Pandemic Influenza Preparedness Resource Kit for Academic Institutions

"Resource Kit"

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■ Table of Contents

RESOURCE KIT EXECUTIVE SUMMARY

The Pandemic Influenza Preparedness Planning Resource Kit for Academic Institutions is a resource for institutions of higher learning to use when preparing for a public health emergency, specifically an influenza pandemic. Despite annual vaccinations, the United States faces a burden from seasonal influenza that results in approximately 36,000 deaths and 200,000 hospitalizations each year. A pandemic would result in significantly higher numbers of illness, hospitalizations, and mortalities than any regular influenza season.

After reviewing the resource kit, academic institutions requiring additional information for pandemic influenza planning should contact the Centers for Public Health Preparedness (CPHP) referral center through the network's website, http://www.asph.org/cphp/home.cfm.

The resource kit began with a University of Iowa outline in place as of September 2006, produced through an initial six-month development process. CPHP members from across the United States reviewed and extensively expanded that outline to include an introduction and guiding principles for each of the five categories of planning identified. Collaboration group members pooled their collective knowledge of pandemic influenza preparedness plans from other higher educational institutions, the White House plan, numerous Centers for Disease Control and Prevention documents, and state plans. The original Iowa version of the resource kit was presented at the National Preparedness Summit sponsored by the Centers for Disease Control and Prevention (CDC) and National Association of County and City Health Officials (NACCHO) in Washington, D.C., in February 2007.

The resource kit is composed of five categories. Four categories align with the "Colleges and Universities Pandemic Influenza Planning Checklist" released by the Centers for Disease Control and Prevention in March 2006. The five categories in this resource kit are compliance, coordination, and evaluation; continuity of operations; public health: surveillance, epidemiology, and disease control; health care services; and communications and consultation. The resource kit is intended to be flexible and adaptable for use by any academic institution. It is not intended to be a complete plan for institutions; rather, it is intended to present topics and issues to serve as a springboard for more in-depth discussions, analysis, and plan development to reflect the specific features of each institution.

An academic institution's plan, with guidance provided from the resource kit, should serve as the reference manual for a pandemic. An institution's pandemic influenza plan should be complementary to the institution's existing emergency management plan and in many instances will be an addendum to that broader plan. Through regular review and updates, a resource kit-based institutional plan should contain all the relevant components necessary to reduce the impact of interruptions caused by an influenza pandemic. Attachments containing telephone and address information should be updated at least twice per year.

Sensitive information, such as locations of stockpiled items or other information that is a potential security concern, should be included in the plan as an attachment with restricted access. These attachments should be secured by means that allow them to be readily accessible to authorized personnel needing such information. Paper copies of the attachments should be maintained by authorized personnel. Paper copies of the full pandemic plan and all emergency plans should also be available at work and at home, as appropriate, to provide guidance in the event of a power outage resulting in inability to access electronic files.

An academic institution's plan should contain procedures and mechanisms to maintain and safeguard academic institution assets and capabilities to ensure continuity of research, academic, and health missions stated in the charter of the institution. The plan should align with other plans at the local, state, and national

levels that are similarly committed to assuring the health of the public. As with any preparedness planning, the process is dynamic. The academic institution must remain vigilant and continuously update its plan based on the continuing and multijurisdictional work now underway to prepare our nation for a pandemic.

The preparedness cycle includes planning, training, exercise, and evaluation. A full commitment throughout the entire cycle is necessary to ensure a coordinated response to a public health emergency.

■ SECTION A: COMPLIANCE, COORDINATION, AND EVALUATION

I. Plan Authorization

List authorization for Plan.

II. Introduction: Applicability, Plan Organization, Purpose, Scope

The plan is composed of five sections or subcommittees. Section A is "Compliance, Coordination, and Evaluation." Section A within this resource kit is designed to be the overarching subcommittee that allocates assignments to the other sections and resolves disputes. Section A serves as the "eyes and ears" of the other sections to identify necessary response partners; sets forth the roles and responsibilities of academic institution personnel; and outlines activities that should occur as the academic institution advances through the World Health Organization Disease Progression Phases or equivalent at your institution. Section A ensures that the academic institution pandemic plan aligns with local, city, state, and national plans. Effective coordination will be crucial to ensure that all members of the academic institution are informed of roles and responsibilities of other agencies involved in pandemic preparedness and response. Section A requires knowledge and definition of the limits under which the academic institution can act. Section A reviews continuity of operations planning to identify individuals who must receive National Incident Management System (NIMS) training and determines the level of training appropriate for those individuals.

Members of the Section A subcommittee should work within the highest levels of the academic institution. These members should possess the utmost discretion while acting on behalf of the academic institution and must be intimately familiar with institution structure, function, and policy. In addition to monitoring and supporting general actions within each of the additional subcommittees, the Section A subcommittee receives questions and information to direct to other sections. This section also establishes a set of principles and assumptions upon which subsequent preparedness strategies are detailed.

Section B is "Continuity of Operations." This section is further broken down into four categories: academic, research, human resources, and facilities. The plan identifies activities that may be suspended in the event of a pandemic (e.g., classes, arts events, sports events, large public gatherings) and those that must continue, including some core functions of these equivalents at the academic institution: public safety, human resources (HR), facilities management, information technology services (ITS), and student health services (SHS). Continuity of operations planning may begin by charging core functions with outlining issues related to their units and establishing lines of succession.

Section C is "Public Health: Surveillance, Epidemiology, and Disease Control." Section C includes surveillance and gathering of epidemiology information (disease tracking and contact tracing) as well as notification of appropriate individuals and agencies. This section identifies priorities for inclusion in potential implementation of vaccine and antiviral drug distribution plans. Furthermore, Section C implements disease-control measures such as alerting providers to the need for personal protective equipment (PPE), aiding in planning for potential social distancing measures (e.g. quarantine, isolation, cancellation of gatherings/meetings), and limiting travel to or from areas with influenza activity. In the event of a pandemic, state and county or local public health officials should provide information to academic institution communications contacts for subsequent dissemination regarding disease risk and how to respond if symptoms occur, as well as provide daily and weekly

reports of influenza cases.

Section D is "Health Care Services." This section will vary significantly between academic institutions based on the health care resources that are part of the institution, and those that the institution works with under normal circumstances. This section of the plan is structured to ensure that the academic institution will be able to effectively direct its students, faculty, and staff to appropriate sites for screening, triage, treatment, and distribution of medications and vaccines, as well as provide for quarantine as necessary during an influenza pandemic.

Section E is "Communications and Consultation." All public information should be coordinated through and disseminated by the academic institution's public relations office or equivalent, with assistance from experts identified in the plan. Relevant audiences include faculty, staff, and students; parents; local media; local and regional communities; institutional governance boards; state officials; other higher education institutions in the state (and possibly region); and the general public. The plan recommends establishing a website on which to post the response plan and related resources, such as prevention and public health information; planning and confirming communications technologies to aid in communications efforts in the event of a reduced staff; creating contact lists for individuals in key communications roles; and making sure plans are in place for communicating with various external organizations.

III. Roles and Responsibilities

Many different response partners will be necessary for a public health emergency such as an influenza pandemic. Your academic institution should identify various partners and organizations that they may have extended contact with throughout a pandemic. In addition, determine roles and responsibilities for the following individuals and structures:
1. Academic Institution President/Provost (highest administrator at your institution)
2. Internal and External Notifications
3. Unified Command/Management System
   • Incident Command System (ICS)
   • National Incident Management System (NIMS)

IV. Principles upon which the Plan is Based

1. The Pandemic Influenza Preparedness Plan (i.e., the Plan) should be an addendum to the appropriate academic institution all-hazards emergency plan.

2. A public health emergency such as an influenza pandemic has a low to moderate probability of occurring. However, an influenza pandemic would be a high consequence event. This makes planning more challenging than for more conventional threats that, by comparison, are higher probability but lower consequence.

3. Pandemic influenza planning activities should serve as a catalyst for broader all-hazards emergency planning. Many of the activities underway to maximize pandemic influenza

preparedness and response will also enhance capabilities for other threats including but not limited to natural disasters, human errors and intentional terrorist acts.

4. Coordinated pandemic influenza planning must occur across the institution in:
   • All affiliated hospitals and clinics
   • All Branches of the campus
   • All Colleges within the academic institution
   • All Departments, Units and Offices

5. The Plan will utilize an organizational framework compatible with the National Incident Management System (NIMS) and the Hospital Incident Command System (HICS).

6. The Plan resource kit utilizes a phased approach to disease emergence referencing models developed by the World Health Organization (WHO), the United States Department of Homeland Security (DHS), the Centers for Disease Control and Prevention (CDC) and the Department of Health and Human Services (HHS). The phases are:
   • Alert/Standby: A virus with pandemic potential is present somewhere in the world (WHO Stages 1-3)
   • Limited Services: Effective transmission of a virus with pandemic potential from one person to another anywhere in the world (WHO Stage 4)
   • Full Services: Local effective transmission person to person (WHO Stage 5-6)
   • Recovery/Preparation for Next Wave: Dramatic reduction in new reported cases of illness

7. The Plan should be coordinated with State and Local Public Health and Emergency Management Officials.

8. The academic institution should have a plan to meet the contingencies of its missions in its charter, including continuity of operations as an employer, as an educational institution and as a health care provider, if applicable.

9. A comprehensive educational plan is necessary to educate students, faculty, staff, and their families about:
   • Individual responsibility to limit the spread of infection if they or their family members become ill
   • Nonpharmaceutical measures to limit infection, including social distancing
   • Preparedness planning at the academic institution, county, state, and federal levels

10. Academic institution enrollments result in varying numbers of persons being present across academic periods (semesters, quarters, trimesters, etc.). Planning must account for a public health emergency occurring when the largest number of individuals are present. Each institution should identify the categories and numbers of persons present on campus using definitions that are meaningful to the institution. The maximum numbers for each category should be documented in the plan.

V. Assumptions: Pandemic Influenza

It is important to understand that the diagnosis of Pandemic Influenza implies a virulent human outbreak of serious disease which can easily be spread from person to person. As of June 20, 2007 there is no Pandemic Influenza in the world. We do not know the characteristics of the orthomyxovirus which may eventually emerge and succeed at producing epidemic human to human spread, only that it has happened in the past and can be expected to occur again in the future. Pandemic Human Influenza A outbreaks occurred in 1874, 1889, 1900, 1918, 1957 and 1968. Recent outbreaks have been relatively benign.

