



Pandemic Influenza Annex

State of Florida
Emergency Operations Plan

Version 10.4

October 2006

Approval

The Department of Health Emergency Operations Plan provides an approach to emergency management based on all hazards. This annex addresses the specifics of a pandemic influenza scenario. Questions and comments about this annex should be addressed to the Division of Emergency Medical Operations, Office of Emergency Operations, Planning Section.

Reviewed and adopted this date October 9, 2006 by:

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I. INTRODUCTION

A. Overview

Pandemic influenza is a unique public health emergency and potential community disaster. A highly probable, if not inevitable, event, it is also impossible to predict. During the twentieth century, a pandemic influenza occurred every 11 to 39 years. Based on this historical information, experts advise that another influenza pandemic may occur within the next few years.

Influenza A viruses can cause worldwide epidemics, or pandemics, resulting in high rates of illness and death (morbidity and mortality). Chapter 381 of the *Florida Statutes* charges the Department of Health (DOH) with protecting the health of the state's citizens and visitors. This responsibility includes the implementation of programs for the prevention, control and reporting of diseases of public health significance.

The goal of this plan is to minimize the morbidity and mortality related to a pandemic influenza event, and to align Florida preparedness, response, recovery and mitigation to national and international efforts. The annex outlines a series of activities designed to rapidly detect, investigate and implement interventions which, based on the best available science, maximize the use of available resources to minimize morbidity and mortality. Specific activities and interventions are set forth in the technical appendices to this annex.

For planning purposes, and considering the World Health Organization Phases of Pandemic Alert, this annex and associated appendices anticipate possible stages of an influenza pandemic. There is no assurance, however, that a real event will follow a linear course through these stages.

In a real event, decision-makers will determine when to transition from one stage – with its associated recommended responses – to another stage. The facts will not always be clear. There may be periods when the state, as a whole, is in more than one stage at the same time, or when different areas of the state are in different stages. Decision-making at the local, regional and state levels will have to be flexible, coordinated and take into account specific circumstances that are being experienced on an ongoing basis.

This annex recommends some interventions that will be logistically difficult and/or expensive to implement. Certain interventions, such as mandatory travel restrictions or *cordon sanitaire* around entire communities, are not recommended because they seem infeasible under any foreseeable circumstance. Ultimately, the decision to scale back effective, but difficult or expensive, interventions, and/or implement other interventions not included within this annex, will be made by the department, State Emergency Response Team or Executive Office of the Governor.

Activities related to limiting social and economic disruption and maintaining critical infrastructure will be a part of the Pandemic Influenza Annex of the Florida Comprehensive Emergency Management Plan currently under development.

B. Purpose and Goals

The purpose of this annex is to describe the coordinated Department of Health efforts relative to a threatened or actual pandemic influenza event in Florida due to a novel virus. The annex provides an overarching strategic approach the department will use in preparing for, and responding to, these events, and offers technical guidelines and supporting material for event decision-making. This annex may serve as a resource for planning efforts for other entities outside of the department.

The goals of these coordinated efforts are:

- Reduce morbidity and mortality resulting from a pandemic event.
- Provide alignment between local, state, national and international plans.

The goals of this plan will be achieved through a series of activities designed to rapidly detect, investigate and implement interventions which, based on the best available science, maximize the use of available resources to minimize morbidity and mortality. Specific activities and interventions are set forth in the technical appendices to this annex. Activities related to limiting social and economic disruption and maintaining critical infrastructure will be a part of the Florida Comprehensive Emergency Management Plan, Pandemic Influenza Annex, currently under development.

C. Scope

- This annex explains how the DOH will prepare for, respond to, recover from and mitigate future impacts of a pandemic event.
- This annex defines specific roles and responsibilities within the department, as well as linkages to key external response entities.
- This annex provides for a command and coordination structure that is integrated within the state's emergency management structure.
- This annex provides guidance to emergency management officials for the activation of the emergency management system in a pandemic event.
- The scope of this annex is consistent with, and has integrated, international and national guidance.
- This annex is limited to the scope of the department's role in the delivery of public health services essential during a pandemic event. The role of the department, as lead agency for ESF8, is detailed in the state's Comprehensive Emergency Management Plan.

II. AUTHORITIES AND REFERENCES

Chapter 120.54, F.S.

State Agencies

Allows state agencies to adopt temporary emergency rules when there is immediate danger to public health, safety or welfare without going through the normal rule making process.

Chapter 252, F.S.

Emergency Management Act

Governor and Division of Emergency Management:

- Allows the Governor to declare a state of emergency.
- Gives the Governor and division direction and control of emergency management.
- Allows the Governor and division to delegate authority to carry out critical functions to protect the peace, health, safety and property of the people of Florida.

Chapter 381, F.S.

Section 381.0011, F.S.

Department of Health – Communicable disease and quarantine

- Authorizes the department to administer and enforce laws and rules relating to control of communicable disease.
- Authorizes the department to declare, enforce, modify and abolish quarantine of persons, animals and premises.
- Authorizes the department to specify the conditions and procedures for imposing and releasing a quarantine order.

Section 381.0012, F.S.

Department of Health – Enforcement Authority

- Authorizes the department to: maintain necessary legal action, request warrants for law enforcement assistance and direct state and county attorney, law enforcement and city/county officials, upon request, to assist the department to enforce the state health laws and rules adopted under Chapter 381, F.S.

Section 381.00315, F.S.

Department of Health – Public Health Emergencies and Advisories

- Authorizes the State Health Officer to declare public health emergencies and issue public health advisories.

Chapter 768.28, F.S.

Section 768.28, F.S.

State Agencies – Sovereign immunity for state officers and employees

- Protects state employees who administer pharmaceuticals as part of their official duties.

III. SITUATION

A. Vulnerability and Risk Assessment

1. Florida's Unique Characteristics

As the fourth most populous state in the United States, Florida's demographic and population density characteristics provide significant risks for rapid spread of influenza.

As a major tourist destination, a number of Florida's counties function as tourism epicenters. Large numbers of visitors enter and leave the state

each day. Therefore, Florida has an increased risk of infection transmission being introduced from affected countries. Florida's vast natural areas function as important breeding areas and flyways for wild bird and duck populations. Florida's robust agricultural economy supports significant domestic poultry businesses.

2. Influenza

Influenza is a highly infectious viral illness. Three types of influenza viruses cause disease in humans--A, B and C.

- Influenza A usually causes pandemics with moderate to severe illness, affecting all age groups.
- Influenza B generally causes milder disease than type A and affects only humans, primarily children.
- Influenza C is rarely a reported cause of human illness.

3. Pandemic Influenza

Pandemic influenza is a unique public health emergency and potential community disaster. A highly probable, if not inevitable, event, it is also impossible to predict. During the twentieth century, a pandemic influenza occurred every 11 to 39 years. Based on this historical information, experts advise that another influenza pandemic may occur within the next few years.

Pandemic influenza has the potential of affecting all elements of society. A large number of cases will add a burden to hospitals and other healthcare systems already stressed with normal, day-to-day emergencies.

A novel influenza-virus strain could emerge first in another country or in the U.S. Most experts agree that there will be one to six months between identification of a novel virus and widespread outbreaks in the U.S. These outbreaks will likely occur simultaneously throughout the U.S., and the impacted communities will experience two to three (2-3) waves, each lasting six to eight (6-8) weeks or more.

Due to the lack of human immunity and lack of an effective vaccine to a novel influenza virus, there is significant risk of morbidity and mortality affecting all segments of society.

4. Influenza Pandemic Impacts on Florida

In accordance with U.S. Department of Health and Human Services (HHS) planning guidance, Florida is planning for a *severe* influenza pandemic similar to 1918-1919, as compared to a *moderate* pandemic similar to 1957 or 1968. Either could happen, however.

The following tables document estimates of potential severe pandemic impacts to the State of Florida, with estimates based on planning assumptions derived from the HHS Pandemic Influenza Plan (November 2005):

Table 1: Pandemic Influenza Impact, Florida 2006

	%	Florida
Attack Rate	35%	6.41 million
Seeking Treatment	75% of cases	4.8 million
Hospitalization Rate	10%	640,000
Case Fatality Rate	2%	128,000

Table 2: Impact on Healthcare System with no antiviral medication

Characteristics	In Each of 1st Wave and 2nd Wave	Florida
Cases	3.2 million	6.4 million
Hospitalized (10% of cases)	320,000	640,000
Surge Beds (130%)	65,000	135,000
ICU Total	48,000	96,000
ICU Ventilators	24,000	48,000
Surge Ventilators	5,000	10,000
Case Fatality Rate (2%)	64,000	128,000

Table 3. Impact on Healthcare System with antiviral medication for 20%-25% of population*

Characteristics	In Each of 1st Wave and 2nd Wave	Florida
Hospitalized	80,000 – 160,000	160,000 - 320,000
Surge Beds	20,000 – 32,500	40,000 – 65,000
Surge Ventilators	1,500 – 2,500	3,000 – 5,000
Case Fatality Rate	16,000 - 32,000	32,000 - 64,000

*Assumes 50%-75% reduction in number of hospitalizations/fatalities

These impact estimates are based on a standard statistical model that does not consider differences in healthcare systems, practice patterns or healthcare-seeking behavior in Florida. Other statistical models that estimate impacts are available. Nonetheless, these tables provide an overview of the potential magnitude and impact of the next influenza pandemic in Florida. Estimates using Flu Aid, specialized software developed by the Centers for Disease Control and Prevention (CDC), can be viewed at <http://www.pandemicflu.gov/plan/tools.html>.

B. Planning Assumptions

1. Pandemic Influenza

- That a future influenza pandemic will occur involving humans is considered a certainty by the scientific community. When it will happen is entirely uncertain.
- Per HHS planning guidance, Florida is planning for a severe influenza pandemic similar to the pandemic that occurred in 1918, as compared to a moderate pandemic similar to the pandemics of 1957 or 1968. Either scenario could happen.
- Susceptibility to the pandemic influenza virus will be universal.
- Efficient and sustained person-to-person transmission will signal that a pandemic is imminent.
- Risk groups for severe and fatal infection will not be able to be predicted with certainty.
- Illness rates will be highest among school-aged children (about 40%) and decline with increasing age levels.
- Among working adults, an average of 20% will become ill during a community outbreak.
- An estimated 35% of the general population will become ill with influenza, of which 75% will seek outpatient medical care (equaling 25% of the total population).
- The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ ten-fold between more and less severe scenarios. The design of this annex is predicated on a severe pandemic scenario with a 10% hospitalization rate and a 2% case fatality rate.
- Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- Persons who become ill will shed the virus and transmit infection for up to one day before the onset of illness. Viral shedding and the risk of transmission will be greatest during the first two (2) days of illness. Those with full-blown symptoms will be most infectious.
- Children typically shed the greatest amount of virus and, therefore, are likely to pose the greatest risk for disease transmission.
- On average, infected persons will transmit infection to approximately 1.5 to 2.0 other people.
- Multiple waves of illness (periods during which community outbreaks occur across the country) could occur, with each wave lasting two to three months. Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic cannot be predicted with certainty.
- In an affected community, a pandemic wave will last from six to eight weeks.

2. Public Health Services

- Rates of absenteeism will depend on the severity of the pandemic.
- In a severe pandemic, absenteeism may reach 40% during the peak weeks of a community outbreak – attributable to illness, the need to care for ill family or household members and fear of infection – with lower rates of absenteeism occurring during the weeks before and after the peak.
- Certain public health interventions (i.e., closing schools or quarantining household contacts of infected individuals) are likely to increase rates of absenteeism.
- Social and economic disruption may limit the department's ability to provide public health services that could result in unintended consequences.
- Public health services will be reduced to those deemed mission essential or life sustaining.
- DOH staff will be trained in the competencies necessary to implement their assigned roles and responsibilities found within this annex.

3. Disease Control

- Introduction of pandemic influenza into Florida may come from a variety of venues.
- Attempts to control and contain pandemic influenza will reduce morbidity and mortality.

4. Antiviral

- Limited amounts of antiviral will be available for treatment and prophylaxis of a novel virus in a pandemic.
- State stockpiles will be available to priority groups for treatment and prophylaxis according to federal guidelines from the Department of Health and Human Services (HHS).
- Treatment, containment, control and prevention strategies for pandemic influenza are most effective when antivirals for treatment and pre- and post-exposure prophylaxis are included with other non-pharmaceutical interventions.

5. Vaccines

- When the pandemic occurs, vaccine will not be available, or will be in short supply and will be allocated on a priority basis, following federal guidelines from the HHS.
- Vaccine will be available for pandemic influenza prophylaxis approximately six to eight months after the pandemic begins.
- The total vaccine supply will be under the control of the federal government.
- With the emergence of a novel influenza-virus strain, all persons identified for vaccination will likely need two doses of vaccine to achieve optimal antibody response.

6. Risk Communication

- It is to be expected that there will be an immediate and continuous demand from all segments of society for information on actual and potential impact, magnitude, transmission, treatment and recovery resulting from the pandemic.
- Emerging issues will influence the timing and delivery of the communication activities outlined in this annex.
- Information demands during a pandemic will be sustained over a long period, and maintaining public confidence over many months will be based, in part, on consistency and credibility of messages.
- Public Information will be coordinated through the state emergency management system and will align local, state, national and international efforts.

7. Resource Support

- State, interstate and federal assistance and resource support to local communities are expected to be limited or unavailable.

IV. CONCEPT OF OPERATIONS

A. Alert, Notification, Activation and Deactivation

1. Alert

- **WHO Phase Change Alert**

Notification of any WHO phase change will be received through national and international channels.

- **Surveillance System Alert**

Multiple human and bird/animal surveillance systems for routine and enhanced surveillance at the local, state, national, and international levels will be utilized to alert the department of detected aberrations. The Divisions of Environmental Health and Disease Control are the lead for assessing the validity of the aberration and recommending the appropriate action as described in Appendix 1 Response System Overview.

2. Notification

- **WHO Phase Change**

When a phase change notification is received, the designated departmental representative will communicate to internal and external partners through established alerting protocols as detailed in Appendix 3 Notification Protocol.

- **Surveillance System Alert**

When a surveillance system aberration is validated, the designated departmental representative will communicate to internal and external

partners through established alerting protocols as detailed in Appendix 3 Notification Protocol.

3. Activation

Based on alert and notification of a WHO phase change and/or validated surveillance system aberration, the appropriate components of this plan will be activated as defined in Appendix 1 Response System Overview.

4. Deactivation

Based on the course of the pandemic and the reduction of illness within the state, the response efforts will be scaled down in an appropriate and proportionate way. Surveillance systems will be monitored on a regular basis to determine pandemic influenza activity in the state and to identify further areas for investigation and confirmation of disease.

B. Command and Coordination

- The DOH Secretary is responsible to ensure that all DOH personnel and resources are committed to participating in the response of an influenza pandemic.
- Once the State Emergency Response Team (SERT) is activated, this plan is incorporated into the established state emergency management structure, as designated in Appendix 8 (ESF8) of the state's Comprehensive Emergency Management Plan (CEMP).

C. Communications

During an activation, information development and dissemination will be coordinated through established department protocols and procedures, utilizing appropriate technical specialists, and will align to local, state, national and international efforts. (See Appendix 13 Communications for details.)

V. Emergency Management Phases, Activities and Roles and Responsibilities

A. Preparedness

Preparedness activities begin in the WHO Inter-Pandemic Phases 1 and 2, extending to Pandemic Alert Phases 3 and 4. During this phase, the following persons and units will:

1. Secretary

- Inform the Office of the Governor, the Director of the Division of Emergency Management and other department heads of the status and progression of pandemic influenza preparedness efforts, as appropriate.

- Direct that departmental leadership disseminate clear expectations of the department's role in all phases of a pandemic event.
 - Direct that appropriate plans be in place to assure continuation of mission-critical or life-sustaining departmental services.
 - Direct that a workgroup be established to coordinate pandemic influenza preparedness activities across the department.
- 2. Deputy Secretaries**
- Supervise pandemic influenza preparedness activities within their areas of responsibilities.
- 3. Chief of Staff**
- Coordinate pandemic influenza preparedness activities for departmental executive leadership.
- 4. Divisions/Bureaus/Offices/County Health Departments/CMS Clinics/A.G. Holley**
- Develop, document and implement pandemic influenza preparedness activities within their areas of responsibilities.
 - Ensure that staff are trained on the competencies necessary to perform assigned roles and responsibilities during a pandemic response.
 - Develop appropriate continuity of operations plans to ensure continuation of mission-essential or life-sustaining departmental services.
- 5. Office of Communications**
- Review and revise, as necessary, the Risk Communications Plan to ensure that it has appropriate pandemic influenza activities.
 - Communicate the pandemic influenza preparedness activities through mass media and electronic venues.
 - Coordinate interstate pandemic influenza communication activities.
- 6. Office of the General Counsel**
- Appoint a representative to assist the pandemic preparedness workgroup.
 - Develop model orders to support response to an influenza pandemic.
 - Collaborate with the Florida Division of Emergency Management and the Governor's Office General Counsel on development of executive order language.
 - Educate DOH staff on legal authority and legal issues related to a pandemic influenza.

7. Division of Disease Control

- Ensure that surveillance systems are in place to detect aberrations that may indicate the presence of a novel influenza virus in humans.
- Develop protocols for enhanced statewide pandemic influenza surveillance and reporting.
- Provide guidance to hospital and clinical laboratories for testing persons for influenza when the novel strain is suspected (in conjunction with the Bureau of Laboratory Services and partner agencies).
- Disseminate the case definition established by the CDC and/or WHO.
- Monitor federal guidance and develop Florida-specific prioritization strategies/policies for various levels of influenza vaccine and antiviral drug availability.
- Review and test in conjunction with the Bureau of Statewide Pharmaceutical Services and Division of Emergency Medical Operations the ordering, receiving, shipping, dispensing, storage and retrieval procedures that the department will use for various levels of vaccine and antiviral drug availability.
- Review the procedures for reporting adverse events through the Vaccine Adverse Events Reporting System (VAERS).

8. Division of Environmental Health

- The Zoonotic and Vector-borne Disease Program will serve as a liaison between the DOH, the Florida Department of Agriculture and Consumer Services and the Florida Fish and Wildlife Conservation Commission in the monitoring of avian influenza in birds (see Appendix 5).
- Develop guidelines in conjunction with state partner agencies that will ensure the safety of the food supply and mitigate the risk of exposure from wildlife (see Appendix 5).

9. County Health Departments

- Develop and test a community-based pandemic influenza response plan.
- Review local plans to assess existing healthcare resources, coordinate responses with key stakeholders in the counties and develop contingencies for anticipated shortages of essential services, in conjunction with local emergency management and community partners.

10. Division of Emergency Medical Operations

- Ensure development of logistical plans for receiving, storing, deploying and retrieving procedures for pharmaceuticals, medical equipment and supplies.

- Develop and maintain the DOH Emergency Operations Plan and its associated annexes.
- Serve as the entity authorizing official for requisitioning of antivirals under HHS-managed antiviral contracts.
- Serve as the ESF8 liaisons for State Emergency Response Team in pandemic influenza preparedness activities.

11. Bureau of Laboratory Services

- Review and test Statewide Laboratory Surge Capacity Plan to ensure functionality in a pandemic influenza event.
- Provide guidance to hospital and clinical laboratories for specimen collection, handling and transport specimens when a novel strain is suspected, in conjunction with the Division of Disease Control and partner agencies (See Appendix 10).
- Procure appropriate reagents from the CDC or other appropriate sources to detect and identify the novel virus strain.
- Partner with local private labs without virus-strain identification capacity to obtain and use rapid antigen testing kits.

12. Bureau of Statewide Pharmaceutical Services

- Review and test, in conjunction with the Division of Disease Control and Division of Emergency Medical Operations, the ordering, receiving, shipping, dispensing, storage and retrieval procedures that the department will use for various levels of vaccine and antiviral drug availability (see Appendix 11).
- Develop contingency plans for antibiotic and other pharmaceutical shortages.
- Requisitioning of antivirals under HHS managed antiviral contracts, by bureau chief as ordering officer.

B. Response

During this phase, the following persons and units will:

1. Secretary

- Inform the Governor of the phase and status of the event.
- Serve as a member of the state unified command, as directed by the Governor.
- Direct implementation of DOH Emergency Operations Plan and associated annexes.

2. Deputy Secretaries

- Supervise pandemic influenza response activities within their areas of responsibilities.

- 3. Divisions/Bureaus/Offices/County Health Departments/CMS Clinics/A.G. Holley**
 - Implement pandemic influenza response activities within their areas of responsibilities.
 - Implement appropriate continuity of operations plans to assure continuation of mission essential or life-sustaining departmental services.
 - Assign staff to support state/county health and medical response in conjunction with established Emergency Management System requirements.

- 4. Office of Communications**
 - Participate in a Joint Information Center.
 - Designate Public Information Officers to support ESF8 and ESF14.
 - Coordinate and review departmental public and healthcare provider messages.
 - Provide periodic updates on the event status to Department of Health divisions, bureaus, county health departments, CMS Clinics and A.G. Holley Hospital.
 - Monitor information flow and initiate corrective measures to address rumors and misinformation.

- 5. Office of the General Counsel**
 - Assist Secretary with Public Health advisories and alerts.
 - Assist local county health departments regarding isolation and quarantine orders, as requested.
 - Serve as legal counsel to ESF8.
 - Maintain event specific legal documentation.

- 6. Division of Disease Control**
 - Inform the Secretary and Deputy Secretaries when the surveillance system has detected and confirmed the presence of a novel influenza virus in Florida.
 - Provide recommendations to the Secretary, Deputy Secretaries and other appropriate staff on initial control and containment measures.
 - Direct surveillance activities – particularly the continuing evolution/shift/drift of the novel virus, victim demographics and other factors important to containment of pandemic influenza.
 - Distribute a surveillance case definition for influenza caused, or suspected to be caused, by the pandemic virus. Provide specific guidance on enhanced surveillance and reporting, particularly for evolving novel virus and other data of interest to the CDC, WHO and the state, and oversee continued surveillance with daily reports.

- Develop and direct disease control strategies based upon the best available information.
- Monitor vaccine coverage when such pharmaceuticals are available.
- Distribute vaccines to support delivery to high-priority groups pursuant to federal or state guidance.
- Monitor adverse effects of vaccines reporting.

7. Division of Environmental Health

- Zoonotic and Vector-borne Disease Program to serve as liaison between DOH, Florida Department of Agriculture and Consumer Services and Florida Fish and Wildlife Conservation Commission during response to avian influenza in birds (see Appendix 5).

8. County Health Departments

- Implement appropriate response activities as defined in local pandemic influenza plans (see Appendix 16).
- Assign staff for county health and medical response in conjunction with local Emergency Management System requirements.
- Implement plan for County Health and Medical Response Continuity of Operations based on Emergency Management System requirements.

9. Division of Emergency Medical Operations

- Assume lead of ESF8 Health and Medical by Office of Emergency Operations Director upon activation of State Emergency Operations Team.
- Implement plan for ESF8 Continuity of Operations based on Emergency Management System requirements.

10. Bureau of Laboratory Services

- Implement Laboratory Surge Plan, as appropriate, to ensure adequacy of specimen-testing capacity (see Appendix 10).

11. Bureau of Pharmaceutical Services

- Support ordering, receiving, shipping, dispensing, storage and retrieval of vaccines and antivirals based on state and federal guidelines.
- Monitor for antibiotic and other pharmaceutical shortages and implement contingency plan for maintaining adequate supplies.
- Monitor utilization and implement re-supply plans for redistribution of vaccines and antivirals, as necessary.

C. Recovery

Based on the course of pandemic and reduction of illness within the state, response efforts will be scaled down appropriately and proportionally. During this phase, the following persons and units will:

1. Secretary

- Provide guidance to the Governor as to when a Declaration of Public Health Emergency is no longer necessary.
- Direct development of a DOH after-action report.

2. Deputy Secretaries

- Implement recovery activities within their areas of responsibilities.
- Ensure after-action reports are completed within their areas of responsibilities.

3. Divisions/Bureaus/Offices/County Health Departments/CMS Clinics/A.G. Holley

- Assess staff availability and ability to resume normal operations.
- Return to normal operations, as appropriate.
- Complete after-action reports, as directed.

4. Chief of Staff

- Coordinate the development of a consolidated and comprehensive after-action report, to be submitted to the Secretary within 90 days of deactivation.

5. Division of Disease Control

- Implement plan for the recovery of unused vaccine in collaboration with the Bureau of Statewide Pharmaceutical Services and Division of Emergency Medical Operations.

6. Division of Environmental Health

- Maintain liaison function with Department of Agriculture and Consumer Services and other partners involved with environmental issues.

7. Bureau of Statewide Pharmaceutical Services

- Implement plan for the recovery of unused vaccine, antivirals, antibiotics and other pharmaceuticals, in collaboration with the Division of Disease Control and Division of Emergency Medical Operations.

8. Bureau of Laboratory Services

- Continue a special surveillance program to detect antigenic drift variants or reassortant viruses for detection of possible changes in original pandemic strain.

D. Mitigation

During this phase, the following persons and units will:

1. Secretary

- Appoint working group to implement DOH mitigation activities.

2. Division of Emergency Medical Operations

- Revise, in conjunction with the Division of Disease Control, the Pandemic Influenza Annex, as indicated, based on the after-action report.

3. Division of Disease Control

- Revise, in conjunction with the Division of Emergency Medical Operations, the Pandemic Influenza Annex, as indicated, based on the after-action report.

4. Divisions/Bureaus/Offices/County Health Departments/CMS Clinics/A.G. Holley

- Participate in the Pandemic Influenza Annex revision process, as indicated.

VI. Annex Review and Maintenance

A. Process of Review and Maintenance

The Division of Emergency Medical Operations and the Division of Disease Control will periodically, no less than annually, review this statewide Influenza Pandemic Annex. The Division of Emergency Medical Operations will update, publish and distribute the revisions.

B. Record of Changes

Changes	Status
Update Pandemic Influenza Plan V8.0	Completed March 2004
Convert to Standard Format	Completed June 2005

Compare WHO Phases to Phases of Emergency Management	Completed November 2005
Incorporate CHD Advisory	Completed March 2005
Incorporate "White Paper" Planning Recommendations	Completed September, 2005
Develop Preparedness, Response and Recovery Matrices	Completed November 2005
Cross Reference Nov. 2005 HHS Plan	Initiated November 2005
Develop Flu Aid Tables for Vulnerability Analysis	Completed December 2005
Adopt DOH Pandemic Influenza Annex V9.1	Completed February 2006
Develop Technical Appendices	Completed March 2006
Complete V10.0 Draft	Complete September 2006
V10.4 Authorized by Secretary	Complete September 2006



Pandemic Influenza Annex

State of Florida Emergency Operations Plan

Appendix 1

Response System Overview: Strategy Summary, Intervention Matrix, Roles and Responsibilities Matrix

October 2006

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I. Overview

A influenza pandemic could exhibit an array of characteristics. For example, it could last six to 18 months and it could have a relatively low or catastrophically high morbidity and mortality rate. Under any scenario, the scope of response required will be broad and will include government, businesses and citizens in general, and the emergency management system.

Given the size and complexity of Florida and the global nature of a pandemic influenza threat, implementation of aligned strategies and coordinated response has the potential to limit morbidity and mortality from a pandemic event. This Appendix serves as a quick reference for the health and medical response. Included in this Appendix are:

- A comparison of WHO Pandemic Phases and Emergency Management Phases
- Florida strategies by Pandemic Sub-Stage, including a conceptual framework for these strategies
- Interventions by Pandemic Sub-Stage
- Roles and responsibilities by DOH Organizational Unit and Emergency Management Phase

Details for each of these summary documents are documented in the appendices to this annex.

II. WHO Pandemic Phases Defined and Emergency Management Phases

To better understand the actions needed, the activities of the WHO/CDC phases are sorted by emergency management phases of **preparedness, response, recovery and mitigation**. How these activities relate to the WHO Phases is outlined in Table 1 below.

Table 1: WHO Pandemic Phases Defined and Emergency Management Phases

World Health Organization Pandemic Phase			Emergency Management Phase			
Period	WHO Phase (2005)	Definition	Preparedness	Response	Recovery	Mitigation
Inter-Pandemic	Phase 1	No new influenza virus subtypes have been identified in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of a human infection or disease is considered to be low.				
	Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.				
Pandemic Alert	Phase 3	Human infection(s) with a new subtype , but no human-to-human spread, or, at most, rare instances of spread to a close contact.				
	Phase 4	Small cluster(s) with limited human-to-human transmission but highly localized , suggesting the virus is not well adapted to humans. "Novel virus alert" in WHO 1999 Phases.				
	Phase 5	Larger cluster(s) but human-to-human spread still localized , suggesting the virus is better adapted to humans but not readily transmissible.				
Pandemic	Phase 6 Country not affected	Increased and sustained transmission in general population in other countries.				
	Phase 6 Country affected	Increased and sustained transmission in general population in the U.S. and Florida.				
	Phase 6 Subsided	Decreasing incidence in the US.				
	Phase 6 Next Wave	Increased and sustained transmission in general population in the U.S. and Florida.				
Post Pandemic	Return to inter-pandemic period	Return to Inter-Pandemic period				

Note: The distinction between **Phases 1 and 2** is based on the risk of human infection or disease resulting from circulating strains in animals. The relative risk factors may include pathogenicity in animals and humans, occurrence in domesticated animals and livestock or only in wildlife, whether the virus is enzootic or epizootic, geographically localized or widespread, and other scientific parameters.

The distinction among **Phases 3 and 4**, based on an assessment of the risk of a pandemic. The relative risk factors may include rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain) and other scientific parameters.

III. Florida Strategies by Pandemic Sub-Stage

A. WHO Pandemic Sub-Phases and Key Events Requiring Intervention

For Florida planning purposes, refer to the following stages, which are subcategories of the WHO Phases defined in Table 1 of this Appendix.

1. WHO Phase 1
2. WHO Phase 2
- 3A. WHO Phase 3 – Disease in wild birds in Florida
- 3B. WHO Phase 3 – Disease in poultry flocks in Florida
- 3C. WHO Phase 3 – Human cases in Florida, resulting from exposure outside Florida, with very little or no risk of human-to-human spread
- 3D. WHO Phase 3 – Human cases in Florida, resulting from exposure in Florida, with very little or no risk of human-to-human spread
- 4A. WHO Phase 4 – Disease in wild birds in Florida
- 4B. WHO Phase 4 – Disease in poultry flocks in Florida
- 4C. WHO Phase 4 – Human cases in Florida, resulting from exposure outside Florida, with small risk of human-to-human spread
- 4D. WHO Phase 4 – Human cases in Florida, resulting from exposure in Florida, with small risk of human-to-human spread
- 5A. WHO Phase 5 – Disease in wild birds in Florida
- 5B. WHO Phase 5 – Disease in poultry flocks in Florida
- 5C. WHO Phase 5 – Human cases in Florida, resulting from exposure outside Florida, with moderate degree of human-to-human spread
- 5D. WHO Phase 5 – Human cases in Florida, resulting from exposure in Florida, with moderate degree of human-to-human spread
- 6A. WHO Phase 6 – Human cases with potential for sustained person-to-person spread, scattered cases allowing case-based control measures
- 6B. WHO Phase 6 – Human cases with sustained person-to-person spread, no vaccine available, community-based control measures
- 6C. WHO Phase 6 – Human cases with sustained person-to-person spread, vaccine available, community-based control measures plus selective vaccination, then widespread vaccination
- 6D. WHO Phase 6 – First wave of epidemic receding, recovery and alertness for next wave

Several of these stages have the same names but occur at different periods of the epidemic's development. They are listed separately because the event's impact, and appropriate response, would need to be different. For example, it is much less dangerous if a case of influenza is found in wild birds in Phase 3 – when there is “no human-to-human spread” – than in Phase 5 – when there are “large clusters of human-to-human spread.”

B. Strategy Conceptual Framework

The strategies utilized at the different stages of the epidemic can be grouped together conceptually:

1. Primarily Response to Avian Influenza in Birds

In Stages 3A, 3B, 4A, 4B, 5A and 5B, the ***focus is on control of novel influenza in wild and domestic birds, and prevention of spillover infection from birds to closely exposed people.***

The approach to these situations is primarily presented in the appendix on zoonotic disease, with supporting material in the appendices on laboratory services, occupational health, surveillance and rapid response/containment.

2. Case-Based Response to Infection in Humans

In Stages 3C, 3D, 4C, 4D, 5C, 5D and 6A, the ***focus is on case-based control measures*** to be led by public health agencies.

The approach to these situations is described at a fairly general level in the document *Rapid Response and Containment Protocol* (Version 2.2), approved by the DOH Emerging Event Policy Group in late April 2006.

The Containment appendix includes much of the same material, with supporting material available in the Appendix 10 Laboratory Services, Appendix 6 Surveillance, Appendix 9 Isolation/Quarantine, Appendix 12 Occupational Health and Appendix 11 Antivirals.

3. Community-Based Response to Infection in Humans

In Stage 6B, the ***focus is on community-based measures to control or mitigate a pandemic.***

This strategy will be ***initiated when case-based control measures are no longer feasible*** or effective, and/or when an effective vaccine is not yet available.

The approach in this situation is multifaceted, as described in Appendix 8 Community-Based Control and Social Distancing, with supporting material in Appendix 6 Surveillance, Appendix 11 Antivirals and Appendix 12 Occupational Health.

4. Community-Based Response to Infection in Humans, Plus Vaccine

In Stage 6C, the ***focus is on selective and then universal vaccination.***

While vaccination efforts are being implemented, the ***community-based control measures*** from Stage 6B ***will have to be continued.***

Our approach in this stage is described primarily in Appendix 11 Vaccines, with supporting material in Appendix 6 Surveillance.

5. Recovery

In Stage 6D the focus is on recovery, ***restoring medical care and public health functions***, and ***maintaining surveillance*** for a second or subsequent wave of influenza.

