

# Ottawa County Respiratory Illness Report

Submitted for Publication March 8, 2024

*Dates of data may vary.*



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# Executive Summary

## *Influenza (Flu)*

*Influenza activity in Ottawa County remains elevated.*

*Influenza activity remains elevated in [Michigan](#) and across most of the [United States](#).*

## *Coronavirus (COVID-19)*

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

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

## *Respiratory Syncytial Virus (RSV)*

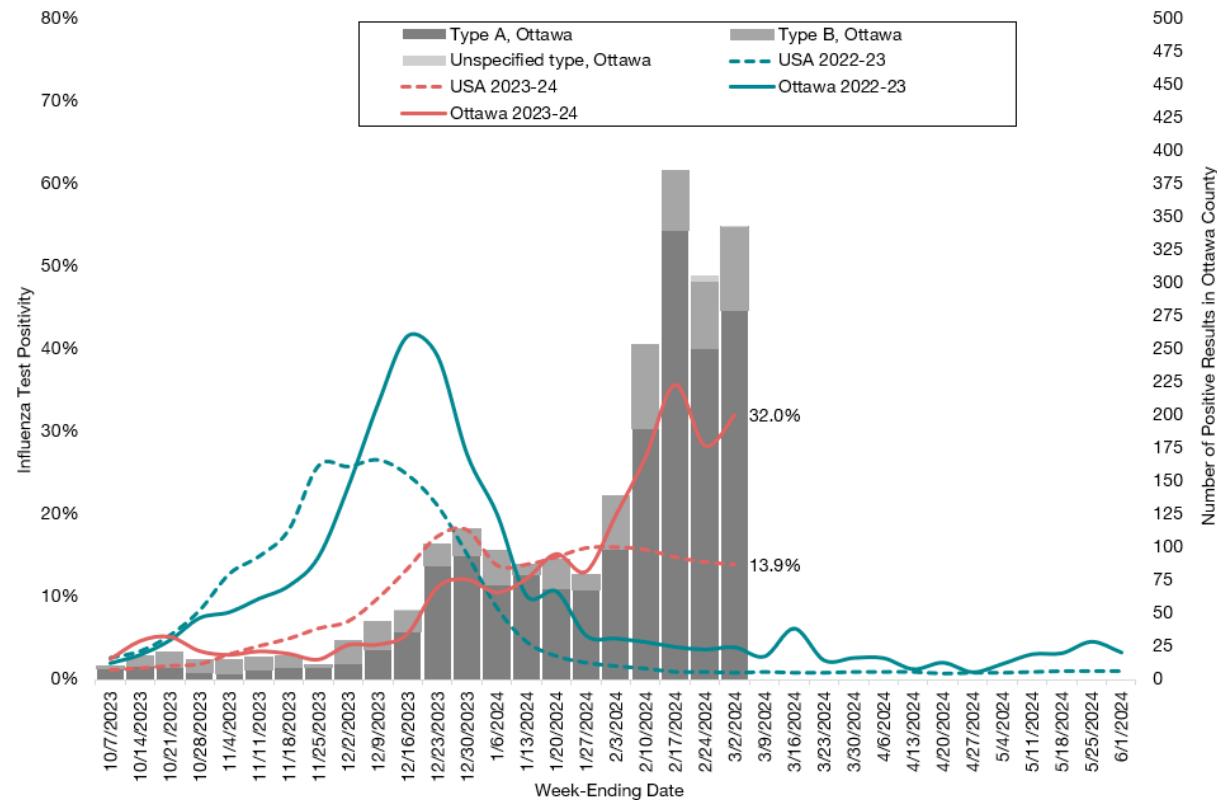
*Ottawa County surveillance data shows a decrease in local RSV activity. RSV activity in [Michigan](#) and across the [United States](#) continues to decline.*

# Influenza Surveillance

*MMWR\* Week 9: February 25, 2024 – March 2, 2024*

# Influenza Test Positivity in the USA and Ottawa County

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



\*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.

