



GILLESPIE COUNTY/CITY OF FREDERICKSBURG PANDEMIC INFLUENZA PREPAREDNESS PLAN *

* Adapted from the plans of San Antonio Metropolitan Health District, Texas
Department of State Health Services, Homeland Security Council, and World Health
Organization

VERSION: 29 May 2007

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Telephone Contact List

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DSHS Immunization Branch	(512) 458-7284 (800) 252-9152
DSHS HSR 8 – Sandra Guerra-Cantu, MD, Director	(210) 949-2000
DSHS HSR 8 – Trudi Nekemoto, Epidemiologist	(210) 949-2000
DSHS HSR 8 – Steve Hannemann, Emergency Response Coordinator	(210) 949-2000
Department of State Health Services (DSHS) Central Office	(512) 458-7111
DSHS Immunization Branch	(512) 458-7284 (800) 252-9152
DSHS HSR 8 – Becky Walch, Gillespie County Health Nurse	(830) 997-4249
Gillespie County/Fredericksburg EMA Office	(830) 997-7521
STRAC	(210) 822-5379
EHDG	(210) 822-5379

Document Web Link List	
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/CommunicationsPlan_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 – DSHS	www.dshs.state.tx.us/lab/g-2a_instruct.htm
Laboratory Specimen Submission Form Sample – DSHS	www.dshs.state.tx.us/lab/G2A_FORM_sample.pdf
Limited English Proficiency	www.hhs.gov/ocr/lep
Media Policy (DSHS)	
Laboratory Specimen Submission Instructions – SAMHD	
Laboratory Specimen Submission Form - SAMHD	
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
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/ 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
DMDG	Drug and Medical Devices Group
DSHS	Department of State Health Services (Texas)
EMS	Emergency Medical Services
ESC	Emergency Support Center (DSHS)
GCEMP	Gillespie County Emergency Management Plan
GCEPTF	Gillespie County Emergency Preparedness Task Force
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
ID	Immunization Division
IC	Incident Command
ICS	Incident Command System
IDCU	Infectious Disease Control Unit
ILI	Influenza-like Illness
ISD	Independent School District
JIT	Just in Time training
OTC	Over the counter
PB	Tx DSHS Pharmacy Branch
PHL	Public Health Laboratory
PI	Pandemic Influenza
PIC	Person-In-Charge
PIPP	Pandemic Influenza Preparedness Plan
PPE	Personal Protective Equipment
PRT	Pandemic Response Team
REMPSC	Regional Emergency Medical Preparedness Steering Committee
SDO	Standing Delegation Orders
SNS	Strategic National Stockpile
SOC	State Operation Center
STRAC	South Texas Regional Advisory Council
TALHO	Texas Association of Local Health Officials
THA	Texas Hospital Association
TIMS	Texas Inventory Management System
TMA	Texas Medical Association
TMC	Texas Medical Clinic
VAERS	Vaccine Adverse Events Reporting System
VIS	Vaccine Information Statement
VMI	Vendor-Managed Inventory
WHO	World Health Organization

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 contains 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: 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:** Practices 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.

SECTION I. INTRODUCTION

A. GOALS OF THE Gillespie County 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 the Gillespie County area as a result of an influenza pandemic (U.S. Department of Health and Human Services, 2005). The objectives of the Gillespie County Pandemic Influenza Preparedness Plan (PIPP) include:

1. To assist and facilitate appropriate planning and response at all levels of government by:
 - a. Developing a county-wide plan in conjunction with the 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.

The Gillespie County 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): Inter-pandemic Period, Pandemic Alert Period, Pandemic, and Post-pandemic 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.

B. 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 25-35% attack rate. In Gillespie County, between 7,500 and 10,500 residents could become infected. Of those, 3,750 to 5,250 may require hospitalization. The estimates of case fatality rates range from 1.5% to 5%, suggesting that at a minimum nearly 450 people could die.

It is thought that pandemic influenza will occur in two waves separated by three to nine months, with each to last about one month. A second wave in Gillespie County would cause an additional 5% of the population, approximately 1,500 people, to develop the influenza. Of these, it is estimated that 4% may be hospitalized and a case fatality rate of 1.7%. 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 public 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, but by how the community is affected and to what extent. If millions of people get sick at the same time, major social consequences also will occur. Hospital capacity will not be able to 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 outbreaks that happen nearly every year are important events. Influenza and similar respiratory illnesses make 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 re-assortment 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 re-assortment 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 - 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.

C. ASSUMPTIONS

- The primary responsibility to provide public health, mental health, and emergency medical services within Gillespie County lies with Gillespie County Emergency Management. State government may 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 (US 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 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). Gillespie County Emergency Management 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
 - 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 if available.
- 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.

D. KEY COMPONENTS

1. PLANNING AND COORDINATION

A. Use of the Incident Command System – The Gillespie County Emergency Management uses 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 Gillespie County Emergency Management Incident Command (IC) will be at the City Hall of Fredericksburg EOC as part of a Unified Command. The Gillespie County Emergency Management command post will be located at the Conference room in City Hall.

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 (World Health Organization). 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 are in concordance with those developed at the state and regional levels.
4. The Planning and Coordination structures at the Gillespie County Emergency Management, unified as necessary with the state and regional offices, to assure 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 Gillespie County Emergency Preparedness Task Force (GCEPTF) personnel may be present at the local Emergency Operations Centers. Redundancy and backup provide for necessary shift relief for situations that extend beyond an 12-hour working day.
6. In order to supplement local resources, state and federal assistance may 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.

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.

Currently, the DSHS Laboratory isolates and subtypes influenza viruses year round, although emphasis each year is from September through May. Influenza isolates are referred to the CDC for detailed antigenic characterization according to the WHO guidelines, which include any isolate that cannot be sub-typed 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. Samples will be sent to the DSHS lab or as they direct.

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 vaccine delivery in Gillespie County area relies on a combination of public and 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). Gillespie County Emergency

Management will adhere to DSHS recommendations 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 relies on selective community-wide outreach clinics located throughout community will be supplemented with more pre-determined accessible congregate points of distribution. This could include utilizing the resources of community health clinics, mass immunizer, and the local hospital system. As vaccine supplies become readily available, purchase and distribution of flu vaccine could be opened up to the private sector.

There are two significant concerns with developing vaccines to combat a pandemic:

- 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	Approved Population	How Supplied	Approximate Cost per Daily

				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 16oz	\$3.66
Rimantadine (Flumadine®)	Prophylaxis & treatment	All A strains	Adults & children	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 Oseltamivir is approved for treatment for people >1 year; it is approved for prophylaxis for people 13 years of age and older.

Problems and Limitations with widespread use of antivirals are:

- i. It is anticipated that current federal stockpile strategies for both oseltamivir and zanamivir will fall far below anticipated demand during an influenza pandemic.
- ii. The widespread and indiscriminate use of antivirals could lead to the 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.

4. HEALTH SYSTEMS RESPONSE

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
- segregated seating for patients with ILI

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

Special populations such as home bound or special needs population 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. Gillespie County Emergency Management is coordinating with the Gillespie County Community on Aging (Golden Hub), MHMR, as well as other local agencies to identify such individuals and their special needs.

5. COMMUNICATIONS

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.

As a unified command Gillespie County Emergency Management and DSHS would form a JIC (Joint Information Center) which would disseminate information as needed to each agency's PIO. The Public Information Officer is charged with news media relations and public information dissemination. The PIO will carry out emergency risk communications and public information dissemination for pandemic influenza. The Gillespie County CERC Guidelines cover two areas of crisis and emergency risk communications within the city/county:

1. Direct communication from the Gillespie County Emergency Management through the Public Information Officer to the news media; and
2. Information dissemination to educate the public regarding exposure risks and effective public response.

E. 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
Post-pandemic Period	End of pandemic and return to Inter-pandemic Period.
<p>^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.</p> <p>^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.</p>	

SECTION II. PREPAREDNESS PLAN RESOURCE GUIDANCE

1. INTERPANDEMIC PERIOD – PHASES 1 AND 2

1.1

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.

PLANNING AND COORDINATION

PHASE 1 and 2

During this period, GCEPTF will develop the Pandemic Influenza Response Plan.

GCEPTF will activate the EOC structure to take the lead during the Pandemic Alert Period Phases 3& 4 “Texas identification,” or 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).

- A. The GCEPTF will provide support to the EOC and deal with plan-specific issues.
- B. The DSHS Public Health Laboratory (PHL) and Laboratory Response Network will provide testing, training and technical support to the GCEPTF pandemic response.
- C. The GCEPTF and Emergency Management Coordinator (EMC) will provide oversight for vaccine/drug procurement and distribution.
- D. Department of State Health Services (DSHS) Region 8 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
 - a. STRAC will be responsible for evaluating health care practitioner licensing
 - b. Gillespie County and STRAC are in the process of developing a credentialing system.
 4. Immunization Division – nurses (RN, LVN), health program specialists and health program supervisors, Coordinators, Admin Aides, etc, through DSHS.
 5. City of Fredericksburg/Gillespie County 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 through DSHS.
 7. Health Alert Network: Hill Country Memorial Hospital participates in the HAN, as administered by DSHS.
 8. Stress management and Crisis Counseling: Stress Management trained personnel,

social workers, psychologists, psychiatric nurses, and other professional staff will be conducted by MHMR and other agencies as appropriate and available.

9. Texas Medical Rangers

G. Information resource lists are maintained in Appendix 6, of the 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 GCEPTF will develop, review, and update the Pandemic Influenza Standard Operating Guidelines annually (Appendix B).

I. GCEPTF will coordinate with DSHS as the state PIPP is updated.

J. 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. GCEPTF cooperates with the DSHS IDCU to conduct state-wide influenza surveillance activities.

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 Influenza Like Illness (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 Public Health Lab (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. Continue laboratory-based viral subtyping surveillance for A non-subtypable isolates

4. The DSHS 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 DSHS 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.
 - 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 that 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.

D. Gillespie County Influenza Surveillance: The Gillespie County Public Health Nurse through DSHS, conducts influenza surveillance activities throughout Gillespie County, in collaboration with its partners which include the hospital, physicians, medical clinics, and schools.

1. Syndromic Surveillance – The Redbat Syndromic Surveillance system is in place in each hospital in the GCEPTF area. As symptoms are entered into the surveillance program, values are assigned to each. These are then assessed for Flu-like illnesses, in addition to GI-like, Pulmonary-like, Rash-like, and Encephalitis-like illnesses. The Hospitals report these data to DSHS Region 8 daily, where it is reviewed and analyzed.
2. School Absentee Data – Currently data is obtained from FISD and HISD and Doss Consolidated Common School District weekly on school absenteeism. These data are reviewed weekly to identify any trends in absenteeism as indicators of illness in the

community. Frequency of reporting will be increased as justified by regional condition and will include all Day Care Centers.

3. Over-the-Counter (OTC) Medication sales Surveillance – Recent studies have indicated that monitoring of OTC pharmaceutical sales gives an early warning of developing community-wide illnesses (Magruder, 2003). In accordance with CDC recommendations, EMC will request from local pharmacies a report of sales of nine drug classes on a weekly basis.

Table 1. Classes of drugs likely to be prescribed or purchased for influenza like illnesses

Medication
Cephalosporin*†
Cough suppressant with another medication*†
Cough suppressant with bronchial-pulmonary antimicrobial drug*†
Expectorant*† Mucinex, Robitussin, guaifenesin
Topical nose cream*†
General rhinosinusitis preparation*
Macrolide* erythromycin etc.
Nasal decongestant* Mucinex, Afrin, Sudafed, Benadryl, Claritin, etc.
Nonnarcotic analgesic* ibuprofen, acetaminaphen, aspirin, etc.
Other antimicrobial agent*
Penicillin*
Rhinocorticoids without antiinflammatory agent*
Tetracycline in association with another medication*
Vitamin C only*
Pharyngeal antiinflammatory decongestant throat lozenges, Chloraseptic
Antiviral except anti-HIV
Cough suppressant only Triaminic Cold & Cough, Vicks 44
Nasal antiinflammatory except corticoids
Vitamin C in association with another medication

*Significant ($p < 0.05$) medication classes that were included in the 1-, 2-, and 3-week-ahead national predictive models.

†Medication classes included in >50% of regional predictive models.

4. Reportable Disease Reporting - Local health care providers and laboratories report via phone and fax identification of any reportable disease on a regular basis to the Gillespie County Public Health Nurse. Influenza reports are made from local health providers.

5. Animal Surveillance – The EMC will contact the local veterinarians and request that they report any unusual clusters of animal deaths or suspected cases of Avian Flu to the Gillespie County Sanitarian who will distribute the information as is appropriate.

