



Michigan Flu Focus

Weekly Influenza Surveillance Report

April 9, 2021

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Week Ending April 3, 2021 | WEEK 13

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Data provided in this report are preliminary and will be updated as additional data is received

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2020-21 Influenza Season Week 13 ending Apr 03, 2021

Updates of Interest

Seasonal influenza activity remains lower than usual for this time of year in Michigan and nationally.

Seasonal Flu Vaccination Coverage

Michigan's goal is to vaccinate more than **4.3 million** residents during the 2020-2021 flu season.

As of March 27, 2021, there have been **3,434,888** doses administered (**79.73%** towards goal) for the 2020-2021 flu season.

Please visit the Flu Dashboard at www.michigan.gov/flu for more info.



Note: This graph represents U.S. ILI activity levels reported to ILINet. Geographic spread of influenza has been suspended for the 2020-2021 influenza season

Influenza-associated Pediatric Mortality

Nationally, one (1) influenza-associated pediatric death has been reported thus far for the 2020-2021 flu season.

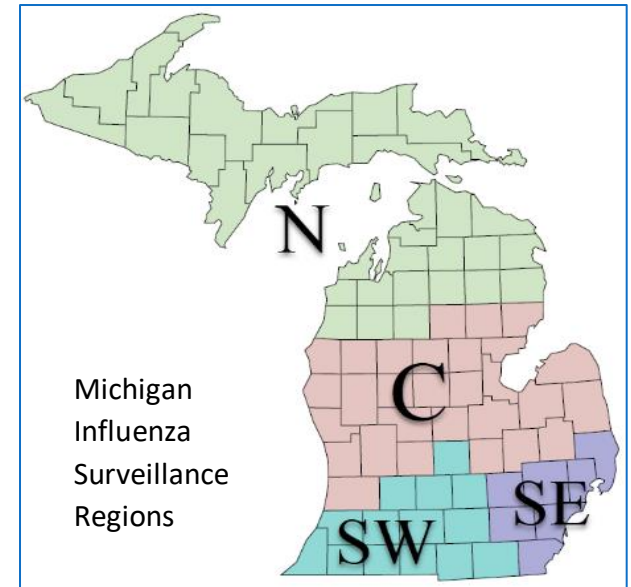
No (0) pediatric deaths have been confirmed by MDHHS for the 2020-2021 flu season.

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)

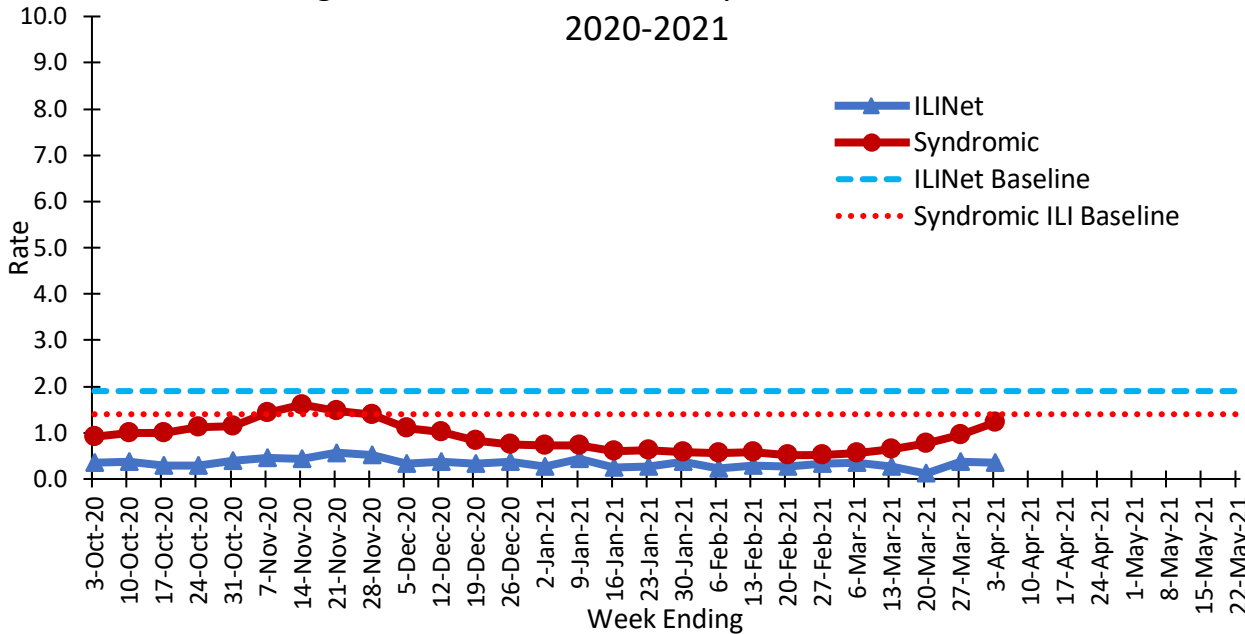
Michigan participates in ILINet, a collaborative effort between the CDC, state and local health departments, and volunteer sentinel clinicians as part of Michigan's influenza surveillance. ILINet provides data on the total number of outpatient visits to health care providers seen for any reason and the number of those patients with influenza-like illness (ILI). *ILI is defined as fever ($\geq 100^{\circ}F$) and a cough and/or a sore throat without a known cause other than influenza.*

