Pandemic Influenza Planning Guidance

for Universities and Colleges

Philadelphia Metropolitan Area
June 2010

Contents

I. Introduction

The Philadelphia Department of Public Health (PDPH) has developed this guidance document to help colleges, universities and other institutions of higher education prepare for and respond to a mild, moderate or severe human influenza pandemic. PDPH recommends that colleges and universities update their existing pandemic influenza plans to reflect this current information.

During a pandemic, decisions about which strategies to implement should balance the goal of reducing the number of people who become seriously ill or die from influenza with the goal of minimizing educational and social disruption. This document is meant to serve as a planning tool and the recommendations provided are not compulsory. General principles and disease control recommendations presented in this document may apply to a variety of infectious disease agents beyond influenza. College and university administration is advised to use this guidance accordingly.

The information is based on:

- Federal guidance from the Department of Health and Human Services (DHHS) and the Centers for Disease Control and Prevention (CDC).
- Input from medical directors of student health services and other administrators at multiple regional collegiate institutions through a formal review process.
- Experience gained from past influenza outbreaks (including the 2009 H1N1 influenza outbreak, commonly referred to as swine flu).

This document is intended to supplement other important planning tools, such as:

- H1N1 Flu (Swine Flu): Resources for Colleges and Universities (http://www.cdc.gov/h1n1flu/institutions/).
- CDC Guidance for Responses to Influenza During the 2009-2010 Academic Year (http://www.cdc.gov/h1n1flu/institutions/guidance/technical.htm).
- Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States (http://pandemicflu.gov/professional/community/commitigation.html).
- Guidelines for Pandemic Planning by the American College Health Association (http://www.acha.org/Publications/docs/Guidelines%20for%20Pandemic%20Planning_Jul2006.pdf).
- Guidance for Preparing Workplaces for an Influenza Pandemic (http://www.osha.gov/Publications/influenza_pandemic.html).

Local College and University Assessment

In the Fall of 2006, PDPH conducted a survey of local colleges and universities to identify which pandemic issues needed further planning. Results from the survey showed that there was little coordinated planning between colleges and universities and local government and minimal ways to test aspects of pandemic preparedness. Planning was needed to develop triggers for

response actions; develop policies for international travel; manage illness among students, faculty and staff; create isolation and quarantine procedures; and develop recommendations for stockpiling materials to manage a pandemic.[1]

It is essential for colleges and universities to plan in advance of a pandemic, as they may have many unique issues specific to disease transmission and control. And, they may have a critical role in the citywide response. Throughout this document recommendations for institutions of higher education planners and administration are provided in bold italics. A summary of all these recommendations is in Appendix 1. Additional appendices include contact information of public health agencies and available resources.

II. How a Flu Pandemic May Unfold

A flu pandemic is an outbreak of a new influenza virus. According to the World Health Organization (WHO), a pandemic can start when three conditions have been met:

- A new influenza virus subtype emerges;
- It infects humans, causing serious illness; and
- It spreads easily and sustainably among humans.

A flu pandemic is different from the seasonal flu epidemics, which occur every winter and cause an average of 36,000 deaths annually in the United States. Seasonal flu epidemics are caused by influenza viruses that circulate globally in humans. Over time, people build up some degree of immunity to these seasonal influenza viruses and vaccines are developed annually to help protect people from serious illness. Pandemic flu is different because it means a worldwide epidemic is being caused by a new, dramatically different strain of influenza virus to which there is no immunity. The new virus strain may spread rapidly from person to person and, if severe, may cause high levels of disease and death around the world.

Symptoms of illness caused by a pandemic flu strain are similar to, but sometimes more severe than, those of seasonal flu viruses that typically affect people each winter season. Symptoms include fever, cough, sore throat, body aches, headaches, chills, runny nose and malaise. Some people may also experience diarrhea and vomiting.

Public health experts agree that once a pandemic is triggered by the emergence of a novel influenza virus subtype, it is a global event and all countries are at risk. A pandemic poses many threats because it may cause:

- Widespread illness, and possibly death, in a very large number of people. (The number of hospitalizations and deaths will depend on the virulence of the pandemic virus.)
- The healthcare system to become overwhelmed.
- High rates of worker absenteeism in all sectors.
- Interruptions to essential services, such as law enforcement, fire and emergency response; health care; communications; transportation; and utilities.
- Other social and economic disruptions.

A pandemic, unlike most other emergency events, could last many months and affect areas throughout the world simultaneously. It is likely that the pandemic virus may circulate for up to 12 weeks and have multiple waves of transmission.

Influenza pandemics occurred in 1918, 1957, 1968, and 2009. Future pandemics are likely, and due to the unpredictable behavior of influenza viruses, neither the timing nor the severity of the next pandemic can be predicted with any certainty.

In a pandemic, colleges and universities will not only be impacted as individual institutions, but they can also become sites of transmission due to dormitory style living arrangements, classroom environments, social functions and international travel programs. For these reasons, it is especially important that colleges and universities take steps to become as prepared as possible.

2009 H1N1 Influenza

Many colleges and universities were impacted by the outbreak of H1N1 flu, which was first reported in Mexico in March 2009, detected in the United States in April 2009, and subsequently declared a worldwide pandemic in June 2009. Populations in the Northern Hemisphere experienced multiple waves of H1N1 flu activity, each lasting about six to eight weeks: Spring 2009, Fall 2009.

The following are some additional points that characterize the 2009 H1N1 pandemic:

- The total number of flu cases caused by H1N1 flu was far greater than the number of cases typically caused by seasonal flu.
- H1N1 flu had a greater impact on children and young adults (caused many times more hospitalizations and deaths among this age group) than the seasonal flu typically has.
- People over age 65 (who are believed to have some protection from the virus because of past flu exposures) accounted for a low proportion of the H1N1 cases (only 2% of H1N1 cases compared to 44% of seasonal flu cases).
- The timing of the fall H1N1 wave may have resulted in accelerated community transmission, since the onset coincided with the start of the school year.
- Individuals at higher risk for complications caused by H1N1 flu include:[2]
    - Children younger than 5, especially under age 2.
    - Pregnant women and women up to two weeks postpartum.[3]
    - People with underlying health conditions.

Pandemic Response Strategies

During a pandemic, the goal is to slow the spread of disease to prevent illness. The most effective strategy to accomplish this is through vaccination. However, it is likely that a well-matched vaccine may not be available for many months following the emergence of a new pandemic strain of influenza (then it may only be available in limited supply and allocated to priority groups). And while antiviral medications are sometimes used to treat or prevent influenza illness, the drugs may not be effective against the pandemic flu strain or available. Instead, public health officials plan to rely on non-pharmaceutical interventions – a range of mitigation strategies, such as social distancing, improved hygiene and respiratory etiquette, isolation and quarantine, that may be used to control the spread of disease. When initiated at appropriate times, these interventions may help to delay the outbreak peak, minimize the burden on hospitals and other resources, and reduce the overall number of cases and impact on public health.

In February 2007, the CDC issued the Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States[4]. This guidance emphasizes that early, targeted and layered (at the individual/household level and at the community/institution level) use of non-pharmaceutical interventions should be used to minimize disease transmission in communities. These interventions include the following:

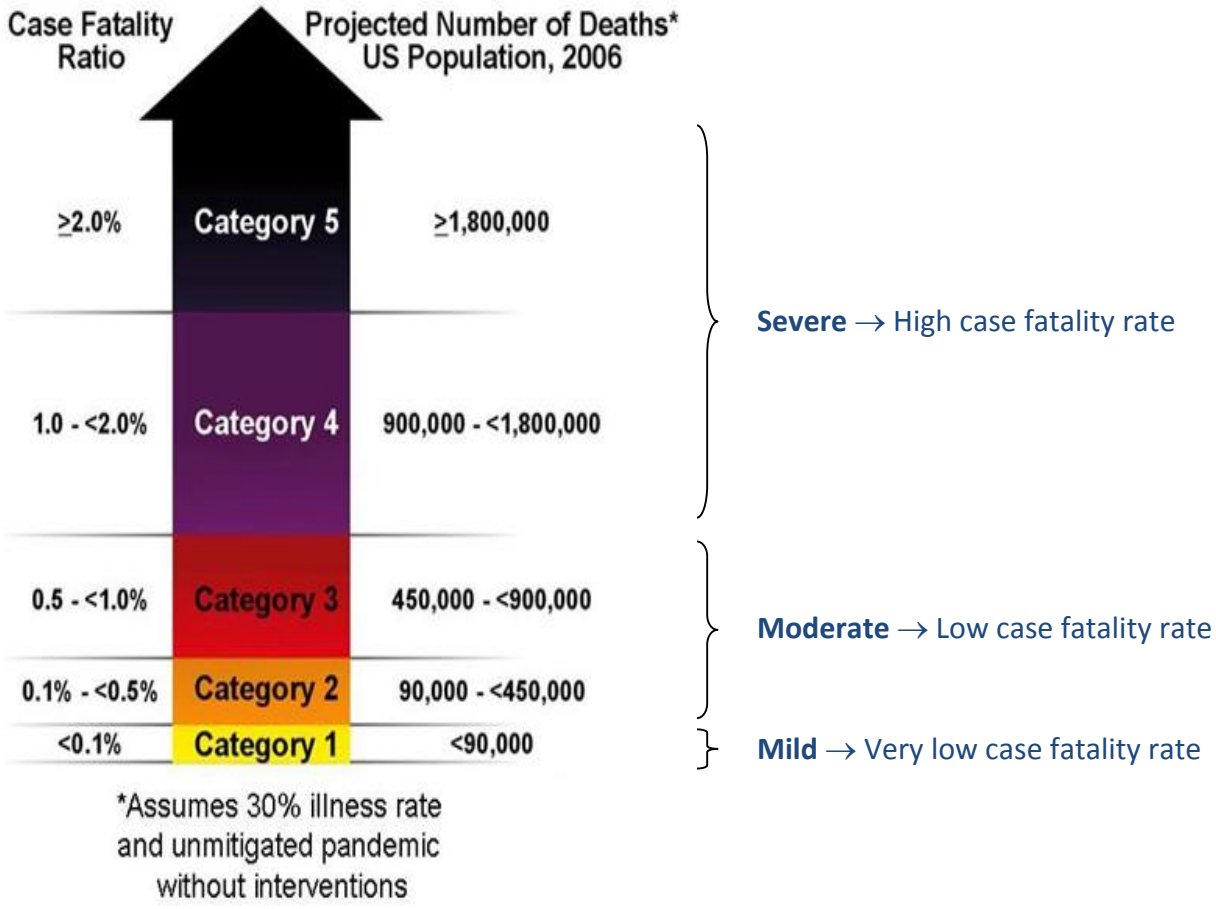
- Voluntary home isolation (ill people to remain at home) – *may be recommended at all severity levels.*
- Voluntary home quarantine (people who share a household or close contact with ill people to remain at home) – *may be considered for a moderate pandemic; recommended for severe pandemic.*
- Dismissal of students from school, school-based activities, and childcare programs – *may be considered for up to four weeks for a moderate pandemic, recommended up to 12 weeks for a severe pandemic.*
- Community and workplace social distancing (may include working from home, cancellation of public events, maintaining at least three feet of separation between people, etc.) – *may be considered for a moderate pandemic; recommended for a severe pandemic.*

Many of these non-pharmaceutical interventions will likely be recommended during future influenza outbreaks including seasonal influenza (e.g., voluntary home isolation). CDC, state and local health departments will issue recommendations as disease transmission is identified.

Classification of a Flu Pandemic Situation – The Pandemic Severity Index

The CDC has developed a Pandemic Severity Index, one tool that helps to direct public health response strategies. The index assigns a level of severity, from a category 1 (lowest severity / a mild pandemic / such as a typical seasonal flu outbreak) to a category 5 (highest severity / "worst case scenario" pandemic / such as the 1918 Spanish Flu pandemic), based on the case fatality ratio. This classification is used to better predict the impact of the pandemic on the population and to guide the extent and duration of mitigation strategies. For example, a school may consider dismissing students for a period of four weeks in a Category 2 or 3 pandemic (moderate fatality). Whereas in a Category 4 or 5 pandemic (severe fatality), CDC recommends that K-12 schools, colleges and universities dismiss students for up to 12 weeks. Since the CDC pandemic severity index relies on mortality data, there may be a delay in establishing the severity after disease transmission has occurred in the region. [5] Based on the death rate, the 2009 H1N1 influenza is considered a mild pandemic.

Figure 1. Pandemic Severity Index
Source: Centers for Disease Control and Prevention, "Community Strategy for Pandemic Influenza Mitigation".



Classification of a Flu Pandemic Situation –Geographic Location

Another tool that PDPH health officials use to describe potential scenarios of a future pandemic is based on the geographic location of disease transmission. During a pandemic, spread of the flu virus may begin in a region outside of Philadelphia or far from the Northeast United States region. Local public health officials will consider how the relative proximity of flu activity (as shown in Table 1), coupled with the pandemic severity level, may impact people in the Philadelphia metro area. Health officials will recommend appropriate response strategies depending on these factors.

Note: the amount of time flu transmission is present in each geographic location is unpredictable, so it is possible that the locations of flu activity listed in Table 1 may be bypassed (e.g., flu activity may emerge sporadically in North America first, then spread to other parts of the world.)