1.3 PREVENTION AND CONTAINMENT

PHASE 1 and 2

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

A. Non-pharmaceutical Interventions

1. In order to provide informed recommendations, the GCEPTF 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 City/County Attorney's Offices and the Fredericksburg City Council and/or Gillespie County Commissioners Court, utilizing Guide for Public Health Authorities in a Public Health Emergency (www.dshs.state.tx.us/comp/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

4. Websites useful to the public in preparation for pandemic influenza can also be found in Appendix F. Implement strategies for Inter-pandemic Period Phases 1 and 2.

5. 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 EMC 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. GCEPTF will demonstrate steps consistent with CDC guidelines to insure equitable distribution, access, and follow-up to vaccines.

- ii. DSHS and GCEPTF is working with community partners to provide

information in English and Spanish.

- Vaccine Information Sheets (VIS) and other educational materials are available in English and Spanish.
- 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, i.e. Good Samaritan Center
 - 3) Community Attendant Services,
 - 4) Community Living Assistance and Support Services,
 - 5) Deaf-Blind/Multiple Disabilities Program, i.e. New Horizons
 - 6) Home and Community-Based Services,
 - 7) Medically Dependent Children Program,
 - 8) Texas Home Living Waiver, and
 - 9) Hospice
 - 10) Golden Hub
 - 11) Home health care agencies in Gillespie County.

c. Identify immigrant health issues and plan solutions with the Office of Border Health and other applicable agencies.

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, 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 vaccine-preventable 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).

iii. While GCEPTF is not responsible for border communities, many such immigrants, authorized and unauthorized, live and work in Gillespie County.

d. GCEPTF and SNS are developing 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 appropriate 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 GCEPTF in collaboration with the hospital, medical clinics, physicians, and nursing homes will maintain an inventory of available supplies of antiviral medications (Appendix K) to include the following:

i. Working with DSHS, determine the potential supply of antivirals that are available from Texas drug wholesalers (actual inventories will vary on a day to day basis; this info obtained from DSHS Pharmacy Branch)

ii. Determine supply of any existing hospital based stockpiles.

iii. With DSHS, determine the amount of amantadine needed for patients taking the drug for conditions other for flu treatment, including Parkinson's Disease.

- 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 Gillespie County Public Health Nurse 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 by the DSHS. Vaccine adverse reactions will be reported through this system, which is currently used to report vaccine adverse reactions including influenza. 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.

- DSHS Immunizations receives reports of injuries or complaints associated with drugs, which are then investigation by DSHS Epidemiology. These reports are forwarded to the DSHS DMDG,

which then forwards reports of drug injury to the Food and Drug Administration MedWatch, but also maintains these reports in their database.

iii. Gillespie County Public Health Nurse will coordinate with Health Care Providers throughout the City/County to ensure adequate follow-up and/or monitoring with regard to adverse reactions to vaccines and antivirals amongst special populations.

g. Ensure the City/County Attorney's Office, in conjunction with the GCEPTF:

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

h. Utilize the GCEPTF SNS Plan as a mass clinic template. The plan will be made 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 GCEPTF 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 EMC will be the primary point of contact. If activated, the SNS Push Pack will be the primary source of supply and the Vendor Managed Inventory is the secondary source of supply.
 - k. The DSHS Drug and Medical Devices Group 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.
 - l. GCEPTF, STRAC/REMPSC ensure plans for credentialing 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 state 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 [Director of Health](#) 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.
 - m. Collaborate with private and public sector stakeholders in planning:
 - i. Determine private sector roles, responsibilities, and capabilities
 - 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
 - n. Ensure MHMR resources and substance abuse assets are identified and included in planning, exercising and response activities in accordance with the Disaster Mental Health Annex O of the Basic Emergency Management Plan
 - o. Participate in the state and regional exercises:
 - 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

GCEMTF in conjunction with DSHS 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. 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 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.
- c. 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.
 - 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 vice 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.
- d. Encourage poultry industry workers to be vaccinated for seasonal influenza.
- e. Enhance Pneumococcal vaccination coverage levels for eligible children and adults to reduce the incidence or severity of secondary bacterial pneumonia (Appendix L).
- f. Develop Standing Delegation Orders (SDO)/protocols for:
 - 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. GCEPTF in conjunction with public and private sector stakeholders as appropriate is actively addressing the following:

1. Collaborate with the appropriate agencies to inventory and identify resources.
2. 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 DSHS Epidemiological Response Teams, will participate as needed.
3. Review major elements of the health sector and essential non-health sector response plans as requested.
4. Develop, based on the disease epidemiology, protective action recommendations specific to the disease to be implemented during the pandemic.
5. Estimate the impact of pandemic influenza on essential services.
6. 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.
7. Convene annually to review the existing Pandemic Influenza Plan. The GCEPTF is responsible for assuring maintenance, updates and annual review of the plan. The GCEPTF members with responsibility for particular sections of the plan are responsible for coordinating the review of their sections.
8. Participate in a tabletop exercise as training for an All Hazards/pandemic event, as needed.
9. Update public and private sector stakeholders including special populations and the public with current information and non-pharmaceutical prevention strategies.

B. GCEPTF will:

1. Coordinate data collection; collect data from appropriate sources, in conjunction with STRAC, to maintain an 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. Suggest that 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 those communities; and for determining pre-event health-related needs.
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 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. GCEPTF and the City/County Attorney's Office 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.

1.5 COMMUNICATIONS

PHASE 1 and 2

A. DSHS- Gillespie County participates in the Tx 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. The Gillespie County Public Health Nurse receives health alerts directly from the CDC's ProMed as well as the HAN.
 3. The Gillespie County Public Health Nurse maintains its own records in the contact database and auto-forward health alerts to the local contact list.
 4. GCEPTF utilizes a redundant communication system including radio, fax, conventional telephone, email, mobile phone and hand held devices.
 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 DSHS and local health care providers.
2. Targeting of Communications: the Emergency Operation Center 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 EOC.
4. Web-based communications systems may 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 communication will be in accordance with the Gillespie County Emergency Management Plan.
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 key messages/fact sheets relating to currently circulating virus(es) and pandemic influenza.
4. Identify and train spokespeople for response to pandemic influenza.
5. 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.
6. Establish and update a Web page for pandemic influenza information as part of the City of Fredericksburg web site.
7. Maintain channels for activating CDC Public Response Line (hotline) and provide information to other emergency information resources including the Emergency Operations Center.
8. Assure that public information dissemination is a part of any exercise or training for pandemic influenza response.
9. Maintain resource lists to facilitate communication with media, and public and private sector stakeholders.

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 The Emergency Management Coordinator for the Gillespie County will be notified of the Pandemic Alert Phase through the Health Alert Network by TxDSHS, in addition to other resources – CDC, etc.
2. The Emergency Management Coordinator will review and update the plan in conjunction with key private and public sector stakeholders at community, regional, and state levels.
3. The Emergency Management Coordinator will:
 - a. Confirm on an annual basis the availability of resources to support a pandemic response
 - b. Serve as the local IC for community distribution of developed state and national communication.

B. Upon Identification in Texas, outside Health Service Region 8

1. Department of State Health Service Incident Command (IC) activated. GCEMP 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 Operation Center if activated. If the State Operation Center is activated Gillespie County Emergency Operations Center and the Regional Medical Operations Center (RMOC) will be at partial activation.

C. Gillespie County and/or DSHS Health Service Region 8 Identification

1. Begin tracking expenses for all Gillespie County agencies and providers. Each agency will track their own expenses. In the event of presidential disaster declaration, partial reimbursement through the Federal Emergency Management Agency of allowable expenses should be anticipated.
2. The Gillespie County IC will convene the Gillespie County Emergency Task Force to determine next steps.
3. The Gillespie County IC will review major elements of the plan, modifying as necessary.
4. The Gillespie County IC will operationalize plans for Gillespie County Identification Pandemic Alert Phases 3 & 4 in conjunction with key private and public sector stakeholders (DSHS, DSHS HSR 8, Mental Health Mental Retardation, Regional Emergency Medical Preparedness Steering Committee/South Texas Regional Advisory Council, Regional Medical Operations Center, Emergency

Hospital Disaster Group, Gillespie County Judge, City of Fredericksburg Mayor and City Manager, Gillespie County Emergency Management, etc).

5. Emergency Management Coordinator will utilize the Health Alert Network Alert system to notify local stakeholders and hospitals via fax/email and emergency public information channels.

6. The Emergency Management Coordinator will:

- a. Activate local Pandemic Influenza Plans at the Texas Pandemic Alert Phases 3 and 4,
- b. Confirm availability of resources to support a pandemic response, and
- c. Serve as the regional/local IC for community distribution of developed state and national communication.

7. Enhanced activities will be initiated:

- a. Surveillance
- b. Communication through the Health Alert Network

8. Responding agencies and support components, with the City of Fredericksburg Department of Finance, Gillespie County Treasurer and the GCEPTF technical assistance, will determine funding needs and process.

- a. Key government officials will be notified of funding needs
- b. Responders, agencies 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 Gillespie County Emergency Operation Center. GCEMP Annex H is the framework for convening and activating local responses. The Emergency Operation Center 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. Emergency Management Coordinator will be on high alert and will continue to monitor events as above by establishing 2 shift EMC coverage and 24 hour Dispatcher operations.

D. Gillespie County and/or HSR8 Identification:

1. Activate the Gillespie County Emergency Operation Center. GCEMP Annex H is the framework for convening and activating local responses. The Gillespie County Emergency Operation Center 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. Emergency Operation Center will initiate communication and interfacing with regional, state, and national counterparts, including the CDC.
 3. The Gillespie County Emergency Operation Center will communicate with the GCEPTF to determine next steps.
 4. The Emergency Operation Center will determine communications needs and alert and/or mobilize necessary resources and organizations as applicable including the establishment of a hotline operations to handle incoming calls diverting them from overloading the Dispatch operation..
 5. The Emergency Management Coordinator will:
 - a. Continue to collaborate with regional 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 Pandemic Influenza Plans at the Pandemic Alert Phase 5
 6. Gillespie County 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. Gillespie County Emergency Operation Center will be responsible for directing the work of the reassigned staff.
 7. Meet with all participating partners to review the critical elements and expectations of the Pandemic Influenza Plan.
 8. 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).
 9. Collaborate with the infectious disease specialists and influenza experts (Appendix Q) in the review and revision of the prevention and control measures,
 10. Enhanced activities will be initiated:
 - a. Surveillance
 - b. Communication through the Health Alert Network
 11. Responders and support components, with the Gillespie County Emergency Operation Center Financial Section Chief and the GCEPTF 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
 12. Expenses will continue to be documented through the event Gillespie County Emergency Operation Center structure.
 13. Hospital 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. Continue influenza surveillance as during Interpandemic Period.

B. North American Identification.

1. There should be emergency notification if avian influenza (H5N1) or other virulent subtype is identified. A Health Advisory Network Advisory will be sent notifying public health officials and clinicians.

C. Texas Identification

1. The Emergency Management Coordinator will cooperate with the Gillespie County Public Health Nurse DSHS Region 8 requests to laboratory directors, Infection Control Practitioners, physicians, directors of emergency rooms and urgent care centers with patients presenting with Influenza Like Illness 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 Health Alert Network 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. Gillespie County Public Health Nurse DSHS Region 8 will coordinate assistance for specimen transport to state 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, (a secured Web site), and the Health Alert Network may be used.
4. The Emergency Management Coordinator in coordination with the Gillespie County Public Health Nurse DSHS Region 8 will initiate meetings with necessary public and private sector stakeholders and partners to review elements of enhanced surveillance.
5. The DSHS laboratory will:
 - 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.

D. Gillespie County and/or Region 8 Identification

1. The Emergency Management Coordinator will act in accordance with state level plans:
 - a. The Emergency Management Coordinator in conjunction with the Gillespie County Public Health Nurse DSHS Region 8 will request laboratory directors, Infection Control Practitioners, physicians, directors of emergency rooms and urgent care centers with patients presenting with Influenza-Like Illness 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 Health Alert Network 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. Gillespie County Public Health Nurse DSHS Region 8 will coordinate assistance for specimen transport to state 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, (a secured Web site), and the Health Alert Network may be used.
4. The Emergency Management Coordinator and the Gillespie County Public Health Nurse DSHS Region 8 will initiate meetings with necessary public and private sector stakeholders and partners to review elements of enhanced surveillance.

PHASE 5

A. International Identification.

1. In Gillespie County, 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 hospital and medical clinic sites.

2.3 PREVENTION AND CONTAINMENT

PHASE 3 AND 4

A. International / North American Identification

1. Expedite completion of Inter-pandemic 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 Emergency Management Coordinator 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).
- b. Review the Emergency Management Assistance Compact (EMAC), 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.
- c. Review written material from the City Attorney's Office and County Attorney's Office regarding medical and public health control legislation and liability issues related to delivery of biologic agents (e.g., vaccine, antivirals).

