



Maryland Influenza Plan

2016-2017 Flu Season

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I. INTRODUCTION

Influenza (“flu”) is a contagious respiratory illness caused by the influenza virus. Influenza virus strains perennially circulate throughout the world. In the northern hemisphere, flu season can begin as early as October and last as late as May. The flu virus can cause mild to severe illness and at times can lead to death. Older people, young children, and people with certain health conditions are at higher risk for serious flu complications. **The best way to prevent the flu is by getting vaccinated each year.**

Influenza is spread by airborne droplets made when an infected person coughs, sneezes, or talks. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching their own mouth, eyes, or nose.

You may be able to pass the flu to someone else even before you know you are sick, as well as while you are sick. Most healthy adults may be able to infect others beginning 1 day before symptoms develop and up to 5-7 days after becoming sick. Some people, especially children and people with weakened immune systems, might be able to infect others for an even longer time.

Flu seasons occur each year with varying severity. Estimates of flu-associated deaths range from a low of about 3,349 to a high of around 48,614 people in the United States per year. A subsequent modeling analysis of population-based surveillance data for seasons following the 2009 pandemic (2010–2011 through 2012–2013) estimated that influenza was associated with 114,018–633,001 hospitalizations, 18,476–96,667 intensive care unit (ICU) admissions, and 4,866–27,810 deaths per year.¹

UPDATE: For the 2016-2017 season, CDC recommends use of the flu shot and the recombinant influenza vaccine. The nasal spray flu vaccine (live attenuated influenza vaccine or LAIV) should not be used during the 2016-2017 season.

Additional Resources

CDC Flu Information: <http://www.cdc.gov/flu/>

Maryland Flu Information: <http://phpa.dhmh.maryland.gov/influenza/Pages/home.aspx>

Maryland Flu Surveillance: <http://phpa.dhmh.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

II. PURPOSE

The Maryland Department of Health and Mental Hygiene (DHMH) developed the Maryland Influenza Plan to prepare for, prevent, and mitigate the number and severity of influenza cases within the state. This plan acts as a guide for Maryland residents, public health departments, and the healthcare community. The Maryland Influenza Plan will categorize flu activity by stages and include information for each audience type. Additionally, this document includes high impact and pandemic threat triggers that can aid in the identification of outlier influenza activity potentially caused by an unusual flu season or a pandemic.

¹ Grohskopf LA, Sokolow LZ, Broder KR, et al. Prevention and Control of Seasonal Influenza with Vaccines. MMWR Recomm Rep 2016;65(No. RR-5):1–54. DOI: <http://dx.doi.org/10.15585/mmwr.rr6505a1>

III. DEFINITIONS

Antiviral Medications – prescription medications that can be used to prevent or treat the flu

Community Prevention and Mitigation – tactics used by public health officials and the general public to reduce the effects of the flu

Early Flu Activity - Early flu activity is characterized by the presence of some confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either sporadic or local and Influenza-like Illness intensity is minimal or low

ESSENCE –Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a system used to gather, manage, and analyze health-related data to identify early warning of public health threats, hazards, and incidents

Influenza-like Illness (ILI) – medical diagnosis that indicates a possible influenza infection but has not been confirmed by a laboratory test

Influenza Vaccination – preventive medical intervention administered through an injectable that reduces the likelihood of an individual being infected by seasonal flu

Late Flu Activity - Late flu activity is characterized by decreasing levels of influenza in Maryland

MRITS –Maryland Resident Influenza Tracking Survey (MRITS) is an online system designed to measure ILI in Maryland based on illness reported directly by residents each week

Pandemic Influenza – a flu pandemic occurs when a novel influenza A virus emerges for which there is no or little immunity in the human population. In the past, pandemic strains have caused serious illness and have spread easily from person-to-person worldwide

Peak Flu Activity - Peak flu activity is characterized by an increase in confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either regional or widespread and ILI intensity is moderate or high

Pre Flu Activity - Pre flu activity is characterized by the absence or minimal presence of influenza throughout Maryland prior to the beginning of flu season

Seasonal Influenza – annual outbreaks of flu that typically occur during the late fall through early spring. Most people have natural immunity, and a seasonal flu vaccine is available each year. In a typical year, approximately 5 to 20 percent of the population gets the seasonal flu

