

PANDEMIC INFLUENZA RESPONSE PLAN

I. Purpose

The purpose of this plan is to provide effective guidelines for response to a Pandemic Influenza event in the City of Plano. This plan is patterned after Collin County Health Care Services, Texas Department of State Health Services and U.S. Department of Health and Human Services Pandemic Influenza Plans. Hard copies of each plan are available in the Plano Health Department or may be viewed on individual agency web sites provided in Section III below.

II. Goals

The goals of the Pandemic Influenza Plan are to identify local (COP) organization, operational concepts, responsibilities and procedures to accomplish a coordinated public health and medical services response to a pandemic event. Additionally, to reduce human exposures, hospitalizations, mortality and morbidity by activation of this plan and through effective communications, provide timely, factual information to the public to minimize community disruption.

III. Explanation of Terms

A. Acronyms

ACF	Alternate Care Facility
CDC	Centers for Disease Control
CCHSC	Collin County Health Care Services (www.co.collin.tx.us/healthcare_services)
COP	City of Plano
DHSH	Department of State Health Services (www.dshs.state.tx.us)
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
HAN	Health Alert Network
HEICS	Hospital Emergency Incident Command System
HEPA	High Efficiency Positive Airflow
HLS	Homeland Security Department
ICS	Incident Command System
ILI	Influenza-Like Illness
NIMS	National Incident Management System
PHIN	Public Health Information Network
PPE	Professional Protective Equipment
USHHS	U.S. Department of Health and Human Services (www.hhs.gov)

B. Definitions

1. Alternate Care Facility. A medical location, other than a hospital, in the City of Plano that can serve as an alternate facility for treating persons exposed to avian influenza.
2. Hospital Emergency Incident Command system. An existing incident command structure utilized at local hospitals by medical and non-medical staff to provide a coordinated response to emergencies.
3. High Efficiency Positive Airflow. Referring to the direction of air circulation in hospital patient isolation rooms for patients who are contained due to spreading of infectious diseases to medical and non-medical personnel.
4. Influenza-Like Illness. Signs and symptoms that resemble influenza illness without receiving confirmation of the illness.

IV. SITUATIONS AND ASSUMPTIONS

A. Situation

1. “ An influenza pandemic occurs when a new influenza virus appears against which the human population has little or no immunity, begins to cause serious illness and then spreads easily person-to-person worldwide.” (www.pandemicflu.gov)
2. An influenza pandemic, from which there is no immunity and for which preventive vaccines are not available will increase hospitalizations and possibly deaths. Influenza virus is a highly contagious respiratory virus that is responsible for annual epidemics in the United States and other countries.
3. Historically, three influenza pandemics have occurred in the last century. In 1918, the Spanish influenza (H1N1), killed an estimated 500,000 people in the United States with a worldwide mortality of approximately 20-50 million. In 1957-58, Asian influenza (H2N2), first identified in China, caused roughly 70,000 deaths in the U.S. Because this strain has not circulated in humans since 1968, no one under 30 years old has immunity to this strain. In the 1968-69 Hong Kong pandemic, virus (H3N2), first detected in Hong Kong resulted in approximately 34,000 deaths in the U.S. H3N2 viruses still circulate today. (National Institute of Allergy and Infectious Diseases, National Institute of Health)

4. Influenza A and B are known to continually undergo antigenic *drift*. Antigenic drift is gradual change in viral genes and is the reason for changes in influenza vaccine on a yearly basis. Antigenic *shift* is a sudden change in the genetics of influenza A or B virus-the majority of which are almost always followed by pandemics.
5. Prevention and control of pandemic influenza hinges on surveillance of the genetic characteristics of circulating viruses, effective control measures, infection control programs and community education and cooperation.
6. A pandemic public health emergency could result in the disruption of business, schools and food service, instill public fear and panic, and result in serious medical and health risk in addition to other situations that adversely affect the daily life of our citizens.
7. This type of pandemic could result in loss of life with potential for mass fatalities, especially among the most vulnerable, namely the elderly, immuno-compromised individuals and children.
8. Hospitals, nursing homes, ambulatory services facilities, pharmacies and other facilities for medical and health care, may be overwhelmed with capacity and staffing concerns.
9. Health and medical facilities expected to handle such a public health emergency, may be unable to operate normally because of a lack of staff due to personal or family exposures.
10. A pandemic could produce a large number of exposures in high risk populations that could overwhelm the city, county and state health and medical system.
11. Emergency responders, medical providers and special needs caregivers who are affected by emergency situations may experience stress, anxiety, and display other physical and psychological symptoms that may adversely impinge on their daily lives. Disaster crisis counseling services may be needed.
12. During a pandemic, health and medical services are essential. Protocol for such services is outlined in Annex H of the City of Plano Emergency Action Plan.
13. Influenza currently causes 36 to 40,000 deaths and more than 250,000 hospitalizations per year in the United States.