Number of Reports and ILI % by Region during this time period:

Region	C	N	SE	SW
No. of Reporters (13)	5	2	4	2
ILI %	0.3	0.8	0.2	0.0



Michigan Statewide ILINet and Syndromic Surveillance, 2020-2021



Michigan ILI Activity: 0.3%

(Last week: 0.4%)

Regional Baseline*: 1.9%

A total of 23 patient visits due to ILI were reported out of 6,617 office visits for Week 13.

*Regional baseline is determined by calculating the mean percentage of patient visits due to ILI during non-influenza weeks for the previous three seasons and adding two standard deviations.

National Surveillance

In the United States, 1.0% of outpatient visits were due to ILI (Last week: 0.9%)

This is **below** the national baseline of 2.6%

Become an ILINET provider!

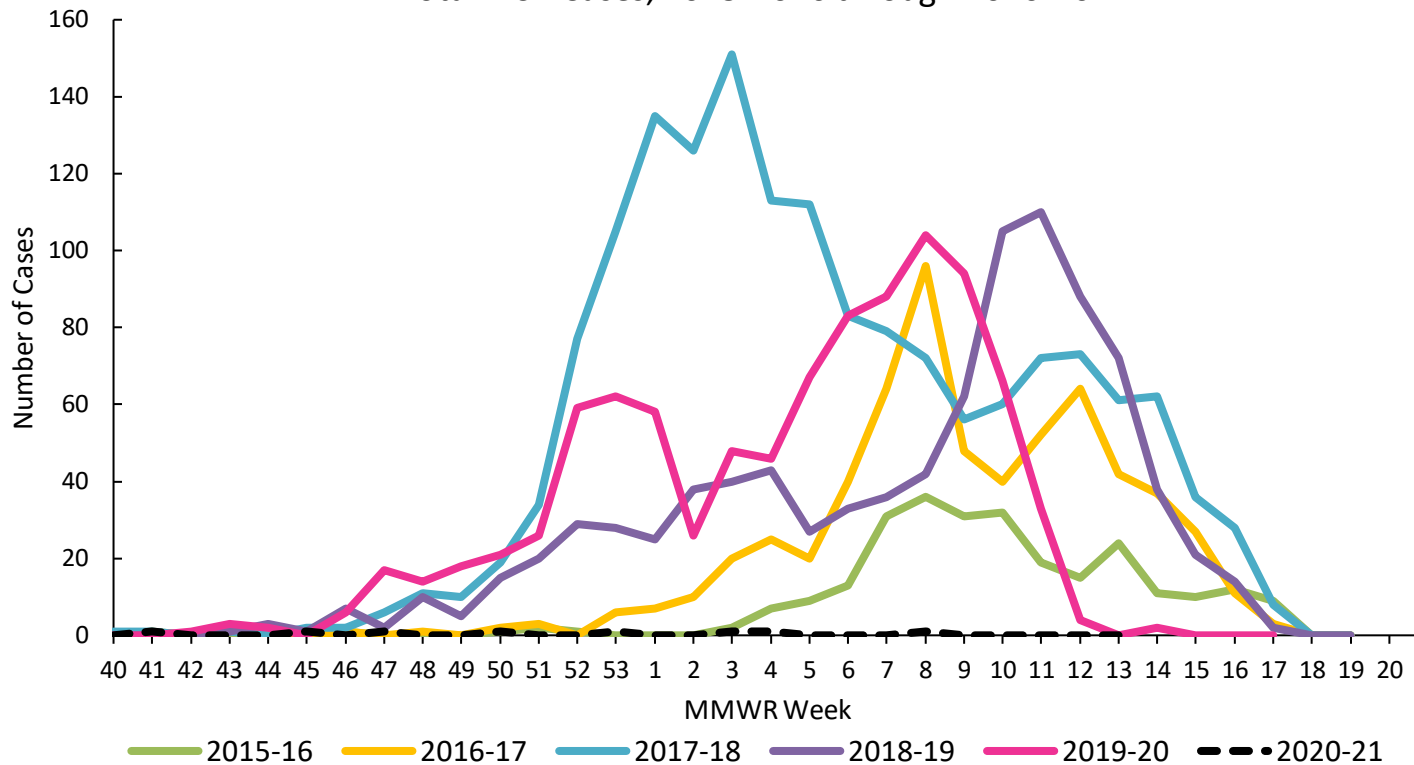
Contact Shelly Doebler at DoeblerM@michigan.gov

