Pandemic Influenza Prevention and Control Plan
Response to an Influenza Pandemic

LA Department of Health and Hospitals

Office of Public of Health

Immunization Program

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TABLE OF CONTENTS

Purpose…… 3
Key Role of DHH-OPH…… 3
Background – Epidemiology of Pandemic Influenza……... 4
Pandemic Influenza: A High Priority for Planning……. 5
Policies…….6
Pandemic Phase Chart……..6
Part A: Command, Control and Management Procedures…….....7
I. Lead State Agency……..… 7
II. Support State Agencies and Component Agencies. ……7
III. Support Federal Agencies…… 7
IV. Other Partners/Stakeholders…….…7
V. Organization and Management……. 7
VI. Statutory and Operational Authority…… 8
VII. Federal Operational Authority…… 9
VIII. State and Local Operational Authority……. 9
IX. Guidelines for Pandemic Influenza Planning…… 10
X. Planning for Command and Control of Pandemic-related Activities… 11
XI. Information Strategy for Incident Management…..……12
Part B: Components of the Pandemic Influenza Plan……. 13
I. Surveillance…….……13
A. Virus and Disease Surveillance in Humans…… 13
II. Veterinary Surveillance…… 17
Part C: Vaccine Delivery…… 18
I. Introduction…….18
II. Current Vaccine Distribution……. 19
III. Pandemic Vaccine Supply and Distribution…… 20
IV. Louisiana Mass Distribution Policy…… 24
V. Vaccine Monitoring and Evaluation…… 26
Part D: Antiviral Drugs…….. 26
Part E: Communications…… 30
Part F: Infection Control Recommendations……32
Glossary…… ..39
Appendix A WHO Pandemic Phase Identification……41
Appendix B Partners and Stakeholders..……45
Appendix C Available Personnel and Resources of LA DHH, LA OPH and LA OEP to Assist in Pandemic Response …..…… …46
Appendix D Sample Standing Delegation Orders for Immunizations…. ……48
Appendix E Regional and Local Health Unit Site Plan…….52
Appendix F VAERS Sample Form ……..…… 54
Appendix G Communication Shelf Kit…….58

Purpose

The purpose of this plan is to provide a guide for the Louisiana Department of Health and Hospitals Office of Public Health (DHH-OPH) in collaboration with other federal, state and local agencies on the detection and response to pandemic influenza in Louisiana. This plan establishes the framework and guidelines for ensuring that an effective system of health and medically related emergency management is in place to contain adverse outcomes associated with an influenza pandemic. Because the response to pandemic influenza will use much, if not all, of the same infrastructure as needed for response to bioterrorism events, this guide highlights areas that are specific to pandemic influenza and may require the specific additional consideration of disease and laboratory surveillance, emergency management, delivery, distribution and use of vaccine and antiviral drugs, and communication activities. The Louisiana Pandemic Influenza Plan shall be integrated as an annex to the LA Department of Health and Hospitals Emergency Operations Plan – Weapons of Mass Destruction (WMD) Incident Plan.

All state and local governments are required to have an emergency management plan which addresses all hazards. However, pandemic influenza is likely to pose unique challenges that may not be addressed in current emergency management plans. Because of the many unique challenges that will arise, emergency management plans should incorporate the pandemic influenza plan as an appendix to the existing plan. Some of the relevant issues that must be addressed in these plans include:

1. Medical services and numbers of available healthcare workers being overwhelmed during the influenza pandemic
2. Healthcare workers not being able to provide essential care to all patients in need due to lack of resources of personnel and materials
3. Because of increased exposure to the virus, essential community services personnel such as healthcare personnel, police, firefighters, emergency medical technologists, and other first responders, being more likely to be infected and affected by influenza than the general public
4. An influenza pandemic poses significant threats to the human infrastructure responsible for critical community services due to widespread absenteeism in the workforce, i.e. the distribution of food, the deliveries of home health and home meal services, day care providers, garbage collectors, morticians and cemetery burial service personnel and other similar critical services.

Key Role of the DHH – OPH

A coordinated response to pandemic influenza requires collective infrastructure and response capacities, as well as coordinated activities that will permit the DHH-OPH to anticipate problems, monitor for adverse outcomes, and respond to minimize the impact of a pandemic influenza event. Key DHH roles within this response include:

1. Assist hospitals in the development of a public health emergency plan
2. Assist local healthcare facilities in the development of mass fatality plans for facility-based deaths (e.g. hospitals, nursing homes, mental health units).
3. Assist local health departments, coroners, funeral directors and vital

records registrars and medical examiners in the development of a mass fatality plan for deaths (e.g. facility based deaths vs community deaths)

4. Participation in local mass fatality disaster exercises.
5. Maintain a statewide inventory of resources including, medical facilities, medical supplies and services that may be used during the influenza pandemic including universal security paper for issuing certified death certificates
6. Review plans for methods of disposition in a mass fatality situation.
7. Assist local registrars in developing plans for filing and issuing death certificates in a mass fatality situation

In addition, this action plan, as with other strategic plans that address emerging disease threats from terrorism, represents an evolving process that must be periodically reviewed and updated to ensure that the plans are consistent with current knowledge and changing infrastructure. In the event of a pandemic, the judgments of the public health leadership, based on the epidemiology of the disease and the extent of the population affected, may alter or override anticipated strategies and plans.

Background - Epidemiology of Pandemic Influenza

Influenza viruses are unique in their ability to cause infection on a global scale in all age groups. In addition to the highly transmissible nature of influenza, the virus can change its antigenic structure, resulting in novel sub-types that have never occurred in the human population. Major shifts in the viral sub-types are associated with influenza pandemics. The 1918 influenza pandemic caused more than 20 million deaths worldwide while the pandemics of 1957 and 1968 resulted in lower mortality rates due in part to antibiotic therapy for secondary bacterial infections and more aggressive supportive care. These pandemics were associated with high rates of morbidity and social disruption.

Pandemic influenza is a unique public health emergency and community disaster. It is considered a highly probable, if not inevitable, event that no one can predict when it will occur. There may be little warning, but most experts agree that there will be one to six months between identification of a novel virus and widespread outbreaks in the U.S. It is widely hypothesized that outbreaks will occur simultaneously throughout the U.S., and the effect on individual communities will last at least from six weeks to months.

Certain conditions make an influenza pandemic more likely:

- A new influenza A virus arising from a major genetic change, i.e., an antigenic shift.
- A susceptible population with little or no immunity;
- A virus that is transmitted efficiently from person to person; and
- A virulent virus with the capacity to cause serious illness and death.

Pandemic Influenza: A High Priority for Planning

Several features set pandemic influenza apart from other public health emergencies or community disasters, including typical annual winter time outbreaks of influenza:

- Influenza pandemics are expected but unpredictable and arrive with very little warning.

- Outbreaks can be expected to occur simultaneously throughout much of the U.S., preventing shifts in human and material resources that usually occur in the response to other disasters. Localities should be prepared to rely on their own resources to respond. The effect of influenza on individual communities will be relatively prolonged (weeks to months) in comparison to other types of disasters.

- Health care workers and other first responders may be at higher risk of exposure and illness than the general population, further straining the health care system.

- Effective prevention and therapeutic measures, including vaccine and antiviral drugs, will be delayed and in short supply.

- Widespread illness in the community could increase the likelihood of sudden and potentially significant shortages of personnel in other sectors which provide critical public safety services.

- Because of the high degree of infectiousness and contagiousness of pandemic influenza, the number of persons affected in the United States will be high and is estimated by CDC that
  - o Up to 200 million persons will be infected
  - o Between 38 million and 89 million persons will be clinically ill
  - o Between 18 million and 50 million persons will require outpatient care
  - o Up to 2,000,000 persons will be hospitalized
  - o Between 100,000 and 500,000 person will die

- According to Meltzer's[1] assumption using his FluAid software program which estimates the impact of an influenza pandemic, the estimated impact within Louisiana (population estimate 4,351,769) is predicted
  - o Between 272,243 and 1,158,853 persons will be clinically ill
  - o Between 2,437 and 22,215 persons will be hospitalized
  - o Between 920 and 6,611 persons will die

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[1] Meltzer MI, Cox NJ, Fukuda K. 1999b. Modeling the economic impact of pandemic influenza in the United States: Implications for setting priorities for intervention. Background paper: available on the Web at: **http://www.cdc.gov/ncidod/eid/vol5no5/melt_back.htm**

Policies

Early identification of pandemic influenza is essential to responding rapidly and successfully with available influenza vaccination and/or antiviral drugs. The Louisiana Department of Health and Hospitals is the responsible State agency that will coordinate the pandemic influenza response in Louisiana.

Pandemic Phase Chart

National pandemic planning is divided into several phases, from early identification of a novel virus to resolution of pandemic cycling. These phases are determined and announced by the CDC in collaboration with the World Health Organization [WHO, Appendix A] These declared and defined phases will help ensure a consistent and coordinated response by national, state, and local agencies in the event of a pandemic influenza occurring. The intent is for all activities listed in this document to be initiated during the assigned pandemic phase. Some activities will, of course, continue during subsequent phases. The pandemic phase table below is based on the phases outlined in the World Health Organization's *"Influenza Pandemic Preparedness Plan: The Role of WHO and Guidelines for National and Regional Planning,"* Geneva, Switzerland, April 1999.

Pandemic Phase Chart

PANDEMIC PHASE	DEFINITION
WHO Phase 0, Level 0	*Interpandemic Period*. No indication of any new virus types.
WHO Phase 0, Level 1	*Interpandemic Period*. New influenza strain in a human.
WHO Phase 0, Level 2	*Novel Virus Alert*. Human infection confirmed in 2 or more humans.
WHO Phase 0, Level 3	*Human Transmission Confirmed*. Person-to-person spread in the general population.
WHO Phase 1	*Onset of Pandemic*. Several outbreaks in at least one country with spread to other countries.
WHO Phase 2	*Pandemic*. Outbreaks and epidemics in multiple countries, spreading region by region across the world.
WHO Phase 3	*End of First Wave*. Activity in initially affected regions/countries stopped; outbreaks still occurring elsewhere.
WHO Phase 4	*Second Wave*. Second outbreak in a region, 3-9 months after initial wave.
WHO Phase 5	*Post Pandemic*. Pandemic period over, likely 2-3 years after onset; immunity to new virus type is widespread in the population.

PART A: COMMAND, CONTROL AND MANAGEMENT PROCEDURES

I. Lead State Agency: Louisiana Department of Health & Hospitals
Louisiana Office of Public Health
(Medical and Administrative Command)

II. Support State Agencies and Component Agencies:

Louisiana Office of Homeland Security and Emergency Preparedness
Louisiana Emergency Response and Bioterrorism
Louisiana DHH-OPH Central Pharmacy
- Immunization Program
- Infectious Disease Epidemiology Section
- Laboratory Services
- Regional Offices
- Parish Health Unit Facilities
- Emergency Medical Services

Louisiana Office of Mental Health
Louisiana Office of Management and Finance
Louisiana for Citizens with Developmental Disabilities
Louisiana Office for Addictive Disorders
Louisiana Department of Public Safety & Corrections
Louisiana Department of Transportation & Development

III. Support Federal Agencies: Centers for Disease Control and Prevention
Federal Emergency Management Agency (FEMA)
U. S. Army Medical Department

IV. Other Partners/Stakeholders: (see Appendix B)
Alliance for Immunization Management Coalition
LA Childhood Immunization Coalition
Louisiana Healthcare Review
Nursing/Medical/Pharmacy Associations

V. Organization and Management

The Louisiana Pandemic Influenza Plan is the DHH-OPH standard operating procedure for this type of public health emergency and shall be integrated with bioterrorism response planning activities. The Louisiana DHH Office of Public Health (DHH-OPH) will be the lead agency in a government-wide response to accomplish the task of vaccinating and/or medicating the citizens of Louisiana against influenza. Specifically, the DHH-OPH will stage the task in such a manner that higher priority groups are vaccinated and/or medicated first and lesser priority groups next. The DHH-OPH will act as the lead agency through the nine component regional health departments and two metropolitan parish health departments (Orleans and Plaquemines parishes) and provide a regional approach to coordinate a mass vaccination/medication strategy. The DHH-OPH is working closely with the Louisiana Hospital

Association (LHA) and acute care hospitals to implement emergency vaccination strategies. The Louisiana Office of Homeland Security and Emergency Preparedness' (LOHSEP) Emergency Operations Center in Baton Rouge, in almost all disasters, maintains direction and control and serves as the central clearinghouse for disaster-related information and requests for assistance from local government. After an area has been impacted by a major disaster, the state continues to provide support to local communities through response and recovery operations. Recovery assistance includes community relation teams and coordination with unmet needs committees and all other federal, state and local governmental and cooperating voluntary private agencies, as outlined in detail in the state's official general Emergency Preparedness Manual. The DHH-OPH is always represented at the Office of Homeland Security and Emergency Preparedness' Emergency Operations Center, when it is activated. Simultaneously, the DHH-OPH maintains its own Health Emergency Operations Center located in Baton Rouge which coordinates specific public health activities statewide, and is in constant communication with the LOHSEP.

The planning for and response to pandemic influenza preparedness planning is under the overall direction of the State Health Officer. The OPH Emergency Preparedness and Response Program is in charge of the overall planning for all bioterrorism events. The Immunization Program within OPH is charged with the development and implementation of pre- and post-event smallpox activities and pandemic influenza preparedness activities. The State Epidemiologist who serves over the DHH-OPH Infectious Disease Epidemiology Section will coordinate activities with the LHA, the Bioterrorism Executive Committee, the Hospital Preparedness Advisory Committee and all Louisiana hospitals.

VI. Statutory and Operational Authority

1. The State of Louisiana has in place statutes and rules necessary for preparedness and response to pandemic influenza. Operational authority is also in place for public health and other health-related emergency response entities at the state, regional and local levels of government. The federal government has been granted authority to support affected states or jurisdictions as necessary.

