

Ottawa County Respiratory Illness Report

Submitted for Publication April 29, 2024

Dates of data may vary.



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Executive Summary

Influenza (Flu)

Influenza activity in Ottawa County remains elevated but continues to decline.

Influenza activity remains elevated but is declining in [Michigan](#). Influenza activity in the [United States](#) continues to decline.

Coronavirus (COVID-19)

Ottawa County hospital occupancy indicators show a low percent of patients hospitalized with COVID-19; wastewater signals from Holland/Zeeland, Allendale, and Grand Haven-Spring Lake remain low and stable.

The weekly rate of new COVID-19 hospitalizations per 100,000 population is relatively low and decreasing in both [Michigan](#) and the [United States](#).

Respiratory Syncytial Virus (RSV)

Ottawa County surveillance data shows that local RSV activity is low. RSV activity in [Michigan](#) and across the [United States](#) remains low and stable.

Influenza Surveillance

MMWR Week 16: April 14, 2024 – April 20, 2024*

Influenza Test Positivity in the USA and Ottawa County

Figure 1: Positivity Rate* of Influenza Tests by Week, Ottawa County and United States

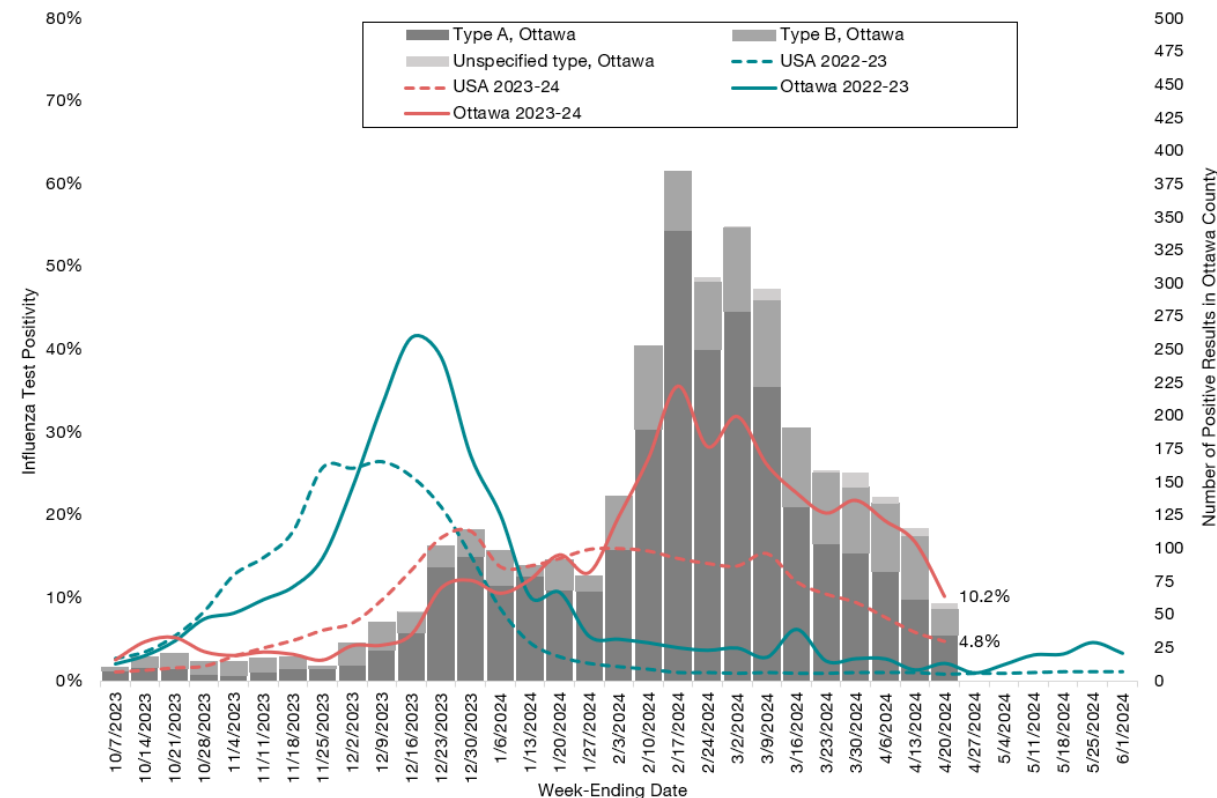


Table 1: Influenza Positive Tests Reported in Ottawa County – Last 8 Weeks

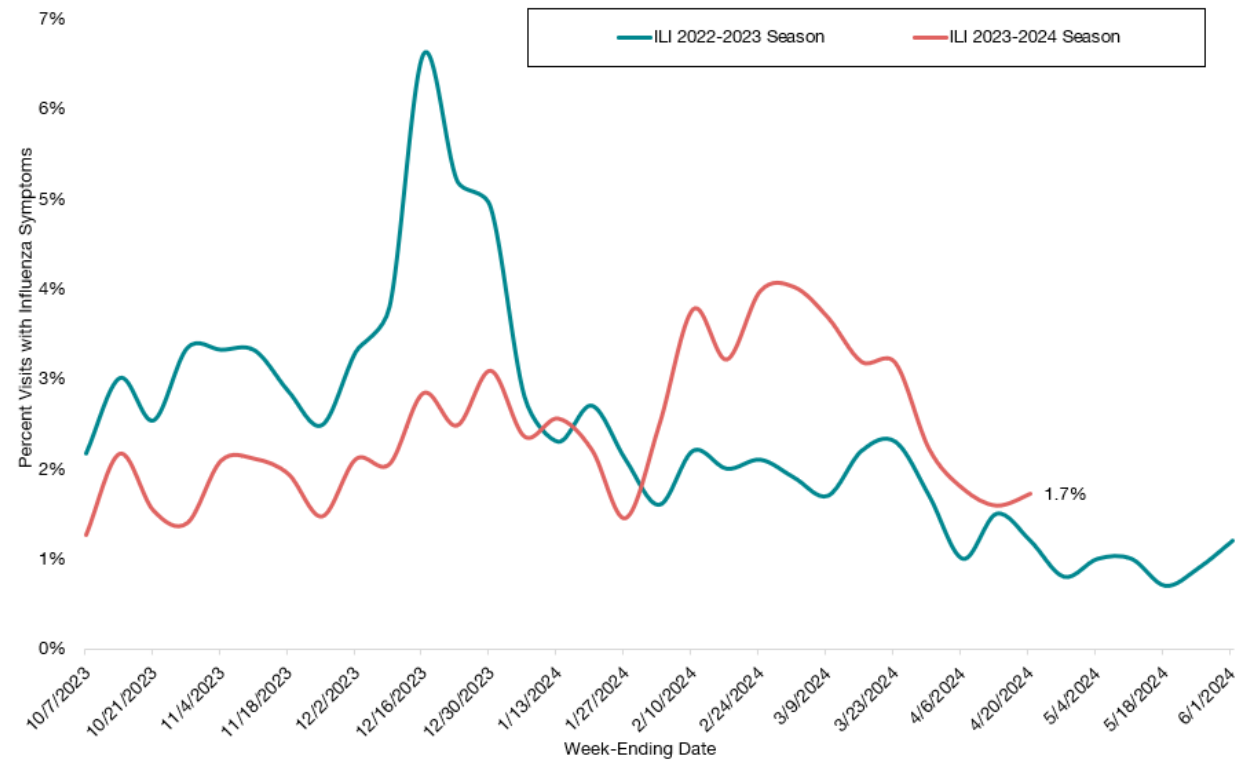
Week-Ending Date	Type A	Type B	Unspecified	Total Influenza	Total Tested	Positivity
3/2/2024	279	63	1	343	1072	32.0%
3/9/2024	222	65	9	296	1131	26.2%
3/16/2024	132	59	0	191	840	22.7%
3/23/2024	104	53	2	159	784	20.3%
3/30/2024	97	49	11	157	719	21.8%
4/6/2024	83	51	5	139	719	19.3%
4/13/2024	62	47	6	115	684	16.8%
4/20/2024	35	19	5	59	579	10.2%

*Influenza positivity is the percent of influenza tests conducted by reporting providers and laboratories that result positive. Elevated influenza positivity is often an indication that influenza is circulating in the community.

- During week 16, influenza test positivity in Ottawa County decreased to 10.2% from 16.8% the previous week. The number of influenza tests decreased by 15% from the previous week, from 684 to 579.
- The latest influenza positivity estimate in Ottawa County is much higher than that reported at a similar time last influenza season (2.1%).
- Seasonal influenza activity nationally continues to decline. National influenza test positivity for week 16 was 4.8%.

Syndromic Surveillance for Influenza in Ottawa County

Figure 2: Percentage of Emergency Department (ED) and Urgent Care (UC) Visits in Ottawa County with Influenza-like Illnesses (ILI)*



*Influenza-like illness include sudden onset of fever, cough and/or sore throat.

