Texas Department of State Health Services
Pandemic Influenza Preparedness Plan

draft

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Telephone Contact List

Organization	Telephone number
CDC Emergency Response	(770) 488-7100
Department of State Health Services (DSHS) Central Office	(512) 458-7111
DSHS Immunization Branch	(512) 458-7284 (800) 252-9152
Health Service Region 1 – Nick Curry, MD, Acting Director Barry Wilson, Deputy Director	(806) 744-3577 (806) 741-1366 Fax
Health Service Region 2/3 – James Zoretic, MD, Director	(817) 264-4500 (817) 264-4506 Fax 817) 264-4505 TDD
Health Service Region 4/5N – Paul McGaha, DO, Director	(903) 595-3585 903) 593-4187 Fax
Health Service Region 6/5S – W. John Ryan, MD, Director	(713) 767-3000 (713) 767-3049 Fax
Health Service Region 7 – James Morgan, MD, Director	(254) 778-6744 (254) 778-4066 Fax
Health Service Region 8 – James Morgan, MD, Acting Director Anita Martinez, Deputy Director	(210) 949-2000 (210) 949-2015 Fax
Health Service Region 9/10 – James Zoretic, Acting Director Charles Gaiser, Deputy Director	(915) 834-7675 (915) 834-7799 Fax
Health Service Region 11 – Brian Smith, MD, Director	(956) 423-0130 (956) 444-3298 Fax

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Document Web Link List

Document	Web Address
CDC Influenza Home Page	www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm
Communicable Disease Control Measures in TX: A Guide for Health Authorities in a Public Health Emergency	www.dshs.state.tx.us/comprep/ogc/cdmanual.pdf
Community Emergency Medical Clinic template	Not available as yet
Control of Influenza in Acute Care Settings	www.cdc.gov/ncidod/hip/INFECT/flu_acute.htm
Crisis and Emergency Risk Communications Plan	www.dshs.state.tx.us/riskcomm/documents/Communications Plan 050101.pdf
Department of State Health Services (DSHS)	www.dshs.state.tx.us/
Disaster Mental Health Appendix 13	www.dshs.state.tx.us/comprep/dmh/Appendix13.pdf
Fever: How to Take the Temperature	www.lpch.org/HealthLibrary/ParentCareTopics/FeverInfectionsCrying/FeverHowtoTaketheTemperature.html
FluAid	www2a.cdc.gov/od/fluaid
Good health habits	www.cdc.gov/flu/protect/stopgerms.htm - GoodHealthHabits
Health and Safety Code – Chapter 81. Communicable Diseases	www.capitol.state.tx.us/statutes/docs/HS/content/htm/hs.002.00.000081.00.htm
Homeland Security – Unified Command	www.dhs.gov/dhspublic/display?theme=14&content=3697
How to stop the spread of germs at home, school, & work	www.cdc.gov/flu/protect/stopgerms.htm www.cdc.gov/flu/protect/preventing.htm
Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities	www.cdc.gov/flu/avian/professional/protect-guid.htm
Isolation Precautions in Hospitals, Guideline for	www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm
Laboratory Specimen Submission Form Instructions	www.dshs.state.tx.us/lab/g-2a_instruct.htm
Laboratory Specimen Submission Form Sample	www.dshs.state.tx.us/lab/G2A_FORM_sample.pdf
Limited English Proficiency	www.hhs.gov/ocr/lep
Media Policy (DSHS)	
MedWatch	www.fda.gov/medwatch/
News Release: DSHS Recommends Flu Shots Now for Those At Risk of Complications	www.dshs.state.tx.us/news/releases/20051007.shtm
Office of General Council – Legal	www.dshs.state.tx.us/comprep/ogc/default.shtm

Resources and Interpretations	
Prevention and Control of Influenza	www.cdc.gov/mmwr/preview/mmwrhtml/rr5208a1.htm
Prevention of Pneumococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP)	www.cdc.gov/mmwr/preview/mmwrhtml/00047135.htm
Ready Business	http://www.ready.gov/business/st1-planning.html
Recommendations for annual seasonal flu vaccination	www.cdc.gov/mmwr/preview/mmwrhtml/mm5434a4.htm
Recommendations for pneumonia vaccine	www.cdc.gov/nip/publications/VIS/vis-ppv.pdf
Respiratory Hygiene / Cough Etiquette in Health Care Settings	www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm
School influenza prevention resources	www.cdc.gov/germstopper www.itsasnap.org/snap/teachers_nurses.asp www.cdc.gov/flu/school/qa.htm www.cdc.gov/flu/school/ www.cdc.gov/germstopper/resources.htm www.healthinschools.org/sh/influenza.asp www.tdh.state.tx.us/immunize/flu.htm
Surveillance and Epidemiology	www.tdh.state.tx.us/immunize/html/survepi_txt.htm - survey
Texas Emergency Management Plan	ftp.txdps.state.tx.us/dem/plan_state/state_plan_20040211.pdf
Updated Infection Control Measures for the Prevention and Control of Influenza in Health-Care Facilities	www.cdc.gov/flu/professionals/infectioncontrol/healthcarefacilities.htm
Vaccine Adverse Events Reporting System	vaers.hhs.gov
Vaccine Information Statements-Immunization Action Coalition	www.immunize.org/vis/
Vaccine Information Statements-National Immunization Program	www.cdc.gov/nip/publications/VIS/

Abbreviations Used

ACIP	Advisory Committee on Immunization Practices
CDC	Centers for Disease Control and Prevention
CERC	Crisis and Emergency Risk Communications
CPS	Community Preparedness Section
DLC	Distance Learning Coordinator
DMDG	Drug and Medical Devices Group
DSHS	Department of State Health Services (Texas)
EMS	Emergency Medical Services
ESC	Emergency Support Center (DSHS)
GDEM	Governor's Division of Emergency Management
HAN	Health Alert Network
HHSC	Health and Human Services Commission
HSR	Health Service Region
IAP	Incident Action Plan
IB	Immunization Branch
IC	Incident Command
ICS	Incident Command System
IDCU	Infectious Disease Control Unit
ILI	Influenza-like Illness
JIT	Just in Time training
LHD	Local Health Department
PB	Pharmacy Branch
PHL	Public Health Laboratory
PI	Pandemic Influenza
PIC	Person-In-Charge
PIL	Pandemic Influenza Lead
PIPG	Pandemic Influenza Planning Group
PIPP	Pandemic Influenza Preparedness Plan
PPE	Personal Protective Equipment
PRT	Pandemic Response Team
SDO	Standing Delegation Orders
SNS	Strategic National Stockpile
SOC	State Operation Center
TALHO	Texas Association of Local Health Officials
THA	Texas Hospital Association
TIMS	Texas Inventory Management System
TMA	Texas Medical Association
VAERS	Vaccine Adverse Events Reporting System
VIS	Vaccine Information Statement
VMI	Vendor-Managed Inventory
WHO	World Health Organization

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DEFINITIONS

Antiviral medication: A medication that destroys or inhibits the growth and reproduction of viruses.

Accessibility: (a) physical accessibility - complying with the portions of the Texas Accessibility Standards pertaining to parking, path of travel, entrances, restrooms, and fire alarms, (b) social accessibility - the ability to obtain available, adequate, and appropriate services related to, among others, geographic isolation (including transportation), cultural appropriateness, ability to pay, and language and comprehension issues, and (c) communications accessibility - people with disabilities have the same level of access to information resources as those without disabilities.

Confirmed case: Refers to a laboratory-confirmed influenza virus infection in a person with influenza-like illness. A diagnosis of influenza is usually made on a clinical basis, particularly if influenza has been reported in the community.

Community containment measures: Refer to the separation of infected or exposed people from non-infected people by use of isolation, quarantine, or other restrictions on movement and activities.

Community health worker: A person, serving with or without compensation, who provides services within the cultural, linguistic, and value system of his or her community. The community health worker functions as a culture broker between traditional cultural healing practices and western allopathic medicine by applying his or her unique understanding of the experiences, language and culture of the communities he or she serves. Included in the title are **promoter (a)** (Hispanic communities) and **community health representatives** (American Indian tribal communities).

Contact: A person who has been exposed to an influenza case in some way during the infectious period. A **close contact** is a person who has had direct exposure to respiratory secretions or body fluids of a person with confirmed influenza, or has touched or talked to a person with confirmed influenza within 3 feet. For instance, a person who has cared for or lived with an influenza patient is considered a close contact. A **household contact** is a type of close contact where direct exposure occurs through such additional actions as kissing or hugging, sharing eating or drinking utensils. Working in the same building, walking by, or sitting across a room from a person with influenza is NOT considered a direct exposure and therefore is considered a contact only.

Control Measures: Standard emergency containment practices in public health that aim to control exposure to both infected and potentially infected people. Practices may be voluntarily (agreed to) or compelled (enforced) by public health authorities and can be applied on an individual or population level. The Communicable Disease Prevention and Control Act is a comprehensive statute — codified as Chapter 81, Texas Health and Safety Code — that provides for numerous control measures to be made available for use in protecting the public health. Control measures are actions necessary to control and prevent communicable disease. They include, but are not limited to, immunization, detention, restriction, disinfection, decontamination, isolation, quarantine, disinfestation, chemoprophylaxis, preventive therapy, prevention, and education. However, the law does not limit control measures only to these measures. Texas law allows control measures to be imposed on individuals, property, areas, or common carriers. A complete description of control measures and statutory authority are

discussed in *Communicable Disease Control Measures in Texas: A Guide for Health Authorities, 2004* at www.dshs.state.tx.us/comprep/ogc/cdmanual.pdf

- **Isolation:** Refers to the separation and restriction of movement of people with a specific communicable disease contain the spread of that illness to susceptible people. People in isolation may be cared for in their homes, in hospitals, at designated health care facilities, or other dedicated facility.
- **Quarantine:** The separation and restriction of movement of well people who may have been exposed to an infectious agent and may be infected but are not yet ill. Quarantine usually occurs in the home but can be in a dedicated facility or hospital. The term "quarantine" also can be applied to restrictions of movement into or out of buildings, other structures, and public conveyances. In addition, specific areas or communities may be quarantined. The Centers for Disease Control and Prevention (CDC) also is empowered to detain, medically examine, or conditionally release people suspected of carrying certain communicable diseases at points of arrival in and departure from the United States or across state lines.

Frontier. Frontier refers to a county with a population density of less than 7 people per square mile. 64 Texas counties meet this criterion.

Health authority: A physician designated to administer state and local laws relating to public health under the Local Public Health Reorganization Act, Health and Safety Code, Chapter 121. The health authority, for purposes of these sections, may be:

- A local health authority who is the director of a local health department or a physician appointed by the Commissioner of Health, if there is no local health department director; or
- A Health Service Region director of the Texas Department of State Health Services (DSHS), if no physician has been appointed by the Commissioner of Health as a local health authority.

Health care personnel: Any employee working in the health care field (inpatient, outpatient, public health) or temporarily assigned to patient-related activities (transport) who may have close contact, within 3feet, of persons with influenza-like-illnesses. Contact may occur directly with persons, care items, waste, or specimens in locations such as patient rooms, procedure areas, physician offices, homes, clinics, workplaces, or laboratories.

Incubation period: The time from exposure to an infectious disease to symptom onset. The incubation period for influenza is usually 2 days but can vary from 1 to 5 days.

Infection control measures: Actions taken to decrease the risk for transmission of infectious agents. The key precautions are typed according to mode of transmission:

- **Standard precautions: P**ractices required for the basic infection control practices of proper hand hygiene, appropriate handling of clinical waste, and use of personal protective equipment (PPE) to reduce the spread of infectious agents. PPE includes gloves, gowns, surgical masks, goggles or face shields.

- **Contact precautions**: Practices designed to reduce the risk of disease transmission by direct or indirect contact with an infectious person. Direct contact transmission involves a direct body surface–to–body surface contact and physical transfer of infectious agents from an infected person to a susceptible host. Indirect–contact transmission involves contact of a susceptible host with a contaminated intermediate object (e.g., instruments or dressings, unwashed hands, or gloves that are not changed between patients). Contact precautions also may include the use of PPE.
- **Droplet precautions**: Practices designed to reduce the risk of disease transmission that occurs when droplets containing infectious agents generated by an infectious person are propelled a short distance through the air (i.e., by coughing, sneezing, or talking) and deposited on the conjunctivae or mucous membranes of the mouth or nose of a susceptible person. Droplet precautions include the use of PPE.

Influenza-like illness: Describes a combination of symptoms that include 1) a fever ≥ 100°F and 2) cough and/or sore throat in the absence of a known cause.

Influenza pandemic: A worldwide outbreak of a novel influenza virus influenza causing sudden, pervasive illness that can severely affect even otherwise healthy individuals in all age groups. Influenza pandemics occur infrequently and at irregular intervals and have the potential for substantial impact resulting in increased morbidity and mortality, significant social disruption, and severe economic costs.

Limited English Proficiency: Refers to individuals who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English. They may be eligible to receive language assistance with respect to a particular type of service, benefit, or encounter, such as sign language interpreters (retrieved 9/19/05 from www.hhs.gov/ocr/lep).

Nonpharmaceutical Interventions: Those interventions to reduce transmission of disease at an individual or population level that are not pharmaceutically based.

Nosocomial Infections: Refer to infections obtained by patients in a health care setting, such as a hospital or clinic. Typically, nosocomial transmission refers to spread of an infectious disease from a patient in a health care setting or from health care personnel to another patient, worker, or visitor in the same setting.

Outbreak: is a sudden increase in the number of cases of a specific disease or clinical symptom.

Pandemic Response Team: A team comprised of members of the Texas Department of State Health Services (DSHS) Pandemic Influenza Planning Group (PIPG) that provides the DSHS Pandemic Influenza Preparedness Plan (PIPP) expertise to the Incident Command.

Personal protective equipment: Barrier protection to be used by an individual to prevent disease transmission. PPE may include gowns, gloves, masks, goggles, or face shields. The type of mask (i.e., surgical, N-95, or powered, air-purified respirator) is disease-specific and defined in the type of precautions.

Prophylaxis: The prevention of or protective treatment for a disease.

- **Chemoprophylaxis:** The use of vaccines, antiviral medications or other chemical agents to prevent the spread of influenza disease).

Public Health Disaster: a declaration by the governor of a state of disaster; and a determination by the commissioner that there exists an immediate threat from a communicable disease that:

- Poses a high risk of death or serious long-term disability to a large number of people; and
- Creates a substantial risk of public exposure because of the disease's high level of contagion or the method by which the disease is transmitted.
- A declaration may not continue longer than 30 days and may be renewed once for an additional 30 days.

Recognized Community Health Providers: Refers to providers who practice in communities that are identified by various groups as healers within their cultural context.

Respiratory hygiene and cough etiquette: Individual public health activities that avert the transmission of influenza and/or other infectious diseases by using measures to contain respiratory secretions and hand washing or sanitizing (see Appendix N).

Rural: Counties in Texas that do not meet the U.S. Office of Management and Budget criteria for classification as metropolitan or micropolitan areas. 133 counties in Texas do not meet the criteria for metro- or micropolitan classification. Of these counties, 64 meet the criterion for classification as "frontier" leaving the remaining 69 counties classified as "rural" (Jane Meier, personal communication, 10/7/05).

Special Populations: Refers to individuals who are underserved in health care and disasters, including but not limited to, children, elderly, homeless, persons with disabilities, homebound, people with psychological or cognitive deficits, people who are geographically isolated, people with varying cultural backgrounds, persons with limited English proficiency, and people with very low income.

Stakeholders: Organizations or individuals, both public sector and private sector that have a stake in or may be impacted by a given approach to managing an influenza pandemic in Texas.

Strategic National Stockpile (SNS): Refers to the United States' national repository of antibiotics, antivirals, vaccines, antitoxins, chemical antidotes, life-support medications, IV administration supplies, airway maintenance supplies and medical/surgical equipment items. The SNS is designed to supplement and re-supply state and local public health agencies in the event of a national emergency. The SNS Program is committed to have 12-hour Push Packages delivered anywhere in the U.S. or its territories within 12 hours of a federal decision to deploy.

Surge Capacity: Refers to the accommodation to transient sudden rises in demand for services following an incident. It is the ability of a health system to expand beyond normal operations to meet a sudden increased demand for service.

Surveillance: Refers to "information for action" in public health. Surveillance enables a health department to take the pulse of its community. By knowing the ongoing pattern of disease occurrence and disease potential, a health department can more effectively and efficiently investigate, prevent, and control disease in its community. An effective disease surveillance program systematically collects, analyzes, interprets, and disseminates health data on an ongoing basis (www.tdh.state.tx.us/immunize/html/survepi_txt.htm - survey).

Unified Command. In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by

establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility, or accountability (www.dhs.gov/dhspublic/display?theme=14&content=3697).

Vendor Managed Inventory: Refers to a means of optimizing supply chain performance in which the pharmaceutical manufacturer is responsible for maintaining the distributor's inventory levels. The manufacturer has access to the distributor's inventory data and is responsible for generating purchase orders. Under this Private sector system, providers (physicians, clinics, etc.) order pharmaceuticals directly from distributors.

Volunteer: Describes any individual accepted to perform services by an agency and/or volunteer organization (such as Ready Texans and Texas Ready Nurse) that has authority to accept volunteer services, when the individual performs services without promise, expectations, or receipt of compensation for services performed.

- **Employee on voluntary assignment:** Refers to a State Agency employee who, with written supervisory approval, volunteers to provide and is subsequently tasked to perform a task outside the scope of their employment during a state and/or federal emergency. The employee may be considered as being on temporary assignment (Source-Health and Human Services Commission (HHSC) Human Resource manual, Chapter 3) to perform disaster assistance duties.

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SECTION I. INTRODUCTION

1. BACKGROUND

> "Outbreaks of influenza illness have been documented for at least the past 400 years. A total of 32 worldwide outbreaks, or pandemics, have been recorded with the first described in 1580. During this past century, the three major influenza A pandemics occurred in 1918, 1957, and 1968. The pandemic of 1918–1919 was felt in three waves and was by far the most devastating, resulting in the death of 20 to 40 million people worldwide, with a disproportionate number of them young. Although it is impossible to predict when, it is a certainty that the next pandemic will arrive (Penn, 2004)."

National experts are unable to provide a consensus for the anticipated severity or duration of the next influenza pandemic. Some scientists and public health officials estimate a lower attack rate than others. In general, experts estimate that an international outbreak (pandemic) due to a new hemagglutinin variation of influenza may have a 25-50% attack rate meaning that, in Texas, between 5 and 10 million Texans could become infected. An estimated 4% of those, between 200 and 400 thousand Texans, may likely require hospitalization. Case fatality rate estimations range from 1.5% to 5% indicating that at a conservative 25% attack rate between 75 and 250 thousand Texans may die, while at 50% attack rate between 150 and 500 thousand might die as a result of their illnesses.

It is predicted that at least two waves of pandemic influenza will occur. The second wave will strike about three to nine months after the first wave. In a given community, the pandemic waves are expected to last about one month and peak at two weeks depending on interventions available. A second wave in Texas would likely cause an additional 5% of the population, approximately 1 million people, to develop the influenza. Of these, it is estimated that 4%, about 44,000, may be hospitalized and 1.7%, about 18,000, may die. Additional waves may occur each with fewer numbers ill, hospitalized, and dying. These numbers depend on virus transmissibility, virulence, other factors such as vaccine availability, and Texans' understanding of and willingness to practice personal protective behaviors and adhering to health department instructions aimed at reducing exposure and transmission.

The impact of a pandemic will be measured not only by how many people die. If millions of people get sick at the same time, major social consequences also will occur. Hospital capacity will not be able handle the numbers of severely ill requiring in-patient care. If significant numbers of physicians and nurses become ill, it will be difficult to care for the sick. If the majority of officers on a local police force are infected, the safety of the community might be at risk. If air traffic controllers are all sick at once, air travel could grind to a halt, interrupting not only business and personal travel, but also the transport of life-saving vaccines or anti-viral drugs.

A pandemic event also may be expected to result in stress and emotional trauma for responders, health care providers, individuals, and communities. Hospitals will need to provide psychological and stress management support to those who are symptomatic, those who believe they are ill, and to staff who are dealing with the increased workloads and personal concerns. The public will require information on how to recognize and cope with the short and long-term risk of sustained stress during mass vaccinations, for those debilitated by influenza, and their

caregivers. Special attention and resources will be needed to ensure that special populations are identified prior to the event and unique service and transportation needs are incorporated into the local pandemic influenza emergency management plan. A vital part of pandemic planning is the development of strategies and tactics to address these potential problems.

The influenza epidemics that happen nearly every year are important events. Influenza is a respiratory illness that makes hundreds of thousands of people sick each year and kills tens of thousands. One of the most important features about influenza viruses is that their structure changes slightly but frequently over time, a process known as "genetic drift." This process results in the appearance of different strains that circulate each year. The composition of the influenza vaccine is changed annually to help protect people from the strains of influenza virus that are expected to be the most common ones circulating during the coming influenza season. Currently, only 3 influenza virus strains are in general circulation in humans (H1N1, H1N2, and H3N2); H2N2 circulated in 1957 and 1968, causing the Hong Kong influenza pandemic, but has not been seen since (CDC, 2005). The 2005 "bird flu" threat is an H5N1 strain.

In some years, the influenza virus changes dramatically and unexpectedly through a process known as "genetic shift." Outbreaks of influenza in birds or animals, especially when happening simultaneously with seasonal human influenza, may lead to the merging of animal and human influenza viruses. This mix can result in new antigens, which previously infected only birds or animals, to become easily transmissible from human to human. A second form of genetic shift occurs when genetic reassortment happens within birds or animals allowing for easy transmission to humans and between humans, without the merging with human influenza (Penn, 2004). New evidence indicates that the Spanish Flu pandemic of 1918 may have resulted from reassortment within birds resulting in easy human-to-human transmission of H1N1 (Taubenberger, et. al, 2005). The 2005 "bird flu" is an H5N1 strain that might "shift" in either of these ways and become easily transmissible between humans. Genetic shift results in the appearance of a new influenza virus (called a "novel virus" to which few, if any, people are immune. If this new virus spreads easily from person to person, it could quickly travel around the world and cause increased levels of serious illness and death, affecting millions of people. This is called influenza pandemic**.**

The next pandemic, an event considered by many experts to be inevitable and overdue, will require an estimated three weeks to three months to reach North America following international identification. In addition, experts believe that the next pandemic will involve sustained transmission of highly pathogenic avian influenza. This plan discusses the H5N1 virus as the next pandemic influenza threat; however, the DSHS acknowledges that other novel viruses may emerge in the future. This plan is intended to apply to pandemic influenza preparedness regardless of novel virus strain.

A. GOAL OF THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES (DSHS) PANDEMIC INFLUENZA PREPAREDNESS PLAN (PIPP)

The goal of influenza pandemic preparedness and response is to minimize serious illness, hospitalizations, and death; to preserve critical infrastructure; and to minimize social disruption in Texas as a result of an influenza pandemic (U.S. Department of Health and Human Services, 2005). The objectives of the Texas Department of State Health Services (DSHS) Pandemic Influenza Preparedness Plan (PIPP) include:

1. To assist and facilitate appropriate planning and response at all levels of government by:
    a. Developing a state plan through a collaborative process which is acceptable to stakeholders that clearly identifies roles and responsibilities;
    b. Developing a Plan that is sufficiently flexible to account for the unknown epidemiology of a pandemic and the needs of different stakeholders;
    c. Recommending planning considerations for the appropriate prevention, patient care, and treatment during a pandemic; and
    d. Advocating planning considerations for appropriate communications, resource management, and preventive measures to minimize infrastructure and social disruption.
2. To provide a comprehensive and clearly operational plan that is reviewed on an annual basis to ensure incorporation of new developments and to ensure consistencies with best practices.

B. TARGET AUDIENCES

The target audiences for this DSHS PIPP are primarily regional and local health departments, hospital planners, and emergency management planners tasked with developing pandemic influenza response plans. The DSHS PIPP serves as a guide to local planning as well as delineating the DSHS activities.

Health departments must be ready to act immediately. The DSHS Pandemic Influenza Planning Group (PIPG) (Appendix A), in cooperation with various private sector and public sector stakeholders, has developed the DSHS PIPP to outline strategies by which state and local health care systems can work together to reduce pandemic influenza-related morbidity, mortality, and social disruption. Key roles and responsibilities (Appendix B) for the pandemic stages have been defined for the DSHS staff. Within the DSHS, the Community Preparedness Section (CPS) has been designated as the lead for pandemic response.

The DSHS PIPP reflects a dynamic, ongoing collaborative process organized on the cyclical periods and phases of an influenza pandemic as defined by the World Health Organization (WHO): Interpandemic Period, Pandemic Alert Period, Pandemic, and Postpandemic Period. “Subsided Period” is added as a fifth period to accommodate actions required to deal with inter-wave issues. Each of five Key Components is developed as it applies to each pandemic period. Key components are categories for actions that address the aforementioned goals of (1) reducing hospitalizations and deaths, (2) preserving critical infrastructure, and (3) minimizing social and psychological disruption. The Key Components are: planning and coordination, situation monitoring and assessment, prevention and containment, health systems response, and communication.

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2. ASSUMPTIONS

- Local governments have the primary responsibility to provide public health, mental health, and emergency medical services within their jurisdictions. State government will provide (for counties without a health department) and/or augment public health, mental health, and emergency medical services that exceed the capabilities of the local government.
- The National Response Plan, Emergency Support Function 8 "Public Health and Medical" and Texas Emergency Management Plan, Annex H (ftp://ftp.txdps.state.tx.us/dem/plan_state/state_plan_20040211.pdf), will support public health and medical activities as required by the State of Texas in accordance with pre-established activation procedures. This may be expected to include activation of the Federal Emergency Management Agency to bring federal resources to assist Texas response. If required, a Primary Federal Coordinating Officer will be tasked to coordinate Federal (Public Health service, etc) and Armed Forces resources.
- Pandemic influenza (PI) plans, based on similar command/control templates developed at the federal, state, region, and local levels, will integrate with existing emergency plans, activities, and inventories.
- Although there may be isolated pockets, the pandemic could affect all geographic areas of the state.
- Although the federal government plans to purchase vaccine, depending upon when the pandemic occurs, vaccine supplies may be severely limited during the first wave of the pandemic.
- According to the CDC guidelines, total vaccine supply will be under the control of the federal government while supplies are limited, with states receiving an allotment and determining distribution strategies (Orenstein, 2005).
- Although the federal government's goal is to have antivirals stockpiled in the Strategic National Stockpile (SNS), production capability for oseltamivir and zanamivir is limited and international demand is high, therefore the ability to stockpile adequate supplies quickly is limited.
- Antiviral drugs are an important adjunct to the proper use of infection control measures and vaccine for the mitigation of influenza. However, they will not a substitute for effective infection control or vaccination.
- The pandemic strain may attack categories of people at different rates than normally occur during the influenza seasons.
- When the pandemic occurs, vaccines and medicines will be in short supply and will have to be allocated on a priority basis (Bridges, 2005). The DSHS will issue vaccination and antiviral guidelines that will be modified and updated as the CDC recommendations are developed.
- Response to the demand for services may require non-standard approaches, including:
    - Discharge of all but critically ill hospital patients
    - Expansion of hospital "capacity" by using all available space and "less than code compliance beds"
    - Increase of patient ratio to hospital staff
    - Recruitment of volunteers who can provide custodial services under the general supervision of health and medical workers
    - Relaxation of practitioner licensure requirements as deemed appropriate, and

  - Utilization of general purpose and special needs shelters as temporary health facilities.
  - Establishment of Disaster Medical Assistance and Disaster Mortuary Operational Teams to supplement local resources.
- The emotional impact of a pandemic will strain individual and community coping skills and will result in the need for stress management support for responders, providers and the general public.
- Disseminating timely, consistent, and accurate information to public sector and private sector stakeholders, the media and the general public is one of the most important facets of pandemic influenza preparedness and response.

draft

3. KEY COMPONENTS

3.1 PLANNING AND COORDINATION

A. Use of the Incident Command System - The Texas Department of State Health Services (DSHS) uses the Incident Command System (ICS) structure, a component of the National Incident Management System (NIMS). This standard, on-scene, all-hazards incident management system is used by first responders, states, and the federal government. The DSHS Incident Command (IC) will be in the DSHS Emergency Support Center (ESC) and be a part of a State and Federal Unified Command response. The incident commander will be known as the Person-In-Charge (PIC) (Appendix C).

B. Planning and Coordination Assumptions for Pandemic Influenza Plan

1. All Planning and Coordination organizational concepts, standardized terminology, and operational principles shall comply with National Incident Management System guidelines mandated by Homeland Security Presidential Directive 5.
2. Command/Control procedures will be flexible and adaptable to all pandemic influenza periods and phases as defined by the WHO. Ideally, the same basic command structure will be in place so that roles and responsibilities do not change significantly during the evolution of the pandemic or inter-pandemic periods. Staff and resources will be added to, or removed from, the command structure as the situational needs dictate.
3. Plans based on similar command/control templates are developed at the regional and local levels.
4. The Planning and Coordination structures at the DSHS central office, Health Service Region (HSR) offices, and local health departments (LHD) will be unified as necessary, to assure statewide coordination is maintained and transition between levels of authority is as seamless and as mutually agreeable as possible to the entities involved.
5. Redundancy (the provision of multiple interchangeable components equally able to perform a single function) and backup of staff roles and responsibilities will be expected. Disaster realities will dictate that the DSHS Pandemic Response Team (PRT) personnel may be present at the local Emergency Operations Centers, Disaster District Command Centers, State Operations Center (SOC), Federal Emergency Management Agency Joint Field Office, and/or the DSHS ESC. Redundancy provides adequate staffing of the DSHS ESC while also serving the needs of the Emergency Operations Center, Disaster District Command, or SOC. Redundancy and backup provide for necessary shift relief for situations that extend beyond an 8-hour working day.
6. There is an adequate local capability to meet most emergency situations at the local level, although only for a limited period of time. Local governments and health departments have the primary responsibility to provide public health, mental health and emergency medical services within their jurisdictions. For counties without LHDs, state government, via HSRs, will provide or augment public health, mental health and emergency medical services that exceed the capabilities of the local government as available resources allow. It is understood that rural and frontier counties may have few or no disaster response capabilities. Requests for services beyond resources available locally must be made through the DSHS ESC, or if activated, the Disaster District Committee.

