

Ohio Department of Health Seasonal Influenza Activity Summary

MMWR Week 14

April 2nd – April 8th, 2023


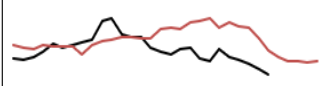
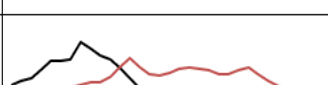
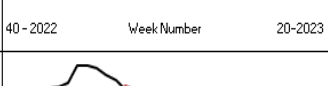

Current Influenza Activity:

During MMWR Week 14, public health surveillance data sources indicate minimal intensity for influenza-like illness (ILI) in outpatient settings reported by Ohio's sentinel ILINet providers. The percentage of emergency department (ED) visits with patients exhibiting constitutional symptoms and fever/ILI specified ED visits are below baseline levels statewide. Reported cases of influenza-associated hospitalizations decreased. There were 20 influenza-associated hospitalizations reported during MMWR Week 14.

Ohio Week 14 Influenza-associated Hospitalizations by Ohio Public Health Region

Central	6
East Central	5
Northeast	7
Northwest	0
Southeast	1
Southwest	1
West Central	0
Total	20

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)	1.99%	-13.48%	↓ 3	
Thermometer Sales (National Retail Data Monitor) ⁴	0.36%	-10.00%	↓ 5	
Fever and ILI Specified ED Visits (EpiCenter)	1.47%	-13.02%	↓ 1	
Constitutional ED Visits (EpiCenter)	9.51%	-3.16%	↓ 2	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	20	-20.00%	↓ 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 2016-2017 season through the 2021-2022 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 5-year average, which includes data from the 2015-2016 season through the 2021-2022 season, is shown.

State, Regional, and National Data:

Ohio Surveillance Data:

- The **U.S. World Health Organization (WHO) Collaborating Laboratories System and the National Respiratory and Enteric Virus Surveillance System (NREVSS)** has reported **159,864** tests for influenza performed at participating facilities; of these, **1,115 tested positive for influenza A(H1N1pdm09), 1,256 for influenza A(H3N2), 21,663 for influenza A (subtyping not performed), and 191 for influenza B** (through 04/08/2023).
- Five **influenza-associated pediatric mortalities** have been reported so far during the 2022-2023 influenza season (through 04/08/2023).
- No **novel influenza A virus infections** have been reported so far during the 2022-2023 influenza season (through 04/08/2023).
- Incidence of confirmed **influenza-associated hospitalizations** in 2022-2023 season = 9,013 (through 04/08/2023).

HHS Regional Surveillance Data*: During week 13 (March 26th – April 1st, 2023), the percentage of outpatient visits for influenza-like illness (ILI) in Region 5 (Ohio is in Region 5) was 1.6%, which is **below** the regional baseline of 2.5%.

National Surveillance Data*: During 13 (March 26th – April 1st, 2023), the majority of U.S. states reported Minimal or Low activity, though some states are reporting Moderate or High activity. The percentage of outpatient visits for ILI was 2.3%, which is **below** the national baseline of 2.4%. Two of 10 HHS regions reported ILI levels at or above their region-specific baseline level.

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/>

Antigenic Characterization:

Influenza A Viruses

- A (H1N1)pdm09: One hundred and eight A(H1N1)pdm09 viruses were antigenically characterized by HI, and 106 (98%) were well-recognized (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera to cell-grown A/Wisconsin/588/2019-like reference viruses representing the A(H1N1)pdm09 component for the cell- and recombinant-based influenza vaccines.
- A (H3N2): One hundred and eighty A(H3N2) viruses were antigenically characterized by HINT, and 168 (93%) were well-recognized (reacting at titers that were within 8-fold of the homologous virus titer) by ferret antisera to cell-grown A/Darwin/6/2021-like reference viruses representing the A(H3N2) component for the cell- and recombinant-based influenza vaccines.

Influenza B Viruses

- B/Victoria: Sixteen influenza B/Victoria-lineage virus were antigenically characterized by HI, and all were well-recognized (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera to cell-grown B/Austria/1359417/2021-like reference viruses representing the B/Victoria component for the cell- and recombinant-based influenza vaccines.
- B/Yamagata: No influenza B/Yamagata-lineage viruses were available for antigenic characterization.

