



Texas Department of State Health Services
Pandemic Influenza Plan Operational Guidelines

Version 2.1
July 6, 2008

STATE OF TEXAS
Department of State Health Services

Pandemic Influenza Plan Operational Guidelines

APPROVAL AND IMPLEMENTATION

The Department of State Health Services Pandemic Influenza Plan Operational Guidelines is hereby accepted for implementation and supersedes all previous editions.

Date

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Commissioner
Department of State Health Services

DISCLAIMER

The *Pandemic Influenza Plan Operational Guidelines* (PIPOG) serve as the Texas Department of State Health Services (DSHS) operational response plan for use throughout Texas; however, the primary target audiences are state, regional and local health departments (LHD), health care system planners, and planners in other agencies and organizations tasked with developing pandemic influenza response plans. DSHS PIPOG serves as a guide for local planning as well as for delineating DSHS roles, responsibilities and activities.

This document is made available to outside agencies for the sole purpose of providing an understanding of the internal processes within DSHS. This document in no way prescribes guidance for any entity other than the departments mentioned above.

This plan shall not be construed to alter any law, executive order, rule, regulation, treaty, or international agreement. Noncompliance with this document shall not be interpreted to create a substantive or procedural basis to challenge agency action or inaction.

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Table of Contents

DISCLAIMER	3
RECORD OF CHANGES AND REVIEWS	4
EXECUTIVE SUMMARY	7
ABBREVIATIONS	8
SECTION I. PURPOSE	10
I. GOALS, OBJECTIVES AND ACTIVITIES	10
II. SITUATION AND ASSUMPTIONS	10
III. ROLES AND RESPONSIBILITIES	12
IV. DOCUMENT STRUCTURE	14
SECTION II. OPERATING GUIDELINES	19
PILLAR 1: Preparedness and Communication	19
I. INTERPANDEMIC PERIOD (WHO Phases 1 and 2; FGR Stage 0; CDC Interval Investigation)	19
PILLAR 2: Surveillance and Detection	33
II. PANDEMIC ALERT PERIOD (WHO Phases 3, 4, and 5; FR Stages 0, 1, and 2; CDC Interval Recognition).....	33
PILLAR 3: Response and Containment.....	38
III. PANDEMIC PERIOD (WHO Phase 6; FGR Stages 3, 4, 5; CDC Intervals Initiation, Acceleration, Peak, Deceleration).....	38
IV. PANDEMIC PERIOD (WHO Phase 6; FR Stage 6; CDC Interval Resolution).....	44
APPENDICES	50
APPENDIX A: Key Roles and Responsibilities.....	51
APPENDIX B: Surveillance.....	53
Appendix B.1: Influenza Surveillance	54
Appendix B.2: Texas DSHS Weekly Influenza Report Form.....	56
Appendix B.3: Influenza Sentinel Provider Surveillance Network Information Sheet.....	57
Appendix B.4: U.S. Influenza Sentinel Provider Surveillance Network Sample Workfolder	58
Appendix B.5: Influenza Sentinel Provider Surveillance Network Sample Enrollment Form	62
Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form	65
APPENDIX C: Recommendations for Pneumococcal Vaccine	70
APPENDIX D: Standing Delegation Orders and Emergency Medical Management for Adverse Reactions to Vaccines and Antiviral Drugs	71
Appendix D.1: Sample Standing Delegation Orders for Pandemic Influenza Vaccine	72
Appendix D.2: Emergency Medical Management of Vaccine Reactions	75
Appendix D.3: Vaccine Adverse Reaction Form and DSHS Complaint and/or Injury Report.....	80
Appendix D.4: Vaccine Allocation Form—Example Only	86
Appendix D.5: Standing Orders for Administration of Antivirals to Contacts	88
Appendix D.6: Antiviral Allocation Form—Example only	94
APPENDIX E: Vaccine and Antiviral Tracking	97
Appendix E.1: Plan for Vaccine and Antiviral Tracking.....	98
Appendix E.2: Draft Consent Form for Enrollment into IMMTRAC.....	99
APPENDIX F: Business Continuity Planning.....	100
APPENDIX G: Death Care for Managing Mass Fatalities.....	103
APPENDIX H: Templates for Common Incident Command Forms Used During an Influenza Pandemic	111
APPENDIX I: Contacts and Resources	112
Appendix I.1: Stakeholders Providing Input.....	113
Appendix I.2: Pandemic Influenza Planning Group (PIPG)	118
Appendix I.3: Disaster Preparedness Communication Protocol	120
Appendix I.4: Pandemic Influenza Coordinating Council and Pandemic Influenza Committee	121
Appendix I.5: Links to Web-based Resources	122
APPENDIX J: Planning Guidelines for Non-Pharmaceutical Interventions	123
APPENDIX K: Antiviral Allocation, Distribution and Storage Planning Guidelines (AADS).....	124
APPENDIX L: Vaccine Allocation, Distribution and Storage Planning Guidelines (VADS)	125
APPENDIX M: Allocation of Limited Resources	126
APPENDIX N: Alternate Care for Medical Surge	134
Appendix N.1: Determining Need for Alternate Care	135
Appendix N.2: Site Selection and Design.....	145
Appendix N.3: Staffing.....	151
Appendix N.4: Equipment, Consumable, and Disposable Supplies for Alternate Care.....	152
Appendix N.5: Stock Medications	153

Table of Contents

APPENDIX O: Guidelines for Monitoring International Travel.....	154
GLOSSARY	155
REFERENCES	166
END NOTES	169

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EXECUTIVE SUMMARY

An influenza pandemic has the potential to cause substantial worldwide illness and death, possibly more than any other current health threat. Without interventions, a pandemic influenza similar to the 1918 pandemic could result in an estimated 7 million illnesses and 1.4 million deaths among Texans. Although the timing, nature and severity of the next pandemic cannot be predicted with certainty, preparation is imperative to lessen the impact of a pandemic.

The ***Pandemic Influenza Plan Operational Guidelines*** (PIPOG) are intended to coordinate with global and national plans developed by the World Health Organization (WHO), U.S. Department of Homeland Security (DHS), U.S. Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC), and the State of Texas Emergency Management Plan. The PIPOG guides preparedness for and response to an influenza pandemic, with the intent of (1) stopping, slowing, or otherwise limiting the spread of a pandemic into the state; (2) limiting the spread of a pandemic and mitigating disease, suffering, and death; and (3) sustaining infrastructure and mitigating impact on the economy and the functioning of society. Specifically, these guidelines outline activities and responsibilities for the state, regional and local public health departments and build upon preparedness assets developed at the state, regional, and local levels of government and in the private sector. This document is structured around the three Pillars of the National Strategy (Preparedness and Communication, Surveillance and Detection, Response and Containment) and five Key Components (Planning and Coordination, Situation Monitoring and Assessment, Prevention and Containment, Health Systems Response, and Communications) following the pandemic phases outlined by the World Health Organization. The prevention and containment component is further developed in three companion documents that are part of State of Texas Emergency Management Plan, Annex H: Health and Medical: ***Planning Guidelines for Non-Pharmaceutical Interventions*** ([Appendix J](#)), the ***Antiviral Allocation, Distribution, and Storage Planning Guidelines*** (AADS) ([Appendix K](#)), and the ***Vaccine Allocation, Distribution, and Storage Planning Guidelines*** (VADS) ([Appendix L](#)).

The decisions and actions outlined in this document are not exhaustive but are intended to provide a high-level overview of state recommendations and approaches for responding to a pandemic influenza. A number of the processes described are in various of development. It is recognized that during a pandemic a number of actions and decisions will proceed in the face of incomplete information or in the setting of a rapidly evolving epidemiologic or societal picture. Maintaining a flexible and nimble response posture throughout the response, and adjusting our approach as additional situational information becomes available will be vital. Finally, a series of crosscutting actions will occur throughout the response. The strategies described will be continuously reviewed, reassessed, and adjusted as new information or response capabilities become available in areas such as risk communication to the public, the allocation scheme for countermeasures, and support provided to different sectors of critical infrastructure and the economy. While these guidelines provide strategic direction for the state, health service regions (HSR), and local health departments (LHD), they do not attempt to catalogue and assign all responsibilities. The unique characteristics and events of a pandemic will strain local, state, and federal resources. It is unlikely that there will be sufficient personnel, equipment, and supplies to respond adequately to multiple areas of the state for a sustained period of time. Preparing for and responding to a pandemic has to occur at all government levels and in all sectors outside of government that can be integrated to address the pandemic threat.

ABBREVIATIONS

AADS	Antiviral Allocation, Distribution and Storage Guidelines
ACIP	Advisory Committee on Immunization Practices
CDC	Centers for Disease Control and Prevention
CERC	Crisis and Emergency Risk Communications
COOP	Continuity of Operations Planning
CPS	Community Preparedness Section
DSHS	Department of State Health Services (Texas)
EMS	Emergency Medical Services
ERT	Epidemiology Response Teams
FEMA	Federal Emergency Management Agency
FGR Stage	Federal Government Response Stage
GDEM	Governor’s Division of Emergency Management
DHHS	U.S. Department of Health and Human Services
HHSC	Health and Human Services Commission (Texas)
HSEEP	Homeland Security Exercise and Evaluation Program
HSR	Health Service Region
IAP	Incident Action Plan
IB	Immunization Branch
IC	Incident Command
ICM	Incident Commander
ICS	Incident Command System
IDCU	Infectious Disease Control Unit
ILI	Influenza-like Illness
LHD	Local Health Department
LRN	Laboratory Response Network
MACC	Multi-Agency Coordination Center (DSHS)
MHMR	Mental Health/Mental Retardation
MHSA	Mental Health and Substance Abuse
MOU	Memorandum of Understanding
NIMS	National Incident Management System
NREVSS	National Respiratory and Enteric Virus Surveillance System
OBH	Office of Border Health
OGC	Office of General Counsel
PB	Pharmacy Branch
PCC	Pandemic Coordinating Council
PHIN	Public Health Information Network
PHL	Public Health Laboratory
PI	Pandemic Influenza
PIC	Person In Charge
PIL	Pandemic Influenza Lead
PIPC	Pandemic Influenza Planning Committee
PIPG	Pandemic Influenza Planning Group
PIPP	Pandemic Influenza Preparedness Plan
PIPOG	Pandemic Influenza Plan Operational Guidelines
PPE	Personal Protective Equipment
PRT	Pandemic Response Team
SDO	Standing Delegation Orders
SITREP	Situational Report

Abbreviations

SMAT	State Mortuary Assistance Teams
SME	Subject Matter Expert
SNS	Strategic National Stockpile
SOC	State Operations Center
SOP	Standard Operating Procedure
SPSN	Sentinel Provider Surveillance Network
STRAC	South Texas Regional Advisory Council
TALHO	Texas Association of Local Health Officials
TER	Texas Electronic Registration (Electronic Death Reporting System)
THA	Texas Hospital Association
TIMS	Texas Inventory Management System
TMA	Texas Medical Association
TOMA	Texas Osteopathic Medical Association
TWICES	Texas Web-based Integrated Client Encounter System
VADS	Vaccine Allocation, Distribution and Storage Guidelines
VAERS	Vaccine Adverse Events Reporting System
VIS	Vaccine Information Statement
VMI	Vendor-Managed Inventory
WebEOC	Web Based Emergency Operations Center
WHO	World Health Organization

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SECTION I. PURPOSE

I. GOALS, OBJECTIVES AND ACTIVITIES

- A. The state goals of the Pandemic Influenza Plan Operational Guidelines, which are consistent with those of the nation ([DHHS Pandemic Influenza Plan, 2005](#)), are to:
 - 1. Minimize serious illness, hospitalizations, and death.
 - 2. Preserve critical infrastructure.
 - 3. Minimize social disruption in Texas resulting from an influenza pandemic.
- B. The objectives include the following:
 - 1. Identify roles and responsibilities for DSHS, health service regions (HSR) in both their role as the regional presence of DSHS and their role as the local health department (LHD) for jurisdictions without independent LHDs, and LHDs.
 - 2. Develop flexible guidelines to account for the unknown epidemiology of a pandemic and the needs of different [stakeholders](#).
 - 3. Recommend appropriate prevention, patient care, and treatment during a pandemic.
 - 4. Advocate appropriate communications, resource management, and preventive measures to minimize infrastructure and social disruption.
- C. Activities associated with preparedness planning include the following:
 - 1. Establish a National Incident Management System ([NIMS](#)) compliant [incident command](#) protocol for DSHS.
 - 2. Define local roles and responsibilities.
 - 3. Identify and develop interrelationships among bordering jurisdictions and among national and state [surveillance](#) programs.
 - 4. Improve surveillance methods.
 - 5. Clarify the role of the DSHS Laboratory and the Laboratory Response Network (LRN).
 - 6. Identify [non-pharmaceutical interventions](#) available to health departments.
 - 7. Recommend personal protection practices for Texas residents.
 - 8. Develop plans for equitable [vaccine](#) and antiviral allocation and distribution.
 - 9. Reinforce seasonal vaccination efforts.
 - 10. Identify health care resources and supplies in communities.
 - 11. Project potential impact on the community.
 - 12. Identify critical service providers.
 - 13. Develop professional and public communication strategies.

II. SITUATION AND ASSUMPTIONS

- A. Situation
 - 1. The people of Texas are susceptible to a novel influenza virus that may cause a pandemic.
 - 2. Immunity to infection with a pandemic strain can only occur after natural infection or immunization with an effective vaccine.
 - 3. Animals also may be susceptible to the novel influenza virus and may carry, spread, or serve as an intermediate host to facilitate genetic reassortment of the virus (See [Appendix 4 of Annex H: Foreign and Emerging Animal Disease Response Plan](#) of the [State of Texas Emergency Management Plan](#).)

4. When pandemic influenza occurs, many people will become ill and may die from influenza or its complications.
5. Pandemic influenza in Texas will be deemed a catastrophic incident.
6. Pandemic influenza will cause the degradation of local infrastructure.
7. If the initial [outbreak](#) is not controlled within a short time, pandemic influenza may spread to all jurisdictions within the State.
8. Pandemic influenza will severely affect economic stability and viability of the state and nation.
9. Social and economic ties with neighboring states and Mexico necessitate interstate and binational cooperation during all phases of pandemic influenza.
10. **The federal government will make every effort to keep international and intrastate travel routes open to maintain the flow of critical supplies.**

B. Assumptions

1. It is highly unlikely that the most effective tool for mitigating a pandemic (a well-matched pandemic strain vaccine) will be available when a pandemic begins.
2. Seasonal influenza vaccination may or may not offer some level of protection against a novel pandemic influenza strain.
3. The pre-pandemic vaccine stockpiled by the federal government may be effective against the pandemic strain of H5N1 influenza.
4. The novel influenza virus may initially be spread by animals to people in Texas, or by people entering the state and already contagious with the virus.
5. Multiple waves of illness are likely to occur—each wave may last six to eight weeks.
6. Communities will experience differences in the occurrence and length of pandemic influenza waves based on community risk and availability and use of countermeasures.
7. Pandemic influenza may severely affect even otherwise healthy people in all age groups and will limit or degrade the response capabilities at all levels of government.
8. Individuals who become ill shed virus and may transmit virus up to one day before the onset of symptoms. Individuals who are ill may shed virus up to five days after onset of symptoms.
9. Children will play a major role in transmission of infection because their illness rates are likely to be higher, they shed more virus over a longer period of time, and they control their secretions less effectively.
10. Surveillance of pandemic influenza will provide information critical to the implementation of [control measures](#), such as restricting travel, closing schools, canceling public gatherings, and initiating antiviral vaccine usage in target groups.
11. Systematic application of [non-pharmaceutical disease control measures](#) can significantly reduce the disease transmission rates with accompanying reductions in the intensity and velocity of pandemic influenza spread.
12. Control and monitoring of pandemic influenza will involve many state and federal agencies, not just those traditionally associated with public health activities.
13. Some people may not believe the reality of the threat posed by a pandemic influenza incident, and may take actions counterproductive to the government process to [quarantine](#), control and treat people infected with the disease. Health

- education will be needed on multiple levels and at multiple points to achieve full cooperation.
14. Over the course of the pandemic, up to 50 percent of the work force may be absent due to illness, caretaking responsibilities, fear of contagion, loss of public transportation, or public health control measures. Local government and private industries must plan for the continuation of critical community infrastructure and services even with high employee absenteeism.
 15. Alternate care sites and decisions for allocating scarce resources will be required.
 16. There will likely be critical shortages of health care resources such as pharmaceuticals, vaccine (once developed), staffed hospital beds, [health care workers](#), mechanical ventilators, morgue capacity, and temporary refrigerated holding sites.
 17. Pandemic influenza will severely affect local and state economies, as well as intrastate, interstate, and international travel and commerce.
 18. Pandemic influenza may result in long-term and costly emergency response operations.
 19. Pandemic influenza may cause stress and/or emotional trauma.
 20. Disseminating timely, consistent, and accurate information to public and private sector stakeholders, the media, and the general public is one of the most critical facets of pandemic influenza preparedness and response.
 21. When the CDC determines pandemic influenza is imminent, [antiviral medications](#) and other medical supplies from the [Strategic National Stockpile](#) (SNS) will be forward-placed in Texas.
 22. A small DSHS cache has been purchased for outbreak control, responder prophylaxis and preserving critical infrastructure are stored in health service regions.
 23. Antivirals purchased with General Revenue funds are stored centrally and will be forward-placed before receiving the SNS cache.
 24. Some local jurisdictions and private entities have purchased their own antiviral medications and other medical materiel for pandemic response.
 25. The private health care system will serve as the primary source for antiviral medications for the treatment of ill patients.

III. ROLES AND RESPONSIBILITIES

- A. **Pandemic Response Team (PRT)ⁱ**: Provides support to the DSHS Incident Command (IC) and deals with plan-specific issues. The PRT will be composed of the Pandemic Influenza Lead (PIL),ⁱⁱ the Pandemic Influenza Program Coordinator, and the Pandemic Influenza Planning Group (PIPG) members.
- B. **Pandemic Influenza Planning Group (PIPG)**: A group composed of the Pandemic Influenza Program Coordinator who serves as the committee chair, a physician from the DSHS Infectious Disease Control Unit (IDCU) who functions as the PIL, subject matter experts related to the Key Components of PIPOG, representatives from across the agency, and stakeholder representatives. This group is charged with development and updating the PIPOG annually.
- C. **Laboratory Response Network (LRN)**: A network of public health labs around the state that provides testing, training, and technical support for the DSHS pandemic response.
- D. **DSHS Immunization Branch (IB), DSHS Pharmacy Branch (PB), and/or Strategic**

- National Stockpile (SNS) Team:** Depending on the situation, will provide oversight for vaccine/drug procurement and distribution for vaccine and antivirals either purchased by the state or allocated to the state by the federal government during short supply periods when vaccine will be available only for highest priority groups.
- E. **Health Service Region (HSR):** HSRs serve as the LHD for counties without a full service LHD. Each HSR will have 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 and hospital licensing
 4. **Immunization Program and Pharmacy:** nurses, pharmacists, and epidemiologists
 5. **Emergency Medical Services (EMS):** staff with expertise in emergency medical system response and trauma systems
 6. **Public Health Laboratories (PHL):** microbiologists, laboratory technicians and other staff; laboratory testing facilities
 7. **Public Health Information Network (PHIN):** designated administrators and back-ups
 8. **Stress Management and Crisis Counseling:** trained personnel, social workers, psychologists, psychiatric nurses, and other professional staff
- F. **Community Preparedness Section (CPS):** Coordinates plans, including the PIPOG, with bordering states, American Indian tribes, and [special populations](#). In collaboration with the Office of Border Health, CPS assists in coordinating plans with Texas-Mexico border jurisdictions and their Mexican counterparts.
- G. **World Health Organization (WHO):** Conducts international influenza surveillance activities. More than 100 countries with a total of 112 laboratories participate with the WHO flu surveillance.
- H. **Centers for Disease Control and Prevention (CDC):** Conducts national influenza surveillance in the United States. 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 CDC for comparative antigenic and genetic analysis.
- I. **State and territorial epidemiologists:** Report the level of influenza activity in their state each week as “widespread,” “regional,” “sporadic,” “local,” or “no activity.”
- J. **Sentinel physicians:** Report the number of patients presenting with [influenza-like illness](#) (ILI) and the total number of patient visits by age group to CDC.
- K. **Vital statistics offices:** Report, on a weekly basis, the percentage of total deaths caused by influenza and pneumonia.
- L. **DSHS Infectious Disease Control Unit (IDCU):** Carries out state influenza surveillance activities in collaboration with partners.
- M. **Office of Border Health (OBH):** Identifies border health issues and plan solutions with other agencies. Develops memoranda of understanding (MOU) between Texas and the sister Mexican states as necessary.
- N. **DSHS Office of the General Counsel (OGC):** Reviews medical and public health

control legislation and liability issues related to delivery of biologic agents (e.g., vaccine and antiviral drug), examines legal aspects (including workers compensation issues) related to use of prophylactic medications and refusal of medication for those in high-risk groups, and makes changes as necessary and determines procedures for, and legalities related to suspension of rules to contain the pandemic, including but not limited to:

1. Unlicensed vaccinators
 2. Distribution of prescription antivirals by unlicensed [volunteers](#)
 3. Distribution and/or vaccination by non-Texas licensed volunteers
 4. Mandatory vaccinations
 5. Emergency distribution of drugs/vaccines
 6. Use of investigational drugs/vaccines
 7. Social distancing strategies
- O. **Preparedness Coordinating Council (PCC):** Provides advice and assistance to DSHS in coordinating efforts to prepare Texas for bioterrorism attacks, other infectious disease outbreaks, and additional public health threats and emergencies.
- P. **Pandemic Influenza Coordinating Committee (PICC):** A subcommittee of PCC that focuses on pandemic influenza planning and pandemic preparedness activities. Through study and discourse, develops recommendations for actions by the PCC. Membership reflects a broad spectrum of society including faith-based organizations, community advocates, animal health, retailers, grocers, information and referral services, transportation, and others. Through members' contacts with members of their organizations, information is shared and needs and concerns are brought to DSHS. Some members of the PICC also are members of the PCC.
- Q. **Center for Consumer and External Affairs (CCEA):** Oversees and coordinates government affairs, media relations, public awareness and education campaigns, volunteer and community engagement activities, stakeholder relations and supports the DSHS Council. Communications and Governmental Affairs staff serve on the Command Staff in PIO and Liaison roles when the Multi-Agency Coordination Center is activated during a disaster response.

IV. DOCUMENT STRUCTURE

- A. This document is formatted to provide roles and responsibilities for DSHS and LHDs. HSRs that may act in both capacities will need to evaluate both sections.
- B. These guidelines operationalize Texas' approach to a pandemic threat and the format correlates with the National Strategy for Pandemic Influenza developed by U.S. Department of Homeland Security. The organization of the PIPOG ties the pillars of the National Strategy to the WHO pandemic phases and the Federal Government Response Stages (Table 1) as well as [CDC Intervals](#)¹ (See Table 2.) The pillars of the National Strategy, the WHO Phases, and Federal Government Response Stages (FGR Stage), and CDC Intervals are
 1. **Pillar 1: Preparedness and Communication (WHO Interpandemic Period, Phases 1 and 2; FGR Stage 0; CDC Interval Investigation):** Activities that

¹ U.S. Government (2008). Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans. Available at: <http://www.pandemicflu.gov/news/guidance031108.pdf>

should be undertaken before a pandemic to ensure preparedness, and the communication of roles and responsibilities to all levels of government, and individual members and segments of society.

2. **Pillar 2: Surveillance and Detection (WHO Pandemic Alert Period, Phases 3, 4, and 5; FGR Stages 0, 1, and 2; Investigation and Recognition):** Actions to limit the spread of the outbreak and to mitigate the health, social and economic impacts of a pandemic.
3. **Pillar 3: Response and Containment (WHO Pandemic Period, Phase 6; FGR Stages 3, 4, 5; 6; CDC Intervals Acceleration, Peak, Deceleration, and Resolution):** Actions to limit the spread of the outbreak and to mitigate the health, social and economic impacts of a pandemic.

TABLE 1: WHO Periods and Phases and Corresponding Federal Government Response Stages

WHO Phases		Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
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.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
4	Small cluster(s) with limited human-to-human transmission, but spread is highly localized, suggesting that the virus is not well adapted to humans.	2	Confirmed human outbreak overseas
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).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

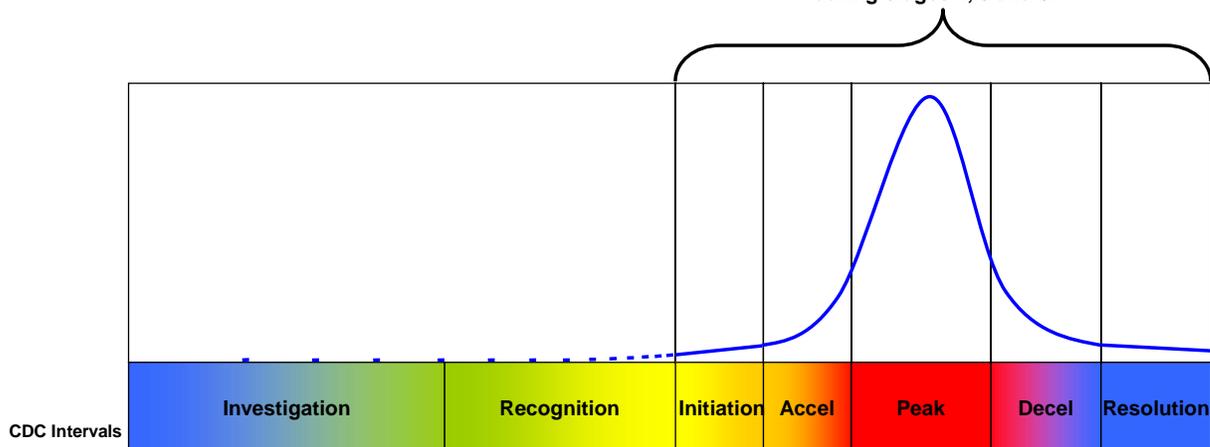
C. The WHO Phases and Federal Government Response Stages have provided structure

for triggers for action. FGR Stages are categories, rather than actions to be taken. The epidemic curve superimposed over the Phases and Stages provides an epidemiological guide to action. This guide to action is divided into intervals classified as *pre-pandemic* and *pandemic*. Pre-pandemic actions are *Investigation*, *Recognition*; pandemic actions include *Initiation*, *Acceleration*, *Peak Transmission*, *Deceleration*, and *Resolution*. For state planning, using the intervals to describe the progression of the pandemic within communities in a state helps to provide a more granular framework for defining when to respond with various interventions during U.S. Government Response Stages 4, 5 and 6.²

Table 2: WHO Phases, Federal Government Response (FGR) Stages or (USG Stage), and Corresponding CDC Intervals

WHO Phase	Inter		Pandemic Alert Period			Pandemic Period			
	1	2	3	4	5	6			
	New Domestic Animal Outbreak in At-Risk Country		Suspected Human Outbreak Overseas	Confirmed Human Outbreak Overseas	Widespread Outbreaks Overseas	First Human Case in N.A.	Spread Throughout United States		Recovery
USG Stage	0		1	2	3	4	5		6

For planning, intervals provide additional specificity for implementing state and community level interventions during stages 4, 5 and 6.



Pre- Pandemic Intervals

- Investigation
- Recognition

Pandemic Intervals

- Initiation
- Acceleration
- Peak Transmission
- Deceleration
- Resolution

- D. Within each pandemic period and associated FGR Stages, state, regional and local roles, responsibilities and activities are outlined according to WHO-defined key components including:
1. Planning and Coordination
 2. Situation Monitoring and Assessment
 3. Prevention and Control

² U.S. Government (2008). Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans.

4. Health Systems Response
5. Communication

E. Key Components

1. **Planning and Coordination**—These efforts require collaboration at all levels (national, federal, state, local, tribal) and involve cooperation of leaders from both public and private sectors. DSHS is charged with guiding the state’s health response during a pandemic crisis. The focus of efforts is to provide leadership and expertise in the development of the state plan, and to develop a series of guidance documents that can be used to focus roles, responsibilities, and operations at the state, regional, and local level. These plans and guidance documents should be flexible and practical with the purpose of supporting existing national, state, regional, and local plans and guidelines. Additionally, they will be updated as needed. *Key Roles and Responsibilities* are summarized in [Appendix A](#).
2. **Situation Monitoring and Assessment**—Successful influenza surveillance requires support, participation, and coordination of a wide network of support agencies, healthcare practitioners, and people within the state as well as cross-state and international borders. This section provides guidance for maintaining and improving situational awareness and enhanced surveillance efforts to monitor changes in current circulating influenza virus subtypes, to rapidly identify novel influenza viruses, and to track and monitor their introduction and movement through human populations. Enhanced surveillance activities may be recommended during a particular pandemic period. Implementation steps for enhanced human surveillance and algorithms for surveillance activities are located in the appendix for *Surveillance* ([Appendix B](#)). Surveillance issues associated with case identification and submission of laboratory specimens are not discussed in this document. They are located in the [DSHS Resource Manual for Seasonal and Pandemic Influenza Testing in Texas](#).
3. **Prevention and Containment**—The public health system will take steps to delay the introduction of a pandemic influenza virus into the state and movement throughout the state to provide communities additional time to activate their response plans. This section provides guidance for community-level prevention and containment through the use of both non-pharmaceutical and pharmaceutical mitigation strategies. Detailed guidelines and implementation strategies have been created and are available as companion documents. For brevity, information contained in these documents will not be detailed in this document. People who seek additional information or who are tasked with implementing operational aspects of these strategies should refer to the specific operational guidelines for further details including the *Antiviral Allocation, Distribution and Storage Planning Guidelines* (AADS), the *Vaccine Allocation, Distribution and Storage Planning Guidelines* (VADS), and *Planning Guidelines for Non-Pharmaceutical Interventions*. A strong seasonal vaccination program provides the foundation for a strong pandemic influenza response. *Recommendations for Pneumococcal Vaccine* ([Appendix C](#)) also have been made available. Sample *Standing Delegation Orders and Emergency Medical Response* for antiviral drugs and vaccines are available in [Appendix D](#). Vaccine and antiviral tracking information (for adults and children) is available in [Appendix E](#).

4. **Health Systems Response**—All state and local governments, hospitals, nursing homes, schools and other congregate settings are required to have an all-hazards emergency management plan. However, pandemic influenza is likely to pose unique and long-standing challenges that may not be addressed in current emergency management plans. This section offers guidance for agencies involved in health systems response as they revisit their all-hazards emergency plans to address specific issues associated with pandemic influenza. An important consideration in pandemic planning is the availability of resources. Just as hospital bed capacity will be challenged during a pandemic, the supplies of critical equipment and health care materials may be inadequate. Information on the *Allocation of Scarce and Limited Resources* can be found in [Appendix M](#). Information regarding *Alternate Care for Medical Surge* is found in [Appendix N](#). Topics addressed in sub-appendices include: Determining the need for alternate care, (N.1); Site Selection and Design (N.2); Staffing (N.3); Equipment, Consumable, and Disposable Supplies for Alternate Care (N.4); and Stock Medications (N.5). In addition, efforts must be made to identify [special populations](#) (e.g., homeless, elderly, immunocompromised, speaking other languages, physically challenged, immigrants) as well as mechanisms to ensure continued delivery of services.
5. **Communications**—Events leading up to and including a pandemic necessitate effective communications strategies with stakeholders, media, and the general public. This section provides guidance strategies to address these needs. Disseminating timely and accurate information to stakeholders including government officials, community leaders, public health officials, medical care providers, the media, and the general public is an important facet of pandemic influenza preparedness and response. Cross-agency communications may be achieved using standard communications tools such as Epi-X or through the Public Health Information Network (PHIN). The DSHS Communications Unit, through the *DSHS Crisis and Emergency Risk Communication (CERC) Guidelines*, will carry out emergency risk communications and public information dissemination at the state level for pandemic influenza in compliance with the *DSHS News Media Policy* (found under Tab A in the DSHS CERC Guidelines). In addition, [Pandemic Influenza Shelf Kits](#) have been developed and distributed to regional offices, local health departments, hospitals, and partner organizations to provide standardized educational materials and to assist with prevention and containment strategies. During the pandemic period, many routine communications efforts will be handled within the [Incident Command System](#) (ICS) structure. *DSHS Incident Command Templates* ([Appendix H](#)) are provided as samples of common incident command forms which might be used during an influenza pandemic. Information on *Additional Contacts and Resources* is available in [Appendix I](#); however, secured contacts information will be available through the PHIN.

F. Other Useful Appendices

1. *Business Continuity of Operations Planning (COOP)* documents are located in [Appendix F](#). Add some narrative
2. *Death Care for Managing Mass Fatalities* is available in [Appendix G](#). Add

narrative

3. *Guidelines for Monitoring International Travelers* ([Appendix O](#))

G. Appendices as Free-Standing Companion Documents

1. Several Appendices to the Pandemic Influenza Plan Operating Guidelines also are stand-alone companion documents. These documents may be reviewed independently or as part of the PIPOG. Others will be added as they are developed. The current documents include:
 - a. *Planning Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#)),
 - b. *Antiviral Allocation, Distribution and Storage Planning Guidelines* (AADS) ([Appendix K](#)),
 - c. *Vaccine Allocation, Distribution and Storage Planning Guidelines* (VADS) ([Appendix L](#)).
2. Other useful appendices.

SECTION II. OPERATING GUIDELINES

PILLAR 1: Preparedness and Communication

Preparedness and planning are fundamental for preparedness and response activities, including surveillance, detection, response, containment and recovery efforts, and communications.