7. In order to supplement local resources, state and federal assistance will be available upon request or by direction of the Texas Office of Homeland Security or the Governor's Division of Emergency Management (GDEM). Based on past history, resources can be expected from the national level for plan implementation, although the level and nature of such resources should not be assumed for planning purposes.

3.2 SITUATION MONITORING AND ASSESSMENT

The genetic structure of the influenza virus is constantly changing. Most of these changes (genetic drift) do not affect public health response. However, more significant changes may necessitate changing the strains of influenza virus that are in the annual trivalent vaccine. Detecting circulating strains through virologic surveillance and evaluating morbidity and mortality through disease are equally important for pandemic preparedness.

The DSHS Laboratory isolates and subtypes influenza viruses year round, although emphasis each year is from September through May, The laboratory transmits data electronically to the CDC. Influenza isolates are referred to the CDC for detailed antigenic characterization according to the WHO guidelines, which include any isolate that cannot be subtyped with the WHO kit reagents; pre-season, early-season, and late-season isolates; a representative number of isolates during peak activity; isolates obtained during an outbreak; isolates from people receiving antivirals or from their contacts who become ill; and isolates from cases of suspect animal-to-human transmission. The Epidemiology and Laboratory Capacity for Infectious Diseases grant supports influenza laboratory testing and any testing coordinated with the DSHS Infectious Disease Control Unit (IDCU) is free.

Pandemic influenza, however, is likely to pose unique challenges that may not be addressed with routine laboratory surveillance. For example, if the recommendation is to use non-culture methods to detect and identify the novel strain, molecular testing will be used. The laboratory's capability to identify novel influenza strains will follow the CDC guidelines.

3.3 PREVENTION AND CONTAINMENT

A. Non-pharmaceutical Interventions

Non-pharmaceutical interventions are important to prevent infection and to contain disease. Interventions can be classified into two groups: (1) those that persons practice themselves to improve their ability to prevent infection or maximize their response to disease and (2) population focused interventions done by government to reduce spread of disease (Appendices F, G, and H).

B. Pharmaceutical Interventions

1. Vaccines

Vaccination programs for pandemic influenza present unique challenges. Methods of vaccine delivery, administration, and tracking depend upon the vaccine supply and the epidemiology of the illness. The current system for routine influenza vaccination relies on private sector distribution and administration. During an influenza pandemic, the bulk of the vaccine will be distributed through the public sector with federal and state governments controlling the purchase and distribution during the time period that vaccine is in short supply (Orenstein, 2005). The DSHS will establish mechanisms for allocating and distributing the vaccine. This may either be done through Vendor-Managed Inventory

(VMI) or acquired and distributed through the DSHS. Vaccine will be used to vaccinate priority groups as defined by the DSHS/CDC guidelines. The current system will be supplemented with more active participation of public health clinics located throughout communities or through pre-determined accessible congregate points of distribution. As vaccine supplies become readily available, purchase and distribution may move back to the private sector.

a. Problems with vaccine

There are two formidable concerns with vaccines:

i. The virus strain used in developing the existing vaccine in testing and production may not be the strain that ultimately circulates due to genetic shift that will make the virus easily transmissible human-to-human. Therefore, the vaccine "could serve as a priming dose in a two-dose series, in which the second dose would be more closely matched to the pandemic virus" (Osterholm, 2005).

ii. Using current vaccine development methods and technology, it will take at least six months after identification of a new virus subtype causing the pandemic before a new vaccine is developed and produced in a significant amount. We can expect to receive only U.S. produced vaccine at a rate of 5-6 million doses/week (Bridges, 2005; Schwartz, 2005; Toner, 7/26/05).

2. Antivirals

Four currently approved antivirals are available in the United States: amantadine, rimantadine, zanamivir (Relenza®), and oseltamivir (Tamiflu®). Amantadine and rimantadine are chemically related antiviral drugs with activity against influenza A viruses, but not influenza B viruses. Zanamivir and oseltamivir are neuraminidase inhibitors with activity against both influenza A and B viruses. Both zanamivir and oseltamivir were approved in 1999 for the treatment of uncomplicated influenza infections. Oseltamivir and zanamivir demonstrate efficacy in treatment or prevention of H5N1 infection. Oseltamivir has been used with humans; zanamivir has been tested in-vitro and in mice (Writing Committee of the World Health Organization, 2005). Amantadine and rimantadine show no effectiveness against H5N1, however, they are effective against other Influenza A strains.

Antiviral drugs for influenza are an important adjunct to influenza vaccine for the control and prevention of influenza. However, they are not a substitute for vaccination when vaccine is available. Antivirals may be the only intervention available during the first wave of the pandemic. Recommendations forwarded to the CDC in July 2005 by the National Vaccine Advisory Council and the Advisory Committee on Immunization Practices (ACIP) earmark antivirals for treatment rather than prophylaxis, although prophylaxis is recommended for outbreak control and for certain healthcare workers and critical infrastructure workers, but the priority level is low (Pavia, 2005). Because zanamivir is in limited supply, giving antivirals for prophylaxis is resource-intensive. Protection exists only while the medication is taken. If used for influenza treatment, antivirals are taken for 5 days.

Table 1. Antiviral Drugs Approved for Influenza by the Food and Drug Administration

Antiviral Drug [a]	Approved Use	Influenza Strains Affected	Approved Population	How Supplied		Approximate Cost per Daily Dose[b]
				Form	Dosage	
Amantadine (Symmetrel®)	Prophylaxis & treatment	All A strains	People ≥1 year	Capsules, generic	100 mg	$0.36
				Capsules, brand	100 mg	$2.34
				Syrup, generic	50mg / 5ml 16oz	$1.56
				Syrup, brand	50mg / 5ml 16 oz	$3.66
Rimantadine (Flumadine®)	Prophylaxis & treatment	All A strains	Adults & children[c]	Capsules, generic	100 mg	$1.76
				Capsules, brand	100mg	$3.92
				Syrup, brand	50mg / 5m 8oz	$1.50
Zanamivir (Relenza®)	Treatment	All A and B strains	People ≥7 years	Powder for inhalation 5 day supply	5mg per blister; 20 per pack	$10.32
Oseltamivir (Tamiflu®)	Prophylaxis & treatment	All A and B strains	Adults & children [d]	Capsules	75mg 10s	$5.94
				Oral suspension	12mg / ml 25ml	$11.80

[a] Drugs not normally stocked in the DSHS pharmacy.
[b] Cost to state government based on state contracts; prices quoted as of 10/20/05 by McKesson distributor.
[c] Rimantadine is approved for prophylaxis in children; however the CDC reports that many experts also consider rimantadine appropriate for treatment in children.
[d e] Oseltamivir is approved for treatment for people ≥1 year; it is approved for prophylaxis for people 13 years of age and older.

a. Problems and Limitations of Antivirals:

There are a series of formidable problems and limitations associated with widespread use of antiviral agents:

i. Currently, the federal government is attempting to stockpile both oseltamivir and zanamivir. It is anticipated that supply will be far below anticipated demand during an influenza pandemic.
ii. Widespread use of antivirals could lead to the widespread emergence of drug-resistant viral strains. Some evidence exists that oseltamivir is becoming less effective in treatment over time.
iii. Adverse reactions and liability are a concern.

3.4 HEALTH SYSTEMS RESPONSE

All state and local governments as well as congregate care facilities are required to have an emergency management plan that addresses all hazards. However, pandemic influenza is likely to pose unique and long-standing challenges that may not be addressed in current emergency management plans. For example, in a pandemic emergency situation, it is expected that notification and response will be initiated at the national or international level, followed by state and, finally, local level. Because of these unique challenges, the emergency management plans of hospitals, nursing homes, schools, and other congregate settings should incorporate a pandemic influenza plan as an appendix to their existing plans or have a separate pandemic influenza plan. It is also recommended that physician practices develop plans to manage the large numbers of patients seeking care. Considerations include: telephone triage, separate entrances, and segregated seating for patients with ILI. In

addition, practices may prepare by developing lists of patients who fit the DSHS/CDC priority groups for vaccination.

Lessons learned from hurricanes Katrina and Rita demonstrate that special populations are at risk for accessing and utilizing emergency services both in the private and public sectors. Pre-pandemic, efforts must be made to identify special populations as well as mechanisms to insure community delivery resources exist or are considered.

3.5 COMMUNICATIONS

A. Disseminating timely and accurate information to public health officials, medical care providers, the media, and the general public is clearly one of the most important facets of pandemic influenza preparedness and response. This section describes the procedures for communications that mirror the components of the national system and facilitate exchange of information among all levels of government – local, state and federal.

The Communications Unit within the DSHS Center for Consumer and External Affairs is charged with news media relations and public information dissemination. The DSHS Communications Unit through the DSHS Crisis and Emergency Risk Communication (CERC) Guidelines will carry out emergency risk communications and public information dissemination for pandemic influenza. The DSHS CERC Guidelines can be found on the Web at: www.dshs.state.tx.us/riskcomm/documents/Communications Plan 050101.pdf. The DSHS News Media Policy is outlined in the DSHS CERC Guidelines and also may be accessed through the DSHS Intranet at online.dshs.state.tx.us/policy/agency/aa%2D5036.htm. The DSHS CERC Guidelines cover two areas of crisis and emergency risk communications within the DSHS:

1. Direct communication from the DSHS through the Communications Unit to the news media; and
2. Information dissemination to educate the public regarding exposure risks and effective public response.

The DSHS CERC Guidelines are reviewed and revised periodically, at a minimum of once a year.

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4. PANDEMIC PHASE CHART

The WHO has defined periods and phases of a pandemic to assist with planning and response activities. For consistency, comparability and coordination of national, state and local response, identification and declaration of the following periods and phases will be done at the national level.

> "Actions listed for each pandemic phase are intended to continue after upscaling to higher phases unless they are superseded by actions in the higher phase. If upscaling designation skips a phase, actions in the skipped phase should also be implemented unless they are superseded by actions in the higher phase" (WHO, 2005, p. 14).

The WHO and the CDC may declare, upscale, or downscale phases in a non-sequential order since viral characteristics and sequence of progression may vary (WHO, 2005). In addition, there is the possibility of simultaneous occurrence of events with pandemic potential with different threat levels in different countries. Thus, there may be significant deviations from the anticipated sequence of events.

PANDEMIC PHASE CHART (WHO, 2005)	
WHO Pandemic Phase	**Definition**
Interpandemic Period Phases 1 and 2	**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, 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.
Pandemic Alert Period Phase 3, 4, and 5	**Phase 3 -** Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
	Phase 4 - Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.[b]
	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]
Pandemic Period Phase 6	**Phase 6 -** Pandemic phase: increase and sustained transmission in general population.[b]
Subsided Period	Between waves
Postpandemic Period	End of pandemic and 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.

SECTION II. PREPAREDNESS PLAN RESOURCE GUIDANCE

1. INTERPANDEMIC PERIOD – PHASES 1 AND 2

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, the risk 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 of human disease.

1.1 PLANNING AND COORDINATION

PHASE 1 and 2

A. The DSHS leadership will activate the DSHS ESC structure to take the lead during the Pandemic Alert Period Phases 3& 4 "Texas identification," Phase 5 "North American identification," or Pandemic Period Phase 6 "International circulation" and subsequent phases of the state's public health and health-care related response to pandemic influenza. Personnel will be identified for each role (Appendix C).
B. A Pandemic Response Team (PRT) will provide support to the DSHS IC and deal with plan-specific issues. The PRT will be comprised of:
   1. Pandemic Influenza Lead (PIL)
   2. Pandemic Influenza Plan Manager
   3. Pandemic Influenza Planning Group (PIPG) members
C. The PIPG is comprised of:
   1. The Pandemic Influenza Plan Manager, committee chair
   2. A physician from the DSHS IDCU who functions as the PIL
   3. Subject matter experts related to the Key Components of the DSHS PIPP
   4. Representatives from across the agency (Appendix A)
   5. Representatives from stakeholders (Appendix D)
D. The Public Health Laboratory (PHL) and Laboratory Response Network (Appendix E) will provide testing, training and technical support to the DSHS pandemic response.
E. The DSHS Immunization Branch (IB) and the DSHS Pharmacy Branch (PB) will provide oversight for vaccine/drug procurement and distribution.
F. Each HSR has the following personnel and other resources to assist in disaster response:
   1. Disease Control and Prevention: epidemiologists, physicians, veterinarians, infection control practitioners, registered nurses, data entry/analysis, health educators, and other professional staff
   2. Environmental Health: sanitarians, industrial hygienists, toxicologists, health physicists, engineers, hydrologists, and other environmental technicians
   3. Regulatory Affairs: regulatory staff with expertise in state/federal laws; hospital licensing expertise
   4. Immunization Program and Pharmacy: nurses, pharmacists, and epidemiologists
   5. Emergency Medical Services (EMS): staff with expertise in facilitating emergency medical system response and trauma systems
   6. Public Health Laboratories: microbiologists, laboratory technicians and other staff; laboratory testing facilities
   7. Health Alert Network: Designated HAN Administrators and back-ups.

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8. Stress management and Crisis Counseling: Stress Management trained personnel, social workers, psychologists, psychiatric nurses, and other professional staff

G. Information resource lists are maintained in Appendix 6, Texas Bioterrorism Preparedness and Response Plan, and its associated standard operating guidelines as part of Health and Medical Annex H of the State Emergency Management Plan.
H. The CPS coordinate plans with bordering states, Texas-Mexico border jurisdictions and their Mexican counterparts, American Indian tribes, and special populations.
I. The PIPG will develop, review, and update the Pandemic Influenza Standard Operating Guidelines and DSHS PIPP annually (Appendix B).
J. HSRs and LHDs will be included in the planning/updating of the state plan and develop pandemic influenza response plans for their jurisdictions.
K. The PIPG will identify gaps in state infrastructure and resources, laws and statutes that may interfere with effective response. HSRs and LHDs will identify local gaps. Approaches to correct these gaps will be developed.
L. Plans will be exercised alone or in conjunction with other All Hazards Response Plans.

1.2 SITUATION MONITORING AND ASSESSMENT

PHASE 1 and 2

A. International Influenza Surveillance. International influenza surveillance activities are carried out by the WHO. Over 100 countries with a total of 112 laboratories participate with the WHO flu surveillance. This includes four laboratories in the United States.
B. National Influenza Surveillance. In the United States, the CDC carries out national influenza surveillance activities. Current United States surveillance activities include:
   1. Seventy laboratories in the United States report the number and type of influenza viruses isolated each week and send representative and unusual viral specimens to the CDC for comparative antigenic and genetic analysis. This information is updated weekly and is available online at www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm.
   2. State and territorial epidemiologists report the level of influenza activity in their state each week as “widespread,” “regional,” “sporadic,” “local” and “no activity.” This information is updated weekly and is available on line at www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm.
   3. Each week, a national voluntary network of approximately 2,200-sentinel physicians report the number of patients presenting with ILI and the total number of patient visits by age group. This information is updated weekly and is available online at www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm.
   4. Vital Statistics Offices of 122 cities in the United States report, on a weekly basis, the percentage of total deaths caused by influenza and pneumonia.
   5. A variety of other sources that report influenza outbreaks or other influenza-associated events.
C. Texas Influenza Surveillance. In Texas, the DSHS IDCU carries out state influenza surveillance activities in collaboration with partners.
   1. State and county health departments assume primary responsibility for carrying out virologic, mortality and morbidity components.
   2. In response to unanticipated vaccine shortages, aggregate electronic reporting of ILI will be undertaken regionally as an expansion of existing sentinel provider surveillance activities. While this has not been established it can be set up in a matter of days.

3. Current influenza surveillance is done by the DSHS and includes:
    a. Passive surveillance of respiratory specimens sent to the DSHS PHL for viral isolation and identification of influenza type and subtype
    b. Passive surveillance of ILI outbreaks in long-term care facilities
    c. Passive surveillance of ILI outbreaks in schools or other institutional settings (jails, workplaces)
    d. A voluntary network of state sentinel providers (physicians and group medical practices) report each week the number of patients presenting with ILI and the total number of patient visits by age group. Currently there are approximately 70 participating sentinel providers reporting throughout the year with at least one site in each region of Texas Forty-six of these sites are in rural or frontier areas.
    e. LHDs and HSRs conduct syndromic surveillance for respiratory illness or ILI (software applications are being used or under consideration). Those currently in use in the state vary in application and syndromes identified. Some may be useful for data gathering during a pandemic. Consideration is being given to 2 software applications for statewide use.
    f. Continue laboratory-based viral subtyping surveillance for A non-subtypable isolates
4. The PIL will coordinate the statewide influenza surveillance data including but not limited to syndromic surveillance, lab information, and other sources of information.
5. The PIPG will continue to seek out funding sources to maintain and enhance the influenza plan. The PIL and the PHL will coordinate funding opportunities for influenza program development.
6. Targeted improvements to routine influenza surveillance in Texas are resource dependent and could include:
    a. Increasing the sentinel physician network to one physician for every 250,000 population.
    b. Developing relationships with Recognized Community Health Care Providers who serve diversity populations who may not access western health care system for care and Community Health Workers who act as facilitators between traditional cultural healing practices and western allopathic medicine.
    c. Passive reporting of prescription trends by pharmacies.
    d. Recruiting healthcare facilities with population-based electronic medical records to report coding for visits for acute febrile respiratory illnesses (ICD-9 codes 460-487).
    e. Enhancing surveillance of severe respiratory illness and unexplained deaths at local sites, e.g. hospitals that evaluate immigrant health.
    f. Linking influenza surveillance to syndromic bioterrorism surveillance, e.g. increased over-the-counter drug use, work/school absenteeism.
    g. Establishing formal partnerships between the DSHS and the Texas Animal Health Commission, Texas Racing Commission, Texas Parks and Wildlife Department, United States Department of Agriculture Animal and Plant Health Inspection Service and Food Safety Inspection Service, Texas Veterinary Medical Diagnostic Laboratory, and other entities to share animal influenza surveillance data.

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h. Establishing an active serologic surveillance program for monitoring poultry workers and others with exposure to poultry, wild birds, pigs, horses and other animals with confirmed influenza infections.

7. The DSHS laboratory will:
   a. Provide laboratory specimen submission forms containing the following minimum information:
      i. Demographics
      ii. Symptom onset date
      iii. Date of collection
      iv. Specimen source
      v. Vaccination history
   b. Maintain reference capability and capacity to isolate influenza in cell culture and subtype using reagents provided by the WHO.
   c. Maintain LRN protocols for identifying influenza subtypes.
   d. Submit influenza isolates to the CDC according to the WHO guidelines, sending isolates that cannot be subtyped with kit reagents; pre-season, early-season, late-season isolates and a representative number of isolates during peak activity; isolates obtained during an outbreak; isolates from persons receiving antivirals or from their contacts who become ill; and isolates from cases of suspect animal-to-human transmission.
   e. Identify additional staff required for surge capacity.
   f. Identify and maintain a list of laboratories in addition to those in the Laboratory Response Network that may serve as resources for specimen analysis.

1.3 PREVENTION AND CONTAINMENT

PHASE 1 and 2

The DSHS pre-pandemic activities are designed to develop infrastructure, strategies, and collaborative relationships during the Interpandemic Period and prepare for a pandemic. They include the following strategies:

A. Non-pharmaceutical Interventions
   1. In order to provide informed recommendations, the PIPG will review procedures for, forms, laws, and statutes related to, suspension of rules and necessary limitations of freedoms to contain the pandemic in collaboration with the DSHS Office of the General Counsel are located in *Communicable Disease Control Measures in Texas: A Guide for Public Health Authorities in a Public Health Emergency* (www.dshs.state.tx.us/comprep/ogc/cdmanual.pdf). These include, but are not limited to:
      a. Quarantine and property control measures
      b. Release of information to law enforcement
      c. School/business closures
      d. Cancellation of public events
   2. A list of public health population level non-pharmaceutical interventions can be found in Appendix G.
   3. Personal protective strategies for the public related to pandemic periods and phases and Websites useful to the public in preparation for pandemic influenza can also be found in Appendix F. Implement strategies for Interpandemic Period Phases 1 and 2.

4. Strategies for taking care of an influenza patient at home can be found in Appendix H.

B. Pharmaceutical Interventions: Vaccines and antivirals

1. System-focused strategies:
   The DSHS IB, HSRs, and LHDs in conjunction with public sector and private sector stakeholders will:
   a. Provide influenza vaccine and/or antivirals to high-priority target groups and the general population based on the CDC Goals for Pandemic Planning, the CDC and the DSHS priority recommendations (Appendix I), availability, and changing conditions:
      i. Minimize hospitalizations and deaths.
      ii. To preserve critical infrastructure
      iii. Reduce economic disruption
      iv. Prioritization within priority groups may occur if supplies are limited.
   b. HSR and LHD plans will demonstrate steps to ensure equal distribution, access, and follow-up to special population groups by identifying barriers to vaccination (e.g. culture, disability, rural or frontier location, immigration status, damage to infrastructure, etc.).
      i. LHDs will develop strategies to overcome these barriers reflective of local community needs and assets in collaboration with recognized community health providers, community health workers, formal and informal community leaders, and consultation with the Office for the Elimination of Health Disparities, if necessary**.**
         - Examples of solutions might include location of Community Emergency Medical Clinics on public transportation routes or providing transportation; establishing alternative care sites in cultural at-risk communities; taking vaccine to the homeless or substance abusing populations by co-locating clinics with safety net programs, mobile clinics, etc.
      ii. LHDs will work with community partners to:
         - Develop an inventory of languages spoken with substantial frequency.
         - Determine if Vaccine Information Sheets (VIS) and other educational materials are available in these languages. If not, pursue translation options.
         - Identify locations of long term care facilities
         - Identify location of medically fragile homebound or those unable to access public transportation. Check with the Health and Human Services Commission (HHSC) to obtain lists of participants in such programs as:
            1) Medicaid long term care,
            2) Community Based Alternatives
            3) Community Attendant Services,
            4) Community Living Assistance and Support Services,
            5) Deaf-Blind/Multiple Disabilities Program,
            6) Home and Community-Based Services,
            7) Medically Dependent Children Program,
            8) Texas Home Living Waiver, and

9) Hospice.
- Numbers will be reported to HSRs upon request during Pandemic Period to help determine vaccine and antiviral allocation by the DSHS Central Office.

c. Identify border health issues and plan solutions with the Office of Border Health and other applicable agencies. Develop memoranda of understanding as necessary.
   i. The unauthorized Mexican migrant population in Texas is estimated at 1.54M (Passel, 2005). Other unauthorized migrants come mostly from: El Salvador, Guatemala, Columbia, Honduras, China, and Ecuador.
   ii. Unauthorized migrants from any country are entitled to Public health assistance (not including any assistance under title XIX of the Social Security Act [42 U.S.C. 1396 et seq.]) for immunizations with respect to immunizable diseases and for testing and treatment of symptoms of communicable diseases whether or not such symptoms are caused by a communicable disease (8USC1611, paragraph b.1.C).

d. The DSHS has developed a vaccine and antiviral plan as required by the national plan (Appendix J) that includes the following:
   i. A method to:
      - Estimate the amount of vaccine and/or antivirals needed for priority groups.
      - Monitor and track vaccine and antiviral supplies and distribution.
      - Monitor patient compliance with antiviral medication regimen.
      - Track vaccine series to ensure two doses are given.
   ii. Alternatives for ordering and distribution of vaccines and/or antivirals in the presence of:
      - Severe shortages
      - Moderate shortages
      - No shortages
      - Complete federal purchase and distribution
      - Partial federal purchase and distribution
      - Minimal federal purchase and distribution
      - State purchase of existing supplies using emergency funds.
      - Status quo (Majority of drugs in private sector):
   iii. Plans for distribution of antivirals purchased with public funds in collaboration with the private sector stakeholders (private drug distributors, and others).
   iv. Plans for outcomes monitoring.

e. The DSHS PB coordinate data collection, collect data from appropriate sources, including Metropolitan Medical Response Systems, HSRs, and LHDs, and adjust for data duplication to maintain a statewide inventory of available supplies of antiviral medications (Appendix K) to include the following:
   i. Determine the potential supply of antivirals that are available from Texas drug wholesalers (actual inventories will vary on a day to day basis)
   ii. Determine supply of any existing hospital based stockpiles.
   iii. Determine the amount of amantadine needed for patients taking the drug for conditions other for flu treatment, including Parkinson's Disease.

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- The usual daily dose of amantadine (Symmetrel®) for Parkinson's patients is from 200 to 400mg daily. Dosage depends upon the age of the patient, etiology of the disease, and individual responsiveness).

f. The PIPG and the DSHS IB will ensure procedures to monitor and track adverse reactions to vaccines and antivirals during an influenza pandemic.
   i. Vaccine - The Vaccine Adverse Events Reporting System (VAERS) is used in Texas. Adverse vaccine reactions will be reported through this system, which is currently used to report vaccine adverse reactions including influenza. HSRs and LHDs are familiar with VAERS. VAERS program information and forms are available on the web at vaers.hhs.gov/.
   ii. Antivirals - MedWatch (www.fda.gov/medwatch/) is the Food and Drug Administration safety information and adverse event-reporting program for drugs. Reporting by consumers and health care professionals is voluntary. Reporting by drug and biologic manufacturers and packers is mandatory.
      - Texas does not have a mandatory state-level drug adverse event-reporting program. However, the DSHS Drug and Medical Devices Group (DMDG) does have a program to receive reports of injuries or complaints associated with drugs. Reports of injury or complaints can be called into a toll-free number or entered into an online complaint form. Reports and complaints are then entered into a complaint database. The DSHS DMDG forwards reports of drug injury to the Food and Drug Administration MedWatch, but also maintains these reports in their database.
      - The PIPG and/or the DSHS PB will explore adapting this reporting system and database to monitor and track adverse events associated with antivirals administered for pandemic influenza.
   iii. LHDs will develop plans that demonstrate steps to ensure adequate follow-up and/or monitoring with regard to adverse reactions to vaccines and antivirals amongst special populations.

g. Ensure the DSHS Office of the General Counsel, in conjunction with the PIPG, the DSHS IB, and the DSHS PB:
   i. Reviews medical and public health control legislation and liability issues related to delivery of biologic agents (e.g., vaccine and antiviral drug). The DSHS publication, *Communicable Disease Control Measures In Texas, A Guide for Health Authorities in a Public Health Emergency (April 2004)* summarizes these issues. The publication is accessible online at: www.dshs.state.tx.us/comprep/ogc/cdmanual.pdf
   ii. Examines legal aspects, including workers compensation, related to use of prophylactic medications and refusal of medication for those in high-risk groups. Makes changes as necessary.
   iii. Determines procedures for, and legalities related to suspension of rules to contain the pandemic that include, but are not limited to:
      - Unlicensed vaccinators
      - Distribution of prescription antivirals by unlicensed volunteers
      - Distribution and/or vaccination by non-Texas licensed volunteers
      - Mandatory vaccinations

- Emergency distribution of drugs/vaccines
- Use of investigational drugs/vaccines

iv. Other legal resources and Office of the General Counsel interpretations that may be helpful can be found at www.dshs.state.tx.us/comprep/ogc/default.shtm

h. Ensure the draft the DSHS Community Emergency Medication Clinic Standard Operating Guidelines, which can be used as a mass clinic template, is available (in a yet-to-be-determined location). The template includes:
   i. Mass clinic flow template
   ii. Job action sheets (staffing duties)
   iii. Provisions for limited English proficiency interpreter services
   iv. Vaccine and antiviral distribution system
   v. Protocols for proper storage of vaccines and antivirals
   vi. Suggested list of supplies needed for clinic operations
   vii. Other materials as necessary

i. If included in the CDC/DSHS priorities (Appendix I) and based on community needs and resources, HSRs and LHDs will determine who will provide prophylaxis to certain targeted risk groups, such as hospital staff, EMS, or critical service providers.

j. Identify sources of supplies needed for administering vaccine. The DSHS DMDG will be the primary point of contact. The SNS Push Pack and the VMI are secondary sources of supplies.
   i. The DSHS DMDG maintains a database of licensee information including product codes that generally identify the products handled by the firm. Although it is possible to identify firms that may have specific kinds of products needed to supply clinics in the affected area(s), the database is searchable by product code, but not by specific item.

k. Ensure plans for recruiting/credentialing the DSHS and other state agency assigned staff, volunteers, pharmacists, EMS, retired physicians, and nurses, and others to administer vaccines will be done at the local and regional level. This activity is being accomplished in conjunction with local and regional bioterrorism plans for mass pharmaceutical dispensing clinics.
   i. Obtain memoranda of agreement from agencies providing “volunteers” for the vaccination or antiviral dispensing effort to include volunteers to meet the needs of special populations.
   ii. Amend policies and procedures to ensure that all non-health department personnel administering vaccine and prophylactic medication, such as volunteers, are working under the legal authority of the Commissioner of Health, Regional Director, and/or the LHD Medical Director and are legally covered for insurance purposes.
   iii. Volunteers normally are defined as non-paid personnel. If agency staff “volunteer,” and/or are directed to respond, and continue to be paid, there are significant legal/liability differences. This should be clarified with legal counsel.

l. Collaborate with private and public sector stakeholders in planning:
   i. Determine private sector roles, responsibilities, and capabilities

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ii. Determine who is responsible for vaccinating or prophylaxing certain risk groups (e.g. hospitals vaccinating hospital staff vs. establishing mass clinics for high priority groups).
iii. Determine plans for educating private professional sector regarding prophylaxis and intervention strategies

m. Identify border health issues and plan solutions with the Office of Border Health and other applicable agencies. Develop memoranda of understanding as necessary.
n. Ensure the DSHS Disaster Mental Health Services resources including state hospitals, community MHMR centers and substance abuse assets are identified and included in planning, exercising and response activities in accordance with the draft Disaster Mental Health Appendix 13 to Medical Annex H of the State Emergency Management Plan (www.dshs.state.tx.us/comprep/dmh/Appendix13.pdf).
o. Ensure the plan is exercised at the regional level and modify it as necessary to meet regional and local needs:
i. As tabletop exercises (The Pandemic Influenza Tabletop Exercise Package, April 2005, is available from the CDC)
ii. In conjunction with bioterrorism and/or all-hazards exercises

2. **Individual-focused Strategies**

The HSR and LHD participants in conjunction with the DSHS IB and the PIPG will:

a. Encourage personal use of personal protective strategies including seasonal influenza vaccination, hand washing, respiratory hygiene, and cough etiquette to prevent influenza (Appendix F).
b. Enhance annual influenza vaccination coverage levels in traditional "high-risk" groups, particularly in sub-groups in whom coverage levels are low: 6 to 23 month old children (36.6% 2004-2005 season), pregnant women (12% 2002-2003), ethnic groups (34% white; 28% African American; 27% Hispanic 2000 season), over 50 years of age with chronic underlying medical conditions (44% 2003-2004). The goal is to meet 90% coverage for over 64 and 60% coverage for 50-64 and high risk less than 50 years of age.
i. Consider vaccinating children in schools and child care centers to protect susceptible children and to reduce transmission to family members and others who may be at high risk for influenza complications.
ii. Distribute written materials developed by the Communications Unit in the Center for Consumer and External Affairs to health care providers that include a summary of the most current year's influenza vaccine recommendations issued by the Advisory Committee on Immunization Practices (ACIP); suggestions on strategies that have been successful in reaching special populations; and listing of other resources to help promote and deliver adult vaccines. Include information on expected physiological and emotional impact as well as treatment recommendations.
b. Encourage protection for persons involved in activities to control and eradicate outbreaks of avian influenza among poultry in the United States.
i. Activities that could result in exposure to avian influenza-infected poultry include euthanasia, carcass disposal, and cleaning and disinfection of premises affected by avian influenza.