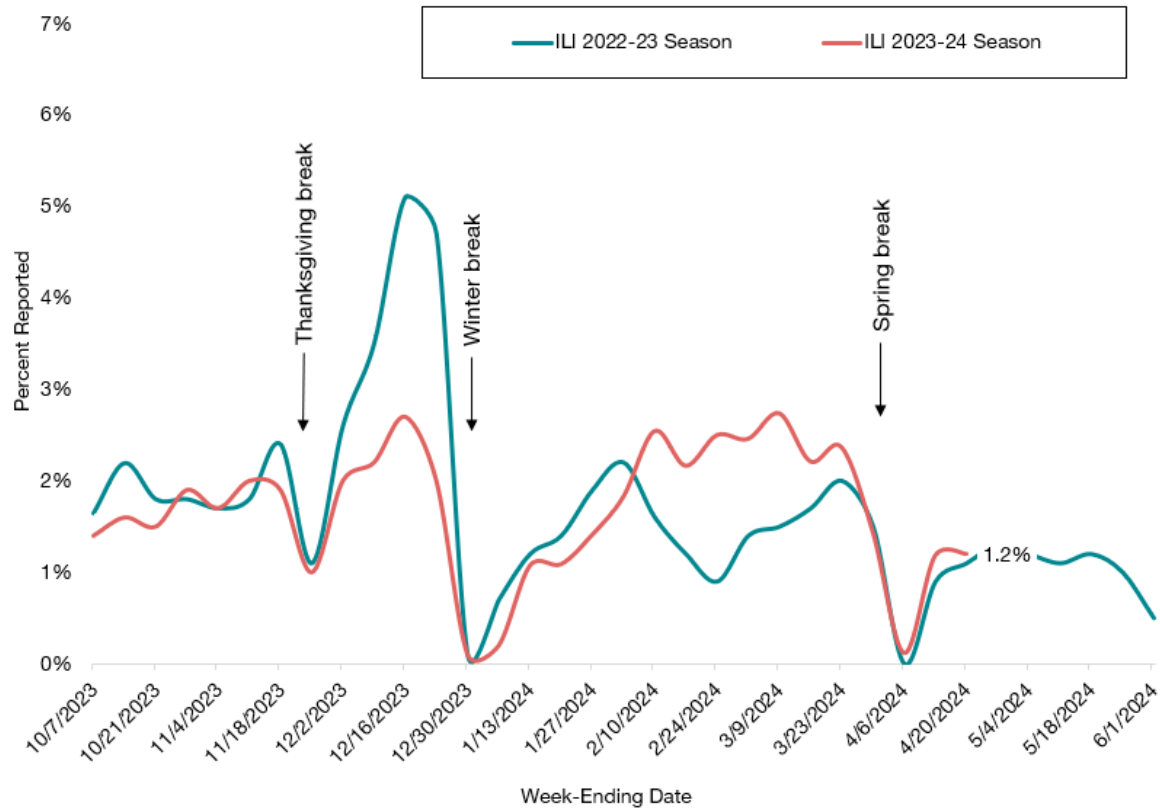
Table 2: Emergency Department and Urgent Care Visits with Influenza-like Illnesses in Ottawa County – Last 8 Weeks

MMWR Week	Week-Ending Date	ILI Visits	Total ED/UC Visits	Percent of ED/UC Visits
9	3/2/2024	107	2663	4.0%
10	3/9/2024	98	2663	3.7%
11	3/16/2024	80	2509	3.2%
12	3/23/2024	77	2424	3.2%
13	3/30/2024	54	2429	2.2%
14	4/6/2024	41	2297	1.8%
15	4/13/2024	40	2506	1.6%
16	4/20/2024	41	2374	1.7%

- During week 16, Ottawa County Emergency Department and Urgent Care visits with ILI reported increased slightly to 1.7% from 1.6% the previous week.

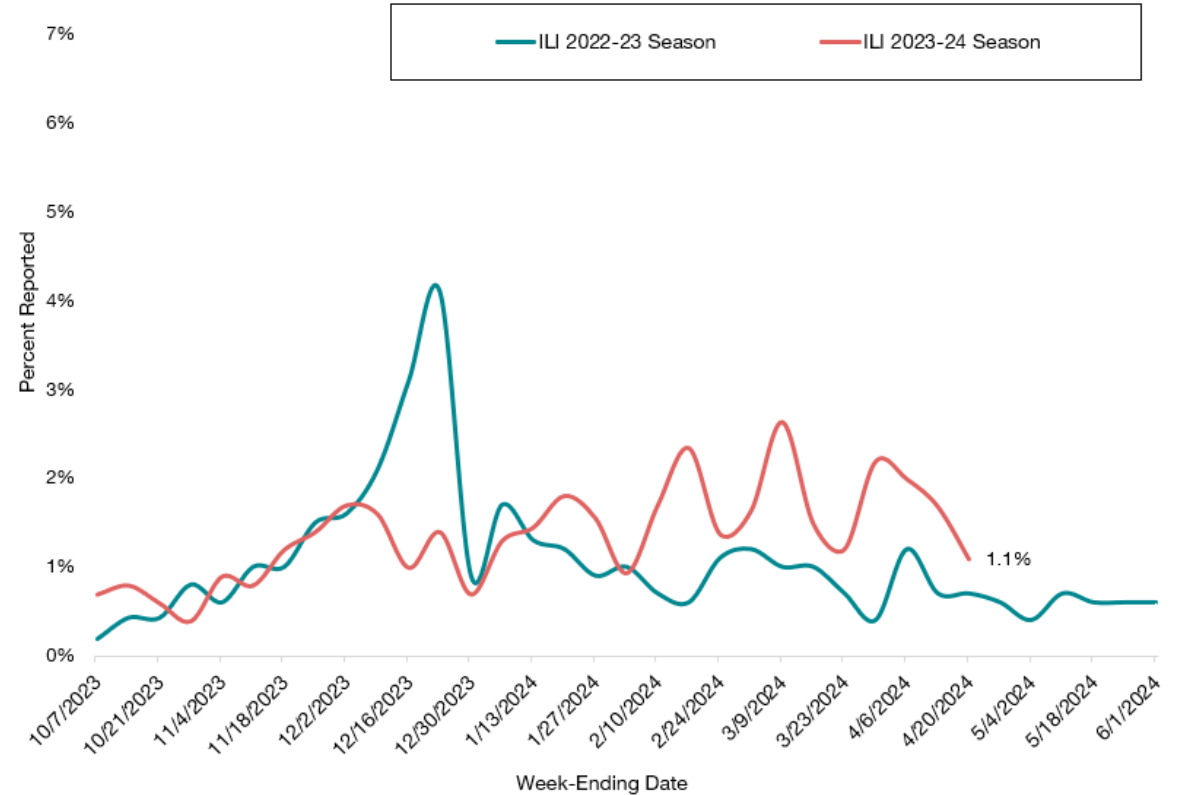
Influenza-Like Illness (ILI) Surveillance from Reporting Schools, Child Care, and Healthcare Settings

Figure 3: Percent ILI in Schools and Child Care by Week



- During week 16, the proportion of ILI reported in school/child care settings was 1.2%, the same as that reported the previous week.
- The proportion of ILI reported in week 16 is similar to that reported at the same time last season (1.1%).

Figure 4: Percent Healthcare ILI Visits by Week



- Reported ILI in healthcare offices was 1.1% during week 16.
- There have been three reported influenza outbreaks in long-term care facilities (LTCFs) during the 2023-24 season in Ottawa County. No new LTCF influenza outbreaks were reported in week 16.

Influenza-Associated Pediatric Mortality & Vaccine Coverage

Influenza-Associated Pediatric Mortality

Table 3: Influenza-associated Pediatric Mortality

	2023-24 Season (YTD)	2022-23 Season (YTD)	2022-23 Season Total
Ottawa County	0	0	0
Michigan	1	4	4
United States	148	174	184

Note: All data are preliminary and may change as more reports are received.