B. Texas Identification, including but not limited to Region 8

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 GCEPTF 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).
- b. Review the current antiviral supply estimates to determine the appropriate use of the limited antiviral supply (Appendix K).
- c. Modify the Gillespie County 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 Health Alert Network 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 Gillespie County.

- g. Emergency Management Coordinator will:
 - i. Notify medical community of plan status and vaccine availability.
 - ii. Notify Recognized Community Health Providers and Community Health Workers of vaccine availability and client options for obtaining vaccine.
 - iii. Distribute vaccine guidelines to medical community.

PHASE 5

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 Pandemic Response Team will:

- a. Ensure all elements of the Gillespie County Emergency Management Plan 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. 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 Health Alert Network.
 - 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. Consent forms 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 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 local partners, including volunteer agencies.

- i. Ensure appropriate policies, protocols, and memoranda of understanding are in place.

2.4 HEALTH SYSTEMS RESPONSE

PHASE 3 AND 4

A. International identification

The Emergency Management Coordinator and GCEPTF will:

1. Review the critical elements and expectations of the City of Fredericksburg/Gillespie County Officials and Pandemic Influenza Preparedness Plan.
2. Encourage hospital and congregate facilities to review and update their Pandemic Influenza Plans.
3. Maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.
4. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, emergency rooms, Recognized Community Health Providers, and Community Health Workers within their own jurisdictions.
5. 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 Pandemic Response Team will:
 - a. Meet with all appropriate partners to review the critical elements and expectations of the Gillespie County Pandemic Influenza Preparedness Plan
 - b. Emergency Response Plans will be activated.

2. Emergency Management Coordinator and GCEPTF will:
 - a. 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 room within their own jurisdiction.

 - 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

A. International Circulation

1. The Emergency Management Coordinator and GCEPTF will:
 - a. Continue strategies of Phases 3 and 4.

B. North American / Texas Circulation

1. The Emergency Management Coordinator and the GCEPTF will:
 - a. Meet with all the participating partners to review the critical elements and expectations of the Pandemic Influenza Preparedness Plan.
 - 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.

2. Hospital will:
 - a. Implement health care setting prevention and control procedures as appropriate (Appendix N).

2.5 COMMUNICATIONS

PHASE 3 & 4

A. Health Alert Network

1. Alert Notification: the Health Alert Network 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 Health Alert Network emergency contact database if required. The Health Alert Network staff will coordinate with DSHS Infectious Disease Control Unit 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 by AACOG and all involved public health entities will use to pass Situation Reports (SitReps) and other real time information between agencies.

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 Health Alert Network. Modifications will be made accordingly.

a. Coordinate the notification of all appropriate agencies, statewide professional organizations and the Public Health Laboratory directors that a novel virus has been identified in a single human case. The Health Alert Network 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 Gillespie County Emergency Management Crisis and Emergency Risk Communication Guidelines:

- a. Develop standardized messages about novel viruses. Share messages with South Texas Regional Advisory Council, Regional Medical Operations Center, Emergency Hospital Disaster Group, and other local partners via email/fax distribution and the Health Alert Network.
- b. Work with partners to ensure consistent messages are delivered.
- c. Update fact sheets, flyers and frequently asked question sheets. Provide information in Spanish.
- d. Update Web page as needed.
- e. Gillespie County Emergency Management PIO and DSHS PIO (or designees) will serve to form the Joint Incident Command under the Unified Command System.
- f. Confine communications with the media to designated spokesperson(s).

PHASE 5

A. HAN

1. Alert Notification: the Health Alert Network 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 Health Alert Network emergency contact database if required. The Health Alert Network staff will coordinate with DSHS Infectious Disease Control Unit 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

B. Communications with Health Care Professionals

1. Human-to-human transmission confirmed: Designated Emergency Operations Center/Hill Country Memorial Hospital command center will be responsible to communicate pandemic response updates and recommendations of the DSHS Epidemiological Response Teams to targeted health care professionals or agencies that serve healthcare professionals.

C. Public Information Dissemination

1. As per the Crisis and Emergency Risk Communication 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.
 - e. Update Web page at least daily or as needed.
 - f. PIO (or designee) continues to serve in the Joint Incident Command under the Unified Command System.
 - g. Continue restricted release of information on pandemic influenza through designated spokesperson(s) only.

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 Gillespie County EOC. The Gillespie County EOC structure will be determined by the size and scope of the event, and by development and needs identification by the Gillespie County Emergency Preparedness Task Force.
2. The Gillespie County Emergency Management Coordinator, will activate the Pandemic Period of the Plan. All GC Emergency Preparedness Task Force Members will be made available for response activities. Public Health Officials will ensure that surveillance is enhanced. Government officials will already have been notified via existing protocols.
3. The Gillespie County Emergency Management Coordinator, will convene the top level of the Incident Command System to determine next steps.
4. The Gillespie County Incident Command Center Staff will determine communications needs and alert and/or mobilize necessary resources and organizations as applicable.
5. If needed, the Emergency Management Coordinator will submit requests for assistance through the Gillespie County Judge the, Region 8 RMOC, DSHS office to SOC GDEM
6. The Gillespie County EOC Logistics and Operations Section will monitor staffing needs, request additional staff and re-assign personnel as necessary.
7. On-going communication with DSHS will continue.
8. Expenses will be documented through the Gillespie County Incident Command Financial Section.

3.2 SITUATION MONITORING AND ASSESSMENT

- A. Surveillance and reporting to GC EOC and the local DSHS office continues.
- B. Enhanced GC EOC surveillance activities may include:
 - 1. Monitoring attendance within schools.
 - 2. Reporting from the hospital to the GC EOC and RMOC via WebEOC will include:
 - a. Number of patients on ventilators
 - b. Number of available ventilators
 - c. Number of beds occupied
 - d. Number of beds available
 - e. Estimates of staffing levels (MDs, nurses, ancillary)
 - f. Number of deaths due to any respiratory illness (ICD-9 480-486 and 487)
 - g. Emergency room visit trends, syndromic surveillance
 - 3. Monitoring of essential infection control supplies at health care clinics and suppliers/distributors
 - 4. Community and physician owned clinics reporting enhanced Influenza-like Illness activity
 - 5. Surveillance for retail over-the-counter medication purchases
- C. Culture screen reporting from local clinics and the hospital
 - 1. All positive cultures performed will be reported to GC EOC and to DSHS through the Public Health Nurse.
- D. Use of patient self-screening tools (e.g., Severe Acute Respiratory Syndrome) in emergency rooms and healthcare facilities.
 - 1. 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 Hill Country Memorial Hospital and providers in Fredericksburg and Gillespie County (clinics, etc.). Reporting will follow current communicable disease reporting methods.
- F. Specimen selection will be determined by Gillespie County Public Health Nurse in conjunction with the DSHS Epidemiology Division. Specimens will be screened at the collecting hospital or clinic for influenza and then sent to the DSHS laboratory as directed to identify the novel subtype.

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 Public Health Nurse under the direction of DSHS Region 8 will:

- a. Ensure all elements of the Gillespie County 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 Emergency Management Coordinator 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.
- 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.
- h. Conduct Just In Time training on pandemic policies and protocols for local partners, including volunteer agencies.
- i. Ensure appropriate policies, protocols, and memoranda of understanding are in place.
- j. Prepare to activate distribution system according to local plans.

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 Gillespie County Emergency Management Incident Command staff through the DSHS

(vaccines) and the DSHS SNS Coordinator (antivirals). The DSHS 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, HSR8, and Gillespie County. It is assumed at the early stage, the state will coordinate ordering (Appendix S).

iii. Gillespie County Emergency Management Incident Command staff through the DSHS (vaccines) and the DSHS SNS Coordinator (antivirals). will estimate numbers in priority groups based on available data.

iv. County allotment will be determined by county priority group percent of total Texas priority group population.

v. The DSHS (vaccine) and SNS Coordinator (antivirals) will be notified by the CDC of the total number of doses available for each priority group in Fredericksburg / Gillespie County.

vi. HSR8 will be allowed to make adjustments in county allocations

vii. The DSHS (vaccine) and SNS Coordinator (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 HSR8 will coordinate distribution.

i. The DSHS (vaccine) and SNS Coordinator (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 HSR8. Security will be provided at deployment site as well as regional and/or local receiving site.

iii. The GCEPTF 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 HSR8. DSHS / Gillespie EOC will distribute to relevant providers and locations 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 just in time training sessions for staff to acquaint local providers, volunteers, and local partners with issues related to the delivery of vaccines (e.g., teleconference)

vi. Gillespie County EOC will notify the DSHS DMDG of affected regions and request supply and contact information to be forwarded to affected regions. The state will be prepared to contact the SNS for Push Pack and the VMI backup resources, if authorized by the State Epidemiologist

vii. Gillespie County Public Health Nurse / Emergency Management Coordinator will:

- Arrange vaccine and antiviral distribution within Fredericksburg / Gillespie County 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. Local DSHS/ Gillespie EOC is responsible for vaccine storage and security at mass clinic sites.
- Assure printing the VIS in quantities for Spanish / English languages in the community that are sufficient to meet the needs of public clinics if able, or request forms from the Local DSHS that can be delivered in 24 hours.
- Distribute the VIS to all relevant sites where workers are identified as priority recipients and to public clinic sites
- FPD and Gillespie County Sheriffs Office will coordinate securing of 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
- Track distribution of vaccine and antivirals through the TIMS (Appendix T) or Countermeasure Response Administration System module if available.

c. Administering Pharmaceuticals

Local Public Health Nurse / Emergency Management Coordinator 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 partners and private sector stakeholders.
- ii. Develop specific standing orders for vaccine administration and treating adverse reactions signed by the local health authority.
- iii. Administer vaccine or antivirals to priority groups as defined by the CDC and the DSHS.
- iv. Use local emergency response plans developed by Gillespie County/Fredericksburg for administration of vaccine and prophylactic medications.

d. Monitoring and tracking

- i. Vaccine and antiviral distribution and administration will be monitored by the Local 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. Local DSHS will hold the primary responsibility for data entry. Assistance of HSR8 may be requested if there is a shortage of staff. HSR8 has 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 local partners and providers through-Local **DSHS**. 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 DSHS Vaccines for Children Program or those administered in a public health clinic must be reported to the DSHS Epi Division on the VAERS form (DSHS Form C-76). This form may be either mailed or faxed (210-207-8807). The **DSHS Epidemiology Division** will review these forms and submit copies of these to the national VAERS office via mail or fax. The **DSHS Epi Division** will enter the VAERS forms from the 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 by 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 Inter-pandemic Period.

3.4 HEALTH SYSTEMS RESPONSE

A. International/National/ Texas Circulation

1. Gillespie County Emergency Management Coordinator will:
 - a. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, and emergency room within their own jurisdictions.
 - b. Recommend healthcare system providers activate PI plans.

2. Disaster Mental Health:
 - a. Response activities of the Human Services Annex O to the Gillespie County / Fredericksburg Emergency Management Plan are implemented. These agencies may be required to coordinate external behavioral health resources in the provision of stress management and crisis counseling services for responders and disaster survivors.

3.5 COMMUNICATIONS

A. HAN

1. Alert Notification: the Local Public Health Nurse / staff will continue to monitor the delivery of health alerts and maintain backup and redundant communications systems as needed.
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

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 Public Health Nurse 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. According to the Gillespie County/City of Fredericksburg Guidelines:
 - a. Develop messages about novel viruses. Share messages with STRAC, RMOC, EDHG, and other local partners via email/fax distribution.
 - b. Work with partners to ensure consistent messages are delivered.
 - c. Update fact sheets, flyers and frequently asked question sheets. Provide information in English, Spanish and other languages as needed.
 - d. Update Web page as needed.
 - e. Gillespie County PIO, City of Fredericksburg PIO, Hill Country Memorial Hospital PIO, and DSHS PIO (or designees) will serve to form the JIC under the Unified Command System.
 - f. Confine communications with the media to designated spokesperson(s) and Gillespie County Press Officer (or designee).

4.1 PLANNING AND COORDINATION

- A. The GCEPTF will review procedures from first wave and make adjustments as necessary.
- B. Continue vaccination efforts.
- C. The EOC 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 City of Fredericksburg Department of Finance/Gillespie County Treasurer.

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 Subsidized Period strategies.
- 2. Encourage personal use of non-pharmaceutical interventions including hand hygiene, respiratory hygiene, and cough etiquette to prevent pandemic influenza.