2. The statutory authority for responding to an influenza pandemic is identified in the Louisiana Administrative Code (LAC), Title 51, Public Health Sanitary Code which pertains to communicable diseases and control activities:

   • Communicable Disease Reporting
   • Quarantine and Isolation
   • Investigation and Control Measures

   The Public Health Sanitary Code can be found at http://www.state.la.us/osr/lac/51v01/51v01.pdf. Rules can be found in Title 51, Part II - The Control of Diseases. These statutes include specific information on the reporting and control of communicable diseases. Although influenza illness is not reportable in Louisiana, it is the duty of the all physicians to report all cases of rare or exotic communicable diseases, unexplained deaths and unusual clusters of disease, allowing outbreak control measures to be implemented immediately.

3. In general, the federal government has primary responsibility for preventing the introduction of communicable diseases from foreign countries. States and local jurisdictions have primary responsibility for isolation and quarantine within their borders. By statute, the Department of Health and Human Services (DHHS) Secretary may accept state and local assistance in the enforcement of federal quarantine and other health regulations and may assist state and local officials in the control of communicable diseases. Public health officials at the federal, state, and local levels may seek the assistance of their respective law enforcement counterparts to enforce a public health order related to isolation and quarantine.

4. An effective response to pandemic influenza will require coordinated efforts of a wide variety of organizations, both public and private, and health as well as non-health related.

VII. Federal Operational Authority

1. The federal Department of Health and Human Services (DHHS) released a draft version of the national Pandemic Influenza Response and Preparedness Plan in September 2004; this plan is available at http://www.hhs.gov/nvpo/pandemicplan/

2. The DHHS is the U.S. Government's federal lead agency for the preparation, planning, and response to an influenza pandemic. As such, the DHHS will:
   - Coordinate the U.S. Government's federal response to the public health and medical requirements of an influenza pandemic
   - Provide the DHHS Secretary's Command Center (SCC) as the national incident command center for all health and medical preparedness, response, and recovery activities
   - Authorize CDC as the primary agency responsible for tracking the pandemic outbreak and managing the operational aspects of the public health response

3. To this end, CDC will augment local and state resources for a pandemic response, as available in the following areas:
   - Disease surveillance
   - Epidemiological response
   - Diagnostic laboratory services and reagents
   - Education and communication
   - Disease containment and control
   - Vaccine liaison/management

VIII. State and Local Operational Authority

1. While this plan serves as a guide for specific influenza intervention activities, during a pandemic the judgment of public health leadership, based on the knowledge and epidemiology of the specific virus, may alter the strategies that have been outlined.

2. State, Regional and local officials provide the first line of response with respect to preparing and planning for a pandemic at their own jurisdictional level to:

   - Identify and manage local resources to deal with a pandemic.

- Appropriately isolate ill persons and recommend appropriate resources within mass quarantine measures.
- Impose other community containment measures as required.

IX. Guidelines for Pandemic Influenza Planning

1. Planning for pandemic influenza encompasses a variety of activities and involves persons representing a range of disciplines and expertise.

2. Planning for pandemic influenza shall be done in the context of the responsibilities of the particular health agencies and the division of responsibilities in the jurisdiction.

- Executive Committee. An executive committee has been designated to oversee a pandemic influenza planning process, in cooperation with Regional and local agencies and other partners. This committee is chaired by the State Health Officer and is composed of members representing:

  - Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP)
  - Office of Public Health Assistant Secretary
  - Office of Public Health Medical Director
  - Office of Public Health Emergency Response Director
  - State Epidemiologist
  - Immunization Program Director
  - Influenza Surveillance Coordinator
  - Office of Public Health Chief Nurse
  - Office of General Counsel
  - DHH Office of Communications

- LA DHH Command Center. The state has designated LA DHH to govern roles and responsibilities during a multi-agency, multi-jurisdictional response to a public-health related event such as an influenza pandemic. In the event that the state LOHSEP is activated, the LA DHH will serve in a consulting capacity, with the state LOHSEP leading the emergency response.

- Legal Preparedness Plan. The legal preparedness plan includes isolation and quarantine, disease reporting and control.

- Public Health Authority. The State Health Officer, the Secretary of DHH, the State Epidemiologist, and DHH Emergency Preparedness Response Director have the authority to declare a public health emergency and for officially activating the State Pandemic Influenza Plan. The State Health Officer also has the authority to issue an emergency order declaring a disease or condition reportable for 90 days without change of rule process.

- Enforcement. The Attorney General of Louisiana will provide enforcement of Louisiana Statutes specific to pandemic influenza.

- Governor and Other Agency Heads. The Louisiana (LA) Governor's Office and other agency heads are addressed in the LA Emergency Operations Plan – Weapons of Mass Destruction Incident Plan in the event of an influenza pandemic that requires LOEP activation.

- Transportation Command and Control. Controlling authorities over intrastate and interstate modes of transportation in the event that these need to be curtailed during an outbreak include the Governor, State Health Officer (as lead technical advisor), LA Department of Transportation, law enforcement, and LA Office of Emergency Preparedness.

- Inter-State Coordination. The State Epidemiologist will work cooperatively with adjoining states, the CDC, and other federal agencies to ensure effective communication.

- Medical Personnel Coordination. The Office of Emergency Medical Services has authority to coordinate different medical personnel groups, such as private and public ambulance services and emergency medical technical personnel, during an outbreak.

- Public Order and Enforcement Control. Local law enforcement will assist in maintaining public order and enforcing control measures during an outbreak.

- Additional emergency response resources are articulated in the DHH Emergency Operations Plan – Weapons of Mass Destruction Incident Plan (March 2002).

X. Planning for Command and Control of Pandemic-related Activities

1. The existing Emergency Operations Plan will be used to respond to a widespread public health threat posed by pandemic influenza which has been classified with other Class A agents.

2. In the event of an influenza pandemic, the State Epidemiologist will advise the State Health Officer to recommend Emergency Response Team activation.

3. Agencies will be formed into the State Medical Assessment Teams (SMAT) and the Public Health Emergency Response Teams (PHERT) which have been organized to perform and coordinate services necessary for rapid, effective response to an emergency event. The lead technical agencies are outlined in the DHH WMD Incident Plan. The SMAT and other supporting agencies have divided activities for preparation, response, and recovery phases. Response phase actions to pandemic influenza will be based on the size and severity of the disease event.

4. Pandemic influenza affects and involves a variety of public and private agencies/organizations at the local, regional, state, and federal levels. These agencies

must coordinate their activities and resources and sharing information in real time. To sustain coordinated efforts required to control pandemic influenza, the LA Emergency Assistance and Disaster Act of 1993 will be followed. The LA Office of Homeland Security and Emergency Preparedness will lead the state response.

5. The Office of Public Health Team (OPH) (see Appendix C) is responsible for public health issues including identifying and tracking an influenza pandemic and informing the medical community about preventive and protective measures. The OPH will convene and operate in the LA DHH Health Emergency Operations Center Command Center. The DHH Health Emergency Operations Center will work with CDC's Emergency Operations System, which includes the Director's Emergency Operations Center (DEOC).

6. The State Health Officer and Secretary of DHH will advise the Governor on control measures to prevent the spread of pandemic influenza. Control measures may include mass quarantine measures.

XI. Information Strategy for Incident Management Structure

1. The success of efforts to rapidly detect, respond to, and contain an outbreak also depends in large part on the availability of information systems. These systems can support and coordinate the activities generated within an Incident Management Structure.

2. Within Louisiana, the Public Health Information Network (PHIN) includes the following components that are in use or under development:

- The Health Alert Network (HAN) is a communications system designed to immediately alert key health officials and care providers in Louisiana to acts of bioterrorism as well as other types of emerging disease threats. In the event of an influenza pandemic, the HAN can be used to rapidly disseminate information on pandemic activity in Louisiana as well as WHO and CDC information and alerts regarding the pandemic.

- A National Electronic Disease Surveillance System (NEDSS), is under development in Louisiana, and will include an outbreak module which will enable users to report cases electronically to the State Health Department. The anticipated date of completion for a NEDSS system in Louisiana is early 2006.

- The Louisiana Immunization Program has developed the Louisiana Immunization Network for Kids Statewide (LINKS) system which is the Immunization Registry for tracking both pediatric and adult immunizations such as influenza and pneumococcal vaccines.

- The Louisiana Hospital Emergency Surveillance System enables electronic reporting from hospital emergency departments transmitting to a central database for monitoring emergency department data regarding specific syndromes, such as influenza-like illnesses.

3. The DHH-OPH will distribute news releases, manage press conferences, and insure all necessary emergency information is available in public venues. The DHH Office of Communications will coordinate and release public information throughout the pandemic phases in complete collaboration with the LOHSEP.

PART B: COMPONENTS OF THE PANDEMIC INFLUENZA PLAN

I. Surveillance

Surveillance for influenza requires global and national monitoring both for virus strain and disease activity. Timely identification of circulating or novel virus strains includes detection from avian and animal sources as well as human cases. Monitoring influenza disease activity is important to facilitate resource planning, communication, intervention, and investigation. The essential requirement for effective state pandemic surveillance is a well-functioning inter-pandemic system that includes: Louisiana's participation in all aspects of influenza surveillance as outlined by the Centers for Disease Control and Prevention (CDC). This includes virologic surveillance by the OPH State Laboratory, active surveillance of influenza-like illness (ILI) by sentinel providers, overall state level of influenza activity in Louisiana, and the 122-Cities pneumonia and influenza mortality system, of which 3 cities (New Orleans, Baton Rouge and Shreveport) are inclusive in reporting mortality data. Influenza surveillance in Louisiana also includes the investigation of outbreaks of influenza, monitoring influenza-like illness (ILI) in hospital emergency departments (EDs), and case investigations of severe illness and deaths associated with influenza. In the event of an influenza pandemic, routine surveillance systems shall be flexible and be rapidly adapted to respond to the challenges of a pandemic such as assessing and monitoring the pertinent epidemiology of the pandemic influenza virus. In the early phases of a pandemic, surveillance systems will need to have the sensitivity to detect and characterize circulating strains of influenza virus as well as early human cases of a novel virus in the state. In the later phases, enhanced surveillance activity will be needed to assimilate large amounts of data to determine age-specific attack rates, morbidity, and mortality

a. Virus and Disease Surveillance in Humans

The influenza surveillance system consists of four components: laboratory surveillance, outpatient influenza-like-illness (ILI) surveillance, pneumonia and influenza related mortality surveillance, and assessment of influenza activity within the state. Traditionally, influenza surveillance has been conducted from October through April. Surveillance efforts have moved toward year-round reporting as a means to recognize unusual outbreaks and pandemic influenza that can occur at anytime. Enhancing this system by increasing the number of sites that obtain specimens for laboratory testing and

strain identification would improve the likelihood that an antigenic drift or antigenic shift in influenza strains are rapidly detected.

Multiple surveillance activities for influenza are conducted in Louisiana as part of the national monitoring system that includes ongoing activities such as:

- **Routine annual influenza surveillance** system is actively conducted from late October to April each year with a subset of sentinel sites conducting year-round surveillance outside of the "typical" influenza season. Viral testing and physician reporting of unusual cases/clusters will continue with further case investigation as needed.

- **Virologic surveillance** conducted by LA Office of Public Health Laboratory by which the state laboratory provides viral isolation and serologic testing for influenza on specimens submitted by both sentinel and non-sentinel sites. The laboratory capabilities include:

  1) isolate and subtype influenza viruses during the influenza season with maintenance capability year round and utilization of PCR testing. Voluntary submission of influenza virus isolates by clinical virology laboratories to OPH laboratory should be done for viral subtyping.

  2) perform viral culture and rapid influenza testing for influenza A and B on select specimens to facilitate outbreak investigation and control.

  3) send select influenza isolates submitted from clinical virology laboratories to the CDC for antigenic analysis. Maintain submission of respiratory specimens to the laboratory from providers in the state that participate in the sentinel provider specimen submitter network

  4) transmit influenza data (positives and negatives) electronically to CDC via the Public Health Laboratory Information System.

  5) implement the contingency plan for enhancing virologic and disease-based surveillance systems in the event of a novel virus or pandemic alert as a critical component of a state pandemic plan including:

     a) Laboratory surge capacity - the laboratory has cross trained staff to ensure adequate personnel for influenza viral testing

     b) Laboratory safety issues – OPH Central Laboratory has been designated as a Biosafety Level II lab with potential upgrade to Biosafety III to handle critical agents.

  6) implement enhanced laboratory surveillance to include the following:
     a) Notification of public health/sentinel providers to collect respiratory specimens from patients who present with ILI and:

- had recent travel to a region where a novel strain of influenza has been identified;
- or had received influenza vaccine within the previous year and present with ILI;
- or present with unusually severe symptoms of ILI regardless of their travel history
- one respiratory specimen should be submitted directly to the OPH lab to test for the novel influenza virus. The submitter may send a duplicate specimen to their usual laboratory provider for detection of influenza viruses
- during periods of low influenza activity, laboratories and rapid influenza test sites should forward to the OPH lab:
    - specimens that are rapid test positive for influenza for confirmation of test results
    - influenza isolates for subtyping and subsequent characterization at CDC

• **Disease-based sentinel surveillance** is conducted by a voluntary network of sentinel providers as part of the U.S. Sentinel Provider Network. This program has been established within the state and is conducted in joint collaboration with CDC (with at least the minimum number of health care providers - 1/250,000 persons or a minimum of 10 providers in states with smaller populations) with regular reporting of weekly data to CDC via the Internet year-round. All providers are encouraged to send specimens collected from patients with ILI at the beginning, middle, and end of the season to the state laboratory for viral culture at no charge to the provider. This project provides a central repository for influenza morbidity and virologic surveillance data that can be readily analyzed by CDC.

Currently, Louisiana has an active State Influenza Surveillance Coordinator who:

a) Monitors sentinel provider data for the reporting of ILI by four age group categories (0-4 years, 5-24 years, 25 – 64 years and > 65 years) on a weekly basis
b) Provides feedback and maintains contact with sentinel providers weekly to encourage reporting and follow-up on unusual reports
c) Contributes to state pandemic planning issues and activities
d) Establishes and maintains strong working relationships with the public health laboratory and other laboratories performing primary isolation
e) Encourages sentinel providers to actively submit at least 3 ILI specimens for viral culture to the state laboratory
f) Conducts weekly assessment of overall influenza activity level in the state and reporting of that data to CDC by noon each Tuesday

During the 2004-2005 influenza season, there were 127 providers in Louisiana who participated in the Sentinel Providers Network and include:

- 25 Hospitals
- 64 Private providers
- 18 Schools
- 20 Nursing homes

- **122-Cities Pneumonia and Influenza Mortality Reporting includes 3 major cities in Louisiana** (New Orleans, Baton Rouge & Shreveport, LA) reported in the CDC MMWR

- **Level of influenza activity** within Louisiana reported weekly by State Influenza Coordinator as "widespread", "regional", "sporadic", "local", and "no activity".