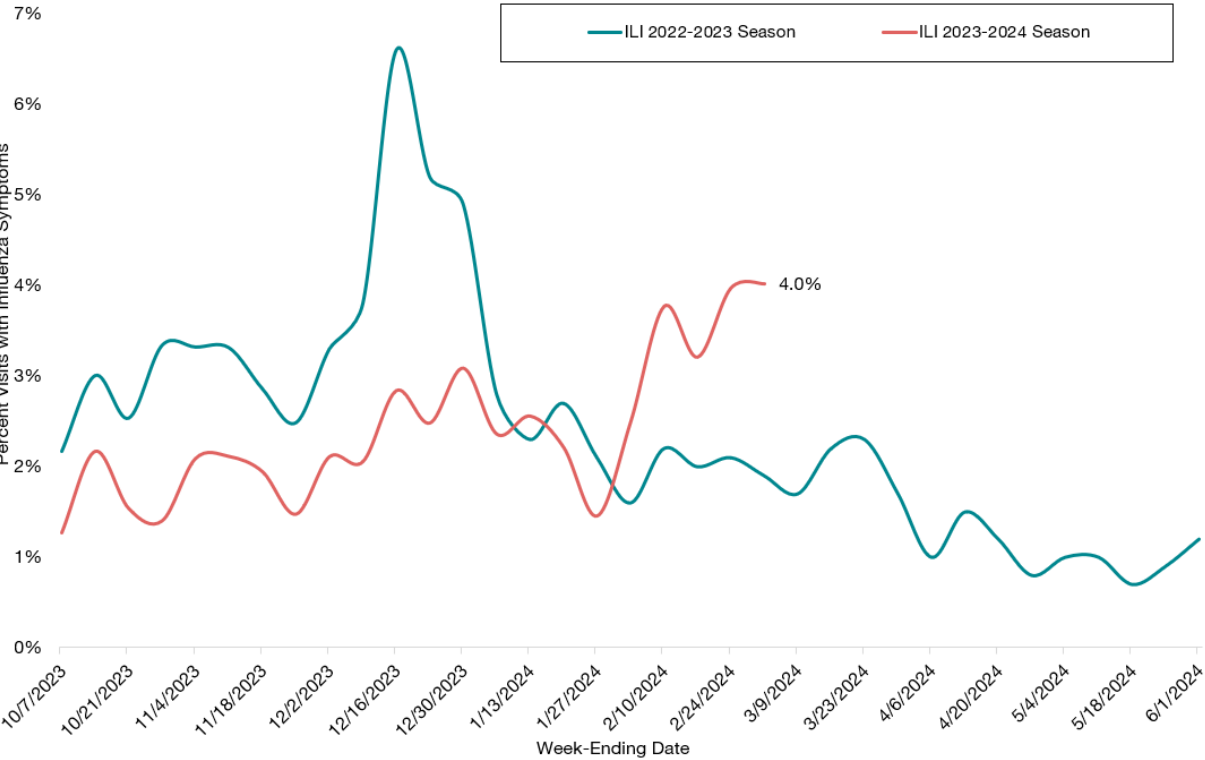
Table 1: Influenza Positive Tests Reported in Ottawa County – Last 8 Weeks

Week-Ending Date	Type A	Type B	Unspecified	Total Influenza	Total Tested	Positivity
1/13/2024	79	8	0	87	713	12.2%
1/20/2024	69	22	0	91	598	15.2%
1/27/2024	68	11	0	79	604	13.1%
2/3/2024	99	40	0	139	700	19.9%
2/10/2024	190	63	0	253	941	26.9%
2/17/2024	340	45	0	385	1079	35.7%
2/24/2024	250	51	4	305	1077	28.3%
3/2/2024	279	63	1	343	1072	32.0%

- During week 9, influenza test positivity in Ottawa County increased to 32.0% from 28.3% the previous week. The number of influenza tests decreased by less than 1% from the previous week, from 1077 to 1072.
- The latest influenza positivity estimate in Ottawa County is much higher than that reported at a similar time last influenza season (3.9%).
- Seasonal influenza activity remains elevated with increases noted in some parts of the country. National influenza test positivity remained elevated at 13.9%.