B. 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 Vaccine Adverse Events Reporting System (VAERS).

4.4 HEALTH SYSTEMS RESPONSE

4. SUBSIDED PERIOD	Between waves	A.
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Collaborate with DSHS HSR8 and 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 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

B. Communications with Health Care Professionals

1. Communication efforts will continue as described above in the Pandemic Alert Period, Phase 5:

2. Designated DSHS Region 8 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. According to the Gillespie County CERC Guidelines:

- a. Develop messages about novel viruses. Share messages with STRAC, RMOC, EDHG, and other local partners via email/fax 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. EOC and DSHS PIO (or designees) will serve to form the JIC under the Unified Command System.
- f. Confine communications with the media to designated spokesperson(s) and EOC PIO (or designee).

5.1 PLANNING AND COORDINATION

- A. The GCEPTF and EOC will convene to debrief from response activities.
- B. The GCEPTF and EOC will communicate the status of the response throughout the HSR8 and public/private sector stakeholders.
- C. GCEPTF and EOC 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 HSR8 offices and public and private sector stakeholders).
- E. The Pandemic Influenza Plan will be reviewed and updated by the GCEPTF 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 GCEPTF EOC Finance Department.
- G. After Action Reports will be generated and disseminated appropriately.
- H. The GCEPTF and EOC communication with the SOC/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. GCEPTF and Emergency Management will initiate a multidisciplinary team of invited local medical and public health experts representing organizations/agencies such as the DSHS HSR8, Organizations dealing with Special Needs, and behavioral health organizations to carry out analyses. Analysis may include: Document influenza outbreaks in different populations in Gillespie County.
 - 1. Determine age-specific attack rate, morbidity and mortality.
 - 2. Describe unusual clinical syndromes (as well as risk factors for those syndromes and

5. POSTPANDEMIC PERIOD

End of Pandemic and return to Interpandemic Period.

- 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. GCEPTF 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 countywide 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 Gillespie County Public Health Nurse may be tasked with gathering this information.

D. City/County data would be analyzed and distributed by Gillespie County Public Nurse. 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 Subsidized 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.

B. 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 as appropriate.
4. Assure completion of all vaccine and antiviral paperwork: distribution, tracking, and compliance record keeping.
5. Reconvene the GCEPTF to debrief. Public and Private partners 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. GCEPTF and EOC will:

1. Notify involved agencies re: change of status to Post-pandemic 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. Disaster Mental Health:

1. Gillespie County Public Health Nurse will coordinate the assessment with the Department of Aging and Disability Services.
3. Gillespie County Public Health Nurse will coordinate the assessment of the impact on Substance Abuse Providers.
4. Gillespie County Public Health Nurse will provide technical assistance, including FEMA Public Assistance, to Health and Human Service Commission Risk Management, DSHS, and Substance Abuse providers.
5. Department of Mental Health Services 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 Texas Association of Local Health Officials 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 public and private stakeholders

about end of pandemic.

2. The GCEPTF will reconvene to discuss the communications strategy and conduct a process review. Modifications will be made as necessary.

C. Public Information Dissemination

1. According to the GCEPTF 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.

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 City of Fredericksburg Web (www.fbgtx.org)page as needed.

g. Evaluate when to reinstate the Open Door media policy.

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Appendix B:
Key Roles and Responsibilities

Appendix B:
Key Roles and Responsibilities
Pandemic Influenza Response

	Emergency Management Coordinator in conjunction with GCEPTF	GCEPTF	Gillespie County Public Health Nurse, or designee
Inter- pan- dem- ic Peri- od Phas- es 1 and 2	<ul style="list-style-type: none"> • Lead in GCEPTF public health, mental health and health-care related response to pandemic influenza. • Maintain information resource list. Works with the Gillespie County Public Health Nurse in state's response. 	<ul style="list-style-type: none"> • Develop, review and update the plan annually. • Look for funding sources to sustain Influenza plan. 	<ul style="list-style-type: none"> • Review state-wide influenza data, syndromic surveillance, lab information .
Pan- dem- ic Aler- t Peri- od Phas- es 3, 4, and 5	<ul style="list-style-type: none"> • Operationalize plan in conjunction with key partners • Along with the Gillespie County Public Health Nurse, coordinates a review of essential elements of vaccine distribution plan with major stakeholders. • 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. 	<ul style="list-style-type: none"> • Convene to review plan and modify as necessary. 	<ul style="list-style-type: none"> • Track influenza activity
Pan- dem- ic Peri- od Phas- es 6	<ul style="list-style-type: none"> • Coordinates pandemic influenza response with the EOC • Provides standard communication with agency and other state and national agency counterparts. • Implement and coordinate the response using existing Pandemic plan as framework. • Assess available resources and communicate needs to the EOC. • Ensures vaccination of priority groups as vaccine becomes available. 	<ul style="list-style-type: none"> • Work with Gillespie County Public Health Nurse to ascertain the continued availability of resources. 	<ul style="list-style-type: none"> • 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.
Sub- side- d Peri- od	<ul style="list-style-type: none"> • Evaluate the Gillespie County IC response during first wave and make adjustments • Evaluate resources • 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 	<ul style="list-style-type: none"> • Evaluate how well plan worked in first wave and make adjustments 	<ul style="list-style-type: none"> • Evaluate epidemiological data from first wave. • From data, determine groups most impacted and examine priority groups for vaccination and antivirals.
Post- Pan- dem- ic	<ul style="list-style-type: none"> • Communicate status of response throughout involved agencies and the community • Recommend changes in the existing plan, once analysis is finalized. • Receive community-specific analysis and distribute 	<ul style="list-style-type: none"> • Conduct retrospective analysis of the process and documents. 	<ul style="list-style-type: none"> • Monitor any cases for long-term residual sequelae.

Appendix C: Incident Command System

The City of Fredericksburg/Gillespie County Incident Command System (ICS) complies with the National Incident Management System guidelines. This utilized to bring about a coordinated multi-disciplinary agency response. It will be activated at the direction of the Mayor/City Manager and/or County Judge in response to a public health emergency or at the direction of the GDEM. Once activated, the EOC will be housed at City Hall. Key individuals at the EOC such as the incident commander 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 public funds to resolve emergency and/or disaster requirements.

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.

**EMERGENCY OPERATIONS CENTER
ORGANIZATION CHART**

EMERGENCY OPERATIONS CENTER

1. Organization & Staffing

- A. The diagram depicted on the previous page is for Full Activation. For a partial activation of the EOC, only those staff members required to deal with a particular emergency situation will be summoned to the EOC.

- B. The Emergency Management Coordinator shall maintain and distribute a current EOC Staff Roster, including the names of EOC team members and contact information for those individuals.

2. EOC Operations

General operating guidelines for the EOC are provided in Emergency Management Plan Annex N.

Appendix D:
Stakeholders Providing Input into Plan

Appendix D:
Stakeholders Providing Input into Plan

AGENCY	NAME
South Texas Regional Advisory Council	
Emergency Hospital Disaster Group	
Hill Country Memorial Hospital	
DSHS HSR8	
City of Fredericksburg	
County of Gillespie	

Appendix E

For Future Use

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 the Gillespie County/Fredericksburg plan. Just as with other natural disasters (floods, tornadoes, severe weather), 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 other natural disasters, 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 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 other natural disasters. 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.

Appendix F:
Personal Protective Strategies

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
<p>Interpandemic Period / 1 & 2</p> <p>Phase 1 – No new virus subtypes identified</p> <p>Phase 2 - “Novel virus” identified in birds or animals.</p>	<ul style="list-style-type: none"> • Obtain annual seasonal flu vaccine or nasal spray. DSHS recommendations are found at www.dshs.state.tx.us/news/releases/20051007.shtm <ul style="list-style-type: none"> ○ 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®). ○ 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 needed --www.cdc.gov/nip/diseases/pneumo/default.htm <ul style="list-style-type: none"> ○ The Pneumococcal Conjugate vaccine (PCV7, Prevnar) is a required for all children

<p>Transmission to humans has not occurred.</p>	<p>who are two (2) months through fifty-nine (59) months of age attending child-care or pre-kindergarten programs in Texas. Be sure your children are up-to-date.</p> <ul style="list-style-type: none"> ○ The Pneumococcal Polysaccharide vaccine (PNV23) for persons older than 2 years may help prevent some complications of pneumonia associated with influenza. If you are in any of the following group, you should get the vaccine: <ul style="list-style-type: none"> ▪ 65 years of age or older ▪ 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: <ul style="list-style-type: none"> - 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. <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> ○ Hand hygiene: washing and use of hand sanitizer. ○ Cover nose and mouth with tissue when coughing or sneezing. ○ Routinely wipe down and disinfect work areas (i.e. keyboards, telephones, desks, etc.).
<p>Pandemic Alert / Phases 3 & 4</p> <p>Phase 3 – Transmission to humans from birds has occurred but no human-to-human spread.</p> <p>Phase 4 – small clusters of human-to-human spread.</p>	<ul style="list-style-type: none"> • Continue practices of Interpandemic Period • Seek information provided by local and national media avenues, the Texas Department of State Health Services (DSHS) website www.dshs.state.tx.us/ and the SAMHDA website http://www.samhda.org/, http://www.sanantonio.gov/health/, Fredericksburg City website at http://www.fbgtx.org. • 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. • 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.

<p>Pandemic Alert / Phase 5</p> <p>Phase 5 – larger but still localized clusters of human spread suggesting that virus is better adapting to humans but may not be fully transmissible.</p>	<ul style="list-style-type: none"> • 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. <p>The following preparations might be disturbing to think about, but they are good practices in preparation for any emergency:</p> <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> • 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 interrupted, grocery shelves will empty. Remember, any amount is better than none. One to two weeks will get you through a quarantine period. • 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.
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<p>Pandemic / Phase 6</p> <p>Increased and sustained transmission to humans. Indications of spread across countries.</p>	<ul style="list-style-type: none"> • 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, the Texas Department of State Health Services (DSHS) website www.dshs.state.tx.us/ and Fredericksburg City website at http://www.fbgtx.org, the SAMHD website http://www.sanantonio.gov/health/ 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. <ul style="list-style-type: none"> • Take illness preventative measures: <ul style="list-style-type: none"> ○ Cover your nose and mouth with a tissue when you cough or sneeze ○ Throw the tissue away after you use it; ○ 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) ○ Stay away, as much as you can, from people who are sick; ○ Stay home from work or school if you are sick; ○ Try not to touch your eyes, nose, or mouth – germs often spread this way; ○ Seek medical attention if you develop symptoms of a cold.
<p>Subsided Period</p> <p>The period between pandemic waves. At least 2 waves are expected.</p>	<ul style="list-style-type: none"> • Keep informed about the status of disease outbreaks through from local and national media avenues, Fredericksburg City website at http://www.fbgtx.org, San Antonio Metro Health http://www.sanantonio.gov/health/ 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.
<p>Postpandemic Period</p> <p>End of pandemic and return to Interpandemic Period</p>	<ul style="list-style-type: none"> • 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. However, 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 www.cdc.gov/mmwr/preview/mmwrhtml/mm5434a4.htm
Recommendations for pneumococcal vaccine	www.cdc.gov/nip/diseases/pneumo/default.htm
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

Interim Public Health Guidance for the Use of Facemasks and Respirators in Non-Occupational Community Settings during an Influenza Pandemic
May 2007

This document describes interim guidance for the use of facemasks¹ and respirators² in certain public settings during an influenza pandemic. Very little information is available about the effectiveness of facemasks and respirators in controlling the spread of pandemic influenza in community settings. In the absence of scientific data, this document offers interim recommendations that are based on public health judgment and on the historical use of facemasks and respirators in other settings. In brief, these interim recommendations advise the following:

- 1 • *Whenever possible, rather than relying on the use of facemasks or respirators, close contact³ and crowded conditions should be avoided during an influenza pandemic.*
- 2 • *Facemasks should be considered for use by individuals who enter crowded settings, both to protect their nose and mouth from other people's coughs and to reduce the wearers' likelihood of coughing on others. The time spent in crowded settings should be as short as possible.*
- 3 • *Respirators should be considered for use by individuals for whom close contact with an infectious person is unavoidable. This can include selected individuals who must take care of a sick person (e.g., family member with a respiratory infection) at home.*

Facemasks and respirators should be used in combination with other preventive measures, such as hand hygiene and social distancing, to help reduce the risk for influenza infection during a pandemic. This interim guidance will be updated as new information becomes available.

Introduction

In November 2005, the U.S. Department of Health and Human Services (HHS) published the *HHS Pandemic Influenza Plan* (www.hhs.gov/pandemicflu/plan), which provides public health guidance to national, state, and local policymakers and

¹Unless otherwise specified, the term “facemasks” in this document refers to disposable masks cleared by the U.S. Food and Drug Administration (FDA) for use as medical devices. This includes facemasks labeled as surgical, dental, medical procedure, isolation, or laser masks. Such facemasks have several designs. One type is affixed to the head with two ties, conforms to the face with the aid of a flexible adjustment for the nose bridge, and may be flat/pleated or duck-billed in shape. Another type of facemask is pre-molded, adheres to the head with a single elastic band, and has a flexible adjustment for the nose bridge. A third type is flat/pleated and affixes to the head with ear loops. Facemasks cleared by FDA for use as medical devices have been determined to have specific levels of protection from penetration of blood and body fluids.

