Public Health-Dayton & Montgomery County
Pandemic Influenza Preparedness and Response Plan
for
Montgomery County, Ohio

Appendix 2
PHDMC Public Health Emergency Preparedness Plan

Public Health – Dayton & Montgomery County
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Foreword

An influenza pandemic is a public health threat that could overwhelm existing public health, public safety, and health care system infrastructures in Montgomery County, Ohio. Managing the human health consequences of an influenza pandemic will require coordination and collaboration among local response partners, and state and national assistance.

In July 2008, the current pandemic threat was associated with an outbreak of avian influenza and subsequent spread to several continents, caused by the H5N1 strain of the influenza "A" virus. It is not known whether the current circulating H5N1 virus will lead to a human pandemic. However, in 2009 H1N1 did cause the World Health Organization (WHO) to declare a pandemic. The widespread distribution of the virus and rapid and sustained person-to-person transmission is cause for public health concern and preparedness. Regardless of the strain, history and science suggest that new influenza "A" viruses will eventually emerge and result in another pandemic.

To prepare for an influenza pandemic, Public Health – Dayton & Montgomery County (PHDMC) has developed a *Public Health Pandemic Influenza Preparedness and Response Plan*. This plan serves as an appendix to the *Public Health Emergency Preparedness Plan for Montgomery County*. The plan presents the PHDMC's pandemic preparedness strategy, and outlines planning, response, and recovery actions

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I. Introduction

Influenza is an acute viral disease of the respiratory tract characterized by fever, chills, headache, nonproductive cough, sore throat, runny nose, and muscle aches. Influenza viruses are highly contagious and spread rapidly from person-to-person (primarily by droplet transmission), resulting in widespread morbidity. The incubation period for influenza is usually one to three days. Secondary viral and bacterial pneumonias in susceptible individuals are often associated with influenza, resulting in an estimated 36,000 deaths and 200,000 hospitalizations annually in the United States.

Pandemics are distinct from seasonal influenza epidemics, however, and rank as global public health emergencies. Pandemics, although rare, occur when a novel influenza A virus emerges through major changes in genetic composition (antigenic shift). Antigenic shift is a genetic change that enables a strain to jump the species barrier, and occurs by several mechanisms. An animal influenza A virus may directly infect humans, and then undergo subsequent genetic changes to sustain person-to-person spread. Similarly, the previous chain of infection may include an intermediate animal host prior to infection in humans. Alternately, exchange of gene segments between a human influenza A virus and an animal influenza A virus (genetic re-assortment) can result in a new human influenza A subtype that may demonstrate person-to-person transmission.

Protective immunity in the population does not exist following antigenic shift due to absence of past exposure to the strain. Novel subtypes may be transmitted globally within three to six months. Historically, three criteria are necessary for a global influenza pandemic:

- A novel subtype of human influenza A virus emerges;
- Human infection causes serious illness due to minimal population immunity;
- Rapid and sustained person-to-person transmission occurs.

Four influenza pandemics occurred within the 20$^{th\ ce}$ntury: the 1918 (H1N1) *"Spanish flu"*, the 1957 (H2N2) *"Asian flu"*, and the 1968 (H3N2) *"Hong Kong flu"* and the 2009 (H1N1) *"Swine Flu"*. Each of these influenza pandemics was associated with antigenic shift of influenza A virus. Table 1 lists human mortality associated with these influenza pandemics.

Table 1. 20th Century Influenza Pandemic Human Deaths

Year	Worldwide Deaths	United States Deaths
1918	20-40 million	500,000
1957	1-2 million	70,000
1968	700,000	34,000
2009*	18,449	

*The reported number of fatal cases is an under representation of the actual numbers as many deaths are never tested or recognized as influenza related

Pandemic influenza planning assumptions developed by the Centers for Disease Control and Prevention (CDC) for illness, health care utilization, and deaths are provided in Table 2. Montgomery County, Ohio data included in Table 2 were extrapolated from these CDC national data based on a 2005 U.S. Census population estimate of 547,435. These worst-case estimates are for planning purposes only, and should not be interpreted as predictive.

Table 2. Estimated Human Health Consequences Associated with Pandemic Influenza Scenarios in the United States

Human Health Consequence	1957 & 1968-like Scenario		1918-like Scenario	
	United States	**Mont. Co.**	**United States**	**Mont. Co.**
illness	90 million	162,000	90 million	162,000
outpatient care	45 million	81,000	45 million	81,000
hospitalization	865,000	1557	9.9 million	17,820
ICU care	128,750	232	1.485 million	2673
mechanical ventilation	64,875	117	745,500	1342
deaths	209,000	376	1.903 million	3425

*Human health consequences and United States data developed by CDC.

Local public health, public safety, and health care infrastructures are likely to be overwhelmed during an influenza pandemic due to the potential for significant illness/demand for essential services in the general population. In the absence of an adequate stockpile of vaccines, antiviral medication, and possibly antibiotics for secondary bacterial infections, the public health and health care workforces may not be able to implement prompt, effective preventive and therapeutic measures. Further, anticipated high absenteeism in critical positions in all workforces may result in a disruption of key resources and critical infrastructures (transportation, commerce, utilities, public safety, agriculture, and communications), limiting the provision of essential community services. For planning purposes, it is prudent to assume a temporal course of disease either consistent with or longer than seasonal influenza epidemics, which typically last three to six weeks.

A. Purpose

The purpose of the *Public Health Pandemic Influenza Preparedness and Response Plan* is to provide a coordinated community response to an influenza pandemic in Montgomery County to limit illness and death, preserve continuity of essential government functions, and minimize social disruption and economic losses. This document details PHDMC's preparedness activities, and response and recovery actions associated with an influenza pandemic.