I. INTERPANDEMIC PERIOD (WHO Phases 1 and 2; FGR Stage 0; CDC Interval Investigation)

A. DSHS will

1. Planning and Coordination
 - a. Identify Pandemic Influenza Coordinators:
 - i. Planning Coordinator from the Strategic Preparedness Branch
 - ii. Pandemic Influenza Surveillance Coordinator is the Nurse Epidemiologist from the Infectious Disease Epidemiology and Surveillance Group in the Infectious Disease Control Unit
 - b. The State assumes the state coordination role for pandemic influenza.
 - c. Participate in the Preparedness Coordinating Council (PCC) and related Pandemic Influenza Coordinating Committee (PICC), and the Pandemic Influenza Planning Group (PIPG).
 - d. Review and update pandemic influenza plans and guidelines:
 - i. [Appendix 7: Pandemic Influenza Response](#) to [Annex H—Health and Medical Services](#) of the [State of Texas Emergency Management Plan](#).
 - ii. [Appendix 8: Strategic National Stockpile](#) of the [Annex H: Health and Medical Services](#) of the [State of Texas Emergency Management Plan](#).
 - iii. *Pandemic Influenza Plan Operational Guidelines* (PIPOG) and companion documents,
 - (a) [DSHS Resource Manual for Seasonal and Pandemic Influenza Testing in Texas](#).
 - (b) *Planning Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#)),

- (c) *Antiviral Allocation, Distribution and Storage Planning Guidelines* (AADS) ([Appendix K](#)),
 - (d) *Vaccine Allocation, Distribution and Storage Planning Guidelines* (VADS) ([Appendix L](#))
 - (e) *Interim Guidance for Allocation of Scarce Resources* ([Appendix M](#)), and
 - (f) *Establishment of Alternate Care Sites* ([Appendix N](#))
 - iv. ***DSHS Continuity of Operations Plan (COOP)*** [[HYPERLINK when posted](#)]
 - e. Provide subject matter expertise and guidance as requested to assist HSRs and LHDs in developing jurisdictional and COOP plans.
 - f. COOP planning
 - i. Developed [COOP](#) plan for DSHS
 - ii. Develop, in collaboration with other state agencies,
 - iii. Provide guidance and assistance in developing COOP plans for all state agencies including the development of overarching policies such as leave, and telecommuting.
 - g. Coordinate with stakeholders including regional and local bioterrorism planning groups to ensure that pandemic influenza is included in planned scenarios.
 - h. Coordinate high-level planning with bordering states, Texas-Mexico border jurisdictions, Mexican counterparts and American Indian tribes.
 - i. Coordinate planning activities with military partners.
 - j. Plan for the oversight for procurement, distribution and storage of state-controlled caches of antiviral drugs, seasonal/pandemic influenza vaccines, and other medical assets.
 - k. Identify funding sources to maintain and enhance seasonal and pandemic influenza program development.
 - l. Identify major gaps in effective pandemic influenza preparedness and response, and explore ways to address them.
 - m. Identify and develop/explore approaches to address gaps in state infrastructure and resources, laws and statutes that may interfere with effective response such as:
 - i. Isolation and quarantine laws for individuals and communities
 - ii. Medical volunteer licensure, liability and compensation
 - iii. Employees on voluntary assignment
 - n. Improve and maintain the Texas Electronic Registration-Death Registration (electronic death certificate and reporting system).
 - o. Identify and train staff in NIMS, ICS, and working in the Multi-Agency Coordination Center (MACC).
 - p. Participate in developing, exercising, evaluating, and updating plans and guidelines. Ensure state-level exercises are Homeland Security Exercise and Evaluation Program (HSEEP) compliant.
 - q. Assist HSRs and LHDs as they work with community agencies/organizations (e.g., Salvation Army, Meals on Wheels, EMS, Red Cross) regarding the development of plans to:

- i. Assist in distributing pharmaceuticals to households in isolation/quarantine.
 - ii. Assist households in obtaining adequate food and supplies while in isolation/quarantine.
 - iii. Address access to critical services and supplies for vulnerable populations.
2. Situation Monitoring and Assessment
 - a. The Infectious Disease Surveillance and Epidemiology Branch will coordinate ongoing state influenza surveillance activities ([Appendix B](#)) with national, regional, and local partners, including coordination of year-round statewide seasonal/pandemic influenza surveillance. The nurse epidemiologist within the Branch serves as the state influenza surveillance coordinator. Sources may include reports from key health providers and clinics, sentinel providers ([Appendix B.3-B.5](#)), [syndromic surveillance](#) reports, laboratory reports, animal health sources and reports, and other sources of information.
 - b. Continue to monitor the national and international communities for alerts and updates concerning avian/seasonal/pandemic influenza, and work with state and local partners to communicate information using appropriate [web-based](#) methods.
 - c. Seasonal influenza surveillance is conducted year-round in Texas. During WHO Phases 1 and 2, the state influenza surveillance coordinator will work with HSRs and LHDs to enhance respiratory virus surveillance:
 - i. Expand the number of participating physicians in the Sentinel Provider Surveillance Network (SPSN). (Goal: at least one (1) sentinel physician per 250,000 individuals).
 - ii. Increase the number of SPSN physicians who report on a weekly basis.
 - iii. Increase the number of medical providers serving as culture surveillance sites.
 - iv. Increase the number of specimens collected and submitted for viral isolation.
 - v. Expand the number of laboratories participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS).
 - vi. Provide rapid flu test kits as necessary to encourage testing.
 - vii. Develop LRN ability to conduct PCR testing.
 - viii. Use PHIN to communicate to medical providers and both reference and hospital clinical laboratories the criteria for pandemic influenza virus testing and local contact information for testing coordination.
 - ix. Collaborate and establish formal partnerships through the zoonosis epidemiologist in the Infectious Disease Control Unit (512-458-7111 x2155) with animal health agencies at the federal, state, and local levels to:
 - x. Identify human influenza associated/linked with animals with confirmed influenza infection.
 - xi. Share surveillance data (e.g., line lists, contact information, investigation points) associated with animal/human influenza between departments using appropriate means (typically using email, telephone, conference calls, etc.).

- xii. Consider establishing an active serologic surveillance program to monitor potential exposure among all individuals who are likely to have contact with poultry, wild birds, pigs, horses, and other animals with confirmed influenza infection.
 - d. Assist HSRs and LHDs to develop plans for follow up of isolated and/or quarantined households as a part of outbreak control measures during the “Initiation” and early “Acceleration” CDC intervals. Sample forms to monitor isolated/quarantined individuals and household contacts ([Appendix B.6](#)) and case investigation forms ([Appendix B.7](#)) are currently available as guides for HSRs and LHDs.
 - e. Continue to improve virologic surveillance capabilities and capacity to isolate and subtype influenza viruses during a pandemic influenza.
 - f. Develop/improve, maintain, and provide guidelines related to laboratory issues surrounding pandemic influenza.
 - g. Maintain LRN protocols for identifying influenza subtypes.
 - h. Improve ability to submit influenza isolates to CDC according to established protocols.
 - i. Work toward linking influenza specimen-level and surveillance data electronically to share information with other participating laboratories and CDC.
 - j. Identify and maintain a list of laboratories that may serve as resources and assist with [surge capacity](#) needs for specimen analysis.
 - k. Provide laboratory specimen submission forms and materials to HSRs and LHDs as requested.
 - l. Consider linking influenza surveillance to [syndromic bioterrorism surveillance](#), e.g., increased over-the-counter drug use, school/work closures.
 - m. Coordination of reports of early suspect cases will be conducted by the state influenza surveillance coordinator. Investigations will be conducted by appropriate local and regional epidemiologists. The epidemiologists will be directed to complete the Human Influenza A (H5) Domestic Case Screening Form ([Appendix B...HYPERLINK](#)). Suspect cases will be reported using the state disease surveillance application (NEDSS).
3. Prevention and Containment
- a. Provide subject matter expertise and guidance to HSRs and LHDs for the provision of non-pharmaceutical intervention strategies (e.g., cancellation of public events, school/business closures, [quarantine](#) and [isolation](#), sharing information across agencies) and pharmaceutical intervention strategies (allocation, distribution and storage of antiviral drugs, pre-pandemic/pandemic vaccine, and other medical assets) during a pandemic. State-level guiding documents and materials include the following:
 - i. [Pandemic Influenza Shelf Kits](#),
 - ii. *Planning Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#))
 - iii. *AADS Planning Guidelines I* ([Appendix K](#))
 - iv. *VADS Planning Guidelines* ([Appendix L](#))
 - v. [Communicable Disease Control Measures in Texas: A Guide for Public Health Authorities in a Public Health Emergency](#)

- b. Provide guidance to HSRs, LHDs and other agencies concerning interpretation of isolation and quarantine statutes and laws associated with cross-border, and interstate travel.
 - c. Generate and maintain lists of critical service providers for DSHS as a part of the DSHS [COOP](#) Plan.
 - d. Ensure draft of the DSHS Community Emergency Medication Clinic, a mass clinic templateⁱⁱⁱ developed for the DSHS SNS program, is available on the PHIN^{iv} to local and regional planners.
 - e. Maintain the Texas childhood immunization tracking system (ImmTrac) to include tracking of antivirals and pandemic vaccine for children and adults ([Appendix E](#)).
 - i. Inform healthcare sector about system.
 - ii. Provide online training.
 - f. Develop or revise interview forms for pandemic influenza outbreak management.
 - g. Develop, with assistance of HSRs and LHDs, a community mitigation tracking tool for use on WebEOC.
4. Health Systems Response
- a. Review and communicate pertinent legal authorities and laws and procedures including quarantine laws and their applicability for closing of businesses, cancellation of public events, and dismissal of schools during a declared public health emergency.
 - b. Review and communicate 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 nonmedical volunteers.
 - c. Assist health care providers in developing templates for triaging/screening sick individuals in places such as ambulatory care, homes, or fever clinics to determine appropriate placement for care.
 - d. Provide guidance to hospitals to assist in decision making regarding allocation of scarce resources ([Appendix M](#)).
 - e. Develop guidelines for healthcare surge including alternate care sites ([Appendix N](#)).
5. Communications
- a. Increase communication capabilities in and among HSRs and LHDs and ensure the health department's ability to broadcast and receive health bulletins using the PHIN.
 - i. Maintain direct communication channels to the Governor's Division of Emergency Management (GDEM) and the Governor's Office of Homeland Security, physicians, Texas Osteopathic Medical Association (TOMA) and the Texas Medical Association (TMA).
 - ii. Maintain a database of emergency contacts that receive health alerts.
 - iii. Maintain PHIN capability to auto-forward health alerts to:
 - (a) LHD staff,
 - (b) HSR staff,
 - (c) DSHS central office staff,
 - (d) GDEM,

Section II. Operating Guidelines

- (e) Texas Commission on Environmental Quality,
 - (f) Texas Hospital Association (THA),
 - (g) TMA, and
 - (h) TOMA
- iv. Maintain the Emergency Operations Center software application (WebEOC) to manage communication (message boards, information sharing with state and local partners, instant communications) during short- and long-term critical events.
 - v. Provide Real Time Emergency Resource Management (EMResource™), an internet-based application, to public health professionals statewide. The Web-based application EMResource™ is used by most Texas hospitals to monitor and report capacity and diversion statuses.
- b. Maintain ability to communicate with DSHS Mental Health and Substance Abuse (MHSA) Section through the Health and Human Services Commission (HHSC) communication channels or an out-of-state vendor until MHSA joins the PHIN system.
 - c. Maintain redundant communication systems.
 - d. Communicate with health care professionals
 - i. Identify and address health issues and concerns for healthcare professionals regarding pandemic influenza.
 - ii. Assist hospitals and health care facilities in the development of triage and screening protocols for patients presenting with ILI thought to be associated with pandemic influenza.
 - iii. Assist hospitals and health care facilities in the development of community and patient recommendations concerning the use of non-pharmaceutical interventions (i.e., social distancing, staying home from school and work with symptoms of ILI associated with pandemic influenza, voluntary isolation and quarantine, and when to seek additional help for ill family members).
 - iv. Develop communication channels for affected target audiences so they can receive messages regarding pandemic influenza;
 - v. Develop appropriate messages to address issues and concerns associated with healthcare professionals as they deal with pandemic influenza.
 - vi. The Texas Department of State Health Services communicates and informs private- and public-sector health professionals on case definitions and methods for laboratory diagnosis through the PHIN and the Departments website.
 - vii. Alert state and local hospitals, local health authorities, state schools, community mental health centers, the GDEM, the Texas Department of Criminal Justice, county emergency management coordinators and other mental health partners to pandemic potential.
 - viii. Promote review of the [Disaster Mental Health Appendix 13](#) to [Annex H—Health and Medical Services](#) of the [State of Texas Emergency Management Plan](#).
 - e. Inform the public
 - i. Ensure all state-level communication is in accordance with the [DSHS](#)

[Crisis and Emergency Risk Communications \(CERC\) Guidelines.](#)

- ii. Review CERC guidelines on a regular basis, at a minimum of once a year.
 - iii. Develop and refine public education strategies for use with community resources.
 - iv. Coordinate the development, adaptation, revision, and update of educational materials. These materials will be in an easy-to-read format in multiple languages and will include information on personal use of non-pharmaceutical prevention measures such as hand washing, [respiratory hygiene, and cough etiquette](#).
 - v. Provide informational materials in multiple languages to local jurisdictions through the [Pandemic Influenza Shelf Kit](#) and the [DSHS Public Health Preparedness Web site](#).
 - (a) Ensure that foreign missions have access to informational materials.
 - vi. Coordinate development of key messages and fact sheets regarding currently circulating viruses and pandemic influenza.
 - vii. Identify and prepare DSHS spokesperson to handle questions regarding the DSHS response to pandemic influenza.
 - viii. Identify and strengthen relationships among public and private sector stakeholders, including [recognized community health providers](#) who are able to reach [special populations](#); provide them pandemic influenza information.
 - ix. Maintain Web section in English and Spanish for pandemic influenza information as part of the [DSHS Preparedness Web site](#).
 - x. Maintain channels for providing emergency public information to the public (including those who under voluntary isolation and quarantine) including the use of Texas 2-1-1, [Texas Online](#) and any DSHS-operated hotlines that are established.
 - xi. Include public information dissemination for any pandemic influenza response exercise or training in which DSHS participates.
 - xii. Maintain resource lists to facilitate communication with media, and public and private sector stakeholders.
- B. Health Service Regions and Local Health Departments will
1. [Planning and Coordination](#)
 - a. Establish/appoint a Pandemic Influenza Coordinators
 - i. Planning Coordinator (PIPC)
 - ii. Surveillance Coordinator (Epidemiology Response Team)
 - b. Participate in the development, review, and update of state-level pandemic influenza plans and operational guidelines.
 - c. Develop, update, and maintain pandemic influenza plans and operational guidelines for the jurisdictions for which they serve in the LHD role based on the following State documents:
 - i. *Pandemic Influenza Plan Operational Guidelines*,
 - ii. *Planning Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#)),
 - iii. *AADS Planning Guidelines* ([Appendix K](#)),
 - iv. *VADS Planning Guidelines* ([Appendix L](#)),
 - v. *Interim Guidance for Allocation of Scarce Resources* ([Appendix M](#)),

- vi. *Establishment of Alternate Care Sites* ([Appendix N](#)), and
- vii. Texas *Strategic National Stockpile Manual*
- d. Develop COOP plans to maintain critical services.
- e. Provide subject matter expertise to assist in the development of local and community plans.
- f. Identify and maintain private- and public-sector partners to facilitate coordination and participation in the pandemic influenza planning process.
- g. Identify gaps in existing local infrastructure to respond to a pandemic influenza and develop approaches to correct them.
- h. Identify and develop/explore approaches to address gaps in region and/or local infrastructure and resources, and laws and statutes that may interfere with effective response.
- i. Collaborate with local government, community organizations, and community leaders to identify and address the [accessibility](#) needs of [vulnerable populations](#).
- j. Collaborate with community partners including informal leaders to identify [vulnerable populations](#).
 - i. Identify locations of long-term care facilities.
 - ii. Identify location of individuals who are medically fragile, homebound or are unable to access public transportation.^v
 - iii. Identify languages spoken with substantial frequency within jurisdictions and supply educational materials in those languages.
 - iv. Collaborate with community partners to determine availability of potential sites for aggregate care facilities.
- k. Develop strategies to overcome barriers experienced by special populations with particular attention to vulnerable populations including access and language issues.^{vi}
 - i. Assist community agencies/organizations (e.g., Salvation Army, Meals on Wheels, EMS, Red Cross) with plans to:
 - ii. Assist in distributing pharmaceuticals to households with homebound patients including isolation/quarantine.
 - iii. Assist households in obtaining adequate food and supplies to with homebound patients including those in isolation/quarantine.
- l. Coordinate pandemic influenza planning efforts with other [public health disaster](#) planning at the local level.
- m. Work with DSHS to address cross-border/cross-jurisdictional planning issues , if applicable, with
 - i. Bordering states,
 - ii. Texas-Mexico border jurisdictions and their Mexican counterparts, and
 - iii. American Indian tribes.
- n. Identify and provide training opportunities for staff in [NIMS](#), [ICS](#), and working in local emergency operations centers.
- o. Collaborate with local healthcare providers to identify appropriate sites to serve as triage and treatment centers, vaccination sites and holding areas for acutely ill patients not able to be admitted to hospitals.
- p. Collaborate with local healthcare providers and death care providers to identify

- facilities/resources with sufficient refrigerated storage to serve as temporary morgues.
- q. Provide oversight for procurement, regional or local storage, safety, and distribution of vaccine and antivirals from national, state, and locally acquired caches.
- r. Participate in developing, exercising, evaluating and updating plans and guidelines.
- s. Ensure that Disaster Mental Health Services resources such as state hospitals, community Mental Health and Mental Rehabilitation (MHMR) centers, and substance abuse assets are identified and included in planning, implementation, and response activities in accordance with the [Disaster Mental Health Appendix 13](#) to [Annex H—Health and Medical Services](#) of the [State of Texas Emergency Management Plan](#).
- t. Ensure plans and guidelines are exercised at the regional level according to [HSEEP](#) guidelines and modify as necessary to meet regional and local needs.
- u. Develop or adapt Standing Delegation Orders (SDO) or protocols ([Appendix D.5](#)) for:
 - i. Administering antiviral medications and
 - ii. Reporting drug reactions to MedWatch.
- v. Develop or adapt SDOs or protocols ([Appendix D.1](#)) for:
 - i. Administering influenza vaccine in clinics
 - ii. Emergency medical management of vaccine reactions ([Appendix D.2](#))
 - iii. Prevention protocol for vaccinating people with chicken egg or gentamycin sulfate allergy ([Appendix D.1](#)).
- 2. Situation Monitoring and Assessment
 - a. Continue to assume responsibility for and conduct year-round influenza virologic, mortality, and morbidity surveillance for jurisdictions, including suspected early cases of pandemic influenza.
 - b. Participate in the development, use, and improvement of an electronic surveillance system for seasonal influenza that can be used during an influenza pandemic.
 - c. Collaborate with local health care partners to improve, develop, and enhance surveillance of severe respiratory illness (including associated deaths), and ILI.
 - d. Develop relationships with health care partners serving populations that favor traditional cultural healing practices over conventional U.S. health care practices.
 - e. Work with DSHS Central Office to develop methods for estimating/ enumerating influenza-associated deaths.
 - f. Recruit local physicians into the Sentinel Provider Surveillance Network (SPSN) and encourage weekly reporting to assure adequate sampling within jurisdictions.
 - g. Work to increase number of medical providers to serve as culture surveillance sites.
 - h. Work with DSHS Central Office and local health care providers to increase number of influenza isolates submitted to DSHS laboratory (possibly directly to CDC) according to established protocols.

- i. Collaborate with local hospitals to explore monitoring of pneumonia and influenza hospitalizations electronically during a pandemic influenza.
 - j. Participate in ongoing influenza surveillance which includes the following:
 - i. Assist with submission of respiratory specimens for viral isolation and identification, typing and sub-typing,
 - ii. Passive surveillance of ILI outbreaks in long-term care facilities, schools, and other institutional settings (e.g., jails, workplaces).
 - k. Develop plans for follow up of isolated and/or quarantined households as a part of outbreak control measures during the “Initiation” and early “Acceleration” CDC intervals. Engage community service agencies/organizations:
 - i. Information- Dedicated website for isolation/quarantine information, 2-1-1, etc.
 - ii. Monitoring - phone calls from Salvation Army, churches
 - iii. Evaluation – phone calls or visits by EMS, Home Health, hospital phone triage nurses
 - l. Maintain LRN protocols for identifying influenza subtypes.
 - m. Enroll/train private practitioners and hospital personnel, and other designated officials/individuals to use the newly developed [Texas Electronic Registration-Death Registration](#) (electronic death certificate and reporting system).
3. Prevention and Containment
- a. Address antiviral and vaccination issues including
 - i. Collaborate with DSHS Central Office and community partners to review current emergency plans for inclusion of provisions for mass antiviral distribution and vaccination campaigns.
 - ii. Identify appropriate sites to serve as vaccination sites within jurisdictions.
 - iii. Locate and enumerate Target Groups in the jurisdiction and methods to deliver antivirals to these priority groups.
 - iv. Locate, enumerate, and determine methods to verify Target Group membership for vaccination.
 - v. Identify, locate and determine methods to verify Target Group membership for vaccination.
 - vi. Identify and remove barriers to annual influenza and pneumococcal vaccination programs. ^{vii}
 - vii. Enhance influenza and pneumococcal vaccination coverage levels for high risk populations.
 - viii. Work with health care partners to assess and improve healthcare worker influenza immunization levels.
 - ix. Work with animal health partners to assess and improve poultry, swine, and wild waterfowl influenza immunization levels.
 - x. Maintain ability to participate in antiviral adverse event reporting online ([MedWatch](#)) including plans demonstrating steps toward adequate follow-up and monitoring.
 - xi. Maintain ability to participate in vaccine adverse event reporting (VAERS, [Appendix D.3](#)) including plans demonstrating steps toward adequate follow-up and monitoring (further guidance is expected from CDC).

- b. Ensure ability to report data during [Pandemic Period](#) to help determine vaccine and antiviral allocation for Target Groups by the DSHS Central Office. See [Appendix D.4](#) and [Appendix D.6](#) for sample vaccine and antiviral allocation forms.
- c. Identify border health issues^{viii} and plan solutions with the Office of Border Health (OBH) and other applicable agencies. Develop MOUs as necessary.
- d. Collaborate with DSHS Central Office to
 - i. Review medical and public health control legislation and liability issues^{ix} related to delivery of biologic agents (e.g., vaccine and antiviral drugs).
 - ii. Examine legal aspects (including workers compensation issues) related to use of prophylactic medications and refusal of medication for those in high-risk groups. Make changes as necessary.
 - iii. Determine procedures for, and legalities related to, suspension of rules to contain the pandemic, including but not limited to
 - (a) Unlicensed vaccinators,
 - (b) Distribution of prescription antivirals by unlicensed volunteers,
 - (c) Distribution and/or vaccination by non-Texas licensed volunteers,
 - (d) Mandatory vaccinations,
 - (e) Emergency distribution of drugs/vaccines, and
 - (f) Use of investigational drugs/vaccines.
- e. Develop plans for application and tracking of [community containment](#) strategies by local jurisdictions to include
 - i. Educational campaigns for the public and local businesses.
 - ii. Provision of social, medical, and psychological care.
 - iii. Provision of supplies such as food.
- f. Determine who will provide [prophylaxis](#) to certain targeted risk groups such as hospital staff, EMS, or critical service providers, if included in the DSHS priorities (*Antiviral Allocation, Distribution and Storage Planning Guidelines*) ([Appendix K](#)) and based on community needs and resources.
- g. Ensure that plans for recruiting/credentialing DSHS and other state agency assigned staff, volunteers, pharmacists, EMS, retired physicians, and nurses, and others (out-of-state and federal, including the Public Health Service and the U.S. military) to administer antivirals and vaccines will be done at the local and regional level.
- h. Prepare to track distribution of antivirals and vaccine through TIMS (See [AADS](#) and [VADS](#) guidelines)
- i. Prepare to track children and adult antiviral distribution and vaccinations through ImmTrac. ImmTrac will generate summary reports which will be used to report to CDC through the Countermeasure and Response Administration (CRA) reporting system.
- j. Identify sources of supplies^x needed for administering vaccine.
- k. 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 target populations.
 - iii. Develop plans for educating private professional sector regarding

- prophylaxis and intervention strategies.
- l. 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. Maintain the list and provide numbers to DSHS for allocation of pharmaceuticals for Target Groups.
 - m. Individual-focused strategies
 - i. Encourage use of personal protective strategies including seasonal influenza vaccination, hand washing, respiratory hygiene, and cough etiquette to prevent influenza.
 - ii. Encourage annual seasonal influenza vaccination for health care workers.
 - iii. Enhance seasonal influenza vaccination coverage levels in traditional “high-risk” groups, particularly in subgroups in whom coverage levels are low.^{xi}
 - iv. Work with the Texas Animal Health Commission to require protection for individuals involved in activities to control and eradicate outbreaks of avian influenza among poultry and swine.
 - v. Encourage poultry and swine industry workers to be vaccinated for seasonal influenza.
 - vi. Enhance Pneumococcal vaccination coverage levels for eligible children and adults to reduce the incidence or severity of secondary bacterial pneumonia ([Appendix C](#)).
4. Health Systems Response
- a. Encourage and assist private sector healthcare providers to develop and maintain pandemic influenza plans and protocols.
 - b. Provide preventive action recommendations to communities.
 - c. HSR and LHDs in conjunction with public and private sector stakeholders including state and federal agencies, health care systems, pharmaceutical companies and researchers, as appropriate, will
 - i. Update and/or inventory state medical assets.
 - ii. Collaborate with the appropriate agencies to inventory, identify, and type regional resources.
 - iii. Develop and coordinate recommendations on health issues related to pandemic influenza.
 - iv. Review major elements of the health sector and essential non-health sector response plans and guidelines.
 - v. Coordinate plans for fever clinics and telephone hotlines to include:
 - (a) When clinics and hotlines will be activated,
 - (b) Where clinics and hotlines will be located,
 - (c) Hours and staffing patterns, and
 - (d) Protocols and triage decision trees.
 - (e) Coordinate with area 2-1-1 Information and Referral Service.
 - vi. Develop or identify, based on the disease epidemiology, disease-specific protective action recommendations to be implemented during the pandemic.

- vii. Estimate and communicate the impact of pandemic influenza on essential health services using both moderate and worst-case scenarios.
- viii. Maintain an inventory of, and report to DSHS as requested, available beds in nursing facilities that might serve to house sick patients as hospital overflow.
- ix. Maintain the ability to inventory hospital readiness status and medical resources (e.g., EMResource™).
- d. Assist DSHS to maintain a statewide inventory of
 - i. 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,
 - ii. Back-up personnel with emphasis on nontraditional volunteers (e.g., family members, retired health care personnel),
 - iii. Beds (hospital and long-term care),
 - iv. ICU capacity,
 - v. Ventilators,
 - vi. Pharmacies and pharmacists,
 - vii. Laboratories,
 - viii. Personal Protective Equipment (PPE) (e.g., masks, gloves),
 - ix. Specimen collection and transport materials,
 - x. Contingency medical facilities (within jurisdiction),
 - xi. Mortuary and funeral services,
 - xii. Social services, disaster mental health services, substance abuse and faith based services,
 - xiii. Medical supplies (e.g., syringes, gloves, IV supplies, feeding tubes) appropriate for infants and children as well as adults, and
 - xiv. Interpreter services.
- e. Analyze public surge capacity and assist private-sector providers to determine potential needs.
 - i. Work with healthcare partners to identify and train screeners for on-site and remote patient screening.
 - ii. Collaborate with area hospitals to establish alternate care sites as necessary ([Appendix N](#))
- f. Provide a range of estimates for the potential local impact related to deaths, hospitalizations, and outpatient visits due to pandemic influenza for your community ([FluAid](#) software is available).
- g. In collaboration with area hospitals, determine a strategy to advise non-acute patients to stay home.
- h. In collaboration with healthcare partners, identify locations for the management of patient overflow.
- i. Contact the local and/or regional State Mortuary Assistance Team^{xiii} to ensure death care of mass fatalities is coordinated ([Appendix G](#)).
- j. Provide lists of healthcare workers and support personnel critical for pandemic response for Tier 1 prophylaxis or vaccination.
- k. Assist state hospitals and community mental health/mental retardation centers

- to:
- i. Review internal emergency management plans and [Disaster Mental Health Appendix 13](#) of [Annex H—Health and Medical Services](#) of the [State of Texas Emergency Management Plan](#).
 - ii. Review shelter-in-place and evacuation procedures.
 - iii. Update and/or inventory medical supplies.
 - iv. Identify and maintain lists (including work and home contact information) of essential medical and nonmedical staff including back-up personnel with special emphasis on nontraditional volunteers.
 - v. Estimate the impact of pandemic influenza on service provision.
- l. DSHS recommends that congregate facilities serving special needs populations follow the same recommendations as above.
5. Communications
- a. Adopt appropriate communications strategies as outlined in DSHS Communication section above.
 - b. Maintain ability to send and receive information using the PHIN.
 - c. Maintain local level emergency contact lists and the ability to communicate health alert messages to local partners.
 - d. Maintain redundant communications systems.
 - e. Coordinate the use of educational materials (e.g., personal use of non-pharmaceutical prevention measures such as hand washing, respiratory hygiene, and cough etiquette).
 - f. Encourage local health care providers to use the PHIN for alerts and useful information.

PILLAR 2: Surveillance and Detection

Early warning of a pandemic and the ability to closely track the spread of an avian influenza outbreak is critical to being able to rapidly employ resources to contain the spread of the virus. An effective surveillance and detection system will save lives by allowing the activation of response plans before the arrival of a pandemic virus to the state.

II. PANDEMIC ALERT PERIOD (WHO Phases 3, 4, and 5; FR Stages 0, 1, and 2; CDC Interval Recognition)

A. Department of State Health Services will

1. Planning and Coordination

- a. If incomplete, accelerate activities of Interpandemic Period.
- b. Notify and update all HSRs and LHDs about changes in Pandemic Phase, Federal Response Stages, and CDC Intervals through the PHIN.
- c. Meet with all participating DSHS partners/stakeholders to review the critical elements and expectations of State Pandemic Influenza Plan, PIPOG, AADS, and VADS Guidelines,
- d. DSHS and HSRs review and update if necessary [COOP](#) Plans.
- e. Provide training and monitor records for staff cross-trained to cover critical tasks and ICS.
- f. Notify and update HSRs, LHDs and partners of antiviral and pandemic vaccine status and projected timeline of antiviral and vaccine availability.
- g. Coordinate activities with Quarantine Stations ([Appendix O](#)).
- h. Review response readiness (non-pharmaceutical and pharmaceutical preparations) with the Texas Military Forces (TMF).
- i. Prepare to transition into Emergency Operations

2. Situation Monitoring and Assessment

- a. Provide HSRs and LHDs with updated case definitions, protocols, and algorithms to assist with case finding, management, [infection control](#), and surveillance reporting. This information will be provided through the PHIN and the Department's website.
- b. The state influenza coordinator within the Infectious Disease Surveillance and Epidemiology Branch will initiate discussions and meetings with necessary public and private sector stakeholders, and partners to review elements of enhanced surveillance.
 - i. Notify public and private sector stakeholders of the need for heightened awareness.
 - ii. Craft public announcements encouraging education and heightened awareness.
 - iii. Activate the National Electronic Data Surveillance System (NEDSS)-Based System (NBS) to collect enhanced surveillance data.
 - iv. Collaborate with animal health partners to share information between agencies on animal and human diseases, specifically avian influenza and [influenza-like illnesses](#) (ILI) in humans.
- c. Request submission of additional viral specimens from patients presenting with ILI including those with recent travel history to regions where

- avian/seasonal/pandemic strains of influenza are circulating and those with unusual or severe symptoms (See [DSHS Resource Manual for Seasonal and Pandemic Influenza Testing in Texas](#)). The PHIN will be sued to communicate with medical providers and reference and hospital clinical laboratories the criteria for virus testing and local contact information for testing coordination.
- d. Work with CDC and other national partners to ensure capability and capacity to identify novel subtype.
 - e. Acquire/maintain laboratory space that meets Bio Safety Level 3 specifications.
 - f. Determine need for increased transportation resources and additional shipping materials for viral specimens. Coordinate specimen transport to national labs.
 - g. Test specimens that are suspected of being a novel subtype, using non-culture techniques as requested by DSHS epidemiologists. (See [DSHS Resource Manual for Seasonal and Pandemic Influenza Testing in Texas](#).)
3. Prevention and Containment
- a. Expedite completion of [Interpandemic](#) preparations.
 - b. Initiate relevant components of non-pharmaceutical and pharmaceutical guidelines for including
 - i. DSHS *Pandemic Influenza Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#))
 - ii. *Antiviral Allocation, Distribution and Storage Guidelines* ([Appendix K](#))
 - (a) Allocate and distribute General Revenue Cache to HSRs.
 - iii. *Vaccine Allocation, Distribution, and Storage Guidelines* ([Appendix L](#))
 - (a) Allocate and distribute pre-pandemic vaccine per Target Population.
 - c. Report confirmed cases of novel influenza virus to CDC according to established protocols.
 - d. Prepare to track community mitigation strategies a they are initiated.
4. Health Systems Response
- a. Review, revise as needed, and activate guidelines for [infection control measures](#) for health care settings ([DHHS Strategic Plan, Supplement 4: Infection Control](#)), business communities ([Appendix F](#)), and [schools](#).
 - b. Collaborate with the infectious disease specialists and influenza experts on the review and revision of the prevention and control measures.
5. Communications
- a. Maintain enhanced and secure communication with international, federal, interstate, regional and local partners.
 - b. PHIN staff will continue to monitor the delivery of health alerts, maintain backup and redundant communications systems as needed, and update the PHIN emergency contact database if required.
 - c. Continue to coordinate with DSHS IDCU staff on use of DSHS broadcast messaging equipment for delivery of health alerts by email, automated phone and fax technologies.
 - d. Utilize the PHIN to pass Situational Reports (SitReps) among agencies.
 - e. Communicate with health care professionals
 - i. Communication efforts regarding novel virus identified in a single human

- [confirmed case](#), small overseas cluster(s), and larger overseas cluster(s) will continue as described for the Interpandemic Phase. Modifications to the standard communications procedures will be made accordingly as new information about the novel subtype is received.
- ii. DSHS will coordinate notification of all appropriate agencies, statewide professional organizations, and PHL directors.
 - iii. Designated DSHS IDCU staff will be responsible to communicate pandemic response updates and recommendations of the Epidemiology Response Teams (ERT) to targeted health care professionals or agencies that serve health care professionals.
- f. Inform the public per [CERC](#) guidelines
- i. Update *Pandemic Influenza Shelf Kits*, fact sheets, flyers and frequently asked questions sheets in coordination with local jurisdictions.
 - ii. Provide information in Spanish and other languages as needed.
 - iii. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts in coordination with the DSHS OBH. Work with partners to ensure consistent messages are delivered.
 - iv. Update Web page as needed.
 - v. DSHS Press Officer or designee will provide public information in ways such as response to media calls and dissemination of educational materials on pandemic influenza in coordination with local jurisdictions.
- B. Health Service Regions and Local Health Departments will
1. Planning and Coordination
 - a. Notify regional and local partners of WHO Pandemic Alert Phase and changes in federal stages through PHIN or other communication channels.
 - b. Confirm availability of resources to support a pandemic response
 - c. Review guidelines for prevention and control measures.
 - d. Review SNS plans for state and jurisdictions.
 - e. Review and update regional and local antiviral and vaccine allocation, distribution and storage plans.
 - f. Distribute antiviral and vaccine plans with updated priority groups to the medical community.
 - g. Review training records for staff identified for surge capacity.
 - h. Provide education about agency COOP plans to maintain essential services.
 - i. Prepare to transition into Emergency Operations
 2. Situation Monitoring and Assessment
 - a. Initiate meetings with necessary public and private sector stakeholders and partners to review elements of enhanced surveillance.
 - b. Review seasonal influenza guidelines.
 - c. Review protocols for submitting specimens for influenza testing.
 - d. Consider enhanced syndromic surveillance activities such as monitoring school absenteeism, use of over-the-counter medications, and emergency room visits.
 - e. Encourage local practitioners test for influenza and to submit specimens to LRN laboratories for confirmation and further testing.

- f. Implement investigation and containment strategies for cases/clusters as necessary.
- g. Prepare for and conduct investigations of suspected cases/clusters of pandemic influenza as required.
- 3. Prevention and Containment
 - a. Expedite completion of [Interpandemic](#) and [Pandemic Alert](#) preparations.
 - i. Non-Pharmaceutical Interventions
 - (a) Place on alert (FGR Stage 2) relevant components of the *Planning Guidelines for Non-Pharmaceutical Interventions* ([Appendix J](#))
 - (b) Prepare to track community mitigation strategies as they are initiated.
 - ii. Coordinate prevention and mitigation strategies with the OBH for Texas-Mexico border jurisdictions and their Mexican counterparts.
 - iii. Coordinate prevention and mitigation strategies for international travelers with federal quarantine stations ([Appendix O](#)).
 - iv. Pharmaceutical Interventions (Vaccines and Antivirals)
 - (a) Implement strategies to improve seasonal and influenza vaccination rates among priority groups and the general population.
 - (b) Implement strategies to improve pneumococcal vaccination rates among priority groups and the general population.
 - (c) Place on alert (FGR Stage 2) relevant components of jurisdictional and *DSHS AADS Planning Guideline(s)* ([Appendix K](#)).
 - (i) Have available Target Group population count for submission to DSHS upon request.
 - (ii) Have available appropriate client forms (see SNS guidelines).
 - (iii) Alert partner locations previously identified for antiviral distribution to priority populations.
 - (d) Notify medical community of (pre)pandemic vaccine status, projected timeline of vaccine availability and client options for obtaining vaccine.
 - (e) Prepare to activate (FGR Stage 2) relevant components (depending on federal stage) of the DSHS and jurisdictional *Vaccine Allocation, Distribution and Storage Planning Guidelines* ([Appendix L](#)) for pre-pandemic vaccine distribution.
 - (i) Have available Target Group population count for submission to DSHS upon request.
 - (ii) Have available adequate supplies of Texas [C-93 Addendum to Vaccine Information Statements](#) and [Vaccine Information Statements](#).
 - (iii) Alert partner locations previously identified as locations for vaccine clinics for pre-pandemic vaccine to priority populations.
 - (iv) Prepare to activate plans for allocation and distribution of any available pre-pandemic vaccine.
 - v. Activate (FGR Stage 2) relevant components (depending on federal stage) of the jurisdictional plans associated with the [Appendix 8: Strategic National Stockpile](#) of the *Annex H: Health and Medical Services* of the *State of Texas Emergency Management Plan*.