Influenza Hospitalization Surveillance Project (IHSP)

The CDC's Influenza Hospitalization Surveillance Network (FluSurv-NET) provides population-based rates of laboratory-confirmed influenza-associated hospitalizations from October 1st through April 30th each year. Michigan participates as an IHSP state in FluSurv-NET for Clinton, Eaton, Genesee, Ingham, and Washtenaw Counties.

There were no influenza-associated hospitalizations reported to MDHHS for the IHSP during this time period. Since October 1st, **8** (1 pediatric, 7 adult) influenza-associated hospitalizations were reported in the catchment area for the 2020-2021 season.

Total IHSP Cases, 2015-2016 through 2020-2021



Washtenaw County was added in the 2017-2018 season

Join the Influenza Sentinel Hospital Network (ISHN)!

What is it? ISHN is a group of hospitals in Michigan that voluntarily report weekly aggregate counts of influenza positive inpatients to assist MDHHS with statewide flu surveillance.

How it works: As a participating hospital in the ISHN, you would complete a brief Survey Monkey every week containing:

- Number of hospitalizations with a positive influenza test by age group during that time period
- The total number of hospitalizations due to any condition during that time period (if available)

The data you provide can assist providers and public health in recognizing changes in the age or geographic distribution of flu in this population.

If your facility is interested in participating or would like more details, please contact Sue Kim (KimS2@michigan.gov)