²Unless otherwise specified, “respirator” in this document refers to an N95 or higher filtering facepiece respirator certified by the U.S. National Institute for Occupational Safety and Health (NIOSH).

³Three feet has often been used by infection control professionals to define close contact and is based on studies of respiratory infections; however, for practical purposes, this distance may range up to 6 feet. The World Health Organization defines close contact as “approximately 1 meter”; the U.S. Occupational Safety and Health Administration uses “within 6 feet.” For consistency with these estimates, this document defines close contact as a distance of up to approximately 6 feet.

health departments for use during an influenza pandemic. Among the infection control measures described in the *Plan* is the use of facemasks and respirators in the healthcare and community settings (see Part 2, Infection Control [Supplement 4] and Community Disease Control and Prevention [Supplement 8]). Since publication of the *Plan*, HHS has received many comments and inquiries about the use of facemasks and respirators during a pandemic.

The U.S. Centers for Disease Control and Prevention (CDC) is unaware of any major new scientific information related to either the transmission of influenza viruses or the effectiveness of facemask or respirator use in preventing the transmission of these viruses since the drafting of the *Plan*. However, given the requests for additional public health guidance, CDC has prepared this document to assist in planning for decisions regarding the use of facemasks and respirators during a pandemic. As used in this guidance, “non-occupational community settings” refer to places and locations other than workplace and healthcare settings (e.g., mass transit, public gatherings, households); interim guidance for workplace and healthcare settings is provided in other documents (see below).

For advice on surgical mask and respirator use in healthcare settings, consult the document, *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic*

(www.pandemicflu.gov/plan/healthcare/maskguidancehc.html), which provides a framework to facilitate planning for those settings. Together, the interim guidance documents for the healthcare and community settings augment and supersede information contained in the *HHS Pandemic Influenza Plan*, and they will be updated and amended as new information becomes available. A separate document, *Guidance on Preparing Workplaces for an Influenza Pandemic*

(www.osha.gov/Publications/influenza_pandemic.html), prepared by the U.S.

Department of Labor, provides guidance for facemask and respirator use in occupational settings (healthcare and non-healthcare) during an influenza pandemic. For more information about pandemic influenza, visit www.pandemicflu.gov.

Background

An influenza pandemic will likely cause illness in large numbers of people in almost every community worldwide. Influenza is thought to be transmitted from person to person by close contact (within 6 feet) with individuals who are infected with influenza virus (e.g., via exposure to respiratory secretions). It is unclear to what extent inhalation of small particles or direct exposure to larger droplets contributes to this close-range transmission of influenza viruses. Experience with influenza viruses transmitted from person to person in institutional settings indicates that most transmission occurs over short distances; long-distance transmission through the air (e.g., via ventilation systems) has not been demonstrated. For a more detailed discussion of influenza virus transmission, see Appendix A of *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings*

during an Influenza Pandemic

(www.pandemicflu.gov/plan/healthcare/maskguidancehc.html).

For many respiratory infections other than influenza, transmission occurs primarily during the later stages of illness when infected persons are likely to stay home or seek medical care. In contrast, influenza tends to be most infectious during the early stages of illness, especially just after the onset of coughing and sneezing. Therefore, much influenza transmission during a pandemic is likely to occur in non-healthcare settings, such as schools, public gatherings, and households. Although it is not possible to completely avoid all risk of becoming infected while continuing to interact with others in the community, individuals and households can use various strategies, including those described in this document and elsewhere (see below), to help limit the risk of exposure to themselves and their families.

Vaccination is generally considered the most effective way to prevent seasonal influenza. However, unlike the typical situation with seasonal influenza, an effective vaccine may not be available for all people early in a pandemic. Thus, current U.S. pandemic preparedness and planning efforts have included the coordinated use of nonpharmaceutical interventions to help reduce the spread of influenza. This approach is described in *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States — Early, Targeted, Layered Use of Nonpharmaceutical Interventions*

(www.pandemicflu.gov/plan/community/commitigation.html), which would be used in conjunction with this interim guidance for facemask and respirator use.

Community-based interventions include the following:

- 1 • isolation and treatment with influenza antiviral medications of persons with confirmed or probable pandemic influenza;
- 2 • voluntary home quarantine of members of households with confirmed or probable influenza cases;
- 3 • dismissal of students from schools and school-based activities, and closure of childcare programs coupled with protecting children through social distancing in the community; and
- 4 • social distancing of adults in the community and in the workplace.

One social distancing strategy is to avoid crowds, individuals with an influenza-like illness, and other situations that increase the risk of exposure to someone who may be infectious. If it is absolutely necessary to be in a crowded setting, the time spent in a crowd should be as short as possible. If used correctly (see below), facemasks and respirators may help to prevent some exposures while in a crowded setting; however, they should be used along with other prevention interventions, such as cough etiquette (see www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm) and hand hygiene (see www.cdc.gov/flu/protect/stopgerms.htm).

There is very limited information on the use of facemasks or respirators for the control of pandemic influenza in community settings. Thus, it is difficult to assess

their potential effectiveness in controlling influenza in these settings. In the absence of definitive data, this interim guidance document draws from the principles of traditional infection control and industrial hygiene approaches used for enhancing protection of healthcare personnel in the healthcare setting during an influenza pandemic. (For background, see *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic*; www.pandemicflu.gov/plan/healthcare/maskguidancehc.html). However, there are fundamental differences between the healthcare and community settings, including the following:

- 1 • in the healthcare setting, exposure to an infectious source is frequently intense and prolonged, which would be less likely in the community;
- 2 • in the healthcare setting, the infectious source (e.g., an ill person or contaminated item) is more likely to be known to be infectious than it would be in community settings; and
- 3 • in the healthcare setting, the ability to provide direct training in the proper use of facemasks and respirators is much more readily available than it is in the community setting.

Because of these and other differences, recommendations for the community setting differ from those for healthcare settings.

This document emphasizes that the use of facemasks or respirators is only one part of a combination of approaches that can be used to help reduce the spread of virus from infectious to non-infected persons. Guidance on community preventive measures is provided in *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States — Early, Targeted, Layered Use of Nonpharmaceutical Interventions* (www.pandemicflu.gov/plan/community/commitigation.html).

Certain practices related to taking care of a person infected with influenza at home can create potentially infectious aerosols and require more stringent precautions (e.g., use of a respirator by a caregiver in the home). Examples include giving nebulizer treatments to children with asthma who have influenza and providing care (e.g., suctioning) for people with chronic respiratory conditions. Specific guidance for friends or family members who need to provide care for ill individuals at home is currently in preparation and will be available at www.pandemicflu.gov.

If new information becomes available about the effectiveness of current or future facemasks or respirators in controlling influenza in community settings, this interim guidance document will be revised accordingly.

Recommendations

The timing and severity of the next influenza pandemic cannot be predicted. Information about the prevalence and severity of influenza in a pandemic may affect how these and other public health recommendations are applied. Once a pandemic is

under way and more is known about the characteristics (e.g., virulence, transmissibility, clinical manifestation, drug susceptibility, and risk to different age groups and subpopulations) of a given pandemic strain, these recommendations may be modified. (Appendix 1 summarizes the interim guidance for facemask and respirator use during a pandemic, and Appendix 2 provides a sample public fact sheet that describes these recommendations in lay language).

1 **1. Avoid the Source** During an influenza pandemic, people should avoid contact with ill individuals and with groups of people that might include infectious individuals. While close contact (within 6 feet) with an individual ill with influenza carries an increased risk of infection, more crowded conditions increase the probability of being exposed to infectious material (e.g., from coughs and sneezes). Crowded settings should be avoided to the greatest extent possible during a pandemic.

Some individuals, such as pregnant women and persons with certain underlying medical conditions (e.g., cardiopulmonary disease or immunodeficiency), are at increased risk for severe illness or complications from seasonal influenza infection, and they may likewise be at high risk during a pandemic as well. In addition to the usual risk groups, others may be at high risk for severe illness and complications during a pandemic (e.g., normally healthy children or young adults). It is especially important that all persons who are at high risk avoid crowded settings and adhere to recommended infection prevention practices.

2. **Contain the Source**

When individuals are ill with respiratory symptoms (e.g., coughing, sneezing) during an influenza pandemic, they should stay at home except when it is critically necessary to leave (e.g., to obtain medical care). Individuals with a respiratory illness should wear a facemask to contain respiratory secretions (e.g., to cover coughs and sneezes) if they are in the presence of others. For specific information about the use of facemasks by ill persons (“source control”), see *Interim Guidance for the Use of Masks to Control Influenza Transmission*

(www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm). For information about masks cleared by the FDA and legally marketed as medical devices in the United States, see *Masks and N-95 Respirators* (www.fda.gov/cdrh/ppe/masksrespirators.html). For information on cough etiquette and hand hygiene, see *Stopping the Spread of Germs at Home, Work & School* (www.cdc.gov/flu/protect/stopgerms.htm).

Since a facemask worn by a coughing person may reduce the amount of potentially infectious material released into the surrounding area, one strategy for reducing the spread of influenza would be to encourage everyone to wear a facemask while they are together if a group gathering is unavoidable. This might reduce the overall risk to the group by increasing the likelihood that all unanticipated coughs and sneezes would be covered and that respiratory secretions would not be widely spread while people are speaking or breathing.

Another strategy that could reduce this risk would be to screen individuals as they enter a gathering and to exclude anyone with a cough or fever, or anyone who has been exposed to an ill household member. No approach is foolproof and instituting such measures may be problematic, but each strategy may have additive benefits when a gathering is unavoidable.

1 3. Prevent/Limit Exposures

If a gathering is unavoidable, crowding should be minimized and every effort should be made to encourage cough etiquette (see www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm) and hand hygiene (e.g., tissues, waste baskets, handwashing facilities, and alcohol-based hand sanitizers as an alternative to handwashing should be readily available; see www.cdc.gov/flu/protect/stopgerms.htm). In addition, individuals may consider wearing a facemask or respirator to help prevent exposure to respiratory secretions from symptomatic individuals. Different types of currently available facemasks and respirators are described in Appendix B of *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic* (www.pandemicflu.gov/plan/healthcare/maskguidancehc.html).

Facemasks do not form a tight seal on the wearer's face and are not designed to filter out small particles that can be inhaled and that may have a role in influenza transmission. However, facemasks are useful in blocking large infectious droplets (created when a person coughs or sneezes nearby) from landing on the susceptible mucous membranes of the wearer's nose and mouth; this is thought to be an important mode of influenza transmission. Facemasks have the advantages of being relatively comfortable to wear and inexpensive to purchase. In addition, small facemasks are available that can be worn by children, but it may be problematic for children to wear them correctly and consistently. Moreover, no facemasks (or respirators) have been cleared by the FDA specifically for use by children. For these reasons, other prevention strategies (e.g., hand hygiene, social distancing) should be considered for this population (see *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States — Early, Targeted, Layered Use of Nonpharmaceutical Interventions*; www.pandemicflu.gov/plan/community/commitigation.html). Washable fabric masks are used in many parts of Asia and elsewhere in the world when disposable facemasks are unavailable. However, no reusable fabric masks have been evaluated by the FDA for use in preventing transmission of infectious agents, and none are legally marketed in the United States for use in infection control.

NIOSH-certified N95 and higher filtering facepieces are made of dense material that is certified to filter out very small particles that can be inhaled. To be most effective, these types of respirators should form a tight seal against the wearer's face. They also will block both small splashes and large droplets. These respirators are most effective and safest when the wearer has been properly fitted

(i.e., fit-tested) and provided with a health assessment and training to use the device. In the non-work setting, this fit-testing, health assessment, and training may be difficult to obtain, since these activities are usually performed for workers as part of an occupational health program. Respirators are not designed to form a tight fit on people with very small faces (e.g., children) or who have facial hair. N95 and higher respirators are less comfortable to wear than facemasks because the density of the material makes it more difficult to breathe through. Reusable (e.g., elastomeric) respirators are also available. These respirators can be cleaned, repaired, and re-used, but special precautions should be followed when using them. For more information about respirators, see NIOSH Safety and Health Topic: Respirators (www.cdc.gov/niosh/npptl/topics/respirators/). Persons with pre-existing heart or lung disease or other health conditions may have difficulty breathing through some respirators and should consult with their personal physicians before using a respirator. For more information about respirators, refer to Appendix B of *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic* (www.pandemicflu.gov/plan/healthcare/maskguidancehc.html). Both facemasks and respirators may be beneficial in discouraging wearers from inadvertently touching their nose or mouth with unwashed hands, which could help prevent virus transmission and infection.