2022-2023 Influenza Vaccine Components:

Egg-Based Vaccines		
A/B	Virus	Quadrivalent
A	A/Victoria/2570/2019 (H1N1)pdm09-like virus	X
A	A/Darwin/9/2021 (H3N2)-like virus (updated)	X
B	B/Austria/1359417/2021-like virus (B/Victoria lineage) (updated)	X
B	Phuket/3073/2013-like (B/Yamagata lineage)	X
Cell- and Recombinant-Based Vaccines*		
A	A/Wisconsin/588/2019 (H1N1)pdm09-like virus	X
A	A/Darwin/6/2021 (H3N2)-like virus (updated)	X
B	B/Austria/1359417/2021-like virus (B/Victoria lineage) (updated)	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 2022–23 season.

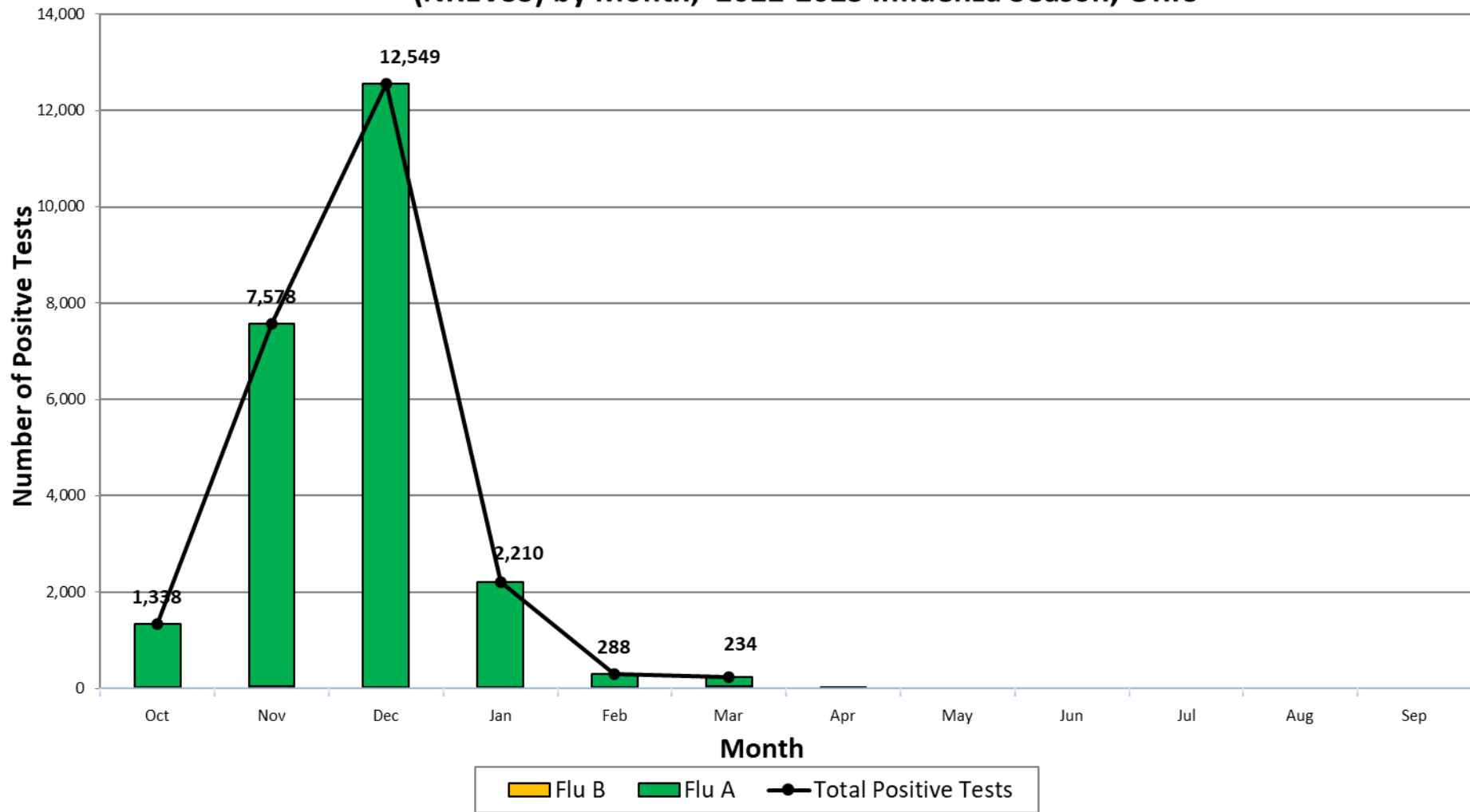
Influenza-Associated Hospitalizations, Ohio 2022-2023 Season*								
County	Influenza-Associated Hospitalizations	Percent of All Influenza-Associated Hospitalizations	Rate per 100,000 Population [†]		County	Influenza-Associated Hospitalizations	Percent of All Influenza-Associated Hospitalizations	Rate per 100,000 Population [†]
ADAMS	5	0.1%	18.20		LOGAN	26	0.3%	56.34
ALLEN	146	1.6%	142.85		LORAIN	220	2.4%	70.30
ASHLAND	42	0.5%	80.08		LUCAS	408	4.5%	94.60
ASHTABULA	71	0.8%	72.77		MADISON	24	0.3%	54.76
ATHENS	46	0.5%	73.68		MAHONING	194	2.2%	84.86
AUGLAIZE	56	0.6%	120.63		MARION	72	0.8%	110.16
BELMONT	22	0.2%	33.08		MEDINA	110	1.2%	60.28
BROWN	38	0.4%	87.00		MEIGS	17	0.2%	76.54
BUTLER	271	3.0%	69.42		MERCER	43	0.5%	101.11
CARROLL	33	0.4%	123.50		MIAMI	116	1.3%	106.64
CHAMPAIGN	32	0.4%	82.66		MONROE	3	0.0%	22.41
CLARK	218	2.4%	160.29		MONTGOMERY	842	9.4%	156.71