Influenza Vaccination Coverage

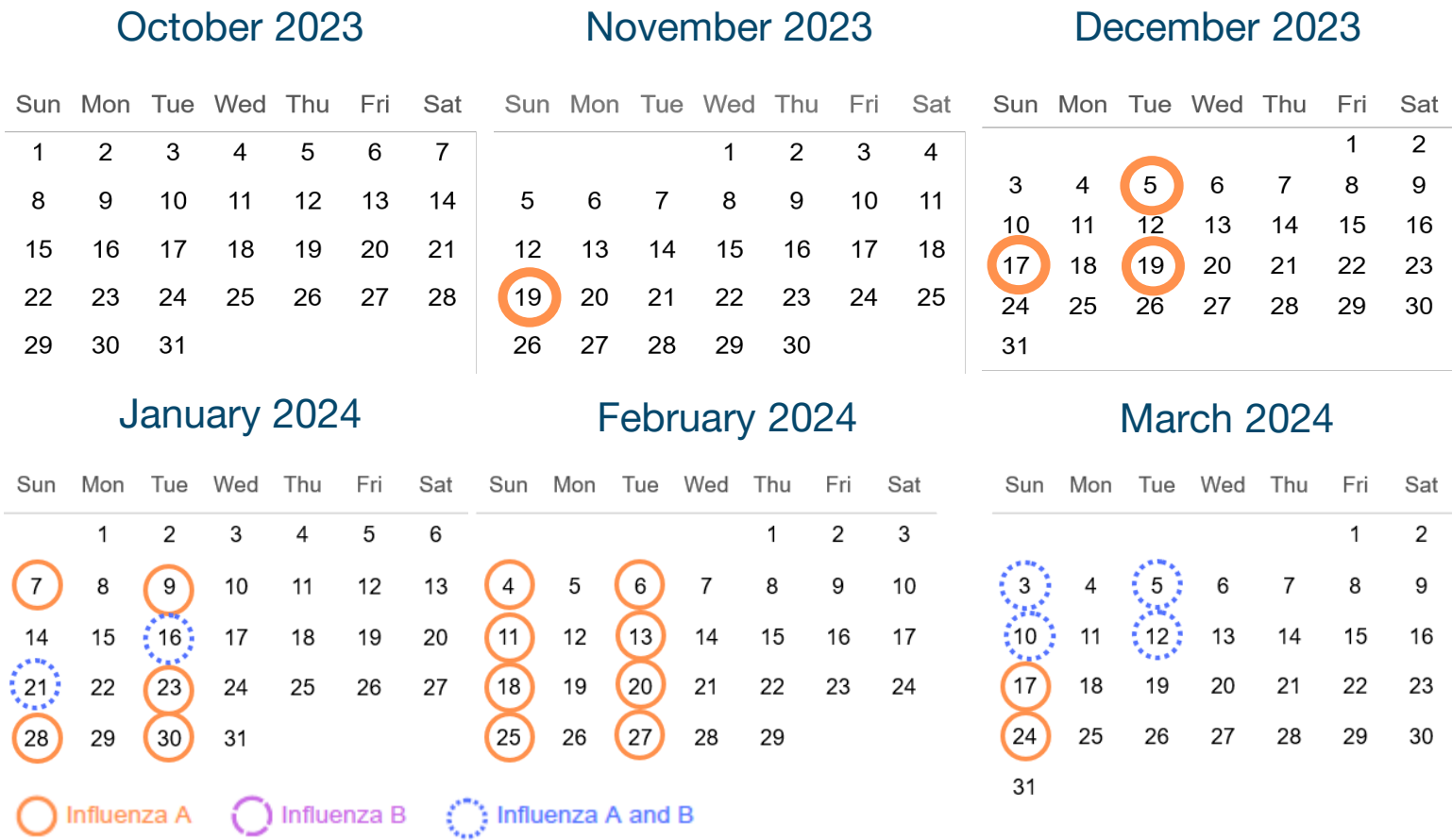
- The best way to reduce the risk of getting the seasonal flu and its potentially serious complications is to get vaccinated every year. Over the past five influenza seasons, average vaccination coverage in Ottawa County hovered around 40%. Table 4 below reflects total vaccination coverage rate in Ottawa County and statewide (Michigan) over the last five seasons and through April 20 this season.

Table 4: Influenza Vaccination Rates in Ottawa County and Michigan, Previous Five Seasons and 2023-24 Season YTD

	2018-19 Season	2019-20 Season	2020-21 Season	2021-22 Season	2022-23 Season	2023-24 Season (YTD)
Ottawa County	39%	40.2%	42.9%	40.1%	35.4%	30.6%
Michigan	30.3%	31.6%	34.3%	31.8%	29.2%	25.7%
Healthy People 2030 Target	70%	70%	70%	70%	70%	70%

YTD = Year To Date

Ottawa County Wastewater Influenza Detection Calendar



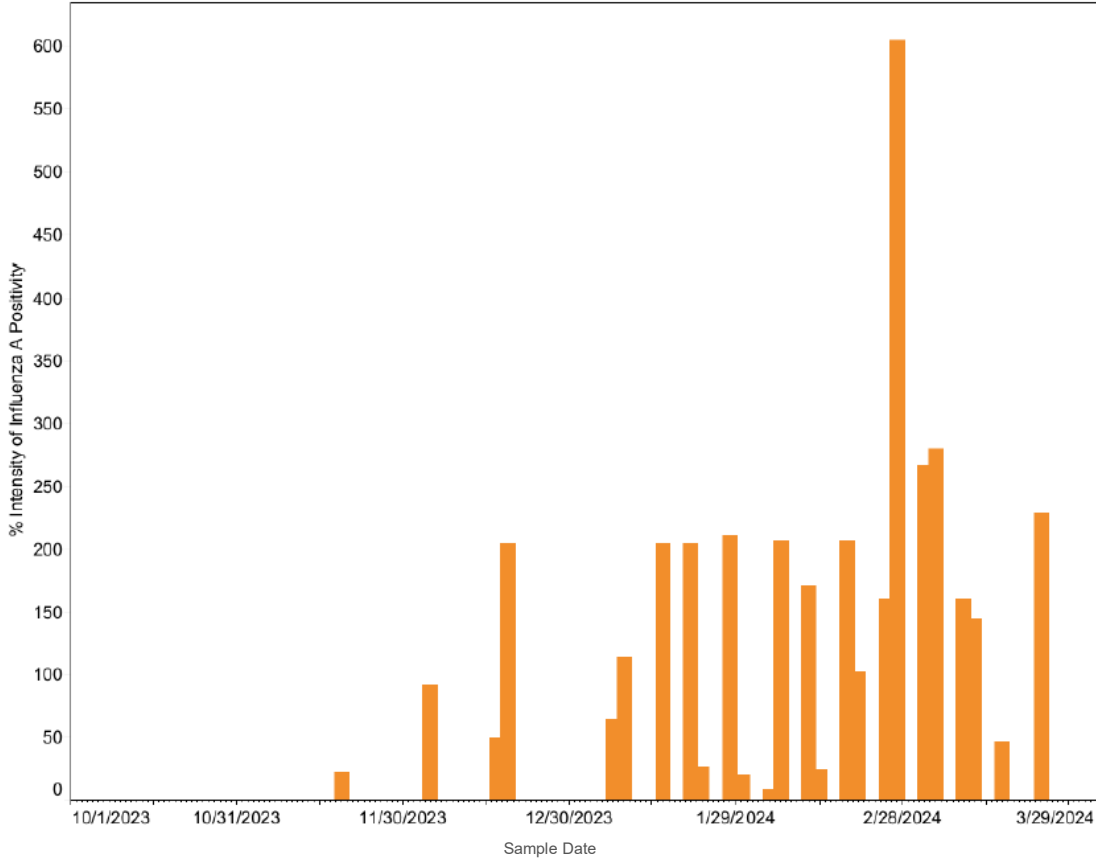
Data Interpretation: The above calendar shows influenza detections observed through wastewater monitoring in Ottawa County for October 2023-March 2024. Samples were collected twice a week at the Grand Haven-Spring Lake and Allendale Wastewater Treatment Plants. In October 2023, there were no influenza detections observed. The first influenza detection occurred in November. No samples were collected on 3/19/2024.

Notes: Wastewater testing has been used to detect other pathogens within wastewater including COVID-19. The use of testing wastewater for Influenza is currently being piloted in Ottawa County.

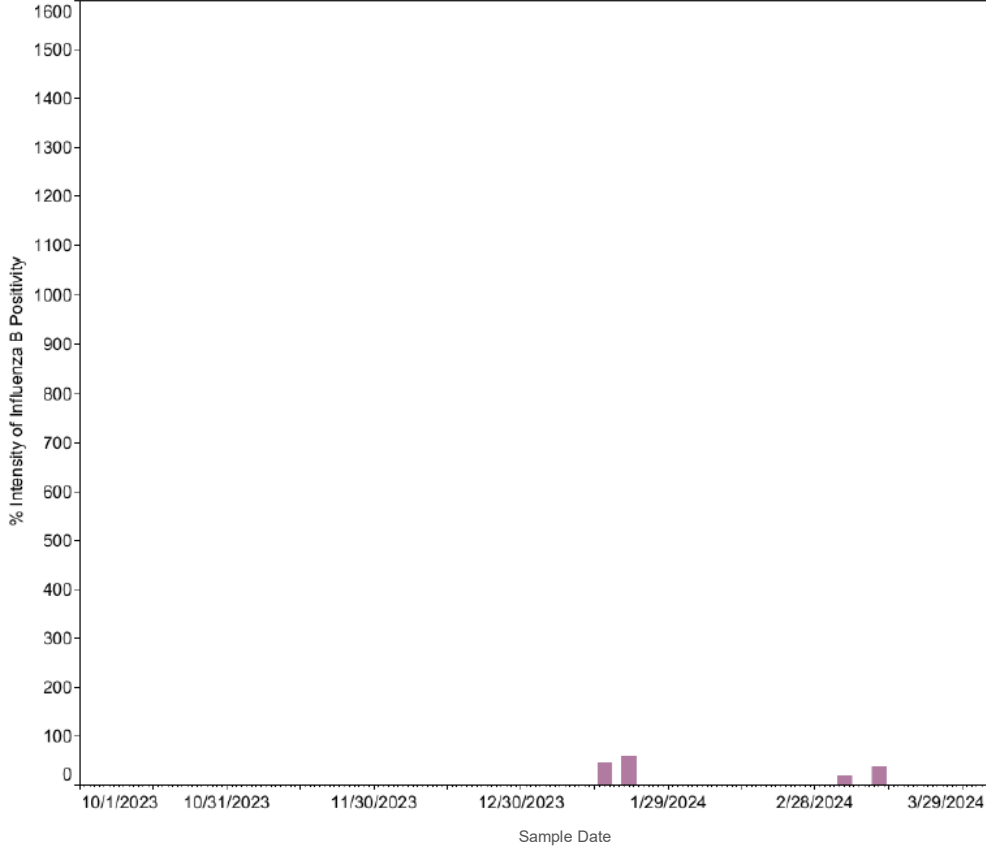
Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. (otterr@gvsu.edu)

Allendale Wastewater Influenza Surveillance

Ottawa County Wastewater Influenza A Detection and Intensity



Ottawa County Wastewater Influenza B Detection and Intensity



Flu Intensity Definition: the percent (%) increase above the sample-specific detection limit threshold which allows for direct sample-to-sample comparisons to be made over time.

