

Influenza

Surveillance and Investigation Protocol

Table of Contents

I.	ABOUT THE DISEASE.....	2
A.	Clinical Presentation.....	2
B.	Etiologic Agent.....	3
C.	Reservoir.....	3
D.	Incubation Period.....	4
E.	Mode of Transmission.....	4
F.	Period of Communicability.....	4
II.	DISEASE INVESTIGATION.....	4
A.	Case Definition and Case Classification.....	4
	Influenza.....	4
	Influenza-like Illness (ILI).....	5
	Novel Influenza A.....	5
	Pediatric Influenza Deaths.....	7
B.	Reporting Timeframe to Public Health.....	8
C.	Outbreak Recognition.....	8
D.	Healthcare Provider Responsibilities.....	9
E.	Laboratory Responsibilities.....	10
F.	Local Health Responsibilities.....	11
G.	State Health Responsibilities.....	11
H.	Occupational Health.....	12
III.	DISEASE CONTROL AND PREVENTION.....	13
A.	Disease Control Objectives.....	13
B.	Disease Prevention Objectives.....	14
C.	Treatment.....	14
IV.	DISEASE SURVEILLANCE.....	15
A.	Public Health Significance.....	15
B.	Disease Surveillance Objectives.....	16
C.	Surveillance Indicators.....	17

Influenza

Surveillance and Investigation Protocol

I. ABOUT THE DISEASE

Influenza is a highly contagious virus that is spread from person to person, primarily through large-respiratory droplet transmission and can cause mild to severe illness, and in rare instances, death. Influenza activity in the United States typically occurs anytime from October to May, commonly peaking between December and February. Seasonal epidemics can last eight to 12 weeks, or longer. Circulation of two or three influenza virus strains in a community may be associated with a prolonged influenza season with a potential peak in the summer as well as the winter.

Annual epidemics (otherwise known as flu season) are caused by influenza type A and B. A and B antigens are included in seasonal influenza vaccines. Influenza type C and D antigens are not included in the seasonal influenza vaccines. Depending on how well the vaccine matches the circulating strains the season may be mild or severe.

A. Clinical Presentation

Influenza symptoms usually come on suddenly. Not everyone who has the flu has symptoms, but most people who have the flu often feel some or all of these symptoms:

Symptoms

- Rhinitis
- Fever/feeling feverish
- Chills
- Cough (nonproductive)
- Sore throat
- Runny/stuffy nose
- Earaches
- Myalgia (muscle or body aches)
- Headaches
- Fatigue (tiredness)
- Rash (rare)
- Vomiting and diarrhea (more common in children than adults)

Complications of influenza are rare but can occur especially in elderly persons, those with underlying conditions or are immuno-compromised.

Complications

- Primary influenza viral pneumonia
 - Elderly persons, pregnant women, and those with underlying health conditions have a higher risk.
- Secondary bacterial pneumonia
- Co-infections with other viral or bacterial pathogens

Influenza

Surveillance and Investigation Protocol

- Influenza-associated encephalopathy
- Exacerbation of underlying conditions
- Guillain-Barre syndrome
- Myocarditis
- Myositis
- Parotitis
- Seizures
- Death (rare)

B. Etiologic Agent

Influenza virus, an RNA enveloped virus that belongs to the Orthomyxovirus genus, causes infection of the respiratory tract. There are four types of influenza viruses: A, B, C, and D. Influenza A viruses are classified into subtypes according to the combinations of the proteins on the surface of the virus and then further classified into clades and subclades. There are many different influenza A subtypes that exist and circulate. However, H1N1 and H3N2 are the influenza A viruses that routinely circulate in people during flu season. In contrast, Influenza B viruses are classified into lineages, which include B/Yamagata (has not been detected since 2020) and B/Victoria (which is commonly found during flu season).

Novel influenza A viruses are antigenically different from seasonal influenza viruses and usually circulate among animals. For more information about novel influenza A please visit [CDC's Influenza Viruses of Special Concern](#). For more specific information on highly pathogenic avian influenza (HPAI) please visit [CDC: A\(H5\) Bird Flu: Current Situation](#).