CLERMONT	148	1.6%	70.95		MORGAN	24	0.3%	173.89
CLINTON	13	0.1%	30.94		MORROW	16	0.2%	45.78
COLUMBIANA	83	0.9%	81.47		MUSKINGUM	128	1.4%	148.13
COSHOCTON	30	0.3%	81.94		NOBLE	21	0.2%	148.78
CRAWFORD	18	0.2%	42.83		OTTAWA	27	0.3%	66.89
CUYAHOGA	1168	13.0%	92.35		PAULDING	9	0.1%	47.86
DARKE	40	0.4%	77.10		PERRY	35	0.4%	98.85
DEFIANCE	34	0.4%	88.81		PICKAWAY	63	0.7%	107.62
DELAWARE	68	0.8%	31.76		PIKE	18	0.2%	66.45
ERIE	87	1.0%	115.05		PORTAGE	72	0.8%	44.50
FAIRFIELD	73	0.8%	45.93		PREBLE	28	0.3%	68.29
FAYETTE	21	0.2%	72.54		PUTNAM	36	0.4%	104.50
FRANKLIN	581	6.5%	43.89		RICHLAND	109	1.2%	87.24
FULTON	27	0.3%	63.21		ROSS	64	0.7%	83.02
GALLIA	41	0.5%	140.31		SANDUSKY	41	0.5%	69.61
GEAUGA	43	0.5%	45.07		SCIOTO	126	1.4%	170.25
GREENE	161	1.8%	95.85		SENECA	40	0.4%	72.64
GUERNSEY	54	0.6%	140.49	SHELBY	24	0.3%	49.76	
HAMILTON	523	5.8%	62.96	STARK	309	3.4%	82.43	
HANCOCK	58	0.6%	77.42	SUMMIT	253	2.8%	46.81	
HARDIN	20	0.2%	65.16	TRUMBULL	117	1.3%	57.93	
HARRISON	7	0.1%	48.33	TUSCARAWAS	93	1.0%	99.72	
HENRY	11	0.1%	39.77	UNION	18	0.2%	28.67	
HIGHLAND	61	0.7%	140.82	VAN WERT	10	0.1%	34.56	
HOCKING	9	0.1%	32.09	VINTON	11	0.1%	85.94	
HOLMES	37	0.4%	83.67	WARREN	109	1.2%	44.98	
HURON	48	0.5%	81.96	WASHINGTON	58	0.6%	97.04	
JACKSON	42	0.5%	128.63	WAYNE	68	0.8%	58.17	
JEFFERSON	16	0.2%	24.52	WILLIAMS	14	0.2%	37.73	
KNOX	65	0.7%	103.63	WOOD	110	1.2%	83.18	
LAKE	161	1.8%	69.22	WYANDOT	18	0.2%	82.19	
LAWRENCE	79	0.9%	135.65	UNKNOWN	0	0.0%	*	
LICKING	62	0.7%	34.73	TOTAL	9013	100%	76.38	