Table 2: Interventions by Pandemic Sub-Stage (see sub-stage definition in Section III of this Appendix)

Interventions and Stages	1	2	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D
			Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Scattered human cases	Widespread human cases, no vaccine	Widespread human cases, vaccine	Recovery
Key: ♦ Activity is not appropriate at this stage ♦ Activity is an optional component of response at this stage ♦♦ Activity is an important component of response at this stage ♦♦♦ Activity is a core component of response at this stage																		
Planning	♦♦	♦♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Wild bird surveillance		♦	♦♦♦	♦♦	♦	♦♦♦	♦♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦	♦♦	♦♦♦	♦			
Domestic poultry surveillance	♦♦	♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦			
Surveillance for human impact	♦♦	♦♦													♦♦♦	♦♦♦	♦♦♦	♦♦♦
Surveillance for human cases			♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦			
Laboratory strain surveillance	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦
Public health laboratory support for interventions			♦♦	♦	♦♦♦	♦♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦♦			♦♦
Surveillance for disease in poultry workers			♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦			
PPE for poultry responders			♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦			
Antiviral prophylaxis for poultry responders			♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦	♦♦♦		♦♦♦	♦♦			
Antiviral treatment of hospitalized human cases					♦♦♦	♦♦♦			♦♦♦	♦♦♦			♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦
Antiviral treatment of all human cases within 24 hours of onset					♦♦♦	♦♦♦			♦♦♦	♦♦♦			♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦
Prophylactic antiviral treatment of all household and other close contacts within 24 hours					♦♦♦	♦♦♦			♦♦♦	♦♦♦			♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦
PPE for healthcare workers					♦♦♦	♦♦♦			♦♦♦	♦♦♦			♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦♦
Antiviral prophylaxis for all HCW														♦	♦♦♦	♦♦♦		

Interventions and Stages	1	2	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D
			Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Scattered human cases	Widespread human cases, no vaccine	Widespread human cases, vaccine	Recovery
Infection control in HCF					◆◆◆	◆◆◆			◆◆◆	◆◆◆			◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
Directed voluntary isolation of cases at home					◆◆◆	◆◆◆												◆◆
Self-isolation of cases																◆◆◆	◆◆◆	
Compulsory isolation of cases by CHD									◆◆◆	◆◆◆			◆◆◆	◆◆◆	◆◆◆			
Monitoring of contacts by CHD					◆◆◆	◆◆◆												
Directed voluntary quarantine of contacts									◆◆◆	◆◆◆			◆◆◆	◆◆◆				◆◆
compulsory quarantine of contacts by CHD															◆◆◆			
Self-quarantine of contacts																◆◆	◆◆	
Support home management of ill persons, keeping ill persons out of healthcare facilities and medical offices					◆◆◆	◆◆◆			◆◆◆	◆◆◆			◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
Support the social expectation that persons ill with respiratory symptoms will strictly self-isolate at home																◆◆◆	◆◆◆	◆◆
Support the social expectation that persons who become ill while away from home will take prescribed control measures and proceed directly home or to a healthcare facility																◆◆◆	◆◆◆	◆◆

Interventions and Stages	1	2	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D
			Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Scattered human cases	Widespread human cases, no vaccine	Widespread human cases, vaccine	Recovery
Provide directions for complete self-isolation at home of ill and convalescent cases to reduce transmission to caregivers					♦♦	♦♦			♦♦	♦♦			♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦
Provide community support for persons who are confined to home to reduce breaches of isolation and quarantine					♦♦	♦♦			♦♦	♦♦			♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦
Support organizational policies that support workers and students for staying home while ill, or with an ill family member					♦♦	♦♦			♦♦	♦♦			♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦
Develop practical measures in day-cares, schools, workplaces, colleges, etc. to immediately detect and exclude persons ill with influenza-like illness													♦♦	♦♦	♦♦	♦♦	♦♦	♦♦
Provide ongoing prophylactic antiviral medications for healthcare workers, EMS workers, public health workers, agricultural and veterinary workers and other first responders who are exposed repeatedly													♦♦	♦♦	♦♦♦	♦♦♦	♦♦♦	♦♦
Assure that appropriate PPE is provided for all whose essential occupations put them at increased risk for exposure and infection (e.g., healthcare workers, public safety workers, teachers, transit drivers, food store workers)					♦♦	♦♦			♦♦	♦♦			♦♦	♦♦	♦♦	♦♦♦	♦♦♦	♦♦

Interventions and Stages	1	2	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D
			Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Scattered human cases	Widespread human cases, no vaccine	Widespread human cases, vaccine	Recovery
Provide antiviral prophylaxis promptly for all children in the same classroom as a case, or who have attended classes with a case															◆◆◆	◆◆◆	◆◆◆	
Provide antiviral prophylaxis promptly for all members of a case's work group who have regular face-to-face with the case; goal of five to 30 contacts per case															◆◆◆	◆◆◆	◆◆◆	
Support temporary social changes that result in greatly reduced face-to-face interactions throughout the community, i.e., social distancing															◆	◆◆◆	◆◆◆	
Schools: graded response including strict exclusion, targeted antiviral prophylaxis, reactive closure, and community-wide closure													◆◆	◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆
Close theme parks, ocean cruises and other tourist attractions																◆◆	◆◆	
Build social support for recommended individual protective behavior changes					◆◆◆	◆◆◆			◆◆◆	◆◆◆			◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
Support employers and employees in maximizing the proportion of those who can work from home in doing so															◆	◆◆◆	◆◆◆	
Acquire, stockpile and manage needed antiviral medications, personal protective equipment, and other supplies; recommend central control of at least the antiviral supply	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆

Interventions and Stages	1	2	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D
			Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Disease in wild birds	Disease in poultry	Imported human cases	Local human cases	Scattered human cases	Widespread human cases, no vaccine	Widespread human cases, vaccine	Recovery
Identify and use volunteers to extend community ability to carry out many essential functions	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆
Identify government services, including DOH services, that can be put on hold so unneeded workers can stay at, or work from, home and available workers can focus on essential tasks															◆	◆◆◆	◆◆◆	
Assure enough antiviral medications are available and used only for priority indications					◆◆◆	◆◆◆			◆◆◆	◆◆◆			◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆◆◆	#

Table 3: Pandemic Influenza Roles and Responsibilities by Department of Health Organizational Unit and Emergency Management Phase

Trigger Events	SEOC Activation Level, ESF8 A.	Executive Office 1 B.	All Divisions/ Bureaus/ CHD/CMS/AG Holley C.	Division of Emergency Operations DEMO D.	Division of Disease Control E.	Division of Environmental Health F.	Bureau of Laboratory Services G.	Bureau of Statewide Pharmaceutical Services H.	County Health Departments I.
<p>1. Preparedness activities</p> <p><i>Emergency Management Preparedness Phase</i></p> <p><i>WHO Inter-Pandemic Phases 1 and 2 and Pandemic Alert Phases 3 and 4</i></p>	Monitoring	<p>Inform Governor, FDEM and other leaders of preparedness status (Annex)</p> <p>Disseminate expectation of department's role in preparedness (Annex)</p> <p>Direct development of plans, including continuity of operations of mission-critical and life-sustaining services (Annex)</p> <p>Establish workgroup to coordinate preparedness (Annex)</p> <p>Review/revise Risk Communication Plan (Annex)</p>	<p>Implement preparedness activities (Annex)</p> <p>Ensure staff are trained to perform assigned response roles (Annex)</p> <p>Develop continuity of operations plans (Annex)</p>	<p>Develop and maintain DOH EOP Pandemic Influenza Annex (Annex)</p> <p>Develop logistical plans for pharmaceutical and medical supplies and equipment (Annex)</p> <p>Serve as DOH liaison to ESF8 (Annex)</p>	<p>Ensure surveillance systems and procedures are in place to detect aberrations (Annex)</p> <p>Provide guidance to partners on testing persons for influenza (Annex)</p> <p>Disseminate case definition (Annex)</p> <p>Monitor federal guidance on priority groups for Antiviral and Vaccine distribution (Annex)</p> <p>Review and test plans for vaccine and antiviral drug management (Annex)</p>	<p>Serve as liaison to DOACS and FFWCC (Annex)</p> <p>Develop guidelines to ensure safety of food supply (Annex)</p> <p>Disseminate case definition (Annex)</p> <p>Monitor federal guidance on priority groups for Antiviral and Vaccine distribution (Annex)</p> <p>Review and test plans for vaccine and antiviral drug management (Annex)</p>	<p>Review and test Laboratory Surge Capacity Plan (Annex)</p> <p>Provide guidance to partners for specimen collections, handling and transport (Annex)</p> <p>Procure reagents from CDC (Annex)</p> <p>Partner with private labs to obtain and use rapid antigen testing kits (Annex)</p>	<p>Review and test plans for vaccine and antiviral drug management (Annex)</p> <p>Develop contingency plans for pharmaceutical shortages (Annex)</p>	<p>Develop and test community-based response plan (Annex)</p> <p>Assess healthcare resources and develop contingency plans (Annex)</p>

Trigger Events	SEOC Activation Level, ESF8 A.	Executive Office 1 B.	All Divisions/ Bureaus/ CHD/CMS/AG Holley C.	Division of Emergency Operations DEMO D.	Division of Disease Control E.	Division of Environmental Health F.	Bureau of Laboratory Services G.	Bureau of Statewide Pharmaceutical Services H.	County Health Departments I.
A. Preparedness activities <i>Emergency Management Preparedness Phase</i> <i>WHO Inter-Pandemic Phases 1 and 2 and Pandemic Alert Phases 3 and 4</i>		Participate in development of Executive Order language (Annex) Coordinate interstate communication activities (Annex)			Review procedures for reporting adverse events (Annex)				
B. Response activities <i>Emergency Management Response Phase</i> <i>WHO Pandemic Alert Phases 3 and 4 and Pandemic Phases 5 and 6</i>		Inform Governor of phase and status of event (Annex) Serve in Unified Command as designated by Governor (Annex) Direct DOH Pandemic Influenza response (Annex) Serve at Joint Information Center (Annex) Coordinate and review public health messages	Implement response activities (Annex) Implement continuity of operations plans (Annex) Assign staff to support state health and medical response through ESF8 (Annex)	Serve as lead for ESF8 on State Emergency Response Team (Annex) Implement continuity of operations plans for ES (Annex)	Inform and provide recommendations to Executive Staff when surveillance system has detected aberration (Annex) Direct surveillance activities (Annex) Distribution Case Definition to partners (Annex) Implement disease control interventions (Annex)	Serve as liaison to DOACS and FFWCC (Annex)	Implement Laboratory Surge Capacity Plan (Annex)	Support distribution and re-supply of antivirals and vaccines through ESF8 (Annex) Monitor pharmaceutical shortages and implement contingency plans (Annex)	Implement local response plans (Annex) Assign staff to participate with health and medical system response (Annex)

Trigger Events	SEOC Activation Level, ESF8 A.	Executive Office 1 B.	All Divisions/ Bureaus/ CHD/CMS/AG Holley C.	Division of Emergency Operations DEMO D.	Division of Disease Control E.	Division of Environmental Health F.	Bureau of Laboratory Services G.	Bureau of Statewide Pharmaceutical Services H.	County Health Departments I.
		(Annex) Monitor information flow and initiate rumor control measures (Annex) Develop Declaration of Public Health Emergency Order (Annex) Assist CHDs with isolation and quarantine orders (Annex)			Monitor vaccine coverage (Annex) Distribute vaccines to high priority groups (Annex) Implement Adverse Reactions Reporting (Annex)				
C. Recovery Activities		Inform Governor when PH Emergency Declaration is no longer needed (Annex) Implement recovery activities within DOH (Annex) Coordinate Agency After Action Report within 90 days	Assess staff availability and ability to resume normal operations (Annex) Implement plans to return to normal operations (Annex) Develop After Action Report, as directed (Annex)		Implement plan for recovery of unused vaccine (Annex)	Maintain liaison with DOACS and FFWCC (Annex)	Maintain special surveillance program to detect antigenic drift variants or reassortant viruses (Annex)	Implement plan for recovery of unused vaccines, antivirals and other pharmaceuticals	

Trigger Events	SEOC Activation Level, ESF8 A.	Executive Office 1 B.	All Divisions/ Bureaus/ CHD/CMS/AG Holley C.	Division of Emergency Operations DEMO D.	Division of Disease Control E.	Division of Environmental Health F.	Bureau of Laboratory Services G.	Bureau of Statewide Pharmaceutical Services H.	County Health Departments I.
		(Annex)							
D. Mitigation Activities		Establish workgroup to implement mitigation actions (Annex)	Participate in Pandemic Influenza Annex revision (Annex) Implement mitigation activities which would reduce negative consequences in future events (Annex)	Coordinate revision of Pandemic Influenza Annex (Annex)					

Notes:

1. Includes Executive Office, Office of General Counsel and Office of Communications



**Pandemic Influenza Annex
Emergency Operations Plan**

Appendix 2

**Ethical Framework for
Decision-Making and Legal Strategy
During an Influenza Pandemic**

October 2006

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I. Ethical Framework for Decision-making during an Influenza Pandemic

A. Background

An influenza pandemic will pose moral and ethical challenges for the Department of Health workforce. During an influenza pandemic, the public health workforce will be required to make difficult decisions that might include the following:

- How to protect public health and safety by prioritizing scarce medical resources, such as vaccines or antivirals.
- How to protect public health and safety while also protecting individual freedom.
- How to protect the public health workforce and continue to provide essential healthcare services.

The department's response should be equitable, competent and compassionate throughout a pandemic. It is essential that recommendations and decisions not only be legally sufficient, but also morally and ethically defensible so that Floridians trust, accept and comply with the department's disease-control and other strategies.

B. Floridians Must Prepare for Moral and Ethical Dilemmas

Florida's citizens must take responsibility to prepare themselves and their families for emergencies, such as an influenza pandemic. The Department of Health can help citizens prepare by providing accurate and timely information, and by helping the public understand that pandemic influenza may pose moral dilemmas for individuals, decision-makers and public health authorities.

C. Decision-making Process

During an influenza pandemic, many complex situations will be faced by the public health community, not only by policy makers and government officials, but also front-line healthcare providers.

It is important that the decision-making process be morally defensible and lead to ethical decisions.

- **Reasonable and Defensible**

Decisions should be based on the best available peer-reviewed and publicly available evidence, a clear understanding of the circumstances surrounding the event, and result in actions that are reasonable in relation to anticipated benefits.

- **Competent and Accountable**

Decisions should be made and carried out by a competent and well-trained workforce that will continue to be accountable throughout a prolonged pandemic. Decisions should reflect cultural competency in dealing with diverse public health needs.

- **Open and in the Sunshine**

Decision-making should be transparent and open to scrutiny, and the basis for decisions should be clearly explained and communicated publicly.

D. Core Public Health Values Guiding Decisions

Florida's response to an influenza pandemic will be based on core substantive values in public health. More than one value may be relevant in a given situation, and some values may be in tension in a given situation, leading to moral dilemmas.

The reasonable possibility exists that public health authorities and providers will face moral dilemmas in the course of performing their professional responsibilities. Some may experience personal moral distress. This possibility reinforces the importance of planning for moral dilemmas, providing workforce development to increase core competencies in ethical reasoning and exercising and practicing decision-making in public health teams and in cooperation with community partners.

Florida's response to an influenza pandemic or other infectious disease pandemic will be based on core substantive values in public health that include the following:

- **Equity and Fairness**

Decisions should be made with the goal of protecting the health and safety of all Floridians and visitors, and citizens should have an opportunity to understand the decision-making process.

The department will strive to provide equitable and fair response throughout a pandemic. Depending on the extent of the pandemic, measures taken to contain the spread of disease may influence the provision of healthcare by the department. In these circumstances, the department will attempt to:

- Preserve as much equity as possible between the needs of influenza patients and those who need treatment for other diseases.
- Apply fair decision-making criteria focusing on medical criteria, not social worth.
- Involve communities in planning discussions about fair decision-making criteria or processes.
- Develop guidelines clarifying duties and provide the required support needed to care for the department's workforce during a prolonged pandemic.

- **Compassion**

Decisions should ultimately aim at compassionate care for Floridians throughout the course of a pandemic.

- **Respect for Persons**

An extended influenza pandemic may require restrictions on individual freedom to protect individual health and public health. In such a context, respecting the wishes of individuals, to the extent possible consistent with protecting public health, is of the utmost importance. Because of the obligation of respect for persons, the department will attempt to:

- Limit freedom only when necessary to protect the public health and use the least restrictive measures possible, in accordance with established law and due process.
- Communicate the reasons for necessary public health limitations on freedom.
- Review decisions as the situation changes to ensure the department continues to protect public health using measures that are the least restrictive on individual freedom.
- Involve communities in planning so that citizens understand the challenge of upholding the value of respect for persons when restrictions on freedom may be necessary to protect public health.

- **Protection from Harm**

Public health authorities have an ethical and legal obligation to protect the public from serious harm. This requires that public health authorities throughout the state plan, prepare and exercise plans to fulfill the core public health mission, minimize the spread of a localized epidemic and minimize serious illness, death and social and economic disruption. Because of the obligation to protect the public from serious harm, the department will attempt to:

- Assess the benefits of protecting the public from harm against the loss of liberty of some individuals through control measures such as isolation.
- Use the least restrictive or coercive measures available when protecting the public health to limit infringement on individual freedoms.
- Use coercive measures only when less restrictive measures have failed and when they are required by overriding public health considerations.
- Communicate the medical and ethical reasons behind actions taken, the individual and social benefits of adhering and the consequences of not complying.
- Involve communities in planning so citizens understand the challenge of protecting public health.

E. Decision-making in the Sunshine

Technical literature exists from experts in bioethics, public health and medicine to assist policy-makers, but it is also important to engage the public in discussions,

particularly about the ethical dimensions of the pandemic influenza planning process. The principle of public accountability, openness and transparency is well established in Florida.

While it is possible to plan based on previous influenza pandemics and other disease outbreaks such as SARS, it is reasonable to expect that decisions would need to be made in a context of some degree of scientific uncertainty, particularly during the initial presentation of an outbreak in Florida. This point underscores the importance of openness and decisions made in the Sunshine, as well as community involvement in the planning process.

Infectious diseases cause fear and stigmatization; decisions about disease outbreaks may, in the past, have been driven by fear. Openness and transparency serves the interests of preserving public trust and helps the department fulfill its mission of disease control and prevention. Explicitly involving the public in discussions about ethical issues also helps develop greater understandings of the moral challenges posed by an infectious disease pandemic. To these ends, the department will attempt to:

- Assess public attitudes about public expectations and the department's ethical framework.
- Engage the public to increase its understanding of the complex issues faced by the department to maintain public trust in the planning decisions of the department.
- Develop training materials for the public health workforce to develop core competencies in public health ethics using case studies.

By focusing on these elements of an ethics framework for decision- making in an infectious disease pandemic, and by providing workforce development and training in these core competencies of public health ethics, the department will increase its ability to provide equitable, compassionate and competent care to protect the health and safety of all Floridians and visitors to the state.

II. Legal Strategy for Pandemic Influenza

A. Background

This document was composed pursuant to the *Implementation Plan, National Strategy for Pandemic Influenza* and addresses aspects of legal strategy from the Florida perspective.

- The Florida legal strategy is founded on the principles in the *National Strategy for Pandemic Influenza*.
- Florida's legal strategy recognizes the emergency management structure set out in Ch. 252, *F.S.* in addressing the pandemic threat.
- Florida's legal strategy recognizes that response to pandemic is primarily local and that the national strategy emphasizes local self-reliance.
- The private sector should prepare and participate in the national response.

- Individual citizens should prepare, and bear responsibility for knowledge of infection control for themselves or their families.

B. Pillars of the Florida Legal Strategy

The Florida legal strategy conforms to the pillars of the national strategy.

- Preparedness and Communication: Activities to prepare for pandemic and advice about legal aspects of communicating various responsibilities to government, society and individuals.
- Surveillance and Detection: Legal aspects of health information about pandemic and ways of handling that information.
- Response and Containment: Legal aspects of attempts to control the outbreak and lessen its effects.

Pillar One: Preparedness and Communication

The Department of Health's expertise is in health-related areas. The legal office provides advice and counsel to department employees for the benefit of the citizens.

To assist preparations, the department's legal office will:

- Develop model orders to provide a legally acceptable starting point for containment efforts.
- Continue to review contracts from various entities that fund preparations by entities inside and outside the department, e.g., hospitals, exercises.
- Advise program staff regarding legality of surge needs and other planning efforts.

To assist communications, the department's legal office will:

- Teach people about federal and state health law through the CDC's Public Health Emergency Law course and other related presentations.
- Participate as supporters and speakers in the department's Office of Communications Speaker's Bureau.

Pillar Two: Surveillance and Detection

The department's legal office has an indirect, supportive role in surveillance and detection, i.e., to advise regarding legal aspects of such activities.

Pillar Three: Response and Containment

Department's legal office has an indirect, supportive role in all response and containment activities at Level 3, including those roles described above. If and when the phase of alert moves to Level 4 (new virus causing human cases) or greater, the legal office will take part in additional Pillar Three efforts.

To assist response, the department's legal office will:

- Activate its own COOP and report same to the department's executive offices.
- Refresh contacts with professional legal counterparts and program contacts in government, private sector and among individuals.

- Advise regarding lawful authority and limits on actions to respond to the outbreak, wherever that may be.
- Support all ESF8 activities, most of which are familiar from hurricane response activities.
- Provide counsel on an around-the-clock basis, as appropriate, under the particular circumstances to answer legal questions that arise in response activities.
- Monitor status of events related to health response activities, primarily through CHD legal counsel.

To assist containment, the department's legal office will:

- Track the sequence and extent of plans that have been activated and implemented, to estimate legal impacts of same and to locate persons.
- Advise regarding legal questions and problems that arise with the above.
- To the extent possible, engage in rumor control through objective analysis and reports to Office of Communications.
- Track events relating to containment activities, such as numbering of quarantine orders (case numbering for docket purposes) and any legal issues arising around such orders.
- Advise regarding lawful authority and limits on actions to contain the outbreak, wherever that may be.

C. Roles and Responsibilities

The department's legal office will follow the roles and responsibilities set out in the national strategy and the Florida strategy.



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 3
Notification Protocol

To be developed – November 2006



**Pandemic Influenza Annex
Emergency Operations Plan**

Appendix 4

Planning Section, Situation Status Unit

**Draft Situation Status Unit – Piloting 2006 Hurricane Season
(To be updated December 2006)**

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I. Purpose:

To provide situational awareness and future forecasting during a pandemic to inform decision-making and contingency planning.

II. Objectives:

1. Operationalize the Situation Status Unit at state and local or regional levels, as needed.
2. Collect data and its analysis from technical specialists to summarize and present current status and future forecasts to assist in decision-making and contingency planning at the state and local levels.
3. Integrate the information received from various technical specialists.

III. Action Items:

1. Develop and maintain list of technical specialists.
2. Develop routine process of daily situational reporting by technical specialists to provide some standardization and assure future forecasting.
3. Provide contact liaison to all technical specialists, both within and external to the Department of Health.
4. Provide the situational status report daily.

IV. Resources Required To Implement:

1. Staffing of the Situational Status Unit upon stand-up.
2. Technical specialists prepared to provide daily updates and future forecasts.
3. Collaborative process so that future forecasts represent the best thinking of the professional area represented by the technical specialist.

V. Suggested Staffing, Position Descriptions

1. Situation Status Unit Leader
2. Resource Specialists 1 and 2
3. Threat Assessment Specialist
4. Situation Status Report Supervisor
5. GIS Specialist
5. Infrastructure Assessment Specialist
6. Technical Specialist

Position Description

Situation Status (Sit Stat) Unit

Situation Status Unit Leader

Roles:

1. Prepare the daily situation status report and present it to the planning chief.
2. Coordinate activities of resource specialists, threat assessment specialists and situation report supervisor and team to provide the best possible analysis of the current situation and predictions about what will most likely happen in the near and distant future, as well as what resources and actions will be necessary to provide maximum service to those requiring them.
3. Facilitate daily Sit Stat meeting to review information from threat assessment Specialists for interconnectivity and interrelationships between the various areas.
4. Attend the daily EOC/planning meetings and daily section coordinators' meetings.
5. Facilitate the daily Sit Stat Unit meetings to share current incident action plan (IAP) and to finalize analysis for the day's Sit Stat report.
6. Provide the daily Sit Stat report to planning at the leadership update meeting.
7. Attend the morning and evening SEOC briefings, as necessary.
8. Provide other duties, as required.

Direct Supervisor: Planning Coordinator/Deputy Planning Coordinator

Position Description

Situation Status Unit

Resource Specialist 1

Roles:

1. Maintain current inventory of all Department of Health Personnel working on a current situation, disaster or emergency event. This inventory is to be able to provide specific assignment and tracking of DOH employees for emergency contact, and for specific personnel redeployments, if needed.
2. Maintain current inventory of all non-DOH health personnel in the field who are working on the current situation, disaster or emergency event. This inventory will provide specific identification of federal, private and state personnel deployed into the field to assist the Florida DOH.

Duties:

1. Maintain current inventory of DOH employees, including CHD staff in affected areas.
2. Inventory includes:
 - a. Name.
 - b. Profession.
 - c. Normal job location.
 - d. Normal job supervisor and contact information.
 - e. Assigned location for event.
 - f. Assigned supervisor or coordinator for event and contact information.
 - g. Date and time of activation.
 - h. Date and time of deactivation.
 - i. Verification of return to home station.
3. Routinely contact Logistics Staffing Unit's Florida public field staffing manager to maintain current inventory of DOH staff placements.
4. Routinely contact Logistics Staffing Unit's private staffing manager to maintain current inventory of non-DOH staff placements.
5. Routinely update inventory to show secondary deployment of personnel.
6. Routinely update inventory to show demobilized staff resources and confirm their safe return home.
7. Maintain inventory to show all entries made to the inventory for after-action analysis.
8. Provide twice-daily summary reports of resource deployments made, by categories and locations, as needed in planning for an event. One summary report will be provided early in the morning and another late in the afternoon of each day.

Direct Supervisor: Situation Status Unit Leader

Position Description

Situation Status Unit

Resource Specialist 2

Role:

Maintain current inventory of materials, equipment and supply placements into the field to assist before, during or after an event, including an awareness of locations of same, based upon the mission request and its documented deployment and receipt.

Duties:

1. Routinely check with Logistics Staffing and Materials Units to log and track all material resources deployed into theater of operation.
2. Maintain current inventory of all deployed material resources by location and category, including:
 - a. Equipment
 - b. Mobile clinics
 - c. Mobile laboratories
 - d. Portable toilets, wash stations, dumpsters
 - e. Generators for health facilities
 - f. Water tankers
 - g. Food and supplies
 - h. WIC formulas
3. Routinely contact Logistics Material Unit to maintain current inventory of DOH material shipment, destination and receipt.
4. Routinely update inventory to be able to produce current summaries of material resources deployed.
5. Routinely update inventory to show secondary deployment of materials and supplies.
6. Maintain inventory to show all entries made for after-action analysis.
7. Provide twice-daily summary reports of resource deployments made, by categories and locations, as needed in planning for an event. One summary report will be provided early in the morning and another late in the afternoon of each day.

Direct Supervisor: Situation Status Unit Leader

Position Description
Situation Status (Sit Stat) Unit
Threat Assessment Specialist

Roles:

1. Provide liaison between the Situation Status Unit and assigned technical specialists to obtain daily reports of current status evaluation, as well as forecasts of anticipated situations and possibly needed resources.
2. Provide daily reports from the technical specialists to the situation report coordinator.
3. Participate in twice-daily Sit Stat meetings to evaluate and analyze information for daily Sit Stat reports, particularly those implications and inter-relationships of situations reported by technical specialists and forecasting.
4. Provide analysis, reflected in daily Sit Stat reports, to assist planning coordinator in making decisions for resources and decisions that must be made 3, 7, 10 and/or 30 days out from the event.
5. Perform other duties, as required.

Direct Supervisor: Situation Status Unit Leader

Position Descriptions

Situation Status (Sit Stat) Unit

Situation Status Report Supervisor

Role:

Prepare daily situation status report for submission through Sit Stat Unit coordinator to planning chief. Coordinate information from other Sit Stat sections into a single, integrated report.

Duties:

1. Coordinate daily receipt of reports from all technical specialists, regarding current situation analysis and forecast of anticipated events and needs, into daily situation status report for DOH.
2. Coordinate daily receipt of reports from resource coordinators and threat assessment specialists into daily situation status report for DOH.
3. Coordinate activities of infrastructure assessment specialist and MIS specialist to support the activities of the Sit Stat Unit.
4. Assure daily Sit Stat report is completed by either direct supervision of report writer or by writing the report personally with input received.
5. Perform other duties, as required.

Direct Supervisor: Situation Status Unit Leader

Position Description

Situation Status (Sit Stat) Unit

GIS Data Specialist

Roles:

1. Provide liaison to various organizations and organizational units within DOH to access maps, GIS coordinates and databases to be able to provide overlay maps with GIS locations for various facilities and infrastructure components impacting the health of the public.
2. Access and display maps with GIS locations, as above, in support of Sit Stat Unit and planning within ESF8.
3. Develop and maintain databases necessary for creation and display of overlays for GIS maps as new ESF8 data becomes available within the Sit Stat Unit.
4. Provide advice and suggestion to Sit Stat Unit and threat assessment specialists regarding current status and future concerns evident in geographic analysis of events.
5. Provide other duties, as required.

Direct Supervisor: Situation Status Report Supervisor

Position Description

Situation Status Unit

Infrastructure Assessment Specialist

Roles:

1. Routinely monitor all tracker requests, groove requests or other mission-specific requests for personnel, supplies or equipment needed in support of health services to the public.
2. Routinely log all health-related mission requests by category of request, to include:
 - a. Mission number
 - b. Date and time
 - c. Category of request
 - d. Requestor, name and title
 - e. Assignment of request
3. Routinely forward copies of all health-related mission requests to the respective resource specialist within Sit Stat Unit for tracking.
4. Review all-night mission requests immediately each morning and process as above.
5. Provide advice and suggestion to Sit Stat Unit and threat assessment specialists regarding current status and future concerns evident in mission trends observed.
6. Routinely monitor DOH DEMO planning e-mail box and assign unique number to emails requiring action so future follow-up can be made. Forward to appropriate staff for handling and mark as unread unless fully acted upon.
7. Perform other duties, as required.

Direct Supervisor: Situation Report Supervisor

Position Description

Situation Status (Sit Stat) Unit

Technical Specialist

Roles:

1. Assure Planning Section of Office of Emergency Operations (OEO) has current 24/7 information for contact.
2. Liaison with threat assessment specialist from Sit Stat Unit of OEO prior to, during and post event.
3. Represent area of expertise, division, organization or agency in providing response to information requests and routine reports during activation.
4. Assure respective division, organization or agency participates in internal briefing and discussion for decision-making process and vetting of responses made to OEO.
5. Provide daily reports on current status of events related to area of expertise, division, organization or agency, currently planned for receipt by 12 noon daily during activation.
6. Communicate with Sit Stat daily by means of:
 - a. Status report and future forecasts
 - b. Only future forecasts
 - c. A report of no current situational involvement
7. Communicate daily, as required.
8. Provide daily projections/forecasts of likely situation related to area of expertise, division, organization or agency – 1 to 3, 4 to 7 and more than 7 days in the future.
9. Review ESF8 situation reports and information e-mails from Sit Stat, providing analysis and response to any item with possible implication for future planning that is not being addressed.
10. Identify and communicate to Sit Stat Unit any and all high-risk situations, problems or issues that may arise affecting their area.
11. Participate in ESF8 Situation Status Unit briefings, as required.
12. Participate in working at the ESF8 Sit Stat Unit, as may be required.
13. Provide a briefing, preferably face-to-face during an event involving area, with incoming technical specialist at beginning of next operational period.
14. Provide after-action feedback to ESF8 Planning Section to improve future activations.



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Appendix 5

Zoonotic Avian Influenza Surveillance and Response Protocol

October 2006

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I. Purpose and Scope

This protocol describes steps to follow in investigating suspicious deaths of wild or domestic birds. Its purpose is to:

- Support wild bird surveillance efforts (trigger: first wild bird positive with Avian Influenza (AI) in the state).
- Support domestic bird surveillance efforts (trigger: first domestic bird flock with AI in the state).
- Human disease surveillance of animal disease responders and other animal healthcare professionals.

A. Policy Statements

- The Florida Department of Health will facilitate access to influenza vaccines, antivirals and PPE for animal disease responders in other agencies.
- As events unfold, these guidelines or attached supporting materials may become the protocol and documentation required for all FDOH-managed investigations. Announcement of any portion of this document becoming DOH policy will come through FDOH chain of command.

II. Situation

A. Planning Assumptions

- The Department of Agriculture and Consumer Services is agency lead for domestic animal surveillance and response. The Fish and Wildlife Conservation Commission is lead agency for wild bird AI surveillance.
- Influenza viruses transmitted between animals and people are not very transmissible from person to person.

III. Concept of Operations

A. Objectives and Actions

- Prevent zoonotic avian influenza transmission to humans in Florida, to be accomplished by:
 - Supporting partner agencies in animal surveillance and disease control efforts.
 - Educating animal disease responders on appropriate PPE.
 - Facilitating animal responder access to vaccines, antivirals and PPE.
 - Providing safe handling and disposal guidelines for infected birds.
 - Testing, treating and isolating human cases, identifying contacts and monitoring/quarantining and treating contacts.

B. Roles and Responsibilities

1. State Agencies

a. Florida Department of Health (DOH)

DOH is responsible for:

- Human disease surveillance
- Human disease control (including recommendations for vaccines and antivirals)
- Lead for ESF8
- Recommendations on personal protective equipment (PPE)

b. Florida Department of Agriculture and Consumer Services (DOACS)

DOACS is responsible for:

- Domestic bird surveillance
- Avian influenza control in domestic birds
- Lead for ESF17 (working closely with USDA)
- Food Safety
- Testing of domestic and wild birds
- Import regulations

c. Florida Fish and Wildlife Conservation Commission (FWC)

FWC is responsible for:

- Wild bird surveillance
- Send specimens for testing to DOACS, DOI (Department Of Interior) lab in Madison, Wisconsin, and SCWDS (Southeastern Cooperative Wildlife Disease Study) lab in Georgia.

d. Florida Department of Environmental Protection (DEP)

DEP is responsible for:

- Carcass disposal
- Parks and recreation

e. Other groups that need to be involved include:

- Mosquito control districts
- Florida Animal Control Association
- Zoos
- National wildlife preserves
- University of Florida College of Veterinary Medicine
- Florida Veterinary Association
- Wildlife rehabilitators

2. Federal Agencies

a. U.S. Department of Agriculture

Veterinary Services

Regional Office in Gainesville, responsible for:

- Avian Influenza control in domestic birds.
- Providing staff to support DOACS, intimately involved in Foreign Animal Disease Control.

Wildlife Services

Regional Office in Gainesville, responsible for:

Coordinating development of national wild bird surveillance plan.

- Distributing funding for wild bird testing.
- Providing field staff support for wild bird testing.

b. U.S. Department of Interior

The USDI assisted in the development of the national wild bird surveillance plan and are also responsible for:

- Providing the national wild bird-mortality surveillance database through United States Geological Survey.
- Providing testing through the National Wildlife Health Center (NWHC) in Wisconsin.

c. Centers for Disease Control and Prevention

Provides guidelines and epidemiologic and laboratory technical assistance for human aspects of zoonotic disease prevention.

C. Objectives and Tasks

1. Support Partner Agencies

Support partner agencies involved in avian influenza surveillance and response at the local level via close coordination.

- Identify and contact local representatives from agencies involved in bird surveillance and response representing Department of Agriculture/Consumer Services (DOACS), Fish and Wildlife Conservation Commission (FWC), Department of Environmental Protection (DEP), U.S. Department of Agriculture (USDA), local animal control, public works, mosquito control agencies (links to FWC, USDA, DOACS, DEP on workspace).
- Establish who will be points of contact at county health department (CHD) and partner agency(ies). Confirm policies/procedures for surveillance, investigation, testing of wild and domestic birds, animal disease responders, etc.
- Establish procedures for periodic exchange of information/data.

2. Develop Surge Capacity

Develop protocol for providing assistance/"surge capacity" for local dead bird response.

- Collection of dead wild birds for testing is responsibility of FWC, in collaboration with USDA Wildlife Services. County health departments may be involved in surge capacity.
- Determine pre-event the maximum effort CHD is willing/can afford to commit to local dead bird response without compromising ability to meet other responsibilities.
- Work with state health office to develop county-specific or regional contingency protocols to partner agencies' dead-bird response. Plan should specify when, how, who, to what extent CHDs will assist FWC in collecting carcasses to be tested.
- Provide CHD point of contact for FWC AI Surveillance Program and establish an internal cascading hierarchy of response for sample collection requests.
- Staff called upon to participate in dead bird response should:
 - a) be equipped and trained on proper use of PPE.
 - b) receive training by FWC on approved AI sampling and shipping protocols.

3. Local Sanitary Efforts

Plan for and support local sanitary efforts associated with dead birds.

- Promote public awareness of safe handling and disposal of dead bird carcasses based on messages prepared by DOH, DEP, DOACS and FWC Joint Information System (JIS).
- Elimination of sanitary nuisances is responsibility of property owner per *F.S. 386.03*.
- Advise county and municipalities on formulating contingency plans for retrieval and disposal of dead birds on public property.
- Advise on proper PPE for retrieval of dead birds.
- Advise appropriate county ESFs and local representatives from partner agencies to articulate contingency plan for retrieval and disposal of mass mortality of birds.
- Be prepared to provide dead bird pick up surge capacity
- Determine pre-event which staff might be available to help with this effort. Make sure staff members are equipped and trained on proper use of PPE.

4. Responder Occupational Safety

Provide responder with occupational safety guidelines and assistance with PPE/respirator fit testing.

- Share DOH "Guidelines for Persons Involved in Surveillance, Eradication and Control of Avian Influenza Outbreaks in Birds in Florida" with partner agencies.
- Collaborate with partner agencies to ensure personnel involved in handling suspect birds are properly equipped and trained in use of appropriate PPE.
- Establish protocol for CHD to:
 1. Assist with respirator fit testing, as needed.
 2. Administer seasonal influenza vaccination to bird-mortality response staff.

3. During a response, facilitate access for exposed workers to appropriate antivirals per latest guidelines from Florida Department of Health for prophylactic medications.

(State health office, DOACS and FWC to develop protocols for payment for vaccine and antivirals.)

- Establish CHD Point(s) of Contact for occupational safety issues (PPE, yearly influenza vaccination, antivirals) who make sure partner agencies at county level are aware of process (where, how, when?).
- Communicate safety and PPE guidelines to high-risk groups (veterinarians, wildlife rehabilitators, etc.).
- Provide safe bird handling guidelines and PPE recommendations to veterinarians, wild bird rehabilitators, zoo personnel, mosquito control personnel, animal control personnel etc.
- Work with state health office to ensure animal disease responders have CHD contact information for questions and reporting of suspect human AI illness (see surveillance guidelines).

5. Reporting and Communication

Facilitate dead bird reporting and communication of safe dead bird handling.

- Develop CHD protocol for processing calls reporting dead birds:
 1. Refer caller to FWC's bird-mortality database website (<http://MyFWC.com/bird>) OR to JIS AI website or FWC dead bird hotline. If caller has no internet access, and/or FWC's hotline has not yet been established, take report and enter information into FWC bird mortality database.
 2. Refer calls reporting unusual sickness or die-offs in domestic poultry to Department of Agriculture/Consumer Services Division of Animal Industry (850-410-0900) or USDA Veterinary Services (1-800-536-7593).
- Develop instructions for callers on the safe handling and disposal of dead bird carcasses (based on JIC website, protocol or messages prepared by JIS).
- Consider adding dead bird reporting and disposal guidelines to CHD website.
- Conduct training to educate CHD staff on AI issues and reporting and handling of dead birds.
- Plan and conduct county-wide public awareness campaign on bird mortality reporting, safe handling and disposal of dead birds, and when dead bird surveillance is no longer needed.

6. Pet Bird Testing

Facilitate testing of pet birds with suspect AI (per clinical case definition).