# 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.

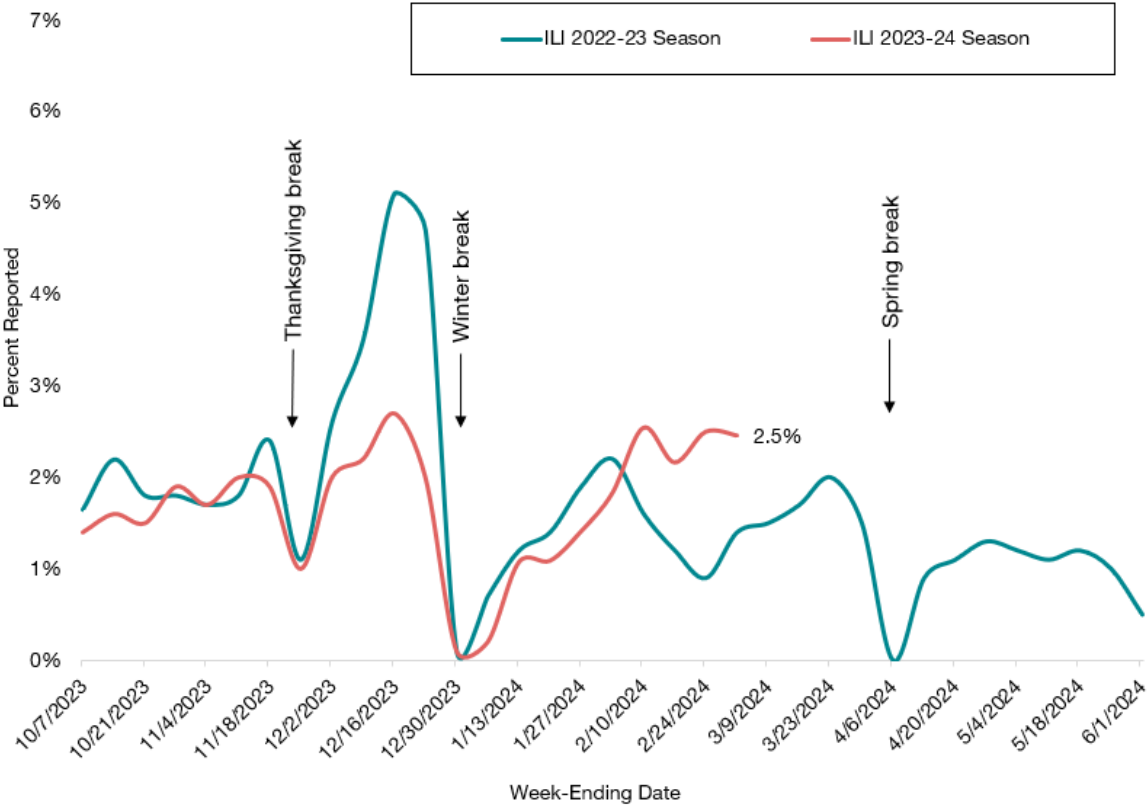
Table 2: Emergency Department and Urgent Care Visits with Influenza-like Illnesses in Ottawa County – Last 8 Weeks

MMWR Week	Week-Ending Date	ILI Visits	Total ED/UC Visits	Percent of ED/UC Visits
2	1/13/2024	57	2226	2.6%
3	1/20/2024	44	1987	2.2%
4	1/27/2024	31	2128	1.5%
5	2/3/2024	55	2205	2.5%
6	2/10/2024	91	2412	3.8%
7	2/17/2024	77	2397	3.2%
8	2/24/2024	102	2565	4.0%
9	3/2/2024	107	2660	4.0%

- During week 9, Ottawa County Emergency Department and Urgent Care visits with ILI reported remained the same as the previous week at 4.0%.

