



MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (MDPH)
WEEKLY INFLUENZA UPDATE
December 31, 2020

Estimated Weekly Severity of Influenza
(12/20/20 – 12/26/20)



Weekly severity is determined by combining three key markers of influenza activity and distribution: influenza-like illness, hospitalizations, and influenza positive test results reported to the Massachusetts Department of Public Health. MDPH analyzes data on these markers weekly and classifies the severity using historical data collected during past influenza seasons. For more information about how the severity indicator is calculated, please visit <https://www.cdc.gov/flu/about/classifies-flu-severity.htm>.

All data in this report are preliminary and subject to change as more information is received. Data collected through December 26, 2020 are included in this report.

Highlights from this week's report:

- Influenza severity for Massachusetts is low this week.
- The percent of influenza-like illness (ILI) visits in Massachusetts is 1.11%, which is lower than the previous two seasons in the same week.
- The percent of hospitalizations associated with influenza is 0.03%, which is lower than the previous two seasons in the same week.
- Overall ILI activity is minimal. All regions are reporting minimal ILI activity.
- More influenza B than influenza A positive specimens have been reported by hospitals and outpatient facilities in Massachusetts.
- Nationally, flu activity is low.
- Additional statewide and national data including geographic spread, ILI activity, and pneumonia and influenza mortality are available at CDC's FluView Weekly Report at www.cdc.gov/flu/weekly and FluView Interactive <https://www.cdc.gov/flu/weekly/fluviewinteractive.htm>.
- Statewide and national COVID data are available at CDC's COVIDView weekly report at <https://www.mass.gov/info-details/covid-19-response-reporting> and <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html>

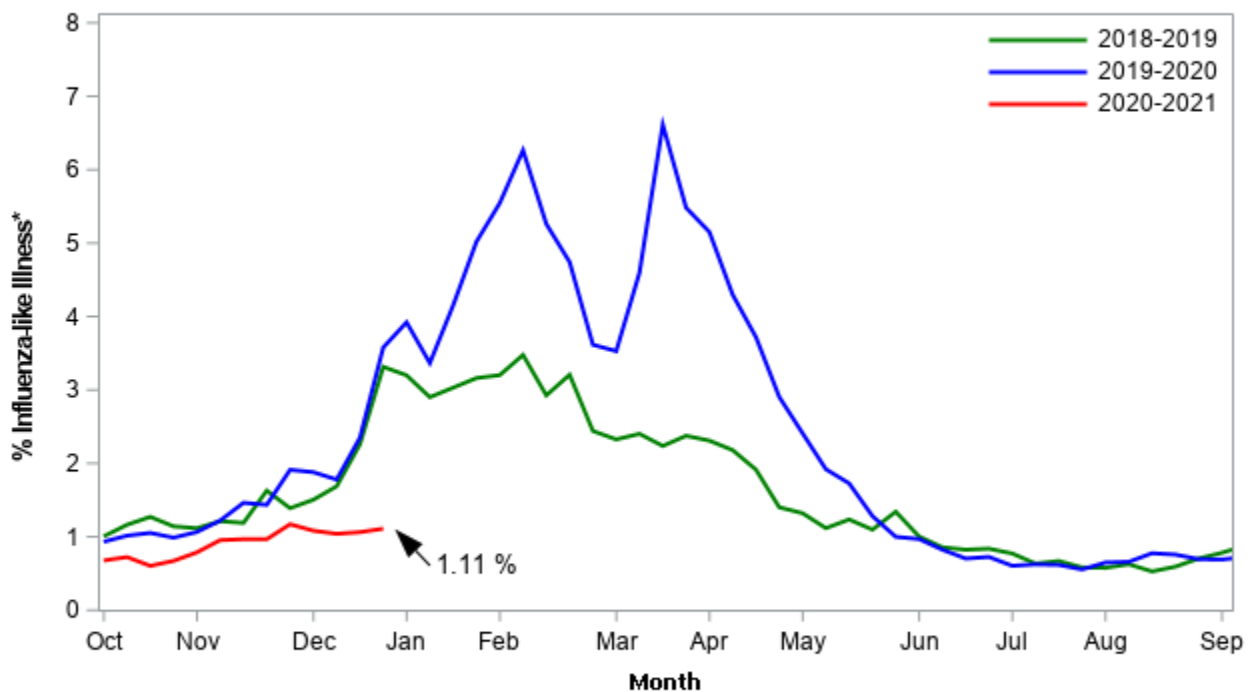
*Flu season has begun and the best time to get your flu shot is now.
Flu vaccination is the best way to prevent flu and its potentially serious complications.*