- Assist DOACS with educating local veterinarians about AI, test methodologies and procedures for submitting test samples.
- Establish protocol to refer owners of AI suspect pet birds (cats, etc.) to veterinarians for testing. AI in birds must be reported to DOACS.

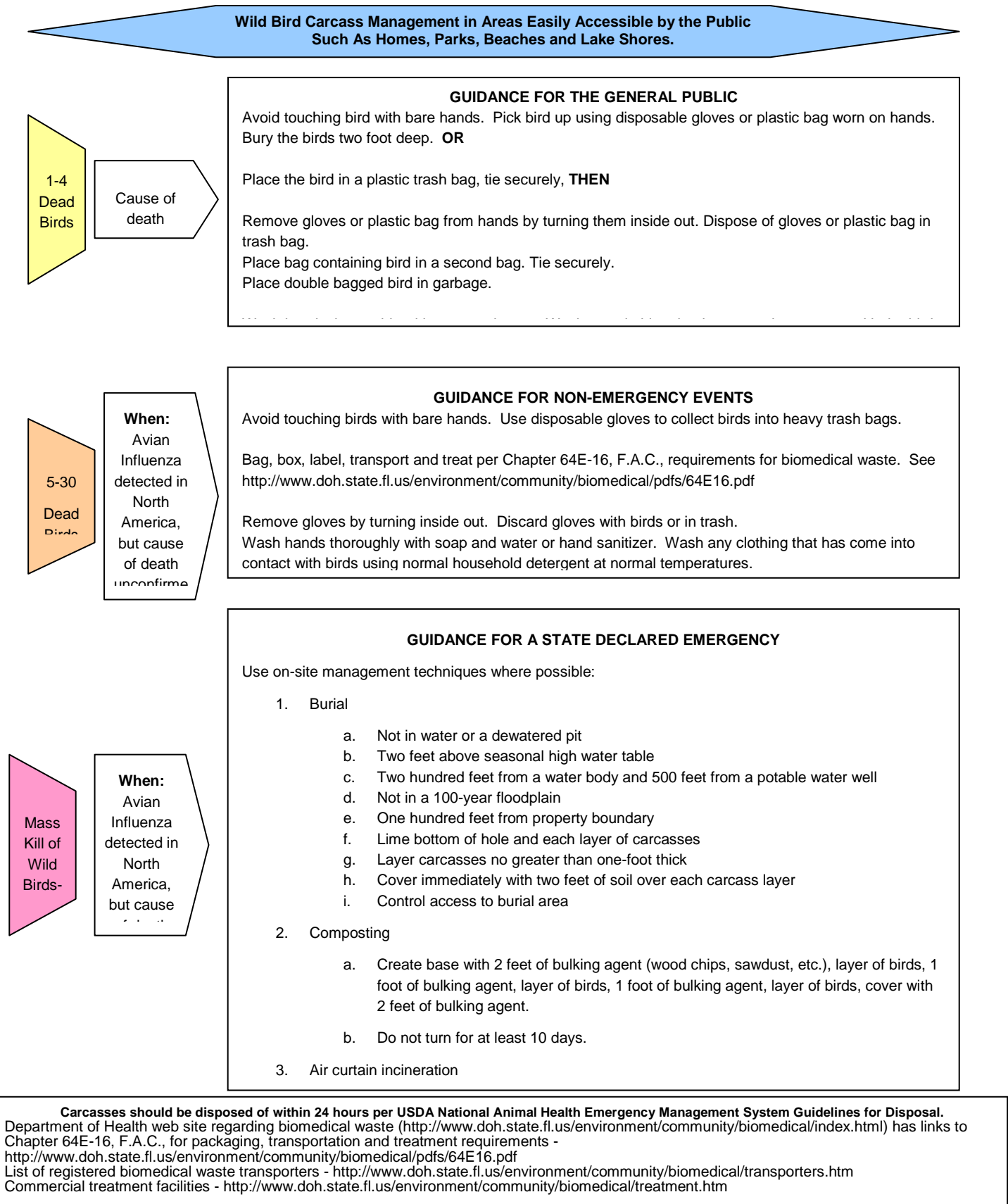
- DOACS will notify state public health veterinarian of any pet bird or mammal that tests positive for HPAI H5N1. SPHV will notify CHD, which will contact animal owner/ family to advise about:
 - a) Human AI symptoms.
 - b) Diagnostic procedures and measures to prevent animal-human disease transmission.
 - c) Human disease-reporting procedures, personnel to call.

7. Surveillance Data Collection, Sharing and Dissemination

Plan for local surveillance data collection, sharing and dissemination.

- See general and zoonotic AI influenza surveillance guidelines for specific instructions.
- Human cases with animal exposure should be interviewed using “Animal Contact Case Report” form.
- Human cases and contacts are managed per Disease Control Task Force Protocols.
- Animal AI data will be sent from DOACS to DOH, who disseminates it to CHDs.
- Wild bird AI test results will be entered into FWVSS.
- Positive poultry flocks will be reported to arbovirus surveillance coordinator or SPHV by phone/ or electronically from DOACS. animal diagnostic laboratory database. The affected CHD will be notified by DEH staff.
- Establish a point of contact to receive the data and a protocol for sharing or disseminating the data locally.

Figure 1: Wild Bird Carcass Management in Public Areas



D. Infection Control and Personal Protective Equipment Guidelines for persons involved in surveillance, eradication and control of avian influenza outbreaks in birds in Florida

1. Basic Infection Control

Strict adherence to, and proper use of, hand hygiene after contact with wild and domestic birds or contaminated surfaces, and after removing gloves, is very important. Hand hygiene should consist of washing with soap and water for 15 to 20 seconds or using hand-disinfectants with 70% alcohol. Hand disinfectants are less effective when hands are soiled. Soiled hands should be washed with soap and water. Gloves should be changed between procedures.

2. Specific Guidelines for Animal Workers regarding Handling:

Apparently, healthy birds in areas where HPAI H5N1 is not suspected should:

- When possible, work in well-ventilated areas if working indoors. When working outdoors, work upwind of animals, to the extent practical, to decrease the risk of inhaling aerosols, such as dust, feathers or dander.
- Wear rubber, nitrile or latex gloves that can be disinfected or disposed of, and protective eyewear or a face shield, while handling animals.
- Wash hands often with soap and water, and disinfect work surfaces and equipment between sites.
- Use protective clothing (such as a protective coverall or apron) that can be disinfected or disposed of when there is extensive physical contact with the bird.
- Carry a bottle of hand sanitizer for hand hygiene when hand-washing stations are not readily accessible.
- Do not eat, drink, smoke or apply cosmetics or lip balm while handling animals.
- Do not place laboratory specimens in coolers or refrigerators holding food.
- Disinfect or wash protective clothing at the end of the day.

Wild birds or poultry that are sick or associated with a undiagnosed mortality event in areas where HPAI H5N1 is not suspected should:

- Follow the recommendations above and, at a minimum, wear protective clothing, including coveralls, rubber boots, latex, nitrile or rubber gloves that can be disinfected or disposed of. Personnel

working in a poultry house should wear disposable coveralls (such as Tyvek® suits).

- Minimize exposure to mucosal membranes by wearing protective eyewear (goggles) and a particulate respirator (NIOSH N95 respirator or higher).
- Disposable particulate respirators (e.g., N-95, N-99, or N-100) are the minimum level of respiratory protection that should be worn. Workers must be fit-tested to the respirator model they will wear and also know how to check the face piece-to-face seal. Workers who cannot wear a disposable particulate respirator because of facial hair or other fit limitations should wear a loose-fitting (i.e., helmeted or hooded), powered, air-purifying respirator equipped with high-efficiency filters.
- Decontaminate and properly dispose of potentially infectious material, including carcasses, per DOH and DEP guidelines.
- Decontaminate, remove and properly dispose of all PPE except eyewear and respirator. Wash hands thoroughly. Remove protective eyewear and respirators.
- Wash hands again after removing all PPE.

Those who work with wild birds or backyard flocks of poultry that are sick or associated with an undiagnosed mortality event in areas where HPAI H5N1 has been detected should:

- Follow the recommendations above.
- Wear a fluid-resistant apron over protective clothing.
- Be vaccinated with the seasonal influenza vaccine.
- Receive, if they are unvaccinated, the current season's influenza vaccine to reduce the possibility of dual infection with avian and human influenza viruses. There is a small possibility that dual infection could occur and result in reassortment. The resultant hybrid virus could be highly transmissible among people and lead to widespread infections. Vaccination of all residents of affected areas is not supported by current epidemiologic data.
- Consult with a healthcare provider regarding any health concern
- If avian influenza infection is suspected, report to the local CHD.
- Follow the latest guidelines from CDC and the WHO for prophylactic medications and precautions for persons involved in avian influenza disease control.

(Adapted from joint USDA and CDC recommendations posted at <http://www.cdc.gov/flu/avian/professional/protect-guid.htm>)

Commercial poultry flocks that are sick or associated with an undiagnosed mortality event in areas where HPAI H5N1 has been detected.

3. Personal Protective Equipment

Disposable gloves made of lightweight nitrile or vinyl, or heavy-duty rubber work gloves that can be disinfected, should be worn. To protect against dermatitis, which can occur from prolonged exposure of the skin to moisture in gloves caused by perspiration, a thin cotton glove can be worn inside the external glove. Gloves should be changed if torn or otherwise damaged. Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces.

Personnel should carry a bottle of hand sanitizer and use it, at a minimum, before changing gloves. The bottle should be disposed with other PPE at the end of the day

Protective clothing – preferably disposable outer garments or coveralls such as Tyvex® suits, an impermeable apron or surgical gowns with long cuffed sleeves, plus an impermeable apron – should be worn.

Rubber or polyurethane boots with shallow treads that can be cleaned and disinfected should be worn.

Non-vented, snug-fitting safety goggles should be worn to protect the mucous membranes of eyes.

Disposable particulate respirators (e.g., N-95, N-99, or N-100) are the minimum level of respiratory protection that should be worn. This level or higher respiratory protection [negative or positive pressure respirators] may already be in use in poultry operations due to other hazards that exist in the environment (e.g., other vapors, manure, dusts) and for improved vision or comfort. Workers must be fit-tested to the respirator model they will wear and also know how to check the face piece-to-face seal. Workers who cannot wear a disposable particulate respirator because of facial hair or other fit limitations should wear a loose-fitting (i.e., helmeted or hooded), powered, air-purifying respirator equipped with high-efficiency filters.

Personnel should receive appropriate personal protective equipment (PPE), instructions and training in PPE use and respirator fit-testing.

Disposable PPE should be properly discarded, and non-disposable PPE and underwear should be cleaned and disinfected, as specified in the Department of Agriculture and Consumer Services Avian Influenza Response Plan.

Protective clothing and gloves should be removed and discarded before removing respirators and goggles. Thorough hand hygiene measures should be performed before removing the respirator and goggles and after removal of all PPE.

Personnel should shower and put on clean clothing before leaving the premises at the end of the day.

4. Administration of Antiviral Drugs for Prophylaxis

Workers participating in the eradication and control of an avian influenza outbreak should receive an influenza antiviral drug daily for the duration of time during which direct contact with infected poultry or contaminated surfaces occurs, and 7 days post exposure. The choice of antiviral drug should be based on sensitivity testing, when possible. In the absence of sensitivity testing, a neuraminidase inhibitor (oseltamavir) is the first choice, since the likelihood is smaller that the virus will be resistant to this class of antiviral drugs than to amantadine or rimantadine.

E. Surveillance Guidelines for Animal Disease Responders

These guidelines were developed particularly for Avian Influenza (H5N1), 2006.

1. General

The Florida Department of Health will pass out information sheets on avian influenza, the clinical presentation of the disease and reporting and human specimen testing procedures for suspected human AI illness to all animal disease responders in the state. The information will be distributed through the Department of Agriculture and Consumer Services, the Fish and Wildlife Conservation Commission, the Department of Environmental Protection and the Florida Animal Control Association. Information will also be distributed to staff at the USDA Veterinary Services Office and Wildlife Services offices in Gainesville.

- The FDOH will follow-up to make sure the sheets were received
- Updated informational sheets will be distributed every 3 months to ensure current information and to account for staff turnover.
- Medical staff should be available on site during a poultry mortality event to facilitate sampling and other medical care needs (*link to medical document).

2. Responders with an AI-like illness

If an animal disease responder develops an avian influenza-like illness:

- a. Responder should notify local county health department (CHD) immediately. Name and phone number of contact person will be provided immediately.
 - If responder is working under Incident Command System, he/she should work through on-site medical station.
- b. CHD will facilitate testing for avian influenza (H5N1) according to established testing protocol (reference):
 - In addition to naso-pharyngeal swab (antigen) test, serum samples may be collected for antibody detection.
 - Acute sera must be collected within 7 days of illness onset.

- A convalescent sample should be collected 2 to 4 weeks later.
- c. A Bureau of Epidemiology interviewer will interview the responder, who will be asked to provide information about potential exposures and signs and symptoms. The responder will also be asked about close contacts, defined as household members or other persons with whom they have had prolonged face-to-face contact from 36 hours prior to symptom onset until diagnosis.
- d. To minimize virus transmission, the ill responder will be isolated. The isolation can take place either in a healthcare facility or at home, depending on the overall health of the person, until symptoms have resolved per DOH Rapid Response and Containment Protocol.
- e. The CHD will follow the DOH Rapid Response and Containment Protocol, which will (depending on pandemic phase and whether there is exposure to animals with known H5N1 infection) direct immediate or laboratory-result-dependent treatment of the case with antivirals (regardless of degree of illness), and monitoring and/or quarantining of contacts.
- f. CHD will follow-up on the case on a daily basis.
- g. Close contacts of the cases will be recommended a 5-day course of antiviral medication to prevent influenza infection, and be instructed to contact the CHD should they develop flu-like illness.
 - If test results are negative, discontinue daily monitoring and antiviral therapy.
 - If test results are unavailable, and contacts remain asymptomatic after 10 days, discontinue monitoring.

If Florida is among the first states to detect avian influenza:

FDOH will conduct seroprevalence survey among exposed animal disease responders and their close contacts to determine degree of occupational risk and factors associated with any infections that occur, to guide protection of workers in future responses.

- FDOH will seek any necessary IRB approval.
- Participation will be voluntary.
- Responders and close contacts will be provided with consent form, and question and answer sheets.
- If possible, baseline sera will be obtained prior to event.
- Questionnaires with questions on exposure, hygiene and PPE use will be distributed.
- Serum will be drawn approximately two weeks after exposure to detect early exposures, **and** four weeks after exposure to maximize antibody titers.
- H5 antibody testing will occur at CDC or other reference laboratory.

- DOH personnel will coordinate set-up of a medical station associated with poultry eradication operation for responders and poultry workers. Wildlife staff or animal control staff involved in AI bird sanitation:
 - Will be tested two weeks after completing work on mortality event.
 - Will be asked to complete questionnaire with questions on exposure, hygiene and PPE.
 - Will possibly be asked to participate in case control study of positive and negative responders.

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

1. During the 10 days prior to symptom onset, did the patient:

a. Come into contact with any domestic poultry? Yes No Unknown

If yes, please answer the following questions. If no, proceed to question 1b.

i. Did the patient come within three feet of the poultry?

Yes No Unknown

ii. Was any of the poultry sick or dying?

Yes No Unknown

iii. Did the patient touch any live or recently dead poultry?

Yes No Unknown

iv. Did the patient come into contact with poultry feces or feathers?

Yes No Unknown

v. Over the past 10 days, how long did the patient have contact with domestic poultry?

Not applicable

Less than 1 hour

Between 1 and 8 hours

Between 8 and 40 hours

More than 40 hours

vi. Over the past 10 days, how long did the patient have contact with sick or dying domestic poultry?

Not applicable

Less than 1 hour

Between 1 and 8 hours

Between 8 and 40 hours

More than 40 hours

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

vii. Was the patient wearing any protective clothing or equipment (PPE) during contact?

Yes No Unknown

Please check the type(s) of PPE worn during contact:

- Gloves
- Coveralls
- Goggles or face shield
- Disposable respirator (specify type) _____
- Helmeted or hooded air purifying respirator
- Other (please specify) _____

viii. If gloves were worn, how frequently were they changed each day?

- Not changed
- 1x per day
- 2x per day
- 3x per day
- 4x per day
- More than 4x per day

ix. Were hand-washing stations accessible?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

x. Did the hand-washing stations have:

Warm water? Yes No Unknown

Soap? Yes No Unknown

Paper towels? Yes No Unknown

xi. How frequently did you wash your hands?

Did not wash hands

Once per day

Twice per day

3 times per day

4 times per day

More than 4 times per day

xii. How did you dry your hands?

Did not dry hands

Used paper towels

Dried on clothes

Other (please specify) _____

xiii. Did you carry hand gel sanitizer?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

xiv. If yes, how often did you clean your **hands** with the hand gel sanitizer?

- Did not clean hands with sanitizer
- Once per day
- Twice per day
- 3 times per day
- 4 times per day
- More than 4 times per day

xv. If yes, how often did you clean your **gloves** with the hand gel sanitizer?

- Did not clean gloves with sanitizer
- Once per day
- Twice per day
- 3 times per day
- 4 times per day
- More than 4 times per day

b. Come into contact with any ill or dead wild birds? Yes No Unknown

If yes, please answer the following questions. If no, proceed to question 1c.

i. Did the patient come within three feet of the bird(s)?

- Yes No Unknown

Animal/Environmental Exposure Investigation Form

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ii. Did the patient touch any ill or dead wild birds?

Yes No Unknown

iii. Did the patient come into contact with wild bird feces or feathers?

Yes No Unknown

iv. Over the past 10 days, how long did the patient have contact with wild birds?

- Less than 1 hour
- Between 1 and 8 hours
- Between 8 and 40 hours
- More than 40 hours

v. Over the past 10 days, how long did the patient have contact with sick or dying wild birds?

- Not applicable
- Less than 1 hour
- Between 1 and 8 hours
- Between 8 and 40 hours
- More than 40 hours

vi. Over the past 10 days, how many dead or sick birds did the patient have contact with?

- One
- Between 1 and 9
- Between 10 and 50
- More than 50

vii. Was the patient wearing any protective clothing or equipment (PPE) during contact?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

Please check the type(s) of PPE worn during contact:

- Gloves
- Coveralls
- Goggles or face shield
- Disposable respirator (specify type) _____
- Helmeted or hooded air purifying respirator
- Other (please specify) _____

viii. If gloves were worn, how frequently were they changed each day?

- Not changed
- 1x per day
- 2x per day
- 3x per day
- 4x per day
- More than 4x per day

ix. Were hand-washing stations accessible?

- Yes No Unknown

x. Did the hand-washing stations have:

- | | | | |
|---------------|------------------------------|-----------------------------|----------------------------------|
| Warm water? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Soap? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |
| Paper towels? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unknown |

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

xi. How frequently did you wash your hands?

- Did not wash hands
- Once per day
- Twice per day
- 3 times per day
- 4 times per day
- More than 4 times per day

xii. How did you dry your hands?

- Did not dry hands
- Used paper towels
- Dried on clothes
- Other (please specify) _____

xiii. Did you carry hand gel sanitizer? Yes No Unknown

xiv. If yes, how often did you clean your **hands** with the hand gel sanitizer?

- Did not clean hands with sanitizer
- Once per day
- Twice per day
- 3 times per day
- 4 times per day
- More than 4 times per day

Animal/Environmental Exposure Investigation Form

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D. Does the cat sleep in or near the patient's bed?

Yes No Unknown

ii. Has the patient had contact with any wild or stray cats, or other cats not belonging to the patient?

Yes No Unknown

If yes, please answer the following questions. If no, please proceed to part iii

A. Does the patient know the owner of the cat?

Yes No Unknown

Please specify: _____

B. Did the cat show signs of illness?

Yes No Unknown

iii. Does the patient own any dogs?

Yes No Unknown

If yes, please answer the following questions. If no, please proceed to part iv.

A. Has/have the dog(s) recently shown signs of illness?

Yes No Unknown

B. Do(es) the dog(s) spend time outdoors unsupervised?

Yes No Unknown

C. In the past month, has the dog killed or eaten any domestic or wild birds?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

D. Does the dog sleep in or near the patient's bed?

Yes No Unknown

iv. Has the patient had contact with any wild or stray dogs, or other dogs not belonging to the patient?

Yes No Unknown

If yes, please answer the following questions. If no, please proceed to part v.

A. Does the patient know the owner of the dog?

Yes No Unknown

Please specify: _____

B. Did the dog show signs of illness?

Yes No Unknown

v. Does the patient have any other pets?

Yes No Unknown

Please specify: _____

If yes, please answer the following questions. If no, please proceed to part vi.

A. Have any of the other pets recently shown signs of illness?

Yes No Unknown

B. Do the other pets spend time outdoors unsupervised?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

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C. In the past month, have other pets killed or eaten domestic or wild birds?

Yes No Unknown

D. Do any of the other pets sleep in or near the patient's bed?

Yes No Unknown

vi. Has the patient had contact with any other wild or stray animals, or other animals not belonging to the patient?

Yes No Unknown

If yes, please answer the following questions. If no, please proceed to question 2.

A. Does the patient know the owner of the animal(s)?

Yes No Unknown

Please specify: _____

B. Did the animal(s) show signs of illness?

Yes No Unknown

Animal/Environmental Exposure Investigation Form

Draft – Version 1.0, 6/5/06

2. What is the patient's source of drinking water (i.e. public supply, well water, other)?

3. During the 10 days prior to symptom onset, did the patient consume any water directly from an untreated freshwater source, such as a pond, lake or stream?

Yes No Unknown

If yes, please specify: _____

4. During the 10 days prior to symptom onset, did the patient consume poultry (chicken/turkey) products ?

Yes No Unknown

If yes, please answer the following questions. *If no, the form is complete.*

a. How was the meat prepared (cooked, baked, deep fried, smoked)? _____

b. Where was the meat consumed (home, restaurant, church, other)? _____

c. Did the patient participate in preparing the meal or handle the raw bird meat?

Yes No Unknown

If yes, did the patient wear gloves?

Yes No Unknown

d. Did the patient wash his/ her hands after handling the raw chicken meat?

Yes No Unknown



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 6
Surveillance – Pandemic Influenza Protocols

October 2006

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Additional Materials: Bureau of Epidemiology,
http://www.doh.state.fl.us/disease_ctrl/epi/index.html

- Case Definitions
- Laboratory Specimen Collection and Identification Guidelines
- Novel Influenza Case Report Form, General Human
- Novel Influenza Case Report Form, Animal Exposure Human (*)
- Novel Influenza Patient Triage Screening Form (*)
- Case Identification Algorithm (*)
- Line Listing (*)
- Daily Reporting Log (*)
- Algorithm for determining County Influenza Activity Levels

(* under development)

I. Purpose

Surveillance for pandemic influenza centers around four major issues that will vary in importance depending on the pandemic phase: (1) to respond to every individual case to limit the spread of disease; (2) to respond to clusters or upward trends or outbreaks, (3) to provide information to plan prevention programs and (4) to provide information to evaluate prevention and control programs. To evaluate and tailor disease control interventions of a novel virus, it will be crucial to collect and analyze detailed real-time data on its clinical and epidemiological characteristics.

II. Objectives

The objectives of surveillance for pandemic influenza will vary based on the phase of the pandemic.

A. Interpandemic Surveillance Objectives

During the interpandemic phase, surveillance in the state is used to assess the seasonal burden of influenza. Surveillance data is primarily used to enhance the national influenza vaccination program. Surveillance serves not only to detect local outbreaks of seasonal influenza, but also unusual clusters of illness that may be due to a new influenza virus. Influenza itself is not a reportable disease, but outbreaks or clusters of any disease, including influenza, are reportable by State of Florida regulation.

Interpandemic and Pandemic Alert Novel Influenza Virus Surveillance Activities:

- Ensure early detection of cases and clusters of respiratory infections that might signal the presence of a novel influenza virus.
- Ensure laboratory resources are available to rapidly detect the introduction of a novel virus.
- If a novel strain of influenza is confirmed, ensure prompt and complete identification and reporting of potential cases to facilitate control and management of local outbreaks.

B. Pandemic Surveillance Objectives

Case-based surveillance and control strategies should be maintained as long as possible in an effort to delay widespread morbidity and mortality until adequate control measures, such as vaccine, have been developed and are available for extensive use. When strategies move to community-based control and mitigation, surveillance strategies will change with them.

Surveillance data collection should only be maintained if it serves clear objectives, such as to support planning of the use of scarce resources (antivirals, health-care infrastructure), evaluate control measures (including vaccine if available) or monitor changes in the influenza virus. The data collection process in this phase will be modified based on available resources.

At Phase 6 onset, case-based detection will be in place. During the peak of pandemic influenza activity, case-based detection methods will no longer be practical and surveillance data collection will be geared toward estimating community impact. Case-based detection will again become important as elimination of the pandemic influenza strain becomes feasible due to vaccine availability or an immune population.

Pandemic Influenza Virus Surveillance Activities (after case-based detection methods are no longer applicable)

Once a pandemic has been confirmed, monitor:

- Change in the circulating virus, including development of antiviral resistance, and shifts in the affected populations.
- Impact on human health, by conducting ongoing assessment of the morbidity and mortality.
- Evaluation of community- and population-based control measures, as applicable.

III. Surveillance for Human Infection

In conjunction with recommendations from other public health partners, such as the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO), FDOH will provide updated guidance to medical providers and local health departments on an ongoing basis. Surveillance activities outlined below will be contingent on local, national and international influenza activity at the time.

A. Components of Current Surveillance Activities

Statewide and local activities collect data from multiple partners. Information compiled includes laboratory testing data, outbreak reports, syndromic surveillance, sentinel influenza-like illness (ILI) surveillance by age group, influenza associated encephalitis, sentinel influenza and pneumonia mortality surveillance (all ages) and pediatric influenza associated deaths. These routine systems will be enhanced or modified during an influenza pandemic or pandemic alert periods.

- **Virologic Surveillance: WHO and/or National Respiratory and Enteric Virus Surveillance System (NREVSS)**

Data reported by two participating state laboratories throughout the interpandemic influenza season are the number of specimens tested and the number positive for influenza by type and subtype. The data identify which viruses are circulating, in addition to providing information on when and where influenza activity is occurring. During pandemic alert and pandemic periods, this surveillance will be used to monitor changes in transmission patterns and detect potential human-to human transmission of novel influenza viruses. (For further information, please refer to the Laboratory Surveillance and Diagnostic protocols).

- **Outpatient Surveillance: Sentinel Provider Surveillance for Influenza-Like Illness**

On a weekly basis during the interpandemic influenza season (October through May), over 100 members of the Florida Sentinel Influenza Provider Network (FSIPN) voluntarily report the total number of patients seen and the number of patients presenting with influenza-like-illness (ILI) by age group, information is used to monitor community impact of the influenza virus and determine geographic distribution and spread of influenza across the state each season. During the pandemic alert and pandemic periods, this provider network will be enhanced and additional healthcare providers will be identified.

County health departments should recruit multiple sentinel participants serving a representative sample of their population, such as providers from different geographic locations in the county representing all patient groups (urgent care centers, facilitated care centers, pediatric offices). During pandemic or pandemic alert periods, providers may be asked to submit numbers daily instead of weekly. During the interpandemic phase, all sentinel providers will be encouraged to submit specimens for viral strain surveillance testing, as well as interesting severe influenza cases.

- **Syndromic Surveillance**
 - **National Retail Data Monitor (NRDM):** Over-the-counter retail pharmaceuticals sales data is reported daily to the University of Pittsburgh RODS Laboratory by 2,138 participating stores in Florida. Categories such as anti-fever, anti-cough, and thermometer sales can be used as indicators of possible respiratory illness outbreaks or impact at a community level.
 - **Emergency Department Syndromic Surveillance System:** Currently, 52 hospitals in 11 counties submit daily “syndrome” counts/census data from emergency departments, including an illness category designed to track influenza-like illness. Statistical methods determine if there are any short-term or sustained increases in patients presenting with possible respiratory illness. Syndromic surveillance systems will increase the ability to detect unusual or unexplained events of acute respiratory illness, comprehensive or sentinel hospital-based surveillance for individuals with, and clusters of, acute respiratory illness on or during admission. These systems will be utilized during pandemic periods to monitor community impact of the influenza virus when individual case-based reporting is not feasible.
 - **BioSense System:** Selected ICD-9-coded outpatient visits at federal Department of Veterans Affairs (VA) ambulatory-care centers and outpatient clinics, and at U.S. Department of Defense Military Treatment Facilities, generate Sentinel Infection Alerts. FDOH investigates alerts that may indicate single or cluster cases of diseases of public health significance. In addition, BioSense collects laboratory order data from all LabCorp patient service centers in Florida, and allows monitoring of lab orders requested by providers using LabCorp services to identify significant

increases in numbers of lab tests used to diagnose respiratory disease.

- **Mortality Surveillance**

- **Florida Pneumonia and Influenza Mortality Reporting System**

The Florida Pneumonia and Influenza Mortality Reporting System, anticipated to be in place in the fall of 2006, will collect weekly data on mortality associated with influenza and pneumonia from 23 Florida counties with populations in excess of 200,000 persons by age group. The system will model the number of excess deaths that occur in association with pneumonia and influenza, adjusting for the seasonal effects of increased mortality due to influenza and other respiratory diseases. While the system will initially require the weekly reporting of mortality, daily reporting may be required during a pandemic period, so the system will have the capacity to both collect and analyze data based on these two intervals.

- **Pediatric Influenza-Associated Deaths**

Medical providers are required by regulation, as stated in 64D-3, *Florida Administrative Code*, to report influenza-associated deaths in patients less than 18 years of age to the local health department where the patient resides. This system enables the investigation of individual cases of unusual mortality due to influenza including the identification of severe presentations, and unusual or highly pathogenic influenza strains during interpandemic and pandemic alert periods. During pandemic periods, depending on widespread mortality, individual case investigation and reporting of pediatric influenza-associated deaths may not be feasible and may be administratively suspended.

- **Reportable Disease Surveillance**

- **Influenza-Associated Encephalitis**

Medical providers are required by regulation, as stated in 64D-3, *Florida Administrative Code*, to report influenza-associated encephalitis to the local health department where the patient resides. This system enables the investigation of individual cases of unusual morbidity due to influenza, including the identification of severe presentations and unusual or highly pathogenic influenza strains during interpandemic and pandemic alert periods. During pandemic periods, depending on widespread morbidity, individual case investigation and reporting of influenza-associated encephalitis may not be feasible and may be administratively suspended.

- **Influenza due to Novel or Pandemic Strains or Isolation of Influenza Virus from Humans of a Novel or Pandemic Strain**

Medical providers and laboratories or other individuals are required by regulation stated in Rule 64D-3 (anticipated 2006 promulgation) to report cases of influenza due to novel or pandemic strains or isolation of influenza virus from humans of a novel or pandemic strain to the local health department where the patient resides. During interpandemic and pandemic alert periods, reporting should take place without delay upon the occurrence of any of the following: initial suspicion, receipt of a specimen with an accompanying request for an indicative or confirmatory test, findings indicative thereof or diagnosis. After-hours reports shall be made to the CHD after-hours duty official. If unable to do so, the reporter shall contact the Bureau of Epidemiology after-hours duty official at (850) 245-4401.

This system enables the investigation and reporting of individual cases of unusual morbidity due to influenza including the identification of severe presentations and unusual or highly pathogenic influenza strains during interpandemic and pandemic alert periods. During pandemic periods, depending on widespread morbidity, individual case investigation of cases of influenza due to novel or pandemic strains may not be feasible and may be administratively suspended.

- **Outbreaks or Clusters of Influenza or Influenza-Like Illness**

Medical providers and laboratories are required by regulation, as stated in 64D-3, *Florida Administrative Code*, to report any grouping or clustering of patients having similar disease, symptoms or syndromes that may indicate the presence of a disease outbreak to the local health department where the patient(s) resides. This system enables the investigation of individual cases and outbreaks of unusual morbidity due to influenza, including the identification of severe presentations and unusual or highly pathogenic influenza strains during interpandemic and pandemic alert periods. During pandemic periods, depending on widespread morbidity, individual cluster or outbreak investigation of influenza-associated origin may not be feasible and may be administratively suspended.

- **County-level Assessment of Influenza Activity**

Epidemiologists determine their county activity influenza activity levels by reviewing: 1) the number of laboratory confirmed influenza cases in the county, 2) detected influenza outbreaks in community settings and 3) ILI activity detected by surveillance systems in the county. ILI surveillance activity at the county is assessed using a variety of surveillance systems, including sentinel providers, school/workplace absenteeism, long-term care facility or sentinel long-term care surveillance, correctional institution

surveillance, hospital emergency department and laboratory surveillance from the state lab, and local laboratories, such as hospital labs, that provide county epidemiologist with rapid influenza percent positive information. Algorithms for determining county influenza activity level can be found on the Bureau of Epidemiology website.

- State-level Assessment of Influenza Activity:** The Bureau of Epidemiology reports influenza statewide activity levels assessed weekly and reported to the CDC from October to May during interpandemic periods.

Activity Level	ILI activity/Outbreaks		Laboratory data
No activity	Low	And	No lab-confirmed cases
	Not increased	And	Isolated lab-confirmed cases
Sporadic	OR		
	Not increased	And	Lab-confirmed outbreak in one institution
Local	Increased ILI in one region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	OR		
Regional	2 or more institutional outbreaks (ILI or lab-confirmed) in one region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
	OR		
Regional	Increased ILI in \geq two but less than half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	OR		
Regional	Institutional outbreaks (ILI or lab confirmed) in \geq two and less than half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	OR		
Widespread	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the state.

IV. Surveillance for Infection in Animal Populations

See Zoonotic Avian Influenza Surveillance and Response Protocols (Appendix 5) for further information regarding surveillance strategies and early warning of human respiratory infection associated with unexplained or unusual mortality in commercial bird flocks or animal herds.

V. Data Management and Reporting

During the pandemic alert periods, individual human case reporting should follow traditional notifiable disease surveillance methods using the Merlin System. Further guidance by pandemic periods will be provided to CHDs from the Bureau of Epidemiology. During the pandemic alert periods, CHDs will provide daily updates of cases and contacts reported and under investigation. Pending necessary modifications to the Merlin System, paper-based line listings and daily summary information will be developed by the Bureau of Epidemiology and posted to the bureau's website.

Daily summary information will include, at a minimum, all confirmed cases, all persons for whom the diagnosis of pandemic influenza is being considered and any discarded cases. Once case-based control measures are no longer effective during Phase 6, individual case reporting may be administratively suspended. Additional related information can be found under the Information System Appendix 7 and the Rapid Response Case-based and Community-based Containment Appendix 8.

VI. Surveillance Goals and Responsibilities by Pandemic Period

Surveillance for pandemic influenza centers around four major issues that will vary in importance, depending on the pandemic phase:

- Responding to every individual case to limit the spread of disease.
- Responding to clusters or upward trends or outbreaks.
- Providing information to plan prevention programs.
- Providing information to evaluate prevention and control programs.

Surveillance strategies are most effectively based on the characteristics of the disease(s) and/or outbreak. (Please refer to Table 1, the matrix of surveillance goals by pandemic period). Information in this section (VIII) should be used as a planning guide, as activities may not be exclusive or exhaustive of individual pandemic periods.

Table 1: Matrix of Surveillance Goals by Pandemic Period

	Interpandemic Period		Pandemic Alert Period			Pandemic Period			
	1	2	3	4	5	early 6	early-mid 6	late-mid 6	late 6
Goals:									
Strengthen influenza surveillance pandemic preparedness at all levels.	*	*	*	*	*	*	*	*	*
Monitor influenza and /or ILI morbidity and mortality surveillance data to detect the onset, peak and close of influenza seasons as well as determine community impact and geographic distribution and spread of the influenza virus throughout the season.	*	*	*	*	*	*	*	*	*
Conduct laboratory surveillance to document circulating virus strain and changes to plan and implement control measures including vaccine development and/or emergence of antiviral resistance.	*	*	*	*	*	*	*	*	*
Determine geographic distribution and spread of circulating virus.	*	*	*	*	*	*	*	*	*
Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases to document the presence of a novel virus in the population to promptly locate 100% of the individuals with the new infection to take preventive action.	*	*	*	*	*	*			*
Detect and investigate individual cases of influenza associated encephalitis and pediatric mortality.	*	*	*	*	*	*			*
Minimize the risk of transmission of animal influenza virus to humans; detect and report such transmission rapidly if it occurs	*	*	*	*					
Document presence or absence of person-to-person spread of this novel virus. Result will be to contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.				*	*	*			*
Maximize efforts to contain or delay spread to possibly avert a widespread outbreak of a virus strain with effective human-to-human transmission, and to gain time to implement response measures especially vaccine development.				*	*	*			
Estimate mortality due to novel or pandemic influenza strains.					*	*	*	*	
Estimate morbidity due to novel or pandemic influenza strains.							*	*	
Monitor effectiveness of community based control measures to minimize pandemic impact.							*	*	

A. Phase 1 and 2 (Interpandemic Period)

- 1. Goals:** Refer to Table 1: Matrix of Surveillance Goals by Pandemic Period
- 2. Control Strategies:** Control strategies will be focused on management of individual cases of disease due to novel influenza strains.
- 3. Surveillance Responsibilities:**

a. County Health Departments

- Detect individual cases, requiring good case and laboratory results reporting by doctors, hospitals and laboratories.