The plan is intended to achieve the following objectives:

1. Outline public health preparedness activities prior to a pandemic;

2. Outline the command and coordination structure to be implemented among key response partners during a pandemic;

3. Outline roles and responsibilities for key response partners during a pandemic;

4. Outline public health interventions to be implemented by the PHDMC during a pandemic;

5. Serve as a guide for pandemic influenza plan development for health care system and RMRS partners.

B. Scope

This *Public Health Pandemic Influenza Preparedness and Response Plan* is an appendix to the *Public Health Emergency Preparedness Plan for Montgomery County*. The plan primarily outlines the roles, responsibilities, and activities of PHDMC, but also includes specific responsibilities for health care system and RMRS partners. For clarification, it is the responsibility of individual response partners to update internal emergency response plans with pandemic preparedness procedures and protocols.

II. Situations and Assumptions

A. Situation

1. Montgomery County is vulnerable to Pandemic Influenza events that result in large scale public health response.

2. For planning purposes, Montgomery County has a population of 547,435 (Census 2005 est.), with 29 political jurisdictions. The City of Dayton, with an estimated population of 160,293, is the most densely populated area in the county.

3. A large-scale public health emergency in Montgomery County will exhaust local resources.

4. Montgomery County's public safety force consists of approximately 3000 Fire/EMS personnel and law enforcement officers.

5. Health care demographics include six acute care hospitals, two specialty care hospitals, one pediatric hospital, and a Veteran's Affairs Medical Center.

6. Current isolation capacity for Montgomery County hospitals is 317 beds.

7. Effective preparedness and response to a public health emergency will require coordination and collaboration among public health, public safety, and health care organizations at the local, regional, state, and national level.

B. Assumptions

1. Infected individuals can transmit the virus before the onset of symptoms/illness. On average, an infected individual will transmit the virus to approximately two other individuals.

2. Multiple waves of infection/illness may occur in a community, each lasting six to eight weeks. Demand for urgent medical care services, and Emergency Medical Services may increase significantly.

3. The number of ill individuals needing outpatient medical care and hospitalization may overwhelm the local health care system. Prioritization criteria for limited health care services and resources may be needed. Medical standards-of-care for the public may be adjusted.

4. Influenza-related illness may occur in thirty percent of the Montgomery County population during an outbreak. Outpatient medical care may be needed for fifteen percent of the Montgomery County population, whereas four percent of the population may require hospitalization.

5. The health care system should expect an increase (25% or more) in demand for inpatient beds and assisted ventilators. The health care system may need to open alternate treatment sites to relieve demand on hospital Emergency Departments.

6. The number of influenza-related fatalities may overwhelm mortuary and burial services.

7. Demand for home care and social services may increase significantly. Individuals may need to assume responsibility for the care of family members with mild to moderate influenza symptoms at home due to limited health care system services and resources.

8. Antiviral medicines may be in short supply, and will be prioritized by PHDMC and health care partners for high risk groups.

9. A vaccine will likely not be available for six to eight months following the emergence of a new human influenza A subtype. PHDMC will distribute/administer available vaccine based on national and state guidelines.

10. Insufficient supplies of vaccines and antiviral medications will require social distancing strategies and public education to control the spread of disease in Montgomery County.

11. Social distancing strategies as an infection control measure may include the closure of schools, daycare centers and community centers, and cancellation of public events.

12. Limitations on movement (isolation and quarantine) recommendations and/or requirements will be established as needed by PHDMC.

13. Quarantine may be used as a disease containment measure during the early stages of an outbreak.

III. Concept of Operations

PHDMC is charged with the protection of public health and welfare, and has the authority to implement measures to prevent, suppress, and control infectious diseases within Montgomery County. PHDMC will be the lead agency in coordinating local pandemic influenza preparedness and response activities with regional, state, and federal partners as outlined in this document, the PHDMC *Public Health Emergency Preparedness Plan for Montgomery County*, and ESF#8 of the County Emergency Operations Plan. Public health interventions to limit the spread of disease will emphasize surveillance and investigation, social distancing measures, education and communication, and individual responsibility to reduce the risk of infection.

A. Command and Coordination

All local health departments within the West Central Region have adopted an ICS structure. These respective ICS structures are consistent with the structures outlined in the NIMS and NRP to facilitate coordination and communication of incident management activities at the local, regional, state, and national level.

To insure a consistent approach in the management of a Pandemic emergency, all Montgomery County response partners have adopted NIMS as the framework for preparation, prevention, response, recovery, and mitigation actions. Public health, public safety, and healthcare organizations have established internal ICS structures, and will collaborate with PHDMC during public health emergencies.

The Health Commissioner or his IMT representative will participate as the Public Health official during a county Unified Command response. After establishment of the overall incident objectives, the foremost responsibility is to formulate the initial public health response strategy. Following the development and implementation of the public health strategy, the Health Commissioner will then assume the role of lead command official pertaining to public health issues.

PHDMC has developed a *Continuity of Operations Plan(COOP)* to ensure to the extent possible the continuation of essential public health functions during a pandemic. As part of the COOP planning The Montgomery County Board of Health and PHDMC's Health Commissioner have established a line of succession for the agency. It is possible that they may suspend nonessential public health functions to direct available resources to pandemic-related response actions. All Divisions are included in the COOP and have identiferd essential functions which must be continued under any and all circumstances.

