

Anne Arundel County Department of Health
Pandemic Influenza and Highly Infectious Respiratory Diseases
Preparedness & Response Plan

Version 2.0



Anne Arundel County, Maryland
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**Anne Arundel County Department of Health’s
Public Health Preparedness & Response Plan
Pandemic Influenza and Highly Infectious Respiratory Diseases**

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BACKGROUND

Influenza (also call flu) is a highly contagious viral disease, with epidemics affecting thousands of people each year. The ability for influenza viruses to “drift,” or make slight structural changes over time, results in the appearance of the different strains that circulate among the human population annually. Vaccines are developed yearly to match those strains that are expected to be in circulation.

In contrast to the gradual drift process, the influenza virus can also change suddenly and dramatically or “shift.” An influenza shift results in a new, or novel influenza virus to which very few people, if any, are immune. The potential for a global epidemic, also called a pandemic, exists if the novel virus has the ability to spread easily from person to person and cause serious illness.

Influenza pandemics differ from annual influenza outbreaks. Annual seasonal influenza outbreaks are caused by strains that already circulate; therefore, some immunity exists in the population. In comparison, pandemics are caused by strains the population has not been exposed to, so little immunity exists. As a result, pandemics cause high levels of illness, death, social disruption, and economic loss. During the 20th century, the emergence of new influenza A virus subtypes have caused three pandemics:

- 1918-19, "Spanish flu," [Type A (H1N1)], caused the highest number of known influenza deaths. More than 500,000 people died in the U.S., and up to 50 million people may have died worldwide. Nearly half of those who died were young, healthy adults.
- 1957-58, "Asian flu," [Type A (H2N2)], caused about 70,000 deaths in the U.S. First detected in China in February 1957, the Asian flu had spread to the U.S. by June 1957.
- 1968-69, "Hong Kong flu," [Type A (H3N2)], caused about 34,000 deaths in the U.S. This virus was first detected in Hong Kong in early 1968 and spread to the U.S. later that year.

It is this history that causes many scientists and public health experts to believe it is only a matter of time until the next influenza pandemic occurs. While the severity of the next pandemic cannot be predicted, modeling techniques suggest the impact of the next pandemic to be substantial.

PURPOSE

The purpose of the Anne Arundel County Department of Health’s *Pandemic Influenza and Highly Infectious Respiratory Diseases Preparedness & Response Plan* is **to provide operational response plans for the DOH to prepare for and respond to a pandemic influenza or other respiratory illness outbreak**. This may also serve as a guide for other organizations and agencies.

SCOPE & ACTIVATION

- The DOH *Pandemic Plan* follows U.S. Department of Health and Human Services guidance¹ for developing pandemic influenza response plans and is intended as a companion to the *Maryland Department of Health and Mental Hygiene Pandemic Influenza Preparedness Plan*². These

¹ *HHS Pandemic Influenza Plan*, Part 1, page 18. U.S. Department of Health and Human Services, November 2005. <http://www.hhs.gov/pandemicflu/plan/part2.html>

² Maryland Department of Health and Mental Hygiene, Emergency Support function 8: Pandemic Influenza Response Annex, Version 7.2, April 2008

response plans detail the activities that are the responsibility of the local health departments, within the context of the State and Federal plans.

- While the plan focuses on influenza, it is also intended to serve as the template for responding to large-scale outbreaks of other highly infectious respiratory diseases such as Severe Acute Respiratory Syndrome (SARS).
- This *plan* encompasses how the DOH will prepare for and respond to a pandemic emergency in Anne Arundel County.
- This *plan* must be used in conjunction with the DOH's *All Hazards Emergency Operations Plan* and, if necessary, should also be used with the DOH's *Continuity of Operations Plan*.
- **While interpandemic activities in this *plan* are on-going, sustained human-to-human transmission anywhere in the world will be the triggering event for activation of this *plan*.**

AGENCY ROLES & RESPONSIBILITIES

Local governments have the primary responsibility to provide public health, mental health, and emergency medical services within their jurisdictions. State government will augment public health, mental health, and emergency medical services that exceed the capabilities of the local government. The *Federal Response Plan* will support public health and medical activities, as required by the state of Maryland, in accordance with pre-established activation procedures.

Because of its unique nature, responsibility for preparedness and response to a pandemic extends across all levels of government and all segments of society as no single entity alone can prevent or mitigate the impact of a pandemic. The following summarizes the roles of local, state, and federal governments as cited in the November 2005 *National Strategy for Pandemic Influenza*³.

Local and State Agencies

Local governments are on the front lines of a pandemic and will face many challenges in maintaining continuity of service in the face of widespread illness and increased demand on most essential government services. State and local responsibilities include the following:

- Ensuring that all reasonable measures are taken to limit the spread of an outbreak within and beyond the community's borders.
- Establishing comprehensive and credible preparedness and response plans that are exercised on a regular basis.
- Integrating non-health entities in the planning for a pandemic, including but not limited to county and city police and fire departments, central services, public schools, utilities, and City of Annapolis agencies and political leadership.
- Establishing as appropriate state and community-based stockpiles (e.g., medications, supplies, etc.) and distribution systems to support a comprehensive pandemic response.

³ *National Strategy for Pandemic Influenza*. Homeland Security Council. November 2005.

- Identifying key spokespersons for the community, ensuring that they are educated in risk communication and have coordinated crisis communications plans.
- Providing public education campaigns on pandemic influenza and public and private interventions.

The Federal Government

While the success of preparedness is predicated on actions taken at the local level, the federal government also plays a critical role in elements of preparedness and response to a pandemic. Federal responsibilities include the following:

- Advancing international preparedness, surveillance, response, and containment activities.
- Supporting the establishment of countermeasure stockpiles and production capacity by:
 - Facilitating the development of sufficient domestic production capacity for vaccines, antivirals, diagnostics, and personal protective equipment to support domestic needs, and encouraging the development of production capacity around the world;
 - Advancing the science necessary to produce effective vaccines, therapeutics, and diagnostics; and
 - Stockpiling and coordinating the distribution of necessary countermeasures, in concert with states and other entities.
- Ensuring that federal departments and agencies, including federal health care systems, have developed and exercised preparedness and response plans that take into account the potential impact of a pandemic on the federal workforce, and are configured to support state, local, and private sector efforts as appropriate.
- Facilitating state and local planning through funding and guidance.
- Providing guidance to the private sector and the public on preparedness and response planning, in conjunction with states and communities.

LEGAL AUTHORITY

Various state and local public officials have overlapping authorities with regard to protecting public health and safety. The Governor, the Secretary of the Department of Health and Mental Hygiene, and the Local Health Officer each can implement authorities within the scope of their jurisdiction aimed at protecting public health, including increasing social distancing by closing public or private facilities. During a pandemic, the presence of overlapping authorities will necessitate close communication and coordination between elected leaders and the Local Health Officer to ensure decisions and response actions are clear and consistent. **The DOH All Hazards plan should be referenced for all legal authority.**

PLANNING ASSUMPTIONS FOR ANNE ARUNDEL COUNTY

Based on extrapolation from past pandemics in the United States, the Centers for Disease Control and Prevention (CDC) estimates that up to 90 million people in the U.S. may become ill during a pandemic influenza, 45 million people may require outpatient care, about 1 million people may require hospitalization, and between 200,000 and 2,000,000 persons may die ¹.

Based these national estimates, the impact of influenza pandemic in Anne Arundel County, is illustrated below in Table 1.