The avian epidemic of H5N1 presently being carefully followed has produced some human cases, has a (human) mortality rate of around 67%, demonstrates some resistance to antiviral medications, and evolves rapidly. Circulating H5N1 is very different from the 1997 strain. While an unlucky point mutation drift could make it more readily transmissible between humans there is no reason to assume that a future human pandemic has a higher likelihood of deriving from this strain than from any one of the numerous alternatives.

Estimates, therefore, of pandemic influenza infectivity, sensitivity to antiviral medications, human mortality and other strain characteristics can only be offered as demonstrative examples and may not be relevant to the disease which actually emerges. A severe model on which we are well informed, and which forms the basis of much of our planning, was the 1918 "Spanish Flu" which started out with characteristics of easy human spread and relatively mild symptoms until it suddenly acquired the clinical severity which elevated mortality to 2% and resulted in many millions of deaths worldwide.

In the event of a pandemic influenza outbreak, public health research teams may be expected to rapidly investigate the viral characteristics and suggest effective control and therapeutics countermeasures which public health authorities and responsible medical officers will apply in formulating, coordinating and promulgating the epidemiological and clinical guidelines and standards upon which effective community and national response will be based.

Assumptions within this resource kit state the list of assumptions each academic institution needs to review and select only those assumptions that hold true for their institution. It is important that this occur so that the plan developed is based on the applicable and appropriate "best guesses" given a very dynamic situation.

1. A virus with pandemic potential anywhere represents a risk to populations everywhere.
2. An influenza pandemic may create several waves of acute health crises, with each wave lasting approximately three months.
3. An influenza pandemic might not follow traditional seasonal influenza patterns.
4. The academic institution may be expected to provide necessary health care services for faculty, staff, and students during a pandemic.
5. The academic institution would be considered a community and/or state asset in responding to a pandemic.
6. Vaccines may not be available for up to six months following the specific identification of the virus causing the pandemic.
7. Antivirals will be in limited supply throughout the pandemic.
8. Based on national CDC estimates during a severe pandemic:

- 35 percent of students, staff, and faculty will be ill
- 15 percent of students, staff, and faculty will require treatment
- 2 percent mortality rate

9. Health care workers and other essential service providers probably will encounter an attack rate similar to the general population.
10. Absenteeism may reach as high as 40 percent, due to personal illness, workers caring for an ill family member, or voluntary absenteeism due to concerns of contracting influenza.
11. Utilization of academic institution health care resources may be subject to a priority needs protocol set by state or federal authorities, raising security and ethical issues.
12. International and domestic travel may be restricted.
13. Social distancing strategies, including the imposition of quarantine and isolation, probably will be employed.
14. Personal protective equipment (PPE) will be in short supply but will be essential for those persons at increased risk of exposure to pandemic influenza.
15. Internal and external communications will need to be intensified and coordinated.
16. Services providing for fundamental human needs, such as food service, would be in short supply.
17. During each wave of contagion, there may be significant economic disruption, including inventory shortages, shipment delays, and reduced business activities.
18. There will be widespread circulation of conflicting information, misinformation, and rumors.
19. Most faculty and staff may remain on campus and in the community area for the duration of the pandemic.
20. Most faculty and staff may remain on campus and available for work unless authorities close the institution or require everyone to remain in their homes for a period of time (quarantine).
21. Most professional and graduate students will remain on campus or in the immediate community and will want to continue to work towards their degree.
22. Most undergraduate students will leave campus to return to their families.
23. Contagious employees will come to work—both asymptomatic and symptomatic—who feel compelled to work.
24. Closure of the campus may be a joint decision involving the academic institution and state and local health departments.
25. Closure of the campus by the academic institution or other authorities may have negative financial implications resulting in a refusal of insurance companies to pay claims.
26. After the first wave passes, resumption of normal activities in private and public sectors may be difficult. There will be grieving for deceased and concerns over the next pandemic wave (in the event that an effective vaccine is not available during or after the first wave).

VI. Outline of Activities with Corresponding WHO Disease Progression Phase

The WHO Disease Progression Phases provide information on the status of infectious agents with pandemic potential as applied to the worldwide community. Due to the fact that an outbreak may be localized and contained, and "ground zero" for the event may be anywhere in the world, it is advisable for academic institutions to have their own corresponding phases with specific activities to be accomplished.

VII. Concept of Operations

In cooperation with public health authorities, the academic institution may assist with the following:

1. Management of epidemiologic surveillance and response activities, including contact tracing and the selection and implementation of disease control and prevention measures, such as vaccine/pharmaceutical administration for prophylactic or treatment purposes.
2. Communication of information:
    •   Regarding prevention, treatment and control measures
    •   The local effects of a disease to students, staff and faculty, their families, health care providers, the media, and the general public.
3. Maintenance of health care and essential community functions during periods of high absenteeism.

VIII. Organizations and Responsibilities

The academic institution will perform the following functions as needed:

1. Establish provisions for notification
2. Develop and maintain this plan in collaboration with public health agencies
3. Identify resources (personnel, supplies, reference materials) to carry out an emergency vaccination or medication dispensing/administration clinic
4. Obtain information from neighboring jurisdictions as needed to develop and maintain this plan
5. Conduct emergency exercises
6. Coordinate, or arrange to provide, emergency-related training

Programs and offices with responsibilities under this plan will develop and maintain procedures for implementing this plan.

IX. Plan Development, Review and Maintenance

In order to test the operability of the plan, periodic exercises should be conducted. Exercises should be designed to identify gaps or conflicts in either internal or external preparedness or response activities. Following exercises, an after-action report should be generated to provide a written record of areas for improvement. The plan, as well as lists of contact information and inventories of critical equipment and supplies, should be reviewed and updated as necessary, not less than annually.

Those items that should be reviewed include, but are not limited to, the following:

1. Community notification and alerting lists, including 24/7 contact information for appropriate personnel
2. Inventories and/or identified sources of critical equipment, supplies, and other resources
3. Facility- and community-specific functions and procedures

The academic institution will appoint an official to be responsible for this plan who will utilize the following policies to review and maintain this plan:

1. It is the responsibility of the designated institutional official to coordinate the review and maintenance of this plan. Academic institution officials, departments, facilities, and others who have a role in emergency response under the plan should provide support.
2. The plan must be reviewed annually.
3. Contact information must be updated at least biannually.
4. Departments, agencies, and facilities that maintain sections and/or procedures that are a part of this plan should review the portions of the plan pertaining to their function on an annual basis.
5. The academic institution's designated official is responsible for maintaining a list of plan holders and ensuring that plan changes are disseminated in a timely manner.

■ SECTION B: CONTINUITY OF OPERATIONS

Introduction

The purpose of the continuity of operations section is to guide planners through the process of developing detailed plans for continuing the ongoing operation of key elements of the institution during an extended emergency. Detailed plans identify the set of tasks, the order of the tasks, and the responsible party for task accomplishment—in other words, specify what, by when, by whom. This section focuses on four essential functions of an academic institution—academic operations (students, programs of study, athletics, and extension services); research (infrastructure, sustaining existing research, and prioritizing research activities); human resources (assuring appropriate policies are developed, implementing the policies, and conflict adjudication); and facilities maintenance (classifying facilities, essential infrastructure, public safety, and cross-training of personnel). The guiding principles for each proposition may suggest alteration of the outline through the addition or contraction of topics as the principles are applied to a specific institution.

I.   Academic Continuity of Operations

Guiding Principles
- Continuity of operations ensures the preservation of student welfare by establishing policies regarding physical and virtual access to the institution and the provision of services such as housing, meal services, medical services, travel, travel assistance, financial aid, scholarships, and maintenance of immigration status.
- Continuity of operations ensures that the academic institution maintains its educational mission. Planners should consider alternative methods of study, including distance education, waivers and course substitutions, and altered standards of educational quality.
- Athletic programs are a major component of campus life and represent a major funding stream for many institutions. Planners should consider the triggers for canceling competitions and the subsequent financial impact that may have on the institution.
- Academic institutions may have academic programming that takes place off campus. Planners should consider what roles and responsibilities the institution should have in maintaining the welfare of students who study abroad or are completing internships and practicums as part of their academic requirements.

Content Outline
1. Student Welfare
    - Housing
    - Meals and meal services
    - Medical
    - Travel assistance
    - Financial aid
2. Continuity of Programs of Study
    - Distance education
    - Waivers and course substitutions
    - Altered standards of educational quality

3. Athletic Programs and Meets
4. Off-campus Educational Activities
   • Study abroad
   • Internships/practicums

II. Research Continuity of Operations

Guiding Principles
- Maintenance of research infrastructure: At a minimum, the academic institution has investments in research infrastructure that need to be maintained. These investments may include, but are not limited to, research animals, research instruments that cannot be turned off or otherwise put in a hibernating state, and freezers containing biological specimens. The academic institution must ensure that these investments are protected by developing a plan that identifies 1) the important infrastructure items, 2) specific plans to maintain the items, and 3) essential employees who should carry out the plan.
- Infrastructure and processes for sustaining active research: Beyond the minimum level of continuity needed to maintain and protect the research infrastructure above, the academic institution should try—to the extent possible—to sustain ongoing, active research. The academic institution should develop a plan that 1) identifies investigator succession (at least for all major research projects/programs), 2) optimizes data collection, analysis, and reporting in the context of reduced operations, 3) provides ongoing opportunities for proposal development and submission, and 4) continues the protocols and procedures for continuity of funding for ongoing research from federal, state, and private funding sources.
- Identification and special support of "essential research" (e.g., pandemic influenza–specific): The academic institution has a special obligation to society to attempt to continue research and other activities that directly address the catastrophic event and maximally benefit society. The academic institution should develop a plan that identifies 1) research of particular relevance and benefit, 2) requirements to sustain this research, and 3) processes to do so.

Content Outline
1. Maintenance of Research Infrastructure
   • Animals
   • Freezers
   • Instruments
2. Infrastructure and Processes for Sustaining Active Research
   • Principal investigator and investigator succession plan
   • Data collection, processing, and reporting
   • Proposal development and approval
   • Funding continuity
3. Identification and Special Support of "Essential Research" (e.g., pandemic influenza–specific)

III. Human Resources

- To create and maintain a mechanism and protocols for the development of personnel policies appropriate to both short-duration and long-duration extraordinary events.
- To promote faculty and staff physical and mental well-being during an event.
- To promote a formal means of conflict and dispute resolution that is fair to all employees and protective of the assets of the academic institution.
- To assure public safety for all personnel housed or working in the institution during an incident.
- To defining and implementing a plan for achieving appropriate depth of cross-training for "core" or "essential" jobs and job classifications.