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ii. People responding to outbreaks of influenza in animals, such as outbreaks of avian influenza in poultry production facilities, should closely follow the Center for Disease Control and Prevention's *"Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities"* (www.cdc.gov/flu/avian/professional/protect-guid.htm) to prevent human infection with animal strains of influenza, and vise versa, and also to minimize the opportunity for co-infection with animal and human influenza strains that might lead to re-assortment and the emergence of a pandemic strain.

c. Encourage poultry industry workers to be vaccinated for seasonal influenza.
d. Enhance Pneumococcal vaccination coverage levels for eligible children and adults to reduce the incidence or severity of secondary bacterial pneumonia (Appendix L). Currently 64% (2004-2005 season) of people 65 years old and older have been vaccinated.
c. Develop Standing Delegation Orders (SDO) or protocols for (Appendix M):
   i. Administering Influenza Vaccine in Clinics
   ii. Emergency Medical Management of Vaccine Reactions
   iii. Prevention protocol for Vaccination of people with chicken egg or gentamicin sulfate allergy

1.4 HEALTH SYSTEMS RESPONSE

PHASE 1 and 2

A. The HSRs in conjunction with public and private sector stakeholders as appropriate will:
   1. Update and/or inventory state medical supplies, in coordination with local Epidemiological Response Teams and Texas Building and Procurement Commission.
   2. Collaborate with the appropriate agencies to inventory and identify statewide resources.
   3. Ensure the HSRs and LHDs have pandemic influenza plans and protocols in place.
   4. Develop and coordinate recommendations on health issues related to pandemic influenza. Multiple stakeholders, including state and federal agencies, health care systems, pharmaceutical companies and researchers, along with the regional Epidemiological Response Teams, will participate as needed.
   5. Review major elements of the health sector and essential non-health sector response plans.
   6. Collaborate with infectious disease and influenza experts to develop and revise recommendations on health-related issues (Appendices L, O).
   7. Develop, based on the disease epidemiology, protective action recommendations specific to the disease to be implemented during the pandemic.
   8. Estimate the impact of pandemic influenza on essential services.
   9. Develop and maintain an inventory of available beds in nursing facilities and non-traditional settings that might serve to house sick patients as hospital overflow.
   10. Alert state and local hospitals, local health authorities, state schools, community mental health centers, the GDEM, the Texas Department of Criminal Justice, county emergency management coordinators and other mental health partners to pandemic potential and promote review of the draft Emergency Mental Health Appendix 13.

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11. Convene annually to review the existing Pandemic Influenza Plan. The PIPG is responsible for assuring maintenance, updates and annual review of the plan. The PIPG members with responsibility for particular sections of the plan are responsible for coordinating the review of their sections.
12. With input from multiple stakeholders including, local and regional bioterrorism planning groups, the CPS will ensure that pandemic influenza is included in planned scenarios.
13. Conduct a tabletop exercise as training for an All Hazards/pandemic event, annually.
14. Update national authorities, other public and private sector stakeholders including special populations and the public with current information and non-pharmaceutical prevention strategies.

B. Health Service Regions and Local Health Departments will:
1. Coordinate data collection, collect data from appropriate sources, including Metropolitan Medical Response Systems, and adjust for data duplication to maintain a statewide inventory of:
    a. Medical personnel, including but not limited to currently licensed physicians, physician assistants, registered nurses, licensed practical nurses, medical assistants, and other people who may be trained in the event of an emergency (e.g., people with previous patient care experience who currently work outside of patient care) Identification of back-up personnel will be provided with special emphasis on non-traditional volunteers (e.g. family members, retired health care personnel)
    b. Beds (hospital and long-term care)
    c. ICU capacity
    d. Ventilators
    e. Pharmacies and pharmacists
    f. Laboratories
    g. PPE (e.g., masks, gloves)
    h. Specimen collection and transport materials
    i. Contingency medical facilities (within jurisdiction)
    j. Mortuary and funeral services
    k. Social services, disaster mental health services, and faith services
    l. Sources of medical supplies (e.g., syringes, gloves)
    m. Limited English proficiency interpreter services
2. Analyze surge capacity in public and private sectors to determine potential needs.
3. Ensure private health care systems have pandemic influenza plans and protocols.
4. Estimate the impact of pandemic influenza on health care services, special populations; for providing and reinforcing preventive action recommendations to communities; and for determining pre-event health-related needs. Information and estimates will be provided to the PIPG.
5. Identify locations of relative quiet/calm to be used for overflow patient care including those presenting with anxiety, psychosomatic or stress related/induced symptoms, and strategies for the management of overflow locations, i.e., advance-planning protocols to triage overflow locations.
6. Estimate the impact of an influenza pandemic related to hospitalizations, outpatient visits and deaths using FluAid. FluAid is a CDC software program designed to assist state and local level planners in preparation for an influenza pandemic. FluAid provides

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a range of estimates for the potential local impact related to deaths, hospitalizations, and outpatient visits due to pandemic influenza. FluAid can be accessed at: www2a.cdc.gov/od/fluaid/.

7. Request hospitals and community service providers, such as police and utilities, to develop and maintain contact lists of essential community services personnel (including work and home communication information) whose absence would pose a serious threat to public safety, critical infrastructure, or would significantly interfere with the ongoing response. The list should also include back-up and replacements personnel. Retired personnel may also be utilized.

C. The PIPG and Legal Counsel will:
   1. Review pertinent legal authorities, including quarantine laws and their applicability in a public health emergency and laws and procedures for closing of businesses, schools, and public events during a declared state of emergency.
   2. Review legal aspects and issues related to medical volunteer licensure, liability, and compensation for in-state, out-of-state, federal public health service, and returning retired and non-medical volunteers.

D. State Hospital and Community Mental Health Mental Retardation Centers will:
   1. Review internal emergency management plans and Disaster Mental Health Appendix 13 to Annex H of the State Emergency Management Plan. Review shelter-in-place and evacuation procedures.
   2. Update and/or inventory medical supplies.
   3. Identify medical staff including back-up personnel with special emphasis on non-traditional volunteers. Will identify and maintain lists of essential medical and service staff (including work and home contact information) whose absence would significantly interfere with the response and/or patient care.
   4. Estimate the impact of pandemic influenza on service provision.

E. The DSHS recommends that congregate facilities serving special needs populations follow the same recommendations as section D above.

1.5 COMMUNICATIONS

PHASE 1 and 2

A. Health Alert Network (HAN)

   1. The primary goals of the HAN are to increase communication capabilities in and between state and local health departments and to ensure the health department's ability to broadcast and receive health bulletins.
      a. The HAN covers approximately 87% of the population in Texas through email, voice, and fax capabilities.
      b. All the DSHS main and sub offices are online with Broadband access and email at all 138 locations.
      c. There are more than 4,700 key contact records in the HAN database which are being constantly updated for accuracy.
      d. Direct communication channels have been developed with the GDEM and the Governor's Office of Homeland Security.
      e. Ability to alert more than 13,000 physicians has been greatly enhanced through collaboration with the Texas Medical Association (TMA). Note: At this time the

DSHS Mental Health and Substance Abuse Section is not part of the HAN and would need to be a part of this group and effort preferably before an event. Those contacts are currently being gathered and should be included by year's end. At this point, until they are plugged into the HAN, Health and Human Services Commission (HHSC) will forward alerts.

f. A private out-of-state vendor is under retainer as a back up notification system to the HAN. They are located in Ohio and their web-based, multi-functional application is capable of voice, email, and fax mass broadcasting.

2. The HAN Team also maintains a database of emergency contacts that receive health alerts. While some LHDs receive health alerts directly from the CDC, the majority relies upon the HAN to disseminate any CDC or DSHS generated alert. The HAN office has created four Texas HAN email accounts that also receive health alerts from the CDC. These accounts have rules applied to them to auto-forward health alerts to:
   a. HSR Staff
   b. DSHS Central Office Staff
   c. GDEM
   d. Texas Commission on Environmental Quality
   e. Texas Hospital Association (THA)
   f. TMA
   g. Texas Osteopathic Medical Association
3. LHDs maintain their own records in the contact database and auto-forward health alerts to their local contact list.
4. All state and local health departments will utilize a redundant communication system.
5. HAN also maintains an Emergency Operations Center software application (WebEOC) to manage communication during short and long term critical events.

B. Communications with Health Care Professionals
1. Issue Identification: Health issues and concerns that will or may need to be addressed for health care professionals regarding pandemic influenza will be identified by the PIPG.
2. Targeting of Communications: the PIPG will develop for affected target audiences' communication channels for messages regarding pandemic influenza.
3. Message Development: Appropriate messages addressing identified issues and concerns will be developed by the PIPG.
4. Web-based communications systems will be utilized to communicate with Health Service Region offices and local health departments and other health care professionals as indicated in item A. above. The HAN will be accessed.

C. Public Information Dissemination
1. All state-level communication will be in accordance to the DSHS Crisis and Emergency Risk Communications Guidelines.
2. Develop/revise/update informational materials in easy-to-read format and multiple languages related to personal use of non-pharmaceutical interventions including hand washing, respiratory hygiene, and cough etiquette to prevent pandemic influenza.
3. Develop/revise/update information materials for target audiences in multiple languages through a Pandemic Information Shelf Kit and/or CD ROM revised as necessary.
4. Develop key messages/fact sheets relating to currently circulating virus(es) and pandemic influenza.

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5. Identify and train spokespeople for DSHS response to pandemic influenza.
6. Identify and develop relationships with public and private sector stakeholders including Recognized Community Health Providers who are able to reach special populations providing them pandemic influenza information.
7. Establish and update a Web page for pandemic influenza information as part of the DSHS Preparedness and Response Web site.
8. Maintain channels for activating CDC Public Response Line (hotline) and provide information to other emergency information resources including the State Operations Center and community 2-1-1 systesm.
9. Assure that public information dissemination is a part of any exercise or training for pandemic influenza response.
10. Maintain resource lists to facilitate communication with media, and public and private sector stakeholders.

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2. PANDEMIC ALERT PERIOD – PHASE 3, 4, AND 5

Phase 3 – Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
Phase 4 – Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
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).

2.1 PLANNING AND COORDINATION

PHASES 3, 4

A. International / North American Identification:

1. All HSRs and LHDs will be notified of the Pandemic Alert Phase through the HAN.
2. The PIPG will review and update the plan in conjunction with key private and public sector stakeholders (Regional Directors, DSHS IDCU, GDEM, DSHS executive leadership, DSHS IB, DSHS PB, TMA, Texas Osteopathic Medical Association, THA, TALHO, Texas Nurses Association, etc.).
3. HSRs and LHDs will:
   a. Confirm the availability of resources to support a pandemic response
   b. Serve as the regional/local IC for community distribution of developed state and national communication.

C. Texas Identification

1. Consider activating the DSHS IC. Appendix 6 to Annex H is the framework for convening and activating local responses. The DSHS IC structure will be determined by the size and scope of the event, and by development and needs identification of the SOC if activated.
2. Begin tracking expenses at State, HSR, LHD, and provider levels. In the event of presidential disaster declaration, partial reimbursement through the Federal Emergency Management Agency of allowable expenses should be anticipated.
3. Collaborate with the GDEM to determine if the SOC should be activated.
   a. The SOC, if activated, will initiate communication, and interfacing with national counterparts, including the CDC.
4. The DSHS IC will convene the PRT to determine next steps.
5. The DSHS IC, in conjunction with the PRT will review major elements of the plan, modifying as necessary.
6. The DSHS IC, with the PRT assistance, will operationalize plans for Texas Identification Pandemic Alert Phases 3 & 4 in conjunction with key private and public sector stakeholders (Regional Directors, DSHS IDCU, GDEM, DSHS executive leadership, DSHS IB, DSHS PB, TMA, Texas Osteopathic Medical Association, THA, TALHO, Texas Nurses Association, etc.).
7. All HSRs and LHDs will be notified of the Texas Identification Pandemic Alert Phases 3 & 4 through the HAN.
8. HSRs and LHDs will:
   a. Activate local PI Plans at the Texas Pandemic Alert Phases 3 and 4

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b. Confirm availability of resources to support a pandemic response and
c. Serve as the regional/local ICS for community distribution of developed state and national communication.

9. Enhanced activities will be initiated:
   a. Surveillance
   b. Communication through the HAN
10. Responders and support components, with the DSHS IC Financial Section Chief and the PRT technical assistance, will determine funding needs and process.
    a. Key government officials will be notified of funding needs
    b. Responders and support components will begin documenting expenses

PHASE 5

A. International Identification:
   1. Continue as for Phases 3 and 4.

B. North American Identification
   1. Consider activating the DSHS IC. Appendix 6 to Annex H is the framework for convening and activating local responses. The DSHS IC structure will be determined by the size and scope of the event, and by development and needs identification of the State Emergency Management Unified Command.

C. Texas Identification:
   1. Activate the DSHS IC. Appendix 6 to Annex H is the framework for convening and activating local responses. The DSHS IC structure will be determined by the size and scope of the event, and by development and needs identification of the State Emergency Management Unified Command.
   2. Collaborate with the GDEM to determine if the SOC should be activated.
      a. The SOC, if activated, will initiate communication and interfacing with national counterparts, including the CDC.
   3. The DSHS IC will convene the PRT to determine next steps.
   4. The DSHS IC will determine communications needs and alert and/or mobilize necessary resources and organizations as applicable.
   5. HSRs and LHDs will:
      a. Continue to collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.
      b. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, and emergency rooms within their own jurisdictions
      c. Activate local PI Plans at the Pandemic Alert Phase 5
   6. The Regional Directors and LHDs in affected areas will submit requests for assistance through the DSHS IC structure.
      a. If more assistance is required than assigned staff can supply, unaffected sections, units and branches will be tasked for support.
      b. The regional/local ICS will be responsible for directing the work of the reassigned staff.

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6. Meet with all participating partners (at the DSHS ESC) to review the critical elements and expectations of the Pandemic Influenza Plan.
7. Review, revise as needed, and activate guidelines for prevention and control measures for health care settings (Appendix N), communities (Appendix O), and schools (Appendix P).
8. Collaborate with the infectious disease specialists and influenza experts (Appendix Q) in the review and revision of the prevention and control measures,
9. Enhanced activities will be initiated:
    a. Surveillance
    b. Communication through the HAN
10. Responders and support components, with the DSHS IC Financial Section Chief and the PRT technical assistance, will determine funding needs and process.
    a. Key government officials will be notified of funding needs
    b. Responders and support components will begin documenting expenses
11. Expenses will continue to be documented through the event DSHS IC structure.
12. Hospitals will:
    a. Implement health care setting prevention and control procedures (Appendix N).

2.2 SITUATION MONITORING AND ASSESSMENT

PHASE 3 AND 4

A. International Identification.
    1. In Texas, continue influenza surveillance as during Interpandemic Period.
B. North American Identification.
    1. There should be emergency Epi-X notification if avian influenza (H5N1) or other virulent subtype is identified. A HAN Advisory will be sent notifying public health officials and clinicians.
C. Texas Identification
    1. The PIL will request laboratory directors, Infection Control Practitioners, physicians, directors of emergency rooms and urgent care centers with patients presenting with ILI submit a specimen for viral culture if they are of epidemiologic interest. That is those persons with recent travel history to regions where the pandemic strain of influenza is circulating or those with unusual, severe symptoms. The HAN will notify public and private sector stakeholders in healthcare delivery of the issues and the need for heightened awareness. A similar public announcement would be made. The National Electronic Data Surveillance System -Based System has the capacity to be rapidly implemented (within days) to collect aggregate data on influenza cases.
    2. The DSHS Laboratory Services Section will coordinate assistance for specimen transport to national labs as per protocol.
    3. Enhanced and secure communication with the CDC and other states will be maintained, e.g. identification of virus, surveillance. Conference calls, e-mail, Epi-X (a secured Web site), and the HAN may be used.
    4. PIL will initiate meetings with necessary public and private sector stakeholders and partners to review elements of enhanced surveillance.
    5. The DSHS laboratory will:

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a. Continue testing routine influenza specimens, referring isolates to the CDC as defined in Phase 1 and 2.
b. Test specimens for advanced surveillance (the CDC guidelines) using non-culture techniques, as requested by the DSHS epidemiologists.
c. Refer specimens for advanced surveillance that test positive for Influenza A to the CDC as needed.
d. Train staff that has been identified for surge capacity - Just In Time (JIT) training.
e. Determine need for increased transportation resources and additional shipping materials for viral specimens.

PHASE 5

A. International Identification.
1. In Texas, continue influenza surveillance as during the Interpandemic Period.

B. North American Identification.
1. Once pandemic influenza has been identified as circulating in North America, the goal of pandemic alert phase surveillance is to identify the novel influenza virus as it begins circulating in Texas.
2. Active surveillance will be initiated at existing DSHS IDCU surveillance sites.
3. Regional epidemiology response teams will facilitate initiation at new sites.
4. The DSHS laboratory will:
   a. Ensure non-routine laboratory submitters have current instructions for collecting appropriate samples for influenza specimens and how to package and ship those specimens to meet the lab requirements.
   b. Continue to separate specimens for routine surveillance from specimens for enhanced surveillance, testing specimens for enhanced surveillance using non-culture techniques.
   c. Develop and evaluate diagnostic tests for novel subtype.
   d. Ensure availability of diagnostic reagents to identify the novel subtype.
   e. Develop and evaluate diagnostic tests for novel subtype.
   f. Provide laboratory support to test clinical specimens for influenza and identity a novel subtype.
5. Consider acquiring laboratory space that meets Bio Safety Level 3 with enhancements specifications.

2.3 PREVENTION AND CONTAINMENT

PHASE 3 AND 4

A. International / North American Identification
1. Expedite completion of Interpandemic preparations
2. **Non-pharmaceutical Interventions**
   a. See Appendix F for personal protective strategies. Implement Pandemic Alert Phases 3 and 4 strategies.
3. **Vaccine and Antivirals**
   The PIPG will:
   a. Meet with public and private sector stakeholders to review the major elements of vaccine and/or antiviral ordering and distribution plans (Appendix J).

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b. Review border health issues with the Office of Border Health, bordering states, and other applicable agencies. Review Memoranda of Understanding and standing communications with other state epidemiologists.
c. Review EMAC, the Emergency Management Assistance Compact, whereby a disaster-impacted state can request and receive assistance from other member states quickly and efficiently. Resolve two key issues upfront: liability and reimbursement.
d. Review written material from Office of General Council regarding medical and public health control legislation and liability issues related to delivery of biologic agents (e.g., vaccine, antivirals).

B. Texas Identification

1. **Non-pharmaceutical Interventions**
   a. See Appendix F for personal protective strategies. Implement Pandemic Alert Phases 3 and 4 strategies.
   b. Numerous on-line educational resources are available through the CDC Influenza Website (www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm)

2. **Vaccine and Antivirals**

The **PRT** will:

a. Meet with public and private sector stakeholders to review the major elements of vaccine and/or antiviral ordering and distribution plans (Appendix J). HSRs and LHDs will be placed on alert.
b. Review the current antiviral supply estimates to determine the appropriate use of the limited antiviral supply (Appendix K).
c. Modify the DSHS vaccine and antiviral plan (Appendix J) to account for updates as needed, i.e., target groups and projected vaccination supply.
d. Review, reprioritize, and/or prioritize within high-risk vaccine and antiviral priority groups as needed (Appendix I).
e. Evaluate needs and process for activating antiviral prophylaxis stockpiles (e.g. rimantadine, amantadine, oseltamivir, zanamivir) that exist (e.g. SNS, possibly others).
f. Test existing systems that track vaccine and/or antiviral supplies:
   i. The Texas Inventory Management System (TIMS) through the HAN currently tracks inventory of medications in the SNS deployments.
   ii. Back-up: The Texas Pharmacy Inventory Control System tracks vaccine and program-related medication distribution to HSRs and LHDs.
g. Alert the DSHS DMDG to prepare to activate clinic supply stockpile.

HSRs and LHDs will:

a. Notify medical community of plan status and vaccine availability.
b. Notify Recognized Community Health Providers and Community Health Workers of vaccine availability and client options for obtaining vaccine.
c. Distribute vaccine guidelines to medical community.
d. Coordinate with the Office of Border Heath for Texas-Mexico border jurisdictions and their Mexican counterparts.

PHASE 5

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A. International Identification:
   1. Continue as for Phases 3 and 4.

B. North American Identification/Texas Identification:
   1. **Non-pharmaceutical Interventions**
      a. See Appendix F for personal protective strategies. Implement Pandemic Alert Phase 5 strategies.
      b. If you or family members become ill, implement care strategies in Appendix H as appropriate.
   2. **Vaccines and Antivirals**

      The **PRT** will:
      a. Ensure all elements of the DSHS vaccine and antiviral plan are in place as described in Inter-Pandemic Period and Appendix J.
      b. Determine responsibility for activation of specific plan elements and begin preparations.
      c. Review logistics and human resources.
      d. Alert the DSHS DMDG to prepare to activate clinic supply stockpile.
      e. Ensure systems to track vaccine and/or antiviral supplies and individual client data are in place and functional:
         i. The Texas Inventory Management System (TIMS) through the HAN.
            - A module is in development for the TIMS to track individuals.
         ii. Another system such as Countermeasure Response Administration System module under development by CDC).
         iii. The 5 X 8 filing card to Excel spreadsheet system will serve as the primary system for patient level data collection and consent. Data can be entered into the spreadsheet at a later date. Spreadsheet data and/or card can be uploaded into the TIMS system.
      f. Evaluate needs and process for activating antiviral prophylaxis stockpiles (e.g. rimantadine, amantadine, oseltamivir, or zanamivir) that exist (e.g. SNS and possibly others).
      g. Prepare for SNS delivery, prepare for delivery to the DSHS pharmacy, or request pharmaceutical distributors to prepare for re-distribution of vaccine or antivirals to determined sites. Models developed in the state bioterrorism plan will be used for implementation.
      h. Conduct Just In Time training on pandemic policies and protocols for regions and other partners.
      i. Ensure appropriate policies, protocols, and memoranda of understanding are in place.

      HSRs and LHDs will:
      a. Prepare to activate distribution system according to local plans.
      b. Begin coordination with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts.

2.4 HEALTH SYSTEMS RESPONSE

PHASE 3 AND 4

A. International identification

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1. The PIPG will:
    a. Review the critical elements and expectations of the DSHS PIPP.
2. HSRs and LHDs will:
    a. Encourage hospitals and congregate facilities to review and update their Pandemic Influenza Plans.
    b. Collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.
    c. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, emergency rooms, Recognized Community Health Providers, and Community Health Workers within their own jurisdictions.
    d. Provide public and private health care providers with updated case definitions, protocols, and algorithms to assist with case finding, management, infection control, and surveillance reporting.

B. Texas Identification
1. The **PRT** will:
    a. Meet with all appropriate partners to review the critical elements and expectations of the DSHS PIPP
    b. Emergency Response Plans will be activated.
2. HSRs and LHDs will:
    a. Collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.
    b. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, and emergency rooms within their own jurisdictions
    c. Provide public and private health care providers with updated case definitions, protocols, and algorithms to assist with case finding, management, infection control, and surveillance reporting.

PHASE 5

B. International Circulation
12. The PIPG will:
    a. Continue strategies of Phases 3 and 4.

C. North American / Texas Circulation
12. The PRT will:
    a. Meet with all the participating DSHS partners to review the critical elements and expectations of the DSHS PIPP.
    b. Review, revise as needed, and activate guidelines for prevention and control measures for health care settings (Appendix N), communities (Appendix O), and schools (Appendix P).
    c. Collaborate with the infectious disease specialists and influenza experts (Appendix Q) in the review and revision of the prevention and control measures.
13. HSRs and LHDs will:

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a. Continue to collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.

14. Hospitals will:
    a. Implement health care setting prevention and control procedures as appropriate (Appendix N).

2.5 COMMUNICATIONS

PHASE 3 AND 4

A. HAN
1. Alert Notification: the HAN staff will monitor the delivery of health alerts and implement backup and redundant communications systems as needed. The staff will be ready to update the HAN emergency contact database if required. The HAN staff will coordinate with DSHS IDCU staff on use of the DSHS broadcast messaging equipment for delivery of health alerts by e-mail, automated phone and fax technologies.
2. Event Communication Management: An event will be created on WebEOC and all involved public health entities will use to pass Situation Reports (SitReps) and other real time information between agencies.
3. Distance Learning Delivery**:** It is expected that the CDC will call for national satellite broadcasts dealing with the emergency. The HAN distance learning coordinator (DLC) with the assistance of the HAN distance learning technologist will assure that appropriate communications assets are employed to receive the programming, record it and deliver it to responders across the state. Assets to be used include HAN video conferencing; HAN video streaming; multicast streaming; and audio conferencing equipment. The HAN DLC will coordinate the delivery of satellite broadcasts. If JIT distance learning is required for the event, the HAN DLC will coordinate with the CDC, DSHS programs, TALHO, and other partners for the delivery and/or rebroadcast of the JIT training.

B. Communications with Health Care Professionals
1. Novel virus identified in a single human case: Communication efforts will continue as described in Interpandemic and the HAN. Modifications will be made accordingly.
    a. Coordinate the notification of all appropriate agencies, statewide professional organizations and the PHL directors that a novel virus has been identified in a single human case. The HAN will be used for this notification. Phones, pagers, faxes, or other redundant communication systems will be used as alternative forms of notification. (From Health Systems)

C. Public Information Dissemination
1. As per the DSHS CERC Guidelines:
    a. Develop messages about novel viruses. Share messages with HSRs and LHDs by email distribution and the HAN.
    b. Work with partners to ensure consistent messages are delivered.
    c. Update fact sheets, flyers and frequently asked question sheets. Provide information in Spanish and other languages as needed.
    d. Update Web page as needed.
    e. DSHS Press Officer (or designee) serves in the DSHS ESC with the DSHS IC team as PIO.

f. Confine communications with the media to designated spokesperson(s) and DSHS Press Officer (or designee).

PHASE 5

A. HAN
   1. Alert Notification: the HAN staff will continue to monitor the delivery of health alerts and maintain backup and redundant communications systems as needed. The staff will continue to update the HAN emergency contact database if required. The HAN staff will continue to coordinate with DSHS IDCU staff on use of the DSHS broadcast messaging equipment for delivery of health alerts by e-mail, automated phone and fax technologies.
   2. Event Communication Management: The WebEOC event created will still be used by public health entities to pass SitReps and other real time information between agencies
   3. Distance Learning Delivery**:** It is expected that the CDC will call for national satellite broadcasts dealing with the emergency. The HAN DLC with the assistance of the HAN Distance Learning Technologist will assure that appropriate communications assets are employed to receive the programming, record it and deliver it to responders across the state. Assets to be used include HAN video conferencing; HAN video streaming; multicast streaming; and audio conferencing equipment. In the future, if satellite technologies are implemented for the HAN, the HAN DLC will coordinate the delivery of satellite broadcasts. If JIT distance learning is required for the event, the HAN DLC will coordinate with the CDC, DSHS programs, TALHO and other partners for the delivery and/or rebroadcast of the JIT training.