Table 1. Geographic Location and Severity of Disease, Relative to Philadelphia Area

	Location of Flu Activity
Planning Phase	Flu activity in the world, none in North America.
Response Phase	Flu activity in North America, none in the Northeast Region (DE, MD, NJ, NY, PA, Washington D.C.).
	Flu activity in the Northeast Region (DE, MD, NJ, NY, PA, Washington D.C.), none in the Philadelphia metropolitan area.
	Flu activity in the Philadelphia metropolitan area.
Recovery Phase	Decreased, sporadic or no flu activity in North America and Philadelphia metropolitan area. *Recovery and preparation for subsequent pandemic activity.*

PDPH Response to Pandemic Influenza

PDPH has a written plan to address the challenges potentially posed by an influenza pandemic. The goal of this plan is to minimize illness and death caused by influenza and to maintain the essential operations of the city.

The Pandemic Influenza Preparedness Plan is an annex to the Philadelphia Public Health Emergency Response Plan and supplements the City's overall Emergency Operations Plan. The Pandemic Influenza Plan identifies the cooperating City agencies involved in preparedness for pandemic flu and their respective response roles. The Pandemic Influenza Preparedness Plan also describes how the PDPH will work with local partners, such hospitals, physicians, and other community organizations, to respond to an outbreak of disease due to a novel strain of influenza.

PDPH will disseminate information to the public through a variety of methods, including the health department website (www.phila.gov/health); the City's emergency preparedness website (www.readyphiladelphia.org); the City's telephone hotline 1-800-READY-11, which provides taped information and access to live operators 24 hours a day; the PDPH flu hotline 215-685-6458; and the media. Public health recommendations for case and outbreak management will be disseminated through the Health Information Portal (HIP), a PDPH-managed health professional website (https://hip.phila.gov/xv/), and conference calls coordinated by the Division of Disease Control as appropriate.

How and When Pandemic Response Strategies Will Be Recommended

It is important to match the intervention to the severity of the pandemic to maximize the public health benefit while minimizing undesirable secondary effects. However, it is difficult to predict the timing, severity, impact and other nuances of a future pandemic. Therefore, public health officials must make decisions about response strategies as a pandemic evolves and more information is available. In other words, public health officials must follow a "wait and see" approach, i.e., as pandemic conditions unfold and defined thresholds are reached, it will trigger an appropriate response. A number of factors will influence the timing of interventions and which strategies will be recommended, including:

- Severity of symptoms, duration of illness, and fatality rates
- Viral transmissibility
- Location of disease transmission respective to the local community
- Vulnerability of affected populations (i.e., populations such as children and younger adults may be at greater risk)
- Efficacy and availability of antiviral medications
- Efficacy and availability of a pandemic-strain vaccine
- Predicted or observed impact on healthcare and infrastructure

Successful pandemic planning assures that colleges and universities consider a wide range of emergency and public health mitigation strategies, and that execution of these strategies is thought through and tested. Pandemic response activities for colleges and universities should come from a list of pre-planned mitigation options (described in this document), informed by the evolving situation, and activated during the event in consultation with appropriate health and public safety authorities.

Recommendation: ***Administrators are encouraged to maintain situational awareness of the pandemic and communication with state and local public health agencies to be prepared to implement appropriate control measures.***

III. Planning and Coordination

PDPH acknowledges that local colleges and universities vary in significant ways (e.g., student population, residential life, educational programs, research capabilities, affiliation with local hospitals), so it is difficult to fully anticipate all of the unique pandemic influenza planning issues each will have to address. As much as possible, this guidance concentrates on pandemic planning and response issues common to all institutions. This section provides general all-hazards recommendations for preparedness planning for colleges and universities designed to enhance existing approaches to incidents to include public health emergencies. In the next section (Section IV. Planning and Response Elements), pandemic specific planning activities are defined for consideration by college planners.

Planning and Response by College and Universities, General Approaches

PDPH recommends that colleges and universities take the following steps to ensure that their approach to planning is comprehensive. The following recommendations are based on guidance from CDC and the American College Health Association recommendations for Institutions of Higher Education with input from local college and university pandemic planners.

Recommendation: ***Identify a pandemic coordinator with defined roles and responsibilities for preparedness, response, and recovery planning.***

Recommendation: ***Ensure that the pandemic influenza plan addresses both strategic and operational goals, and outlines specific activities, timelines, desired outcomes, staffing and resource requirements, and performance measures.***

Recommendation: ***Ensure that the pandemic influenza plan is a subset of and consistent with the existing college/university emergency operations plan, and the plan is coordinated with the city/community health department and state higher education agency.***

Recommendation: ***Tailor plans to specific campus community. When developing or revising a plan, ensure there is representation from administration officials, faculty and staff, and students. This will allow the plan to be more realistic for implementing on the campus.***

Recommendation: ***Identify and plan to activate a critical response team, a cadre of key personnel representing all relevant departments and services, who will be needed to manage the pandemic response.***

The nature of the pandemic situation will determine if and when the critical response team should be activated and which member will serve as Incident Commander (IC) to oversee the university's response. Members of the critical response team should provide contact information in advance (including cell phone, home phone, e-mail address and home address) to be kept in an easily located dataset and backup paper copy.

Depending on the type of the emergency, the critical response team should include leaders from various departments and operations, such as the following.

- Administration
- Risk management
- Public safety / security
- Communications
- Health services
- Finance / budget office
- Human resources / employee relations
- Facilities management / maintenance / grounds
- Occupational and environmental safety
- Resident life
- Counseling services
- Provost's office
- Dining services
- Information technology services
- Admissions
- Legal
- Student development / student

A list of backup personnel should also be named, in the event that the primary team members cannot participate.

<u>Recommendation:</u> Ensure that a pre-designated location on campus can serve as an emergency command center.

An important part of an emergency response plan is having an established location for an emergency command center – a place where administrators and staff can convene to centrally coordinate emergency response activities. Ideally, this location should have sufficient space, computers, phones, televisions, fax communication, maps, building plans, directories and an emergency power supply for communications and lighting. The nature of the pandemic situation and guidance from the local health officials can help determine when a college/university should open the emergency command center and how long operations should continue.

<u>Recommendation:</u> Work with state and local public health and other local emergency management authorities to identify legal authority, decision makers, trigger points, and thresholds to implement strategic response actions. (A list of local public health agencies is included in Appendix 3.)

<u>Recommendation:</u> Plan for a wide range of possible pandemic issues that may affect college/university functioning. Consider different outbreak scenarios, including:

- ***Variations in severity of illness.***
- ***Variations in the mode of transmission.***
- ***Variations in rates of infection in the community.***
- ***At-risk or vulnerable populations more heavily affected, likely to suffer more severe outcomes***

Consider use of different containment strategies, such as:

- ***The need to cancel classes, sporting events or other public events.***
- ***The need to close campus, student housing or public transportation.***

- ***The need to use student housing for quarantine of exposed or ill students.***
- ***The need to temporarily relocate students, e.g., ill students, students at high risk for severe illness if they become sick, etc.***

Consider the need for contingency plans for:

- ***Students who depend on student housing and food services (e.g., international students who live too far away to travel home).***
- ***Maintaining research laboratories, particularly those using animals.***

Consider the need to stockpile supplies, non-perishable food and equipment.
Consider the need to supplement healthcare, mental health and other social services to meet the needs of the college/university population during and after a pandemic.

(Many of these issues are addressed in the next section, Planning and Response Elements.)

Planning and Response by the City of Philadelphia

In a pandemic, the City of Philadelphia will activate appropriate elements of its Pandemic Influenza Preparedness Plan. The Pandemic Influenza Plan identifies the roles and responsibilities of the cooperating City agencies involved in pandemic response activities. The plan also describes how the Philadelphia Department of Public Health (PDPH) will work with local partners, such as physicians, hospitals and community agencies, to respond to an influenza pandemic.

During a pandemic, the City of Philadelphia may activate its Emergency Operations Center (EOC) if it becomes necessary for aspects of response coordination, such as public safety, continuity of critical functions, public information, or mass dispensing of medication or supplies. In all aspects of planning and response, the City follows the Incident Command System (ICS), in compliance with National Incident Management System (NIMS). When appropriate, response agencies will operate under a unified command structure. PDPH will serve as the lead agency and incident commander for management of a public health crisis. More information on NIMS and ICS is in Appendix 2, the Glossary of Terms.

Regional Coordination Among Colleges and Universities

As influenza or other public health situation emerges nationally or internationally, college and university health and safety response personnel would benefit from cross-institutional communications to share issues and concerns and to coordinate a more unified response as appropriate. College and university student health directors in the 5 Southeastern Pennsylvania counties participate in a regional work group called the Delaware Valley Student Health Services Directors Group. Health directors communicate as needed through an e-mail list serv, and have in-person meetings three to four times per year to address a variety of student health issues that pertain to the college and university environment.

IV. Planning and Response Elements

A. Continuity of Student Learning and Essential Operations

Planning for continuity of operations will help ensure that certain essential functions of the institution will continue in the event of an influenza pandemic.[6] This aspect of pandemic preparedness is important to:

- Ensure succession of key leadership.
- Sustain critical operations until the situation returns to normal.
- Ensure survivability of critical equipment, records and other assets.
- Minimize damage and losses.
- Achieve orderly response and recovery from incident.

Recommendation: ***Develop a continuity of operations plan for maintaining the essential operations of the college/university including payroll; ongoing communication with employees, students and families; security; maintenance; housekeeping and food service for student housing.***

The following is a breakdown of tasks, sorted by area of responsibility, to help maintain essential operations during a pandemic:

Administration

- Identify and prioritize the institution's mission-essential functions.
- Delegate a succession of authority for key leadership positions. Include at least three back-up people.
- Identify essential personnel and back-up personnel (staff who are critical to the support and recovery of operations). Communicate the expectation that identified essential personnel will be asked to work throughout the pandemic. Essential personnel may include employees in student health, senior administration, facilities and maintenance, campus security, residential life, dining services, information technology, and research support.
- Cross train staff and faculty to perform multiple essential duties and roles.
- Maintain a functioning communications network for staff, faculty, students, and parents. Routinely test how the university will notify members using these systems.
- Identify governmental agencies and contacts for continued information exchange (e.g., local health department, office of emergency management).
- Develop alternative procedures to assure continuity of instruction during partial or complete campus closure (e.g., web-based distance instruction, telephone trees, mailed lessons and assignments, instruction via local radio or television stations). (More information in Section IV, F.)
- As necessary, colleges and universities should develop plans to support on-going research needs. Examples of equipment/materials that will need to be maintained

include: backup generators, sensitive experiments, critical computer databases, laboratory animals, freezers, refrigerators, and other sensitive materials.

Facilities Management

- Coordinate with student health personnel to pre-assign specific residence halls to support persons who must remain on campus, or to house essential staff and faculty or medical staff working in a campus or nearby medical facility.
- Smaller colleges and universities (<4000 students) should consider coordinating with larger institutions (e.g., nearby academic medical center) if they anticipate inadequate staffing or facilities in the case of a pandemic.
- Assure ability to access campus buildings as needed.

Student Health Director/Health Services Administrator

- Estimate the number of students, staff and faculty who will likely remain on campus during widespread transmission given the school's infrastructure (populations unable to vacate, essential staff and faculty).
- Determine which student health services can be maintained and which must be temporarily suspended if there is an influx of patients with influenza like illness (ILI).
- Ensure health facilities and clinics have identified critical supplies needed to support a surge in demand and take steps to have those supplies on hand.
- Coordinate with facilities management to pre-assign residence halls to serve as housing for those unable to vacate or are essential personnel.
- Work with the administration to develop a memorandum of understanding (MOU) with area institutions (other colleges, hospitals, hotels) to share resources and support pandemic relief efforts as appropriate.
- Identify contacts within local government for information exchange and inclusion in pandemic updates and control recommendations.
- Provide ongoing campus-wide infection control recommendations.
- Identify capacity (space, refrigeration, staff) to support a mass vaccination effort for students and staff.

Security

- As necessary, facilitate cancelation of public gatherings, building closure, dismissal of students, and campus evacuation.
- Assure continued access to critical campus areas for essential personnel.
- Enforce access restriction policies.
- Ensure worker and patient safety at pandemic vaccination clinics.

Essential Supplies

Recommendation: ***Stockpile supplies, equipment and non-perishable food that may be needed for the college/university to sustain operations during a pandemic.***

When deciding on amounts of materials to stockpile, colleges and universities should assume that one pandemic wave may last 12 weeks in duration. The following is a breakdown of supplies that may be needed to support various university functions:

Essential Operations

- Laptops, wireless capacity, other technology to support e-mail, intra-campus communications, remote work strategies and web-based academic activities.
- Food and water requiring minimal preparation for critical staff and faculty and students who cannot vacate.
- Food for research animals.
- Generators to maintain power to critical areas.

Staff Safety

- Personal protective equipment (PPE) for clinical staff in student health departments and other higher risk situations to include surgical masks, N-95 particulate respirators, eye protection and gloves. (More information about infection control practices for healthcare personnel is in Section IV, D.)
- Hand washing materials (soap, paper towels, hand sanitizer).
- Antiviral medications, to be used as directed by the CDC, state and local health departments.

Disease Control for Pandemic Influenza Cases and Contacts on Campus

- Food and water requiring minimal preparation.
- Surgical masks.
- Tissues.
- Hand washing materials (soap, paper towels, hand sanitizer).
- Materials for educational signage (paper, markers, ink cartridges, toner).