Content Outline
1. Policy Development and Maintenance
   - Employee compensation
   - Pandemic sick leave
   - Hazard compensation
   - Employee support
   - Fit-to-work procedures
2. Policy Implementation Actions
   - Employee compensation
   - Pandemic sick leave
   - Hazard compensation
   - Employee assistance and support
3. Conflict Resolution

IV.   Facilities Maintenance

Guiding Principles
- To assure that all facilities to be used as part of the "response to an incident," e.g., a building used as an isolation facility, reliably can function to serve such purposes for the duration of an event.
- To minimize the time required to restore facilities to their normal use.
- To assure the provision of power, telecommunications, heat and ventilation, water, sewer, janitorial services, etc., appropriate to facilities based on their classification during an event.

Content Outline
1. Building and Facility Classification
   - Quarantine sites
   - Isolation sites
   - Triage sites
   - Reduced services
   - Shut-down

2. Facilities Infrastructure
    • Information technology
    • Utilities (power, fuel, telecommunications, water)
    • Fleet
3. Public Safety
4. Cross-Training

SECTION C: PUBLIC HEALTH SURVEILLANCE, EPIDEMIOLOGY AND TRANSMISSION CONTAINMENT

Introduction

Pandemic influenza planning should challenge academic institution campuses to research and implement public health strategies to detect, investigate, and contain this public health threat. Respiratory communicable diseases do not obey organizational, geographic, or political boundaries. Preexisting inequities that may go unnoticed during regular times may become exacerbated or even impede containment efforts.

Guiding Principles: "Recognize, Respond, and Report"

The primary responsibility for leading and coordinating the public health and medical response to pandemic influenza lies with public health authorities. The success of containment measures will depend upon the communication, collaboration, and coordination with key public health partners such as universities and colleges. The following guiding principles should direct efforts:

- Recognize Early
  - Design, implement, and test surveillance systems to detect threats and monitor trends in your community.
  - Design, implement, and test epidemiology capacity to conduct field investigations, including studies to test hypotheses and evaluate containment measures.
- Respond Early
  - Design, implement, and test transmission containment plans to interrupt influenza transmission and prevent disease.
- Report Early
  - Immediately report suspected influenza cases to public health authorities.
  - Communicate, collaborate, and coordinate surveillance, epidemiology, and containment activities with public health authorities.

I. Overview

The academic institution's public health response should include or assure the following operational functions (based upon the capabilities of the institution):

1. Surveillance and Epidemiology
2. Laboratory Diagnostics
3. Transmission Containment
   (a) Community mitigation measures
      i. Isolation of cases (infectious)
      ii. Quarantine of exposed (and possibly infectious)
      iii. Social distancing measures
         A. School closure or suspension of classes
         B. Cancellation of large public gatherings, events, etc.
         C. Travel restrictions (to or from affected areas)
   (b) Vaccine distribution and use
   (c) Antiviral drug distribution and use

4. Infection Control and Clinical Guidelines
5. Health Care Services, Including Mental Health, and Surge Capacity
6. Public Health Communications (campus community, public, clinicians, media)

The academic institution may be viewed as a resource to perform some of these functions for surrounding communities.

II. Surveillance and Epidemiology

Academic institution surveillance objectives may include the following:

1. Detect outbreaks and new threats.
2. Detect infectious cases (case finding).
3. Monitor exposed individuals for symptoms (possible new cases).
4. Monitor trends in the campus population.
5. Direct and evaluate campus containment measures.
6. Generate hypotheses for further evaluation and study.

For conducting surveillance activities, campus investigators will use "case definitions" for what constitutes a "case" and what constitutes "exposed." Case definitions should be available from public health authorities and may change throughout a pandemic. Surveillance activities should enable campus authorities to detect when pandemic influenza arrives in their community.

Issues to Consider
1. When will surveillance be triggered?
2. Who will direct surveillance activities?
3. Who will be responsible for conducting surveillance?
4. What are the case definitions?
5. How will off-campus students be monitored for illness?
6. How will travel be tracked to and from involved geographic areas?

III. Laboratory Diagnostics

Accurate and timely diagnostic testing can help guide treatment decisions for those suspected of influenza infection.

IV. Specimen Collection

Samples should be collected within the first three to four days of illness and should be collected using appropriate infection control practices (full-barrier personal protective equipment). Significant training on protocol and safety is necessary to collect specimens. This should not be attempted outside of the medical community.

1. What is the capacity of the academic institution to take samples and perform testing?
    • Requires complicated, technical procedures
    • If the academic institution is not taking samples, who will be responsible for this?
    • Use established protocol from your state department of public health and/or CDC.
2. Where will samples be sent for testing?
3. How will samples be transported? By whom? Are they trained? What training should these individuals receive?
4. Are infection control procedures established for specimen collection and transport?
5. Will diagnostic testing be used for all persons suspected of influenza?
6. At what point will diagnostics testing be disregarded (e.g., too many with suspected infection)?

Additional Resources

WHO guidelines for the collection of human specimens for laboratory diagnosis of avian influenza infection, at http://www.who.int/csr/disease/avian_influenza/guidelines/humanspecimens/en/index.html.

CDC—Lab diagnosis of influenza, at http://www.cdc.gov/flu/professionals/labdiagnosis.htm.

V. Transmission Containment

Transmission containment is achieved by the implementation of specific control measures derived from six control strategies common to controlling communicable diseases:

1. Reduce contact between susceptibles and potential infectives (infectious cases).
2. Reduce probability potential sources are infectious.
3. Reduce biological susceptibility of susceptibles.
4. Reduce biological infectiousness of infectives.
5. Interrupt transmission (physical, chemical, environmental).
6. Increase herd immunity.

VI. Case Isolation

Infectious cases are isolated and exposed cases are quarantined. Unexposed persons may voluntarily stay home (sheltering) to avoid possible exposures in the community.

Issues to Consider
1. What are the criteria for isolation facilities?
2. What are the points of access for selected facilities?
3. Consider air exchange/sharing.
4. Internet/computer access: how will isolated cases communicate?
5. How is a case defined (suspect, probable, confirmed)?

6. How will cases be evaluated?
7. Where are cases isolated?
8. How do we feed isolated persons?
9. How will housekeeping be arranged?
10. Who will provide medical care?
11. Who will provide transportation?
12. Who will train staff in infection control?
13. How long will cases be isolated?

VII. Quarantine

Quarantine contains the spread of illness by restricting activities or limiting freedom of movement of persons presumed to be exposed to a contagious disease. Quarantine may or may not be voluntary, based upon decisions made by local, state, and federal authorities.

The duration and scope of quarantine measures vary, depending on the purpose and the incubation period (how long it takes for symptoms to develop after exposure) of the influenza strain suspected. The imposition of quarantine will not be uniform and much of what is contained within these sections will not be universally true.

1. Home Quarantine
Home quarantine asks that persons who have been exposed or potentially exposed remain at home during the incubation period of the infectious agent.

Persons in home quarantine should follow the advice of public health authorities in addition to considering the following measures when practicable:

- Sleep and eat in a separate room.
- Use a separate bathroom.
- Use appropriate personal protective equipment.
- Refrain from activities that may expose other individuals in the household.

Issues to Consider
1. Is there sufficient equipment and accessibility for telecommuting for persons who are home quarantined?
2. Who will provide care for dependents and pets of exposed individuals?
3. How will you accommodate the needs of special populations (e.g., disabled, mentally ill, chronic ill, etc.)?
4. How will persons in home quarantine be evaluated for symptoms of disease?
   - Who will do this and how often?
5. How will symptomatic persons be transported for necessary medical care?
6. Are there provisions for food and medical care (e.g., prescriptions) for length of quarantine?
7. Is there a system to provide supplemental income (e.g., payment of bills) during the length of the quarantine (if sick leave is not available)?

8. Will quarantine be voluntary or enforced? How will quarantine be enforced?
9. Are infection control procedures in place to ensure that quarantined individuals do not expose presumed healthy individuals living or staying in the home (e.g., face masks, etc.)?
10. Are resources available to enable persons in quarantine to learn how to protect themselves and others against the spread of disease?

Additional Resources
Model operational guidelines for disease exposure control (DRAFT)—Home quarantine protocols to consider, pp. 47–48, at http://www.csis.org/media/csis/pubs/051102_dec_guidelines.pdf.

2. Work Quarantine
Work quarantine allows personnel to work as long as they remain well.

Issues to Consider
1. What authority does your academic institution have to require work quarantine?
2. What incentives will you offer employees to remain in work quarantine?
3. What policies are already in place or should be developed to ensure persons in work quarantine comply with recommendations?
4. Are infection control procedures in place to ensure quarantined faculty or staff do not expose individuals presumed healthy (e.g., face masks, etc.)?
   • What public information or resources are available to educate work-quarantined persons about disease prevention?
5. Who may be quarantined at work?
6. How will employees be monitored for symptoms of disease?
   • Whom do individuals in work quarantine notify if they develop symptoms?
7. Are there specific sections of campus, buildings, offices, etc., where work-quarantined persons will be permitted?
   • Are there educational resources or public information available to assist persons in quarantine learn how to protect themselves and others against the spread of disease?
8. Are separate facilities (bathrooms, food areas, etc.) identified for use by staff and faculty in work quarantine?

Additional Resources
Model operational guidelines for disease exposure control (DRAFT)—Work quarantine protocols to consider, p. 49, at http://www.csis.org/media/csis/pubs/051102_dec_guidelines.pdf.

3. Facility Quarantine
Facilities may be arranged to house quarantined individuals. Persons restricted to facility quarantine should remain within the facility or building during the quarantine.

Facilities considered for quarantine should have the following characteristics/capabilities:
• Separate rooms for each person
• Onsite laundry services
• Essential utilities (heating, cooling, plumbing, electrical)

- Services to provide basic needs (food, water)
- Ability to provide communication services
- Ease of transporting patients (are the doors wide enough for gurneys?)
- Ease of decontaminating rooms
- Ease of securing the building
- Ease of allowing family to visit (if applicable)
- Proximity to isolation facilities

Issues to Consider
1. What buildings on campus will be used for quarantine?
   - Do these buildings meet the characteristics listed above?
2. How will you accommodate the needs of special populations (e.g., disabled, mentally ill, chronic ill, etc.)?
3. Are infection control procedures in place to ensure that quarantined individuals do not expose presumed healthy individuals (e.g., face masks, etc.)?
4. How will individuals be monitored for symptoms of disease?
   - Who is notified if a quarantined person develops symptoms?
5. What policies are in place to ensure that persons in facility quarantine comply with recommendations (e.g., not leaving facility during incubation period)?
   - Are resources available to enable persons in quarantine to learn how to protect themselves and others gainst the spread of disease?
6. Is security available to monitor flow inside and out of the facility used for quarantine?
7. If visits are not permitted, are there communications systems available to allow those in quarantine to contact friends, family, relatives, etc.?