Social Distancing - a set of non-pharmaceutical intervention tactics with the purpose of reducing the number of close interpersonal contacts and the spread of influenza

Surveillance – epidemiological activities of gathering and analyzing data to provide situational awareness

IV. PRE FLU ACTIVITY

DEFINITION: *Pre flu activity is characterized by the absence or minimal presence of influenza throughout Maryland prior to the beginning of flu season.*

TIME PERIOD: *Prior to the first laboratory-confirmed case of influenza in Maryland; typically June through September*

Tips for Maryland Residents

- ❖ Vaccinate to best prevent influenza. Vaccination is most effective if you receive a flu shot in the summer or fall
- ❖ Identify the best location to receive your annual flu vaccination. Many primary-care physicians have vaccine available. Vaccine is also available at pharmacies and health clinics and can be found here: <http://flushot.healthmap.org/>
- ❖ Live a healthy lifestyle. This includes regularly washing your hands, avoid touching your eyes, nose, and mouth, and avoiding close contact with sick people
- ❖ Register for the Maryland Resident Influenza Tracking Survey: <https://flusurvey.dhmh.maryland.gov/>

State and Local Health Department Actions

Epidemiological and Laboratory

- Coordinate with the Centers for Disease Control and Prevention (CDC) to identify likely flu strains that could affect Maryland during next flu season
- Monitor any disease outbreaks with patients exhibiting upper-respiratory infections or symptoms of influenza-like illness (ILI)
- Monitor ILI-activity in hospital emergency departments in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for statistically significant warnings and threats
- Conduct laboratory testing to identify and confirm any flu cases prior to the beginning of flu season or early flu activity stage
- Monitor flu activity in the southern hemisphere to inform decision-making
- Monitor adverse reactions to vaccine

Communication and Public Information

- Develop materials and coordinate public health messaging; encourage vaccination
- Provide information for healthcare community, including recommendations on vaccine ordering and availability and current vaccine information statements (VIS)

- Provide update on vaccine supplies and distribution
- Announce seasonal flu clinics at schools and local health departments
- Provide media with preventive measures including hand washing and cough etiquette
- Hold a flu vaccination kick-off event with senior DHMH leadership

Community Prevention and Mitigation

- Assess cache of medical countermeasures and equipment
- Update antiviral medications distribution plan and influenza plan
- Issue a letter to clinicians to encourage the promotion of seasonal flu vaccination in patients
- Receive and distribute vaccine to local providers and local health departments within the vaccines for children (VFC) program

Healthcare System and Provider Actions

- Conduct vaccination clinics, including school flu vaccination clinics
- Vaccinate healthcare workers
- Review plans and prevention strategies for seasonal influenza in the healthcare setting, including implementation of respiratory hygiene, appropriate management of ill staff, and infection control precautions. CDC guidance can be found:
<http://www.cdc.gov/flu/professionals/index.htm>

High Impact and Pandemic Threat Warning

- ESSENCE data that suggest a significant increase in ILI outside of typical flu season
- Outbreak or multiple outbreaks of ILI outside of typical flu season

V. Early Flu Activity

DEFINITION: *Early flu activity is characterized by the presence of one or more confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either sporadic or local and ILI intensity is minimal or low.*

TIME PERIOD: *Beginning after the first laboratory-confirmed case of influenza in Maryland has been identified and lasting until influenza increases in intensity and spread.*

Tips for Maryland Residents

- ❖ Get vaccinated against the flu if you have not done so already. Vaccination is the best way to prevent influenza
- ❖ Continue to practice hand hygiene and cough etiquette, such as coughing into your sleeve
- ❖ Stay informed by monitoring DHMH's influenza surveillance reporting website:
<http://phpa.dhmh.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

State and Local Health Department Actions

Epidemiological and Laboratory

- Examine data obtained from ILINet sentinel providers
- Monitor the Maryland Resident Influenza Tracking Survey (MRITS)
- Investigate influenza / ILI outbreaks
- Monitor severity of virus including number of hospitalizations and deaths
- Monitor reportable conditions related to flu including pneumonia cases in healthcare workers, hospitalizations, pediatric flu deaths, and novel strains of Type A influenza
- Monitor ILI-activity in hospital emergency departments in ESSENCE for statistically significant warnings and threats
- Monitor hospital emergency department status, intensive care units, and hospital bed capacities
- Provide confirmatory testing of viral specimens in DHMH laboratory
- Monitor characterization of virus including subtypes and resistance to antiviral medications
- Monitor adverse reactions to vaccine
- Monitor vaccine supply and availability
- Provide recommendations regarding the use of antiviral medications

