

Ohio Department of Health Seasonal Influenza Activity Summary MMWR Week 1 January 2nd, – January 8th, 2022

Current Influenza Activity:

During MMWR Week 1, public health surveillance data sources indicate Moderate intensity for influenza-like illness (ILI) in outpatient settings reported by Ohio’s sentinel ILINet providers. The percentage of emergency department visits with patients exhibiting constitutional symptoms and Fever/ILI specified ED visits decreased but are still above baseline levels statewide. Reported cases of influenza-associated hospitalizations are above the seasonal threshold*. There were 80 influenza-associated hospitalizations reported during MMWR Week 1.

Ohio Weekly Influenza-associated Hospitalizations by Ohio Public Health Region

Central	6
East Central	4
Northeast	1
Northwest	19
Southeast	15
Southwest	13
West Central	22
Total	80

Ohio Influenza Activity Summary Dashboard:

Data Source	Current week value	Percent Change from last week ¹	# of weeks ²	Trend Chart ³
Influenza-like Illness (ILI) Outpatient Data (ILINet Sentinel Provider Visits)	4.88%	-18.67%	↓ 1	
Thermometer Sales (National Retail Data Monitor) ⁴	0.91%	-14.15%	↓ 1	
Fever and ILI Specified ED Visits (EpiCenter)	4.01%	-13.95%	↓ 1	
Constitutional ED Visits (EpiCenter)	14.96%	-9.55%	↓ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	80	-14.89%	↓ 1	

¹Interpret percent changes with caution. Large variability may be exhibited in data sources with low weekly values.

²Number of weeks that the % change is increasing or decreasing.

³Black lines represent current week’s data; red lines represent baseline averages. The 2020-2021 influenza season has been omitted from the five-year baseline averages due to abnormal counts reported during the COVID-19 pandemic. A five-year average, which includes data from the 2015-2016 season through the 2019-2020 season, is displayed.

⁴Due to abnormally high thermometer sales during the COVID-19 pandemic, the 2019-2020 and 2020-2021 season data has been omitted. A 4-year average, which includes data from the 2015-2016 season through the 2018-2019 season, is shown.

**The seasonal threshold is 25 cases of influenza-associated hospitalizations; historical data demonstrate that once the weekly count exceeds 25 cases, the number of weekly cases thereafter will likely not decrease until after the peak of influenza activity for the season*

State, Regional, and National Data:

Ohio Surveillance Data:

- The **Ohio Department of Health Laboratory** has tested 313 specimens for influenza during the 2021-2022 influenza season: of these, **1 tested positive for influenza A(H1N1pdm09), 279 for influenza A(H3N2), 3 for influenza B, and 1 for swine variant influenza A(H3N2v)** (through 01/08/2022).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** and **U.S. World Health Organization (WHO) Collaborating Laboratories** reported **88,870** tests for influenza performed at participating facilities; of these, **8 tested positive for influenza A(H1N1pdm09), 298 for influenza A(H3N2), 1906 for influenza A (subtyping not performed), 29 for influenza B, and 1 for swine variant influenza A(H3N2v)** (through 01/01/2022).
- No **pediatric influenza-associated mortalities** have been reported so far during the 2021-2022 influenza season (through 01/08/2022).
- One **novel influenza A virus infection** has been reported so far during the 2021-2022 influenza season (through 01/08/2022).
- Incidence of confirmed **influenza-associated hospitalizations** in 2021-2022 season = 408 (through 01/08/2022).

HHS Regional Surveillance Data*: During week 52 (December 26th – January 1st, 2022), the percentage of outpatient visits for influenza-like illness (ILI) in Region 5 (Ohio is in Region 5) was 3.5%, which is **above** the regional baseline of 2.5%.

National Surveillance Data*: During week 52 (December 26th – January 1st, 2022), most U.S. states reported Moderate, High, or Very High influenza activity reported by sentinel ILINet providers; some states are reporting Minimal or Low activity. The percentage of outpatient visits for ILI was 4.8%, which is **above** the national baseline of 2.5%. All 10 HHS regions reported ILI levels above their region-specific baseline level.

***National-level and regional-level data are reported one week later than Ohio state-level data**

National activity levels and more information can be found at the following CDC pages:

- <http://www.cdc.gov/flu/weekly/usmap.htm>
- <http://www.cdc.gov/flu/>

2021-2022 Influenza Vaccine Components:

Egg-Based Vaccines		
A/B	Virus	Quadrivalent
A	A/Victoria/2570/2019 (H1N1)pdm09-like virus (updated)	X
A	A/Cambodia/e0826360/2020 (H3N2)-like virus (updated)	X
B	B/Washington/02/2019 (B/Victoria lineage)-like virus	X
B	Phuket/3073/2013-like (B/Yamagata lineage)	X
Cell- and Recombinant-Based Vaccines*		
A	A/Wisconsin/588/2019 (H1N1)pdm09-like virus (updated)	X
A	A/Cambodia/e0826360/2020 (H3N2)-like virus (updated)	X
B	B/Washington/02/2019 (B/Victoria lineage)-like virus	X
B	Phuket/3073/2013-like (B/Yamagata lineage)	X

*No trivalent preparations are available for cell and recombinant-based vaccines or for egg-based vaccine for the 2021–22 season.