B. Communication

Communication is very important to staff, students, parents, and local health authorities during pandemic influenza. Universities and colleges should detail in their pandemic influenza plan what different methods of communication will be used with parents, students and staff (e.g. Internet, social media, text messaging). Universities and colleges will experience large increases of questions from the public, especially parents, on what they are doing to prevent the spread of pandemic influenza.

Recommendation: ***Tailor your pandemic influenza plan specific to your campus community. When developing or revising your plan, ensure there is representation from administration officials, faculty, staff and students.***

By involving administration officials, faculty, staff and students into the campus' pandemic influenza planning, it will be more realistic for implementing because these groups will already be familiar with the plan and what the response may be.

***Recommendation:* Educate the campus community on what is pandemic influenza, how to prevent disease transmission, and how the campus may be impacted during a pandemic.**

It is important to educate the campus community on what is pandemic influenza and what to expect if there is a pandemic influenza outbreak on the campus. The more prepared the campus community is for pandemic influenza, the better the response will be. Examples of education opportunities are:

- Organize a fireside chat or brown-bag lunch with pertinent departments including academics, resident life, dining services, and maintenance. Education topics include hand hygiene, sanitation, alternate meal arrangements, alternate housing, and student absenteeism.
- Use the student health advisory council to promote hygiene and vaccination, if available. Student health advisory council members can give presentations in classes across the campus. For example, most colleges and universities have a Freshman 101 course. This would be an appropriate topic to cover during the class.
- Work with various student-led peer groups to promote hygiene and vaccination, if available. For example, resident assistants would be useful in disseminating messages to their floor residents.

***Recommendation:* Ensure that the college/university has a well-developed crisis communication plan, which is fully integrated into the overall emergency response plan.**

As part of the crisis communication plan, colleges and universities should:

- Maintain contact information (including back-ups) for local and state public health officials, local emergency management and other government officials, and the state's higher education officials.
- Test the linkages between the college/university's Incident Command System and the Incident Command Systems of the local and/or state health department and the state's higher education agency.

Internal Communication

***Recommendation:* Develop policies and strategies to provide and receive messages during a pandemic to all of the school's internal audiences.**

Internal communications are those that occur between the school and its staff, faculty, students, and parents of students. The following are specific activities that colleges and universities should consider to maintain ongoing communications throughout a pandemic.

- Explore social media tools that will reinforce messages and encourage information sharing, such as widgets, e-cards, social networking sites, mobile information, online videos, podcasts, RSS feeds, etc. Tools and more information are provided by the CDC at http://www.cdc.gov/SocialMedia/index.html.
- Identify the school's internal audiences, such as all students (undergraduate, graduate, international, study abroad, online and continuing education, summer school, high school students taking college courses); parents and students' emergency contacts; faculty and staff (including those who may not have access to e-mail); visitors and clients of the school; and alumni.
- Outline a method to consult and inform school officials, including the provost, the university physician or medical team, university housing staff, human resources and benefits. These key officials will be integral in developing and relaying messages to internal audiences.
- Develop lists of contact information for all essential and non-essential staff and faculty, enrolled students, students' families, and alumni. Contact lists should be updated regularly, or at least annually, and include phone numbers, e-mail and home street address.
- Identify and test multiple methods (in case the Internet is not available or cellular phones are not functioning) of reaching internal audiences including:
  - E-mail.
  - Text messaging.
  - Telephone phone trees.
  - Reverse 911 phone systems.
  - Websites.
  - List serves.
  - Social networking websites (e.g., Facebook, Twitter).
  - Letters sent via the postal mail service.
  - Newsletter.
  - The public announcement (pa) system.
  - Closed-circuit television monitors.
  - University cable television channels.
  - Posters or flyers in common areas.
  - Campus newspapers.
  - Campus radio.
  - 800 numbers / hotlines.
  - "On Hold" messages / pre-recorded messages that play while someone is waiting for the phone to be answered.
  - Verbal messages from resident advisers or student leaders.
- Consider whom the messages should come from to specific audiences. For example, sending a letter to parents from the college or university president can signify that the college or university is prepared to respond to pandemic influenza and that the administration supports student health services.

- Determine if there is a need to translate any of the communication messages into other languages.
- Ensure that messages are culturally and reading-level appropriate for the target audience.
- Determine if special communication strategies are needed to reach students with a disability.

Recommendation: ***Develop (or obtain from CDC, state and local health department) messages for internal audiences in advance so they are ready to distribute at necessary times during a pandemic.***

The Philadelphia Health Information Portal (http://hip.phila.gov) offers many communication materials, flyers and brochures that colleges and universities may use (visit https://hip.phila.gov/xv/DiseaseInformation/H1N1Influenza/PatientEducation/tabid/196/Default.aspx).

Examples of issues that will be important to address may include the following:

- How students, faculty and staff can prepare for and protect themselves during a pandemic.
- How an influenza pandemic may unfold, including signs and symptoms of influenza, modes of transmission, and potential severity and duration of a pandemic.
- Steps that students, faculty and staff can take to prevent the spread of flu including infection control (e.g., hand hygiene, coughing / sneezing etiquette), voluntary isolation (staying at home when sick), etc.
- Steps that the college / university may take to prevent the spread of flu (e.g., canceling large public gatherings, canceling classroom instruction, transition to web-based learning, and advising students, faculty and staff to stay at home).
- How and when students, faculty and staff should remain at home and care for themselves when sick.
- The potential impact of a pandemic on student housing closure and the contingency plans for students who depend on student housing and campus food service.
- Changes to work schedules, human resources policies and class attendance policies.
- Information for parents of students regarding their child's safety and health, the possibility of classes being suspended, etc.
- The health and safety of students traveling or studying abroad.
- Where students, faculty and staff can find up-to-date and reliable pandemic information from federal, state and local public health sources.
- The status of public safety and campus security during the pandemic period.
- The potential fear and anxiety of employees, students and families that may result from rumors or misinformation. Where one can go to seek counseling if needed.
- The recovery of damages, and resumption of operations after a pandemic recovery period including academic credits and graduation.

External Communication

Recommendation: ***Prepare to maintain ongoing communication with organizations, groups, and individuals outside the institution's formal structure.***

External audiences may include local government agencies (health department, police, emergency management), the media, partner businesses and organizations, others in the higher education community (e.g., neighboring colleges and universities) and citizens of the local community. To communicate effectively during a pandemic, colleges and universities should:

- Appoint essential employees who are responsible for coordinating with relevant government agencies and ensure that mutual contact information is shared.
- Designate spokespersons (and backup representatives) to conduct interviews with the media.
- Identify a college/university representative who can serve as a liaison with a designated contact person at the local health department.
- Participate in regional conference calls with university and college student health service directors during an evolving pandemic.

Communication with the Local Health Department

Philadelphia colleges and universities can expect to receive critical information from PDPH during a pandemic. PDPH will provide support with disease control and written materials, such as screening tools and fact sheets. PDPH is able to contact student health officials directly through its Health Alert Network (HAN), which includes e-mail, text alert and fax notification. Colleges and universities should develop methods to route important HAN messages to other critical people within the institution (e.g., administrators, designated staff, etc.).

PDPH posts current information and resources on infectious disease and public health emergency preparedness topics for health care professionals on the PDPH Health Information Portal website (http://hip.phila.gov). The site offers late-breaking news, epidemiological data, and in-depth guidelines for diagnosis and management of diseases and conditions. For information about the Health Information Portal (HIP) or the Health Alert Network (HAN), including how to become a member, please contact PDPH at hip@phila.gov or 215-685-6841. PDPH will also convene conference calls to share the most up-to-date information with college and university student health services during an outbreak situation to discuss optimal disease control strategies.

In addition, PDPH disseminates information to the public through a variety of methods, including the health department website (www.phila.gov/health); the City's emergency preparedness website (www.readyphiladelphia.org); the City's call center 311, which provides access to live operators 24 hours a day; the PDPH flu hotline 215-685-6458; and the media.

C. Human Resource Management and Support

In order for colleges and universities to carry out the overarching disease prevention strategies during a flu pandemic, they must ensure that human resources policies are in line with these efforts.

Recommendation: ***Review, and revise if necessary, all relevant human resources policies, including policies regarding exclusion, sick leave and absences.***

It is important that colleges and universities uphold exclusion policies and support the CDC recommendation for the duration specified. Influenza typically has an incubation period of 1 – 5 days, duration of isolation may vary but is typically up to 7 days after illness onset or after 24 hours from last fever without use of fever-reducing medications. Recommendations may also vary for specific higher risk groups (e.g., healthcare workers).

The following will help facilitate this recommendation and ensure that students' academic concerns do not prevent them from staying home while ill or prompt them to return to class while symptomatic and potentially infectious:

- Relax policies on missed classes, missed examinations and late assignments.
- Relax policies that correlate class attendance with grades.
- Do not require students to provide a doctor's note to validate their illness (since doctor's offices and medical facilities may become extremely busy and not able to provide documentation in a timely way.)
- Administration officials should work with faculty and staff, especially professors, on the importance of encouraging students to not attend class if they are ill.

The following will help facilitate this recommendation for faculty and staff:

- Allow sick leave time, vacation leave time, and personal leave time to be used for pandemic-related absences (whether due to employee illness or family care needs).
- Allow employees to take unpaid sick leave if they exhaust their paid leave options.
- Do not require staff to provide a doctor's note to validate their illness (since doctor's offices and medical facilities may become extremely busy and not able to provide documentation in a timely way.)
- Do not count pandemic-related absences toward termination or against qualification for tenure.

Recommendation: ***Assess employee payment policies, including hazard or bonus pay, for non-exempt or exempt workers who are required to continue working when campus operations are reduced (i.e., the critical response team and essential personnel).***

Recommendation: ***Consider opportunities to allow staff to telecommute, when possible, and the necessary mechanisms to support off-site employees.***

Recommendation: ***Encourage students, faculty and staff to develop personal preparedness plans for themselves and their families.***

Recommendation: ***Plan to offer psychosocial support services to students, faculty and staff, as needed during a pandemic, to help cope with the fear, exhaustion, stress, isolation and loss they may feel.***

To supplement the available services, colleges and universities may consider the following:

- Use the Employee Assistance Program (EAP).
- Train student counseling services staff to provide pandemic related behavioral health counseling, grief counseling and other disaster mental health counseling and debriefing techniques.
- Identify and partner with local community-based and nongovernmental organizations that specialize in psychological support services and training.
- Provide follow-up support to people who use mental health services.
- Provide materials on mental health issues for students, staff and families.

Additional information about human resource policies is provided by the U.S. Department of Health and Human Services (DHHS) at http://answers.flu.gov/categories/322 and in the CDC Guidance for Responses to Influenza for Institutions of Higher Education at http://www.cdc.gov/h1n1flu/institutions/guidance/technical.htm.

D. Disease Surveillance and Control

PDPH advises colleges and universities to balance the goal of reducing the number of people who may become seriously ill or die from influenza with the goal of minimizing educational and social disruption. However, PDPH also recognizes that student health departments and campus facilities often lack the resources to care for large numbers of ill students, faculty and staff. Therefore, it may be in the best interest of colleges, universities and communities to close temporarily during periods of peak pandemic transmission if illness is severe and other factors exist that warrant this activity. If the pandemic situation is not severe enough to suspend campus operations, colleges and universities should plan to manage and isolate stable cases and possibly quarantine contacts who are unable to vacate the campus (e.g., international students, those without travel and local lodging resources).

Supplemental guidance on how colleges and universities should respond to the H1N1 influenza A pandemic is provided by the CDC at http://www.cdc.gov/h1n1flu/institutions/guidance/technical.htm.

Recommendation: ***Identify and review the college/university's legal responsibilities and authorities for executing infection control measures, including case identification, reporting information about ill students and employees, isolation, movement restriction, and provision of healthcare on campus.***

Recommendation: ***Student health services administration, along with college/university administration, should coordinate with the local health department for case management and disease control guidelines.***

In general, student health services staff will have an important role in response to a pandemic and should be prepared to:

- Establish a pandemic plan for campus-based healthcare facilities that addresses issues unique to healthcare settings. (More information at: http://www.pandemicflu.gov/professional/hospital/index.html.)
  Identify and separate students reporting to student health with ILI from non-ILI patients in waiting areas and exam areas. Place a surgical mask on these patients as tolerated.
  Or block off hours for patients who are healthy to be seen for routine examinations.
- Perform diagnostic tests as directed by the local health department.
- Report cases to the local health department when directed to do so.
- Isolate ill students as able.
- Support quarantine of contacts on campus if recommended to do so.
- Distribute personal protective equipment (e.g., masks) to appropriate populations and educate on proper usage.
- Administer vaccine to students and staff as available and as advised by CDC and the local health department.
- Administer antiviral medications for treatment or prophylaxis as advised by the CDC and local health department.
- Transfer acutely ill patients / patients with severe or life threatening illness to hospitals.
- Ensure that common areas are regularly cleaned and surfaces are disinfected.
- To minimize the number of students from coming to student health services when it is not needed here are some suggestions:
  - Develop a telephone triage plan to screen students before coming to student health services.
  - Create a hotline phone number for students and parents to call for information.
  - Update student health services website to define what students should be seen at student health services.