C. Reservoir

The reservoir for influenza depends on the type of influenza virus. The primary reservoirs for influenza A viruses are wild birds, such as waterfowl, and domestic poultry and swine populations. Influenza A viruses can also infect other animal species (e.g., bats, cats, dairy cattle, dogs, ferrets, horses, sea lions, seals, etc). Influenza A viruses may infect both humans and some animals. Influenza B generally infects humans, but at least two reports have documented influenza B in seals. Humans are the only known reservoir of influenza type C. Influenza B and C viruses have very limited host range and appear primarily in humans. Influenza D viruses primarily affect cattle with spillover to other animals but are not known to cause illness in people.

Influenza

Surveillance and Investigation Protocol

D. Incubation Period

The incubation period for influenza is typically two days but ranges from one to four days after exposure.

E. Mode of Transmission

Influenza

- Person-to-person via large droplets in close proximity (<2m; <65 ft)
- Aerosol transmission of small droplets (can occur within confined air spaces)
- Indirect transmission: exposure to fomites (infected surfaces or objects)

**Indirect transmission is less common but can occur.*

Note: Respiratory droplets typically only travel short distances, which is why close proximity is required for transmission.

Novel Influenza A

- Animal-to-human (zoonotic transmission). Please see the [Novel Influenza A surveillance protocol](#) for more information.

F. Period of Communicability

Most adults ill with influenza shed the virus in the upper respiratory tract and are infectious from the day before symptom onset (24 hours before) to approximately five to seven days after symptom onset. Infectiousness is greatest within three to four days after illness onset and is higher in those with fever. Children, immunocompromised people, and severely ill people might shed influenza virus for > 10 days after symptom onset. Viral shedding in nasal secretions usually peaks during the first three days of illness and stops within seven days, but those who are asymptomatic can still shed influenza virus and infect others.

II. DISEASE INVESTIGATION

A. [Case Definition and Case Classification](#)

Influenza

Clinical Criteria

Not applicable.

Laboratory Criteria

Positive laboratory results by immunofluorescence, culture or PCR.

Influenza

Surveillance and Investigation Protocol

Influenza-like Illness (ILI)

Clinical Criteria

Influenza-like-illness (ILI) is defined as fever > 100 °F with cough and/or sore throat.

Laboratory Criteria

Not applicable. symptom-based criteria only.

Novel Influenza A

Clinical Criteria

In the absence of a more likely alternative diagnosis or cause, an acute illness characterized by either:

- One or more of the following: Cough, sore throat, fever (measured or subjective), shortness of breath or difficulty breathing, conjunctivitis (red eye, discharge from eye)

OR

- Two or more of the following: Headache, myalgia, arthralgia, fatigue, rhinorrhea or nasal congestion, diarrhea, vomiting.

Laboratory Criteria

Confirmatory Laboratory Evidence:

Category 1 (novel influenza virus detection)

- Positive confirmatory molecular test result (e.g., reverse transcriptase polymerase chain reaction[rT-PCR]) for novel influenza A subtype,
- OR**
- Genetic sequence indicative of novel influenza A virus.

Category 2 (viable virus)

- Isolation of a novel influenza virus from a clinical specimen.

Category 3 (evidence of infection)

- Significant IgG antibodies rise to novel influenza A (i.e., at least a four-fold rise in a quantitative titer or seroconversion) in paired acute and convalescent serum IgG in the absence of another explanation (such as vaccination).

Presumptive Laboratory Evidence:

Category 1

Influenza

Surveillance and Investigation Protocol

- Presumptive positive for novel influenza virus on tests specifically designed to detect novel influenza viruses, such as H5 or H7.

Category 2

- Virus testing results are indicative of variant influenza viruses, such as H1v or H3v, as determined in consultation with subject matter experts at CDC.