Antigenic Characterization: CDC genetically characterized 272 influenza viruses collected since October 3, 2021. While there are little data to date, most of the H3N2 viruses so far are genetically closely related to the vaccine virus, but there are some antigenic differences that have developed as H3N2 viruses have continued to evolve. Virus antigenic data will be reported later this season when a sufficient number of specimens have been tested.

**Influenza-Associated Hospitalizations, Ohio
2021-2022 Season***

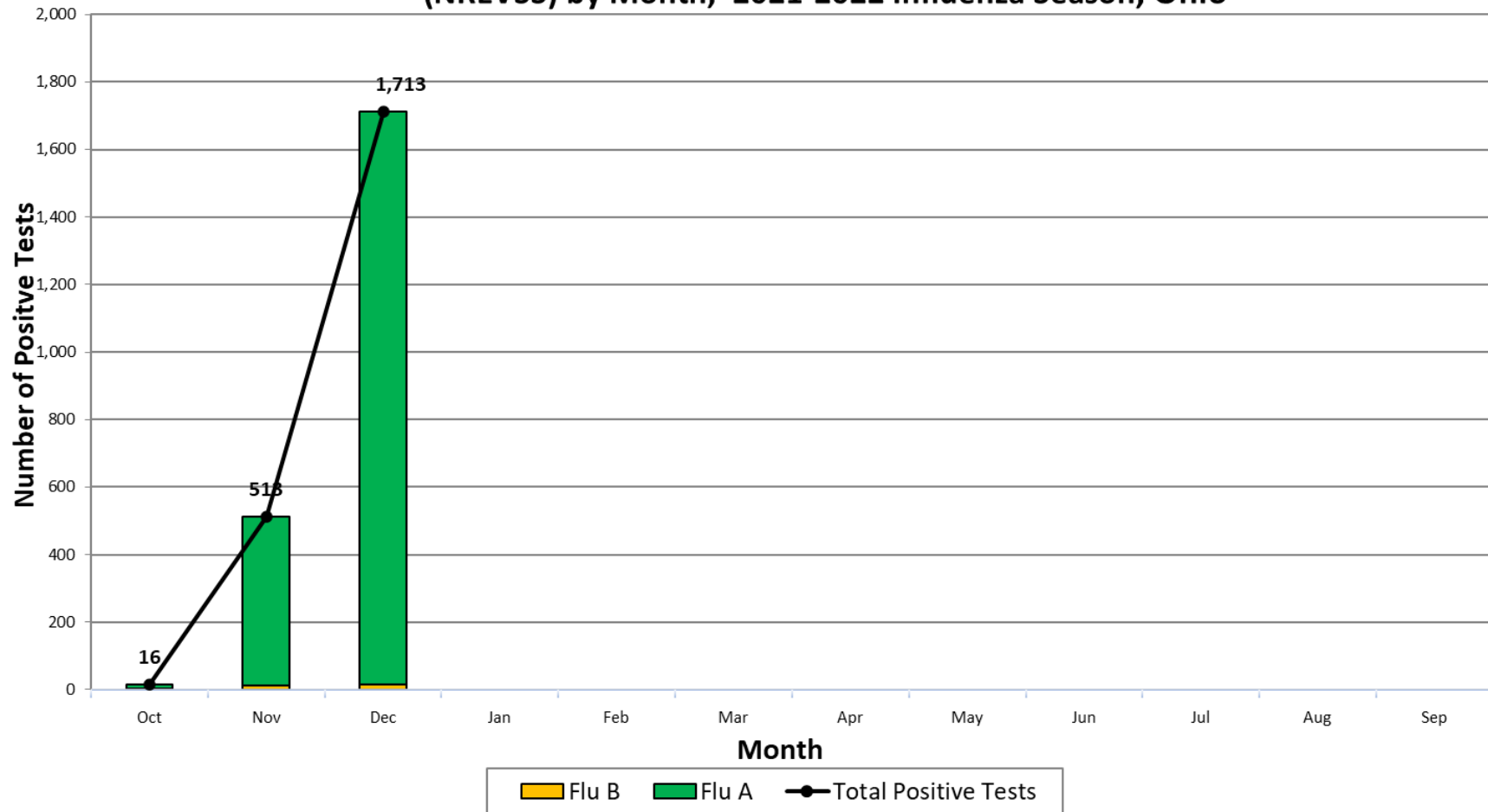
County	Influenza-Associated Hospitalizations	Percent of All Influenza-Associated Hospitalizations	Rate per 100,000 Population†	County	Influenza-Associated Hospitalizations	Percent of All Influenza-Associated Hospitalizations	Rate per 100,000 Population†
ADAMS	0	0.0%	0.00	LOGAN	1	0.2%	2.17
ALLEN	15	3.7%	14.68	LORAIN	5	1.2%	1.60
ASHLAND	0	0.0%	0.00	LUCAS	4	1.0%	0.93
ASHTABULA	0	0.0%	0.00	MADISON	1	0.2%	2.28
ATHENS	2	0.5%	3.20	MAHONING	4	1.0%	1.75
AUGLAIZE	12	2.9%	25.85	MARION	0	0.0%	0.00
BELMONT	0	0.0%	0.00	MEDINA	2	0.5%	1.10
BROWN	0	0.0%	0.00	MEIGS	1	0.2%	4.50
BUTLER	18	4.4%	4.61	MERCER	13	3.2%	30.57
CARROLL	0	0.0%	0.00	MIAMI	15	3.7%	13.79
CHAMPAIGN	3	0.7%	7.75	MONROE	0	0.0%	0.00
CLARK	11	2.7%	8.09	MONTGOMERY	69	16.9%	12.84