B. Assumptions

1. A “new” influenza virus emerges.
2. The “new” virus infects and causes serious illness in humans.
3. Susceptibility to the pandemic influenza subtype will be universal.
4. The “new” virus spreads easily and sustainably from human to human. Of those who become ill, 50 to 65% will seek outpatient care.
5. The clinical disease attack rate is estimated to be approximately 30% in the overall population. Illness rates are anticipated highest among school-aged children (about 40%) and decline with age. An average of 20% of working adults will become ill during a community outbreak.
6. Risk groups for severe and fatal infections cannot be predicted with certainty.
7. The typical incubation period for influenza is 2 days.
8. Persons who become ill may shed the virus and can transmit infection for 1 to 1-½ days before onset of illness. Viral shedding and the risk for transmission will be greatest during the first 2 days of illness. Children will shed the greatest amount of virus and are likely to pose the greatest risk for transmission.
9. On average, about 2 secondary infections will occur as a result of transmission from someone who is ill.
10. A pandemic outbreak will last about 6-8 weeks in a community. At least two pandemic waves are likely to occur. Following the pandemic, a new viral subtype is likely to continue to circulate and contribute to seasonal influenza.
11. The seasonality of a pandemic cannot be predicted with certainty. The largest waves in the U.S. during 20th century pandemics occurred in the fall and winter.

C. Impact on the City of Plano

The following estimates are based on extrapolations from past pandemics in the United States. Extrapolations do not consider medical advances, vaccination, antivirals, sanitation or hygienic interventions not available in the 20th century. Estimates provided are categorized as “severe” and “moderate” with the following assumptions:

1. 6.5 billion global population
2. 286 million U.S. population
3. 250,000 Plano population
4. 2,000 City of Plano workforce

**“Severe” Level
Statistical Extrapolations
USA/Plano/City of Plano**

	USA	Plano	C.O.P.
(a) Morbidity (#sick)	85,800,000	75,000	600
(b) Morbidity Rate	30%	30%	30%
(c) Hospitalizations 11% of (a)	9,438,000	8,290	66
(d) Mortality (#dead)	1,801,800	1,575	13
(e) Mortality Rate (.021 x a)	2.1 %	2.1 %	2.1 %

**“Moderate” Level
Statistical Extrapolations
USA/Plano/City of Plano**

	USA	Plano	C.O.P.
(a) Morbidity (#sick)	85,800,000	75,000	600
(b) Morbidity Rate	30%	30%	30%
(c) Hospitalizations (11% of (a))	9,438,000	7,500	60
(d) Mortality (#dead)	199,246	173	< 2
(e) Mortality Rate (.002 x a)	0.2 %	0.2 %	0.2 %
(f) Economic Impact (\$3931/pp)	\$166 B	\$144 M	?

City of Plano, High risk for complications of influenza as estimated using Flu Aid:

	0-18 yrs	19-64 yrs	65+yrs	Total	%Total
Non-high risk	54,026	150,547	7,874	212,417	86%
High Risk	3,729	25,570	5,257	34,578	14%
Totals	57,755	176,117	13,123	246,995	100%

Individuals categorized as high risk are those who have a preexisting medical condition (e.g., asthma, diabetes mellitus) that makes them more susceptible to developing medical complications due to influenza. High risk does not mean that those persons are more likely to contract a case of influenza. It means that if they do have a case of influenza, then they are more likely to have an adverse health outcome (e.g., outpatient visit, hospitalization) than those considered non-high risk. (CDC)

V. Concept of Operations

A. General

The concept of operations will be based on the influenza pandemic phases outlined in the Health and Human Services Pandemic Influenza Plan (Appendix A). The Health and Human Services Pandemic Plan specifies that sustained human to human transmission anywhere in the world will be the triggering event to initiate a response by the United States. The City of Plano will be vigilant to monitor status of the federal, state and county response. Key actors in local response will be first responders, medical providers and city government.