Additional Resources
Model operational guidelines for disease exposure control (DRAFT)—Facility quarantine protocols for consideration, pp. 48–49, at http://www.csis.org/media/csis/pubs/051102_dec_guidelines.pdf

VIII.　Community Mitigation Measures, Including Social Distancing

Early in a pandemic effective vaccines and antivirals may not be available to all members of the population. Targeted social distancing includes methods that reduce social contact networks, thereby reducing the persons' amount of contact with each other and the likelihood that disease will be spread among persons. See Table 1.

Social distancing methods to reduce person-to-person contact on a college campus may include the following:
- Cancellation of classes, sporting events, performances, sponsored programs (child care) and/or public events
- Closure of campus, student housing, and/or public transportation
- Changing workplace environments and/or schedules (e.g., telecommuting, using staggered shifts)
- Encouraging good hygiene (e.g., reducing handshakes)

Issues to Consider

1. What trigger will be used to cancel events?
   - How will faculty, staff, students, visitors, and the public be notified?
2. What criteria will be used to resume classes, public events?
   - How will faculty, staff, students, visitors, and the public be notified?
3. Can distance learning methods be used for the continuation of classes?
   - Do faculty and students have equipment, including Internet access and technical support, outside of the institutional setting?
4. Depending upon when classes are cancelled, how will students be evaluated? Will tuition be reimbursed or advanced to the next semester?
5. Who should report to work if events and classes are cancelled?
6. Can personnel use sick or paid leave time when gatherings are cancelled?

Table 1: Summary of Pandemic Influenza Community Mitigation Measures

Setting	Intervention	Description
Home	Voluntary isolation	• Isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated.
	Voluntary quarantine	• Quarantine of household members in homes with ill persons (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient.
School	Student social distancing	• Dismissal of students from schools and school-based activities and closure of child care programs. • Reduce out-of-school social contacts and community mixing.
Workplace/ Community	Nonstudent social distancing	• Decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings). • Increase distance between persons (e.g., reduce density in public transit, workplace). • Modify, postpone, or cancel selected public gatherings to promote social distance (e.g., postpone indoor stadium events, theater performances). • Modify workplace schedules and practices (e.g., telecommute, staggered shifts).

Adapted from CDC, Community strategy for pandemic influenza mitigation, February 2007, at http://www.pandemicflu.gov/plan/community.

Additional Resources
Glass, R.J., Glass, L.M., Beyeler, W.E., and Min, H. J. (2006). Targeted social distancing design for pandemic influenza. Emerging Infectious Diseases 12 (11): 1671–81. http://www.cdc.gov/ncidod/EID/vol12no11/pdfs/06-0255.pdf.

IX.   Travel Restrictions/Recommendations

Travel restrictions help prevent the spread of disease from one location to another, including within or between institutions, communities, states, or countries. Travel restrictions at academic institutions may be applied to the following:

- Students, faculty, staff, visitors, and the public traveling to and from campus grounds
- U.S. students traveling abroad to study (outbound)
- U.S. students returning from studying abroad (inbound)
- Foreign students traveling to the United States to study (inbound)
- Faculty, staff, students scheduled to travel abroad for personal or business-related reasons

Persons traveling from affected international regions should be monitored for the development of symptoms indicative of influenza infection. CDC international travel guidelines are found at http://www.cdc.gov/travel/other/avian_flu/#notices.

Issues to Consider

1. How should travel restrictions/recommendations be communicated to students, faculty, staff, visitors and the public?
   - Who is responsible for issuing these recommendations?
2. Who should monitor international travelers for signs of disease? How often?
3. How should persons from affected countries be identified upon their arrival to the campus or the community?
4. Is there a system to track and contact persons traveling internationally during the school year and during the summer?

X. Vaccine and Antiviral Distribution and Use

Vaccination will be the primary strategy in preventing a pandemic. Production of a vaccine to protect against a pandemic strain takes approximately six months from identification of the strain. Production of sufficient vaccine for all persons may take additional time. The CDC has recommended tiered use of inactivated vaccine in the event of a shortage, and two doses of vaccine may be required to build immunity against pandemic influenza.

Antivirals can be used for both the treatment and prevention of influenza. If used for treatment, antivirals must be administered within 48 hours of the onset of symptoms (also applies for seasonal flu). The effectiveness of current antivirals to prevent or reduce the complications of pandemic strain of influenza is unknown. There may be an insufficient supply of antivirals for all persons in the event of a pandemic. Specific groups, such as health care workers, may receive priority. The role of vaccine and antiviral distribution lies within the state and local health departments. In the event of pandemic, state and local health departments may use Point of Dispensing/Distribution (POD) to dispense medication or antivirals or to vaccinate a large group of people.

Issues to Consider
1. How does your academic institution integrate into the state and local health department POD plans?
   • Will your site serve a location for a POD in the community?
   • What role will academic institution staff, faculty, and students serve (e.g., volunteers, etc.)?
   • How will transportation be provided to and from POD sites for persons on campus and off campus?
   • How will you identify priority populations?
   • Are students, faculty, and staff accounted for in the local/municipal POD plans (e.g., are they part of the population to which the POD plans to provide services)?

Additional Resources
Vaccines and vaccine research—pandemicflu.gov, at
http://www.pandemicflu.gov/vaccine/vacresearch.html.

Medications/antivirals—pandemicflu.gov, at
http://www.pandemicflu.gov/vaccine/medantivirals.html.

Working in a POD—University of Albany CPHP online course, at
http://www.ualbanycphp.org/learning/registration/tab.cfm?course=pod&s=Overview.

XI. Infection Control Guidelines

Infection control measures are recommended to prevent person-to-person transmission of influenza and to control outbreaks of influenza. In settings where large groups of people congregate, basic infection control measures such as frequent hand washing, covering coughs and sneezes, and using personal protective equipment (e.g., wearing gloves, gowns, etc.) are essential. Policy and procedures should be developed and implemented to ensure awareness and compliance during a communicable disease outbreak, such as influenza.

Recommended Infection Control Measures for Academic Institution Settings
To prevent person-to-person transmission of influenza and/or to control influenza outbreaks on campus settings, the following control measures should be considered:

1. Surveillance
2. Education: Educate students, staff, faculty, and visitors about the signs and symptoms of influenza, control measures, and indications for obtaining influenza treatment and testing.
3. Influenza laboratory testing (see above)
4. Respiratory hygiene/cough etiquette
5. Antiviral prophylaxis (see above)
6. Restrictions for sick or exposed persons, including isolation and quarantine (see above)
7. Standard precautions
8. Droplet precautions

Issues to Consider

1. What communication methods will be used to raise awareness about infection control measures to prevent disease transmission for both on-campus and off-campus populations (e.g., postage of signs, Web announcements, hotlines, etc.)?
2. Are there specific wards or buildings to keep confirmed or suspect cases of influenza?
   - Are there dedicated entrances and passageways for influenza patients?
3. Are policies developed to assign dedicated staff (e.g., health care, housekeeping, janitorial) to provide care for pandemic influenza patients and restrict those staff from working with non-influenza patients?
4. Is personal protective equipment (PPE) stockpiled?
   - Where can additional personal protective equipment be accessed, if needed?
5. If limited personal protective equipment is available, who will receive priority?
   - Are plans developed to distribute limited personal protective equipment to priority populations?
6. Consistent with standards at the time, what is the recommended use of PPE such as face masks and respirators?
7. Are waste management protocols developed (e.g., handling of potentially contaminated materials)?

Additional Resources

Interim public health guidance for the use of facemasks and respirators in non-occupational community settings during an influenza pandemic, at
http://www.pandemicflu.gov/plan/community/maskguidancecommunity.html.

Infection control in health care settings—CDC, at
http://www.cdc.gov/ncidod/dhqp/index.html.

■ SECTION D: HEALTH CARE SERVICES

Institutions will differ in the way which health care services are provided to or accessed by students, faculty, and staff. Hospital plans are not addressed in this section, as they should have their own institutional plans that may interface with institutional plans. In order to ensure that resources are accessible, the following should be considered:

I.   Health Care Services Provided

Consider the model for health care provision for students, faculty, and staff that is used on the campus. The following are common models:
1.   No dedicated health service on campus
2.   Dedicated health service (not hospital based)
3.   Dedicated health service (hospital based)
4.   Hospital available on campus
     •   Owned by academic institution
     •   Affiliated with academic institution
5.   Unaffiliated hospital
6.   No specific hospital or health services used: students, faculty, and staff are responsible for selecting their service provider.
7.   Identify Memorandums of Understanding (MOUs) that exist with acute care facilities and the potential for inclusion of plans for pandemic flu treatment as part of the MOU.
8.   Review existing plans for care of students, faculty, and staff to identify potential need for changes based on pandemic situation.

II. Routine Care vs. Pandemic Care

1.   Identify how/where/by whom routine care will be provided.
2.   Identify how/where/by whom pandemic care will be provided.
     •   Determine whether alternative care sites will be established and their location.
     •   Test the use of alternate care sites and staff through exercises.
3.   Develop job action sheets and just-in-time training for workers providing pandemic care.
4.   Consider the need to provide different sites of care for routine/chronic health care needs and pandemic influenza care.
5.   Will there be a need to establish alternate sites for laboratory, diagnostic, and pharmacy services?

III. Identify Who Will Receive Services

IV. Determine Source of the Supply of Needed Health Care Workers

1. Who will be available for the campus?
2. Will there be conflicts between campus expectations for staff availability and expectations of other health care resources in the community/region?
3. Who will decide where health care workers will be assigned in the event of a pandemic?
4. Is there a need for MOUs in order to ensure staffing of campus-based services?
5. Consider models for provision of child care/elder care for health care workers' families, so that health care workers will be assured that their families are cared for while they report for duty.
6. Ensure that health care workers and others providing health care are screened for signs of illness as they report to and leave their worksite.