CLERMONT	10	2.5%	4.79	MORGAN	2	0.5%	14.49
CLINTON	2	0.5%	4.76	MORROW	0	0.0%	0.00
COLUMBIANA	0	0.0%	0.00	MUSKINGUM	21	5.1%	24.30
COSHOCTON	2	0.5%	5.46	NOBLE	1	0.2%	7.08
CRAWFORD	1	0.2%	2.38	OTTAWA	0	0.0%	0.00
CUYAHOGA	14	3.4%	1.11	PAULDING	1	0.2%	5.32
DARKE	7	1.7%	13.49	PERRY	3	0.7%	8.47
DEFIANCE	3	0.7%	7.84	PICKAWAY	0	0.0%	0.00
DELAWARE	0	0.0%	0.00	PIKE	1	0.2%	3.69
ERIE	0	0.0%	0.00	PORTAGE	4	1.0%	2.47
FAIRFIELD	7	1.7%	4.40	PREBLE	0	0.0%	0.00
FAYETTE	1	0.2%	3.45	PUTNAM	6	1.5%	17.42
FRANKLIN	9	2.2%	0.68	RICHLAND	1	0.2%	0.80
FULTON	3	0.7%	7.02	ROSS	3	0.7%	3.89
GALLIA	6	1.5%	20.53	SANDUSKY	1	0.2%	1.70
GEAUGA	0	0.0%	0.00	SCIOTO	1	0.2%	1.35
GREENE	0	0.0%	0.00	SENECA	1	0.2%	1.82
GUERNSEY	3	0.7%	7.80	SHELBY	7	1.7%	14.51
HAMILTON	39	9.6%	4.70	STARK	11	2.7%	2.93
HANCOCK	7	1.7%	9.34	SUMMIT	3	0.7%	0.56
HARDIN	0	0.0%	0.00	TRUMBULL	0	0.0%	0.00
HARRISON	0	0.0%	0.00	TUSCARAWAS	1	0.2%	1.07
HENRY	3	0.7%	10.85	UNION	4	1.0%	6.37
HIGHLAND	0	0.0%	0.00	VAN WERT	0	0.0%	0.00
HOCKING	2	0.5%	7.13	VINTON	0	0.0%	0.00
HOLMES	2	0.5%	4.52	WARREN	13	3.2%	5.36
HURON	0	0.0%	0.00	WASHINGTON	3	0.7%	5.02
JACKSON	0	0.0%	0.00	WAYNE	3	0.7%	2.57
JEFFERSON	0	0.0%	0.00	WILLIAMS	3	0.7%	8.09
KNOX	1	0.2%	1.59	WOOD	6	1.5%	4.54
LAKE	0	0.0%	0.00	WYANDOT	2	0.5%	9.13
LAWRENCE	3	0.7%	5.15	UNKNOWN	0	0.0%	*
LICKING	5	1.2%	2.80	TOTAL	408	100%	3.46