Infrastructure needed:

- Wide dissemination of information about what, how, when and why to report.
 - Simple, reliable reporting mechanisms.
 - 24/7 availability of public health officials for clinical and public health consultation, actively ensuring that every primary-care physician in the county, every emergency department and every urgent care clinic knows what to report and how to do so.
 - Rapid alerting mechanisms for clinicians, labs and other partners.
 - Rapid distribution of authoritative reports and recommendations.
 - Staffing to manage system and data.
- Provide consultation and investigation of suspected novel influenza cases to healthcare providers in conjunction with state health department.
 - Report individual human cases through traditional methods used for notifiable disease surveillance utilizing Merlin System, or paper reporting if system enhancements are not available.
 - Consult on collection of specimens for influenza and suspected novel influenza testing.
 - Facilitate transfer of specimens to Bureau of Laboratories.
 - Assist in identifying and recruiting medical providers willing to participate in Florida Influenza Sentinel Physicians Network.
 - Help educate healthcare providers about novel and pandemic influenza.
 - Develop partnerships with schools and large businesses to monitor absenteeism and/ or ILI rates.
 - Register for access to NRDM to view county specific over-the-counter medication data.

- If available at CHD, monitor daily the local syndromic surveillance system for detection of respiratory infection or ILI data.
- If syndromic surveillance system is in place, develop written response protocols for detected aberrations in syndromic surveillance data.
- Ensure epidemiologic investigation of pediatric influenza deaths and influenza associated encephalitis of county residents in conjunction with state health department.
- Report (October through May) county influenza activity levels via EpiCom.

b. Healthcare Providers

- Collect recommended specimens for diagnosis of novel influenza in consultation with CHD.
- Forward specimens to Bureau of Laboratories **after** consultation with CHD.
- Contact CHD to find out more information about enrolling in the Florida Influenza Sentinel Physician Network (FISPN).
- Participating FISPN physicians report percent of all patient visits for ILI by age group.
- Review Bureau of Epidemiology website for case definitions, screening procedures, infection control, laboratory testing and antiviral regimens for influenza A (H5N1) and other novel strains.
- If applicable, facilitate provision of hospital data for syndromic surveillance.
- Report immediately, 24/7, influenza-associated deaths in patients less than 18 years of age to local health department where patient resides.
- Report immediately upon suspicion, 24/7, cases of influenza due to novel or pandemic strains, or isolation of influenza virus from humans of a novel or pandemic strain, to local health department where patient resides.
- Report immediately, 24/7, any grouping or clustering of patients having similar disease, symptoms or syndromes that may indicate presence of disease outbreak to local health department where patient resides.
- Report influenza-associated encephalitis to local health department where patient resides.

c. State Health Office Epidemiology

- Provide consultation to CHDs and healthcare providers, as needed, on suspect novel influenza cases including those suspected to be due to animal to human transmitted influenza.
- Investigate influenza outbreaks in conjunction with CHD.
- Work with CHDs and Bureau of Laboratories to coordinate influenza testing.
- Continue work with CHDs to recruit medical providers to participate in Florida Influenza Sentinel Physician Network.
- Develop materials and help educate healthcare providers about novel and pandemic influenza.
- Develop protocols for using surge capacity epidemiology staff for surveillance activities.
- Work with external partners (FWC, DOACS, USDA) to remain informed of coordination efforts related to non-human animal disease control.
- Identify and enumerate communication groups.
- Monitor NRDM data to detect aberrations in sales of over-the-counter pharmaceuticals statewide.
- Monitor BioSense surveillance data.
- Facilitate a coalition of surveillance system partners.
- Monitor mortality surveillance trends, as reported by four Florida cities reporting data to 122 cities.
- Access local syndromic surveillance systems to monitor respiratory and influenza like illness in various locations across the state.
- Facilitate implementation of state-wide syndromic surveillance system.
- Determine and report weekly the state influenza-activity level to CDC and disseminate to CHDs.

(See Appendix 5 Zoonotic Avian Influenza Surveillance and Response for additional activities.)

d. Bureau of Laboratories

Refer to Appendix 10 Laboratory Surveillance and Diagnostic Protocols.

B. Phase 3 and 4 (Pandemic Alert Period)

- 1. Goals:** Refer to Table 1: Matrix of Surveillance Goals by Pandemic Period.

2. **Control Strategies:** Control strategies will be focused on management of individual cases of disease due to pandemic influenza strains. While these activities are relevant for both phases, the intensity of those activities would need to increase during Phase 4.

3. **Surveillance System Responsibilities:**

a. **County Health Departments** (in addition to continuation of Phase 1 and 2 responsibilities)

- Investigate county influenza outbreaks in conjunction with state health department; in the case of a novel influenza strains, one case is considered an outbreak. **See Appendix 7 Rapid response and containment protocols.**
- Case-based information compiled daily in a paper line-listing format or through an electronic reporting method, such as the Merlin Outbreak Module (further guidance to be distributed on the Bureau of Epidemiology website). Daily summary information should include confirmed cases, all persons for whom the diagnosis of pandemic influenza is being considered and any discarded cases.
 - Maintain a daily tally of the number of confirmed cases for which there is no reported at-risk animal exposure **and** no laboratory occupational exposure. In addition, maintain a daily tally of the number of confirmed cases for which exposure history is unknown or undetermined.
 - Maintain daily records of the number of new hospital admissions of individuals for whom a diagnosis of pandemic influenza is being considered.
 - A case report form should be completed for every individual for whom a diagnosis of pandemic influenza viral infection is being considered. (Case report forms are available on the Bureau of Epidemiology website). All individuals should be assigned a case classification according to the implemented case definitions.
 - A thorough field investigation of initial cases of pandemic influenza viral infection should be conducted to assess exposures and likelihood of human-to-human transmission. Subsequent confirmed cases should be similarly investigated with priority being given to:
 - Cases with most recent dates of onset.

- Cases resident in an area without reported HPAI outbreaks in the animal population.
- Cases in healthcare workers.
- Cases with reported contact with a confirmed case and with no other reported risk or exposure.
- Cases that are part of a cluster.
 - Enhanced surveillance may also include the monitoring of the following groups:
 - People involved in culling birds or animals infected with influenza (single cases and/or clusters).
 - Other people exposed to birds or animals infected with influenza, for example farmers and veterinarians (single cases and/or clusters).
- Provide health authorities with up-to-date information on the occurrence of novel human influenza viral infections.
- Make contact with every laboratory in local community doing respiratory virus testing to ensure they know they must call immediately if they get request for testing for novel strain of influenza, or receive specimen for such testing.
- Identify and recruit private physicians and walk-in clinics in areas where hard-to-reach populations reside, and additional geographic areas within the county to be used as sentinel locations.
- Work with hospitals in development of a strategic medical plan that will interface with local and state public health emergency plans.
- Identify and maintain points of contact at airports, ports and other forms of mass transit for communication of information.
- Establish and implement, as indicated, a public information line and/or website. Educate the public about the symptoms of influenza and about what to do if they suspect cases, clusters or outbreaks of infection. Highly suspect cases should be triaged to an epidemiologist or medical professional to evaluate the case for pandemic flu.
- Work with the healthcare community to heighten response activities and monitor impact of pandemic on healthcare facilities and systems, and communicate regularly with key response partners (see Table 2: Surveillance Partners and Communication Groups).

b. Healthcare Providers (in addition to continuation of Phase 1 and 2 responsibilities)

- Establish a system to monitor and report all hospital-acquired influenza infections.
- Provide training of enhanced infection control procedures to be utilized in later pandemic phases in all medical facilities.
- Medical facilities to identify triage areas for: 1) persons presenting with possible influenza, fever or respiratory disease, and 2) persons at high risk for severe complications, such as pregnant women, elderly, infants and those who are immune-compromised.
- Communicate regularly with key response partners.
- Monitor the activity and recommendations surrounding use of antiviral medications.

c. State Health Office Epidemiology (in addition to continuation of Phase 1 and 2 responsibilities)

- Implement system enhancements developed for electronically reporting laboratory influenza-surveillance data to CHDs via Merlin.
- Maintain updated pandemic influenza screening protocol and screening criteria on Bureau of Epidemiology website.
- Implement Florida Pneumonia and Influenza Reporting System (FPIRS), and analyze excess deaths attributable to pneumonia and influenza.
- Continue to provide updated case definition, protocols or algorithms for case findings, inclusive of clinical data and travel or exposure history.
- Enhance surveillance to include monitoring of following groups:
 - People involved in culling birds or animals infected with influenza (single cases and/or clusters).
 - Other people exposed to birds or animals infected with influenza, e.g., farmers and veterinarians (single cases and/or clusters).
- Monitor statewide syndromic surveillance data through either local or statewide syndromic surveillance systems.
- Develop protocols for using surge capacity epidemiology staff for surveillance activities.
- Communicate regularly with key response partners.
- Work with Bureau of Immunizations to establish system for:
 - Monitoring vaccine usage for routine and pandemic strain influenza vaccines, if available.
 - Monitoring adverse vaccine events attributed to pandemic strain vaccine, if available.

- Collecting data for later use in calculation of vaccine effectiveness for the pandemic strain vaccine.
- Monitoring pneumococcal vaccine use and adverse events associated with its use, if this vaccine is available and being used.
- Establish system for monitoring antiviral use and adverse events that may be attributed to antiviral use, if applicable.
- Establish system for monitoring hospital admissions for suspected or confirmed cases of pandemic strain influenza, available for use by CHD staff.
- Develop materials and help educate healthcare providers, veterinarians and animal disease responders about pandemic influenza strains.
- Aggregate and interpret animal disease exposure case-report forms to determine need for modified infection control guidelines.
- Establish criteria to indicate when to move from one level of surveillance to higher or lower level, and indicators for movement from case-based control measures to community-based control measures.
- Establish system for revising pandemic case definition, given availability of additional clinical information (WHO will recommend global case definitions according to different global phases).
- Consider how recovered cases, presumably immune to new virus, can be identified by occupation (e.g., healthcare workers or workers in designated essential services), to facilitate development of resource of workers presumed to be immune.
- Establish mechanism for data aggregation and interpretation for decision-making.
- Facilitate dissemination of pandemic influenza surveillance reports to CHDs, partner agencies and public.
- Ensure mechanism for daily reporting of cases to national authorities, including information on possible source of infection.

d. Bureau of Laboratories (Refer to Appendix 10 Laboratory Surveillance and Diagnostic protocols)

C. Phase 5 (Pandemic Alert Period)

- 1. Goals:** Refer to Table 1, Matrix of Surveillance Goals by Pandemic Period.
- 2. Control Strategies:** Control strategies will focus on management of individual cases of disease due to pandemic influenza strains. Intensity of activities will increase, as in Phase 4.

3. Surveillance System Responsibilities:

a. County Health Departments (in addition to continuation of Phase 1, 2, 3 and 4 responsibilities)

- Vital statistics offices may report county deaths on daily (instead of weekly) basis under Florida Pneumonia and Influenza Mortality Reporting System.
- Solicit first responders to assist with community surveillance.
- Establish system for monitoring workforce absenteeism in services designated as essential.
- Increase surveillance at ports of entry.
- Request epidemiologic surge capacity staff to support phones, data entry and investigations.
- Increase review of syndromic surveillance data for respiratory disease surveillance to twice daily.
- Enhance surveillance, including monitoring of following:
 - Incoming travelers from infected regions.
 - Healthcare workers caring for patients with suspected or confirmed pandemic strain influenza infection (single cases and/or clusters).
 - Laboratory workers handling clinical specimens from patients with suspected or confirmed pandemic strain influenza infection (single cases and/or clusters).
 - School absenteeism.
 - Mortuary workers.

b. Healthcare Providers (in addition to continuation of Phase 1, 2, 3 and 4 responsibilities)

- Implement clinical triage at alternative sites or via hotline, if appropriate.
- Implement enhanced infection control guidelines, if appropriate.

c. State Health Office Epidemiology (in addition to continuation of Phase 1, 2, 3 and 4 responsibilities)

- Enhance statewide surveillance to include monitoring of the following groups:
 - Incoming travelers from infected regions.
 - Healthcare workers caring for patients with suspected or confirmed pandemic strain influenza infection (single cases and/or clusters).
 - Laboratory workers handling clinical specimens from patients with suspected or confirmed pandemic strain influenza infection (single cases and/or clusters).

- Surveillance using utilizing information supplied by HMOs.
- School and workplace absenteeism.
- Mortuary workers.
- Provide guidance on when to move from case-based to community based control measures.
- Enhance review of respiratory disease syndromic surveillance to twice daily.

d. Bureau of Laboratories (Refer to Appendix 10 Laboratory Surveillance and Diagnostic protocols)

D. Phase 6 (Pandemic)

1. Goals: Refer to Table 1: Matrix of Surveillance Goals by Pandemic Period.

2. Control Strategies: Case-based control strategies should be maintained as long as feasible. Indication that case-based control strategies are no longer effective will be when capacity to investigate individual cases exceeds available resources.

3. Surveillance System Responsibilities:

a. County Health Departments

- Conduct select individual case or outbreak investigations, as needed, to guide prevention and control recommendations. (Further information provided as available.)
- Assess effectiveness of community-based disease control interventions, including:
 - Vaccine, once available.
 - Antiviral resistance, as applicable.
 - School closures, as applicable.
 - Social distancing.
- If a system for electronic data transfer is not in place, contact healthcare providers on daily basis for aggregate data on number of patients seen meeting case definition.
- Work with community partners to support aggregate monitoring of morbidity and mortality.
- Provide regular updates to key response partners on local disease trends as they become available, including:
 - Case incidence, and morbidity and mortality.
 - Range of clinical presentations and other characteristics of circulating strain(s).
 - Risk factors associated with increased morbidity and mortality.
 - Local populations that may be at increased risk.

- Track levels of absenteeism in services designated as essential.

b. Healthcare Providers

- Track levels of absenteeism.
- Supply aggregate data, rather than individual case reporting, using clinical diagnosis.
- Track healthcare workers' return to workforce.

c. State Health Office Epidemiology

- Monitor and trend impact, change in epidemiology, clinical presentation, virology features.
- Assess the effectiveness of interventions.
- Increase respiratory disease surveillance to twice daily.
- Monitor vital statistics and medical examiners for mortality surveillance.
- Work with Bureau of Immunizations to implement system for:
 - Monitoring vaccine usage for routine and pandemic strain influenza vaccines, if available.
 - Monitoring adverse vaccine events attributed to pandemic strain vaccine, if available.
 - Collecting data for later use in calculation of vaccine effectiveness for pandemic strain vaccine.
 - Monitoring pneumococcal vaccine use and adverse events associated with its use, if vaccine is available and being used.
- Implement system for monitoring antiviral use and adverse events that may be attributed to antiviral use, if applicable.
- Determine when pandemic incident cases have decreased sufficiently to move back to case-base detection and control methods, and begin recovery and planning for second wave or return to interpandemic period.
- Additional information available in Appendix for Zoonotic Avian Influenza Surveillance and Response.
- If attack rate is high, consideration should be given to limiting, or even discontinuing, both routine and early warning surveillance. Limited sampling of viruses should be continued to monitor virus characteristics.

d. Bureau of Laboratories (Refer to Appendix 10 Laboratory Surveillance and Diagnostic protocols.)

Table 2: Surveillance Partners and Communication Groups	
	High Priority
a. Medical Providers	
All area hospitals, emergency departments and infection control	*
Walk-in clinics, urgent care clinics	*
Infectious disease physicians	*
General practice providers, private physicians	*
Respiratory therapists	*
Long-term care facilities - nursing homes, assisted living	*
Travel clinics	*
Medical Examiner's Office	*
b. Laboratories	
Bureau of Laboratories	*
Private laboratories	*
3) First Responder Agencies	
EMS	*
American Red Cross	
Law Enforcement	
Fire and Rescue	
4) Animal Handlers and Caretakers (See Appendix 5 for Zoonotic Disease Surveillance Protocol)	
Agriculture workers, poultry workers, USDA	
Wildlife and Animal rehabilitators and handlers	
Exotic pet stores	
Field biologists (Fish and Wildlife)	
Veterinarians	
Zoos	
5) Educational Institutions	
Daycare/ Pre-kindergarten centers, Head Start	
Elementary, middle, high schools (public and private)	
School health nurses (public and private)	
Schools for children with special needs	
University clinics, community colleges, technical schools	
6) Government Agencies	
FDOH Central Office Epidemiology	*
FDOH County Health Departments	*
County Emergency Operations Center	
County Government Officials	
7) Correctional Institutions	
Federal prisons	
Jails	
8) Community Groups/ Mass Transit Services	
Migrant worker populations	
Neighborhood associations	
Ports of entry	
Airports	
Customs services, Border Patrol	



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 7

Rapid Response and Containment:
Case-based Containment Protocol

October 2006

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I. Purpose

This document describes the Florida Department of Health's planned response to, and containment of, human infection due to a novel influenza virus (such as H5N1 (Asian strain)) during WHO Phases 3, 4 and 5, and at the beginning of Phase 6. We assume that no one in the population is vaccinated against this strain and that no vaccine is available. The intent of these measures is to interrupt and stop local human-to-human transmission of the novel influenza agent as part of a larger strategy to attempt to delay a full-scale influenza pandemic.

If the pandemic can be delayed long enough, an effective vaccine can be manufactured, distributed and administered in time to save many lives. Flattening out the epidemic curve can spread out the demand on healthcare facilities, as well.

A useful insight from WHO's containment plan is that, if the public health authority controls the supply of antivirals, then access to antiviral medications can be a strong incentive for cases and contacts to come forward.

This document assumes that adequate supplies of antiviral medications will be made available to support this containment strategy, and that available supplies will not be diverted away from this strategy for other purposes. The amounts needed for containment are very small compared to those needed during the later community-based control measures phase.

The interventions described in this appendix will be implemented with individual cases or small clusters of disease due to a novel influenza agent. The details of specific interventions depend on the stage of the Pandemic (see Table 1, p. 5 for details). This case-based containment strategy will continue as long into Phase 6 as practical in terms of public health manpower and effectiveness.

Appendix 8 describes targeted layered community-based containment interventions, built on the principle of social distancing as well as voluntary isolation and the use of antiviral medications to reduce transmission. Some components of these community-based Interventions may be implemented while these containment interventions are still the primary response, but initiating social distancing interventions for persons not in known direct contact with cases should not detract from implementing containment as described here for as long as it is effective.

II. Objectives

The objectives of the interventions described are to:

- A. Prevent those who are ill from infecting others.
- B. Prevent those infected or exposed from becoming ill.
- C. Prevent those not infected from becoming infected.

III. Strategies

To accomplish these objectives, the following rapid response and containment protocols will include:

- A. Isolation of cases
 - Voluntary isolation (Phases 3 and 4)
 - Compulsory isolation (Phases 5 and 6)
- B. Monitoring and/or quarantine
 - Voluntary (Phases 3 and 5)
 - Compulsory (Phases 6)
- C. Antiviral treatment of cases
- D. Antiviral prophylaxis of identified contacts

IV. Recommendations on case and contact management

A. High-suspicion and moderate-suspicion situations

These recommendations are specific to a novel influenza strain, such as H5N1.

High-suspicion and moderate-suspicion situations for a novel influenza strain, such as H5N1, are defined by the following CDC interim document, dated April 21, 2006, and later documents that may replace it. Persons for whom testing for the novel influenza virus is recommended below would be considered high-suspicion, and persons for whom it can be considered on a case-by-case basis can be considered moderate-suspicion. All others are low-suspicion and do not require urgent public health action.

In general, for high-suspicion situations, control measures should be initiated as described in the table, as appropriate for the WHO phase, without waiting for laboratory confirmation. Preliminary identification of a novel strain, such as H5N1, can be made within four hours of receipt of appropriate specimens at the state public health laboratory. If the laboratory finds another cause for the illness, the control measures can be discontinued. (See appendix 10 for more detail on laboratory testing and services.)

B. Moderate-suspicion situations

- Phase 3 – Take Phase 3 control measures if rapid testing shows Influenza A is present, then discontinue if H5N1 is not confirmed.
- Phases 4 or 5 – Take Phase 3 control measures while waiting for laboratory results and discontinue if H5N1 is not confirmed; move up to Phase 4/5 control measures if H5N1 is confirmed.

- Phase 6 – Take Phases 4/5 control measures while waiting for laboratory results and discontinue if H5N1 is not confirmed; move up to Phase 6 control measures if H5N1 is confirmed.

V. Interim Criteria for Reporting and Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) virus in the United States

A. Testing for avian influenza A (H5N1) virus infection recommended for:

Hospitalized patients with a documented temperature of $\geq 38^{\circ}\text{C}$ ($\geq 100.4^{\circ}\text{F}$) **AND** radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS) or other severe respiratory illness for which an alternate diagnosis has not been established **AND** at least **one of the following exposures** within 10 days of symptom onset:

1. History of travel to a country with H5N1 documented in poultry, wild birds, and/or humans*, AND had at least one of the following during travel:
 - a. Direct contact with (e.g., touching) sick or dead domestic poultry.
 - b. Direct contact with surfaces contaminated with poultry feces.
 - c. Consumption of uncooked poultry or poultry products.
 - d. Direct contact with sick or dead wild birds suspected of having, or confirmed to have, H5N1 virus infection.
 - e. Close contact (within 1 meter) of a person who was hospitalized or died due to a severe unexplained respiratory illness.
2. Had close contact (within 1 meter) of an ill patient who is confirmed or suspected to have H5N1.
3. Works with live H5N1 influenza virus in a laboratory.

B. Testing for avian influenza A (H5N1) virus infection can be considered on a case-by-case basis, in consultation with local and state health departments, for:

1. A patient with mild or atypical disease** (hospitalized or ambulatory) who meets criteria A, B or C above, OR
2. A patient with severe respiratory disease requiring hospitalization, with uncertain or unavailable epidemiological information, who partially meets criteria A, B or C above (e.g., a returned traveler from an H5N1-affected country whose exposures are unclear or suspicious, contact with well-appearing poultry, etc.).
3. These recommendations are based upon the state of knowledge regarding human infection with influenza A (H5N1) viruses as of October 2006, and will be updated as events warrant.

**For a listing of H5N1-affected countries, visit:
DC website at: <http://www.cdc.gov/flu/avian/outbreaks/current.htm>,
OIE website at: http://www.oie.int/eng/en_index.htm,
WHO website at: http://www.who.int/csr/disease/avian_influenza/en/.*

***For example, a patient with respiratory illness and fever who does not require hospitalization, or a patient with significant neurological or gastrointestinal symptoms in the absence of respiratory disease.*

Table 1: Recommended Interventions of Case-based Containment Strategy

	Phase 3	Phase 4/5	Early Phase 6
Triggers	High-suspicion: Act without waiting for lab results	High-suspicion: Act without waiting for lab results	High-suspicion: Act without waiting for lab results
	Moderate-suspicion: Act without waiting for lab results if rapid testing shows Influenza A is present; otherwise, wait for lab confirmation	Moderate-suspicion: treat as Phase 3 pending lab results	Moderate-suspicion: treat as Phase 4/5 pending lab results
Management of case	Isolate in healthcare facility if in need of health care	Formal isolation order for case in hospital if in need of health care	Formal isolation order for case in hospital if in need of health care
	Self-isolate at home otherwise	Order formal isolation for case at home otherwise	Order formal isolation for case at home otherwise
	Treatment includes a full course of antiviral agent to which organism is sensitive, if any	Treatment includes a full course of antiviral agent to which organism is sensitive, if any	Treatment includes a full course of antiviral agent to which organism is sensitive, if any
	CHD checks on case location and status daily	CHD checks on patient location and status daily	CHD checks on patient location and status twice daily
Definition of contacts	Household members and others in similar prolonged face-to-face contact with the patient	Persons who have been in the same room with the patient or talking with the patient face-to-face for 5 minutes or more	Persons who have been in the same room with the patient or talking with the patient face-to-face for 5 minutes or more
Management of contacts	Locate all contacts, on and off site	Locate all contacts, on and off site	Locate all contacts, on and off site
	No activity restrictions for contacts	Immediate self-quarantine of all contacts to stay home	Formal quarantine order for all contacts to stay home or in designated location
	Instruct contacts to contact CHD immediately if symptoms develop	Instruct contacts to contact CHD immediately if symptoms develop	Instruct contacts to contact CHD immediately if symptoms develop
		CHD checks on location and status of all contacts daily	CHD checks on location and status of all contacts twice daily
	If any contacts have or develop symptoms, manage case as Phase 4/5 infection until proven not to be H5N1	If contacts have or develop symptoms, treat contact as a new case of Phase 4/5 infection and initiate contact tracing until proven not to be H5N1	If contacts have or develop symptoms, treat patient as a new case of Phase 6 infection and initiate contact tracing until proven not to be H5N1
	Antivirals for all contacts, including exposed healthcare workers	Antivirals for all contacts, including exposed healthcare workers	Antivirals for all contacts, including exposed healthcare workers

C. Explanations of terms

Self-isolation of case at home (Phase 3): Case agrees to stay home until symptoms resolve. No visitors to home except as needed to provide supportive or clinical care. Others, including children, should stay somewhere else if possible, or be separated within the home. Caregivers, visitors and household members managed as contacts.

Cases isolated in hospital: Ensure that, for hospitalized cases, hospitals are aware of, and are following, recommended infection-control practices.

Case management (Phases 4/5/6): Order isolation of the case with a formal DOH quarantine order – no visitors to home except as needed to provide supportive or clinical care. Others, including children, should stay somewhere else, if possible, or be separated within the home. Caregivers, visitors and household members treated as contacts. Be prepared to act immediately if any contacts report ILI symptoms. For persons reluctant to comply, arrange for law enforcement and courts to enforce order; alert legal department and arrange for needed court hearings. Make needed arrangements for any legally mandated isolation of case in hospital or other healthcare facility. Healthcare and public health workers with close exposure to a suspected case must protect themselves by following standard respiratory isolation precautions, to as great an extent as can be managed in the settings where the contact is occurring.

Contact definition (Phases 4/5/6): When deciding whether to call a person who has had face-to-face contact with an influenza case, an exposed person and, thus, a contact, the fact that the case or the potential contact was wearing a surgical mask, or was taking antiviral medications at the time of the interaction, does not change assessment of exposure. A healthcare worker who was wearing a properly fitted N-95 mask during the entire interaction with the source patient should be considered non-exposed. Participating in a respiratory treatment activity with the patient (e.g. suctioning, intubation, collecting a sputum specimen, respiratory therapy session) would constitute exposure, even if duration of exposure was less than 5 minutes. For cases in children in daycare centers or elementary schools, all children in the same classroom as the case, and all teachers for that class, would be considered exposed. For adolescents in middle and high schools, for Phases 4/5/6, contacts are defined as above – being in the same room (including a classroom) or face-to-face contact for 5 minutes or more, or kissing or similar intimate contact. For co-workers, the 5-minute definition applies.

Contact identification: Locate all contacts onsite and offsite for in-person interview. Identify all contacts who have had face-to-face contact with patient, starting 36 hours before symptom onset to present, or a minimum of four days post onset of illness (Phase 3 – household members and others in prolonged face-to-face contact with patient; Phase 4 and later – persons who have been in same room with patient or talking with patient face-to-face for five minutes or more).

Contact interviews: Get all locating information – home, school, work, e-mail, cell phone, pager, parents, someone who will know how to locate them. Obtain daily schedule (commuting, church, classes, lunch spots, hangouts, clubs, friend's house, exercise routine, etc).

Check-in with cases and contacts (Phases 4/5/6): Daily or twice-daily required check-in with public health authorities (phone, other) as to current status of case, family members, caretakers or contacts with household member, home visit by CHD staff member and/or telephone contact with hospital staff.

Ill contacts: If any contacts are already ill with an influenza-like illness (fever, headache, myalgias, cough, shortness of breath, etc), treat contact as another index case until proven by laboratory testing not to be a transmission case. Same for contacts who develop ILI while being monitored or quarantined.

Contact management (Phase 3): Inform all contacts of their exposure and risk, give them an instruction sheet and ask them for signature acknowledging receipt of instructions. Instructions will say person can follow usual routine, but to go home immediately, stay at home and contact CHD immediately if symptoms develop.

Contact management (Phase 4/5): Instruct people who meet contact criterion, verbally and in writing, over the signature of the CHD Director/administrator, to go home and self-quarantine there until 4 days have elapsed from their last contact, or until they become ill if that happens first. If they are unwilling to promise to completely self-quarantine, obtain as much information as possible about daily schedule. Inform all contacts of their exposure and risk, give them an instruction sheet requiring self-quarantine and ask them for a signature acknowledging receipt of instructions. Instructions will say to go home immediately and stay at home, and, if symptoms develop, to contact CHD immediately.

Contact management (Phase 6): People meeting the contact criterion will be formally ordered in writing, over the signature of the CHD Director/administrator, to go home and remain quarantined there until 4 days have elapsed from their last contact, or until they become ill if that happens first. For persons who are reluctant to comply, arrange for law enforcement and courts to enforce the order; alert the legal department and arrange for needed court hearings.

Antivirals for contacts: Arrange for all contacts to promptly initiate a single 10-day course of treatment with an antiviral to which the virus is believed to be currently susceptible. CHD protocols should specify how antivirals would get into the hands of contacts who are being quarantined, either voluntarily or by order. Healthcare, caretaker or family contacts with ongoing contact should take antiviral medication until four days after the case has recovered or 10 days after the case has recovered, whichever is longer.

VI. Outcomes of Protocol – Local Level

A. Training

All epidemiology and disease control staff from every CHD must have learned and been trained on their county's protocol to implement this aspect of the control of a dangerous contagious respiratory pathogen, such as a novel influenza strain, within 2 weeks of declaration by WHO that the world is in WHO Pandemic Phase 4. Regional trainings and exercises will be held for key staff from every CHD. These trainings will be repeated periodically, both to refresh existing staff's skills and to allow for staff turnover. More extensive training will be provided in bigger cities with international airports and seaports, and with more travelers.

Every CHD director will be trained on, and know how his/her CHD will carry out, this protocol, understand the CHD's role in this control effort and support staff time and resources to be spent on training and response.

B. Accessibility and Response

Within 15 minutes, every CHD, and the Department of Health central office, must be accessible by phone to physicians, hospitals, CHDs or others wanting to report a case of the novel influenza or obtain consultation, 24/7/365. Callers should be able to find the phone number for making a case report or seeking consultation in the telephone directory and directory assistance, and on the CHD's web site (if there is one).

In the setting of case and outbreak investigations, the CHD must also be similarly accessible to exposed or quarantined persons who need to report development of symptoms.

DOH central office must provide technical assistance and guidance to CHDs on how to consistently achieve the timeliness standard.

A core team to implement initial control measures must be able to assemble at the CHD or another location in the county (e.g., a doctor's office or hospital ED) within 60 minutes of notification to assemble. This capability must be tested and demonstrated in exercises. Local pandemic influenza plans must address how law enforcement and other first responder staff will be used in this effort.

C. Surveillance, case response and laboratory services

The goals of surveillance in these phases of pandemic are to document the presence of novel virus in the population, to promptly locate all individuals with new infection to take preventive action and to document presence or absence of person-to-person spread of this novel virus.

Once Phase 4 has been declared, each CHD must be able to actively ensure that every primary care physician in the county, every emergency department and every freestanding urgent care clinic knows what to report and how to do so 24/7. CHD staff must also actively ensure that the same information about surveillance and management of cases and contacts is conveyed to jail, prison, college, military, school and occupational health nurses and clinics operating in their jurisdiction.

CHD staff must be able to initiate activating the core response team within 15 minutes of receiving a high-suspicion case report.

The state Public Health Laboratory system must be prepared to handle potentially large volumes of tests for suspected cases of avian influenza as part of case-finding and containment strategies from all parts of the state in this early part of the pandemic.

CHD surveillance staff must also make contact with every laboratory in the community doing respiratory virus testing, to ensure they know they must call immediately if they get a request for testing for the novel strain of influenza or to receive a specimen for such testing.

CHD staff must be able to obtain needed diagnostic specimens from high-suspicion and moderate-suspicion cases within 30 minutes of arrival at the case's location and get them to the relevant branch of the state public health laboratory within six hours of obtaining the specimen.

D. Case management

All practicing physicians and healthcare facilities should know how to manage an ill person and others in office or healthcare settings (staff, family, patients in waiting area, other patients) while awaiting further instructions. DOH and its CHDs need to gain full cooperation of the organized medical profession and healthcare facilities to facilitate implementation of these measures. Implementation requires development of specific protocols by the Central Office, training CHD staff on those protocols, training key clinical responders (e.g. EMS, ED staff) on their roles in response strategy and developing/exercising a joint approach with local first responders.

All hospitals must have facilities and protocols (specified fully in other documents) in place to manage single cases of influenza or other serious communicable respiratory diseases needing respiratory isolation, and to manage their own employees and other persons who have been exposed as contacts. Every facility must have a plan for how to manage employees who are contacts and each CHD must know what those plans are and include them in its own pandemic influenza plan.

All hospitals must have open lines of communication with their CHDs for ready exchange of information about patients, suspects and contacts and their management.

For persons who are isolated or quarantined at home, families must be provided with clear guidelines on how to care for an ill family member while minimizing exposure of other family members, and when and how to seek medical care for a family member whose health is deteriorating.

E. Contact elicitation and management:

CHD staff with skills in partner elicitation and notification (e.g., from their work with STDs, tuberculosis, HIV or other communicable diseases) must be part of the core response team to enable rapid complete ascertainment of each new case's whereabouts, movements, exposures and contacts. The core team must have members trained in both interview skills and technology of contact tracing, including concepts of concentric circles and secondary contacts.

Clear protocols must be developed locally for how and by whom the needed prescriptions for antiviral medications for cases and contacts will be written, and how the medication will be dispensed, without delay, potentially to several dozen to several hundred people per case. Sending people to their private physicians is not considered a viable option.

A ready supply of antivirals must be available for use in both cases and contacts, at all locations where cases may occur. This supply should be under public health control to assure that all cases and contacts receive needed medication. Access to the supply can be an incentive for cases and their contacts to come forward.

Every CHD must know how to set up and staff a system to monitor contacts, and know how it will manage the information about the status of such contacts.

Every CHD must know how to invoke quarantine powers to isolate cases and quarantine or otherwise limit the movement of contacts – who has the authority, who has to be consulted, who is needed for enforcement, how enforcement would occur. It must know how it will manage the information about the status of persons isolated and quarantine on health department order or advice.

F. Support and management of quarantined persons

Every CHD must know how its community (through interagency collaboration managed through its EOC) will provide needed support to numerous households containing isolated and/or quarantined people – food, other necessary supplies, communication, childcare, elder care, etc

Every CHD must know what the terms of various levels of quarantine are, why they are justified and how to encourage or require compliance; when and how movement of quarantined persons is allowed, movement of other household members, visitors to household, access to medical care and advice, etc.

VII. Estimated Antivirals for Case-based Containment Protocol

This section estimates the total amount of Oseltamivir needed to carry out this protocol.

As described above, early in an influenza pandemic situation – in Phases 3, 4 and 5, and as we move from Phase 5 into Phase 6 – we would be attempting to stop a series of local outbreaks of influenza due to importations of a novel virus from outside our state, or even between areas within the state. We will use case identification, case isolation, contact identification, contact quarantine (of graded intensity according to the situation) and antiviral medications in a coordinated case-based control effort.

At some point, this effort will no longer be productive because there are too many such events to stay on top of and/or our surveillance system simply can't detect all the individual cases. For this analysis, assume that the maximum number of these outbreak control efforts, around individual cases, that we would carry out would be 200. Further, assume that, on average, for each index case we miss one contact who develops clinical influenza and exposes others, in spite of our control efforts.

We, thus, have 400 individual people who need and would benefit from treatment for influenza to reduce their infectiousness. For each of these 400 people, let us further assume that we have, on average:

- 5 family contacts who need antiviral prophylaxis (along with quarantine, etc. PRN)
- 25 school, neighborhood, waiting room or work contacts who need antiviral prophylaxis (along with quarantine, etc. PRN)
- 10 healthcare worker contacts who need antiviral prophylaxis (along with quarantine, etc. PRN)

If we follow WHO recommendations, each case or contact requires 10 doses: five days of two doses per day for cases, and 10 days of one dose per day for contacts. With 40 persons needing prophylaxis per case, or a total of $40 * 400$ or 16,000 identified persons needing prophylaxis, along with 400 5-day courses of medication. Total need would be for 16,400 courses of medication, or 164,000 doses.

200 such mini-outbreak-control measures is a reasonable estimate, but the actual number would more likely be lower than higher.