- b. Prepare to receive General Revenue Cache of antivirals (WHO Phase 4).
 - c. If there are suspected cases/clusters within jurisdiction, confirm infections with LRN and implement outbreak management strategies.
 - i. Implement individual and community level countermeasure strategies for confirmed cases/clusters and their contacts as appropriate (see *Planning Guidelines for Nonpharmaceutical Interventions* and AADS plan).
 - ii. Report cases of confirmed Novel Virus Influenza to DSHS.
 - iii. Implement enhanced surveillance activities.
 - iv. Implement screenings of international and interstate travelers in collaboration with quarantine stations.
4. Health Systems Response
- a. Encourage hospitals and congregate facilities to review and update their Pandemic Influenza Plans.
 - b. Encourage hospitals to review health care setting prevention and control procedures ([DHHS Strategic Plan, Supplement 4: Infection Control](#)).
 - c. Collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health.
 - d. Provide public and private health care providers with updated case definitions, protocols, and algorithms to assist with case finding, management, [infection control](#), and surveillance reporting. This information will be provided using the PHIN and the Department's website. In addition, this information would be located on appropriate local public health department websites.
 - e. Work with healthcare partners to train secondary screeners.
5. Communications
- a. Maintain enhanced and secure communication with international, interstate, state, regional and local partners.
 - b. PHIN staff will continue to monitor the delivery of health alerts, maintain backup and redundant communications systems as needed, and update the PHIN emergency contact database if required.
 - c. Coordinate with DSHS staff for delivery of health alerts.
 - d. Communicate with healthcare professionals
 - i. ERTs will ensure that pandemic response updates and recommendations will reach local health care professionals or agencies that serve health care professionals.
 - ii. Highly encourage health care providers to use the PHIN to receive health alerts and other useful information.
 - iii. Inform partners regarding novel virus identified in a single human case, small overseas cluster(s), and larger overseas cluster(s).
 - g. Inform the public
 - i. Update fact sheets, flyers and frequently asked questions sheets in coordination with DSHS.
 - ii. Provide information in Spanish and other languages as needed.
 - iii. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts in coordination with the DSHS Communications Unit and the OBH. Work

- with partners to ensure consistent messages are delivered.
- iv. Work with DSHS Press Officer or designee to provide public information including through responses to media calls, news releases, and dissemination of educational materials on pandemic influenza.

PILLAR 3: Response and Containment

It is recognized that a virus with pandemic potential anywhere represents a risk to populations everywhere. Once health authorities have signaled sustained and efficient human-to-human spread of the virus has occurred, a cascade of response mechanisms will be initiated.

III. PANDEMIC PERIOD (WHO Phase 6; FGR Stages 3, 4, 5; CDC Intervals Initiation, Acceleration, Peak, Deceleration)

- A. Department of State Health Services will
 - 1. Planning and Coordination
 - a. Notify and update all HSRs and LHDs of Pandemic Phase 6, changes in the Federal Response Stages, and CDC Intervals through the PHIN.
 - b. Review the *PIPOG* in conjunction with key private and public sector stakeholders.
 - c. Activate (FGR Stage 4) DSHS MACC incident command; refer to MACC Operational Guidelines [\[HYPERLINK\]](#).
 - d. Review the State Pandemic Influenza Plan
 - e. Review the SNS Manual
 - f. Declare community mitigation triggers [\[HYPERLINK TO NEW TABLE\]](#) (alert, standby, activate) as appropriate based on PSI and presence of disease in the state or region.
 - g. Review and operationalize (FGR Stage 4–6) elements of the PIPOG, modifying as necessary.
 - h. Review (FGR Stage 4) and operationalize (FGR Stage 5–6) the DSHS COOP plan.
 - i. Review (FGR Stage 4) and operationalize (FGR Stage 5–6) HHSC and state multi-agency COOP plans.
 - j. Ensure that TIMS through the PHIN is available and ready for implementation to track antiviral supplies according to SNS Manual.
 - k. Ensure that ImmTrac is available and ready for implementation to track antiviral and vaccine administration and CDC-required client data to be reported in the aggregate.
 - l. Conduct just-in-time training on pandemic policies and protocols for regions and other partners.
 - m. Ensure that appropriate policies, protocols, and MOUs are in place.
 - n. Review logistics and human resources.
 - 2. Situation Monitoring and Assessment
 - a. Begin (FGR Stage 2) and continue enhanced surveillance activities which may include
 - i. Provide assistance to HSRs to conduct outbreak investigations as requested and as resources allow,
 - ii. Monitor absenteeism rates within schools,

- iii. Alert hospitals to be prepared to report number of patients, number of patients with influenza, number on ventilators, number of available ventilators, number of beds occupied, number of beds available, estimates of staffing levels (MDs, nurses, ancillary), number of deaths due to any respiratory illness (ICD-9 480–486 and 487) including medical examiner offices, emergency room visit trends, syndromic surveillance),
 - iv. Monitor essential infection control supplies at health care venues, state-level response venues (including GDEM, TMF), and suppliers/distributors,
 - v. Report enhanced ILI activity by participating health practitioners, and
 - vi. Conduct surveillance for a spike in retail over-the-counter medication purchases,
- b. During the CDC Interval Acceleration
 - i. Move from case-based interventions toward community level interventions,
 - ii. Focus surveillance on syndromic disease and mortality
 - c. During CDC Interval Peak
 - i. Laboratory accepts samples for virologic surveillance rather than case confirmation
 - ii. Continue to focus surveillance on syndromic disease and mortality
 - d. During the CDC Interval Deceleration
 - i. Refocus surveillance away from community-level back toward individual-level measures.
 - e. Report data and information using available electronic reporting system(s).
 - f. Collaborate with HSRs, LHDs, and other public and private sector stakeholders to evaluate response to previous wave(s) and make adjustments as necessary based on new information.
 - i. Surveillance and outbreak control
 - ii. Community mitigation strategies
 - iii. Pharmaceutical interventions
3. Prevention and Containment
- a. Activate as appropriate [Interpandemic](#) and [Pandemic Alert](#) preparations.
 - i. Non-Pharmaceutical Interventions
 - (a) Activate relevant components of the [Planning Guidelines for Non-Pharmaceutical Interventions](#) as appropriate according to the Pandemic Severity Index.
 - (b) Begin/continue to track and monitor activated community mitigation strategies as reported by HSRs.
 - ii. Pharmaceutical Interventions (Vaccines and Antivirals)
 - (a) Prepare for receipt of pre-pandemic vaccine (FGR Stage 4)
 - (b) Begin administering pre-pandemic vaccines to priority groups
 - (c) Deploy SNS Cache of antivirals to HSRs and LHDs as necessary.
 - iii. Activate relevant components of the [Appendix 8: Strategic National Stockpile](#) of the *Annex H: Health and Medical Services of the State of Texas Emergency Management Plan*.
 - (a) Activate relevant components of ***DSHS AADS Planning Guidelines***

- [\(Appendix K\)](#)
 - (i) Provide appropriate client forms to distribution sites per SNS Manual.
 - (ii) Distribute to allocation sites available antivirals for dispensing to pre-identified Target Groups.
 - (b) Activate relevant components of the *DSHS Vaccine Allocation, Distribution and Storage Planning Guidelines* ([Appendix L](#)).
 - (i) Provide Texas [C-93 Addendum to Vaccine Information Statements](#) and [Vaccine Information Statements](#) to dispensing sites.
 - (ii) Distribute to allocation sites available pre-pandemic vaccine for dispensing to pre-identified Target Groups.
 - (c) Monitor Immtrac for antiviral and/or vaccine coverage levels and adverse reactions
 - (d) Report adverse reactions to antivirals and vaccines to Medwatch and VAERS.
4. Health Systems Response
 - a. Recommend health care system providers activate Pandemic Influenza plans.
 - i. Screen employees for illness (physical and mental health) prior to entering the facility
 - b. Review mass fatality plan and activate as necessary
 - c. Implement response activities of the *Appendix 13: Disaster Mental Health to Annex H—Health and Medical Services* of the *State of Texas Emergency Plan*.
 - d. DSHS Behavioral Health Services personnel and mental health partners are activated to provide stress management and crisis counseling services.
 - e. Recommend inventory, evaluation of medical assets during (previous/subsequent) waves of pandemic influenza.
 - f. Prepare to activate (CIKR Initiation) or activate (CIKR Acceleration) Appendix __ of Annex H [[HYPERLINK TO STATE PLAN](#)] and Death Care for Managing Mass Fatalities ([Appendix G](#)).
5. Communications
 - a. Contact 2-1-1 information system with current pandemic influenza situation information for the public and update as appropriate.
 - b. Coordinate notification of all appropriate agencies that pandemic influenza has been identified in the United States/Texas.
 - c. Provide information using the PHIN, Epi-X, WebEOC, or other electronic or available means to federal, state, and local stakeholders regarding cases of pandemic influenza.
 - d. Notify bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts (and the OBH as appropriate).
 - e. PHIN staff will continue to monitor the delivery of health alerts, maintain backup and redundant communications systems as needed, and update the PHIN emergency contact database if required.
 - f. Create a WebEOC event to be used by public health entities to pass SitReps and other real time information among agencies.
 - g. Communicate with health care professionals

- i. Continue communication efforts as described above for the Pandemic Alert Period.
 - ii. Designated DSHS IDCU staff will be responsible to communicate pandemic response updates and recommendations of the ERTs to targeted health care professionals or agencies that serve health care professionals.
 - h. Inform the public per DSHS [CERC](#) Guidelines and in accordance with state and/or local ICS
 - i. Staff the MACC in the PIO and Liaison positions on Command Staff.
 - ii. Update the public through regular news releases and news updates as warranted, and coordinate with local, other state and federal jurisdictions.
 - iii. Update fact sheets, flyers and frequently asked questions sheets in coordination with CDC information and local jurisdictions.
 - iv. Provide translations in Spanish and other languages as needed.
 - v. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts in coordination with the DSHS OBH.
 - vi. Go live with the Pandemic Flu Emergency Web page and update as necessary, following DSHS CERC Guidelines.
- B. Health Service Regions and Local Health Departments will
 - 1. Planning and Coordination
 - a. Activate as appropriate Regional and local ICS.
 - i. Coordinate response and requests to DSHS through local and regional EOCs as appropriate.
 - ii. Direct the work of the reassigned staff.
 - iii. Meet with all participating partners to review the critical elements and expectations of the state and jurisdictional Pandemic Influenza Plans.
 - b. Activate, as appropriate, local Pandemic Influenza Plans for Pandemic Period WHO Phase 6 and appropriate federal stage (3-5).
 - c. Declare community mitigation triggers [\[HYPERLINK TO NEW TABLE\]](#) (alert, standby, activate) as appropriate based on PSI and presence of disease in the state or region.
 - d. Coordinate with Quarantine Stations as appropriate.
 - e. Confirm the availability of resources to support a pandemic response.
 - f. Prepare for medical surge.
 - 2. Situation Monitoring and Assessment
 - a. Maintain heightened surveillance for pandemic influenza as resources allow.
 - b. Conduct outbreak investigations (as resources allow) and report results to DSHS for dissemination to other stakeholders.
 - c. Encourage collection and facilitate shipment of additional viral specimens and viral cultures to DSHS for subtyping from health care providers (e.g., SPSN providers, and participating hospitals, clinics and private practitioners).
 - d. Electronically submit laboratory reports through jurisdictions to DSHS using the PHIN or established electronic reporting system.
 - e. DSHS, LHDs, and other health care providers in Texas (e.g., hospitals and clinics) are responsible for data collection and reporting, which must be done according to currently established guidelines.

- f. Private practitioners, hospital personnel and other designated officials/individual will provide death records to state using electronic Texas Electronic Registration-Death Registration web-based system (available since January 2006).
3. Prevention and Containment
 - a. Expedite completion of Interpandemic and Pandemic Alert preparations if incomplete
 - b. Non-Pharmaceutical Interventions
 - i. Activate relevant components of jurisdictional plans and **Planning Guidelines for Non-Pharmaceutical Interventions** ([Appendix J](#)) as appropriate according to the Pandemic Severity Index.
 - ii. Coordinate prevention and mitigation strategies with the OBH for Texas-Mexico border jurisdictions and their Mexican counterparts.
 - iii. Begin/continue to track and monitor activated community mitigation strategies as reported by LHDs.
 - c. Pharmaceutical Interventions (Vaccines and Antivirals)
 - i. Activate relevant components of the jurisdictional plans associated with [Appendix 8: Strategic National Stockpile](#) of the *Annex H: Health and Medical Services* of the *State of Texas Emergency Management Plan*.
 - ii. Continue to implement strategies to improve seasonal and influenza vaccination rates among jurisdictional priority groups and the general population.
 - iii. Continue to implement strategies to improve pneumococcal vaccination rates among jurisdictional priority groups and the general population.
 - iv. Activate relevant components of jurisdictional and *DSHS AADS Planning Guidelines* ([Appendix K](#))
 - (a) Distribute State General Revenue Cache antivirals, deployed during WHO Phase 4, according to established protocols in the antiviral plan.
 - (b) Request SNS antivirals as necessary
 - v. Notify medical community of (pre)pandemic vaccine status, projected timeline of vaccine availability and client options for obtaining vaccine.
 - vi. Activate relevant components of the DSHS and jurisdictional **Vaccine Allocation, Distribution and Storage Planning Guidelines** ([Appendix L](#))
 - (a) Make available adequate supplies of Texas [C-93 Addendum to Vaccine Information Statements](#) and [Vaccine Information Statements](#).
 - (b) Consider vaccine clinics for (pre)pandemic vaccine to priority populations.
 - (c) Consider allocation and distribution of any available pre-pandemic and pandemic vaccine as it becomes available.
 - vii. Enter required information relating to antiviral and vaccine administration into Immtrac
 - viii. Report adverse reactions to antivirals and vaccine to Medwatch and VAERS.
 - ix. Coordinate movement of medical assets obtained from other state caches as available and necessary.
4. Health Systems Response

- a. Continue to collaborate with local emergency management coordinators to maintain a high level of awareness and preparedness among emergency responders and health care providers to include mental health
 - b. Coordinate notification of appropriate agencies, infection control practitioners, local laboratories, and emergency rooms within their own jurisdictions
 - c. Encourage healthcare providers to:
 - i. Activate COOP plan
 - ii. Ensure direct service and care employees are:
 - (a) Listed on Target Population list for antivirals and vaccine
 - (b) Have been fitted for and have available N95 masks or surgical masks as appropriate.
 - (c) Begin social distancing behaviors
 - (d) Begin preparation for medical surge and activate plans for managing surge as necessary.
 - d. Advise health care systems to implement health care setting prevention and control procedures ([DHHS Strategic Plan, Supplement 4: Infection Control](#)).
5. Communications
- a. Maintain contact with 2-1-1 Texas, providing appropriate messages to guide residents to appropriate resources for their questions and needs.
 - b. Communicate jurisdictional updates among the regions and jurisdictions, bordering states, Texas-Mexico border jurisdictions and their Mexican counterparts, and all partners.
 - c. Continue to monitor the delivery of health alerts,
 - d. Maintain backup and redundant communications systems as needed and update the PHIN emergency contact database if required.
 - e. Use established WebEOC event for communications per established protocol (e.g., transfer SitReps, and other real time information).
 - f. Communicate with health care professionals by local PIO through ICS structure.
 - g. Inform the public in accordance with state and/or local ICS
 - i. Update the public through regular news releases and news updates as warranted, and coordinate with local, regional, state and federal jurisdictions.
 - ii. Update fact sheets, flyers and frequently asked questions sheets in coordination with DSHS and CDC information.
 - iii. Provide translations in regional and local languages as needed.
 - iv. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts in coordination with the DSHS and the DSHS OBH.
 - v. Update Web-based information as necessary. Link to the DSHS Pandemic Influenza Emergency Web page as appropriate.
 - vi. Maintain local channels for providing emergency public information to the public (including those who under voluntary isolation and quarantine) including the use of Texas 2-1-1, [Texas Online](#) and any DSHS-operated hotlines that are established.

IV. PANDEMIC PERIOD (WHO Phase 6; FR Stage 6; CDC Interval Resolution)

- A. Department of State Health Services will
1. Planning and Coordination
 - a. DSHS IC will
 - i. Convene to determine next steps.
 - ii. Determine communications needs and alert and/or mobilize necessary resources.
 - iii. Logistics section will determine the need for obtaining and maintaining essential personnel, facilities, equipment, and supplies.
 - iv. Review procedures from (previous) wave and make adjustments as necessary.
 - v. Debrief from response activities. After Action Reports will be generated and disseminated appropriately.
 - vi. Communicate the status of the response throughout DSHS, HSRs, LHDs, and private sector stakeholders.
 - b. Provide technical assistance regarding assessment and analysis as needed to and from HSR offices, LHDs and public and private sector stakeholders.
 - c. Review and update PIPOG to account for any gaps in the public health infrastructure noticed during the pandemic.
 - d. Behavioral Health Services will
 - i. Coordinate with [Federal Emergency Management Agency \(FEMA\)](#) to provide technical and public assistance to HHSC Risk Management, DSHS, and Community MHMR Centers and Substance Abuse providers.
 - (a) Throughout the life of the [FEMA Crisis Counseling Program](#), reassess and refine service provision adjusting grant objectives and funding as needed.
 - (b) Because the psychosocial and financial effects of a pandemic will probably be felt for months if not years, efforts will be made to make crisis counseling program services available for a at least one year after the postpandemic declaration date.
 - e. HHSC (Risk Management) will
 - i. Coordinate the assessment of the impact on State Hospitals.
 - ii. Coordinate the assessment of the impact on Substance Abuse Providers.
 - f. Initiate recovery operations including stress management and crisis counseling needs.
 - g. Summarize and analyze the pandemic response and record lessons learned for future pandemic situations.
 - h. Review and revise PIPOG based on outcome measurements and performance results of current plans.
 - i. Support rebuilding of essential services.
 - j. Coordinate the assessment of Community MHMR Centers in consultation with the Department of Aging and Disability Services.
 2. Situation Monitoring and Assessment
 - a. Assess the impact, response, and control of the pandemic.
 - b. Initiate [multidisciplinary teams](#) of invited local medical and public health experts to carry out analyses. Tasks and analysis may include:

- i. Document influenza outbreaks among different populations in Texas.
 - ii. Determine age-specific [attack rates](#), [morbidity and mortality rates](#), and [case fatality rates](#).
 - iii. Describe unusual clinical syndromes as well as risk factors for those syndromes and appropriate treatment.
 - iv. Describe unusual pathologic features associated with “serious” or fatal cases.
 - v. Conduct efficacy studies of vaccination, infection control interventions, or [chemoprophylaxis](#).
 - vi. Monitor and describe the ability of Texas hospitals and outpatient clinics to cope with increased patient loads.
 - vii. Assess the medical, social and economic impact of the pandemic.
 - viii. Provide rates of illness visits and hospitalizations using data from defined populations.
 - ix. Determine effects of community mitigation strategies on patterns of illness related to various demographics.
 - c. Analyze and distribute state data under the supervision of PIL. Draft protocols for these and other studies will have been developed at the national level and will be shared with states that show an interest in collaborating.
 - d. Evaluate situation-monitoring response in first wave. Make adjustments as necessary for subsequent waves.
 - e. Maintain heightened surveillance activities.
 - f. Maintain laboratory capabilities as necessary to determine reemergence.
 - g. Assess state, regional and local plans (e.g., COOP, state plan, PIPOG) and recommend changes/updates as necessary.
3. Prevention and Containment
- a. Expedite recovery preparations and restocking of medical assets.
 - b. Non-Pharmaceutical Interventions
 - i. Continue to support relevant components of jurisdictional plans and ***Planning Guidelines for Non-Pharmaceutical Interventions*** ([Appendix J](#)) while discontinuing others
 - ii. Coordinate state-level prevention and mitigation strategies with the OBH for Texas-Mexico border jurisdictions and their Mexican counterparts.
 - iii. Track cessation of community mitigation strategies reported by HSRs.
 - c. Pharmaceutical Interventions (Vaccines and Antivirals)
 - i. Continue to implement strategies to improve seasonal and influenza vaccination rates among jurisdictional priority groups and the general population as necessary.
 - ii. Continue to implement strategies to improve pneumococcal vaccination rates among jurisdictional priority groups and the general population.
 - iii. Continue to support activation of relevant components of jurisdictional and ***DSHS AADS Planning Guidelines*** ([Appendix K](#)) as necessary.
 - (a) Distribute antivirals according to established protocols in the AADS Planning Guidelines.
 - iv. Notify medical community of pre-pandemic and pandemic vaccine status, projected timeline of vaccine availability and client options for obtaining

- vaccine.
 - v. Continue with relevant components of the DSHS and jurisdictional **VADS Planning Guidelines** ([Appendix L](#)) as necessary.
 - (a) Consider mass vaccine clinics as supplies of vaccine allow.
 - (b) Continue state-level allocation and distribution of any available pre-pandemic and pandemic vaccine as available.
 - vi. Continue to activate relevant components of the jurisdictional plans associated with the [Appendix 8: Strategic National Stockpile](#) of the **Annex H: Health and Medical Services** of the **State of Texas Emergency Management Plan**.
 - vii. Coordinate restocking and movement of pharmaceutical and non-pharmaceutical medical assets between state caches as available and necessary.
 - viii. Continue to enter pre-pandemic and antiviral dispensing information into ImmTrac and report aggregate data to CDC as required.
4. Health Systems Response
- a. Notify health service agencies (e.g., hospitals, clinics, and private practitioners) and community partners about the change of status to Postpandemic Period and federal stage 6.
5. Communications
- a. Continue communication efforts to inform the HSRs and LHDs about additional pandemic waves or the end of the pandemic.
 - b. Conduct after-action analysis of PHIN communications systems and database systems to improve the network design and delivery of services.
 - c. Conduct after-action analysis of WebEOC use to determine effectiveness and to determine areas for additional training and improvement.
 - d. Conduct analysis of the effectiveness of distance learning programming and delivery to improve delivery of services.
 - e. Update emergency contact database and conduct after-action interviews with local response staff to gather information to improve the alert function.
 - f. Discuss the communications strategy and conduct a process review.
 - g. Communicate pandemic response updates (including case definitions) and recommendations to the ERTs for targeted health care professionals or agencies that serve health care professionals.
 - h. Inform the public per DSHS [CERC](#) Guidelines
 - i. DSHS communication with the media continues to be disseminated through the PIO and Liaison positions on the MACC Command Staff.
 - ii. Update the public through regular DSHS news releases and news updates as warranted. Coordinate release of information with local, other state and federal jurisdictions.
 - iii. Update DSHS fact sheets, flyers, and frequently asked questions sheets in coordination with CDC information and with local jurisdictions.
 - iv. Provide translations in Spanish and other languages as needed.
 - v. Coordinate messages and information with bordering states and Texas-Mexico border jurisdictions and their Mexican counterparts in coordination with the DSHS OBH.

- vi. Update the Pandemic Flu Emergency Web page as necessary, following DSHS CERC Guidelines.
 - vii. Evaluate (through after-action report) the DSHS CERC Guidelines and public information dissemination. Assess effectiveness of messages.
 - viii. Assess media coverage and amount of information provided.
- B. Health Service Regions and Local Health Departments will
- 1. Planning and Coordination
 - a. Review and update plans, guidelines, and standard operating procedures to account for any gaps in the public health infrastructure noticed during the pandemic wave and/or complete pandemic.
 - b. Coordinate the generation and dissemination of epidemiologic and after action reports.
 - c. Determine the need for obtaining and maintaining essential personnel, facilities, equipment, and medical assets.
 - 2. Situation Monitoring and Assessment
 - a. Evaluate situation-monitoring response for each wave. Make adjustments as necessary for subsequent waves.
 - b. Maintain heightened surveillance activities.
 - c. Maintain laboratory capabilities.
 - d. Collaborate with DSHS to carry out analyses of the pandemic's impact on the community:
 - i. Success of community mitigation strategies
 - (a) Determine use of social distancing measures within communities
 - (i) Survey businesses for social distancing strategies, use of PPE and/or closures.
 - (ii) Count numbers of schools that dismissed students
 - (iii) Count number of cancelled public events
 - (iv) Determine morbidity and mortality rates
 - (b) Compare communities to determine differences in attack rates, and morbidity and mortality rates
 - ii. Hospital surge
 - iii. Mortuary/Mass fatality surge
 - iv. Success of Alternate Care Sites (if mobilized)
 - 3. Prevention and Containment
 - a. Expedite recovery preparations and restocking of medical assets within jurisdictions.
 - b. Non-Pharmaceutical Interventions
 - i. Continue with relevant components of jurisdictional plans and ***Planning Guidelines for Non-Pharmaceutical Interventions***, and ([Appendix J](#))
 - ii. Coordinate prevention and mitigation strategies with the OBH for Texas-Mexico border jurisdictions and their Mexican counterparts as necessary.
 - iii. Coordinate prevention and mitigation strategies with the Quarantine Stations as appropriate ([Appendix O](#)).
 - iv. Track cessation of community mitigation strategies reported by HSRs.
 - v. Evaluate the impact of community mitigation strategies on local

- jurisdictions and make adjustments for future waves. Report findings.
 - c. Pharmaceutical Interventions (Vaccines and Antivirals)
 - i. Continue to implement strategies to improve seasonal and influenza vaccination rates among jurisdictional priority groups and the general population.
 - ii. Continue to implement strategies to improve pneumococcal vaccination rates among jurisdictional priority groups and the general population.
 - iii. Activate relevant components of jurisdictional and ***DSHS Antiviral Allocation, Distribution and Storage Planning Guidelines*** ([Appendix K](#)) as necessary.
 - (a) Distribute antivirals according to established protocols in the antiviral plan.
 - iv. Continue to notify medical community of (pre)pandemic/pandemic vaccine status, projected timeline of vaccine availability and client options for obtaining vaccine.
 - v. Continue with relevant components of the DSHS and jurisdictional ***Vaccine Allocation, Distribution and Storage Planning Guidelines*** ([Appendix L](#)) as necessary.
 - (a) Restock adequate supplies of Texas [C-93 Addendum to Vaccine Information Statements](#) and [Vaccine Information Statements](#)
 - (b) Consider mass vaccine clinics as supplies of vaccine allow.
 - (c) Continue allocation and distribution of any available pre-pandemic and pandemic vaccine as available.
 - (d) Complete populating ImmTrac with required data.
 - (e) Begin second dose recalls for Target Groups if adequate vaccine is available.
 - (f) Continue to monitor and support vaccination efforts with a narrow focus, e.g., regions and cities only.
 - vi. Continue to activate relevant components of the jurisdictional plans associated with the [Appendix 8: Strategic National Stockpile](#) of the ***Annex H: Health and Medical Services*** of the ***State of Texas Emergency Management Plan***.
 - vii. Coordinate restocking and movement of medical assets obtained from other state caches as available and necessary.
 - d. Maintain the ability to continue/discontinue strategies as necessary.
 - e. Continue to track/restock resources for use during subsequent waves for final inventory for return to interpandemic period.
- 4. Health Systems Response
 - a. Notify involved agencies of change of status to the Postpandemic Period.
 - b. Collaborate with HSRs, LHDs, and other public and private sector stakeholders to evaluate response to previous wave and make adjustments as necessary.
 - c. Respond to subsequent waves with identified adjustments.
 - d. Support rebuilding of essential services.
 - e. Provide stress management and crisis counseling services for responders and disaster survivors.
- 5. Communications

- a. Conduct after-action analysis of communications systems and database systems to improve the network design and delivery of services.
- b. Conduct after-action analysis of WebEOC use during the event to determine effectiveness and areas for additional training and improvement.
- c. Conduct after-action analysis of the effectiveness of distance learning programming and delivery to improve delivery of services.
- d. Update the emergency contact database and conduct after-action interviews with local response staff to gather information to improve the alert function.
- e. Communicate with health care professionals
 - i. Inform local partners about the end of the pandemic.
 - ii. Discuss the communications strategy and conduct process review.
- f. Inform the Public
 - i. Disseminate public service announcements requesting those who have been ill and recovered to volunteer for service for the next wave.
 - ii. Evaluate (through after-action report) risk communications and public information dissemination. Assess effectiveness of messages.
 - iii. Assess media coverage and amount of information provided.
 - iv. Update the public through regular news releases and news updates as needed about the current situation.
 - v. Update messages about the current pandemic influenza aftermath in coordination with DSHS and CDC information.
 - vi. Update fact sheets, flyers and frequently asked questions sheets in coordination with DSHS and CDC information.
 - vii. Provide translations in relevant regional and local languages as needed.
 - viii. Update Web pages as needed. Link to the DSHS Pandemic Influenza Emergency Web page as appropriate.

APPENDICES

[APPENDIX A: Key Roles and Responsibilities](#)

[APPENDIX B: Surveillance](#)

[APPENDIX C: Recommendations for Pneumococcal Vaccine](#)

**[APPENDIX D: Standing Delegation Orders and Emergency Medical Management for
Adverse Reactions to Vaccines and Antiviral Drugs](#)**

[APPENDIX E: Vaccine and Antiviral Tracking](#)

[APPENDIX F: Business Continuity Planning](#)

[APPENDIX G: Death Care for Managing Mass Fatalities](#)

**[APPENDIX H: Templates for Common Incident Command Forms Used During an
Influenza Pandemic](#)**

[APPENDIX I: Contacts and Resources](#)

[APPENDIX P: Planning Guidelines for Non-Pharmaceutical Interventions](#)

[APPENDIX K: Antiviral Allocation, Distribution and Storage Planning Guidelines \(AADS\)](#)

[APPENDIX L: Vaccine Allocation, Distribution and Storage Planning Guidelines \(VADS\)](#)

**APPENDIX M: Allocation of Limited Resources (INCLUDED ONLY TO BEGIN
DISCUSSION)**

[APPENDIX N: Alternate Care for Medical Surge](#)

[APPEDIX O:](#)

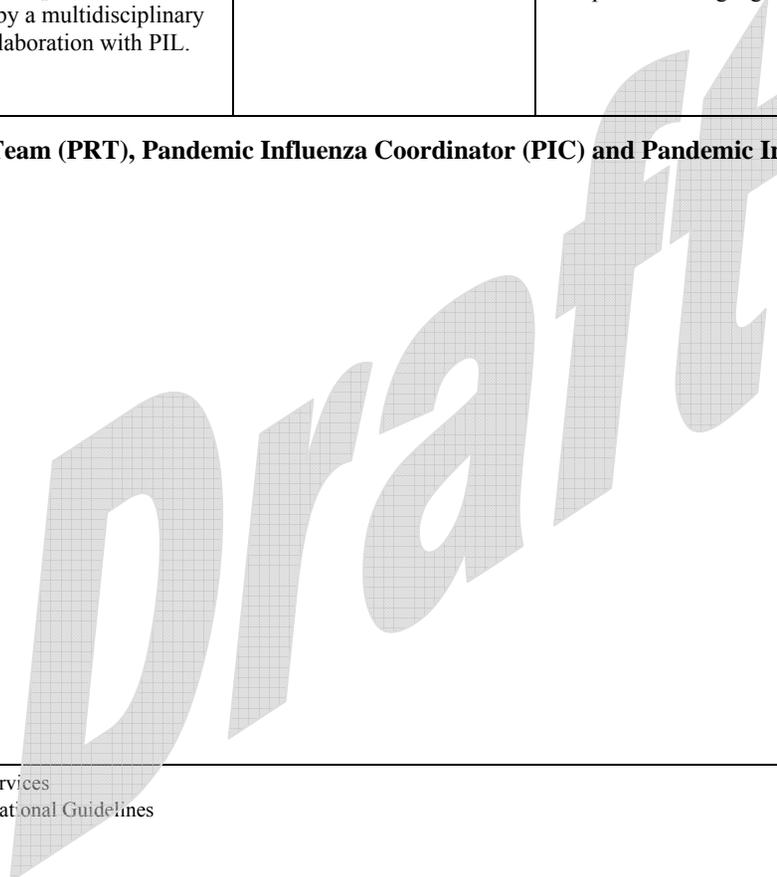
APPENDIX A: Key Roles and Responsibilities

		Community Preparedness Section (CPS) with Assistance from the Pandemic Response Team (PRT)¹	Pandemic Influenza Coordinator (PIC)¹ and Pandemic Influenza Planning Group (PIPG)	Regional/Local Health Departments (HSR/LHD)	Pandemic Influenza Lead (PIL)¹
Interpandemic Period Phases 1 and 2	Federal Stages 0 and 1	<ul style="list-style-type: none"> • Lead in state’s public health, mental health and health-care related response to pandemic influenza. • Maintain information resource list(s). Works with PIL in state’s response. 	<ul style="list-style-type: none"> • Develop, review and update the plan annually. 	<ul style="list-style-type: none"> • Involve HSR/LHD Representatives in the planning/updating process. 	<ul style="list-style-type: none"> • Mandatory member of PIPG and PRT. • Review state-wide influenza data, syndromic surveillance, and laboratory information. • Look for funding sources to sustain Influenza plan.
Pandemic Alert Period Phases 3, 4, and 5	Federal Stages 0, 1, and 2	<ul style="list-style-type: none"> • Operationalize plan in conjunction with key partners— regional directors, IDCU, GDEM, IB, and others. • Along with PIL, coordinates a review of essential elements of vaccine distribution plan with major stakeholders. 	<ul style="list-style-type: none"> • Convene to review plan and modify as necessary. 	<ul style="list-style-type: none"> • 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"> • Track influenza activity.
Pandemic Period (Phase 6)	Federal Stages 3, 4 and 5	<ul style="list-style-type: none"> • Coordinate pandemic influenza response with the DSHS MACC • Provide standard communication with agency and other state and national agency counterparts. 	<ul style="list-style-type: none"> • Work with the CPS and PIL to ascertain the continued availability of resources. 	<ul style="list-style-type: none"> • Implement and coordinate the response from regional & local levels. • Assess available resources and communicate needs to local EOC. • Ensure distribution of vaccine/antivirals to target groups as available. 	<ul style="list-style-type: none"> • Track influenza activity to isolate affected geographic areas. • Disseminates resource needs to agency heads. • Direct work of reassigned agency staff. • Monitor procedures for Texas on vaccinations and adverse event reporting.