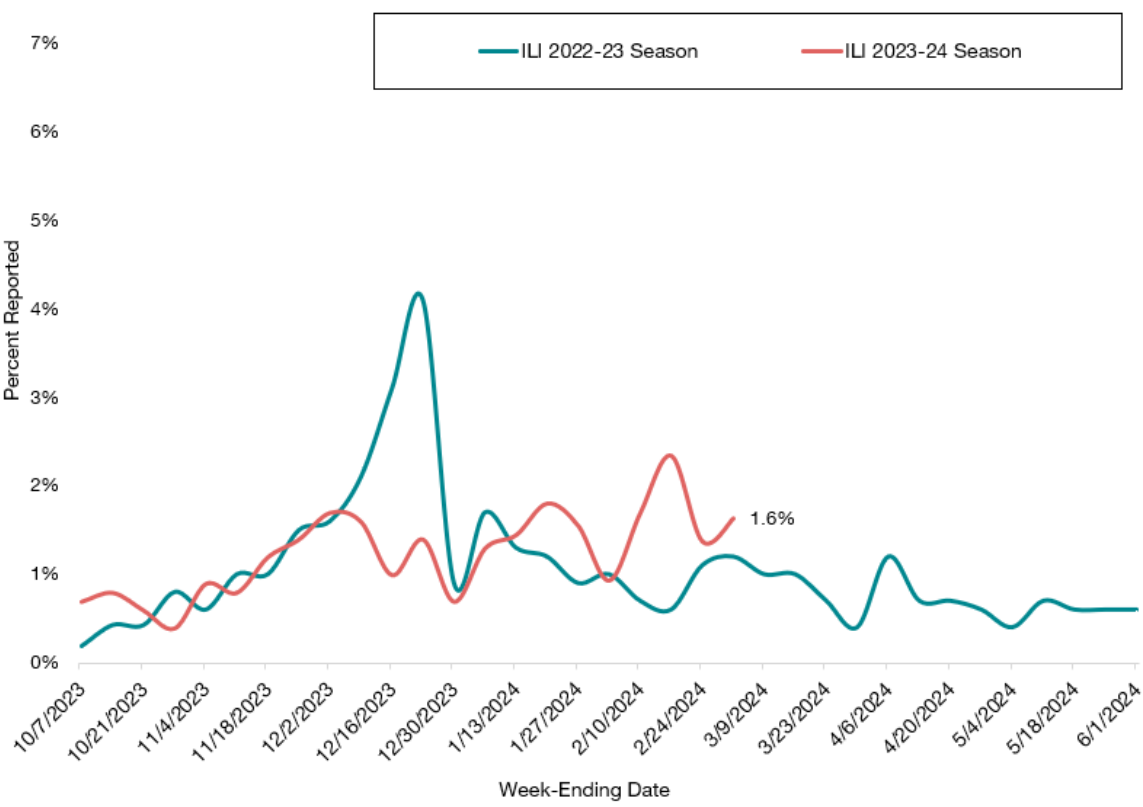
# Influenza-Like Illness (ILI) Surveillance from Reporting Schools, Child care and Healthcare Settings

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



- During week 9, the proportion of ILI reported in school/child care settings was 2.5% the same as that reported the previous week. The proportion of ILI reported in week 9 is higher than that reported at the same time last season (1.4%).

Figure 4: Percent Healthcare ILI Visits by Week



- Reported ILI in healthcare offices was 1.6% during week 9.
- There have been two 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 9.

# 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	0	0	4
United States	103	168	183

**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 February 24 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%	30.0%
Michigan	30.3%	31.6%	34.3%	31.8%	29.2%	25.1%
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-January 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 and a gradual increase in detections has been observed through January 2024.