*2022-2023 Season began on 10/2/2022; data as of 04/10/2023

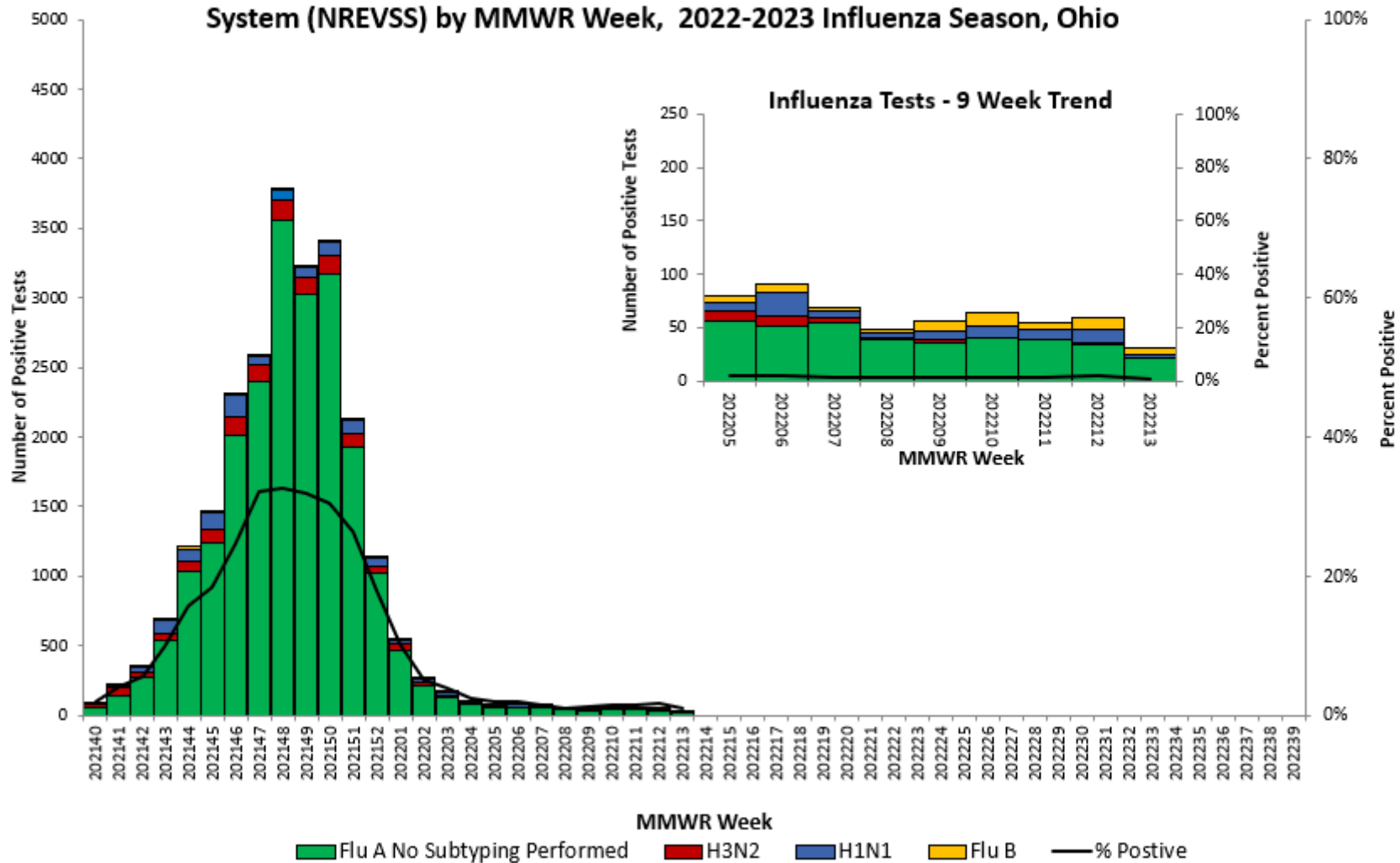
† Disease rates were calculated by number of cases per 100,000 residents using 2020 census data.