PHDMC's Office of the Health Commissioner has prioritized both essential and nonessential functions. All Division Directors have identified positions needed to implement essential functions, and will ensure that staff is cross-trained to fill these positions. Division Directors have also identified essential functions that can be performed via telecommuting or manual processes if information technology systems are not available. All Division Directors have established resource requirements for essential functions.

PHDMC's Office of Epidemiology and Emergency will train IMT staff quarterly to assure that staff is able to perform assigned tasks during an emergency. They will also participate in the RMRS planning process to assist health care system partners with medical surge capacity planning.

PHDMC's Office of the Health Commissioner will conduct community outreach to educate community partners, elected officials, news media, and the public about pandemic preparedness planning, the human health consequences associated with an influenza pandemic, and necessary public health interventions.

C. Crisis Communication

1. PHDMC's Public Information Officer will coordinate county-wide risk communications and public education during an influenza pandemic.

2. PHDMC's Emergency Preparedness Educator will disseminate printed and web-based pandemic preparedness planning information to staff, community partners, elected officials, and the news media.

3. PHDMC will use radio, television, and print media as needed to disseminate information on public health interventions.

4. PHDMC's Emergency Preparedness Educator will identify and conduct outreach to special needs and traditionally underserved populations to disseminate pandemic influenza educational messages.

5. PHDMC's Office of the Health Commissioner will promote and disseminate pandemic influenza preparedness planning information to community partners, county agencies, businesses, schools, and community-based organizations.

During pandemic phases 1-3:

2. PHDMC's Public Information Officer will assess the information needs of community partners, elected officials, news media, and the public.

3. PHDMC's Public Information Officer will develop a process for the exchange of pandemic-related information among health care system and RMRS partners.

4. PHDMC's Public Information Officer will assess the operational readiness of communications systems and equipment, including staffing and operating a public health information/call center.

5. PHDMC's Public Information Officer will establish a website for public access to up-to-date information on pandemic influenza.

6. PHDMC's Public Information Officer will intensify community outreach and education efforts, and disseminate pandemic preparedness planning information.

7. PHDMC's Public Information Officer will coordinate with all West Central Region local health departments to ensure regional consistency in public health messages.

During pandemic phases 4-6:

8. PHDMC's Public Information Officer will establish a county Joint Information Center (JIC) as needed for the coordination and dissemination of official public information.

9. Public Health, health care, and RMRS Public Information staff will collocate in the JIC to perform crisis communications.

10. PHDMC's Public Information Officer will ensure that information released from the JIC is accurate, easy to understand, consistent, and timely.

11. PHDMC's Public Information Officer will ensure that information released from the JIC instills and maintains public confidence in Montgomery County's ability to respond to and manage an influenza pandemic.

12. PHDMC's Public Information Officer will ensure that the Montgomery County JIC communicates and coordinates with JICs established in other West Central Region counties, and at other levels of government.

13. PHDMC will use the Ohio Public Health Communication System (OPHCS) and the Multi-Agency Radio Communication System (MARCS) radios as needed for communication.

14. PHDMC's Public Information Officer will establish a public information/call center as needed to address public concerns, rumors and inaccuracies, minimize public panic and fear, and facilitate compliance with public health interventions.

15. PHDMC's Public Information Officer will schedule media briefings as needed.

16. PHDMC's Communicable Disease Reporting staff will conduct communication briefings as needed with hospital emergency departments and infection control practitioners.

17. PHDMC's Health Commissioner will conduct communication briefings as needed with community partners and elected officials on the status of the pandemic and local response actions.

E. Epidemiological Surveillance

1. Ohio Administrative Code classifies influenza as a Class B infectious disease, and requires health care providers and laboratories to report the number of confirmed cases to the local health department by the close of each working week. During an influenza pandemic, PHDMC's Health Commissioner and Medical Director may reclassify the circulating virus strain as a Class A disease of major public health concern. This reclassification would require Montgomery County providers to report confirmed and suspect cases to PHDMC immediately by telephone.

2. During a pandemic, PHDMC's Communicable Disease Reporting staff and Epidemiology staff will enhance existing surveillance activities.

During pandemic phases 1-3:

3. PHDMC's Communicable Disease Reporting nurses and Epidemiology staff will continue to coordinate and communicate with the Ohio Department of Health.

4. PHDMC's Communicable Disease Reporting staff will:

    a. report the number and type of influenza to ODH by the close of each working week, including Type A, B, A/B per EIA and flu-like illness via the Ohio Disease Reporting System;

b. report weekly during influenza season the number and type of influenza cases, including number of deaths, by reporting agency and school district to designated PHDMC administrative personnel;
c. investigate all influenza-associated pediatric mortality;
d. request laboratories to send culture-positive influenza specimens to the ODH Laboratory for sub-typing;
e. continue to request all school districts to provide weekly data regarding illness when levels of absenteeism indicate a possible influenza outbreak;
f. maintain stocks of transport media used for influenza typing;
g. monitor school absences on a daily basis (24 hour lag time) throughout the school year;
h. continue to use the Real-Time Outbreak and Disease Surveillance System (RODS) to detect an increase in influenza-like illness cases being seen at participating West Central Region hospital emergency departments;
i. maintain communications with community physicians, hospitals and laboratories regarding influenza reporting;
j. increase the number of sentinel physicians reporting the number of patients presenting with influenza-like illness and the total number of patient visits by age group each week.