Table 1
Impact of Pandemic Influenza on Anne Arundel County, Maryland ⁴

	Low 15% Attack Rate	Moderate 25% Attack Rate	Severe 35% Attack Rate
Total County Population ⁵	508,572	508,572	508,572
Illness	76,286	127,143	178,000
Outpatients	33,819	56,363	78,898
Hospitalizations	7,094	11,829	16,572
Deaths	1,554	2,589	3,633

The impact of a pandemic is measured not only by how many people will die. If millions of people across the country get sick at the same time, major social consequences will occur. There will be disruptions across all sectors – fire, police, hospitals, school systems, business, etc. Therefore, a vital part of pandemic planning is to anticipate such disruptions and its consequences and plan accordingly. **The following are planning assumptions for Anne Arundel County, based on national estimates:**

⁴ AA County estimates based on *Basic Instructions and Template of Draft Report Using FluAid and FluSurge to Estimate the Potential Impact of the Next Influenza Pandemic Upon Locale Y*. Meltzer, M.I. 2006. CDC, National Center for Infectious Disease, Office of Surveillance.

⁵ U.S. Census Bureau's 2005 Population Estimates for Maryland's Jurisdictions 2000-2005. Maryland State Department of Planning. www.mdp.state.md.us accessed 4/27/06

Transmission

1. Susceptibility to the pandemic influenza type will be universal; therefore, such a pandemic will result in the rapid spread of the infection, with outbreaks throughout the world, including the U.S. counties across the state of Maryland may be impacted simultaneously.
2. The typical incubation period (the time between acquiring the infection until becoming ill) for influenza averages two days. We assume this would be the same for a novel strain that is transmitted between people by respiratory secretions.
3. On average, it is expected that the clinical disease attack rate will be 30% in the overall population. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% may become ill during a community outbreak. Severity of illness may be highest in the very old and very young.
4. Approximately, of those who become ill with influenza, 50% will seek outpatient medical care.
5. Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk for transmission will be greatest during the first two days of illness. Children will shed the greatest amount of virus and, therefore, are likely to pose the greatest risk for transmission.
6. In an affected community, a pandemic outbreak will last about six to eight weeks. At least two pandemic disease waves are likely.
7. There will be a need for heightened local surveillance, as well as a means to estimate the number of hospitalizations.

Specific Geographic Factors

1. The presence of military installations and Baltimore-Washington International Airport located within Anne Arundel County increases the potential of exposure from infectious international travelers.
2. Sustained human-to-human transmission anywhere in the world will be the triggering event to initiate a pandemic response in the U.S. Because we live in a global community, a human outbreak anywhere could quickly arrive in the U.S. and in Maryland.
3. Given the large poultry industry on the Delmarva Peninsula, birds with an avian influenza strain may arrive and cause avian outbreaks on the Eastern Shore of Maryland prior to the onset of a pandemic, significantly impacting domestic poultry, wild and exotic birds, and other species.

Vaccines & Antivirals

1. The Federal government will purchase all influenza vaccine during a pandemic.
2. Antiviral medications will be in extremely short supply. Local supplies of antiviral medications may be prioritized by the DOH based on current federal guidelines and in consultation with the DHMH.

3. Development of a vaccine for the pandemic influenza strain will likely take six - eight months following the emergence of a novel virus. In addition,
 - a. As vaccine becomes available, it will be distributed and administered by the DOH based on current federal guidelines and in consultation with the DHMH.
 - b. Insufficient supplies of vaccines and antiviral medicines will place greater emphasis on social distancing strategies and public education to control the spread of the disease in the county.
 - c. Two doses of vaccine administered approximately 30 days apart may be required to develop immunity to a novel virus.
4. Once the vaccine is developed, it may take an additional five months to produce an adequate supply of vaccine for the entire U.S. population (currently production capacity is approximately 5,000,000 doses per week).
5. An Emergency Use Authorization (EUA) may be required by the CDC through the Food and Drug Administration (FDA) to authorize use of all antivirals and vaccine received in states through the Strategic National Stockpile or state/county private local caches of medication. Medication fact sheets will also be issued to states by the FDA to be distributed to any recipient of medication/vaccine from these stockpiles.

First Responder & Healthcare Sector

1. The number of ill people requiring outpatient medical care and hospitalization could overwhelm the local public health, first responder, and health care system. In addition,
 - a. Emergency Medical Service (EMS) responders will face extremely high call volumes for several weeks and may face 25-35% reduction in available staff.
 - b. Hospitals and clinics will have to modify their operational structure to respond to surge capacity (high patient volumes) in order to maintain functionality of critical systems.
 - c. The health care system may have to respond to increased demands for service while the medical workforce experiences 25-35% absenteeism due to illness, fear of infection, caring for ill family members, or sheltering in place.
 - d. Demand for inpatient beds and assisted ventilators may increase by 25% or more, and prioritization criteria for access to limited services and resources may be needed.
 - e. There will be tremendous demand for urgent medical care services.
 - f. Infection control measures specific to management of influenza patients will need to be developed and implemented at health care facilities, outpatient care settings, and long-term care facilities.
 - g. The demand for home care and social services will increase dramatically.
 - h. The number of fatalities experienced during the first few weeks of a pandemic could overwhelm the current resources of hospital morgues, the Medical Examiner's Office, and funeral homes.

Community Containment

1. Social distancing strategies aimed at reducing the spread of infection such as closing schools, community centers, and other public gathering points and canceling public events may be implemented during a pandemic.
2. Some persons will be unable or unwilling to comply with isolation directives. For others, social distancing strategies may be less feasible (for example, homeless populations who live in congregate settings). It will be important to develop and disseminate strategies for infection control appropriate for these environments and populations.

Critical Infrastructure

1. There could be significant disruption of public and privately owned critical infrastructure, including transportation, commerce, utilities, public safety, agriculture, and communications.

DEPARTMENT OF HEALTH RESPONSE AREAS

The Anne Arundel County Department of Health will prepare for a pandemic according to the following 11 functions.

Command and Control

Existing DOH organizational structure and incident command systems will be utilized for pandemic influenza planning and response. These structures will delineate DOH priorities along with who is responsible for making decisions and carrying out response activities before, during, and after a pandemic.

Surveillance

This *plan* describes the system that will be used to complete virologic surveillance in order to detect and characterize circulating strains of influenza virus and disease surveillance to generate epidemiologic information. The Anne Arundel County pandemic surveillance activities will build upon existing influenza surveillance in Maryland.

There are five primary national surveillance components:

1. Virologic surveillance – Each week, approximately 80 U.S. collaborating laboratories that are part of the WHO Influenza Surveillance Network and 70 National Respiratory and Enteric Virus Surveillance System laboratories report the number of clinical specimens tested for influenza and the number of positive results by virus type and subtype.
2. Surveillance for influenza-like illness (ILI) – Approximately 1,000 sentinel health care providers/clinics located in 50 states regularly report the number of patient visits for ILI by age group and the total number of patient visits each week.
3. Mortality Surveillance (Surveillance for influenza and pneumonia deaths) – The Vital Statistics Offices of 122 U.S. cities report each week the percentage of total deaths that may be influenza related.
4. Hospitalization Surveillance – Monitors hospitalizations with laboratory confirmed influenza infections.
5. Summary of Geographic Spread – State and territorial epidemiologists assess influenza activity levels in their respective states each week and report it as “widespread”, “regional”, “local”, “sporadic”, or “no activity.” Information regarding these national surveillance components is updated weekly and can be accessed at www.EpidemiologyProgramc.gov/ncidod/diseases/flu/weeklychoice.htm.

At the state level, the Maryland DHMH collaborates with partners to conduct the following surveillance activities:

1. Passive surveillance of respiratory specimens from the University of Maryland Medical Center and Johns Hopkins University Hospital to the DHMH state laboratory for viral isolation, identification of influenza type and subtype.