1. Diagnosis and Reporting

Identification of Cases

Diagnostic and reporting protocols for cases of influenza will likely change as a pandemic evolves. Early on as the disease is first being detected in the region, student health services will likely be asked to report and definitively diagnose suspect cases that meet the clinical case definition and also have an epidemiological risk factor (e.g., travel to area where outbreaks are occurring). Once pandemic disease is established and case burden increases, recommendations for definitive diagnosis and reporting will likely change to reflect salient disease characteristics and epidemiological factors.

Case Definition

The case definition and risk factors used to identify pandemic influenza cases may vary as a pandemic evolves. At a minimum, the case definition will likely include the symptoms for influenza like illness (ILI), a documented fever of over 100°F, plus one of the following: cough, sore throat, respiratory distress. PDPH and CDC will provide updated clinical case definitions and information on risk factors to colleges, universities and the community. (PDPH also maintains updated information for health care providers on the Health Information Portal website at http://hip.phila.gov.)

Diagnosis

In the early response phases of a new pandemic, patients who are suspected to have influenza will likely need definitive diagnostic testing. Culture, PCR or DFA/IFA testing may be performed to identify presence of influenza type A. Positive specimens may then be forwarded to a reference laboratory for definitive subtype testing. Student health services staff should collect appropriate specimens for testing and transfer to appropriate laboratory. Early in a pandemic, PDPH will assist student health services staff with respiratory specimen collection and handling protocols and will facilitate transport of specimens to the appropriate clinical laboratory, if recommended and as able. In the later response phases of a pandemic, when widespread transmission is occurring, confirmatory testing will become less available and diagnosis will rely on clinical symptoms and exposure to known or suspect cases.

Commercially available rapid tests for seasonal influenza (often called "point-of-care" diagnostic tests) have variable sensitivity and may lack the ability to detect a new pandemic strain of influenza.[7] Clinicians should understand the limitations of these tests before using them. For current information about using rapid tests, visit the CDC webpage at http://www.cdc.gov/h1n1flu/guidance/rapid_testing.htm.

More information on testing and specimen collection for pandemic influenza patients is available at http://www.cdc.gov/h1n1flu/specimencollection.htm.

Reporting

In the early response phases of a pandemic, colleges and universities should immediately report all suspect and confirmed cases of pandemic influenza to their local public health department. (Reports to PDPH should be directed to the Division of Disease Control at 215-685-6748. See Appendix 3 for more contact information.) In the later response phases, reporting requirements may be reduced at the discretion of the local health department. Updates on reporting requirements will be distributed by the local health department through the HAN, conference calls, and/or e-mail.

Steps to help colleges and universities identify cases include:

- Educate students, faculty and staff to recognize the symptoms and risk factors for influenza.

- If useful, design or modify forms to identify cases.
    - Self-evaluation forms for use by students, faculty and staff.
    - Triage screening forms for use by clinicians in student health clinics.
    - Screening forms for use by students who have traveled.
- Encourage students to report illness to student health services. Refer suspect cases to student health or a local hospital for evaluation if severely ill.
- As cases occur, track student, faculty and staff absenteeism (including the reason for absence and symptoms of illness) and plan to share these data with the local health department upon request.
- Maintain a daily count of students seen by student health services and referrals to hospitals with a description of symptoms. Plan to share these numbers with the local health department on a weekly basis or as requested.

Role of the Local Health Department

PDPH, or the appropriate local health department, will provide consultation and assistance in the following areas:

- Confirmation of clinical and epidemiological case suspicion.
- Specimen collection plan for diagnostic testing.
- Immediate infection control recommendations.
- Patient discharge protocols and follow up.
- Contact tracing and investigation.
- Guidance for the use of antiviral medications.

PDPH will collect surveillance data and case reports directly from community partners (e.g., hospitals, student health services, long-term care facilities, outpatient clinics) to identify initial cases in the region, to monitor the burden of illness, and to guide mitigation strategies. Management of an influenza pandemic will rely on early detection of cases in the state and region, followed by extensive investigation and implementation of targeted control strategies.

2. Management of Cases

Recommendation: ***Suspect and confirmed cases of pandemic influenza should be aggressively managed to minimize illness transmission in the region.***

Case management may include these steps:

- Isolate patient from others to limit transmission.
- Supportive care with antipyretics (fever reducers) and rehydration.
- If patient exhibits factors that may predict increased risk for progressive disease (e.g., underlying conditions such as pregnancy, chronic cardiovascular or pulmonary disease, diabetes, immune-deficiency), it may warrant close observation and early antiviral treatment.
- Refer patient to a hospital if illness is severe or life threatening.
- Treat patient with antiviral medications, if appropriate and available.

- Offer a surgical mask for the patient to wear, as tolerated.

Recommendation: ***Institutions that are not already affiliated with an academic medical center, should consider partnering with a local hospital to facilitate communication and transport of acutely ill people during a pandemic.***

Isolation

Isolation means to separate an individual with an infectious illness from those who are healthy and have not been exposed to the contagion. Keeping sick people physically separated from others will help stop the spread of illness and protect healthy people from getting sick. People can be isolated at home or in a separate room in the hospital, depending on the severity of their illness and their need for medical care.

Isolating ill people is a critical strategy for addressing pandemic influenza for three reasons: (1) a vaccine for the novel influenza will not be available in the early stages of a pandemic; (2) the novel influenza may result in more serious complications for people in high-risk groups and these measures help protect high-risk people; and (3) a widespread pandemic may result in many more hospitalizations and medical care visits than usually associated with seasonal flu.

Recommendation: ***All symptomatic cases should be isolated to prevent the illness from spreading to others.***

CDC recommends that individuals with influenza like illness (fever of 100°F or greater, plus cough and/or sore throat) remain at home and away from other people until at least 24 hours after they are free of fever, or signs of a fever, without the use of fever-reducing medications (e.g., acetaminophen or ibuprofen).

Self-Isolation Off-Campus

When possible, students, faculty and staff with influenza like illness should be asked to stay at home (or a friend or family member's home) and avoid contact with other people. Students who go to a private home to recuperate should limit contact with others as much as possible. For example, travel by private car or taxi would be preferable over use of public transportation. As tolerated, ill persons should wear a surgical-type mask while in close contact with others. For more information about how to care for a sick person at home, visit http://www.flu.gov/individualfamily/parents/homecare/index.html. More information about the amount of time sick people should stay away from others is at http://www.cdc.gov/h1n1flu/guidance/exclusion.htm.

Self-Isolation On Campus

The campus student health services center may become overwhelmed during an influenza outbreak. The following steps may help with the logistical challenges of keeping sick students away from others in residence halls and campus housing:

- Sick students should limit their contact with others and, as much as possible, maintain a distance of six feet from others who are not sick.
- Sick students with single rooms and private bathrooms should stay in their own rooms.
- Sick students who live in suite-type living quarters should remain in their own rooms and receive care and meals from a single person, if possible.
- Sick students should avoid using shared bathrooms. Shared bathrooms should be cleaned frequently.
- Sick students should not use common facilities, such as dining halls.
- It may be helpful for students to establish a "flu buddy system" in which students pair up and serve as a caregiver if one or the other becomes ill.
- The college / university should plan how to get food and other essential supplies to sequestered students (e.g., deliver food crates and flu kits with tissues, supplies to rooms).
- If close contact cannot be avoided, the sick student should be asked to wear a surgical mask during the period of contact. For more information on personal protective equipment, visit http://www.flu.gov/individualfamily/prevention/facemasks/index.html.

Recommendation: ***For those who cannot leave campus, and who do not have a private room, consider providing temporary, alternate housing where those who are ill can stay until 24 hours after they are free of fever.***

Recommendation: ***Establish a method for maintaining contact with students who are in self-isolation.***

If resources permit, student affairs, housing staff, residential advisors, or health care providers (for example, nurses or physician's assistants) could be assigned to make daily contact with each student who is in self-isolation for influenza like illness in a dormitory or other university residential setting. These staff may also check on roommates, suitemates, and others who come in close contact with the ill person to determine if they have also fallen ill. Possible contact and reporting methods include e-mail, text messaging, phone calls, secure website, or room visits.

Recommendation: ***Students with flu like illness should be instructed to promptly seek medical attention if they have a medical condition that places them at increased risk of influenza-related complications, are concerned about their illness, or develop severe symptoms.***

Severe symptoms include increased fever, shortness of breath, chest pain or pressure, rapid respirations, cyanosis (bluish skin color), vomiting, dizziness, or confusion. Campus health

services should communicate to students, faculty and staff about these symptoms, how to contact health services, and groups of people at high risk for complications from influenza.

Recommendation: ***Provide guidance and health education that emphasizes hygiene, self-isolation and self-care to students, faculty and staff.***

Guidance for caring for influenza patients in the home can be applied in the dormitory or residence hall as well. Visit http://www.flu.gov/individualfamily/parents/homecare/index.html for more information on caring for sick people in the home.

Recommendation: ***Students, faculty and staff should be vigilant in identifying people who appear to be ill.***

People who are sick should be encouraged to self-isolate and to talk with a health care provider about whether they have influenza, appropriate treatment, and actions to take if they experience severe symptoms.

Recommendation: ***Students, faculty and staff who may be at higher risk for complications caused by influenza should be encouraged to seek early treatment.***

Groups that may be at higher risk for complications from influenza if they get sick include: young children, pregnant women, people with chronic health conditions like asthma, diabetes or heart and lung disease, and people 65 years and older.

3. Management of Contacts

Confining Asymptomatic Contacts

Quarantine is the physical separation of asymptomatic contacts (people who have been exposed to a contagious disease, but are not ill). Quarantine may be voluntary, done at home, or done in another restricted area. Quarantine can be highly effective in protecting the public from disease. During an influenza pandemic, quarantine may be recommended once cases have been identified in the region.

Dormitories that have private rooms and bathrooms could potentially serve as quarantine sites. However, PDPH recognizes that not all campuses have these facilities, and confining asymptomatic students may pose logistical and enforcement challenges. Therefore, colleges and universities may consider a low threshold for dismissal of students from classes.

During an influenza pandemic, PDPH will recommend when quarantine measures should be implemented. Depending on the severity level and location of disease transmission, quarantine efforts may be raised or scaled back.

To facilitate quarantine efforts, PDPH will:

- Work closely with student health
- Identify people who have had close contact with a sick person / a significant exposure to the illness.
  (Close contact is defined as having cared for or lived with a person with influenza like illness or having been in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of such a person. Examples of close contact include kissing, sharing eating or drinking utensils, etc. Close contact typically does not include activities such as walking by an infected person or sitting across from an infected person in a waiting room or office.)
- Conduct interviews with contacts.
- Maintain a database of contacts for follow up (as pandemic demand allows).
- Support voluntary confinement.
- Educate contacts on infection control (e.g., hand washing, use of surgical masks) and how to recognize symptoms.
- Provide answers to common questions to help alleviate fears.

Low-Level Transmission

During the early response phase of a pandemic, when disease transmission is low and surveillance efforts are high, PDPH will conduct contact investigations and recommend quarantine when asymptomatic contacts are identified. Household contacts of suspected or confirmed cases will be asked to voluntarily stay home and closely monitor for symptoms of influenza like illness until an incubation period has passed (5-7 days). If effective, post-exposure antiviral medication will be provided to these contacts to prevent illness. The university / college should ensure that people in quarantine have information on infection control measures and that food and other essential needs are met.

High-Level Transmission

Surveillance efforts will be scaled back as pandemic influenza becomes widespread and case counts escalate. Public health authorities will have to rely on clinical providers and community messaging to educate contacts about how to recognize symptoms, infection control measures, and home quarantine to minimize the spread of disease.

4. Other Infection Control Strategies

How Flu Spreads

All human flu viruses, seasonal and H1N1 flu are contagious. The flu virus is spread by large respiratory droplets (drops that are expelled when a person coughs or sneezes). These particles usually do not remain suspended in the air, so close contact (being within 6 feet of a sick person who coughs or sneezes) is usually required for transmission. Flu viruses may also be spread when a person touches an environmental surface (e.g., doorknob, desktop or other surface) that has been recently contaminated by contact with a sick person. A person with the flu can spread germs from 1 day before to 7 days after getting sick.

How to Prevent the Spread of Flu in the Campus Community

The following are steps that colleges and universities should encourage everyone to take to limit the spread of flu on campus and in the community.

– Recommended for all pandemic severity levels –

PRACTICE GOOD HYGIENE

- Wash your hands often with soap and water.
- Cover your mouth and nose with a tissue when you cough or sneeze.
- Put used tissues in a waste basket.
- Cough into your upper sleeve if you don't have a tissue.
- Clean your hands after coughing or sneezing. Use soap and water or an alcohol-based hand sanitizer.

Recommendation: Procure, store and provide sufficient and accessible infection prevention supplies (e.g., soap, alcohol-based hand sanitizer, tissues and receptacles for their disposal).

– Recommended for all pandemic severity levels –

PRACTICE ROUTINE CLEANING

- Frequently clean bathrooms and other commonly-used areas.
- Ensure that soap and paper towels are available in bathrooms.
- Provide no-touch wastebaskets and ensure they are emptied as needed.
- Ensure that high-touch surfaces are regularly cleaned, e.g., doorknobs; handrails; elevator buttons; desks; tables; chairs; counters/surfaces in cafeterias, meeting rooms and offices.
  (More on environmental cleaning is stated below.)