**Isolation of a novel virus should not be performed outside of CDC.*

Epidemiologic Linkage

- Close contact with a confirmed human case of novel influenza A virus infection,
OR
- Shared a common exposure (such as an agricultural fair or live animal market) with a confirmed novel influenza A case,
OR
- Direct or indirect contact (such as touching an animal, their environment, or their raw or unprocessed animal products) with animals with confirmed influenza A,
OR
- Inadequate use or breach of PPE and exposure to novel influenza A virus in a laboratory.

Vital Records Criteria

No vital records required for Novel Influenza A.

Case Classifications

Suspect

- Meets clinical criteria **AND** epidemiologic linkage criteria **AND** laboratory testing results are positive for influenza A virus, but no laboratory evidence is available that would rule out novel influenza A.

Probable

- Meets confirmatory laboratory evidence category 1,
OR
- Meets clinical criteria **AND** presumptive laboratory evidence category 1,
OR
- Meets clinical criteria **AND** epidemiologic linkage criteria **AND** presumptive laboratory evidence category 2.

Influenza

Surveillance and Investigation Protocol

Note: A probable case classification should not undermine the diagnosis of novel influenza A under CLIA guidelines, and the patient should be provided with the same care and investigation as a confirmed case.

Confirmed

- Meets clinical criteria **AND** confirmatory laboratory evidence category 1,
OR
- Meets confirmatory laboratory evidence category 2,
OR
- Meets confirmatory laboratory evidence category 3.

Pediatric Influenza Deaths

Clinical Criteria

For surveillance purposes, an influenza-associated death is defined as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. Influenza-associated deaths in all persons aged <18 years should be reported.

A death should **not** be reported if:

1. There is no laboratory confirmation of influenza virus infection.
2. The influenza illness is followed by full recovery to baseline health status prior to death.
3. The death occurs in a person 18 years or older.
4. After review and consultation there is an alternative cause of death.

Laboratory/Imaging Criteria

Laboratory testing for influenza virus related death may be done on pre- or post-mortem clinical specimens, and include identification of influenza A or B virus infections by a positive result by at least one of the following:

- Influenza virus isolation in tissue cell culture from respiratory specimens;
- Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens;
- Immunofluorescent antibody staining (direct or indirect) of respiratory specimens;
- Rapid influenza diagnostic testing of respiratory specimens;
- Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens;

Influenza

Surveillance and Investigation Protocol

- Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera*.

Case Classifications

Confirmed

A death meeting the clinical definition that is laboratory confirmed.

Laboratory or rapid diagnostic test confirmation is required as part of the case definition; therefore, all reported deaths will be classified as confirmed.

B. Reporting Timeframe to Public Health

Influenza

Evidence of acute infection is reportable via **ELR to WVEDSS only** within one week. Positive laboratory results by immunofluorescence, culture or PCR, only.

Novel Influenza A:

Report suspect or confirmed cases immediately to the Local Health Department.

Pediatric Influenza Deaths:

Report within one week to the Local Health Department.

Outbreaks or Clusters:

Report suspected or confirmed outbreaks/clusters to the Local Health Department immediately.

C. Outbreak Recognition

Influenza Outbreak Definitions:

Healthy Populations

Outbreak Definition for small congregate settings (e.g., classrooms, daycares rooms, sports teams, dormitories, workplace floor/units/departments):

- Five or more cases if ILI identified within 72 hours **OR**
- Three or more cases of influenza identified within 72 hours. Confirmation can be any testing method, including rapid tests.

Outbreak Definition for large congregate settings (e.g., entire school, daycare, or workplaces):

Influenza

Surveillance and Investigation Protocol

- Increased absenteeism (above 15% if baseline is unknown or 5% above otherwise determined baseline) associated with ILI or laboratory-confirmed influenza.

Outbreak Definition for large congregate settings (e.g., entire school, daycare, or workplaces):

- A community wide outbreak will be declared if three or more congregate settings within a jurisdiction are experiencing an outbreak simultaneously.