B. Communications with Health Care Professionals
   1. Human-to-human transmission confirmed: Designated DSHS IDCU staff will be responsible to communicate pandemic response updates and recommendations of the Epidemiological Response Teams to targeted health care professionals or agencies that serve healthcare professionals.

C. Public Information Dissemination
   1. As per the DSHS CERC Guidelines:
      a. Disseminate news release as warranted.
      b. Update messages about pandemic alert.
      c. Update fact sheets, flyers and frequently asked questions sheets. Provide information in Spanish and other languages as needed.
      d. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts. Work with partners to ensure consistent messages are delivered.
      e. Update Web page at least daily or as needed.
      f. Press Officer (or designee) continues to serve in the DSHS ESC as PIO.
      g. Continue restricted release of information on pandemic influenza through designated spokesperson(s) only.

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3. PANDEMIC PERIOD – PHASE 6

Phase 6 – Pandemic phase: increase and sustained transmission in general population.

3.1 PLANNING AND COORDINATION

A. International / North American / Texas circulation
   1. Activate the DSHS IC. Appendix 6 to Annex H is the framework for convening and activating local responses. The DSHS ICS structure will be determined by the size and scope of the event, and by development and needs identification of the State Emergency Management Unified Command.
   2. Collaborate with the GDEM to determine if the SOC should be activated.
      a. The DSHS IC in the DSHS ESC will function under the SOC if activated.
      b. The SOC, if activated, will initiate communication and interfacing with national counterparts, including the CDC.
   3. The DSHS IC will activate the Pandemic Period of the Plan. All the DSHS components will be made available for response activities. PIL will ensure surveillance is enhanced. Government officials will already have been notified via existing protocols.
   4. The DSHS IC will convene the PRT to determine next steps.
   5. The DSHS IC will determine communications needs and alert and/or mobilize necessary resources and organizations as applicable.
   6. The Regional Directors and LHDs in affected areas will submit requests for assistance through the DSHS IC structure.
      a. If more assistance is required than assigned staff can supply, unaffected sections, units and branches will be tasked for support.
      b. The regional/local ICS will be responsible for directing the work of the reassigned staff.
   6. The DSHS ESC Logistics and Operations Section will monitor staffing needs, request additional staff and re-assign personnel as necessary.
   7. On-going communication with HSRs and LHDs will continue. The DSHS IC will communicate with Regional Directors or designees who will be responsible for communication with LHDs, bordering states, Texas-Mexico border jurisdictions and their Mexican counterparts, and all partners.
   8. Expenses will be documented through the DSHS IC Financial Section.

3.2 SITUATION MONITORING AND ASSESSMENT

A. Surveillance and reporting to DSHS IDCU continues (Appendix R). Reporting would most likely be conducted through the National Electronic Data Surveillance System-Based System or a web-based system (yet to be developed).
B. Enhanced DSHS surveillance activities may include:
   1. Monitoring attendance within schools.
   2. Reporting by hospitals to DSHS that may include:
      a. Number of patients on ventilators
      b. Number of available ventilators
      c. Number of beds occupied
      d. Number of beds available

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e. Estimates of staffing levels (MDs, nurses, ancillary)
f. Number of deaths due to any respiratory illness (ICD-9 480-486 and 487) including medical examiner offices. Vital statistics should be involved
g. Emergency room visit trends, syndromic surveillance

3. Monitoring of essential infection control supplies at health care venues and suppliers/distributors
4. Community clinics reporting enhanced ILI activity
5. Surveillance for retail over-the-counter medication purchases

C. Culture reporting from HSR/LHD clinics. Whatever cultures are done will be reported through jurisdictions to DSHS IDCU.

D. Use of self-screening tools (e.g., Severe Acute Respiratory Syndrome) in emergency rooms and healthcare facilities. People with known exposure to a person diagnosed with novel virus influenza or have been around people who might have had influenza caused by a novel virus AND have respiratory symptoms (cough, sore throat and fever) should obtain a mask, follow the instructions for applying the mask, and report to the triage nurse.

E. Data collection and reporting are the responsibility of the DSHS, LHDs and providers in Texas (hospitals, clinics, etc.). Reporting will follow current communicable disease reporting methods. The plan is to move to an electronic Web based secure reporting system for all reporting.

F. The DSHS laboratory will test clinical specimens for influenza and identify the novel subtype. Specimen selection will be determined by DSHS IDCU or the Infectious Disease Surveillance and Epidemiology Branch.

G. Other items will be added to list www.dshs.state.tx.us/lab/G2A_FORM_sample.pdf. Instructions for filling out the form are available at: www.dshs.state.tx.us/lab/g-2a_instruct.htm

3.3 PREVENTION AND CONTAINMENT

A. International Identification:

1. **Non-pharmaceutical Interventions**
   a. See Appendix F for personal protective strategies. Implement Pandemic Alert Phase 5 strategies.
   b. If you or family members become ill, implement care strategies in Appendix H as appropriate.
2. **Vaccines and Antivirals**
   The **PRT** will:
   a. Ensure all elements of the DSHS vaccine and antiviral plan are in place as described in Inter-Pandemic Period and Appendix J.
   b. Determine responsibility for activation of specific plan elements and begin preparations.
   c. Review logistics and human resources.
   d. Alert the DSHS DMDG to prepare to activate clinic supply stockpile.
   e. Ensure the TIMS through the HAN (or other developed system such as the Countermeasure Response Administration System module under development by the CDC is on line and ready for implementation to track vaccine and/or antiviral supplies and client data.

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f. Evaluate needs and process for activating antiviral prophylaxis stockpiles (e.g. rimantadine, amantadine, oseltamivir, or zanamivir) that exist (e.g. SNS and possibly others).
g. Prepare for the SNS delivery, prepare for delivery to the DSHS pharmacy, or request pharmaceutical distributors to prepare for re-distribution of vaccine or antivirals to determined sites. Models developed in the state bioterrorism plan will be used for implementation.
h. Conduct Just In Time training on pandemic policies and protocols for regions and other partners.
i. Ensure appropriate policies, protocols, and memoranda of understanding are in place.

HSRs and LHDs will:

a. Prepare to activate distribution system according to local plans.
b. Begin coordination with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts.

B. North American / Texas circulation

1. **Non-pharmaceutical Interventions**
   a. See Appendix F for personal protective strategies. Implement Pandemic Phase 6 strategies.
   b. If you or family members become ill, implement care strategies in Appendix H as appropriate.
2. **Vaccine and Antivirals**
   a. Vaccine and antiviral ordering
      i. Vaccine and antiviral ordering will be coordinated by the DSHS IC staff through the DSHS IB (vaccines) and the DSHS PB and IDCU (antivirals). The DSHS IB has influenza vaccine prioritization and distribution expertise including forms and knowledge of risk populations.
      ii. Vaccine and antiviral ordering will depend on vaccine and antiviral availability and allocation as determined by the CDC, the DSHS Austin, HSRs, and LHDs. It is assumed at the early stage, the state will coordinate ordering (Appendix S).
      iii. The DSHS IB (vaccine) and IDCU (antivirals) will estimate numbers in priority groups based on available data received from HSRs and LHDs collected as described in the Interpandemic Period 1.3,B.1.e.
      iv. The DSHS IB (vaccine) and IDCU (antivirals) will be notified by the CDC of the total number of doses available for each priority group in Texas.
      v. County allotment will be determined by county priority group percent of total Texas priority group population.
      vi. HSRs will be allowed to make adjustments in county allocations
      vii. The DSHS IB (vaccine) and IDCU (antivirals) will be responsible for authorizing the distribution of only the number of doses needed to vaccinate or prophylax the priority groups described above according to available supplies.
   b. Vaccine and antiviral delivery and distribution. It is assumed at the early stage, the state will coordinate distribution.

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i. The DSHS IB (vaccine) and IDCU (antivirals) are responsible for distributing the specified number of doses to agencies based on population distribution and on distribution of essential service personnel.
ii. Vaccine and antivirals will be distributed either through a centralized distribution system or the VMI system (depending on the CDC directives) to HSR and/or LDH. Security will be provided at deployment site as well as regional and/or local receiving site.
iii. The PIL or designee will notify all internal and external partners of the ordering and delivery/distribution plans
iv. VIS forms and antiviral information sheets will be distributed to HSRs and/or LHDs through mailings or electronically accessible website.
    - The general address for VIS forms is: www.cdc.gov/nip/publications/VIS/This page will provide access to most current documents.
    - The information on the VIS for some future influenza virus causing a pandemic may differ from seasonal influenza, due to viral characteristics or vaccine idiosyncrasies, so be sure to locate appropriate forms.
v. Conduct JIT training sessions for staff to acquaint HSRs and LHDs with issues related to the delivery of vaccines (e.g., teleconference)
vi. Notify the DSHS DMDG of affected regions and request supply and contact information to be forwarded to affected regions. Be prepared to contact the SNS for Push Pack and the VMI backup resources, if authorized by the State Epidemiologist
vii. HSRs and LDHs will:
    - Arrange vaccine and antiviral distribution within their jurisdictions to include distribution to those who are unable to reach mass clinic sites. Private health care providers may be enlisted for help, as appropriate.
    - Coordinate assistance in the transportation of vaccine and antiviral supplies as arranged through Memorandum of Understanding.
    - Safely store vaccine and antivirals and maintain security until delivered to private agencies or mass clinics as appropriate. LHDs are responsible for vaccine storage and security at mass clinic sites. The VMI assumes this role if distribution is through the private system
    - Assure printing the VIS in quantities for predominant languages in the community that are sufficient to meet the needs of public clinics if able, or request forms from the DSHS IB that can be delivered in 24 hours
    - Distribute the VIS to private sites to workers identified as priority recipients and to public clinic sites
    - Secure clinic sites that are accessible to the community including special populations. Potential mass clinic sites have already been identified through development of local emergency response plans
    - Set up clinics
    - Call up volunteers

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- Track distribution of vaccine and antivirals through the TIMS (Appendix T) or Countermeasure Response Administration System module if available.

c. Administering Pharmaceuticals
HSRs and LHDs will:
   i. Plan and oversee the administration of vaccines and antivirals to people in their respective communities per established local emergency protocols, in collaboration with local health departments and private sector stakeholders.
   ii. Develop specific standing orders for vaccine administration and treating adverse reactions signed by Regional Directors or local health authorities (Appendix M).
   iii. Administer vaccine or antivirals to priority groups as defined by the CDC and the DSHS.
   iv. Use local emergency response plans developed by HSRs and LHDs for administration of vaccine and prophylactic medications.

d. Monitoring and tracking
   i. Vaccine and antiviral distribution and administration will be monitored by the DSHS through the TIMS or federal Countermeasure Response Administration System module to be developed for the CDC. A paper system will be used for initial documentation. Client data will be entered on an Excel spreadsheet after the clinic. The LHDs will hold the primary responsibility for data entry. Assistance of the HSRs may be requested if there is a shortage of staff. HSRs have the responsibility to ensure non-electronic data will be transferred to the DSHS IB or the DSHS PB for up-load into the electronic system (Appendix T).
   ii. Report adverse vaccine event following influenza vaccination to VAERS by HSRs and LHDs. An adverse event is defined as any clinically significant adverse event that occurs after the administration of any vaccine licensed in the United States, whether or not it is clear event was vaccine related (CDC vaers.hhs.gov/).
      - Vaccine adverse events involving vaccines purchased with public funds, such as those purchased through the Texas Vaccines for Children Program or those administered in a public health clinic must be reported to the DSHS IB on the VAERS form (DSHS Form C-76). This form may be either mailed or faxed (512-458-7544). The DSHS IB will review these forms and submit copies of these to the national VAERS office via mail or fax. The DSHS IB will enter the VAERS forms from the LHDs or health care providers into a database for tracking adverse events
      - Vaccine adverse events involving vaccines purchased with private funds may be reported directly to the national VAERS office. The preferred method of reporting to VAERS is through the web-based reporting system at vaers.hhs.gov/. This secure web-based form is identical to the VAERS-1 (or DSHS Form C-76). The VAERS-1 form may also be completed and faxed (1-877-721-0366) or mailed to the national VAERS office. The VAERS-1 form can be obtained be calling toll-free to 1-800-

822-7967 or by visiting the VAERS website at vaers.hhs.gov/and downloading the form.

f. Implement MedWatch (www.fda.gov/medwatch/) for reporting reactions to antivirals as discussed in Interpandemic Period.

3.4 HEALTH SYSTEMS RESPONSE

A. International/National/ Texas Circulation

1. DSHS IC/ESC will:
   a. Coordinate the notification of the SOC, all appropriate agencies, statewide professional organizations and the PHL directors that an outbreak of ILI is occurring in the jurisdiction.
   b. Notify bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts (and Office of Border Health as appropriate).
   c. Recommend healthcare system providers activate PI plans.
   d. Implement response activities of the Draft Disaster Mental Health Appendix 13. The DSHS disaster mental health personnel and mental health partners are activated to provide stress management and crisis counseling services.
2. HSRs and LHDs will:
   a. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, and emergency rooms within their own jurisdictions.
3. Disaster Mental Health:
   a. Response activities of the Draft Disaster Mental Health Appendix 13 to the State Emergency Management Plan are implemented. The DSHS Disaster Mental Health Services (DMHS) is activated. The DSHS DMHS may be required to staff the DSHS ESC, the SOC, or the Federal Emergency Management Agency Joint Field Office to continue coordinating the DSHS and external behavioral health resources in the provision of stress management and crisis counseling services for responders and disaster survivors.
   b. State Hospitals and State Schools will be an integral part of the DSHS emergency response. In addition these facilities may need to determine whether the pandemic impact may result in shelter-in-place, evacuation, or use by the community as a supplemental medical facility.
   c. Upon federal declaration the DSHS Disaster Mental Health staff, will pursue the Federal Emergency Management Agency Crisis Counseling Program grant, which is due the GDEM within 14 calendar days of declaration.

3.5 COMMUNICATIONS

A. HAN

1. Alert Notification: the HAN staff will continue to monitor the delivery of health alerts and maintain backup and redundant communications systems as needed. The staff will continue to update the HAN emergency contact database if required. The HAN staff will continue to coordinate with DSHS IDCU staff on use of the DSHS broadcast messaging equipment for delivery of health alerts by e-mail, automated phone and fax technologies.
2. Event Communication Management: The WebEOC event created will still be used by public health entities to pass SitReps and other real time information between agencies

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3. Distance Learning Delivery**:** The HAN DLC with the assistance of the HAN Distance Learning Technologist will continue to assure that appropriate communications assets are employed to receive satellite programming, record it and deliver it to responders across the state. Assets to be used include HAN video conferencing; HAN video streaming; multicast streaming; and audio conferencing equipment. The HAN DLC will coordinate the delivery of satellite broadcasts. If JIT distance learning is required for the event, the HAN DLC will coordinate with the CDC, DSHS programs, TALHO and other partners for the delivery and/or rebroadcast of the JIT training.

B. Communications with Health Care Professionals
   1. Communication efforts will continue as described above in Pandemic Alert Period, Phase 5:
      a. Human-to-human transmission confirmed - Designated DSHS IDCU staff will be responsible to communicate pandemic response updates and recommendations of the Epidemiological Response Teams to targeted health care professionals or agencies that serve healthcare professionals.

C. Public Information Dissemination
   1. As per the DSHS CERC Guidelines:
      a. Update the public through regular news releases and news updates as warranted.
      b. Update messages about pandemic influenza in coordination with the CDC information.
      c. Update fact sheets, flyers and frequently asked questions sheets in coordination with the CDC information. Provide translations in Spanish and other languages as needed.
      d. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts.
      e. Update Web page at least daily (more often if necessary).
      f. Press Officer (or designee) continues to serve in the DSHS ESC as PIO.
      g. Confine communications with the media to designated spokesperson(s) and DSHS Press Officer (or designee).

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4. SUBSIDED PERIOD

Between waves

4.1 PLANNING AND COORDINATION

A. The PRT will review procedures from first wave and make adjustments as necessary.
B. Continue vaccination efforts. Narrow areas of focus – regions, cities, etc.
C. The DSHS ICS logistics section will determine the need for obtaining and maintaining essential personnel, facilities, equipment and supplies.
D. Expenses will continue to be documented through the DSHS ICS financial section.

4.2 SITUATION MONITORING AND ASSESSMENT

A. Evaluate situation-monitoring response in first wave. Make adjustments as necessary for subsequent waves.
B. Maintain heightened surveillance activities
C. Maintain laboratory capabilities

4.3 PREVENTION AND CONTAINMENT

A. **Non-pharmaceutical Interventions**
   1. See Appendix F for personal protective strategies. Implement Subsided Period strategies.
   2. Encourage personal use of non-pharmaceutical interventions including hand hygiene, respiratory hygiene, and cough etiquette to prevent pandemic influenza.

A. **Vaccines and Antivirals**
   1. Evaluate prevention and containment response to first wave.
   2. Make adjustments in response for subsequent waves as necessary. Follow same guidelines as appropriate from the Pandemic period.
   3. Continue vaccinations and distribution and use of antivirals if indicated by the CDC.
   4. Continue to monitor and document any adverse reactions using the VAERS system. HSRs and LHDs will be responsible for coordination of this procedure in their jurisdiction.

4.4 HEALTH SYSTEMS RESPONSE

A. Collaborate with HSRs, LHDs, and other public and private sector stakeholders to evaluate response to previous wave and make adjustments as necessary.
B. Respond to subsequent waves as in Phase 6 with identified adjustments.

4.5 COMMUNICATIONS

A. HAN
   1. Alert Notification: the HAN staff will continue to monitor the delivery of health alerts and maintain backup and redundant communications systems as needed. The staff will continue to update the HAN emergency contact database if required. The HAN staff will continue to coordinate with DSHS IDCU staff on

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use of the DSHS broadcast messaging equipment for delivery of health alerts by e-mail, automated phone and fax technologies.

2. Event Communication Management: The WebEOC event created will still be used by public health entities to pass SitReps and other real time information between agencies
3. Distance Learning Delivery**:** The HAN DLC with the assistance of the HAN Distance Learning Technologist will continue to assure that appropriate communications assets are employed to receive satellite programming, record it and deliver it to physicians and responders across the state. Assets to be used include HAN video conferencing; HAN video streaming; multicast streaming; and audio conferencing equipment. The HAN DLC will coordinate the delivery of satellite broadcasts. If JIT distance learning is required for the event, the HAN DLC will coordinate with the CDC, DSHS programs, TALHO and other partners for the delivery and/or rebroadcast of the JIT training.

B. Communications with Health Care Professionals
   1. Communication efforts will continue as described above in the Pandemic Alert Period, Phase 5:
   2. Designated DSHS IDCU staff would be responsible to communicate pandemic response updates and recommendations of the Epidemiological Response Teams to targeted health care professionals or agencies that serve healthcare professionals.

C. Public Information Dissemination
   1. As per the DSHS CERC Guidelines:
      a. Update the public through regular news releases and news updates as warranted.
      b. Update messages about pandemic influenza in coordination with the CDC information.
      c. Update fact sheets, flyers and frequently asked questions sheets in coordination with the CDC information. Provide translations in Spanish and other languages as needed.
      d. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts.
      e. Update Web page as needed.
      f. Press Officer (or designee) continues to serve in the DSHS ESC as PIO.
      g. Confine communications with the media to designated spokesperson(s) and DSHS Press Officer (or designee).

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5. POSTPANDEMIC PERIOD

End of Pandemic and Return to Interpandemic Period

5.1 PLANNING AND COORDINATION

A. The DSHS IC and the PRT will convene to debrief from response activities.
B. The DSHS IC and the PRT will communicate the status of the response throughout the DSHS, HSRs, LHDs and private sector stakeholders.
C. HSRs and LHDs will analyze local response efforts and social impact for communities. The DSHS Central office will assess statewide response.
    1. Multidisciplinary teams may include representatives from hospitals, clinics, private practice, Recognized Community Health Providers, Community Health Workers, military, veterans, nongovernmental organizations, churches, disability organizations, and grass roots representatives.
D. Technical assistance regarding assessment and analysis will be provided as needed (The DSHS to and from HSR offices, LHDs and public and private sector stakeholders).
E. The Pandemic Influenza Plan will be reviewed and updated by the PIPG to account for any gaps in the public health infrastructure noticed during the pandemic.
F. Expenses will continue to be documented and costs analyzed through the DSHS ICS financial structure.
G. After Action Reports will be generated and disseminated appropriately. The DSHS IC in communication with the GDEM is deactivated.

5.2 SITUATION MONITORING AND ASSESSMENT

The post-pandemic goals are to provide a detailed retrospective characterization of the pandemic and to evaluate the efficacy of protective action recommendation and emergency management strategies.

A. In collaboration with the CPS, the PIL will initiate a multidisciplinary team of invited local medical and public health experts representing organizations/agencies such as the LHDs, TMA, THA, Texas Nurses Association, the DSHS (central and regional), TALHO, Schools of Public Health, and behavioral health organizations to carry out analyses. Analysis may include: Document influenza outbreaks in different populations in Texas.
    1. Determine age-specific attack rate, morbidity and mortality.
    2. Describe unusual clinical syndromes (as well as risk factors for those syndromes and appropriate treatment).
    3. Describe unusual pathologic features associated with “serious” or fatal cases.
    4. Conduct efficacy studies of vaccination, infection control interventions, or chemoprophylaxis.
    5. Monitor the ability of Texas hospitals and outpatient clinics to cope with increased patient loads.
    6. Assess the medical, social and economic impact of the pandemic.
    7. Provide rates of illness visits and hospitalizations using data from defined populations.
B. HSRs and LHDs will analyze local response efforts and social impact for communities.
    1. Multidisciplinary teams may include representatives from hospitals, clinics, private practice, Recognized Community Health Providers, Community Health Workers,

military, veterans, nongovernmental organizations, churches, and grass roots representatives.

C. Reviewing death certificates statewide for influenza-related pneumonia and influenza deaths, as well as reviewing hospital admissions for serious influenza-associated illness may accomplish some of the aforementioned goals. The DSHS central and regional offices/local health departments may be tasked with gathering this information in their jurisdictions.

D. State data would be analyzed and distributed by DSHS IDCU under supervision of the PIL. Draft protocols for these and other studies will have been developed at the national level and will be shared with states that show an interest in collaborating.

5.3 PREVENTION AND CONTAINMENT

A. **Non-pharmaceutical Interventions**

1. See Appendix F for personal protective strategies. Implement Subsided Period strategies.
2. Continue to encourage personal use of non-pharmaceutical interventions including hand washing, respiratory hygiene, and cough etiquette as a regular practice to prevent infectious diseases.

A. **Vaccines and antivirals**

1. Complete public vaccinations until completed as vaccine supply allows.
2. Discontinue antiviral distribution.
3. Return unused vaccine and antivirals to appropriate vendor source or the DSHS pharmacy in Austin as appropriate.
4. Assure completion of all vaccine and antiviral paperwork: distribution, tracking, and compliance record keeping.
5. Reconvene the Response Team to debrief. HSRs and LHDs will be included in the debriefing:
6. Complete After Action Reports
   a. Modify pandemic influenza plans as necessary to correct problem areas.
   b. Evaluate interventions related to coverage, processes, efficiency, effectiveness, and health outcomes.

5.4 HEALTH SYSTEMS RESPONSE

A. IC/PIPG will:

1. Notify involved agencies re: change of status to Postpandemic Period.
2. Initiate recovery operations including stress management and crisis counseling needs.
3. Assess the impact, response, and control of the pandemic.
4. Summarize and analyze the pandemic response and record lessons learned for future pandemic situations.
5. Review and revise the Pandemic Influenza Plan based on outcome measurements and performance results of current plan(s).
6. Support rebuilding of essential services.

B. HSRs and LHDs will:

1. Notify involved agencies of change of status to the Postpandemic Period.

C. Disaster Mental Health:

1. Risk Management, HHSC will coordinate the assessment of the impact on State Hospitals.

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2. DSHS will coordinate the assessment of Community MHMR Centers in consultation with the Department of Aging and Disability Services.
3. DSHS will coordinate the assessment of the impact on Substance Abuse Providers.
4. DMHS will provide technical assistance, including FEMA Public Assistance, to HHSC Risk Management, DSHS, and Community MHMR Centers and Substance Abuse providers.
5. DMHS will, throughout the life of the FEMA Crisis Counseling Program, re-assess and refine service provision adjusting grant objectives and funding as needed.
6. It is expected that the psychosocial and financial effects of a pandemic will be felt for months if not years, hampering personal, community and agency recovery. It is the expectation that crisis counseling program services will be available for a period of at least one-year post declaration date.

5.5 COMMUNICATIONS

A. HAN
   1. The HAN Technology Implementation: After action analysis of communications systems and database systems will be conducted in order to improve the network design and delivery of services. As funding is available, the HAN staff will coordinate with TALHO and other partners to implement new systems that might be required.
   2. Event Communication Management: After-action analysis of WebEOC use during the event will be conducted to determine effectiveness and areas for additional training and improvement.
   3. The HAN Distance Learning Coordination: After-action analysis of the effectiveness of distance learning programming and delivery will be conducted in order to improve delivery of services. The HAN DLC and Distance Learning Technologist will recommend any improvements to technology systems that are required.
   4. Alert Notification: the HAN staff will coordinate the update of the emergency contact database and conduct after-action interviews with local response staff to gather information to improve the alert function.

B. Communications with Health Care Professionals
   1. Communication efforts will continue to inform the regional offices and local health departments about end of pandemic.
   2. The PIPG will reconvene, along with representatives from the regions to discuss the communications strategy and conduct a process review. Modifications will be made as necessary.

C. Public Information Dissemination
   1. As per the DSHS CERC Guidelines:
      a. Evaluate (through after-action report) risk communications and public information dissemination. Assess effectiveness of messages.
      b. Assess media coverage and amount of information provided.
      c. Update the public through regular news releases and news updates as needed about the current situation.
      d. Update messages about the current pandemic influenza aftermath in coordination with the CDC information.

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e. Update fact sheets, flyers and frequently asked questions sheets in coordination with the CDC information. Provide translations in Spanish and other languages as needed.
f. Update Web page as needed.
g. Evaluate when to reinstate the Open Door media policy.

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Appendix A:
Pandemic Influenza Planning Group (PIPG)

The composition of the PIPG shall be determined by the Community Preparedness Section (CPS) Leader, and will be based on the organizational structure of the Texas Department of State Health Services (DSHS), with consultation provided through an interagency contract with the Texas Forrest Service ICS Support Team, in compliance with National Incident Management System guidelines.

In addition to appropriate expertise within the DSHS the PIPG also may include representatives from the Texas Animal Health Commission, Texas Parks and Wildlife Commission, United States Department of Agriculture – Animal and Plant Health Inspections Service, Texas Veterinary Medical Diagnostic Laboratory and Texas Racing Commission.

The following list reflects participants involved in developing the 2004 draft and/or the 2005 draft.

Bastis, David	Emergency Preparedness and Response Specialist, Williamson County and Cities Health District
Betz, Tom	State Epidemiologist, Acting, Community Preparedness Section
Bradford, Calandra	Public Heath Tech, Immunization Branch
Brown, Irene	Influenza Coordinator, Sentinel Provider Surveillance Network, Infectious Disease Control Unit
Clark, Tom	Pharmacist, Pharmacy Branch, Disease Prevention & Intervention Section
Curry, Nick	Deputy Commissioner, Prevention, Preparedness, and Regulatory Services
Davis, Lisa	CDC Public Health Advisor, Immunization Branch, Adult Immunization Coordinator
Davlin, Stacy	Influenza Surveillance Coordinator, Infectious Disease Control Unit
Drumgoole, Rahsaan	Microbiologist, Laboratory Operations Unit
Fonken, Eric	Veterinarian, Zoonosis Control Group, Infectious Disease Control Unit
Greenberg, Mike	Attorney, Office of General Counsel
Jones, Russ	Epidemiologist, Health Service Region 7 - Temple
Maldonado, Ed	Assistant Coordinator, Disaster Mental Health Services, Community Preparedness Section, Response, Recovery Branch
Mansolo, Leslie	Strategic Sciences Group Lead, Community Preparedness Section, Pandemic Influenza Planning Lead
McGaha, Paul	Director, Health Service Region 4/5N
Morgan, Cynthia	Pandemic Influenza Plan Manager, Disease Prevention & Intervention Section
Nash, Robert	Pharmacist, Pharmacy Branch Manager, Disease Prevention & Intervention Section
Palmer, Emily	Assistant Press Officer, Communications Unit, Center for Consumer and External Affairs
Pascoe, Neil	Nurse Epidemiologist, Infectious Disease Control Unit
Patterson, Mary Ann	Laboratory Operations Unit, Microbiology Science Branch
Penfield, Susan	Infectious Disease Control Unit Manager
Ritter, Mark	CDC Public Health Advisor, Immunization Branch
Sessions, Wendy	Microbiologist, Laboratory Operations Unit, Microbiology Science Branch
Stabeno, Debra	Assistant Commissioner, Division for Prevention and Preparedness Services
Suarez, Lucina	Chief, Epidemiology Research Services Branch, Community Preparedness Section
Walker, John	Acting Preparedness Medical Director, Pandemic Influenza Lead, Infectious Disease Control Unit

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Appendix B:
Key Roles and Responsibilities

Pandemic Influenza Response

	Community Preparedness Section (CPS) With assistance from the Pandemic Response Team (PRT)	Project Manager and Pandemic Influenza Planning Group (PIPG)	Regional/Local Offices (HSR/LHD)	Pandemic Influenza Lead (PIL)
Inter-pandemic Period Phases 1 and 2	• Lead in state's public health, mental health and health-care related response to pandemic influenza. • Maintain information resource list. Works with the PIL in state's response.	• Develop, review and update the plan annually.	• Representatives will be involved in the planning/updating process.	• Mandatory member of the PIPG and PRT. • Review state-wide influenza data, syndromic surveillance, lab information • Look for funding sources to sustain Influenza plan.
Pandemic Alert Period Phases 3, 4, and 5	• Operationalize plan in conjunction with key partners – Regional Directors, IDCU, GDEM, IB, and others. • Along with the PIL, coordinates a review of essential elements of vaccine distribution plan with major stakeholders.	• Convene to review plan and modify as necessary.	• Confirm availability of resources to support a pandemic response. • Serve as lead for community distribution of developed state and national communication. • Maintain a resource checklist.	• Track influenza activity
Pandemic Period Phases 6	• Coordinates pandemic influenza response with the DSHS ESC • Provides standard communication with agency and other state and national agency counterparts.	• Work with the CPS and the PIL to ascertain the continued availability of resources.	• Implement and coordinate the response from regional & local levels using existing bioterrorism plans as framework. • Assess available resources and communicate needs to local EOC. • Ensures vaccination of priority groups as vaccine becomes available.	• Track influenza activity to isolate affected geographic areas. • Disseminates resource needs to agency heads. • Directs work of re-assigned agency staff. • Monitors procedures for Texas on vaccinations and adverse event reporting.
Subsided Period	• Evaluate the DSHS IC response during first wave and make adjustments • Evaluate resources	• Evaluate how well plan worked in first wave and make adjustments	• Evaluate local response and make adjustments • Evaluate resources; attempt to resupply • Collect relevant information/data (e.g., # of deaths, # of hospitalizations) to include in final analysis. • Continues vaccination as vaccine becomes available	• Evaluate epidemiological data from first wave. • From data, determine groups most impacted and examine priority groups for vaccination and antivirals.
Post-Pandemic Period	• Communicate status of response throughout agency including HSR/LHD. • Supervise a detailed retrospective characterization /analysis of the pandemic conducted by a multidisciplinary team in collaboration with the PIL.	• Conduct retrospective analysis of the process and documents. • Recommend changes in the existing plan, once analysis is finalized.	• Collaborate with the CPS and the PIL on retrospective analysis of the pandemic. • Receive community-specific analysis and distribute to stakeholders. • Provide the PIL with recommendations regarding state plan to meet geographic needs.	• Supervise a detailed retrospective characterization /analysis of the pandemic conducted by a multidisciplinary team in collaboration with the CPS. • Monitor any cases for long-term residual sequelae (work with HSR/LHD).