B. When no human to human transmission is documented anywhere in the world. *Inter-pandemic Phase (New virus in animals, no human cases)*

1. City of Plano
 - i. Identify locations within jurisdiction where prophylaxis could be administered and locations where patients could receive medical care if hospitals were unable to accept patients.
 - ii. Sites that could be used as field hospitals or alternative care centers should be evaluated for proximity to advanced care, ability of traffic to move in and out of the facility, areas for loading patients and the ability to secure the site.
 - iii. City departments are required to compose a Pandemic Influenza Continuity of Operations Plan that encompasses plans for service delivery.
2. First responders, medical providers and hospitals
 - i. Remain vigilant to the presence of respiratory illness and practice respiratory hygiene as described by CDC's "Cover Your Cough" web page.
 - ii. When first responders transport febrile patients Personal Protective Equipment (PPE) consisting of universal precautions, mask and eye protection may be required by the EMS Medical Director. Masks do not need to be N95 unless specified for use against a novel pathogen.
3. Medical providers
 - i. Receive yearly influenza immunizations.
 - ii. Responsible to educate staff regarding transmission of respiratory infections and novel pathogens as they emerge and are described by investigating authorities.
 - iii. The importance of normal control procedures, PPE and immunizations / prophylaxis should be emphasized to office staff.
4. Hospitals
 - i. Continue to engage in surveillance for infectious processes.

5. Schools

- i. Continue to engage in surveillance of respiratory illnesses.
- ii. Unusual absenteeism or illness among students should be reported to the City of Plano Health Department.

C. Human to human transmission is reported by the CDC to be occurring outside the United States and no vaccination or prophylaxis is available. *New virus causes human case. Novel Virus Alert – Pandemic Alert – Pandemic Imminent (Preparedness Phase)*

1. City of Plano

- i. City departments are required to compose a Pandemic Influenza Continuity of Operations Plan that encompasses plans for service delivery. Plans should include details regarding operation of department with minimum staffing, necessary services, priority of services, and implementation procedures.
- ii. Educate stakeholders regarding transmission, prevention, and control of respiratory viruses.
 - 1. Identify key stakeholders – key stakeholders will be identified based on their role in the community, contribution to the organization or any party that has an interest or plays a key role in the distribution of materials, education, prevention and control of flu-like illnesses. Key stakeholders, hereafter referred to as “stakeholders”, at this time have been identified as, but are not limited to the following:
 - a. Schools
 - b. Medical care providers
 - c. Libraries
 - d. Nursing homes and skilled nursing facilities
 - e. Day care centers
 - f. Hospitals
 - g. General public
 - h. City of Plano employees
 - i. Business and industry
 - 2. Schools – provide information to school district and monitor/report absenteeism to city and county health authorities as listed:

Dr. Allan R. DeVilleneuve, M.D., City Health Authority
4112 West 15th Street
Plano, TX. 75093
972-612-5059

Dr. Muriel Marshall, Collin County Health Authority
Collin County Health Care Services
825 McDonald
McKinney, TX. 75069
972-548-5500 (McKinney) 972-424-1460, X.5500 (Metro)

3. Libraries – provide information for distribution at City of Plano libraries along with relevant websites for additional information.
 4. Nursing/Assisted Living facilities – provide information and monitoring/reporting procedures for high risk populations.
 5. Day care centers – provide relevant information for distribution to parents and care givers.
 6. Hospitals – provide information and monitoring/reporting procedures.
 7. General public – provide relevant information via website, news articles, local access cable, utility bill inserts and provide information for distribution from the Health Department office.
 8. City of Plano employees – provide relevant information via e-mail, and/or pamphlet.
- iii. Identify and estimate the number of special needs populations within the City.
1. Nursing Homes and Skilled Nursing Facilities – meet with staff to discuss modes of transmission, prevention, and control of respiratory illness.
 2. Senior Independent Living facilities – educational presentations for residents on modes of transmission, prevention and control of respiratory illness.
 3. Hospitals – meet with staff to discuss prevention, and control of respiratory illness.
 4. Day care facilities – meet with staff to discuss modes of transmission, prevention, and control of respiratory illness. Discuss surveillance methods.
 5. Group homes – meet with staff to discuss modes of transmission, prevention, and control of respiratory illness. Discuss surveillance methods.
- iv. Assess alternate care facilities; coordinate assessment with Collin County Health Care Services (CCHCS).
- v. Remain alert to potential outbreak illnesses among community members. Outbreaks of illness are mandated as immediately reportable to the local health authority and CCHCS.