Long-Term Care Facilities (LTCF)

Outbreak Definition:

- One laboratory-confirmed influenza case identified along with other cases of acute respiratory illness on a unit. **OR**
- Two cases of laboratory-confirmed influenza identified within 72 hours of each other on the same unit. Influenza testing with molecular assays such as RT-PCR is preferred and is available through the state public health laboratory.

Novel Influenza

Outbreak Definition:

- A single suspected or confirmed case of a novel or variant influenza strain constitutes an outbreak.

D. Healthcare Provider Responsibilities

1. Report any suspected or confirmed outbreaks/clusters of influenza in humans or animals to the local health department immediately.
2. Report any suspected or confirmed infections of novel influenza in humans or animals to the local health department immediately.
3. Report any influenza-associated pediatric deaths to the local health department within one week.
4. Offer seasonal influenza vaccinations to all eligible persons aged 6 months and older. Please see [Flu Vaccine Information](#) for more details on "who needs a flu vaccine."
5. Consider being a Sentinel Provider (ILINet):
 - a. ILINet is made up of healthcare providers (called sentinel providers) that voluntarily report visits for influenza-like illness and the number of all-cause visits on a weekly basis by age group. These sentinel providers report weekly to the CDC surveillance system ILINet. For more information on ILINET please visit [Sentinel Provider/ILINET Information WVBPB](#)

Influenza

Surveillance and Investigation Protocol

- b. For ILINET reporting instructions please visit [ILINET/Sentinel Provider Reporting Instructions](#)

E. Laboratory Responsibilities

1. Report any suspected or confirmed infections of novel influenza in humans or animals to the local health department immediately.
2. Report any suspected or confirmed outbreaks/clusters of influenza in humans or animals to the local health department immediately.
3. Report seasonal Influenza cases via ELR to WVEDSS only, within one week. Evidence of acute infection via (ELR) to the West Virginia Electronic Disease Surveillance System (WVEDSS) only Positive laboratory results by immunofluorescence, culture or PCR, only.
4. **Sentinel providers** should submit up to **two** nasopharyngeal specimens every week from patients with symptoms of influenza-like illness and submit them to OLS. **Clinical Laboratories** should submit up to **five** influenza specimens per week to OLS. For more instructions on virologic surveillance please visit [Virologic Surveillance Information Sheet](#).
5. The Bureau for Public Health should be contacted if a commercial flu test yields an unsubtypeable result. Sometimes a commercial flu test will yield an unsubtypeable result due to low viral titer or other issues even though the patient is infected with seasonal strain. Testing at OLS can determine whether an unsubtypeable result commercially is due to seasonal flu or due to novel virus.
6. Due to the ongoing threat of HPAI in the U.S, submit influenza A specimens to OLS that have not been subtyped or are unsubtypeable in patients tested for influenza as soon as possible.
7. Consider voluntarily participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS).
 - a. NREVSS is a voluntary surveillance systems laboratory that can participate in to allow timely analysis of data to monitor viral seasons and circulation patterns. Participating U.S. laboratories, including those from university and community hospitals, state public health departments, and commercial entities, voluntarily report weekly to CDC the following information.
 - i. The total number of tests performed;
 - ii. The type of test used for detection;
 - iii. The number of tests with positive results.
 - b. To enroll in NREVSS please go to the following:
 - i. Clinical laboratory registration:
<https://nrevss.cdc.gov/register/lab.aspx>
 - ii. County Department of Health:
<https://nrevss.cdc.gov/register/county.aspx>