Further Development: Procedures and forms are under development for contact elicitation, contact interviews, checking in with cases and contacts, what to do with an ill contact, contact management Phase 3, 4, 5 and early 6 and antiviral for contacts.



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 8
Community-based Control and Mitigation Interventions

October 2006

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I. Purpose

During Phase 6B, interventions will be needed to control and mitigate an influenza pandemic when individual case-based interventions have been overwhelmed and before an effective vaccine is available in quantity. These interventions include both community containment and interventions to prevent people with disease from infecting others and to protect those who are or may be exposed.

These interventions include voluntary isolation of cases and quarantine of contacts, and reducing community-wide interactions through restriction or limitation of public events, large gatherings, interactions or other activities (including seeking care in medical facilities). These restrictions limit social interaction across an entire community as a means of lessening the likelihood that unwitting carriers of disease will come into contact with healthy individuals and infect them. In addition, this plan calls for the extensive use of antiviral medications to reduce transmission by assuring that all infected persons are promptly treated with antiviral medications, and that prophylactic antiviral medications are promptly provided to their contacts.

A separate appendix (Appendix 7) deals with Phase 6A, during which the mainstays of our case-based interventions are identification of contacts, voluntary and mandated isolation of cases and quarantine of identified contacts or groups of contacts as well as antiviral treatment of cases and prophylaxis of contacts.

II. Objectives

DOH overall goals are to assure that the sick get treated, infections are prevented and social and economic impact are minimized (Florida Strategy for Pandemic Influenza, November, 2005). From a disease control point of view, we attempt to ensure that:

- A. Those who are ill do not infect others.
- B. Those who are infected do not get ill.
- C. Those who are not infected do not become infected.

These three objectives each support the others. Measures to support the first objective include treating those who are ill and isolating those who are infectious. Measures to support the second objective include providing antivirals to those who have been exposed. Measures to support the third objective include providing those who are well with protection from infection, via barrier methods or social distancing.

III. Strategies

- A. Once a decision has been made to shift from case-based to community-based control measures, a series of decision criteria are needed for

implementation of various components of the overall strategy described in this document. These decision criteria are still under development. Guidance will be provided to CHDs and their community partners for them to use in making these decisions.

- B. Decision-making will describe a process indicating (1) what information is needed, (2) who the players are, and (3) the scope of authority for decision-makers.
- C. Partnership entities involved in the process include: ESF8, Law enforcement, first responders, other government service workers, utilities, transportation industry, local businesses, schools and school boards.

Currently, there are inadequate resources needed to successfully accomplish the overall objective of this plan.

IV. Threshold Determinants for Use of Community Containment Interventions

A. Potential parameters to consider include (HHS):

- Cases and contacts
- Healthcare resources
- Public health resources
- Community cooperation
- Mobility
- Compliance

Data on cases and contacts — as well as on depletion of healthcare and public health resources over the course of a pandemic — can help state and local health authorities decide when to implement community-level containment interventions. As part of preparedness planning, state and local health agencies and healthcare partners may estimate at what point in the pandemic — in terms of such variables as numbers of cases and numbers of unoccupied hospital beds — more extensive interventions may be imposed. During a pandemic, state and local health departments should evaluate social considerations, such as levels of community cooperation and mobility. Interventions that affect whole communities should be considered when:

- There is moderate to extensive disease transmission in the area.
- Many cases cannot be traced to contact with an earlier case or known exposure.
- Cases are increasing among contacts of influenza patients.
- There is a significant delay between the onset of symptoms and the isolation of cases because of the large number of ill persons.

Potential parameters	Variable
Cases and contacts	Number of cases (absolute or estimated) Rate of incident cases Number of hospitalized cases Number and percentage of cases with no identified epidemiologic link Morbidity (including disease severity) and mortality Number of contacts under surveillance and/or quarantine
Healthcare resources	Staff resources Availability of specifically trained specialists and ancillary staff members Availability of personal protective equipment and other interventions Availability of therapeutic medications (influenza and non-influenza specific)
Public health resources	Investigator to case and contact ratios Number of contacts under active surveillance Number of contacts under quarantine Ability to rapidly trace contacts (number of untraced/interviewed contacts) Ability to implement and monitor quarantine (staff member to contact ratio) Ability to provide essential services (food, water, etc.)
Community cooperation, mobility and compliance	Degree of compliance with voluntary individual isolation Degree of compliance with active surveillance and voluntary individual quarantine Degree of movement out of the community Degree of compliance with community-containment interventions

V. Community-Based Disease Control and Mitigation Interventions

A. Situation Status Conditions to recommend a transition from case-based to community-based interventions

- The spread of the disease is no longer limited to known chains of transmission, but instead it has evolved into “community transmission” where not all contacts can be traced.
- There are not enough personnel available to perform contact tracing.
- Mass gatherings pose a risk of furthering the spread of the disease.
- Transportation poses a risk for spread of the disease within and between communities.

B. Categories of interventions

Interventions during Phase 6B will be chosen from the list that follows. Priorities for use of antiviral medications are described in a separate appendix. If antiviral medications are in short supply, the interventions below that require use of antivirals will be undertaken in a manner consistent with those priorities. If the virus responsible for the outbreak is resistant to the available antivirals, then none of the interventions that require antivirals will be possible and the remaining interventions will necessarily receive relatively more emphasis.

Note that these interventions cannot be carried out by CHD staff acting alone. The main role of public health organizations during this phase of the response will be twofold: 1) to assure that clear messages are received by all citizens and 2) to build and maintain public support for the needed interventions.

The most difficult of these recommended strategies are 1a (below) and 2b (next page) – assuring that all persons ill with the novel virus get a prompt course of therapeutic antiviral medication and that all their contacts get a prompt course of prophylactic antiviral medication. This intervention is likely to be very effective in reducing community spread if carried out completely and in concert with the other recommended interventions. Achieving this goal without also providing medication to a large number of persons who are not candidates for it will require numerous entities within each community to work closely and creatively together.

C. Assuring that persons who are ill have the smallest possible opportunity to infect others

- Provide a full course of antiviral medication, starting within 24 hours of symptom onset for all persons sick with influenza-like illness, as part of the best feasible management of their illness.
- Implement strong infection-interventions in healthcare facilities and alternate medical treatment sites where sick infected people

who need medical care are managed, including management of patient flow in waiting and treatment areas.

- Encourage and support home management of ill persons, keeping ill persons out of healthcare facilities and medical offices, if at all possible.
- Strongly build and support the social expectation that persons ill with respiratory symptoms will NOT expose others by going to work, school, retail stores, church, etc, but will strictly self-isolate at home.
- Strongly build and support the social expectation that persons who become ill while away from home will put on a surgical mask and/or any other prescribed interventions and proceed directly home or, if needed, to a healthcare facility.
- Provide practical advice and directions for complete self-isolation at home of ill and convalescent cases to reduce transmission to caregivers and breaches of isolation.
- Provide community support for persons who are isolated at home while ill and convalescing, in terms of food, medicines, and other needed supplies to reduce chances that they will break out of isolation.
- Identify and support organizational policies that support workers and students for staying home while ill, or staying home with an ill family member (sick leave, unemployment compensation, extensions on school deadlines, support for work from home, etc).
- Implement strategies to detect and exclude persons with influenza-like illness in daycare centers, schools, workplaces, colleges, etc.

D. Assuring that persons who have been potentially exposed to infection have the smallest possible chance of developing disease

- Recommend barriers and other personal protective interventions (e.g. masks, respirators) to all whose essential occupation puts them at increased risk for exposure and infection (e.g., healthcare workers, public safety workers, teachers, transit drivers, food store workers).
- Provide ready access to ongoing prophylactic antiviral medications for healthcare workers, EMS workers, public health workers, agricultural and veterinary workers and other first responders who can be presumed to be exposed repeatedly.
- Provide prophylactic antiviral medications within 24 hours for all family members and other caretakers of cases who are being managed at home and other close contacts of cases (see also item 4 below).
- Targeted Antiviral Prophylaxis
 - Provide antiviral prophylaxis promptly for all children in same classroom as a case (daycare, elementary school), or who have attended classes with a case (middle/high school, university).

- Provide antiviral prophylaxis promptly for all members of a case's work group who have regular face-to-face contact with a case, with goal of 5 to 30 contacts per case.

E. Assuring those not infected or identifiably exposed do not become infected

- Recommend temporary social changes that result in greatly reduced face-to-face interactions throughout community, e.g., at school, church, retail stores, sporting events, entertainment events, etc.
 - Cancel, postpone or find alternatives to a very wide range of non-essential activities – such as amateur, school and professional sporting events, plays, movies, church services, concerts, many kinds of work – for a period lasting up to 8 weeks in any one locality.
 - For schools, daycare centers and universities, implement a graded response including strict exclusion, targeted antiviral prophylaxis, reactive closure (when there is a case in a school) and, finally, community-wide closure. Effectiveness of school closures in interrupting disease transmission is not known with certainty.
 - Close theme parks, ocean cruises and other tourist attractions as part of this same strategy. (Closure may occur voluntarily because of reduced attendance.)
- Encourage social support for individual protective behavior changes – cough etiquette, hand-mouth-eye hygiene, reduced physical contact and greater physical distance, mask use in public settings (if supported by scientific data or authoritative recommendations).
- Support employers and employees in maximizing proportion of those who can work from home in doing so.

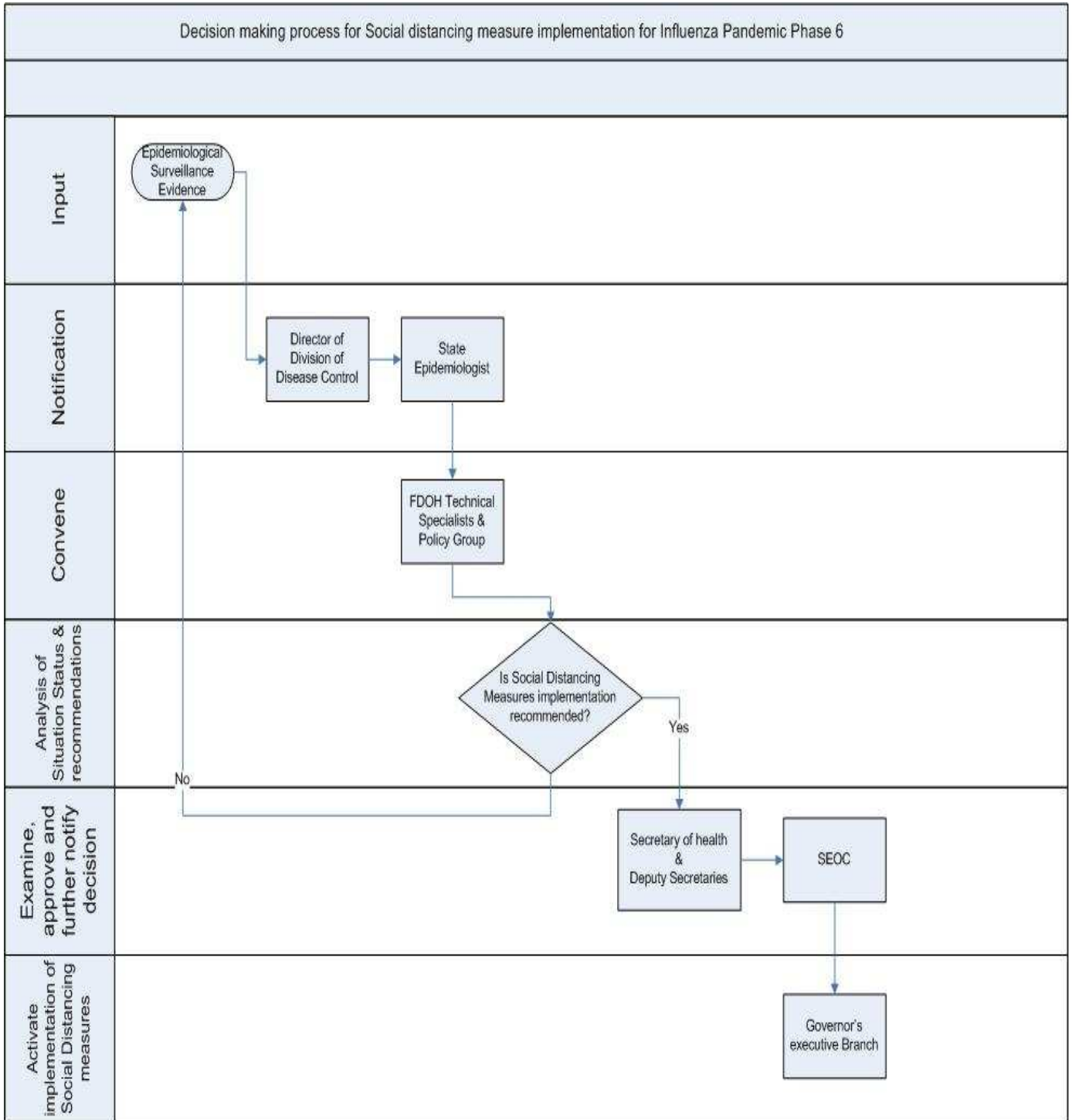
F. Scaling back community containment interventions

- The decision to discontinue community-level interventions must balance need to lift individual movement restrictions against community health and safety. Premature removal of containment strategies can increase risk of additional transmission. Decisions should be based on evidence of improving local/regional control, such as:
 - Consistent decrease in number of confirmed cases.
 - Reduction in the number of probable and known cases.
 - Effective protective counter interventions are in place (e.g., high coverage with a pandemic influenza vaccine).
 - Widespread availability of vaccine to protect individuals against infection.
- General recommendations are to withdraw the most stringent or disruptive interventions first (e.g., widespread community quarantine, snow days, mass transit interruptions).

VI. Decision Making Process for Social Distancing Measure Implementation

The following flowchart illustrates the decision-making for social distancing implementation during Phase 6B.

INFLUENZA PANDEMIC PHASE 6B





Pandemic Influenza Annex
Emergency Operations Plan

Appendix 9
Monitoring, Isolation and Quarantine Protocols

October 2006

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I. Purpose

To provide a method to limit the spread and reduce the mortality/morbidity in communities in the early stages of an influenza pandemic (Phases 3, 4 and 5, and the early part of Phase 6). Containing the virus is the ultimate goal; however, the use of voluntary and mandatory monitoring, isolation and quarantine can limit viral transmission and reduce the number of cases that occur before a vaccine becomes available.

II. Policy Statement

The Florida Department of Health *Annex V: Isolation and Quarantine of the Emergency Operations Plan*, dated 2004, is the overall guidance for use of these strategies as mandatory interventions for containment of diseases. The annex, outlining procedures to be used during a pandemic to implement legally mandated isolation and quarantine, can be found at <http://dohiws.doh.state.fl.us/Divisions/DEMO/PHP/PDFS/Rev-AnnexV.pdf>.

This appendix to the Pandemic Influenza Annex provides detail specific to an influenza pandemic and Florida's approach to use of monitoring, isolation and quarantine in such a situation, including a wide variety of voluntary measures that have many features in common with legally mandated isolation and quarantine.

The U.S. Department of Health and Human Services has provided extensive guidance on use of monitoring, isolation and quarantine in a pandemic influenza situation, contained in Supplement 8 – Community Disease Control and Prevention – to the HHS Pandemic Influenza Plan of November 2005 (<http://www.hhs.gov/pandemicflu/plan/sup8.html>).

III. Triggers for action

The triggers for implementation of the case-based monitoring, isolation and quarantine procedures described in this document are declarations by the WHO and the U.S. Centers for Disease Control that the world, as a whole, or the US, are in Phases 3, 4, 5 or 6 of an influenza pandemic.

The transition from case-based to community-based control measures will be based on triggers described in Pandemic Influenza Appendix 8. Generally, the transition will occur when the number of cases and contacts exceeds the capacity of the public health system to respond on a case-by-case basis.

IV. Uses of monitoring, isolation and quarantine during case-based and community-based control measure implementation

Case-based control: Uses of monitoring, isolation and quarantine

The interventions named “isolation” and “quarantine,” as well as monitoring, will be implemented very differently at different phases of the epidemic. Table 1 below, a shorter version of a table in the Appendix on Case-based Containment, describes how case isolation and contact quarantine will be used during the early phases of a

pandemic, including the beginning of Phase 6. These measures will be implemented under the leadership of county health departments, with the cooperation and support of other components of their local EOC. The use of monitoring, isolation and quarantine is different, depending on the phase of the epidemic, becoming more stringent as the risk of widespread case from each case goes up later in the course of the pandemic.

Following the table are definitions and instructions for implementing monitoring, isolation and quarantine in Florida. More detail on the overall control strategy, including use of Antivirals, identification of contacts, etc., can be found in Appendix 8 Case-based Control Measures.

See HHS descriptions, in addendum to this document, of Passive Monitoring, Active Monitoring without Activity Restriction and Active Monitoring with Activity Restriction (Quarantine).

Implementation of legally mandated isolation and quarantine orders will require close partnerships and cooperation with law enforcement at the local and state levels. Federal law enforcement resources, including the National Guard, may also be available in some situations.

Table 1	Phase 3	Phase 4/5	Phase 6
Management of case	Isolate in healthcare facility if in need of health care (Active Monitoring without Activity Restriction)	Formal isolation order for case in hospital if in need of health care (Active Monitoring with Activity Restriction)	Formal isolation order for case in hospital if in need of health care (Active Monitoring with Activity Restriction)
	Self-isolate at home otherwise	Order formal isolation for case at home otherwise	Order formal isolation for case at home otherwise
	CHD checks on case location and status daily	CHD checks on patient location and status daily	CHD checks on patient location and status twice daily
Management of contacts	Locate all contacts, on and off site	Locate all contacts, on and off site	Locate all contacts, on and off site
	No activity restrictions for contacts (Passive Monitoring)	Immediate self-quarantine of all contacts to home. (Active Monitoring without required Activity Restriction)	Formal quarantine order for all contacts, to stay home or in designated location (Active Monitoring with Activity Restriction)
	Instruct contacts to contact CHD immediately if symptoms develop	Instruct contacts to contact CHD immediately if symptoms develop	Instruct contacts to contact CHD immediately if symptoms develop
		CHD checks on location and status of all contacts daily	CHD checks on location and status of all contacts twice daily

a. Explanations of terms

Self-isolation of case at home (Phase 3): Case agrees to stay in home until symptoms resolve. No visitors allowed in home except as needed to provide supportive or clinical care. Others, including children, should stay elsewhere, if possible, or be separated within home. Caretakers, visitors and household members managed as contacts.

Cases isolated in hospital: Make sure that, for any hospitalized cases, hospitals are aware of, and are following, recommended infection-control practices.

Case management (Phase 4/5/6): Order isolation of case with formal DOH quarantine order. No visitors allowed in home except as needed to provide supportive or clinical care. Others, including children, should stay elsewhere, if possible, or be separated within home. Caregivers, visitors and household members treated as contacts. Be prepared to act immediately if any contacts report ILI symptoms. For persons reluctant to comply, arrange for law enforcement and courts to enforce order, alert legal department and arrange for needed court hearings. Make needed arrangements for any legally mandated isolation of case in hospital or other healthcare facility. Healthcare and public health workers with close exposure to suspected case must protect themselves by following standard respiratory isolation precautions to as great an extent as can be managed in settings where contact is occurring.

Check-in with cases and contacts (Phases 4/5/6): Daily or twice-daily required check-in with public health authorities as to current status of case, family members, caretakers or contacts can occur by telephone contact with household member, home visit by CHD staff member and/or telephone contact with hospital staff.

Ill contacts: If any contacts are already ill with an influenza-like illness (fever, headache, myalgias, cough, shortness of breath, etc), treat contact as another index case until proved not to be transmission case by laboratory testing. Same for contacts who develop ILI while being monitored or quarantined.

Contact management (Phase 3): Inform all contacts of their exposure and risk, give them an instruction sheet and ask for signature acknowledging receipt of instructions. Instructions will say people can follow usual routine, but to immediately go home and stay home, and to contact CHD, if they become ill.

Contact management (Phase 4/5): Instruct people meeting the contact criterion, verbally and in writing, over signature of the CHD Director/administrator, to go home and self-quarantine at home until 4 days have elapsed from their last contact, or until they become ill if that happens first. If they are unwilling to promise to completely self-quarantine, obtain as much information as possible about daily schedule. Inform all contacts of exposure and risk, give them an instruction sheet requiring self-quarantine and ask for signature acknowledging receipt of instructions. Instructions will say people can follow usual routine, but to immediately go home and stay home, and to contact CHD, if they become ill.

Contact management (Phase 6): People meeting contact criterion will be formally ordered in writing, over signature of the CHD Director/administrator, to go home and remain quarantined at home until 4 days have elapsed from their last contact, or until they become ill if that happens first. For persons who are reluctant to comply, arrange for law enforcement and courts to enforce the order, alert legal department and arrange for needed court hearings.

Follow-up of persons who cannot be reached by telephone. Protocols should include a threshold period for non-responsiveness that should trigger a home visit or other means to locate the person. Partnerships with law enforcement and other community-based resources will be helpful in tracing the whereabouts of persons who have violated restrictions.

Persons who cannot or will not comply with voluntary home quarantine.

Alternative arrangements might include:

- Issuing official, legally binding quarantine orders.
- Posting a guard outside the home.
- Using electronic forms of monitoring.
- Using guarded facilities.

Isolation and Quarantine as part of Community-Based Control Measures.

As the pandemic continues and grows in Phase 6, the number of importations of disease into Florida will get larger and there will be more and more spread within the state from unrecognized cases, contacts who are not identified and located,

etc. As it becomes clear case-based containment, led by county health department staff, is no longer effective or feasible, we will transition into Community-based Control approach. In this approach, it is still critical for disease control that individual cases be isolated and their contacts (as far as possible) stay home. These measures, however, will be exclusively voluntary and self-directed, and will be only one part of an overall strategy to reduce face-to-face interactions so that transmission of the virus can be reduced. Strategies from Appendix Community-based Control Measures that support isolation, self-isolation and self-quarantine as control measures are reproduced here:

- Implement strong infection-control measures in healthcare facilities and alternate treatment sites where sick infected people who need medical care are managed, including management of patient flow in waiting and treatment areas.
- Encourage and support home management of ill persons, keeping ill persons out of healthcare facilities and medical offices if at all possible.
- Strongly build and support the social expectation that persons ill with respiratory symptoms will NOT expose others by going to work, school, retail stores, church, etc, but will strictly self-isolate at home.
- Strongly build and support the social expectation that persons who become ill while away from home will wear a surgical mask and/or any other prescribed control measures, and proceed directly home or, if needed, to a healthcare facility.
- Provide practical advice and directions for complete self-isolation at home of ill and convalescent cases to reduce transmission to caregivers and breaches of isolation.
- Provide community support for persons who are isolated at home while ill and convalescing, in terms of food, medicines and other needed supplies, to reduce chances that they will break out of isolation.
- Identify and support organizational policies that support workers and students for staying home while ill, or staying home with an ill family member (sick leave, unemployment compensation, extensions on school deadlines, support for work from home, etc).
- Develop practical measures in day-cares, schools, workplaces, colleges, etc. to immediately detect and exclude persons ill with influenza-like illness (e.g., separate such children or workers from others until someone can take them home, take people's temperatures as they arrive for work or school and not allow entry if temperature is elevated or person is symptomatic).

V. Background material related to Isolation and Quarantine

- A.** For related background information, refer to the Florida Department of Health Annex V: Isolation and Quarantine Annex (<http://dohiws.doh.state.fl.us/Divisions/DEMO/PHP/PDFS/Rev-AnnexV.pdf>) pages 14 (Containment Measures: Terms and Definitions); Appendix 1 (Interventions for Community Containment), Appendix 9 (Recommendations for Quarantine) and Appendix 5 (Evaluation of Homes and Facilities for Isolation and Quarantine). Appendix 2 (Preparedness Checklist for

Community Containment Measures) outlines issues which should be addressed by CHDs as they develop their community containment plans.

- B.** Infection control precautions and procedures for isolating influenza patients—at home or in a residence, community facility or hospital—are described in HHS Supplement 4. HHS Supplement 4, Infection Control outlines infection control procedures for healthcare settings that include nursing homes and other residential facilities and outpatient services. This plan is located at <http://www.hhs.gov/pandemicflu/plan/sup4.html>. Highlights of the supplement are:
- Supplement 4 provides guidance to healthcare and public health partners on basic principles of infection control for limiting spread of pandemic influenza. These principles are common to prevention of other infectious agents spread by respiratory droplets. Guidance also covers infection control practices related to management of infectious patients, protection of persons at high-risk for severe influenza or its complications and issues concerning occupational health.
 - Supplement 4 also provides guidance on how to adapt infection control practices in specific healthcare settings, including hospitals, nursing homes and other long-term care facilities, pre-hospital care, medical offices and other ambulatory care settings, and during the provision of professional home healthcare services. The section on hospital care covers detection of entering patients who may be infected with pandemic influenza, implementation of source-control measures to limit virus dissemination from respiratory secretions, hospitalization of pandemic influenza patients and detection and control of nosocomial transmission.
 - In addition, Supplement 4 includes guidance on infection control procedures for pandemic influenza patients in the home or alternative care sites that may be established if local hospital capacity is overwhelmed by a pandemic. Finally, it includes recommendations on infection control in schools, workplaces and community settings.

C. Modern Quarantine

Modern quarantine encompasses a range of disease-containment strategies. Many are described in more detail in other Appendices, including the Appendix 8 Community-based Control Measures. The entire range may include:

- Short-term, voluntary home-curfew.
- Restrictions on assembly of groups of people (e.g., school events).
- Cancellation of public events.
- Suspension of public gatherings and closings of public places (e.g., theaters).
- Restrictions on travel (air, rail, water, motor vehicle, pedestrian).
- Closure of mass transit systems.
- Snow days.

- “Cordon sanitaire” (guarded barrier restricting passage in/out of an area).

Modern quarantine is used in combination with other interventions and public health tools, including:

- Enhanced disease surveillance and symptom monitoring.
- Rapid diagnosis and treatment for those who fall ill.
- Preventive interventions for quarantined individuals, including vaccination or prophylactic treatment, depending on the disease.

Quarantined individuals should be sheltered, fed, and cared for under the supervision of trained healthcare professionals. They should also be among the first to receive all available medical interventions to prevent and control disease, including:

- Vaccination (e.g., in the case of smallpox).
- Antibiotics (e.g., in the case of plague).
- Early and rapid diagnostic testing and symptom monitoring.
- Early treatment if symptoms appear.

Quarantined people may be cared for at home, in a designated emergency facility, or in a specialized hospital, depending on the disease and the available resources.

An important principle is that modern quarantine lasts only as long as necessary to protect the public by providing public health interventions (e.g., immunization or drug treatment, as required) and ensuring that quarantined persons do not become ill or infect others.

Modern quarantine does not have to be absolute to be effective. Modeling exercises suggest that partial quarantine can be effective in slowing the rate of smallpox spread, especially when combined with vaccination. The goal is to reduce the reproductive rate (the number of secondary cases from an index case) to < 1 to extinguish an epidemic.

Modern quarantine is more likely to involve limited numbers of exposed persons in small area than to involve large numbers of persons in whole neighborhoods or cities. The small areas may be thought of as “boxes” or “concentric circles” drawn around individual disease cases. Logistical issues will vary in each case, depending on size and location of boxes.

Examples of “boxes” include:

- People on an airplane or cruise ship on which a passenger is ill with a suspected quarantinable disease.
- People who have contact with a contagion-infected person whose source of disease exposure is unknown.

Implementation of modern quarantine requires a clear understanding of public health roles at the local, state, and federal levels, based on well-understood legal authorities at each level.

Implementation of modern quarantine requires coordinated preparedness planning by many public and private response partners, including agencies and groups involved in public health, healthcare, transportation, emergency response, law enforcement, and security.

Implementation of modern quarantine requires trust and participation of the general public, who must be informed about dangers of quarantinable diseases *before* an outbreak occurs and during an actual event.

VI. HHS descriptions of Interventions for Community Containment

Contacts of pandemic influenza patients can be managed by use of a range of interventions, all of which are designed to facilitate early recognition of illness in persons at greatest risk of becoming infected and, thereby, prevent transmission to others.

Whereas many of these interventions are applied individually to persons identified as contacts of a person with possible or known influenza disease, others are applied to larger groups of persons or communities that share a similar risk of exposure.

Measures applied to individuals may not be feasible during the Pandemic Period, when quarantining individuals and tracing close contacts may not be possible. Range of intervention includes the following:

A. Passive Monitoring

<i>Definition</i>	The contact is asked to perform self-assessment at least twice daily and to contact authorities immediately if respiratory symptoms and/or fever occur.
<i>Application</i>	Situations in which 1) the risk of exposure and subsequent development of disease is low, and 2) the risk to others if recognition of disease is delayed is also low
<i>Benefits</i>	Requires minimal resources Places few constraints on individual movement
<i>Challenges</i>	Relies on self-reporting Affected persons may not perform an adequate self-assessment
<i>Resources Required</i>	Supplies (thermometer; symptom log; written instructions) Hotline to notify authorities about symptoms or needs Staff to receive telephone reports and provide in-person evaluation and care Plans and procedures for rapid isolation of persons who develop symptoms
<i>Partners</i>	Household members
<i>Forms/Templates</i>	Symptom logs Instructions for patients and healthcare workers

B. Active Monitoring without Explicit Activity Restrictions

<i>Definition</i>	A healthcare or public health worker evaluates the contact on a regular (at least daily) basis by phone and/or in person for signs and symptoms suggestive of influenza
<i>Application</i>	Situations in which 1) the risk of exposure to and subsequent development of disease is moderate to high, 2) resources permit close observation of individuals, and 3) the risk of delayed recognition of symptoms is low to moderate
<i>Benefits</i>	Places few constraints on individual liberties

<i>Challenges</i>	Requires adequate staffing Requires a system to track information and to verify monitoring and appropriate actions based on findings
<i>Resources Required</i>	Trained staff to provide in-person and/or telephone evaluations Plans and procedures for rapid isolation of persons who develop symptoms Contingency plans for managing noncompliant persons Hotline to notify authorities about symptoms or needs
<i>Partners</i>	Professional and lay healthcare workers to perform evaluations on behalf of the health department. Possible need for law enforcement to assist with management of noncompliant persons
<i>Forms/Templates</i>	Checklist for assessment of active monitoring Template for recording results of clinical evaluation

C. Active Monitoring with Activity Restrictions (Quarantine)

<i>Definition</i>	The contact remains separated from others for a specified period (up to 10 days after potential exposure), during which s/he is assessed on a regular basis (in person at least once daily) for signs and symptoms of influenza disease. Persons with fever, respiratory, or other early influenza symptoms require immediate evaluation by a trained healthcare provider. Restrictions may be voluntary or legally mandated; confinement may be at home or in an appropriate facility. No specific precautions are required for those sharing the household with a person in quarantine as long as the person remains asymptomatic. Because onset of symptoms may be insidious, it may be prudent to minimize interactions with household members during the period of quarantine, if feasible
<i>Application</i>	Situations in which the risk of exposure and subsequent development of disease is high and the risk of delayed recognition of symptoms is moderate
<i>Benefits</i>	Reduces risk of spread from persons with subacute or subclinical presentations or from delayed recognition of symptoms
<i>Challenges</i>	May infringe on personal movement May lead to a feeling of isolation from family and friends May lead to loss of income or employment Requires plans/protocols for provision of essential services Requires plan for provision of mental health support Risk of noncompliance, particularly as duration increases May require enforcement for noncompliance
<i>Resources Required</i>	Staff for monitoring and evaluation Appropriate facility if home setting is unavailable or inadequate Staff, funding, and goods for provision of essential services Hotline for notification of symptoms or personal needs Mechanisms to communicate with family members outside the household or facility Mental health and social support services Delivery systems for food and other essential supplies
<i>Partners</i>	Professional and lay healthcare workers to perform assessments on behalf of the health department Community volunteers/workers to assist with provision of essential services Potential need for law enforcement to assist with noncompliant persons
<i>Forms/Templates</i>	Checklist for active monitoring Template for recording results of clinical evaluation Checklist and guidelines for evaluation of homes for quarantine Checklist and guidelines for evaluation of community-based sites for quarantine Guidelines for monitoring compliance with home quarantine

Guidelines for monitoring compliance with quarantine in community-based facilities
Forms for recording compliance with quarantine

Examples Home quarantine (voluntary or mandatory)
Facility quarantine (voluntary or mandatory)

D. Working Quarantine

<i>Definition</i>	Employees are permitted to work, but they must observe activity restrictions while off duty. Monitoring for influenza-like illness before reporting for work is usually required. This may change based on the clinical presentation of the pandemic strain. Use of appropriate PPE while at work is required (see Supplement 4)
<i>Application</i>	Persons for whom activity restrictions (home or facility quarantine) are indicated but who provide essential services (e.g., healthcare workers)
<i>Benefits</i>	Reduces risk of community spread from high-risk contacts while minimizing adverse impact of activity restrictions on provision of essential services Clinical monitoring at work reduces the staff required for active monitoring at the quarantine site
<i>Challenges</i>	Need for close and consistent pre-shift monitoring at the work site to prevent inadvertent exposures May require means of transporting persons to and from work site to minimize interactions; persons in working quarantine should wear appropriate PPE during transport. (See Supplement 4) Must maintain close cooperation and communication between work site and local health authorities Need to provide mental health services to address concerns about isolation from family and friends
<i>Resources Required</i>	Appropriate facility for off-duty quarantine if home is unavailable or inadequate Staff, funding, and goods for provision of essential services Personal protective equipment (see Supplement 4) Hotline for notification of symptoms and personal needs System to track results of work-site monitoring and location(s) of off-duty quarantine Mental health, psychological, and behavioral support services, especially if work includes care of influenza patients
<i>Partners</i>	Work-site administrators and infection control personnel Community volunteers/workers Staff/volunteers to assist with transportation to and from work Mental health professionals Potential need for law enforcement to assist with noncompliant persons
<i>Forms/Templates</i>	Guidelines and instructions for persons in working quarantine Instructions for supervisors of persons in working quarantine Checklist to evaluate homes for quarantine Guidelines for monitoring compliance Checklist for active monitoring at work site Template for recording results of clinical evaluation Forms for recording compliance

The HHS Plan's Supplement 8 also contains important sections about mental health needs of those persons subject to isolation or quarantine, and about needs of special populations such as separated family members, critical workers whose children need childcare, homeless persons, the elderly, disabled and/or immobile, blind and deaf

populations, people in prisons and foreign groups (including diplomats), various ethnic groups within the U.S., and religious groups.

The HHS plan also contains an important section on preparing and building support for enforcement of community containment measures.

D. Preparedness Checklist for Community Containment Measures (from HHS)

a. General

- Establish an incident command structure that can be used for influenza response.
- Establish a legal preparedness plan.
- Establish relationships with partners, such as law enforcement, first responders, healthcare facilities, mental health professionals, local businesses and the legal community.
- Plan to monitor and assess factors that will determine types and levels of response, including epidemiologic profile of the outbreak, available local resources and level of public acceptance and participation.
- Develop communication strategies for the public, government decision-makers, healthcare and emergency response workers, mental health professionals and the law enforcement community.
- Invite key partners to participate in pandemic influenza containment exercises and drills.
- Plan to ensure provision of essential services and supplies to persons in isolation and quarantine, keeping in mind special needs of children. Services and supplies include:
 - Food and water.
 - Shelter.
 - Medicines and medical consultations.
 - Mental health and psychological support services.
 - Other supportive services (e.g., daycare or elder care).
 - Transportation to medical treatment, if required.
- Plan to address issues of financial support, job security, and prevention of stigmatization.
- Establish procedures for medical evaluation and isolation of quarantined persons who exhibit signs of illness.
- Develop protocols for monitoring and enforcing quarantine measures, such as:
 - Protocols for follow-up of persons who cannot be reached by telephone, which may include a threshold period for non-responsiveness that should trigger a home visit or other means to locate the person. Partnerships with law enforcement and other community-based resources will be helpful in tracing whereabouts of persons who have violated restrictions.
 - Protocols for monitoring persons who cannot or will not comply with voluntary home quarantine. These may include:
 - Issuing official, legally binding quarantine orders.
 - Posting a guard outside the home.