- **Voluntary reporting of ILI outbreaks** in long-term care facilities and schools

- **Investigations of deaths and severe illness** as recommended by the CDC in children less than 18 years of age.

- **ILI surveillance in hospital EDs** is conducted in 25 hospitals across the state. Information on ILI is obtained from the Infection Control Practitioners (ICPs) that is submitted weekly. The ILI data summary is derived from ICD-9 codes which identify ILI cases from ER visits and inpatient census. Further case investigations on patients hospitalized at their institutions are conducted on those who have unusual clinical syndromes or severe morbidity associated with influenza. The ICPs also assist in the reporting and investigations of pediatric deaths associated with influenza.

- **Syndromic surveillance for ILI is being conducted in hospitals across the state via** the Louisiana Hospital Emergency Room Syndromic Surveillance System. 101/120 acute care facilities in LA participate in syndromic sureveillance for emergency departments which enables electronic data from hospital emergency departments to be transmitted to a central database that LA Infectious Disease Epidemiology Section will monitor for specific syndromes, such as ILI and BT incidents.

- **Syndromic surveillance for bioterrorism preparedness with EMS for** Fever and Acute Respiratory Distress syndrome. There are 19 services from the major metropolitan areas of the state participating in this web-based system called Emergency Medical Services Syndromic Surveillance (EMSSS) which is a part of the state's Reportable Disease Database.

- **Outbreak investigation** of reported ILI clusters at long term care facilities and other institutions will be a collaborative effort between the Infectious Disease Epidemiology Section and the Immunization Program (see *Guidelines for Pneumonia/Influenza Outbreaks or Clusters in Long Term Care Facilities*)

- **Through CDC Epi-X** and other communications methods sustain a communication network with epidemiologists and public health laboratories sharing information regarding the detection and circulation of novel influenza viruses

The Louisiana Immunization Program is exploring contingency plans for enhancing State and local virologic and disease-based surveillance systems for novel respiratory illnesses and unexplained deaths at local hospitals; surveillance at clinics catering to international travelers; and surveillance of persons from geographic areas in which the novel strains have been isolated.

II. Veterinary surveillance

A pandemic influenza virus strain is likely to arise from re-assortment of animal and human influenza viruses. Coordination of surveillance with the U.S. Department of Agriculture (USDA) is critical, given USDA's responsibility to conduct influenza surveillance in domestic animals. The LA Department of Agriculture & Forestry (LDAF), Office of Animal Health Services State Veterinarian in close association with USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS) is generally responsible for the development and implementation of surveillance programs that are consistent with the size and complexity for the resident commercial and backyard poultry industry. Establishing communication links between USDA APHIS VS, LDAF and LA OPH regarding avian and swine influenza surveillance is necessary in order to exchange information for early identification and intervention measures. The USDA APHIS VS is monitoring for the presence of avian influenza viruses that may pose a threat to commercial poultry.

- **Testing for influenza in poultry and swine** is conducted by the LA Department of Agriculture & Forestry and the respective industries. The requirement for the reporting of contagious (animal) diseases follows the protocol described in Title 7 XXI: §121. The plenary power to deal with contagious diseases of animals is within Title 3: chapter 16, Part 1: §2095. The State Veterinarian, as an employee and executive secretary of the Livestock Sanitary Board has plenary power to deal with any contagious disease involving animals.

  If an animal owner, county agent, or veterinarian suspects a disease, they are required to report it within 24 hours by several means (phone, fax, email, etc). A list of diseases, including Highly Pathogenic Avian Influenza (high path AI), is included in Title 7 XXI: §121. All public practice veterinarians, including state and federal, are trained at Plum Island to be foreign animal disease diagnosticians. They are required to submit highly suspicious samples to the National Veterinary Medical Disease Laboratory in Ames, IA. If the sample is determined to be positive, the USDA APHIS VS area veterinarian in charge (AVIC) and the State Veterinarian would begin a unified command system. Quarantine measures

would have been implemented and enhanced surveillance with testing would simultaneously occur. The USDA, the lead agency, would collaborate with the state in the operational management of the public health response to the novel viruses identified.

Part C. Vaccine Delivery

I. Introduction

Vaccination of susceptible individuals is the primary means to prevent disease and death from influenza during an epidemic or pandemic. The Advisory Committee on Immunization Practices (ACIP) produces annual recommendations on the use of influenza vaccine in persons who are at risk for influenza or for those who could spread influenza to persons at greatest risk. These inter-pandemic recommendations are also published annually in Louisiana using a variety of media options. The annual distribution and administration of vaccine for each winter's predicted strain of influenza is a collaborative process involving both the public and private sectors. The vaccine type is predicted annually by the Centers for Disease Control and Prevention (CDC) approximately 18 months before the anticipated influenza season. Two U.S. and one English Pharmaceutical manufacturers produce approximately 70 to 80 million doses over a six to eight month production period with the influenza vaccine ready for distribution from October through February.

Except for some children under 9 years of age, effective immunization is generally achieved with a single dose of vaccine. Approximately 90 percent of the vaccine is administered by the private sector and is directed toward high-risk individuals as defined by the Advisory Committee on Immunization Practice (ACIP).

A relative shortage of vaccine should be anticipated especially early in the pandemic. Prioritizing of persons receiving the initial doses of vaccine will be necessary. As information about the impact of the novel virus becomes available, recommendations will be formulated at the national level, which may need to be adapted at the state level depending on local factors. The State of Louisiana will build upon the existing infrastructure identified for mass vaccination of the population. Immunization clinics for influenza vaccine will require less staff-to-client time, but there will be a need for tracking to ensure appropriate receipt of vaccine. Monitoring of vaccine adverse events will be utilized through the Vaccine Adverse Reporting System (VAERS).

The US Department of Health and Human Services has listed the following goals of vaccination in its *Pandemic Influenza Preparedness and Response Plan*:

- Goal 1: Maintain the ability to provide quality health care, implement pandemic response activities and maintain vital community services.
- Goal 2: Protect persons at highest risk for influenza mortality.
- Goal 3: Decrease transmission of infection to those at highest risk for influenza mortality.
- Goal 4: Maintain other important community services.
- Goal 5: Protect the susceptible population at large.

These goals are the foundation for the pandemic planning issues associated with the identification of priority groups to receive vaccine. Priority groups include those essential personnel (e.g., healthcare workers, first responders, and public safety officers) that will maintain the capacity to implement pandemic response activities. Direct protection of high-risk persons for influenza and their family members, (high-risk groups defined by the Advisory Committee on Immunization Practices on an annual basis) should be considered as an effective strategy in decreasing the transmission of influenza and influenza-related morbidity and mortality. It is not known what additional prioritization may occur, however, state and local public health officials shall identify members of these priority groups in advance of a pandemic as part of the strategy goals to decrease health, social and economic impacts within LA communities. This strategy shall be flexible and responsive not only to vaccine supply, but also to the epidemiology of the pandemic.

The success of the pandemic influenza vaccination strategies will be determined in large part by the strength of state and local vaccination programs during the inter-pandemic period and be designed to decrease the health impacts of an influenza pandemic by taking into account susceptibility to infection and the risk that once infected, severe illness or death will occur.

II. Current Vaccine Distribution Status

Recent influenza vaccine supply problems and the policy of vaccinating high risk patients has become increasingly difficult and costly. Vaccination programs during an influenza pandemic will present even greater challenges. Methods of vaccine delivery, administration, and inventory control depend on the vaccine supply and the epidemiological features of the illness. Close collaboration between public and private healthcare providers is essential to the success of a pandemic influenza vaccination program.

As a base for disaster planning associated with vaccine delivery issues, Louisiana intends to rely to a large extent on the strength of its current distribution system, which is based in the OPH Immunization Program. This infrastructure is currently used to efficiently distribute childhood vaccine. In 2004, an average of 150,000 doses of childhood vaccine was distributed each month. The distribution program has the systems, policies, and procedures, and processes that can be adapted to assist the state in its pandemic vaccine distribution goals and objectives. Specifically, the current distribution system includes:

- A central Immunization Program site for management of a state distribution system with backup strategic sites available on an as-needed basis;
- Adequate coolers and back-up power for proper storage of vaccine; adequate supplies for repackaging vaccine as necessary;
- Established protocols and lines of communication;
- An existing communication infrastructure, which includes phone and fax accessibility for the community;

- An existing computer system for tracking inventory receipt and shipping;
- Secured and monitored location;
- Trained professional and support staff, who are capable of preparing shipments for over 100 plus different sites per day, with shipments averaging 15,000 doses per day; and
- Experience with providing rapid, accurate service with the ability to complete and ship orders within two to three days of receipt.

III. Pandemic vaccine supply and distribution

Influenza vaccine availability will change during the course of a pandemic. Pandemic response strategies will vary with vaccine supply. Four vaccine supply levels have been defined.

Stage 1: No vaccine available

At the beginning of the pandemic, it is likely that no vaccine will be available. Other interventions to decrease the burden of influenza illness must be implemented to decrease the spread of infection (such as quarantine, closing schools, prohibiting public gatherings), to prevent infection by using antiviral chemoprophylaxis and to effectively treat those who become ill. The duration of this phase will be dependent on several factors: a) the lag between when the pandemic strain is identified and when vaccine production begins relative to the occurrence of disease in the U.S.; b) the time of year when the pandemic strain is identified given the seasonal nature of the annual influenza vaccine production; and c) the time required for vaccine development and licensure. Regardless of the availability of a vaccine that protects against the influenza pandemic strain, increasing the availability of pneumococcal vaccine to those at-risk will reduce the risk of complications that can result from influenza infection. However, there are many complications of influenza that pneumococcal vaccine will not prevent.

Stage 2: Limited vaccine supply

When the first vaccine becomes available, the supply will be less than that required to protect the susceptible population. During this time, several planning issues will be accomplished during this stage: a) identifying the priority groups for vaccine receipt; b) formulating a plan for rapid, efficient and equitable distribution to be formulated; c) developing approaches to inform priority groups about availability and location of vaccine, and education of the public regarding vaccine priorities and their rationale; d) planning for use of the tracking system to be implemented for those who have received the first dose of vaccine, if a two-dose series is required; and e) monitoring vaccine efficacy and safety for quality assurance purposes.

Stage 3: Adequate vaccine supply

During this stage, an adequate vaccine supply will meet the need and ability to distribute and administer the vaccine. This supply will allow a shift from targeted vaccination of priority groups to widespread vaccination by public

and/or private sectors with the primary objective of equitable access and distribution.

Stage 4: Vaccine excess

Vaccine supply will exceed that needed to protect the overall population if production levels remain high after the majority of the population has been vaccinated. This stage is unlikely to occur before the second or third wave of the pandemic.

Vaccine ordering. Once the vaccine becomes available and how it will be apportioned between the public and private sectors is known, the Louisiana Immunization Program will meet with the Executive Committee and private health care representatives to determine the needs of the State. The Committee will make recommendations as to whom vaccine should be targeted to within the private sector. With regards to the public sector, CDC will notify the Louisiana Immunization Program as to how much vaccine will be available for Louisiana through a federal contract. Vaccine may also be available through contracts negotiated directly between the Program and vaccine manufacturers. The Executive Committee will determine the proportion of vaccine needed for essential state personnel (based on the Priority Group list) and the vaccine availability for regional and local distribution. The Immunization Program will then notify each city and parish.

The Immunization Program Director in collaboration with the State Health Officer will ensure policies and procedures for specific standing orders (see Appendix E for sample orders). Regional Medical Directors will implement policies and procedures for vaccination of priority groups, dosage, site of administration, contraindication to vaccination, precautions to vaccinations and response to anaphylaxis.

Access to Emergency Funds. Funds may be needed to quickly pay for vaccines and additional personnel, courier services, and /or space for storage and distribution of vaccines on an emergency basis. At the State level, a Declaration of a Public Health Emergency may be issued by the DHH State Health Officer. In this case, scripted letters should be available to facilitate a quick turnaround of a budget request by the LA State Health Officer and/or Secretary of Health. In addition, the Governor could issue an Executive Order identifying the need for quick action by all state agencies, including the Administration and Finance to release funds necessary to respond to the pandemic.

Supply Needs versus Allocation. In the event of pandemic influenza, it is expected that the state will be involved in the purchase of vaccine and clinic supplies, overtime for weekend work, and additional travel using either an emergency fund or from emergency appropriations if available. Louisiana has approximately 4.5 million residents in the year 2005. Faced with a novel influenza virus, estimates suggest that Louisiana may need over 8 million doses of vaccine, with adequate lead-time, to fully immunize its population during an influenza pandemic. However, due to anticipated shortages and delays in acquiring vaccine, the actual distribution will, in most likelihood, be substantially less than the amount needed for full population immunization with vaccine distribution to occur in several stages. In addition, the need for additional resources such

as national response teams that may be utilized, consideration for additional vaccine dosage and medical supplies to protect these persons should be inclusive of the total estimate needed for coverage within the state.

Provisions will be necessary in the event of an emergency distribution of IND unlicensed vaccines (investigational new drug). A contingency plan shall be developed with considerations to provisions necessary such as strict inventory control, record-keeping and obtaining a signed consent form.

Vaccination of Public Health and Health Care Response Personnel and Essential State Personnel

A contact listing will be completed and maintained in each regional health department and updated on a semi-annual basis. The agencies will maintain an internal notification listing of employees, staff or others that will be notified of the need to be immunized and where to report for vaccine. In a limited operation, these employees can be seen either in the health department or at designated facilities for their immunization. Procedures are in place, pending approval from CDC and the availability of vaccine, to allow hospitals and certain other agencies to immunize a portion of their staff. The Immunization Program will order vaccines, process orders and request the State agencies to pick up the vaccine from the Louisiana Immunization Program Office and/or one of the designated regional offices. In the pandemic influenza setting, healthcare, public health workers and essential State personnel will be offered vaccine on day one of the mass vaccination clinics.