V. Recruitment of Volunteers and Plans for Training

1. Identify options for including volunteers and/or non–health care workers in plan for pandemic care; estimate number potentially available.
2. Identify sources of volunteers (students, etc.).
3. Identify non–health care workers who may be trained to work in pandemic care.
4. Establish training models and strategies:
   • Training prior to events
   • Just-in-time training when workers report for duty

VI. Emergency Transportation for Health Care

1. Identify current emergency transportation options and determine whether these will be available during a pandemic.
2. Consider the limitations that may occur during a pandemic due to excessive demand for transportation services and potential decreased availability of services.
3. Identify alternate modes of transportation that might be used in a pandemic.
4. Consider developing MOUs with services, with the understanding that these services may be fully encumbered serving the broader community.

VII. Communications and Reporting

1. Identify current methods of communication concerning utilization of health care resources and how these might be used during a pandemic.
2. Consider establishment of methods for phone contact or triage of students, faculty, and staff who become ill or are concerned about exposures.
3. If the institution provides health services on campus, consider how the health service will communicate with acute care hospitals or other institutions about needs for care and other resources.

4. Establish responsibilities and processes for reporting to the public information officer (PIO), incident commander (IC), acute care hospitals, local and state authorities, and institutional officials.
5. Test communications plan and modify it if necessary.

VIII. Provisions to Meet Consumable Supply/Equipment/Pharmaceutical Needs

1. Identify how needs for the following will be met, and what inventory will be needed in on-campus, nonhospital facilities:
   • Consumable supplies
   • Equipment
   • Pharmaceutical needs
   • Items to stockpile
2. Ensure that adequate supplies of food and water will be available to provide for the needs of patients and staff.

IX. Outpatient Health Care under Quarantine

1. Identify potential sources and locations of care.
2. Determine whether institutional resources will be used to provide care to students, staff, and faculty under quarantine.
   • Who will take responsibility for quarantine of students and others who are housed on campus and remain on campus during a pandemic?
   • If students and others are quarantined on campus, will the institution have a mechanism for health care practitioners to make rounds to ensure that the students are not in need of more extensive care?

X. Student Health Service Operational Plan (if applicable)

1. Identify modification to the operations of the student health service under a pandemic.
2. Will the student health service continue to provide routine care?
3. Will the student health service serve as a POD?
4. Will the student health service provide pandemic care?

XI. Employee Health Clinic Operation Plan (if applicable)

1. Identify modifications to the operations of the employee health service under a pandemic
2. Will the employee health service continue to provide routine care?
3. Will the employee health service serve as a POD?
4. Will the employee health service provide pandemic care?
5. Ensure that preventive interventions and protections are available to workers providing health care.

XII. Relationships with Local/State Health Department(s) and Resources

1. What do local/state health department(s) expect of the institution if it already provides health care for students, faculty, and staff?
2. What are the resources that institution can expect to obtain from local/state health departments?
3. Do local/state health departments expect the institution to provide health care staff at sites external to the institution?
4. Identify expectations for cooperation/collaboration with local/regional/state health departments in provision of pandemic treatment and immunization for students, faculty, and staff.
   Consider development of MOUs if there is a need to access resources of health departments.

XIII. Family Protection
1. Identify need to protect families of workers who are responding to the event. This includes all workers, not only health care workers.
2. Have means of notifying workers of plans for family protection and how to access services.

XIV. Psychosocial Accommodations

1. Consider the mental health needs of people responding to or affected by the event.
   What resources are available to them for screening, assessment, and intervention?
   • How will they be informed about how and when to access these resources?

XV. Mental Health and Substance Abuse Services/Care Needs

1. How will routine care services be maintained?
2. If there is a need to decrease service components due to the demands of a pandemic event, which priority services will remain available?
3. Will there be alternate sites for mental health and substance abuse care?
4. Is it necessary to establish MOUs with alternate care?

XVI. Handling of Decedents

1. Identify potential need for setting up mortuary services in addition to routine services.
2. Consider processing as well as storage of bodies, including family considerations.
3. Consider locations that may be available or whether there will be a need to bring in other services such as refrigerated trucks.
4. Identify need for MOUs to ensure that services are available and accessible.

■ SECTION E: COMMUNICATIONS AND CONSULTATION

Introduction

The tasks to be accomplished in order to communicate across the academic institution and to external stakeholders are complex and varied.

Guiding Principles
- Communicating the most current and reliable information to students, faculty, staff, and external stakeholders will necessitate frequent and ongoing communication between the incident commander's staff and the state and/or local public health authorities.
- Just-in-time training by an expert will need to be provided initially and periodically to all individuals filling communication roles so nonpharmaceutical interventions are employed early and continuously throughout a pandemic.
- With input from lawyers and risk managers, disclaimers on websites, e-mails, phone calls, etc., should be considered so that these communication channels and their messages are not perceived as substitutes for seeking medical care.
- Every activity should be staffed at least three deep to allow for the extended nature of the event and anticipated absenteeism.
- Mental health services should be readily available to staff, especially to those working the hotline.
- Experts should be available 24/7/365 to the incident commander and public information officer to answer questions and provide guidance.
- After-action reports need to include input from each communication function operational during the response. Findings should be used to revise the unit's and the institution's communications plans and the emergency operation plan.

I. Pre-Pandemic Period

- How your school defines "pre-pandemic period" should be outlined here.
- These activities should be examined in light of how your school defines the "pre-pandemic period."

i. *Internal Communications to/from Student, Staff, and Faculty*
1. Develop and verify unit communication plan to include notification trees and redundant communication modalities.
2. Test unit's and institution's communication plans regularly as specified in emergency operations plan.
3. Test redundancy of communications modalities.
4. Establish and update emergency communication website with pandemic information and links to key sites. Confirm ability to access remotely.
5. Consider establishing Web portal to publish information that may have limited/restricted access.
6. Develop and verify mass e-mail and fax capabilities to all and assure 24/7 information technology (IT) access to the lists.
7. Develop and verify mass phone calling capability to all and assure 24/7 IT access to the lists.
8. Determine the most efficient strategy to address rumors and misinformation among the students, staff, and faculty.
9. Communicate developments (particularly changes in policies) as they occur via website, e-mail,

fax, radio, phones, etc.

10. Revise pandemic website regularly to reflect frequently asked questions (FAQs) and answers; date-stamp updates.
11. Develop process for referring to website for questions received. Also provide an e-mail address to send questions not addressed on website.
12. Develop designated e-mail address to receive questions.
13. Push out information regarding nonpharmaceutical measures.
14. Push out information about need for personal preparedness planning.
15. Plan for hotline with appropriate staffing and develop guidelines for use of hotline.
16. Develop job action sheets (JASs) for hotline staff.
17. Develop guidance for hotline staff in providing answers to callers.
18. Develop criteria for selection of hotline staff. Choose staff and provide training on role.
19. Script messages for anticipated communications needing to be broadcasted.
20. Develop culturally appropriate educational handouts, flyers, posters, and newspaper announcements.
21. Release statement concerning institution's preparedness planning and that the status of any outbreak will be carefully monitored.
22. Identify spokespersons to serve as PIO/information officer to incident commander.
    Be prepared to answer questions 24/7 from the following:
    • The academic institution community
    • The media
    • Public health officials
23. Develop JASs for PIO/information officer.
24. Exchange PIO/information officer contact information with the media and others as appropriate.
25. Identify venue(s) for holding news conferences, media briefings, distance learning, and teleconferencing opportunities and other related activities. Consider proximity to emergency operations center (EOC) and ability of media and stakeholders to access.
26. Explore videoconferencing and streaming capabilities.
27. Identify experts and solicit assistance in providing technical guidance and assistance to IC, media, health care, and others as needed.

ii. *External Communications to/from Parents, Spouses, and Community at Large*
    1. Establish relationship between institution's PIO/IO and the local and/or state public health authority and the local emergency management agency.
    2. Determine who are the external stakeholders (ESs) that need to be in the communications loop.
    3. Inform external stakeholders of pandemic website and updating mechanism.
    4. Develop and verify mass e-mail and/or fax capabilities to all external stakeholders and assure 24/7 IT access to lists.
    5. Develop and verify mass phone calling capability to all external stakeholders and assure 24/7 IT access to lists.
    6. Copy all stakeholders on information pushed out to students, faculty, and staff to include that addressing rumors and misinformation.
    7. Revise pandemic website to reflect FAQs from external stakeholders. Date-stamp all updates.
    8. Inform external stakeholders of availability of FAQs. Also provide e-mail address to send questions

not on website.
9. Push out information regarding nonpharmaceutical measures.
10. Push out information about need for personal preparedness planning for students, families, etc.
11. Script messages for anticipated communication to be broadcast to external stakeholders.
12. Release statement concerning institution's preparedness planning and that the status of any outbreak will be carefully monitored.

II. Intra-Pandemic Period

- How your school defines "intra-pandemic period" should be identified here.
- These activities should be examined in light of how your school defines the "intra-pandemic period."

i. *Internal Communications to/from Students/Staff/Faculty*
1. Activate communication plans to include notification trees and redundant communication modalities.
2. Update website and confirm ability to access and update remotely.
3. Communicate the activation of the plan via mass e-mail and fax.
4. Communicate the activation of the plan via mass phone calling.
5. Address rumors and misinformation quickly and efficiently.
6. Monitor developments and push out information as the incident develops.
7. Update website and FAQs. Date-stamp all entries.
8. Continue to refer questions to website and publicize process for submitting and answering new questions not addressed on website.
9. Publish, using a variety of means, the designated e-mail address to receive questions.
10. Push out information regarding necessity of implementing nonpharmaceutical measures ASAP.
11. Push out information about the need to activate personal preparedness plans.
12. Institute hotline and publicize number and purpose.
13. Update hotline JASs as needed.
14. Provide hard copies of hotline guidance to staff. Revise as needed.
15. Give hotline staff just-in-time refresher training or initial training if staff member is new.
16. Review and push out scripted messages using a variety of communication channels.
17. Disseminate educational materials broadly.
18. Communicate readiness of institution and mobilization of all resources necessary to protect school community.
19. PIO/IO reports to incident commander at emergency operations center (EOC) for briefing. All requests for information are routed to EOC.
20. PIO/IO assumes roles as described in JASs.
21. Ready venues for anticipated activities such as media briefings and other communication strategies.
22. Alert experts and have them on standby to field questions and concerns.

ii. *External Communications to/from Parents, Spouses, and Community at Large*
1. Communicate activation of plan to local and/or state public health authority
2. Direct stakeholders to website and FAQs. Update links to HHS/CDC, state health department, local health department, local emergency management agency.