- Using electronic forms of monitoring.
- Using guarded facilities.
- Protocols for using checkpoints to restrict travel between neighborhoods.

b. Temporary emergency facilities for patient isolation quarantine, and assessment of patients with fever

- Identify appropriate community-based facilities for isolation of patients who have no substantial healthcare requirements.
- Develop policies related to use of these facilities.
- Identify facilities for persons for whom home isolation is indicated but who do not have access to an appropriate home setting, such as travelers and homeless populations.
- Ensure that required procedures for assessment of potential isolation or quarantine sites are available and up to date.
- Identify potential quarantine facilities and prepare contingency plans for staffing and equipping them.
- Identify potential sites for fever clinics and prepare contingency plans for staffing and equipping them, including the ability to dispense antiviral drugs to identified cases in the priority groups.

c. Community containment measures

- Ensure that legal authorities and procedures are in place to implement the various levels of movement restrictions, as necessary.
- Establish procedures for medical evaluation and isolation of quarantined persons who exhibit signs of illness. (Additional information on medical evaluation is provided in Supplement 5.)
- Develop tools and mechanisms to prevent stigmatization and provide mental health services to persons in isolation or quarantine.
- Identify key partners and personnel for the implementation of movement restrictions, including quarantine and the provision of essential services and supplies:
 - Law enforcement
 - First responders
 - Other government service workers
 - Utilities
 - Transportation industry
 - Local businesses
 - Schools and school boards

d. Establish procedures for delivering medical care, food and services to persons in isolation or quarantine. Examples of services that will require the help of non-traditional partners include:

- Training for responders and healthcare workers, as necessary, in use of personal protective equipment.
- Plans for the mobilization and deployment of public health and other community-service personnel.

e. Management of cases and contacts (including quarantine)

- Develop protocols, tools and databases for management of cases and contacts, considering account security and privacy concerns. These may include protocols for:
 - Case surveillance.
 - Clinical evaluation and management.
 - Contact tracing, monitoring, and management.
 - Reporting criteria.
- Develop standards and tools for home and non-hospital isolation and quarantine.
- Establish supplies for non-hospital management of cases and contacts.
- Establish a telecommunications plan for “hotlines” or other services for case and contact monitoring and response:
 - Fever triage.
 - Public information.
 - Provider information.
- Plan to ensure provision of essential services and supplies to persons in isolation and quarantine, including:
 - Food and water.
 - Shelter.
 - Medicines and medical consultations.
 - Mental health and psychological support services.
 - Other supportive services (e.g., day care or elder care).
 - Transportation to medical treatment, if required.
- Plan to address issues of financial support, job security, privacy concerns and prevention of stigmatization.



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 10
Laboratory Surveillance and Diagnostics

October 2006

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I. Purpose

Clinical and Public Health laboratories have multiple roles that vary with pandemic phase and laboratory type. These include assays for confirmation of etiology of influenza-like illness, clinical health care, influenza strain typing and laboratory-based surveillance studies. Clinical laboratories perform the first two tasks, using rapid, point of care testing to screen for influenza and monitoring patient clinical status with multiple health indicator assays. Public health laboratories perform confirmatory assays and influenza strain surveillance testing, as well as support outbreak investigations and special surveillance studies, and carry out detection/identification of novel, emerging viruses.

II. Strategy

To collect information through laboratory-based surveillance and diagnostic testing to assist public health officials in their effort to prevent, treat, vaccinate and respond to influenza in the community.

III. Policy Statement

The U.S. Department of Health and Human Services has provided extensive guidance on diagnostic testing in a pandemic influenza situation, contained in Supplement 2: Laboratory Diagnostics to the HHS Pandemic Influenza Plan of November 2005, available at <http://www.hhs.gov/pandemicflu/plan/sup2.html>.

This appendix addresses issues related to laboratory testing for novel/pandemic strains of influenza during each of the WHO/CDC designated Influenza Pandemic Phases. These issues include the tasks assigned to the state of Florida Bureau of Laboratories and interactions between the public health, clinical health and animal health sectors.

IV. Objectives

- A. Rapid detection and identification of novel influenza strains.
- B. Monitor circulating influenza strain types.
- C. Monitor respiratory disease etiology across time and space in the state.
- D. Provide laboratory guidance to CHDs, healthcare providers and laboratories.

V. Action Items

- A. Develop Bureau of Laboratories Influenza Test Algorithm (under development).
- B. Stockpile testing reagents and laboratory supplies.
- C. Assure information on appropriate specimen collection and shipping is available to county health departments and the medical community.

VI. Surveillance and Data Collection

A. Phase 1, 2

Florida Bureau of Laboratories (BOL) receives samples for detection of respiratory viruses from multiple sources throughout the year. Specimens are evaluated by assays appropriate to study type (Attachment 1).

- Sentinel Strain Surveillance Program. County health departments (CHDs) recruit community-based physicians to participate in CDC/WHO Influenza Sentinel Physician Network. Specimens from select patients with influenza-like-illness (ILI) are submitted to BOL for virus detection and influenza strain typing. Results are reported to CDC, submitter and Bureau of Epidemiology (BOE). Selected samples forwarded to CDC for additional studies.
- Outbreak Investigations. BOL works closely with CHD epidemiologists to detect and type respiratory viruses in reported outbreaks.
- Suspect cases of Avian or other novel influenza virus: if sanctioned by BOE, BOL conducts appropriate testing and sends samples to CDC for additional or confirmatory testing on patients suspected of infection with non-seasonal influenza virus.
- Reference Function. BOL regularly receives influenza isolates from commercial and hospital laboratories with no sub-typing capability, with request for typing.

BOE and CHDs review laboratory surveillance data and maintain contact with potential specimen providers.

B. Phase 3

CHDs will recruit additional sentinel providers to submit specimens for viral isolation and strain typing, and distribute guidelines to hospitals, healthcare providers and clinical laboratories describing how to request testing for novel influenza virus.)This testing policy may be viewed at website

http://www.doh.state.fl.us/Disease_ctrl/epi/htopics/flu/avian_flu_testingpolicy.pdf.)

CHDs request specimens from outbreaks of respiratory illness for submission to BOL. Each CHD epidemiology unit will be provided with specimen collection kits (swabs, shipping boxes, directions) for rapid sampling from suspect cases of novel influenza.

BOL continues to perform influenza testing as for Phase 1 and 2, increases intra-laboratory cross training of staff and readies supplies and reagents for potential increase in testing. BOL provides guidance on specimen collection and shipping to clinical laboratories and consults with BOE and CHDs.

BOE will use current clinical case definition and travel history to determine if testing for Influenza A H5 is appropriate. At this time, no testing is to be performed for Influenza A H5 unless authorized by BOE. BOE assures that most current guidelines on specimen submission are posted on its website.

C. Phase 4/5

There will be significant increase in specimen submission to BOL for influenza detection and strain confirmation. It is anticipated that many specimens will be from patients with other etiologies. Thus, screening assays to rule-in influenza etiology

will be used prior to strain analysis. These may include point-of-care testing with commercially available assays in hospitals/clinics. BOL will follow BOE updated case surveillance definition for influenza testing: http://www.doh.state.fl.us/disease_ctrl/epi/htopics/BirdFlu.htm. BOL will utilize its intra-laboratory personnel surge plans to provide testing services.

D. Phase 6

Initially, during the pandemic period, a large number of specimen submissions are anticipated to BOL for strain confirmation. During the pandemic, in the absence of an effective vaccine, staff shortages may occur due to illness suffered by our workers and/or their family members. BOL will implement its COOP plan and, pending direction from DOH leadership, shift testing priorities, as required. Commercial clinical laboratories will be hit by staff shortages and hard-pressed to perform assays relevant to patient care.

As the pandemic progresses, and prevalence of the pandemic strain overshadows the previously circulating seasonal influenza strains, the need for strain confirmation will decrease. Submissions of samples will decrease. To detect antigenic drift or shift and anti-viral resistance, BOL will continue to perform surveillance testing on a select number of specimens in collaboration with BOE and CHDs.

Sentinel surveillance and outbreak investigation testing by BOL will continue in the period after the first wave and during additional waves of pandemic as for pre-pandemic and first wave phases.

1. Diagnostics, Specimen Collection, Shipping and Packaging

BOL will follow current Influenza Test Reporting and Algorithm, which will be updated periodically to reflect changes in target virus and methods of analysis and posted on BOE website. On November 8, 2005, BOL designed test algorithm and BOL/BOE physician's advisory letter posted on BOE website. The test algorithm was designed to show different protocols employed for handling clinical specimens submitted by sentinel physicians (as part of the routine seasonal influenza strain surveillance), specimens submitted as part of epidemiologic outbreak investigations and specimens submitted for detection of avian or other exotic influenza strains. BOL laboratories were authorized to perform specific parts of procedures, based on experience, expertise and level of staffing. Specimen types requested were based on our understanding at the time of the most productive sample sites for general influenza detection.

On April 21, 2006, the Association of Public Health Laboratories (APHL) distributed to the nation's Public Health Laboratory Directors revised guidelines for specimen collection and influenza test algorithms. Test algorithms were divided into routine surveillance, no risk factors for avian influenza and testing for suspect avian influenza A/H5. Based upon characteristics of current human infections with Asian avian A/H5 strain, specimens recommended for submission when this virus is suspected were included, as was test interpretation guidance and recommendations for collaborations between state public

health laboratories and epidemiology programs, to limit test use to the most appropriate cases.

These guidelines did not conflict with current BOL guidelines and affirm existing approach of laboratory-epidemiology collaboration that Florida has already established. Nevertheless, BOL algorithms have been revised to reflect updated information (Attachment 1). When new data suggests additional changes are required, algorithms will be updated at http://www.doh.state.fl.us/Disease_ctrl/epi/htopics/flu/Influenza_test_algorithm.pdf.

VII. Diagnostics

A. Phases 1-5

Diagnostic testing includes commercially produced “rapid tests,” real-time Reverse Transcriptase Polymerase Chain Reaction (real-time RT-PCR) assays for Influenza A and for Influenza B virus nucleic acid, presumptive hemagglutinin strain typing by real-time RT-PCR and virus isolation in cell culture. These assays require a specimen taken during the acute phase of illness (1-5 days post onset of illness). Serological assays for detection of antibody to influenza are not effective for rapid diagnosis, as antibody may not develop for a number of weeks post infection.

Commercial clinical, hospital laboratory and individual physicians have many choices in testing for influenza. Some companies have developed, and are aggressively marketing, rapid assays purportedly capable of detecting the Asian Avian strain of Influenza A/H5. The predictive value of such assays will depend on prevalence of the target etiologic agent in the community and type of specimen assayed. When prevalence is low, there may be a significant number of false positives. A review of use and value of rapid tests in the clinical setting may be found at <http://www.hhs.gov/pandemicflu/plan/> (Part 2 - Public Health Guidance Supplements, 2-Laboratory Diagnostics, Appendix 6).

Additionally, there are large commercial clinical laboratories with testing centers located outside of Florida. BOE will remind them, as well as in-state clinical laboratories, that they are required to report suspect cases immediately upon receipt of a test requisition for avian influenza. This will enable the CHD/BOE to determine test request credibility and call for additional specimens to be sent to BOL.

Regionally, advanced capacity hospital laboratories (ACHLs) are capable of developing in-house real-time RT-PCR assays for this virus. These assays are often very sensitive and thus may be prone to false positives and contamination issues. There may be a delay in reporting of suspect cases, especially in early pandemic phases, if the hospital waits for results of in-house testing before contacting the CHD. Laboratories desiring to perform in-house testing should immediately, upon receipt of a physician’s orders for an influenza A H5 test, contact the CHD or BOE. If BOE deems this a credible potential case, the affected hospital shall immediately collect specimens for shipment to BOL.

APHL has recommended that testing be limited only to patients who meet the case definition per epidemiological assessment, as this plan proposes. Nevertheless, patients will be tested, per physician's orders, in the private sector even if BOE deems the patient not appropriate for testing for A H5. There is potential for the occurrence of overreaction to a positive test result by hospital staff (facility shut-down, refusal to work, excessive quarantine procedures, press releases) which may impede efforts to confirm/refute results. Specimens shall be immediately submitted to BOL for confirmation if a clinical laboratory assay results in detection of a novel influenza strain.

B. Phase 6

BOL will review laboratory diagnostic capacity and test algorithms for novel strain virus. Testing will focus on detecting genetic changes in the virus by targeting cases with unusual presentations. Routine clinical diagnosis by laboratory testing will be discouraged when the pandemic is in full force.

VIII. Specimen Collection

A. Phase 3

Most human cases of Asian avian influenza A/H5 have been lower respiratory tract infections; thus, collecting only a nasopharyngeal or nasal swab is not recommended. In a clinical setting, nasopharyngeal swabs have been a traditional specimen for detection of seasonal influenza, along with the use of rapid test kits. Because A H5 infections are deep in the lung, such samples will produce false negative influenza results. This may lead to non-reporting of the case and no further testing performed. As such, early cases will be missed unless additional specimens are collected.

If a suspect case is evaluated by BOE as being acceptable for testing, multiple sample types should be collected. Sputum, nasopharyngeal washes/aspirates or bronchial lavage specimens are recommended. An oropharyngeal swab may be collected using a viral culturette or viral transport media. Swabs with wood shafts, dry swabs or culturettes designed for bacterial samples are not acceptable.

Beyond the first three to five days post onset of disease, the probability of recovering virus is low. The specimen must be collected prior to treating the patient with antivirals.

Negative test results may not rule out avian influenza. If suspicion is high, multiple samples should be collected and tested over multiple days during acute illness. Sample collection protocol shall be posted on the BOE web page.

Sample collection:

- Oropharyngeal swab
 - Have patient give a deep cough.
 - Swab oropharynx, or far back in the throat, using a Dacron- or rayon-tipped plastic shaft swab.

- Reinsert swab into culturette and crush ampoule at base of culturette, OR Insert swab into tube of transport media, remove excess shaft from swab and close tube tightly.
- Sputum, nasopharyngeal washes/aspirates or bronchial lavage: follow facility protocols for collection of specimen types.
- Label each specimen with patient's name and specimen type.
- Place each specimen in separate Ziploc™ bag with absorbent material to trap any spills.
- Do not freeze. Hold specimen in back of refrigerator until shipped.
- Pack specimen in small Styrofoam cooler with frozen gel-ice and ship as diagnostic specimen, via overnight carrier, to BOL.

Additional information on current shipping protocol is available at http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/avian_flu_testingpolicy.pdf.

B. Phases 4-6

Laboratories will receive high volume of samples for testing. Laboratory testing supplies and reagents may be depleted and back-ordered by suppliers. Hospitals and clinics will be primarily concerned with patient health care and rely on clinical presentation for presumptive diagnosis. To conserve supplies and reagents, BOL will work with BOE to prioritize testing for unusual or severe cases, or epidemiological studies.

1. Communication

Timely communication among healthcare providers, laboratories, CHDs, BOE and BOL are necessary to effectively manage public health response to the pandemic. Necessity for sample submission to BOL, as well as reporting, on the basis of "suspicion (i.e., if a test is ordered for influenza A H5) must be emphasized. Per draft revised reportable disease rule (64D-3.0), this is required for any non-seasonal influenza.

CHDs should routinely communicate with local healthcare providers and laboratories to provide current surveillance definitions and guidelines for testing of suspect Influenza A H5N1 cases. Educational outreach to physicians and clinical laboratory directors must be repeated frequently. Educational outreach should include reporting, sample submission requirements, appropriate specimens, timeliness of submission, and information on interpretation of in-house tests and which tests are appropriate. BOL periodical "Lab-Link," sent quarterly to clinical laboratories statewide, could be used for this purpose. This information will be updated routinely on the Florida Department of Health's website at http://www.doh.state.fl.us/disease_ctrl/epi/htopics/BirdFlu.htm.

C. Reporting of Results

Influenza laboratory-test information is reported through the BOL's laboratory-information system known as "MUMPS," which is designed so only pre-registered providers are listed, limiting the system's ability to print out reports for direct mailing to new submitters. (The MUMPS system should be replaced by a more flexible one.) A report is sent, by U.S. mail, only to the specimen submitter.

Data will be transferred on a daily basis from the laboratory information system electronically to BOE database "Merlin." This information transfer system will be functional and tested by Fall 2006. When a new BOL information management system is developed, a transfer of data to Merlin will be enabled.

Clinical laboratories each have a laboratory information system of their choosing. These do not interface with DOH systems. Point-of-care rapid kit testing may be performed as a waived test in a physician's office; the results of these assays are not reportable. Electronic reporting per Florida Reportable Disease Rule (64D-3) to BOE is not currently enabled.

1. Laboratory testing of non-human animals

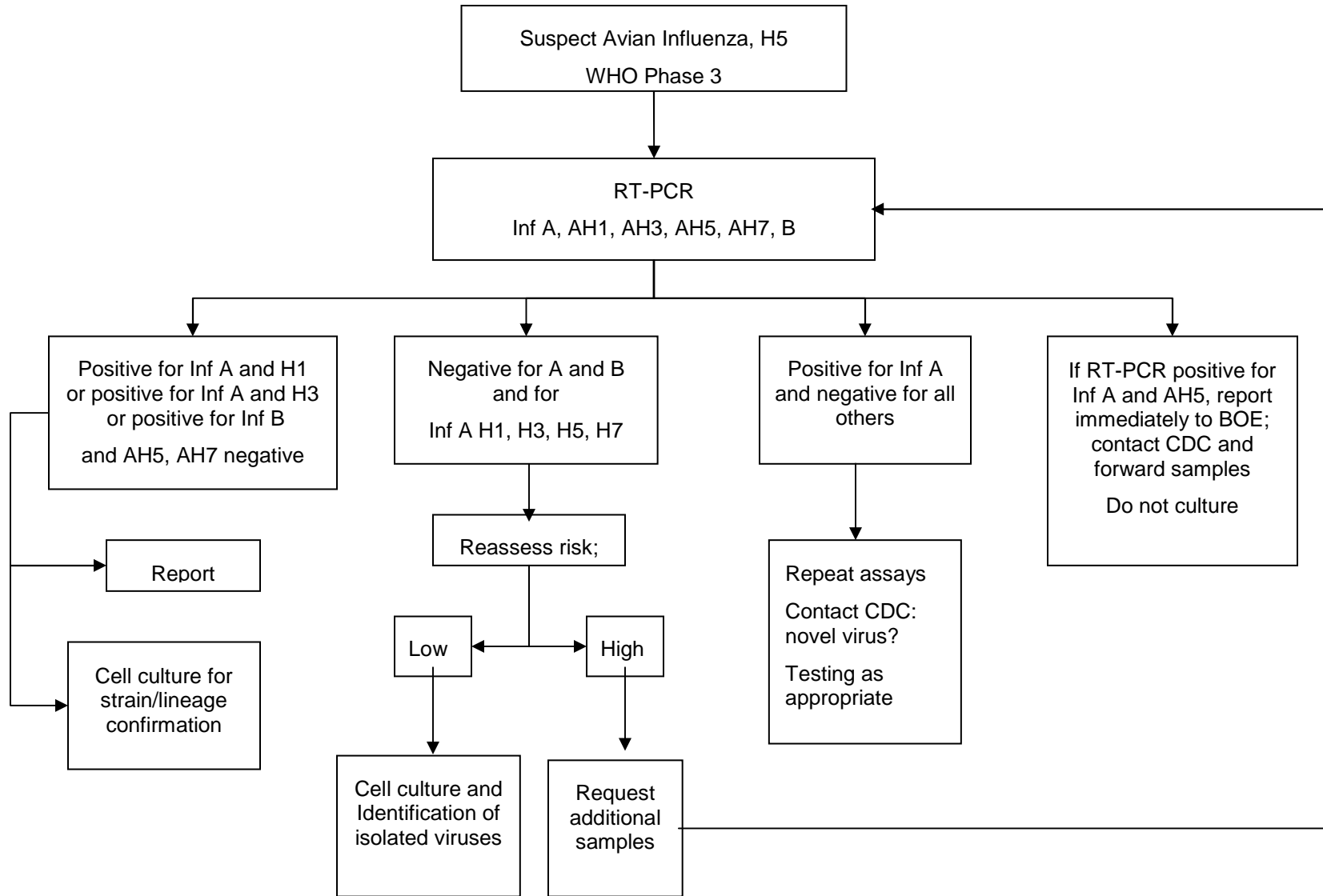
As with West Nile virus (WN), when H5N1 first appears in the US, it is possible that wild dead birds will be the indicator of its arrival. With the virus circulating in the wild bird populations and only occurring in humans with close contact to domestic poultry, responsibility for bird testing falls on Florida Fish and Wildlife Conservation Commission (FWC) (wild birds) and Department of Agriculture and Consumer Services (DOACS) (domestic poultry). Triggers need to be in place prior to wild birds arriving in the U.S. that clearly define roles and responsibilities of BOL and CHDs.

Handling of wild birds that may have died from infection by avian influenza may pose a threat to the handler's health. By August, 2006, FDOH will define policy as to testing of wild birds and other animals by BOL. Bird carcasses are routinely submitted to BOL for detection of West Nile virus and other arboviruses. If they are also to be assayed for avian influenza, this additional work effort must be funded and staff must be trained by DOACS Kissimmee Diagnostic Laboratory in National Veterinary Services Laboratories (NVSL) approved methods for detection on avian influenza viruses in birds. Avian influenza positive results will be confirmed by DOACS laboratory prior to reporting.

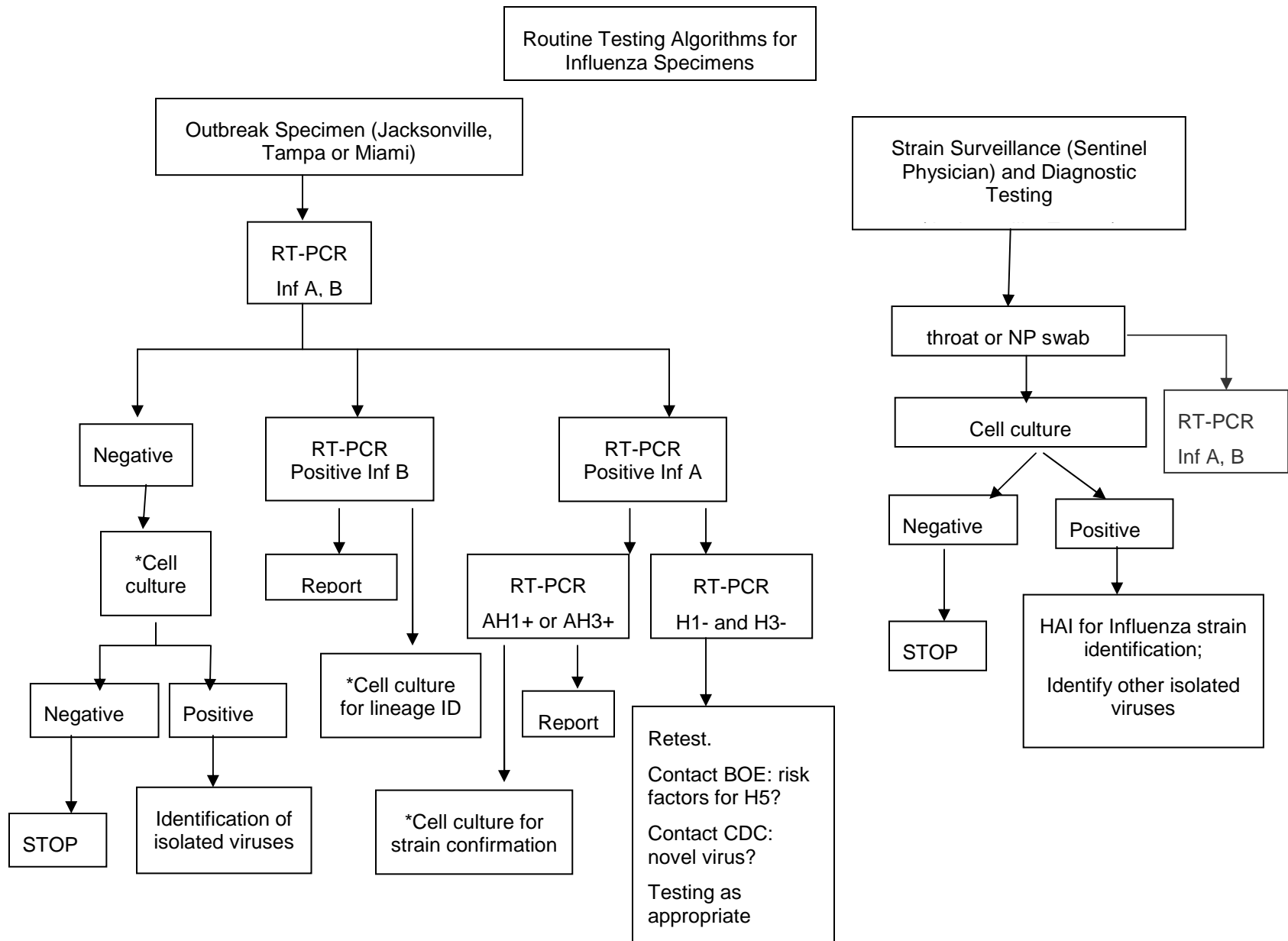
To clearly define the role of FDOH and CHDs in conjunction with DOACS and FWC, as it relates to testing of non-human animals, triggers shall be determined that will define circumstances under which FWC will seek assistance for CHDs and BOL to fulfill the State's wild bird testing needs.

FDOH will create public information sheets for use at CHDs and state health offices that clearly define FDOH position on dead bird handling. FWC submission and testing guidelines will also be distributed. The public information statement shall be consistent for all counties and re-distributed whenever updated. If FWC needs CHD assistance with dead bird submissions, PPE guidelines for collecting specimens should be defined and changes indicated that may occur when H5N1 has been detected in the U.S. The public will be encouraged to report **wild** bird mortality at <http://www.myfwc.com/bird/>.

Laboratory results of wild bird testing will be reported in the Food and Water-borne and Vector-borne Disease Surveillance System (FWVSS). Results will subsequently be incorporated into the FWC bird mortality database.



* Miami BOL will send specimens to the Tampa Virology Laboratory for cell culture after PCR assays.



* Miami BOL will send specimens to the Tampa Virology Laboratory for cell culture after PCR assays.



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 11

Vaccine and Antiviral Medication Distribution and Use

October 2006

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I. Introduction

This document outlines the distribution and use of influenza vaccine and antiviral medications during an influenza pandemic.

II. Purpose

The Vaccine and Antiviral Medication Use and Distribution Plan was developed in support of the primary public health mission of reducing morbidity and mortality during a pandemic influenza.

Though it is limited to those public health services that are the responsibility of the Florida Department of Health (DOH) in support of the core public health mission, it will identify and outline the process for Influenza vaccine and antiviral distribution upon receipt by the state from the Strategic National Stockpile (SNS)/Centers for Disease Control and Prevention (CDC), manufacturers, distributors or other sources. Last, it will provide a framework for preparedness of the Bureau of Statewide Pharmaceutical Services (BSPS) and its partners.

III. Scope

The Vaccine and Antiviral Distribution Plan describes the primary strategy of distributing vaccine and antiviral medications to healthcare providers in Florida during an influenza pandemic. It assists DOH Central Offices, Regional Domestic Security Task Force Health and Medical working groups, county health departments (CHD) and Children's Medical Services (CMS) in the planning process for utilization of both medical interventions.

IV. Concept of Operations

A. Vaccine and Antiviral Ordering

1. Background

All orders for pharmaceuticals to support response to pandemic flu at the local level must be submitted following the State Emergency Operations Plan, using Tracker/Groove to initiate the request. Once that request has been approved, the order is routed to the pharmacy logistics specialist, who will then facilitate the delivery of pharmaceuticals to the requesting sites. National recommendations for optimal use of limited stocks of antivirals will be updated throughout the course of an influenza pandemic to reflect new epidemiologic and laboratory data. Interim recommendations will also be updated as an effective influenza antiviral becomes available. Vaccine for the pandemic strain is not expected to become available until approximately six to eight months after identification of the pandemic strain.

2. **Experience dictates two scenarios for ordering influenza vaccine and antivirals**

Tracker missions for supply of pharmaceuticals will be assigned to the pharmacy logistics specialist within the BSPS Central Pharmacy who, in turn, will be responsible for facilitating delivery of required product to requesting sites.

BSPS Central Pharmacy may order product from a manufacturer or distributor following that vendor's ordering protocols, or product may be obtained through the RSS following protocols in the FDOH CEMP Strategic National Stockpile Plan.

Regardless of the ordering scenario in place during a pandemic event, the pharmacy technical specialist is responsible for tracking vaccine or antiviral shipments from a manufacturer, distributor or the SNS to give DOH senior leadership a statewide view of antiviral and vaccine use and distribution.

All ordering entities must report any pharmaceutical transfers (e.g., to another CHD / CMS) **or receipts** (e.g., from another CHD / CMS, from a manufacturer [bill-to/ship-to]) **to the Central Pharmacy**. See Attachment 1 Perpetual Inventory for Pharmaceuticals.

Bureau of Immunization and BSPS will work together to ensure that available pharmaceuticals are distributed following federal and DOH guidelines in place at the time of event.

B. **Vaccine and Antiviral Receiving and Distribution**

Vaccine shipments may be sent either from a manufacturer, distributor or the CDC to a single or multiple locations. **Any location receiving shipments of vaccine must be permitted or authorized to be in possession of legend drugs** (e.g., location permitted by Board of Pharmacy as a pharmacy, drug wholesaler or drug distributor; or, a licensed medical practitioner authorized to prescribe medication [MD, DO, ARNP, PA] or be in possession of legend drugs).

1. **Receipt, Staging and Storage (RSS)**

If the SNS has been requested and delivered to the state of Florida, one or more RSSs will be established, following the SNS Plan.

Each CHD/CMS will be responsible for establishing and implementing strategies for ordering, receiving and distributing at the local level.

Any vaccine receiving point (e.g., Central Pharmacy, RSS, CHD/CMS) will develop primary and contingency plans for further vaccine distribution (e.g., alternate carriers or couriers, alternate routes to predetermined vaccination PODs, or CHD/CMS bill-to/ship-to), as well as addressing storage, security and transportation issues.

2. Storage

Pharmaceuticals (vaccine or antivirals) will be stored under conditions meeting manufacturer's recommendations. Refer to manufacturers' package inserts for instructions in handling, storage and temperature limits [parameters]. Antivirals generally are stored at controlled room temperature and vaccines are stored cold. USP defines controlled room temperature as 20°-25°C (68°-77°F) and cold as 2°-8 °C (36°-46°F).

BSPS will determine storage space required to meet shipping requirements. If Central Pharmacy warehouse space is limited, BSPS will request opening of an RSS at a location other than Central Pharmacy warehouse.

3. Security

Pharmaceuticals will be stored in a secure location with access limited only to authorized personnel. BSPS will coordinate with DEMO logistics and SEOC/ESF16, to ensure security of storage locations and deliveries.

4. Transportation

BSPS will coordinate with DEMO logistics and SEOC/ESF1 and ESF13 for transportation of pharmaceuticals to RSS/LSA or alternative sites (bill-to/ship-to methods, National Guard, alternate carriers). Pharmaceuticals will require temperature control while transported. (See storage requirements above.)

Pharmaceuticals will be distributed from RSS to requesting sites according to mission assignment and allocation protocols in place at time of event.

BSPS will send an inventory/tracking log to be used by RSS or CHD/CMS (bill-to/ship-to method) to track pharmaceutical distributions. (See Appendix 1.)

Due to limited resources, pharmaceuticals are likely to initially be distributed based on an allocation methodology determined by Department of Health senior leadership, following federal guidelines. It is each CHD's/CMS's responsibility to garner information related to local pharmaceutical needs and report it to the pharmacy technical specialist, who will provide updates to the threat assessment specialist to ensure DOH senior leadership is situationally aware. For subsequent distributions, BSPS will coordinate with BOI and other agencies to distribute vaccine based on priority and need.

C. Pharmaceutical (Vaccine, Antiviral) Inventory Reporting

Each RSS and CHD/CMS will be responsible for maintaining an electronic record of vaccine receipts from any source (e.g., Central Pharmacy, regional hub, manufacturer or distributor, another CHD/CMS, local vaccination POD, et al) or distributions to any other entity (e.g., ibid). The electronic record of receipts and distributions will contain, but not be limited to, the following information:

- Distribution site name
- Inventory information per site:
 - Vaccine or Antiviral name.
 - NDC (National Drug Code) number (e.g., 49281-0372-11, 66521-0106-10, etc.).
 - Strength (e.g., 45 mcg/0.5 ml, 22.5 mcg/0.25 ml, etc.).
 - Expiration date (e.g., JUN 1 2006, JUN 2006, etc.).
 - Manufacturer's lot number.
 - Package size (e.g., 1x10ml MDV, 10x0.5ml syringe, etc.).
 - Date of receipt or distribution.
 - Source of receipt.
 - Quantity received as number of vials, syringes or unit of use packages, not number of doses.
 - Receiver of distribution.
 - Quantity distributed as number of vials, syringes, or unit of use packages, not number of doses.
 - Current inventory quantities.

Data submitted for inventory management and control to the Pharmacy Technical Specialist will contain, but not be limited to, the following information:

- Report date
- Distribution site name
- Inventory information per site:
 - Vaccine or Antiviral name.
 - NDC (National Drug Code) number (e.g., 49281-0372-11, 66521-0106-10, etc.).
 - Strength (e.g., 45 mcg/0.5 ml, 22.5 mcg/0.25 ml, etc.).
 - Package size (e.g., 1x10ml MDV, 10x0.5ml syringe, etc.).
 - Previous inventory balance per product.
 - Total receipts and distributions per product.
 - Current inventory balance per product.

CHDs/CMS are responsible for transmitting this data on a daily basis to the pharmacy technical specialist. The pharmacy technical specialist is responsible for transmitting this data on a daily basis to the threat specialist in the Situation Status Unit of the SEOC.

D. Pharmaceutical Return and Recovery

Subsequent to a pandemic influenza outbreak, limited or no pharmaceuticals are expected to remain after the pandemic threat has diminished. Each CHD/CMS will develop plans to retain pharmaceuticals at its location, if necessary. Each CHD/CMS will report to BSPS and Bureau of Immunization any remaining unused pharmaceuticals. When products expire, each CHD/CMS will utilize third-party reverse distributor for expired returns, unless otherwise instructed by department.

If RSS has remaining unused pharmaceuticals after pandemic threat has diminished, pharmacy technical specialist will coordinate with BSPS Central

Pharmacy, Bureau of Immunization and CDC (SNS) as to storage or redistribution of unused product.

E. Local Distribution

Refer to specific county POD/Vaccination clinic distribution plan and to current versions of Mass Prophylaxis or Vaccination Annex for definitions and dispensing procedures (Addenda 2, 4, 6).

F. Prioritization of Vaccine and Antiviral Medications

Due to high potential for limited supply of antiviral medication and delay in vaccine production that is anticipated once the pandemic strain is identified, Florida will base prioritization for antiviral medications and influenza vaccine based on recommendations from CDC, DOH, DHHS and Advisory Committee on Immunization Practices (ACIP). As given authority in statute, the Secretary of Health can modify the priority tiers, as determined by vaccine supply, criticality of need and the epidemiology of the outbreak.

Priority groups will be reassessed and updated periodically at the national level as surveillance, antiviral stockpile efforts and vaccine supply indicate.

Current recommendations for prioritizing vaccine supply are provided in Appendix 2 and for antiviral medications in Appendix 3, and are also available on the DHHS website at <http://www.hhs.gov/pandemicflu/plan/appendixd.html>. In addition, the DOH Central Office has identified a need for 160,000 doses of oseltamivir, to be available centrally to support case-based containment efforts around the first 200 cases of introduced pandemic influenza, in Phases 3, 4, and 5 and at the beginning of Phase 6.

G. Reporting of Adverse Events

CHDs/CMS will maintain routine process for reporting of adverse drug events to influenza vaccine or antiviral medications until capacity warrants a change in reporting. Currently, the Vaccine Adverse Events Reporting System (VAERS) is used for reporting of adverse vaccine reactions.

H. Documentation

See Attachment 1, Pharmaceutical Tracking Log for site-inventory information capture. Requests for vaccine or antiviral supplies, movement, or storage will be tracked in the State EOC Tracker/Groove system.

I. Training and Exercise for Vaccine and Antiviral Distribution

BSPS will conduct routine training sessions for pharmacy managers' meetings. pharmacy managers should partner with local CHD/CMS administration to conduct training to local medical and nursing staff, as well as other personnel involved in receipt and distribution. Training sessions will include review of medications, doses, storage and handling requirements of vaccines. BSPS will

also conduct routine training of Central Pharmacy staff to the review ordering, shipping, inventorying and handling requirements of various vaccines and antivirals. Refer to Annex 5 for a list of educational and training resources and their locations that can be used in preparing for distribution exercises for pandemic influenza.