Source: Ohio Disease Reporting System

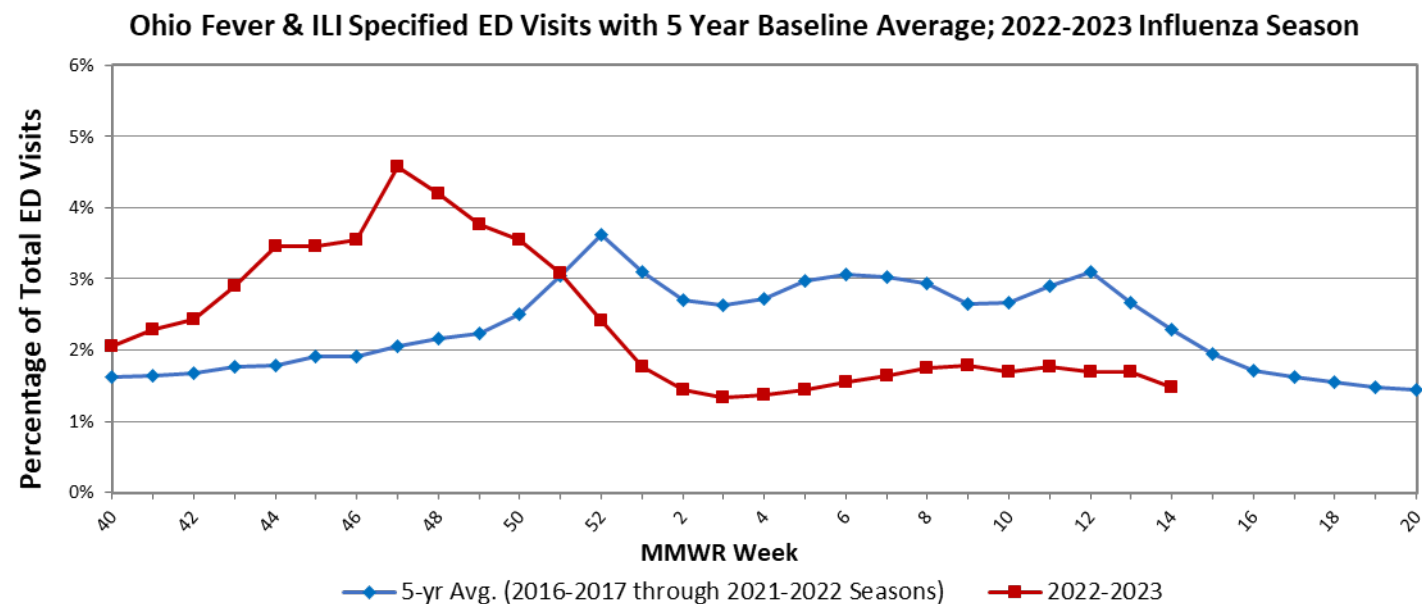
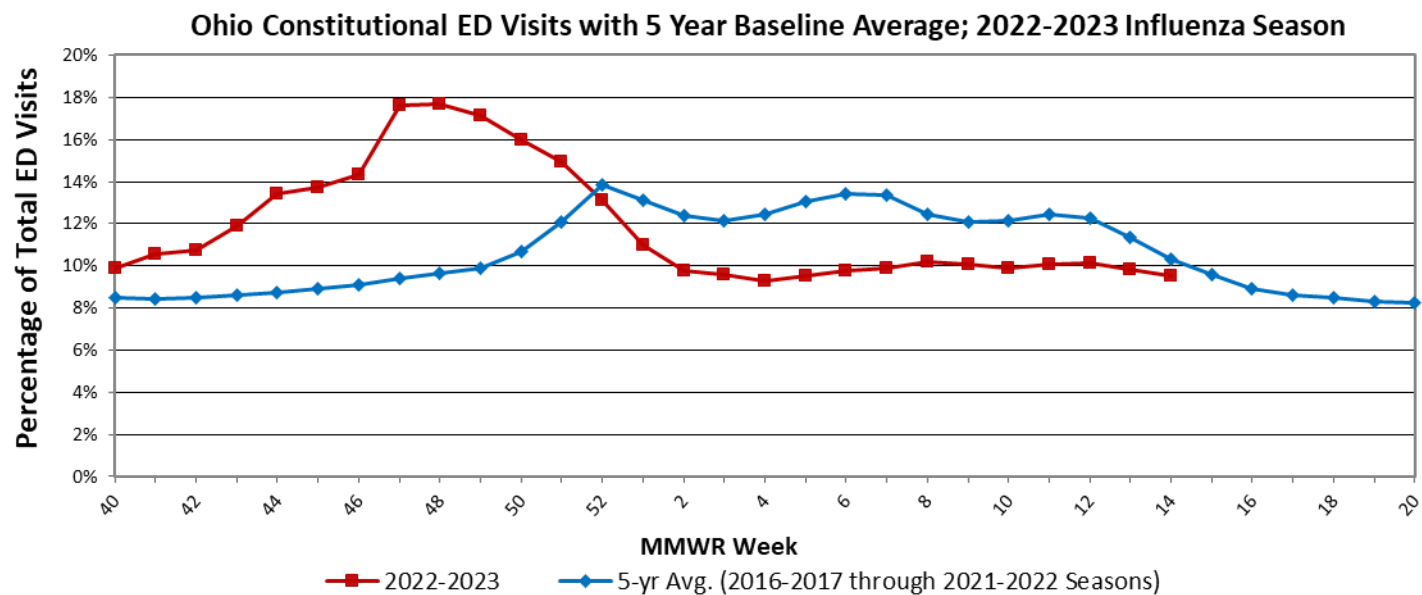
Positive Influenza Testing from Public Health Laboratories and Selected Clinical Laboratories Participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS) by Month, 2022-2023 Influenza Season, Ohio