*2021-2022 Season began on 10/3/2021; data as of 1/09/2022

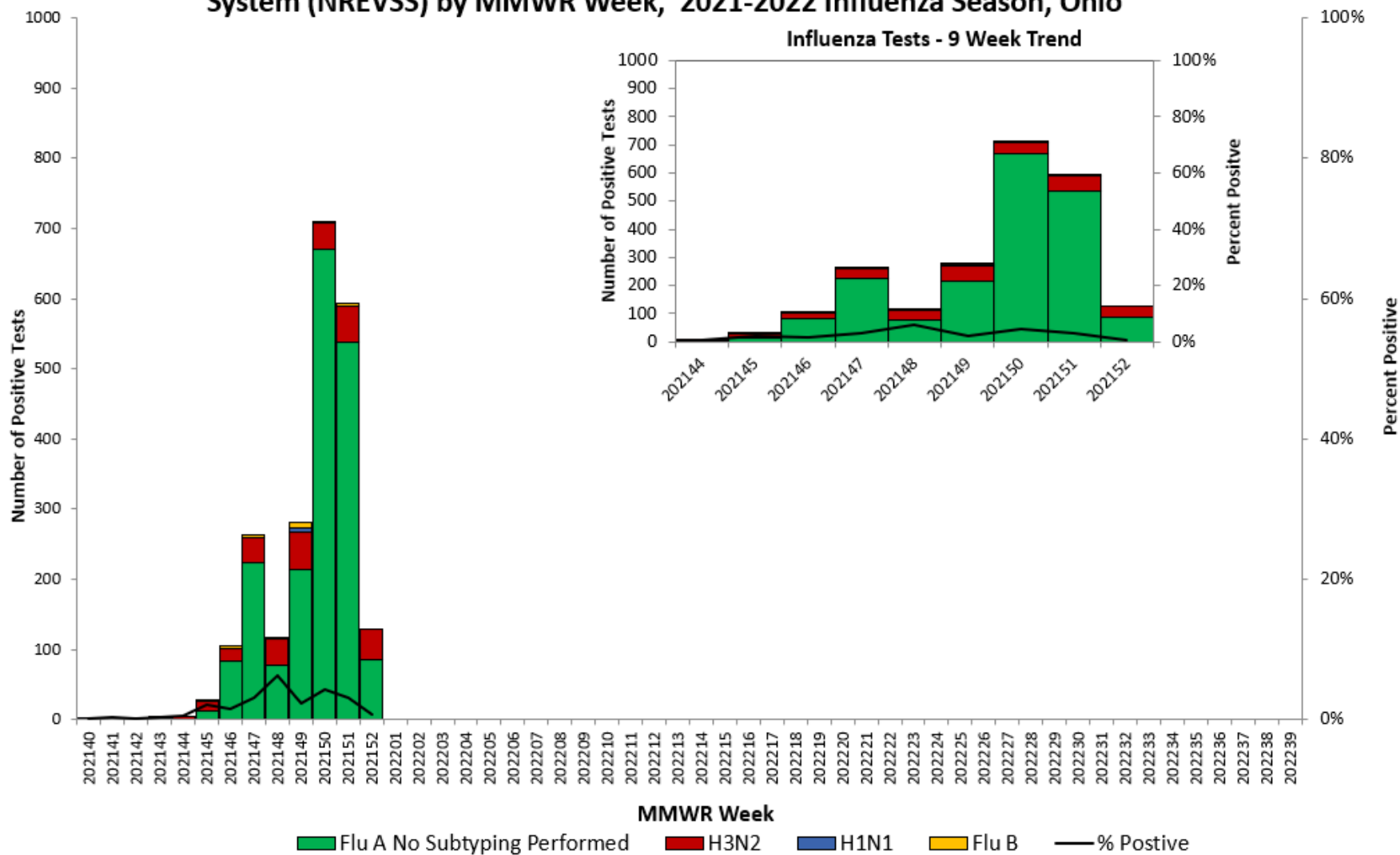
† Disease rates were calculated by number of cases per 100,000 residents using 2020 census data.

Source: Ohio Disease Reporting System

Positive Influenza Testing from Public Health Laboratories and Selected Clinical Laboratories Participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS) by Month, 2021-2022 Influenza Season, Ohio