During pandemic phases 4-6:

5. PHDMC's Communicable Disease Reporting staff will:

a. alert community and hospital physicians, infection control practitioners laboratories, the coroner's office and Vital Statistics regarding increased surveillance and reporting criteria for influenza, case detection and laboratory testing based on ODH and CDC guidelines;
b. keep abreast of changing guidelines and new developments regarding virologic, epidemiologic and clinical information and will keep the medical community informed;
c. use the Health Alert Network and the Ohio Public Health Communication System to receive up-to-date information;
d. consider expanding enhanced surveillance to day care centers, long-term care facilities, and homeless shelters based on local epidemiologic data and state and federal guidance.
e. maintain communications with the coroner's office in investigating unexplained deaths and encouraging influenza testing;
f. initiate syndromic surveillance appropriate to the clinical signs and symptoms of the pandemic influenza-infected patients to maximize detection and identification of new cases;
g. gather relevant clinical data on individuals hospitalized with unexplained pneumonia, adult respiratory distress syndrome (ARDS), or severe respiratory illness AND who have traveled to countries where exposure to the novel influenza might occur.

F. Vaccine and Antiviral Medication

1. PHDMC's Office of Epidemiology and Emergency Preparedness will serve as liaison to the Ohio Department of Health to identify vaccine and antiviral medication availability.

2. PHDMC's Office of the Health Commissioner, in conjunction with community partners, will develop protocols consistent with national and state guidelines for the use of limited supplies of vaccine and antiviral medication. These protocols may be modified during successive phases of the pandemic based on the observed epidemiological characteristics of the pandemic influenza virus strain (Appendices A and B).

During pandemic phases 1-3:

3. PHDMC's Office of Epidemiology and Emergency Preparedness will develop a *West Central Region Strategic National Stockpile Plan* for the receipt and distribution of vaccine and antiviral medication if available.

4. PHDMC's Office of Epidemiology and Emergency Preparedness will develop a *Mass Vaccination Plan*.

5. PHDMC's Office of Epidemiology and Emergency Preparedness will develop operational plans for primary Points of Dispensing for the administration of vaccine to the public.

6. PHDMC's Office of Epidemiology and Emergency Preparedness, in conjunction with community partners, will identify essential response partners to be included in priority groups for vaccine and antiviral medication.

7. PHDMC's Office of Epidemiology and Emergency Preparedness will estimate the number of individuals in each priority group to receive vaccine and/or antiviral medication.

8. PHDMC's Immunization Program will ensure the operational readiness of the *Vaccine Management Plan*.

9. PHDMC's Immunization Program will coordinate vaccination planning with health care system providers.

10. PHDMC's Health Commissioner and Medical Director will coordinate with government officials and health care system partners regarding acquisition/stockpiling of antiviral medication.

11. PHDMC's Office of Epidemiology and Emergency Preparedness will continue to support the development of a volunteer Medical Reserve Corps to assist with

administration of vaccine and dispensing of antiviral medication at public health Points of Dispensing.

During pandemic phases 4-6:

12. PHDMC's Office of Epidemiology and Emergency Preparedness will implement the *West Central Region Strategic National Stockpile Plan* as needed to distribute available vaccine and antiviral medication.

13. PHDMC's Office of Epidemiology and Emergency Preparedness will implement the *Mass Vaccination Plan* as needed.

14. PHDMC's Immunization Program will implement cold chain management protocols as outlined in the *Vaccine Management Plan* during the transportation and storage of vaccine.

15. PHDMC's Immunization Program will track vaccine and antiviral medication doses.

16. PHDMC's Immunization Program will use the Vaccine Adverse Event Reporting System to track adverse reactions to the vaccine.

G. Isolation and Quarantine

1. The West Central Region RMRS Planning Committee will form a subcommittee to draft a *Limitations on Movement Plan* to be adopted by each local health department in the region.

2. The *Limitations on Movement Plan* will address legal issues and statutory authority, implementation, maintenance and removal, surveillance and monitoring, social support, and risk communication.

3. PHDMC's Office of Epidemiology and Emergency Preparedness will collaborate with the Dayton International Airport to develop procedures for the management of passengers requiring isolation, quarantine, or follow-up.

During pandemic phases 4-6:

4. Hospitals and other health care settings will implement standard and droplet precautions to prevent health care-associated disease transmission.

5. PHDMC will coordinate with community partners to ensure the availability of isolation and quarantine facilities, and support systems for patients.

6. PHDMC's Medical Director will coordinate with health care system partners to ensure that influenza patients are isolated in the appropriate setting based on medical necessity (hospital, acute care center, home).

7. PHDMC, in consultation with community partners, will implement aggressive nonmedical interventions, including the detection and isolation of cases, and quarantine of case contacts if appropriate.

8. PHDMC's Health Commissioner will direct individuals with influenza to remain in isolation in health care settings or at home to the extent possible.

9. PHDMC's Health Commissioner will direct contacts of cases to self-quarantine at home to the extent possible.

10. PHDMC's Health Commissioner will advise caregivers of individuals in isolation or quarantine to implement appropriate infection control precautions.

11. PHDMC, in conjunction with community partners, will shift the focus of nonmedical interventions to community-based measures (social distancing) to reduce the impact and to delay the spread of disease.

H. Social Distancing

1. PHDMC's Health Commissioner will issue county-wide directives to reduce person-to-person disease transmission by minimizing contact between infected and uninfected individuals.

2. Social distancing measures may include closing schools (public, private, community college, university), suspension of public events/gatherings, and implementing public and private sector Continuity of Operations Plans for emergency staffing, telecommuting, and flex scheduling (Appendix C).