Appendix A: Key Roles and Responsibilities

		Community Preparedness Section (CPS) with Assistance from the Pandemic Response Team (PRT)¹	Pandemic Influenza Coordinator (PIC)¹ and Pandemic Influenza Planning Group (PIPG)	Regional/Local Health Departments (HSR/LHD)	Pandemic Influenza Lead (PIL)¹
Pandemic Period (Phase 6)	Federal Stage 6 (Subsided Period)	<ul style="list-style-type: none"> • Evaluate DSHS IC response during first wave and make adjustments. • Evaluate resources. 	<ul style="list-style-type: none"> • Evaluate how well plan(s)/ guidelines worked during initial and subsequent waves and make adjustments. 	<ul style="list-style-type: none"> • Evaluate regional/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. • Continue vaccination as vaccine becomes available. • Ensure antivirals/vaccine information is entered into IMMTRAC 	<ul style="list-style-type: none"> • Evaluate epidemiologic data from first wave. • From data, determine groups most impacted and examine priority groups for vaccination and antivirals.
	Federal Stage 6 (Postpandemic Recovery)	<ul style="list-style-type: none"> • Communicate status of response throughout agency including HSR/LHD. • Supervise a detailed retrospective characterization /analysis of the pandemic conducted by a multidisciplinary team in collaboration with PIL. 	<ul style="list-style-type: none"> • Conduct retrospective analysis of the process and documents. • Recommend changes to the existing plan(s)/ guidelines once analysis is finalized. 	<ul style="list-style-type: none"> • Collaborate with the CPS and PIL on retrospective analysis of the pandemic. • Receive community-specific analysis and distribute to stakeholders. • Provide the PIL with recommendations regarding state plan to meet geographic needs. 	<ul style="list-style-type: none"> • Supervise a retrospective characterization/analysis of the pandemic led by a multidisciplinary team in collaboration with the Strategic Preparedness Branch. • Monitor any cases for long-term residual sequelae (work with HSR/LHD).

¹ Pandemic Response Team (PRT), Pandemic Influenza Coordinator (PIC) and Pandemic Influenza Lead (PIL) to be developed.



APPENDIX B: Surveillance

- [**Appendix B.1: Influenza Surveillance**](#)
- [**Appendix B.2: Texas DSHS Weekly Influenza Report Form**](#)
- [**Appendix B.3: Influenza Sentinel Provider Surveillance Network Information Sheet**](#)
- [**Appendix B.4: Influenza Sentinel Provider Surveillance Network Sample Workfolder**](#)
- [**Appendix B.5: Influenza Sentinel Provider Surveillance Network Sample Enrollment Form**](#)
- [**Appendix B.6: Sample Case and Household Contact Reporting Form**](#)
- [**Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form**](#)

Draft

Appendix B.1: Influenza Surveillance

DSHS Lead Contact Information

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Summary

Texas primarily uses a sentinel surveillance system to monitor influenza. Influenza is not a reportable condition in Texas; however, through a variety of different sources of information, local, regional, and state health officials monitor flu activity. The Infectious Disease Control Unit within the Texas Department of State Health Services (DSHS) reports activity level to Centers for Disease Control and Prevention (CDC) weekly during the influenza season (October through May). Influenza activity levels are reported as no activity, sporadic, local, regional, or widespread. Many sources of information are used to determine the state's influenza activity level. Texas currently has culture surveillance sites across the state, whose health care providers collect and submit specimens for viral culture to the DSHS Medical Virology Laboratory on a weekly basis during the influenza season as well as specimens from any cases of influenza that occur during the summer. Other laboratories, military institutions, and facilities besides DSHS also are capable of viral isolation. Viral isolation results from these laboratories are shared with DSHS. DSHS also utilizes information from the CDC-sponsored Sentinel Provider Surveillance Network (SPSN). Approximately 100 providers in Texas voluntarily participate in this program. These providers report influenza-like illness by age group to the CDC on a weekly basis. Not only does this data provide information on influenza activity, but it is also a good indicator of when influenza season begins, ends, and peaks. The SPSN and virus surveillance results provide public health partners with a situational awareness of influenza virus activity, the geographic distribution of influenza viruses, and the clinical impact of the circulating viruses are obtained. In addition, DSHS facilitates and encourages laboratories in Texas to participate in the National

Respiratory and Enteric Virus Surveillance System (NREVSS) sponsored by CDC. This system collects surveillance data on other respiratory viruses affecting the state population. These viruses include respiratory syncytial virus, parainfluenza viruses, and adenoviruses. This is a laboratory-based sentinel surveillance system, and participation is voluntary. DSHS actively recruits hospital laboratories to participate. These sentinel providers report on a weekly basis both the number tests performed antigen detection or isolation to identify each virus and the number of positives test results. Currently, 21 laboratories in Texas participate in this system representing 7% of all participating laboratories nationwide.

The Texas DSHS is continuously attempting to enhance respiratory virus surveillance by:

- 1) Expanding the number of participating physicians in the SPSN,
- 2) Increasing the number of SPSN physicians that report on a weekly basis,
- 3) Increasing the number of medical providers to serve as culture surveillance sites,
- 4) Increasing the number of specimens collected and submitted for viral isolation, and
- 5) Expanding the number of laboratories participating in NREVSS.

Year-round influenza surveillance has been implemented in Texas and is conducted by staff at state, regional and local health departments. The enhancements noted above will improve surveillance to detect and identify novel influenza viruses and other respiratory agents. Surveillance to identify and report newly occurring cases of possible novel influenza have been implemented. Public health staff are familiar and aware of how to report novel influenza virus cases.

Currently, the DSHS does not monitor influenza-related hospitalization and deaths related in influenza virus. DSHS has focused its surveillance efforts on other activities described above. In January 2006, the Texas Electronic Registration—Death Registration for submitting death record information to the State became available. Physicians, other designated officials/personnel may now report deaths and electronically submit certificate of death records to the State using this Web-based system.

Appendix B.2: Texas DSHS Weekly Influenza Report Form

WEEKLY FLU REPORT FORM

HSR: _____ **WEEK ENDING:** _____

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

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

Influenza activity is defined as:

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

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

Co..	Flu A	Flu B	ND*	ILI	INSTITUTIONAL OUTBREAK	SCHOOL CLOSURE

*Not Differentiated Influenza

Please email report to the Influenza Activities Coordinator on Mondays. If Monday is a holiday, send ASAP.

The report may also be faxed to (512) 458-7616 to the Influenza Activities Coordinator. The Coordinator may be reached at (512) 458-7111 ext. 6364 if you have questions or comments.

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

Appendix B.3: Influenza Sentinel Provider Surveillance Network Information Sheet



Now You Can Help With...

Influenza Sentinel Provider Surveillance

...In Only a Few Minutes a Week!

What is an influenza sentinel provider?

An influenza sentinel provider reports clinically diagnosed influenza-like illness (ILI) to the CDC. The CDC and the state health departments use this data to determine flu activity levels for each state. Nationally, over 2,000 providers were enrolled in this network during the 2005-06 influenza season. Less than 100 participated in Texas. **More are needed!**

What data do sentinel providers collect? How and to whom are data reported?

Sentinel providers report the total number of patient visits for ILI by age group (0–4 years, 5–24 years, 25–64 years, ≥ 65 years) along with the total number of patient visits for any reason. These data are transmitted once a week via the Internet or fax to the CDC. Most providers report that the entire process takes **less than 20 minutes a week**. In addition, sentinel providers can submit specimens from a subset of patients for virus isolation **free of charge**.

Who can be an Influenza Sentinel Provider?

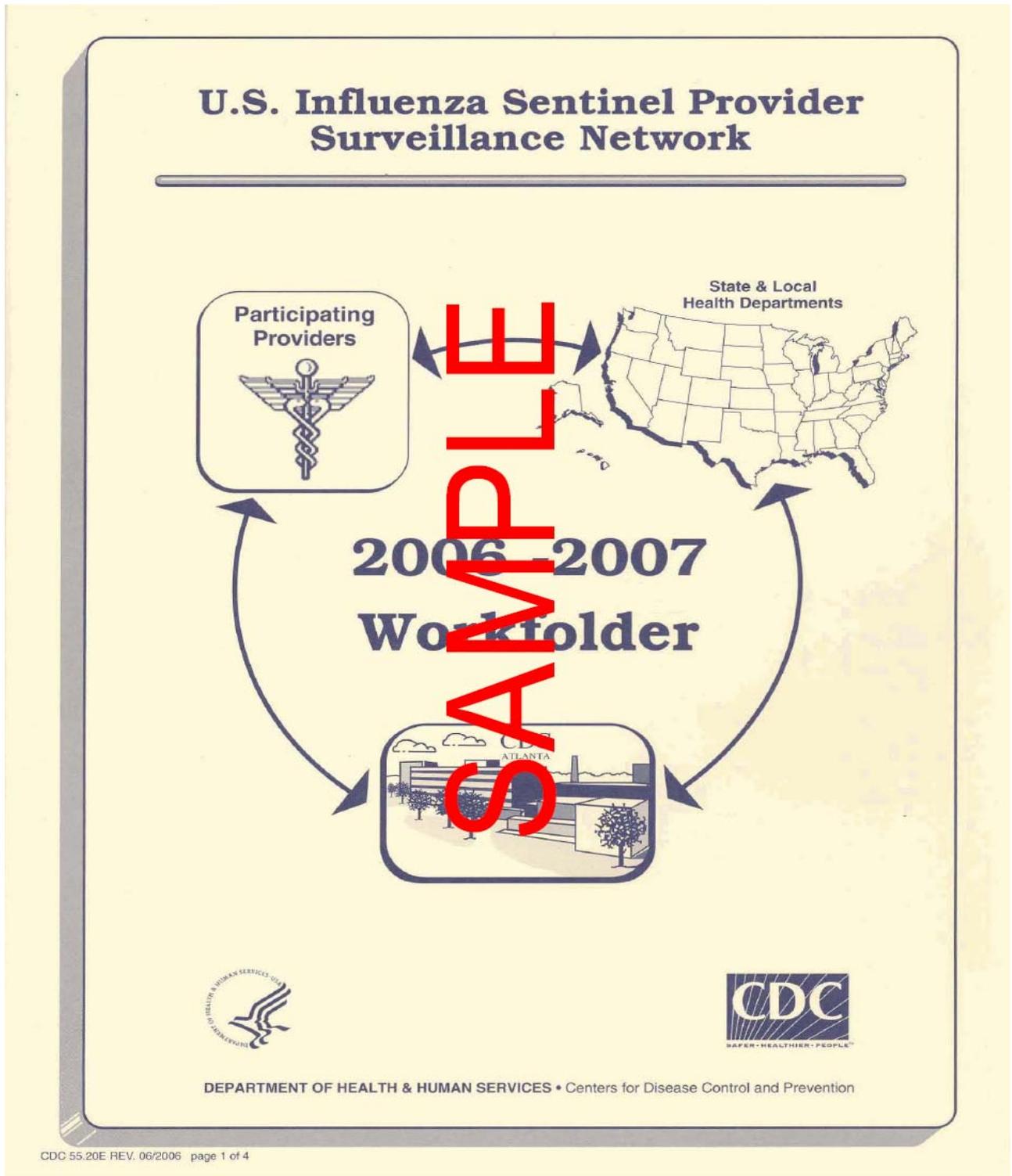
Providers of any specialty (e.g., family practice, internal medicine, pediatrics, infectious diseases) in any type of practice (e.g., private practice, public health clinic, urgent care center, emergency room, university student health center) are eligible to be sentinel providers. Nurse Practitioners and Physician Assistants are also eligible.

Why Volunteer?

Influenza viruses are constantly evolving and cause substantial morbidity and mortality (approximately 36,000 deaths) almost every winter. With the ever-increased threat of pandemic influenza, the need for surveillance has never been more important. Data from sentinel providers are critical for monitoring the impact of influenza and, in combination with other influenza surveillance data, can be used to guide prevention and control activities, vaccine strain selection, and patient care. **Sentinel providers receive feedback on the data submitted, summaries of regional and national influenza data, and free subscriptions to CDC's Morbidity and Mortality Weekly Report and Emerging Infectious Diseases journal.** The most important consideration is that the data provided are critical for protecting the public's health.

For more information on Influenza Sentinel Provider Surveillance, please contact Irene Brown, SPSN Coordinator, or an epidemiologist at (512) 458-7676

Appendix B.4: U.S. Influenza Sentinel Provider Surveillance Network Sample Workfolder



Appendix B.4: U.S. Influenza Sentinel Provider Surveillance Network Sample Workfolder

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention (CDC)
Atlanta, Georgia 30333



U.S. INFLUENZA SENTINEL PROVIDER SURVEILLANCE WORKFOLDER

U.S. INFLUENZA SURVEILLANCE
INFLUENZA DIVISION

October 1, 2006 – September 29, 2007

Form Approved
OMB No. 0920-0004

Provider ID: Password:		INFLUENZA-LIKE ILLNESS (ILI) is defined as: Fever ($\geq 100^{\circ}\text{F}$ [37.8°C], oral or equivalent) AND cough and/or sore throat (in the absence of a KNOWN cause other than influenza).											
2006 – 07 Season						2006 – 07 Season							
Week Ending Date	CDC Date Code	0-4 Yrs.	5-24 Yrs.	25-64 Yrs.	>64 Yrs.	Total Patients Seen*	Week Ending Date	CDC Date Code	0-4 Yrs.	5-24 Yrs.	25-64 Yrs.	>64 Yrs.	Total Patients Seen*
OCT 7	0640						JUN 2	0722					
14	0641						9	0723					
21	0642						16	0724					
28	0643						23	0725					
NOV 4	0644						30	0726					
11	0645						JUL 7	0727					
18	0646						14	0728					
25	0647						21	0729					
DEC 2	0648						28	0730					
9	0649						AUG 4	0731					
16	0650						11	0732					
23	0651						18	0733					
30	0652						25	0734					
JAN 6	0701						SEP 1	0735					
13	0702						8	0736					
20	0703						15	0737					
27	0704						22	0738					
FEB 3	0705						29	0739					
10	0706												
17	0707												
24	0708												
MAR 3	0709												
10	0710												
17	0711												
24	0712												
31	0713												
APR 7	0714												
14	0715												
21	0716												
28	0717												
MAY 5	0718												
12	0719												
19	0720												
26	0721												

SAMPLE

***Total Patients seen for any reason = (non-ILI + ILI)**

*Thank you for participating in the
U.S. Influenza Sentinel Provider
Surveillance System.*

Please do not discard this workfolder.

A postage paid envelope will be provided for you to return the workfolder to CDC.

CDC 55.20E REV. 06/2006 page 2 of 4

INFLUENZA-LIKE ILLNESS (ILI) is defined as:
Fever (>100°F [37.8°C] , oral or equivalent) AND cough and/or sore throat.
(In the absence of a KNOWN cause other than influenza)

The presence or absence of other symptoms, such as body aches, fatigue, or vomiting, should be disregarded when classifying a patient as having an ILI. Although this clinical definition by itself is very general, when combined with information on circulating viruses, the information on ILI activity provides an excellent picture of influenza activity in the United States.

INSTRUCTIONS FOR INTERNET REPORTING

The sentinel provider Internet reporting site should be accessible by both Netscape (Version 5.0 and above) and Internet Explorer (Version 5.0 and above) browsers.

To access the influenza sentinel provider Internet reporting system, go to:
<http://www2.ncid.cdc.gov/flu/>

Enter your provider ID code and password which can be found on the previous page and select **Submit**.

You will now be on the Main Menu page. From this page you may either enter or view your data.

To enter data:

1. Select **Enter Data**.
2. Select the four digit date code (e.g. 0640) for the week you wish to report and enter your data. Use the enter or tab key to move from one data field to the next. Indicate if the report is an update from a previously entered report.

Influenza Surveillance Program

Sentinel Provider Internet Reporting System
Data Input Page

1. Provider ID Code:	<input style="width: 80%;" type="text" value="77001"/>
2. Date Code:	<input style="width: 80%;" type="text" value="0640 (Oct 7, 2006)"/> ▼
3. ILI AGE 0-4:	<input style="width: 80%;" type="text" value="0"/>
4. ILI AGE 5-24:	<input style="width: 80%;" type="text" value="0"/>
5. ILI AGE 25-64:	<input style="width: 80%;" type="text" value="0"/>
6. ILI AGE OVER 64:	<input style="width: 80%;" type="text" value="0"/>
7. TOTAL SEEN:	<input style="width: 80%;" type="text" value="100"/>
8. Is this a revision of data reported on an earlier date?	No <input type="checkbox"/> Yes <input type="checkbox"/>

3. Select **Submit**. Your data have been transmitted to CDC and will be displayed on the screen. If the data displayed are incorrect, select **Go To Main Menu**, re-enter the correct report, and indicate that this entry is a revision of previously reported data.
4. Select **Go To Main Menu**. This will take you back to the Main Menu page. If you wish to enter data for additional weeks, repeat steps 1 through 4.

In addition to entering and viewing your own data, you can also view the most recent influenza activity update.



Form Approved
OMB No. 0920-0004

SENTINEL PROVIDER REPORTS OF INFLUENZA-LIKE ILLNESS (ILI) 2006 – 2007 Influenza Surveillance Season

ID Number

Report for the 7-day period ending ___/___/___
(Period ends Saturday at midnight)

**Check if
Revised
Report**

Number of Patients with ILI

0-4 yrs.
(Pre-school)

5-24 yrs.
(School age)

25-64 yrs.
(Adults)

> 64 yrs.
(Older adults)

Influenza-like Illness
Fever ($\geq 100^{\circ}$ F [37.8° C], oral or equivalent)
-AND-
cough and/or sore throat
(in the absence of a known cause other than influenza)

SAMPLE

Total Number of Patients Seen For Any Reason

(Total of ILI + Non-ILI cases for all age groups combined)

**DO NOT LEAVE BLANK.
WITHOUT THIS NUMBER, THE REPORT CANNOT BE USED.**

FAX THIS FORM TO [REDACTED]
(NO COVER SHEET IS REQUIRED)

Public reporting burden of this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to DHHS Reports Clearance Officer, Paperwork Reduction Project (0920-0008); Rm 531H, H.H. Humphrey Bg., 200 Independence Ave., SW, Washington, DC 20201.



Appendix B.5: Influenza Sentinel Provider Surveillance Network Sample Enrollment Form

Provider's First Name _____

Last Name _____

Degree (example: MD, PA, DO) _____

Practice Name (example: name of facility) _____

Contact Person _____

E-mail Address _____

Address _____

City _____

State _____

Zip _____

Area Code / Phone Number _____

Alternate Phone _____

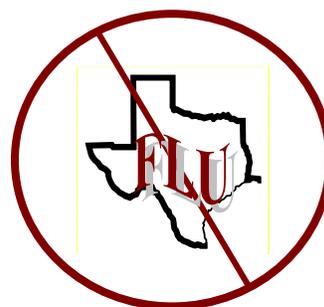
Fax Number _____

Type of Practice (example: pediatrician, family practice) _____

A certificate is sent annually to regular participants who submit 50% or more reports.

Please indicate Provider or Clinic name for certificate _____

Unable to participate at this time



Irene Brown

Sentinel Influenza Coordinator

Infectious Disease Control Unit

Phone: (512) 458-7111, ext. 6878

Fax: (512) 458-7616

E-mail: Irene.Brown@dshs.state.tx.us

Reported By					
Agency Name:	Date Form Filled Out: ____/____/____ (mm/dd/yy)				
Contact Name:	Date Household Reported to Agency: ____/____/____ (mm/dd/yy)				
Contact Phone:	Date Agency Assigned to Case: ____/____/____ (mm/dd/yy)				
	Date Submitted to Regional/State Health Department: ____/____/____ (mm/dd/yy)				
Information on Isolated Patient					
Date <u>Placed</u> in Voluntary Isolation/Quarantine: ____/____/____ (mm/dd/yy)					
Anticipated Date <u>Ending</u> Voluntary Isolation/Quarantine: ____/____/____ (mm/dd/yy)					
Household Characteristics					
Physical Address:	Apartment #	City	Zipcode		
Contact Person for Household:	Phone:				
Number Living in Household:	Number of Household Members:				
Information Collected on Each Household Member					
Name	Age (Years)	Gender		Are they currently sick?	
		Male	Female	No	Yes
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Signs and Symptoms*					
Does anyone in the household have any of these signs and symptoms (<i>check all that apply</i>):					
<input type="checkbox"/> Fever	<input type="checkbox"/> Cough				
<input type="checkbox"/> <i>Temperature taken (> 38 C (100.4 F))</i>	<input type="checkbox"/> Headache				
<input type="checkbox"/> <i>Temperature not taken</i>	<input type="checkbox"/> Shortness of Breath				
<input type="checkbox"/> Eye infection	<input type="checkbox"/> Nausea				
<input type="checkbox"/> Vomiting	<input type="checkbox"/> Other (specify): _____				
* Investigations must be completed on all contacts with symptoms					
If someone is sick in your household, have you contacted your physician? Yes <input type="checkbox"/> No <input type="checkbox"/>					

Draft

Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form¹

The following case investigation form can be adapted for Case Investigations.

		Human Influenza A (H5)	
Human Influenza A (H5) Domestic Case Screening Form CDC Case ID: _____			
1. Reported By			
Date reported to state or local health department: ____ / ____ / ____ <small>m m d d y y y y</small>		State/ local Assigned Case ID: _____	
Last Name: _____		First Name: _____	
State: _____	Affiliation: _____	Email: _____	
Phone 1: _____	Phone 2: _____	Fax: _____	
2. Patient Information			
City of Residence: _____		County: _____	State: _____
Age at onset: _____ <input type="checkbox"/> Year(s) <input type="checkbox"/> Month(s)		Race: <i>(Choose One)</i> <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Unknown <input type="checkbox"/> Black <input type="checkbox"/> Native Hawaiian/Other Pacific Islander	
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		Ethnicity: <input type="checkbox"/> Non Hispanic <input type="checkbox"/> Hispanic	
3. Optional Patient Information			
Last Name: _____		First Name: _____	
4. Signs and Symptoms			
A. Date of symptom onset: ____ / ____ / ____ <small>m m d d y y y y</small>			
B. What symptoms and signs did the patient have during the course of illness? (check all that apply)			
<input type="checkbox"/> Fever > 38° C (100.4° F) <input type="checkbox"/> Feverish (temperature not taken) <input type="checkbox"/> Conjunctivitis <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Other (specify): _____			
C. Was a chest X-ray or chest CAT scan performed? <input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown			
If yes*, did the patient have radiographic evidence of pneumonia or respiratory distress syndrome (RDS)? <input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown			
February 19, 2004 Page 1 of 5 <hr style="border: 1px solid black;"/> DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL AND PREVENTION SAFER • HEALTHIER • PEOPLE™			

¹ Taken from the HHS Pandemic Influenza Plan, November 2005. Entire Document available at <http://www.hhs.gov/pandemicflu/plan/>

Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form

Influenza A (H5) Domestic Case Screening Form 1.0
(continued from previous page)

Epidemiologic Risk Factors

CDC Case ID:

5. Travel/Exposures					
A. In the 10 days prior to illness onset, did the patient travel to any of the countries listed in the table below? If yes*, please fill in arrival and departure dates for all countries that apply.			<input type="checkbox"/> Yes* <input type="checkbox"/> No** <input type="checkbox"/> Unknown **If patient did not travel outside U.S., skip to question 6.		
Country	Arrival Date	Departure Date	Country	Arrival Date	Departure Date
<input type="checkbox"/> Afghanistan			<input type="checkbox"/> Myanmar (Burma)		
<input type="checkbox"/> Bangladesh			<input type="checkbox"/> Nepal		
<input type="checkbox"/> Brunei			<input type="checkbox"/> North Korea		
<input type="checkbox"/> Cambodia			<input type="checkbox"/> Oman		
<input type="checkbox"/> China			<input type="checkbox"/> Pakistan		
<input type="checkbox"/> Hong Kong			<input type="checkbox"/> Papua New Guinea		
<input type="checkbox"/> India			<input type="checkbox"/> Philippines		
<input type="checkbox"/> Indonesia			<input type="checkbox"/> Saudi Arabia		
<input type="checkbox"/> Iran			<input type="checkbox"/> Singapore		
<input type="checkbox"/> Iraq			<input type="checkbox"/> South Korea		
<input type="checkbox"/> Israel			<input type="checkbox"/> Syria		
<input type="checkbox"/> Japan			<input type="checkbox"/> Taiwan		
<input type="checkbox"/> Jordan			<input type="checkbox"/> Thailand		
<input type="checkbox"/> Laos			<input type="checkbox"/> Turkey		
<input type="checkbox"/> Lebanon			<input type="checkbox"/> Viet Nam		
<input type="checkbox"/> Macao			<input type="checkbox"/> Yemen		
<input type="checkbox"/> Malaysia					
For the questions 5B to 5E, In the 10 days prior to illness onset, while in the countries listed above					
B. Did the patient come within 1 meter (3 feet) of any live poultry or domesticated birds (e.g. visited a poultry farm, a household raising poultry, or a bird market)?			<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown		
If Yes*					
C. Did patient touch any recently butchered poultry?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
D. Did the patient visit or stay in the same household with anyone with pneumonia or severe flu-like illness?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
E. Did the patient visit or stay in the same household with a suspected human influenza A(H5) case?*			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
F. Did the patient visit or stay in the same household with a known human influenza A(H5) case?*			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
* SEE Influenza A (H5): Interim U.S. Case Definitions					

Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form

Influenza A (H5) Domestic Case Screening Form 1.0
(continued from previous page)

CDC ID:

6. Exposure for Non Travelers	
For patients whom did not travel outside the U.S., in the 10 days prior to illness onset , did the patient visit or stay in the same household with a traveler returning from one of the countries listed above who developed pneumonia or severe flu-like illness?	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown
If yes*, was the contact a confirmed or suspected H5 case patient?	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> Unknown
If yes*: CDC ID: _____ STATE ID: _____	

Laboratory Evaluation

7. State and local level influenza test results	
Specimen 1	
<input type="checkbox"/> NP swab <input type="checkbox"/> Bronchoalveolar lavage specimen (BAL) <input type="checkbox"/> NP aspirate <input type="checkbox"/> OP swab <input type="checkbox"/> Other _____	Date Collected: ____/____/_____ m m d d y y y y
Test Type: <input type="checkbox"/> RT-PCR <input type="checkbox"/> Direct fluorescent antibody (DFA) <input type="checkbox"/> Viral Culture <input type="checkbox"/> Rapid Antigen Test*	Result: <input type="checkbox"/> Influenza A <input type="checkbox"/> Influenza B <input type="checkbox"/> Influenza (type unk) <input type="checkbox"/> Negative <input type="checkbox"/> Pending
*Name of Rapid Test: _____	
Specimen 2	
<input type="checkbox"/> NP swab <input type="checkbox"/> Bronchoalveolar lavage specimen (BAL) <input type="checkbox"/> NP aspirate <input type="checkbox"/> OP swab <input type="checkbox"/> Other _____	Date Collected: ____/____/_____ m m d d y y y y
Test Type: <input type="checkbox"/> RT-PCR <input type="checkbox"/> Direct fluorescent antibody (DFA) <input type="checkbox"/> Viral Culture <input type="checkbox"/> Rapid Antigen Test*	Result: <input type="checkbox"/> Influenza A <input type="checkbox"/> Influenza B <input type="checkbox"/> Influenza (type unk) <input type="checkbox"/> Negative <input type="checkbox"/> Pending
*Name of Rapid Test: _____	
Specimen 3	
<input type="checkbox"/> NP swab <input type="checkbox"/> Bronchoalveolar lavage specimen (BAL) <input type="checkbox"/> NP aspirate <input type="checkbox"/> OP swab <input type="checkbox"/> Other _____	Date Collected: ____/____/_____ m m d d y y y y
Test Type: <input type="checkbox"/> RT-PCR <input type="checkbox"/> Direct fluorescent antibody (DFA) <input type="checkbox"/> Viral Culture <input type="checkbox"/> Rapid Antigen Test*	Result: <input type="checkbox"/> Influenza A <input type="checkbox"/> Influenza B <input type="checkbox"/> Influenza (type unk) <input type="checkbox"/> Negative <input type="checkbox"/> Pending
*Name of Rapid Test: _____	

February 19, 2004

Page 3 of 5

Appendix B.7: Sample of an Influenza A. H5 Case Investigation Form

Influenza A (H5) Domestic Case Screening Form 1.0
(continued from previous page)

CDC ID:

8. List specimens sent to the CDC		
Select a SOURCE* from the following list for each specimen: Serum (acute), serum (convalescent), NP swab, NP aspirate, bronchoalveolar lavage specimen (BAL), OP swab, tracheal aspirate, or tissue		
Specimen 1: <input type="checkbox"/> Clinical Material <input type="checkbox"/> Extracted RNA <input type="checkbox"/> Virus Isolate	Source*: -----	Collected : ___ / ___ / _____ m m d d y y y y Date Sent: ___ / ___ / _____ m m d d y y y y
Specimen 2: <input type="checkbox"/> Clinical Material <input type="checkbox"/> Extracted RNA <input type="checkbox"/> Virus Isolate	Source*: -----	Collected : ___ / ___ / _____ m m d d y y y y Date Sent: ___ / ___ / _____ m m d d y y y y
Specimen 3: <input type="checkbox"/> Clinical Material <input type="checkbox"/> Extracted RNA <input type="checkbox"/> Virus Isolate	Source*: -----	Collected : ___ / ___ / _____ m m d d y y y y Date Sent: ___ / ___ / _____ m m d d y y y y
Specimen 4: <input type="checkbox"/> Clinical Material <input type="checkbox"/> Extracted RNA <input type="checkbox"/> Virus Isolate	Source*: -----	Collected : ___ / ___ / _____ m m d d y y y y Date Sent: ___ / ___ / _____ m m d d y y y y
Specimen 5: <input type="checkbox"/> Clinical Material <input type="checkbox"/> Extracted RNA <input type="checkbox"/> Virus Isolate	Source*: -----	Collected : ___ / ___ / _____ m m d d y y y y Date Sent: ___ / ___ / _____ m m d d y y y y
Carrier:	Tracking #:	
9. Case Notes:		

February 19, 2004

Page 4 of 5

APPENDIX C: Recommendations for Pneumococcal Vaccine

- A. **Assumption:** Pneumococcal vaccine will assist in the prevention of secondary bacterial infections.
- B. **Interpandemic Period:** DSHS participates in a number of coalitions to improve vaccine coverage throughout Texas. Local health departments promote vaccination locally with Pneumococcal Polysaccharide vaccine for individuals >65 and Pneumococcal Conjugate vaccine for children 2 to 23 month olds.
- C. **Pandemic Alert Period, Phase 4:** Human-to-human transmission is confirmed.
 - 1. DSHS will notify all health care providers of the need to vaccinate people over 65 years of age and people recommended by the Advisory Committee on Immunization Practice (MMWR 1997; v46: No. RR-8) with pneumococcal vaccine as a method of decreasing morbidity and mortality associated with pandemic influenza.
 - 2. The DSHS Press Officer (or designee) may send information to the media to inform the general public of the need for children ages 2 months to 23 months, adults age 65 and older, 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 healthcare providers. Children may be covered by the Texas Vaccines for Children program. Reimbursement rates for Medicare and Medicaid vary annually. Private insurers frequently follow Medicare reimbursement guidelines. Be sure to check current publications.
- D. **Pandemic Period, Phase 6:** Confirmation is made of onset of pandemic, regional and multiregional 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 follow same process as D.
- F. **Postpandemic Period:**
 - 1. The DSHS will continue efforts to notify providers and people recommended by the ACIP to receive pneumococcal vaccine as described above.
 - 2. DSHS, along with providers and HSRs and LHDs will review the plan and pandemic and update as necessary.

APPENDIX D: Standing Delegation Orders and Emergency Medical Management for Adverse Reactions to Vaccines and Antiviral Drugs

Vaccines

- [Appendix D.1: Sample Standing Delegation Orders for Pandemic Influenza Vaccine](#)
- [Appendix D.2: Emergency Medical Management for Vaccine Reactions](#)
- [Appendix D.3: Vaccine Adverse Reaction Form and DSHS Complaint and/or Injury Report](#)
- [Appendix D.4: Vaccine Allocation Form—Example Only \(priority groups will change\)](#)

Antiviral Drugs

- [Appendix D.5: Standing Orders for Administration of Antivirals to Contacts](#)
- [Appendix D.6: Antiviral Allocation Form—Example Only](#)

Appendix D.1: Sample Standing Delegation Orders for Pandemic Influenza Vaccine

[INSERT NAME OF PUBLIC HEALTH ORGANIZATION]

A. Administering Influenza Vaccine in Clinics

Purpose

To reduce morbidity and mortality from influenza by vaccinating patients who meet priority criteria established by the Advisory Committee on Immunization Practice (ACIP). If these priority criteria are unavailable, criteria developed by the DSHS will be followed.

Policy

After determining that a client is eligible to receive vaccination (i.e., there are no absolute contraindications), registered nurses, licensed vocational nurses, and/or other staff licensed or certified to give medications can administer influenza vaccine in pandemic influenza vaccination clinics. The chart below lists the types of vaccine that may be used and the required guidelines for use. These guidelines reflect ACIP recommendations, Standards for Immunization Practices, and established CDC or DSHS target group priorities.

VACCINE	AGE GROUP	CONTRAINDICATIONS
Live Attenuated Influenza Virus Vaccine (nasal spray, e.g., FluMist®)	2 years through 49 years of age	History of anaphylaxis after eating eggs or following previous influenza vaccination, pregnancy, immunosuppressed people, or people with close contact with immunosuppressed people (e.g., health care personnel or household contacts)
Inactivated Influenza Vaccine (injectable)	> 6 months of age	History of anaphylaxis after eating eggs or following previous influenza vaccination; history of gentamycin sulfate allergy

All approved personnel administering vaccines should

- o Read and have available a copy of the protocols for Managing Vaccine Reactions including anaphylactic reactions ([Appendix D.2: Emergency Medical Management of Vaccine Reactions](#)).
- o Sign the vaccinator list at the end of this form.

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

SDO Procedures

1. Practice and clinic personnel will be trained and qualified to be responsible for one or more of the SOP procedural steps.
2. Each client is provided with a copy of the most current [Vaccine Information Statement](#)

Appendix D.1: Sample Standing Delegation Orders for Pandemic Influenza Vaccine

- [\(VIS\)](#). Provide non-English speakers with a VIS in their native language if available. The publication date of the VIS should be documented.
3. Designated person(s) will answer client questions and assist if form completion if necessary.
 4. Each client will be screened for eligibility for vaccination using the most current CDC/ACIP recommendations available at that time for prioritizing the use of available influenza vaccine(s). As and when epidemiologic evidence indicates the need to revise priorities or vaccine availability changes, prioritizing recommendations may be revised and instituted.
 5. Each eligible client will be screened for contraindications and precautions to influenza vaccine(s)
 - a. **Contraindications:** serious reaction (e.g., anaphylaxis) after ingesting eggs or after receiving a previous dose of influenza vaccine or an influenza vaccine component. Do not give live attenuated influenza vaccine (LAIV) to pregnant women, immunosuppressed people, or people with close contact with immunosuppressed people (e.g., health care personnel or household contacts).
 - b. **Precautions:** moderate or severe acute illness with or without fever
 6. The appropriate influenza vaccine will be administered correctly:
 - a) Administer 0.5 mL inactivated influenza vaccine IM (22-25g, 1–1½" needle) in the deltoid muscle or other age appropriate dose and injection site
 - b) Alternatively, healthy people 2–49 years of age without contraindications may be given 0.5 mL of LAIV; 0.25 mL is sprayed into each nostril while the patient is in an upright position
 7. Emergency medical protocol, kit, and trained person will be on site. ([Appendix D.2](#)). Standing Delegation Order (SDO) for Emergency Medical Management of Vaccine Reactions.)
 8. Vaccine, vaccination date and site will be documented in client held record and in practice or clinic records.
 9. Vaccine-tracking forms will be completed and submitted to the appropriate DSHS office.