Ordering and Distribution. Assuming that the need will exceed vaccine availability, Louisiana will submit its order to the CDC for the maximum allocation of vaccine. The CDC will assume responsibility for ensuring that the manufacturer ships the vaccine to the OPH Immunization Program. However, if a mass vaccination plan is required, the program may be directed to use the Strategic National Stockpile (SNS) infrastructure for storage and transport of vaccines and supplies if necessary. The LA DHH encourages private organizations to purchase influenza vaccine and administer it in their community-based programs as necessary. However, private immunization providers enrolled in the Vaccine-For-Children (VFC) program will receive vaccine shipments directly from the central Immunization Program office in New Orleans.

If the influenza vaccine for a pandemic is available through CDC, it will be ordered through the Vaccine Management (VACMAN) software system. If the vaccine is delivered directly from the manufacturers without going through CDC, it will be recorded electronically into VACMAN from the manufacturers to the central office and processed through the State Immunization Information System (SIIS). The Central Immunization Site estimates it would be able to store up to 4 million doses of influenza vaccine at any one time. This amount is in addition to the other vaccines and biologicals normally stored in its facilities. Temporary relocation of some existing inventory would be considered if the need for capacity storage is greater than currently available.

The OPH Immunization Program Director and staff will focus on distributing the influenza vaccine as quickly as possible to regional and local communities. To

accomplish this objective, the program will use the existing infrastructure and contracts with contractual carriers to deliver the vaccine to secondary storage sites in each parish. If existing contracted commercial carriers are unable to provide the full extent of needed delivery services, and other commercial carriers cannot be found to provide comprehensive and timely delivery services, as part of the Louisiana Comprehensive Emergency Management Plan, the DHH State Health Officer will seek an executive order authorizing emergency delivery assistance via the governor's office. Under the *Louisiana Emergency Support Function (LAESF) 16: Law Enforcement and Security*, the State Police as the primary agency could provide security for all activities associated with the vaccine distribution process for the duration as needed by the Immunization Program.

Regional and Parish Health Unit Activity. The role of the regional office and local health units will be to develop and implement a mass vaccination plan (see Appendix F). These facilities have the experience and resources to properly store and secure vaccine as well as track its receipt and redistribution. Each parish health department will be responsible for developing a local plan that conforms to the priorities and recommendations set forth by national guidelines. Security for vaccine during transport between the regional offices and the local distribution sites will be the responsibility of the local authorities.

The Immunization Program will continue shipments of vaccine to parish health units, Vaccine for Children (VFC) providers and other identified community sites as necessary to address community needs. Shipments may occur weekly to monthly depending on vaccine supply and usage. Additional staff will be recruited to manage excessively large shipments or to continue vaccine management and shipping activity for extended hours or over non-traditional workdays.

The following provider groups can be utilized as potential partners for vaccine redistribution and administration:

- Federally funded health care centers and clinics
- Private medical providers, coordinated through the local medical society
- Urgent care centers, walk-in clinics, or managed care organizations
- Hospitals with outpatient services and clinics
- Hospital emergency facilities
- Nursing homes and assisted living facilities
- Paramedics and emergency management personnel
- School health clinics, including colleges and universities
- Commercial health care vendors (e.g., home health agencies)
- Local emergency response and support agencies, such as the Red Cross

The recruitment of community partners will depend on the resources available to the community. In addition, the actual coordination with community partners may be further refined based on the populations that are targeted for actual disease management during a pandemic. In working with community partners that will administer vaccine during a pandemic, parish health departments must ensure that these partners understand their roles and the expectations associated with this partnership. Specifically, the community partner must be prepared to accept and store their allotment of vaccine and must ensure

that vaccine administration is properly documented for accountability purposes, and in the event that reimbursement becomes available. Finally, the personnel resources devoted by community partners should be considered a public health contribution to the community, rather than a cost-reimbursable or profit-making activity.

IV. Louisiana Mass Distribution Policy

The next pandemic poses a number of challenges for vaccine delivery for LA DHH-OPH, since distribution by the public sector during the pandemic will be greater than the amount distributed in non-pandemic years. With little time to prepare for a pandemic, it is likely that either no influenza vaccine or limited doses will be available for vaccinating Louisianans, which makes influenza antiviral distribution and delivery important in order to limit influenza morbidity and mortality. Both the public and private sector will be mobilized to administer whatever vaccine is available. The exact proportion of vaccine to be purchased and administered through the public versus the private sector is yet to be established. At the minimum, the public sector will take responsibility for vaccinating health care workers, other "local responders," certain essential community servants, the poor, and the uninsured. The actual organization of the vaccination program, in both the public and private sectors, will have to be customized for each community and target group and will depend on the extent and availability of the infrastructure and resources. Success of the pandemic vaccination program will be determined in large part by public confidence in the benefits of influenza vaccination and the strength of state and local planning. While vaccine may be unavailable or in short supply during the early stages of the pandemic, every state agency and organization should have contingency plans to provide continuity of essential services during periods of high absenteeism. Contingency plans should be in place to provide backup for any personnel whose absence would pose a threat to public safety or would significantly interfere with the ongoing response to the pandemic.

A mechanism for vaccine delivery is in place in advance of a pandemic that can be efficiently allocated and distributed to high priority individuals. Unused vaccine can be reallocated and redistributed promptly and efficiently. High rates of compliance for the second dose (if needed) can be achieved through the current operational immunization registry. Risk communication staff will assist all health care providers notifying the need to vaccinate persons who are recommended by the ACIP to receive pneumococcal vaccine as a method of decreasing morbidity and mortality associated with pandemic influenza. Influenza antiviral medication distribution and delivery will also be in place using the SNS infrastructure for storage and transport if necessary.

The rank order of high priority groups who will receive influenza vaccine in a pandemic will be as follows: (1) "essential community workers" (e.g., key government officials, medical care providers, policemen, firemen, and emergency medical services and military personnel); (2) persons traditionally considered to be at increased risk of severe influenza illness and mortality; (3) infants less than one year of age and pregnant women; (4) all other groups for whom vaccination has been traditionally recommended; (5) preschool

age and school-age children; and (6) persons age 18 years or older who do not fall into any high priority group. This rank order may change, depending on the epidemiologic and clinical features exhibited by the actual pandemic strain. This rank order also applies to antiviral medications which will be used with or without influenza vaccine.

Upon the identification of an event or imminent threat, the DHH may recommend prioritization and limitations on distribution of pharmaceuticals, medical supplies and equipment based on risk factors, but with pandemic influenza in mind:

Infected persons (cases) with clinical disease related to the emergency pandemic that has a reasonable likelihood of responding to treatment.

Persons critically ill with a disease unrelated to the emergency epidemic for which the treatment of choice is the same medication needed for treatment/prophylaxis of the epidemic disease.

Persons known to have been exposed at the original common point source, if identified within one incubation period of the disease.

Susceptible contacts of cases that are at increased risk of contracting the epidemic disease due to direct exposure to a case.

Individuals and their immediate household contacts that, as a result of their direct involvement in treatment and control efforts, may be at increased risk of contracting the disease. Groups, which may be involved, include but are not limited to the following:

- Health care workers, public health professionals and support staff - Rationale: The first line of defense during a pandemic will be the healthcare and public health sectors. These sectors are a crucial component in the execution of a pandemic response plan. Maintaining the healthcare infrastructure during a pandemic is essential for reducing the morbidity and mortality.

- Persons responsible for community safety and security such as Emergency medical service responders, Volunteer and career fire service responders, Law enforcement responders, Activated national guard and military reserve personnel, State and local emergency management professionals, Registered and authorized American Red Cross and other private non-governmental disaster relief organizations. Rationale: The community safety and security sectors are a vital component to the pandemic response plan in order to assure an effective response to the demand placed on the healthcare community as well as ensuring the safety of the public

- Other persons with specialized skills that provide essential community services such as Coroners, medical examiners, morticians and those handling human remains; the Governor and key staff, officially designated disaster councils, the Governor's officially designated Expert Emergency Epidemic Response Committee and public officials in local affected areas and any other individuals who perform essential community services. Members of these groups are likely to vary widely from community to community and are highly influenced by local circumstances:
    1. Water, power, and wastewater treatment system operators
    2. Transportation service workers (public and essential goods)
    3. Telecommunications infrastructure operators

  Rationale: Individuals whose absence would either pose a significant hazard to public safety or severely disrupt the pandemic response effort.

- Or others as determined by the threat in question; all or segments of the general population as determined by the Committee.

The order of these groups is based on a number of factors including the need to maintain those elements of community infrastructure that are essential to carrying out the pandemic response plan. Other factors include limiting mortality among high-risk groups, the reduction of morbidity in the general population, and the minimization of social disruption and economic losses. The priority list is subject to change - potentially on short notice - depending on the epidemiological and clinical features exhibited by the actual pandemic strain. Plans based on these pandemic draft recommendations should contain a great deal of flexibility in order to be responsive both to the final recommendations and changing conditions during the pandemic.

V. Vaccine Monitoring and Evaluation

Adverse reactions to influenza vaccine will be monitored by the Immunization Program through the Vaccine Adverse Events Reporting system [VAERS, Appendix D]. The Louisiana Immunization Network for Kids Statewide (LINKS) registry electronic database will record the necessary demographic and vaccine information with the capability of tracking and recalling individuals to receive all necessary doses as well as tracking and monitoring for adverse vaccine reactions. All adverse event forms should be submitted to the LA Immunization Program at 1450 L & A Road, Metairie, LA 70001.

Part D: Antiviral Drugs

I. Antiviral Drugs – Preparedness and Response

Key to any distribution plan in determining where the priorities are for places to distribute the medications would be specifics as to the exact ways the antivirals are recommended for use. While the primary focus of the state's plan is on the distribution of

vaccine for the prevention of a novel influenza virus, the CDC anticipates that a limited amount of antivirals will be available for the treatment of the disease. Their estimates suggest that nationally, adequate antiviral stock will be available to treat from 500,000 to 3 million persons per month. In addition to the anticipated limited supply, the administration of antivirals as either a prophylaxis or treatment regimen is rigorous, requiring approximately 60 doses per month to prevent individual illness and approximately 10 doses for therapeutic intervention

The current antiviral armamentarium for chemoprophylaxis and treatment of influenza includes two main classes of antiviral agents, the adamantanes (Amantadine and Rimantadine) and the neuraminidase inhibitors (Zanamivir and Oseltamivir). The adamantanes have activity against only influenza A, while the neuraminidase inhibitors have activity against both influenza A and B. Recent evidence indicates that Amantadine has no, or only limited, activity against the H5N1 avian influenza A strains currently emerging and circulating in Asia. While the adamatanes are much less expensive and in greater supply compared to the neuraminidase inhibitors, current evidence suggests that the neuraminidase inhibitor Oseltamivir may be the best antiviral to stockpile for chemoprophylaxis and treatment during the next influenza pandemic. However, both adamatanes and neuraminidase inhibitors may play a role in chemoprophylaxis and treatment depending on the following factors:

- Susceptibility of the pandemic influenza strain to currently available antiviral medications
- Prophylactic and therapeutic efficacy of the respective antiviral agents against the strain
- Number of doses of the respective antiviral agents available via the public and private sectors
- Size of the target populations recommended to receive chemoprophylaxis or treatment
- Cost and reimbursement

The main goals of chemoprophylaxis and treatment are to reduce the human influenza infection rate and to reduce human morbidity and mortality associated with the pandemic strain. Reduction of the infection rate via chemoprophylaxis should be the last preventive option and should follow implementation of other recommended or indicated preventive efforts (e.g., restrictions on travel and communal events, isolation of ill persons, quarantine of exposed persons, implementation of infection control measures such as the use of masks and diligent hand washing, and vaccination).

Because vaccine will likely not be available when the novel virus first affects communities, antivirals may play an important role for the control and prevention of influenza, especially – but not only -- during the period before vaccine is available. Existing production capacity for influenza antiviral drugs is less than would be needed to provide prophylaxis or treatment for the entire population and the current supply of antivirals in the SNS is limited. Similarly to planning for vaccine distribution, it is important to consider planning for different scenarios, including:

a) Federal purchase of the existing supply and distribution to states
b) State purchase of antivirals using emergency funds.

During the initial stage of an influenza pandemic, and until vaccine is available and widely distributed to a sufficient number of first line medical providers to become immune (at least 2 weeks after the initial immunization), anitviral drugs will be needed for front line medical personnel and other critical individuals as well as high risk patients. The cost of stockpiling large amounts of these medications, especially for a long and uncertain period of time, makes this an impractical approach at the state level. Moderate amounts of these medications may be available and distribution should begin as early during the influenza pandemic as possible. However, there is no identified funding for this, so the medication purchase will have to be done on an emergency basis and distribution of the medication will be on a "most needed" basis. It should be recognized that the supply of the medications is limited, and it is not known if CDC will purchase
and manage the distribution of these medications.

Identification of influenza within a community (based on either isolation of the pandemic strain or an increase in ILI) should be the trigger for initiating prophylaxis. To be effective, prophylaxis must be continued until exposure has ceased. As with decisions about vaccine use, recommendations for priority groups for antivirals will be established at the national level, however, LA DHH OPH will need to establish a process for reviewing these recommendations and revising as needed based on local factors.

National experts are currently assessing the use of antivirals during an influenza pandemic. Approval of additional antivirals by the FDA is expected. Until assessments of current and newly developed antivirals have been completed, antivirals will be included in the LA Pandemic Influenza Preparedness Plan only as one contingency to control influenza. Antivirals will be considered for distribution to health care workers and other essential community service personnel. Neuraminidase inhibitors (oseltamivir and zanamivir) should be used for therapy because of the potential for viral resistance when adamantanes are used for therapy. Therapy is effective at decreasing severe complications and reducing hospitalizations only if offered within two days of developing symptoms. Distribution of drugs for therapy is a challenge given the limited amount available, the large number of points of care, and the need to initiate the course of treatment within 48 hours of onset of symptoms.