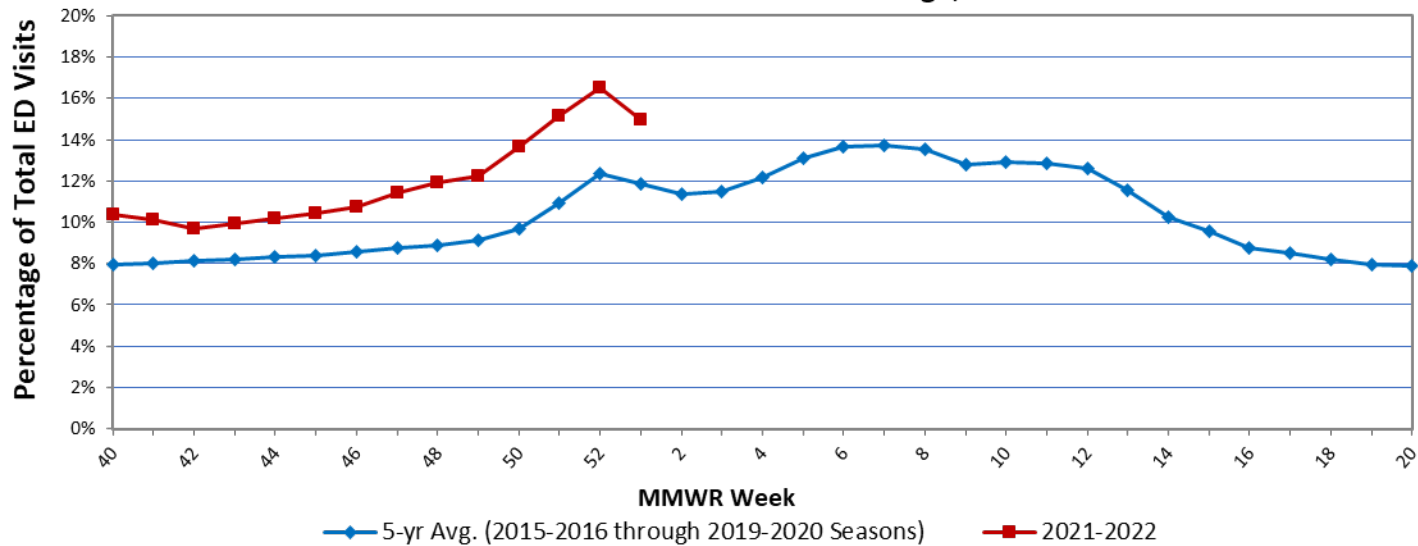


Positive Influenza Testing from Public Health Laboratories and Selected Clinical Laboratories Participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS) by MMWR Week, 2021-2022 Influenza Season, Ohio

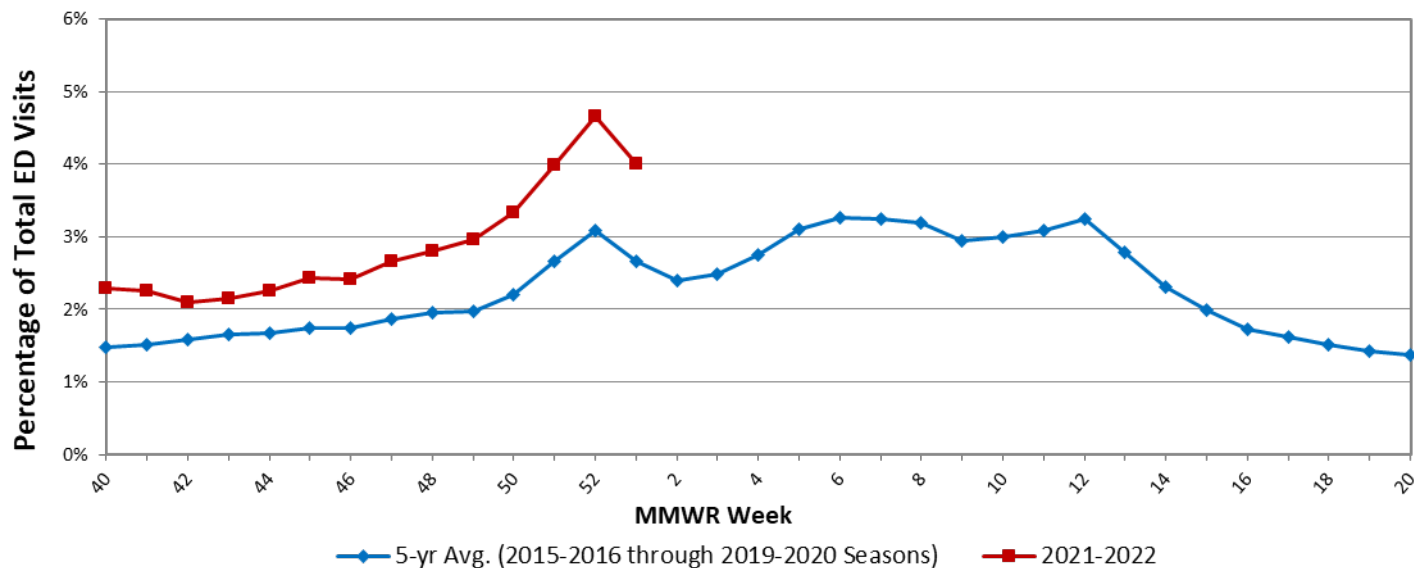


Note: NREVSS/Public Health Laboratory data are reported one week later than Ohio state-level data to ensure data completeness.