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Appendix C:
Incident Command System

The Texas Department of State Health Services (DSHS) Incident Command System (ICS) complies with the National Incident Management System guidelines. This ICS structure is internal to the DSHS and is utilized to bring about a coordinated multi-disciplinary agency response. It will be activated at the direction of the DSHS Commissioner, or designee, in response to a public health emergency or at the direction of the GDEM. Once activated, the DSHS ICS will be housed at the DSHS Emergency Support Center (ESC) at the DSHS central campus. The DSHS incident or disaster management activities or actions will be carried out through the DSHS ESC. Key ESC individuals at the DSHS, the incident commander, called the Person-In-Charge (PIC), and command staff, are responsible for executing direction and control of response and recovery operations, are authorized to issue mission assignments that commit state personnel and/or material resources, and have approval authority to expend agency funds to resolve emergency and/or disaster requirements.

Unless the incident is a DSHS specific event, requiring no external assistance, it is assumed that the GDEM will be the coordinating agency for Unified Incident Command for the state. When multiple state and/or federal agencies are responding, the Unified Command structure will be activated, allowing all agencies who have jurisdictional or functional responsibilities to jointly develop a common set of incident objectives and strategies. This will be accomplished without losing or giving up agency authority, responsibility, or accountability. Under Unified Command, the following always applies:

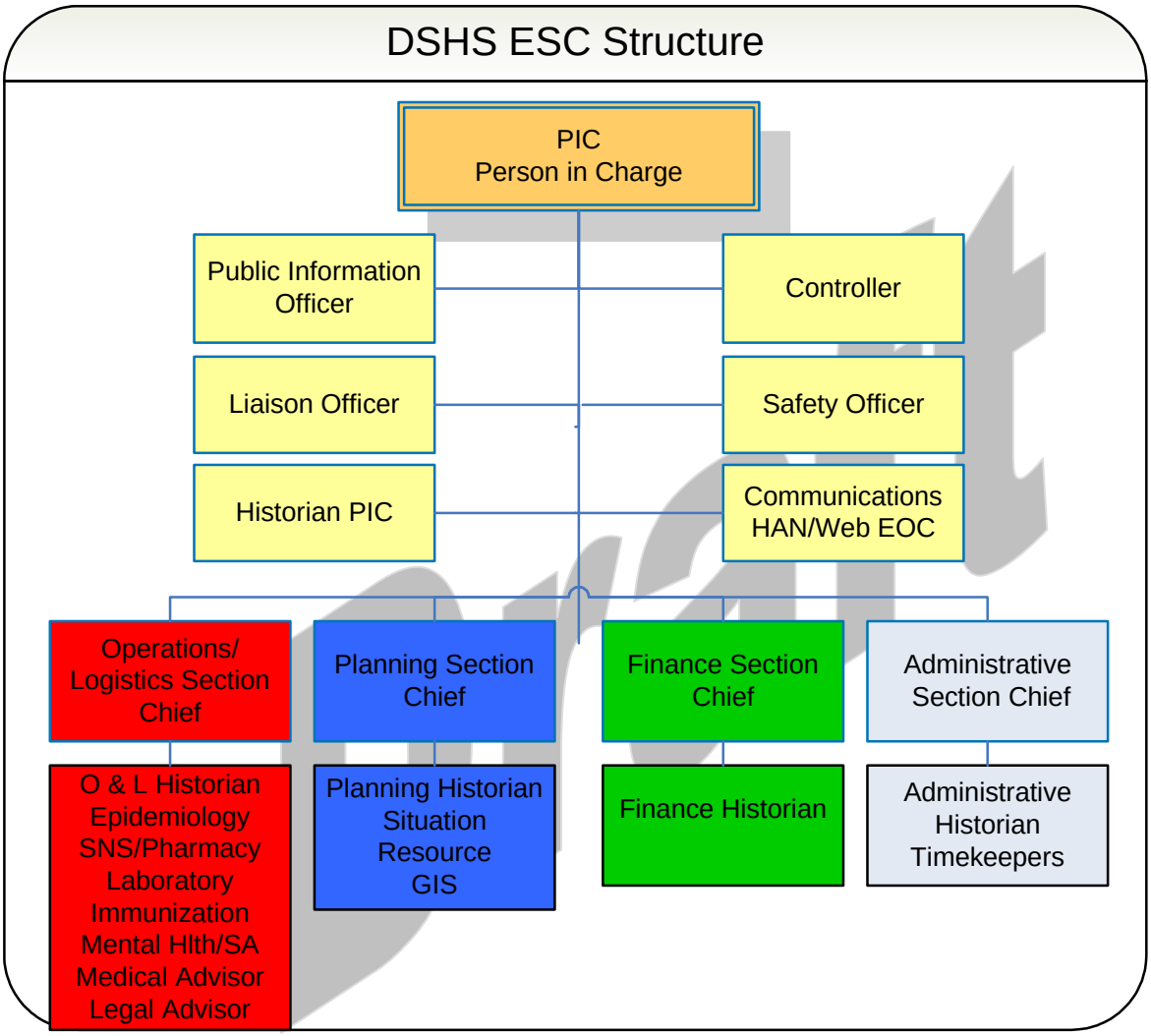
- Incident functions under a single, coordinated Incident Action Plan (IAP)
- One Operations / Logistics Section Chief will have responsibility for the implementation

The GDEM, Texas Department of Public Safety, will provide guidance and direction to all state agencies, boards, commissions, and departments assigned emergency responsibilities, and to others as designated by the Governor or Director, the GDEM as well as local governments in Texas.

The DSHS, as a member of the GDEM State Emergency Management Council is assigned primary health and medical emergency management functions and responsibilities in the State of Texas Emergency Management Plan. As such, council members are required, upon determination of a possible catastrophic threat, to begin emergency operations including pre-event response operations if indicated. The level of activation will range from bridged conference calls to 24/7 on-site coverage at the SOC. The DSHS maintains a roster of individuals who will function as agency SOC representative and liaison between the SOC and the DSHS ESC. Individuals participating in conference calls or staffing the SOC are responsible for ensuring an accurate and timely flow of information, requests for state and/or federal assistance and addressing the SOC requests for assistance.

Below is the Incident Command Structure as it will be implemented at the DSHS and followed at Regional offices. It is assumed LHDs will use a similar structure.

The DSHS Incident Command Structure:



Each of the command staff may have a deputy, or more than one if necessary. The role of the deputy is flexible. The deputy can work with the primary position, work in a relief capacity, or be assigned specific tasks. Deputies should always be as qualified as the person for whom they work.

DSHS Person in Charge

The DSHS PIC is in control of the incident for the agency. The PIC and Command Staff will be headquartered in the DSHS ESC.

The DSHS PIC is responsible for setting overall incident-related priorities; allocating critical resources according to priorities; ensuring that incidents are properly managed; ensuring that incident management objectives are met and do not conflict with each other or with agency policy; identifying and reporting critical resource needs and requirements; and ensuring that

short-term emergency response and recovery operations are coordinated to assist in the transition to full recovery operations.

Controller
The controllers are the nerve center of the DSHS ESC. They are responsible for receiving and routing of requests requiring DSHS ESC reply or action; logging all in-coming calls, forwarding tasking's to the appropriate DSHS IC functional area; maintaining copies of all DSHS ESC forms, including those from functional areas, and updating record keeping systems (WebEOC); and follow up to ensure task referral or completion. The controller is expected to be thoroughly versed and/or has immediate access to Agency operating procedures, rules and regulations.

Historian(s)
Responsible for the documentation and maintenance of accurate, up-to date, real time activities related to the DSHS ESC section assigned to. Responsibilities include: document and maintain all records and recordings, set up work area and begin organization of incident files, enter data into WebEOC, establish duplication service, assist the section leader in responding to requests, filing all official forms and reports and review records for accuracy and completeness.

Communications
The communication/HAN/WebEOC is responsible for the display of incident status information obtained from the field observers, resource status reports, aerial and other data. Responsibilities include: Determining number, type, and location of visual displays, determine map requirements, obtaining necessary equipment, maintaining all communication systems and assisting the section chief in analyzing and evaluating field reports.

Regions will also have an Incident Command Structures to respond to regional and local response and recovery efforts and will report to the DSHS ESC. Determinations concerning matching positions titles with ICS assignments will be made at the regional and local levels.

Public Information Officer
The Public Information Officer, known at the DSHS as the Press Officer, serves as the official spokesperson for the DSHS and is responsible for interfacing with the public and media and/or with other state and federal agencies with incident-related information requirements. The Public Information Officer (press officer) develops and disseminates accurate and complete information and education on the incident’s cause, size, and current situation; resources committed; and other matters of general interest for both internal and external consumption. The Public Information Officer (press officer) also may perform a key public information-monitoring role. The Public Information Officer (press officer) is backed up by the DSHS Assistant Press Officer. The DSHS IC must approve the release of all incident-related information.

Liaison Officer
On larger incidents or events, representatives from other agencies (usually called agency representatives) may be assigned to the incident to coordinate their agency's involvement. The Liaison Officer is the point of contact for these agencies and organizations, and/or private entities. Agency and/or organizational representatives assigned to an incident must have the

authority to speak for their parent agencies and/or organizations on all matters, following appropriate consultations with their agency leadership.

Safety Officer

The Safety Officer monitors safety conditions within incident operations, develops measures for assuring the safety of all assigned personnel, and advises the DSHS IC on all matters relating to operational safety, including the health and safety of the DSHS response personnel. The ultimate responsibility for the safe conduct of incident management operations rests with the DSHS IC and supervisors at all levels of incident management. The Safety Officer is, in turn, responsible to the DSHS IC for the set of systems and procedures necessary to ensure ongoing assessment of hazardous environments and implementation of measures to promote the general safety of incident operations. The Safety Officer has emergency authority to stop and/or prevent unsafe acts during incident operations and may be a member of multiagency safety efforts. The Safety Officer, Operations Section Chief, and Planning Section Chief coordinate closely regarding operational safety and emergency responder health and safety issues. The Safety Officer must also ensure the coordination of safety management functions and issues across jurisdictions, across functional agencies, and with private sector and nongovernmental organizations. It is important to note that the agencies, organizations, or jurisdictions that contribute to joint safety management efforts do not lose their individual identities or responsibility for their own programs, policies, and personnel. Rather, each entity contributes to the overall effort to protect all responder personnel involved in incident operations.

Operations/Logistics Section Chief

In order to better address agency needs, the DSHS has combined the operations and logistics sections. There is only one Operations/Logistics Section Chief for each operational period and should have direct involvement in the preparation of the IAP for the corresponding period of responsibility. The Operations/Logistics Section Chief is responsible to the DSHS IC for the development and management of all incident-related operational activities. The Operations/Logistics Section Chief will establish tactical objectives for each operational period, with other section chiefs and unit leaders establishing their own supporting objectives.

Logistics is responsible for all service and support requirements of an incident, including obtaining and maintaining essential personnel, facilities, equipment and supplies. This includes coordination of the allocation of the DSHS resources such as personnel, facilities, transportation, supplies, equipment maintenance and fuel, food services, communications and information technology support. Functional units can be established within the logistics section and may include communications units, a medical unit, supply unit, facilities unit and others as indicated to facilitate span of control. This section is responsible for coordinating service and support for incident personnel.

In addition, the Medical and the Legal Advisors will perform their duties from within the Operations Section. An Operations/Logistics Section Chief should be designated for each operational period.

Planning Section Chief
The Planning Section Chief is responsible for gathering, evaluating and disseminating information about the incident, developing IAPs for each operational period (generally a 24 hour and/or weekly period), conducting long-range planning and developing plans for demobilization. The IAP includes the overall incident objectives and strategies established by the DSHS IC group. The IAP must adequately address the mission and policy needs of the DSHS, as well as interaction between jurisdictions, functional agencies, and private organizations. The IAP also addresses tactical objectives and support activities required for the operational period, The IAP also contains provisions for continuous incorporation of "lessons learned" as incident management activities progress and maintaining incident documentation.

Finance Section Chief
The Finance Section Chief (FSC) is responsible for finance, procurement, contracting, cost estimates, cost and time monitoring and analysis and staff and volunteer compensation and claims. In addition to monitoring sources of funding, the FSC will track and report to the DSHS IC the financial "burn rate" as the incident progresses. This allows the DSHS IC to forecast the need for additional funds before operations are affected negatively. This is particularly important when operational assets are under contract from the private sector. Units in this section may include, Procurement, Compensation/Claims and a Cost unit.

Administration Section Chief
The Administration Section Chief (ASC) is responsible for staff scheduling, time monitoring and other administrative support services. Units in this section may include Time and administrative support.

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Appendix D:
Stakeholders Providing Input into Plan

Agency	Name
Abilene-Taylor County Public Health District	Kay Durilla, BSN, RN - Nursing Program Manager
American Civil Liberties Union of Texas	Lisa Graybill, JD - Legal Director
American Red Cross	Wayne Brennessel, MSW - Executive Director
Asian American Cultural Center	Amy Wong Mok, MEd - President & CEO
Baptist St. Anthony's Health System	Charlotte Wheeler, RN, BSN - Baptist St. Anthony's
Baylor University College of Medicine	Jeff Starke, MD – Professor and Vice Chair of Medicine
Baylor University Medical Center of Dallas Epidemiology	Allen Peden, RN, CEN - Infection Control Practitioner
Center for Public Policy Priorities	Anne Dunkleberg, MPA - Assistant Director
Central Texas Veterans Health Care System	Elicia Berry, MSN, RN, CIC, CPQH – Assistant Chief Infection Control
CHRISTUS Santa Rosa Health Care	Nancy Mendicino, MSN, RN, CIC - Infection Control Manager/Officer
City of Laredo Health Department	Blanca Gonzalez, BSN, RN - Immunization Clinic Supervisor
City of Lubbock Health Department	Tigi Ward BSN, MS - Public Health Coordinator - Surveillance
Collin County Health Care Services	Janet Glowicz, RN - Epidemiologist
Consumers Union - Southwest Regional Office	Reggie James - Director
Cook Children’s Medical Center	Don Murphey, MD - Director of Occupational Health, Pediatric Infectious Diseases
DADS - Tx Dept of Aging and Disability Services	Leslie Cortes, MD, Director Medical Quality Assurance, Quality Assurance/Quality Improvement
DARS - Tx Dept. of Assistive and Rehabilitative Services	Keisha Rowe Nunn, MHA Consumer and External Affairs Specialist
Del Sol Medical Center	Pat Foret, RN, CPHQ - Director of Infection Control & Employee Health
DFPS -Tx Dept of Family & Protective Services- Child Protective Services & Adult Protective Services	James Yocum, MS – Innovation Analyst
DFPS -Tx Dept of Family & Protective Services- Child Protective Services & Adult Protective Services	Maria Cervania, MPH(c) – Cross Program Improvement Analyst
DSHS - Tx Dept of State Health Services- Community Preparedness	Barry Sharp, MS, CHES – Exercise Coordinator
DSHS - Tx Dept of State Health Services- Community Preparedness	Evelyn Shewmaker - Program Resource Coordinator

DSHS - Tx Dept of State Health Services- Community Preparedness	Martha Gonzalez, BA - Preparedness Plans Coordinator
DSHS - Tx Dept of State Health Services- Division for Mental Health & Substance Abuse	John Keppler, MD
DSHS - Tx Dept of State Health Services- Health Service Region 1	Barry Wilson, BS - Deputy Regional Dir.
DSHS - Tx Dept of State Health Services- Health Service Region 2/3	Shelley Stonecipher, DVM, MPH - CDC/Career Epidemiology Field Officer, LCDR/ US Public Health Service
DSHS - Tx Dept of State Health Services- Health Service Region 9/10	Charles Gaiser, DVM, MPH, ACVPM - Deputy Regional Director/Zoonosis Control Veterinarian
DSHS - Tx Dept of State Health Services- Health Service Region 11	Brian Smith, M.D., M.P.H - Regional Director
DSHS - Tx Dept of State Health Services- Infectious Disease Control Unit	Marilyn Felkner, PhD
DSHS - Tx Dept of State Health Services- Infectious Disease Control Unit	LCDR Richard Taylor, PhD USPHS - Epidemic Intelligence Service Officer
DSHS - Tx Dept of State Health Services- Office for Elimination of Health Disparities	Kimberly McCoy-Daniels, MPH – Director
DSHS - Tx Dept of State Health Services- Office for Elimination of Health Disparities	Larry Cuellar, BS – Program Specialist
DSHS - Tx Dept of State Health Services- Office of Border Health	R.J. Dutton, PhD - Director
DSHS - Tx Dept of State Health Services- Radiation Safety Licensing Branch	Cathy McGuire – Environmental Specialist and Technical Writer
DSHS - Tx Dept of State Health Services- Regional and Local Services	Debra Edwards, MSN
DSHS - Tx Dept of State Health Services- Youth Focused Group	Anita Wheeler, BSN, RN, CPN – School Health Coordinator/School Nurse Consultant
Geriatric Consultants of Central Texas, PA	David A. Smith, M.D., FAAFP, CMD - American Medical Directors Association Current President
Governor's Committee on People with Disabilities	Angela English, MS, LPC, LMFT, CPHQ - Accessibility & Disability Rights Coordinator
Governor's Committee on People with Disabilities	Pat Pound, BA - Executive Director
Grass Roots Neighborhood member, Waco	Lisa Ware
Harris County Public Health & Environmental Services	Elizabeth Love, MPH - Chief, Office of Policy and Planning
HHSC - Tx Health and Human Services Commission Texas Information & Referral Network 211 Texas Integrated Help Line	Debra Glover, MS - Development Specialist
Hidalgo County Health Department	Lydia Serna, RN - Director of Nursing
Hill Country Memorial Hospital	Robin Duderstadt, RN, BSN, CIC - Infection Control Practitioner

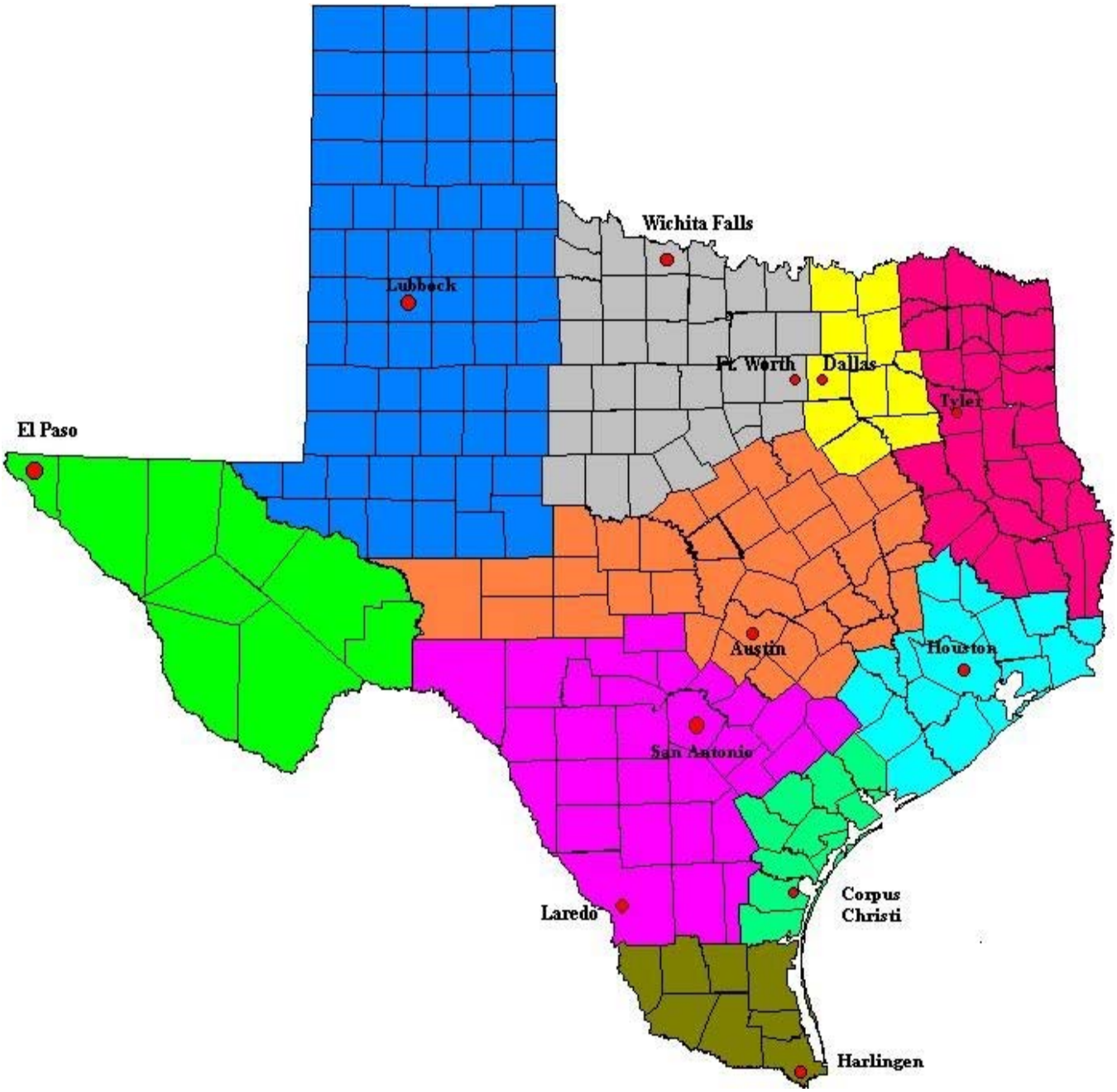
Houston Council on Alcohol and Drug Abuse	Jennifer Helley, MHA, MBA - Director Women's and Children's Services
Influenza Research Center - Baylor College of Medicine	W. Paul Glezen, MD – Study Chair; Professor of Molecular Virology and Microbiology, and Pediatrics, Baylor College of Medicine
JPS Health Network	Adonna Lowe, R.N., M.A., CHE - Vice President Patient Care/CNO
Llano Memorial Healthcare System	Linda Meredith, RN, CS, NP-C - Chief Compliance Officer
Northwest Texas Healthcare System	Gwen Campbell, RNC, BSN, CIC - Epidemiology Coordinator
Permian Regional Medical Center	Brenda Foster, RN - Director of Infection
Providence Memorial Hospital	Toni Moreland, MSN, RN - Infection Control
San Antonio Metropolitan Health District	Edmund Baca, Jr. - Acting Executive Assistant
Sanofi-Pasteur	Mr. Sandy Kaufman
Scott and White Memorial Hospital	Greg Bond, MSN, RN, CIC - Infection Control Manager
Seton Healthcare Network - Brackenridge Hospital	Lynda Watkins RN, BSN, CIC - Infection Control Practitioner
Seton Highland Lakes Medical Center	Janet Keyser, RN, ICL - Infection Control Liaison & Director of Diagnostics and Therapeutics
Sheppard Air Force Base Clinic	Elaine Marie Dekker, Maj, USAF, NC - Course Supervisor, Infection Control
St. Luke's Episcopal Hospital	Margaret F. Price, PhD, CIC - Infection Control Co-coordinator
Tarrant County Public Health	Elvin Adams, MD, MPH, FACPM - Health Authority/Medical Director
Texas A&M – Poultry Science Department Egg Production Waste Management	John B. Carey, PhD - Professor and Assoc. Head for Extension Services
Texas A&M School of Rural Public Health Center for Rural PH Preparedness	Barbara Quiram, PhD - Director of the Office of Special Programs; Principal Investigator, USA Center for Rural Public Health Preparedness
Texas A&M University System Health Science Center College of Medicine - Department of Medical Microbiology & Immunology	John M Quarles, PhD – Professor Microbiology and Immunology
Texas A&M University System Health Science Center College of Medicine - Department of Medical Microbiology and Immunology Formerly with CDC Influenza Program	Nancy Arden, M.N. - Epidemiologist and Program Coordinator
Texas Academy of Family Physicians	Andrew Eisenberg, MD, MHA - Chair TMA Council on Public Health
Texas American Indian Information and Resource Network	Chebon Tiger, EMT-LP
Texas Association of Health Plans	Barry Lachman, MD - Medical Director

Texas Association of Local Health Officials	Lee Lane - Executive Director
Texas Children's Hospital	Lori Upton, BSN, RN - Assistant Director of Emergency Services, Co-Chair Disaster Mitigation Committee
Texas College of Emergency Room Physicians	Brian Zachariah, M.D, MBA, FACEP - Medical Director, Division of Emergency Medicine
Texas Council of Developmental Disabilities	Beth Stalvey, PhD, MPH - Public Policy Director
Texas Health Care Association	Dorothy Crawford - Director of Policy & Regulatory Analysis
Texas Hospital Association	Ernie Schmid, MSHP, FACHE - Senior Health Care Policy Analyst
Texas Hospital Association	Jennifer Banda, JD – Director of Government Affairs
Texas Medical Association	Chip Riggins, MD
Texas Medical Association	Gayle Love – Director, Public Health Department
Texas Medical Association	Nancy B. Bjerke, BSN, RN, MPH, CIC – Co-chair, EHDG Infectious Disease Committee
Texas Municipal League	Bennett Sandlin, JD - General Counsel
Texas Pediatric Society	Martin Myers, MD - Professor of Pediatrics, University of Texas Medical Branch
Texas Poultry Federation	James Grimm - Executive Vice President
Texas Society of Infection Control Practitioners	Michelle Peninger, BSMT, CIC - President
Texas State Board of Pharmacy	Allison Benz, RPh., M.S. - Director of Professional Services
Texas Veterinary Medical Diagnostic Laboratory	Gayne Fearneyhough, DVM - Head, Diagnostic Services and Informatics
The Methodist Hospital	Kathryn M. Hawkins, M.S., C.I.C. – Director, Infection Control & Environmental Safety
Trinity Mother Francis Health System	Sylvia Radcliffe, RN, CIC - Director Infection Control
United States Dept. of Agriculture Animal and Plant Health Inspection Service	Joe Garrett, DVM, MPH - Area Emergency Coordinator
University Heath System	Jan Patterson, MD
University of Texas Health Science Center at Houston - School of Public Health Epidemiology and Infectious Diseases	Herbert L. DuPont, MD - Professor, Director of the Center for Infectious Diseases
UT Harris County Psychiatric Center	Susan Parnell, MSN, MPH, RN, COHN-S, CIC - Infection Control Officer
Uvalde Memorial Hospital	Jacqueline Gilliett, BSN, RN - Infection Control & Employee Health Coordinator

Appendix D:
Stakeholders Providing Input into Plan

VA North Texas Health Care System	Beverly Gray, MS, CIC - Infection Control Officer
Valley Baptist Medical Center-Harlingen	Alyson G. Hight, BSN, RN, CIC - Infection Control Nurse
Waco-McLennan County Public Health District	Kelly Craine, BA - Community Relations Coordinator
Wichita Falls- Wichita County Public Health District	Lou Franklin, BSN, RN - Assistant Director of Health
William Beaumont Army Medical Center	Lynn B. McNicol, BSN, MPH, CIC - Infection Control & Prevention

Appendix E:
Laboratory Response Network



Appendix F:
Personal Protective Strategies

It is not possible to predict accurately when influenza pandemics will occur or how severe they will be. We can only look at patterns of evidence and make educated predictions much like determining the time and location of hurricane landfall and strength. Sometimes meteorologists are right, sometimes wrong, and sometimes they are both. They may accurately predict landfall but inaccurately predict strength. Similar to hurricanes, the current outbreak of avian influenza (Bird Flu) in Asia has experts concerned that a pandemic is developing that may be severe. This concern is based on patterns of infection (called epidemiology) and severity of disease transmitted from birds to humans. We can make an educated best guess that is altered as evidence and situations change. History will demonstrate if predictions are accurate.