D. Human to human transmission is occurring in the United States, not Texas or Collin County, no vaccination or prophylaxis available. *Pandemic (Response Phase)*

1. City of Plano Departments – review Pandemic Influenza Continuity of Operations Plan for Service Departments.
2. City of Plano Health Department
 - i. Educate stakeholders regarding transmission, prevention, and control of respiratory viruses. Staff will develop and coordinate accurate and timely information to the public regarding transmission, prevention, and control of respiratory viruses. Plano will work with Collin County Health Care Services regarding surveillance and data collection.

1. Schools – provide information to school district and monitor absenteeism through school nurses. Absenteeism due to flu-like illness parallels flu activity in the community at large.
2. Medical Care Providers - selected primary care providers, strategically located in representative geographic areas should be asked to report on flu-like illnesses that are seen.
3. Libraries – provide information for distribution at City of Plano libraries along with relevant websites for additional information.
4. Nursing Homes and Skilled Nursing Facilities - provide information and monitoring / reporting procedures for high risk populations. Ensure that prevention and control measures are in place. Re-enforce previous information provided.
5. Day care centers – provide relevant information for distribution to parents and care givers. Day care centers are not currently being solicited for information regarding flu. As surveillance activities are expanded, day care centers could provide additional information regarding flu in small children.
6. Hospitals – provide information and monitoring/reporting procedures. Hospitals in Plano will be asked to provide regular weekly totals of emergency department visits and hospitalizations related to influenza-like illness. A sudden surge in patients can be reported daily by phone to the City of Plano Health Department.
7. General public – provide relevant information via website, news articles, local access cable, utility bill inserts and provide information for distribution from the Health Department office. Community meetings provided at libraries, the municipal center and other public forums. These public meetings may include the health officer, health authority for the City of Plano or a representative from the medical community.
8. City of Plano employees – provide educational meetings at municipal offices for city employees. These meetings would include a representative from the Health Department or medical community for questions & answers.
9. Business and Industry – collect absenteeism data due to flu-like illness from those businesses that have employee health services.

E. When human to human transmission is occurring in the United States, not Texas or Collin County, and the federal or state government has recommended vaccination. *Pandemic (Response Phase)*

1. City of Plano
 - i. Service Departments - review Pandemic Influenza Continuity of Operations Plan for Service Departments and be prepared to activate plan.
 - ii. Family members of personnel who will work at dispensing sites or whose loved ones are required to work during administration of vaccine/prophylaxis to the general public are a priority group.
 - iii. Request immunization/prophylaxis doses through normal emergency management chains of command. Vaccine or prophylaxis for city employees can be administered by staff trained in medication/vaccine administration (e.g., EMS personnel under the supervision of a licensed medical doctor or the city Health Authority).
2. Stakeholders – continue to provide information and surveillance through key stakeholders as listed above.

F. When human to human transmission of a novel pathogen is suspected of occurring in a community setting in Texas or Collin County and antiviral prophylaxis is recommended if vaccine or antiviral medications are available. *Pandemic (Response Phase)*

1. City of Plano
 - i. Service Departments – *activate* Pandemic Influenza Continuity of Operations Plan for Service Departments.
 - ii. Family members of personnel who will work at dispensing sites or whose loved ones are required to work during administration of vaccine/prophylaxis to the general public are a priority group.
 - iii. Request immunization/prophylaxis doses through normal emergency management chains of command. Vaccine or prophylaxis for city employees can be administered by staff that has been trained in medication/vaccine administration (e.g., EMS personnel under the supervision of a licensed medical doctor or the city Health Authority).
2. Stakeholders – active involvement with stakeholders to increase surveillance and follow prevention and control measures established for each stakeholder.