– Recommended for all pandemic severity levels –

IF YOU ARE SICK WITH THE FLU:

- Stay home.
  Follow your doctor's orders, and watch for signs that you need immediate medical attention. Remain at home for 7 days after your symptoms begin or until you have been fever-free without the use of fever-reducing medications (e.g., acetaminophen or ibuprofen) for 24 hours, whichever is longer.
- Avoid close contact with others.
  Especially avoid those who might easily get the flu, such as people of any age with chronic medical conditions (such as asthma, diabetes, or heart disease), pregnant women, young children, and infants.
- Wear a surgical mask, if available and tolerable.
  Use a mask when sharing common spaces with other household members to help prevent spreading the virus to others. This is especially important if other household members are at high risk for complications from influenza.

- Take care.
  Get plenty of rest. Drink clear fluids such as water, broth, sports drinks, or electrolyte beverages to prevent becoming dehydrated.
- Cover coughs and sneezes.
- Clean hands often.
  Use soap and water or an alcohol-based hand sanitizer often, especially after using tissues and after coughing or sneezing into your hands.
- Talk to your doctor about the prescription antivirals, Oseltamivir (TAMIFLU®) and Zanamivir (RELENZA®).

– Recommended for all pandemic severity levels –
GET VACCINATED

- Vaccination is the best way to protect against getting the flu.
  It is recommended that people get both the seasonal flu vaccine and the pandemic-strain vaccine, once it becomes available.
- Student health services need to identify those students who require vaccination to continue clinical rotations. This information should be conveyed to state and local health departments so that vaccine, if available, is provided to this priority population.

<u>Recommendation:</u> When vaccine is available, encourage students, faculty and staff to get the annual influenza vaccine and the pandemic-strain vaccine.

– Recommended for moderate or severe pandemic levels –
IF A HOUSEHOLD MEMBER OR CLOSE CONTACT IS SICK WITH THE FLU (EVEN IF YOU ARE NOT SICK):

- Stay home.
  See previous section on quarantine / confining asymptomatic contacts.

– Recommended for moderate or severe pandemic levels –
PRACTICE SOCIAL DISTANCING
Note: social distancing refers to the actions that increase space and decrease face-to-face contact between people. Implement these recommendations as pandemic severity increases.

- Limit face-to-face interaction with others. Restructure work and classroom environments, when possible, to increase space between people to a distance of 3-6 feet.
- Avoid handshaking as a greeting.
- Allow high-risk students, faculty and staff to stay home.
- Allow staggered shifts, telecommuting or distance learning, when possible.
- Limit non-essential gatherings, e.g., meetings, social events, sporting events, extra-curricular activities.
- Limit use of public spaces, e.g., libraries, cafeterias, computer labs.

- Limit non-essential travel.
- Cancel classes and other campus activities.
  (Note: college / university classes and other school-based activities may need to be cancelled for up to 4 weeks during a moderate or up to 12 weeks during a severe pandemic. See Section VI, F on reduced operations and campus closure.

Recommendation: ***As pandemic severity increases, colleges and universities should explore innovative methods for increasing social distances while continuing to meet their educational goals.***

Possible options to increase the amount of space between students include moving desks farther apart, leaving vacant seats between students, holding classes outdoors, and using distance learning methods. At a higher level of severity, colleges and universities may consider whether to suspend or modify public events such as lectures, films, concerts, sporting events, worship services and commencement or baccalaureate ceremonies. Colleges and universities should also discourage large gatherings that are not sponsored by the institution, such as fraternity parties and tailgate parties.

Infection Control Considerations for College/University Workplaces and Student Health Services

During a pandemic, the risk of being exposed to flu while at work can vary for employees. The level of risk can vary from very high, high, medium, or lower (caution) risk, and it depends on:

- Whether or not the job requires close proximity to people who are sick with the flu.
- Whether or not the employee is required to have repeated or extended contact with other possible sources of flu virus, such as the general public, school children, or other groups of people.
- The underlying medical conditions of the employee

To help employers determine appropriate work practices and precautions, the Occupational Safety and Health Administration (OSHA) has divided workplaces and work operations into four risk zones, according to the likelihood of employees' occupational exposure to pandemic influenza. A summary is presented in Table 2 and more information is at http://www.osha.gov/Publications/influenza_pandemic.html.

Table 2. Classification of Risk of Exposure to Pandemic Influenza in the Workplace
Source: Occupational Safety and Health Administration, "Guidance on Preparing Workplaces for an Influenza Pandemic".

Level of Occupational Risk	Definition	Examples
Very High Risk	High potential exposure to high concentrations of known or suspected sources of pandemic influenza during specific medical or laboratory procedures.	• Healthcare employees (e.g., doctors, nurses, dentists) performing aerosol-generating procedures on known or suspected pandemic patients (e.g., cough induction procedures, bronchoscopies, some dental procedures, or invasive specimen collection). • Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients (for

		example, manipulating cultures from known or suspected pandemic influenza patients).
High Risk	Jobs with high potential for exposure to known or suspected sources of pandemic influenza virus.	• Healthcare delivery and support staff exposed to known or suspected pandemic patients (e.g., doctors, nurses, and other hospital staff that must enter patients' rooms). • Medical transport of known or suspected pandemic patients in enclosed vehicles (for example, emergency medical technicians). • Performing autopsies on known or suspected pandemic patients (for example, morgue and mortuary employees).
Medium Risk	Jobs that require frequent, close contact (within 6 feet) exposures to known or suspected sources of pandemic influenza virus such as coworkers, the general public, outpatients, school children or other such individuals or groups.	• Employees with high-frequency contact with the general population (such as schools, high population density work environments, and some high volume retail).
Lower Risk (Caution)	Occupations are those that do not require contact with people known to be infected with the pandemic virus, nor frequent close contact (within 6 feet) with the public. Even at lower risk levels, however, employers should be cautious and develop plans to minimize employee infections.	• Employees who have minimal occupational contact with the general public and other coworkers (e.g., office employees).
Lower Risk (Caution)	Occupations are those that do not require contact with people known to be infected with the pandemic virus, nor frequent close contact (within 6 feet) with the public. Even at lower risk levels, however, employers should be cautious and develop plans to minimize employee infections.	• Employees who have minimal occupational contact with the general public and other coworkers (e.g., office employees).

How to Protect Employees in College/University Workplaces and Student Health Services

Occupational safety and health professional have defined a framework, called the "hierarchy of controls," that lists the methods that mitigate employees' risk of exposure to pandemic influenza in the workplace. The hierarchy of controls emphasizes intervention strategies that remove hazards from the workplace, rather than simply relying on employees to reduce their exposure. Colleges and universities should evaluate individual workplaces and choose the most appropriate combination of strategies for employees. The following is a description of each type of control: [8]

1. **WORK PRACTICE CONTROLS** - procedures for safe and proper work that are used to reduce the duration, frequency or intensity of exposure to a hazard.
    - In all workplace settings:
        - Educate employees about protective behaviors and hygiene habits (e.g., cough etiquette).
        - Ensure the work environment promotes personal hygiene. E.g., provide tissues, no-touch trash cans, hand soap, hand sanitizer, disinfectants and disposable towels to clean work surfaces. Post signs with instructions on

infection control measures (hand washing, cough and sneeze etiquette) at building entrances and in waiting rooms and common areas.
    - Promote or provide the seasonal and pandemic flu vaccine, if available.
- In student health services and campus healthcare settings:
    - Take steps to minimize outpatient visits for patients with mild influenza like illness who do not have risk factors for complications.
    - Postpone elective visits by patients with suspected or confirmed influenza until they are no longer infectious.
    - Deny entry to visitors who are sick.
    - Provide patients with educational materials on infection control measures.

2. **ENGINEERING CONTROLS** - making changes to the work environment to reduce work-related hazards.
    - In all workplace settings:
        - Install barrier protections, such as sneeze guards, between people or over food serving stations.
        - Install a drive-through window or glass partition window for customer service.
    - In student health services and campus healthcare settings:
        - Install partitions in triage areas and other public spaces to reduce exposures by shielding personnel and other patients.
        - Use closed suctioning systems for airways suction in intubated patients.
        - Use negative pressure ventilation rooms for aerosol generating procedures.
3. **ADMINISTRATIVE CONTROLS** - controlling employees' exposure by scheduling their work tasks in ways that minimize their exposure levels.
    - In all workplace settings:
        - Enforce exclusion of ill personnel.
        - When possible, encourage practices that minimize face-to-face contact between employees, such as e-mail, websites and teleconferences.
        - When possible, encourage flexible work arrangements such as telecommuting or flexible work hours to reduce the number of your employees who must be at work at one time or in one specific location.
    - In student health services and campus healthcare settings:
        - Manage patient flow; set up triage stations and separate areas for patients who visit emergency departments with influenza like illness; and assign dedicated staff to minimize the number of healthcare personnel exposed to those with suspected or confirmed influenza.
        - Separate patients with symptoms of influenza like illness from other patients in waiting rooms and patient care rooms.
4. **PPE** - personal protective equipment.
    - In all workplace settings where use of PPE is applicable:

    - PPE is a last line of defense for personnel against hazards that cannot otherwise be eliminated or controlled.
    - PPE must be selected based upon the hazard to the employee.
    - PPE is effective only if used throughout potential exposure periods.
    - PPE must be properly fitted and some must be periodically refitted (e.g., respirators).
    - PPE must be regularly maintained and replaced as necessary.
    - PPE must be properly removed and disposed of to avoid contamination of self, others or the environment.
- In student health services and campus healthcare settings:
    - When performing high-risk aerosol-generating procedures, staff must use particulate respirators (N95 or FFP2 equivalent), eye protection, gown and gloves. Procedures must be conducted in an airborne precaution room that is naturally or mechanically ventilated.
    - Request that patients with symptoms of influenza like illness wear a surgical mask while in common areas or when being transported.

Additional information specific to healthcare providers and infection control is available on:

- The PDPH Health Information Portal, https://hip.phila.gov.
- The health professional planning webpage on Flu.gov http://www.flu.gov/professional/hospital/index.html.
- The DHHS websites http://www.hhs.gov/pandemicflu/plan/sup4.html#s4-IV and http://www.flu.gov/professional/hospital/infectioncontrolguidance.html.
- OSHA Guidance on Preparing Workplaces for an Influenza Pandemic http://www.osha.gov/Publications/influenza_pandemic.html.

Recommendation: ***Identify possible exposure and health risks to employees in various university/college workplace settings, including campus healthcare settings. Implement the hierarchy of controls (methods that mitigate employees' risk of exposure to pandemic influenza in the workplace).***

Environmental Cleaning

Pandemic flu viruses spread the same way as seasonal flu viruses. One way flu virus may be spread is when a person touches an environmental surface (e.g., doorknob, desktop or other surface) that has been recently contaminated by contact with a sick person.

Recommendation: ***Student health services should coordinate with environmental services staff to ensure effective cleaning methods are used to help limit the spread of the flu virus.***

During an influenza outbreak, these environmental cleaning steps will help limit the spread of flu virus:

- Use regular soap and water to clean surfaces and then follow by disinfecting.

- Disinfect surfaces with a common disinfectant (e.g., bleach or ammonia based cleaning products). Or use another EPA-registered disinfectant in accordance with the manufacturer's instructions. A list of all registered disinfectants can be found at: http://www.epa.gov/oppad001/influenza-disinfectants.html.
- Clean surfaces that are visibly contaminated with potentially infectious materials (respiratory secretions, vomit).
- Clean commonly touched surfaces, such as:
  - Doorknobs or handles.
  - Hand rails.
  - Elevator buttons.
  - Shared computer keyboards and mice.
  - Shared counters or desks.
  - Shared telephones, headphones and remote controls.
  - Sink faucet handles and hand contact areas of drinking fountains.
  - Chairs, desks, study carrels.

Recommendation: ***Provide disposable wipes so that students, faculty and staff may wipe down commonly-used surfaces before each use.***

Recommendation: ***Encourage students to frequently clean their living quarters.***

5. Vaccine

It is important to clarify the difference between the seasonal flu vaccine and a pandemic strain vaccine. The seasonal flu vaccine protects against the three seasonal flu viruses that research suggests will be the most common that year. However, a vaccine that is effective for a new flu strain will not be available in the early weeks and months of a pandemic. It takes about six months from the time that pandemic flu strain is identified to manufacture and make vaccine available. Then, two doses of vaccine may be required for full protective immunity. For the fall of 2009, there is a seasonal flu vaccine and a vaccine to protect against the 2009 H1N1 influenza ("swine flu") virus.

A flu vaccine is the best way to prevent people from getting and spreading the flu virus.

Recommendation: ***Encourage students, faculty and staff to get the seasonal flu vaccine and the pandemic flu strain vaccine, once it becomes available.***

Vaccine Availability and Prioritization During a Pandemic

It is expected that an effective vaccine will not be available during the initial weeks to months of a pandemic. Then, the vaccine will be in limited supply. Therefore, vaccine will be prioritized for certain groups of individuals until production is at full capacity and vaccine is fully available for everyone.