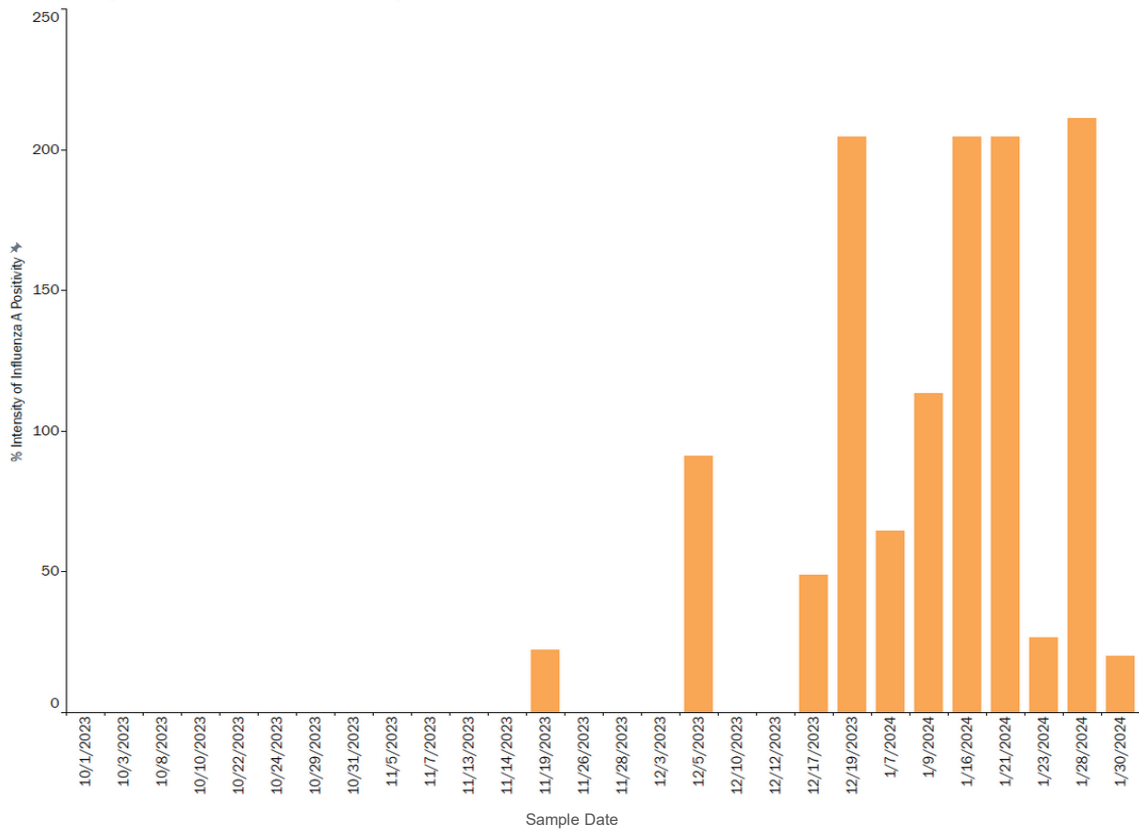
**Notes:** Wastewater testing has been used to detect other pathogens within wastewater including COVID-19. The use of testing wastewater for Influenza is currently being piloted in Ottawa County.