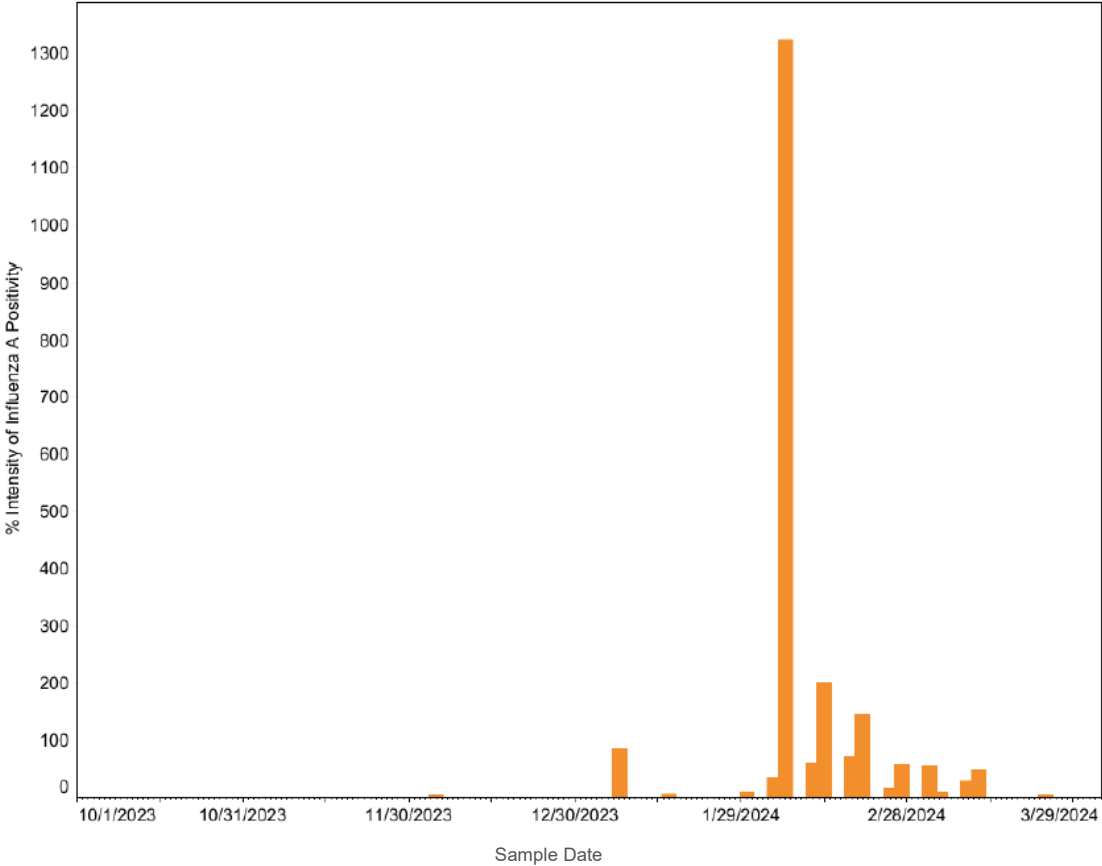
Data Interpretation: The graphs above show the percent positive intensity above the detection limit (magnitude of positive detection) for influenza. Influenza A was detected most often in Allendale wastewater samples and had the highest concentration intensity. Influenza B only occurred in addition to influenza A, at a low concentration intensity for the four sampling events noted in the right graph above.

Notes: Wastewater testing has been used to detect other pathogens within wastewater including COVID-19. The use of testing wastewater for Influenza is currently being piloted in Ottawa County.

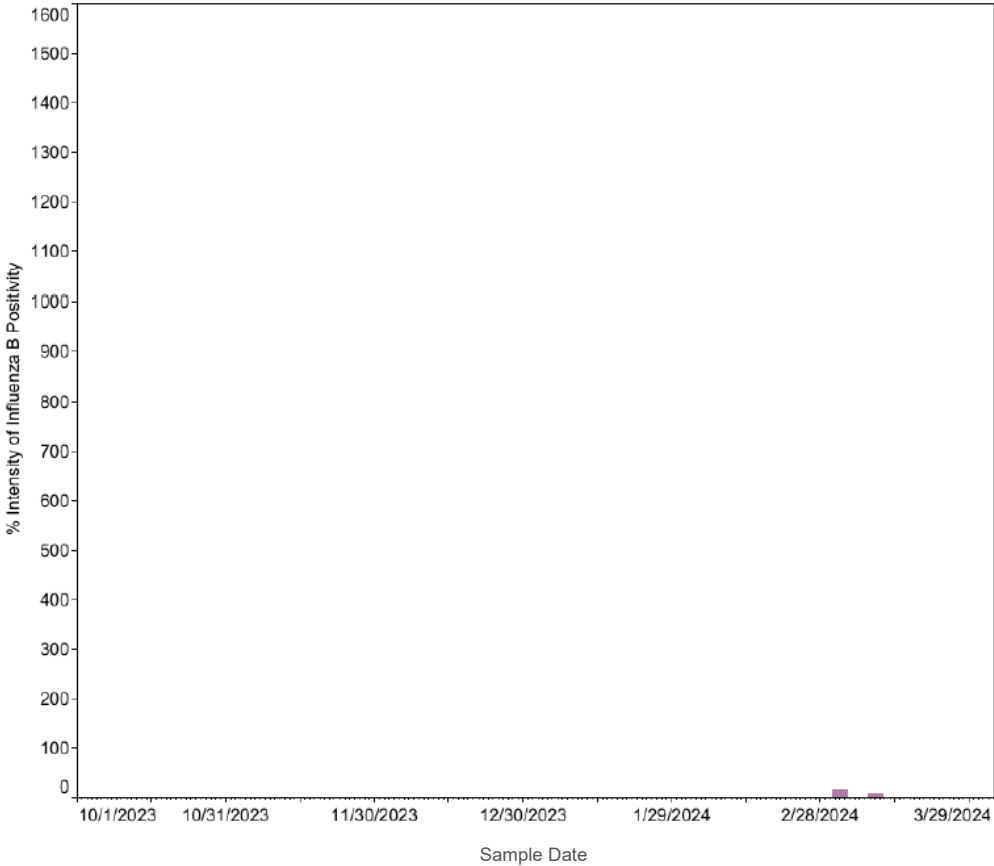
Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. (otterr@gvsu.edu)

Grand Haven-Spring Lake Wastewater Influenza Surveillance

Ottawa County Wastewater Influenza A Detection and Intensity



Ottawa County Wastewater Influenza B Detection and Intensity



Flu Intensity Definition: the percent (%) increase above the sample-specific detection limit threshold which allows for direct sample-to-sample comparisons to be made over time.

Data Interpretation: The graphs above show the percent positive intensity above the detection limit (magnitude of positive detection) for influenza. Influenza A was detected most often in Grand Haven-Spring Lake wastewater samples and had the highest concentration intensity. Influenza B was detected twice at low concentrations in Grand Haven-Spring Lake wastewater samples for the given time-period.

Notes: Wastewater testing has been used to detect other pathogens within wastewater including COVID-19. The use of testing wastewater for Influenza is currently being piloted in Ottawa County.