Communication and Public Information

- Issue a press release and social media post announcing the first case of influenza in Maryland
- Provide educational messages including vaccine promotion and steps to take if you get sick
- Announce seasonal flu clinic dates and locations
- Communicate disease severity and monitor news coverage

Community Prevention and Mitigation

- Report first confirmed flu case to healthcare and preparedness partners, including the Maryland Joint Operations Center (MJOC)
- Issue information on first cases of influenza to local public health and healthcare partners. Consider conducting a conference call for more specific information sharing needs
- Implement CDC guidance and recommendations for use of antiviral medications

Healthcare System and Provider Actions

- Continue to conduct vaccination clinics, including flu clinics at schools
- Healthcare systems should continue to vaccinate healthcare workers
- Clinicians should emphasize seasonal flu vaccine for patients, especially those at high risk for complications due to influenza
- Implement infection control practices in the healthcare settings. This may include adherence to standard precautions for hand hygiene and use of personal protective equipment

High Impact and Pandemic Threat Warning

- Laboratory suspected or confirmed test showing a novel strain of influenza
- Initial severe flu cases (hospitalizations or deaths) in atypical population, such as healthy adults

VI. Peak Flu Activity

DEFINITION: *Peak flu activity is characterized by an increase in confirmed cases of influenza in Maryland. Geographic spread of influenza in Maryland is either regional or widespread and ILI intensity is moderate or high.*

TIME PERIOD: *Peak flu activity typically occurs during the winter; however, each flu season is different. Peak flu activity is occurring when greater than 15% of influenza tests from sentinel laboratories are positive for the virus.*

Tips for Maryland Residents

- Avoid direct contact with ill people whenever possible. Continue to practice hand hygiene by washing your hands often
- Remain at home and avoid contact with other people if you have flu-like symptoms or do not feel well. Use proper cough and sneeze etiquette if you are sick
- Know the warning signs that require urgent medical attention including high or prolonged fever, shortness of breath, dehydration, chest pain, and fainting
- Stay informed by monitoring DHMH's influenza surveillance reporting website: <http://phpa.dhmd.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

State and Local Health Department Actions

Epidemiological and Laboratory

- Monitor changes in viral characteristics, including antiviral resistance
- Monitor adverse reactions to vaccine
- Continue to investigate influenza outbreaks
- Monitor geographic spread and intensity of influenza
- Monitor information that could indicate a severe flu impact, such as influenza hospitalization rate, school absenteeism rate, and morbidity and mortality rate

Communication and Public Information

- Continue to provide educational messages including vaccine promotion, disease characteristics, and steps to take if you get sick
- Communicate disease severity and alerts and monitor news coverage
- Issue guidance on avoiding hospital emergency departments unless illness is severe
- Provide information regarding mitigating medications, if applicable

Community Prevention and Mitigation

- Conduct a conference call with healthcare partners and health departments to provide guidance and assess the status of seasonal influenza in Maryland

- Monitor the status of antiviral medications in the commercial supply chain on a weekly basis
- Monitor statewide hospital bed availability through the Maryland Institute for Emergency Medical Services System (MIEMSS)
- If necessary, activate Maryland Responds professional volunteers to provide support to local health departments vaccination clinics

Healthcare System and Provider Actions

- Use caution when performing aerosol-generating procedures and only perform these procedures on patients with confirmed or suspected influenza if they are medically necessary
- Manage visitor access and movement within the facility
- Implement environmental infection control and ensure standard disinfection procedures are occurring in patient-care areas
- Continue vaccinating patients and focus vaccination efforts on CDC-recommended target populations

High Impact and Pandemic Threat Warning

- Laboratory suspected or confirmed test showing a novel strain of influenza
- Significantly higher severity in flu cases in comparison to previous years

SEVERE FLU IMPACT

Peak seasonal flu activity is characterized by an increase in the spread and/or intensity of influenza. Particularly severe seasons may cause a severe flu impact. A severe flu impact is characterized by flu activity that greatly affects health systems and the community.