Influenza-like illness activity

Influenza-like illness (ILI) is defined as fever (temperature of 100 deg F or greater) in addition to cough and/or sore throat. Many more people are infected with influenza than are tested for influenza. ILI is used throughout the regular influenza season to help track influenza activity in individuals who are not tested, as trends in ILI have been shown to mirror influenza trends. Ninety-seven healthcare facilities called ‘sentinel sites’ report the number of patients they see with ILI each week during regular flu season to the Massachusetts Department of Public Health (MDPH). Sentinel sites include provider offices, school health services, community health centers, urgent care centers, and emergency departments across Massachusetts. Data reported by emergency departments provide information about ED visits that include diagnostic codes (influenza diagnosis code) as well as terms indicative of ILI.

Figure 1 shows that the percent of ILI visits is lower than the two previous seasons in the same week. For more information, see CDC’s influenza surveillance website at www.cdc.gov/flu/weekly/fluactivitysurv.htm.

**Figure 1: Percentage of ILI visits reported by sentinel provider sites
September 27, 2020 – December 26, 2020**



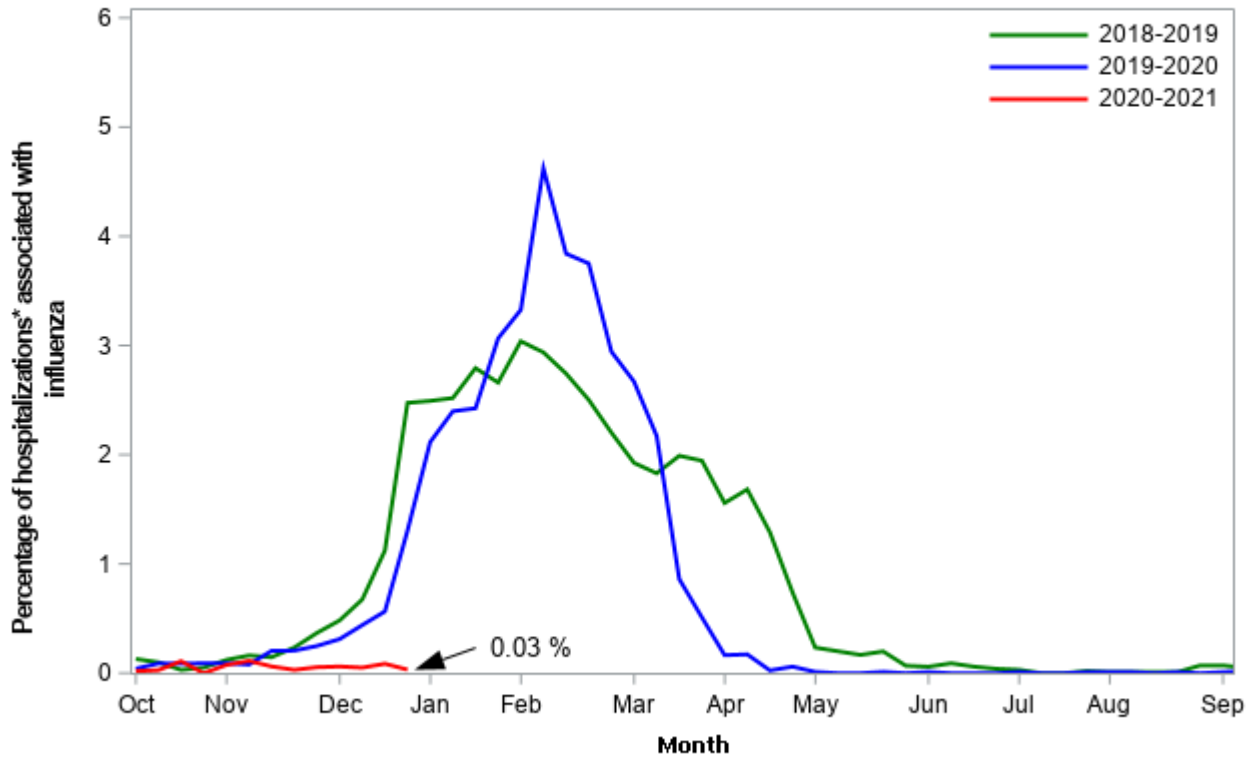
*Influenza-like illness (ILI, defined by fever >100F and cough and/or sore throat), as reported by Massachusetts sentinel surveillance sites. ILI reported by sentinel sites which report via ED syndromic surveillance include cases meeting the ILI definition and cases with a diagnosis indicating influenza infection.