3. Communicate the activation of the plan via mass e-mail and fax.
4. Communicate the activation of the plan via mass phone calling.
5. Copy all stakeholders on information pushed out to students, faculty, and staff.
6. Continually update website as information needs revising. Date-stamp all updates.
7. Publicize availability of e-mail address and test process for handling questions and supplying answers.
8. Push out information regarding necessity of implementing nonpharmaceutical measures ASAP.
9. Push out information about need to activate personal and family preparedness plans.
10. Review and push out scripted messages using a variety of communication channels.
11. Communicate readiness of institution and mobilization of all resources necessary to protect school community.

III. Inter-Pandemic Period (between waves)

- How your school defines "inter-pandemic period" should be identified here.
- These activities should be examined in light of how your school defines the "inter-pandemic period."

i. *Internal Communications to/from Students, Staff, and Faculty*
1. Debrief and revise unit and institution's communication plans as needed.
2. Provide maintenance on redundant communication resources.
3. Test unit's and institution's revised communication plans as specified in emergency operations plan (EOP).
4. Test redundancy of communication modalities.
5. Continue to update website.
6. Communicate the status of the plan via mass e-mail and fax.
7. Communicate the status of the plan via mass phone calling.
8. Continue to monitor developments and push out information with a caution that waves may occur.
9. Continue to update website and FAQs. Include FAQs on likelihood of next wave and its severity. Date-stamp all entries.
10. Continue to refer questions on website and publicize process for submitting and answering new questions not addressed on website.
11. Continue to publish, using a variety of means, the designated e-mail address to receive questions.
12. Push out information regarding the necessity of continuing with nonpharmaceutical measures.
13. Push out information about need to revise and update personal preparedness plans.
14. Continue availability of hotline number. Evaluate its use and effectiveness.
15. Revise hotline JASs as needed.
16. Revise hotline guidance materials as needed.
17. Debrief with hotline staff. Revise just-in-time training as needed. Prepare staff for next wave.
18. Review scripted messages sent and revise for use during next wave.
19. Communicate status of partial demobilization with emphasis of likelihood of next wave and its potential severity.
20. PIO/IO remains available to IC. All requests for information continue to be routed to PIO/IO.
21. Revise PIO/IO JASs as needed.
22. Provide maintenance on venues and equipment.
23. Continue to have experts available to provide guidance.

ii. External Communications to/from Parents, Spouses, and Community at Large
1. Communicate status of plan to local and/or state public health authority.
2. Continue to direct stakeholders to website and FAQs.
3. Communicate the status of the plan via mass e-mail and fax.
4. Communicate the status of the plan via mass phone calling.
5. Continue to copy all stakeholders on information pushed out to students, faculty, and staff.
6. Continue to update website and FAQs. Include information on likelihood of next wave and its severity. Date-stamp all updates.
7. Continue to refer questions to website and publicize process for submitting and answering new questions not addressed on website.
8. Push out information regarding necessity of continuing to implement nonpharmaceutical measures.
9. Push out information about need to revise plans in anticipation of next wave.
10. Review scripted messages sent and revise for use during next wave.
11. Communicate status of partial demobilization with emphasis of likelihood of next wave and its potential severity.

IV. Post-Pandemic Period

- How your school defines "post-pandemic period" should be outlined here.
- These activities should be examined in light of how your school defines the "post-pandemic period."

i. Internal Communications to/from Students, Staff, and Faculty
1. Debrief and revise unit's and institution's communication plans as needed. Provide maintenance on redundant communication resources.
2. Test unit's and institution's revised communication plan regularly as specified in EOP.
3. Test redundancy of communication modalities.
4. Determine need to maintain website.
5. Maintain mass e-mail and fax capabilities and test as specified in EOP.
6. Maintain mass phone calling capabilities and test as specified in EOP.
7. Communicate findings from debriefings and after-action reports as appropriate.
8. Determine need to maintain website and to update FAQs.
9. Refer questions to website if determination is made to maintain it.
10. Continue to publicize e-mail address for questions if determination is made to maintain website or communicate decision to discontinue.
11. Push out information regarding continuing nonpharmaceutical measures as good public health measures.
12. Push out information about need to periodically review and update personal preparedness plans.
13. Determine appropriate time to discontinue hotline and to demobilize staff.
14. Revise hotline JASs based on debriefing.
15. Revise guidance materials based on debriefing.
16. Debrief with staff including a review of selection criteria for choosing hotline staff.
17. Review all scripted messages sent and revise accordingly. Evaluate effectiveness of communication channels used.
18. Review all materials distributed for content of the message and appropriateness of the

communication channel. Revise accordingly.
19. Communicate demobilization with emphasis on institution's outcome and plans to return to as near normal as possible.
20. All requests for information continue to be routed to PIO/IC.
21. Revise PIO/IO JASs based on debriefing.
22. Continue to have experts available to provide guidance.

ii. *External Communications to/from Parents, Spouses, and Community at Large*
1. Communicate status of plan to local and/or state public health authority.
2. Refer questions to website if determination is made to maintain it.
3. Maintain mass e-mail and fax capabilities and test as specified in EOP.
4. Maintain mass phone calling capabilities and test as specified in EOP.
5. Continue to copy all stakeholders on information pushed out to students, faculty, and staff.
6. Determine need to maintain website.
7. Continue to publicize e-mail address for questions if determination is made to maintain website—or communicate desire to discontinue.
8. Push out information regarding continuing nonpharmaceutical measures as good public health measures.
9. Push out information about need to periodically review and update preparedness plans.
10. Review all scripted messages sent and revise accordingly. Evaluate effectiveness of communication channels used.
11. Communicate demobilization with emphasis on institution's outcome and plans to return to as near normal as possible.

■ APPENDIX A: GLOSSARY OF TERMS

Disclaimer: Definitions were constructed after referring to websites from the Centers for Disease Control and Prevention, Federal Emergency Management Agency (FEMA), Wikipedia, and numerous medical facilities. In some instances the definition is a fusion from several sources to best illustrate current common usage of terms. Definitions are for advisory purposes only and should not be detrimentally relied upon by any organization as they are subject to change based on policy and scientific advances.

Absenteeism: The percentage of an organization or institution's absence rate due to personal illness, caretaking responsibilities, uncertainty about reporting to work, or other reasons.

Academic institution: Used in this document to mean any institute of higher learning including but not limited to all types of universities, four-year colleges, technical schools and community colleges.

After-Action Report (AAR): A report created after an incident, event or exercise to summarize procedures, actions, and lessons learned. The AAR is integral to future preparedness planning and should be drafted as close to the event as possible to preserve information and provide opportunities for improvement.

Antiviral drugs: Medications used specifically to treat viral infections, such as influenza. Drug resistance may result as the pathogens evolve to survive exposure to the treatment; therefore caution should be exercised when administering antivirals.

Attack rate: The incidence of illness in a group of people over a period of time, defined as the number of exposed persons infected with the disease divided by the total number of exposed persons. For example, if 100 persons were exposed to a disease and 64 became ill, the attack rate would be 64%.

Case definition: The method by which public health professionals define which persons are included as a case (i.e. a person considered directly affected by an outbreak.) As investigations proceed, a case definition may be expanded or narrowed based on the dynamic nature of outbreak investigations.

Communicable: A disease that is infectious. An infectious disease is a clinically evident disease that damages or injures the host from presence or one or more pathogen microbial agents including viruses, bacteria or fungi and is easily spread from one person to another.

Contact tracing: The identification and diagnosis of persons who may have come into contact with an infected person. For highly virulent diseases such as pandemic influenza or tuberculosis, contact tracing would require thorough information regarding even casual contacts.

Contagious disease: An infectious disease that is capable of being transmitted from one person to another. Contagious diseases are often spread through direct contact with an infected individual, contact with the bodily fluids of infected individuals, or with objects that the infected individual has contaminated.

Diagnostics: The process of identifying a medical condition or disease by its signs, symptoms, and from the results of various diagnostic procedures. Diagnosis has two distinct dictionary definitions, the first being "the recognition of a disease or condition by its outward signs and symptoms," whereas the second is "the analysis of the underlying physiological/biochemical causes of a disease or condition."

Disease tracking: Epidemiological monitoring, passive surveillance and active surveillance of a disease once it is identified and assigned a case definition. This function is to learn lessons and possible interventions to reduce spread and prevent illness.

Droplet precautions: Precautions used to reduce the risk of infectious disease from droplets, most commonly generated from the coughing, sneezing or talking of an ill person. Generally the precaution is use of a surgical mask.

Emergency Operations Center (EOC): The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, State, regional, county, city, tribal), or some combination thereof.

Emergency Operations Plan (EOP): The "steady-state" plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards.

Emergency Response Provider: Includes Federal, State, local, and tribal emergency public safety, law enforcement, emergency response, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities. See Section 2 (6), Homeland Security Act of 2002, Pub. L. 107-296, 116 Stat. 2135 (2002). Also known as Emergency Responder.

Enforced: Used interchangeably with "involuntary."

Epidemic: An outbreak of a disease within a determined geographical boundary; i.e. an outbreak that is localized.

Epidemiology: The study of factors affecting wellness and illness within human populations which serves as the foundation of interventions made in the interest of public health and preventive medicine. A cornerstone methodology that identifies risk factors for disease and determines optimal treatment approaches to clinical practice. Epidemiological work could include outbreak investigation, study design, data collection and analysis including development of statistical models to test hypotheses.

Exposed: A description of the condition where a person may have been in contact with an ill person and therefore should be observed, generally through a process called quarantine, to ensure that person does not develop symptoms of illness.

H5N1: A subtype of the Influenza A virus that causes severe illness in birds (avian influenza). H5N1 is currently an avian disease and there is no evidence of efficient human-to-human transmission at the time of this writing, although experts are concerned that H5N1 may mutate or reassort to infect humans directly, possibly causing the next pandemic.

Hospital Incident Command System (HICS): A comprehensive incident management system for hospitals to implement in both emergent and non-emergent situations such as moving the facility, dispensing medications to hospital staff, or planning for a large hospital or community event. HICS was developed by a National Work Group of twenty hospital subject-matter experts from across the United States. Ex officio members were included to ensure consistency with governmental, industrial and hospital accreditation planning efforts and requirements.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Incident Commander (IC): The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Infectious: The state of a person who is infected with a particular disease or illness and is in a contagious state, capable of spreading their illness to other persons.

Influenza A: A genus of the family of viruses called Orthomyxoviridae in virus classification that is hosted by birds but also infects several species of mammals including humans and pigs.

Investigation: In epidemiology, the process by which a disease's characteristics are observed and identified.