Length of time and risk of exposure

Several activity-related and personal issues should be considered before deciding whether to wear a facemask or respirator for personal protection in non-occupational settings during a pandemic. The primary consideration in selecting between a facemask and respirator is whether close contact **is expected** with someone who has symptomatic pandemic influenza. Other considerations may include the duration of the event and whether it will or will not be crowded. One should also consider personal issues, such as the ability to wear a respirator correctly for the period of time anticipated. As noted above, compared with a respirator, a facemask is more comfortable to wear and could likely be worn for longer periods, but is not intended to provide protection against smaller inhalable particles. In contrast, if used correctly, a respirator can provide protection against most smaller inhalable particles, but is less comfortable than a facemask and is more difficult to wear for longer periods of time.

If the activity in which interaction with other members of the community is unavoidable, but is unlikely to involve close contact with an ill individual, a facemask could be comfortably worn during this interval to prevent unexpected splashes from a sneeze or cough reaching the wearer's nose or mouth. (Examples include a brief trip to a grocery store to purchase food and supplies or attending essential religious services.)

If there is the expectation of close contact with a symptomatic individual, every effort should be made to limit the duration of exposure to the ill individual(s) to as short a period as possible. In such situations, proper use of a well-fitted N95 or higher respirator may be a reasonable choice. (Examples include treating an ill family member in the home or visiting an ill neighbor to deliver food or medications.)

Planning assumptions project that there will likely be shortages of respirators during a sustained pandemic. For example, quantities of N95 or higher respirators may have to be prioritized for use by certain healthcare workers whose occupational activities place them at increased risk for infection. If supplies of N95 or higher respirators are not available, facemasks can provide protection against large-droplet exposure and should be worn when close contact with ill persons is anticipated. If supplies of respirators and facemasks are unavailable, washable fabric masks might afford some protection against exposure to large droplets. However, no reusable fabric masks have been evaluated by the FDA for use in preventing transmission of infectious agents, and none are legally marketed in the United States for use in infection control.

Considerations for using facemasks and respirators

To offer optimal protection, both facemasks and respirators need to be worn correctly and consistently throughout the time they are used. Facemasks can be worn comfortably for longer periods, but they are not designed to prevent inhalation of small particles.

Respirators, if worn and fitted correctly, will provide protection against most small particles, although they are not specifically designed to prevent transmission of infectious agents. There is limited evidence available to suggest that use of a respirator without fit-testing may still provide better protection than a facemask against inhalation of small particles.

Respirators should be inspected for damage (e.g., cracks) and structural integrity. For example, if the filter material is physically damaged or soiled, the respirator should be discarded. Users should familiarize themselves with the different types and limitations of facemasks and respirators and with the proper method for wearing them (see Appendix B of *Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Healthcare Settings during an Influenza Pandemic*; www.pandemicflu.gov/plan/healthcare/maskguidancehc.html).

Wearing a facemask or respirator incorrectly or removing or disposing of it improperly can contaminate the wearer's hands or mucous membranes with virus, possibly resulting in exposure of the wearer or others to the virus. Proper facemask or respirator use and removal include the following:

- 1 • Prior to putting on a facemask or respirator, wash hands thoroughly with soap and water. Use an alcohol-based hand sanitizer if soap and water are not available.

- 1 • Avoid touching the outside of the face piece during and after use to help prevent contamination of hands with infectious material that may have collected there.
- 2 • Once worn, the disposable facemask or respirator should be removed carefully using the elastic bands or ties at the back of the head (avoid touching the face piece) and appropriately discarded in the regular trash. If disposable facemasks and respirators are unavailable and a reusable fabric mask is used, it should be removed in the same way and laundered with normal laundry detergent and tumble-dried in a hot dryer. As noted previously, no reusable fabric masks have been evaluated by the FDA for use in preventing transmission of infectious agents, and none are legally marketed in the United States for use in infection control.
- 3 • After the facemask or respirator has been removed and discarded, wash hands thoroughly with soap and water. Use an alcohol-based hand sanitizer if soap and water are not available.

Additional Considerations

The lack of clear scientific evidence regarding the effectiveness of facemasks and respirators in protecting against influenza poses a challenge to proposing interim guidance on the use of these devices during a pandemic. Similarly, important operational and policy questions regarding the manufacturing, supply, and distribution of facemasks and respirators, and public education about their use, remain unresolved. Additional studies of influenza virus transmission coupled with research and development of improved facemask/respirator technologies may yield new practical and effective approaches for helping to prevent influenza during a pandemic.

This interim guidance document will be revised as new information about the use of facemasks and respirators in the setting of pandemic influenza becomes available. For up-to-date information about pandemic influenza, visit www.pandemicflu.gov.

¹Unless otherwise specified, the term “facemasks” refers to disposable masks cleared by the U.S. Food and Drug Administration (FDA) for use as medical devices. This includes facemasks labeled as surgical, dental, medical procedure, isolation, or laser masks. Such facemasks have several designs. One type is affixed to the head with two ties, conforms to the face with the aid of a flexible adjustment for the nose bridge, and may be flat/pleated or duck-billed in shape. Another type of facemask is pre-molded, adheres to the head with a single elastic band, and has a flexible adjustment for the nose bridge. A third type is flat/pleated and affixes to the head with ear loops. Facemasks cleared by the FDA for use as medical devices have been determined to have specific levels of protection from penetration of blood and body fluids.

²Unless otherwise specified, “respirator” refers to an N95 or higher filtering facepiece respirator certified by the U.S. National Institute for Occupational Safety and Health (NIOSH).

³Three feet has often been used by infection control professionals to define close contact and is based on studies of respiratory infections; however, for practical purposes, this distance may range up to 6 feet. The World Health Organization uses “approximately 1 meter”; the U.S. Occupational Safety and Health Administration uses “within 6 feet.” For consistency with these estimates, this document defines close contact as a distance of up to 6 feet.

Appendix 1

Summary of Interim Recommendations for Facemask and Respirator Use in Certain Community Settings during an Influenza Pandemic

Information on the use of facemasks¹ and respirators² for the control of pandemic influenza in community settings is extremely limited. Thus, it is difficult to assess their potential effectiveness in controlling influenza in these settings. In the absence of clear scientific data, the interim recommendations below have been developed on the basis of public health judgment and the historical use of facemasks and respirators in other settings.

During an influenza pandemic, the risk for influenza can be reduced through a combination of simple actions. No single action will provide complete protection, but an approach combining the following steps may help decrease the likelihood of infection: handwashing, isolation and treatment with antiviral medications of persons with confirmed or probable influenza, voluntary home quarantine of members of households with confirmed or probable influenza cases, reduction of unnecessary social contacts, and avoidance whenever possible of crowded or congested social settings.

When it is absolutely necessary to enter a crowded setting or to have close contacts³ with persons who might be infectious, the time spent in that setting should be as short as possible. If used correctly, facemasks and respirators may help prevent some exposures, but they should be used along with other preventive measures, such as social distancing and hand hygiene. When crowded settings or close contact with others cannot be avoided, the use of facemasks or respirators should be considered as follows:

- 1 • Whenever possible, rather than relying on the use of masks or respirators, close contact and crowded conditions should be avoided during an influenza pandemic.

- 1 • Facemasks should be considered for use by individuals who enter crowded settings, both to protect their nose and mouth from other people's coughs and to reduce the wearers' likelihood of coughing on others; the time spent in crowded settings should be as short as possible.
- 2 • Respirators should be considered for use by individuals for whom close contact with an infectious person is unavoidable. This can include selected individuals who must care for a sick person (e.g., family member with a respiratory infection) at home.

These interim recommendations will be revised as new information about the use of facemasks and respirators in the setting of pandemic influenza becomes available. For up-to-date information about pandemic influenza, visit www.pandemicflu.gov.

Appendix 2

What You Should Know about Using Facemasks and Respirators during a Flu Pandemic

This fact sheet provides information about the use of facemasks and respirators in public places during an influenza (flu) pandemic. It does not address the use of facemasks and respirators in the workplace or in healthcare settings.

Taking Protective Actions during a Flu Pandemic

A flu pandemic is an outbreak caused by a new flu virus that spreads around the world. The virus will spread easily from person to person, mostly through coughing and sneezing. Because the virus is new to people, everyone will be at risk of getting it. During a flu pandemic, you can use simple actions to help protect yourself and others from becoming sick with the flu. No single action protects completely. If used together, the steps below can help reduce the chances of becoming infected.

- 1 • Wash your hands often with soap and water. Use an alcohol-based hand cleaner if soap and water are not available.
- 2 • Cover your mouth and nose with a tissue or your arm when you cough and sneeze.
- 3 • Stay away from other people if you are ill.
- 4 • Avoid crowded places and large gatherings as much as possible.

There may be times during a pandemic when you must be in a crowded setting or in close contact (within 6 feet) with people who might be ill. During such times, the use of a facemask or a respirator might help prevent the spread of pandemic flu.

Wearing a Facemask or a Respirator

Very little is known about the benefits of wearing facemasks and respirators to help control the spread of pandemic flu. In the absence of clear science, the steps below offer a “best estimate” to help guide decisions. They will be revised as new information becomes available.

Consider wearing a facemask if

- 1 • You are sick with the flu and think you might have close contact with other people.
- 2 • You live with someone who has the flu (you therefore might be in the early stages of infection) and need to be in a crowded place. Limit the amount of time you spend in these crowded places and wear a facemask while you are there.
- 3 • You are well and do not expect to be in close contact with a sick person but need to be in a crowded place. Limit the amount of time you spend in these crowded places and wear a facemask while you are there.

Consider wearing a respirator if

- 1 • You are well and you expect to be in close contact with people who are known or thought to be sick with pandemic flu. Limit the amount of time you are in close contact with these people and wear a respirator during this time. These recommendations apply if you must take care of a sick person at home.

What is a facemask?

Facemasks are loose-fitting, disposable masks that cover the nose and mouth. These include products labeled as surgical, dental, medical procedure, isolation, and laser masks.

Facemasks help stop droplets from being spread by the person wearing them. They also keep splashes or sprays from reaching the mouth and nose of the person wearing the facemask. They are not designed to protect you against breathing in very small particles. Facemasks should be used once and then thrown away in the trash.

What is a respirator?

A respirator (for example, an N95 or higher filtering face piece respirator) is designed to protect you from breathing in very small particles, which might contain viruses. These types of respirators fit tightly to the face so that most air is inhaled through the filter material. To work the best way, N95 respirators must be specially fitted for each person who wears one (this is called “fit-testing” and is usually done in a workplace where respirators are used). Most of the time, N95 respirators are used in construction and other jobs that involve dust and small particles. Some healthcare workers, such as nurses and doctors, use these types of respirators when taking care of patients with diseases that can be spread through the air.

If you have a heart or lung disease or other health condition, you may have trouble breathing through respirators and you should talk with your doctor before using a respirator.

Like surgical masks, N95 respirators should be worn only once and then thrown away in the trash.

Additional Information

Neither a facemask nor a respirator will give complete protection from the flu. That is why it is important to wash your hands often, cover your coughs and sneezes with a handkerchief or your arm, and avoid crowds and gatherings during a pandemic. To learn more about these and other issues relating to pandemic influenza, visit <http://www.pandemicflu.gov>.