State health officials regularly review a number of factors that might trigger a severe flu impact. The following are primary factors for determining a severe flu impact.

(1) Factor 1: Hospitals experiencing reported surge in emergency departments or diminishing bed availability

Established by: MIEMSS monitoring and Emergency Department Overload Mitigation Plan

Threshold: Hospitals within one region are on “yellow” alert status greater than 35% of the collective daily time for several days

(2) Factor 2: Emergency Department data trends for ILI syndrome show a statistically significant increase above previous flu season trends

Established by: DHMH ESSENCE

Threshold: Emergency Department chief complaints for ILI are significantly above expected compared to previous flu season trends

(3) Factor 3: Flu surveillance data suggest a number of hospitalizations out of proportion with previous flu seasons due to the influenza virus

Established by: DHMH Influenza-associated Hospitalizations report

Threshold: Hospitalization rate higher than typical flu seasons

(4) Factor 4: Increased virulence of circulating strains causing an increase in morbidity and mortality, especially in atypical populations

Established by: DHMH Laboratory testing and Influenza-associated Hospitalizations and Deaths Reports

Threshold: Identified pandemic strain of influenza (such as 2009-2010 H1N1); increased morbidity in previously healthy, aged 18-24 and 25-49 individuals

(5) Factor 5: Circulating strains of influenza do not match available seasonal vaccine and/or are resistant to antiviral medications

Established by: CDC Morbidity and Mortality and Flu Surveillance Weekly Reports

Threshold: Seasonal vaccine significantly less than 50% effective

(6) Factor 6: School absenteeism is significantly higher than typical levels

Established by: DHMH ESSENCE

Threshold: 50% or more of Maryland local jurisdictions report greater than 15% absenteeism for three consecutive weekdays

The impact of seasonal influenza when it is both widespread geographically and high in intensity can be severe. The disease circulates throughout Maryland and can cause many residents to become ill and seek hospital treatment, increasing the number of patients in healthcare settings. Influenza simultaneously infects healthcare workers which reduces the workforce at these hospitals and community health centers. This dual impact might be severe and can greatly affect the community.

Additional Considerations for Mitigating a Severe Flu Impact

Non-pharmaceutical Intervention and Communications

- Conduct weekly assessment conference calls with healthcare partners and local health departments to provide situational awareness and initiate mitigation tactics
- Increase the number of public press releases and information on seasonal flu
- Operationalize portions of the State Pandemic Influenza Annex including recommendations regarding social distancing and travel restrictions as necessary
- Review potential declarations under the Catastrophic Health Emergencies (CHE) Act
- Consider enacting Pandemic Flu Attendance and Leave Policy and Advanced Sick Leave Policy
- Review policies and procedures for potential school closures with the Maryland State Department of Education (MSDE) and local public school systems
- Issue guidance and manage visitor access to patients in healthcare settings. Consider screening visitors for symptoms of acute respiratory illness before entering hospitals
- Hospitals should consider designing and installing engineering controls to reduce potential exposure to influenza and other hospital-acquired infections

Medical Countermeasures

- Encourage universal vaccination effort and increase the number of vaccine clinics
- If necessary, allocate and distribute antiviral medications to local community partners for potential dispensing
- Request medications from the CDC Strategic National Stockpile (SNS) if a shortage of antivirals or equipment is identified in the commercial supply chain or State stockpile

VII. Late Flu Activity

DEFINITION: *Late flu activity is characterized by decreasing levels of influenza in Maryland.*

TIME PERIOD: *Late flu activity is occurring when less than 15% of influenza tests from sentinel laboratories are positive. Additionally, the predominant strain of circulating influenza virus typically shifts to Type B.*

Tips for Maryland Residents

- ❖ Continue to practice hand hygiene and cough etiquette
- ❖ Stay informed by monitoring DHMH's influenza surveillance reporting website:
<http://phpa.dhmh.maryland.gov/influenza/fluwatch/Pages/Home.aspx>

State and Local Health Department Actions

Epidemiological and Laboratory

- Continue to investigate influenza outbreaks throughout Maryland
- Publish epidemiological data and flu season summary at end of season

Community Prevention and Mitigation

- Review and update Maryland Influenza Plan at end of season

Healthcare Systems and Providers Actions

- Assess medications and personal protective equipment caches and refill stocks as necessary
- Review and update seasonal influenza plans and medical surge plans

High Impact and Pandemic Threat Warning

- Sudden increase in reported cases of ILI late in flu season

VIII. Conclusion

Influenza is a serious disease that affects many Maryland residents every year. The Maryland Department of Health and Mental Hygiene has identified and published essential tips for Maryland residents to prevent and mitigate the spread of the flu. Additionally, this plan outlines the State's efforts in surveillance, communication, community prevention and mitigation, and guidance for healthcare systems and providers to dictate actions to reduce the effect the flu has on Maryland and its residents.