Influenza

Surveillance and Investigation Protocol

F. Local Health Responsibilities

1. Maintain one regular reporting sentinel provider per county.
2. Communicate with the Vaccine Program Manager (VPM) at the Immunization Services Division at OEPSimmunize@wv.gov about sentinel provider vaccine ordering process. Sentinel providers are responsible for completing the order form and submitting it to the VPM via email. The LHDs will then be notified when the orders are ready for pickup. The sentinel providers will pick up the vaccines from their LHD.
3. Encourage **sentinel providers** to obtain up to **two** nasopharyngeal specimens every week from patients with symptoms of influenza-like illness and submit them to OLS. Encourage **clinical laboratories** to work with OLS to confirm and subtype up to **five** influenza specimens per week. For more instructions on virologic surveillance please visit [Virologic Surveillance Information Sheet](#).
4. Educate providers about CDC recognition and reporting of influenza.
5. Report Influenza-associated pediatric mortality within one week to the BPH. Report suspected or confirmed novel influenza A immediately to the BPH. Report any respiratory outbreaks immediately to BPH. Please see the Reportable Disease Rule information at [Disease and Event Reporting](#) for additional information.
6. Investigate cases of suspected or confirmed novel influenza in collaboration with OEPS.
7. Investigate cases of influenza-associated pediatric mortality. Complete the case investigation in WVEDSS **AND** the CDC case report form. [Influenza-associated pediatric mortality case report form](#).
8. Investigate clusters and outbreaks of influenza in healthy populations and congregate living facilities.
9. Keep at least five unexpired respiratory collection kits on hand at the LHD. Reorder respiratory collection kits from OLS as kits expire or are used. [Influenza/Respiratory Virus Specimen Test Kit Order Form](#)
10. Have an emergency number that can be used to contact LHD staff after-hours and over the weekend.
11. Recommend and offer seasonal influenza vaccines each year.
12. Notify Sentinel Providers/ILINET providers of when seasonal influenza vaccines are available to pick up.

G. State Health Responsibilities

1. Maintain the statewide influenza surveillance system including:
 - a. Virologic surveillance as reported by clinical laboratories.

Influenza

Surveillance and Investigation Protocol

- b. Outpatient reports of influenza-like illness from sentinel providers.
- c. ILINET surveillance.
- d. Outbreak surveillance for influenza.
- e. Syndromic surveillance of influenza-like illness from emergency departments.
- f. NREVSS reports.
- g. Review influenza-associated hospitalization data.
- h. Review influenza-associated deaths (pediatric and adult).
2. Provide technical expertise and consultation regarding surveillance, investigation, control measures and prevention of influenza.
3. Educate the LHDs through webinars, lunch and learns, and additional trainings.
4. Prompt and complete reporting of novel influenza cases to the Centers for Disease Control and Prevention (CDC).
5. Maintain the Pan-Respiratory Dashboard which includes West Virginia virologic data, outpatient reports from ILINET, outbreak data for influenza, syndromic surveillance influenza data, influenza hospitalizations, and influenza-associated deaths. The Pan-Respiratory Dashboard is specific to West Virginia and can be found at <https://breatheeasy.wv.gov/>
6. Keep program materials updated on an annual basis.
7. Work with OLS to ensure there are adequate numbers of specimens from clinical laboratories and Sentinel Providers (ILINET providers) to meet the Right Size Goals. For more information about right sizing for influenza surveillance please visit [APHL Influenza Virologic Surveillance Right Size Roadmap 2nd edition](#).

H. Occupational Health

- Steps to reduce transmission among patients and employees in any setting should be used including hand hygiene, environmental cleaning and disinfection, respiratory and cough etiquette, and appropriate PPE use (e.g., gloves, gowns, face masks).
- Additional precautions may need to be implemented based on the level of patient care and transmission risk.
- Facilities should develop policies and procedures for infection control and prevention efforts for influenza illness.
- Facilities should have processes and sick leave policies in place to encourage healthcare personnel to stay home when ill and have a process for staff to report illnesses that may represent a risk to their patients and coworkers.
- Additionally, CDC recommends that all individuals six months and older should receive an annual influenza vaccination to help prevent seasonal influenza infection.

Influenza

Surveillance and Investigation Protocol

- CDC recommends that workers who have a fever and respiratory symptoms stay at home for 24 hours after their fever ends, without the use of medication.