2. Passive surveillance of influenza or ILI outbreaks in long term care facilities, schools, and other institutional settings.
3. Passive surveillance of ILI from clinicians – Each week, sentinel providers/clinics in Maryland report the percent of ILI (number of patients presenting with ILI divided by the total number of patient visits by age group) to the CDC. As of December 2005, at least one site in each region of Maryland reported to the CDC.
4. Currently, Baltimore City in Maryland reports the percentage of deaths by influenza and pneumonia each week to the CDC. In addition, statewide pediatric deaths from influenza are reportable.

Community Control Measures

The goal of community control measures is to slow the spread of pandemic influenza as much as possible and to provide additional time for the development, manufacture, distribution, and administration of antiviral medications and vaccine. There are two key strategies for preventing transmission, each with varying degrees of efficacy. The first involves education that will result in decreased infection and may include activities such as teaching the public about practicing cough etiquette and proper hand-washing and respiratory hygiene. The second involves decreasing contact between infected and uninfected individuals, which may include activities such as isolating suspected cases and quarantining case contacts, issuing travel advisories, and canceling schools and large gatherings⁶. The DOH will follow the state of Maryland DHMH's guidelines for isolation and quarantine as appropriate.

Laboratory Diagnosis

The DHMH state laboratory provides the framework, methodology, and recommendation for actions at the public health laboratory testing level. The DHMH state laboratory is responsible for accurate and timely testing of clinical specimens for the detection of influenza, providing results to clients, and communicating with the CDC on matters of technical testing.

The goals of diagnostic testing during a pandemic include:

- Identify the earliest U.S. cases of pandemic influenza (whether the pandemic begins in the United States or elsewhere).
- Support disease surveillance to monitor the pandemic's geographic spread and impact of interventions.
- Facilitate clinical treatment by distinguishing patients with influenza from those with other respiratory illnesses.
- Monitor circulating viruses for antiviral resistance.

⁶ *Isolation* is the separation or restriction of movement of an individual who is ill and has (or is suspected to have) an infectious illness. *Quarantine* is the separation or restriction of movement of an individual who, though not ill, has been exposed to an infectious agent. Both of these methods are mechanisms to prevent the spread of an infectious agent.

Clinical Guidelines

Screening criteria for the identification of novel influenza cases will be developed by federal HHS/CDC in order to expedite diagnosis and exclude non-cases. The screening criteria have two components: clinical and epidemiologic. Once the criteria have been met, a full workup will ensue, along with initiating treatment.

Workplace Infection Control

The goal of infection control measures is to prevent transmission of pandemic influenza to clients and employees of the DOH during patient care. Strategies to achieve this goal must take into consideration the modes of transmission of influenza, the short incubation period, the non-specific clinical presentation, the likelihood of asymptomatic infected persons, the various job duties and job locations of DOH employees, and the feasibility of implementing recommended infection control strategies within each department or clinic setting. The DOH's Workplace Communicable Disease Program (WCDDP) is responsible for ensuring the implementation of infection control measures throughout the DOH.

There are two key strategies for preventing transmission of the influenza virus in the workplace. The first strategy is to decrease contact between infected and uninfected individuals. This strategy focuses on administrative controls such as exclusion from work of exposed or infected staff, implementing telephone triage and/or on-site triage of clients, and possibly closing clinics or canceling services.

The second strategy is to decrease the probability that exposure to an infectious person will result in infection. This strategy mainly involves the implementation of work practice controls. Examples of practices to prevent transmission include utilizing appropriate personal protective equipment when interacting with clients, performing frequent and thorough hand hygiene as indicated, insuring proper disposal of medical waste, and cleaning environmental surfaces. In addition, administrative controls can be utilized, including the reassignment of immune-compromised staff to non-clinic areas.

Agencies and institutions that interact with the public (e.g., hospitals, police, EMS, etc) should follow their respective infection control policies and procedures.

Use of Antivirals

Antiviral medications have been shown to decrease the symptoms of seasonal influenza and shorten the time for recovery, only if taken within 48 hours of symptom onset. Also, studies have concluded that antivirals decrease the period of communicability. The following factors will be considered when discussing the use of antivirals in the setting of an influenza pandemic:

- Availability of antivirals
- Method of distribution
- Effectiveness for treatment and for prophylaxis
- Development of resistance
- Research and development of new antivirals
- Proper treatment regimens
- Priority groups
- Use in adults and children
 - contraindications
 - off-label use
- Adverse events

Use of Vaccine & Distribution

Vaccine will serve as one preventive strategy during an influenza pandemic. Unlike annual production of influenza vaccine, wherein viral strains are selected in the spring and vaccine is manufactured and delivered during late summer/fall to be used during the fall and winter influenza season, a pandemic strain can be detected at any time. Because current manufacturing procedures require 6-8 months before large amounts of vaccine are available for distribution, there could be a large gap between identification of a pandemic strain and availability of vaccine. Further, once vaccine becomes available, production capacity may allow for just 1-2% of the population being vaccinated per week. Therefore, it is necessary to plan for the allocation of vaccine based on federally identified priority population groups.

According to the *HHS Pandemic Influenza Plan*¹, the Federal government will collaborate with states to work with the pharmaceutical industry to acquire appropriate vaccine. Distribution of vaccines to health departments and providers will occur through private sector vaccine distributors or directly through the vaccine manufacturer. Only stockpiled vaccine would be distributed directly by the federal government.

Health Systems & Critical Infrastructure

Of great concern during a Pandemic are the probable effects on the capacities of the healthcare system and other critical community services. The DOH will interact with local health system partners to ensure a coordinated response effort.

Public Health Information

The DOH's communications role is to:

- Ensure through a variety of communication tools that all reasonable measures are taken to limit the spread of an outbreak within and beyond the community's borders.
- Identify key DOH spokesperson(s), ensuring that they are educated in risk communication and are familiar with the *Pandemic Plan*.
- Provide public education campaigns on pandemic flu and public and private interventions.
- Work with other agencies to ensure coordinated and consistent messages are released to the public.

Communicating information to the public will be carried out according to policies and procedures in the Department of Health's Policy and Procedures for Managing Media Relations (1.02-2.0), Policy and Procedures for the Development and Distribution of Public Information (1.92-4.1), and the DOH's All Hazards Emergency Operations Plan. These documents detail the means, organization and process by which the DOH, through the Public Affairs Office, will provide information and instructions to the public before, during and after a public health threat or emergency, such as pandemic influenza.

Guided by these department policies and procedures, the DOH will develop messages to ensure that the public receives accurate and timely information about the following concerns during a pandemic event:

- Basic information about influenza, high risk populations and recommended preventive practices
- Symptoms that should prompt seeking medical assistance
- The availability of antivirals and vaccines and the rationale for providing medication to priority groups during vaccine and antiviral shortages
- Instructions for receiving antivirals and vaccines at mass vaccination sites
- Directives for community level containment activities
- Explanations of concepts such as isolation and quarantine

Psychological Considerations

The response to an influenza pandemic will pose considerable psychosocial challenges to both the public at large and the healthcare providers who are providing essential services to our community. A pandemic might occur both globally and nationally and last for more than a year – while disease outbreaks in local communities may last six to eight weeks or longer. As a result, the general public and responders (and their families) may be at personal risk as long as the pandemic continues in their community. With this in mind, it is essential that preparation for the psychosocial needs of all members of our community be integrated into our local response plan. To this end, the DOH, along with the Anne Arundel Mental Health Agency, will provide support services to the community.

PANDEMIC INFLUENZA PLAN

The World Health Organization (WHO) has defined phases of a pandemic to assist with planning and response activities:

WHO Pandemic Phases

1	Interpandemic Period	WHO Phase 1: No new influenza virus subtypes 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 low.
2		WHO 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.
3	Pandemic Alert Period	WHO 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.
4		WHO 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.
5		WHO Phase 5: Larger 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).
6	Pandemic Period	WHO Phase 6: Pandemic phase; increased and sustained transmission in general population.