Appendix G:
Population Level Public Health Interventions¹

**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	
Self-health monitoring but no restrictions on movement		Y	Y	N	N Not relevant for contacts in quarantine
Advise contacts to reduce social interaction		N	NR	N	Not relevant for contacts in quarantine; see also Measures to Increase Social Distance
Advise contacts to defer travel to unaffected areas		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		Y	Y	Y	Measures needed to reduce risk of transmission to other household members.
Closure of schools (incl. preschool, higher education) in conjunction with other measures to reduce mixing of children		N	C	C	Depends on epidemiological context – extent to which these settings contribute to transmission. Health Authority may declare a public health disaster
Population-wide measures to reduce mixing of adults (furlough non-essential workers; close workplaces; discourage mass gatherings)		N	C	C	Depends on epidemiological context – extent to which unlinked community transmission and workplace transmission occur. Health Authority may declare a public health disaster
Control of entry of visitors and employees into LTC facilities including prisons (e/g/ denial of entry if fever or respiratory symptoms present)		N	N	Y	Enforcement would be by the responsible administrators of these facilities.
Masks in public places ^d		N	N	N	Not known to be effective. Not encouraged. Difficult to enforce
Involuntary confinement		N	C	C	Health Authority may declare a public health disaster Depends on the situation, e.g. non-cooperation with voluntary quarantine

Appendix G:
Population Level Public Health Interventions¹

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		Y	Y	Y	
Urge entire population in affected area to check for fever at least once daily		N	N	N	
Set up fever telephone hotlines with ambulance response		N	C	N	
Set up fever clinics with appropriate infection control		N	C	N	
Disinfection Measures					
Handwashing		Y	Y	Y	
Household disinfection of potentially contaminated surfaces		Y	Y	Y	
Measures for people entering or exiting an infected area					
Advise to avoid contact with high risk environments		Y	Y	Y	
Recommend deferral of non-essential travel to affected areas		N	Y	Y	Only if significant areas remain unaffected
Restrict travel to and from affected areas		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)		N	N	N	Enforcement considered impractical
Disinfection of clothing, shoes, or other objects of people exiting affected area		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 <i>WHO Global Influenza Plan</i> . Geneva: World Health Organization, 2005.					
^b					
^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 depends 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					

Community Strategy for Pandemic Influenza Mitigation

February 2007

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Full text can be found at: <http://www.pandemicflu.gov/plan/community/commitigation.html>

Appendix H:

Taking Care of an Influenza Patient at Home

Appendix H: Taking Care of an Influenza Patient at Home

There is one hospital in the Gillespie County area, comprising 84 beds. However, estimates suggest that in the event of an influenza pandemic, approximately 800 could require hospitalization. It is obvious that there are not enough beds for the severely ill, much less for those without complications. 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 specially 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.

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

 - o **Fever:** write down: the number and when and how it was taken
 - o **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?
 - o **Sleep:** Note the time and duration of regular sleep and naps for the last 12 hours or since the onset of illness.
 - o **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.
 - o **Urination:** Changes in amount or frequency.
 - o **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 within 48 hours of first sign of symptoms to have any effect 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**

Uncomplicated flu-like illness

- 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.
- 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 waking
 - Confusion or disorientation
 - New inability to function, if an independent elder
 - Severe earache
 - Severe or persistent vomiting, if an elder
- 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.

** Primary Source: Mayo Clinic (2005)

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 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°C.
- 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.
- 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

a. **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

b. 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).

c. 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. Guaifenesin 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.

d. 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.

- 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 “salicylates” to children or teens with flu symptoms.** Salicylates 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.

e. 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

10. 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)

Appendix I: Vaccine and Antiviral Priority Lists

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

The City of Fredericksburg and County of Gillespie are working closely with 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:

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. Groups at high risk of influenza complications (persons 2 – 64 years with medical condition for which influenza vaccine is recommended and all person 6-23 months and 65 years and older. (this excludes nursing home residents and severely immuno-compromised persons who would not be expected to respond well to vaccination.
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

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)

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-pclepi/index.html and the CDC recommendations.

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.

1. Establish contacts and procedures for collecting data on possible priority targeted groups.
2. Present plans and data needs to various organizations to elicit willingness to help
3. Update annually data necessary for formula computations to determine vaccine allotments.
4. Keep current on high risk and priority population data sets
5. Compare annually local data with state data.
6. 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.
7. Identify other populations including undocumented aliens, seasonal workers, temporary residents such as 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.

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. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:

The Emergency Operations Center will:

- i. Notify HSR8 of vaccine needs for priority groups in their jurisdictions.
- ii. Priority groups will be served through regular public health clinics, schools, workplaces, or other centrally located facilities at the discretion of the EOC.

HSR8 will:

- i. Order vaccine for priority groups by submitting to the IB, the DSHS Immunization Branch (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 Local Health Department 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. If SNS distribution protocols are suspended and the SOC gives DSHS control, DSHS will determine allocation and distribution strategies:

Gillespie County EOC will:

- i. Project number of antivirals needed for prophylaxis and ill patient treatment. Submit to HSR8
- ii. Obtain lists of persons in specific priority groups from workplaces, etc. for prophylaxis.
- iii. Priority groups for prophylaxis will be served through designated clinics or locations, or at workplaces, at the discretion of the EOC
- iv. Distribute allocations for ill patients to health care providers.

HSR8 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.

- 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:

1. Purchase strategies:

- 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.

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.

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 30 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).
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
 - 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.

Appendix K:
Antiviral availability and use inventory

Flu-Specific Checklist for Statewide Inventory Available Anti-Viral Drugs:

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.

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

DSHS promotes vaccination with Pneumococcal Polysaccharide (PNV23) vaccine primarily for persons >65 and those person 2 years of age and older who are at high risk for pneumococcal related infections. In addition, Pneumococcal Conjugate vaccine (PCV7) is recommended for all children 2 to 59 month olds and required for those attending daycare and pre-K.

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. DSHS 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 Advisory Committee on Immunization Practices(ACIP).
3. Pneumococcal vaccine will be distributed and administered by private health care providers. 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

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. DSHS will continue efforts to notify providers and people recommended by the ACIP to receive pneumococcal vaccine as described above.
2. DSHS along with providers and HSR8 will review the plan and pandemic and update as necessary.

Appendix M:

Appendix M:
Sample Standing Delegation Orders

For Future Use

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 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

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.
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.

Appendix O: Community Prevention and Control: Business Continuity Planning

Unlike natural disasters such as hurricanes Katrina and Rita or terrorist actions such as 9/11/01 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.

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.

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.dshs.state.tx.us/immunize/flu.htm

**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.

- (4) If WebEOC is activated resources may be available from Regional Medical Operations Center staff.

**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 1000F 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!

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

Vaccine Allocation Form

GROUPS	NUMBER	Comments
All Long Term Care Facility Residents		
Individuals 65+ with chronic conditions		
Health Care providers – Direct Patient Care		
Total Population – SA/Bexar Priority Groups		
Pregnant Women		
Household Contacts of children < 6 months		
Out of home caregivers of children < 6 months		
Total Population – Extended Priority Groups		
Total population – SA/Bexar Priority and Extended Priority Groups		
Local Allotment		
Allocation Adjustment (+/-)		
Final Allocation		

*Priority Groups may differ for pandemic influenza. These used reflect 2004-2005 shortage.

A. 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

B. 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.

C. 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.

Total Population – SA/Bexar Priority Groups

Sum of A, B, and C

D. Pregnant Women

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

E. 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.

F: 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.

Total Population – Extended Priority Groups (CDC)

Sum of D, E, and F

Total Population – TX Priority and Extended Priority Groups (CDC)

G. 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.

H. Local Allotment

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

I. Allocation Adjustment (+/-)

Amount of adjustment for county level vaccine allocation (+ or -) by the regions.

J. Final Allocation

Sum of H and I. This is the requested amount of vaccine for SA/ Bexar 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.

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 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 Gillespie County Health Nurse 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.

3. The Texas Web-based Integrated Client Encounter System (TWICES) 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 San Antonio Immunization Registry System (SAIRS) which will be shared with 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

Appendix U:
Plan for the impact of a pandemic on your business

1.1 Plan for the impact of a pandemic on your business:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Identify a pandemic coordinator and/or team with defined roles and responsibilities for preparedness and response planning. The planning process should include input from labor representatives. 			
<ul style="list-style-type: none"> Identify essential employees and other critical inputs (e.g. raw materials, suppliers, sub-contractor services/ products, and logistics) required to maintain business operations by location and function during a pandemic. 			
<ul style="list-style-type: none"> Train and prepare ancillary workforce (e.g. contractors, employees in other job titles/descriptions, retirees). 			
<ul style="list-style-type: none"> Develop and plan for scenarios likely to result in an increase or decrease in demand for your products and/or services during a pandemic (e.g. effect of restriction on mass gatherings, need for hygiene supplies). 			
<ul style="list-style-type: none"> Determine potential impact of a pandemic on company business financials using multiple possible scenarios that affect different product lines and/or production sites. 			
<ul style="list-style-type: none"> Determine potential impact of a pandemic on business-related domestic and international travel (e.g. quarantines, border closures). 			
<ul style="list-style-type: none"> Find up-to-date, reliable pandemic information from community public health, emergency management, and other sources and make sustainable links. 			
<ul style="list-style-type: none"> Establish an emergency communications plan and revise periodically. This plan includes identification of key contacts (with back-ups), chain of communications (including suppliers and customers), and processes for tracking and communicating business and employee status. 			
<ul style="list-style-type: none"> Implement an exercise/drill to test your plan, and revise periodically. 			

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1.2 Plan for the impact of a pandemic on your employees and customers:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Forecast and allow for employee absences during a pandemic due to factors such as personal illness, family member illness, community containment measures and quarantines, school and/or business closures, and public transportation closures. 			
<ul style="list-style-type: none"> Implement guidelines to modify the frequency and type of face-to-face contact (e.g. hand-shaking, seating in meetings, office layout, shared workstations) among employees and between employees and customers (refer to CDC recommendations). 			
<ul style="list-style-type: none"> Encourage and track annual influenza vaccination for employees. 			
<ul style="list-style-type: none"> Evaluate employee access to and availability of healthcare services during a pandemic, and improve services as needed. 			
<ul style="list-style-type: none"> Evaluate employee access to and availability of mental health and social services during a pandemic, including corporate, community, and faith-based resources, and improve services as needed. 			
<ul style="list-style-type: none"> Identify employees and key customers with special needs, and incorporate the requirements of such persons into your preparedness plan. 			

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1.3 Establish policies to be implemented during a pandemic:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Establish policies for employee compensation and sick-leave absences unique to a pandemic (e.g. non-punitive, liberal leave), including policies on when a previously ill person is no longer infectious and can return to work after illness. 			
<ul style="list-style-type: none"> Establish policies for flexible worksite (e.g. telecommuting) and flexible work hours (e.g. staggered shifts). 			
<ul style="list-style-type: none"> Establish policies for preventing influenza spread at the worksite (e.g. promoting respiratory hygiene/ cough etiquette, and 			

prompt exclusion of people with influenza symptoms).

<ul style="list-style-type: none"> Establish policies for employees who have been exposed to pandemic influenza, are suspected to be ill, or become ill at the worksite (e.g. infection control response, immediate mandatory sick leave). 			
<ul style="list-style-type: none"> Establish policies for restricting travel to affected geographic areas (consider both domestic and international sites), evacuating employees working in or near an affected area when an outbreak begins, and guidance for employees returning from affected areas (refer to CDC travel recommendations). 			
<ul style="list-style-type: none"> Set up authorities, triggers, and procedures for activating and terminating the company's response plan, altering business operations (e.g. shutting down operations in affected areas), and transferring business knowledge to key employees. 			

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1.4 Allocate resources to protect your employees and customers during a pandemic:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Provide sufficient and accessible infection control supplies (e.g. hand-hygiene products, tissues and receptacles for their disposal) in all business locations. 			
<ul style="list-style-type: none"> Enhance communications and information technology infrastructures as needed to support employee telecommuting and remote customer access. 			
<ul style="list-style-type: none"> Ensure availability of medical consultation and advice for emergency response. 			

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1.5 Communicate to and educate your employees:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Develop and disseminate programs and materials covering pandemic fundamentals (e.g. signs and symptoms of influenza, modes of transmission), personal and family 			

protection and response strategies (e.g. hand hygiene, coughing/sneezing etiquette, contingency plans).

<ul style="list-style-type: none"> Anticipate employee fear and anxiety, rumors and misinformation and plan communications accordingly. 			
<ul style="list-style-type: none"> Ensure that communications are culturally and linguistically appropriate. 			
<ul style="list-style-type: none"> Disseminate information to employees about your pandemic preparedness and response plan. 			
<ul style="list-style-type: none"> Provide information for the at-home care of ill employees and family members. 			
<ul style="list-style-type: none"> Develop platforms (e.g. hotlines, dedicated websites) for communicating pandemic status and actions to employees, vendors, suppliers, and customers inside and outside the worksite in a consistent and timely way, including redundancies in the emergency contact system. 			
<ul style="list-style-type: none"> Identify community sources for timely and accurate pandemic information (domestic and international) and resources for obtaining counter-measures (e.g. vaccines and antivirals). 			

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1.6 Coordinate with external organizations and help your community:

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Collaborate with insurers, health plans, and major local healthcare facilities to share your pandemic plans and understand their capabilities and plans. 			
<ul style="list-style-type: none"> Collaborate with federal, state, and local public health agencies and/or emergency responders to participate in their planning processes, share your pandemic plans, and understand their capabilities and plans. 			
<ul style="list-style-type: none"> Communicate with local and/or state public health agencies and/or emergency responders about the assets and/or services your business could contribute to the community. 			
<ul style="list-style-type: none"> Share best practices with other businesses 			

in your communities, chambers of commerce, and associations to improve community response efforts.