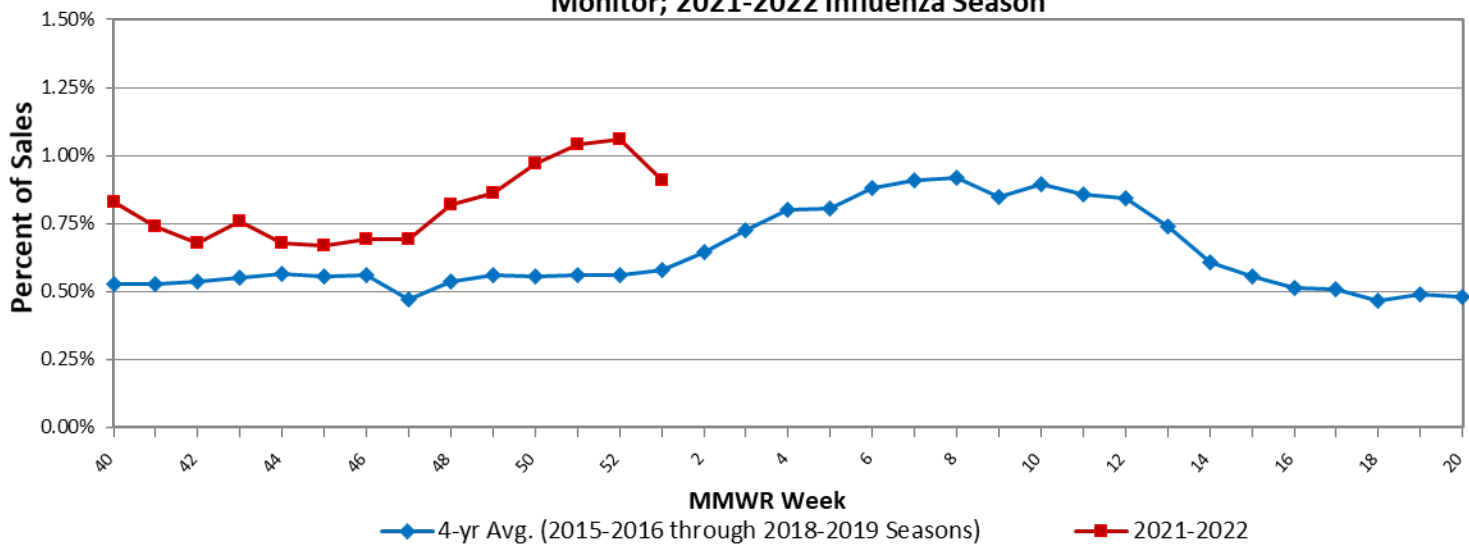
Ohio Constitutional ED Visits with 5 Year Baseline Average; 2021-2022 Influenza Season



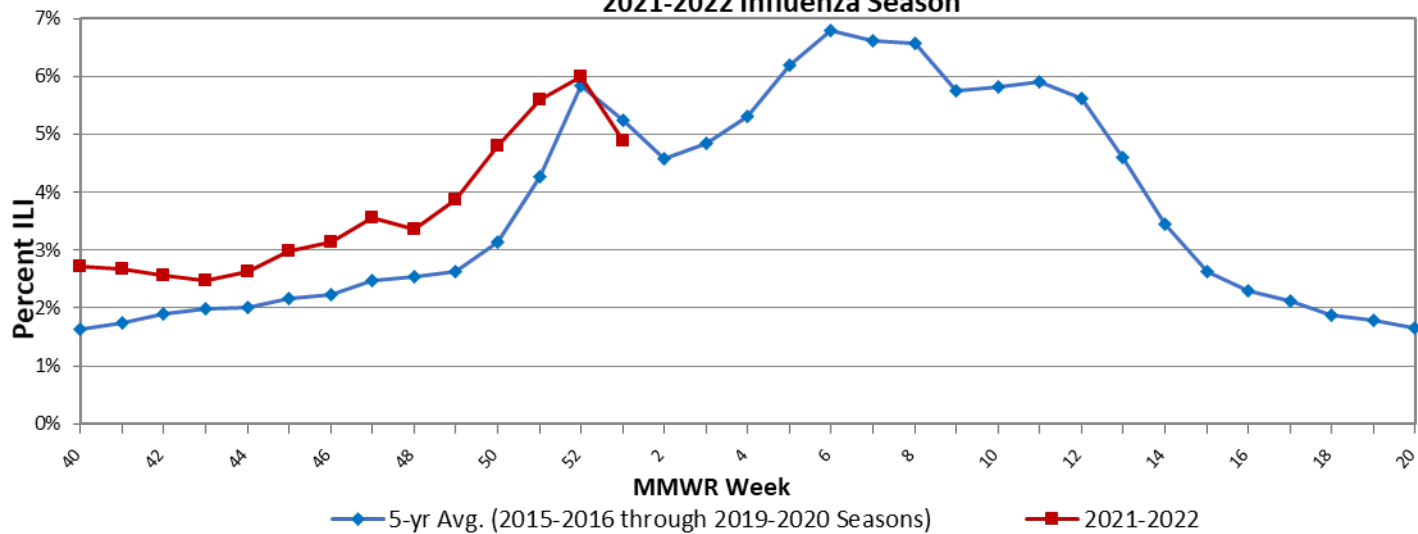
Ohio Fever & ILI Specified ED Visits with 5 Year Baseline Average; 2021-2022 Influenza Season