The LA DHH OPH Executive committee involved in implementing this plan shall identify those individuals and groups of individuals who shall be eligible to receive these agents. In general, use of antivirals shall be reserved for the highest priority groups with consideration given to maintaining the integrity of the healthcare community and the leadership and persons responsible for the safety and security of the communities most affected by the novel virus. For antivirals available from the SNS or state reserves, in addition to providing guidelines on appropriate use, the Executive Committee will need to determine how drugs will be distributed (central locations versus at points of care) and whether they will require any controls for dispensation of drugs (such as positive rapid test). Public education will be very important given the scarcity of this resource. In the absence of an expanded stockpile there will likely be limited antivirals available. Prioritizing within priority groups will probably be necessary given the limited supply. For antivirals purchased with public funds, the State will be responsible for local distribution of the antivirals in collaboration with the private sector. If there is no state or federal purchase, the State’s role will largely be one of public and provider education around appropriate use of antivirals. As with vaccine, it will be critical to clearly communicate with the public about the rationale for priority groups. Coordination with and education of the private sector needs to be an important aspect of planning.

While there is no current stockpile of antiviral drugs being coordinated within the state, inter-pandemic planning activities for antiviral drugs will be implemented to:

1. Assess the feasibility of providing an interim stockpile of antiviral medications within the state. These antiviral drugs will not be made available for public distribution, but will be used to maintain essential medical and public services within the public health regions.

Key components of the feasibility study include:
• Establish the location of the antiviral stockpiles, likely in central hospitals located in various regions of the state
• Identification of essential medical and public service entities that would benefit from short term antiviral medication
• Identification of individuals responsible for the storage and distribution of antiviral medication in their region
• As specified in state emergency funds, allocated purchase of antiviral medication from private healthcare facilities, drug companies or other entities

2. The Executive Committee in collaboration with the LA OPH Immunization Program and Central Pharmacy will be responsible for developing criteria for the use of antiviral medication from state stockpiles. These criteria will include:
• Estimates of the amount of antiviral medication needed to maintain essential services
• Methods of distribution of antiviral medication
• Maintain an interim stockpile of antiviral drugs
• Assist local health departments with developing lists of pharmaceutical outlets

3. In cooperation with the CDC, develop education materials for healthcare professionals and the public regarding the use of antiviral medication for treatment and prevention of influenza.

Therefore, a sufficient quantity of these agents should be available to the OPH Central Pharmacy or to specific parish health units in order for any planned effective use of these medications to take place. An effective intervention with antivirals will require:
a) A secure supply;
b) A well planned distribution and monitoring system;
c) Ability to target priority groups;
d) The availability of rapid diagnostic tests;
e) Clinical guidelines for the appropriate use of antivirals;
f) Study protocols to further assess the effectiveness of antivirals for treatment and prophylaxis during a pandemic;
g) Effective communication and education materials on antivirals for health care workers and the public

II. Antiviral Drug Monitoring and Evaluation

Adverse reactions to antiviral agents will be monitored by the Immunization Program through the Vaccine Adverse Events Reporting system (VAERS). A Web-based method of reporting form is available for VAERS at http://www.vaers.org. The local health department should submit the report to the Immunization Program at fax number (504) 838-5206 or mailed to the OPH Immunization Program, 1450 L & A Road, Metairie, LA 70001. If access to the Internet and national VAERS is not available, the VAERS form can be obtained from the Immunization Program at (504) 838-5300. The Immunization Program will forward these reports to the national VAERS office. The LA LINKS Immunizaton registry has the capacity to record all necessary demographic and vaccine information

with a tracking system for mailing recall reminders to individuals regarding the need for antiviral doses. The LA LINKS registry will have the VAERS form available for tracking and monitoring for adverse antiviral drug reactions.

Part E: COMMUNICATION

In an emergency situation, accurate, consistent and timely messages are key in notifying and educating the public, notifying and facilitating movement of emergency staff to their assigned duties and stations, and in roll-out of the emergency plan as intended. One important goal of the pandemic influenza plan is to educate the public, health care professionals, policy makers, partner organizations, and the media about influenza viruses; their unique ability to cause sudden, pervasive illness in all age groups on a global scale; and the need for strategies by which influenza-related morbidity, mortality and social disruption might be reduced. The following delineates communication-related issues that pertain to pandemic influenza.

1. Assuring adequate communication systems will be a joint responsibility of federal, state and local public health agencies
2. The public will likely encounter some unreliable and possibly false information in the media and on the Internet. The DHH-OPH in collaboration with the LOHSEP, when applicable, will communicate accurate, reliable information regarding the influenza pandemic
3. Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on Louisiana communities
4. DHH-OPH will continually strive to communicate with all essential partners. Keeping all essential partners completely informed throughout the pandemic is certain to be a major challenge.

I. GENERAL:

Effective communication will play a critical role during influenza pandemic times. They are especially important in the initial period, since they may determine whether the influenza pandemic can be modified in any way or the consequences of the influenza pandemic can be mitigated.

II. COMMUNICATIONS:

There are two separate channels of communications; one channel is for internal utilization, which is generally concerned with assessment activities, and one for external utilization, which is generally concerned with general public communications, and response activities.

INTERNAL

Assessment communications and reporting are those activities whereupon technical experts such as epidemiologists, physicians, Medical Assessment Teams and others will collect data, facilitate and organize information to determine the existence and extent of a public health threat. Most of these activities are maintained within the DHH-OPH. When information becomes available of a possible public health threat, it is vital that this information be reported to the State Health Officer via OPH internal reporting structure, so that prevention activities can be considered for initiation.

The DHH is administratively divided into nine Regions. For operational considerations, DHH-OPH is considered the lead state agency when responding to public health emergency events. DHH-OPH Regional Administrators and Medical Directors are the contact for local, multi-parish or regional events. They assist local responders and provide coordination activities when responding to public health issues.

In keeping with the DHH Emergency Preparedness Policy, the other Offices within the DHH may be requested to support those activities required by the State Health Officer.

EXTERNAL

When pandemic influenza mobilization is necessary, external communications are controlled by the State Health Officer with concurrence by the Secretary of DHH. External communications consist of health messages to the general public for prevention activities.

In the event of an incident whereupon the LOHSEP activate the State EOC, the State Health Officer, acting on behalf of the Secretary of DHH, shall engage the DHH human and material resources as necessary for the safety and well being of Louisiana citizens. Development of prototype communication materials for use during a pandemic is underway at the national level. However, state-specific communication materials will be developed to address the particular needs of the influenza outbreak and will be available as an influenza shelf kit (Appendix G). Among these will be: a) key messages available in all appropriate languages and as for those who are visually or hearing impaired; b) fact sheets on the specific virus; c) fact sheets on the specific treatment, vaccine supply, antiviral drug use, prevention methods and maintenance of essential services.

INTERNAL / EXTERNAL

The DHH-OPH has established internal and external communication protocols of how to route information. The DHH-OPH Health Alert Network will notify Emergency Rooms within the state of imminent health threats. Lack of interface communicability and nonstandardization of medical forms needs to be addressed before a successful network can be achieved. In the meantime, OPH Regional Medical Directors provide the means of contact for local hospitals in the event of imminent threat.

Part F: Infection Control Recommendations

Guidelines for Prevention and Control of Pandemic Influenza A in Healthcare Institutions

BACKGROUND

Influenza is spread from person to person primarily by inhalation of small particle aerosols and large droplet infection. Although the extent of transmission by direct contact or contact with articles recently contaminated by nasopharyngeal secretions is not known, these mechanisms are not the primary mode of transmission. During community outbreaks of influenza, the highest attack rates tend to occur among school-age children. Secondary spread to adults and other children within the family is common. The attack rates depend in part on immunity developed by previous experience (either by natural disease or immunization) with the circulating strain or a related strain. Antigenic shift, reassortment in an animal host, or major drift in the circulating strain may result in widespread epidemics or even pandemics.

In temperate climates, seasonal epidemics usually occur during the winter months and, within a community, peak within 2 weeks of onset and last 4 to 8 weeks or longer. However, isolated outbreaks may occur year-round. Activity of more than one type or subtype of influenza virus in a community may be associated with a prolongation of the influenza season to 3 months or more. Influenza is highly contagious, especially among institutionalized populations. Patients are most infectious during the 24 hours before the onset of symptoms and during the most symptomatic period, which generally lasts 3-5 days after the onset of illness. Detectable viral shedding in the nasal secretions usually ceases within 7 days of the onset of illness but can be prolonged in young children and immunodeficient patients.

During community influenza outbreaks, admitting patients infected with influenza to hospitals has led to nosocomial transmission of the disease. Unimmunized healthcare workers and visitors can also contribute to nosocomial influenza spread in acute care hospitals and long-term facilities. Transmission of influenza among medical staff causes absenteeism and considerable disruption of health care. In addition, influenza outbreaks have caused morbidity and mortality in nursing homes. In a recent study of long-term care facilities with uniformly high patient influenza vaccination levels, patients in facilities in which greater than 60% of the staff had been vaccinated against influenza experience less influenza-related mortality and illness, compared with patients in facilities with no influenza-vaccinated staff . Further information and updates on influenza can be found at www.cdc.gov/ and www.apic.org/.

Infection control practices both in the community and in healthcare settings will present special challenges in the event of a pandemic. Influenza virus is highly contagious and persons who are clinically or subclinically infected can transmit virus to persons at high risk for influenza complications. Preventing and controlling nosocomial infection will be an important factor in reducing the spread of influenza in a pandemic. Measures other than vaccination and chemo-prophylaxis are recommended for controlling nosocomial influenza outbreaks. These measures include interventions for preventing and controlling nosocomial influenza through prompt recognition, detection, isolation and cohorting of confirmed and suspected cases, and implementation of droplet precautions.

General Principles of Routine Infection Control

The Society for Healthcare Epidemiology of America (SHEA) states three goals for infection control and prevention programs: protect the patient; protect the healthcare worker, visitors, and others in the healthcare environment; and accomplish the previous two goals in a cost-effective manner, whenever possible. These goals are germane to any patient care setting including acute care hospitals, long term care facilities, nursing homes, ambulatory care centers, out-patient surgical facilities, rehabilitation centers, alternative care centers, and home-care programs. Each type of health care organization may employ a different means of achieving these goals based on their needs, circumstances, and federal, state, and local regulations.

CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC) have developed guidelines on prevention of nosocomial/health-care associated infections that are based on the latest epidemiologic information on transmission of infection in hospitals. These guidelines include "Standard Precautions" that are to be followed when caring for all patients, regardless of their diagnosis, and "Transmission Based Precautions" to be followed when a patient is known or suspected to be infected or colonized with an epidemiologically important pathogen, such as influenza virus.

Standard Precautions address the importance of hand washing before and after caring for a patient; use of gloves, masks, eye protection, face shields, and gowns when splashes or sprays of

blood, body fluids, secretions or excretions are possible; cleaning of patient-care equipment, the patients' physical environment, and soiled linen; precautions to reduce the possibility of healthcare worker exposure to blood borne pathogens; and patient placement.

Transmission Based Precautions describe infection control measures, above and beyond Standard Precautions, that should be taken based on the mode of transmission of the pathogen causing infection. There are three routes of transmission that play a significant role in nosocomial infections: contact, droplet, and airborne. All of these routes of transmission are relevant to influenza, especially droplet and airborne transmission, as mentioned above, and should be incorporated into influenza control, including during a pandemic. Further details regarding Standard Precautions and Transmission Based Precautions can be found in the "Guideline for Isolation Precautions in Hospitals" .

- **CONTACT TRANSMISSION**, the most frequent mode of transmission of nosocomial infections, occurs when there is direct body surface-to-body surface contact and transfer of microorganisms from an infected or colonized person to a susceptible host or when a susceptible host comes in contact with a contaminated intermediate object such as a health care workers' hands or a contaminated instrument.
- **DROPLET TRANSMISSION** occurs when an infected person generates large droplets containing microorganisms by talking, coughing, or sneezing and these droplets move through the air and come in contact with a susceptible host's conjunctivae, nasal mucosa, or mouth. When caring for patients with suspected or confirmed influenza, droplet precautions should be followed.
- **AIRBORNE TRANSMISSION** is similar to droplet transmission but in this case, the particles from the infected or colonized person are much smaller and therefore can remain in airborne for long periods of time and can be widely carried by air currents to susceptible hosts some distance away.

General Principles of Pandemic Influenza Infection Control in Health Care Organizations

As a part of pandemic influenza planning, communities and health care organizations will need to have in place special guidelines for infection control during a pandemic that take into account the likelihood that a high proportion of the population will be affected and that secondary infection is a major source of morbidity and mortality with influenza virus infection.

The Regional Medical Director or his/her designee will inform communities and healthcare institutions when pandemic influenza activity is anticipated in the community so that healthcare institutions can prepare to institute pandemic influenza infection control measures. These measures will likely differ from routine influenza infection control procedures because it can be assumed that the risk of transmission is high, immunity within the population is low, that an increased number of persons will be seeking medical care, and that resources traditionally used for infection control may be in short supply. Each recommendation discussed below includes what should be done in an ideal situation (i.e., what is recommended for routine influenza when supply shortages are not an issue) as well as alternative measures to consider should the ideal not be possible. No distinction has been made based on the site at which care is given (e.g., hospital, physician's office, long term care facility, etc.) with the presumption that health care professionals in each setting will adopt the highest level of infection control possible in their circumstances.

GUIDELINES

Staff Education

Educate staff about the epidemiology and prevention of influenza. It will be particularly important that staff understand the dynamics of influenza infection spread and understand the impact of predictable fear and panic. This annual event should be repeated and geared toward a wider audience when pandemic influenza is expected. Additional methods of education including teleconferencing, mass mailing, etc. may be considered. Extra effort should be made to ensure that all staff participates in this program including volunteers who may not routinely care for patients but might be required to do so in the event of a pandemic, volunteers, and non-patient care staff (e.g., administrative, medical records, food service personnel, and maintenance and housekeeping staff).