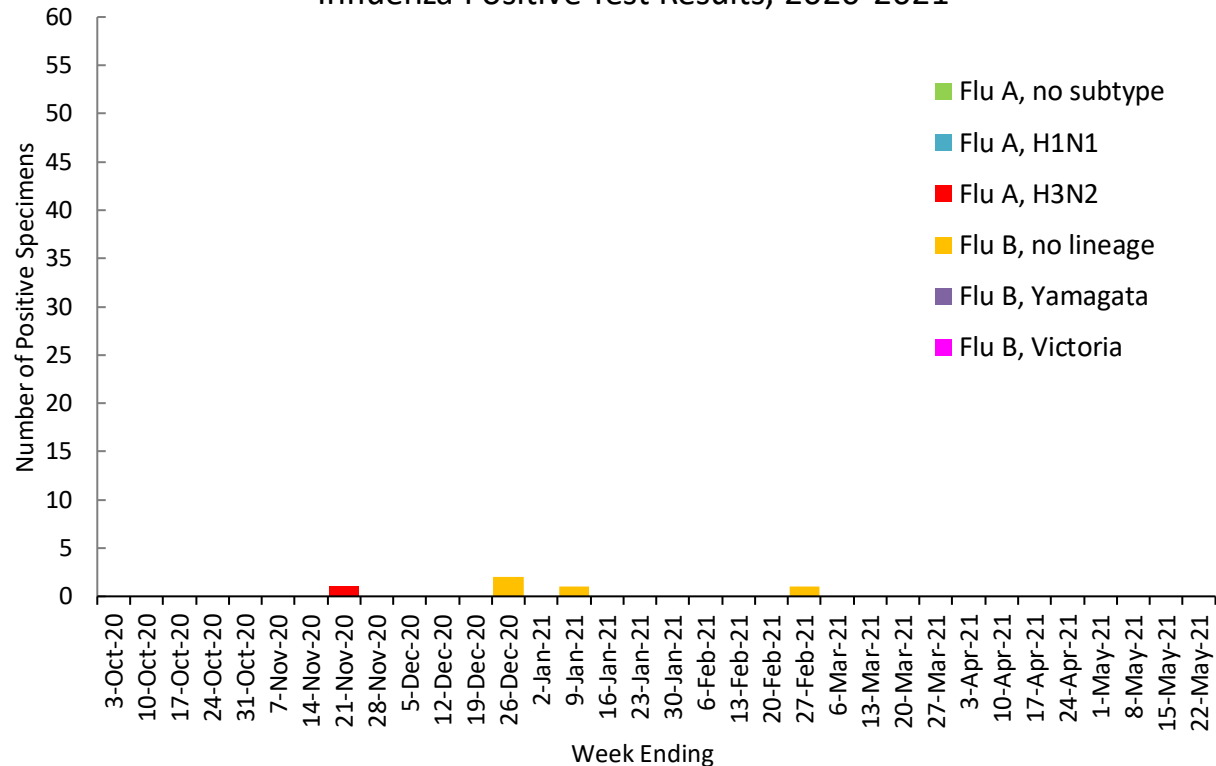
MDHHS BOL Virology Laboratory Data

There were **0** new positive influenza results (OC, ON, OSE, OSW) reported by the MDHHS Bureau of Laboratories (BOL) during this time period.

of Positive Respiratory Virus Results by Region

	C	N	SE	SW	Total
H1N1	0	0	0	0	0
H3N2	0	0	1	0	1
Infl B	0	0	4	0	4
Total	0	0	5	0	5

Influenza Positive Test Results, 2020-2021



Note: Based on Specimen Collection Date

Flu B lineage data will be reported based on MDHHS BOL testing runs and will be backtracked into this graph

Michigan Sentinel Clinical Lab Network Respiratory Virus Data

Ten (10) sentinel clinical labs (2SE, 2SW, 5C, 1N) reported for the week ending 04/03

SE Region	
Influenza A:	no activity
Influenza B:	sporadic
Parainfluenza:	sporadic – low
RSV:	sporadic
Adenovirus:	low
hMPV:	no activity
Central Region	
Influenza A:	no activity
Influenza B:	sporadic
Parainfluenza:	sporadic
RSV:	no activity
Adenovirus:	low
hMPV:	no activity
SW Region	
Influenza A:	sporadic
Influenza B:	sporadic
Parainfluenza:	no activity
RSV:	no activity
Adenovirus:	sporadic – low
hMPV:	no activity
North Region	
Influenza A:	no activity
Influenza B:	no activity
Parainfluenza:	no activity
RSV:	no activity
Adenovirus:	no activity
hMPV:	no activity

There were **0** new respiratory outbreaks (OC, ON, OSE, OSW) reported to MDHHS during this time period. Respiratory outbreaks for the 2020-2021 season are listed in the table below.

of Congregate Setting Outbreaks by Region

Facility Type	C	N	SE	SW	Total
Schools: K-12 & College	0	0	0	0	0
Long-term Care / Assisted Living Facility	0	0	0	0	0
Healthcare Facility	0	0	0	0	0
Daycare	0	0	0	0	0
Homeless Shelter	0	0	0	0	0
Correctional Facility	0	0	0	0	0
Other	0	0	0	0	0
Total	0	0	0	0	0

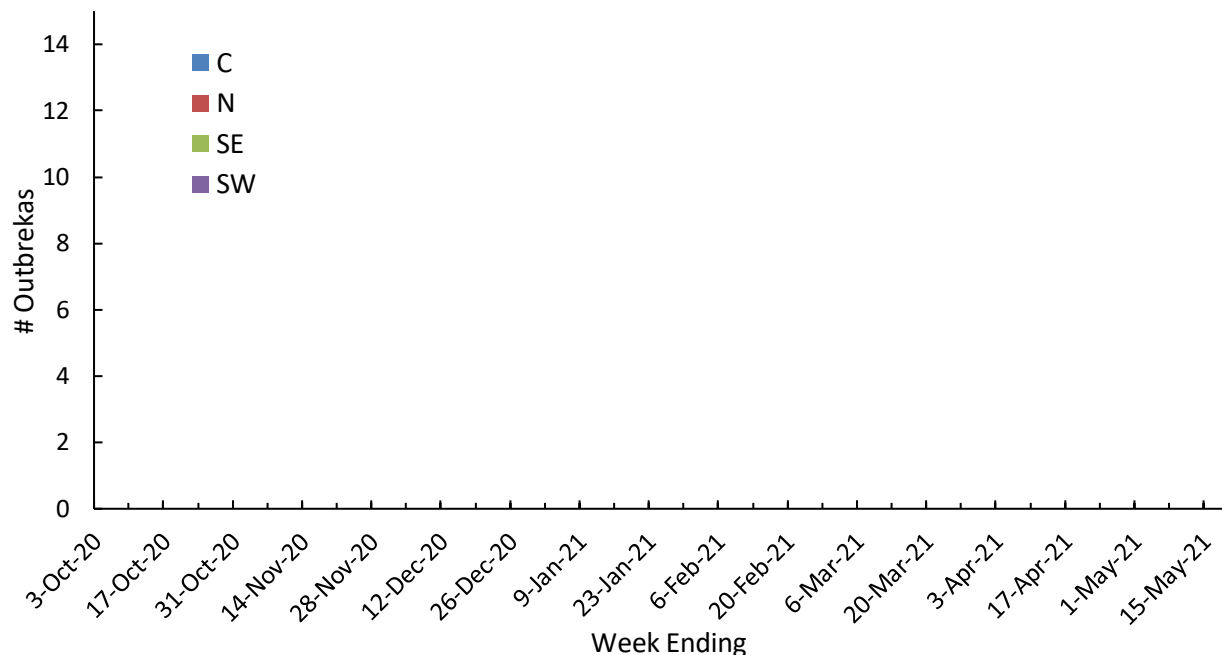
Did you know?