Interpandemic Period (WHO Phases 1-2)

Command and Control

1. DOH's Office of Emergency Preparedness and Response (OEPR) will take the lead in planning the public health response to pandemic influenza for the county, in coordination with other DOH programs and external partners across AACo and the City of Annapolis, including government agencies, schools, hospitals, other health system providers, day care facilities, and others as identified. Upon completion of the plan, copies will be distributed to county and city partners. OEPR will be responsible for the training of the DOH staff.
2. DOH's OEPR will plan pandemic response strategies with other counties across the state of Maryland, particularly those in EMS Region III (Howard, Baltimore City, Baltimore County, Hartford, Carroll).
3. DOH's OEPR will assure necessary agreements/Memoranda of Understanding are current and provide resources as appropriate for a public health emergency (i.e., space, personnel, medications, etc).
4. The DOH will follow the CDC and the DHMH recommendations to define and quantify local priority population groups to receive vaccine or antiviral medications in case of a vaccine shortage during a pandemic.
5. The DOH's Immunization Services and the OEPR will coordinate planning for the distribution of vaccines and antivirals.
6. DOH's OEPR will monitor the Facilities Resource Electronic Database (FRED) to monitor information about public health emergencies throughout the state of Maryland, including Anne Arundel and surrounding counties.
7. DOH will seek guidance from Maryland's Office of Chief Medical Examiner (OCME) and the Anatomy Board regarding plans to address mass mortality.
8. The State of Maryland Department of Agriculture will coordinate activities related to planning for the public health response to an identification of a novel influenza strain in the animal population.
9. DOH's Public Affairs Office will coordinate the planning of communication activities for a pandemic response in collaboration with AACo and the Annapolis City Government, the Maryland State Office of Public Information, and the DHMH Office of Public Information.
10. OEPR will monitor mass media outlets for news of novel influenza activity.
11. DOH will work with community partners to enhance community preparedness capacity for responding to pandemic influenza, including offering related training and participating in drills and exercises.
12. The Health Officer will distribute this *Pandemic Plan* to key policymakers and other stakeholders as appropriate.
13. DOH's OEPR will review and update this *Pandemic Plan* on an ongoing basis, as needed.

14. OEPR will increase the number of providers in the health community it can reach through fax broadcast and automatic calling systems to include all hospitals, long term care facilities, urgent care centers, and military health facilities.

II. Surveillance

The Epidemiology Program will be responsible for the following activities, unless otherwise specified.

1. The DOH Epidemiology Program will coordinate surveillance and epidemiological investigation activities, including implementing ongoing influenza surveillance, planning for pandemic epidemiological investigation, and coordinating specimen testing with the State of Maryland DHMH laboratory.
2. Draft job action sheets for all surveillance activities, including but not limited to, surveillance influenza/ILI data entry, contact investigations, and monitoring of home isolation and quarantine in the event that staffing needs to be scaled up during a flu pandemic.
3. Collaborate to establish and coordinate a CDC sentinel influenza surveillance system with the DHMH. This will require a recruitment of a minimum of two providers in Anne Arundel County, reaching the goal of one provider for every 250,000 residents.
4. Collaborate with Baltimore Washington Medical Center (BWMC) and Anne Arundel Medical Center (AAMC) to establish a system to report rapid influenza results, which may include becoming sentinel influenza providers.
5. Investigate/report any disease outbreaks suspicious for the novel influenza virus and trace contacts, if necessary.
6. Continue passive surveillance of outbreaks of ILI in institutions, including long-term care facilities and schools.
7. Investigate deaths; e.g. severe illness possibly due to influenza in children less than 18 years of age.
8. Develop criteria for schools to report ILI/influenza outbreaks.
9. Request, in collaboration with the DHMH, specimens from providers or hospitals for viral culture from patients presenting with ILI or unusually severe symptoms, especially those with a recent travel history to or from the region of novel virus circulation.
10. Maintain current emergency staffing lists and phone trees.

Community Control Measures

1. OEPR, in collaboration with other DOH programs, will provide ongoing education to various segments of the community regarding the importance of hand hygiene, cough etiquette, and annual influenza vaccination.
2. DOH will review appropriate legal authorities regarding the implementation of community control measures, including isolation and quarantine laws.

3. OEPR, in collaboration with other DOH programs, will develop and maintain contact information with partners through whom DOH may communicate information about the impact of community control measures, including local hospitals, Department of Aging, public and private school systems, Department of Recreation and Parks, child daycare centers, community associations, Chambers of Commerce, and local businesses and private industry, etc.
4. HIP will develop plans for communicating information to the public about community control measures.
5. OEPR and Epidemiology will develop local Isolation and Quarantine plans that are consistent with DHMH plans.

Laboratory Diagnostics

1. Ensure an adequate supply of influenza viral media kits at the DOH and facilitate transport of kits to providers as needed.
2. Communicate with infection control practitioners in hospitals, nursing homes, and other long-term care facilities and provide guidance to facilitate testing by the DHMH State laboratory for preliminary testing of suspicious disease specimens.
3. Enhance surveillance efforts by state and local health departments, hospitals, and clinicians to identify patients at increased risk for the novel influenza strain. Interim recommendations include the following:
 - a. Testing for the novel influenza strain should be considered on a case-by-case basis in consultation with state and local health departments for hospitalized or ambulatory patients, based on clinical case definition provided by the CDC and DHMH.
 - b. Specimens from providers and hospitals should be sent to the DHMH state laboratory **ONLY** after consultation with the DOH Epidemiology program staff and the DHMH EDCP staff.

Clinical Guidelines

The main features of detection and clinical management during the Interpandemic/Pandemic Alert/Pandemic Periods are: 1) quickly identifying and triaging cases, 2) containing the spread of infection, 3) beginning an efficient and comprehensive workup, 4) initiating antiviral and other supportive therapy, and 5) anticipating clinical complications.

1. DOH physicians will review clinical guidelines for diagnosis and management of novel influenza cases developed by HHS/CDC and DHMH.
2. Epidemiology Program, in coordination with the Division of Health Information and Promotion, will disseminate clinical guidelines to community providers, including healthcare agencies and ensure that they have access to current information, as it's available.
3. Epidemiology Program will be available as a resource for community providers with physicians on-call 24/7.

Workplace Infection Control

1. Workplace Communicable Disease Prevention (WCDP) will conduct ongoing education regarding the importance of hand hygiene, cough etiquette, and standard & droplet precautions for DOH employees.
2. WCDP will develop a plan for fit testing all necessary employees with N95 respirators in the event that HHS or the CDC would recommend this level of PPE for pandemic influenza.
3. WCDP will work with the OEPR to train staff on work practice and administrative controls to be implemented in each period of the DOH Influenza *Pandemic Plan*.
4. Immunization Services (IS) will educate staff on the importance of the annual influenza vaccine.
5. Immunization Services will continue to provide the annual influenza vaccine to all employees of the DOH.
6. A policy will be developed to address the administration and type of influenza vaccination received by each employee. If an employee does not receive the vaccine, he/she will be required to sign a document declining the vaccine.
7. IS will continue to provide the pneumococcal vaccine to all employees of the DOH who are eligible based on the ACIP recommendations of the Federal Advisory Committee of Immunization Practices. The vaccination is intended to reduce the incidence and severity of secondary bacterial pneumonia.
8. The Epidemiology Program under the direction of the DOH Physician Consultant will develop a telephone triage algorithm for all clinic areas and client services. Utilizing these guidelines, clients suspected of being exposed or infected with influenza virus will be rescheduled.
9. DOH's Central Services will assess the need for additional stocks of personal protective equipment (masks, gloves, gowns, eye protection), hand sanitizer, disposable tissues, and disinfectant supplies for each facility of the DOH. Necessary stocks of supplies will be ordered.
10. Division of Health Information and Promotion will post instructional posters regarding respiratory hygiene and cough etiquette throughout DOH facilities. These posters should be posted in both clinic and non-clinic areas and should be in languages appropriate to the population served.
11. The DOH Physician Consultant, in coordination with the Human Resources (HR) Department, may develop criteria for the exclusion from work of employees based on ILI or exposures, as well as criteria for the return to work after an exclusion, ILI, or exposure.
12. Human Resources will develop a specific policy regarding work-from-home (telecommuting) during the pandemic in accordance with county and state policies. This policy should outline the criteria for when to implement the practice, who would qualify, and how it would be implemented.