Hand Washing and Gloving

Decreasing the risk of transmission of microorganisms in health care settings, accomplished primarily by hand washing is a major component of infection control. Hands should be washed after touching blood, body fluids, secretions, excretions, and contaminated items, even when gloves are worn. Hand washing with plain soap or detergent for at least 10-15 seconds under running water is an effective method of removing soil and transient microorganisms. If sinks for hand washing are not readily available, alcohol-based agents can be used and are allowed by DHH-OPH policy.

Clean, non-sterile, disposable gloves should be worn when touching blood, body fluids, secretions, excretions and contaminated items. Gloves should be removed after use and before touching any non-contaminated items or touching another patient, and hands should be washed immediately with soap and water or an antiseptic hand rub. Due to the significant number of health care workers with latex hypersensitivity, other strategies should be available such as non-latex products alone or in combination with latex gloves, powder-free latex gloves, "low protein" latex gloves, and vinyl gloves.

During a pandemic, it is possible that health care institutions of all types may become overwhelmed and plans are underway for determining which alternative sites might be available to provide healthcare, who would be treated there, and how this would be carried out. These alternative sites may not have sinks as readily accessible as traditional health care settings. Therefore consideration should be given to using detergent-containing towelettes to cleanse hands of soil and organic material. This can also be followed by alcohol-based hand rubs for antisepsis following hand contact with blood or body secretions. The protocol (as indicated in standard precautions) for glove use should remain unchanged regardless of the setting in which medical care is provided.

Masks

Ideally, to be consistent with droplet precautions, health care workers and visitors should wear masks when they are within 3 feet of the patient and the patient should wear a mask when being transported. However, during pandemic influenza this may not be practical and health care institutions may want to consider limiting the use of masks for containment of other pathogens. Studies demonstrating the efficacy and effectiveness of wearing masks to reduce influenza transmission are lacking.

Bed Management

Isolation plans for use during a pandemic should be developed in advance. Under ideal circumstances, patients with suspected or diagnosed influenza should be in a private room. The use of special ventilation in rooms of patients for whom influenza is suspected or diagnosed has been recommended previously. However, during a pandemic this may not be practical as it is currently impractical during seasonal epidemics. Studies demonstrating the efficacy and effectiveness of special ventilation to reduce influenza transmission are lacking, but have been proven to be effective for other droplet and airborne transmissible disease, such as tuberculosis. During a pandemic, private rooms are unlikely to be available and containment of infection is likely to be difficult. Consideration should be given to cohorting patients with active confirmed or suspected influenza infection. Isolation procedures for other pathogens, including use of a private room, should continue to be utilized. Use of dedicated staff that has been immunized should be considered for care of those with suspected or confirmed influenza infection. If vaccine is unavailable, consideration of antiviral prophylaxis for dedicated staff should be considered.

The period of greatest communicability of inter-pandemic influenza is the first 3 days of illness but the virus can be shed before onset of symptoms and up to seven or more days after illness. It is possible that more prolonged shedding could occur with pandemic influenza since the immune system would not have prior experience with related strains. It is also possible that prolonged shedding can occur in young children and immunodeficient patients. Therefore, all influenza specific bed management measures should be maintained for at least 7 days after onset of illness or longer if symptoms persist.

Movement and transport of infected patients should be limited as much as possible. If a patient must be transported, he or she should wear a surgical mask to decrease the risk of virus transmission to other patients and health care workers. Congregation of patients should be minimized. This will prevent spreading of illness by non-symptomatic or undiagnosed persons. Patients should also be educated about personal hygiene measures that decrease virus transmission (i.e. covering their mouth and nose when coughing or sneezing, hand washing, discarding tissues, using disposable eating and drinking utensils, etc).

During a pandemic, high census is likely to represent a management problem for all healthcare facilities. Advance planning for high census will be important. Communities will need to have in place community-wide bed management plans and plans for use of alternate (non-traditional) sites for provision of both in-patient and out-patient medical care.

Cleaning, Disinfection, and Sterilization

The most important mode of transmission of influenza is via aerosolized or droplet transmission from the respiratory tract of infected persons. Transmission of droplets by direct contact is less important. Influenza is highly infectious and contagious and can spread rapidly in healthcare facilities by infected healthcare personnel, patients, and visitors. Secondary bacterial infection is an important cause of complications. While vaccination is the most important method for preventing the spread of influenza, appropriate use of disinfectants in environmental cleanliness should be followed. Recommended guidelines are available by the Association for Professionals in Infection Control and Epidemiology (APIC). No additional recommendations specific to influenza are indicated.

Elective Utilization of Health Care Facilities

Elective utilization of health care facilities including acute care hospitals, ambulatory surgical centers, dialysis centers, and home care should be limited as much as possible during a pandemic.

Reducing the number of elective visits to health care facilities and elective procedures will decrease a person’s likelihood of contracting influenza due to exposure to influenza infected patients receiving care in the health care facility. Reducing the number of elective procedures will also reduce the number of persons at increased risk of influenza infection complications due to a compromised immune system as a result of an invasive procedure. Performing fewer elective procedures will also allow a re-distribution of supplies and personnel to care for those ill with influenza and its complications. Health care facilities should develop criteria and guidelines for appropriate patient utilization including the consideration of a phone triage system.

Acute Care Hospitals: The Centers for Disease Control and Prevention's Guideline for Prevention of Nosocomial Pneumonia suggest that during severe outbreaks (of which a pandemic would certainly qualify) the following measures be considered: curtailment or elimination of elective admissions, both medical and surgical, and restriction of cardiovascular and pulmonary surgery.

Ambulatory Surgical Centers: Consideration should be given to closing ambulatory surgical centers. If these Centers remain open, patients should be screened for influenza like illness prior to surgery to reduce the risk of the patient transmitting influenza to others and suffering from complications of influenza infection due to a suppressed immune system. Health care workers should be vaccinated in order to prevent influenza virus transmission to patients while in the Center.

Home Care: Unvaccinated home health care workers should limit the number of visits they make to each patient's home and to the number of homes visited as much as possible in order to reduce the risk of introducing influenza to the home care patient. Home heath workers and home health patients should receive influenza vaccine annually and should be administered the pandemic strain vaccine once it is available.

Many persons are dependent on certain health care procedures or treatments such as dialysis, which must continue during a pandemic. In these situations it is especially important that both the health care worker and the patient receive annual influenza vaccine and that pandemic strain vaccine be administered once it is available.

Health Care Workers with Influenza-like Illness

As part of the health care organization's responsibility to implement measures that reduce transmission of infection, it may be necessary to exclude personnel from patient contact if they have symptoms of febrile upper respiratory tract infection suggestive of influenza. This is especially critical if the health care worker cares for severely immunocompromised patients, both as in-patients or out-patients, including neonates, young infants, and patients in the intensive care unit. To reduce the likelihood of excluding personnel from duty, all health care workers should be strongly encouraged to receive annual influenza vaccine and receive pandemic strain vaccine once it is available. Consideration may also be given to chemoprophylaxis with antiviral agents if vaccine is not available.

During a pandemic, when health care systems are likely to be overwhelmed, it may be necessary to amend personnel restriction policies. For example, health care workers with symptoms of influenza-like illness, who feel well enough to be at work, might be allowed to care for patients with known influenza therefore freeing other personnel to care for non-influenza patients. Except

in circumstances of limited staff, it would be better if personnel with febrile influenza-like illness did not care for patients at high risk of complications from influenza infection. Hospitals and other health care facilities, including both in-patient and out-patient facilities, need a plan for staffing during the various periods of pandemic influenza that considers high census, high absenteeism, ill staff, use of diagnostic tests for staff assignments, and that weighs the benefits and risks for patients of high risk of influenza infection. Polices regarding staff refusal to care for influenza patients should also be addressed.

Visitors

Visitors should be limited as much as possible to reduce the likelihood of transmission of influenza from ill visitors to patients and/or health care workers and vice versa. The use of family members and volunteers to assist during a pandemic may be considered with education and documented policies in place.

Outbreak Control

Influenza outbreaks in healthcare facilities can occur whenever influenza exists in the community. Vaccination remains the most important measure to prevent the spread of influenza in healthcare facilities. However, incomplete vaccination, less than 100% vaccination efficacy, and the introduction of infected people into the facilities can lead to influenza outbreaks. The factors that can lead to an outbreak will be expected to intensify during a pandemic. Active surveillance programs can reduce or prevent outbreaks. Prompt recognition of influenza infection needs to be followed by the initiation of infection control measures. It is recommended that all healthcare facilities develop and implement an influenza outbreak control plan. Steps that should be considered in an outbreak control plan are:

- Implement an influenza surveillance program including the monitoring of patients, new admissions, and staff and measures for infection control.
- Incorporate a system of communication between laboratory and infection control personnel to insure regular updating of influenza activity.
- Incorporate all aspects of infection control including protocols for vaccine and antiviral medication use, education on preventive measures, and patient management.

Glossary

Advisory Committee on Immunization Practices (ACIP) -the panel of national experts appointed to make recommendations for the Centers for Disease Control and Prevention on the use of vaccines.

antigenic drift -a minor change in the structure of an influenza virus within the same virus subtype, associated with epidemic influenza.

antigenic shift -a major change in the structure of an influenza virus resulting in a new virus subtype, associated with pandemic influenza.

Infectious Disease Epidemiology Section -the division of the Louisiana Department of Health and Hospitals which is responsible for monitoring the occurrence of disease in Louisiana, developing and implementing strategies for preventing and controlling disease.

Louisiana Office of Homeland Security and Emergency Preparedness -a division of the Louisiana Department of Health and Hospitals responsible for the coordination of the State response to any major disaster/emergency that is beyond the response capabilities of the affected local units of government.

Office of Emergency Preparedness' Emergency Operations Center -a site from which State and local government officials coordinate, monitor, and direct emergency response activities during an emergency/disaster.

Emergency Operations Plan -a living document that provides the basis for a multi-state agency response to a major emergency/disaster. The plan includes the following items: who is responsible for carrying out specific actions and the personnel, equipment, facilities, supplies, and other resources available for use in the disaster.

epidemic influenza -typical annual cycles of influenza occurring in late fall through early spring in the Northern Hemisphere

Louisiana DHH-OPH Office of Communications -a facility which serves as a media briefing area: the purpose is to centralize the release of all public information relating to the disaster and to provide a forum for news media representatives to collectively gather critical information concerning disaster operations.

novel virus -a new influenza virus subtype which is immunologically different from those of isolates previously circulating in a population (population has no immunity)

pandemic influenza -a new influenza virus subtype which is immunologically different from those isolates circulating previously in a population to which the population has a lack of antibody and has the ability of spread geographically and cause disease

Public Health Laboratory -a division of the Louisiana Department of Health and Hospitals-Office of Public Health responsible for conducting a broad range of state-of-the-art traditional and molecular biological and chemical tests to detect, identify, and characterize threats to the public's health caused

by bacterial, viral, fungal, and parasitic infectious agents, as well as those caused by inherited inborn errors of metabolism and exposure to hazardous environmental substances. These analytical activities support public health-related programs within the Office of Public Health, and other governmental agencies, by providing the essential data needed to respond to local, state, and national emergencies involving biological and chemical agents.

surveillance -the systematic collection of data pertaining to the occurrence of specific diseases, the analysis and interpretation of these data, and the dissemination of consolidated and processed information.

Appendix A: WHO Pandemic Phase Identification

New phases

Table 1 provides a summary of new phases before and during an influenza pandemic. To promote harmonization with existing national and international documents, the new phases are (as much as possible) related to the phases in the 1999 WHO *Global influenza pandemic preparedness plan*.

Additional national subdivisions

Each phase is associated with international and national public health actions. National actions during each phase are further subdivided according to the national epidemiological situation. For convenience, the term "not affected" is used for countries without cases/outbreaks. However, these countries should also take certain actions as indicated, in order to strengthen preparedness. National authorities are free to adjust the suggested additional national subdivisions of phases given here. However, WHO strongly recommends that countries consider the national actions proposed in this document when developing or updating a national plan.

Sequence of declaration of phases

As the species of origin and sequence of progression of the next pandemic strain may vary and thus be difficult to predict, WHO may declare, upscale and downscale phases in a non-sequential order. If an upscaling designation skips a phase, actions in the skipped phase should also be implemented, unless they are specifically superseded by actions in the new phase.

Rationale for phases

Interpandemic period

Phase 1. No new[1] influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection or disease may or may not be present in animals. If present in animals, the risk of human infection or disease is considered to be low.[2]

Rationale. It is likely that influenza subtypes that have caused human infection and/or disease will always be present in wild birds or other animal species. Lack of recognized animal or human infections does not mean that no action is needed. Preparedness requires planning and action in advance.

Phase 2. No new[1] influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk[2] of human disease.

Rationale. The presence of animal infection caused by a virus of known human pathogenicity may pose a substantial risk to human health and justify public health measures to protect persons at risk.

Pandemic alert period

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.[3]

Rationale. The occurrence of cases of human disease increases the chance that the virus may

[1] Definition of new: a subtype that has not circulated in humans for at least several decades and to which the great majority of the human population therefore lacks immunity.

[2] The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. 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/or other scientific parameters.

[3] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. 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/or other scientific parameters.

Table 1 **Comparison of phases published by WHO in 1999 and those in the present document**

PHASES AS PUBLISHED BY WHO IN 1999	NEW PANDEMIC PHASES	ADDITIONAL NATIONAL SUBDIVISIONS OF NEW PHASES
Interpandemic period **Phase 0**	**Interpandemic period** **Phase 1.** No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk[a] of 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[a] of human disease.	Affected or extensive travel/trade links with affected country.
		Not affected.
Phase 0. Preparedness level 1: human case.	**Pandemic alert period** **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.	Affected or extensive travel/trade links with affected country.
		Not affected.
Phase 0. Preparedness level 2: limited human transmission.	**Phase 4.** Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.[b]	Affected or extensive travel/trade links with affected country.
		Not affected.
Phase 0. Preparedness level 3: spread in general population.	**Phase 5.** Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).[b]	Affected or extensive travel/trade links with affected country.
		Not affected.
Pandemic period **Phase 1.** Multiple countries.	**Pandemic period** **Phase 6.** Pandemic phase: increased and sustained transmission in general population.[b]	Not yet affected.
Phase 2. Multiple regions.		Affected or extensive travel/trade links with affected country.
Phase 3. Subsiding in initially affected countries but not in other countries.		Subsided.
Phase 4. Next wave.		Next wave.
Postpandemic period **Phase 5.** Return to phase 0.	**Postpandemic period** Return to interpandemic period.	Return to interpandemic period.