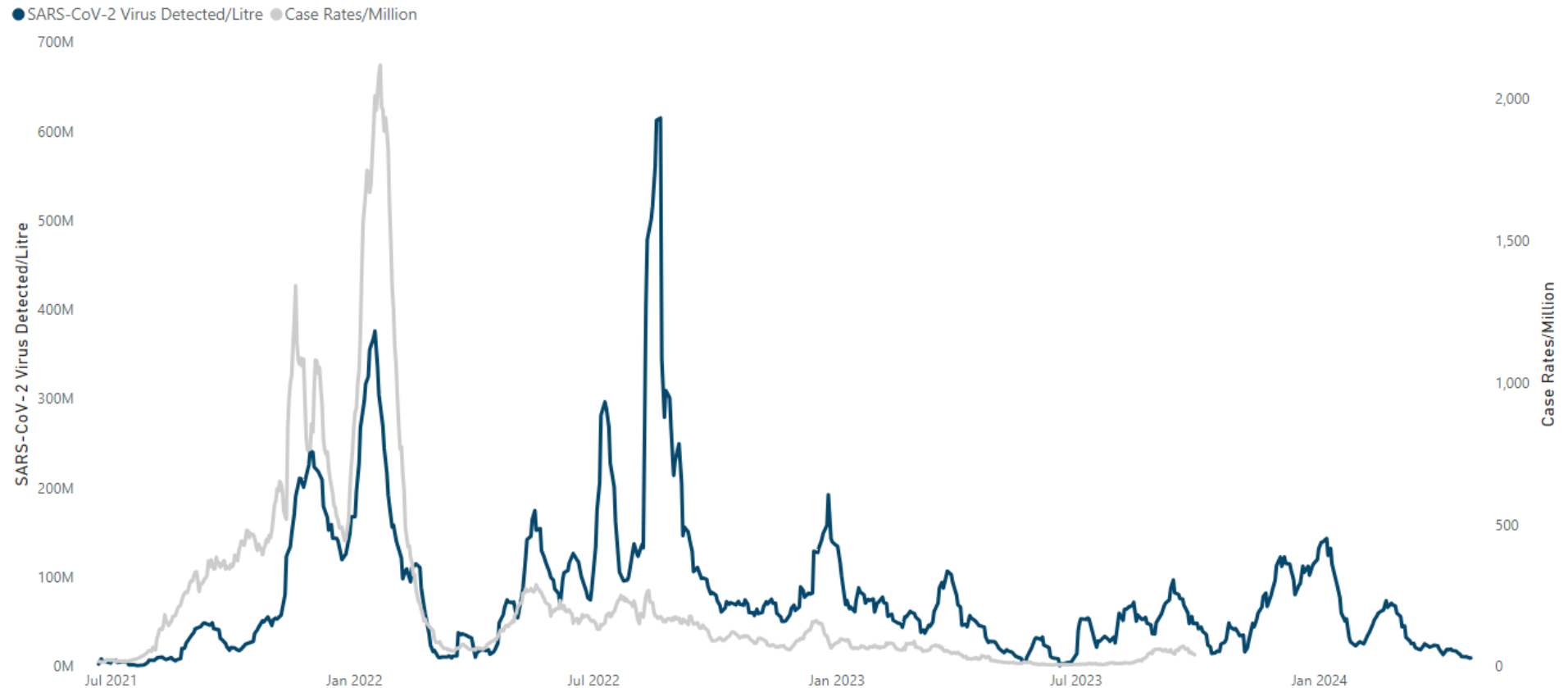
Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. (otterr@gvsu.edu)

Coronavirus (COVID-19) Surveillance

Dates of data may vary.

Holland-Zeeland Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)



Data Interpretation: The **blue line** on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from treatment plants in Holland & Zeeland. The **gray line** on the graph represents the 7-day average COVID-19 case rates/million for all of Ottawa County by referral date.

Notes: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined. A data point from Zeeland collected June 23, 2022, was removed from data analysis as an extreme outlier. County case rate calculation was discontinued on September 27, 2023 due to limited resources to maintain data.

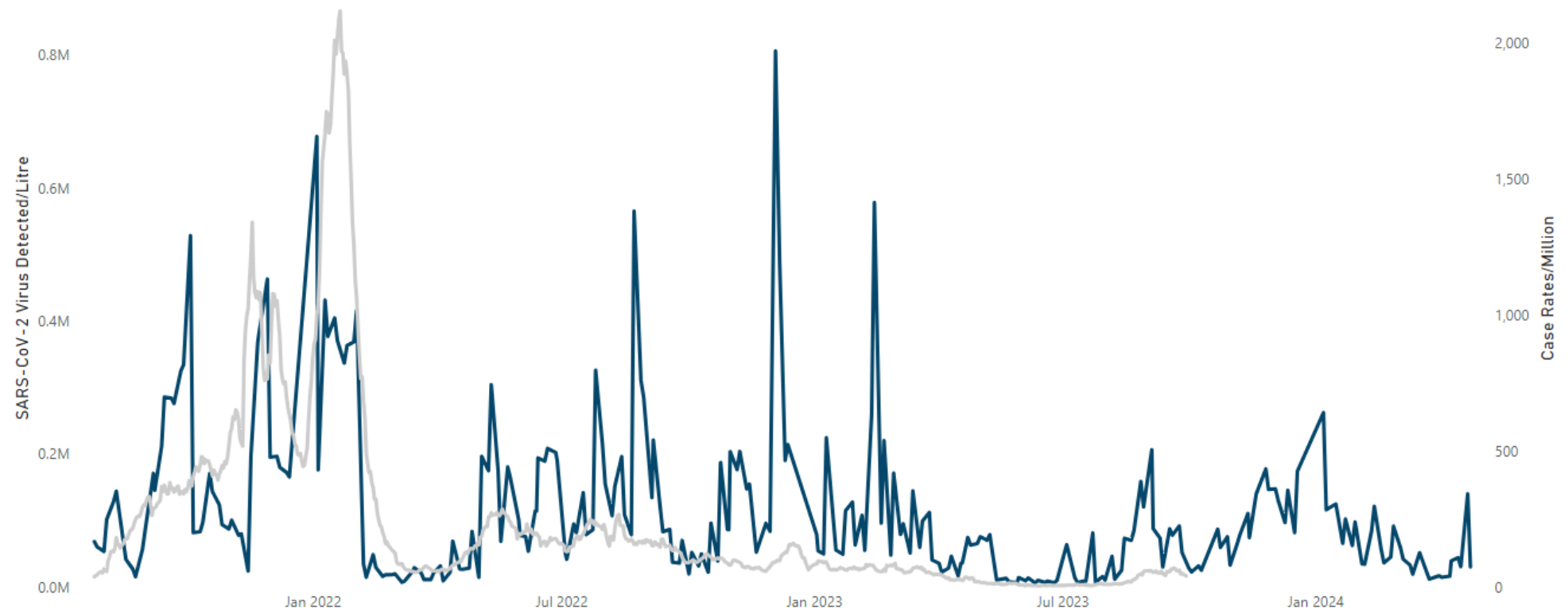
Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (best@hope.edu)

Additional Information: [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEET\) \(michigan.gov\)](https://michigan.gov)

Allendale Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)

● SARS-CoV-2 Virus Detected/Litre ● Case Rates/Million



Data Interpretation: The **blue line** on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from the treatment plant in Allendale. The **gray line** on the graph represents the 7-day average COVID-19 case rates/million for all of Ottawa County by referral date.

Notes: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined. County case rate calculation was discontinued on September 27, 2023 due to limited resources to maintain data.

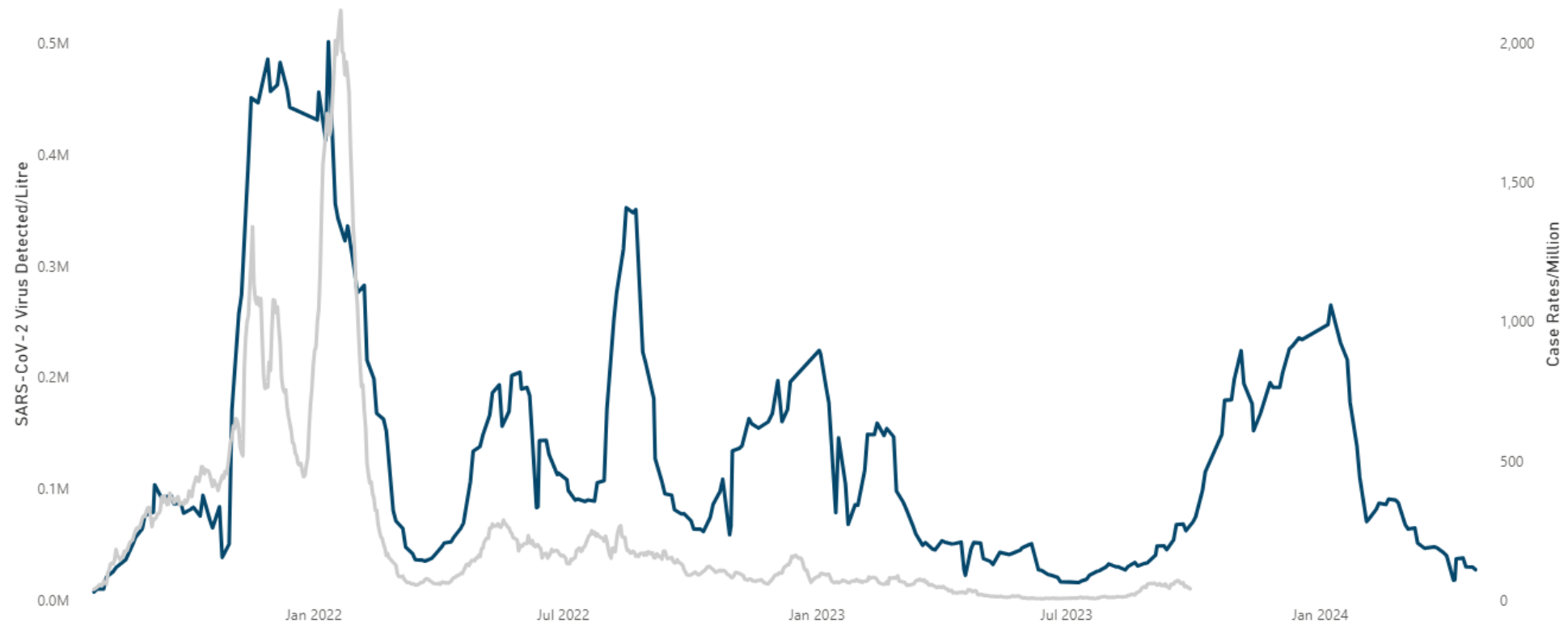
Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. (otterr@gvsu.edu)