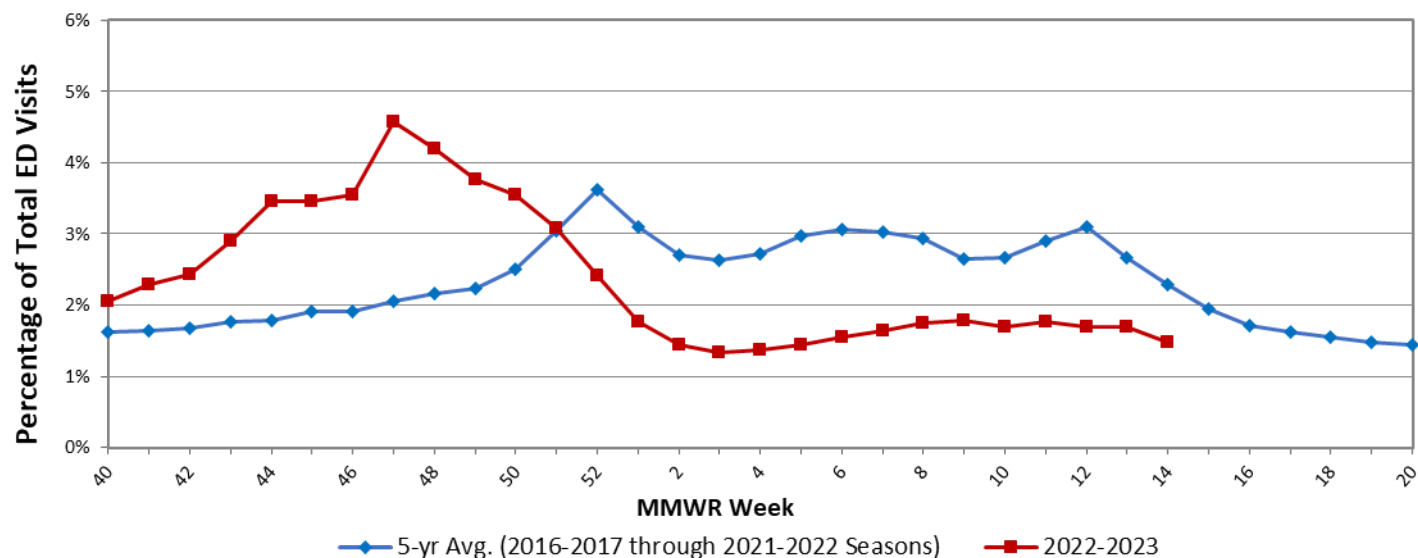
Positive Influenza Testing from Public Health Laboratories and Selected Clinical Laboratories Participating in the National Respiratory and Enteric Virus Surveillance System (NREVSS) by MMWR Week, 2022-2023 Influenza Season, Ohio