[a] The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction would be based on various factors and their relative importance according to current scientific knowledge. 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; other information from the viral genome; and/or other scientific information.

[b] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. 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); other information from the viral genome; and/or other scientific information.

adapt or reassort to become transmissible from human to human, especially if coinciding with a seasonal outbreak of influenza. Measures are needed to detect and prevent spread of disease. Rare instances of transmission to a close contact – for example, in a household or health-care setting – may occur, but do not alter the main attribute of this phase, i.e. that the virus is essentially not transmissible from human to human.

Examples:

- One or more unlinked human cases with a clear history of exposure to an animal source/non-human source (with laboratory confirmation in a WHO-designated reference laboratory).
- Rare instances of spread from a case to close household or unprotected health-care contacts without evidence of sustained human-to-human transmission.
- One or more small independent clusters[1] of human cases (such as family members) who may have acquired infection from a common source or the environment, but for whom human-to-human transmission cannot be excluded.
- Persons whose source of exposure cannot be determined, but are not associated with clusters[1] or outbreaks of human cases.

Phase 4. Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.[2]

Rationale. Virus has increased human-to-human transmissibility but is not well adapted to humans and remains highly localized, so that its spread may possibly be delayed or contained.

Examples:

- One or more clusters[1] involving a small number of human cases, e.g. a cluster of <25 cases lasting <2 weeks.[3]
- Appearance of a small number of human cases in one or several geographically linked areas without a clear history of a non-human source of exposure, for which the most likely explanation is considered to be human-to-human transmission.

Phase 5. Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).[2]

Rationale. Virus is more adapted to humans, and therefore more easily transmissible among humans. It spreads in larger clusters, but spread is localized. This is likely to be the last chance for massive coordinated global intervention, targeted to one or more foci, to delay or contain spread. In view of possible delays in documenting spread of infection during pandemic *phase 4*, it is anticipated that there would be a low threshold for progressing to *phase 5*.

Examples:

- Ongoing cluster-related transmission, but total number of cases is not rapidly increasing, e.g. a cluster of 25–50 cases and lasting from 2 to 4 weeks.[4]
- Ongoing transmission, but cases appear to be localized (remote village, university, military base, island).

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[1] An unusual cluster of cases or deaths from influenza-like illnesses can be defined as a group of cases (suspected, probable and/or confirmed) of individuals with disease onset within a period of two weeks in a same defined geographical area, presenting with similar clinical features including respiratory symptoms, and for which the epidemiological pattern or clinical features do not correspond to usual observation in cases of infection with seasonal influenza. These unusual observations may include: (i) unusual distribution by age group; (ii) severity of illness in adults in the absence of chronic disease; (iii) disease affecting special risk groups such as individuals exposed to potentially infective live or dead animals, or health-care workers.

[2] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. 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/or other scientific parameters.

[3] Ro = Basic reproduction rate (average number of new infections acquired from one case). It will not be possible to calculate Ro in the early stages of a cluster; however modelling suggests that for a cluster with these characteristics, $0 < Ro \leq 0.5$.

[4] It will not be possible to calculate Ro in the early stages of a cluster; however modelling suggests that for a cluster with these characteristics, $0.5 < Ro \leq 1.0$.

- In a community known to have a cluster, appearance of a small number of cases whose source of exposure is not readily apparent (e.g. beginning of more extensive spread).
- Appearance of clusters caused by same or closely related virus strains in one or more geographical areas without rapidly increasing numbers of cases.

Pandemic period

Phase 6. Increased and sustained transmission in the general population.

Rationale. Major change in global surveillance and response strategy, since pandemic risk is imminent for all countries. The national response is determined primarily by the disease impact within the country.

Postpandemic period

A return to the interpandemic period (the expected levels of disease with a seasonal strain) follows, with continued need to maintain surveillance and regularly update planning. An intensive phase of recovery and evaluation may be required.

Simultaneous occurrence of situations posing different levels of pandemic risk

In the event of simultaneous situations posing different levels of risk, e.g. different new influenza subtypes or different extent of spread in different areas, the phase will be determined by the highest applicable level of risk.

Criteria for downscaling of phases

All phases except *phase 1* are anticipated to be temporary. With every announcement of a new phase, WHO will set a time period at which the designation will be reviewed. In consideration of downscaling, the following criteria will be used:

- Lack of ongoing disease activity meeting the criteria for the current phase.
- Adequate national surveillance and international reporting as assessed by WHO and, for issues relating to infection in animals, in partnership with other organizations such as the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE).
- Adequate, if necessary on-site, risk assessment by WHO in partnership with affected countries, and for issues relating to infection in animals, in partnership with other organizations such as FAO and OIE.
- A risk assessment considering the factors that led to designation of the phase,[1,2] as well as other potential factors. For example, if the respiratory illness season is in progress in the region, downscaling might sometimes be delayed because of the increased risk that new strains might reassort with seasonal strains, and that surveillance to detect new strains co-circulating with seasonal strains might be more difficult.

Procedure for decision-making

- Designation of phases, including decisions on upscaling and downscaling, will be made by the Director-General of WHO. The designation will be made in harmony with existing regulations governing human disease reporting and control (e.g. the International Health Regulations), and in consultation with other organizations and institutions, as necessary.
- The national subdivisions of phases will be designated by national authorities.

[1] The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. 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/or other scientific parameters.

[2] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. 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/or other scientific parameters.

APPENDIX B

Partners and Stakeholders

The pandemic plan must be prepared in close collaboration with, and with 'buy in' from a wide variety of organizations within the public and private sectors as a means to advance a common goal. Such organizations may include, but not be restricted to:

Louisiana Infectious Disease Epidemiology Section
Louisiana Immunization Program
Louisiana Health Care Review
Louisiana Hospital Association
LSU School of Veterinary Medicine and/or State Veterinarians' Association
Alliance for Immunization Management Coalition
Louisiana Childhood Immunization Coalition (comprised of MCOs)
Louisiana National Guard
Louisiana Medical Society
Louisiana State Nursing Association
Nursing associations
Medical associations
Pharmacy associations
Public and private laboratories for processing clinical samples
MIS services – OPH and private sector involved in communications systems, networks, computer hardware and software support
Primary Schools, Secondary Schools, College/University Representatives
Education administrators
Local media officials
Radio/CB groups
Social Services agencies
Law enforcement, fire/rescue and emergency medical services (including local 911 dispatchers)
Area hospitals, Emergency Room services, medical societies, medical examiners/coroners and other medical community members
Funeral directors
Local military installations
Large industries or employers in regional/local locales
State aviation authority/board and others involved in air transport/support services
Representatives from major public utility corporations (ensure continuity of essential public services)
The State's Chief Financial Officer, auditor, directors of centralized procurement and/or resource support agencies
Volunteer organizations involved in disaster response and recovery

Appendix C:

AVAILABLE PERSONNEL AND RESOURCES WITHIN THE LA DHH, LA OPH AND LA OEP TO ASSIST IN THE INFLUENZA PANDEMIC RESPONSE

Personnel

Infectious Disease Epidemiology Section
• Epidemiologists
• State Epidemiologist/Physician
• State Public Health Veterinarian
• Clerical and support staff
• Regional epidemiologists
• Regional Disease Surveillance Specialists

Regional/Local Health Departments
• Regional Administrators
• Regional Medical Directors
• Public health nurses
• Administrative Coordinators

Immunization Program
• Regional Immunization Consultants
• Assessment Feedback Incentives Exchange (AFIX) regional staff
• Medical Consultant
• Immunization Program Section

Office of Environmental Health
• Registered sanitarians
• State and local environmental health contacts
• Public water supply contacts
• Engineers

Office of Chronic Disease Prevention and Health Promotion
• Epidemiologists
• Public health educators

Louisiana Office of Public Health Laboratories – New Orleans (Central Laboratory) and Regional Laboratories (Shreveport, Lake Charles)
• Microbiologists
• Virologists
• Laboratory technicians, and
• Other laboratory staff
• Laboratory testing facilities for infectious agents, to provide assessment data as part of a response to a novel influenza virus.

Section of Environmental Epidemiology and Toxicology
• State and local environmental epidemiologists
• Public Health risk assessment
• Physician

• Geographic Information Systems and mapping specialists

Emergency Response and Bioterrorism
• Regional BT Coordinators

Emergency Medical Services / Emergency Operations Center
• Emergency Medical Technicians

Resources and Inventory Lists

• Physicians by medical specialties
• Morticians
• Crematories
• Medical examiners/coroners
• Casket manufacturers, embalming supply companies, and
• Stress counselors

Office of Operations
• Public Health Consortia list

Louisiana State University Veterinary Diagnostic Laboratory and Veterinary School
• Laboratory directors/managers, and essential laboratory staff
• Specimen collection and transport arrangements and information management

Bureau of Health Services Financing, Health Standards Section
• Licensed and certified healthcare facilities

Appendix D: Sample Standing Delegation Orders for Immunizations

Sample Standing Delegation Orders for Administering Influenza Vaccine For Pandemic Influenza

[INSERT NAME OF PUBLIC HEALTH ORGANIZATION]

STANDING DELEGATION ORDERS FOR ADMINISTERING THE INFLUENZA VACCINE DURING MASS VACCINATION CLINICS FOR PANDEMIC INFLUENZA

These standing delegation orders are provided for guidance to registered nurses, licensed practical nurses, and other licensed personnel providing influenza immunization under the medical supervision of the [insert regional director or local health authority] during a public health emergency. All staff authorized to use these orders will sign the cover sheet before administering the influenza immunization. It is the intent of all parties involved that the procedure done through them be in conformity with the Louisiana Medical Practice Act, the Louisiana Nurse Practice Act, the practice acts of other allied health professional persons, and all of the rules duly promulgated under those acts.

Standing delegation orders are defined as written instructions, orders, rules, regulations, or procedures prepared by a physician and designed for a patient population with specific diseases, disorders, health problems or sets of symptoms. These orders are drafted by [insert regional public health staff or local public health staff] in accordance with the most current Center for Disease Control and Prevention (CDC) and Louisiana OPH Immunization guidelines. Training for personnel authorized to perform the orders will be provided by the [insert name or position of individual to provide training] prior to the start of the vaccination clinic and will consist of:

- Indications
- Contraindications and precautions
- Vaccine dosing and administration
- Side effects
- Talking points with patients
- Emergency procedures

Signed:_____ **Date**:_____

Signature block of Regional Director or local health authority

Sample Standing Delegation Orders for Administering Influenza Vaccine For Pandemic Influenza

Subject: Administration of Influenza Immunization to Adults, Adolescents and Children During Pandemic Influenza

Standing Delegation Order: Registered and licensed practical nurses and other licensed professionals able to provide vaccinations under their licensing boards will administer the influenza immunization using the procedures outlined in this document and the most up-to-date recommendations developed by the Advisory Committee on Immunization Practices. These documents are published by the CDC and may be accessed through the CDC Web site: www.cdc.gov. A copy of the vaccine package insert will be provided as an adjunct to this SDO.

Purpose: Decrease morbidity and mortality associated with pandemic influenza

Procedures:

A. All personnel administering the influenza vaccine must be familiar with the following documents:

1) Influenza Vaccine Information Statement published by CDC and provided by vaccination clinic
2) All written OPH policies and /or procedures related to administration of vaccines. These policies include but may not be limited to:
   - Obtaining informed consent for vaccines
   - Obtaining consent for immunization registry
   - Recording immunizations given
   - Reporting adverse reactions
   - Record retention
3) Standing delegation orders for emergencies signed by the authorizing physician.

B. Personnel administering the influenza vaccine must also be familiar with the package insert that accompanies the influenza vaccine.

C. The following requirements must be met before any immunizations are given:

1) The authorizing physician or a designated alternate will be accessible to vaccine administering personnel at least by telephone during implementation of the delegated medical functions.
2) A 911 Emergency Response team with physician support at the site the patient is transported to must be available during times immunizations are given. The name and phone number of the emergency backup must be posted where all clinic personnel can see it, and by each telephone in the clinic.
3) There must be two staff persons at the vaccine administration site who hold a

current course completion card for Basic Cardiac Life Support for Health Care Providers (adult, child, and infant), or equivalent.

4) No immunizations may be given unless all designated emergency supplies are on hand and available for immediate use.

D. The following **Special Considerations/Precautions** must be followed:

1) Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician.

2) Persons with acute febrile illness usually should not be vaccinated until their symptoms have abated. However, minor illnesses with or without fever do not contraindicate the use of influenza vaccine, particularly among children with mild upper respiratory tract infection or allergic rhinitis.

3) Because of the increased risk for influenza-related complications, women who will be beyond the first trimester of pregnancy (>14 weeks gestation) during the influenza season should be vaccinated. Certain providers prefer to administer influenza vaccine during the second trimester to avoid a coincidental association with spontaneous abortion, which is common in the first trimester, and because exposures to vaccines traditionally have been avoided during the first trimester. Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season, regardless of the stage of pregnancy. A study of influenza vaccination of >2,000 pregnant women demonstrated no adverse fetal effects associated with influenza vaccine. However, additional data are needed to confirm the safety of vaccination during pregnancy.

E. The following procedures must be followed:

1) The decision to give or not give immunizations MUST be made by the nurse or physician. Support staff will not decide if a medical condition, such as a cold, warrants not giving the shot. They may “screen” the patients, using approved questions, and record or report to the nurse or physician any abnormal findings.

2) Immunizations will be given by route and site specified by manufacturer.

3) All immunizations given will be recorded using OPH policies and records.

Signatures and Initials of Nurses and Other Licensed Personnel Administering Influenza Vaccine Under This Standing Delegation Order

Printed Name	Signature	Initials	Date

Appendix E: Regional and Local Health Unit Site Plan –

Influenza Vaccination Activities Integrated with Post-Event Smallpox Plan

The state plans to use different clinic sites statewide for influenza vaccination. Identified staff needs and responsibilities for each function within the clinics are suggested below. Each regional health department must identify individuals who will assume these duties. Additionally, these individuals must have a back-up individual for most administrative positions. Certain positions within the clinic should be staffed by Health Department employees and are designated as such:

Clinic Manager (Health Department Staff) - The Clinic Manager is responsible for assuring clinic site(s) are available, open, and ready to use. The Clinic Manager will make such purchases or authorize such expenditures as are needed to conduct control activities. An Assistant Clinic Manager and a Float Staff should be assigned to each site to provide administrative support.