3. Social distancing measures will be dependent on the availability of vaccine, the ability to immunize populations at risk, the observed characteristics of the virus strain, the observed mortality rate, transmissibility of the virus, the characteristics of the affected population, and other observed epidemiological characteristics.

During pandemic phases 1-3:

4. PHDMC's Office of the Health Commissioner will conduct outreach to elected officials, government leaders, school officials, community response partners, businesses, the news media and the public regarding the use of social distancing measures.

5. PHDMC's Health Commissioner will communicate with the Montgomery County Commissioners, the County Administrator, the City of Dayton Commissioners,

the City of Dayton Mayor and Manager, and executive heads of other cities, villages, and townships regarding necessary social distancing measures to limit the spread of disease.

6. PHDMC's Health Commissioner will collaborate with local school district superintendents, college/university presidents, and elected officials regarding school closings.

7. PHDMC's Health Commissioner will collaborate with the Montgomery County Commissioners, the County Administrator, the City of Dayton Commissioners, the City of Dayton Mayor and Manager, and executive heads of other cities, villages, and townships regarding the suspension of public gatherings, and closing stadiums, theaters, churches, community centers, and other facilities.

During pandemic phases 4-6:

8. PHDMC's Health Commissioner will issue county-wide social distancing directives commensurate with the severity of illness in Montgomery County (Appendix C).

9. PHDMC's Health Commissioner will monitor the effectiveness of social distancing measures in controlling the spread of disease, and will advise appropriate decision-makers regarding relaxation or termination of these measures.

I. Recovery

1. PHDMC's Office of the Health Commissioner will assist the Montgomery County Office of Emergency Management (MCOEM) with community-wide recovery efforts as applicable. They will support MCOEM, health care system partners, and the business community in assessing the economic impact of the pandemic.

2. PHDMC's Health Commissioner will assess the public health impact of the pandemic as measured by illness and death, and will report findings to all community partners. They will also provide recommendations on recovery actions to return the health care system and government functions to pre-event status.

3. PHDMC's Office of Epidemiology and Emergency Preparedness will make amendments to the *Public Health Pandemic Influenza Preparedness and Response Plan* based on corrective action items identified in the after-action evaluation.

IV. Roles and Responsibilities

A. Public Health – Dayton & Montgomery County

1. Coordinate county-wide pan-flu influenza preparedness with community partners.

2. Coordinate Montgomery County's public health response as outlined in Emergency Support Function #8 of the County Emergency Operations Plan.

3. Educate staff, community partners, news media, and the public about influenza pandemics, and necessary public health infection control measures.

4. Coordinate planning for and implementation of disease containment strategies.

5. Conduct epidemiologic surveillance to track the spread of human disease.

6. Implement public health infection control measures to limit the spread of disease, illness, and death.

7. Provide guidance to health care system partners on surveillance and infection control guidelines, case reporting, case management, and laboratory testing.

8. Support health care system medical surge planning.

9. Coordinate receipt and distribution of Strategic National Stockpile (SNS) assets.

10. Coordinate distribution and administration of vaccine and antiviral medication.

11. Coordinate the operation of Points of Dispensing (PODs) for mass vaccination.

12. Develop protocols consistent with national and state guidelines for the use of limited supplies of vaccine and antiviral medication (Appendices A and B).

13. Provide effective communications to staff, community partners, news media, and the public.

14. Establish and operate a Joint Information Center to ensure consistency of public health messages.

15. Coordinate information-sharing, and planning and response actions among Ohio West Central Region local health departments.

10. PHDMC's Office of Epidemiology and Emergency Preparedness may assist in coordinating the distribution of available vaccine and antiviral medication to health care system partners, and the vaccination of priority groups.

11. PHDMC's Health Commissioner may suspend nonessential public health functions and reassign staff to essential functions, which may include staffing Points of Dispensing for mass vaccination, and staffing a public health information/call center.

12. PHDMC's Medical Director may reassign staff with clinical training and licensure to alleviate staffing shortages among health care system partners in the event that vaccine and/or antiviral medication are not available and Points of Dispensing are not opened.

B. Health Care System Partners

1. Develop pandemic influenza response plans consistent with health care guidance in the Department of Health and Human Services' Pandemic Influenza Plan.

2. Develop plans for the provision of care in hospitals.

    a. surveillance
    b. communications and information-sharing
    c. education and training (staff, patients, and visitors)
    d. triage, clinical evaluation and admissions
    e. facility access
    f. occupational health
    g. use and administration of vaccines and antiviral medications
    h. surge capacity
    i. security
    j. mortuary issues

3. Develop plans for the provision of care in non-hospital settings.

    a. nursing homes/residential care facilities
    b. urgent care centers
    c. primary care facilities

4. Develop plans for the use of alternate care facilities.

    a. staffing
    b. bed capacity and separation of patients
    c. medical supplies and equipment
    d. safety and security

5. Develop and implement infection control plans to limit the spread of disease.

   a. personal protective equipment
   b. hand hygiene
   c. cleaning/disinfection of environmental surfaces
   d. handling laboratory specimens
   e. post-mortem care
   f. management of infectious patients

C. Montgomery County Office of Emergency Management

1. Will coordinate continuity of government planning and preparedness for county political jurisdictions.

2. Ensure prompt and efficient county emergency response and recovery.

3. Activate the county Emergency Operations Center as needed to coordinate emergency response and recovery activities.

4. Activate the Emergency Support Functions of the county Emergency Operations Plan as needed.

5. Manage and coordinate county emergency response and recovery resources.

6. Notify the Ohio Emergency Management Agency of the situation in Montgomery County.

7. Facilitate requests for state emergency management assistance as needed.

D. Ohio Department of Health

1. Coordinate statewide pandemic preparedness efforts.

2. Coordinate statewide virologic and disease surveillance activities.

3. Operate a CDC Laboratory Response Network public health reference laboratory for novel influenza virus testing.

4. Submit local health department epidemiologic data to CDC, and disseminate statewide data and situation updates.

5. Develop and implement statewide strategies to limit disease transmission.

6. Coordinate the receipt and statewide distribution of vaccines and antiviral medications in the Strategic National Stockpile.