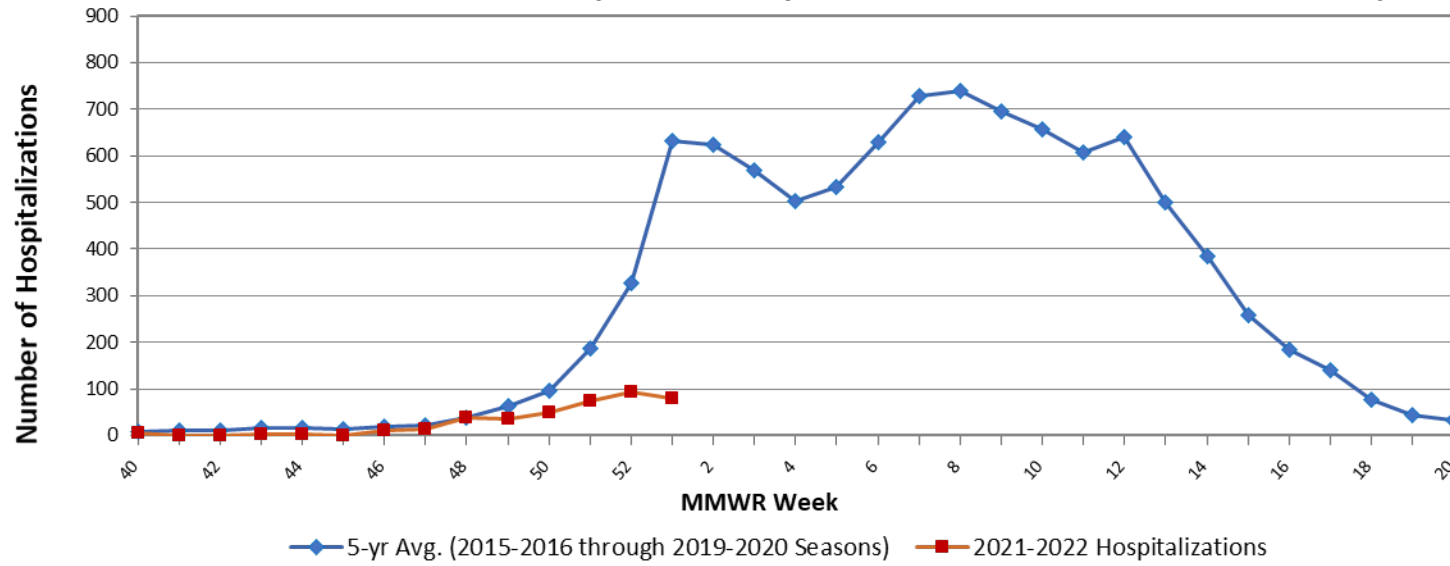
Percent of Ohio Thermometer Sales with 4 Year Baseline Average; National Retail Data Monitor; 2021-2022 Influenza Season



Ohio Outpatient Influenza-like Illness Network (ILINet) with 5 Year Baseline Average; 2021-2022 Influenza Season



Ohio Confirmed Influenza-associated Hospitalizations by MMWR Week; 2021-2022 Influenza Season (n=408)