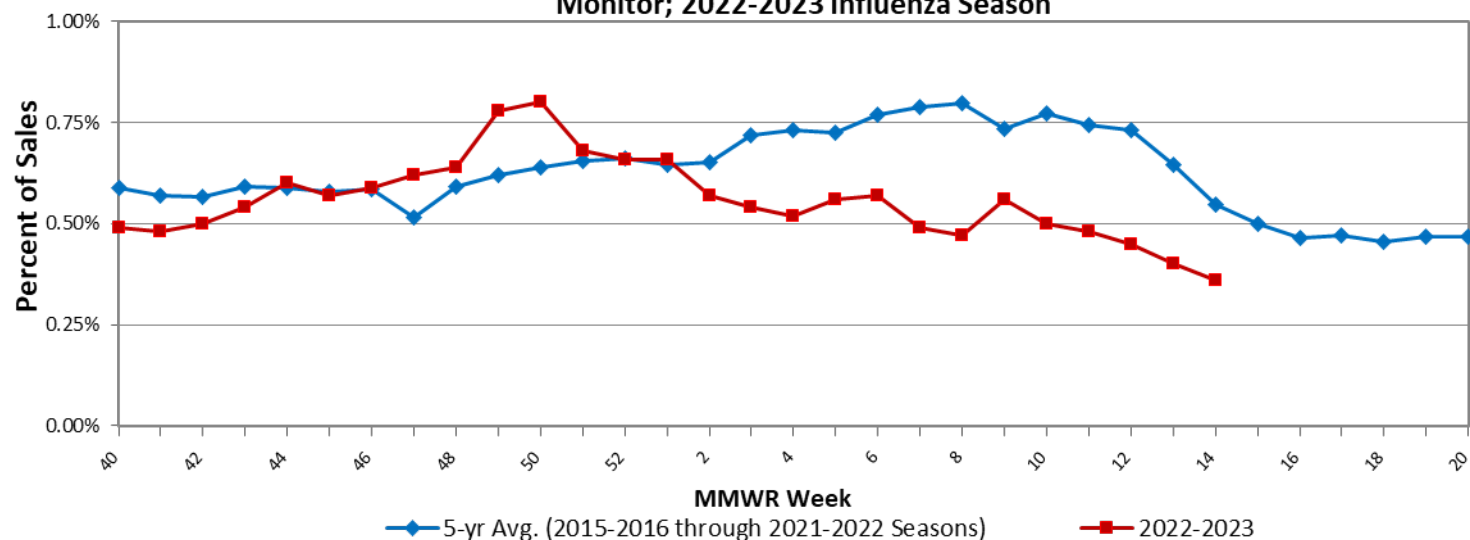
Note: NREVSS/Public Health Laboratory data are reported one week later than Ohio state-level data to ensure data completeness.