During a pandemic, the CDC, National Vaccine Advisory Committee and the Advisory Committee on Immunization Practices will recommend how to prioritize the American population for vaccine. The priority levels will likely be based on most susceptible populations occupational risk and role in sustaining essential community operations. As pandemic severity increases, this allocation strategy may shift limited vaccine supply away from populations more likely to suffer increased morbidity and mortality and to groups more likely to be involved in managing the pandemic. In addition, during a pandemic, changes may be made based on the characteristics of the pandemic flu virus (e.g., transmissibility, virulence, initial geographic distribution, age-specific attack rates, complication rates) and on vaccine effectiveness. The rationale for this approach is that, in a severe pandemic, sustaining critical public services (law enforcement, health care, water and essential utilities) will minimize adverse outcomes and economic disruption. If there are students at the college / university who require vaccination to continue clinical rotations this information should be conveyed to state and local health departments so that vaccine, if available, is provided if this population is identified as a priority.

PDPH will provide more information about availability and prioritization of vaccine. For updates, check the Philadelphia Health Information Portal at http://hip.phila.gov. For more information on who is prioritized to receive 2009 H1N1 flu vaccine, please visit http://www.cdc.gov/h1n1flu/vaccination/acip.htm.

Pandemic Vaccine Registry

Recommendation: ***Occupational health or student health services should develop a vaccination registry to track all vaccinations given to school personnel and students.***

The registry should record names, contact information and any adverse reactions experienced by people who receive the vaccine. If sufficient vaccine is available, colleges and universities should plan to hold mass vaccination clinics for the school community and require that vaccination be a requirement in order to return to campus.

6. Antiviral Medication

An antiviral drug is a prescription medicine (in pills, liquid or an inhaled powder) that decreases the ability of flu viruses to reproduce, so it makes the illness milder and shortens the amount of time a person is sick. It may also help prevent serious complications caused by the flu. Antiviral medication works best when treatment is started within the first two days of flu symptoms. It is important to note that antiviral medications do not substitute for the seasonal or pandemic flu vaccine, but can be used as a secondary option to help protect against or treat the flu.[9]

Antiviral medication may be especially beneficial for:

- Pregnant women
- Patients with progressing disease or pneumonia
- Patients with underlying conditions

More information is at http://www.flu.gov/individualfamily/prevention/medicine/index.html.

Efficacy of Antiviral Medications

There are four influenza antiviral drugs:

- Oseltamivir (brand name Tamiflu®)
- Zanamivir (brand name Relenza®)
- Amantadine (Symmetrel®, generic)
- Rimantadine (Flumadine®, generic)

Oseltamivir (Tamiflu®) and zanamivir (Relenza®) have shown to be effective in treating the 2009 H1N1 flu. In addition, a fifth antiviral drug, Peramivir IV, has been authorized under an Emergency Use Authorization (EUA) to treat certain patients with suspected or confirmed 2009 H1N1 influenza virus infection.

It is uncertain if any of the antiviral medications that are currently FDA approved for the treatment and prophylaxis of influenza will be effective against the next human pandemic flu strain.

Use of Antiviral Medications for Treatment

For treatment, influenza antiviral drugs work best when started within two days after a person becomes sick, however hospitalized patients might benefit from treatment started more than 48 hours after symptoms begin. The guidelines about how and when clinicians should prescribe antiviral treatment can vary based on many factors, such as what is indicated in an Emergency Use Authorization (EUA) and which population groups are at higher risk for complications caused by influenza illness. These guidelines will be specific to the pandemic event. Current recommendations for 2009-10 are at: http://www.flu.gov/individualfamily/prevention/medicine/antiviralsrecommend.html.

Recommendation: ***Maintain a small supply of antiviral medications for targeted prophylactic use and treatment of selected faculty and staff, as appropriate.***

Recommendation: ***Student health services staff that may diagnose cases of pandemic influenza should be prepared to give an antiviral treatment course and the patient has severe, complicated or progressive illness. (See current recommendations for the use of antiviral medications:***
http://www.flu.gov/individualfamily/prevention/medicine/antiviralsrecommend.html.)

Use of Antiviral Medications for Pre-exposure Prophylaxis

Influenza antiviral drugs also can be used to prevent influenza when they are given to a person who is not ill, but who has been or may be near a person with influenza. When used to prevent the flu, antiviral drugs are about 70% to 90% effective against susceptible viruses (i.e., viruses that are not resistant to the antiviral medication). Persons at risk for developing severe complications of influenza may be candidates for chemoprophylaxis.

Outbreak prophylaxis for a moderate or severe pandemic (provision of antiviral medication for the pandemic duration / up to 12 weeks) has received consideration by CDC for certain individuals who may have repeated exposures to flu virus during a moderate or severe pandemic. This includes healthcare workers with OSHA defined high-risk exposure and may apply to staff working in student health services as transmission increases in the college community. Also essential personnel (people who are critical for the maintenance of operations) should receive consideration for outbreak prophylaxis. Note: this was not warranted or considered for the 2009 H1N1 flu pandemic.

Use of Antiviral Medications for Post-exposure Prophylaxis

During a moderate or severe pandemic, contacts of cases may receive a 10-day course of antiviral prophylaxis in addition to voluntary confinement (i.e., the person should stay away from others and away from community settings). Student health services staff, and staff in other medium risk settings (cafeteria worker, cashier), and students may also be exposed to suspect or confirmed cases of novel influenza, if school closure has not occurred. These people should be evaluated on a case-by-case basis (with priority given to people with risk factors for complications or severe illness) and provided with one course of antiviral prophylaxis, if warranted.

Availability and Prioritization of Antiviral Medications

In general, the priority use for antiviral drugs is treatment over prophylaxis, i.e.:

- Treatment for people who are very sick (hospitalized).
- Treatment for people who are sick with flu-like symptoms and who are at increased risk of serious flu complications, such as pregnant women, young children, people 65 and older and people with chronic health conditions. (Note: most people are able to recover at home from the seasonal flu and the 2009 H1N1 flu without needing medical care.)
- Prophylaxis for people who are at high risk of serious flu complications.
- Prophylaxis for people who work in settings where exposure to pandemic flu is likely.

E. Travel Associated Issues

Travel during an influenza pandemic has the potential to pose a significant health threat to the traveler and to the community to which the traveler returns, especially if the pandemic virus is circulating outside the United States before transmission has spread to the United States. Colleges and universities frequently sponsor international travel for students and faculty and host visiting students and faculty as part of their academic and research endeavors, so it is important to be vigilant to travel related issues as they arise.

The following are strategies that colleges and universities may implement to prevent travel-associated illness. More information about travel during a pandemic is available at http://www.pandemicflu.gov/individualfamily/travelers/index.html.

– PLANNING PHASE – Recommendations for before a pandemic begins–

- Continuously assess the flu situation in countries where there are students in your study abroad/research programs.
- Review policies for study abroad/research programs, including:
    - How students can access health services abroad.
    - How illness will be reported back to the college / university.
    - What resources are available for students abroad who are unable to travel back to the U.S.
    - What health documentation travelers may need as they pass through customs (e.g., proof of vaccination or perhaps proof of illness and recovery).
    - Any legal or liability issues.

– RESPONSE PHASE – Recommendations for all pandemic severity levels –

- Maintain a database of all reported student, faculty and staff travel, especially noting travel to high-risk areas. (A high-risk area is one where a human or animal influenza outbreak is present and contact is possible.)
- Educate travelers about potential exposure, high-risk activities and risk-reduction measures prior to departure.
- Offer the seasonal influenza vaccine and pandemic-strain vaccine (if available) prior to travel.
- Remind travelers that if they have flu-like symptoms (such as fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and/or fatigue), they **should not** travel.
- Remind travelers that when a pandemic influenza virus is circulating, the airport staff in the United States and many other countries may screen arriving passengers for symptoms of flu-like illness. When entry screening is conducted, travelers may be checked for fever and other symptoms, and this may result in travel delays. Travelers may visit the website of the U.S. embassy, consulate or diplomatic mission (http://www.usembassy.gov/) for more information about screening procedures in foreign countries.
- Communicate with parents of students who are participating in study abroad/research programs sponsored by the institution. Encourage parents to advise their child to use good judgment and to take precautions against getting the flu in the country where they are studying and living, as well as in any countries to which they may travel.
- **All travelers** should receive:
    - A fact sheet on travel-associated illness, including:
        - The symptoms of flu.
        - How to avoid getting and spreading the flu.
    - A self-screening tool to complete upon return to the U.S., including:
        - Questions about the type and frequency of possible exposure to influenza viruses during travel.
        - Questions that prompt the traveler to check daily for any symptoms of flu-like illness (body temperature of greater than 100.4° **and** cough, sore throat or respiratory distress).

(Student health services should track travelers' responses in the travel database.)

- Travelers who did not visit a high-risk area, did not have any recognized contact with influenza, and do not have any symptoms of flu-like illness upon return should:
    - Use the self-screening tool to monitor for symptoms of flu-like illness for a minimum of 10 days. Any symptoms should prompt the traveler to seek medical evaluation immediately, being sure to inform the healthcare provider about recent travel.
- Travelers who visited a high-risk area, may have had contact with a novel strain of influenza, and/or have symptoms of flu-like illness should:
    - Seek medical evaluation. (If abroad, the U.S. embassy or consulate can provide names and addresses of local physicians.)
    - Wear a surgical mask to prevent exposing others.
    - Inform the healthcare provider of the following before visiting the healthcare setting: the symptoms, the areas of travel, and when a possible exposure to the novel influenza strain may have occurred.
- The local health department should be notified of all probable or confirmed cases of pandemic influenza. Consult the local health department on appropriate measures for isolation, contact identification and quarantine.
- When possible, individuals who were exposed to influenza but appear to be healthy (do not have symptoms of flu-like illness) should delay entry into congregate classroom and dormitory settings for a minimum of 5-7 days after exposure.
- Adopt CDC travel recommendations (www.cdc.gov/travel) and be able to support voluntary and mandatory movement restrictions, such as:
    - Restricting travel to and from affected domestic and international areas.
    - Recalling students and faculty on nonessential work or study travel in or near an affected area.
    - Distributing health information to people who are returning from affected areas.
- In a mild or moderate pandemic, consider restricting all travel that is determined to be non-essential. During a severe pandemic, cancel all school-sponsored travel.

– RECOVERY PHASE – Recommendations for a pandemic recovery period –

- Maintain regular communication with public health authorities for ongoing situational awareness regarding subsequent waves and changes to travel advisories.
- Consider resuming school-sponsored travel, depending on current travel advisories and precautions.

F. Reduced Operations and Campus Closure

The CDC will work with state and local health departments to continue to assess the severity of illness caused by pandemic influenza. Depending on the severity indicated by global, national, or regional risk assessments, CDC may recommend further strategies to control disease transmission (in addition to all listed above), such as reducing campus operations, suspending classes or closing campus.

Feasibility and acceptability of disease control strategies will vary, as some are likely to be more difficult to implement and have more disruptive effects than previously described strategies. Staff at local colleges and universities have expressed the belief that it will be extremely difficult for their institutions to care for large numbers of ill students, to isolate and confine students in dormitories, and that parents may insist early on that students return home (particularly if there is a high degree of fear about a potentially severe pandemic). Therefore, colleges and universities may expect a demand to reduce campus operations, even before authorities have implemented social distancing. Colleges and universities may choose to suspend classes or close dorms prior to official decisions made by CDC or PDPH.

In making decisions regarding the cancellation of classes and campus activities or campus closure, colleges and universities may consider the following factors:

- Campus morbidity (evidenced by absenteeism, faculty and staff using higher amounts of sick leave / personal leave, large number of people visiting student health services for influenza like illness).
- Public health surveillance data from local, state and national sources.
- Input from local, state and national health authorities.
- Input from parents and other stakeholders.
- Status of infrastructure (e.g., transportation, food, campus security, utilities).

Recommendation: ***College/university administration should balance the risks of morbidity caused by influenza in the community with the disruption caused by canceling classes and interrupting campus activities.***

Recommendation: ***Consult with the local health department, other appropriate emergency management agencies, and other local colleges and universities in order to establish a shared regional perspective and communicate consistent messages to local populations.***

Recommendation: ***Use clear messages and multiple channels to communicate about campus closure, the reasons for doing so, and the implications for students, faculty, staff and the community. (See section IV, B on communication.)***

– PLANNING PHASE - Recommendations for before a pandemic begins–

- Identify students who will be unable to return home in the event of campus closure (e.g., international students). Develop alternative plans for these students (e.g., coordinate with local area families to take in students; encourage students to identify a friend to stay with).
- Identify residential facilities to house students who will be unable to leave campus and ensure isolation would be possible if they become ill.