Influenza-associated hospitalizations

As part of the National Syndromic Surveillance Program, MDPH receives data from Emergency Departments (EDs) covering 100% of ED visits statewide. These data are used to track patient visits related to influenza by monitoring the diagnoses the patients receive (ICD-10 code). These data are available to MDPH in near real-time.

Figure 2 shows the percent of all ED visits which result in a patient hospitalized because of illness associated with influenza infection. The percentage of influenza-associated hospitalizations is lower than the two previous seasons in the same week.

**Figure 2: Influenza-associated Hospitalizations, Massachusetts
September 27, 2020 – December 26, 2020**

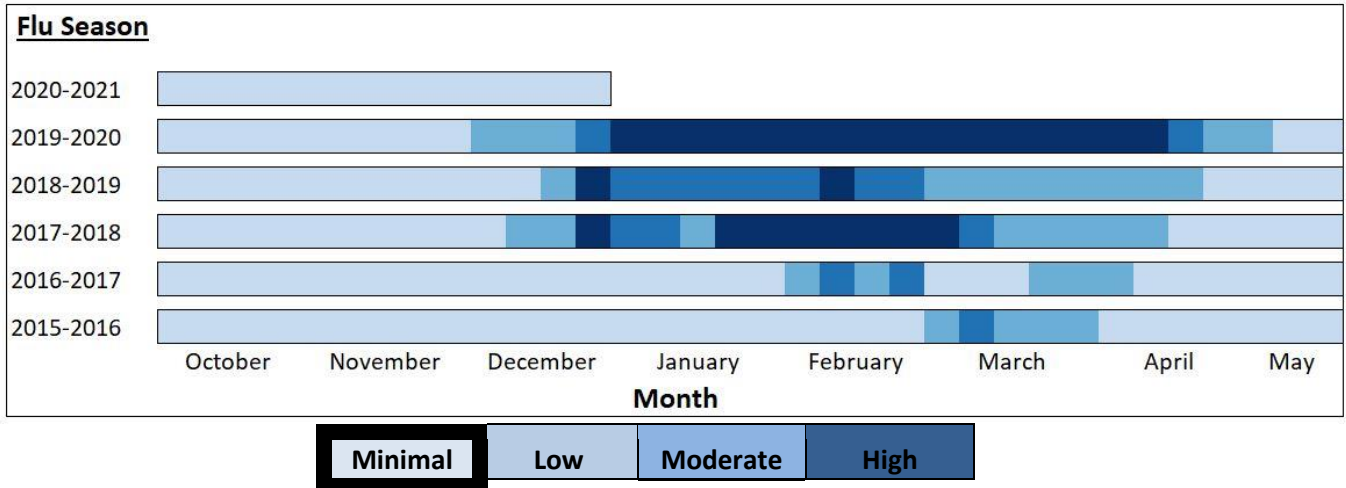


*All patients admitted through hospital emergency departments as captured by syndromic surveillance