Just as with hurricanes, federal, state, and local governments need response plans. This document is Texas' plan. Just as with hurricanes, individuals and families must prepare and take steps in advance to weather the storm; in this case the storm may be a pandemic of H5N1 bird flu. Just as with hurricanes, your family's outcome can range from being safe and unharmed due in large part to good preparations that prevent damage, to being killed in the flooding or debris. While personal decisions and preparations cannot guarantee a good outcome, poor decisions and lack of preparation can result in a poor outcome.

The social and economic scenario is similar to what we see with hurricanes. Local, state, and federal governments will work together to maintain essential health care and community services if an outbreak occurs. However, the length of this disaster is longer than other emergencies or disasters; a pandemic influenza could last for many weeks, if not months and could come in waves separated by periods of normalcy. This will greatly affect availability of resources in communities. In addition to large numbers of people needing health care quickly overwhelming health care resources, basic services such as law enforcement, fire, emergency response, communications, transportation, and utilities could be disrupted during a pandemic. As food industry workers become ill, food processing, delivery, and stocking the shelves of markets will be impacted.

Complicating matters further, vaccine and antivirals are in short supply. There is currently no vaccine that will completely protect people against the H5N1 "bird flu" virus that may eventually cause a pandemic because that exact virus does not exist yet. The vaccine undergoing human testing was developed from the virus before it mutates to become easily transmitted from human to human. Using current vaccine development methods, once the new virus becomes easily transmitted between humans, it will take about 6 months to develop and begin manufacture of vaccine. Meanwhile, the outbreak in one area spreads and within weeks to a few months it has spread around the world. Research into new methods of vaccine development to more rapidly and efficiently develop vaccine is under way.

Two antiviral drugs, oseltamivir and zanamivir can be used to treat H5N1 "bird flu." These drugs do not cure flu but will reduce the length and severity of illness and may prevent complications such as pneumonia. Oseltamivir may also be given before illness to prevent getting the flu. Currently only one company holds the patent and rights to manufacture oseltamivir. Efforts are

being made to license more drug companies to manufacture oseltamivir, but it will take time to increase production. While in short supply, antivirals will be reserved for people who are sick with influenza and people who work in essential occupations, such as health care.

There are strategies that have proven successful in the past in limiting transmission and reducing illness and death that are behavioral and low-tech. The first set of strategies is controlled by you. Through the implementation of good personal protective strategies you may be able to protect yourself and your family from exposure and maximize your chances of survival. The second set of strategies can be implemented by government. These are public health strategies to slow the spread of influenza and include temporarily closing schools, sports arenas, theaters, restaurants, and other public gathering places, as well as isolation and quarantine.

Following are practical actions that families can take to best protect themselves from disease, in the absence of vaccine and antivirals, and from the potential of social disruption caused by workers becoming ill. Some suggestions are good health practices in general, others are influenza specific, and still others are general preparedness suggestions useful in preparation for any emergency. Your activities are divided by pandemic period and phases just as the rest of this Pandemic Influenza Preparedness. This table is referred to in the Plan as Non-pharmaceutical Interventions in the Prevention and Containment sections.

Pandemic Period / Phase	**Activity**
Interpandemic Period / 1 & 2 Phase 1 – No new virus subtypes identified Phase 2 - "Novel virus" identified in birds or animals. Transmission to humans has not occurred.	• Obtain annual seasonal flu vaccine or nasal spray. DSHS recommendations are found at www.dshs.state.tx.us/news/releases/20051007.shtm o **Flu vaccines**: age 65 or greater; residents of long term care facilities; ages 2 through 64 with chronic illness; over age 65 without chronic illness; children 6-23 months; pregnant women; healthcare workers providing direct patient care; household contacts or out-of-home caregivers of children less than 6 months of age; and others (particularly those who are not eligible to receive FluMist®). o **Nasal spray (FluMist®):** healthy individuals who are not pregnant ages 5-49; healthcare workers and contacts of children less than 6 months of age may choose nasal spray if age and health criteria are met. There are no priority groups for FluMist®. • Obtain pneumococcal vaccine if recommended (www.cdc.gov/nip/publications/VIS/vis-ppv.pdf). o The Pneumococcal Conjugate vaccine is a required childhood immunization for 2 through 23-month-old children. Be sure your children are up-to-date. Pneumococcal Conjugate vaccine may prevent some influenza complications. o The Pneumococcal Polysaccharide vaccine for persons older than 2 years may help prevent some complications of influenza. If you are in any of the following group, you should get the vaccine: ▪ 65 years of age or older

Pandemic Period / Phase	Activity
	▪ 2 years of age or older with a long-term health problem such as: heart disease, lung disease, sickle cell disease, diabetes, alcoholism, cirrhosis, leaks of cerebrospinal fluid ▪ 2 years of age or older who has a disease or condition that lowers the body's resistance to infection, such as: lymphoma, leukemia, Hodgkin's disease, kidney failure, nephrotic syndrome, damaged or no spleen, organ transplant, multiple myeloma, HIV infection or AIDS. ▪ A second dose is recommended for: • Persons over 65 who received first dose before age 65 and 5 or more years have passed since that does. • Children and adults who have: a damaged or no spleen, sickle-cell disease, HIV infection or AIDS, cancer, leukemia, lymphoma, multiple myeloma, - have kidney failure, nephrotic syndrome, an organ or bone marrow transplant. • Children and adults who are taking medication that lowers immunity such as chemotherapy or long-term steroids. • Children 10 years old and younger may get the second dose 3 years after the first dose. Those older than 10 should get it 5 years after the first dose. • When ill, stay home from work, school, or places where there are many people such as grocery stores and movie theaters. • Practice good personal behaviors to reduce disease spread o Hand hygiene: washing and use of hand sanitizer. o Cover nose and mouth with tissue when coughing or sneezing. o Routinely wipe down and disinfect work areas (i.e. keyboards, telephones, desks, etc.).
Pandemic Alert / Phases 3 & 4 Phase 3 – Transmission to humans from birds has occurred but no human-to-human spread. Phase 4 – small clusters of human-to-human spread.	• Continue practices of Interpandemic Period • Seek information provided by local and national media avenues and the Texas Department of State Health Services (DSHS) website www.dshs.state.tx.us/. • Reconsider traveling to parts of the world experiencing a novel viral disease. • If you do not have a primary care provider who is familiar with your health and medical status, find one. It will be nearly impossible during a pandemic to find one. • Stop or reduce habits (i.e. tobacco and alcohol) that are detrimental to your health, and could limit your ability to fight off disease. • If you have recently traveled to another country or state that has been identified as having the novel virus, or live in an area where the novel virus has been identified and develop any symptoms, seek immediate medical attention.

Pandemic Period / Phase	Activity
	• A pandemic is likely to affect your workplace. See if your employer has a business continuity plan in place. Investigate the possibility of working at home or telecommuting. • A major pandemic may require major measures be taken to limit or minimize exposure. Plan ahead and be prepared for the possibility of limited travel to affected areas, limiting of large public gatherings, school closures, limited availability of public transportation, and potential quarantines.
Pandemic Alert / Phase 5 Phase 5 – larger but still localized clusters of human spread suggesting that virus is better adapting to humans but may not be fully transmissible.	• Continue practices of Interpandemic and Pandemic Alert Period Phases 3 & 4 • Consult your primary care provider if you develop flu-like symptoms. • Get plenty of rest and exercise. • Maintain a healthy well balanced diet with plenty of liquids. • Ensure that all recommended immunizations are up-to-date – specifically seasonal influenza and Pneumococcal (if recommended) immunizations. • Minimize exposure by going less often and at less busy times to places where there are many people such as grocery stores and movie theaters. Shop for food less often, buy more per trip, and not go during rush hours when the aisles are crowded. Try early shows at the theater that are both less crowded and cheaper. • If you are an unemployed or retired medical professional, consider volunteering to assist at clinics or other emergency response action sites during the pandemic. Contact your local health department. The following preparations might be disturbing to think about, but they are good practices in preparation for any emergency: • Ensure you have sources of light not dependent on electricity, e.g. candles, kerosene lamps, flashlights with plenty of batteries. • Purchase a battery-powered radio with AM, FM, and short wave capability and plenty of batteries. • Consider how you will heat/cook food in the absence of power. Camping stoves and barbeque grills fueled by propane are options. Consider safety precautions to prevent fires, burns, and carbon monoxide poisoning. • Consider how the house can be warmed in the absence of power and make preparations. Wood-burning fire places and kerosene heaters are examples. Consider safety precautions to prevent fires, burns, and carbon monoxide poisoning. • Begin to acquire a three-month supply of non-perishable food (canned or dried meats, fish, beans, peanut butter, vegetables, fruit, cereal, powdered or canned milk, and crackers), baby food and supplies, drinking water, household supplies, personal supplies, and pet food you would need in case a quarantine or prolonged shortage occurs. If food shipments are

Pandemic Period / Phase	Activity
	interrupted, grocery shelves will empty. Remember, any amount is better than none. One to two weeks will get you through a quarantine. • Speak with your pharmacist about obtaining an extra month or two of medications routinely taken by family members. Ensure you have a supply of medications to treat influenza symptoms (see Appendix H) and pediatric electrolyte replacement drinks for infants and children. • Speak with a financial advisor about risks from an economic depression. Consider having cash available to purchase needed goods during a pandemic. It is likely credit cards may not work. • Have wills and advanced directives for all adults in the family. • Have life insurance policies available and discuss among family members.
Pandemic / Phase 6 Increased and sustained transmission to humans. Indications of spread across countries.	• Continue practices of Interpandemic and Pandemic Alert Period Phases 3, 4, and 5 • Determine if you reside in, work near, or travel to an area that has a disease outbreak. If so, observe optimal personal health activities to aid in enhancing resistance to disease. Avoid places where people gather to reduce the possibility of exposure. • Keep informed about the status of disease outbreaks through from local and national media avenues and the Texas Department of State Health Services (DSHS) website www.dshs.state.tx.us/ and Hotline. For English speakers, the number is 1-888-246-2675; for Spanish speakers, the number is 1-888-246-2857. TTY callers use 1-866-874-2646. During pandemic, the service is available 24 hours a day, seven days a week. • Determine if you are a member of a CDC priority group for vaccination or antivirals (Appendix I) • Be alert for locations of vaccination clinics (when vaccine available) and alternative medical treatment areas. • Limit travel and crowded areas. • Be aware of potential closures of schools and businesses. • If you are a healthy individual or retired medical professional, consider volunteering to assist at clinics or other emergency response action sites. • Take illness preventative measures: o Cover your nose and mouth with a tissue when you cough or sneeze o Throw the tissue away after you use it; o Wash your hands often with soap and water, especially after you cough or sneeze (if you are not near water, use an alcohol-based hand cleaner) o Stay away, as much as you can, from people who are sick; o Stay home from work or school if you are sick; o Try not to touch your eyes, nose, or mouth – germs often spread

Pandemic Period / Phase	Activity
	this way; o Seek medical attention if you develop symptoms of a cold.
Subsided Period The period between pandemic waves. At least 2 waves are expected.	• Keep informed about the status of disease outbreaks through from local and national media avenues and the Texas Department of State Health Services (DSHS) website www.dshs.state.tx.us/. • Continue illness preventive measures of previous phases.. • Consult your primary care provider if you develop flu-like symptoms. • Get plenty of rest and exercise. • Maintain a healthy well balanced diet with plenty of liquids. • Restock supplies and food. • If flu vaccine previously unavailable, be alert for locations of vaccination clinics. • If you have recovered from novel virus influenza or are an unemployed or retired medical professional, consider volunteering to assist at clinics or other emergency response action sites during the next wave.
Postpandemic Period End of pandemic and return to Interpandemic Period	• Follow basic healthy living discussions from all the Pandemic Phases ensuring that you remain up-to-date with all recommended immunizations. • If you are a healthy individual or unemployed or retired medical professional, consider volunteering to assist at clinics or other emergency response action sites in the future.

Preparing poultry (Mayo Clinic, 2005)

No human cases of bird flu have been linked to eating poultry, although in at least one instance, the H5N1 virus was found in a package of frozen duck. Because heat destroys avian viruses, WHO officials don't consider cooked poultry a health threat. Even so, it's best to take precautions when handling and preparing poultry, which is often contaminated with salmonella or other harmful bacteria.

- **Wash well.** Carefully wash cutting boards, utensils and all surfaces that have come into contact with raw poultry in hot, soapy water. Wash your hands thoroughly before and after handling poultry and dry them with a disposable towel.
- **Cook thoroughly.** Cook chicken until the juices run clear and it reaches an internal temperature of 180 F. Avoid eating raw or undercooked eggs or any products containing them, including mayonnaise, hollandaise sauce and homemade ice cream.

Helpful websites

Topic	Location
Recommendations for annual seasonal flu vaccination	www.cdc.gov/mmwr/preview/mmwrhtml/mm5434a4.htm;

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Topic	Location
	www.cdc.gov/mmwr/preview/mmwrhtml/mm5434a4.htm
Recommendations for pneumonia vaccine	www.cdc.gov/nip/publications/VIS/vis-ppv.pdf
How to stop the spread of germs at home, school, & work	www.cdc.gov/flu/protect/stopgerms.htm www.cdc.gov/flu/protect/preventing.htm
Good health habits	www.cdc.gov/flu/protect/stopgerms.htm - GoodHealthHabits
Mayo Clinic	www.mayoclinic.com/invoke.cfm?id=DS00566

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Appendix G:
Population Level Public Health Interventions[a]

Measures	Lead Agency[b]	Pandemic Alert Period[c]		Pandemic Period[c]	Comments
		Phase 3	Phases 4 & 5	Phase 6	
Public Health Information, communication					
Information developed for public on risks and risk avoidance (tailored to target populations)	S	Y	Y	Y	Risks may vary according to phase and require different messages Messages consistent through state to avoid mixed messages & public confusion
Information developed for professionals	S	Y	Y	Y	Risks may vary according to phase and require different messages Messages consistent through state to avoid mixed messages & public confusion
Information developed on universal hygiene methods (handwashing, etc.)	S	Y	Y	Y	Messages consistent through state to avoid mixed messages & public confusion
Preparatory information for next phase developed	S	Y	Y	Y	Messages consistent through state to avoid mixed messages & public confusion
Dissemination of information developed by state	S/L	Y	Y	Y	
Measures to reduce risk of infection transmission					
Confinement: • Confine cases as appropriate to local situation; provide medical care & social services	L	Y	Y	Y	Need to plan for large numbers of severe cases.
Face masks[d] • Symptomatic people	L	Y	Y	Y	Logistics need to be considered
• Exposed people: conduct risk assessment considering evidence of human-to-human transmission; closeness of contact frequency of exposure	L	C	C	C	Consider recommending masks based on risk assessment
• Well people seeking care in health care setting	L	N	C	Y	Need more data
Measures to reduce risk that contacts transmit infection					
Tracing and follow-up of contacts	L	Y	Y	N	Not feasible once pandemic starts
Voluntary quarantine (such as home confinement) of healthy contacts with health monitoring, medical, & social services	L	N	Y	Y	Voluntary quarantine should also apply to contacts of known cases undergoing antiviral prophylaxis as efficacy not known

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Measures	Lead Agency[b]	Pandemic Alert Period[c]		Pandemic Period[c]	Comments
		Phase 3	Phases 4 & 5	Phase 6	
Self-health monitoring but no restrictions on movement	L	Y	Y	N	Not relevant for contacts in quarantine
Advise contacts to reduce social interaction	L	N	NR	N	Not relevant for contacts in quarantine; see also Measures to Increase Social Distance
Advise contacts to defer travel to unaffected areas	L	N	NR	Y	Not relevant for contacts in quarantine. Precautionary principle when unclear whether human-to-human transmission is occurring
Measures to increase social distance					
Voluntary home confinement of symptomatic people	L	Y	Y	Y	Measures needed to reduce risk of transmission to other household members.
Closure of schools (including preschool, higher education) in conjunction with other measures to reduce mixing of children	SL	N	C	C	Depends on epidemiological context – extent to which these settings contribute to transmission Governor may declare a public health disaster giving Commissioner additional authority
Population-wide measures to reduce mixing of adults (furlough non-essential workers; close workplaces; discourage mass gatherings)	SL	N	C	C	Depends on epidemiological context – extent to which unlinked community transmission and workplace transmission occur Governor may declare a public health disaster giving Commissioner additional authority
Control of entry of visitors and employees into LTC facilities including prisons (e.g., denial of entry if fever or respiratory symptoms)	SL	N	N	Y	Enforcement would be by the responsible administrators of these facilities.
Masks in public places	L	N	N	N	Not known to be effective. Not encouraged
Involuntary confinement	SL	N	C	C	Difficult to enforce Governor may declare a public health disaster giving Commissioner additional authority Depends on situation, e.g. non-cooperation with voluntary quarantine

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Measures	Lead Agency[b]	Pandemic Alert Period[c]		Pandemic Period[c]	Comments
		Phase 3	Phases 4 & 5	Phase 6	
Measures to decrease interval between symptom onset and patient isolation					
Public campaign to encourage self-diagnosis	L	Y	Y	Y	
Urge entire population in affected area to check for fever at least once daily	L	N	N	N	
Set up fever telephone hotlines with ambulance response	L	N	C	N	
Set up fever clinics with appropriate infection control	L	N	C	N	
Disinfection measures					
Handwashing	L	Y	Y	Y	
Household disinfection of potentially contaminated surfaces	L	Y	Y	Y	
Measures for people entering or exiting an infected area					
Advise to avoid contact with high risk environments	L	Y	Y	Y	
Recommend deferral of non-essential travel to affected areas	SL	N	Y	Y	Only if significant areas of the state remain unaffected
Restrict travel to and from affected areas	SL	N	N[e]	N	Enforcement of travel restrictions considered impractical but likely to occur voluntarily when risk is considered significant by the public
Cordon sanitaire (buffer zone)	SL	N	N	N	Enforcement considered impractical
Disinfection of clothing, shoes, or other objects of people exiting affected area	L	N	N	N	Not recommended for public health purposes, but may be required by veterinary authorities to prevent spread of infection in animals

[a.] Adapted from *WHO Global Influenza Plan*. Geneva: World Health Organization, 2005.
[b.] S = State (state responsible for this); L = Local (local responsible for this); SL = State and Local (both share responsibility)
[c.] Y = yes (should be done at this phase); N = no (not necessary at this phase); C = should be considered; NR = not relevant
[d.] Quantity and type of mask depend on risk group: Cases = surgical masks; Health care personnel = surgical masks or equivalent; Others = depends on risk.
[e.] Could be considered as an emergency measure to avert or delay a pandemic.

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Appendix H:
Taking Care of an Influenza Patient at Home

More than 440 acute and specialty hospitals exist in Texas. Acute care hospitals, according to most recent data available, provide 2.6 beds per 1,000 people (Kaiser Family, 2005) which means that if all beds in all hospitals were dedicated to influenza patients during a Texas-wide outbreak, 59,800 patients could receive hospital-based care at any given time. However, experts estimate that 5 to 10 million Texans will become infected and 200,000 to 400,000 will need hospitalization. It is obvious that there are not enough beds for the severely ill, much less for those without complications. Local communities are considering alternatives to provide care for those who need professional care. Be aware of current options for diagnosis, treatment, and care in your community. Be sure to follow the news in newspapers, on television, or on your battery-powered radio (Appendix F – Pandemic Alert Phase 5).

If you or a family member develops symptoms of influenza, call your doctor immediately if possible. Your doctor's office staff may ask you questions over the phone to help them determine the best thing for you to do. Early in the outbreak, you might be asked to visit the office. Doctors have rapid tests to identify the flu virus, but the tests can't distinguish between avian flu and other influenza A viruses. For that reason, specimens from anyone with a suspected case of bird flu would be sent to a DSHS laboratory for identification. Later in the outbreak your doctor may recommend you go to another location.

Hospital emergency rooms may become inundated with sick patients early in the pandemic. Alternate options may be available such as "fever clinics" where persons with influenza-like illness can be examined and treated without exposing other patients being seen for other reasons, "influenza hospitals" specializing in influenza care, or "alternate treatment centers" set up especially for patients not sick enough to require hospital care. However, most of us will need to care for ourselves and our families at home.

If you or a family member have influenza-like symptoms and are visiting your doctor, clinic, free-standing emergency center, hospital emergency room or any other health care provider:

- Immediately upon arrival, tell the reception staff that you think you have the flu.
- You may be asked to wear a mask and/or sit in a separate area to protect others from getting sick.

1. **Supplies needed for home care**
   - A thermometer appropriate for the age of the child and an adult thermometer. Instructions for taking temperatures can be found at: www.lpch.org/HealthLibrary/ParentCareTopics/FeverInfectionsCrying/FeverHowtoTaketheTemperature.html
   - Plenty of fluids: water, fruit juice, infant electrolyte replacement drink
   - Simple foods that family members like and will eat when sick: broth, chicken noodle soup, macaroni and cheese, jello, etc.

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2. Signs and symptoms of influenza

Symptoms	Cold	Flu
Fever	rare	characteristic, high (102-104 F); lasts 3-4 days
headache	rare	Prominent
general aches, pains	slight	usual; often severe
fatigue, weakness	quite mild	Can last up to 2-3 weeks
extreme exhaustion	never	early and prominent
stuffy nose	common	Sometimes
sneezing	usual	Sometimes
Sore throat	common	Sometimes
chest discomfort, cough	mild to moderate; hacking cough	common; can become severe; may result in pneumonia

(Source: National Institute of Allergy and Infectious Diseases)

3 Information to have before you call your doctor

- Reporting adult symptoms
  - Report specific symptoms (see above) – when they began and how severe.
    - Fever – **write down:** the number and when and how it was taken
  - Other symptoms not listed above
  - Difficulty breathing
  - Amount of food and fluid intake
  - Sleep pattern change
  - Signs and symptoms of potential complications (see 4 below)

- Reporting children's symptoms*
  Determining and reporting symptoms in children can be a challenge because infants and children can't analyze how they are feeling and tell you. Symptoms that are specific and physical are easy because they are observable or measurable. You need to look for changes in patterns from normal and report those.
  - **Fever: write down:** the number and when and how it was taken
  - **Mood:** Is the child crying more than usual? Does the child seem tired or listless? Does the child appear to be irritable or over stimulated?
  - S**leep:** Note the time and duration of regular sleep and naps for the last 12 hours or since the onset of illness.
  - **Eating:** List all food (solids and liquids) the child has consumed with amounts and times. Note if the child was unable to keep any of these foods down.
  - **Urination:** Changes in amount or frequency.

- **Medicines:** Keep track of any medicine your child is regularly taking or any you may have given as a result of this illness. Know the dosage and times given.

* Primary Source: About (2005)

4 **Prescribed medications**

- If available, doctors may prescribe an antiviral medication that may reduce the length and severity of disease and may also prevent complications such as pneumonia. It is important to remember that **antivirals must be started with 48 hours of first sign of symptoms** to have any affect on the illness.
- Antibiotics have no effect on viruses and **will not be prescribed for flu.** They may be prescribed for flu complications such as pneumonia.

5 **Adult care**

- Treatment for adults at home
  - Stay home and rest, especially while you have a fever.
  - Stop smoking and avoid secondhand smoke, which can make cold symptoms worse.
  - Drink plenty of fluids like water, hot tea with lemon, and fruit juices. Fluids help loosen mucus. Fluids are also important if you have a fever because fever can dry up your body's fluids, which can lead to dehydration.
  - Don't drink alcohol.
  - Gargle with warm salt water a few times a day to relieve a sore throat if you have one. Throat sprays or lozenges may also help relieve the pain.
  - Use saline (salt water) nose drops to help loosen mucus and moisten the tender skin in your nose if nasal congestion is a problem. You may also take over-the-counter medications. Breathe moist air from a hot shower or from a sink filled with hot water to help clear a stuffy nose.
  - If the skin around your nose and lips becomes sore from repeated rubbing with tissues, apply a bit of petroleum jelly to the area. Disposable tissues containing lotion also may help.
  - Elevating your head at night with an extra pillow. This may help you rest if coughing keeps you awake.
  - Take over-the-counter pain relievers for the aches and pains (see 8 below).
  - How about chicken soup or beef bouillon? Mother was right after all. Warm soup may soothe a sore throat, unstuff a clogged nose, hydrate a thirsty body, and soup when you are sick is good TLC which helps psychologically.
- Adult Complications

  Most people with bird flu have signs and symptoms of conventional influenza. Some also develop life-threatening complications such as viral pneumonia and acute respiratory distress syndrome, which causes the air sacs in your lungs to fill with fluid rather than with air, leading to severe breathing difficulties.
  - If you are at high risk from complications of the flu, you should consult your health-care provider if you develop flu-like symptoms. Those at high risk for complications include people 65 years or older, people with chronic medical conditions, pregnant women and children under 2 years of age. Your doctor may recommend use of an antiviral medication to help treat the flu.

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- There are some "emergency warning signs" that require urgent medical attention.**
  - Difficult or painful breathing
  - Shortness of breath at rest or when doing very little
  - Wheezing
  - Coughing up bloody sputum
  - Pain or pressure in the chest or abdomen
  - Fever for 3-4 days without improvement or improvement then sudden high fever and return of symptoms
  - Sudden dizziness
  - Extreme drowsiness or difficulty wakening
  - Confusion or disorientation
  - New inability to function, if an independent elder
  - Severe earache
  - Severe or persistent vomiting, if an elder

  ** Primary Source: Mayo Clinic (2005)

- Seek medical care immediately if you or an adult you are caring for is experiencing any of the signs above. Call your doctor first for instructions. If your doctor is unavailable, go to an emergency room.

6 **Adult caregivers of children under two years old**

- If you get flu-like symptoms including a fever, headache, tiredness, cough, sore throat, runny or stuffy nose, or body aches, and you have another adult available who is not ill, ask that person to care for the child.
- If you get flu-like symptoms, take the following precautions for the first 7 days of your illness (beginning the first day you notice symptoms):
  - Check with your health-care provider. If you have influenza, your doctor may prescribe antiviral medications for you if available.
  - Try to minimize contact with your child as much as possible. Cover your nose and mouth with a tissue when sneezing or coughing, and put your used tissue in a wastebasket.
  - Wash your hands or use an alcohol-based hand rub frequently and as soon as possible if you have sneezed or coughed on your hands.
  - Before engaging in any activity within 3 feet of your child (including feeding, changing, rocking, reading to your child), put on a surgical mask (available in most drugstores) and thoroughly wash and dry your hands. Do not remove your surgical mask until you are done and you have put your child down.
  - Observe your child closely for symptoms of respiratory illness. If your child develops a fever (100°F or higher under the arm, 101°F orally, or 102°F rectally), respiratory symptoms, or is less responsive than normal, contact your child's doctor.

7 **Child Care*****

While we are unsure of how any new virus influenza causing a pandemic will affect infants, we know that seasonal influenza illness is more severe in children under five years old. Age-related differences are evident in infants and toddlers. Infants usually develop higher

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temperatures, and unexplained fever may be the only sign. Central nervous system symptoms may appear in up to 20 per cent of infants/children and may be suggestive of meningitis. Nausea, vomiting, diarrhea and abdominal pain occur in 40-50 per cent, mainly those three years of age and under. Influenza is an important precursor of croup, pneumonia and bronchitis. Otitis media and non-purulent conjunctivitis are more frequent. Myositis (muscle inflammation) is a frequent complication, especially after infection with Influenza B (Alberta Government, 2005).

- Children who should visit their pediatrician if flu suspected
  - Age of infant less than 3 months
  - Has heart or lung disease or any chronic illness requiring regular medical care
  - Has disease or is on treatments causing immunosuppression.
  - Takes aspirin regularly for a medical condition.

- Children's complications
  Seek medical care immediately if your child is experiencing any of the signs below. Call your doctor first for instructions. If your doctor is unavailable, go to an emergency room.
  - Fast breathing, trouble breathing, or change in breathing patterns
  - Bluish skin color
  - Not drinking enough fluids
  - Not urinating enough
  - Not waking up or not interacting
  - Being so irritable that the child does not want to be held
  - Loss of interest in most things and listlessness
  - Flu-like symptoms improve but then return with fever and worse cough
  - Fever with a rash
  - "Just doesn't seem right" and you are concerned

- Emergency signs requiring a trip to the emergency room are when the child:
  - has severe trouble breathing (not caused by nasal congestion).
  - has blue lips or hands or sudden pallor, or has cold legs up to their knees.
  - has a full or sunken fontanel.
  - is limp or unable to move.
  - is excessively sleepy to the point of being difficult to arouse or unresponsive.
  - shows signs of pain: headache and/or stiff neck, especially if combined with fever and listlessness and their eyes are sensitive to light.
  - seems confused.
  - has a seizure.

***Primary source: Alberta Government (2005)

8. **Influenza treatment for children at home*****
   - Dress a child in lightweight clothing and keep room temperature at 20^0C.
   - Offer fluids/breast feed frequently while child is awake.
   - Settle the child or involve them in quiet activities while at home (~five days).
   - Elevate head of the bed; infants may be more comfortable in a car seat or baby swing.
   - Cool baths/alcohol rubs are NOT recommended.