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

name of clinic

Appendix D.1: Sample Standing Delegation Orders for Pandemic Influenza Vaccine

Printed Name	Signature	Initials	Date

Draft

Appendix D.2: Emergency Medical Management of Vaccine Reactions

[INSERT NAME OF PUBLIC HEALTH ORGANIZATION]

Purpose

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

Policy

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

SDO Procedures

REACTION	SYMPTOMS	MANAGEMENT
Localized physical reaction	Soreness, itching, swelling, or redness at injection site	<ul style="list-style-type: none"> Apply cold compress to injection site. Recommend analgesic or antipyretic. Observe the client for 30 minutes before allowing the client to leave to be sure generalized symptoms do not occur.
	Slight bleeding	<ul style="list-style-type: none"> Apply adhesive compress over injection site.
	Continuous bleeding	<ul style="list-style-type: none"> Place a thick layer of gauze pads over the area and maintain direct & firm pressure. Raise arm above the level of the client's heart.
Fright and syncope (fainting)	Fright before injection is given	<ul style="list-style-type: none"> Have client sit or lie down for injection. If available, provide stress management. If available, use client support structure.
	Extreme paleness, sweating, coldness of hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	<ul style="list-style-type: none"> Have client lie flat or sit with head between knees for several minutes. Loosen any tight clothing especially around airway. Apply cool damp cloths to face and neck. If available, provide stress management.
	Fall, without loss of consciousness	<ul style="list-style-type: none"> Examine for injury before attempting to move client. Place client flat on back with feet elevated.

	Loss of consciousness	<ul style="list-style-type: none"> • Examine for injury before attempting to move client. • Place client flat on back with feet elevated. • Do not give anything by mouth. • Monitor vital signs. • After return of consciousness, observe client for 30 minutes before allowing client to leave. • Call on-site emergency provider (EMT or MD) or 911 if client does not respond.
Seizure	Loss of consciousness and rigidity and uncontrolled flexion/extension movements	<ul style="list-style-type: none"> • Call on-site emergency provider (EMT or MD) and 911. • If possible, protect the client from falling. Move furniture away from the client to prevent injury during the seizure. • Do not restrain the client • Do not place anything in the client’s mouth. • Do not give the client anything by mouth until they have completely regained consciousness and are fully alert. • Complete a Vaccine Adverse Event Report (VAERS) form. • Observe the client in the clinic for 30 minutes after seizure. • Send client to the ED for evaluation.
Anaphylaxis	Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); severe bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse.	See “Emergency Medical Protocol for Management of Anaphylactic Reactions in Adults” below for detailed steps to follow in treating anaphylaxis.

Emergency Medical Protocol for Management of Anaphylactic Reaction

Supplies Needed

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

- Adult size pocket mask with one-way valve
- Alcohol swabs
- Tourniquet
- Tongue depressors
- Flashlight with extra batteries (for evaluating the mouth and throat)

Emergency Treatment

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

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

WEIGHT		DOSE	
Kgs	Lbs	Mg	MI
35–40	76–99	40	0.8
46+	100+	50	1

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

Appendix D.2: Emergency Medical Management of Vaccine Reactions

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

name of clinic

Sources:

American Academy of Pediatrics. Passive Immunization. In: Pickering LK, ed. *Red Book: 2003 Report of the Committee on Infectious Diseases*. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2003:63–66.

American Pharmacists Association, Grabenstein, JD, *Pharmacy-Based Immunization Delivery*, 2002.

Got Your Shots? A Providers Guide to Immunizations in Minnesota, Second Edition, Minnesota Department of Health, 2001:80–82.

Draft

C. Vaccination of people with chicken egg or gentamycin sulfate allergy

Purpose

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

Policy

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

Procedure

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

Appendix D.3: Vaccine Adverse Reaction Form and DSHS Complaint and/or Injury Report

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

 VACCINE ADVERSE EVENT REPORTING SYSTEM 24 Hour Toll-Free Information 1-800-822-7967 P.O. Box 1100, Rockville, MD 20849-1100 PATIENT IDENTITY KEPT CONFIDENTIAL			For CDC/FDA Use Only VAERS Number _____ Date Received _____		
Patient Name: _____ Last First M.I. Address _____ _____ _____ City State Zip Telephone no. (____) _____		Vaccine administered by (Name): _____ Responsible Physician _____ Facility Name/Address _____ _____ _____ City State Zip Telephone no. (____) _____		Form completed by (Name): _____ Relation <input type="checkbox"/> Vaccine Provider <input type="checkbox"/> Patient/Parent to Patient <input type="checkbox"/> Manufacturer <input type="checkbox"/> Other Address (if different from patient or provider) _____ _____ _____ City State Zip Telephone no. (____) _____	
1. State	2. County where administered	3. Date of birth mm / dd / yy	4. Patient age	5. Sex <input type="checkbox"/> M <input type="checkbox"/> F	6. Date form completed mm / dd / yy
7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any			8. Check all appropriate: <input type="checkbox"/> Patient died (date mm / dd / yy) <input type="checkbox"/> Life threatening illness <input type="checkbox"/> Required emergency room/doctor visit <input type="checkbox"/> Required hospitalization (____ days) <input type="checkbox"/> Resulted in prolongation of hospitalization <input type="checkbox"/> Resulted in permanent disability <input type="checkbox"/> None of the above		
9. Patient recovered <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN			10. Date of vaccination mm / dd / yy AM Time _____ PM	11. Adverse event onset mm / dd / yy AM Time _____ PM	
12. Relevant diagnostic tests/laboratory data					
13. Enter all vaccines given on date listed in no. 10					
Vaccine (type)		Manufacturer	Lot number	Route/Site	No. Previous Doses
a. _____		_____	_____	_____	_____
b. _____		_____	_____	_____	_____
c. _____		_____	_____	_____	_____
d. _____		_____	_____	_____	_____
14. Any other vaccinations within 4 weeks prior to the date listed in no. 10					
Vaccine (type)		Manufacturer	Lot number	Route/Site	No. Previous doses
a. _____		_____	_____	_____	_____
b. _____		_____	_____	_____	_____
15. Vaccinated at: <input type="checkbox"/> Private doctor's office/hospital <input type="checkbox"/> Public health clinic/hospital		16. Vaccine purchased with: <input type="checkbox"/> Military clinic/hospital <input type="checkbox"/> Other/unknown <input type="checkbox"/> Private funds <input type="checkbox"/> Public funds <input type="checkbox"/> Military funds <input type="checkbox"/> Other/unknown		17. Other medications	
18. Illness at time of vaccination (specify)			19. Pre-existing physician-diagnosed allergies, birth defects, medical conditions (specify)		
20. Have you reported this adverse event previously? <input type="checkbox"/> No <input type="checkbox"/> To health department <input type="checkbox"/> To doctor <input type="checkbox"/> To manufacturer			<i>Only for children 5 and under</i>		
			22. Birth weight _____ lb. _____ oz.	23. No. of brothers and sisters	
21. Adverse event following prior vaccination (check all applicable, specify) Adverse Event Onset Age Type Vaccine Dose no. in series <input type="checkbox"/> In patient _____ <input type="checkbox"/> In brother or sister _____			<i>Only for reports submitted by manufacturer/immunization project</i>		
			24. Mfr./imm. proj. report no.	25. Date received by mfr./imm.proj.	
			26. 15 day report? <input type="checkbox"/> Yes <input type="checkbox"/> No	27. Report type <input type="checkbox"/> Initial <input type="checkbox"/> Follow-Up	
Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.					

Appendix D.3: Vaccine Adverse Reaction Form

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



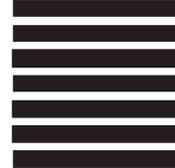
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES
OR APO/FPO

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

POSTAGE WILL BE PAID BY ADDRESSEE



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



DIRECTIONS FOR COMPLETING FORM

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

GENERAL

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

SPECIFIC INSTRUCTIONS

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

- Item 7: Describe the suspected adverse event. Such things as temperature, local and general signs and symptoms, time course, duration of symptoms, diagnosis, treatment and recovery should be noted.
- Item 9: Check "YES" if the patient's health condition is the same as it was prior to the vaccine, "NO" if the patient has not returned to the pre-vaccination state of health, or "UNKNOWN" if the patient's condition is not known.
- Item 10: Give dates and times as specifically as you can remember. If you do not know the exact time, please
- and 11: indicate "AM" or "PM" when possible if this information is known. If more than one adverse event, give the onset date and time for the most serious event.
- Item 12: Include "negative" or "normal" results of any relevant tests performed as well as abnormal findings.
- Item 13: List ONLY those vaccines given on the day listed in Item 10.
- Item 14: List any other vaccines that the patient received within 4 weeks prior to the date listed in Item 10.
- Item 16: This section refers to how the person who gave the vaccine purchased it, not to the patient's insurance.
- Item 17: List any prescription or non-prescription medications the patient was taking when the vaccine(s) was given.
- Item 18: List any short term illnesses the patient had on the date the vaccine(s) was given (i.e., cold, flu, ear infection).
- Item 19: List any pre-existing physician-diagnosed allergies, birth defects, medical conditions (including developmental and/or neurologic disorders) for the patient.
- Item 21: List any suspected adverse events the patient, or the patient's brothers or sisters, may have had to previous vaccinations. If more than one brother or sister, or if the patient has reacted to more than one prior vaccine, use additional pages to explain completely. For the onset age of a patient, provide the age in months if less than two years old.
- Item 26: This space is for manufacturers' use only.

DSHS Complaint and/or Injury Reporting Form

1: Complaint Information:

1a. Form of Complaint: Mode complaint was conveyed to the department: i.e. by telephone, by personal visit, or by a written letter.

1b. Source of Complaint: From what source did the complaint come from: i.e. from the consumer, from another government agency, or from a trade source. If none of the provided answers are appropriate, choose other and write in the source.

2: Injured Party and/or Complaint Information:

2a. Name and Address of Injured Party: Include Full name, street address, Apt # or Box #, City, State and Zip Code. **Phone:** Include area code, home phone number, and work phone number.

2b. Name and Address of Complainant: Include Full name, street address, Apt # or Box #, City, State and Zip Code. **Phone:** Include area code, home phone number, and work phone number.

2c. Age: Age of Injured Party.

2d. Sex: Sex of Injured Party.

2e. Region: Region Number complaint/injury occurred in.

2f. County #: County code complaint/injury occurred in.

2g. County Name: Spell out the county name.

3: Injury or Illness Resulted: (check “yes” or “no” box)

3a. Symptoms: List the type of symptoms the Injured Party experienced. Date and Time of Onset of each symptom is requested, if known.

3b. Attending Physician: Mark no, if no medical attention was sought. Mark yes, if medical attention was sought and list full name, complete address and phone number of attending physician for injury that occurred.

3c. Hospitalization Required: Mark no, if hospitalization was not required. Mark yes, if hospitalization was required and list hospital name, complete address, and phone number.

4.: Product and Labeling:

4a. Product Name: List full name of product or food item(s). If this is regarding a drug product, type one of the following appropriate program categories: “Manufacturer”, “Distributor”, “Salvage”, “Tattoo”, “Cosmetic”, “Piercing”, “Diet”, or “Other”. If this is regarding a device product, type one of the following appropriate program categories: “Manufacturer”, “Distributor”, “Tanning”, “Salvage”, or “Other”. Make sure to enter the program exactly as typed...not “Manufacturing” or “Distributing”.

4b. Product Code: List product code for the product.

4c. Size and Package Type: Describe product size used and type of package. i.e. 16 oz. plastic bottle.

4d. Package Code/Serial Number: List package codes, serial numbers or and other identifying information from product label, if applicable.

4e. Exp/Use Date: List expiration or use by date printed on product, if applicable.

4f. Date Used: List the date the product was used/consumed.

4g. Date Purchased: List date product was purchased, if applicable.

4h. Amt Remaining: List amount of product remaining in package.

4i. Sample No.: List number given to sample if taken.

5.: Manufacturer / Distributor Information:

5a. Name and Address of Manufacturer: List full name and complete address of manufacturer of product. Also list the firm’s CFN number (if licensed with DSHS). Reference the product label. **Phone:** List area code and phone number of manufacturer.

5b. Name and Address of Distributor/Retailer: List full name of distributor or retailer and their complete address including zip code. Also list the firm's CFN number (if licensed with DSHS). **Phone:** List area code and phone number of distributor/retailer.

6.: Complaint or Injury:

6a. Nature of Complaint/Injury: Mark box corresponding to nature of complaint or mark box "other" and describe the nature of the complaint.

6b. Valid Complaint: Is complaint valid? Mark the appropriate box Yes or No.

6c. Follow-Up Inspection: Is a follow-up inspection needed? Mark appropriate box.

6d. Notice Given: Is notice to be given? Mark appropriate box. If answer is yes, list number of days.

6e. Description of Complaint/Injury: Explain the circumstances of the complaint or injury. Include dates and names of any witnesses.

7. Disposition: List the disposition of the complaint or any actions taken.

8. Referred to: List any agency complaint was referred to.

9. Date referred: List the date the complaint was referred.

10. Name and Title: Name and title of person taking complaint.

11. Date Complaint Investigated: Date complaint assigned to an investigator and investigation is started.

OFFICE USE ONLY:

Complaint Number: Assigned complaint number given by the Compliance Branch. To be completed by admin staff.

Date of Complaint: Date complaint was received by DSHS. To be completed by person receiving complaint.

Assigned to Investigator: Who is case assigned to? To be completed by a supervisor.

Division/Branch: What division/branch does this complaint fall under: "Drugs" or "Devices"? **Make sure to enter as plural (not Drug or Device). To be completed by person receiving complaint.

Injury Class: To be completed by a supervisor.

1 = Serious/Imminent health hazard, death, injury/illness associated with the use of this product requiring medical intervention/hospitalization.

2 = Significant health hazard, injury/illness from use of this product.

3 = Potential health hazard from use of this product, economic fraud, misbranding, certification, licensure.

4 = Little or no health hazard from use of this product, administrative noncompliance.

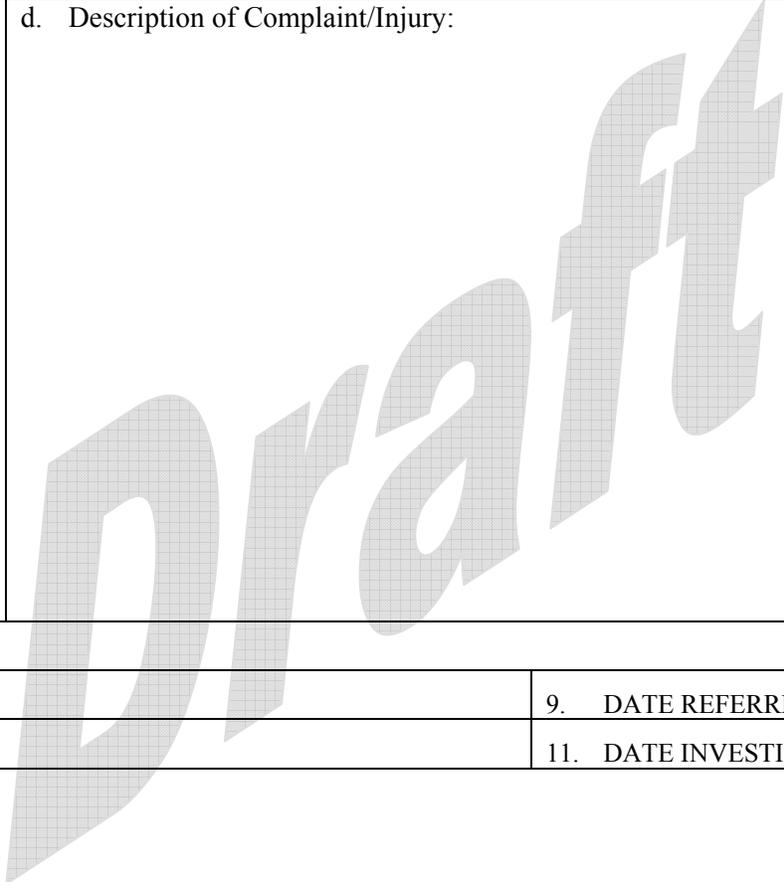
Reviewer's Initials: List the initials of the person reviewing the complaint.

Date Reviewed: List the date the complaint was reviewed.

COMPLAINT/INJURY REPORT				Complaint Number:	
				Date of Complaint:	
1. COMPLAINT INFORMATION	a. Form <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Letter <input type="checkbox"/> Other of complaint:	b. Source of complaint: <input type="checkbox"/> Consumer <input type="checkbox"/> Trade Source <input type="checkbox"/> Government <input type="checkbox"/> Other			
2. INJURED PARTY AND/OR COMPLAINANT INFORMATION	a. Injured Party (name and address):		b. Complainant (name and address):		
	Phone (hm & wk):		Phone (hm & wk):		
c. Age:		d. Sex:	e. Region: 1	f. County #:	g. County name:
3. INJURY OR ILLNESS RESULTED <input type="checkbox"/> Yes <input type="checkbox"/> No	a. Symptoms	Date/Time of Onset	b. Attending Physician <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes, then name and address)		c. Attending Hospital <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes, then name and address)
	1. <input type="checkbox"/> Vomiting	1.			
	2. <input type="checkbox"/> Nausea	2.			
	3. <input type="checkbox"/> Diarrhea	3.			
	4. <input type="checkbox"/> Fever	4.			
	5. <input type="checkbox"/> Skin Irr.	5.			
	6. <input type="checkbox"/> Eye Irr.	6.			
	7. <input type="checkbox"/> Headache	7.	Phone	Phone	
8. <input type="checkbox"/> Other					
4. PRODUCT AND LABELING (as applicable)	a. Product Name:		f. Date Used:		
	b. Product Code:		g. Date Purchased:		
	c. Type Package:		h. Amt. Remaining:		
	d. Pkg Code/Serial #:		i. Sample #:		
	e. Exp/Use Date:				
5. MANUFACTURER/DISTRIBUTOR INFORMATION	a. Manufacturer (name, address, & CFN—if applicable)			b. Distributor/Retailer (name, address, & CFN—if applicable)	
	CFN:			CFN:	
	Phone:			Phone:	

Appendix D.3: Vaccine Adverse Reaction Form

<p>6. COMPLAINT OR INJURY</p>	<p>a. Nature of Complaint/Injury <input type="checkbox"/> Adulterated <input type="checkbox"/> Illness/injury <input type="checkbox"/> Tampering <input type="checkbox"/> Sanitation <input type="checkbox"/> Misbranded <input type="checkbox"/> Other</p> <p>b. Follow-up Notice <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p style="text-align: right;">c. <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No _____ Days</p>
<p>OFFICE USE ONLY ASSIGNED TO INVEST:</p> <p>DIVISION/PROGRAM:</p> <p>INJURY CLASS:</p> <p>REVIEWER'S INITIALS:</p> <p>DATE REVIEWED:</p>	<p>d. Description of Complaint/Injury:</p>
<p>7. DISPOSITION:</p>	
<p>8. REFERRED TO:</p>	<p>9. DATE REFERRED:</p>
<p>10. NAME AND TITLE:</p>	<p>11. DATE INVESTIGATED:</p>



Appendix D.4: Vaccine Allocation Form—Example Only
 (Target groups may change)

Vaccine Allocation Form—Region 1 Example													
Regional Total:	0	Co. Totals	0										
Priority Groups (may need to add more columns and change names of groups)	Health care workers with direct patient contact	Emergency Medical Services	Police, firefighters	Mortuary providers	Public health and regulatory bird workers	Essential service providers, e.g. power, water, etc	Pregnant Women and Infants <1 year	Total Population—Target Groups*	Co. Population's % of Total TX Target Group Population*	Co. Allotment	Allocation Adjustment (+/-)	Final Co. Allocation	Comments
County													
ARMSTRONG													
BAILEY													
BRISCOE													
CARSON													
CASTRO													
CHILDRESS													
COCHRAN													
COLLINGSWORTH													
CROSBY													
DALLAM													
DEAF SMITH													
DICKENS													
DONLEY													
FLOYD													
GARZA													
GRAY													
HALE													
HALL													
HANSFORD													
HARTLEY													
HEMPHILL													
HOCKLEY													
HUTCHINSON													
KING													
LAMB													
LIPSCOMB													
LUBBOCK													
LYNN													
MOORE													
MOTLEY													
OCHILTREE													
OLDHAM													

Appendix D.5: Standing Orders for Administration of Antivirals to Contacts [INSERT NAME OF PUBLIC HEALTH JURISDICTION]

Summary

The public health response for people exposed to influenza may include the urgent provision of prophylactic antiviral to the exposed person in settings including households, residential care facilities, hospitals, and other workplaces. This standing order sets out procedures for administering the antivirals oseltamivir and zanamivir for the purpose of prophylaxis against influenza, when a medical officer is not available to prescribe them and prophylaxis is warranted. This standing order, which is signed by the city, Co., district, region, or state public [health authority](#), has been developed with advice from the Texas DSHS Strategic Preparedness Team and is to be reviewed annually.

General Policy Directives for Standing Orders for the Administration of Medication in a Public Health Emergency

Wherever possible, a prescription should be issued by a medical practitioner, for subsequent dispensing by a pharmacist, to allow for the administration or supply of medication to each patient. However, in many circumstances it is not possible for a medical practitioner to provide a prescription for each patient prior to administration or supply. To accommodate such situations, a standing order provides authorization for a registered nurse to administer or supply medication in specified situations without a prior patient specific prescription. The standing order must be approved by the city, Co., district, regional or state public health authority and reviewed at least annually. The standing order must be dated and annotated with the relevant approval and review dates.

Any administration or supply of medication under a standing order must be in accordance with the following requirements:

1. Each standing order
 - (a) must be in the form of a written instruction, signed and dated by the public health jurisdiction's public health authority;
 - (b) must clearly define the emergency situation, for example "Standing Order for the Mass Administration of Anti-Influenza Prophylaxis to Defined Contacts";
 - (c) must define criteria for identifying the person to whom the medication is to be supplied or administered (for example contact within a specified period of time);
 - (d) must specify any medical, drug or other contraindication;
 - (e) must specifically state the medication to be administered or supplied, the dose or dose schedule (which may be weight-based), the form (tablets, intramuscular injection, syrup etc.), the route and frequency of administration and, if medication is to be supplied to the patient for further dosing, the number of doses to be supplied;
 - (f) must state that any nurse who administers or supplies the medication under the standing order,
 - (g) must be a registered nurse; and
 - (h) must be a "stand-alone" document for each medication. It should not be necessary to refer to other sources for direction or information.

2. Approval to activate a standing order in response to a public health emergency must be given in

writing by the public health jurisdiction's public health authority **on each occasion** of a public health emergency.

3. A registered nurse may administer or supply medication only in accordance with the instructions in the standing order. At all times the registered nurse must be able to contact the jurisdiction's public health authority who gave the approval to initiate treatment or another appropriate medical officer.
4. Prior to administration or supply of medication to a patient, the nurse must
 - (a) Explain the treatment and its purpose to the patient (or guardian);
 - (b) Provide an information sheet to the patient. The information sheet must provide an outline of the disease, the treatment and its purpose, and any significant side effects resulting from the treatment, the public health jurisdiction's 24/7 telephone contact number, and must advise the patient to inform his or her primary care provider of the treatment at the next visit; and
 - (c) Obtain patient/guardian consent to provide treatment as appropriate.
5. The nurse who administers or supplies the medication must keep a full record of the administration or supply. Details must include the patient's name and address, age or date of birth, patient weight if applicable, the name, strength and quantity of the drug supplied or administered, the date of supply or administration and that patient or guardian consent has been obtained. These records are to be held at the public health jurisdiction in accordance with the public health jurisdiction's policy on general retention and disposal of patient/client records.
6. All medication that is to be supplied to the patient for dosing at a later time should be prepared by a pharmacist and labeled with the name and strength of the drug and the directions for use. If known by the pharmacist, the patient's name must be included on the label. If the patient's name is unknown, this must be hand-written on the label by the nurse at the time of supply.
7. At the completion of any mass vaccination/treatment program, the jurisdiction's public health authority must review and sign and date the records as soon as possible to confirm that the program was in accordance with the standing order.

Specific Policy Directives for Standing Orders for Mass Administration of Anti-Influenza Prophylaxis to Defined Contacts

The public health response for people exposed to influenza in either infected animals or humans, or contaminated laboratory specimens from either animals or humans, carried out in accordance with National Centers for Disease Control and Prevention guidelines, may include the urgent provision of anti-influenza prophylaxis to the exposed person. This standing order applies to people exposed to influenza in settings including households, residential care facilities, hospitals, laboratories, airports, poultry operations and processing plants, veterinary practices and other workplaces.

This standing order sets out procedures for administering the antivirals oseltamivir (Tamiflu®), and zanamivir (Relenza®) for the purpose of prophylaxis against influenza, when a medical officer is not available to prescribe them, and when the intensity of exposure is considered to warrant it. This standing order, which is signed by the jurisdiction's public health authority, has been developed with advice from the DSHS Strategic Preparedness Team and is to be reviewed annually.

Anti-influenza medications—oseltamivir and zanamivir

Two medications, oseltamivir and zanamivir, may be suitable for use as prophylaxis against influenza. Oseltamivir is licensed for prophylaxis in individuals aged >1 year, and Zanamivir is licensed for prophylaxis in individuals aged >5 years. All healthcare professionals who administer or supply anti-influenza medication must be familiar with the most current information* regarding:

- drug-resistant strains of influenza virus;
- indications for use of anti-influenza medications when susceptibility exists;
- recommended dosage;
- pharmacokinetics; and
- side effects and adverse reactions.

* Current information for [healthcare professionals](http://www.cdc.gov/flu/professionals/) is available at: (<http://www.cdc.gov/flu/professionals/>).

Note: On November 13, 2006, the FDA approved a labeling supplement for Roche Laboratories' Tamiflu (Oseltamivir Phosphate) to include a precaution about neuropsychiatric events. The revision is based on post-marketing reports (mostly from Japan) of self-injury and delirium with the use of Tamiflu in patients with influenza. The reports were primarily among pediatric patients. The relative contribution of the drug to these events is not known. However, people with the flu, particularly children, may be at an increased risk of self-injury and confusion shortly after taking Tamiflu and should be closely monitored for signs of unusual behavior. A healthcare professional should be contacted immediately if the patient taking Tamiflu shows any signs of unusual behavior. The announcement can be found at: <http://www.fda.gov/medwatch/safety/2006/safety06.htm#tamiflu>.

Use of Standing Orders

These standing orders authorize a registered nurse to administer and/or supply these anti-influenza medications to defined influenza contacts for the purpose of prophylaxis, on the written direction of the jurisdiction's public health authority. Authorization can be written into case progress notes, or provided by e-mail or facsimile. Administration may be carried out during clinics specific for the purpose, or in other settings. The jurisdiction's public health authority or delegated medical officer must be able to be contacted to provide advice to the registered nurse during the prophylaxis program.

Prophylaxis for pandemic influenza should not be provided if more than seven days has elapsed since the last contact with influenza. Once it is determined that prophylaxis is required, administration should commence as soon as possible. Where prophylaxis is commenced after the first exposure to influenza, the temperature of all contacts should be taken prior to administration of prophylaxis. If the contact already has fever and/or other symptoms suggestive of infection with influenza, the contact should be considered for treatment as a case. Consult with the jurisdiction's public health authority or delegated medical officer in this instance, and refer the case to an appropriate facility for isolation and treatment if required.

At the completion of the prophylaxis program, the jurisdiction's public health authority or delegated medical officer must review and sign the program records as soon as possible to confirm that prophylaxis was administered in accordance with this standing order.

* The [incubation period](#) for pandemic influenza is currently unknown, and is assumed to be 7 days. Once information on the epidemiologic characteristics of the pandemic influenza virus, including the incubation period and infectious period are known, the duration of time during which prophylaxis should be offered will be updated accordingly.

Procedure checklist for a registered nurse to supply or administer anti-influenza medication to contacts of influenza

1. Attend yearly training in cardio-pulmonary resuscitation, including review of protocol for administration of adrenaline.
2. Assess the eligibility for prophylaxis of each person exposed to influenza in accordance with the most current National Center for Disease Control and Prevention recommendations, ensure that fever or other symptoms of infection with influenza are not already present, and document that this has occurred. If fever or symptoms are present, contact the jurisdiction's public health authority or designated medical officer immediately.
3. Verify and document that there are no contraindications to the administration of anti-influenza medication.
4. Verify and document that the public health jurisdiction has a surveillance program in place to monitor the development of influenza resistance to anti-viral medication, and that this program is fully integrated into the public health jurisdiction's unified area local-regional-state public health authority [NIMS-compliant ICS](#) structure.
5. Verify that the public health jurisdiction has a surveillance program in place to monitor and report adverse reactions to anti-viral medication, and that this program is fully integrated into the public health jurisdiction's unified area local-regional-state public health authority [NIMS-compliant ICS](#) structure.
6. Explain the rationale and purpose of prophylaxis to each contact (or parent/guardian) and provide the appropriate anti-influenza medication patient information fact sheet and

document that this has occurred.

7. Explain that prophylaxis does not exclude the possibility of a person developing influenza, and that the contact should check their own temperature twice daily, and report the development of fever or symptoms of influenza to their public health jurisdiction
8. Check with the contact (or parent/guardian) if they are pregnant, breast-feeding, have any known allergies or are currently taking any medications or have pre-existing medical conditions, such as renal impairment, asthma or chronic respiratory disease, where the use of a particular medication may be contraindicated, and document that this has occurred.
9. Explain the side effects of the recommended anti-influenza medication and document that this has occurred.
10. Explain the procedure for reporting adverse event. Provide appropriate local health department contact information.
11. Obtain valid consent from the contact (or parent/guardian), and document that this has been obtained.
12. Weigh the contact if indicated (e.g., for a child being administered oseltamivir).
13. Document for each contact the following details: name, address, date of birth, sex, weight (if a child), phone number, dosage and administration details, and the number of doses supplied.
14. For contacts with ongoing exposure, determine whether another week's supply of the anti-influenza medication will be necessary, and if so, document that this has been arranged.
15. Supply recommended medication, labeled by the pharmacist with the drug name, drug frequency, and dose for that contact. If the contact's name was unknown by the pharmacist at the time he/she packaged and labeled the medication, the registered nurse is to hand write the contact's name and date on the label at the time of supply.
16. At the completion of the mass treatment program, the jurisdiction's public health authority or delegated medical officer must review, sign and date the records as soon as possible to confirm that the program was in accordance with the standing order.

Type of influenza	Definition of types of exposure where prophylaxis may be considered
NORMAL SEASONAL INFLUENZA	<p>Prophylaxis against normal seasonal influenza may be considered where the subject has not been vaccinated¹ against the currently circulating strains of influenza and has been in unprotected contact (post-exposure prophylaxis) or will be in contact with (pre-exposure prophylaxis) an ill person. Administration of prophylaxis should be discontinued if subsequent laboratory testing indicates that the index case does not have influenza.</p>
AVIAN INFLUENZA	<p>Prophylaxis against avian influenza (AI) may be considered when the subject has been in unprotected contact with an ill person within the last 7 days² (post-exposure prophylaxis) or will be in contact with (pre-exposure prophylaxis):</p> <ul style="list-style-type: none"> • a confirmed human case of avian influenza during the infectious period (i.e., one day before to 7 days after onset of AI illness, for children aged <13 years one day before to 14 days after onset of illness, and for children < 5 years—one day before to 21 days after onset of illness)² • poultry or with any dead birds where the cause of death is unknown, in an area known to have outbreaks of AI, or • laboratory samples from individuals or animals suspected of having avian influenza. Administration of prophylaxis should be discontinued if subsequent laboratory testing indicates that the index case does not have avian influenza.
PANDEMIC INFLUENZA	<p>Note: As there is no circulating strain of pandemic influenza at the time of writing, the case definition is based on the one for avian influenza and should be treated as an interim case definition only. The case definition will be reviewed and revised as information about any future pandemic influenza strain becomes available. Prophylaxis against pandemic influenza (PI) may be considered where the subject has been in unprotected contact within the last 7 days² (post-exposure prophylaxis) or will be in contact with (pre-exposure prophylaxis):</p> <ul style="list-style-type: none"> • a confirmed human case of pandemic influenza during the infectious period (i.e., one day before to 7 days after onset of influenza illness, for children aged <13 years one day before to 14 days after onset of illness, and for children < 5 years—one day before to 21 days after onset of illness),² or • a person with an undiagnosed influenza-like illness,³ in an area known to have outbreaks of pandemic influenza, or • laboratory samples from individuals suspected of having pandemic influenza. <p>Administration of prophylaxis should be discontinued if subsequent laboratory testing indicates that the index case does not have influenza.</p>
<p>1. Prophylaxis may be considered for influenza exposures that occur less than 2 weeks after vaccination with inactivated vaccine. 2. The incubation period for avian influenza is unknown, and is currently assumed to be 7 days. Once information on the epidemiologic characteristics of the pandemic influenza virus, including the incubation period and infectious period are known, the duration of time during which prophylaxis should be offered will be updated accordingly. 3. An influenza-like illness is characterized by sudden onset of fever $\geq 38^{\circ}\text{C}$, cough and fatigue.</p>	

Appendix D.6: Antiviral Allocation Form—Example only
(priority groups will change)

Antiviral Allocation Form—Region 1 Example													
Regional Total:	0	Co. Totals: 0											
Priority Groups (may need to add more columns and change names of groups)	Health care workers with direct patient contact	Emergency Medical Services	Police, firefighters	Mortuary providers	Public health and regulatory bird workers	providers, e.g. providers, e.g.	Pregnant Women and Infants <1 year			Total Population—Target Groups*	Co. Population's % of Total TX Target Group Population*	Co. Allotment Allocation Adjustment (+/-)	Final Co. Allocation
County												Comments	
ARMSTRONG													
BAILEY													
BRISCOE													
CARSON													
CASTRO													
CHILDRESS													
COCHRAN													
COLLINGSWORTH													
CROSBY													
DALLAM													
DEAF SMITH													
DICKENS													
DONLEY													
FLOYD													
GARZA													
GRAY													
HALE													
HALL													
HANSFORD													
HARTLEY													
HEMPHILL													
HOCKLEY													

Column N: Allocation Adjustment (+/-)

Amount of adjustment for Co. level antiviral allocation (+ or -) by the regions.

Column O: Final Co. Allocation

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

Column P: Comments

Field for comments, particularly those regarding column O.

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APPENDIX E: Vaccine and Antiviral Tracking

- [Appendix E.1: Plan for Vaccine and Antiviral Tracking](#)
- [Appendix E.2: Draft Consent Form for Enrollment into IMMTRAC](#)

Draft

Appendix E.1: Plan for Vaccine and Antiviral Tracking

Vaccine and antiviral distribution and administration will be monitored by DSHS through TIMS and ImmTrac. Both TIMS and ImmTrac are computer-based systems with online entry functions. A back-up paper system based on the C-93 Addendum to the Vaccine Information Statement required by Texas law will be used for vaccine back-up documentation and initial documentation if Internet access is not available at the dispensing site. Client data entered into an Excel spreadsheet will serve as a back-up system for antiviral administration tracking. The LHDs will hold the primary responsibility for data entry. Assistance of the HSRs may be requested if there is a shortage of staff. HSRs have the responsibility to ensure non-electronic data will be transferred to DSHS IB or DSHS PB for up-load into the electronic TIMS system.

- A. **The Texas Inventory Management System (TIMS)** will track antiviral and vaccine distribution to RSS and/or PODs. TIMS is capable of tracking antivirals and vaccine whether received from the SNS, distributed through the DSHS PB, or distributed through [Vendor Managed Inventory \(VMI\)](#) through the contracted DSHS distributor. This system's current status is
1. Current Capabilities
 - a. Dial-up or other Internet access from anywhere
 - b. Encrypted data
 - c. Pharmaceuticals followed from the SNS delivery through accessible Points of Distribution in real time.
 - d. Creation of material lists for shipping
 - e. Running inventory of materials and their location
 - f. Creation of order requests to be filled Tracking of material to be returned
 - g. Tracking of order status
 2. Next steps for use with Pandemic Influenza Plan Operational Guidelines
 - a. PI module written to track client antiviral delivery, if required
3. **ImmTrac:** The 2007 Texas Legislature approved expanding ImmTrac from a children only system to also track medications and vaccinations given to adults during emergencies such as natural disasters, terrorism events and epidemics/pandemics.
1. Current Capabilities
 - a. Developed
 - b. Web-based system with web-based training
 - c. Used for patient level data for immunizations
 - d. Electronic signature tracking
 - e. Compatible with Texas vaccine paperwork requirements
 - f. Has 2nd dose reminder recall with personal physician access
 - g. Legal issues regarding consent worked out
 2. Next steps for use with Pandemic Influenza Plan Operational Guidelines
 - a. Expand software to accommodate additional surge.
 - b. Educate and train health care providers serving adults in the use of ImmTrac for reporting to include use of consent forms for adults ([Appendix E.2](#))
 - c. Recruit and register adult health care providers most likely to use it.