Additional Information: [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Grand Haven-Spring Lake Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)

● SARS-CoV-2 Virus Detected/Litre ● Case Rates/Million



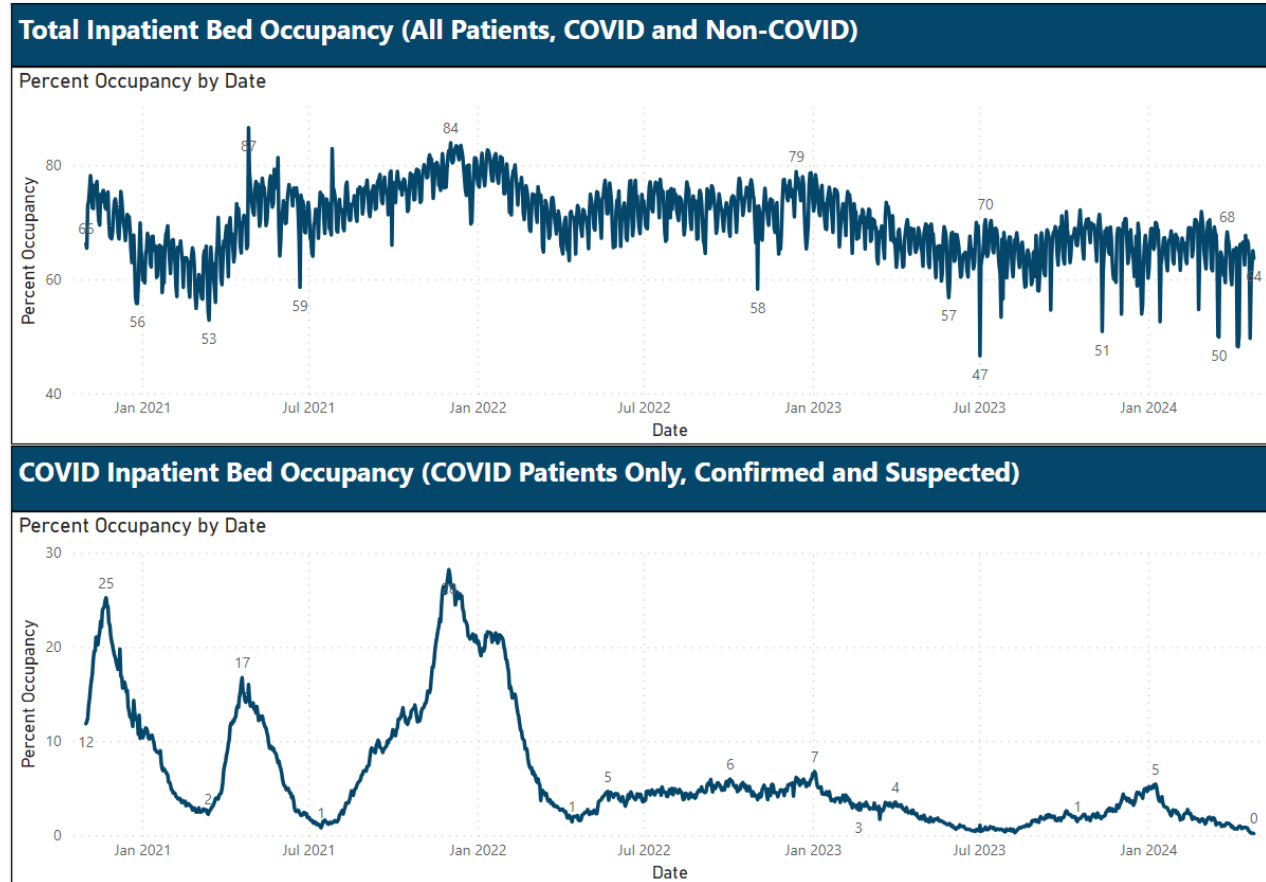
Data Interpretation: The **blue line** on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from the treatment plant in Grand Haven / Spring Lake. The **gray line** on the graph represents the 7-day average COVID-19 case rates/million for all of Ottawa County by referral date.

Notes: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined. County case rate calculation was discontinued on September 27, 2023 due to limited resources to maintain data.

Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. (otterr@gvsu.edu)

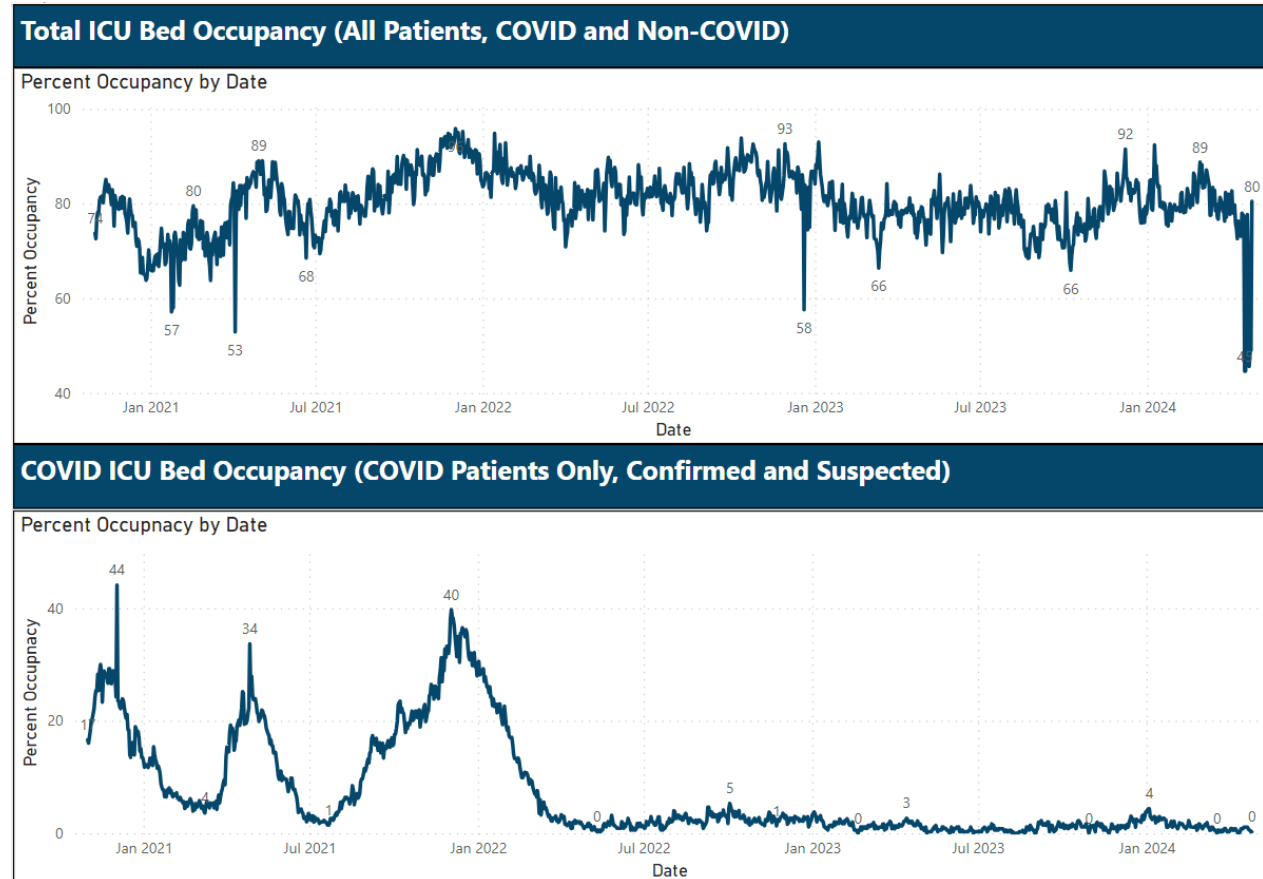
Additional Information: [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Ottawa County Inpatient Bed Occupancy



- Total hospital bed occupancy is 64%.
- Currently, 0% of all inpatient beds are occupied by COVID-19 patients.