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- Non-prescription medications may be used. NO ASPIRIN OR ASPIRIN-CONTAINING PRODUCTS.
- Use a humidifier (except with asthmatic children).
    - Clean daily to prevent bacteria and mold growth using hot water with one part bleach to 10 parts water. Scrub the inside with a cloth or bottle brush to get into tight corners. Rinse well with hot water.

***Primary source: Alberta Government (2005)

9. **Over-the-counter non-prescription medications for treating flu symptoms**

- **Medications advertised to "treat flu" only relieve flu symptoms**: Most contain a combination of medications including an antihistamine to stop a runny nose and sneezing; a decongestant; a cough suppressant; an expectorant to bring up mucus; a fever reducer; and a pain reliever such as acetaminophen, aspirin, or ibuprofen.
    - **Do not give medications containing aspirin to children and teenagers.**
    - If all symptoms are present this choice may be a good one and may save money
    - If all symptoms are **not** present it is not an appropriate choice.
    - No good scientific evidence exists that suggests nonprescription "flu remedies" comprised of a combination of medicines, are useful for children younger than 5 years of age.
- You may give medications to relieve the symptoms of the flu (**but never give aspirin to children or teenagers who have flu-like symptoms, particularly fever**). See "Treatment of Symptoms" below.
- **Treat each symptom separately:**

If you want to do this:	**Choose medicine with this description after name:**
Unclog a stuffy nose	Nasal decongestant
Quiet a cough	Cough suppressant
Loosen mucus so you can cough it up	Expectorant
Ease fever, headaches, minor aches and pains	Pain Reliever (Analgesic)

Adapted from: USDA What to Do for Colds and Flu www.fda.gov/opacom/lowlit/clds&flu.html

✓ **Reducing nasal stuffiness:****Decongestants shrink swollen tissues in the space behind the eardrum (middle ear). This may relieve pressure and pain. They can be taken by mouth or in nose drops or sprays. Oral decongestants, such as those containing pseudoephedrine, are probably more effective and provide longer relief than drops or sprays, but they cause more side effects. Sprays and drops provide rapid but temporary relief. Sprays and drops are less likely to interact with other medications, which can be a problem with oral decongestants.

- Look for a single-ingredient decongestant that contains pseudoephedrine or phenylephrine.
- Do not use medicated nasal sprays or drops more often than directed and not longer than 3 days. Continued use will cause your mucous membranes to swell more than before using the spray (rebound effect).

- Drink extra fluids when taking cold medications.
- If you are uncertain about which decongestant to use, ask your pharmacist or health professional for help.
    - Decongestants can cause problems for people with other health problems such as heart disease, high blood pressure, prostate problems, glaucoma, diabetes, or hyperthyroidism.
    - Decongestants also may interact with other medications such as some antidepressants and high blood pressure medications.
- If nasal drainage is thick, a mucus-thinning drug (mucolytic) such as guaifenesin may help keep it thin and draining.
- You also can try a homemade saline solution nasal spray that contains 0.25 teaspoon of salt in 1 cup of water. This will not cause the rebound symptoms that decongestant nasal sprays will

.

- **Infants and children**
    - Saline nose drops only for infants under 6 months.
    - Do not give cold medications or oral decongestants to babies or children unless instructed by your health professional. Nonprescription cold medications have not been proven effective for preschool children.
    - Oral decongestants can be used for older children

✓ **Cough suppression:******

- Use cough drops or plain, hard candy for adult and older children.
- Take a nonprescription cough medicine that contains dextromethorphan, which may help you get some sleep for adults. Some products contain a high percentage of alcohol.
- **Infants and children**
    - A cough suppressant with dextromethorphan may be given for a dry cough in children older than two years only if cough is interrupting sleep (not for asthmatics or moist cough).

✓ **Expectorant:******

- Taken orally, help loosen mucus and make coughs more productive.
- An expectorant can be purchased separately or in combination with a cough suppressant. Read labels carefully. Guiafenesin is a common expectorant.
- **Infants and children** (MedlinePlus, 2005)
    - Although there is no specific information comparing use of guaifenesin in children with use in other age groups, this medicine is not expected to cause different side effects or problems in children than it does in adults. However, check with your doctor before using this medicine.
    - It should not be given to children younger than 2 years of age unless you are directed to do so by your doctor.

✓ **Fever reducer and/or pain reliever:****** Remember, these medications may make you more comfortable, but they won't make your symptoms go away any faster and may have serious side effects.

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- Aspirin (Excedrin, Bufferin, and others) for **adults only. Never give aspirin to children or teenagers with flu symptoms.** Aspirin may cause stomach pain, bleeding and ulcers.
- Acetaminophen (Tylenol). If taken for a long period of time or in high doses, acetaminophen can be toxic to your liver.
- Ibuprofen (Advil, Motrin, others). Ibuprofen may cause stomach pain, bleeding and ulcers.
- Avoid antihistamines. They are not effective in treating flu symptoms and may thicken nasal drainage.
- **Infants and children**
    - **Do not give aspirin or other "salicilates" to children or teens with flu symptoms.** Salicilates may cause **Reyes Syndrome** and become severely ill or die. Ask the pharmacist or your doctor if you are unsure whether a product contains this.
    - Acetaminophen is the preferred fever medication for children and can be given at any age. However, be sure to get syrup formulated for children.
    - Ibuprofen is the alternate fever medication for children but **cannot** be given to infants **less than 4 months** of age. Be sure to get syrup formulated for children.

✓ **General medication recommendations:******

- Read labels to make sure you know what the medications contain. Some have a large percentage of alcohol, and others have aspirin or acetaminophen. Be careful about taking more than one medication at a time, because it is easy to double up on some ingredients. For example, many cough medicines also contain a pain reliever such as Tylenol (acetaminophen) to reduce aches and pains caused by coughing. If you don't know this, you could be giving a pain reliever as well.
- Use the dosing device that comes with the medicine to measure the dose. Don't take or give more than the recommended dosage or use the medication for longer than directed.
- Try "regular strength" before "extra strength."
- Check the expiration date and flush expired medication down the toilet.
- Keep all medications out of the reach of children.
- If you are taking herbs or other forms of **complementary medicines**, notify your doctor. Many have potential side effects or medication interactions.

****Primary Source: **WebMD** http://my.webmd.com/hw/cold_and_flu/hw122190.asp

8. **Recommendations for travelers****

If you're traveling to any region with bird flu outbreaks, consider these public health recommendations:

- **Avoid domesticated birds.** If possible, avoid rural areas, small farms and especially any close contact with domesticated fowl.
- **Avoid open-air markets.** These can be colorful or dreadful, depending on your tolerance level, but no matter how you see them, they're often breeding grounds for disease.
- **Wash your hands.** One of the simplest ways to prevent infections of all kinds, hand washing is also one of the best. When you're traveling, alcohol-based hand sanitizers, which don't require the use of water, are an excellent choice. They're actually more effective than hand washing in killing bacteria and viruses that cause disease. Commercially prepared hand sanitizers contain ingredients that help prevent skin

dryness. In fact, use of these products can result in less skin dryness and irritation than hand washing. Not all hand sanitizers are created equal, however. Some "waterless" hand sanitizers don't contain alcohol. Use only the alcohol-based products.

- **Watch your kids.** Keep a careful eye on young children, who are likely to put their hands in their mouths and who may not wash thoroughly.
- **Steer clear of raw eggs.** Because eggshells are often contaminated with bird droppings, avoid mayonnaise, hollandaise sauce, ice cream, and any other foods containing raw or undercooked eggs.
- **Ask about a flu shot.** Before traveling, ask your doctor about a flu shot. It won't protect you from bird flu, but it may help reduce the risk of simultaneous infection with bird and human flu viruses.

**Mayo Clinic (2005)

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Appendix I:
DSHS Vaccine and Antiviral Priority Lists

Preliminary Guidelines for the Use of Vaccines and Antiviral Drugs During an Influenza Pandemic

The Texas Department of State Health Services (DSHS) is working closely with local, state, and federal stakeholders to be able to speak with one voice in providing recommendations consistent with sound epidemiological principles and the practical realities of national supplies of vaccine and antivirals. The use of vaccines and antivirals will be consistent with the overall goal of managing an influenza pandemic.

The prioritization lists below may change as the CDC develops guidelines for the nation and public and private sector stakeholders in Texas have an opportunity to evaluate the recommendations.
Strategies and priority groups for the use of vaccine and antivirals during an influenza pandemic will be reassessed and possibly altered when epidemiological data on the specific pandemic virus become available. Supply availability, sudden changes in the pattern of hospitalizations and deaths, or the development and spread of antiviral resistance as the pandemic progresses, may require changes in strategy.

Vaccine - Seasonal Influenza and Pandemic Influenza

Although vaccination is the primary means of preventing seasonal influenza, at the beginning of a pandemic, vaccine supplies against the specific virus will be limited or non-existent. The emergence of a pandemic is unpredictable, the specific vaccine cannot be stockpiled, and effective vaccine production cannot begin until the specific pandemic virus has been identified and characterized. Routine vaccination against seasonal influenza may provide some cross protection depending on the antigenic characteristics of the virus.

With current technology, the first doses of vaccine are unlikely to become available within the early months of the pandemic, and current worldwide production capacity for influenza vaccine is able to cover less than 5% of the world's population. National and international efforts to develop new methodologies for manufacturing vaccine, increasing production, and decreasing response time are ongoing.

Guidelines for use of Vaccine, once available:

DSHS Prioritization for Vaccine use:

1. Health care personnel with direct patient contact and their essential support personnel
2. Other essential service providers, such as police and fire-fighters and public health workers involved in disease investigation/epidemiology of the pandemic that involves direct contact.
3. School aged children and children in daycare, who are frequent contacts to each other and to many other groups. Full immunization of this subpopulation has been shown to reduce flu morbidity and mortality in the population at large.

4. Persons who are more susceptible to severe illness or death from influenza, such as those with lung or heart disease or other chronic illness and their contacts.
    a. Over 64 with one or more chronic disease risk factors
    b. 6 months to 64 years with 2 or more risk factors
    c. Hospitalization in prior year with pneumonia, influenza, or the ACIP high risk condition
    d. Contacts to the above
    e. Household contacts of children less than 6 months or persons who are severely immunocompromised
    f. Pregnant women
5. Persons responsible for maintenance of critical functions, such as clean water and food distribution and mortuary services (this group will become a higher priority if the pandemic appears to be severe enough that basic critical functions are at risk)
6. Key government officials and critical public health pandemic responders not involved in direct care.
7. Other healthy adults and children not covered above

This prioritization list may change as the CDC develops guidelines for the nation and public and private sector stakeholders in Texas have an opportunity to evaluate the recommendations.

Antiviral drugs

At present, antiviral drugs are the only specific medical intervention targeting influenza that will potentially be available during the initial pandemic response. During a pandemic, antiviral drugs are likely to play an important, but limited role. The existing supply and surge capacity for production of antiviral drugs is inadequate. Antiviral drug use should not be considered as a strategy for altering the overall course of a pandemic, but may help with protection for essential personnel and treatment for some individuals. Antiviral use should not begin until the pandemic influenza virus has been detected in the community.

Antiviral drug use is unlikely to substantially modify the course of a pandemic caused by an influenza strain that is well adapted for person-to-person transmission (as in the pandemics of 1918, 1957, or 1968). Prophylaxis with antivirals when an exposure has occurred or is likely to occur may help to prevent disease and keep essential workers on the job. Antiviral therapy is only effective if started in the first two days of symptoms and often causes only a modest increase in the rate of symptom improvement.

Patients with influenza-like illness, especially patients with chronic medical conditions, may have significant bacterial infections. Antiviral medications such as those approved for the treatment of influenza have no activity against bacterial infections.

Guidelines for use of Antiviral Drugs:

Antiviral drugs may be useful for both treatment and prophylaxis. Because of the need to implement therapy early in the course of illness, strategies that make drugs available at the point-of-care are most likely to be successful. Supplies of antiviral drugs are currently limited, as is surge capacity for further production.

Consider both priority lists since both prophylaxis and treatment will occur simultaneously.

Prioritization for Antiviral drugs as prophylaxis (when exposure is likely or is known to have occurred):

1. Health care personnel with direct patient contact; the need for prophylaxis may diminish as the pandemic is recognized and more stringent respiratory protection measures are put into place.
2. Control of institutional outbreaks
3. Other essential service providers, such as police and fire-fighters and public health workers involved in disease investigation/epidemiology of the pandemic that involves direct contact with patients.
4. Persons at high risk for complications hospitalized for illnesses other than influenza.
5. Persons with high risk of complications who are in the community.
6. Persons responsible for maintenance of critical functions, such as clean water and food distribution (this group will become a higher priority if the pandemic appears to be severe enough that basic critical functions are at risk)

This prioritization list may change as the CDC develops guidelines for the nation and public and private sector stakeholders in Texas have an opportunity to evaluate the recommendations.

Prioritization for Antiviral drugs as treatment (within the first 48 hours of symptoms):

1. Persons hospitalized with influenza
2. Health care and emergency service workers with direct patient contact who are ill with influenza.
3. Ill high-risk persons who in the community.
4. Ill public safety workers, public health workers involved in disease investigation/ epidemiology of the pandemic, key government decision makers, and other pandemic responders
5. Ill persons responsible for maintenance of critical functions, such as clean water and food distribution (this group will become a higher priority if the pandemic appears to be severe enough that basic critical functions are at risk)
6. Other ill outpatients

The prioritization lists may change as the CDC develops guidelines for the nation and public and private sector stakeholders in Texas have an opportunity to evaluate the recommendations. These draft guidelines serve as a preliminary plan and a beginning for discussion. The guidelines and comments are based largely upon the Canadian Pandemic Influenza Plan model, at www.phac-aspc.gc.ca/cpip-pclcpi/index.html and the CDC recommendations.

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Appendix J:
Vaccine and Antiviral Purchase, Allocation, and Distribution Plan
(To be altered and replaced as additional guidance becomes available)

A. Estimate amount of vaccine and antivirals needed for priority groups. Without having the CDC and DSHS priority groups identified, it is difficult to determine vaccine and antiviral needs. However, some preparatory work can be done. DSHS Immunization Branch (IB) for vaccine and Infectious Disease Control Unit (IDCU) for antivirals in collaboration with HSRs and LHDs will:
   1. Work with Texas Medical Association, Texas Nurses Association, Texas Hospital Association, Texas Department of Aging and Disability Services, the DSHS IDCU, Texas Pharmacy Association, the DSHS Center for Health Data, State Board of Medical Examiners and others for establishing contacts and procedures for collecting data on possible priority targeted groups.
      a. Present plans and data needs to various organizations to elicit willingness to help
   2. Update annually data necessary for formula computations to determine vaccine allotments to HSRs (Appendix O).
   3. Keep current on high risk and priority population data sets
   4. Compare annually state data with the CDC data, where available, to assure consistency. DSHS IB or IDCU will seek CDC consensus by August 31 each year.
   5. Identify the "Winter Texan" population (those temporarily moving to Texas from colder states) that uses Texas vaccine but who are not Texas residents. The CDC gives states of origin vaccine and antiviral allocation. Texas DSHS will negotiate the direction of these allotments.
   6. Identify other populations including undocumented aliens, seasonal workers, temporary residents who are hurricane evacuees, and those whose legal residence is not Texas who may be missing from population data available for estimates.

B. Provide antivirals and influenza vaccine to high-priority target groups and the general population. DSHS has identified some general approaches:
   1. Vaccines
      a. In the presence of severe vaccine shortages it is assumed that vaccine will be purchased by the federal government, stored in the SNS, and distributed through SNS protocols or states will determine allocation and distribution strategies. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:
         LHDs will:
         i. Notify HSRs of vaccine needs for priority groups in their jurisdictions.
         ii. Priority groups will be served through regular public health clinics, schools, or at workplaces at the discretion of LHDs.
         HSRs will:
         i. Order vaccine for priority groups by submitting to the IB, the DSHS IB spreadsheets rather than through the Secure Data Network (SDN) required of smaller states. DSHS central office will confirm the

mechanism with the CDC. Templates for the DSHS spreadsheets can be obtained via email by calling the IB at 512-458-7284 or 1-800-252-9152.

ii. Depending on federal requirements, allocation will be determined by the DSHS IB based on HSR and LHD identification of numbers of individuals in priority groups in their areas in combination with state data obtained in "A" above.

iii. Depending on federal requirements, distribution of vaccines will occur either through the DSHS Austin pharmacy and/or regional pharmacies or through VMI with the DSHS identifying recipients.

iv. Tracking will be through new TIMS program or its alternative (Appendix T)

b. In the presence of moderate shortages vaccine may be purchased by the federal government, stored in the SNS, and distributed through SNS protocols or states will determine allocation and distribution strategies. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:

i. If vaccine remains in the public sector, processes will continue as above, but with distribution occurring through VMI rather than DSHS pharmacies.

c. In the presence of no shortages

i. Routine distribution as during regular season

ii. Individual orders by private sector providers through distributors

iii. Public and private sector providers may need to increase orders to meet community demands

2. Antivirals

a. In the presence of severe shortages antivirals will be purchased by the federal government, stored in the SNS, and distributed through SNS protocols or states will determine allocation and distribution strategies. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:

LHDs will:

i. Project number of antivirals needed for prophylaxis and ill patient treatment. Submit to HSRs

ii. Obtain lists of persons in specific priority groups from workplaces, etc. for prophylaxis.

iii. Priority groups for prophylaxis will be served through regular public health clinics, or at workplaces at the discretion of LHDs.

iv. Distribute allocations for ill patients to health care providers.

HSRs will:

i. Order vaccine for prophylaxis and treatment using the Vaccine and Antiviral Allocation Form (Appendix S).

ii. Depending on federal requirements, distribution of antivirals to HSRs will occur either through the DSHS Austin pharmacy and/or regional pharmacies or through VMI with the DSHS identifying recipients.

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b. In the presence of moderate shortages antivirals may be purchased by the federal government, stored in the SNS, and distributed through SNS protocols or states will determine allocation and distribution strategies. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:
   i. If antivirals remain in the public sector, processes will continue as above, but with distribution occurring through VMI rather than DSHS pharmacies.
c. In the presence of no shortages antiviral drugs may be obtained directly by the state through established drug wholesaler distribution, with supplemental product obtained as necessary through the SNS.

C. Determine how antivirals and vaccines will be purchased and distributed. Options to be considered include:
1. Purchase strategies include:
   a. Complete federal purchase and/or distribution
      i. It is probable that this will occur with severely limited supply
      ii. It is assumed that this will be distributed through SNS, if that is the federal antiviral and vaccine location, through regular SNS procedures
         - Tracking will be through new TIMS program or its alternative (Appendix T)
      iii. If distribution of federally purchased antivirals and vaccine is through the state:
         - Vaccine procedures: The same state procedures will be used as described above (B.1.a.i.). Templates can be obtained via email by calling the IB at 512-458-7284 or 1-800-252-9152.
         - Antiviral procedures: The same procedures will be used as described above in (B.1.a.i.)
         - Spreadsheets for ordering will include priority groups
   b. Partial federal purchase and distribution
      i. Wait for federal guidance. Plans will be developed after guidance is received.
      ii. Vaccine procedures: Expect to be able to follow same procedures as described above (B.1.a.i.). Templates can be obtained via email by calling the IB at 512-458-7284 or 1-800-252-9152.
      ii. Antiviral procedures: The same procedures as above (B.1.a.i.).
      iii. Spreadsheets for ordering will include priority groups
   c. Minimal federal purchase and distribution
      i. If the state is to purchase, ordering and distribution of vaccine will follow as above.
      ii. Antiviral procedures: Purchase shall be from established wholesaler distribution.
      iii. If the purchase is private, it is assumed usual private sector vaccine and antiviral ordering and distribution will occur.

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D. Plans will demonstrate steps to ensure equal distribution and access to specific population groups by identifying barriers to vaccination (e.g. culture, location, etc.).
   1. Strategies to ensure equal distribution and access for special populations is described in depth in 1.3 Prevention and Control, B Pharmaceutical Interventions, 1.b. on page 29.

E. Establish plan for outcomes monitoring.
   1. Specific objectives are based on current available information related to priority groups, vaccine amount, vaccine ownership, and distribution. Objectives will change as information becomes available.
   2. Process objectives.
      a. Build data collection system to collect descriptive data.
      b. Keep current data related to priority groups.
   3. Outcome objectives
      a. Determine numbers obtaining first vaccination
         i. According to geographic areas
         ii. According to priority groups
      b. Determine numbers obtaining second vaccination
         i. According to geographic areas
         ii. According to priority groups
      c. Determine numbers obtaining antiviral prophylaxis
         i. According to geographic areas
         ii. According to priority groups
      d. Determine numbers obtaining treatment with antivirals
         i. According to geographic areas
         ii. According to priority groups
      e. 90% of clients will exit point of distribution within 15 minutes of arrival
         i. Compare geographic areas
      f. 80% of designated allotments of vaccine will be given to priority group clients within 48 hours of receipt at the POD.
      g. 80% of designated allotments of antivirals for prophylaxis will be given to priority group clients within 48 hours of receipt at the point of distribution (if prophylaxis is the CDC recommendation).
      h. 70% of priority group members with ILI will be treated with antivirals within 48 hours of first symptoms (if adequate antivirals are available and treatment is the approach).

   4. Impact objectives
      a. 70% of targeted priority group members will receive first dose of vaccine once it becomes generally available.
      b. 70% of those receiving first dose will receive a second dose of vaccine (if the CDC recommendations support a second dose).
      c. 70% of targeted priority group members will receive antiviral prophylaxis once it becomes generally available (if this is the CDC/DSHS recommendation).
      d. Determine morbidity and mortality and compare with national data

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i. According to geographic areas
ii. According to priority groups
iii. According to population demographics

5. Performance estimates will be made based on information related to priority groups, vaccine control, etc., once known.

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Appendix K:
Antiviral availability and use inventory

Flu-Specific Checklist for Statewide Inventory Available Anti-Viral Drugs:
including:
1. amantadine-generic/ Symmetrel-Brand
2. rimantadine-generic/ Flumadine-Brand
3. zanamivir-generic/ Relenza-Brand
4. oseltamivir-generic/ Tamiflu®-Brand

Each of the major drug wholesalers in the state shall be contacted, including:
___McKesson Drug
___Cardinal Drug
___Amerisource-Bergen

In addition all other identified medium and small drug wholesalers shall be contacted, including but not limited to:
___Morris-Dickson-Shreveport, Louisiana
___Texas Drug
___Walsh Drug Distribution
___Any additional distribution sources identified

Pharmacy Associations and Professional Group shall be contacted and requested to assist with inquiries at the pharmacy level, including but not limited to the following:
___Texas Pharmacy Association
___Texas Society of Health System Pharmacists (includes Hospitals, HMO's, Mail order, and PBM
Pharmacy operations
___Texas Retailers Association/ Texas Federation of Drug Stores (Chain Drug Stores)
___Texas State Board of Pharmacy

Medical and Osteopathic Associations shall be contacted and requested to assist with inquiries to their membership, including but not limited to the following:
___Texas Medical Association
___Texas Osteopathic Medicine Association

Other possible resources for antivirals including but not limited to the following:
___Other state Pharmacy Associations
___Pharmacies in bordering states near state lines.

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Appendix L:
Pneumococcal Vaccine

A. Assumptions
   1. The United States will have up to six months from the time human-to-human transmission of a novel virus is identified to the arrival of pandemic influenza.
   2. Pneumococcal vaccine will assist in the prevention of secondary bacterial infections.

B. Inter-Pandemic Period: The DSHS participates in a number of coalitions to improve vaccine coverage throughout Texas. Local health departments promote vaccination locally with Pneumococcal Polysaccharide vaccine for persons >65 and Pneumococcal Conjugate vaccine for children 2 to 23 month olds.

C. Pandemic Alert Period; Phase 4: Human-to-human transmission confirmed
   1. The DSHS will notify all health care providers of the need to vaccinate people over 65 years of age and people recommended by the ACIP (MMWR 1997; v46: No.RR-8) with pneumococcal vaccine as a method of decreasing morbidity and mortality associated with pandemic influenza.
   2. The DSHS Communications will notify the media to inform the general public of the need for children 2 to 23 months old, adults over 65, and other high-risk people to receive pneumococcal vaccine as defined by the ACIP.
   3. Pneumococcal vaccine will be distributed and administered by private health care providers. Children may be covered by the Texas Vaccines for Children program. Reimbursement rates for Medicare and Medicaid vary annually. Private insurers frequently follow Medicare reimbursement guidelines. Be sure to check current publications.

D. Pandemic Period; Phase 6: Confirmation of onset of pandemic, regional and multi-regional epidemics, end of first wave: the DSHS will continue efforts to notify providers and people recommended by the ACIP to receive pneumococcal vaccine as described above.

E. Subsided: Second or later waves: Same as D.

F. Postpandemic Period:
   1. The DSHS will continue efforts to notify providers and people recommended by the ACIP to receive pneumococcal vaccine as described above.
   2. The DSHS, along with providers and HSRs and LHDs will review the plan and pandemic and update as necessary.

Appendix M:
Sample Standing Delegation Orders

[*INSERT NAME OF PUBLIC HEALTH ORGANIZATION*]

A. Pandemic Influenza
Standing Delegation Order (SDO) for Administering Influenza Vaccine in Clinics

Purpose: To reduce morbidity and mortality from influenza by vaccinating patients who meet priority criteria established by the ACIP. If these priority criteria are unavailable, criteria developed by the DSHS will be followed.

Policy: After determining that a client is eligible to receive vaccination (i.e., that there are no absolute contraindications), clinic registered nurses, licensed vocational nurses, and/or other staff licensed or certified to give medications can administer the following vaccines during pandemic influenza vaccination clinics, adhering to the ACIP recommendations, the Standards for Immunization Practices, and established the CDC (or the DSHS in the absence of the CDC) target group priorities:

- Live Attenuated Influenza Virus Vaccine (nasal spray)
- Inactivated Influenza Vaccine (injectable)

VACCINE	**AGE GROUP**	**CONTRAINDICATIONS**
Live Attenuated Influenza Vaccine (FluMist®)	5 years – 49 years of age	History of anaphylaxis after eating eggs or following previous influenza vaccination, pregnancy, immunosuppressed people, or people with close contact with immunosuppressed people (e.g., health care personnel or household contacts)
Inactivated Influenza Vaccine (injectable)	> 6 months of age	History of anaphylaxis after eating eggs or following previous influenza vaccination; history of gentamycin sulfate allergy

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All approved personnel administering vaccines should:

1. Read and have available a copy of the protocols for Managing Vaccine Reactions including anaphylactic reactions (See Appendix M, B. Standing Delegation Order for Emergency Medical Management of Vaccine Reactions).
2. Sign the vaccinator list at the end of this form.

Authority for instituting and for oversight responsibility of the SDO is assumed by the Medical Director or other appropriate authority whose signature is at the end of this document.

SDO Procedures:

1. Practice and clinic personnel trained and qualified to be responsible for one or more of the SOP procedural steps.

2. Each client is provided with a copy of the most current VIS form. Provide non-English speakers with a VIS in their native language if available (at www.immunize.org/vis/). The publication date of the VIS should be documented.

3. Designated person(s) answers client questions and assists if form completion if necessary.

4. Each client will be screened for eligibility for vaccination using the most current the CDC/ACIP recommendations available at that time for prioritizing the use of available influenza vaccine(s). As and when epidemiological evidence indicates the need to revise priorities or vaccine availability changes, prioritizing recommendations may be revised and instituted.

5. Each eligible client is screened for contraindications and precautions to influenza vaccine(s):

a. **Contraindications:** serious reaction (e.g., anaphylaxis) after ingesting eggs or after receiving a previous dose of influenza vaccine or an influenza vaccine component. Do not give live attenuated influenza vaccine (LAIV) to pregnant women, immunosuppressed people, or people with close contact with immunosuppressed people (e.g., health care personnel or household contacts).
b. **Precautions:** moderate or severe acute illness with or without fever

6. The appropriate influenza vaccine is administered correctly:

a) Administer 0.5 mL inactivated influenza vaccine IM (22-25g, 1–1½" needle) in the deltoid muscle or other age appropriate dose and injection site
b) Alternatively, healthy people 5–49 years of age without contraindications may be given 0.5 mL of LAIV; 0.25 mL is sprayed into each nostril while the patient is in an upright position

7. Emergency medical protocol, kit, and trained person on site (see Appendix M, B. Standing Delegation Order (SDO) for Emergency Medical Management of Vaccine Reactions).

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8. Document vaccine, vaccination date and site in client held record and in practice or clinic records.

9. Complete and submit vaccine-tracking forms to the appropriate DSHS office.

These SDOs for the administration of pandemic influenza vaccine in clinics shall remain in effect for patients of the _____ until rescinded or until _____.
name of clinic *date*

_____ _____
Medical Director's signature Effective date

VACCINATOR SIGNATURE LIST

Printed Name	Signature	Initials	Date

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B. Pandemic Influenza
Standing Delegation Order (SDO) for Emergency Medical Management of Vaccine Reactions

[*INSERT NAME OF PUBLIC HEALTH ORGANIZATION*]

Purpose: All vaccines have the potential to cause an adverse reaction. Even with careful screening, reactions may occur. These reactions can vary from trivial and inconvenient (e.g., soreness, itching) to severe and life threatening (e.g., anaphylaxis). If reactions occur, staff should be prepared with procedures for their management.

Policy: In order to minimize adverse reactions, patients should be carefully screened for precautions and contraindications before vaccine is administered. All clinic staff licensed for patient care will read and understand symptoms and management of reactions and the location of supplies for event management. The table below describes procedures to follow for various reactions that may occur.