VI. Direction and Control

A. General

1. The Health Officer (Director of Health Department), working as a staff member of the City of Plano emergency organization and supported by appropriate staff, shall direct and coordinate the efforts of local health and medical services, agencies, and organizations during a major pandemic flu outbreak where a coordinated response is required.
2. Routine health and medical services operations may continue during less severe emergency situations. Direction and control of such operations will be by those that normally direct and control day-to-day health and medical activities.
3. The Local Health Authority or his/her designee is responsible to investigate suspected incidents and outbreaks of communicable disease. Influenza is not currently a notifiable condition in Texas and reporting is voluntary, unless the governor declares a public health emergency.
4. Currently the Texas Health and Safety code specifies; "Any outbreak of exotic disease or unusual group expression of disease which may be of public health concern should be reported to the local health authority by the most expeditious means."
5. In an outbreak of illness caused by a novel influenza virus the health authority has broad power to impose control measures on individuals, property and carriers. Control measures for influenza may include limitations of movement among persons (quarantine of individuals, isolation of their contacts), administration of antiviral prophylactic medications and vaccination as it is developed and becomes available. Institution of control measures is coordinated with CCHCS and DSHS and ordered by the City of Plano Health Authority. State vaccination and priority guidelines will serve as a guide to the administration of vaccine and anti-virals.
6. External agencies providing health and medical support during emergencies are expected to conform to the general guidance provided by our senior decision-makers and carry out mission assignments directed by the Incident Commander or the EOC. However, organized response units will normally work under the immediate control of their own supervisors.

B. Incident Command System – EOC Interface

1. The Plano Health Department will utilize the National Incident Management System as specified in the emergency planning annexes to

respond to the needs of individuals and hospitals during an outbreak that requires resources not available at the local level.

2. If both the EOC and an ICP are operating, the Incident Commander and the EOC must agree upon a specific division of responsibilities for emergency response activities to avoid duplication of effort as well as conflicting guidance and direction. The EOC and the ICP must maintain a regular two-way information flow.
3. Once a pandemic alert has been issued locally, the Health Authority may activate an Incident Command Post (ICP). Upon activation of the ICP, the Public Information Officer (PIO) will assign staff to the ICP. The Health Officer will recommend to the Emergency Management Coordinator that an Emergency Operations Center (EOC) should be activated. The EMC will decide whether or not to activate the EOC. If the EOC is activated, the PIO should consider requesting a Joint Information Center (JIC) to be opened at the County Level to coordinate Public Information.

C. Key Activities:

1. The Incident Commander (Health Officer) will activate the Incident Command Post (ICP) if necessary.
2. The Emergency Management Coordinator will activate the Emergency Operations Center (EOC) if requested.
3. The Logistics Section Chief will monitor staffing needs and recruit additional staff, if necessary.
4. The Liaison Officer will ensure activities are coordinated with Dallas and Collin County and other neighboring jurisdictions and related federal, state and local agencies.
5. The Finance Section Chief will document expenses related to responding to a pandemic influenza outbreak.
6. The Planning Section Chief will ensure coordination of response activities with those of the local health departments and medical community.
7. The Operations Section Chief will coordinate activities and requests between the ICP and EOC.
8. The Public Information Officer will staff the ICP, EOC and JIC if applicable.
9. All section chiefs will report directly to the Emergency Management Coordinator; everyone else should report to their branch/section Supervisor.

D. Emergency Area Medical Coordination

1. In emergency situations involving damage to City of Plano medical facilities, each facility shall be responsible for determining its overall status and compiling a consolidated list of resources or services needed to restore vital functions. Each operating unit will report its status and needs to a single contact point designated by the facility. This contact should consolidate the data provided and report it to the Health and Medical staff within the ICP and/or EOC.
2. The Health Officer must be prepared to receive the consolidated requests and channel various elements of those requests to those local health and medical facilities as well as other departments, agencies, and organizations that can best respond. Requests for resources that cannot be obtained through normal sources of supply or through mutual aid by health and medical facilities outside the local area should be identified to the Logistics Section Chief in the EOC for action.