7. Coordinate statewide emergency medical and other responses.

8. Establish a communication system to educate and inform local health departments, other state agencies, health care providers, news media, and the public.

V. Ongoing Plan Management and Maintenance

PHDMC's Office of Epidemiology and Emergency Preparedness is responsible for ongoing management and maintenance of the *Public Health Pandemic Influenza Preparedness and Response Plan*. The plan will be updated periodically as required to incorporate new directives/strategies, new information technology, legislative changes, and procedural changes based on lessons learned and best practices identified during exercises and actual events. A full review, update, and approval of the plan will be conducted annually. Revised plans will be distributed to all individuals, agencies, and organizations that hold copies.

VI. Authorities

A. State of Ohio

1. ORC Section 5923.21 authorizes the Governor to call-up by proclamation the Ohio National Guard to aid civil authorities acting in the event of a disaster to promote the health, safety and welfare of Ohio citizens.

2. The Ohio Emergency Management Agency is the central point of coordination within the state for response and recovery to disasters.

3. The Ohio Department of Health (ODH) has supervision of all matters relating to the preservation of the life and health of the people and has ultimate authority in matters of quarantine and isolation, which it may declare and enforce, when neither exists, and modify, relax, or abolish, when either has been established. Whenever possible, the ODH shall work in cooperation with the health commissioner of a general or city health district, and may make and enforce orders in local matters when an emergency exists, or when the board of health of a general or city health district has neglected or refused to act with sufficient promptness or efficiency (ORC Section 3701.13).

4. The Director of Health shall investigate or make inquiry as to the cause of disease or illness, including contagious, infectious, epidemic, pandemic, or endemic conditions, and take prompt action to control and suppress it (ORC Section 3701.14).

7. Boards of health of a general or city health district, health authorities and officials, officers of state institutions, police officers, sheriffs, constables, and other officers and employees of the state or any county, city, or township, shall

enforce quarantine and isolation orders, and the rules the Department of Health adopts (ORC Section 3701.56).

B. Montgomery County Administrator

1. The County Administrator, the chief operating officer for the County, reports directly to the County Commissioners and is responsible for continuity of county government functions.

2. The County Administrator, under the direction of the Board of County Commissioners, shall perform any or all functions conferred or incumbent upon the Board of County Commissioners in the case of a disaster or emergency, provided that the board, by resolution, has delegated the specific functions or all of the functions to the Administrator (ORC Section 305.30). Disaster and emergency have the same meanings as in Section 5502.21 of the Revised Code. The specific functions delegated to the County Administrator, as listed in ORC Section 5502.21, are civil defense, emergency management, and emergency preparedness/Homeland Security actions.

3. The Montgomery County Board of County Commissioners has authorized the delegation of specific emergency powers to the County Administrator (County Resolution 03-1377).

C. Municipalities

ORC Section 715.37 authorizes any municipal corporation to:

a. provide for the public health;
b. secure the inhabitants of the municipal corporation from the evils of contagious, malignant, and infectious diseases;
c. purchase or lease property or buildings for pesthouses;
d. erect, maintain, and regulate pesthouses, hospitals, and infirmaries.

D. Montgomery County Board of Health

1. The Board of Health is authorized to study and record the prevalence of disease within its district, to provide for the prompt diagnosis and control of communicable diseases, and to take such steps as are necessary to protect the public health and to prevent disease (ORC Section 3709.22).

2. The Board of Health may make such orders and regulations as are necessary for its own government, for the public health, and for the prevention or restriction of disease. In cases of emergency caused by epidemics of contagious or infectious diseases, or conditions or events endangering the public health, the Board of Health may declare such orders and regulations to be emergency measures, and

such orders and regulations shall become effective immediately (ORC Section 3709.21).

3. The Board of Health has specific authority pertaining to the control of dangerous communicable diseases as listed in the Revised Code, including quarantine and isolation, inspection and/or destruction of property, disposal of contaminated bodies, closure of schools, and prohibition of public gatherings (ORC Sections 3707.04 to 3707.26).

4. The Board of Health may seize, occupy, and temporarily use for a quarantine hospital a suitable vacant house or building within its jurisdiction (ORC Section 3707.31).

E. Montgomery County Health Commissioner

1. The Health Commissioner is the executive officer of the Board of Health, and is authorized to carry out all orders of the board and of the Ohio Department of Health (ORC Section 3709.11)

2. Quarantine and isolation authority granted to the Board of Health by the Ohio Revised Code has been delegated to the Health Commissioner by Resolution #00-096 when the Health Commissioner finds that: (a) a threat to the public exists; or (b) the action is necessary to administer the provisions of ORC 3707.04 to 3707.32; and (c) circumstances have rendered a meeting of the board impractical or impossible; or,(d) delaying action until a meeting of the board would compromise the public health.