Ottawa County Intensive Care Unit (ICU) Bed Occupancy



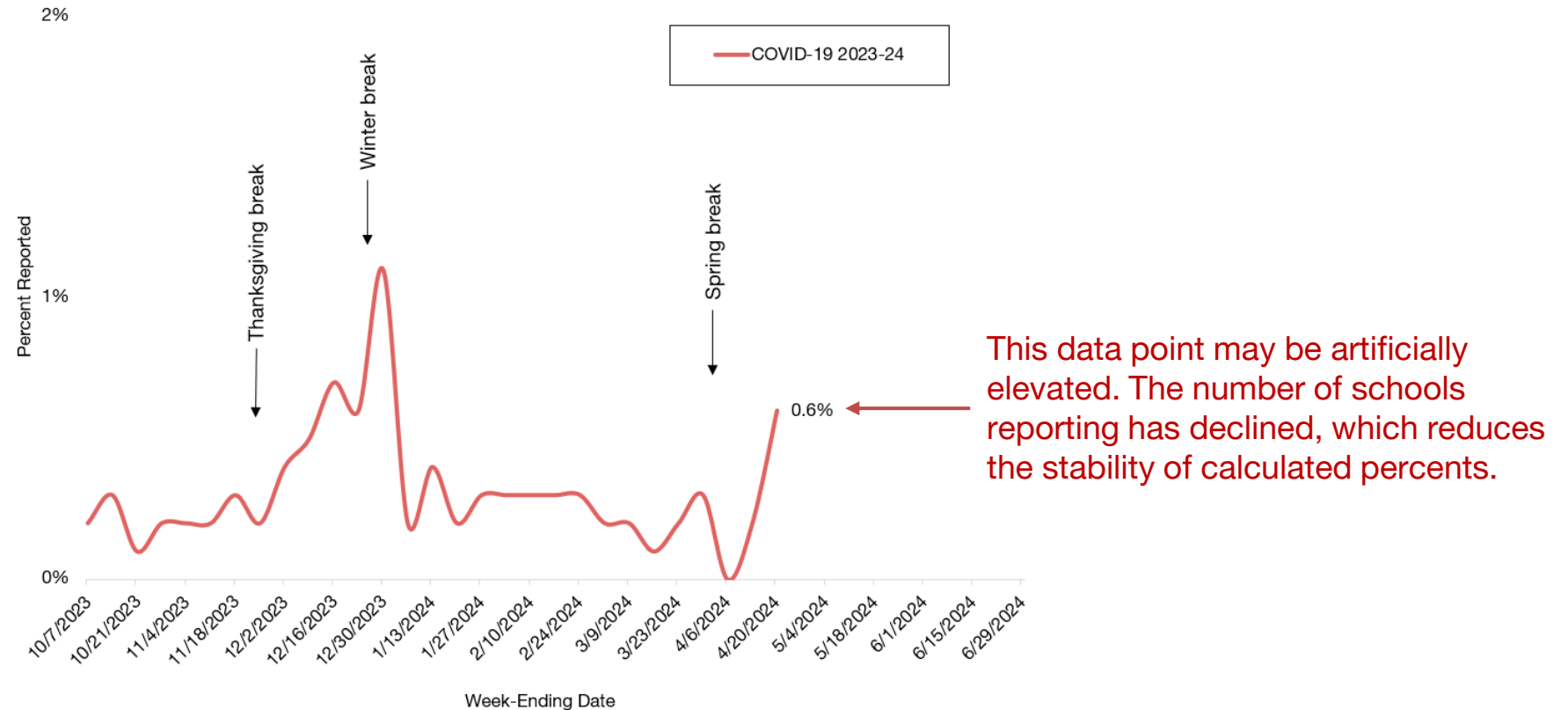
ICU occupancy may be artificially low due to data entry issues.

ICU = Intensive Care Unit

- Total ICU bed occupancy varies considerably by day. Currently, ICU bed occupancy is 80%.
- As of April 25, 2024, 0% of ICU beds were occupied by COVID-19 patients.

COVID-19 Surveillance from Reporting Schools/Child Care Facilities

Figure 5: Percent COVID-19 Cases Reported* by Week, Ottawa County Schools and Child Cares



*Not all schools/childcare facilities in Ottawa County report each week. Over the last eight weeks an average of about 18 schools/child care facilities reported cases weekly.

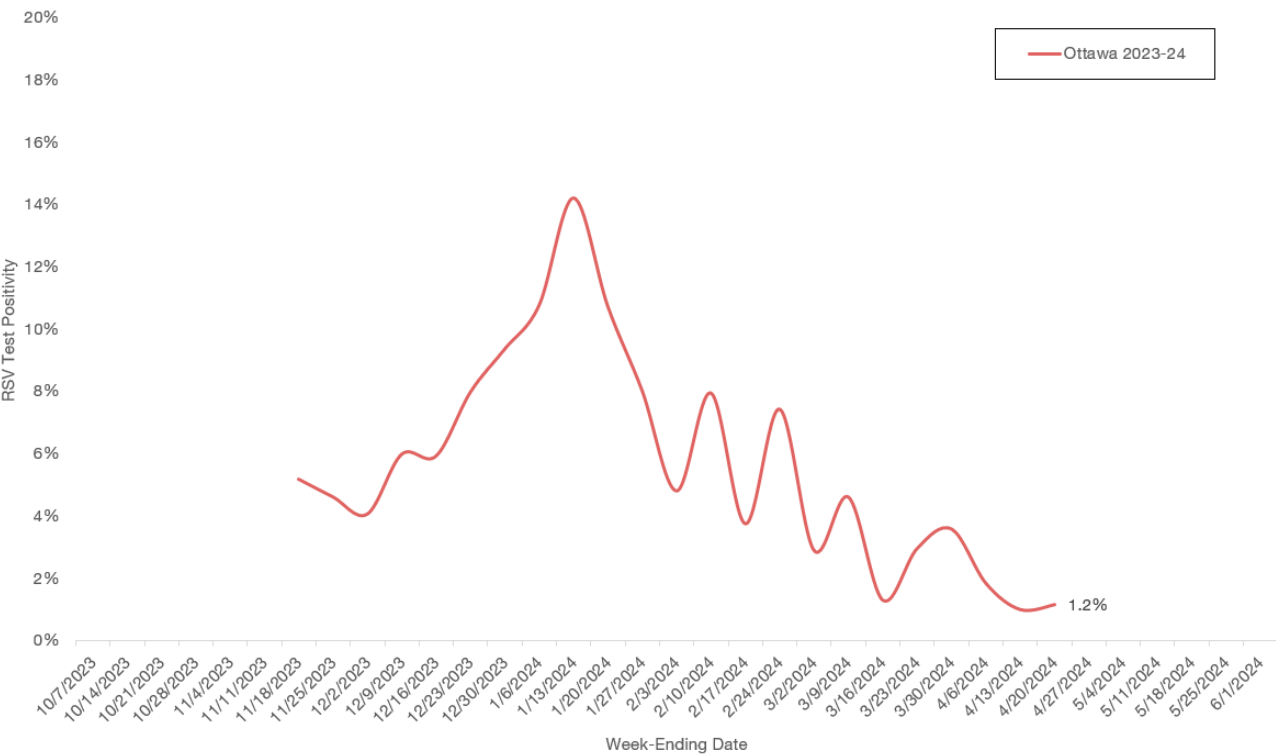
- During week 16, the proportion of COVID-19 student/staff cases reported in Ottawa County school/child care settings was 0.6%, higher than that reported the previous week (0.2%).
- The surveillance system supporting this data source is new as of Fall 2023. As a novel surveillance system, it will continue to be monitored for its utility in describing COVID-19 activity in schools and child care settings.

Respiratory Syncytial Virus (RSV) Surveillance

MMWR Week 16: April 14, 2024 – April 20, 2024

RSV Test Positivity in Ottawa County

Figure 6: Positivity Rate* of RSV Tests by Week, Ottawa County



*RSV positivity is the percent of RSV tests conducted by reporting laboratories that have a positive result. Data includes predominately PCR results. Ottawa data is weekly percentages; data is not smoothed with 3- or 5-week moving averages.

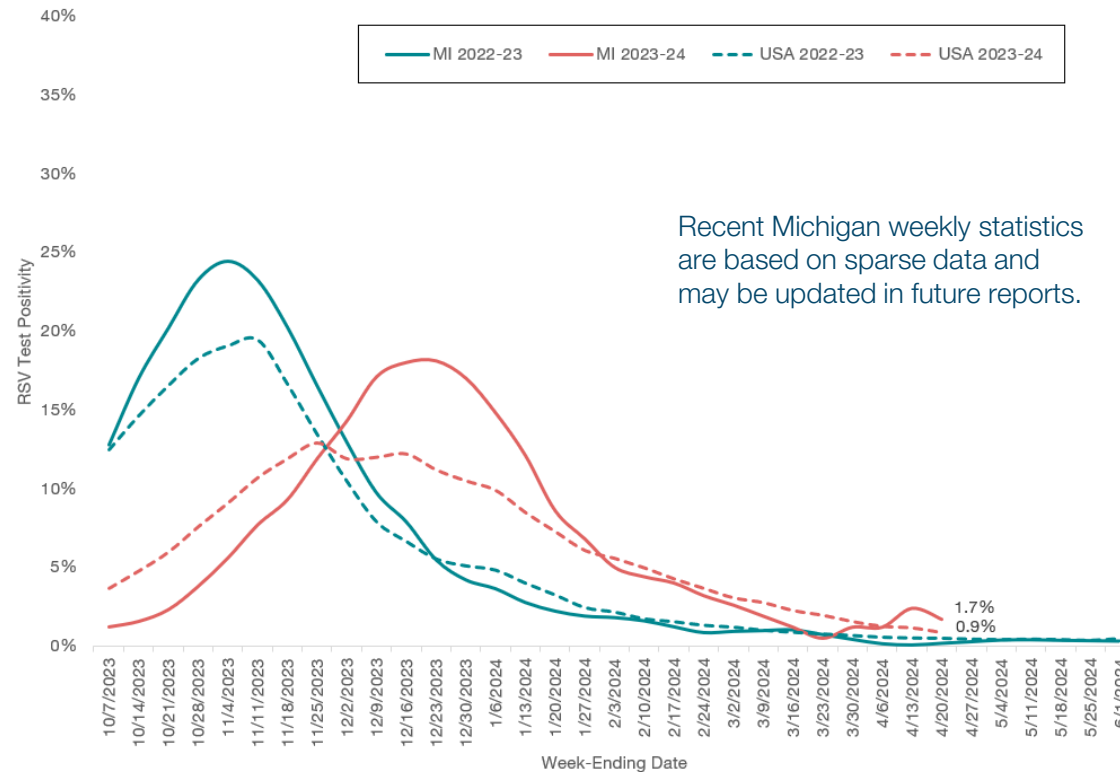
Table 5: RSV Positive Tests Reported in Ottawa County – Last 8 Weeks

MMWR Week	Week-Ending Date	Total RSV	Total Tested	Positivity
9	3/2/2024	9	308	2.9%
10	3/9/2024	12	259	4.6%
11	3/16/2024	3	226	1.3%
12	3/23/2024	6	201	3.0%
13	3/30/2024	7	194	3.6%
14	4/6/2024	4	214	1.9%
15	4/13/2024	2	195	1.0%
16	4/20/2024	2	169	1.2%

- During week 16, Ottawa County RSV positivity increased slightly to 1.2%.
- The surveillance system supporting this data source is new as of Fall 2023. As a novel surveillance system, it will continue to be monitored for its utility in describing RSV activity in Ottawa County.