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

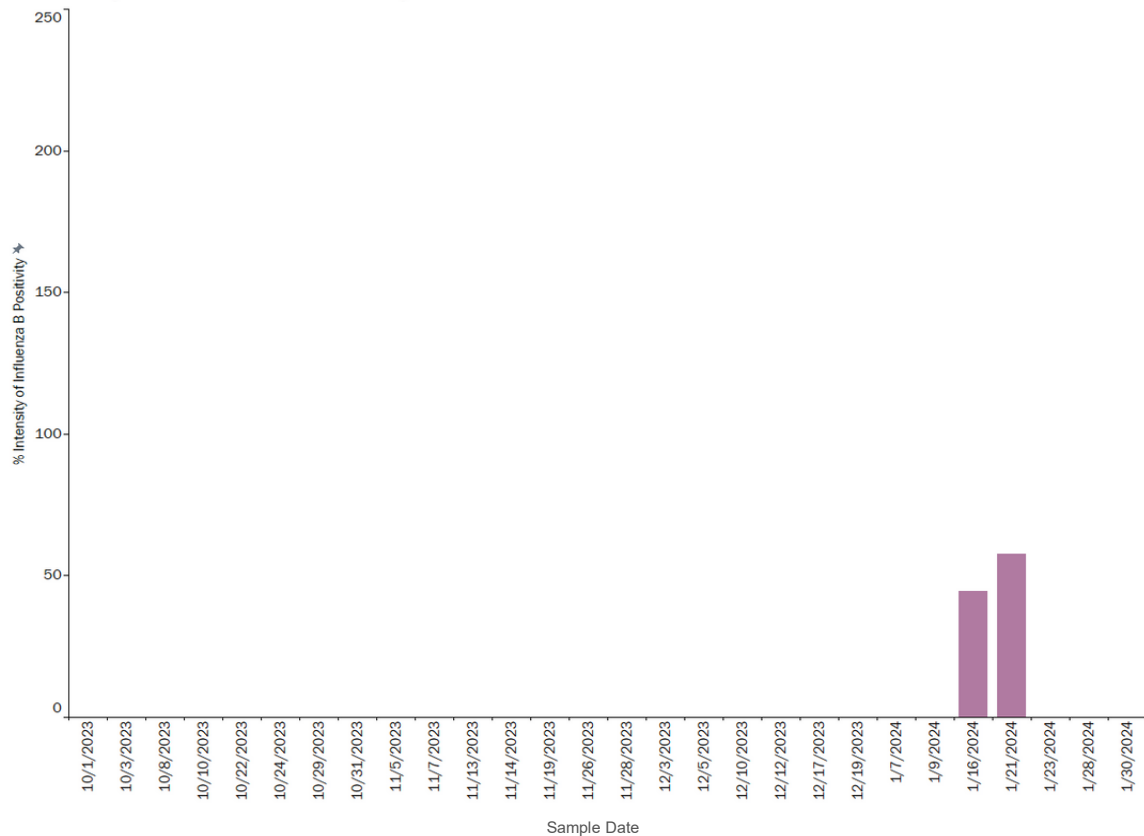


# Allendale Wastewater Influenza Surveillance

Ottawa County Influenza A Detection and Intensity



Ottawa County 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.

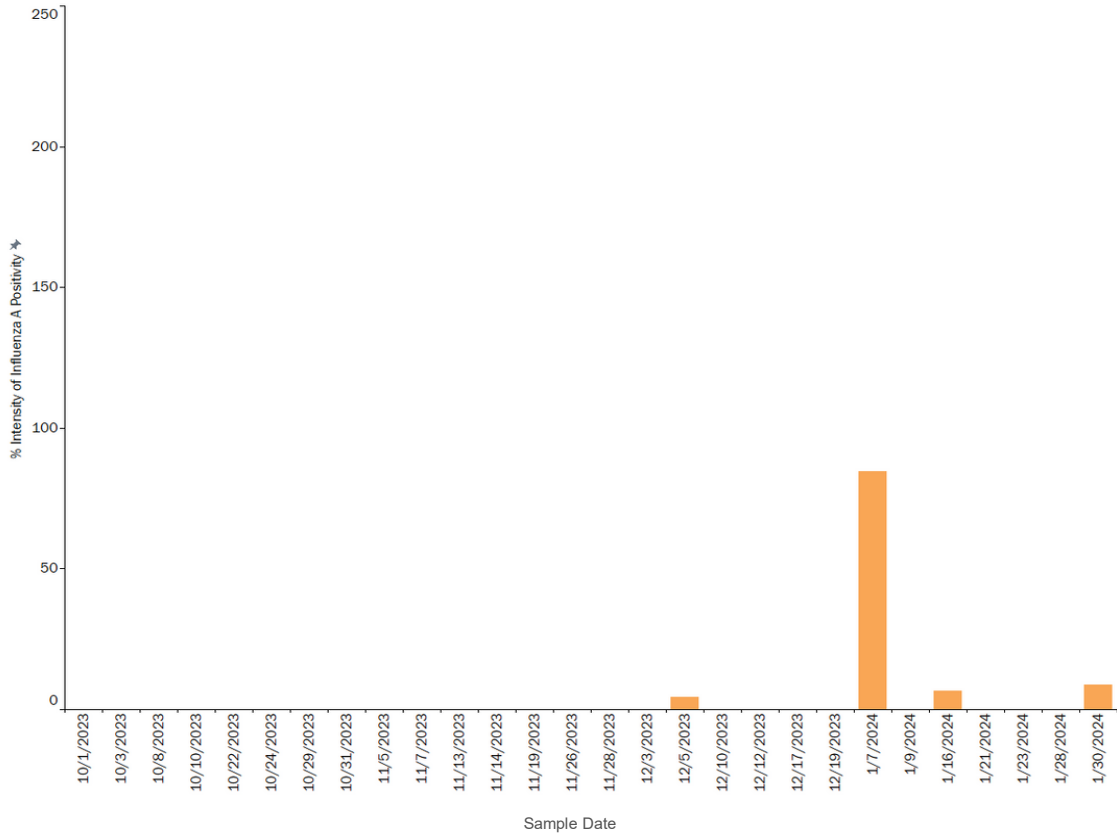
**Data Interpretation:** The graphs above show the percent positive intensity above the detection limit (magnitude of positive detection) for influenza. Influenza A was detected most often in Allendale wastewater samples and had the highest concentration intensity. Influenza B only occurred in addition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