Sources of Influenza Surveillance Data

- **National Retail Data Monitor (NRDM)-OTC Drug Purchases:** The NRDM collects over-the-counter (OTC) drug sales information from approximately 1,420 Ohio chain drug stores and grocery stores. For influenza surveillance, thermometer and adult cold relief sales are monitored on a weekly basis. Due to abnormally high thermometer sales during the COVID-19 pandemic, the data from the 2019-2020 and 2020-2021 influenza seasons has been omitted from the baseline average in the figure above. A four-year average, which includes data from the 2015-2016 season through the 2018-2019 season, is displayed.
- **Emergency Department Visits (EpiCenter):** EpiCenter collects emergency department chief complaint data from 180 hospitals and urgent care facilities across Ohio in real time and classifies them into symptom and syndrome categories. Chief complaints from the constitutional syndrome category and the fever + ILI symptoms classifier are analyzed for influenza surveillance. EpiCenter data from the 2020-2021 influenza season has been omitted from the five-year baseline average due to data instability and effects of the COVID-19 pandemic. A five-year average, which includes data from the 2015-2016 season through the 2019-2020 season, is displayed in the figure above.
- **Sentinel Providers (ILINet):** Sentinel providers, through the US Influenza-like Illness Surveillance Network (ILINet), collect outpatient influenza-like illness (ILI) data. ILI is defined as a fever (≥ 100 F), and cough and/or sore throat. Providers report the total number of patients seen and the number of patients with ILI by age group on a weekly basis. Sentinel providers also submit specimens for influenza testing to the ODH laboratory throughout the influenza season. There are 56 sentinel providers enrolled in Ohio for the 2021-2022 influenza season. ILINet data from the 2020-2021 influenza season has been omitted from the five-year baseline average due to abnormally low percent ILI counts reported during the COVID-19 pandemic. A five-year average, which includes data from the 2015-2016 season through the 2019-2020 season, is displayed in the figure above.
- **ODH Laboratory Surveillance:** The Ohio Department of Health Laboratory reports the number of specimens that test positive for influenza each week. Generally, specimens are submitted by sentinel provider participants. A subset of the positive specimens is sent to CDC for further testing during the season.
- **Influenza-associated Hospitalizations (ODRS):** Influenza-associated hospitalizations are reported to ODH from local health departments and hospitals by direct entry into the Ohio Disease Reporting System (ODRS). Hospitalizations can be used as an indicator of the severity of illness during a particular influenza season. This condition became reportable in 2009. Influenza-associated hospitalization data from the 2020-2021 influenza season has been omitted from the five-year baseline average due to abnormally low counts reported during the COVID-19 pandemic. A five-year average, which includes data from the 2015-2016 season through the 2019-2020 season, is displayed in the figure above.

- **Influenza-associated Pediatric Mortality (ODRS):** Influenza-associated pediatric mortalities are reported into ODRS by local health department and hospital staff. Pediatric deaths can be an indicator of the severity of illness during the influenza season. This condition became reportable in 2005.
- **National Respiratory and Enteric Virus Surveillance System (NREVSS):** The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system that monitors temporal and geographic patterns associated with the detection of respiratory syncytial virus (RSV), human parainfluenza viruses (HPIV), respiratory and enteric adenoviruses and rotavirus. There are 10 facilities in Ohio that submit data to this system.

Ohio Public Health Regions: These counties comprise the Ohio Public Health Regions described in the figures shown on pages 1 and 5.

Central		East Central		Noth East	North West		South East		South West	West Central
CRAWFORD	LOGAN	ASHLAND	RICHLAND	ASHTABULA	ALLEN	MERCER	ATHENS	MONROE	ADAMS	CHAMPAIGN
DELAWARE	MADISON	CARROLL	STARK	CUYAHOGA	AUGLAIZE	OTTAWA	BELMONT	MORGAN	BROWN	CLARK
FAIRFIELD	MARION	COLUMBIANA	SUMMIT	GEAUGA	DEFIANCE	PAULDING	COSHOCTON	MUSKINGUM	BUTLER	DARKE
FAYETTE	MORROW	HOLMES	TRUMBULL	LAKE	ERIE	PUTNAM	GALLIA	NOBLE	CLERMONT	GREENE
FRANKLIN	PICKAWAY	MAHONING	TUSCARAWAS	LORAIN	FULTON	SANDUSKY	GUERNSEY	PERRY	CLINTON	MIAMI
HARDIN	UNION	MEDINA	WAYNE		HANCOCK	SENECA	HARRISON	PIKE	HAMILTON	MONTGOMERY
KNOX	WYANDOT	PORTAGE			HENRY	VAN WERT	HOCKING	ROSS	HIGHLAND	PREBLE
LICKING					HURON	WILLIAMS	JACKSON	SCIOTO	WARREN	SHELBY
					LUCAS	WOOD	JEFFERSON	VINTON		
							LAWRENCE	WASHINGTON		
							MEIGS			

If you have any further questions or comments about surveillance for seasonal influenza for the State of Ohio, please contact the Infectious Disease Informatics and Vaccine Preventable Disease Epidemiology Unit at vpdepi@odh.ohio.gov or call (614) 995-5599.