Congregate setting outbreaks of viral respiratory illnesses are required to be reported to your local health department? See:

- [Influenza Guidance for Healthcare Providers](#)
- [Guideline for influenza and Respiratory Virus Outbreaks in Long-Term Care Facilities](#)

Note: Outbreaks associated with COVID-19 are not reported in this table (above) or graph (below).

Congregate Setting Outbreaks by Region, 2020-2021



Influenza Vaccine Updates

Nanoparticle-Based Flu Vaccine

On April 6, 2021, National Institutes of Health (NIH) published an [article](#) on research regarding nanoparticle-based influenza vaccines.

Currently, researchers predict which flu strains will be circulating and most prevalent each year. These predictions determine the season's flu vaccines. As a result, seasonal flu vaccines have a varied effectiveness each year. Effectiveness for a seasonal flu vaccine can range from 60% to 10%. Research is being conducted to boost global health with a single vaccine that can provide protection against a wide variety of strains.

A research team at the Vaccine Research Center of NIH's National Institute of Allergy and Infection Disease have been conducting research on a vaccine that could provide lasting effects for various influenza strains. The team made four types of nanoparticles, each using HA from a different flu strain. They also made "mosaic" nanoparticles that incorporated all four HAs on each nanoparticle.

The vaccines were tested in mice, ferrets, and monkeys. The nanoparticle vaccine was compared to commercial flu vaccines from the 2017-2018 flu season that used the same flu strains. The nanoparticle vaccines showed to elicit the same or better antibody responses against the flu strains as the commercial flu vaccine.

When examining protection against viruses containing H5 and H7 subtypes, the cocktail vaccine of the four HA nanoparticles conferred 73% protection, the mosaic vaccine conferred 92% protection, and the commercial vaccine provided only 12% protection. Additionally, the nanoparticle flu vaccines provided near-complete protection against flu strains the commercial vaccine did not. The nanoparticle vaccine could also potentially provide protection for more than one year.

Influenza News Blast

- [STUDY: Comparison between Patients Hospitalized with Influenza and COVID-19 at a Tertiary Care Center](#)
- [STUDY: Development of CRISPR as an Antiviral Strategy to Combat SARS-CoV-2 and Influenza](#)
- [STUDY: Programmable Inhibition and Detection of RNA Viruses Using Cas13](#)
- [STUDY: Intranasal Influenza Vaccine Spurs Strong Immune Response in Phase 1](#)
- [STUDY: Effect of Vaccination on Preventing Influenza-Associated Hospitalizations Among Children](#)

Additional Resources

- [MDHHS Influenza Webpage](#)
- [MDHHS Bureau of Laboratories \(BOL\) Webpage and Test Request Forms](#)
- [CDC FluView Weekly Report](#)
- [CDC Healthcare Professionals Flu Toolkit](#)
- [Immunization Action Coalition: Ask the Experts- Flu](#)
- [MDHHS- Influenza Vaccine F.A.Q.](#)

View Michigan Flu Focus Report archives [here](#).

Influenza Burden Estimates

The Centers for Disease Control and Prevention (CDC) have released [preliminary burden estimates](#) for the 2019-2020 flu season.

Between October 1, 2019 through April 4, 2020, it is estimated that there have been:

- **39 million – 56 million flu illnesses**
- **18 million – 26 million flu medical visits**
- **410,000 – 740,000 flu hospitalizations**
- **24,000 – 62,000 flu deaths**

NOTE: The week of April 4 was the last week in-season influenza burden estimates will be provided for the 2019-2020 season.

2020-2021 preliminary burden estimates are expected to be released later in the flu season.

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