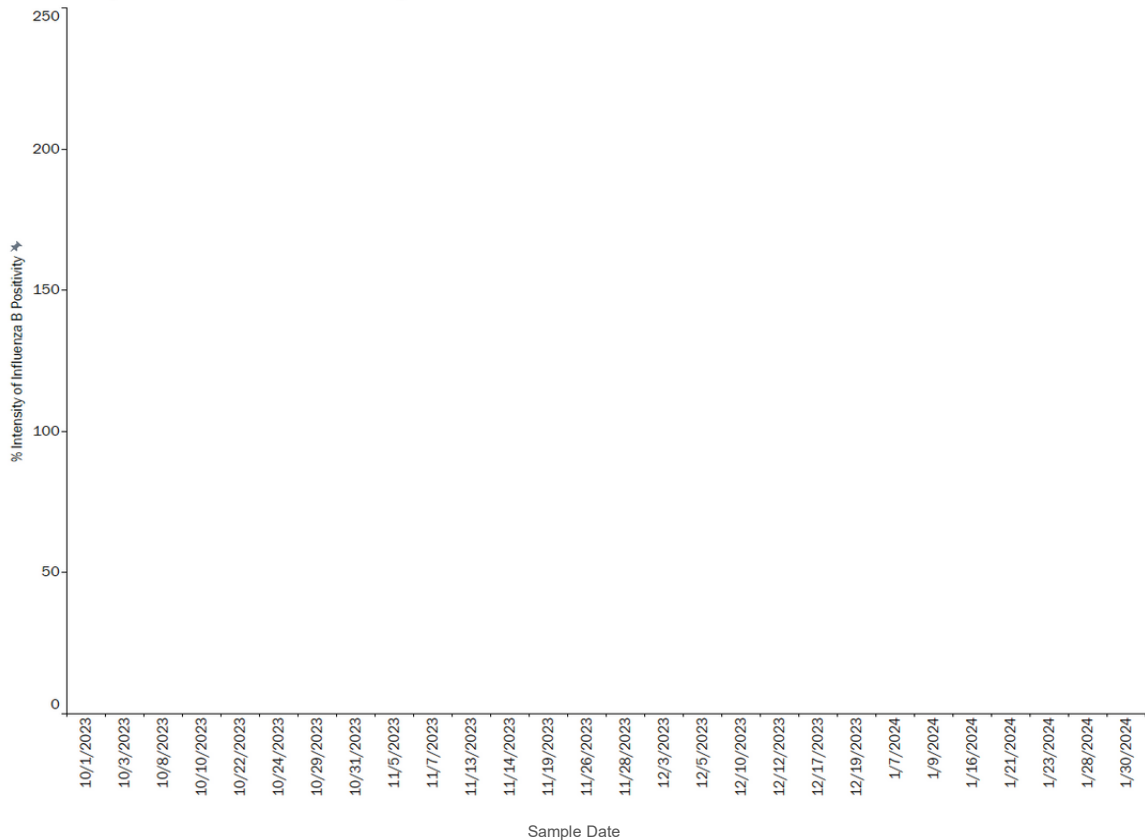
**Source:** Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. ([otterr@gvsu.edu](mailto:otterr@gvsu.edu))

# Grand Haven-Spring Lake Wastewater Influenza Surveillance

Ottawa County Influenza A Detection and Intensity



Ottawa County 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 only was not detected 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.