ILI Activity in Massachusetts

Figure 3 shows the current season’s weekly ILI activity compared to the last five flu seasons in Massachusetts. ILI activity for each week is categorized as minimal, low, moderate, or high, with a shade of blue corresponding to the category of ILI activity for that week. Darker shades of blue indicate more intense ILI activity. Figure 3 shows that ILI activity in Massachusetts is minimal this week.

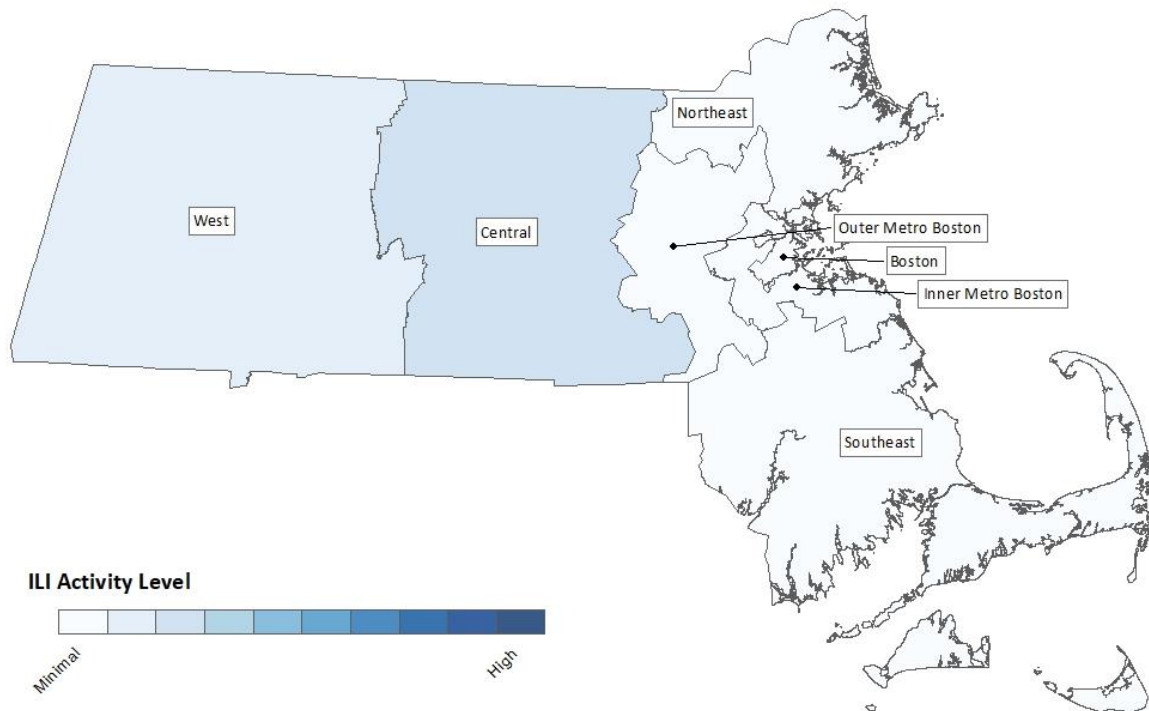
Figure 3: ILI Activity in Massachusetts Reported Weekly by Sentinel Sites



ILI Activity in Massachusetts by Region

Figure 4 shows the relative intensity of reported ILI activity in Massachusetts by region. Although regions may not all experience the same intensity of ILI at similar times, infections due to influenza can be found throughout Massachusetts during flu season. Figure 4 shows that all regions of Massachusetts are reporting minimal ILI activity.