Medical Services Team Leader (Health Department Staff) - This person will have the responsibility of overseeing all medical aspects of the clinic operation. These are listed below:

· Illness Evaluation Section - This section is responsible for the evaluation of potential vaccinees that present to clinic with potential influenza-like illness (ILI). Medical and non-medical staff, such as nurses and Immunization Consultants should be inclusive in this section.
· Vaccination Section - This section will include those individuals giving vaccine and the staff supporting them, including medical and non-medical staff. All vaccinators will be vaccinated prior to participation.
· Medical Screening and Counseling - This section will evaluate individuals who have reviewed the education material (written or video) and have questions regarding the vaccine.
· Exit Review - Will assure paperwork is completed and additional questions or instructions are addressed and document in the LA LINKS registry the vaccination details. This section should include the Regional Immunization Consultants and staff.
· Float Nurse - The Float Nurse will be available to provide relief or services as needed.

Supply Coordinator (Health Department Staff) - Responsible for assuring supplies, including vaccine, medical supplies, forms and educational materials are available in sufficient numbers for the operation. Included in this section are:

· Assistant Supply Manager - Will help assure all needed supplies are available, including the printing of patient forms and information.

Security Coordinator - Responsible for coordinating with the agency that is providing security (including crowd control and traffic control).

Administrative Support Team Leader - Responsible for administrative services/forms distribution, general patient information and triage (non-medical).

· Video Referral Coordinator - Responsible for assuring group education sessions are conducted. If a large number of people are to be immunized, providing information in a group setting (side effects, precautions, expected reactions). If audio/visual educational material is used, this coordinator will make sure it is available at all sites.
· Forms Distribution Coordinator - Responsible for assuring needed forms and records are given to patients.
· Triage (non-medical)-Responsible for routing patients to the correct staging area.

Volunteer Coordinator - Responsible for recruiting and/or training volunteers. This function may be performed by other on-site staff (e.g., parish government representative or non-health department staff.)

Media Coordinator - Responsible for all press releases and communication to the media. All requests for contact with the media should be forwarded to the State Communications Office.

Transportation Coordinator (Optional) - Responsible for arranging transportation of patients from the triage or other facilities to the clinic site(s) and back.

Supplies for Clinic Operations

The vaccine and/or antiviral drugs may be received and distributed in accordance with the State's plan with respect to the utilization of the National Pharmaceutical Stockpile (NPS). Vaccines/antiviral drugs may be shipped directly to regional/local health departments for transport to the actual clinic sites. The regional pharmacist has been tasked with assuring community pharmacists will be available to assist in the management of the vaccine / antiviral drug supplies.

Vaccine will be stored according to National Immunization Program guidelines. The Immunization Program has adequate shipping containers to transport vaccine under cold storage conditions. Each regional/local health unit facility should have sufficient equipment to transport vaccine without breaking the cold chain.

Each local health department or regional office will maintain a supply of forms for each clinic site in its jurisdiction. Clinic medical supplies represent a significant logistical and financial problem. The State can purchase the requisite supplies and store them in facilities across the state or may need to utilize the NPS or Vendor Management Inventory (VMI) to subsidize medical supplies.

Waste disposal at the clinic level will be handled as is all waste from a health department. General waste (paper) will go into the garbage; medical waste (used needles) will go into sharps containers and be disposed of per the usual method. The sharps containers will be transported to the health department or local hospital if they cannot be disposed of on a daily basis at the clinic. (Refer to the *Infection Control Guidelines, Ambulatory Care Settings, First Edition 2004, Louisiana Office of Public Health* for policies related to Medical Waste Management*).*

Appendix F: VAERS – Front cover; part 1

How Do I Report?

It's very easy to report to VAERS. After you submit a report, VAERS staff may contact you for follow-up information.

- **Internet:** Report on-line at http://secure.vaers.org/VaersDataEntryintro.htm. Or print the report form at www.vaers.org, and mail or fax the completed form to VAERS.
- **VAERS Hotline:** Report forms are available by calling 800-822-7967. Operators are on duty from 8:00 a.m. to 6:00 p.m., Eastern Standard Time.
- **Fax:** Fax the completed report form to 877-721-0366 (toll-free).
- **Mail:** Mail the completed report form to VAERS, P.O. Box 1100, Rockville, MD, 20849-1100.
- **E-mail:** Send VAERS inquiries to info@vaers.org.

For More Information

- **Food and Drug Administration**
  800-835-4709 or 301-827-1800;
  www.fda.gov/cber/vaers/vaers.htm. *For safety and effectiveness information on FDA-licensed vaccines.*
- **Centers for Disease Control and Prevention**
  800-232-2522 (English) or 800-232-0233 (Spanish); www.cdc.gov/nip. *For general information on vaccines and immunization schedules.*

Everyone has a part to play!

VAERS
www.vaers.org

P.O. Box 1100
Rockville, MD 20849-1100
Tel: 800-822-7967
Fax: 877-721-0366
info@vaers.org

VAERS
www.vaers.org

Vaccine Adverse Event Reporting System

A National Program for Monitoring Vaccine Safety

Appendix F: VAERS – Inside cover; part 2 (cont)

What Is VAERS?

The Vaccine Adverse Event Reporting System (VAERS) is a national program that monitors the safety of vaccines after they are licensed. VAERS is managed by the U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Food and Drug Administration (FDA).

VAERS is part of a larger system that makes sure that vaccines are safe and work as intended. Steps to make sure that vaccines are safe begin before a vaccine is licensed and continue afterward. Before a vaccine is licensed, FDA requires that it go through extensive safety testing. After a vaccine is licensed, VAERS is used to watch for any problems, or "adverse events," that happen after vaccination. Even though careful and complete studies are done before a vaccine is licensed, rare side effects may not be found until a vaccine is given to millions of people with different backgrounds and medical histories. VAERS helps to make sure that the benefits of vaccines continue to be far greater than the risks.

There are things that VAERS cannot do. VAERS cannot prove that a vaccine either did cause or did not cause a problem. In fact, vaccines are not the cause of many of the problems reported to VAERS. Sometimes people who get vaccinated coincidentally will get sick from some other cause—they get a stomachache, cold, or flu—and it has nothing to do with the vaccine. Rarely, people who have been vaccinated will get unexpected reactions that are serious and should be reported to VAERS.

Even though VAERS cannot prove that a vaccine caused a problem, it can give FDA and CDC important information that might signal a problem. If it looks as though a vaccine might be causing a problem, FDA and CDC will investigate further.

Does VAERS Provide Medical Advice?

No, VAERS does not provide medical advice. For medical advice, please contact your health care provider or state health department.

Who Can Report to VAERS?

Anyone can report to VAERS. FDA and CDC encourage patients, parents, and others to report any significant problems experienced after vaccination, even if they are not certain that a vaccine caused them.

To report a possible problem after vaccination, visit the VAERS web site at www.vaers.org. Also see the section in this brochure on "How Do I Report?"

Why Should I Report to VAERS?

Better reporting helps keep vaccines safe for you and your family, and for everyone who receives vaccinations. Each VAERS report provides valuable information that helps FDA and CDC make sure that vaccines are safe. The more accurate and complete the VAERS reports, the better the system works. Remember, no vaccine (or any medicine) is completely free of risk and some side effects are possible.

What Types of Events Should Be Reported?

You should report any serious problem that happens after getting a vaccine, even if you are not sure that the vaccine caused the problem. It is especially important to report any problem that resulted in hospitalization, disability, or death. Health care providers are required by law to report certain problems. To get a list of these, please call 800-822-7967 or go to http://www.vaers.org/reportable.htm or http://www.hrsa.gov/osp/vicp/table.htm. If you are not sure that a certain type of problem should be reported to VAERS, talk with your health care provider.

WEBSITE: www.vaers.org E-MAIL: info@vaers.org FAX: 1-877-721-0366

VAERS

VACCINE ADVERSE EVENT REPORTING SYSTEM

24 Hour Toll-Free Information 1-800-822-7967
P.O. Box 1100, Rockville, MD 20849-1100
PATIENT IDENTITY KEPT CONFIDENTIAL

For CDC/FDA Use Only

VAERS Number _____

Date Received _____

Patient Name:

Last First M.I.

Address

City State Zip

Telephone no. (___) _____

Vaccine administered by (Name):

Responsible Physician _____

Facility Name/Address

City State Zip

Telephone no. (___) _____

Form completed by (Name):

Relation to Patient ☐ Vaccine Provider ☐ Patient/Parent ☐ Manufacturer ☐ Other

Address *(if different from patient or provider)*

City State Zip

Telephone no. (___) _____

1. State	2. County where administered	3. Date of birth mm dd yy	4. Patient age	5. Sex ☐ M ☐ F	6. Date form completed mm dd yy
		/ /			/ /

7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any

8. Check all appropriate:
- ☐ Patient died (date ___/___/___) mm dd yy
- ☐ Life threatening illness
- ☐ Required emergency room/doctor visit
- ☐ Required hospitalization (_____days)
- ☐ Resulted in prolongation of hospitalization
- ☐ Resulted in permanent disability
- ☐ None of the above

9. Patient recovered ☐ YES ☐ NO ☐ UNKNOWN

10. Date of vaccination mm dd yy / / Time _____ AM PM

11. Adverse event onset mm dd yy / / Time _____ AM PM

12. Relevant diagnostic tests/laboratory data

13. Enter all vaccines given on date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous Doses
a.					
b.					
c.					
d.					

14. Any other vaccinations within 4 weeks prior to the date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous doses	Date given
a.						
b.						

15. Vaccinated at:
☐ Private doctor's office/hospital ☐ Military clinic/hospital ☐ Public health clinic/hospital ☐ Other/unknown

16. Vaccine purchased with:
☐ Private funds ☐ Military funds ☐ Public funds ☐ Other/unknown

17. Other medications

18. Illness at time of vaccination (specify)

19. Pre-existing physician-diagnosed allergies, birth defects, medical conditions (specify)

20. Have you reported this adverse event previously? ☐ No ☐ To health department ☐ To doctor ☐ To manufacturer

Only for children 5 and under

22. Birth weight _____ lb. _____ oz.

23. No. of brothers and sisters

21. Adverse event following prior vaccination (check all applicable, specify)

	Adverse Event	Onset Age	Type Vaccine	Dose no. in series
☐ In patient				
☐ In brother or sister				

Only for reports submitted by manufacturer/immunization project

24. Mfr./imm. proj. report no.

25. Date received by mfr./imm.proj.

26. 15 day report? ☐ Yes ☐ No

27. Report type ☐ Initial ☐ Follow-Up

Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.

Form VAERS-1 (FDA)

"Fold in thirds, tape & mail — DO NOT STAPLE FORM"

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES
OR APO/FPO

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1895 ROCKVILLE, MD

POSTAGE WILL BE PAID BY ADDRESSEE

VAERS
P.O. Box 1100
Rockville MD 20849-1100

DIRECTIONS FOR COMPLETING FORM

(Additional pages may be attached if more space is needed.)

GENERAL

- Use a separate form for each patient. Complete the form to the best of your abilities. Items 3, 4, 7, 8, 10, 11, and 13 are considered essential and should be completed whenever possible. Parents/Guardians may need to consult the facility where the vaccine was administered for some of the information (such as manufacturer, lot number or laboratory data.)
- Refer to the Reportable Events Table (RET) for events mandated for reporting by law. Reporting for other serious events felt to be related but not on the RET is encouraged.
- Health care providers other than the vaccine administrator (VA) treating a patient for a suspected adverse event should notify the VA and provide the information about the adverse event to allow the VA to complete the form to meet the VA's legal responsibility.
- These data will be used to increase understanding of adverse events following vaccination and will become part of CDC Privacy Act System 09-20-0136, "Epidemiologic Studies and Surveillance of Disease Problems". Information identifying the person who received the vaccine or that person's legal representative will not be made available to the public, but may be available to the vaccinee or legal representative.
- Postage will be paid by addressee. Forms may be photocopied (must be front & back on same sheet).

SPECIFIC INSTRUCTIONS

Form Completed By: To be used by parents/guardians, vaccine manufacturers/distributors, vaccine administrators, and/or the person completing the form on behalf of the patient or the health professional who administered the vaccine.

Item 7: Describe the suspected adverse event. Such things as temperature, local and general signs and symptoms, time course, duration of symptoms, diagnosis, treatment and recovery should be noted.

Item 9: Check "YES" if the patient's health condition is the same as it was prior to the vaccine, "NO" if the patient has not returned to the pre-vaccination state of health, or "UNKNOWN" if the patient's condition is not known.

Item 10 and 11: Give dates and times as specifically as you can remember. If you do not know the exact time, please indicate "AM" or "PM" when possible if this information is known. If more than one adverse event, give the onset date and time for the most serious event.

Item 12: Include "negative" or "normal" results of any relevant tests performed as well as abnormal findings.

Item 13: List ONLY those vaccines given on the day listed in Item 10.

Item 14: List any other vaccines that the patient received within 4 weeks prior to the date listed in Item 10.

Item 16: This section refers to how the person who gave the vaccine purchased it, not to the patient's insurance.

Item 17: List any prescription or non-prescription medications the patient was taking when the vaccine(s) was given.

Item 18: List any short term illnesses the patient had on the date the vaccine(s) was given (i.e., cold, flu, ear infection).

Item 19: List any pre-existing physician-diagnosed allergies, birth defects, medical conditions (including developmental and/or neurologic disorders) for the patient.

Item 21: List any suspected adverse events the patient, or the patient's brothers or sisters, may have had to previous vaccinations. If more than one brother or sister, or if the patient has reacted to more than one prior vaccine, use additional pages to explain completely. For the onset age of a patient, provide the age in months if less than two years old.

Item 26: This space is for manufacturers' use only.

Appendix G Communications Shelf Kit

To be developed