E. Line of Succession

To ensure continuity of health and medical activities during threatened or actual emergencies, the following line of succession is established for the Health Officer:

1. Brian Collins, Director of Health
2. Tomeji Miller, Health Manager
3. Sandra Long, Inspection Services Supervisor

VII. Resources/Supporting Information
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A. Potential City of Plano Community Resources

Personnel	Estimated Number
Primary Care Physicians	150
Physician Assistants	55
Registered Nurses	1250
Licensed Practical Nurses	280
Pharmacists	120
Medical-Radiology Technicians	175
First Responders – Fire/EMS	292
First Responders – Police	468
Public Works	153
Administrative Staff	120
Total Personnel	3063

Hospitals:

Baylor Regional Medical Center (BRMC) 4700 Alliance Blvd, Plano TX 75093 (469-814-2100)

Medical Center of Plano (MCP) 3901 W 15th St. Plano, 75075 (972-596-6800)

Presbyterian Hospital of Plano (PHP) 6200 Parker Road, Plano 75093 (972-981-8000)

Facility	Beds Total	ICU Beds	Isolation Rooms	Ventilators	Total Staff
BRMC	96	16	11	10	530
MCP	427	26	20	23	1,541
PHP	231	18	19		2,391

Alternative Care Centers:

Alternative Care Centers will be selected during the pandemic alert phase. Selection of alternative care centers will be coordinated with the city emergency planning staff. Alternative care centers will be assessed for ease of access by the general public, amenability to good infection control practices (including the ability to separate patients from one another), ability to secure the site and ease of transport of patients to facilities with higher levels of service. Potential alternative care centers include hotels, gymnasiums and other facilities that may have been identified as shelters in Annex H of the COP Emergency Action Plan.

Mortuary Services:

Mortuary Services will be coordinated by the City of Plano Health Authority, Collin County Health Care Services and Collin County Medical Examiner.

Morgue Capacity			
Facility	BRMC	MCP	PHP
Capacity	2	6	3

B. Department Responsibilities to Prepare for and/or Respond to a Pandemic Influenza Event

1. Develop a Continuity of Service Plan to address the following issues:
 - i. High absenteeism
 - ii. Continuity of core services
 - iii. Public safety
 - iv. Shift coverage
 - v. Economic loss
 - vi. Increased social demand
2. Get annual flu shot for all employees
3. Meet with Health Department to determine your role in the local plan
4. Inventory and maintain adequate supply of personal protective equipment including masks, gloves, disinfectant, etc.
5. Make sure your department is part of the information exchange throughout the process
6. Constantly monitor changes and communicate those of significance to your personnel

C. Potential City Actions in Response to a Pandemic Influenza Event

1. Stringent infection control
2. Bans on large gatherings
3. Isolation of symptomatic individuals
4. Prophylaxis of entire community
5. Information/education through PIO
6. School/Church closings
7. Collaborate with medical/service communities

D. Quarantine

1. Legal Authority. Texas Health and Safety Code, Section 81.085 provides legal authority for the local Health Authority to order a quarantine.
 - i. If the Health Authority has a reasonable cause to believe that an individual is ill with, has been exposed to, or is the carrier of a communicable disease, the department or Health Authority may order the individual, or the individual's parent, legal guardian, or managing conservator if the individual is a minor, to implement control measures that are reasonable and necessary to prevent the introduction, transmission and spread of the disease in the state.
 - ii. Quarantine order. (See appendix A)

E. WHO Pandemic Phases (See appendix B)

F. HHS Business Checklist (See appendix C)

VIII. Individual Preparedness

A. What Can Individuals (You) Do to Be Prepared

1. Get an annual flu shot for yourself and your family to reduce the chance of influenza infection
2. Understand how viruses are transmitted and practice prevention techniques at home and at work
3. Identify groups in your community that are at risk for influenza, as designated by the CDC
4. Practice good hand washing and cough hygiene at all times
5. Maintain and use all protective equipment and supplies when appropriate
6. Keep abreast of changes locally, regionally, nationally and worldwide
7. Be an ambassador for influenza health and information to your family and friends
8. Have a plan for your family if a pandemic occurs
9. Be prepared!

IX. Appendices:

Appendix A: Order Declaring An Area Quarantine

Appendix B: World Health Organization Pandemic Phases

Appendix C: HHS Business Checklist

Appendix D: Pandemic Flu Planning Checklist for Individuals and Families