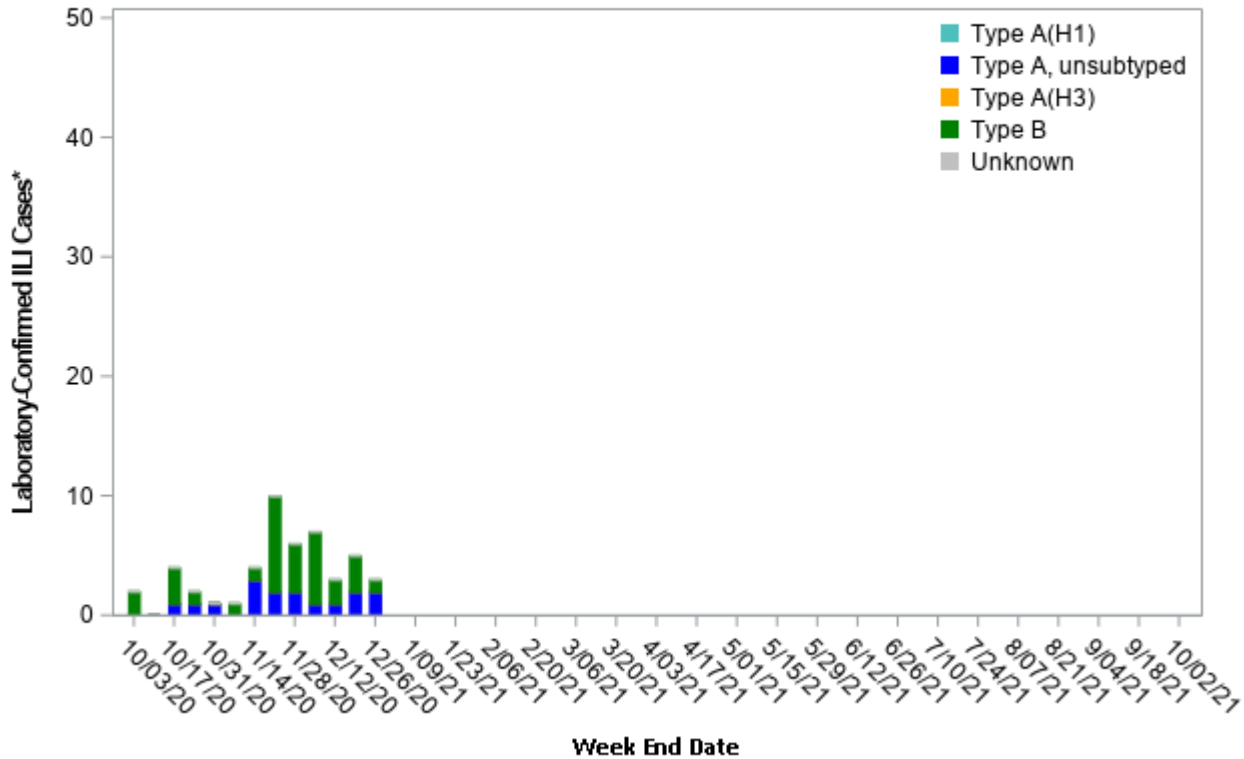
Figure 4: ILI Activity Reported Weekly by Massachusetts Sentinel Sites



Laboratory testing for influenza

Laboratories in Massachusetts report all positive influenza test results to MDPH. The majority of individuals with influenza-like illness are not tested; therefore the number of positive test results does **not** reflect the total number of influenza cases in Massachusetts. However, laboratory data do provide information about the types of influenza virus circulating in Massachusetts and help indicate the presence and define the distribution of influenza in the state. Figure 5 illustrates the number of laboratory confirmed influenza cases in Massachusetts by week. More influenza B than influenza A positive specimens have been reported by hospitals and outpatient facilities in Massachusetts.