– RESPONSE PHASE - Recommendations for all pandemic severity levels –

- Consider suspending campus activities.
    - Although much of the attention to date has focused on the decision to close campus, colleges and universities should first consider other social distancing

strategies, such as canceling selected activities or reducing operations, before needing to close campus completely. The recommendations listed below can be implemented gradually as pandemic severity increases and are meant to be used in addition to the disease control measures previously described in section IV, D and E.
    - Suspending classes is likely to be most effective in decreasing the spread of influenza virus in the community when used early (in relation to appearance of the virus in the community) and when used in conjunction with other strategies. In a mild to moderate pandemic, CDC may recommend a temporary closure of up to four weeks. However, colleges and universities should prepare for the possibility of a more prolonged closure (of up to 12 weeks) in a severe pandemic.
- Cancel study abroad programs, travel for sports tournaments, and other travel to countries where pandemic influenza is endemic.
- Cancel mass assemblies and public gatherings, such as:
    - Rallies.
    - Extra-curricular activities.
    - Theater and music performances.
    - Campus parties (such as fraternity or club-sponsored).
    - Sporting events and tailgate parties.
- Cancel courses held in large lecture halls (or conduct via web cast instead).
- Restrict the use of public spaces, such as libraries, cafeterias and computer labs.
- Cancel all classes that meet face-to-face.
    - Consider suspending classes temporarily if an increase in community-wide transmission occurs shortly before vaccine-induced immunity is anticipated, or before a scheduled break.
    - Consider distance learning or other alternatives to face-to-face classroom education.
- Consider whether to allow faculty and staff to continue to use facilities while classes are not being held. This may allow faculty to develop lessons and materials, to continue teaching through distance learning methods, to advise students over phone and e-mail, and to engage in other essential activities, such as research projects. However, it is important that faculty and staff do so while practicing other social distancing and infection control strategies described in section IV, D.
- Evacuate dormitories and on-campus residences.
    - When possible, dismiss students, faculty and staff who can drive home or go to a nearby home of a relative, close friend or other host home.
    - Communicate to students what belongings they should remove from the dormitory upon evacuation of campus.
    - Students leaving the college/university should be instructed to limit contact with others as much as possible. For example, travel by private car or taxi would be preferable over use of public transportation.
    - International students and others who do not have access to alternative housing should stay on campus but increase the distance between people to minimize crowding and decrease the likelihood of influenza transmission. For example, if

multiple roommates remain on campus, one might move to a separate, now-vacant room for this time period.

- Close campus (full shut down, including faculty and staff, dismissal of students from classes, evacuation of students living in campus residential facilities, and suspension of research activities).
    - Complete closing of campus is not possible or desirable for most colleges and universities and is unlikely to be recommended. However, it is important that colleges and universities plan for periods of closure, including ways to care for animals and maintain critical research activities while minimizing contact between people.

<u>Recommendation:</u> Anticipate and plan for interruptions in college/university operations and academic curriculum.

As a result of a pandemic, college/university administration should anticipate interruptions, such as:

- Student absenteeism (prior to classes being canceled).
- Interruptions of academic curriculum, including canceled classes, missed or cancelled exams and assignments.
- Disruption of research activities.
- Rescheduled standardized tests.
- Delayed degree completion/ graduation or commencements ceremonies.
- Delayed tuition and financial aid payments.
- Disruption of admissions procedures.

To prepare for and help mitigate interruptions, colleges and universities may consider the following:

- Develop relaxed absenteeism policies for a moderate or severe pandemic. State policies in course syllabi so students are aware in advance.
- Develop policies for mandatory sick leave for students, faculty and staff so that people who are sick are required to stay home.
- Develop distance learning strategies using alternative methods (e.g., e-mail, conference calls, web-based streaming video, learning modules aired on local cable television channels, pre-assigned readings and papers, etc.)
- Consider options for a flexible academic calendar. Depending on the timing of the pandemic, colleges and universities may modify the school year, shift semesters to different timeframes, extend summer sessions, cancel breaks, intensify class schedules upon return (e.g., conduct evening or Saturday classes).
- Consider partial and full tuition reimbursement if classes are suspended early in the semester. Determine a threshold for reimbursement (i.e., reimburse if class suspension occurs within first three weeks of semester).

G. Campus Recovery and Pandemic Consequences

Decision to Reopen Campus / Resume Classes

The length of time classes should be suspended will vary depending on the reason for suspending classes, as well as the severity and extent of illness. If classes are suspended, CDC recommends doing so for a minimum of 5-7 calendar days. During a moderate or severe pandemic, colleges and universities may be closed for up to 12 weeks or longer, especially if multiple waves of illness occur. The decision to reopen or resume campus activities should be guided by public health authorities, but may also be informed by the other sources listed above (e.g., surveillance data, input from stakeholders, status of infrastructure). In addition, colleges and universities may want to consider the level of recovery among the campus population and the local availability of vaccine to prevent further illness.

Colleges and universities must also consider that subsequent waves of influenza activity are expected to occur during a pandemic. In 1918 there were three waves of influenza over an 18-month period. During the pandemic of 1957, a second wave of influenza activity occurred 3 months later, and during the pandemic of 1968, a second wave of influenza activity occurred 12 months later. In addition, the severity of the second and/or third waves of pandemic influenza can be more severe than the first wave of infection. Because of this, decisions to restart academic programs and reopen campus facilities must be well-informed and made cautiously so that subsequent waves of illness are mitigated.

Overall, the decision to reopen campus and resume classes can have profound consequences for both the school and the wider community. Recent studies that review the interventions used in the pandemic of 1918 suggest that prematurely relaxing containment measures (e.g., reopening colleges and universities) can reintroduce viral spread.[10],[11] Historical experience also suggests that reopening colleges and universities as soon as possible may seem to have psychological benefits for students, staff and faculty (i.e., return to normalcy) and financial benefits for institutions, but actually may lead to return of widespread transmission, as occurred in several U.S. cities in 1918. Thus, remaining closed for an extended period of weeks may prove to be the preferred public health strategy.

Continued Vigilance

After widespread transmission occurs, a pandemic will likely return to limited human to human spread and small clusters of illness within the community. During this period of reduced influenza activity, PDPH will continue to track the number of cases in the city and frequently communicate disease control recommendations. Colleges and universities should remain guarded in this post-widespread transmission phase. Colleges and universities should continue to monitor and notify PDPH of additional cases during this period.

Strategies for Reopening, Resuming Classes and Recovery

Colleges and universities should plan to reopen and resume classes with an incremental approach, which will allow for an easier transition to re-close institutions if a subsequent wave of flu activity occurs. PDPH will help guide the timing and extent of specific activities, such as these:

Administration

- Maintain communications with local public health authorities to follow course of pandemic and potential for the next wave of illness.
- Uphold school closure until local public health authority lifts closure recommendation.
- Prioritize programs and activities for incremental restart.
- Assess needs for reopening and support of students returning to campus (e.g. availability of critical supplies, food, faculty, essential staff, security, etc.).
- Implement plans to reconstitute workforce and restock critical supplies.
- Communicate with faculty, staff, students, and community regarding plans for reopening and modified school schedule.
- Address pandemic consequences (which may vary, depending on the severity and duration of the pandemic), e.g., loss of students, faculty and staff; financial losses; and operational disruptions.

Student Health Services

- Maintain communications with local public health authorities to follow course of pandemic and potential for the next wave of illness.
- Continue to report absenteeism of staff, students, faculty to local public health authorities.
- Ensure active surveillance systems and infection control measures remain in place for faculty, staff, and students.
- Retain protocols for exclusion of ill and exposed staff, faculty and students.
- Work to return to full behavioral health and counseling services.
- Update campus community about status of behavioral health and counseling services.
- Promote and administer pandemic vaccine for returning students, faculty and staff (pending public health recommendations and vaccine availability).

Environmental Safety

- Work with local health authority to determine environmental safety criteria for facilities (e.g., dorms used for isolation of cases, student health offices, campus public spaces).
- Conduct complete environmental cleaning of dormitories and public spaces, per recommendations by local health authority.
    - Emphasis should focus on frequently touched surfaces in high-traffic areas including elevator buttons, handrails, doorknobs, computer stations, telephones, etc.
    - Select EPA-registered disinfectants, if available, and use them in accordance with the manufacturer's instructions. See section IV, D, 4 on environmental cleaning.

Academic Programs

- Continue non-classroom based learning strategies for students (e.g., web based seminars, pre-assigned reading selections and assignments, homework by mail) until classes resume.
- Apply necessary changes to curriculum and educational programs and reset the academic calendar to resume teaching activities.

Debriefing

Recommendation: Conduct a debriefing with the pandemic response coordinator and the critical response team.

The college/university administrators and pandemic response coordinator should conduct a debriefing with the critical response team as soon as appropriate. Debriefing should include:

- A review of the response strategies implemented.
- Determining what further information needs to be collected.
- Evaluating the overall response process.
- Recommending improvements to the pandemic response plan and adjusting response strategies necessary for future waves of influenza activity.
- Developing one report for consistent communication with students, faculty, staff, community and stakeholders.

Evaluation

Recommendation: Conduct an after-action evaluation of the pandemic response. The evaluation should include amendments to the pandemic influenza response plan.

Colleges and universities should review and critique actions taken during recent pandemic wave. Then, make necessary adjustments/improvements in preparation to plan for subsequent waves of influenza.

Recommendation: Continue ongoing communications with students, faculty, staff, community and stakeholders on the current situation, possible future threats of pandemic activity, and appropriate response actions. (See section should IV, B on commuinication.)

H. Role in the Community Response

Depending on the type of institution (size, composition of student body, location within the city, affiliation with medical care / research centers, etc.), colleges and universities will likely have a role in the broader community response to pandemic influenza.

Recommendation: Coordinate with local government agencies (PDPH, emergency management, police, fire, etc.) to help maximize the support and resources dedicated to pandemic response and management.

The following are possible examples of the support and resources that may be requested of colleges and universities:

– PLANNING PHASE – Support and resources needed before a pandemic begins–

- Identify contacts within local government agencies (PDPH, emergency management, police, fire, etc.) who will coordinate pandemic response within the community.
- Participate in ongoing planning lead by the local public health agency.

- Establish relationships with nearby acute care facilities.
- Identify large campus venues that may be used for public health response during a pandemic (e.g., medication / vaccine dispensing centers, alternate acute care sites).
- Work with local and state health departments to consider and develop plans to host a medication or vaccine dispensing site on campus. (Note: it is best if plans are modifiable to address meningitis outbreaks, exercises, trainings, etc.)
- Encourage students, faculty and staff to register with local volunteer-based organization, such as the Philadelphia Medical Reserve Corps at www.phila.gov/mrc or SERV-PA at www.serv.pa.gov.

– RESPONSE PHASE – Support and resources needed during a pandemic–

- Encourage students from health-related academic programs (medicine, nursing, veterinary, dental, pharmacy, public health, etc.) to volunteer to support the pandemic response. (The best way to coordinate a volunteer response is through the Philadelphia Medical Reserve Corps, www.phila.gov/mrc.)
- Work with the local health agency, local hospitals and medical centers to supplement services and support overflow of patients, as able.
- Host medication distribution centers in large campus facilities (e.g., gymnasiums, stadiums, auditoriums) to dispense medication or vaccine to campus population and the local public.
- Identify personnel and campus security to assist in medication distribution center operations.
- Provide supplemental housing (possibly using evacuated dormitories) for volunteers, hospital staff of nearby medical centers, and first responders who are working under quarantine.
- Assist the local health agency to communicate health messages to the local community.

V. Testing and Revising Plans

Pandemic preparedness and response plans should be reviewed, tested and revised according to the feedback collected, just like any emergency operations plan. Pandemic plans often have limitations that institutions should be aware of and try to overcome, such as:

- Plan only focuses on the recognition and containment of one possible pandemic influenza strain (e.g., 2009 H1N1 "swine flu" strain), without considering other sources of novel strains.
- Plan lacks estimates or calculations of demand during the pandemic.
- Plans lack the protocols to meet surge capacity.
- Plans lack the details of how pandemic mitigation strategies will be implemented.
- Plans lack operational details.
- Responsible personnel lack familiarity with plan.

To avoid gaps in planning, colleges and universities should:

- Regularly revisit checklists and planning guides offered by local, state and federal government sources.
- Conduct tests, such as a tabletop exercise, drill, or other simulation to identify gaps.
- Participate in exercises held by the local community or government agencies.
- Specify the timeframe and responsible personnel tasked to regularly revise the plan and address gaps or changing circumstances.

Finally, it is important that college and university personnel share what they have learned from developing and revising the pandemic plan with other institutions to improve community response efforts.