Appendix A Priority Groups for Vaccination

Appendix B Priority Groups for Antiviral Medication

Appendix C Implementation of Social Distancing Measures

Appendix D Public Health Interventions

Appendix E Pandemic Phases

Appendix A

Per State guidelines at time of Incident

Appendix B

Per State guidelines at time of Incident

Appendix C
Implementation of Social Distancing Measures

Phase	Influenza Activity in Montgomery County	Possible CHDMC Response Actions
3	No novel influenza virus cases in the United States	○ preparedness planning with community partners ○ continuity of operations planning ○ community outreach and public education
4	Limited person-to-person transmission of novel influenza virus outside the United States; local cases begin to appear in Montgomery County with clear epidemiologic links to other cases	○ isolation of cases ○ quarantine of close contacts ○ advise residents to defer travel to affected countries/areas
4	Limited person-to-person transmission of novel influenza virus in Montgomery County; local cases appear without clear epidemiologic links to other cases	○ isolation of cases ○ quarantine of close contacts ○ advise residents to defer travel to affected countries/areas ○ advise residents to avoid close contact with other persons to the extent possible
5	Sustained novel influenza virus transmission in Montgomery County with a large number of cases identified	○ isolation of cases ○ closing public and private schools and daycare centers ○ limiting social interaction at community colleges and universities ○ public and private sector implementation of continuity of operations plans
5	Rate of infection continues to increase in Montgomery County	o suspension of public gatherings ○ closing stadiums, theaters, churches, community centers, libraries, and other facilities o recommend use of public transit only for essential travel
6	Rapid and sustained novel influenza virus activity in Montgomery County with county-wide impact	○ suspension of county government functions not involved in pandemic response

Appendix D
Public Health Interventions

Intervention	Phases 1-3	Phase 4	Phase 5	Phase 6
Public outreach/education campaign				
Detection and isolation of influenza cases				
Support of travel advisories issued by the WHO and CDC				
Quarantine of close contacts of cases				
Advise residents to defer travel to affected countries/areas				
Public and private sector implementation of continuity of operations plans				
Suspension of public gatherings				
Closing public and private schools, community colleges, and universities				
Recommend use of public transit only for essential travel				
Closing stadiums, theaters, churches, community centers, libraries, and other facilities				
Suspension of county government functions not involved in pandemic response				

PHDMC will implement interventions in red font
PHDMC will consider interventions in yellow font

Appendix E
Pandemic Phases and action steps

To facilitate coordinated planning and response within Montgomery County, PHDMC's *Public Health Pandemic Influenza Preparedness and Response Plan* utilizes the pandemic phases of disease progression defined by the World Health Organization (WHO). A list of these phases and priority public health goals as outlined in the WHO global influenza preparedness plan is provided in Table 3.

Category-specific PHDMC actions to be implemented for each pandemic phase are listed in Table 4. The intensity of these actions is dependent on whether or not cases have been identified in Montgomery County.

Table 3. World Health Organization Pandemic Phases

Pandemic Phase	Public Health Goals
INTERPANDEMIC PERIOD	
Phase 1 No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.	Strengthen influenza pandemic preparedness at the global, regional, national and sub-national levels.
Phase 2 No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs.
PANDEMIC ALERT PERIOD	
Phase 3 Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	Ensure rapid characterization of the new virus subtype, and early detection, notification and response to additional cases.
Phase 4 Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.
Phase 5 Large cluster(s) but human-to-human spread is still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Maximize efforts to contain or delay spread to possibly avert a pandemic, and to gain time to implement pandemic response measures.

PANDEMIC PERIOD ***Phase 6*** Pandemic: increased and sustained transmission in general population.	Minimize the impact of the pandemic.

Table 4. Pandemic Influenza Public Health Actions

INTERPANDEMIC PERIOD (Phases 1 and 2)	
No new influenza virus subtypes have been detected in humans	
Planning and Coordination	1. Establish a Pandemic Influenza Planning Committee. 2. Stress the importance of pandemic preparedness planning to key stakeholders/decision-makers. 3. Develop and update a Pandemic Influenza Preparedness Plan consistent with WHO and Department of Health and Human Services guidance. 4. Assist local health care system partners, response agencies, elected officials, the business community, schools and community-based organizations with pandemic preparedness planning aimed at maintaining the provision of health care services, sustaining essential community services, and limiting the spread of disease. 5. Exercise Pandemic Influenza Preparedness Plan and use after-action report and corrective action plan to improve and refine plan.
Situation Monitoring and Assessment	1. Develop county-wide disease surveillance programs, coordinated with state, federal, and international efforts, to detect pandemic influenza strains in humans and animals. 2. Conduct routine influenza surveillance to monitor for disease incidence. 3. Coordinate with the Ohio Department of Agriculture and local veterinarians on veterinary surveillance. 4. Assess burden of seasonal influenza to help estimate additional resources needed during a pandemic.
Prevention and Containment	1. Establish guidelines and/or protocols for nonmedical public health infection control measures. a. hand and respiratory hygiene b. quarantine and isolation, limitations on movement c. social distancing 2. Develop a *Mass Vaccination Plan*. 3. Develop priorities and criteria for vaccine and antiviral medication use.