III. DISEASE CONTROL AND PREVENTION

A. Disease Control Objectives

The following measures should be taken to reduce the risk of transmission of influenza when a person is ill:

1. Take influenza antiviral drugs, per provider recommendations and treatment plan.
2. Ill individuals should stay home until symptoms have improved and have been fever free for 24 hours (without the use of fever-reducing medication).
3. Practice cough etiquette by covering coughs and sneezes with tissue or elbow if tissue is not available.
4. Perform hand hygiene by washing hands with soap and water or alcohol-based hand rub.
5. Consider wearing a mask to reduce the spread of the virus to others.
6. Clean frequently touched surfaces.

In Health Care Settings:

1. For control in some institutional influenza outbreaks, post-exposure antiviral treatment (chemoprophylaxis) may be used to prevent additional transmission (e.g., long-term care facilities and hospitals).
2. Post-exposure antiviral treatment (chemoprophylaxis) may also be used for exposures among certain individuals that are at high risk for influenza complications.
3. For exposures in healthcare facilities follow your internal policies/procedures for additional infection control steps such as post-exposure antiviral treatment, vaccinations, environmental cleaning, and PPE use.
4. In healthcare settings, droplet precautions are recommended for children hospitalized with influenza or influenza-like illness for the duration of the illness.
5. Ill staff should be excluded from work until they are fever free for 24 hours and symptoms have improved. Ill residents in long-term care facilities should be placed on [Transmission-Based Precautions](#).

Influenza

Surveillance and Investigation Protocol

B. Disease Prevention Objectives

Receiving an annual influenza vaccine is the best way to prevent infection. The CDC recommends that everyone six months of age and older receive an annual influenza vaccine with rare exceptions. Timing of vaccination is also important; the best time to receive the vaccine is before the end of October. However, vaccination continues to be recommended whenever influenza is circulating. Individuals who are at high risk for complications (children under five years of age, immunocompromised individuals, pregnant women, individuals with asthma/diabetes/heart/lung issues, and people over 65 years old) from influenza should be vaccinated each season.

Take other preventive actions in addition to vaccination that may help reduce the spread of viruses like flu such as:

- Avoid close contact with people who are sick.
- Clean frequently touched surfaces.
- Perform hand hygiene by washing hands with soap and water or alcohol-based hand rub.
- Avoid touching the eyes, nose, and mouth.
- Practice cough etiquette by covering coughs and sneezes with tissue or elbow if tissue is not available.
- Take steps for cleaner air such as bringing in fresh outside air, purifying indoor air, or gathering outdoors. Cleaner air can reduce the risk of exposure to viruses.
- Wearing a mask around infected persons.

In Healthcare Settings:

- Healthcare facilities should develop an internal policy for infection control prevention strategies regarding sick leave policies, vaccination policies, and PPE use.
- In school settings, parents should ask about the school or daycare program regarding their routine sanitization protocols and ask how sick students and staff are separated from others.

C. Treatment

Antiviral drugs are available to those who are ill or have been exposed to influenza. Antivirals may lessen the severity of the disease and prevent complications for those at high risk. Antiviral drugs work best for treatment when they are started within one to two days (48 hours) of becoming ill but starting them later can still be helpful

Influenza

Surveillance and Investigation Protocol

especially for those at high risk of severe complications. The CDC recommends prompt treatment of those who are at increased risk of serious complications.

There are four types of antiviral medications approved for treatment or prophylaxis of influenza infections. Tamiflu, Relenza, Rapivab are neuraminidase inhibitors and Xofluza is a cap-dependent endonuclease inhibitor.

- 1) Tamiflu (Oral Oseltamivir) *The preferred antiviral medication*
- 2) Relenza (inhaled zanamivir)
- 3) Rapivab (intravenous peramivir)
- 4) Xofluza (oral baloxavir marboxil)

*For more information on influenza antiviral medications for clinicians please visit

[Antiviral Information](#)

*For more information on treating influenza for individuals who are high risk please visit

[Treating Influenza](#)

IV. DISEASE SURVEILLANCE

A. Public Health Significance

An influenza pandemic is a global outbreak of a new influenza A virus that is different from current and recently circulating human seasonal influenza A viruses. Pandemics happen when novel influenza A viruses emerge, which are able to infect people easily and spread from person to person in an efficient and sustained way. Novel influenza A viruses are the only type of influenza virus with pandemic potential.