Involuntary: Relying upon state law to require a person to comply with public health recommendations that benefit the population at large.

Isolation: Separation of an ill individual from the general population to reduce the spread of the illness.

Job Action Sheet (JAS): A document distributed to employees describing their expected duties and responsibilities, generally during an emergency situation where staff may be moved from one division to support another with little advanced notice. The JAS provides a description of the job, qualifications, and may contain a mission statement.

Memorandum of Understanding (MOU): A legal document describing a bilateral or multilateral agreement between parties expressing a convergence of will between the parties and indicating a common line of action that lacks the full legal implications of a contract.

Mitigation: The activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during, or after an incident. Mitigation measures are often informed by lessons learned from prior incidents. Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts, and analysis of hazard related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses, and the public on measures they can take to reduce loss and injury.

National Incident Management System (NIMS): A system mandated by HSPD-5 that provides a consistent nationwide approach for Federal, State, local, and tribal governments; the private-sector, and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

Nonpharmaceutical interventions/measures (NPIs): Public health measures that do not rely on antivirals or vaccinations (pharmaceutical measures) to reduce the spread of illness in a population of persons. Nonpharmaceutical interventions outside of healthcare settings focus on measures to 1) limit international spread of the virus (e.g., travel screening and restrictions); 2) reduce spread within national and local populations (e.g., isolation and treatment of ill persons; monitoring and possible quarantine of exposed persons; and social distancing measures, such as cancellation of mass gatherings and closure of schools); 3) reduce an individual person's risk for infection (e.g., hand hygiene); and 4) communicate risk to the public.

Orthomyxovirus: A family of viruses including those that cause influenza in humans.

Pandemic: A global outbreak of a particular disease; an epidemic that spreads worldwide.

Personal Protective Equipment (PPE): Refers to protective clothing, face masks, gloves, or other items designed to protect the wearer against infection from a contagious disease.

Preparedness: The range of deliberate, critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process. Preparedness involves efforts at all levels of government and between government and private-sector and nongovernmental organizations to identify threats, determine vulnerabilities, and identify required resources. Within the NIMS, preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.

Point of Dispensing/Distribution (POD): A staging area for mass dispensing of emergency response materials. A POD should be capable of distributing a substantial amount of product, whether it is vaccinations, antivirals, food, or water, to that POD's entire service area within 48 hours.

Prophylaxis: In medical terms, application of antivirals or other treatments given before a person is ill with the expectation that such treatment will prevent the person from developing an illness, or will reduce the impact of the illness if a person does contract it.

Public Information Officer (PIO): The member of incident command staff responsible for interfacing with the public and media or with other agencies with incident-related information requirements.

Quarantine: Separation of a person that is not symptomatic but may have been exposed to an ill person from the general population to reduce the spread of the illness. The reasoning applied is that asymptomatic persons may be a carrier of the disease; alternatively, a number of diseases may incubate for period of time lasting up to several days where the host is not yet ill but already capable of transmitting the disease.

Recovery: The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private sector, nongovernmental, and public-assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post-incident reporting; and development of initiatives to mitigate the effects of future incidents.

Redundancy: Development of duplicative procedures, particularly in the area of communications, to protect against complete collapse of a system in the event that one technology fails. Communication redundancies may include electronic mail, telephone systems, or use of the United States Postal Service.

Social distancing: A group of non-pharmaceutical interventions that includes limiting group activities and contact with other persons to reduce the transmission of illness.

Standard precautions: Refers to standard medical precautions that are developed and followed based upon the particular characteristics of a disease.

Stockpile: A reserve or store of items that may be used during an emergency.

Specimen: An individual, plant, animal, or microorganism representative of the whole population of that species.

Surge capacity: A facility's ability to increase its capacities to serve a larger population than the organization was designed to serve and actually does serve during its normal course of business.

Surveillance: The monitoring of a disease or public health related indicators; prior to a pandemic this would include watching populations for a change in behavior or health indicating that a novel threat is present.

Susceptibles: An individual who is a member of a population at risk of becoming infected by a disease if they are exposed to the infectious agent. Susceptibles have not been exposed to the disease or a vaccination, and therefore have not developed immunity to the disease.

Symptom: A physical or otherwise outwardly condition which indicates that a person is suffering from a particular illness. The plural, symptoms, refers to the list of physical conditions that indicate a particular disease.

Transmission: The act of passing an illness to an uninfected person.

Vaccine: An antigenic preparation used to establish immunity to a disease.

Voluntary: An action that does not require intervention from a governmental organization, but rather stems from an individual's desire to comply with recommendations.

World Health Organization (WHO) Disease Progression Phase: Refers to the six stages that the WHO assigns to an illness with pandemic potential to indicate that illness's real time impact upon a population.

■ APPENDIX B: ADDITIONAL RESOURCES

After reviewing the Resource kit, academic institutions requiring additional information for pandemic influenza planning should contact the Centers for Public Health Preparedness (CPHP) referral center through the network's website, http://www.asph.org/cphp/home.cfm.
Note: The links on this list are accurate as of August 12, 2007.

Links to University Pandemic Influenza Plans

Bluegrass Community College, Pandemic Response Plan, at
http://www.bluegrass.kctcs.edu/fileadmin/files_info/Pandemic/Pandemic_Plan_for_BCTC_2006.pdf

Coconino County Community College, Pandemic Flu Preparedness Plan, at
http://www.coconino.edu/pandemic/.

Idaho State University, Pandemic Flu Response and Recovery Plan, at
http://www.isu.edu/pubsafe/Pandemic_Flu_Plan/Chapter_11.html.

Kansas State University, Draft Pandemic Influenza Plan, at
http://www.k-state.edu/safety/Documents/PandemicFluPlan.pdf.

University of California at Davis Health System, Pandemic Influenza Plan, at
http://safetyservices.ucdavis.edu/emergencymgmt/downloads/UCDMC%20Influenza%20Pandemic9-1-06%20.pdf.

University of California at Riverside, Draft Pandemic Influenza Plan, at
http://72.14.203.104/search?q=cache:8HRv8-6XBdAJ:respond.ucr.edu/docs/Avian%2520and%2520Pandemic%2520Flu/Pandemic%2520Influenza%2520Emergency%2520Action%2520Plan%2520for%2520UCR.pdf+college+flu+plan&hl=en&gl=us&ct=clnk&cd=77.

University of Cincinnati, Draft Pandemic Influenza Annex Plan, at
http://www.uc.edu/uhs/documents/uc_avian_flu_plan_09062006_2_.pdf.

University of Iowa, Pandemic Influenza Response Plan, at
http://www.uiowa.edu/~provost/docs/pandemic.pdf.

University of Maryland, Pandemic Influenza Plan, at
http://www.umd.edu/emergencypreparedness/pandemic_flu/avfplan.cfm.

University of Minnesota, Pandemic Influenza Preparedness Plan, at
http://www.ahc.umn.edu/img/assets/19701/Pandemic_Influenza_Preparedness_Workplan_and_Progress_Report_091506.pdf.

University of New Hampshire, Draft Pandemic Influenza Preparedness Plan, at
http://www.unh.edu/emergency/pdf/Draft-UNH-Pandemic-Influenza-Preparedness-Plan.pdf.

University of North Carolina at Chapel Hill, Pandemic Influenza Plan, at
http://ehs.unc.edu/healthy/plannarrative2.pdf.

University of North Carolina at Greensboro, Pandemic Flu Plan, at
http://www.uncg.edu/ure/news/stories/2006/Aug/BirdFluPlanning08-29-06.htm.

University of North Carolina at Pembroke, Pandemic Flu Plan, at
http://www.uncp.edu/relations/crisis/pandemic_flu_plan.pdf.

University of Waterloo, Preliminary Response to a Pandemic, at
http://www.secretariat.uwaterloo.ca/UWPandemicPlan.pdf.

West Kentucky Community and Technical College, Avian Flu Prevention Handbook, at
http://www.westkentucky.kctcs.edu/geninfo/ref/afphdbook.pdf.

Winston Salem State University, Pandemic Bird Flu Preparedness Plan, at
http://www.wssu.edu/NR/rdonlyres/279EA801-381D-4792-B08E-7C95E6635E07/0/Pandemic_Plan.pdf.

Links to University Pandemic Influenza Websites

Bluegrass Community College, Pandemic Response Planning, at
http://www.bluegrass.kctcs.edu/info/pandemic/.

Brown University, Avian Influenza Preparedness, at
http://www.brown.edu/Administration/EHS/emergency_preparedness/pandemic/.

Bucknell University, Pandemic Influenza Planning, at
http://www.bucknell.edu/x21063.xml.

Colorado State, Pandemic Flu Planning, at
http://safety.colostate.edu/index.asp?url=flu.

Cornell University, Pandemic Flu Preparedness, at
http://www.sunysb.edu/sb/emergency/flu.shtml.

Dartmouth College, Pandemic Flu Planning, at
http://www.dartmouth.edu/~vox/0506/0515/pandemic.html.

East Carolina University, Pandemic Flu Planning, at
http://www.ecu.edu/cs-admin/news/poe/1206/flu.cfm.

Germanna Community College, Pandemic Influenza Planning, at
http://www.germanna.edu/hr/pandemic_flu/.

Hastings College, Pandemic Flu Planning, at
http://www.hastings.edu/igsbase/igstemplate.cfm?SRC=DB&SRCN=&GnavID=189.

Hiram College, Pandemic and Catastrophic Event Plan, at
http://www.hiram.edu/hiram/pandemic.html;jsessionid=7tj7sqdikkr68.

Jefferson College of Health Sciences, Avian Flu Overview, at
http://www.jchs.edu/page.php/prmID/351.

Johns Hopkins Bloomberg School of Public Health, Avian Influenza Information, at
http://www.jhsph.edu/flu/index.html.

Kansas State University, Pandemic Preparation, at
http://www.mediarelations.k-state.edu/WEB/News/InView/113006pandemic.html.

Loras College, Pandemic Flu Planning, at
http://depts.loras.edu/StudentDevelopment/health/healthnews.html.

Lord Fairfax Community College, Avian Flu Planning, at
http://www.lfcc.edu/Health_Alerts/pandemicflu.htm.

Madison Area Technical College, Avian Flu/Pandemic Flu Information, at
http://matcmadison.edu/facilities/EHS/bulletins/AvianUpdate.shtm.

Malone College, Pandemic Preparedness Planning, at
http://www.malone.edu/5833.