SDO Procedures:

REACTION	SYMPTOMS	MANAGEMENT
Localized	Soreness, itching, swelling, or redness at injection site	• Apply cold compress to injection site. • Recommend analgesic or antipyretic. • Watch for 30 minutes before allowing client to leave to be sure generalized symptoms do not occur.
	Slight bleeding	• Apply adhesive compress over injection site
	Continuous bleeding	• Place a thick layer of gauze pads over the area and maintain direct & firm pressure. • Raise arm above the level of the client's heart.
Psychological fright and syncope (fainting)	Fright before injection is given	• Have client sit or lie down for injection. • If available, provide stress management • If available utilize client support structure.
	Extreme paleness, sweating, coldness of hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	• Have client lie flat or sit with head between knees for several minutes. • Loosen any tight clothing especially around airway. • Apply cool damp cloths to face and neck. • If available, provide stress management.
	Fall, without loss of consciousness	• Examine for injury before attempting to move client. • Place client flat on back with feet elevated.

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	Loss of consciousness	• Examine for injury before attempting to move client. • Place client flat on back with feet elevated. • Do not give anything by mouth. • Monitor vital signs. • After return of consciousness observe client for 30 minutes before allowing client to leave. • Call on-site emergency provider (EMT or MD) or 911 if client does not respond.
Seizure	Loss of consciousness and rigidity and uncontrolled flexion/extension movements	• Call on-site emergency provider (EMT or MD) and 911. • If possible, protect the client from falling. Move furniture away from the client to prevent injury during the seizure. • Do Not restrain the client • Do Not place anything in the client's mouth. • Do Not give the client anything by mouth until they have completely regained consciousness and are fully alert. • Complete a Vaccine Adverse Event Report (VAERS) form. • Monitor- Observe the client in the clinic for 30 minutes after seizure. • Client should be sent to the ER for evaluation.
Anaphylaxis	Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); severe bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse.	See "Emergency Medical Protocol for Management of Anaphylactic Reactions in Adults" below for detailed steps to follow in treating anaphylaxis.

Emergency Medical Protocol for Management of Anaphylactic Reaction

Supplies Needed

- ❑ Aqueous epinephrine USP, 1:1000 in an Epi-Pen. At least three adult Epi-Pens (delivering a single dose of 0.3 mg/0.3 mL) should be available whenever adult immunizations are given.
- ❑ Benadryl (Benadryl) injectable (50 mg/mL solution) & oral in 25 or 50 mg tablets
- ❑ Syringes: 1–3 mL, 22–25g, 1"-1½"-2" needles for injectable Benadryl
- ❑ Adult airways (small, medium, and large)
- ❑ Sphygmomanometer (adult and extra-large cuffs) and stethoscope
- ❑ Adult size pocket mask with one-way valve
- ❑ Alcohol swabs
- ❑ Tourniquet

- ❑ Tongue depressors
- ❑ Flashlight with extra batteries (for evaluating the mouth and throat)

Emergency Treatment

1. If symptoms are generalized, activate the emergency response system (x-4911 DSHS First Responders and 911 EMS) and call the covering physician for orders. Another person should do this while the nurse/1st responders treats and observes the patient.
2. Keep family and/or caregivers informed
3. Administer epinephrine via Epi Pen subcutaneously or intramuscularly. Site of administration can be the anterior thigh or deltoid muscle.
4. Administer Benadryl by intramuscular injection according to the dose in the Table 1. Do not administer oral Benadryl or anything else by mouth if the patient is not fully alert or if the patient has respiratory distress.
5. Monitor the patient until EMS arrives. Perform CPR & maintain airway if necessary.
6. Monitor vital signs frequently.
7. Keep the patient in supine position unless there are breathing difficulties. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness.
8. If EMS has not arrived and symptoms are still present, repeat the dose of epinephrine every 15 minutes.
9. Patient must be referred for medical evaluation, even if symptoms resolve completely. Symptoms may recur after epinephrine and Benadryl wear off, as much as 24 hours later.

Table 1. Dosage for Benedryl (50 mg/ml)

WEIGHT		DOSE	
Kgs	**Lbs**	**Mg**	**Ml**
35-40	76-99	40	0.8
46+	100+	50	1

Authority for instituting and for oversight responsibility of the SDO is assumed by the Medical Director or other appropriate authority whose signature is at the end of this document.

These SDOs for the medical management of vaccine reactions in adult patients shall remain in effect for patients of the _____ until rescinded or until _____.
name of clinic *date*

_____ _____
Medical Director's signature Effective date

Sources:
American Academy of Pediatrics. Passive Immunization. In: Pickering LK, ed. *Red Book: 2003 Report of the Committee on Infectious Diseases.*26th ed. Elk Grove Village, IL:American Academy of Pediatrics; 2003:63-66.
American Pharmacists Association, Grabenstein, JD, *Pharmacy-Based Immunization Delivery*, 2002.
Got Your Shots? A Providers Guide to Immunizations in Minnesota, Second Edition, Minnesota Department of Health, 2001:80-82.

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Vaccination of people with chicken egg or gentamicin sulfate allergy

Purpose: All vaccines have the potential to cause an adverse reaction. Even with careful screening, reactions may occur. These reactions can vary from trivial and inconvenient (e.g., soreness, itching) to severe and life threatening (e.g., anaphylaxis). Clients with known allergies to chicken eggs or GS require careful screening before vaccination. Both the injectable inactivated influenza vaccine and the live attenuated influenza vaccine (FluMist®) are currently grown in eggs.

Policy: In order to minimize adverse reactions, clients should be carefully screened for precautions and contraindications before vaccine is administered.

Procedure:

1. All clinic staff licensed for patient care will read and understand contraindications to influenza vaccination.
2. Question all clients or client caregivers about allergies. If a person reports an allergy to chicken eggs ask about symptoms:
    a. If a person reports an allergy, but has received influenza vaccine in the past without difficulty, give vaccine.
    b. If a person reports an "allergy," because of distaste for eggs, give vaccine.
    c. A person who reports a localized reaction (such as a swollen arm) may be given vaccine.
    d. A person who reacts with systemic symptoms (a drop in blood pressure, significant wheezing, difficulty breathing, or generalized hives) should not receive influenza vaccine.
    e. Allergy to duck meat or duck feathers is not a reason to hold back on influenza vaccine.
3. If vaccine is given to anyone with questionable past reactions, keep client on-site and observe for 30 minutes. If a reaction occurs, see **Emergency Medical Protocol for Medical Management of Vaccine Reactions.**
4. If staff determines that the client should not receive vaccine:
    a. Give instructions on how to reduce influenza exposure.
    b. Give or prescribe antivirals, as appropriate, if client falls into a CDC priority group or if antivirals are plentiful and unrestricted.

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Appendix N:
Health Care and Congregate Settings Prevention and Control Procedures

Infection control practices both in healthcare and congregate settings will present special challenges in the event of a pandemic. Influenza is easily transmitted from person to person. Coughing and sneezing by infected people is the primary means of spreading of the virus. Sometimes the virus is spread by direct contact, either with infected people or a contaminated surface. Influenza can quickly spread and rapidly cause illness in other hospitalized patients or residents in a congregate setting, especially in those who are unvaccinated. Once infected, personnel, patients, residents, or visitors introduce it into a facility. During an outbreak in a hospital ward, nursing home, institution, as many as 70% of staff and patients or residents may become infected. The most important means to prevent influenza illness from spreading in a facility is influenza vaccination of patients or residents and ~~p~~personnel. The ACIP recommends annual vaccination of all healthcare and congregate living setting personnel. However, in part due to low vaccination rates, less than 100% efficacy and because influenza-infected persons will be admitted from the community as patients, residents, or visitors, outbreaks of influenza can occur. When influenza is introduced into a facility, prompt recognition of influenza infection and initiation of infection control measures can limit the spread of disease.

Prevention and Control of Influenza in Health Care Facilities
Adapted from: the CDC's ***Updated Infection Control Measures for the Prevention and Control of Influenza in Health-Care Facilities***
Note: for the latest update of these guidelines, go to
www.cdc.gov/flu/professionals/infectioncontrol/healthcarefacilities.htm

A. **Persons with influenza should be placed on Droplet Precautions or Equivalent: *Droplet Precautions*** are designed to reduce the risk of droplet transmission of infectious agents. Droplet transmission involves contact of the conjunctivae or the mucous membranes of the nose or mouth of a susceptible person with large-particle droplets (larger than 5 µm in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism. Droplets are generated from the source person primarily during coughing, sneezing or talking and during the performance of certain procedures such as suctioning and bronchoscopy. Transmission via large-particle droplets requires close contact between source and recipient people, because droplets do not remain suspended in the air and generally travel only short distances, usually 3 ft or less, through the air. Because droplets do not remain suspended in the air, special air handling and ventilation are not required to prevent droplet transmission. Droplet precautions apply to any patient known or suspected to be infected with epidemiologically important pathogens that can be transmitted by infectious droplets.

B. **Standard Precautions** apply to blood, all body fluids, secretions and excretions *except sweat*, whether or not they contain visible blood, non-intact skin and mucous membranes. Standard precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals. 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 patient's physical environment and soiled linen; precautions to reduce the possibility of health care personnel exposure to blood-borne pathogens; and, patient placement.

C. **Respiratory Hygiene/Cough Etiquette in Healthcare Settings** (the CDC document December 17, 2003)**,** To prevent the transmission of **all** respiratory infections in healthcare settings, including influenza, the following infection control measures should be implemented at the first point of contact with a potentially infected person. These should be incorporated into infection control practices as one component of Standard precautions. **NOTE:** These recommendations are based on the Draft Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Recommendations of the Healthcare Infection Control Practices Advisory Committee, CDC (www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm).

1. Visual Alerts. Post visual alerts (in appropriate languages) at the entrance to living facilities and outpatient facilities (e.g., emergency departments, physician offices, outpatient clinics) instructing residents and patients and people who accompany them (e.g., family, friends) to, first, inform health care personnel of symptoms of a respiratory infection when they first register and, second, to practice respiratory hygiene and cough etiquette.
2. Respiratory Hygiene/Cough Etiquette
   a. The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection.
      i. Cover the nose and mouth when coughing or sneezing;
      ii. Use tissues to contain respiratory secretions and dispose of them in the nearest waste receptacle after use;
      iii. Perform hand hygiene (e.g., hand washing with non-antimicrobial soap and water, alcohol-based hand rub, or antiseptic hand wash) after having contact with respiratory secretions and contaminated objects or materials.

   b. Facilities should ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas.
      i. Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.
      ii. Provide tissues and no-touch receptacles for used tissue disposal.

D. **Masking and Separation of People with Respiratory Symptoms.** During periods of increased respiratory infection activity in the community (e.g., when there is increased absenteeism in schools and work settings and increased medical office visits by people complaining of respiratory illness), offer masks to people who are coughing. Either procedure, masks (i.e., with ear loops) or surgical masks (i.e., with ties), may be used to contain respiratory secretions. Respirators such as N-95 or above are not necessary for this purpose. When space and chair availability permit, encourage coughing people to sit at least three feet away from others in common waiting areas. Some facilities may find it logistically easier to institute this recommendation year-round.

E. **Droplet Precautions.** Advise personnel to observe droplet precautions (i.e., wearing a surgical or procedure mask for close contact), in addition to standard precautions, when examining a person with symptoms of a respiratory infection, particularly if fever is present. These precautions should be maintained until it is determined that the cause of symptoms is not an infectious agent that requires droplet precautions www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm.

Recommended Guidelines for Pandemic Influenza Infection Control

During an influenza pandemic it can be assumed that risk of transmission will be high, that immunity within the population will be low, that an increased number of people will be seeking medical care, and that resources traditionally used for infection control may be in short supply. The following recommendations reflect this assumption and should be used in addition to procedures discussed above. Refer to *Control of Influenza in Acute Care Settings* at www.cdc.gov/ncidod/hip/INFECT/flu_acute.htm

A. **Hospital Infection Control.**

Patients with confirmed, epi-linked, or ILI should be isolated in a private room if possible. Negative air pressure room is not indicated. Multiple patients may be cohorted (housed together) if necessary. Droplet isolation precautions, in addition to standard precautions, should be implemented and adhered to for the pandemic influenza patient. Respiratory tract secretions should be considered infectious and strict hand hygiene practices should be used. Masks (surgical or a higher filtration) should be used when patient care is delivered within 3 feet of the patient. Normal disinfection of the patient environment should be done daily.

Under most circumstances, infection control measures may be the only measures available to prevent transmission. Special circumstances may necessitate the addition of other precautions.

B. **Transportation of the Patient**

Transportation of the patient within the facility does not need to be restricted. The patient must wear and should tolerate the wearing of a surgical mask during the trip. Disinfection of the transportation equipment as well as other potentially exposed surfaces and equipment must be done.

Transportation outside of the facility may also be considered as indicated. Additional precautions and disinfection will be necessary if the person is undergoing mechanical ventilation.

C. **Other Considerations**

1. Uncertainty, anxiety and ongoing stress will affect all segments of the population, which will place additional burdens on the health care system as well as individual and community recovery. Service demand will be heavy as treatment facilities seek to triage and treat the affected, those who believe they are infected and "normal" patient loads.
2. ICU for adults and pediatric cases will be heavy.
3. Morgue storage will potentially be over capacity.

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4. Supplies of certain items may be low. Hospitals and other facilities should plan to stock non-perishable items for extended periods or prepare for the unavailability of these items due to production and/or delivery problems.
5. Cancellation of elective surgeries may be required and other procedures may need to be postponed to allow for the reallocation of staff to other areas.
6. High demand for clinical staff and expected decreases due to becoming ill will create shortages.

Visitors who have any respiratory illness symptoms should be discouraged from visiting.

Employees who are ill should be restricted from working until they are healthy.

If a suspected influenza outbreak occurs among congregate living, nursing home, or hospitalized patients, steps to identify influenza as the cause and to control its spread should be instituted. (*Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices* (ACIP) *MMWR* 25 Apr 2003; 52 [RR08]: 1-36)
www.cdc.gov/mmwr/preview/mmwrhtml/rr5208a1.htm

The primary measure to prevent persons from getting influenza in a congregate setting is vaccination of both patients or residents and employees.

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Appendix O:
Community Prevention and Control: Business Continuity Planning

Unlike natural disasters such as hurricanes Katrina and Rita or terrorist actions such as 9/1/01 where disruption of business activity is localized (other corporation offices remain open and absorb functions); an influenza pandemic will likely impact the entire state of Texas and the nation. The Department of Homeland Security calls small businesses, which account for 99% of the businesses that employ 50% of the workers in the U.S., "the backbone of our economy." As such, it benefits not only the business owner, but the economy as well to be able to continue operation and recover as quickly as possible.

Disasters and terrorist events destroy structures and hardware. Pandemics leave those unscathed and impacts people. Businesses, government, and services should plan for at least a 50% absentee rate for employees lasting about 2 weeks at the peak of the wave and somewhat lower rate for a few weeks on either side of the peak. A number of waves may occur with each affecting smaller numbers of people.

Employees may be absent for a number of reasons:

- Actual or suspected illness
- Illness of family member
- Feel safer at home away from groups of people
- Choose to volunteer services in the community
- Look after school-aged children if schools close

There is a domino effect: employees absent in one business it will impact others. For example: supplies of widgets you require to manufacture your product might drop significantly which prevents you from manufacturing your product. Business continuity plans are one way to plan for emergencies and maximize resources and productivity.

It is beyond the scope of this particular document to provide a template for planning. There are numerous resources for business continuity planning on the Internet (Google "business continuity plans for pandemic influenza"). There are purchased programs, pricy consultant experts, and free resources. The U.S. Department of Homeland Security has a website entitled Ready Business (www.ready.gov/business/st1-planning.html) that focuses on business continuity planning for emergencies. Materials are available for downloading that guide businesses through planning. Examples of existing plans are available for downloading.

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Appendix P:
School Prevention and Control: Interim Guidance for School Administrators, Teachers and Staff

Symptoms
Symptoms of influenza include fever (usually high), headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Gastro-intestinal symptoms, such as nausea, vomiting, and diarrhea, are much more common among children than adults.

Spread of Influenza
The main way that influenza viruses are spread is from person to person in respiratory droplets of coughs and sneezes. (This is called "droplet spread.") This can happen when droplets from a cough or sneeze of an infected person are propelled (generally up to 3 feet) through the air and deposited on the mouth or nose of people nearby. Though much less frequent, the viruses also can be spread when a person touches respiratory droplets on another person or an object and then touches their own mouth or nose (or someone else's mouth or nose) before washing their hands.

Preventing Spread of Influenza in Schools
While vaccination against influenza each fall remains the primary way to prevent this disease, other measures that may help prevent influenza in schools include:

Remind students and staff to clean their hands, and make sure they have the supplies to do so.

- Frequent hand washing with **soap and water** will help protect students and staff from viruses. Wash hands for 15- 20 seconds (long enough to sing the "Happy Birthday" song twice.) Alcohol-based hand rubs may be used as an alternative. Students and staff should be advised to rub their hands thoroughly until dry. Work with your school's janitorial staff to ensure that restrooms are stocked with soap and paper towels or working hand dryers. Work with teachers to have a supply of alcohol-based hand-rub in each classroom.

Remind students and staff to cover noses and mouths when coughing or sneezing, and have tissues readily available.

- Advise students and staff to cover their noses and mouths with a tissue when coughing or sneezing, and to dispose of used tissues in appropriate waste receptacles. Make sure that tissues are available in all classrooms and common areas, such as libraries or lunchrooms. If hands become contaminated with respiratory secretions while coughing or sneezing, perform hand hygiene as soon as possible.

Encourage sick students and staff to stay at home.

- Sick students and staff should stay home from school until they have been without fever for 24 hours to help prevent spreading illness to others.

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Work closely with your local health department if making plans regarding school closure.

- Any decisions about closing a school due to increased influenza activity should be made in consultation with local and state health departments. It is unknown whether school closings are beneficial in controlling the spread of influenza.

Resources

Following are resources for information about preventing the spread of influenza in schools:

- The CDC has prepared a poster for schools that illustrates the message: "Be a Germ Stopper." This is available at www.cdc.gov/germstopper.
- It's a Snap offers free educational program materials about making hand cleaning an integral part of the school day www.itsasnap.org/snap/teachers_nurses.asp
- The CDC offers answers for schools "About the Flu: Questions & Answers" www.cdc.gov/flu/school/qa.htm
- The CDC offers school materials and posters at www.cdc.gov/flu/school/
- The CDC Germstoppers www.cdc.gov/germstopper/resources.htm
- The Center for Health and Health Care in Schools "School Health Issues: Flu Season and Schools" www.healthinschools.org/sh/influenza.asp
- Local and state health departments www.tdh.state.tx.us/immunize/flu.htm

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Appendix Q:
List of Infectious Disease Specialists and Influenza Experts

Disaster Preparedness Communication Protocol

All emergency after-hours contact information, including emergency after-hours contact information for infectious disease specialists/influenza experts, will be kept in three secure places:

(1) The Web-based HAN online searchable database, which can be accessed via the Internet by HAN username and password;

(2) Back-up contact database spreadsheets, which will be kept in the on-call notebooks carried by the DSHS Physician On-Call Team for Public Health Emergencies. These spreadsheets can be utilized if the Internet has slowed or is unavailable for whatever reason.

(3) Back-up regional contact information, which will be kept on file at the DSHS Health Service Region. This information can be obtained via consultation with the DSHS Regional Epidemiologist On-Call by contacting the 24/7 Public Health Preparedness Reporting telephone number for each Health Service Region. The 24/7 telephone number can be obtained by **contacting** each Health Service Region office. A list of offices can be found at: http://www.dshs.state.tx.us/regions/default.shtm.

*The existing statewide HAN database of contact information for 96 infectious disease specialists/influenza experts is continually updated by local HAN Administrators. In addition, the leadership of the Texas Infectious Disease Society (TIDS) has agreed to request approval from the TIDS membership for adding contact information for their members to the existing HAN database.

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Appendix R:
Active Surveillance and Required Reporting

Texas Department of State Health Services (DSHS), Weekly Influenza Report

WEEKLY FLU REPORT

HSR: _____ **WEEK ENDING**: _____

Is influenza activity occurring in the region? (X yes or no) **__ YES __ NO**
(If yes, please complete the report. If no, the report is complete).

Since the last report, has influenza activity in the region:
__ Increased __ Decreased __ Stayed about the same __ Not sure

Influenza activity is defined as:

- Influenza-like illness activity (ILI): ILI is defined as fever over 100°F and cough and/or sore throat. (Can be assessed using a variety of sources including sentinel providers, school/workplace absenteeism, and other syndromic surveillance systems that monitor ILI); **and/or**,
- Lab confirmed case: Influenza case confirmed by rapid test, culture, antigen detection, or PCR; **and/or**,
- Institutional outbreak: A lab confirmed outbreak in a nursing home, hospital, prison, school, etc.

Please complete the table listing the counties where influenza activity is occurring. Enter a (+) in the table where applicable.

COUNTY	Flu A	Flu B	ND*	ILI	INSTITUTIONAL OUTBREAK	SCHOOL CLOSURE

*Not Differentiated Influenza

Please email report to stacy.davlin@dshs.state.tx.us. Mondays. If Monday is a holiday, send ASAP.
The report may also be faxed to (512) 458-7616 to Stacy Davlin's attention. Call Stacy at (512) 458-7111 x6364 with questions or comments.

If sending additional information for a previously submitted report, please highlight the changes being made.
Thank you!

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Appendix S:
Vaccine and Antiviral Allocation Form – Example only (priority groups will change)

Vaccine Allocation Form – Region 1 Example															
Regional Total:	**0**	**County Totals:**	**0**												
County	All Long Term Care Facility Residents*	Individuals 65+ with chronic conditions*	Health Care Providers - Direct Patient Care*	Total Population - TX Priority Groups*	Pregnant Women*	Household Contacts of children < 6 mo* Out of Home Caregivers of children < 6 mo*		Total Population - Extended Priority Groups (CDC)*	Total Population - TX Priority and Extended Priority Groups (CDC)*	County Population's % of Total Texas Priority Group Population*	County Allotment	Allocation Adjustment (+/-)	Final County Allocation	Comments	
ARMSTRONG															
BAILEY															
BRISCOE															
CARSON															
CASTRO															
CHILDRESS															
COCHRAN															
COLLINGSWORTH															
CROSBY															
DALLAM															
DEAF SMITH															
DICKENS															
DONLEY															
FLOYD															
GARZA															
GRAY															
HALE															
HALL															
HANSFORD															
HARTLEY															
HEMPHILL															
HOCKLEY															
HUTCHINSON															
KING															
LAMB															
LIPSCOMB															
LUBBOCK															
LYNN															
MOORE															
MOTLEY															
OCHILTREE															
OLDHAM															
PARMER															

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POTTER														
RANDALL														
ROBERTS														
SHERMAN														
SWISHER														
TERRY														
WHEELER														
YOAKUM														
	*Priority Groups may differ for pandemic influenza. These used reflect 2004-2005 shortage.									**County Totals:**	**0**	0	**0**	

DSHS Allocation Worksheet – Explanation of Columns – Example from 2004-2005 vaccine shortage

****NOTE: These instructions were specifically for the 2004-2005 season vaccine shortage. The priority groups as defined by the CDC and or Texas may vary from these, therefore the column headings and the multiplier may change. THIS IS AN EXAMPLE ONLY.**

Top Row: Regional Totals cell with vaccine allocation determined by the DSHS Austin.

Columns contained in the DSHS Allocation Worksheet:

Note: Columns denoted in blue refer to populations in the Texas Priority Groups. Columns in red refer to populations in the Extended Priority Groups (CDC).

Column A: Health Service Region

Column B: County name

Column C: All Long Term Care Facility Residents:
This column includes the estimated number of residents (all ages) in the following: Nursing Facilities, Intermediate Care Facilities (includes State Schools), Assisted Living Facilities. County census data were available for Nursing Facilities and Intermediate Care Facilities. The Assisted Living Facility population in each county was estimated by taking the total number of residents statewide in Assisted Living Facilities (28,000) and multiplying by each county's proportion of the total Texas statewide population 65 and over (most individuals in Assisted Living are aged 65 and over).
Source: Texas Department of Aging and Disability Services

Column D: Individuals 65+ with Chronic Conditions

This column includes the estimated number of individuals aged 65 and over with chronic health conditions who would be eligible for flu vaccine. An estimated 42.5% of the Texas population aged 65 and over have one of the following chronic conditions: heart disease, asthma, or diabetes (Source: 2003 BRFSS). The number of newly diagnosed cancer cases by county in the 65 and over age group in year 2001 (Source: Texas Cancer Registry) was added to the population estimate of residents with either heart disease, asthma, or diabetes to provide a county estimate of the 65 and over population with chronic medical conditions. *Note: Special consideration should be given to homebound individuals with chronic medical conditions.*

Column E: Health Care Providers – Direct Patient Care

Source: Texas Department of State Health Services (DSHS), Health Professions Research Center, 2003. State-licensed health care professionals providing direct patient care as determined by occupation: direct patient care physicians, physician assistants, RNs, LVNs, nurse aides, dentists, dental hygienists, EMS personnel, respiratory care practitioners, chiropractors, medical radiology technologists, permitted medication aides. *Note: Only about 40% of Texas health care providers receive an annual flu vaccine. The numbers provided in column E* ***are not*** *adjusted for typical vaccine uptake in this population.*

Column F: Total Population – TX Priority Groups

Sum of columns C, D, and E

Column G: Pregnant Women

Estimated number of pregnant women during the flu season based on all 2003 Texas resident births (provisional data).

Column H: Household Contacts of Children < 6 months

The number of household contacts to children less than 6 months of age was estimated from 2003 Texas resident births (months January, February, March, October, November, December) and multiplied by 3.22 (estimated average household size of 3.22 persons 2 - 64 years of age among those households with children < 6 months, National Health Interview Survey, 2002). *Note: Household contacts include children who may be eligible for flu vaccine under the Texas Vaccines For Children program.*

Column I: Out of Home Caregivers of Children < 6 months

The estimated number of out of home caregivers of children < 6 months is based on the number of childcare facilities by county. The number of childcare facilities serving infants 0 - 17 months of age was obtained from the Texas Department of Family and Protective Services, Child Care Licensing. For home-based facilities, it was assumed that only half of the year they would provide care for an infant < 6 months of age, therefore, the number of home-based facilities was multiplied by 0.5. For child care centers, it was assumed there would be 3 staff members caring for infants < 6 months of age per center at any given time, therefore, the number of child care centers was multiplied by 3 to estimate the number of staff members.

Column J: Total Population – Extended Priority Groups (CDC)

Sum of columns G, H, and I

Column K: Total Population – TX Priority and Extended Priority Groups (CDC)

Sum of Columns F and J

Column L: County Population's % of Total Texas Priority Group and Extended Priority Group Population

Multiplier for suggested vaccine allocation. County's proportion of Texas statewide priority group and extended priority group population.

Column M: County Allotment

Suggested county adult vaccine allocation based on the Texas vaccine allotment and multiplier.

Column N: Allocation Adjustment (+/-)
Amount of adjustment for county level vaccine allocation (+ or -) by the regions.

Column O: Final County Allocation

Sum of Columns N and O. This is the requested amount of vaccine for the county after adjustment by the region. Includes the County Totals cell at the bottom of the column with a summary formula. The County Totals cell should equal the Regional Totals cell at the top of the worksheet.

Column P: Comments

Field for comments, particularly those regarding column O.

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Appendix T:
Plan for Vaccine and Antiviral Tracking

Vaccine and antiviral distribution and administration will be monitored by the DSHS through the TIMS or federal Countermeasure Response Administration System module to be developed for the CDC. A paper system will be used for initial documentation. Client data will be entered on an Excel spreadsheet after the clinic. The LHDs will hold the primary responsibility for data entry. Assistance of the HSRs may be requested if there is a shortage of staff. HSRs have the responsibility to ensure non-electronic data will be transferred to the DSHS IB or the DSHS PB for up-load into the electronic system.

The Texas Inventory Management System (TIMS) is the first choice for vaccine and antiviral tracking. It has been developed to track the SNS Pharmaceuticals through the system. The PIPL will work with the TIMS staff to develop an individual client tracking component. This system's current status is:

Current Capabilities:

- Dial-up or other Internet access from anywhere
- Encrypted data
- Pharmaceuticals followed from the SNS delivery through accessible Points of Distribution in real time.
- Creation of material lists for shipping
- Running inventory of materials and their location
- Creation of order requests to be filled
- Tracking of material to be returned
- Tracking of order status

Next steps for use with PI plan:

- PI module written to track client vaccine or antiviral delivery
- Texas childhood vaccination registry, IMMTRAC, download capability to be developed
- 2nd dose reminder recall with personal physician access

Alternate options include one new system under development and two existing systems.

1. Countermeasure Response Administration System. This is a new system for tracking vaccine doses given before and during a pandemic that is under development as of November 2005. This program will allow NIP reporting of aggregate counts by age group, priority, and dose. Needs at the state and local level are recognized such as individual patient tracking, inventory tracking, and counts by provider. The system developed will be part of the Countermeasure Response Administration functional area as defined by Public Health Information Network and, therefore, will be subject to those requirements, key performance measures, and certification.

2. The DSHS Pharmacy Inventory Control System for tracking vaccine vial and antiviral distribution, which is currently used to track HIV/STD and TB medications to dispensing sites.

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3. The Texas Web-based Integrated Client Encounter System could be used as a back-up system for tracking doses given.

Current Capabilities:

- Developed and used for patient level data for immunizations
- Downloadable to IMMTRAC

Next steps for use with PI plan:

- Electronic signature tracking
- Improved data sharing
- 2nd dose reminder recall with personal physician access
- Legal access for consent
- Develop an independent module for Pandemic Influenza
- Determine costs to develop module

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