Appendix E.2: Draft Consent Form for Enrollment into IMMTRAC

(TO BE DEVELOPED)

Draft

APPENDIX F: Business Continuity Planning

Unlike natural disasters such as hurricanes Katrina and Rita or terrorist actions such as 9/11/2001, 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.

The impact of disasters and terrorist events can sometimes be primarily the destruction of buildings and other structures. Leaving those unscathed, the devastation of pandemics affects only 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

Moreover, high absenteeism in one business inevitably has an impact on other businesses. For example, supplies of widgets you require to manufacture your product might drop significantly, a fact 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 (search for “business continuity plans for pandemic influenza”). There are purchased programs, pricy consultant experts, and free resources. Following is a list of Internet resources compiled with input from a number of people who have found them helpful.

Please note: Reference to any private industry or professional association does not constitute an endorsement. The sites below were compiled in the spirit of information sharing. This document is intended neither as a comprehensive resource nor an official recommendation.

Resources from the Private Sector

Avian Flu: Preparing for a Pandemic (PDF, 32 pages) is a report for employees and clients of Marsh on risk related topics: http://www.marsh-asia.com/birca/white_paper.pdf

Example of a Pandemic Influenza Workplace Plan (12 page PDF) based on Shell Oil's workplace plans for operations in Oceana. The host website of this posting has numerous flu related planning resources:

http://www.med.govt.nz/irdev/econ_dev/pandemic-planning/infrastructure/example/example.pdf

Pandemic Flu Planning Guide for Infrastructure Providers (59 page Word Doc.). The actual guidelines begin on page 14. Table 3 may be of special interest. Suggested Summary Actions for Infrastructure Providers for each Alert Code (New Zealand has adopted a PI alert code which seems practical and understandable for the public). Another good tool is their employee screening algorithm on page 36:

<http://healthcareproviders.org.nz/publication/documents/v9PandemicPlanningGuide.doc>

Planning Checklist in Brochure Form by Trust for America's Health (2 Page PDF):

<http://healthyamericans.org/reports/flu/FluBrochure.pdf>

Continuity Central posts influenza related topics on its website, including WHO updates for business community and best practice recommendations:

<http://www.continuitycentral.com/asiapac2004.htm>

Occupational Health Disaster Emergency Network's, OHDEN, Website Site is specific to pandemic influenza private industry workplace planning. This site has links to all state response plans: <http://ohden.sph.unc.edu:9002/pandemic>

The University of North Carolina's *Occupational Health Disaster Expert Network* (OHDEN) can be found at: <http://ohden.sph.unc.edu:9002/pandemic/>

Business Continuity Planning and Disaster Recovery Planning Directory can be located at:

<http://www.disasterrecoveryworld.com/>

The document *Business Continuity Guideline: A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery* provides a complete guide to planning with emphasis on security published by ASIS. Committee members represent some of the largest corporations in the U.S. It can be found at:

<http://www.asisonline.org/guidelines/guidelinesbc.pdf>

The Association of Contingency Planners has 3 chapters in Texas: Capital of TX (Austin), South TX (Houston), and North TX (Dallas). Their websites are: <http://www.acp-centraltexas.com/> , <http://www.acp-international.com/southtx/> , and <http://www.acp-international.com/northtx/> .

The Association of Contingency Planners has developed a composite listing of resources for planning including articles, examples of plans, checklists, exercises taken from the private sector, government resources, and conferences that can be found at http://www.acp-international.com/pandemic/BCPSites_PandemicInfluenzaResponsePlanning.pdf

Government Resources

The Federal Emergency Management Agency (FEMA) provides a wonderful assortment of educational and training tools as well as templates. DSHS used the FEMA COOP template as a starting point for its COOP plan. The template includes suggested language as well:

<http://www.fema.gov/government/coop/#3>

Workplace Planning for businesses and critical infrastructure providers provided by the federal government on their pandemic influenza-dedicated website:

<http://www.pandemicflu.gov/plan/workplaceplanning/index.html>

Emergency Management Guide For Business & Industry (FEMA's website is also an excellent resource for family disaster preparedness guides ~ recommended distribution to employees):

<http://www.fema.gov/library/bizindex.shtm>

DHHS Pandemic Influenza Specific Business Continuity Checklist:

<http://www.pandemicflu.gov/plan/tab4.html>

DHHS Pandemic Influenza Tabletop Exercise Materials:

<http://www.hhs.gov/nvpo/pandemics/tabletopex.html>

Comprehensive Pandemic Preparedness PowerPoint Presentations From CDC and DHHS Sources are Posted on the Arizona Department of Health's Website:

<http://www.azdhs.gov/pandemicflu>

The U.S. Department of Homeland Security has a website entitled Ready Business 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:

<http://www.ready.gov/business/st1-planning.html>

University Pandemic Flu COOP Planning

The Virginia Department of Emergency Management had developed a number of resources for colleges and universities to develop COOP plans. Tools in the tool kit include: a planning manual, worksheets, and templates. These can be accessed for downloading at:

http://www.vdem.state.va.us/library/coop/higher_ed/index.cfm

APPENDIX G: Death Care for Managing Mass Fatalities

During an influenza pandemic the mortuary and funeral service community will be called upon to handle a large number of deaths in addition to the number normally expected from all causes. In 2003, 3603 (2.3%) of the 154,501 deaths in Texas were attributed to influenza and pneumonia. During a flu pandemic, assuming a 35% of the population becomes ill and 3% die, the number of Texans dying from influenza alone might be 219,000. Added to deaths regularly expected from all other causes, it is feasible that the funeral service community might be asked to handle as many as 370,000 bodies, a 140% increase above normal. It is important to remember that unlike natural disasters where help will be forthcoming in a matter of hours or days, this will not be the case with pandemic disease since everyone will be experiencing the same emergency. We will need to prepare as best as possible and assume there will be no additional assistance from outside. This appendix is aimed at assisting emergency planners and funeral service professionals in planning for surge capacity to handle excessive deaths.

The following table provides a concise summary of requirements for each step of preparation and final disposition of a body, limiting factors placed on the steps by a pandemic, and planning for possible solutions.

STEPS	REQUIREMENTS	LIMITING FACTORS	PLANNING FOR POSSIBLE SOLUTIONS
Death pronounced	Person legally authorized to perform task: Physician, Registered Nurse (RN) in consultation with a physician, Justice of the Peace (JP), Medical Examiner (ME)*	<ul style="list-style-type: none"> • If death occurs at home someone will need to contact • Numbers of authorized person 	<ul style="list-style-type: none"> • Determine if temporary authorization can be granted with a declaration of a public health emergency. • Provide public education about how to access an authorized person. • Consider planning a 24/7 call system.
Death certified	Person legally authorized to perform task: Physician, JP*	<ul style="list-style-type: none"> • Does not need to be same person as person who pronounces death. • Number of authorized individuals 	<ul style="list-style-type: none"> • Consider assigning quadrants for certifying deaths to improve efficiency. • Provide public education related to rationale and triggers for determining implementation.
Death certificate issued	Person legally authorized to perform task: Co. Clerk, Local Health Department Vital Statistics Death Registrar	<ul style="list-style-type: none"> • Number of authorized individuals • Must be filed within 10 days of death 	<ul style="list-style-type: none"> • Authorization will be extended to physician, ME, JP, and Funeral Directors with electronic certification coming soon.
Body wrapped	<ul style="list-style-type: none"> • Person trained to perform task • Body bags 	<ul style="list-style-type: none"> • Number of trained individuals • Availability of body bags 	<ul style="list-style-type: none"> • Consider training or expanding the role of current staff to include this task. • Consider developing a rotating 6 month inventory of body bags, given

STEPS	REQUIREMENTS	LIMITING FACTORS	PLANNING FOR POSSIBLE SOLUTIONS
		<ul style="list-style-type: none"> Death occurring at home: availability of either trained individuals or body bags 	<ul style="list-style-type: none"> their shelf life. Provide this service in the home
Transportation to funeral establishment or storage site	<ul style="list-style-type: none"> Stretcher and vehicle appropriate 	<ul style="list-style-type: none"> Availability of drivers and suitable vehicles 	<ul style="list-style-type: none"> Research alternate suppliers equipment that could be used as stretchers in an emergency and consider a Memorandum of Understanding (MOU). Consider assigning quadrants for “collecting” remains for each funeral home to improve efficiency <ul style="list-style-type: none"> Provide public education related to rationale and triggers for determining implementation Consider family transport to funeral establishment or designated storage site. Provide public education or specific instructions through a toll-free phone service regarding where to take remains if the family must transport
Storage	Suitable facility that can be maintained at 34 to 40 degrees Fahrenheit (4 to 8 degrees Celsius)	<ul style="list-style-type: none"> Availability of suitable facility Capacity of facility 	<ul style="list-style-type: none"> Identify and plan for possible temporary morgue sites and/or State Mortuary Assistance Teams (SMAT) Locate ice arenas for temporary storage Consider MOUs
Autopsy if required	Person legally authorized and qualified to perform task: ME and pathologists	Availability of: <ul style="list-style-type: none"> Authorized person Facility 	<ul style="list-style-type: none"> Ensure that physicians and families are aware that an autopsy is not required for confirmation of influenza as cause of death.
Embalming	<ul style="list-style-type: none"> Suitable vehicle to transport from ME office, hospital, home, or temporary storage Suitable location approved by the Texas Funeral Service Commission Consideration of spiritual / ethnic beliefs about embalming Trained person Embalming supplies and equipment 	Availability of: <ul style="list-style-type: none"> Drivers and suitable vehicles Trained individuals Facilities Availability of spiritual leader for consultation Embalming supplies 	<ul style="list-style-type: none"> Consult with service provided regarding the availability of supplies and potential need to stockpile or develop a rotating 6 month inventory of essential equipment/supplies Discuss capacity and potential alternate sources of human to perform this task e.g., retired workers or students in training programs Consider “recruiting” workers that would be willing to provide this service in an emergency and provide training Consider location of facilities for SMAT and acquire MOUs.

Appendix G: Death Care for Managing Mass Fatalities

STEPS	REQUIREMENTS	LIMITING FACTORS	PLANNING FOR POSSIBLE SOLUTIONS
Cremation	<ul style="list-style-type: none"> • Suitable vehicle to transport from ME office, hospital, home, funeral home, storage • Consideration of spiritual / ethnic beliefs about cremation • Crematorium • Cremation certificate • Burial Transit Permit 	Availability of: <ul style="list-style-type: none"> • Drivers and suitable vehicles • Crematorium • Availability of spiritual leader for consultation • If immediate next of kin not available to authorize cremation, it can be done by an authorized authority such as the Commissioner's Court 	<ul style="list-style-type: none"> • Identify alternate vehicles that could be used for mass transport • Examine the capacity and surge capacity of crematoriums within the jurisdiction • Discuss and plan appropriate storage options if the crematoriums become backlogged • Discuss and plan expedited cremation certificate completion processes
Funeral service	<ul style="list-style-type: none"> • Appropriate location • Casket • Funeral director 	Availability of: <ul style="list-style-type: none"> • Location • Casket • Funeral director • Spiritual leader 	<ul style="list-style-type: none"> • Contact suppliers to determine lead time for casket manufacturing and discuss possibilities for rotating 6 month inventory • Consult with the Funeral Services Commission to determine surge capacity and possibly the need for additional sites (e.g., use of churches for visitation)
Transportation to burial site	<ul style="list-style-type: none"> • Suitable vehicle to transport • For commercial or out of state burial a Burial Transit Permit is required 	<ul style="list-style-type: none"> • Availability of drivers and suitable vehicles 	<ul style="list-style-type: none"> • Identify alternate vehicles • Consider use of volunteer drivers
Burial	<ul style="list-style-type: none"> • Space at cemetery • Grave digger 	Availability of: <ul style="list-style-type: none"> • Cemetery space • Grave digger • Inclement weather 	<ul style="list-style-type: none"> • Expand capacity by increasing temporary holding sites or grave sites • Identify sources of supplementary workers • Examine alternatives to individual burial
Cultural and spiritual special needs	<ul style="list-style-type: none"> • Time between death and burial • Special handling of body • Special preparation • Special ceremonies 	<ul style="list-style-type: none"> • Availability of spiritual leaders and supplies • Public health requirements • Realities of handling mass fatalities with limited resources 	<ul style="list-style-type: none"> • Consult in advance with community spiritual leaders on acceptable alternative arrangements in a public health emergency • Encourage spiritual leaders to educate their communities about acceptable alternatives

A number of collaborative death care activities in preparation for the outcomes of a pandemic should be undertaken early, even before there is a threat. However, remember to prepare

yourself, your family (http://www.dshs.state.tx.us/preparedness/Public_Guide.pdf), and your business ([Appendix F](#)). Some preparations may be specific to pandemic influenza, but most are generic for any mass hazard. The following table contains activities to consider for each pandemic period.

Pandemic Period / Phase/Stage	Activity
<p>Interpandemic Period</p> <p>WHO Phase 1: No new virus subtypes identified</p> <p>WHO Phase 2: “Novel virus” identified in birds or animals. Transmission to humans has not occurred.</p> <p>FGR Stage 0: New domestic animal outbreak in at-risk country</p>	<ul style="list-style-type: none"> ● Develop or update your business continuity plan and concept of operations plans. ● Educate yourself on mass fatalities in order to serve as a subject matter expert. Other countries such as Canada, and its funeral professional associations (click on Pandemic Guide after reaching this site), and Great Britain have done more on this issue than the U.S. has. <ul style="list-style-type: none"> ○ Understand risks of exposure and need for PPE when handling body* ○ Implement Personal Protective Strategies and encourage staff to do so. (DSHS Public Health Preparedness Web site) ○ Review laws related to disposition during a public health emergency and seek clarification or change in collaboration with partners (pronouncing, certifying, family transport, etc.) ● Begin collaborations <ul style="list-style-type: none"> ○ Contact the public health preparedness planner in your local health department. If there is no local health department, contact the planner in your health service regional office. Some planning may have started. The death care industry plans must be consistent with local plans ○ Coordinate planning** to avoid inconsistencies and duplication. <ul style="list-style-type: none"> ▪ Develop SMAT Team ▪ Reach consensus on system of after death care during a public health emergency (quadrant system, identifying and tagging dead bodies, etc.). ▪ Coordinate use of scarce resources and surge locations ▪ Consider feasibility of stockpiling and rotating 6 months of supplies in a centralized location ▪ Establish plan for recruiting volunteers (students in training programs, retired professionals, others in community) ○ Get to know your local and county officials, local police, fire representatives, local health official, and local disaster coordinator/planner. ● Familiarize yourself with the community’s emergency management system: <ul style="list-style-type: none"> ○ Review pertinent sections of state and local emergency plans ○ Become an active participant in local emergency management committees/councils. ○ Assist in planning at the local level ● Serve as an educator related to death care <ul style="list-style-type: none"> ○ Via forums, media, meetings ○ Craft messages appropriately for the general public, insurance industry, and health care providers including hospitals, nursing homes, and

Pandemic Period / Phase/Stage	Activity
	<p>primary care.</p> <ul style="list-style-type: none"> ○ Explain potential changes in standard death care that may occur due to large numbers of deaths (access appropriate person, quadrant system, SMATs, delays, etc.) ● Identify sites and resources necessary for temporary needs related to surge in collaboration with other death care professionals and local emergency management: <ul style="list-style-type: none"> ○ Temporary morgue with refrigeration, e.g., refrigerated trucks, ice rinks, or warehouses*** ○ SMAT location, e.g., warehouses, vacant buildings, gymnasiums, large garages. ○ Vehicles and drivers for body transport ○ Determine amount of supplies needed and feasibility of purchasing a 6 month supply and rotating stock. ○ Identify and contact usual and alternate suppliers about ability to fill surge needs ○ Consider MOUs with sites/suppliers to help ensure availability. ● Identify and train SMAT team members ● Familiarize yourself with ethnic groups in your community and their death care practices**** <ul style="list-style-type: none"> ○ Contact spiritual leaders/clergy and discuss issues and their solutions related to increased deaths ● Exercise the mass fatality plan as part of a local or regional all hazards or pandemic influenza exercise.
<p>Pandemic Alert Period</p> <p>WHO Phase 3: Transmission to humans from birds has occurred but no human-to-human spread.</p> <p>FGR Stage 0: New domestic animal outbreak in at-risk country</p> <p>FGR Stage 1: Suspected human outbreak overseas</p> <p>WHO Phase 4: small clusters of human-to-</p>	<p>Begin to focus activities on specific preparations:</p> <ul style="list-style-type: none"> ● Inventory community death care resources and capacity in collaboration with other death care professionals <ul style="list-style-type: none"> ○ Inventory of existing supply stocks ○ Place sites and suppliers on notice regarding projected needs. <ul style="list-style-type: none"> ▪ Finalize points of contact with phone numbers and email addresses of suppliers ▪ Provide alternate point of contact at your location. ▪ Identify supply and resupply points ● In consultation with others (local health departments, local authorities, insurance) determine funding sources for burial and cremation ● Industry placed on alert status <ul style="list-style-type: none"> ○ Contact back-up volunteers ○ Contact suppliers

Pandemic Period / Phase/Stage	Activity
<p>human spread.</p> <p><u>FGR Stage 2:</u> Confirmed human outbreak overseas</p>	<ul style="list-style-type: none"> ● Industry placed on standby status <ul style="list-style-type: none"> ○ Contact back-up volunteers ○ Contact suppliers
<p>Pandemic Alert Period</p> <p><u>WHO Phase 5:</u> Larger but still localized clusters of human spread suggesting that virus is better adapting to humans but may not be fully transmissible.</p> <p><u>FGR Stage 2:</u> Continues</p>	<ul style="list-style-type: none"> ● Cross train staff in skills ● SMAT Team Leader will: <ul style="list-style-type: none"> ○ Order supplies (ID bracelets/tags, body bags, etc.) ○ Finalize transportation requirements of dead human bodies and contact transport representatives. ○ Finalize MOUs with local community for facilities including SMAT site. ○ Notify SMAT team to be on call and prepared for activation and deployment. ○ Prepare SMAT for deployment with assistance from team ○ Review mass fatality plan with other death care professionals and incident command. Edit as necessary. Make decisions regarding procedures, verify triggers. ○ Prepare supply and resupply points ○ Identify and communicate primary and secondary transportation routes and quadrant locations. ○ Communication <ul style="list-style-type: none"> ■ Finalize communication strategy with ME and JP in collaboration with local ICM ■ Establish communication links with state and local points of contact ■ Develop 24/7 call system
<p>Pandemic Period</p> <p><u>WHO Phase 6:</u> Increased and sustained transmission to humans. Indications of spread across countries.</p> <p><u>FGR Stage 3:</u> Widespread human outbreaks overseas in multiple locations</p>	<ul style="list-style-type: none"> ● Contact suppliers and begin shipments ● SMAT teams will be on standby ● Place on standby: <ul style="list-style-type: none"> ○ volunteers ○ body storage sites ○ cemeteries ○ crematoriums ● Review plans for handling mass fatalities with other funeral directors ● Ensure communication with local EOCs and SOC ● Activate plans as necessary

<p>Pandemic Period</p> <p>WHO Phase 6: Continued</p> <p>FGR Stage 4: First human case in North America</p>	<ul style="list-style-type: none"> • Fully operationalize pandemic mass fatality plan. • Activate <ul style="list-style-type: none"> ○ SMAT team ○ Volunteers ○ Temporary morgues
<p>Recovery Period</p> <p>WHO Phase 6: Continues</p> <p>FGR Stage 6: Recovery and preparation for next wave (at least 2 waves are expected).</p>	<ul style="list-style-type: none"> • Complete burials from first wave • Evaluate process and outcomes related to first wave • Make adjustments to plan and notify stakeholders • Supply and resupply
<p>End of pandemic and return to Interpandemic Period</p>	<ul style="list-style-type: none"> • Evaluate and complete after action reports • Submit financial report and request FEMA reimbursement

* Specific infection control practices related to influenza are not necessary as the body is not “contagious” after death.

** In order to develop guidelines or adjust existing plans to suit the pandemic situation, the following individuals are involved in mass fatality planning:

- other funeral home directors
- cemetery managers
- crematorium managers
- medical examiners
- Justices of the Peace/coroners
- local public health authority
- local health facility representatives
- clergy/spiritual leaders
- members of community ethnic groups (including American Indian tribes)
- vital statistics registrars
- life insurance company representatives
- military emergency planners if there is a base in your community

*** Consideration must be given to post-pandemic use of storage units used as temporary morgues. Using local businesses and labeled trucks should be used as a last resort, since use for the storage of human remains may adversely affect business in the future. Refrigerated trucks can generally hold 25-30 bodies without additional shelving. If at all possible, stacking bodies should be avoided. To increase storage capacity, temporary wooden shelves can be constructed of sufficient strength to hold the bodies. Storage

of bodies above waist height is not recommended.

****A number of religious and ethnic groups have specific directives about how bodies are managed after death. Such needs must be considered as a part of pandemic planning. American Indians, Jews, Hindus, Muslims, all have specific directives for the treatment of bodies and for funerals. The wishes of the family will provide guidance. If no family is available plans need to be made to determine how decisions about body management will be made. In addition, the demands placed on the system may preclude ability to follow religious mandates. Therefore it is imperative that procedures be developed in collaboration with religious leaders that are mutually acceptable. Religious leaders should be involved in planning for funeral management and communications, particularly in ethnic communities with large numbers of people who do not speak the official languages.

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APPENDIX H: Templates for Common Incident Command Forms Used During an Influenza Pandemic

(TO BE DEVELOPED)

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APPENDIX I: Contacts and Resources

- [Appendix I.1: Stakeholders Providing Input](#)
- [Appendix I.2: Pandemic Influenza Planning Group \(PIPG\)](#)
- [Appendix I. 3: Disaster Preparedness Communication Protocol](#)
- [Appendix I.4: Pandemic Influenza Coordinating Council and Pandemic Influenza Committee](#)

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Appendix I.1: Stakeholders Providing Input

Agency	Name
AAIM representative on the Resource Council, Travis Co.	Mike Manor
Abilene-Taylor Co. Public Health District	Kay Durilla, BSN, RN—Nursing Program Manager
American Civil Liberties Union of Texas	Lisa Graybill, JD—Legal Director
American Red Cross	Wayne Brennessel, MSW—Executive Director
Asian American Cultural Center	Amy Wong Mok, MEd—President & CEO
Austin Area Inter-religious Ministries	Emilee Whitehurst, Director
Baptist St. Anthony's Health System	Charlotte Wheeler, RN, BSN—Baptist St. Anthony's
Baylor University College of Medicine	Jeff Starke, MD—Professor and Vice Chair of Medicine
Baylor University Medical Center of Dallas Epidemiology	Allen Peden, RN, CEN—Infection Control Practitioner
Center for Disease Control and Prevention Global Migration and Quarantine Station at Houston	Steve Harris, MD
Center for Public Policy Priorities	Anne Dunkleberg, MPA—Assistant Director
Central Texas Veterans Health Care System	Elicia Berry, MSN, RN, CIC, CPQH—Assistant Chief Infection Control
CHRISTUS Santa Rosa Health Care	Nancy Mendicino, MSN, RN, CIC—Infection Control Manager/Officer
City of Laredo Health Department	Blanca Gonzalez, BSN, RN—Immunization Clinic Supervisor
City of Lubbock Health Department	Tigi Ward BSN, MS—Public Health Coordinator—Surveillance
Collin Co. Health Care Services	Janet Glowicz, RN—Epidemiologist
Consumers Union, Southwest Regional Office	Reggie James—Director
Cook Children's Medical Center	Don Murphey, MD—Director of Occupational Health, Pediatric Infectious Diseases
Del Sol Medical Center	Pat Foret, RN, CPHQ—Director of Infection Control & Employee Health
Dept of Aging and Disability Services	Leslie Cortes, MD, Director Medical Quality Assurance, Quality Assurance/Quality Improvement
Dept of Assistive and Rehabilitative Services	Keisha Rowe Nunn, MHA Consumer and External Affairs Specialist
Dept of Family & Protective Services, Child Protective Services & Adult Protective Services	Maria Cervania, MPH(c)—Cross Program Improvement Analyst

Appendix I.1: Stakeholders Providing Input

Dept of Family & Protective Services, Child Protective Services & Adult Protective Services	James Yocum, MS—Innovation Analyst
DSHS Center for Consumer and External Affairs	Rebecca Herron
DSHS Community Preparedness	Vince Fonseca, MD, State Epidemiologist
DSHS Community Preparedness	Barry Sharp, MS, CHES—Exercise Coordinator
DSHS Community Preparedness	Evelyn Shewmaker—Program Resource Coordinator
DSHS Community Preparedness	Martha Gonzalez, BA—Preparedness Plans Coordinator
DSHS Division for Mental Health & Substance Abuse	John Keppler, MD
DSHS Health Service Region 1	Barry Wilson, BS—Deputy Regional Dir.
DSHS Health Service Region 11	Brian Smith, MD, MPH--Regional Director
DSHS Health Service Region 2/3	Shelley Stonecipher, DVM, MPH—CDC/Career Epidemiology Field Officer, LCDR/ U.S. Public Health Service
DSHS Health Service Region 7	James K. Morgan, MD, MPH
DSHS Health Service Region 8	Sandra Guerra-Cantu, MD, MPH
DSHS Health Service Region 9/10	Charles Gaiser, DVM, MPH, ACVPM—Deputy Regional Director/Zoonosis Control Veterinarian
DSHS Infectious Disease Control Unit	Ernest Oertli, DVM
DSHS Infectious Disease Control Unit	Jeff Taylor, MPH
DSHS Infectious Disease Control Unit	Tom Sidwa, DVM
DSHS Infectious Disease Control Unit	LCDR Richard Taylor, PhD USPHS—CDC/COTPER/Career Epidemiology Field Officer
DSHS Infectious Disease Control Unit	Marilyn Felkner, PhD
DSHS Office for Elimination of Health Disparities	Kimberly McCoy-Daniels, MPH—Director
DSHS Office for Elimination of Health Disparities	Larry Cuellar, BS—Program Specialist
DSHS Office of Border Health	R.J. Dutton, PhD—Director
DSHS Radiation Safety Licensing Branch	Cathy McGuire—Environmental Specialist and Technical Writer
DSHS Regional and Local Services	Debra Edwards, MSN
DSHS Youth Focused Group	Anita Wheeler, BSN, RN, CPN—School Health Coordinator/School Nurse Consultant
Geriatric Consultants of Central Texas, PA	David A. Smith, MD, FAAFP, CMD—American Medical Directors Association Current President

Appendix I.1: Stakeholders Providing Input

Governor's Committee on People with Disabilities	Angela English, MS, LPC, LMFT, CPHQ— Accessibility & Disability Rights Coordinator
Governor's Committee on People with Disabilities	Pat Pound, BA—Executive Director
Grass Roots Neighborhood member, Waco	Lisa Ware
Harris Co. Public Health & Environmental Services	Elizabeth Love, MPH—Chief, Office of Policy and Planning
Health and Human Services Commission Texas Information & Referral Network 211 Texas Integrated Help Line	Debra Glover, MS—Development Specialist
Hidalgo Co. Health Department	Lydia Serna, RN—Director of Nursing
Hill Country Memorial Hospital	Robin Duderstadt, RN, BSN, CIC—Infection Control Practitioner
Houston Council on Alcohol and Drug Abuse	Jennifer Helley, MHA, MBA—Director Women's and Children's Services
Influenza Research Center, Baylor College of Medicine	W. Paul Glezen, MD—Study Chair; Professor of Molecular Virology and Microbiology, and Pediatrics, Baylor College of Medicine
JPS Health Network	Adonna Lowe, R.N., M.A., CHE—Vice President Patient Care/CNO
Llano Memorial Health care System	Linda Meredith, RN, CS, NP-C—Chief Compliance Officer
McKenna Hospital New Braunfels	Susan Holm, RN, Infection Control Nurse
Northwest Texas Health care System	Gwen Campbell, RNC, BSN, CIC—Epidemiology Coordinator
Permian Regional Medical Center	Brenda Foster, RN—Director of Infection
Providence Memorial Hospital	Toni Moreland, MSN, RN—Infection Control
San Antonio Metropolitan Health District	John Nava
San Antonio Metropolitan Health District	Edmund Baca, Jr.—Acting Executive Assistant
Sanofi-Pasteur	Mr. Sandy Kaufman
Scott and White Memorial Hospital	Greg Bond, MSN, RN, CIC—Infection Control Manager
Scott and White Temple	Manjusha Gaglani, MD
Seton Health care Network, Brackenridge Hospital	Lynda Watkins RN, BSN, CIC—Infection Control Practitioner
Seton Highland Lakes Medical Center	Janet Keyser, RN, ICL—Infection Control Liaison & Director of Diagnostics and Therapeutics
Sheppard Air Force Base Clinic	Elaine Marie Dekker, Maj, USAF, NC—Course Supervisor, Infection Control
St. Luke's Episcopal Hospital	Margaret F. Price, PhD, CIC—Infection Control Co- Coordinator

Appendix I.1: Stakeholders Providing Input

Tarrant Co. Public Health	Elvin Adams, MD, MPH, FACPM—Health Authority/Medical Director
Texas A&M School of Rural Public Health, Center for Rural PH Preparedness	Barbara Quiram, PhD—Director of the Office of Special Programs; Principal Investigator, USA Center for Rural Public Health Preparedness
Texas A&M University System Health Science Center College of Medicine, Department of Medical Microbiology & Immunology	John M Quarles, PhD—Professor Microbiology and Immunology
Texas A&M University System Health Science Center College of Medicine, Department of Medical Microbiology and Immunology (Formerly with the CDC Influenza Program)	Nancy Arden, M.N.—Epidemiologist and Program Coordinator
Texas A&M, Poultry Science Department, Egg Production Waste Management	John B. Carey, PhD—Professor and Assoc. Head for Extension Services
Texas Academy of Family Physicians	Andrew Eisenberg, MD, MHA—Chair TMA Council on Public Health
Texas American Indian Information and Resource Network	Chebon Tiger, EMT-LP
Texas Association of Health Plans	Barry Lachman, MD—Medical Director
Texas Association of Local Health Officials	Lee Lane—Executive Director
Texas Children’s Hospital	Lori Upton, BSN, RN—Assistant Director of Emergency Services, Co-Chair Disaster Mitigation Committee
Texas College of Emergency Room Physicians	Brian Zachariah, M.D, MBA, FACEP—Medical Director, Division of Emergency Medicine
Texas Council of Developmental Disabilities	Beth Stalvey, PhD, MPH—Public Policy Director
Texas Health Care Association	Dorothy Crawford—Director of Policy & Regulatory Analysis
Texas Hospital Association	Ernie Schmid, MSHP, FACHE—Senior Health Care Policy Analyst
Texas Hospital Association	Jennifer Banda, JD—Director of Government Affairs
Texas Medical Association	Chip Riggins, MD
Texas Medical Association	Gayle Love—Director, Public Health Department
Texas Medical Association	Nancy B. Bjerke, BSN, RN, MPH, CIC—Co-Chair, EHDG Infectious Disease Committee
Texas Municipal League	Bennett Sandlin, JD—General Counsel
Texas Pediatric Society	Martin Myers, MD—Professor of Pediatrics, University of Texas Medical Branch
Texas Poultry Federation	James Grimm—Executive Vice President
Texas Society of Infection Control Practitioners	Michelle Peninger, BSMT, CIC—President

Appendix I.1: Stakeholders Providing Input

Texas State Board of Pharmacy	Allison Benz, RPh., M.S.—Director of Professional Services
Texas Veterinary Medical Diagnostic Laboratory	Gayne Fearneyhough, DVM—Head, Diagnostic Services and Informatics
The Methodist Hospital	Kathryn M. Hawkins, M.S., C.I.C.—Director, Infection Control & Environmental Safety
Trinity Mother Francis Health System	Sylvia Radcliffe, RN, CIC—Director Infection Control
University Health System San Antonio	Thomas Peters, Vice President
University Health System	Jan Patterson, MD
University of Texas at Austin	Russ Hooverman, MD, PhD
University of Texas Health Science Center at Houston School of Public Health	Scott Lillibridge, MD
University of Texas Health Science Center at Houston, School of Public Health Epidemiology and Infectious Diseases	Herbert L. DuPont, MD—Professor, Director of the Center for Infectious Diseases
University of Texas Medical Branch at Galveston	Glen Mayhall, MD
University of Texas Medical Branch, Institute for the Medical Humanities	Kirk Smith, MD, PhD
University of Texas Medical Branch, Institute for the Medical Humanities	Ronald Carson, PhD
U.S. Department of Agriculture Animal and Plant Health Inspection Service	Joe Garrett, DVM, MPH—Area Emergency Coordinator
UT Harris Co. Psychiatric Center	Susan Parnell, MSN, MPH, RN, COHN-S, CIC—Infection Control Officer
Uvalde Memorial Hospital	Jacqueline Gilliett, BSN, RN—Infection Control & Employee Health Coordinator
VA North Texas Health Care System	Beverly Gray, MS, CIC—Infection Control Officer
Valley Baptist Medical Center-Harlingen	Alyson G. Hight, BSN, RN, CIC—Infection Control Nurse
Waco-McLennan Co. Public Health District	Kelly Craine, BA—Community Relations Coordinator
Wichita Falls-Wichita Co. Public Health District	Lou Franklin, BSN, RN—Assistant Director of Health
William Beaumont Army Medical Center	Lynn B. McNicol, BSN, MPH, CIC—Infection Control & Prevention

Appendix I.2: Pandemic Influenza Planning Group (PIPG)

PIPG composition shall be determined by the Pandemic Influenza Program Lead in consultation with the CPS Director and will be based on the organizational structure of the Texas Department of State Health Services.

In addition to appropriate expertise within DSHS, PIPG also may include representatives from such groups as local health departments, animal health advocates (e.g., the Texas Animal Health Commission), and the GDEM. Specialized workgroups of internal and external stakeholders may be formed to develop specific plan elements.

The following list reflects participants involved in developing the 2004 draft and/or the 2007 draft.

Apodaca, Ray	Hospital Preparedness & Community Response Group Manager, CPS
Bastis, David	Emergency Preparedness and Response Specialist, Williamson Co. and Cities Health District
Betz, Tom	Physician, Infectious Disease Control Unit
Bradford, Calandra	Program Specialist, CPS
Cantrell, Johnna	Homeland Security Plans and Policy Unit Supervisor, GDEM
Clark, Tom	Pharmacist, Pharmacy Branch, Disease Prevention & Intervention Section
Curry, Nick	Deputy Commissioner, Prevention, Preparedness, and Regulatory Services
Davis, Lisa	CDC Public Health Advisor, Immunization Branch, Adult Immunization Coordinator
Davlin, Stacy	Influenza Surveillance Coordinator, Infectious Disease Control Unit
Drumgoole, Rahsaan	Microbiologist, Laboratory Operations Unit
Fonken, Eric	Veterinarian, Zoonosis Control Group, Infectious Disease Control Unit
Gonzalez, Martha	Planning Team Lead, Program Planning Branch, CPS
Greenberg, Mike	Attorney, Office of General Counsel
Jones, Russ	Epidemiologist, Health Service Region 7—Temple
Maldonado, Ed	Assistant Coordinator, Disaster Mental Health Services, CPS, Response, Recovery Branch
Mansolo, Leslie	Strategic Sciences Group Lead, CPS
McGaha, Paul	Director, Health Service Region 4/5N
Morgan, Cynthia	Pandemic Influenza Program Coordinator, CPS
Nash, Robert	Pharmacist, Pharmacy Branch Manager, Disease Prevention & Intervention Section
Palmer, Emily	Assistant Press Officer, Communications Unit, Center for Consumer and External Affairs
Pascoe, Neil	Nurse Epidemiologist, Infectious Disease Control Unit
Patterson, Mary Ann	Laboratory Operations Unit, Microbiology Science Branch
Penfield, Susan	Infectious Disease Control Unit Manager

Appendix I.2: Pandemic Influenza Planning Group (PIPG)

Ray, Beverly	Manager, Response and Recovery Branch, CPS
Ritter, Mark	CDC Public Health Advisor, Immunization Branch
Sessions, Wendy	Microbiologist, Laboratory Operations Unit, Microbiology Science Branch
Sharp, Barry	Exercise Coordinator, Program Planning Branch, CPS
Stabeno, Debra	Assistant Commissioner, Division for Prevention and Preparedness Services
Suarez, Lucina	Chief, Epidemiology Research Services Branch, CPS
Walker, John	Acting Preparedness Medical Director, Pandemic Influenza Lead, Infectious Disease Control Unit

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Appendix I.3: 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 3 secure places:

1. The Web-based PHIN online searchable database, which can be accessed via the Internet by PHIN 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 used 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 (HSR). The 24/7 telephone number can be obtained by contacting each HSR office. A list of offices can be found at <http://www.dshs.state.tx.us/regions/default.shtm>.