Minnesota State Colleges and Universities, Avian Flu Pandemic Planning for the Minnesota State System, at
http://www.chancellor.mnscu.edu/avianflu/.

Nebraska Wesleyan University, Pandemic Influenza Information, at
http://www.nebrwesleyan.edu/faculty_staff/flu.php.

New Hampshire Technical Institute, Avian Flu Preparedness, at
http://www.nhti.edu/campuslife/healthservicesavian.htm.

Princeton University, Pandemic Influenza Emergency Guidelines for the Campus Community, at
http://web.princeton.edu/sites/emergency/pandemic.htm.

Randolph College, Pandemic Flu Planning, at
http://www.rmwc.edu/studentlife/health/pandemic_flu.asp.

Rollins College, Pandemic Influenza Planning, at
http://www.rollins.edu/pr/news/06avianflu.shtml.

Skidmore College, Pandemic Planning, at
http://www.skidmore.edu/pandemic/.

Southern Methodist University, Flu Pandemic Plan, at
http://www.smu.edu/flu/pandemic/.

Stanford University, Information About Pandemic Influenza, at
http://ucomm.stanford.edu/news/avianflu.html.

Stony Brook University, Pandemic Planning, at
http://www.sunysb.edu/sb/emergency/flu.shtml.

University of Alabama, Pandemic Influenza Task Force, at
http://main.uab.edu/sites/CEIEP/99456/.

University of California at Berkley, Pandemic Influenza Resources, at
http://www.uhs.berkeley.edu/pandemicflu/resources.shtml#pandemicflu.

University of California at Davis, Pandemic Influenza Planning, at
http://safetyservices.ucdavis.edu/emergencymgmt/AvianInfluenza.cfm.

University of California at Riverside, Pandemic Influenza Planning, at
http://www.ehs.ucr.edu/pandemic/.

University of Colorado at Boulder, Pan Flu Planning, at
http://www.colorado.edu/safety/pandemicflu/.

University of Iowa, Critical Incident Management Pan Flu (home page), at
http://www.uiowa.edu/~crisis/pandemic/index.html.

University of Maryland, Pandemic Influenza Planning, at
http://www.umd.edu/emergencypreparedness/pandemic_flu/avfplan.cfm.

University of Michigan, Influenza and Avian (bird) Flu Preparedness, at
http://www.umich.edu/flu.php.

University of Minnesota, Pandemic Influenza Preparedness, at
http://www.ahc.umn.edu/about/admin/oer/pandemic/home.html.

University of New England, Pandemic Influenza Planning, at
http://www.une.edu/campus/ehs/flu.asp.
University of New Hampshire, Avian Flu Preparedness, at
http://www.unh.edu/emergency/avian-flu.html.

University of North Carolina at Chapel Hill, Avian Flu/Pandemic Flu Planning, at http://ehs.unc.edu/healthy/pandemic_flu.shtml.

University of North Carolina at Greensboro, Pandemic Flu Planning, at http://www.uncg.edu/ure/flu/uncg_fluplan.html.

University of Washington, Draft Pandemic Influenza Response Plan, at http://www.washington.edu/admin/business/oem/files/September06panflu.pdf.

Vanderbilt University, Pandemic Influenza Resources, at http://www.safety.vanderbilt.edu/resources/emergency_pandemic.htm.

Warren Wilson College, Avian Flu Issues, at http://www.warren-wilson.edu/~worldwide/avianflu.shtml.

Wheaton College, Avian Flu Information, at http://www.wheatoncollege.edu/Global/StudyAway/Predeparture/AvianFlu.html.

Winston-Salem State University, Pandemic Bird Flu Preparedness Plan, at http://www.isu.edu/pubsafe/Pandemic_Flu_Plan/Chapter_11.html.

Yavapai College, Pandemic Flu Planning, at http://www2.yc.edu/content/opi/pandemicflu/default.htm.

Links to Drills, Exercises, and Preparedness Tools Related to University Pandemic Influenza Planning

Carnegie Mellon, Avian Influenza Response, at http://www.cshema.org/resource/Avaian%20Influenz%20%20Response%20ver%2011a.doc.

Case Western, Flu and Emerging Infections Response, at http://www.case.edu/news/avianflu/case_flumatrix.pdf.

Case Western, How Colleges Can Plan for Bird Flu (article), at http://www.case.edu/news/avianflu/col_univ_plan_flu.pdf.

Colorado State, Pandemic Flu Planning Resources, at http://safety.colostate.edu/index.asp?url=flu_planning.

Columbia University School of Nursing and School of Public Health; and University at Albany School of Public Health, Public Health Incident Command System (PHICS), at
Volume I, at http://www.ualbanycphp.org/pinata/phics/masters/PHICS_vol1_2006_Oct_27.pdf
Volume II (Appendixes), at http://www.ualbanycphp.org/pinata/phics/masters/PHICS_vol2_2006_Oct_27.pdf.

Harvard School of Public Health, University Tabletop Exercise Template, Master Sequence of Events, at http://www.ualbanycphp.org/pinata/planning/HSPH-CPHP_pandemic_exercise.pdf.

North Carolina State University, Business Continuity Planning Checklist for Universities, at http://www.ncsu.edu/ehs/BCP/planning_templates/planning_checklist.php.

Princeton University, Emergency Preparedness Planning Resources, at http://web.princeton.edu/sites/emergency/DisasterPlanning.html.

University of California at Irvine, Business Continuity Plan, at http://www.ehs.uci.edu/programs/occhlth/pandemic/UCIAcademic&BusinessContinuityPlan.doc

University of Michigan, Business Continuity Planning, at http://www.itd.umich.edu/~websvcs/projects/buscont/bc-planning.html.

University of Minnesota, Pandemic Influenza Tabletop Exercise (overview), at http://www.ahc.umn.edu/img/assets/19701/Exercise_Overview_May_2005.pdf.

University of North Carolina at Chapel Hill, Pandemic Influenza Tabletop Emergency Exercise, at http://www.cshema.org/resource/UNC%20System%20Pandemic%20Tabletop%20Planning%20Exercise.doc.

University of Washington, Business Continuity Management, at http://www.washington.edu/admin/business/oem/bcm/#.

University of Washington, Tabletop Exercise After-Action Report, at http://www.cshema.org/resource/DRU_AfterActionReport_FINAL-June30.pdf.

General Pandemic Influenza Web-based Resources: Federal Government, National Organizations, International Organizations

Campus Safety Health and Environmental Management Association (CSEMA), Pandemic Influenza Resources for Colleges and Universities, at http://www.cshema.org/resource/pandemic0306.htm.

Centers for Disease Control and Prevention, Flu activity: Reports and Surveillance in the United States, at http://www.cdc.gov/flu/weekly/fluactivity.htm.

Centers for Disease Control and Prevention, Interim Pre-Pandemic Planning Guidance: Community strategy for pandemic influenza mitigation in the United States, at http://www.pandemicflu.gov/plan/community/community_mitigation.pdf.

Centers for Disease Control and Prevention, Pandemic Flu Leadership Blog, at http://blog.pandemicflu.gov/.

Centers for Disease Control and Prevention, Travel website, at http://www.cdc.gov/travel/.

Department of Health and Human Services, National Institutes for Health, Animal Resources Team, Emergency Handbook, at http://oacu.od.nih.gov/disaster/ARTHandbkSept06.pdf.

Hospital Incident Command System (HICS), at http://www.emsa.ca.gov/hics/hics.asp.

Infectious Disease Society of American (IDSA), Avian/Pandemic Flu Page, at http://www.idsociety.org/Content/NavigationMenu/Resources/Avian_Pandemic_Flu/Avian_Pandemic_Flu.htm.

National HPAI, Early Detection Data System (HEDDS), National Avian Influenza Surveillance Information, at http://wildlifedisease.nbii.gov/ai/.

OSHA, Guidance on Preparing Workplaces for an Influenza Pandemic, at http://www.osha.gov/Publications/OSHA3327pandemic.pdf.

PAHO, Creating a Communication Strategy for Avian/Pandemic Influenza, at http://www.paho.org/English/AD/argguidelines.doc.

State plans for containment of pandemic influenza (includes the plans of 49 states), at http://www.cdc.gov/ncidod/eid/vol12no09/06-0369_appT1.htm.

United States, Avian and Pandemic Influenza, at http://www.pandemicflu.gov.

United States Department of Agriculture, Avian Influenza Website, at http://www.usda.gov/wps/portal/usdahome?navtype=SU&navid=AVIAN_INFLUENZA.

United States Department of Agriculture, Avian Influenza Website, Questions and Answers (March 14, 2007), at http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB/.cmd/ad/.ar/sa.retrievecontent/.c/6_2_1UH/.ce/7_2_5JM/.p/5_2_4TQ/.d/1/_th/J_2_9D/_s.7_0_A/7_0_1OB?PC_7_2_5JM_contentid=2005%2F10%2F0458.xml&PC_7_2_5JM_parentnav=LATEST_RELEASES&PC_7_2_5JM_navid=NEWS_RELEASE#7_2_5JM.

United States Department of Health and Human Services, National Institutes of Health, Animal Resources Team, Continuity of Operations Plan, at http://oacu.od.nih.gov/disaster/ARTHandbkSept06.pdf.

United States Department of Health and Human Services, National Vaccine Program Office, at http://www.hhs.gov/nvpo/pandemics/.

United States Department of Homeland Security, National Incident Management System (NIMS), at http://www.training.fema.gov/EMIWeb/IS/ICSResource/assets/NIMS-90-web.pdf.

United States Department of State, Fact sheet, How to prepare for "Sheltering-in-Place," at http://travel.state.gov/travel/tips/health/health_3096.html.

United States Department of State, Travel site, at http://travel.state.gov/.

United States Office of Personnel Management (OPM), Pandemic Influenza Information Page, at http://www.opm.gov/pandemic/.

University of North Carolina at Chapel Hill, Continuity of Operations Planning, at http://ehs.unc.edu/healthy/coop.shtml.

Wikipedia, the free encyclopedia, at http://www.wikipedia.org.

White House, National Strategy for Pandemic Influenza, at http://www.whitehouse.gov/homeland/pandemic-influenza.html.

World Health Organization (WHO), Guidance on Public Health Measures in Countries Experiencing Their First Outbreaks of H5N1 Avian Influenza, at http://www.who.int/csr/disease/avian_influenza/guidelines/firstoutbreak/en/index.html.

World Health Organization (WHO), National Plans Submitted by all Countries, at http://www.who.int/csr/disease/influenza/nationalpandemic/en/index.html.