Health System Response	1. Assist health care system partners with pandemic preparedness planning. a. triage and pre-hospital treatment b. medical surge c. patient transportation d. patient tracking e. medical supplies, equipment, hospital beds f. pharmaceutical stockpiles g. staffing 2. Develop infection control guidelines, and case-reporting and treatment procedures in conjunction with health care system partners.
Communications	1. Ensure PHDMC *Crisis Communication Plan* is adequate for pandemic needs (attached). 2. Develop mechanisms for rapid dissemination of pandemic-related information to news media, the public, community partners, and staff. 3. Develop and archive pre-scripted public health messages 4. Disseminate pandemic preparedness planning information to staff, community partners, news media, and the public. 5. Ensure operational readiness of a public health call center.
PANDEMIC ALERT PERIOD (Phases 3, 4, and 5)	
Human infections with a new virus subtype, but person-to-person transmission is localized	
Planning and Coordination	1. Brief key government officials regarding incident status, and the potential need for resource support, public health interventions, and the use of emergency powers. 2. Provide assistance to community partners in implementing public health interventions. 3. Ensure regional collaboration and coordination regarding information-sharing and emergency response. 4. Ensure public health continuity of operations. 5. Finalize preparations for a pandemic.
Situation Monitoring and Assessment	1. Continue routine influenza surveillance. 2. Receive reports of unusual, novel, or avian influenza from health care infection control personnel, and make recommendations for testing, infection control precautions, and treatment. 3. Conduct case-based investigation and contact tracing for confirmed or suspected avian influenza/novel subtype cases. 4. Conduct enhanced surveillance for respiratory disease.

Prevention and Containment	1. Isolate and monitor cases that meet the CDC criteria for avian influenza or a novel subtype. 2. Manage close contacts of cases and suspect cases through monitoring or quarantine. 3. Assess effectiveness of isolation and quarantine in preventing disease spread. 4. Develop and distribute avian and pandemic influenza infection control guidance to health care system partners. 5. Develop recommendations for personal protective equipment. 6. Inform health care system partners about confirmed and suspect avian influenza case definitions, and make recommendations for clinical and laboratory evaluation. 7. Stress to health care system partners the urgency of reporting avian and pandemic influenza cases. 8. Communicate with the ODH Laboratory and health care system partners to facilitate testing of specimens for novel influenza. 9. Review priorities and criteria for vaccine and antiviral medication use (Appendices A and B). 10. Reassess operational readiness of the *Strategic National Stockpile Plan* and the *Mass Vaccination Plan*.
Health System Response	1. Assist health care system partners with medical surge plans. 2. Assist health care system partners with Modular Emergency Medical System planning. a. neighborhood emergency help centers b. acute care centers 3. Reinforce implementation of infection control guidance. 4. Reinforce messages to health care system partners to consider influenza infection in ill patients. 5. Assist mortuary and burial services with surge plans. a. body recovery from homes b. temporary morgue processing centers c. temporary cemeteries
Communications	1. Implement relevant section of the PHDMC *Crisis Communication Plan*. 2. Review and update pandemic preparedness planning materials for staff, community partners, news media, and the public. 3. Assess operational readiness of communications systems and equipment. 4. Ensure the Montgomery County Health Alert Network directory is up-to-date. 5. Reinforce key messages on public health interventions.

	6. Reinforce individual and family preparedness. 7. Reemphasize infection control measures in the community, health care settings, and long-term care facilities. 8. Ensure consistency of messages among community partners. 9. Advise community partners and the public of a possible rapid progression of events, including societal disruption. 10. Ensure regional consistency for public health messages.
PANDEMIC PERIOD (Phase 6)	
Pandemic: increased and sustained transmission in general population	
Planning and Coordination	1. Provide leadership and coordination to limit illness and death, preserve health care system effectiveness, and minimize societal disruptions and economic impacts. 2. Evaluate effectiveness of response actions and public health interventions. 3. Implement all relevant components of *Emergency Preparedness Plan* and *Pandemic Influenza Preparedness and Response Plan*. 4. Invoke the use of emergency powers as needed. 5. Continue collaboration and coordination with regional, state, and federal partners.
Situation Monitoring and Assessment	1. Continue enhanced surveillance measures. 2. Implement mortality surveillance. 3. Identify cases/contacts, and track initial geographic spread. 4. Monitor for possible changes in epidemiology and clinical presentation. 5. In conjunction with the Montgomery County Office of Emergency Management, monitor and assess impact to Montgomery County. a. illness and death b. workplace absenteeism c. medical surge d. continuity of essential government operations 6. Assess the need for emergency measures regarding respectful care and disposition of the deceased. 7. Assess vaccine/antiviral efficacy and safety (if available). 8. Identify the most effective surveillance and infection control measures for subsequent waves. 9. Evaluate resource needs for subsequent waves.
Prevention and Containment	1. Limit illness and death through the use of nonmedical public health interventions, and vaccine and antiviral medication (if available). 2. Adjust public health guidelines and recommendations,

	including priority groups for vaccine/antivirals based on local epidemiologic data and state and federal guidance (Appendices A and B). 3. Update health care system partners on changes in infection control guidance. 4. Implement *Strategic National Stockpile Plan* and *Mass Dispensing and Vaccination Plan* dependent on vaccine availability. 5. Manage vaccine/antiviral acquisition, allocation, distribution, and storage.
Health System Response	1. Assist health care system partners in implementing medical surge plans. 2. Assist health care system partners in implementing Modular Emergency Medical System plans. 3. Reinforce implementation of infection control guidance. 4. Reinforce messages to health care system partners to consider influenza infection in ill patients. 5. Assist mortuary and burial services in implementing surge plans.
Communications	1. Activate a Joint Information Center as needed. 2. Provide clear, credible, consistent and timely information on the progress of the pandemic to staff, community partners, elected officials, news media, and the public. 3. Reemphasize the need to comply with public health infection control measures. 4. Redefine and disseminate key messages and information on: a. influenza symptoms b. respiratory and hand hygiene c. isolation and quarantine d. vaccine and antiviral medication prioritization/use e. social distancing 5. Activate and staff a public health information/call center as needed.