RSV Test Positivity in the United States and Michigan

Figure 7: Positivity Rate* of RSV PCR Tests by Week, United States and Michigan



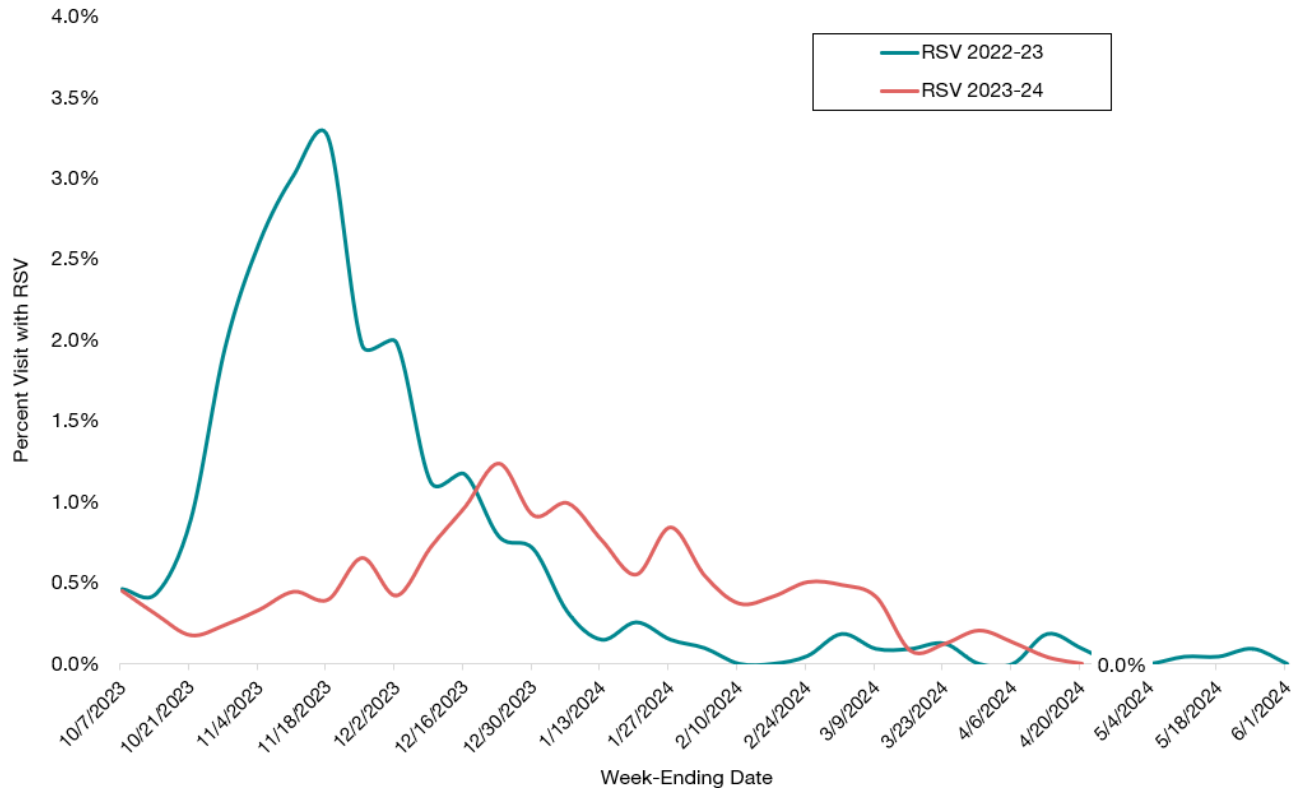
*RSV positivity is the percent of RSV PCR tests conducted by reporting laboratories that have a positive result. Michigan data displayed are 3-week moving averages. US data displayed are 5-week moving averages.

Note: Due to reporting delays, recent statistics may be updated as more data is obtained.

- During week 16, RSV positivity in the US decreased to 0.9%.
- Michigan RSV positivity decreased to 1.7% during week 16.

Syndromic Surveillance for RSV in Ottawa County

Figure 8: Percentage of Emergency Department (ED) and Urgent Care (UC) Visits in Ottawa County with Respiratory Syncytial Virus (RSV) Illness



Note: Data includes all ages.

Table 6: Emergency Department and Urgent Care Visits with RSV Illnesses in Ottawa County – Last 8 Weeks

MMWR Week	Week-Ending Date	RSV Visits	Total ED/UC Visits	Percent of ED/UC Visits
9	3/2/2024	13	2663	0.5%
10	3/9/2024	11	2663	0.4%
11	3/16/2024	2	2509	0.1%
12	3/23/2024	3	2424	0.1%
13	3/30/2024	5	2429	0.2%
14	4/6/2024	3	2297	0.1%
15	4/13/2024	1	2506	0.0%
16	4/20/2024	0	2374	0.0%

- During week 16, Ottawa County Emergency Department and Urgent Care visits with RSV illnesses remained the same as the previous week at 0%.

Additional Resources

Influenza (Flu):

- National influenza surveillance data are available at: <https://www.cdc.gov/flu/weekly/index.htm>
- Statewide influenza surveillance reports are available at: <https://www.michigan.gov/flu/surveillance/past-michigan-flu-focus-surveillance-reports>
- State and county level influenza vaccination coverage data are available at: <https://www.michigan.gov/flu/flu-dashboard>
- Disease burden of flu in the United States: <https://www.cdc.gov/flu/about/burden/index.html>
- Preventing Seasonal Flu: <https://www.cdc.gov/flu/prevent/index.html>
- Seasonal flu vaccine effectiveness studies: <https://www.cdc.gov/flu/vaccines-work/effectiveness-studies.htm>
- Flu vaccine finder: <https://www.vaccines.gov/find-vaccines/>
- Healthy People 2030 Flu Vaccination Objective: [Increase the proportion of people who get the flu vaccine every year — IID-09 - Healthy People 2030 | health.gov](#)

Coronavirus (COVID-19) Resources:

- CDC COVID Data Tracker: <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>
- Michigan COVID-19 Website: <https://www.michigan.gov/Coronavirus>
- Michigan Wastewater Dashboard: <https://www.michigan.gov/coronavirus/stats/wastewater-surveillance/dashboard/sentinel-wastewater-epidemiology-evaluation-project-sweep>

Respiratory Syncytial Virus (RSV) Resources:

- National RSV Information: <https://www.cdc.gov/rsv/index.html>
- Preventing RSV: <https://www.cdc.gov/rsv/about/prevention.html>
- National RSV surveillance data are available at: <https://www.cdc.gov/surveillance/nrevss/rsv/index.html>

Multiple Respiratory Illnesses Resources:

- Centers for Disease Control (CDC) [Health Alert Network \(HAN\) Health Advisory](#) issued December 14, 2023.

Data Sources

Influenza (Flu) and Influenza-Like Illness (ILI) Data Sources:

- USA Positivity Rate from Weekly U.S. Influenza Surveillance Report: <https://www.cdc.gov/flu/weekly/index.htm#ClinicalLaboratories>
- Ottawa County Positivity Rate is calculated from data reported by providers and laboratories in the community through weekly reporting.
- ILI ED and UC visit data is pulled from Michigan Syndromic Surveillance System (MSSS).
- ILI data in schools/childcare facilities is provided by facilities in the community through weekly reporting.
- ILI healthcare visit data is provided by providers and laboratories in the community through weekly reporting.
- Vaccination data from Michigan Flu Dashboard: <https://www.michigan.gov/flu/flu-dashboard>

Coronavirus (COVID-19) Data Sources:

- Inpatient and ICU Hospitalization data from EMResource.
- COVID-19 cases in schools/childcare facilities are reported by the facility through an online weekly reporting system.

Respiratory Syncytial Virus (RSV) Data Sources:

- National influenza surveillance data are available at: <https://www.cdc.gov/flu/weekly/index.htm>
- RSV ED and UC visit data is pulled from Michigan Syndromic Surveillance System (MSSS).
- USA and MI RSV positivity are available at: <https://www.cdc.gov/surveillance/nrevss/rsv/index.html>