13. Division Directors or designees, in consultation with their Program Managers and Program Supervisors, may be asked to compile a list of employees for their Divisions who would be eligible to work from home, as determined by assessing each employee's assigned duties and the resources required and available to accomplish the work at home, and submit the lists to HR. The Deputy Health Officer for Operations, or designee, will compile the list of eligible employees for Administration and submit the list to HR.
14. The Behavioral Health Division will develop a plan for supporting the mental health needs of DOH employees throughout the pandemic phases, based on available resources.
15. The Health Officer, with input from Senior Staff, will develop criteria for the discontinuation of client services during the Pandemic Period.

Use of Antivirals and Distribution

1. OEPR will estimate the number of people in each antiviral priority group according to federal guidelines.
2. The feasibility of the DOH stockpiling antivirals will be explored and discussed.
3. Information regarding cost, storage, distribution, and specific antiviral availability will be gathered.
4. Bulletins from the HHS/CDC and WHO will be monitored for up-to-date antiviral use guidelines.
5. DOH will communicate guidelines to medical providers via *Physician's Link* and other rapid communication mechanisms available.
6. DOH will have ongoing communication with the DHMH to determine if/when local antiviral stockpiles should be accessed, when state antiviral stockpile will be available, and to inquire about the status of the Federal antiviral stockpile.
7. DOH will be aware of the expectations of healthcare facilities regarding allocation of antivirals by monitoring FRED and other communication channels as necessary.
8. DOH will continue to review and update the Strategic National Stockpile (SNS) plan for mass distribution of medication to county residents.
9. DOH will communicate with key external partners (e.g., first responder agencies, hospitals, urgent care facilities, long term care facilities, medical providers, pharmacies, etc) to develop the County medication distribution plan.
10. OEPR will meet with neighboring jurisdictions within EMS Region III, as appropriate, to discuss medication distribution plans.
11. DOH will work with the DHMH to establish a system (e.g., VAERS) for monitoring antiviral adverse events.
12. DOH will identify or develop approved fact sheets for use during mass clinics.

Vaccine Use & Distribution

1. DOH will initiate and/or continue activities to enhance influenza vaccination coverage levels in traditional high-risk groups and in groups with high transmission potential, particularly targeting subgroups in which coverage levels are low. Immunization Services, with other relevant programs, will pursue the following activities prior to the beginning of the traditional influenza season each year:
 - Evaluating and implementing epidemic control strategies, e.g. recommendations from the CDC and DHMH.
 - Disseminating educational materials to area health care providers via *Physician's Link* web site, Public Health News, blast faxes, etc., including a summary of the most current influenza vaccine recommendations and suggested strategies for reaching at-risk populations.
 - Providing education to area doctors' offices, nursing homes, and hospital staff about the importance of vaccinating healthcare workers and patients with high-risk medical conditions.
 - Providing education to area nursing home and assisted living facility staff about the importance of vaccinating persons over the age of 65 or those with high-risk medical conditions.
 - Developing partnerships with local fire, EMS, and police departments, neighboring jurisdictions, military installations, colleges, local government, schools, and local area businesses to assist with administration of vaccine.
 - Recommending that all persons responsible for community safety and security receive annual influenza vaccination, including emergency medical services personnel, police, and firefighters.
 - Utilizing traditional and non-traditional communication channels to educate the general public about the importance of annual influenza vaccination, including television, radio, and print media, the DOH web site, the Flu Line, and through newsletters (School Health, Dept. of Aging, etc.) and flyers.
 - Identifying special populations that traditionally have low vaccination coverage levels (minorities, children, etc.) and providing education and outreach, encouraging influenza vaccination as well as resources for vaccination.
 - Identifying special populations in non-traditional group settings that may be at high risk for influenza; e.g., shelters, detention centers, jails, group homes, etc., providing education and outreach and encouraging influenza vaccination, in addition to providing available resources for vaccination.
 - Maintaining current information about influenza and influenza vaccination on the DOH web site. Information will be targeted to the healthcare community and to the general public. Influenza information on the web site will be available in both English and Spanish.
 - Maintaining current information on the DOH Flu Line and disseminating information to callers utilizing *Learn To Live* operators.
 - Advocating to state and federal partners the development of a standardized method to track and report vaccine shipments from private companies and manufacturers to local entities in order to quickly assess distribution during a vaccine shortage.

2. DOH will initiate and/or continue activities to enhance pneumococcal vaccination coverage levels in traditional high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia. Such activities will occur in concert with the activities described above.
3. On an on-going basis, the DOH will review current federal guidance defining priority populations to receive vaccine for prophylaxis during a pandemic before vaccine is widely available to all citizens.
4. DOH will determine and maintain estimates of the number of persons in the county who will become ill, seek outpatient care, require hospitalization, and die due to influenza.
5. DOH will collaborate with the DHMH, other area jurisdictions, and area private providers to coordinate plans for mass vaccination efforts.
6. DOH will review and update plans for mass vaccination during a pandemic in the event of a severe or moderately severe vaccine shortage.
7. DOH will provide annual training and in-services to nursing staff to ensure vaccination competency.
8. DOH may develop a system to help recall those who were initially vaccinated, that a second dose may be required.
9. DOH will review and update its plans for mass vaccination to ensure that it addresses issues relevant to the provision of influenza vaccine. The plans should include information relevant to providing vaccination to the general public and first responder agencies once vaccine becomes widely available, including:
 - Sites to use as mass vaccination clinics
 - Staffing needs and duties
 - Protocols for proper storage of vaccine
 - Protocols and guidelines for vaccine clinic operations
 - Protocols/standing orders for administration of vaccine and anaphylaxis emergency
 - Model clinic flow design
 - Supplies, forms, equipment, signage
 - Risk communication, press releases, etc.
 - Security
 - Strategies to reach special populations

Health Systems and Critical Infrastructure

1. DOH's OEPR will work with area hospitals to support the development and coordination of essential policies, plans, and protocols necessary in planning for a pandemic influenza outbreak. Key policies may include reporting procedures for disease, infection control and surge capacity.

2. DOH's OEPR will collaborate with such partners as Baltimore Washington Medical Center, Anne Arundel Medical Center, and AACo EMS, in addition to the DHMH and MIEMSS to develop and maintain an inventory of the following resources:
 - Hospital and long-term care bed capacity
 - Intensive care unit capacity
 - Ventilators
 - Personal protective equipment
 - Specimen collection and transport materials
 - Sources of consumable medical supplies
 - Medical personnel who may be utilized during an emergency situation
 - Pharmacies and pharmacists
 - Contingency medical facilities
 - Mortuary/funeral services
 - Social services/mental health services/faith services
3. Based on information collected, the DOH, in conjunction with AACo OEM and Local Hospitals, will estimate the impact of pandemic influenza in healthcare services and critical infrastructure within Anne Arundel County.