Figure 5: Laboratory-confirmed Influenza Cases in Massachusetts, September 27, 2020 – December 26, 2020



*Influenza cases confirmed via viral culture or PCR test by specimen collection date.

Testing at the State Public Health Laboratory

The Massachusetts State Public Health Laboratory (MA SPHL) performs influenza surveillance testing year-round to confirm circulating influenza virus types. Samples are submitted by outpatient healthcare providers (ILINet) and hospital diagnostic laboratories in Massachusetts. For the 2020-2021 season, Table 1 summarizes the influenza surveillance testing conducted by MA SPHL beginning September 27, 2020. There have been 12 samples tested in the 2020-2021 flu season.

Table 1: Weekly Summary of Massachusetts State Public Health Laboratory Influenza Surveillance Test Results

2020-2021 Season: Influenza Surveillance									
MMWR Week: (Specimen Collected)	2009 H1N1	seasonal A/H3N2	H3N2v	B Yam	B Vic	No. Flu Pos (%)	Unsat	Total Tested	Total Rec'd
49 (11/29 – 12/05/20)	0	0	0	0	0	0(0%)	0	1	1
50 (12/06 – 12/12/20)	0	0	0	0	0	0(0%)	0	1	1
51 (12/13 – 12/19/20)	0	0	0	0	0	0(0%)	0	0	0
52 (12/20 – 12/26/20)	0	0	0	0	0	0(0%)	0	0	0
Prior 4 wk Total	0	0	0	0	0	0(0%)	0	2	2
Cumulative Season total	0	0	0	0	0	0(0%)	0	12	13

All data are subject to change as test results become finalized. The 2020 -2021 influenza season began the week of 09/27- 10/03/2020.

All specimens which test negative for influenza at MA SPHL are also tested for non-influenza respiratory diseases including respiratory syncytial virus (RSV), rhinovirus (RHV)/enterovirus (ENT), parainfluenza virus (PIV), human metapneumovirus (HMPV), seasonal human coronavirus (HCV) and adenovirus (ADENO). HCV does not include COVID-19. There has been 1 rhinovirus (RHV)/enterovirus (ENT) case confirmed this flu season.

Table 2: Weekly Summary of Massachusetts State Public Health Laboratory non-Influenza Respiratory Surveillance Test Results

2020-2021 Season: Influenza-like Illness Surveillance											
MMWR Week: (Specimen Collected)	RSV	RHV/ ENT	PIV	HMPV	HCV	ADENO	Co- Infection*	No. Pos (%)	Unsat	Total Tested	Total Rec'd
49 (11/29 – 12/05/20)	0	0	0	0	0	0	0	0(0%)	0	1	1
50 (12/06 – 12/12/20)	0	0	0	0	0	0	0	0(0%)	0	1	1
51 (12/13 – 12/19/20)	0	0	0	0	0	0	0	0(0%)	0	0	0
52 (12/20 – 12/26/20)	0	0	0	0	0	0	0	0(0%)	0	0	0
Prior 4 wk Total	0	0	0	0	0	0	0	0(0%)	0	2	2
Cumulative Season total	0	1	0	0	0	0	0	1(8%)	0	12	12

All data are subject to change as test results become finalized. The 2020 -2021 influenza season began the week of 9/27- 10/03/2020.

*Coinfection is the simultaneous detection of two or more of the non-influenza respiratory diseases included in this table.

MA SPHL submits a subset of influenza samples to CDC for further genetic analysis (antigenic characterization). No influenza positive samples have been identified at this time.

Every two weeks MA SPHL screens influenza specimens to detect mutations within influenza A/H3N2 and A/2009 H1N1 viruses to look for antiviral resistance once positive specimens have been identified.

Additional information on national antiviral resistance testing including recommendations for antiviral treatment and chemoprophylaxis of influenza virus infection can be found at <http://www.cdc.gov/flu/weekly/>.