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

Appendix I.4: Pandemic Influenza Coordinating Council and Pandemic Influenza Committee

(TO BE DEVELOPED)

Draft

Appendix I.5: Links to Web-based Resources

(UNDER DEVELOPMENT)

Draft

APPENDIX J: Planning Guidelines for Non-Pharmaceutical Interventions

This companion document can be found on the [Pandemic Influenza](#) page of the Community Preparedness website.

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APPENDIX K: Antiviral Allocation, Distribution and Storage Planning Guidelines (AADS)

This companion document can be found on the [Pandemic Influenza](#) page of the Community Preparedness website.

APPENDIX L: Vaccine Allocation, Distribution and Storage Planning Guidelines (VADS)

This companion document can be found on the [Pandemic Influenza](#) page of the Community Preparedness website.

Draft

APPENDIX M: Allocation of Limited Resources

NOTE: THIS SECTION HAS BEEN DEVELOPED TO PROMOTE DISCUSSIONS ABOUT THE ALLOCATION AND USE OF LIMITED RESOURCES. THE INFORMATION PRESENTED IS FROM THE LITERATURE. THE FOLLOWING DOES NOT REFLECT A DEVELOPED PLAN FOR THE STATE OF TEXAS.

Hick, et al¹ have emphasized that given the wide variety of possible events and agents that may result in large numbers of patients requiring critical care, no single tool or scale can be expected to provide adequate decision-making power for allocating scarce resources in a disaster. For many injury and disease states (such as pandemic influenza), decision tools will have to be developed and validated during the event.

Because specific decision support tools may be event-driven, the focus should be on establishing the *process* that will be followed at the health care facility and within the geographic region in a resource-scarce situation. Regardless of the origin of the decision tool (federal, state, local/regional government, specialty medical society) implementation occurs at the community level.

Table 1. Essential Planning Groups

Essential Planning Groups That Hospitals Must Discuss and Pre-Define¹
1. A well-practiced incident management system (for example, Hospital Incident Command System) that aligns with the National Incident Management System should be in place in area health care facilities and public safety entities. A similar standard of care both within the institution and in the affected geographic area is achieved only by prioritizing resource allocation and cooperatively working with local public health and other agencies in an incident management framework.
2. A clinical care committee (or other similar group within the planning section) must work with the institution’s incident commander on a daily basis. This group will determine which services a health care facility will provide and what adaptations must be made to provide these critical services based on demand and resources available.
3. A small triage team of individuals with expertise in critical care and relevant disciplines (for example, infectious disease during a pandemic) will determine how best to allocate available scarce resources such as ventilators. For example, the team can examine data from patients currently being ventilated and those who require ventilation.
4. Decision tools developed to assist the above teams in making decisions should be used to most fairly allocate scarce resources such as ventilators.
5. An ethics committee should develop formal processes and recommendations for removing life supportive, palliative, and end-of-life care at the institution.

In addition to a summary of essential planning teams that hospital leadership must discuss and pre-define (Table 1), this interim guidance for allocating scarce resources in Texas communities also includes:

- Sample Roster of Clinical Care Committee Members (Table 2);
- Sample Process for Health Care Facility Response During Resource-Scarce Situations (Table 3);
- Checklist of Key Ethical and Operational Goals (Table 4);
- Comparison of Decision-Making Criteria for Limiting Medical Care in Resource-Adequate Versus Resource-Poor Situations (Table 5);
- Example of a Decision Matrix for Ventilator Allocation During Resource-Poor Situations (Table 6).²

Table 2. Sample Roster of Clinical Care Committee Members

Clinical Care Committee Members¹	
A clinical care committee, with members predetermined for toxic, infectious, and trauma situations, is convened. During a pandemic, for example, this committee might consist of some or all of the following at a large facility:	
<ul style="list-style-type: none"> • Administrator or designee • Medical director • Infection control expert • Infectious disease expert • Critical care practitioner • Emergency medicine practitioner • Pediatric practitioner • Nursing Supervisor 	<ul style="list-style-type: none"> • Social worker • Respiratory care supervisor • Hospital ethicist • Legal counsel • Community representative with role similar to person on Institutional Review Board • Other personnel from areas such as lab, radiology, bioelectronics, and pharmacy

Table 3. Sample Process for Health Care Facility Response during Resource-Poor Situations

Healthcare Facility Response During Resource-Poor Situations¹
1. Incident commander recognizes that systematic changes are or will be required to allocate scarce facility resources and that no regional resources are available to offset demand.
2. Planning chief gathers guidelines, epidemiologic information, resource information, and regional hospital information.

3. Clinical care committee reviews facility/regional situation and examines the following:

- Pre-planned alternate care sites – Which additional areas of the building or external sites can be used for patient care? (See [Appendix N](#))
- Medical care adaptations (for example, use of non-invasive ventilation techniques, changes in medication administration techniques, and use of oral medications and fluids instead of intravenous).
- Changes in staff responsibilities to allow specialized staff to redistribute workload (for example, floor nurses provide basic patient care in the intensive care unit while critical care nurses “float” and troubleshoot) and/or incorporate other health care providers, lay providers, or family members.
- Triage plan describing how scarce resources at the facility (emergency department [ED] resources, beds, operating rooms, and ventilators) will be allocated. (What level of severity will receive care? What tool or process will be used to make decisions when there are competing demands for the same resource?)
- Community/regional strategies to cope with the situation and how the institutional response contributes to those efforts.
- Committee summarizes recommendations for next operational period and determines meeting and review cycles for subsequent periods (may involve conference calls or similar means to avoid face-to-face meetings during a pandemic).

4. Incident commander approves committee recommendations as part of incident action plan. Plan is operationalized. Public information officer communicates updates to staff, patients, families, partners/stakeholders and the public.

5. Current inpatients, patients presenting to the hospital, and their family members are given verbal and printed information (ideally by the triage nurse in the ED or, for inpatients, by their primary nurse or physician) explaining the situation and that resources may have to be reallocated, even once assigned, to provide care to those who will most benefit. A mechanism for responding to patient/family questions and concerns should also be detailed.

6. Security and behavioral health response plans should be implemented.

7. Triage plan² implemented:

- ED/outpatient screening of patients (and denial of service to patients either too sick or too well to benefit from evaluation/admission) based on guidance from clinical care team.
- Tertiary triage team (ideally NOT the physicians directly providing the patients' care and ideally two physicians of equal "rank" in the institution) considers situations in which there are competing patient demands for a scarce resource. General rules for assigning scarce resources are:
 - * When two patients have essentially equal claim to the resource, a "first-come, first-served" policy should be used.
 - * When, according to guidelines or the triage team's clinical experience, the claim to the resource is clearly not equal, the patient with a more favorable prognosis/prediction shall receive the resource.
 - * A decision model should be developed in advance for each scarce resource to guide the process (See Table 6).
- The triage team should ask for and receive patient information needed to make a decision but should NOT consider subjective assessments of the quality of the patients' life or value to society and, in fact, should ideally be blinded to such information when possible.

8. A "bed czar" (inpatient unit leader under the Hospital Incident Command System) should be appointed to make final decisions on bed assignments. This individual should be a clinician who has access to real-time inpatient and outpatient system status and, when needed, patient clinical information.

9. Whenever a decision is made to reallocate a ventilator or similar critical resource, the treating physician and family should be given the grounds for the decision (documented for the record at the facility) and a rapid appeals process if there is additional or new information that the family or a treating physician feels would affect the decision.

Table 4. Checklist of Key Ethical and Operational Goals

Key Ethical and Operational Goals¹
<p>1. In a disaster situation, the focus of medical care shifts from the needs of the individual (autonomy) to the needs of the community (distributive justice) so that the “greatest good for the greatest number” is the goal. Application of this ethical principle is complex and the subject of current debate and interpretation. It is customary for the critical care physician to heavily weigh patient and family wishes and subjective considerations in determining “futile care.” This calculus is reversed during a disaster so that the weight is on objective prognostic criteria and less on subjective and individual patient factors³. This shift in priorities will require significant pre-event education and training for critical care staff and the public.</p>
<p>2. An additional overall goal—which has received inadequate attention—should be to provide patients as much comfort and dignity as the situation allows regardless of other interventions available.</p>
<p>3. If a life-saving or potentially life-saving scarce resource is not available in sufficient quantity to meet patient demand despite all efforts to obtain adequate resources from other local, regional, and national partners in a timely manner <i>and</i></p> <ul style="list-style-type: none"> • No other measures are available (for example, when manual ventilation is not an option) <i>and</i> • Resource cannot be “titrated” (for example, drugs or oxygen) or substituted (for example, oral instead of intravenous antibiotics) <i>and</i> • All available resources (for example, bi-level positive airway pressure and anesthesia machines) have been repurposed to manage respiratory failure but efforts are inadequate to meet the demand, <i>then</i> <p>The overarching goal is to allocate facility resources to those likeliest to benefit, taking into consideration:</p> <ul style="list-style-type: none"> * Medical prognosis, * Underlying disease, * Expected duration of resource need, * Duration of benefit, * Quality of life after intervention. <p>Any other subjective considerations (for example, the role of the patients, including health care workers, in the community) must be determined by public discussion, and a means for a lay panel/team to assess these factors must be available if the community determines that this is important. This stance is consistent with the American Medical Association position on scarce-resource allocation.</p>

4. Because of government control of practitioner licensure and liability, any system of resource allocation should be part of a planned state/regional or national government response to an overwhelming emergency. As part of this planned response, medical providers must be protected legally when making these difficult decisions. No health care facility should be in a position to make systematic triage decisions without activation of state or national emergency health powers to enable legal protection for providers who in good faith are complying with pre-existing response plans or event-specific state and jurisdictional directives.

Table 5. Comparison of Decision-Making Criteria for Limiting Care in Resource-Adequate Versus Resource-Poor Situations

Comparison of Decision-Making Criteria¹		
	Resource-Adequate Situations	Resource-Poor Situations
Focus	Patient Autonomy	Community Needs
Relationships	Caregivers Invested With Family	Caregivers Unknown to Family
Patient Condition	End of Life	NOT at End of Life
Decision Made	Days to Weeks	Hours
Prior Care	Exhaustive	Little to None
Subjective Inputs	Critical	Minimal
Key Decision-Maker	Family and Caregivers	Triage Physician or Team

Table 6. Decision Matrix for Ventilator Allocation during Resource-Poor Situations

Decision Matrix for Ventilator Allocation			
	Ventilator re-allocated ←		→ Ventilator kept
Organ system failure^a	High potential for death according to predictive model^a	Intermediate potential for death according to predictive model^a	Low potential for death according to predictive model^a
Duration of benefit / prognosis	Poor prognosis based on epidemiology of specific disease / injury (e.g. pandemic influenza) Severe underlying disease with poor short-term prognosis^b	Indeterminate / intermediate prognosis based on epidemiology of specific disease / injury Severe underlying disease with poor long-term prognosis and/or ongoing resource demand (e.g. home O₂ dependent, or dialysis)	Good prognosis based on epidemiology of disease / injury No severe underlying disease

		dependent	
Duration of need	Long duration, e.g. respiratory distress syndrome, particularly with pre-existing lung disease (estimate >7 days on ventilator)	Moderate duration, e.g. pneumonia in a healthy patient (estimate 3-7 days on ventilator)	Short duration, e.g. flash pulmonary edema, chest trauma, other condition anticipating <3 days on ventilator
Response to mechanical ventilation	Worsening ventilatory parameters over time^c	Stable ventilatory parameters over time (judged by clinician as failure to improve after adequate trial of mechanical ventilation based on disease process)	Improving ventilatory parameters
<p>^{a.} The SOFA (Sequential Organ Failure Assessment) score is currently preferred scoring system based on type of data required and ease of calculation.</p> <p>^{b.} Examples of underlying disease that predict poor short-term survival include, but are not limited to, congestive heart failure with an ejection fraction <25%(or persistent ischemia unresponsive to therapy with pulmonary edema); acute renal failure requiring hemodialysis (due to illness); severe chronic lung disease including pulmonary fibrosis, cystic fibrosis, or obstructive or restrictive diseases including continuous home oxygen before acute illness; immunodeficiency disease with evidence of opportunistic pathogen infection; central nervous system, solid organ, or hematopoietic malignancy with poor prognosis for recovery; cirrhosis with ascites; history of variceal bleeding, fixed coagulopathy or encephalopathy; acute hepatic failure with hyperammonemia; acute and chronic and irreversible neurologic impairment that makes the patient dependent for all personal care (e.g. severe stroke, congenital syndrome, persistent vegetative state, and severe dementia).</p> <p>^{c.} Changes in oxygenation index (OI) over time may provide comparative data, though of uncertain prognostic significance $OI = \frac{MAWP \times FiO_2}{PaO_2}$, where MAWP is mean airway pressure, FiO_2 is inspired oxygen concentration, and PaO_2 is arterial oxygen pressure. PaO_2 may be estimated from peripheral oxygen concentration saturation by using the oxygen dissociation curve if blood gas measurements are unavailable.</p>			

The American Medical Association (AMA) has identified five criteria to consider when the allocation of scarce resources is required²:

- Likelihood of benefit,
- Change in quality of life,
- Duration of benefit,
- Urgency of need,
- Amount of resources required.

Because a decision to terminate life-sustaining scarce resources such as mechanical ventilation will result in the death of the patient, the difference in criteria should be clear-cut for ventilator reassignment to occur. If there is no clear difference in the criteria between patients, then resources should be allocated on a “first come, first served” basis.⁴

Determining which patients shall receive scarce resources such as mechanical ventilation will be a difficult process from both a clinical and a psychological perspective. Pre-event community planning is essential to establish the process that will be followed at the health care facility and within the geographic region in a resource-scarce situation.

It is important to remember that situations change based on changes in the epidemiology of the disease such as severity of illness, populations at risk, waxing and waning of pandemic waves, and resource availability. Therefore decisions related to scarce resources must be regularly re-evaluated.

References

1. Hick JL, Rubinson L, O’Laughlin DT, Farmer JC. Clinical review: Allocating ventilators during large-scale disasters - problems, planning, and process. *Critical Care*; 19 June 2007; 11(3): 217-226.
2. Christian MD, Hawryluck L, Wax RS, et al. Development of a triage protocol for critical care during an influenza pandemic. *CMAJ*; 21 November 2006; 175(11): 1377-1381.
3. American Medical Association . . .
4. Phillips SJ, Knebel A, Roberts M, et al. Mass Medical Care with Scarce Resources: A Community Planning Guide. Prepared for the Agency for Healthcare Research and Quality by Health Systems Research; February, 2007.
5. U.S. Government (2008). Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans. Available at: <http://www.pandemicflu.gov/news/guidance031108.pdf>

APPENDIX N: Alternate Care for Medical Surge

- [Appendix N.1: Determining Need for Alternate Care](#)
- [Appendix N.2: Site Selection and Design](#)
- [Appendix N.3: Staffing](#)
- [Appendix N.4: Equipment, Consumable, and Disposable Supplies for Alternate Care](#)
- [Appendix N.5: Stock Medications](#)

NOTE: THIS SECTION HAS BEEN DEVELOPED TO START DISCUSSION ABOUT THE DEVELOPMENT AND USE OF ALTERNATE CARE SITES, IF ANY, AND WHO MAY NEED TO BE AT THE TABLE, POTENTIAL ACTIVITIES THAT WILL NEED TO BE COMPLETED, AND ISSUES. THE FOLLOWING DOES NOT REFLECT A DEVELOPED PLAN FOR THE STATE OF TEXAS.

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Appendix N.1: Determining Need for Alternate Care

NOTE: THIS SECTION HAS BEEN DEVELOPED TO START DISCUSSION ABOUT THE DEVELOPMENT AND USE OF ALTERNATE CARE SITES, IF ANY, AND WHO MAY NEED TO BE AT THE TABLE, POTENTIAL ACTIVITIES THAT WILL NEED TO BE COMPLETED, AND ISSUES. THE FOLLOWING DOES NOT REFLECT A DEVELOPED PLAN FOR THE STATE OF TEXAS.

Introduction

The health care system has worked hard to prepare for mass casualty events (MCE). Much of the planning in this area focuses on increasing the surge capacity of affected delivery systems through rapid mobilization and deployment of additional resources from the community, state, regional, or national levels to the affected area. However, few of these plans specifically address a situation in which the delivery system is unable to respond according to established standards of care because of the scope and magnitude of the mass casualty event (Health Systems Research, Inc., 2005).

CDC has estimated the impact of a pandemic at 30% and 50% attack rates. Tables 1 and 2 demonstrate the number of ill people, types of care required, and expected deaths for various sized communities. CDC has developed software to assist local pandemic planners in estimating the potential impact of the next pandemic in their community. This software may be downloaded from www.cdc.gov/flu/tools/fluaid/index.htm.

Table 1: Moderate attack rate of 30%

HHS estimates of Percent of Population Affected by next Pandemic	Number affected Example (Pop. 650,000)	Number affected in your Community (Pop. 350,000)	Number affected in your Community (Pop.80,000)	Number affected in your Community (Pop. 5,000)
Up to 30% of pop. will become ill with flu	195,000	105,000	24,000	15,000
Up to 15% of pop. will require out-patient visits	97,500	52,500	12,000	750
Up to 0.3% of pop. will require hospitalization	1,950	1,050	240	15
Up to 0.1% of pop. will die of flu-related causes	650	350	80	5

Table 2: Severe attack rate of 50%

HHS estimates of Percent of Population Affected by next Pandemic	Number affected Example (Pop. 650,000)	Number affected in your Community (Pop. 350,000)	Number affected in your Community (Pop.80,000)	Number affected in your Community (Pop. 5,000)
Up to 30% of pop. will become ill with flu	375,000	175,000	40,000	2,500
Up to 15% of pop. will require out-patient visits	162,500	87,500	20,000	1,250
Up to 0.3% of pop. will require hospitalization	19,500	10,500	2,400	150
Up to 0.1% of pop. will die of flu-related causes	16,250	8,700	2000	125

Texas major metropolitan area hub cities have the capacity to provide medical care shelters to support victims during an emergency. During Hurricanes Katrina and Rita, human resources were available to provide health and medical care in a mass care environment. Physicians, nurses, allied health professionals, mental health professionals, and others volunteered and were able to get medical supplies, medications, and durable medical equipment to support patient care. For example, from September 1 to 6, 2005, 23,231 persons displaced by Hurricane Katrina were registered to receive evacuee services in Dallas. A system of alternate-care-site surge capacity absorbed large patient volumes while minimizing impact on routine hospital operations.

However, if in any emergency a large number of people need hospitalization at any one time, area hospitals quickly reach capacity and are forced to send patients to nearby hospitals. During a national public health emergency such as a pandemic affecting large geographic areas, transferring patients to other hospitals is not an option. In 2006, the Institute of Medicine's^{xiii} examination of hospital-based emergency departments revealed that emergency services are functioning at full or near full capacity. As such, they are not prepared to function during a MCE.

Health Systems Research studied this issue extensively in 2005 under contract with the Agency for Health Care Research and Quality, reporting in the publication, [Altered Standards of Care in Mass Casualty Events](#). A Blue Ribbon Panel of experts in ethics, emergency medicine, emergency management, health law, health policy, and public health convened to address the issue of providing care in MCEs. Medical issues identified included alterations of standards of care; assistance with planning, guidance, and tools; allocating scarce resources; and protocols for triage. A number of non-medical issues also were identified including: authority to activate altered standards of care; legal issues to liability, licensing, and mutual aid agreements; financial issues related to reimbursement; transportation of patients; issues related to services for special needs populations; and effective communication with the public.

The panel's recommendations for action were to:

- Develop and implement a process to address non-medical issues such as finance and communication related to delivery of health and medical care during a mass casualty event;
- Create strategies to ensure health and medical leadership and coordination for the health and medical aspects of system response during a mass casualty event;
- Continue and expand efforts to train providers and others to respond effectively in a mass casualty event;
- Identify, analyze, and consider modification of federal, state, and local laws and regulations that affect the delivery of health and medical care during a mass casualty event;
- Develop and support a research agenda specific to health and medical care standards for a mass casualty event; and
- Develop a *Community-Based Planning Guide for Mass Casualty Care* to assist preparedness planners in their efforts.

Other recommendations that are in process and/or completed in Texas are to:

- Develop a comprehensive strategy for risk communication with the public before, during, and after a mass casualty event;
- Develop practical tools, such as searchable databases, for verifying credentials of medical and other health personnel prior to and onsite during a mass casualty event;
- Identify and support states, health systems, communities, and regions to develop mass casualty health and medical care response plans; and
- Develop general and event-specific guidance for allocating scarce health and medical care resources during a mass casualty event.

Another important consideration is the goal of care. The Blue Ribbon Panel suggested that the goal of care should focus on maximizing the number of lives saved. To do this requires that those with the least chance of survival are cared for last. The objective of triage would be to identify and reserve immediate treatment for individuals who have a critical need for treatment but are most likely to survive. Resources would be allocated to maximize the number of lives saved. Complicating conditions, such as underlying chronic disease, may affect an individual's ability to survive.

Acute care facilities should consider ways of maximizing capacity before opening an alternate care site. Suggestions are offered in Table 3. If these tactics are not successful in providing adequate capacity, alternate care sites for triage and in-patient care may be required. With limited hospital space and limited health care providers, suspending or altering standards of care must be considered.

Table 3: Actions That Increase Capacity and/or Decrease Admissions

<p>Develop plans to maximize hospital space that include:</p> <ul style="list-style-type: none"> ■ Rapid patient discharge; ■ Cancellation of elective surgeries; ■ Classification of hospitals according to influenza status;¹ ■ Addition of beds/cots to open areas.
Increase staff capacity through schedule changes, staff sharing, and promotion of home care.
Increase access to supplies through contracts/agreements with commercial vendors.
Plan administrative coverage to facilitate processes.
Develop triage plans early to maximize in-hospital care for those most likely to survive.
Plan palliative care options for those with limited chance of survival.
Information sharing:
<ul style="list-style-type: none"> ■ Work with DSHS to improve communication regarding hospital status during a pandemic. ■ Plan messages to be given through hospital help lines in collaboration with other health-care entities to ensure similar recommendations are being made.

¹ Large hospital systems might consider identifying hospitals as to influenza status rather than treating both influenza and other illnesses/surgeries in the same facility.

Caring for large numbers of patients will be a challenge. Current professional and legal restrictions molding practice parameters in health care will be impossible to follow. The Model State Emergency Health Powers Act (MSEHPA), adopted by many state legislatures, grants state and local public health agencies and their public and private sector partners a number of extraordinary powers once a state of public health emergency has been declared. These include the ability to waive state professional licensing and certification requirements for volunteer health professionals participating in emergency response efforts, liability protections for medical personnel, and expedited procedures to acquire essential supplies and personnel. While this works well for localized emergencies, it provides minimal assistance for pandemics. Easing restrictions must go further to include suspension of usual practice standards, broadening the scope of practice for nursing and other staff, training non-professional staff and volunteers to do treatments usually reserved for licensed staff, allocation of scarce resources, use of alternate care sites that will not meet The Joint Commission’s standards, altered staffing models, and reducing documentation standards. Texas’ public and private health systems are collaboratively working on these issues.

Texas’ Medical Surge Capability

Of the approximately 600 hospitals located within Texas, 448 have the medical surge capacity to maintain 3,507 patients in negative pressure isolation. Of hospitals with an emergency department, 90% can maintain at least one patient in negative pressure isolation whereas only 68% of hospitals without an emergency department can maintain at least one patient in negative pressure isolation.

Most Texas hospitals can increase bed capacity and support the physical infrastructure (e.g.,

HVAC, oxygen, and negative pressure capabilities) during a pandemic disaster. About 60% of hospitals have a bed expansion plan in place; and local health departments, city and county governments, and other entities have created plans and processes to open medical shelters if needed. Alternative plans and procedures for increasing physical infrastructure capacity have been developed (e.g., discharging patients to make room for pandemic disaster victims).

Texas hospitals have developed plans to augment staffing during an emergency. These plans include developing databases of available personnel, developing callback lists, and working with state medical and nursing organizations to identify and recruit individuals who are available during an emergency. In Texas, 66 percent of hospitals reported having a database of credentialed clinicians while 53 percent reported having a database of other health professionals to contact during a surge event. The Medical Reserve Corps has been identified as a potential resource to augment personnel and is considered a local asset. Reported capacity for access to mental health assistance and crisis counseling for first responders is low. Only 36 percent of hospitals report having a Critical Incident Stress Debriefing capability while local health departments reported varying levels of success with training individuals to provide worker crisis counseling. Additionally, a few local health departments have implemented mutual aid agreements with other jurisdictions to provide crisis counseling.

Equipment and Supplies

Plans to augment resources are being developing. A Texas Pharmaceutical Blue Ribbon Task Force, made up of representatives from the Department of State Health Services (DSHS), Texas Building and Procurement Commission (TBPC), State Pharmacy Board, Pharmacy Association, Federation of Drug Stores, Society of Health-System Pharmacists, Pharmaceutical Wholesalers, and Children's Health Insurance Program (CHIP)/Medicaid Vendors, is developing an integrated plan for distribution of pharmaceuticals, pharmacy services, and medical supplies. Planning also includes identification of resources; a comprehensive communication system; and receiving, distribution, and coordination systems.

About half the hospitals statewide report having enough personal protective equipment (PPE) including powered air-purifying respirators, N95 masks, gloves, gowns, and hand sanitizers for healthcare personnel. Of those hospitals that have respirators and N95 masks, not all hospital employees are trained to properly wear and use PPE. While most urban emergency services departments have adequately outfitted their emergency response staff and Emergency Medical Services (EMS) employees with appropriate PPE, volunteer and rural emergency services departments often lack funds to purchase even basic PPE.

Pandemic planning includes careful consideration of the potential shortage of ventilators, based on the estimates for the number needed and on federal plans. There is a federal government stockpile of ventilators, but its use is limited for any one locality; there are not enough ventilators to be distributed if many regions need them at once.

Alternate Care Sites

Pandemic influenza planning in Texas has been primarily guided by the U.S. Centers for Disease Control and Prevention (CDC) Pandemic Influenza Public Health Emergency Preparedness

(PHEP) funding. This work in large part has been dedicated to planning activities at the state, regional, and local levels. Approximately 90 percent of the Office of Assistant Secretary for Preparedness and Response (OASPR) Hospital Preparedness Program (HPP) funds is allocated to trauma service areas (TSA) (Map 2.). Regional hospital planning committees/steering committees for each TSA are currently locating alternate care sites and identifying needed staffing and supplies.

DSHS Pandemic Influenza Plan Operational Guidelines (PIPOG) was developed in cooperation with many stakeholders including representatives from Texas hospitals. Assumptions in the plan regarding response to the demand for services and hospital surge will rely on implementing 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 compliant beds;”
- Increase of patient ratio to hospital staff;
- Recruitment of volunteers who can provide custodial services under the general supervision of health and medical workers;
- Relaxation of practitioner licensure requirements as deemed appropriate; and
- Use of general purpose and special needs shelters as temporary health facilities.

Other assumptions include the establishment of Disaster Medical Assistance and State Mortuary Assistance Teams to supplement local resources.

The state’s involvement with hospital medical surge is limited to planning and data collection. Approximately 600 hospitals in Texas are in locations ranging from cities with populations larger than most small states to rural, frontier-like areas whose residents seek service in a 10-bed general hospital in a town 20 miles away. DSHS encourages local health departments (LHDs) to work with healthcare stakeholders to develop community-specific plans based on guidance offered in the PIPOG. Responsibilities at the state level are to:

- Update and/or inventory state medical supplies, in coordination with local Epidemiological Response Teams and Texas Building and Procurement Commission;
- Collaborate with appropriate agencies to inventory and identify statewide resources;
- View major elements of the health sector and essential non-health sector response plans;
- Estimate the impact of pandemic influenza on essential services including hospitals; and
- Develop and maintain an inventory of available beds in nursing facilities and non-traditional settings that might house sick patients as hospital overflow.

In addition to DSHS activities, TBPC will assist in locating and contracting for pandemic influenza-related resources and alternate use facilities, to include locating appropriate lodging and transportation resources for pandemic influenza response operations.

Regional hospital planning/steering committee in collaboration with regional and local public health is responsible to:

Appendix N.1: Determining Need for Alternate Care

- Coordinate data collection, collect data from appropriate sources, including Metropolitan Medical Response Systems (MMRS), and adjust for data duplication to maintain a statewide inventory of:
 - 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);
 - Facility resources such as beds (hospital and long-term care), Intensive Care Unit (ICU) capacity, pharmacy, laboratory, and contingency medical facilities (within jurisdiction);
 - Supplies such as ventilators, PPE (e.g., masks, gloves), specimen collection and transport materials, and sources of supplies;
 - Mortuary and funeral services;
 - Social services, disaster mental health services, and faith services;
 - Sources of medical supplies (e.g., syringes), and
 - Limited English proficiency interpreter services.
- 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 such as advance-planning protocols to triage overflow locations.
- Estimate the impact of an influenza pandemic related to hospitalizations, outpatient visits and deaths using FluAid.

In addition to inpatient care support, health service regions (HSRs) and LHDs also collaborate with the health-care system on triage planning. Although triage planning is the primary responsibility of the health-care system, all preparedness partners assist in:

- Planning for triage (e.g., initial patient evaluation) and admission of patients during a pandemic;
- Developing methods to specifically track admissions and discharges of patients with pandemic influenza; and
- Developing criteria and protocols for modifying admission criteria on the basis of current bed capacity, closing the facility to new admissions and referrals to other facilities, and limiting or restricting visitors to the hospital, including specific plans for communicating with patients' families about hospital rules for visiting hospitalized family members.

Medical surge planning accomplishments so far include the following:

- Criteria developed for determining when to cancel elective admissions and surgeries.
- Plans developed for shifting healthcare services away from the hospital, e.g., to home care or pre-designated alternative care facilities, have been discussed with local, state, tribal, or regional planning contacts.
- Ethical issues addressed concerning how decisions will be made in the event healthcare services must be prioritized and allocated (e.g., decisions based on probability of survival) have been discussed.

- Procedure developed for communicating changes in hospital status to health authorities and the public.
- Plans developed for utilizing non-facility volunteer staff, such as those who may be made available through a state Emergency System for Advanced Registration of Volunteer Health Professionals (ESAR-VHP) to provide patient care when the hospital reaches a staffing crisis.
- Contingency staffing plan to consider how health professions students assigned to the facility will be utilized.
 - The contingency staffing plan includes a strategy for training non-facility volunteers (e.g., retired clinicians, trainees) and includes a procedure for rapid credentialing/privileging and badging for easy identification by security and access to the facility when deployed.
 - The contingency staffing plan includes a strategy for cross-training and reassignment of personnel to support critical services.
 - The contingency staffing plan considers alternative strategies for scheduling work shifts to enable personnel to work longer hours without becoming overtired.
- Responsibility assigned for conducting a daily assessment of staffing status and needs during an influenza pandemic.
- Strategies developed for supporting personnel whose family and/or personal responsibilities or other barriers prevent them from coming to work (e.g., strategies that take into account the principles of social distancing when schools are closed, care of elders, transportation, reasonable accommodation or state governmental mandate).
- Staffing plan to include strategies for collaborating with local and regional planning and response groups to address widespread healthcare staffing shortages during a crisis, including the development of memoranda of advanced agreement (MAAs) and memoranda of understanding (MOUs) with regional and tribal health-care partners.

Assumptions

- Alternate care sites may be in operation intermittently for 12 months or longer in the event of an influenza pandemic. Sites need to be selected based on the ability to operate for this length of time.
- The pandemic may occur in two or more phases and alternate care sites may open, close, and re-open depending on community needs.
- Selecting and staffing the alternate care site should be done in collaboration with local health care providers and hospitals, but it should not be assumed that local providers will be able to totally staff the site.
- Assistance will not be available outside the community such as from other states or the federal government.
- Family members and well community members will be providing care and will need specialized training.
- Suspension of licensing regulations and certification requirement will need to be in effect.
- Care givers will need legal protection.

The following discussion details actions important alternative care site concepts, strategies, and actions that planners need to incorporate into their preparedness planning for pandemic

influenza. The information is arranged according to the three World Health Organization (WHO) Pandemic Periods.

Inter-Pandemic Period

This period is where most of the advance planning for a pandemic needs to occur. Governmental agencies at any level may be able to offer policy guidance, decision tools, and some relief from regulatory obligations, but the operational decisions regarding limited resources and associated liabilities will be the responsibility of individual hospital systems and communities. Those involved in planning ACSs should collaborate in the development of pre-pandemic decision blueprints with legal counsel.

First Level of Response

An overview of issues and activities that community planners need to consider before activating an alternate site and while developing alternative care sites is listed below.

- Define ownership, command, and control of alternate care sites (ACS).
- Determine number of alternate care sites needed in each community using CDC's FluSurge or another patient estimation program.
- Perform site selection based on best estimates of need.
- Decide on the scope of care to be provided in the ACS.
- Establish functional requirements based on the level of care to be provided.
- Acquire supplies, equipment, and pharmaceuticals (including communications equipment) or know how to obtain them from storage caches.
- Establish a pandemic influenza Continuity of Operations Plan (COOP) identifying critical job functions and developing backup plans for these. Perform staffing planning, taking into account absentee rates from potential sources of staff members.
- Develop Memoranda of Understanding (MOU) for operational support of the ACS. Include housing for health care workers.
- Develop policies of operation for the ACS, including:
 - Incident command
 - Criteria for admission, discharge, and transfer
 - Clinical roles and responsibilities
 - Infection control pharmacy and medication control
 - Safety and security
 - Housekeeping
 - Food service
 - Finances and documentation
- Develop a health care risk communication message, including criteria for seeking health care, such as postponement of non-emergency procedures or surgeries.
- Develop criteria for hospital decompression.

Pandemic Alert Period

Planning activities to consider in this period are listed below.

- Formalize agreements with facilities to serve as alternate care sites ([Appendix N.2](#)).

Appendix N.1: Determining Need for Alternate Care

- Perform resource assessment for activating an ACS ([Appendix N.2](#)).
 - Intensify location and acquisition of additional necessary equipment, consumable, and disposable supplies.
- Finalize policies of operation for the ACS.
- Exercise the ACS if possible
 - As early as possible, explore the legal issues around activating an ACS for full functional exercise with patients.
- Test communications.
- Identify and roster the ACS staff and volunteers.
- Establish a process of immunization and prophylaxis of potential staff members.
- Develop a patient transport plan for movement of AC patients to and from area hospitals.