Appendix A: Local Health Department Contact Information

JURISDICTION	WEBSITE ADDRESS	PHONE NUMBER
Allegany	http://www.alleganyhealthdept.com/	301-759-5000
Anne Arundel	http://aahealth.org/index.php	410-222-7095
Baltimore City	http://health.baltimorecity.gov/	410-396-4398
Baltimore	http://www.baltimorecountymd.gov/Agencies/health/	410-887-2243
Calvert	http://www.calverthealth.org/	410-535-5400
Caroline	http://dhmh.maryland.gov/carolinecounty/SitePages/Home.aspx	410-479-8000
Carroll	http://cchd.maryland.gov/	410-876-2152
Cecil	http://www.cecilcountyhealth.org/	410-996-5550
Charles	http://www.charlescountyhealth.org/	301-609-6900
Dorchester	http://www.dorchesterhealth.org/	410-228-3223
Frederick	http://health.frederickcountymd.gov/	301-600-1029
Garrett	http://www.garretthealth.org/	301-334-7777
Harford	http://harfordcountyhealth.com/	410-838-1500
Howard	https://www.howardcountymd.gov/Departments/Health	410-313-6300
Kent	http://www.kenthd.org/	410-778-1350
Montgomery	http://www.montgomerycountymd.gov/hhs/	240-777-0311
Prince George's	http://www.princegeorgescountymd.gov/1588/Health-Services	301-883-7879
Queen Anne's	http://www.qahealth.org/	410-758-0720
Saint Mary's	http://www.smchd.org/	301-475-4330
Somerset	http://somensethealth.org/	443-523-1700
Talbot	http://dhmh.maryland.gov/talbotcounty/Pages/home.aspx	410-819-5600
Washington	http://dhmh.maryland.gov/washhealth/Pages/home.aspx	240-313-3200
Wicomico	http://www.wicomicohealth.org/	410-749-1244
Worcester	http://www.worcesterhealth.org/	410-632-1100

Appendix B: Summary of 2016-2017 Recommendations from the Advisory Committee on Immunization Practices (ACIP)²

2016-2017 Vaccine Recommendations

- Routine annual influenza vaccination of all persons aged 6 months and older who do not have contraindications continues to be recommended.
- No preferential recommendation is made for one influenza vaccine product over another for persons for whom more than one licensed, recommended product is otherwise appropriate.
- In general, healthcare providers should begin offering vaccination soon after vaccine becomes available, and if possible, by October.
- In light of low effectiveness against influenza A(H1N1)pdm09 in the United States during the 2013–14 and 2015–16 seasons, for the 2016–17 season, ACIP made the interim recommendation that live attenuated influenza vaccine (LAIV4) should not be used.
- Children aged 6 months through 8 years who have previously received 2 or more total doses of trivalent or quadrivalent influenza vaccine before July 1, 2016 require only 1 dose for 2016–17. The two previous doses need not have been given during the same season or consecutive seasons.
- All children aged 6 months through 8 years who are recommended for 2 doses should receive their first dose as soon as possible after vaccine becomes available and the second dose at least 4 weeks later.
- Providers should consider observing all patients for 15 minutes after vaccination to decrease the risk for injury should they experience syncope (previous recommendations were to have persons with egg allergies be observed for 30 minutes post-vaccination for signs and symptoms of an allergic reaction).
- Persons with a history of severe allergic reaction to egg (i.e., any symptom other than hives) should be vaccinated in an inpatient or outpatient medical setting (including but not necessarily limited to hospitals, clinics, health departments, and physician offices), under the supervision of a health care provider who is able to recognize and manage severe allergic conditions.

²Full summary can be found: <https://www.cdc.gov/mmwr/volumes/65/rr/rr6505a1.htm>