ATTACHMENT 2: DHHS VACCINE PRIORITY GROUP RECOMMENDATIONS

Tier	Subtier	Population	Rationale
1	A	<ul style="list-style-type: none"> Vaccine and antiviral manufacturers and others essential to manufacturing and critical support (~40,000) Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinators (8-9 million) 	<ul style="list-style-type: none"> Need to assure maximum production of vaccine and antiviral drugs Healthcare workers are required for quality medical care (studies show outcome is associated with staff-to-patient ratios). There is little surge capacity among healthcare sector personnel to meet increased demand
	B	<ul style="list-style-type: none"> Persons > 65 years with 1 or more influenza high-risk conditions, not including essential hypertension (approximately 18.2 million) Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension (approximately 6.9 million) Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year (740,000) 	<ul style="list-style-type: none"> These groups are at high risk of hospitalization and death. Excludes elderly in nursing homes and those who are immunocompromised and would not likely be protected by vaccination
	C	<ul style="list-style-type: none"> Pregnant women (approximately 3.0 million) Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine (1.95 million with transplants, AIDS, and incident cancer x 1.4 household contacts per person = 2.7 million persons) Household contacts of children <6 month olds (5.0 million) 	<ul style="list-style-type: none"> In past pandemics and for annual influenza, pregnant women have been at high risk; vaccination will also protect the infant who cannot receive vaccine. Vaccination of household contacts of immunocompromised and young infants will decrease risk of exposure and infection among those who cannot be directly protected by vaccination
	D	<ul style="list-style-type: none"> Public health emergency response workers critical to pandemic response (assumed one-third of estimated public health workforce=150,000) Key government leaders 	<ul style="list-style-type: none"> Critical to implement pandemic response such as providing vaccinations and managing/monitoring response activities Preserving decision-making capacity also critical for managing and implementing a response

2	A	<ul style="list-style-type: none"> • Healthy 65 years and older (17.7 million) • 6 months to 64 years with 1 high-risk condition (35.8 million) • 6-23 months old, healthy (5.6 million) 	<ul style="list-style-type: none"> • Groups that are also at increased risk but not as high risk as population in Tier 1B
	B	<ul style="list-style-type: none"> • Other public health emergency responders (300,000 = remaining two-thirds of public health work force) • Public safety workers including police, fire, 911 dispatchers, and correctional facility staff (2.99 million) • Utility workers essential for maintenance of power, water, and sewage system functioning (364,000) • Transportation workers transporting fuel, water, food, and medical supplies as well as public ground public transportation (3.8 million) • Telecommunications/IT for essential network operations and maintenance (1.08 million) 	<ul style="list-style-type: none"> • Includes critical infrastructure groups that have impact on maintaining health (e.g., public safety or transportation of medical supplies and food); implementing a pandemic response; and on maintaining societal functions
3		<ul style="list-style-type: none"> • Other key government health decision-makers (estimated number not yet determined) • Funeral directors/embalmers (62,000) 	<ul style="list-style-type: none"> • Other important societal groups for a pandemic response but of lower priority
4		<ul style="list-style-type: none"> • Healthy persons 2-64 years not included in above categories (179.3 million) 	<ul style="list-style-type: none"> • All persons not included in other groups based on objective to vaccinate all those who want protection

<http://www.hhs.gov/pandemicflu/plan/appendixd.html>, accessed 8/16/2006

ATTACHMENT 3: DHHS ANTIVIRAL DRUG PRIORITY GROUP RECOMMENDATIONS

	Group	Estimated population (millions)	Strategy**	# Courses (millions)		Rationale
				For target group	Cumulative	
1	Patients admitted to hospital***	10.0	T	7.5	7.5	Consistent with medical practice and ethics to treat those with serious illness and who are most likely to die.
2	Healthcare workers (HCW) with direct patient contact and emergency medical service (EMS) providers	9.2	T	2.4	9.9	Healthcare workers are required for quality medical care. There is little surge capacity among healthcare sector personnel to meet increased demand.
3	Highest risk outpatients—immunocompromised persons and pregnant women	2.5	T	0.7	10.6	Groups at greatest risk of hospitalization and death; immunocompromised cannot be protected by vaccination.
4	Pandemic health responders (public health, vaccinators, vaccine and antiviral manufacturers), public safety (police, fire, corrections) and government decision-makers	3.3	T	0.9	11.5	Groups are critical for an effective public health response to a pandemic.
5	Increased risk outpatients—young children 12-23 months old, persons >65 yrs old and persons with underlying medical conditions	85.5	T	22.4	33.9	Groups are at high risk for hospitalization and death.

6	Outbreak response in nursing homes and other residential settings	NA	PEP	2.0	35.9	Treatment of patients and prophylaxis of contacts is effective in stopping outbreaks; vaccination priorities do not include nursing home residents.
7	HCWs in emergency departments, intensive care units, dialysis centers and EMS providers	1.2	P	4.8	40.7	These groups are most critical to an effective healthcare response and have limited surge capacity. Prophylaxis will best prevent absenteeism.
8	Pandemic societal responders (e.g., critical infrastructure groups as defined in the vaccine priorities) and HCW without direct patient contact	10.2	T	2.7	43.4	Infrastructure groups that have impact on maintaining health, implementing a pandemic response, and maintaining societal functions.
9	Other outpatients	180	T	47.3	90.7	Includes others who develop influenza and do not fall within the above groups.
10	Highest risk outpatients	2.5	P	10.0	100.7	Prevents illness in the highest risk groups for hospitalization and death.
11	Other HCWs with direct patient contact	8.0	P	32.0	132.7	Prevention would best reduce absenteeism and preserve optimal function.

<http://www.hhs.gov/pandemicflu/plan/appendixd.html>, accessed 8/16/2006

ATTACHMENT 4. ACIP ANTIVIRAL DRUG RECOMMENDATIONS FOR TREATMENT AND CHEMOPROPHYLAXIS

	Age Group (Years)				
	1-6	7-9	10-12	13-64	≥65
Zanamivir*					
Treatment, Influenza A and B	N/A†	10mg (two inhalations) twice daily	10mg (two inhalations) twice daily	10mg (two inhalations) twice daily	10mg (two inhalations) twice daily
Chemoprophylaxis, Influenza A and B	Ages 1-4 N/A†	Ages 5-9 10mg (two inhalations) twice daily	10mg (two inhalations) twice daily	10mg (two inhalations) twice daily	10mg (two inhalations) twice daily
Oseltamivir					
Treatment, § Influenza A and B	Dose varies by child's weight¶	Dose varies by child's weight¶	Dose varies by child's weight¶	75mg twice daily	75mg twice daily
Chemoprophylaxis, Influenza A and B	Dose varies by child's weight**	Dose varies by child's weight**	Dose varies by child's weight**	75mg once daily	75mg once daily
<i>(From Centers for Disease Control and Prevention. Prevention and Control of Influenza Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-10:28).</i>					

.NOTE: Zanamivir is manufactured by GlaxoSmithKline (Relenza® — inhaled powder). Oseltamivir is manufactured by Roche Pharmaceuticals (Tamiflu® — tablet). This information is based on data published by the Food and Drug Administration (FDA), available at <http://www.fda.gov>.

* Zanamivir is administered through oral inhalation by using a plastic device included in the medication package. Patients will benefit from instruction and demonstration of the correct use of the device. Zanamivir is not recommended for those persons with underlying airway disease.

† Not applicable.

§ A reduction in the dose of oseltamivir is recommended for persons with creatinine clearance <30 mL/min.

¶ Treatment dosing recommendations of oseltamivir for children weighing <15 kg is 30 mg twice a day; for children weighing >15–23 kg, the dose is 45 mg twice a day; for children weighing >23–40 kg, the dose is 60 mg twice a day; and for children weighing >40 kg, the dose is 75 mg twice a day.

**Chemoprophylaxis dosing recommendations of oseltamivir for children weighing <15 kg is 30 mg once a day; for children weighing >15–23 kg, the dose is 45 mg once a day; for children weighing >23–40 kg, the dose is 60 mg once a day, and for children >40 kg, the dose is 75 mg once a day.

ATTACHMENT 5. COMPOUNDING OF TAMIFLU® ORAL SYRUP^{1,2,3}

Dilution Chart (15 mg of Oseltamivir per 1 ml) See Dosing Chart

Total Volume of Extemporaneous Preparation	25 ml Volume	50 ml Volume	75 ml Volume
Number of Tamiflu® capsules	5 capsules	10 capsules	15 capsules
Cherry Syrup (Humco Co)	24 ml	49 ml	73 ml
Ora-Sweet SF (Paddock Labs)	24 ml	49 ml	73 ml

1. Carefully separate the capsule body and cap, and transfer the contents of the indicated number of Tamiflu® (75 mg capsules) into a clean mortar.
2. Triturate the granules to a fine powder.
3. Add 1/3 of the specified amount of vehicle and triturate the powder until a uniform suspension is achieved.
4. Transfer the suspension to a bottle. A funnel may be used to eliminate any spillage.
5. Again, add 1/3 of the vehicle to the mortar, rinse the pestle and mortar by a triturating motion and transfer the vehicle into the bottle.
6. Repeat the rinsing (Step 5) with the remainder of the vehicle.
7. Close the bottle with cap.
8. Shake well to insure homogenous distribution of the drug in solutions.
9. Label bottle and add "SHAKE BEFORE USING" label.
10. Place appropriate expiration date, according to storage methods.

Expiration Dating

The stability of the compound made with **Cherry Syrup** at a concentration of 15mg/ml (different than the commercially available product) was evaluated by an internal study and found that the preparation is:

- Stable for 35 days under refrigeration (41°F/5°C) when stored in either amber glass or amber PET bottles.
- Stable for 5 days at room temperature (77°F/25°C/60% relative humidity) in both amber glass and amber PET bottles.
- NOT stable at 86°F/30°C/65% relative humidity after five days in either glass or amber PET bottles.
- The resulting preparation, using this vehicle, is palatable, chemically and physically stable, and microbiologically preserved under conditions specified above.

The stability of the compound made with **ORA-Sweet Syrup** at a concentration of 15mg/ml (different than the commercially available product) was evaluated by an internal study and found that the preparation is:

- Stable for 35 days under refrigeration (41°F/5°C) when stored in either amber glass or amber PET bottles.
- Stable for 5 days at room temperature (77°F/25°C/60% relative humidity) in both amber glass and amber PET bottles.

- NOT stable at 86°F/30°C/65% relative humidity after five days in either glass or amber PET bottles.
- The resulting preparation, using this vehicle, is palatable, chemically and physically stable, and microbiologically preserved under conditions specified above.

Body Weight in Kg.	Body Weight in Lbs.	Recommended Treatment Dose for 5 days	Volume per Dose 15 mg/ml
≤15 kg	≤ 33 lbs	30 mg BID	2 ml
>15-23 kg	> 33-51 lbs	45 mg BID	3 ml
>23-40 kg	> 51-88 lbs	60 mg BID	4 ml
>40 kg	> 88 lbs	75 mg BID	5 ml

NOTE: 1 teaspoon = 5 ml

Consider using / dispensing a graduated oral syringe for measuring small amounts.

References

¹ TAMIFLU® Package Insert.

² Data on File (Reference # 155-040), Hoffman-La Roche., Nutley, NJ 07110

³ Data on File (Reference # 155-041), Hoffman-La Roche., Nutley, NJ 07110

ATTACHMENT 6: EDUCATIONAL RESOURCES

Federal Government (DHHS): www.Pandemicflu.gov

Pandemic Influenza Fact Sheet: www.cdc.gov/flu/avain/gen-info/pandemics.htm

Avian Influenza Fact Sheet: www.cdc.gov/flu/avain/gen-info/facts.htm

CDC: <http://cdc.gov/flu/avain>

National Vaccine Program Office: Historical Overview: www.dhhs.gov/nvpo/pandemics

World Health Organization: www.who.int/csr/disease/influenza/pandemic/en

Information on Investigational New Drug (IND) Use:
www.access.gpo.gov/nara/cfr/waisidx_99/21cfr312_99.htm

OVF Guide (Operation Vaccinate Florida, Smallpox):
dohiws.doh.state.fl.us/divisions/disease_control/immune/smallpox/index.html



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Appendix 12

Infection Control / Occupational Health

October 2006

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A. Guidance for Healthcare Workers Temporarily Assigned to Mortuary Activities	21

I Introduction

The implementation of occupational safety during an outbreak has three major goals: protecting the health of the worker, minimizing the spread of disease, and maintaining an effective workforce that can serve the healthcare needs of the community.

A. **Definitions.** For purposes of this section, the following shall apply:

- **Contaminated:** Presence, or reasonably anticipated presence, of blood or other potentially infectious materials on an item or surface.
- **Decontamination:** Use of physical or chemical means to remove, inactivate or destroy pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.
- **Hand washing:** Facilities means a facility providing an adequate supply of running potable water, soap and single-use towels or hot air drying.
- **Personal Protective Equipment:** Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

II. Employee Education

Key points for any type of employee whose employer has a pandemic influenza plan:

- Employers should have employees carefully read applicable portions of their pandemic influenza plan.
- Employers should develop an educational plan for each of the sections in their documents that apply to their operations, and implement that plan.
- Educational session topics may include: risk and risk avoidance; World Health Organization (WHO) phases; communications; infection control measures; personal protective equipment (PPE), including its location, appropriate use, removal and disposal, and fever monitoring, symptom reporting.

III. Basic Hygiene measures

Key points for any type of employee whose employer has a pandemic influenza plan:

- Employers should:
 - Educate all employees regarding infection control measures.
 - Ensure availability of necessary facilities for convenient employee adherence to standard precautions and other

- infection control measures (e.g., hand washing stations, soap, hand towels, etc).
- Provide yearly influenza vaccine to employees potentially exposed to seasonal influenza infected persons.
- Emphasize strict controls for and proper use of hand hygiene and hand washing.
- Employees should:
 - Routinely perform hand hygiene, using either soap and water (using a single-use towel for drying hands) or an alcohol-based (70%) hand rub.
 - Remember that soiled hands should be washed with soap and water (hand disinfectants are less effective when hands are soiled).
 - Use PPE based on risk assessment and avoid contact with blood, body fluids, excretions and secretions or other potentially infectious materials.
 - Handle patient care equipment and soiled linen appropriately.
 - Implement appropriate decontamination/environmental cleaning and spills-management measures, as needed.
 - Perform appropriate handling of waste, including biomedical waste.

A. Disinfectants

For hospitals and any type of healthcare facility, up to and including alternate treatment sites, Environmental Protection Agency (EPA)-registered hospital disinfectants with label claims for Influenza A viruses, or certified as tuberculocidal, can be used according to manufacturers' instructions for use, proper dilution and contact time. Users should look for an EPA registration number on the label (e.g., EPA Reg. No. XXX-XX).

If EPA-registered disinfectants are not available, other disinfectants can be used. (See Table 1 Disinfectants active against human influenza virus for use in healthcare facilities, next page.)

**Table 1:
Disinfectants active against human influenza virus
for use in healthcare facilities**

Disinfectant	Recommended Use	Precautions
<p>Sodium hypochlorite: 1000 parts per million of available chlorine, usually achieved by a 1 in 5 dilution of hospital grade bleach</p>	<p>Disinfection of material contaminated with blood, body fluids or other potentially infectious materials</p>	<p>Should be used in a well ventilated area</p> <p>Protective clothing required when handling and using undiluted</p> <p>Do not mix with strong acids to avoid the release of chlorine gas</p> <p>Corrosive to metals</p> <p>Use contact time as stated on label or 10 minutes if not stated</p>
<p>Granular chlorine: (e.g.: Det-Sol 5000® or Diversol®) diluted as per manufacturer's instructions</p>	<p>May be used in place of liquid bleach if this is unavailable</p>	<p>Same as above</p>
<p>Alcohol: (e.g., Isopropyl 70%, ethyl alcohol 60%)</p>	<p>Smooth metal surfaces, tabletops and other surfaces on which bleach cannot be used</p>	<p>Flammable and toxic, to be used in well-ventilated areas. Avoid inhalation</p> <p>Keep away from heat sources, electrical equipment, flames, hot surfaces</p> <p>Allow to dry completely, particularly when using diathermy (Diathermy is the use of high frequency electric current to produce heat and is used to either cut or destroy tissue or to produce coagulation) as this can cause diathermy burns.</p>

If a spill of influenza material occurs on a working surface, you should:

- Use absorbent material to take up as much of the spill as possible.
- Clean the surface with soap and water or other detergent.
- Disinfect the surface as described on the product label, following directions on contact time required for disinfection.
- Discard all absorbent materials as regulated medical waste.
- Wash your hands.

B. Immunizations

Targeted to those individuals who may have a higher exposure risk, whether in a human or animal working environment:

- All employees involved with direct contact of patients or animals potentially infected with influenza should receive seasonal influenza vaccine. This reduces the opportunities for the simultaneous infection of humans with avian and human influenza viruses. Reduced opportunities for dual infections reduce opportunities for re-assortment and for the eventual emergence of a novel influenza virus with pandemic potential. CDC guidelines should be followed for the use of seasonal influenza vaccine in humans.
- All employees involved with direct contact of patients or animals potentially infected with avian or pandemic influenza should receive specific vaccines for avian influenza, when they become available.
- Vaccine against a pandemic strain of influenza may be available within 4 to 6 months after the pandemic begins. Two doses will likely be recommended, as this will increase antibody response.

IV. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Recommendations for healthcare workers and first responders when dealing with known or suspected pandemic influenza infected individuals.

Key Points

- Employers should:
 - Provide PPE for staff as appropriate for their level of exposure or potential exposure.
 - Be knowledgeable regarding the availability of PPE from their vendors.
 - Provide training to employees on the proper use and disposal of PPE.
 - Recognize that employees who are required to wear respirators should be included in a respiratory protection program.
 - Have a stock (or access to a stock) of PPE that will support at least 1 month of their operations should a pandemic begin. (See Table 2, next page.)

Table 2

Sample Calculations for Estimating Healthcare Personal Protective Equipment Needs during a Pandemic Event

Use	Calculation	Calculation Example
Masks (surgical or procedure) for individuals presenting for evaluation over the course of the pandemic	One mask per patient	Anticipate 3000 individuals seeking health care = 3000 masks
Masks (surgical or procedure) for inpatients	Number of inpatients estimated, one mask per day X +/- 7 days	Anticipate 400 to 500 inpatients X 1 (mask per day) X 7 days = 2800 to 3500
Respirators (i.e.: N95) for healthcare workers	4 respirator changes per day X number of health staff in patient care roles X duration of pandemic waves	4 respirator changes per day X number of staff in patient care roles X duration of pandemic waves (~180 days, anticipating two waves at 90 days each) = 720 respirators per healthcare worker in care area*
Respirators (i.e.: N95) for other potentially exposed healthcare support staff (security, housekeeping staff etc.)	2 respirator changes per day X number of staff in potential exposure roles X duration of the pandemic waves	2 respirator changes per day X number of staff in potential exposure roles X duration of the pandemic waves (~180 days) = 360 respirators per healthcare worker supporting activities in care area*

***Notes:**

- Calculations are recommended estimates only.
- Mask / respirator type should be determined by reasonably anticipated role, exposure potential and current recommendations.
- When resources are limited and choices have to be made to purchase personal protective equipment, masks, if properly worn, are likely to be the most effective intervention to limit the spread of pandemic influenza.
- While it is not anticipated that the same staff member will be working every day throughout the pandemic, staffing mix in and supporting the care area may remain relatively constant throughout the pandemic and this staffing mix can be used to calculate need. A facility may have a large number of staff, but not all staff is working at the same time.
- When estimating amount of gloves, soap / hand sanitizer needed, consider estimating a 50% increase in current usage.
- Non-disposable goggles should be cleaned and disinfected as per manufacturer guidelines. Considering purchasing 1 pair of goggles per employee who will be working directly in the patient care area, or who may be in the patient care area in support roles.
- Gowns or aprons should be worn by those who will have close and direct patient contact. Amount needed may be based on a 50% or more increase in current usage.

1. Protection of staff

- Source control (ill person) is primary and can prevent opportunities for transmission.
- In general, exposure to person infected with avian or pandemic influenza will involve similar PPE recommendations, regardless of occupation. That is, similar exposure situations require similar PPE.
- Rigorous attention to standard precautions is required to reduce the opportunities for transmission. Standard precautions apply to 1) blood; 2) all body fluids, secretions and excretions, except sweat, regardless of whether or not they contain visible blood; 3) non-intact skin, and 4) mucous membranes. Standard Precautions are designed to reduce risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.
- Masks (for the patient) and respirators (for the healthcare workers) are likely to be the most effective intervention.
- Prioritization of recipients of PPE should be:
 - Employees who will have direct contact (touching infected person or contaminated objects or performing aerosol generating procedures; procedures including endotracheal intubation, nebulizer treatments, suctioning or taking throat or nasopharyngeal cultures, etc.), followed by,
 - Employees with close contact (working within 3 feet of the infected person), followed by,
 - Those with incidental contact (proximity greater than 3 feet).
- This assessment can be used to estimate the degree of exposure and quantity of PPE to stockpile.
- Particulate respirators (e.g., National Institute of Occupational Safety and Health - NIOSH Certified N95) are filtering face pieces designed to protect the wearer from respiratory aerosols expelled by others, regardless of particle size. Examples of acceptable disposable particulate respirators in various parts of the world include:
 - US: NIOSH certified N95(95%), N99(99%), N100 (99.7%)
 - Australia / New Zealand: P2(94%), P3(99.95%)
 - China: II (95%), I (99%)
 - Japan: 2nd class (95%), 3rd class (99.9%)
 - Korea: 1st class (94%), Special (99.95%)
 - European Union CE certified: filtering face piece class 2 (FFP2)(95%), or class 3(FFP3) (99.97%)

Pre Hospital (First Responder) and Hospital Personal Protective Equipment (PPE) – Avian Influenza (AI) or Novel Influenza Virus World Health Organization (WHO) Phases						
PPE (Personal Protective Equipment)	1 (Inter-pandemic: Low risk of human cases)	2 (New virus in animals: Higher risk of human cases)	3 (Pandemic Alert: No or very limited human to human cases)	4 (New virus causing human cases: Evidence of increased human to human cases)	5 (Evidence of significant human to human transmission)	6 (Pandemic: Efficient & sustained human to human transmission)
Mask / Respirator	Surgical mask: - Close contact (< 3 feet) with patients with acute febrile respiratory illness - When performing aerosol generating procedures	Surgical mask: - Close contact (<3 feet) with patients with acute febrile respiratory illness - When performing aerosol generating procedures	Surgical mask: - Close contact (<3 feet) with patients with acute febrile respiratory illness who have no known AI risk factors - When performing aerosol generating procedures	Particulate respirator for (i.e.: N95): - Entry into AI isolation room / area, but no anticipated patient contact - Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures Surgical mask: - Close contact (<3 feet) with patients with acute febrile respiratory illness who are not known or suspected to be infected with AI and have no known AI risk factors	Particulate respirator for (i.e.:N95): - Entry into AI isolation room / area, but no anticipated patient contact - Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures Surgical mask: - Close contact (<3 feet) with patients with acute febrile respiratory illness who are not known or suspected to be infected with AI and have no known AI risk factors	Particulate respirator for (i.e.: N95): - Entry into AI isolation room / area, but no anticipated patient contact - Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures Surgical mask: - Close contact (<3 feet) with patients with acute febrile respiratory illness who are not known or suspected to be infected with AI and have no known AI risk factors
	Use of a fit-tested respirator, at least as protective as a N-95 respirator (with gloves, gown and eye protection as appropriate), should be considered if the patient has A. I. or novel influenza risk factors.			In practice, it may be difficult to determine if a patients with acute febrile respiratory illness has no known or suspected AI risk factors or infection. Consideration should be given to the use of a fit-tested respirator, at least as protective as a N-95 respirator for all close (<3 feet) patient contacts		
Gown	Not routinely	Not routinely	Not routinely	- Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures - During cleaning procedures,	- Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures - During cleaning procedures,	- Close contact (<3 feet) with AI infected patients in or out of isolation room / area - When performing aerosol generating procedures - During cleaning procedures,
Gloves	Standard Precautions, Hand hygiene as well as during cleaning procedures					
Eye Protection	When wearing mask					
Hair cover	Not routinely	Not routinely	Not routinely	Not routinely, unless performing aerosol generating procedures on AI patient	When performing aerosol generating procedures on AI patient	When performing aerosol generating procedures on AI patient

2. Respiratory Protection

- Employee users of N-95 respirators should be included in a respiratory protection program that includes fit testing, instructions on using the respirator and a medical screening questionnaire (in accordance with 29 CFR 1910.134 or other applicable OSHA standards).
- Use particulate respirators that are at least as protective as U.S. NIOSH-certified N-95. Respirators that are also FDA approved are indicated if splashing of blood, body fluids, excretions or secretions is anticipated (such as during aerosol-generating procedures).
- Employees must be fit-tested for the model and size respirator that they wear, and they must be trained to fit-check for face-piece-to-face seal. Incorrect use of PPE may fail to protect employees against the acquisition of healthcare-associated infections and may also lead to self-contamination and inoculation with infectious agents.
- If used properly, wearing a respirator provides a higher level of protection to the wearer than a surgical/procedural mask.
- Surgical/Procedural masks may be placed on a person with respiratory symptoms (if their condition permits) to prevent their spreading of respiratory secretions.
- A tight-fitting surgical/procedural mask may be used by an employee who has direct and close exposure to an infected person when an N-95 or greater NIOSH approved respirator is not available (WHO).
- Masks should be changed when leaving isolation areas, when wet, visibly soiled or every four hours.
- Aerosols (droplet nuclei) and aerosol-generating procedures should not be performed (unless absolutely necessary) if a particulate respirator is not available.

3. Infection Control

- Enhanced Precautions for Avian Influenza: CDC recommends the use of Standard, Contact, Airborne isolation and the use of eye protection when dealing with individuals under evaluation for Avian Influenza. Contact precautions include the use of gloves, gown dedicated equipment (such as stethoscopes, disposable blood pressure cuffs, disposable thermometers, etc) for all patient contact. Airborne precautions includes the placement of the patient in an airborne isolation room (AIR) and the use of a fit-tested respirator, at least as protective as a National Institute of Occupational Safety and Health (NIOSH)-

approved N-95 filtering face-piece (i.e., disposable) respirator, when entering the room.

- It is important to note that if PPE is used, it should always be used in conjunction with basic infection control measures.
- Post signs in languages appropriate to the populations served with instructions to patrons and accompanying family members or friends to cover the mouth/nose with a tissue when coughing and dispose of used tissues.
- Implement frequent hand washing / cleansing after contact with respiratory secretions.
- Implement spatial separation, ideally >3 feet, of persons with respiratory infections in common waiting areas, when possible.

4. Other Types of PPE for avian / pandemic influenza:

- Eye Protection

Use eye protection (face shield, or goggles) if there will be direct or close contact with a person (touching the infected person or being within 3 feet) with Avian influenza infection (confirmed or suspected), and/or for all aerosol-generating procedures (for example bronchoscopy and endotracheal intubation). Note: Personal eyeglasses or sunglasses do not constitute eye protection in the healthcare environment.

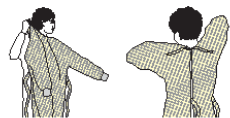


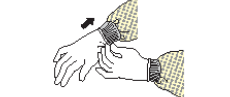
- Gloves

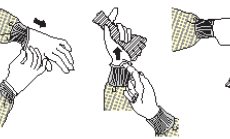



Use clean non-sterile medical grade ambidextrous gloves when it is reasonably anticipated that there will be contact with blood, body fluids or other potentially infectious materials. If used in conjunction with a gown, the gloves should cover up to the cuffs of the gown.

- Gowns

Use clean, non-sterile long sleeved gowns (fluid-resistant, if available) if there will be direct or close contact with a person with pandemic influenza (confirmed or suspected) and/or for all aerosol generating procedures;

If cloth gowns are used, a waterproof apron should also be used if splashing of blood, body fluids, excretions, or secretions is anticipated.

SEQUENCE FOR DONNING PERSONAL PROTECTIVE EQUIPMENT (PPE)	SECUENCIA PARA PONERSE EL EQUIPO DE PROTECCIÓN PERSONAL (PPE)
<p>The type of PPE used will vary based on the level of precautions required; e.g., Standard and Contact, Droplet or Airborne Infection Isolation.</p> <p>1. GOWN</p> <ul style="list-style-type: none"> Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back Fasten in back of neck and waist  <p>2. MASK OR RESPIRATOR</p> <ul style="list-style-type: none"> Secure ties or elastic bands at middle of head and neck Fit flexible band to nose bridge Fit snug to face and below chin Fit-check respirator  <p>3. GOGGLES OR FACE SHIELD</p> <ul style="list-style-type: none"> Place over face and eyes and adjust to fit  <p>4. GLOVES</p> <ul style="list-style-type: none"> Extend to cover wrist of isolation gown 	<p>El tipo de PPE que se debe utilizar depende del nivel de precaución que sea necesario; por ejemplo, equipo Estándar y de Contacto o de Aislamiento de Infecciones transportadas por gotas o por aire.</p> <p>1. BATA</p> <ul style="list-style-type: none"> Cubra con la bata todo el torso desde el cuello hasta las rodillas, los brazos hasta la muñeca y dóblela alrededor de la espalda Átela por detrás a la altura del cuello y la cintura <p>2. MÁSCARA O RESPIRADOR</p> <ul style="list-style-type: none"> Asegúrese los cordones o la banda elástica en la mitad de la cabeza y en el cuello Ajuste la banda flexible en el puente de la nariz Acomódese la en la cara y por debajo del mentón Verifique el ajuste del respirador <p>3. GAFAS PROTECTORAS O CARETAS</p> <ul style="list-style-type: none"> Colóquelas sobre la cara y los ojos y ajústelas <p>4. GUANTES</p> <ul style="list-style-type: none"> Extienda los guantes para que cubran la parte del puño en la bata de aislamiento
USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION	UTILICE PRÁCTICAS DE TRABAJO SEGURAS PARA PROTEGERSE USTED MISMO Y LIMITAR LA PROPAGACIÓN DE LA CONTAMINACIÓN
<ul style="list-style-type: none"> Keep hands away from face Limit surfaces touched Change gloves when torn or heavily contaminated Perform hand hygiene 	<ul style="list-style-type: none"> Mantenga las manos alejadas de la cara Limite el contacto con superficies Cambie los guantes si se rompen o están demasiado contaminados Realice la higiene de las manos

SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)	SECUENCIA PARA QUITARSE EL EQUIPO DE PROTECCIÓN PERSONAL (PPE)
<p>Except for respirator, remove PPE at doorway or in anteroom. Remove respirator after leaving patient room and closing door.</p> <p>1. GLOVES</p> <ul style="list-style-type: none"> Outside of gloves is contaminated! Grasp outside of glove with opposite gloved hand; peel off Hold removed glove in gloved hand Slide fingers of ungloved hand under remaining glove at wrist Peel glove off over first glove Discard gloves in waste container  <p>2. GOGGLES OR FACE SHIELD</p> <ul style="list-style-type: none"> Outside of goggles or face shield is contaminated! To remove, handle by head band or ear pieces Place in designated receptacle for reprocessing or in waste container  <p>3. GOWN</p> <ul style="list-style-type: none"> Gown front and sleeves are contaminated! Unfasten ties Pull away from neck and shoulders, touching inside of gown only Turn gown inside out Fold or roll into a bundle and discard  <p>4. MASK OR RESPIRATOR</p> <ul style="list-style-type: none"> Front of mask/respirator is contaminated — DO NOT TOUCH! Grasp bottom, then top ties or elastics and remove Discard in waste container 	<p>Con la excepción del respirador, quítese el PPE en la entrada de la puerta o en la antecámara. Quítese el respirador después de salir de la habitación del paciente y de cerrar la puerta.</p> <p>1. GUANTES</p> <ul style="list-style-type: none"> ¡El exterior de los guantes está contaminado! Agarre la parte exterior del guante con la mano opuesta en la que todavía tiene puesto el guante y quíteselo Sostenga el guante que se quitó con la mano enguantada Deslice los dedos de la mano sin guante por debajo del otro guante que no se ha quitado todavía a la altura de la muñeca Quítese el guante de manera que acabe cubriendo el primer guante Arroje los guantes en el recipiente de deshechos <p>2. GAFAS PROTECTORAS O CARETA</p> <ul style="list-style-type: none"> ¡El exterior de las gafas protectoras o de la careta está contaminado! Para quítárselas, tómelas por la parte de la banda de la cabeza o de las piezas de las orejas Colóquelas en el recipiente designado para reprocessar materiales o de materiales de deshecho <p>3. BATA</p> <ul style="list-style-type: none"> ¡La parte delantera de la bata y las mangas están contaminadas! Desate los cordones Tocando solamente el interior de la bata, pásela por encima del cuello y de los hombros Voltee la bata al revés Dóblela o enróllela y deséchela <p>4. MÁSCARA O RESPIRADOR</p> <ul style="list-style-type: none"> La parte delantera de la máscara o respirador está contaminada — ¡NO LA TOQUE! Primero agarre la parte de abajo, luego los cordones o banda elástica de arriba y por último quítese la máscara o respirador Arrojéla en el recipiente de deshechos
PERFORM HAND HYGIENE IMMEDIATELY AFTER REMOVING ALL PPE	EFECTÚE LA HIGIENE DE LAS MANOS INMEDIATAMENTE DESPUÉS DE QUITARSE CUALQUIER EQUIPO DE PROTECCIÓN PERSONAL



5. Storage and Disposal of Masks or Respirators

- Single use masks or respirators should be disposed of after use.
- Recommendations of the manufacturer or any applicable regulations or statutes should be followed.
- If there are inadequate supplies of masks available, they should be stored in a closed container (such as a paper or vented plastic bag) to protect them from dust and contamination. (See Section 7: Prioritizing the Use of PPE when Supplies are Limited.)
- Avoid storing this product in an area that is subject to water flow, such as under a sink or near water or drain pipes. Follow manufacturer's directions on temperature and other aspects of appropriate storage.
- Ideally, masks or respirators should not be used for longer than four hours.
- Dispose of masks or respirators if they are damaged, show evidence of significant water spotting or are dirty or contaminated in any way. In addition, N95 respirators should be discarded if the head straps show any signs of damage or deterioration.

6. Use of PPE by Law Enforcement Officers

Law enforcement personnel may be called upon to contain the spread of infection by enforcing the isolation of ill individual patients and by managing individuals who may have come into contact with sources of infection and are not showing any signs or symptoms of illness (quarantine). These steps may be carried out by enforced isolation or quarantine at healthcare facilities, individual homes, or alternative facilities.

Key Points

- If tolerated, a surgical or procedure mask placed on the known or suspected sick individual can help to prevent transmission opportunities.
- Use of N-95 respirators by the law enforcement officer is likely to be the most effective intervention in reducing the chance of exposure and illness.
- The more severe the symptoms of the ill individual and the closer the contact to the ill individual (such as less than 3 feet), the higher the risk of exposure for the officer.
- Use of gloves or goggles (and other PPE, such as gowns or N95 respirator, if available) is appropriate when it is reasonably anticipated that there will be contact with blood, body fluids or other potentially infectious materials. It is

recognized that it may not be practical to use gowns and respirators in some responder situations.

- Responders who will only be out in the community, without anticipated close contact with known or suspected avian/pandemic influenza infected persons, may be provided N-95 respirators or masks to use as needed.

7. Prioritizing the Use of PPE when Supplies are Limited

- Provision of necessary supplies should be an institutional priority.
- Reuse of disposable PPE items should be avoided.
- Reuse of single use items may increase the potential for contamination; however, this risk must be balanced against the need to fully provide protection for employees.
- If a sufficient supply of PPE items is not available, healthcare facilities may consider reuse of some disposable items only as an urgent, temporary solution, and only if the item has not been obviously soiled or damaged (e.g., creased or torn).
- To avoid wastage, critically evaluate in which situations PPE is indicated respiratory protection.
 - Respiratory Protection
 - If AI-infected patients are cohorted in a common area or in several rooms on a nursing unit, and multiple patients will be visited over a short time, it may be practical to wear one particulate respirator for the duration of the activity.
 - N95 respirators (with other appropriate PPE) should be worn by healthcare workers during aerosol generating procedures. Examples include:
 - Endotracheal intubation.
 - Administration of aerosolized or nebulized medication (this administration route should be strongly discouraged in patients if appropriate airborne precautions are not guaranteed.
 - Diagnostic sputum induction.
 - Bronchoscopy.
 - Airway suctioning.
 - Tracheostomy care.
 - Chest physiotherapy.
 - Nasopharyngeal aspiration.
 - Positive pressure ventilation via face mask (e.g., BiPAP, CPAP).
 - High frequency oscillatory ventilation.
 - Resuscitation activities.
 - Post mortem excision of lung tissue.

- Surgical and procedure masks
 - If a particulate respirator is not available, a tightly fitting surgical or procedure mask should be worn.
 - Wear masks once (for a maximum of four hours) and then discard.
 - Change masks when they become moist.
 - Do not leave masks dangling around the neck.
 - After touching or discarding a used mask, perform hand hygiene.
- Gloves
 - If supplies of gloves are limited, reserve gloves for situations where contact with blood or body fluids is likely including during aerosol-generating procedures.
 - Use other barriers (e.g., disposable paper towels, paper napkins) when there is no direct contact with patient's respiratory secretions (e.g., to touch equipment linked to the patient). Scrupulous hand hygiene is critical in this situation.
- Gowns
 - If supplies of gowns are limited, gown use should be prioritized for aerosol-generating procedures and for activities that involve holding the patient close (e.g., in pediatric settings), or when other extensive body surface-to-body surface contact is anticipated.
 - If there is a shortage of gowns, gowns may also be worn in the care of more than one patient in a cohort area if there is no direct contact between the gown and the patients.
- Eye protection
 - Reusable eye protective equipment poses a potential risk for cross-infection. Any such items must be cleaned and disinfected after each use when leaving an isolation room/area. Follow cleaning/disinfection recommendations provided by manufacturer. Cleaning must precede disinfection. Hand hygiene must be performed after cleaning or disposal of eye protective equipment.