Pandemic Period

Federal Response Stage 3: Widespread human outbreaks in multiple locations overseas

During Federal Response Stage 3 of the Pandemic Period, planners need to consider the following activities:

- Establish incident command structure for ACS. Planners should ensure that ACS is integrated with community, regional and State incident command systems.
- Unpack and inventory supplies at the selected site(s).
- Enable the security protection systems of the ACS to protect the supplies.
- Train individuals in skill sets and ACS operational protocols as needed.
- Ensure all ACSs are fully operational.
- Investigate the need for establishing other functional sites for ambulatory care, inpatient care, quarantine, and/or palliative care.
- Establish criteria for terminating operation of the ACSs as the pandemic passes.

Federal Response Stage 4–5: First human case in North America and spread throughout the United States

During Federal Response Stages 4 and 5, planners need to consider the following activities:

- Activate alternate care sites based on disease epidemiology and medical surge reports from ambulatory care, emergency rooms, and hospital bed availability.

Federal Response Stage 6: Recovery and preparation for subsequent stages

- Write an after-action report identifying what went well and what did not with suggested mitigation strategies.
- Examine policies and procedure and change according to after-action report findings.
- Examine staffing patterns, burn-out, and recruitment of persons who had the flu and survived.
- Re-supply consumables and disposables. Examine equipment and complete repairs.

Appendix N.2: Site Selection and Design

General Considerations

- Communities should consider a number of facilities that in total can accommodate beds for the people who become ill enough to require professionally supervised supportive care such as IV solutions for hydration.
- In all cases, the building selected should be code compliant for its currently designated building type.
- Building requirements for alternate care sites should consider the following:
 - Patient care area/beds 3 feet apart
 - Accessibility
 - Security
 - Food/feeding
 - Laundry
 - Toileting/showers
 - Waste disposal to include bio-hazardous material
 - Water and heat
 - Telephone
 - Transportation
 - Ventilation
 - Storage
 - Space for clerks/record keeping
 - Lab specimen storage/processing
 - Pharmacy
 - Space for ancillary services, including case management, social workers and other mental health professionals
- Potential sites should be evaluated during the pre-pandemic period.
 - Evaluation template follows



Alternate Care Facility Evaluation Form**

SITE LOCATION

NAME: _____

ADDRESS: _____

CITY: _____ ZIP CODE: _____

PHONE: _____ EMAIL: _____

Can the site be opened within 6 hours of request?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Is the site available 24/7?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Is a map to the site available?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Can the map be posted on the Internet?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Are clear directions to the site available?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Is the site familiar to the local population?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

CONTACT INFORMATION

First Contact:

NAME: _____

POSITION IN ORGANIZATION: _____

PHONE NUMBER: _____ CELL NUMBER: _____

EMAIL ADDRESS: _____

Can the first contact person be contacted after hours and on holidays? YES NO

If YES, what is the best way to contact this person after hours and on holidays? _____

Second Contact:

NAME: _____

POSITION IN ORGANIZATION: _____

PHONE NUMBER: _____ CELL NUMBER: _____

EMAIL ADDRESS: _____

Can the second contact person be contacted after hours and on holidays? YES NO

If YES, what is the best way to contact this person after hours and on holidays? _____

FACILITY'S PHYSICAL CHARACTERISTICS

BUILDING INFRASTRUCTURE			COMMENTS & NOTES
Ability to lockdown <ul style="list-style-type: none"> To monitor patient traffic To control entry/exit To secure perimeter 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	Building and perimeter security
Doors <ul style="list-style-type: none"> At least 42” wide for gurney Entry and inside doors ADA compliant 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	One door to enter the building with separate door to enter patient care areas
Floors <ul style="list-style-type: none"> Tile or hard cleanable surfaces in patient care areas 	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Loading Dock <ul style="list-style-type: none"> Supply delivery area able to accommodate multiple large delivery vehicles at one time Forklift, pallet jack, and operator accessible 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Parking <ul style="list-style-type: none"> Number of stalls available at the facility Adjacent lots available, enter number of stalls Parking lots well lighted and safe 	YES <input type="checkbox"/> _____ YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Mechanical Ventilation <ul style="list-style-type: none"> System capacity based on minimal air exchange per maximum capacity 	YES <input type="checkbox"/>	NO <input type="checkbox"/>	

Toilets and Showers – Men’s Room <ul style="list-style-type: none"> • Total # of urinals / # ADA compliant • Total # of toilets / # ADA compliant • Total # of showers / # ADA compliant 	# _____ _____ _____	ADA _____ _____ _____	At a minimum, 10 stalls per 300 users
Toilets and Showers – Women’s Room <ul style="list-style-type: none"> • Total # of toilets / # ADA compliant • Total # of showers / # ADA compliant 	# _____ _____	ADA _____ _____	
Family / Unisex <ul style="list-style-type: none"> • Total # of toilets / # ADA compliant • Total # of showers / # ADA compliant 	# _____ _____	ADA _____ _____	
Optional <ul style="list-style-type: none"> • Separate area for staff toilets • Toilets for staff and family members 	# _____ _____	ADA _____ _____	
UTILITIES			
Electrical Power <ul style="list-style-type: none"> • Sufficient to meet demands of ACF • Backup generator must supply power to all areas including HVAC system and hot water heaters 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Air Conditioning and Heating <ul style="list-style-type: none"> • Meets standards based on raw square footage of facility • In good operating condition 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Water <ul style="list-style-type: none"> • Hot and cold running water available • Gallon capacity of water heaters • Potable drinking water available 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	
Refrigeration <ul style="list-style-type: none"> • Type and size available • Temperature controlled 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Lighting <ul style="list-style-type: none"> • Dimmer switch in sleeping area • Lighting is sufficient 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Fire Safety <ul style="list-style-type: none"> • Sprinklers • Number of fire alarms • Number of smoke detectors • Exit doors meet fire safety standards 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	

TOTAL SPACE AND LAYOUT			
Auxiliary Rooms <ul style="list-style-type: none"> • Chapel • Counseling • Family rest area • Patient waiting area • Triage area • Incident command area 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	
Mortuary Holding Area <ul style="list-style-type: none"> • Refrigerated space • Space in parking lot for refrigerated trucks 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Secured Medical Storage Area	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Secured Equipment and Supply Storage Area <ul style="list-style-type: none"> • Large enough to conduct supply distribution and inventory 	YES <input type="checkbox"/>	NO <input type="checkbox"/>	Need approximately 500 sq. ft
Secured Pharmacy Area	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Open Bed Area	YES <input type="checkbox"/>	NO <input type="checkbox"/>	Need approximately 40,000 sq. ft. for 250 beds
Laundry Facilities	YES <input type="checkbox"/>	NO <input type="checkbox"/>	Laundry may be contracted out
Food Supply and Preparation Area <ul style="list-style-type: none"> • Full commercial kitchen • Warming kitchen • Partial kitchen • Walk-in refrigerator • Walk-in freezer 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	
Staff Break Area <ul style="list-style-type: none"> • Quiet and isolated • Staff bathrooms • Staff sleeping area 	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	
COMMUNICATIONS			
Phones <ul style="list-style-type: none"> • # of digital and analog phones • # of available ports per room / area • # fax machines • Strong cell phone signal available • No interference with cell phone signal or signal shielding which could affect connectivity 	_____ _____ _____ YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	

Radio Capabilities <ul style="list-style-type: none"> • Two-way 800 mhz Radio • Ham Radio 	YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/>	
Wired for IT and Internet Services <ul style="list-style-type: none"> • Number of ports available • Capacity to add additional ports • Wireless capable with no interference or signal shielding which could affect connectivity 	_____ YES <input type="checkbox"/> YES <input type="checkbox"/>	NO <input type="checkbox"/> NO <input type="checkbox"/> NO <input type="checkbox"/>	
OTHER SERVICES			
Accessibility / Proximity to: <ul style="list-style-type: none"> • Public transportation • Distance to closest bus/public transportation stop • Distance to hospital • Distance to high risk populations 	YES <input type="checkbox"/> _____ _____ _____	NO <input type="checkbox"/>	
Medical Supply Delivery Capabilities <ul style="list-style-type: none"> • Storage and/or servicing capabilities for O2 bottles 	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Facilities Services <p>Waste Removal Name: _____</p> <p>Janitorial Services Name: _____</p> <p>Food Delivery Services Name: _____</p> <p>Restroom Maintenance Name: _____</p> <p>Security Name: _____</p> <p>Laundry Name: _____</p>	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/> YES <input type="checkbox"/>	

ATTACH FACILITY LAYOUT AND FLOOR PLAN

On separate sheet

Appendix N.3: Staffing

General Considerations

- Staffing considerations should be made using professionals not currently working in acute care, allied health professionals, and non-professional care and comfort providers.
- In many smaller communities, the care and comfort providers are going to be the family members themselves.
- Emergency Medical staff should not be considered as first-line staff for ACSs because they will be providing emergency medical services and hospital patient transportation.
- In situations in which immunization or prophylaxis is available, consideration should be given to community volunteers who have been trained to provide care/comfort at the alternate care sites.

(UNDER DEVELOPMENT)

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Appendix N.4: Equipment, Consumable, and Disposable Supplies for Alternate Care

Following are guidelines for the types and amounts of supplies required for a 50-bed ACS to use as a guideline for planning purposes only. This configuration is not the only one that will be recommended. This configuration assumes care will simulate hospital care. Fewer supplies will be used if the ACS is used for supportive care with health care professional supervising family caregiving of the ill.

Three important elements must be considered as planning for ACSs begins:

- Purchasing supplies
- Storing supplies
- Transporting supplies

(UNDER DEVELOPMENT)

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Appendix N.5: Stock Medications

Patients will present with a myriad of co-existing conditions. Local communities must decide how the issue of personal medications will be handled. Options are:

- Patients bring own medications into ACS;
- ACSs have needed medications on hand.

The following table is a suggested list of medications to stock for ACSs to meet the need of patients on long-term medication therapy, complications of influenza, and emergency situations might develop.

(UNDER DEVELOPMENT)

Draft

APPENDIX O: *Guidelines for Monitoring International Travel*

{Under development}

This companion document will be found at a later date on the [Pandemic Influenza](#) page of the Community Preparedness website.

Draft

GLOSSARY

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

Attack rate: The proportion of an exposed population at risk who becomes infected or who develops clinical illness during a defined period of time.

Accessibility: (a) *physical accessibility*: compliance with the portions of the Texas Accessibility Standards pertaining to parking, path of travel, entrances, restrooms, and fire alarms; (b) *social accessibility*: availability of adequate, appropriate services related to factors such as geographic isolation (including transportation), cultural appropriateness, ability to pay, and language and comprehension issues; and (c) *communications accessibility*: access to information resources comparable to those available to individuals without disabilities.

CDC Intervals⁴:

- **Pre-pandemic Intervals**

- **“Investigation” Interval – Investigation of Novel Influenza Cases:** This pre-pandemic interval represents the time period when sporadic cases of novel influenza may be occurring overseas or within the United States. During this interval, public health authorities will use routine surveillance and epidemiologic investigations to identify human cases of novel influenza and assess the potential for the strain to cause significant disease in humans. Investigations of animal outbreaks also will be conducted to determine any human health implications. During this interval, pandemic preparedness efforts should be developed and strengthened. Case-based control measures (i.e., antiviral treatment and isolation of cases and antiviral prophylaxis of contacts) are the primary public health strategy for responding to cases of novel influenza infection. The national case definition for novel influenza is located at http://www.cdc.gov/nceh/diseases/nidss/casedef/novel_influenzaA.htm.
- **“Recognition” Interval – Recognition of Efficient and Sustained Transmission:** This interval occurs when clusters of cases of novel influenza virus in humans are identified and there is confirmation of sustained and efficient human-to-human transmission indicating that a pandemic strain has emerged overseas or within the United States. During the recognition interval, public health officials in the affected country and community will attempt to contain the outbreak and limit the potential for further spread in the original community. Case-based control measures, including isolation and treatment of cases and voluntary quarantine of contacts, will be the primary public health strategy to contain the spread of infection; however, addition of rapid implementation of community-wide antiviral prophylaxis may be attempted to fully contain an emerging pandemic.

- **Pandemic Intervals:**

- **“Initiation” Interval – Initiation of the Pandemic Wave:** This interval begins with the identification and laboratory-confirmation of the first human case due to pandemic

⁴ U.S. Government (2008). Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans. <http://www.pandemicflu.gov/news/guidance031108.pdf>

influenza virus in the United States. If the United States is the first country to recognize the emerging pandemic strain, then the “Recognition” and “Initiation” intervals are the same for affected states. As this interval progresses, continued implementation of case-based control measures (i.e., isolation and treatment of cases, voluntary prophylaxis and quarantine of contacts) will be important, along with enhanced surveillance for detecting potential pandemic cases to determine when community mitigation interventions will be implemented.

- **“Acceleration” Interval – Acceleration of the Pandemic Wave:** This interval begins in a State when public health officials have identified that containment efforts have not succeeded, onward transmission is occurring, or there are two or more laboratory-confirmed cases in the State that are not epidemiologically linked to any previous case. It will be important to rapidly initiate community mitigation activities such as school dismissal and childcare closures, social distancing, and the efficient management of public health resources.⁵ Isolation and treatment of cases along with voluntary quarantine of contacts should continue as a key mitigation measure. Historical analyses and mathematical modeling indicate that early institution of combined, concurrent community mitigation measures may maximize reduction of disease transmission (and subsequent mortality) in the affected areas.^{6,7,8,9}
- **“Peak/Established Transmission” Interval – Transmission is Established and Peak of the Pandemic Wave:** This interval encompasses the time period when there is extensive transmission in the community and the state has reached its greatest number of newly identified cases. The ability to provide treatment when the healthcare system is overburdened will be particularly challenging. To reduce the societal effects of the pandemic, available resources must be optimized to maintain the critical infrastructure and key resources in the face of widespread disease.
- **“Deceleration” Interval – Deceleration of the Pandemic Wave:** During this interval, it is evident that the rates of pandemic infection are declining. The decline provides an opportunity to begin planning for appropriate suspension of community mitigation activities and recovery. State health officials may choose to rescind community mitigation intervention measures in selected regions within their jurisdiction, as appropriate; however mathematical models suggest that cessation of community mitigation measures are most effective when new cases are not occurring or occur very infrequently.¹⁰

⁵ CDC. Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States – Early, Targeted, Layered Use of Nonpharmaceutical Interventions. February 2007. Available at <http://www.pandemicflu.gov/plan/community/commmitigation.html>

⁶ Hatchett RJ, Mecher CE, Lipsitch M. Public health interventions and epidemic intensity during the 1918 influenza pandemic. *Proceedings of National Academy of Sciences of USA*, (2007); 104 (18): 7583-7587.

⁷ Markel H, Lipman HB, Navarro JA, et al. Nonpharmaceutical Interventions Implemented by US Cities During the 1918-1919 Influenza Pandemic. *JAMA* (2007);298 (6): 644-654.

⁸ Ferguson NM, Cummings DA, Fraser C, et al. Strategies for mitigating an influenza pandemic *Nature* (2006); 442:7: 448-452.

⁹ Bootsma MC, Ferguson NM. The effect of public health measures on the 1918 influenza pandemic in U.S. cities. *Proceedings of National Academy of Sciences of USA*, (2007);104 (18): 7588-7593.

¹⁰ Davey VJ, Glass RJ. Rescinding Community Mitigation Strategies in an Influenza Pandemic. *Emerging*

- **“Resolution” Interval – Resolution of the Pandemic Wave:** In this interval, pandemic cases are occurring only sporadically. The primary actions to be taken during this interval include discontinuing all community mitigation interventions, facilitating the recovery of the public health and healthcare infrastructure, resuming enhanced surveillance protocols to detect possible subsequent waves, and preparing for next waves of infection should they occur.

Case fatality rate: The proportion of people with a particular disease who die of the disease. This number will be significantly higher than the **mortality rate**.

Chemoprophylaxis: See prophylaxis.

Confirmed case: 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: Separation of infected or exposed people from non-infected people by use of isolation, quarantine, or other restrictions on movement and activity.

Community health worker: A person serving with or without compensation who provides services within the unique culture of the community. Using their personal understanding of the experiences, language, traditions, and values of the people they serve, community health workers function as mediators between western allopathic medicine and the traditional healing practices of the community. Included in the title are **promotor(a)** (Hispanic communities) and **community health representative** (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, hugging, and 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 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 voluntary (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 a person, property, areas, or

Infectious Diseases, (2008);14 (3): 365-372. Available at:
http://www.cdc.gov/eid/content/14/3/365.htm?s_cid=eid365_e#cit

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*](#).

- **Isolation:** Separation and restriction of movement of people with a specific communicable disease to contain the spread of that illness to susceptible people. People in isolation may be cared for in their homes, in hospitals, at designated health care facilities, or other dedicated facilities.
- **Quarantine:** 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 U.S. or across state lines.

EMResource™: Real Time Emergency Resource Management (Internet-based) application. An internet-based application accessible from any PC or wireless device with an internet connection and a web-browser. Authorized users securely access, review, and update daily hospital emergency status, mass casualty event resource information, and public health incident alerts. EMResource delivers emergency resource management and streamlines communications between medical response teams and healthcare providers by monitoring healthcare assets, behavioral health, and dialysis bed status and facilitates NDMS reporting and broadcasting. (Retrieved 2/27/08 from http://info.emsystem.com/sol_resource.html)

EMSystem®: A leading provider of real-time communications and resource management solutions that enhance preparedness and response to medical emergencies, mass casualty events, and public health incidents. The company provides emergency department status tracking, patient tracking, mass casualty incident support, syndromic surveillance, hospital bed tracking, and public health alerting solutions. (Retrieved 2/27/08 from <http://info.emsystem.com/>)

Epidemiology Response Teams (ERT): An identified epidemiology team in each of the Health Service regional offices. The ERTs serve as a rapid-response resource for all hazard incidents, and collaborates with local health departments’ epidemiologists. Two epidemiologists, a public health nurse, and a public health technician comprise each team

Frontier County: A special definition of [rural](#) to mean a sparsely populated county with less than 7 individuals per square mile and no urban center. In Texas, 133 counties do not meet the criteria for metro- or micropolitan classification. Of these counties, 64 meet the criterion for classification as “frontier” (Jane Meier, personal communication, 10/7/05).

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 (LHD) or a physician appointed by the Commissioner of Health, if there is no LHD 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 worker: Any employee working in the health care field (e.g., inpatient, outpatient, or public health) or temporarily assigned to patient-related activities (transport) who may have close contact, within 3 feet, of individuals with influenza-like-illnesses (ILI). Contact may occur directly with individuals, care items, waste, or specimens in locations such as patient rooms, procedure areas, physician offices, homes, clinics, workplaces, or laboratories.

Homeland Security Exercise and Evaluation Program (HSEEP): A capabilities-based exercise program that includes a cycle, mix, and range of exercise activities of varying degrees of complexity and interaction. The purpose is to build self-sustaining exercise programs and provide a standardized methodology for designing, developing, conducting, and evaluating all exercises.

ImmTrac: The Texas immunization registry developed by the Texas Department of State Health Services (DSHS). ImmTrac is a free, confidential registry designed to consolidate immunization records from multiple providers and store a child's immunization information electronically in one secure central system. ImmTrac offers physicians and other healthcare providers and authorized users easy online access to a child's immunization history. In 2007, ImmTrac was approved by Senate Bill 11 to include adults and children for emergency vaccinations and medications. First responders can opt to have all immunizations recorded. (Retrieved 2/27/08 from <http://www.dshs.state.tx.us/immunize/immtrac/default.shtm>)

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedures, and communications operating within a standardized organizational structure, designed to aid in domestic incident management activities.

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 day to 5 days.

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

- **Standard precautions:** Practices resulting from the combination and expansion of Universal Precautions and Body Substance Isolation. Actions are based on the principle that all blood, body fluids, secretions, excretions except sweat, non-intact skin, and mucous membranes may contain transmissible infectious agents. Practices required for standard precautions include 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, and goggles or face shields. Also, equipment or items in the patient environment likely to have been contaminated with infectious fluids must be handled in a manner to prevent transmission of infectious agents, (e.g., wear gloves for handling, contain heavily soiled equipment, properly clean and disinfect or sterilize reusable equipment before use on another patient). The U.S. Department of Health and Human Services (DHHS) [Pandemic Influenza Strategic Plan, Part 2, Supplement 4](#) provides a full discussion about application.
- **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) or environment. With contact precautions, greater spatial separation (e.g., single-patient room or >3 feet between beds in multi-patient rooms) of the infected/colonized patient from other patients is preferred. Health care personnel caring for patients on contact precautions wear a gown and gloves for all interactions that may involve contact with the patient or potentially contaminated areas in the patient's environment. Contact precautions apply where the presence of excessive wound drainage, fecal incontinence, or other discharges from the body suggest an increased transmission risk. In addition, contact precautions may apply to patients known or suspected to be infected or colonized (as locally defined) with epidemiologically important microorganisms that can be transmitted by direct or indirect contact, (e.g., multiple drug resistant organisms). The DHHS Pandemic Influenza Strategic Plan, Part 2, Supplement 4 provides a full discussion about application.

- Droplet precautions:** reduce the risk of droplet transmission of infectious agents from close respiratory or mucous membrane contact (e.g., <3 feet) with large-particle droplets (larger than 5 μm in size) as described in I.B.3.b. Because droplets do not remain suspended in the air, special air handling and ventilation are not required to prevent droplet transmission. However, masks (respirators are not necessary) are indicated for close contact with the patient. Indirect evidence suggests that masks are effective in preventing transmission of influenza virus (Bridges, 2003). It is important to change masks when they become moist because they are considered contaminated and to dispose after use. Droplet precautions apply to patients known or suspected to be infected with pathogens that can be transmitted by infectious droplets, such as the influenza virus (Bridges, 2003). Some experiences have suggested that the distance for droplet precautions be extended to 6 feet (Wong, 2004), but this issue remains unresolved. Placing masks on upon entry into a room would protect the HCW in situations where droplets are propelled > 3 feet. The DHHS [Pandemic Influenza Strategic Plan, Part 2, Supplement 4](#) provides a full discussion about application.

Influenza-like illness: A combination of symptoms that include (1) a fever $\geq 100^{\circ}\text{F}$ AND (2) cough and/or sore throat in the absence of a known cause.

Influenza pandemic: A worldwide outbreak of a novel influenza virus causing sudden, pervasive illness that can severely affect even otherwise healthy people 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.

Isolation: See [Control measures](#).

Limited English proficiency: People 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).

Multi-Agency Coordination Center (MACC): Serves as the location of the DSHS Incident

Command.

Metropolitan: A county or area that has at least one urban center including suburbs of at least 50,000 individuals that is the driving force behind the area's economic stability and development. Texas has 25 metropolitan statistical areas incorporating 79 counties (Office of the State Demographer. 2005).

Micropolitan: A county or area that is too urban to be called rural and too rural to be called urban; a location where a small urban center of at least 10,000 individuals mixes socially and economically with the rural area that surrounds it and visa versa. Texas has 40 micropolitan statistical areas incorporating 42 counties (Office of the State Demographer. 2005).

Morbidity and Mortality rates: The risk of becoming ill (morbidity) or dying (mortality) from a specific disease, expressed as a percentage or proportion (e.g., number per 1,000 or 100,000 thousand) of the general population of the area concerned (state, nation). (See also **Standardized mortality rate.**)

Multidisciplinary teams: Teams that 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.

National Incident Management System (NIMS): A system mandated by Homeland Security Presidential Directive 5 that provides a consistent nationwide approach for governments, the private sector, and non-governmental organizations, to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among state, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources. (Retrieved 2/27/08 from <http://www.fema.gov/nimscast/Glossary.do>)

Non-Pharmaceutical interventions: Interventions that reduce transmission of disease at an individual or population level that are not pharmaceutically based.

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

Pandemic: Any international outbreak of a disease.

Pandemic Influenza Shelf Kits: A compendium of literature specific to pandemic influenza that may be shared with the public and sent to media sources in the event of a flu pandemic. Topics for materials currently included in the kit: (1) Internal communications and response materials, (2) Summary sheets, (3) Public information, and (4) Media templates. For additional information, please call Texas Department of State Health Services Communications Unit, (512) 458-7400.

Pandemic Response Team (PRT): Members of the Texas DSHS Pandemic Influenza Planning Group (PIPG) who provide DSHS Pandemic Influenza Planning Operational Guidelines (PIPOG) expertise to the Incident Commander (IC).

Pathogenicity: The ability of the agent to induce disease.

Personal protective equipment (PPE): Barrier protection, used alone or in combination, to protect mucous membranes, skin, and clothing from contact with infectious agents. PPE may include gowns, gloves, masks (surgical or procedural), goggles, face shields, or respirators (N-95 or air-purified). The type of mask or [respirator](#) is disease-specific and defined in the type of precautions. The DHHS [Pandemic Influenza Strategic Plan, Part 2, Supplement 4](#) provides a full discussion about PPE use.

Prophylaxis: Prevention of or protective treatment for a disease.

- **Chemoprophylaxis:** Use of vaccines, antiviral medications or other chemical agents to prevent the spread of disease.

Public health disaster: a declaration by the governor of a state of disaster; and a determination by the commissioner of health 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.

Public Health Information Network (PHIN): Network designed to increase communication capabilities in and among HSRs and LHDs and to ensure the health department's ability to broadcast and receive health bulletins. PHIN reaches jurisdictions covering approximately 87% of the population in Texas through email, voice, and fax capabilities. In addition, all DSHS main and sub offices are online with broadband access and email at all 138 locations. There are more than 10,000 key contact records in the PHIN database that are continually updated. Also, direct communication channels have been developed with GDEM and the Governor's Office of Homeland Security. Moreover, PHIN's ability to alert more than 13,000 physicians has been greatly enhanced through collaboration with the Texas Medical Association (TMA). Note: As of January 2008, the DSHS Mental Health and Substance Abuse Section is not part of PHIN and would need to be a part of this group and effort preferably before an event.

The PHIN team also maintains a database of emergency contacts that receive health alerts. While some LHDs receive health alerts directly from CDC, the majority relies upon PHIN to disseminate any CDC or DSHS generated alert. The PHIN office has created 4 Texas PHIN email accounts that also receive health alerts from CDC. These accounts have rules applied to them to auto-forward health alerts to LHD staff, HSR staff, DSHS central office staff, GDEM, Texas Commission on Environmental Quality, Texas Hospital Association (THA), TMA, and TOMA.

LHDs maintain their own records in the PHIN contact database and re-send health alerts to their local contact distribution lists. All state and LHDs maintain redundant communication system(s). PHIN also maintains an Emergency Operations Center software application (WebEOC) to manage communication during short and long term critical events, and PHIN provides EMResource™ to public health professionals statewide. The web-based application EMResource™ is used by most Texas hospitals to monitor and report capacity and diversion statuses.

Quarantine: See [Control measures](#).

Recognized community health providers: Providers who are identified by various groups as healers within the cultural contexts of their communities.

Respirator: Personal protective devices worn by health care personnel over the nose and mouth to protect them from acquiring airborne infectious diseases by inhaling infectious airborne particles that are $<12\mu$ in size. These include infectious droplet nuclei from patients with M. tuberculosis, variola virus (smallpox), SARS-CoV, and dust particles that contain infectious particles such as spores of environmental fungi (e.g., Aspergillus sp.). The CDC National Institute for Occupational Safety and Health certifies respirators used in industry. These standards are applied to health care settings. The N-95 disposable particulate, air purifying, respirator is the type used most commonly by health care personnel. Other respirators used include N-99 and N-100 particulate respirators, powered air-purifying respirators with high efficiency filters; and non-powered full-face piece elastomeric negative pressure respirators. A listing of [NIOSH- approved respirators](#) is available. Respirators must be used in conjunction with a complete respiratory protection program, as required by the Occupational Safety and Health Administration that includes fit testing, training, proper selection of respirators, medical clearance and respirator maintenance. The DHHS [Pandemic Influenza Strategic Plan, Part 2, Supplement 4](#) provides a full discussion about use of respirators for influenza.

Respiratory hygiene and cough etiquette: A combination of individual activities designed to minimize the transmission of respiratory pathogens via droplet or airborne routes. The components of respiratory hygiene/cough etiquette in the community are: (1) covering the mouth and nose during coughing and sneezing, (2) using tissues to contain respiratory secretions with prompt disposal into a waste receptacle, (3) turning the head away from others and maintaining spatial separation, ideally >3 feet, when coughing. In health care settings, an additional component is added. A surgical mask should be offered to individuals who are coughing to decrease contamination of the surrounding environment. In health care facilities, these measures are targeted to all patients with symptoms of respiratory infection and their accompanying family members or friends beginning at the point of initial encounter with a health care setting (e.g., reception/triage in emergency departments, ambulatory clinics, health care provider offices). The DHHS [Pandemic Influenza Strategic Plan, Part 2, Supplement 4](#) provides a full discussion about application.

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: Underserved groups of people including, but not limited to, those who are children, elderly, homeless, homebound, or geographically isolated; those who have varying cultural backgrounds, [limited English proficiency](#), or very low income; and those with physical, psychological, or cognitive disabilities who may be underserved in disasters.

Stakeholders: Public- or private-sector individuals and organizations that have a stake in or may be affected by a particular approach to managing an influenza pandemic in Texas.

Standardized mortality rate: A mortality rate that is weighted by applying current group-

specific rates to a standardized population distribution of that attribute (such as age) so the contribution from changes in population's distribution of the confounding attribute can be controlled and real changes to the mortality rate over time can be compared more accurately.

Strategic National Stockpile (SNS): The national repository of antibiotics, antivirals, vaccines, antitoxins, chemical antidotes, life-support medications, IV administration supplies, airway maintenance supplies and medical/surgical equipment items. 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 United States or its territories within 12 hours of a federal decision to deploy.

Surge capacity: The ability to respond to transient, sudden rises in demand for services following an incident; the ability of a health system to expand beyond normal operations to meet a sudden increased demand for service.

Surveillance: Systematic collection, analysis, interpretation, and dissemination of health data on an ongoing basis; the documentation of patterns of the occurrence of and potential for adverse health conditions. Surveillance provides essential information that enables health departments to plan and implement effective, efficient prevention and control efforts locally, statewide, and nationally.

Syndromic Surveillance: Monitoring changes in expected patterns in markers (e.g., increased sales of cold and flu medications from pharmacies, increase in diarrheal illness in infants) that might indicate an increase in some currently unidentified disease. Syndromic surveillance is broader than other types of surveillance in that investigators typically focus on changes in patterns for sets of symptoms which could indicate a range of diseases rather than a specific disease.

Vaccine: Any biologically derived substance that brings about a protective immune response when given to a susceptible host.

Vendor-managed inventory: 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) order pharmaceuticals directly from distributors.

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

- **Employee on voluntary assignment:** A state agency employee who, with written supervisory approval, volunteers to provide and is subsequently tasked to perform a task outside the standard job description during a state and/or federal emergency. The employee may be considered as being on temporary assignment (HHSC Human Resource Manual, Chapter 3) to perform disaster assistance duties.

Vulnerable population: groups whose needs are not fully addressed by traditional service providers and who may have difficulty safely accessing and using the standard resources offered in disaster preparedness, relief and recovery. They include, but are not limited to, those who are visually, hearing, cognitively, or physically impaired; have limited English or are non-English speaking; are geographically or culturally isolated; medically or chemically dependent; have a

Glossary

low income or are homeless; the frail, the elderly and children.

WebEOC: Web Based Emergency Operations Center is the original web-enabled crisis information management system and provides secure real-time information sharing to help managers make sound decisions quickly. Originally developed for public safety and emergency management officials, WebEOC is now also used also for routine operations in private corporations, public utilities, domestic and international airlines, healthcare associations, and universities, as well as by government at every level--city, county and state agencies nationwide and NASA, EPA, and other federal agencies within the Departments of Defense, Energy, Agriculture, and Health & Human Services.

Web-based Communications Systems. Communication systems accessed through the Internet. Examples include [PHIN](#), [WebEOC®](#), [EMResource™](#), [EMSystems®](#), [Immtrac®](#).

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END NOTES

ⁱ Composition of the Pandemic Response Team has not been determined.

ⁱⁱ The Pandemic Influenza Lead has not been named.

ⁱⁱⁱ The template includes

- Mass clinic flow template
- Job action sheets (staffing duties)
- Provisions for [limited English proficiency](#) interpreter services
- Vaccine and antiviral distribution system
- Protocols for proper storage of vaccines and antivirals
- Suggested list of supplies needed for clinic operations
- Other materials as necessary

^{iv} To access the template please log on to the PHIN, enter the document sharing folder, and it will be located in the SNS folder. If you have trouble accessing the file, please contact your PHIN administrator for assistance.

^v Check with the HHSC to obtain lists of participants in such programs as:

- Medicaid long term care
- Community Based Alternatives
- Community Attendant Services
- Community Living Assistance and Support Services
- Deaf-Blind/Multiple Disabilities Program
- Home and Community-Based Services
- Medically Dependent Children Program
- Texas Home Living Waiver
- Hospice

^{vi} Access: 1) Locating clinics on public transportation routes; 2) Locating services in at-risk communities, and 3) Co-locating clinics with safety-net programs. Language: 1) Ensure pertinent documents and educational materials are culturally appropriate and available in dominant languages spoken throughout the jurisdiction; 2) Ensure educational materials and media announcements also address the needs for persons who are visually and hearing challenged; 3) Ensure availability of just-in-time translation services for languages spoken within the jurisdiction, but are not considered common; and 4) Ensure health related services have staff available with appropriate language skills.

^{vii} Barriers to vaccination (e.g., culture, disability, rural or [frontier](#) location, immigration status, and damage to infrastructure)

^{viii} The unauthorized Mexican migrant population in Texas is estimated at 1.54M (Passel, 2005). Other unauthorized

migrants come mostly from El Salvador, Guatemala, Columbia, Honduras, China, and Ecuador. Unauthorized migrants from any country are entitled to public health assistance (not including any assistance under Title XIX of the Social Security Act [42 USC 1396 et seq.]) for immunizations with respect to immunizable diseases and for testing and treatment of symptoms of communicable diseases whether or not such symptoms are caused by a communicable disease (8USC1611, paragraph b.1.C).

^{ix} The DSHS publication, [*Communicable Disease Control Measures In Texas, A Guide for Health Authorities in a Public Health Emergency*](#) (April 2004) summarizes these issues.

^x The primary point of contact will be DSHS DMDG, which 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. The SNS Push Pack and VMI will be secondary sources of supplies.

^{xi} Although influenza vaccination levels increased substantially during the 1990s, further improvements in vaccine coverage levels are needed, chiefly among individuals aged <65 years who are at increased risk for influenza-related complications among all racial and ethnic groups, among Blacks and Hispanics aged ≥65 years, among children aged 6–23 months. Season 2003-2004 coverage levels among selected groups were as follows: children 6–23 months old (48%), children 2–17 years old with one or more medical condition (35%), pregnant women without underlying medical conditions (13%), Blacks (48%), Hispanics (45%), adults 19–49 years old with underlying medical conditions (24%), adults over age 50 with chronic underlying medical conditions (46%), and adults over age 65 (66%) (MMWR, 7/29/05). The goal for vaccination coverage is 90% for adults over age 64, 60% for adults aged 50–64, and 60% for anyone at high risk who is younger than 50 years of age.

- 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.
- Distribute written materials developed in coordination with the Communications Unit in the Center for Consumer and External Affairs to health care providers that include a summary of the most current year's influenza vaccine recommendations issued by the Advisory Committee on Immunization Practices (ACIP); suggestions on strategies that have been successful in reaching special populations; and listing of other resources to help promote and deliver adult vaccines. Include information on expected physiological and emotional impact as well as treatment recommendations.

^{xii} Currently in development by the Funeral Director's Association and Texas Funeral Commission.

^{xiii} Institute of Medicine. *Hospital-based Emergency Care: At the Breaking Point*. Washington: National Academies Press, 2006.