Public Health Information

1. The Public Affairs Office (PAO) will contribute communication guidelines to the DOH *Pandemic Plan*. The PAO staff will participate in drills and training as part of the plan.
2. The Public Affairs Office will review, approve, and help disseminate influenza prevention information that can be used in ongoing education regarding the importance of hand washing, cough etiquette, and annual flu vaccination. This information (printed materials, public service announcements, cable spots, web pages, novelty giveaways) will be for the general public, as well as for health care professionals, first responder agencies, schools, government agencies, military, businesses, religious organizations, community associations, and those who serve special populations (physically/mentally disabled or dependent, seniors, those with little income and resources, those with limited English or non-English speaking, criminal justice clients, the chemically dependent, and others with special needs).
3. The DOH *Pandemic Plan* will be made public and sent to government officials, the media, and community groups. The plan will be placed on the web site.
4. The Public Affairs Office will promote vaccinations to the health care community, priority groups, and the general public, following recommendations from the Health Officer, with guidelines from the Maryland DHMH and the CDC. The Department's *Pandemic Plan* will outline the priority groups for receipt of flu vaccine.
5. The Public Affairs Office will maintain current information about influenza and influenza vaccination on the web site.
6. The Public Information Officer will develop partnerships with the County Executive's Communications Director and Public Information Officer (EOC PIO) and the Communications Director at the Maryland DHMH. In addition, the PIO will establish working relationships with PIOs at Public Schools, Departments of Police, Fire, Aging, Social Services, Library, Land Use, and other county government agencies, as well as with PIOs at the Maryland Departments of Agriculture and the Environment, Fort Meade, U.S. Naval Academy, and AAMC and BWMC.

Psychosocial Considerations

1. Research, collect, and create educational and training materials regarding psychosocial issues related to emergency situations, including preparation for the influenza pandemic.
2. Use staff behavioral health expertise to prepare educational and training materials on psychosocial issues for distribution and presentation to:
 - General Public (including children and seniors) – through communities, neighborhoods, schools, Senior Centers, civil and faith-based associations
 - DOH employees – through interdepartmental presentations
3. DOH will review/renew Memoranda of Understanding and other agreements with the Mental Health Agency, Inc. of Anne Arundel County.
4. Continue to provide mental health and substance abuse services to current patients and new intakes, as appropriate.

Pandemic Alert Period (WHO Phases 3-5)

Command and Control

1. The Health Officer, or a representative, will initiate communication with local, state and national counterparts as appropriate.
2. The Epidemiology program and other relevant programs will monitor the Health Alert Network (HAN) and other channels of information and will provide ongoing assessments of the situation to the Health Officer, or representative, as appropriate.
3. The Epidemiology program will ensure that local surveillance and, if applicable, case tracking activities are ongoing.
4. The Division of Health Information and Promotion (HIP) will identify or develop and disseminate appropriate information to the public.
5. The Health Officer will activate the DOH's Incident Command Structure, who will meet regularly to:
 - Assess the DOH's ability to sustain normal services or shift to operating under the DOH's Continuity of Operations Plan, whereby sustaining only priority DOH services.
 - Coordinate the development and dissemination of appropriate information to the public.

Surveillance

The Epidemiology Program will be responsible for the following activities, unless otherwise specified.

1. Identify critical resources for epidemiological surge capacity with guidance from the DHMH.
2. Ensure that all interpandemic influenza surveillance activities are underway regardless of the time of year, enhancing activities as needed based on information from HAN alerts, Epi-X alerts, communication from state and federal partners, and other sources, and investigating the epidemiology of early cases through case tracking activities.
3. Monitor the HAN, the CDC's Epi-X, and other appropriate sources for updates regarding international, federal, and state surveillance activities.
4. Monitor and institute recommendations from the CDC and DHMH for any additional surveillance activities that should be undertaken given the specific circumstances.
5. Work with the DOH's School Health Services to recommend weekly reporting of children in school with ILI to the Epidemiology Program, in addition to daily reporting of absenteeism exceeding 10% in any school.
6. Assist the U.S. Naval Academy and Fort Meade health clinic staff with surveillance for ILI in military personnel returning from areas where novel virus has been isolated or confirmed in humans, as appropriate.

7. If necessary, utilize the DOH's broadcast fax capability to area hospitals, emergency rooms, and urgent care centers to request that they increase laboratory diagnosis of influenza for persons presenting with ILI, especially those with recent travel history to regions where the pandemic strain of influenza is circulating or those with unusual or severe symptoms.
8. Coordinate the collection of ILI specimens among area providers and laboratories and facilitate transfer of ILI specimens to the DHMH.
 - The Epidemiology Program will collaborate with the DHMH Epidemiology Disease Control Program and Laboratory regarding the testing of ILI specimens for the novel influenza.
 - The Epidemiology Program will provide instructions to the health community for collecting samples from patients presenting with severe or unusual ILI to the appropriate laboratory for testing and for the safe handling of a potential novel influenza virus.
9. Request timeliness and completeness of reports from the DHMH on the sentinel providers in Anne Arundel County. Staff will work with these providers to enhance and facilitate complete and timely reporting.
10. In conjunction with the Medical Society of Anne Arundel County and other local health system partners, the Deputy Health Officer for Public Health, or designee, will issue regular alerts through the broadcast fax system regarding surveillance and case tracking activities to the health community.

Community Containment

Possible containment measures if cases are first detected outside the U.S.

1. DOH may recommend isolation of persons who are recent travelers to affected regions if they have influenza like illness. If influenza is suspected or confirmed, the DOH may recommend isolation at home or in a hospital until isolate subtyping is accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be a novel influenza A virus.
2. DOH may recommend quarantine for contacts of cases.
3. Based on the CDC recommendations, the DOH may issue an advisory recommending limiting travel to the affected region and screening travelers arriving from the affected region for illness compatible with influenza.
4. DOH will increase education about the importance of hand hygiene, cough etiquette, and annual influenza vaccination.

Possible containment measures if cases are first detected in the U.S. outside Anne Arundel County

1. DOH may recommend isolation of persons who are recent travelers to affected regions if they have influenza like illness. If influenza is suspected or confirmed, the DOH may recommend isolation at home or in a hospital until isolate subtyping is accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be a novel influenza A virus.

2. DOH may recommend quarantine for contacts of cases.
3. Travelers suspected to be contacts of cases may be referred by the Quarantine Officer at Dulles International Airport for coordinated quarantine service with the assistance from the DOH.
4. DOH may issue advice to those traveling to endemic areas, according to the CDC and WHO guidance, and monitor returning travelers as necessary.
5. DOH will increase public education regarding the importance of hand hygiene and cough etiquette.

Possible containment measures if cases are first detected in Anne Arundel County

1. DOH may recommend that persons who have ILI be placed in isolation at home or in a hospital until subtyping of their isolate can be accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be the novel virus.
2. DOH may recommend quarantine for contacts of cases.
3. DOH may recommend that citizens limit travel to destinations outside of Anne Arundel County, as well as limit non-essential travel within the county.
4. DOH may recommend cancellation of large gatherings depending on the level of person-to-person transmission. Based on the epidemiology of the known infected cases, the DOH may recommend closure of schools, including colleges, closure of office buildings, malls, movie theaters, etc.
5. DOH will increase public education regarding the importance of hand hygiene and cough etiquette.
6. If an animal source is identified and there is ongoing transmission within the animal population, the DOH may recommend that persons who may be in contact with potentially infected animals wear appropriate personal protective equipment.

Workplace Infection Control

1. WCDP will increase education regarding the importance of hand hygiene, cough etiquette, and standard and droplet precautions for DOH employees.
2. WCDP will implement a plan for fit testing all necessary employees with N95 respirators.
3. DOH's Central Services will insure that disposable tissues, no-touch waste receptacles, and hand sanitizer are accessible to all staff and visitors.
4. DOH's Central Services will distribute supplies of personal protective equipment as needed. In addition, Central Services will monitor the level of usage to determine if further supplies need to be procured and/or prioritize use of available supplies.