Influenza is a highly contagious disease, and the severity of influenza seasons can differ from year to year. Influenza vaccination is estimated to have prevented approximately 10 million influenza illnesses, five million medical visits, 180,000 hospitalizations, and 12,000 deaths. Depending on how well the vaccine matches the circulating strains, the influenza season may be mild or severe. Influenza activity in the United States during the 2024-2025 season was classified as a high severity season, marking the most severe influenza season since 2017-2018. High severity was reflected across multiple indicators including ILINET data, hospitalization data, and mortality data, highlighting the significant public health impact of the 2024-2025 flu season.

The 2024-2025 influenza season had approximately 51 million influenza-related illnesses, 23 million medical visits, 710,000 hospitalizations, and 45,000 deaths in the United States. In addition, influenza A viruses were predominant, with A(H1N1)pdm09 and A(H3N2) viruses detected at approximately equal levels.

Influenza B activity remained low throughout the season then slightly peaked during

Influenza

Surveillance and Investigation Protocol

the latter half of the season. There has been no B/Yamagata lineage viruses detected since 2020. According to the percentage of positive clinical specimens, peak influenza activity in each of the Health and Human Services Regions occurred between late January 2025 and early February 2025, which represents the highest peak percentage since the 2015-16 influenza season.

Region 3, which includes West Virginia, peaked in early February (2025) for the 2024-2025 season. Throughout the season, children aged 0–4 years and those aged 5–24 years each had a higher percentage of visits for ILI compared to adult age groups, consistent with trends observed in previous seasons. The pediatric age groups (0–4 years and 5–17 years) experienced the highest percentages of ED visits for influenza. During September 29, 2024 – August 30, 2025, a total of 279 laboratory-confirmed influenza-associated pediatric deaths were reported to CDC; this is the highest number of deaths reported during a seasonal influenza epidemic.

B. Disease Surveillance Objectives

1. To identify the start of the influenza season each year.
2. To characterize the level of influenza activity throughout the season and report/feedback information on circulating strains as available.
3. To identify emerging and re-emerging viruses using complete and timely characterization of circulating respiratory viruses and by monitoring trends in viral detection.
4. To inform action, prevent disease, and mitigate healthcare system strain by detecting outbreaks, unusual clinical manifestations, and illness surges in communities.
5. To contribute to the global World Health Organization (WHO) effort to identify appropriate strains of influenza vaccine to formulate vaccine composition recommendations for the coming year.
6. To detect and monitor trends of influenza.
7. To identify enhanced surveillance techniques to supplement and improve information on influenza in West Virginia.
8. To work with OLS, sentinel providers, and clinical laboratories to submit specimens to the National Center for Immunization and Respiratory Diseases (NCIRD) division for further genomic sequencing.

C. Surveillance Indicators

This section describes measurable attributes of the disease's surveillance system that can be used to assess surveillance data quality (i.e., timeliness of reporting, data completeness, proportion of cases with appropriate laboratory testing, etc.).

Influenza

Surveillance and Investigation Protocol

1. Enrolled sentinel provider, by county.
2. Proportion of weeks sentinel provider reported, by county.
3. ILINet Surveillance- Percent of outpatient visits for flu-like illness out of all patient visits by week.
4. Outbreak surveillance.
5. ESSENCE Surveillance- Hospitalizations for influenza of all ages.
6. Virologic Surveillance- (outpatient- ILINET, clinical laboratories, inpatient settings, etc.)
 - a. Specimen positivity
 - b. Virus characterization
7. Influenza hospitalizations of all ages
8. Mortality Data
 - a. Influenza-associated adult deaths
 - b. Influenza-associated pediatric deaths

Influenza

Surveillance and Investigation Protocol

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Influenza

Surveillance and Investigation Protocol

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Influenza

Surveillance and Investigation Protocol

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