V. Infection Control at Healthcare Facilities

The following measures should be planned for:

- A separate waiting facility (respiratory waiting room or clinic) that can be implemented quickly for persons presenting with suspected influenza (acute respiratory illness).
- A pre-arranged triage mechanism (such as signage) such that persons with acute respiratory illness can be directed to the respiratory waiting room or clinic without having to have contact with other individuals.
- Spatial separation of three feet or more between persons seeking evaluation.
- Surgical or procedure masks for all persons seeking care in the respiratory clinic.
- Encouragement of the use of respiratory hygiene/cough etiquette at all times.
- Provision of hand washing facilities and supplies or alcohol hand rubs.
- Provisions for PPE disposal (Note: All waste generated in the care of influenza patients should be disposed of in suitable containers or bags with all waste from a room/area containing influenza treated as clinical {infectious} waste).
- Patient flow mechanisms to ensure that discharged patients have minimal contact with other patients on their way out and patients being admitted can be moved to isolation wards without passing through other general wards.

On the isolation ward, the following measures should be in place:

- Capacity for rapid expansion of the respiratory isolation ward or an overflow area if there is a surge of severely ill patients.
- Minimum numbers of entries and exits to the ward.
- Eight-hour shift limit for healthcare workers on duty in the respiratory isolation ward (as extended use of PPE is fatiguing).
- Suspension of elective and non-essential medical separation.

If a very large surge in cases occurs, special isolation wards may not be practical and health facilities should be arranged to:

- Ensure as much spatial separation between patients as possible (at least 3 feet).
- Ensure head to toe alignment if space restrictions are present.

A. Respiratory Hygiene/Cough Etiquette in Healthcare Settings

<http://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm>

To prevent transmission of all respiratory infections in healthcare settings, including influenza, the following infection control measures should be implemented at first point of contact with a potentially infected person, and should be incorporated into infection control practices as one component of Standard Precautions.

1. Visual Alerts

Post visual alerts (in appropriate languages) at the entrance to outpatient facilities (e.g., emergency departments, physician offices, outpatient clinics) instructing patients and persons who accompany them to inform healthcare personnel of symptoms of a respiratory infection when they first register for care and to practice Respiratory Hygiene/Cough Etiquette.

- Notice to Patients to Report Flu Symptoms
Emphasizes covering coughs and sneezes and the cleaning of hands.
- Cover Your Cough
Tips to prevent the spread of germs from coughing.

2. Respiratory Hygiene/Cough Etiquette

The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection.

- Cover the nose/mouth when coughing or sneezing.
- Use tissues to contain respiratory secretions and dispose of them in the nearest waste receptacle after use.
- Perform hand hygiene (e.g., hand washing with non-antimicrobial soap and water, alcohol-based hand rub or antiseptic hand wash) after having contact with respiratory secretions and contaminated objects/materials.

Healthcare facilities should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for patients and visitors.

- Provide tissues and no-touch receptacles for used tissue disposal.
- Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.

B. Handling of deceased patients

Removal of the body from the isolation room/area:

- Use standard precautions for routine care of the body.
- PPE should be used by employees:
 - Particulate respirator should be used if employees remove the body immediately after the patient's death.
 - Surgical or procedure mask is sufficient if air in the airborne isolation room/area has been exchanged.
 - Disposable long-sleeved, cuffed gown, (waterproof if outside of body is visibly contaminated with potentially infectious excretions or secretions). Alternatively, if no waterproof gown is available, a waterproof apron can be used.
- Nonsterile, ambidextrous gloves should cover cuffs of gown.
 - If splashing of body fluids is anticipated:
 - Balaclava-type cap or other hair cover (disposable).
 - Face shield or goggles.
- The body should be fully sealed in an impermeable body bag prior to removal from the isolation room/area and prior to transfer to pathology or to the mortuary.
- No leaking of body fluids should occur and the outside bag should be kept clean.
- After removing PPE, perform hand hygiene.
- If the family of the patient wishes to touch the body, they may be allowed to do so. The family can wear gloves followed with hand hygiene after glove removal.
- If family members want to kiss the dead body (hands, face), these body parts can be disinfected prior to viewing, using a common antiseptic (e.g., 70% alcohol).
- If the family wants only to view the body and the face of the deceased, but not touch it, there is no need to wear any kind of PPE.
- Transfer to pathology or to mortuary should occur as soon as possible after death.
- Cultural sensitivity should be practiced when an avian or pandemic influenza patient dies.

C. Guidance for Healthcare Workers Temporarily Assigned to Mortuary Activities

- Mortuary home staff should be informed that the deceased had pandemic influenza.
- If mortuary staff are responding to the death of an influenza-infected patient who died at home, full barrier PPE should be used while in the home.
- In the mortuary, mortuary staff and burial team should use standard precautions when caring for the body. This includes appropriate use of PPE and performance of hand hygiene to avoid unprotected contact with blood, body fluids, secretions or excretions.
- Embalming may be conducted as per routine.
- Hygienic preparation of the deceased (e.g., cleaning, tidying of hair, trimming of nails and shaving) may also be conducted.
- The body in the body bag can be safely removed for storage in the mortuary, sent to the crematorium or placed in a coffin for burial.
- If autopsy is being considered, the body may be held under refrigeration in the mortuary. Standard infection control precautions should be followed; there is no further risk of airborne or droplet spread of pandemic influenza prior to the autopsy being performed.
- If the family of the patient wishes to touch the body, they may be allowed to do so. The family can wear gloves followed with hand hygiene after glove removal.
- If family members want to kiss the dead body (hands, face) these body parts can be disinfected prior to viewing, using a common antiseptic (e.g., 70% alcohol).
- If the family wants only to view the body and the face of the deceased, but not touch it, there is no need to wear any kind of PPE.
- Cultural sensitivity should be practiced when an avian or pandemic influenza patient dies.

VI. Occupational Health

Key Points

- Employees with serological evidence or strong history of avian influenza (H5N1) or pandemic influenza infection should have protective antibodies against this strain and can be prioritized for the care of AI (H5N1) or pandemic influenza patients. These employees could also be prioritized to provide care for patients who are at risk for serious complications from influenza (e.g., transplant patients and neonates).
- Employees who are at high risk for complications of influenza (e.g., pregnant women, immunocompromised persons and persons with

respiratory diseases) should be informed about the medical risks and offered work assignments that do not involve providing care for AI or pandemic influenza infected patients.

- Employees who are ill should not be involved in direct patient care, since they may be more vulnerable to other infection and may be more likely to develop severe illness if infected with AI or pandemic influenza. In addition, ill employees can transmit their illness to vulnerable patients.

A. Surveillance and Monitoring of Employees whose job responsibilities may expose them to Avian or Pandemic Influenza infected patients

- Keep a register of employees who have provided care for avian or pandemic influenza-infected patients.
- Develop an influenza-like illness surveillance system including self-reporting and self-isolating by symptomatic employees.
- Develop a system to monitor work absenteeism for health reasons, especially in employees providing care for avian or pandemic influenza-infected patients.
- Screen all employees providing care for or are exposed to avian or pandemic influenza-infected patients for influenza-like symptoms before each time they start duty. Symptomatic employees should be evaluated and excluded from duty.
- Instruct employees to be vigilant for the development of fever, respiratory symptoms, and/or conjunctivitis (i.e., eye infections) for 1 week after last exposure to avian or pandemic influenza-infected patients.
- With the exception of visiting a health-care provider, employees who become ill should be advised to stay home until 24 hours after resolution of fever, unless an alternative diagnosis is established or diagnostic tests are negative for influenza A virus.

VII. Managing the Employee with Potential Avian Influenza Infection

Key Points

- Employers should have standard operating procedures to identify and manage and employee suspected of having pandemic/avian influenza.
- Employers may have access to antiviral medication for post-exposure prophylaxis and treatment of employees infected with avian or pandemic influenza.
- Employees should be instructed that in the event of fever $> 100.4^{\circ}F$ or the development of influenza-like symptoms, employees should immediately limit their interactions with others, exclude themselves from public areas, and notify the infection control/occupational health team (and/or their healthcare provider) that they are symptomatic and may be infected with AI or pandemic influenza.
- Recommendations for employees who have provided care for AI or pandemic influenza -infected patients: check temperature twice daily and monitor for symptoms of influenza-like illness (cough, sore throat, difficulty breathing) for

10 days after last possible exposure (Annex 10). Avian Influenza, including Influenza A (H5N1), in Humans: WHO Interim Infection Control Guidelines for Health Care Facilities (9 February 2006).

If an employee presents with influenza like illness:

- The healthcare worker with influenza symptoms should wear a paper surgical mask during the assessment process.
- The interviewing healthcare worker should wear an N95 respirator and other PPE, as appropriate.
- Document circumstances of exposures.
- Develop or use existing systems to provide antiviral medication to employees exposed to AI infected patients according to local/national policies. If antivirals are not available locally, contact public health officials for local policy on antiviral prophylaxis of employees and assistance for obtaining adequate supplies of antiviral medication for prophylaxis of employees providing care for AI-infected patients.
- If only a common seasonal influenza infection is suspected (based on current circulating strains of influenza virus and exposure history), standard infection control measures are instituted. The employee will be referred to a physician and asked to remain off work until his/her symptoms have resolved and he/she is released by his/her treating physician (at least five to seven days after the onset of clinical symptoms). A throat culture can be performed and blood will be drawn to test for influenza strain and type.

If an infection with Highly Pathogenic Avian Influenza or other non-contemporary or potentially pandemic influenza strain is a consideration (based on the types of specimens recently handled by the worker, current circulating strains of virus and exposure history), the following procedures should be followed by the supervisor:

- The healthcare worker with influenza symptoms should wear a paper surgical mask during the assessment process.
- Isolate the healthcare worker with influenza symptoms from other employees and keep him/her there until an appropriate isolation plan has been arranged and implemented.
- If the employee is uncooperative, immediately contact the local county health department director/administrator and legal counsel to discuss appropriate isolation and quarantine measures.
- Those interacting with the potentially infected worker should wear a disposable apron, N-95 particulate respirator, gloves and eye protection.
- In conjunction with assessment of the ill healthcare worker, there must be immediate notification of the clinic or department director, the Florida Department of Health/local county health department.
- Initiate efforts to arrange transport of the employee to a location that can manage the patient with appropriate infection control measures (including isolation and negative pressure rooms). If transported by EMS and taken to a medical facility, the first responders and receiving medical facility must be

advised of the situation prior to transport to ensure appropriate infection control measures during transport. A trained physician will immediately investigate known accidental etiologic agent exposure or suspect symptomatology. The selected physician should have full knowledge of etiologic agents being manipulated, including symptomatology and treatment. That same physician will also help provide professional guidance in case of an accidental environmental release of etiologic agent.

- A throat culture should be performed and blood should be drawn for influenza strain and type testing if not already done. This testing should be accomplished and the results reported ASAP. If results are negative for a pandemic strain of influenza, the employee should be managed as for seasonal influenza or other respiratory infection.
- A thorough history of contacts should be obtained promptly. (Contacts should include co-workers, household members and any others whom the symptomatic healthcare worker has had face-to-face contact during the time of symptoms and 36 hours prior to the onset of symptoms).
- In consultation with the local county health department and Division of Disease Control, all contacts should receive immediate instruction regarding isolation or quarantine procedures, as well as prophylactic antiviral medication. Use the local county health department on call system, epidemiology on-call service or state warning point to make emergency contact with Division of Disease Control after hours.
- All contaminated PPE should be disposed of appropriately.

When an employee reports a possible accidental exposure to a clinical specimen or culture, management should include the following:

- Follow standard clean-up procedures for an infectious agent.
- Clearly document the circumstances of the spill or other breach of infection control.
- Contact the local county health department and Division of Disease Control regarding post-exposure anti-viral prophylaxis. (In most cases, when an exposure to a non-contemporary or HPAI virus is suspected, anti-viral post-exposure prophylaxis should be provided in consultation with the Division of Disease control and treating physician).
- Potentially exposed employees should shower before leaving their place of work. If the employee's clothing is contaminated, clothing may be laundered if facilities are available and/or disposed of as biological waste; facility will provide clothing to be used for transport.

A. Guidance for Healthcare Workers Temporarily Assigned to Mortuary Activities

- Mortuary home staff should be informed that the deceased had pandemic influenza.
- If mortuary staff are responding to the death of an influenza-infected patient who died at home, full barrier PPE should be used while in the home.

- In the mortuary, mortuary staff and the burial team should use standard precautions when caring for the body. This includes appropriate use of PPE and performance of hand hygiene to avoid unprotected contact with blood, body fluids, secretions or excretions.
- Embalming may be conducted as per routine.
- Hygienic preparation of the deceased (e.g., cleaning, tidying of hair, trimming of nails and shaving) may also be conducted.
- The body in the body bag can be safely removed for storage in the mortuary, sent to the crematorium or placed in a coffin for burial.
- If autopsy is being considered, the body may be held under refrigeration in the mortuary. Standard infection control precautions should be followed; there is no further risk of airborne or droplet spread of pandemic influenza prior to the autopsy being performed.
- If the family of the patient wishes to touch the body, they may be allowed to do so. The family can wear gloves followed with hand hygiene after glove removal.
- If family members want to kiss the dead body (hands, face) these body parts can be disinfected prior to viewing, using a common antiseptic (e.g., 70% alcohol).
- If the family wants only to view the body and the face of the deceased, but not touch it, there is no need to wear any kind of PPE.
- Cultural sensitivity should be practiced when a avian or pandemic influenza patient dies.

References

Centers for Disease Control:	www.cdc.gov .
World Health Organization:	www.who.int/en/ .
Occupational Safety/Health Administration:	www.osha.gov .
Health and Human Services:	www.pandemicflu.gov .



**Pandemic Influenza Annex
Emergency Operations Plan**

**Appendix 13
Communications**

October 2006

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I. Strategy

Using broadcast, print and other forms of media, and employing appropriate risk communications techniques, to disseminate, both internally and externally, timely and appropriate information about avian (“bird”) and human influenza pandemic.

II. Policy Statement

During an avian (“bird”) or human influenza pandemic, carrying out the mission of the department will require effective risk communications strategies so that Florida Department of Health employees, the general public and targeted professionals and responders have the most current information available.

III. Objectives

- To support the department’s efforts relating to disease control.
- To utilize broadcast, print and other forms of media to distribute messages to stakeholders and the public regarding avian (“bird”) or pandemic influenza.
- In support of COOP, to communicate directly with DOH employees so that they have complete information about the situation.
- To enhance planning by the public for a pandemic event.
- To minimize confusion and panic in the general public about avian (“bird”) and/or human pandemic influenza.
- To ensure a timely coherent and coordinated message is disseminated statewide.
- To ensure that communications activities allow for messaging, initiated at both state and local level.

IV. Action Items

- To develop and support a speakers bureau that identifies a cadre of pandemic influenza subject matter experts to fill speaking requests handled by the department.
- To identify events that are likely to create a need for information.
- To develop message maps that define and complement the communications associated with a particular event.
- To develop a Communications Joint Information System (JIS) with appropriate agencies so that messages are complete, easily accessed and not in conflict; to function cooperatively during pre-event stages. Upon activation of the State Emergency Operations Center, the JIS will operate under the Incident Command System and ESF14.
- To update or modify the Florida Department of Health Communications Plan, as needed, to address any activities not already addressed.

A. Speakers Bureau

The Speakers Bureau is maintained and coordinated within the Office of Communications. The coordinator works closely with the Director of Communications. The Speakers Bureau is charged with assigning articulate and educated representatives of the department to address the topic of pandemic influenza at various speaking assemblies. These speakers may address government agencies, community forums or professional meetings.

Presentations may range in length from 15 to 45 minutes. Support materials for popular topic areas are provided to speakers. Speakers who best fit audience needs are chosen for each engagement.

Upon receipt of the request, data on the request is logged, including date, time and place of the event, as well as length of the speech, number in attendance, type of audience and presenter's name. The appropriate county health department is notified whenever a speaking event occurs in a county.

This information is produced in report format on a weekly basis.

B. Pandemic Communications Events

The following list includes the likely events that will create a high need for information by the public and/or stakeholders. The list is not organized along the World Health Organization (WHO) Phases of Pandemic Alert, but rather is a list of events that can happen in Florida while other parts of the world are experiencing vastly different circumstances.

- Communications Event: No confirmed positive-test wild or domestic bird or human in Western Hemisphere/US.
- Communications Event: Undiagnosed large cluster animal or bird die-off.
- Communications Event: Positive-test wild bird in Western Hemisphere or Hawaii.
- Communications Event: Positive-test wild bird in continental US.
- Communications Event: Positive-test wild bird in Florida.
- Communications Event: Suspected/diagnosed domestic fowl in Western Hemisphere or Hawaii.
- Communications Event: Suspected/diagnosed domestic fowl in continental US.
- Communications Event: Suspected/diagnosed domestic fowl in Florida.
- Communications Event: Suspected/diagnosed poultry house.
- Communications Event: Suspected/diagnosed poultry worker.
- Communications Event: Human-to-human transmission/strain mutation anywhere.
- Communications Event: Suspected/diagnosed human in Western Hemisphere or Hawaii.
- Communications Event: Suspected/diagnosed human in continental US.
- Communications Event: Suspected/diagnosed human in Florida.
- Communications Event: Any flu-related death in Florida.
- Communications Event: H5N1 or novel strain death in US.
- Communications Event: H5N1 or novel strain death in Florida.
- Communications Event: Upswing in request for information from agencies.
- Communications Event: Upswing in request for information from citizens.

- Communications Event: Rumors in general public and media.
- Communications Event: Rumors in responder community.
- Communications Event: Fictionalized media event (i.e., movie).
- Communications Event: Religious practice involving fowl.
- Communications Event: Quack medicine, supplies and advice.
- Communications Event: Holiday with fowl as feature food.
- Communications Event: Hunting season.
- Communications Event: Approval of “mismatched vaccine.”
- Communications Event: Approval of “matched vaccine.”
- Communications Event: Announcement of/change in anti-viral priorities.
- Communications Event: Announcement of/change in vaccine priorities.
- Communications Event: Vaccine generally available.
- Communications Event: Change in WHO phase level.
- Communications Event: Activation of local or state EOC.
- Communications Event: Activation of Florida Emergency Information Line.
- Communications Event: Mass casualties.
- Communications Event: Implementation of DOH Continuation of Operations Plan/Continuation of Government (COOP/COG).

C. Message Maps

"Message maps" are risk communication tools used to organize and convey complex information and make it easier to understand. Each primary message has three supporting messages that can be used to provide context for the subject of the primary message.

The primary source for pre-event message maps utilized in the pandemic communications effort is the Department of Health and Human Services (http://www.pandemicflu.gov/rcommunication/pre_event_maps.pdf).

These message maps have been slightly modified for Florida-specific circumstances. Message maps are subject to constant updating as information about avian (“bird”) and pandemic influenza develops. Other message maps will be developed by the Office of Communications to support communications about communications events not covered in the Department of Health and Human Services Pre-Event Message Maps.

For each identified communications event, both those listed above and those identified later, a message map for specific communications event template will be developed by the press secretary that guides the Office of Communications and the county health departments, or the ESF14, during activation of the State Emergency Operations Center (SEOC) in disseminating information to the public and stakeholders utilizing Florida and national media outlets. (See sample in Attachment 1 to this Appendix.)

In completing the template and determining how best to disseminate information, the Office of Communications will follow the strategies and techniques outlined in the communications plan.

D. Joint Information System

A pre-event Communications JIS will be established. Initially, the group will include the Florida Department of Health, Florida Department of Agriculture and Consumer Services and Florida Fish and Wildlife Conservation Commission. The purpose of the JIS will be to provide citizens of Florida, other government entities and the diverse array of stakeholders served by the three agencies with the best and most current information about avian (“bird”) and/or pandemic influenza in an easy-to-find format.

If and when appropriate, other agencies may be included in the pre-event JIS. A copy of the components of the draft proposal for the JIS is included in Attachment 2.

A representative from the Office of Communications of each participating agency will comprise a work group that guides the activities of the JIS. Upon activation of the State Emergency Operations Center, the JIS will come under the Incident Command System and ESF14.

Attachments

Attachment 1. Sample Message Map for Specific Communications Event Template (A template will be completed for each Communications Event identified in Appendix 18.)

Information Dissemination Messaging Materials for Specific Avian("Bird") and/or Pandemic Influenza Communications Events

Communications Event: Positive-test wild bird in Western Hemisphere

WHO Phase: 3

Is SEOC Activated? No
(Yes/No. If yes, then distribution and handling according to NIMS Incident Command System)

Is Media Action appropriate? Yes; periodic

Messaging Themes: Pandemic Influenza (100 Series)
Preparedness (200 Series)
H5N1 Avian Influenza (300 series)

How Determined? Confirmation by appropriate federal scientific agency, in consultation with FDOH Environmental Health and Joint Information System partners.

Who Coordinates? FDOH Communications Director

Who Implements? FDOH Press Secretary

Who Participates? If JIS activity, then participate with principals from JIS (FDOH, FDOACS, FFWCC). If FDOH, then Secretary, Communications Director, Environmental Health.

All methods to be utilized: Press release, other methods as determined by FDOH Communications Director per communications plan (Incorporate sample press release in with this template.)

Press Release? Yes (yes/no/to be determined)

Message Map numbers to be incorporated into Messaging: 100-115, 200-207, 300-313, plus JIS message maps [dead birds to be developed]

Distribution:

Per Office of Communications/
Communications Plan

Attachment 2. JIS Memorandum of Agreement

MEMORANDUM OF AGREEMENT (“MOA”) AMONG THE FLORIDA DEPARTMENT OF HEALTH (“FDOH”), FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES (“FDOACS”) AND FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (“FFWCC”)

I. Purpose

The purpose of this MOA is to establish a Communications Joint Information System (“JIS”) relating to avian (“bird”) and/or pandemic influenza. The purpose of the JIS would be to provide the citizens of Florida, other government entities and the diverse array of stakeholders served by the three Agencies with the best and most current information about avian (“bird”) and/or pandemic influenza in an easy-to-find format.

II. Parties

The parties to this MOA are the Florida Department of Health, Florida Department of Agriculture and Consumer Services and Florida Fish and Wildlife Conservation Commission (“Agencies”).

III. Roles Recognized

This MOA acknowledges the unique mission, role, responsibility, constituency and constitutional and statutory form of each agency.

IV. JIS Activities

1. Initially, each agency’s website will provide a prominent link to each of the other agency sites so that the reader can find more information on avian (“bird”) and/or pandemic influenza.
2. A link on MyFlorida.com will be created that directs the public to a second site (Site) for more information on avian (“bird”) and/or pandemic influenza.
3. The Director of Communications for the FDOH will coordinate with the MyFlorida.com manager for establishing the link at MyFlorida.com.
4. The Site will show the three (3) most relevant messages for each agency and will offer a link to each agency website for more detailed and focused information.
5. The FDOH will technologically host the Site.
6. The relevant messages will be periodically updated on a schedule and in a technological manner to be determined by a work group from the Agencies involved.

7. At a future point in time, to be determined based on the urgency of messaging relating to avian (“bird”) and/or pandemic influenza, the Site will be altered technologically. This alteration will not supplant the individual agency websites, but will mirror the agency websites and consolidate information, allowing the reader to get comprehensive information without leaving the Site location. Links to each agency website will also be provided.
8. While technologically housed at the FDOH, the Site will not display identification relative to the hosting agency other than the messages and links described in Paragraph 2 above.
9. A work group comprised of representatives of the communications function of each participating agency will determine the procedures and content of the JIS.
10. The initial effort of the work group will be to compile the message maps of each agency, review them for contradictions or inconsistencies and craft messages for gaps.
11. Upon activation of the State Emergency Operations Center due to an avian (“bird”) and/or pandemic influenza event, the JIS would be directed out of ESF14 under the direction of Incident Commander and Command Staff.

V. Expanding the JIS

It may be determined in the future that including other agencies in the JIS would be beneficial to the Agencies in the effort of informing citizens of Florida, other government entities and the diverse array of stakeholders served by the three agencies. In that event, this MOA agreement may be modified to include the additional participants.

VI. Costs

Except where otherwise detailed in this MOA, each agency will be responsible for the costs of supporting its own website. The cost of hosting the Site will be borne by the FDOH.

VII. Settlement of Disputes

The parties agree to good faith consultation with one another to resolve disagreements that may arise under or relating to this MOA before referring the matter to any other person or entity for settlement.

VIII. Effective Date, Modification and Termination

This agreement shall become effective upon the signature of all parties and shall remain in effect until otherwise agreed to by the parties. The terms of this agreement may be modified upon the consent and signature agreement of both parties. This agreement may be terminated by any party at any time.

IX. Capacity to Enter into Agreement

The persons executing this Memorandum of Agreement on behalf of his/her respective entities hereby represents and warrants that he/she has the right, power, legal capacity and appropriate authority to enter into this agreement on behalf of the entity for which he/she signs.

Signing on behalf of FDOACS

Signing on behalf of the FDOH

Title of Signatory

Title of Signatory

Date Signed

Date Signed

Signing on behalf of FFWCC

Title of Signatory

Date Signed



**Pandemic Influenza Annex
Emergency Operations Plan**

**Appendix 14
Education and Training**

October 2006

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I. Goals

To develop a comprehensive education and training effort that supports the Department of Health goals of reducing morbidity and mortality during a pandemic influenza event.

Educations and training are important components of any effective, comprehensive strategy. The DOH will educate the public and train DOH employees and partner agencies so that (1) behavioral change occurs that is needed to minimize and control spread of the disease and (2) a well-trained public health responder, provider and DOH workforce are prepared to implement the strategies defined in the Annex and the supporting Appendices.

II. Objectives

- Through education, instill appropriate behaviors in the public to slow the spread of pandemic influenza.
- Train DOH employees, partner agencies, stakeholders and individuals to assist in meeting the department's goals during a pandemic influenza event.
- Support the department's disease control efforts.
- Enhance planning by the public for a pandemic event.
- Minimize confusion and panic in the general public about avian and pandemic influenza.

III. Action Items

Continue, with appropriate representation and input, the work of the Education and Training Committee, focusing on the following activities relating to education and training:

A. Assess Needs

- Identify both internal and external education and training needs identified, or implied in, the Annex or Appendices to the Annex.
- Conduct an assessment to determine additional educational and training needs not already identified or implied in the Annex or Appendices to the Annex.
- Conduct assessment needs of DOH and other key personnel to determine technical education and training.

B. Determine Capacity

- Conduct an assessment to determine educational and training activities already developed, both internal and external, that support the department's efforts.
- Conduct an assessment to identify personnel with education and training expertise who can serve as education and training resources.

- Where appropriate, identify training and educational needs for appropriate partner agencies.
- C. Develop a Comprehensive Education and Training Plan**
- Ensure the comprehensive education and training plan includes strategies for reaching Hard-to-reach Populations.
 - Ensure education and training plan components are developed into education and training curricula and/or tools.
 - Ensure the Pandemic Influenza Education and Training Plan is fully integrated with the Public Health Preparedness Training Strategy.
- D. Develop a Curriculum**
- Identify audiences and levels for each identified education and training need, whether internal or external, and a method for reaching those audiences.
 - Identify the positive and negative behaviors that will enhance or hamper the DOH's efforts relating to disease control.
 - Confirm that the comprehensive education and training effort will support positive behaviors and minimize negative behaviors.
- E. Schedule and/or distribute education and training events and tools statewide.**
- F. Through appropriate evaluation techniques, measure to determine whether the educational and training events and tools result in the desired behaviors that support the department's objectives.**



Pandemic Influenza Annex

Emergency Operations Plan

Appendix 15

**Continuity of Operations Considerations
Pandemic Influenza**

October 2006

Introduction

This document is to be used as a tool to assist the Pandemic Influenza planning process. Listed are some considerations that may need to be incorporated into the planning process and that may shape your group's discussion, draft and final documents. The list is not meant to be exhaustive, and you may develop other considerations as you work through the process of developing your ESF/agency plan.

Continuity of Operations Planning Considerations

- Management of an outbreak, including a considerable medical and public health component, has been the primary focus of the pandemic planning at the national and state levels. However, maintaining operations during an outbreak is rapidly becoming an equal concern because of the impact that the disease will have on economic, social and political aspects of our nation's day-to-day routine.
- Testing and assessing plans that allow staff to provide critical capability while reducing pandemic spread, including working from home or telecommuting.
- Many states or state agencies may find that they do not have sufficient bandwidth or server capacity to allow large-scale telecommuting of its workforce.
- Addressing the problems of conducting state business and developing new requirements for conducting state business (including emergency measures) when travel, meeting and social contact are limited to prevent the spread of disease.
- Identify ways for state government to continue to provide essential services during a pandemic influenza, such as employees telecommuting from home. Ask businesses and local governments to do the same and set up a coordinating council that includes membership of key government agencies, essential private sector industries and the volunteer and faith-based community to help plan for continuity of essential operations.
- High rates of worker absenteeism will cause all entities in the public and private sector to prioritize their essential service delivery capacities and offer alternative methods of conducting business.
- States will also need to define and communicate the leadership roles, responsibilities and lines of authority needed to maintain government operations.
- State governments, or other state or local authorities, will need to address these concerns while also preparing to respond to the next phase or wave of disease.
- A key priority will be ensuring that government operations continue. Each agency must develop a list of service priorities and then develop plans for meeting those priorities. Continuity of operations (COOP) and continuity of government (COG) documents should incorporate such plans.
- After a pandemic wave is over, it can be expected that many people will have lost friends or relatives, suffer from fatigue or have financial losses as a result of the interruption of business.

- To minimize public concerns during the pandemic, the private sector and critical infrastructure entities must respond in a manner that allows them to maintain the essential elements of their operations for a prolonged period of time, to prevent severe disruption of life in our communities.
- The private sector represents an essential pillar of our society because of the essential goods and services that it provides. Moreover, it touches the majority of our population on a daily basis, through an employer-employee or vendor-customer relationship. For these reasons, it is essential that the U.S. private sector is engaged in all preparedness and response activities for a pandemic. Critical infrastructure entities also must be engaged in planning for a pandemic because of our society's dependence upon their services.
- Meeting essential needs during a crisis will pose technical and logistical challenges to state and local officials. Essential needs include goods (e.g., food, water and medical supplies), services (e.g., sanitation, energy and communication), public safety and security (police, fire and rescue), financial services, transportation, mental health care and many other activities. Assessing these requirements and identifying solutions that combine actions by the public and private sectors can be achieved most effectively through exercises undertaken well in advance of any outbreak.
- Identifying the sectors that are most vulnerable during a pandemic will help to determine the potential impact and determine how the effects might be mitigated. For example, states with significant service-based economies and tourism may be hard hit by restrictions on travel and public gatherings.
- Travel restrictions have been shown to reduce geographic spread, as well as total and local incidence during a disease outbreak. Restrictions may be placed on some or all modes of transportation—air, rail, ferry, cruise ship, subway and bus—and may include a range of increasingly stringent limitations, from issuing travel warnings to closing high-risk stops, limiting schedules or canceling travel routes altogether. In addition, residents may be more reassured if it is obvious that states with international points of entry or crowds associated with tourist attractions anticipate their vulnerabilities and inform the public about how they may act during periods when the pandemic is spreading.
- The combined effect of a reduction in state income and increases in spending will impact state budgets significantly. An assessment of the economic impact of a pandemic and the options to address a budget shortfall should be done in advance of the pandemic outbreak. Consultation in communities well in advance of the emergence of the pandemic disease outbreak will have clear advantage over implementation without consultation during the disease episode
- Preparing for a Pandemic Influenza likely result would be both a “demand shock” for service sectors, such as tourism and mass travel, and a “supply shock” due to workplace absenteeism, disruption of production processes and shifts to more costly procedures. In addition, emergency measures, such as quarantines and restrictions on travel and trade, could add to the economic disruption and increase its costs.
- During a pandemic, changes in daily routines and negative behaviors (such as hoarding) will deplete normal stockpiles of materiel and resources.

- A key aspect of any exercise at the state level should be to assess how the state can continue to provide essential services in the absence of significant support from the federal agencies. The state must test its ability to function without reliance on federal or regional assets and resources to reflect the likely conditions that will prevail during a pandemic.
- Encourage and invest in increased food storage in pantries in government facilities, such as schools, prisons, cafeterias, group homes and state institutions. Encourage businesses, [the] faith-based community and individuals to do the same.
- Stockpile equipment and supplies may be in short supply, such as masks, ventilators, hand sanitizers, medications (e.g., antivirals) and some antibiotics for pneumonia.
- High rates of absenteeism could affect the delivery of food, equipment, supplies and commodities at all levels of the economy.
- Food supplies will be limited.
- Many stores will be closed.
- The event would create economic hardships for state and local governments, business owners and individuals.
- In a pandemic situation, the most immediate economic impact might arise not from the number of cases and deaths, but from uncoordinated efforts of the general public to avoid becoming infected.
- Considerations should be given to telecommuting, as appropriate.
- Agencies should encourage employees to develop personal and family preparedness plans.
- In support of the continuation of mission essential or life-sustaining services, an analysis should include the following elements:
 - Highly critical function.
 - FTE's required.
 - Position titles.
 - General educational background, knowledge and certifications required.
 - Specific program training, experience and certifications preferred.
 - Detailed explanation of tasks assigned to this position.
 - Applicable statutory, regulatory to program procedure references.
 - Information system access required for this task.
 - Third-party contacts (if applicable). Provide name(s), affiliation(s) and contact information for member(s) of trade associations and/or local governments, and/or other groups/entities (e.g., retirees) that could potentially perform the highly critical function.



**Pandemic Influenza Annex
Emergency Operations Plan**

Appendix 16

**County Health Department Pandemic Influenza Annex
Minimum Requirements Checklist**

To be developed – October 15, 2006



**Pandemic Influenza Annex
Emergency Operations Plan**

Appendix 17

**Disease Control Guidelines for
Childcare and School Settings**

To be developed - December 2006



Pandemic Influenza Annex
Emergency Operations Plan

Appendix 18

Glossary

AAR	After-Action Report
ACIP	Advisory Committee on Immunization Practices
AHCA	Agency for Health Care Administration
APHIS	Animal Plant Health Inspections Service (USDA)
ARDS	Acute Respiratory Distress Syndrome
BOE	Bureau of Epidemiology
BOI	Bureau of Immunization
BOL	Bureau of Laboratories
BSL	Bio-safety Level (1-3)
CDC	Centers for Disease Control and Prevention
CEMP	Comprehensive Emergency Management Plan
CEOC	County Emergency Operations Center
CHD	County Health Department
CIRP	Catastrophic Incident Response Plan
CMS	Children's Medical Services
DOACS	Department of Agriculture and Consumer Services (FL)
DCA	Department of Community Affairs (FL)
DDC	Division of Disease Control
DEM	Division of Emergency Management (Florida)
DHS	Department of Homeland Security (Federal)
DIRM	Division of Information Resource Management
DOI	Department of Interior (Federal)
EOC	Emergency Operations Center
ESF	Emergency Support Function
ESF8	Emergency Support Function - Health and Medical

ESF14	Emergency Support Function - Public Information
FAC	Florida Administrative Code
FAO	United Nations Food and Agriculture Organization
FDOH	Florida Department of Health
FDLE	Florida Department of Law Enforcement
FEMA	Federal Emergency Management Agency
FHA	Florida Hospital Association
Florida Shots	A statewide electronic immunization registry
FS	<i>Florida Statutes</i>
GOARN	Global Outbreak Alert and Response Network
GPIN	Global Public Health Intelligence Network
HAN	Health Alert Network
HHS	Health and Human Services (federal)
H5N1	Avian Flu virus
HIV	Human immunodeficiency virus: the cause of Acquired Immune Deficiency Syndrome (AIDS)
HPAI	Highly Pathogenic Avian Influenza
ICS	Incident Command System
ICU	Intensive Care Unit
ILI	Influenza-like-illness
JIC/JIS	Joint Information Center/ Joint Information System
LAIV	Live Attenuated Influenza Vaccine
LRN	Laboratory Response Network
LSA	Logistical Staging Area

MAC	Multi-Agency Coordination Center
MSU	Management Support Unit
NIH	National Institutes for Health
NIMS	National Incident Management System
NIP	National Immunization Plan
NRP	National Response Plan
OIE	World Organization of Animal Health
OSHA	Occupational Safety and Health Administration (federal)
PIO	Public Information Officer
PIRP	Pandemic Influenza Response Plan
PPE	Personal Protective Equipment
RDSTF	Regional Domestic Security Task Force
RERA	Regional Emergency Response Advisor
SARS	Severe Acute Respiratory Syndrome
SEOC	State Emergency Operations Center
SNS	Strategic National Stockpile
SOG	Standard Operating Guide
SWP	State Warning Point
TAG	Technical Assistance Group
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
VA	Veteran's Affairs
VAERS	Vaccine Adverse Events Reporting System
VFC	Vaccine for Children
WHO	World Health Organization

WIC	Women, Infants and Children
WMD	Weapons of Mass Destruction