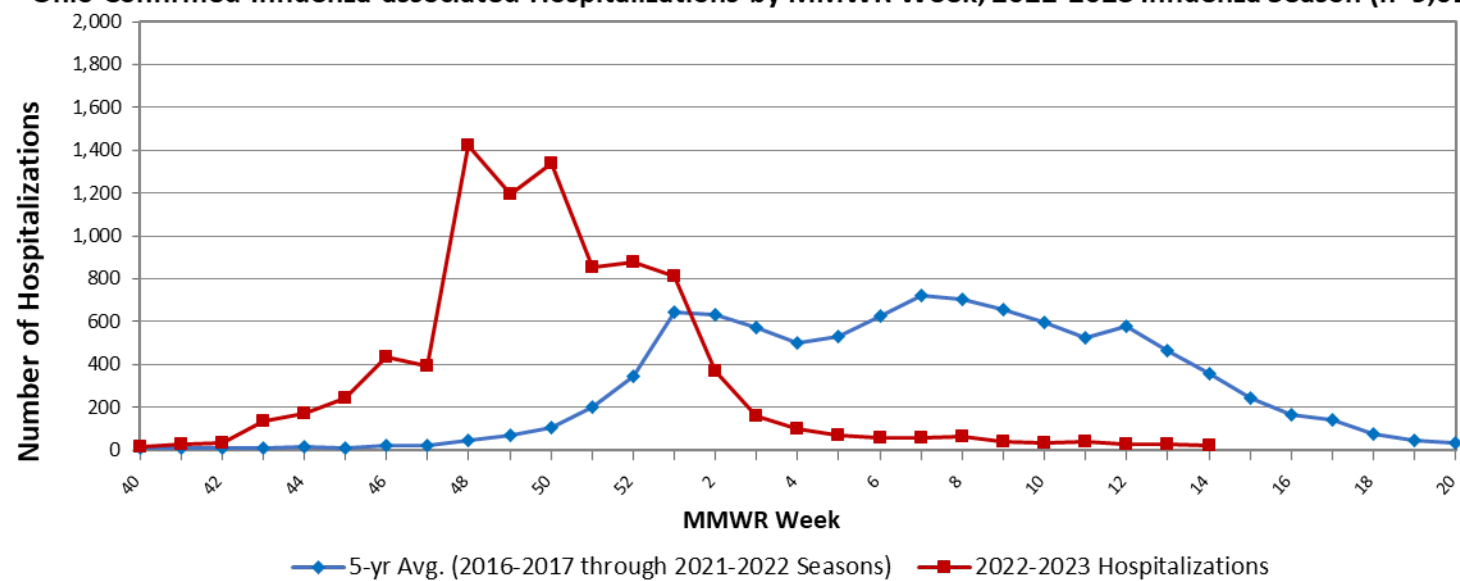
Ohio Fever & ILI Specified ED Visits with 5 Year Baseline Average; 2022-2023 Influenza Season



Percent of Ohio Thermometer Sales with 5 Year Baseline Average; National Retail Data Monitor; 2022-2023 Influenza Season



Ohio Confirmed Influenza-associated Hospitalizations by MMWR Week; 2022-2023 Influenza Season (n=9,013)



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 five-year average, which includes data from the 2015-2016 season through the 2018-2019 season, and the 2021-2022 season is displayed.
- **Emergency Department Visits (EpiCenter):** EpiCenter collects emergency department chief complaint data from 206 hospitals and 15 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. A five-year average, which includes data from the 2016-2017 season through the 2021-2022 season, is displayed in the figure above. 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.
- **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 107 sentinel providers enrolled in Ohio for the 2022-2023 influenza season. A five-year average, which includes data from the 2016-2017 season through the 2021-2022 season, is displayed in the figure above. 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.
- **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. A five-year average, which includes data from the 2016-2017 season through the 2021-2022 season, is displayed in the figure above. 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.
- **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.

- **U.S. World Health Organization (WHO) Collaborating Laboratories System** and the **National Respiratory and Enteric Virus Surveillance System (NREVSS)**: The Ohio Department of Health Laboratory, Wright Patterson Airforce Base (both WHO Collaborating Laboratories), and 19 clinical laboratories located throughout Ohio participate in virologic surveillance for influenza through either the U.S. WHO Collaborating Laboratories System or NREVSS. Influenza testing data from these systems are compiled by the Centers for Disease Control and Prevention's (CDC) National Center for Immunization and Respiratory Diseases (NCIRD) and made available to the influenza surveillance coordinators in each state for analysis.

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.