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**Appendix V:
State & Local Pandemic Influenza Planning Checklist**

Community Preparedness Leadership and Networking [Preparedness Goal 1-Increase the use and development of interventions known to prevent human illness from chemical, biological, radiological agents, and naturally occurring health threats.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Establish a Pandemic Preparedness Coordinating Committee that represents all relevant stakeholders in the jurisdiction (including governmental, public health, healthcare, emergency response, agriculture, education, business, communication, community based, and faith-based sectors, as well as private citizens) and that is accountable for articulating strategic priorities and overseeing the development and execution of the jurisdiction's operational pandemic plan. 			
<ul style="list-style-type: none"> Delineate accountability and responsibility, capabilities, and resources for key stakeholders engaged in planning and executing specific components of the operational plan. Assure that the plan includes timelines, deliverables, and performance measures. 			
<ul style="list-style-type: none"> Within every state, clarify which activities will be performed at a state, local, or coordinated level, and indicate what role the state will have in providing guidance and assistance. 			
<ul style="list-style-type: none"> Assure that the operational plan for pandemic influenza response is an integral element of the overall state and local emergency response plan established under Federal Emergency Support Function 8 (ESF8): Health and medical service and compliant with National Incident Management System. 			
<ul style="list-style-type: none"> Address integration of state, local, tribal, territorial, and regional plans across jurisdictional boundaries in the plan. 			

<ul style="list-style-type: none"> Formalize agreements with neighboring jurisdictions and address communication, mutual aid, and other cross-jurisdictional needs. 			
<ul style="list-style-type: none"> Ensure existence of a demographic profile of the community (including special needs populations and language minorities) and ensure that the needs of these populations are addressed in the operation plan. 			
<ul style="list-style-type: none"> Address provision of psychosocial support services for the community, including patients and their families, and those affected by community containment procedures in the plan (see Supplement 11). 			
<ul style="list-style-type: none"> Test the communication operational plan that addresses the needs of targeted public, private sector, governmental, public health, medical, and emergency response audiences; identifies priority channels of communication; delineates the network of communication personnel, including lead spokespersons and persons trained in emergency risk communication; and links to other communication networks (see Supplement 10). 			
<ul style="list-style-type: none"> Identify for all stakeholders the legal authorities responsible for executing the operational plan, especially those authorities responsible for case identification, isolation, quarantine, movement restriction, healthcare services, emergency care, and mutual aid. 			
<ul style="list-style-type: none"> Make clear to all stakeholders the process for requesting, coordinating, and approving requests for resources to state and federal agencies. 			
<ul style="list-style-type: none"> Create an Incident Command System for the pandemic plan based on the National Incident Management System and exercise this system along with other operational elements of the plan. 			
<ul style="list-style-type: none"> Assist in establishing and promoting community-based task forces that support healthcare institutions on a local or regional basis. 			
<ul style="list-style-type: none"> Identify the authority responsible for declaring a public health emergency at the state and local levels and for officially activating the pandemic influenza response plan. 			
<ul style="list-style-type: none"> Identify the state and local law enforcement personnel who will maintain public order and help implement control measures. Determine in advance what will 			

constitute a “law enforcement” emergency and educate law enforcement officials so that they can pre-plan for their families and sustain themselves during the emergency.

- Ensure that the plans are scalable, to the magnitude and severity of the pandemic and available resources. Revise as necessary.

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Surveillance [HHS Supplement 1. Preparedness Goal 3-Decrease the time needed to detect and report chemical, biological, or radiological agents in tissue, food, or environmental agents that cause threats to the public’s health. Preparedness Goal 5-Decrease the time to identify causes, risk factors, and appropriate interventions for those affected by threats to the public’s health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> • Conduct year-round traditional surveillance for seasonal influenza (e.g., virologic, outpatient visits, hospitalization, and mortality data), including electronic reporting. 			
<ul style="list-style-type: none"> • Improve capacity for rapid identification of unusual influenza strains by working with federal partners to enhance laboratory-based monitoring of seasonal influenza subtypes, as described in Supplement 1 (Surveillance). 			
<ul style="list-style-type: none"> • Develop and be prepared to implement enhanced surveillance once a pandemic is detected to ensure recognition of the first cases of pandemic virus infection in time to initiate appropriate containment protocols, and exercise regularly. 			
<ul style="list-style-type: none"> • Link and routinely share influenza data from animal and human health surveillance systems. 			
<ul style="list-style-type: none"> • Obtain and track information daily during a pandemic (coordinating with epidemiologic and medical personnel) on the numbers and location of newly hospitalized cases, newly quarantined persons, and hospitals with pandemic influenza cases. Use these reports to determine priorities among community outreach and education efforts. 			

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Public Health and Clinical Laboratories [HHS Supplement 2. Preparedness Goal 3- Decrease the time needed to detect and report chemical, biological, and radiological agents in

tissue, food, or environmental agents that cause threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Institute surveillance for influenza-like illnesses (ILI) among laboratory personnel working with novel influenza viruses. 			
<ul style="list-style-type: none"> Develop and test a plan for surge capacity of public health and clinical laboratories to meet the needs of the jurisdiction during a pandemic. 			
<ul style="list-style-type: none"> Assess regularly the influenza diagnostic testing proficiency and adherence to biosafety containment and biomonitoring protocols. 			
<ul style="list-style-type: none"> Inform frontline clinicians and laboratory personnel of protocols for safe specimen collection and testing, how and to whom a potential case of novel influenza should be reported, and the indications and mechanism for submitting specimens to referral laboratories (see Supplements 3, 4, 5). 			

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Healthcare and Public Health Partners [HHS Supplement 3. Preparedness Goal 6-Decrease the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Test the operational plan for the healthcare sector (as part of the overall plan) that addresses safe and effective 1) healthcare of persons with influenza during a pandemic, 2) the legal issues that can affect staffing and patient care, 3) continuity of services for other patients, 4) protection of the healthcare workforce, and 5) medical supply contingency plans. 			
<ul style="list-style-type: none"> Ensure all components of the healthcare delivery network (e.g., hospitals, long-term care, home care, emergency care) are included in the operational plan and that the special needs of vulnerable and hard-to-reach patients are addressed. 			
<ul style="list-style-type: none"> Ensure that plan provides for real-time situational awareness of patient visits, hospital bed and intensive care needs, medical supply needs, and medical staffing needs during a pandemic. 			

<ul style="list-style-type: none"> Test the operational plan for surge capacity of healthcare services, workforce, and supplies to meet the needs of the jurisdiction during a pandemic. 			
<ul style="list-style-type: none"> Test the plan provisions for mortuary services during a pandemic. 			
<ul style="list-style-type: none"> Maintain a current roster of all active and formerly active healthcare personnel available for emergency healthcare services. 			
<ul style="list-style-type: none"> Determine what constitutes a medical staffing emergency and exercise the operational plan to obtain appropriate credentials of volunteer healthcare personnel (including in-state, out-of-state, international, returning retired, and non-medical volunteers) to meet staffing needs during a pandemic. 			
<ul style="list-style-type: none"> Ensure healthcare facilities in the jurisdiction have tested a plan for isolating and cohorting patients with known or suspected influenza, for training clinicians, and for supporting the needs for personal protective equipment. 			
<ul style="list-style-type: none"> Ensure the healthcare facilities in the jurisdiction have tested an operational plan to initiate, support, and implement quarantine of potentially exposed healthcare personnel (see Supplements 4 and 5). 			

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Infection Control and Clinical Guidelines [HHS Supplements 4 and 5. Preparedness Goal 6 -Decrease the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Ensure the Health Alert Network in the jurisdiction reaches at least 80% of all practicing, licensed, frontline healthcare personnel and links via the communication network to other pandemic responders (see Supplements 3, 10). 			
<ul style="list-style-type: none"> Craft messages to help educate healthcare providers about novel and pandemic influenza, and infection control and clinical guidelines, and the public about personal preparedness methods. 			
<ul style="list-style-type: none"> Develop and test a plan (as part of the communication plan) to regularly update providers as the influenza pandemic unfolds. 			

<ul style="list-style-type: none"> • Ensure appropriate local health authorities have access to EPI-X and are trained in its use. 			
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Vaccine Distribution and Use [HHS Supplement 6. Preparedness Goal 6-Decrease the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> • Work with healthcare partners and other stakeholders to develop state-based plans for vaccine distribution, use, and monitoring; and for communication of vaccine status. 			
<ul style="list-style-type: none"> • Exercise an operational plan that addresses the procurement, storage, security, distribution, and monitoring actions necessary (including vaccine safety) to ensure access to this product during a pandemic. 			
<ul style="list-style-type: none"> • Ensure the operational plan delineates procedures for tracking the number and priority of vaccine recipients, where and by whom vaccinations will be given, a distribution plan for ensuring that vaccine and necessary equipment and supplies are available at all points of distribution in the community, the security and logistical support for the points of distribution, and the training requirements for involved personnel. 			
<ul style="list-style-type: none"> • Address vaccine security issues, cold chain requirements, transport and storage issues, and biohazardous waste issues in the operational plan. 			
<ul style="list-style-type: none"> • Address the needs of vulnerable and hard-to-reach populations in the operational plan. 			
<ul style="list-style-type: none"> • Document with written agreements the commitments of participating personnel and organizations in the vaccination operational plan. 			
<ul style="list-style-type: none"> • Inform citizens in advance about where they will be vaccinated. 			

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Antiviral Drug Distribution and Use [HHS Supplement 7. Preparedness Goal 6-Decrease the time needed to provide countermeasures and health guidance to those affected by threats

to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Develop state-based plans for distribution and use of antiviral drugs during a pandemic via the Strategic National Stockpile (SNS), as appropriate, to healthcare facilities that will administer them to priority groups. Establish methods for monitoring and investigating adverse events. 			
<ul style="list-style-type: none"> Test the operational plan that addresses the procurement, storage, security, distribution, and monitoring actions necessary to assure access to these treatments during a pandemic. 			
<ul style="list-style-type: none"> Ensure the jurisdiction has a contingency plan if unlicensed antiviral drugs administered under Investigational New Drug or Emergency Use Authorization provisions are needed. 			

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Community Disease Control and Prevention (including managing travel-related risk of disease transmission) [HHS Supplements 8 and 9. Preparedness Goal 6-Reduce the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Exercise the jurisdiction's operational plan to investigate and contain potential cases or local outbreaks of influenza potentially caused by a novel or pandemic strain. 			
<ul style="list-style-type: none"> Exercise the jurisdiction's containment operational plan that delineates procedures for isolation and quarantine, the procedures and legal authorities for implementing and enforcing these containment measures (such as school closures, canceling public transportation, and other movement restrictions within, to, and from the jurisdiction) and the methods that will be used to support, service, and monitor those affected by these containment measures in healthcare facilities, other residential facilities, homes, community facilities, and other settings. 			
<ul style="list-style-type: none"> Ensure the jurisdiction has exercised the operational plan to implement various levels of movement restrictions within, to, and from the jurisdiction. 			

<ul style="list-style-type: none"> Inform citizens in advance about what containment procedures may be used in the community. 			
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Public Health Communications [HHS Supplement 10. Preparedness Goal 4-Improve the timeliness and accuracy of communications regarding threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Assess readiness to meet communications needs in preparation for an influenza pandemic, including regular review, exercise, and update of communications plans. 			
<ul style="list-style-type: none"> Plan and coordinate emergency communication activities with private industry, education, and non-profit partners (e.g., local Red Cross chapters). 			
<ul style="list-style-type: none"> Identify and train lead subject-specific spokespersons. 			
<ul style="list-style-type: none"> Provide public health communications staff with training on risk communications for use during an influenza pandemic. 			
<ul style="list-style-type: none"> Develop and maintain up-to-date communications contacts of key stakeholders and exercise the plan to provide regular updates as the influenza pandemic unfolds. 			
<ul style="list-style-type: none"> Implement and maintain, as appropriate, community resources, such as hotlines and Web site, to respond to local questions from the public and professional groups. 			
<ul style="list-style-type: none"> Ensure the provision of redundant communication systems/channels that allow for the expedited transmission and receipt of information. 			

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Workforce Support: Psychosocial Considerations and Information Needs [HHS Supplement 11. Preparedness Goal 6-Decrease the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.]

Tasks	Not Started	In Progress	Completed
<ul style="list-style-type: none"> Develop a continuity of operations plan for essential health department services, including contingency planning for increasing the public health workforce in response to absenteeism among health department staff 			

and stakeholder groups that have key responsibilities under a community's response plan.

- Ensure availability of psychosocial support services (including educational and training materials) for employees who participate in or provide support for the response to public health emergencies such as influenza pandemics.
- Develop workforce resilience programs and ensure readiness to deploy to maximize responders' performance and personal resilience during a public health emergency.
- Assure the development of public health messages has included the expertise of behavioral health experts (see Supplement 10).

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January 9, 2006

Version 1.1