5. Staff in all clinic areas or client services settings will implement administrative controls to reduce the number of sick people seen and to isolate high-risk clients.
6. As situation requires, staff in all clinic areas or client services will:
 - Follow DOH guidance regarding use of masks and infection control measures.
 - Wear gloves for contact with respiratory secretions.
 - Perform hand hygiene before and after contact with all clients or after contact with contaminated items.
7. WCDP will monitor updates of guidelines for infection control from the CDC and recommend revision of work practices or administrative controls as needed.

Health Systems and Critical Infrastructure

1. DOH will provide updated information about the epidemiology and spread of the novel virus to the local healthcare community, emergency medical providers, and hospitals.
2. DOH will provide guidance, as appropriate, to emergency medical providers and hospitals on severe respiratory illness protocols and provide guidance about the appropriate use of personal protective equipment, based on recommendations from the DHMH and the CDC.
3. DOH will establish regular communication with AACo OEM, providing updated information about the epidemiology of the novel virus.

Public Health Information

1. The Public Affairs Office (PAO) will participate alongside County and State partners in a Joint Information Center, in order to coordinate and disseminate consistent and accurate information to the public.
2. The PAO will work with the Deputy Health Officer for Public Health and the Community Health Division to notify area hospitals, physicians, emergency rooms, and urgent care centers regarding increased lab diagnosis of influenza for persons presenting with ILI. Notification will be done through automatic calling system, blast faxes, e-alerts, and through alerts sent by the local Medical Society.
3. A phone bank may be established to serve as an information resource to county residents and providers.
4. The PAO will increase public communication about the importance of hand hygiene, cough etiquette, and annual flu vaccination as appropriate.
5. The PAO may work with other DOH Divisions, the Maryland DHMH, and the CDC to prepare an advisory recommending that county residents limit travel to the affected region. This advisory may be linked to the Department's flu and travel information on the web site.
6. The PAO will also increase public communication about the flu—symptoms, recommendations, and treatment.

7. The PAO will prepare media advisories/alerts, press conferences, and regular updates to inform the community regarding public health recommendations, isolation, quarantine, and other measures to help contain the spread of the disease.
8. The PAO will announce updates to the plan regarding the provisions of antivirals to county residents.
9. The PAO will coordinate media, phone line, and web site announcements about providing vaccine to priority groups and the general public.
10. The PAO will assist with preparing flu “Hot Topics” and alerts for the *Physician’s Link* web site and will feature articles about influenza in the Public Health News, which is mailed to private providers.
11. The PAO will assist with addressing rumors, inaccuracies, and misperceptions as quickly as possible and prevent the stigmatization of affected groups.

Psychosocial Considerations

1. Meet with the Anne Arundel County Mental Health Agency, Inc. to review the Memorandum of Understanding, specifically as it relates to the Mental Health Crisis Response Team.
2. Continue to provide mental health and substance abuse services to current patients and provide intake services for additional patients in accordance with emergency guidelines set forth by the DOH.

Pandemic Period (WHO Phase 6)

Command and Control

1. The Health Officer will regularly convene the HDERT or the DOH Incident Command Structure to:
 - Provide on-going assessment of the DOH's ability to operate under the DOH's Continuity of Operations Plan, whereby sustaining only priority DOH services
 - Continue surveillance and tracking activities
 - Continue on-going coordination, development, and dissemination of appropriate information to the public
 - Ensure ongoing communication with local, state, and federal authorities
 - Assess the capacity of area hospitals and identify their resource needs
 - Coordinate delivery of vaccine and/or antivirals to county first responders
 - Determine the need for and scope of mass vaccination activities
 - Carry out mass vaccination activities
2. DOH will send a representative to the Emergency Operations Center (EOC), if activated.
3. The Health Officer, as the public health authority, will implement quarantine and isolation measures, as appropriate, for residents of Anne Arundel County.

Surveillance

The Epidemiology Program will enhance ongoing surveillance activities to include the following:

1. Monitor health impacts, including deaths and hospitalizations, determining age-specific attack rates, morbidity, and mortality.
2. Monitor community impacts, including absenteeism in schools and essential services.
3. Monitor reports of antiviral resistance.
4. Monitor reports of vaccine effectiveness.
5. As disease activity intensifies and becomes more widespread, adjust surveillance case definition to reflect increasing certainty of clinical diagnoses in absence of virological confirmation; switch to aggregate data collection on morbidity and mortality.
6. If sentinel providers cannot keep track of ILI, have them estimate the level of ILI in their practice on a weekly basis (e.g. 50-100 cases, 100-200 cases).
7. Monitor unusual clinical syndromes (as well as risk factors for those syndromes and appropriate treatment).
8. Document outbreaks of influenza in different population groups.

9. Assign DOH liaisons as available to conduct surveillance to BWMC and AAMC on a 24/7 basis in the early phases of the pandemic.
10. Issue guidance for self-quarantine and isolation policies after consultation with the DHMH to health care providers and general public.

Community Control Measures

1. DOH may recommend that all persons who are ill and their contacts remain in isolation at home.
2. DOH may recommend limitation or suspension of large gatherings and recreation activities.
3. DOH may recommend closure of schools, including colleges, closure of office buildings, malls, movie theaters, etc.
4. DOH may recommend the limitation of non-essential work activities, encouraging telecommuting when possible.
5. DOH may recommend area quarantine.

Workplace Infection Control

1. WCDP will provide education regarding the importance of hand hygiene, cough etiquette, and standard & droplet precautions for DOH employees.
2. All of the DOH will be required to undergo training and annual fit testing for the use of respirators.
3. DOH employees may be required to remain at home if exhibiting any ILI symptoms or if exposed to family members with ILI, unless or until the employee has fully recovered from the flu and is no longer susceptible.
4. Program Managers will ensure that telephone and on-site triage are instituted for all clinic areas and client services settings. Masks may be offered to symptomatic clients as appropriate.
5. Staff in all clinic areas or client services settings will:
 - Follow DOH guidance regarding use of masks and infection control measures.
 - Wear gloves for contact with respiratory secretions.
 - Perform hand hygiene before and after contact with all clients or after contact with contaminated items.
6. All DOH employees should report absences to their immediate supervisor in accordance with established policies. Supervisors will record absences as:
 - Employee with ILI
 - Employee with exposure to ILI
 - Other (i.e., previously-scheduled vacation, unrelated illness or injury, maternity leave, etc).

6. As needed, administrators for each Division or their designees will collect information from their Program Managers/Supervisors to make a daily report for their respective Divisions via e-mail to HR regarding names of employees absent and reasons for absences in accordance with established policy. For employees in Administration, the Administrative Aide to the Deputy Health Officer, Operations, or designee, will collect this information and submit the report to HR.
7. Human Resources will monitor the level of DOH staff absenteeism and assist in identifying any critical shortages in staff. Staff may be reassigned to alternate duties, if appropriate.
8. Human Resources, after consultation with Deputy Health Officer for Public Health and appropriate Program Manager or Program Supervisor, may offer employees at high risk for serious complications from influenza an alternative work assignment, away from influenza patient care.
9. Human Resources, after consultation with Health Officer, will implement the work-from-home policy, if appropriate.
10. The Health Officer will activate the DOH's COOP and discontinue client services.
11. WCDP will continue to monitor updates of guidelines for infection control from the CDC and recommend revision of work practices or administrative controls as needed.

Laboratory Diagnostics

1. Throughout the pandemic, the CDC and DHMH will provide updated instructions on the collection of clinical and epidemiologic data that should accompany isolates.
2. The CDC will advise states on when confirmatory testing (subtypes) is required. Although confirmatory testing will be required when the pandemic begins, the level of testing will decrease as the virus becomes widespread.