Appendix 1 - Recommendations

- Administrators are encouraged to maintain situational awareness of the pandemic and communication with state and local public health agencies to be prepared to implement appropriate control measures.
- Identify a pandemic coordinator with defined roles and responsibilities for preparedness, response, and recovery planning.
- Ensure that the pandemic influenza plan addresses both strategic and operational goals, and outlines specific activities, timelines, desired outcomes, staffing and resource requirements, and performance measures.
- Ensure that the pandemic influenza plan is a subset of and consistent with the existing college/university emergency operations plan, and the plan is coordinated with the city/community health department and state higher education agency.
- Tailor plans to specific campus community. When developing or revising a plan, ensure there is representation from administration officials, faculty and staff, and students. This will allow the plan to be more realistic for implementing on the campus.
- Identify and plan to activate a critical response team, a cadre of key personnel representing all relevant departments and services, who will be needed to manage the pandemic response.
- Ensure that a pre-designated location on campus can serve as an emergency command center.
- Work with state and local public health and other local emergency management authorities to identify legal authority, decision makers, trigger points, and thresholds to implement strategic response actions. (A list of local public health agencies is included in Appendix 3.)
- Plan for a wide range of possible pandemic issues that may affect college/university functioning.
    - Consider different outbreak scenarios, including:
        - Variations in severity of illness.
        - Variations in the mode of transmission.
        - Variations in rates of infection in the community.
        - At-risk or vulnerable populations more heavily affected, likely to suffer more severe outcomes.
    - Consider use of different containment strategies, such as:
        - The need to cancel classes, sporting events or other public events.
        - The need to close campus, student housing or public transportation.
        - The need to use student housing for quarantine of exposed or ill students.
        - The need to temporarily relocate students, e.g., ill students, students at high risk for severe illness if they become sick, etc.
    - Consider the need for contingency plans for:

        - Students who depend on student housing and food services (e.g., international students who live too far away to travel home).
        - Maintaining research laboratories, particularly those using animals.
    - Consider the need to stockpile supplies, non-perishable food and equipment.
    - Consider the need to supplement healthcare, mental health and other social services to meet the needs of the college/university population during and after a pandemic.
- Develop a continuity of operations plan for maintaining the essential operations of the college/university including payroll; ongoing communication with employees, students and families; security; maintenance; housekeeping and food service for student housing.
- Stockpile supplies, equipment and non-perishable food that may be needed for the college/university to sustain operations during a pandemic.
- Tailor your pandemic influenza plan specific to your campus community. When developing or revising your plan, ensure there is representation from administration officials, faculty, staff and students.
- Educate the campus community on what is pandemic influenza, how to prevent disease transmission, and how the campus may be impacted during a pandemic.
- Ensure that the college/university has a well-developed crisis communication plan, which is fully integrated into the overall emergency response plan.
- Develop policies and strategies to provide and receive messages during a pandemic to all of the school's internal audiences.
- Develop (or obtain from CDC, state and local health department) messages for internal audiences in advance so they are ready to distribute at necessary times during a pandemic.
- Prepare to maintain ongoing communication with organizations, groups, and individuals outside the institution's formal structure.
- Review, and revise if necessary, all relevant human resources policies, including policies regarding exclusion, sick leave and absences.
- Assess employee payment policies, including hazard or bonus pay, for non-exempt or exempt workers who are required to continue working when campus operations are reduced (i.e., the critical response team and essential personnel).
- Consider opportunities to allow staff to telecommute, when possible, and the necessary mechanisms to support off-site employees.
- Encourage students, faculty and staff to develop personal preparedness plans for themselves and their families.
- Plan to offer psychosocial support services to students, faculty and staff, as needed during a pandemic, to help cope with the fear, exhaustion, stress, isolation and loss they may feel.
- Identify and review the college/university's legal responsibilities and authorities for executing infection control measures, including case identification, reporting information about ill students and employees, isolation, movement restriction, and provision of healthcare on campus.

- Student health services administration, along with college/university administration, should coordinate with the local health department for case management and disease control guidelines.
- Suspect and confirmed cases of pandemic influenza should be aggressively managed to minimize illness transmission in the region.
- Institutions that are not already affiliated with an academic medical center, should consider partnering with a local hospital to facilitate communication and transport of acutely ill people during a pandemic.
- All symptomatic cases should be isolated to prevent the illness from spreading to others.
- For those who cannot leave campus, and who do not have a private room, consider providing temporary, alternate housing where those who are ill can stay until 24 hours after they are free of fever.
- Establish a method for maintaining contact with students who are in self-isolation.
- Students should be instructed to promptly seek medical attention if they have a medical condition that places them at increased risk of influenza-related complications, are concerned about their illness, or develop severe symptoms.
- Provide guidance and health education that emphasizes hygiene, self-isolation and self-care to students, faculty and staff.
- Students, faculty and staff should be vigilant in identifying people who appear to be ill.
- Students, faculty and staff who may be at higher risk for complications caused by influenza should be encouraged to seek early treatment.
- Procure, store and provide sufficient and accessible infection prevention supplies (e.g., soap, alcohol-based hand sanitizer, tissues and receptacles for their disposal).
- When vaccine is available, encourage students, faculty and staff to get the annual influenza vaccine and the pandemic-strain vaccine.
- As pandemic severity increases, colleges and universities should explore innovative methods for increasing social distances while continuing to meet their educational goals.
- Identify possible exposure and health risks to employees in various university/college workplace settings, including campus healthcare settings. Implement the hierarchy of controls (methods that mitigate employees' risk of exposure to pandemic influenza in the workplace).
- Student health services should coordinate with environmental services staff to ensure effective cleaning methods are used to help limit the spread of the flu virus.
- Provide disposable wipes so that students, faculty and staff may wipe down commonly-used surfaces before each use.
- Encourage students to frequently clean their living quarters.
- Encourage students, faculty and staff to get the seasonal flu vaccine and the pandemic flu strain vaccine, once it becomes available.
- Occupational health or student health services should develop a vaccination registry to track all vaccinations given to school personnel and students.

- Maintain a small supply of antiviral medications for targeted prophylactic use and treatment of selected faculty and staff, as appropriate.
- Student health services staff that may diagnose cases of pandemic influenza should be prepared to give an antiviral treatment course and the patient has severe, complicated or progressive illness. (See current recommendations for the use of antiviral medications: http://www.flu.gov/individualfamily/prevention/medicine/antiviralsrecommend.html.)
- College/university administration should balance the risks of morbidity caused by influenza in the community with the disruption caused by canceling classes and interrupting campus activities.
- Consult with the local health department, other appropriate emergency management agencies, and other local colleges and universities in order to establish a shared regional perspective and communicate consistent messages to local populations.
- Use clear messages and multiple channels to communicate about campus closure, the reasons for doing so, and the implications for students, faculty, staff and the community.
- Anticipate and plan for interruptions in college/university operations and academic curriculum.
- Conduct a debriefing with the pandemic response coordinator and the critical response team.
- Conduct an after-action evaluation of the pandemic response. The evaluation should include amendments to the pandemic influenza response plan.
- Continue ongoing communications with students, faculty, staff, community and stakeholders on the current situation, possible future threats of pandemic activity, and appropriate response actions.
- Coordinate with local government agencies (PDPH, emergency management, police, fire, etc.) to help maximize the support and resources dedicated to pandemic response and management.

Appendix 2 - Glossary of Terms

Antiviral drug: A prescription medicine (in pills, liquid or inhaled powder) that decreases the ability of flu viruses to reproduce, so it makes the illness milder and shortens the amount of time a person is sick. For more information, visit: http://www.flu.gov/individualfamily/prevention/medicine/index.html.

ICS: The Incident Command System (ICS) is a set of principles that, although they are flexible and scalable, are used to standardize how incidents are managed. (An incident is defined as an occurrence, caused by human or natural phenomena, that requires response actions to prevent or minimize loss of life and/or damage to property and the environment). ICS allows people (even if from different agencies or who do not normally work together) to use a common framework and standard operation procedures to respond effectively and reduce potential for miscommunication.

Influenza (flu): The flu is a contagious respiratory illness caused by influenza viruses. It spreads from person to person and can cause mild to severe illness; and in some cases, can lead to death. Flu symptoms may include fever, coughing, sore throat, runny or stuffy nose, headaches, body aches, chills and fatigue. In 2009 H1N1 flu infection, vomiting and diarrhea may also occur. Different strains of flu exist.

> Seasonal flu: refers to the common flu viruses that cause outbreaks every year, usually from late fall to early spring. An average of 36,000 deaths occur from seasonal flu every year in the U.S.
>
> Pandemic flu: A flu pandemic is an outbreak of a new flu virus – one that the human population has little or no immunity to, that spreads easily from person to person and that could cause sickness and death in many people around the world.
>
> H1N1 (swine) flu: The H1N1 flu is a new influenza virus causing illness in people. It was first detected in people in the U.S. in April 2009. On June 11, 2009, the World Health Organization declared that a global pandemic of H1N1 flu is underway. More about H1N1 flu is at: http://www.flu.gov/individualfamily/about/h1n1/index.html
>
> H5N1 (bird) flu: H5N1 flu is an influenza A virus subtype that is highly contagious among birds. Rare human infections with the H5N1 (bird) flu virus have occurred. The majority of confirmed cases have occurred in Asia, Africa, the Pacific, Europe and the Near East. Currently, the United States has no confirmed human H5N1 (bird) flu infections, but H5N1 (bird) flu remains a serious concern with the potential to cause a deadly pandemic.

Isolation: Isolation means to separate an individual with an infectious illness from those who are healthy and have not been exposed to the contagion. Keeping sick people separated from others is a way to stop the spread of illness and protect healthy people from getting sick. Depending on the severity of the illness, people can be isolated in a separate room at home or in the hospital.

NIMS: The National Incident Management System (NIMS) is a framework that identifies steps for improved coordination of federal, state, local, and private industry preparedness and response to incidents. One of the key features of NIMS is ICS. NIMS was established in February 2003 by President George W. Bush as part of Homeland Security Presidential Directive 5 (HSPD-5) in response to attacks on September 11, 2001. Information on ICS and NIMS, including training opportunities, are at: http://www.fema.gov/emergency/nims/.

Quarantine: Quarantine is the physical separation of asymptomatic contacts (people who have been exposed to a contagious disease, but are not ill). Quarantine may be voluntary, done at home or done in another restricted area. Quarantine can be highly effective in protecting the public from disease.

Social distancing: Social distancing refers to the actions that increase space and decrease face-to-face contact between people. Keeping distance between people helps to prevent the spread of influenza viruses. Social distancing is one of the primary methods used to mitigate a flu pandemic and may include canceling large public gatherings and changing workplace environments.

Appendix 3 - List of Public Health Agencies

Pennsylvania Department of Health
Bureau of Epidemiology
Division of Infectious Disease Epidemiology
Health and Welfare Building Room 933
7th and Forster Street
Harrisburg, PA 17120
(717) 787-3350
www.health.state.pa.us

Bucks County
Bucks Country Health Department
1282 Almhouse Road; Bldg K, Room 100
Neshaminy, Manor Center
Doylestown, PA 18901
Phone: (215) 345-3344
Fax: (215) 340-8456
www.buckscounty.org/government/departments/HumanServices/HealthDepartment/index.aspx

Chester County
Chester County Health Department
601 Westtown Road, Suite 290
West Chester, PA 19380
Phone: (610) 334 –6625
Fax: (610) 344-5405
http://dsf.chesco.org/health/site/default.asp

Delaware County
Pennsylvania Department of Health, Southeast District Office
Reading State Office Building, Room 442,
625 Cherry Street, Reading, PA 19602
Phone: (610) 378-4352
Fax: (610) 378-4527
www.co.delaware.pa.us/intercommunity/

Montgomery County
Montgomery County Health Department
Montgomery County Human Services Center
1430 DeKalb Street
P. O. Box 311
Norristown, PA 19404-0311
Phone: (610) 278-5117
Fax: (610) 278-5167
http://health.montcopa.org/health/site/default.asp

Philadelphia County
Philadelphia Department of Public Health
Division of Disease Control
500 S. Broad Street
Philadelphia, PA 19146
Phone: (215) 685-6740
Fax: (215) 545-8362
www.phila.gov/health

To report a disease or condition in Philadelphia County:
All Philadelphia physicians, laboratories, school nurses, day care centers, nursing homes, hospitals, state institutions, or other locations providing health services are required by law to report notifiable diseases and conditions (view list at https://hip.phila.gov/xv/Portals/0/HIP/Disease_Reporting/PDPH%20Notifiable%20List%202005-seal.pdf) to PDPH. PDPH may also help facilitate diagnostic testing and assist with infection control and disease management. To report a disease or condition, please call 215-685-6748 during regular business hours, or fax a report to 215-545-8362. To report a public health emergency or a disease requiring immediate public health notification after business hours, please contact the Division of Disease Control on-call personnel at 215-686-4514 through Philadelphia City Hall.

Appendix 4 - Resources

PHILADELPHIA DEPARTMENT OF HEALTH www.phila.gov/health

- Health Information Portal – information for health care providers, including health education materials to distribute to the public
  http://hip.phila.gov

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES www.flu.gov
CENTERS FOR DISEASE CONTROL AND PREVENTION www.cdc.gov

- CDC Guidance for Responses to Influenza During the 2009-2010 Academic Year
  http://www.cdc.gov/h1n1flu/institutions/guidance/technical.htm
- Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States
  http://pandemicflu.gov/professional/community/commitigation.html
- H1N1 Flu (Swine Flu): Resources for Colleges and Universities, including communication toolkit
  http://www.cdc.gov/h1n1flu/institutions/
- Information on social media
  http://www.cdc.gov/socialmedia/index.html
- Information on human resources policies
  http://answers.flu.gov/categories/322

OTHER SOURCES

- Federal Emergency Management Agency training on ICS and NIMS
  http://www.fema.gov/emergency/nims
- Guidelines for Pandemic Planning by the American College Health Association
  http://www.acha.org/Publications/docs/Guidelines%20for%20Pandemic%20Planning_Jul2006.pdf

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[2] Which people are at highest risk for developing flu-related complications? Hhttp://answers.flu.gov/questions/4863H

[3] Updated Interim Recommendations for Obstetric Health Care Providers Related to Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009-2010 Season Hhttp://www.cdc.gov/h1n1flu/pregnancy/antiviral_messages.htmH

[4] Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. February 2007.

[5] Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. February 2007.

[6]March 1, 2006, MEMORANDUM FROM: Director, Office of National Security Coordination, Federal Emergency Management Agency, U.S. Department of Homeland Security. SUBJECT: Continuity of Operations (COOP) Pandemic Influenza Guidance.Hhttp://www.fema.gov/txt/government/coop/coop_influenza.txtH

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[8] OSHA Guidance on Preparing Workplaces for an Influenza Pandemic Hhttp://www.osha.gov/Publications/influenza_pandemic.htmlH

[9] Revised Recommendations for the Use of Influenza Antiviral Drugs. The Centers for Disease Control and Prevention. September 2009.

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