Antiviral Use and Distribution

1. DOH, in collaboration with local hospitals and providers, will estimate the amount of antiviral medication available in the county on an ongoing basis.
2. The Health Officer will initiate a request for antivirals through the SNS request process.
3. Coordinate with local partners and neighboring jurisdictions an antiviral distribution plan according to HHS/CDC and DHMH guidelines.
4. DOH will coordinate the procurement of antivirals and related supplies.
5. Monitor bulletins from the CDC and DHMH to get up-to-date antiviral information.
6. DOH will distribute any modifications to the antiviral use guidelines to medical providers to ensure optimal antiviral use.

7. Serious adverse effects of antivirals will be reported by DOH through VAERS, as appropriate.

Vaccine Use & Distribution

1. DOH will coordinate with the DHMH regarding the availability and delivery of vaccine and vaccine-related supplies.
2. DOH will provide the DHMH with an estimated number of persons within the county requiring vaccine or antivirals.
3. DOH will collaborate with the DHMH, other area jurisdictions, community partners, and area providers to coordinate mass vaccination efforts.
4. Prior to widespread vaccine availability, the DOH will provide vaccine as it is available to priority groups.
5. Upon widespread vaccine availability, the DOH will fully activate mass vaccination activities.
6. During mass vaccination activities, the DOH will monitor and track vaccine supplies, vaccine distribution and use, and immunization data, including, but not limited to, number of vaccines administered, ages of recipients, etc.
7. DOH will track and monitor adverse reactions. The DOH will provide persons receiving vaccine with information about reporting such reactions. The DOH will report any reactions to the CDC Vaccine Adverse Event Reporting System (VAERS).

Health Systems and Critical Infrastructure

1. In accordance with the AACo *Emergency Operations Plan*, AACo EMS and the DOH will ensure that residents of AACo are provided with adequate emergency medical services during a pandemic.
2. DOH will continually review information about the epidemiology of the pandemic. Based on this data, the DOH will develop and provide first responder agencies, medical providers, and county residents with protective action recommendations for health, medical, and essential services.

Public Health Information

1. Under the guidance of the Health Officer or Incident Commander, the Public Affairs Office will develop and disseminate appropriate information to the public.
2. The Public Affairs Office will help to enhance surveillance activities by tracking the types of calls received on the Department's Information Line, the Flu Line, and phone bank (if in operation).
3. The Public Affairs Office will work with the HDERT and with the EOC PIO to prepare and disseminate public health recommendations to the media (media releases, press conferences), general public (web sites, posters, electronic signs, and e-alerts to community association leaders) and special populations (through media/facilities/agencies/associations that serve those special groups).

4. The Public Affairs Office will coordinate media, phone line, and web site announcements about dispensing antivirals to priority groups.
5. The Public Affairs Office will continue to coordinate media, phone line, and web site announcements about providing vaccine to priority groups and the general public.
6. The Public Information Officer will work closely with the HDERT and the EOC PIO to review, disseminate, and update health messages.

Psychosocial Considerations

1. Provide ancillary psychosocial services to other divisions of the DOH, as directed by the DOH Administration (i.e., assist with telephone support lines; provide information via web sites or hotlines; or provide support at vaccine distribution centers or walk-in mental health centers).
2. Provide general stress reduction and referral services for DOH employees.
3. Continue to provide mental health and substance abuse services to current patients in accordance with emergency guidelines set forth by the DOH.
4. Provide coordination (in accordance with DOH directives), with the Anne Arundel County Crisis Response Team.

Post-Pandemic

Command and Control

1. The Health Officer will convene relevant parties to debrief on response activities.
2. The Health Officer will communicate the status of the response activities to appropriate local, state, and federal authorities.
3. The OEPR will develop a report in collaboration with Surveillance, Immunization Services, and other relevant programs, summarizing the pandemic in AACo, identifying:
 - What went well
 - What needed improvement
 - Lessons learned
 - Suggested changes to the plan
4. The OEPR will review and update this *Pandemic Plan* based on lessons learned from response activities.

Surveillance

1. Resume interpandemic influenza surveillance outlined in the Interpandemic Period.
2. The Epidemiology Program, in coordination with the OEPR, will develop a detailed summary of the pandemic, utilizing surveillance data to evaluate the efficacy of local response activities. Analysis may include:
 - Severity of influenza outbreaks among demographic groups
 - Age-specific attack rate, morbidity, and mortality
 - Antiviral efficacy
 - Efficacy of vaccination distribution and implementation of infection control measures
 - Extent of medical, social, and economic impact

Community Control Measures

1. DOH will suspend all community level control measures.
2. DOH will assess the compliance with community level control measures and evaluate the efficacy of community level control measures.

Laboratory Diagnostics

1. Resume interpandemic period laboratory activities for influenza.

Workplace Infection Control

1. DOH will resume routine pre-pandemic workplace activities and control measures.
2. The Epidemiology program will calculate the immunization rate of DOH employees in aggregate, as well as by division.
3. OEPR will conduct analysis of lessons learned and update the *Pandemic Influenza and Highly Infectious Respiratory Diseases Plan* as appropriate.

Use of Antivirals and Distribution

1. DOH will evaluate the medication distribution plan and modify it as necessary.
2. Any DHMH VAERS data will be requested in the form of a report.
3. DOH will estimate the amount of antiviral medication used during the pandemic, as well as the amount available in the county post-pandemic.

Vaccine Use & Distribution

1. DOH will discontinue and demobilize mass vaccination activities, ensuring that supplies are inventoried and returned, as appropriate.
2. DOH will evaluate vaccine delivery and administration procedures and modify plans, as necessary.
3. DOH will compile a final report of number of vaccines administered with demographic information as available.

Health Systems and Critical Infrastructure

1. DOH will participate in recovery and demobilization efforts in coordination with the DHMH and OEM.
2. DOH will provide the OEM with an assessment of the impact, response, and control of the public health response during the pandemic.
3. DOH will continue to provide health information, as appropriate, to the medical community and county residents to assist in the recovery period.

Public Health Information

1. The Public Affairs Office will review and update the communications section of the *Pandemic Plan* on lessons learned from response activities.

2. The Public Affairs Office will coordinate media, phone line, and web site announcements about the discontinuing of antiviral dispensing.
3. The Public Affairs Office will coordinate media, phone line, and web site announcements about the discontinuing of vaccinations at clinics and health centers.

Psychosocial Considerations

Post-Pandemic Period

1. Provide ongoing access to post-emergency psychosocial support services for residents and DOH employees.
2. Participate in the ongoing evaluations of pandemic services and after-effects of the pandemic.
3. Continue to provide mental health and substance abuse services to current patients and for new intakes as appropriate.

Abbreviations

DOH	Anne Arundel County Department of Health
AACo	Anne Arundel County
AAMC	Anne Arundel Medical Center
ACIP	Advisory Committee on Immunization Practices
BWMC	Baltimore Washington Medical Center
CDC	Centers for Disease Control and Prevention
COOP	Continuity Of Operations Plan
DOH	Department of Health
DHHS	US Department of Health and Human Services
DHMH	Maryland Department of Health and Mental Hygiene
EDCP	Epidemiology & Disease Control Program at DHMH
EOC	Emergency Operations Center
FRED	Facilities Resource Electronic Database
HDERT	Health Department Emergency Response Team
HIP	Division of Health Information & Promotion at DOH
HR	Human Resources at DOH
ILI	Influenza-like Illness
IS	Immunization Services Program at DOH
LTCF	Long Term Care Facilities
MEMA	Maryland Emergency Management Agency
MIEMSS	Maryland Institute for Emergency Medical Services Systems
OEPR	Office of Emergency Preparedness and Response at DOH
VAERS	Vaccine Adverse Event Reporting System
WHO	World Health Organization
WCDP	Workplace Communicable Disease Prevention
OEM	Office of Emergency Management
BWI	Baltimore Washington International Airport
PIO	Public Information Officer
PAO	Public Affairs Office
AVERS	Antiviral Adverse Event and Reporting System