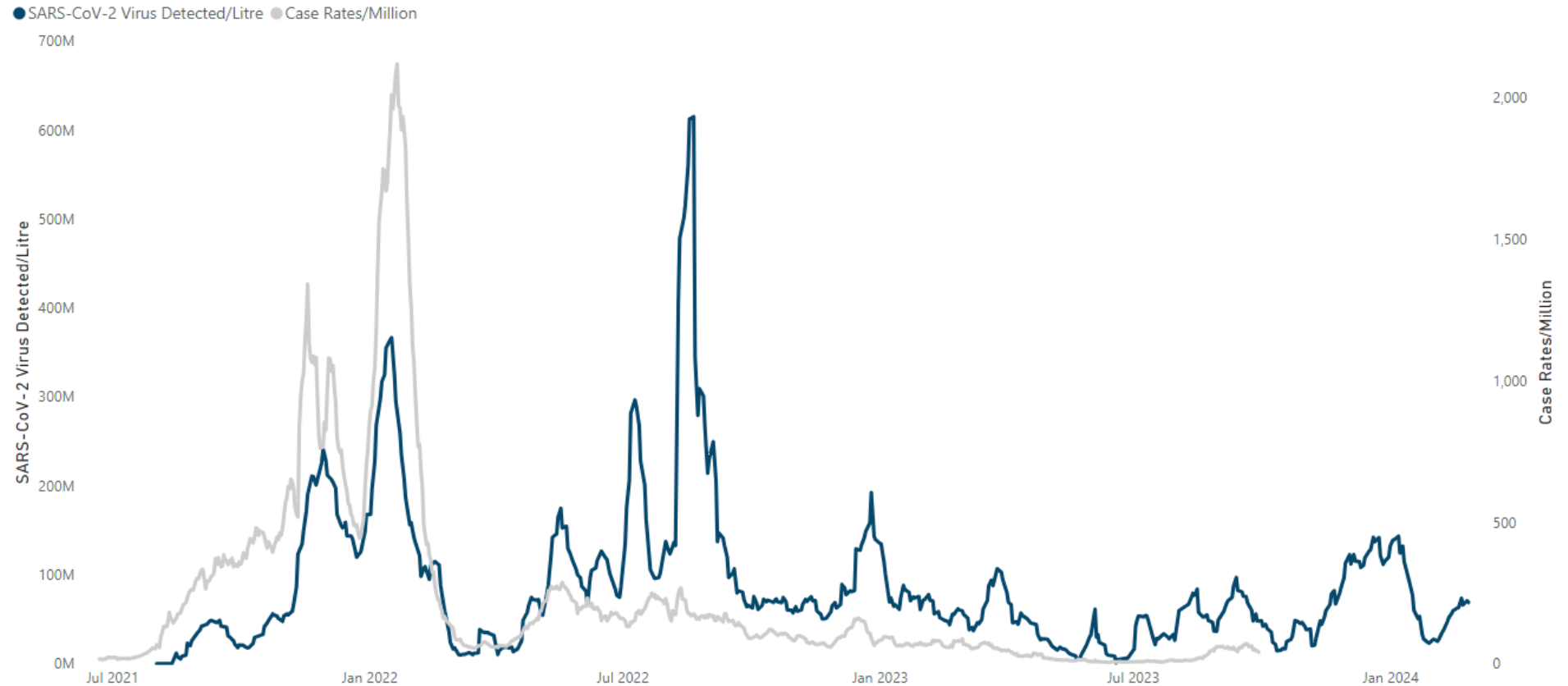
**Source:** Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. ([otterr@gvsu.edu](mailto:otterr@gvsu.edu))

# 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.

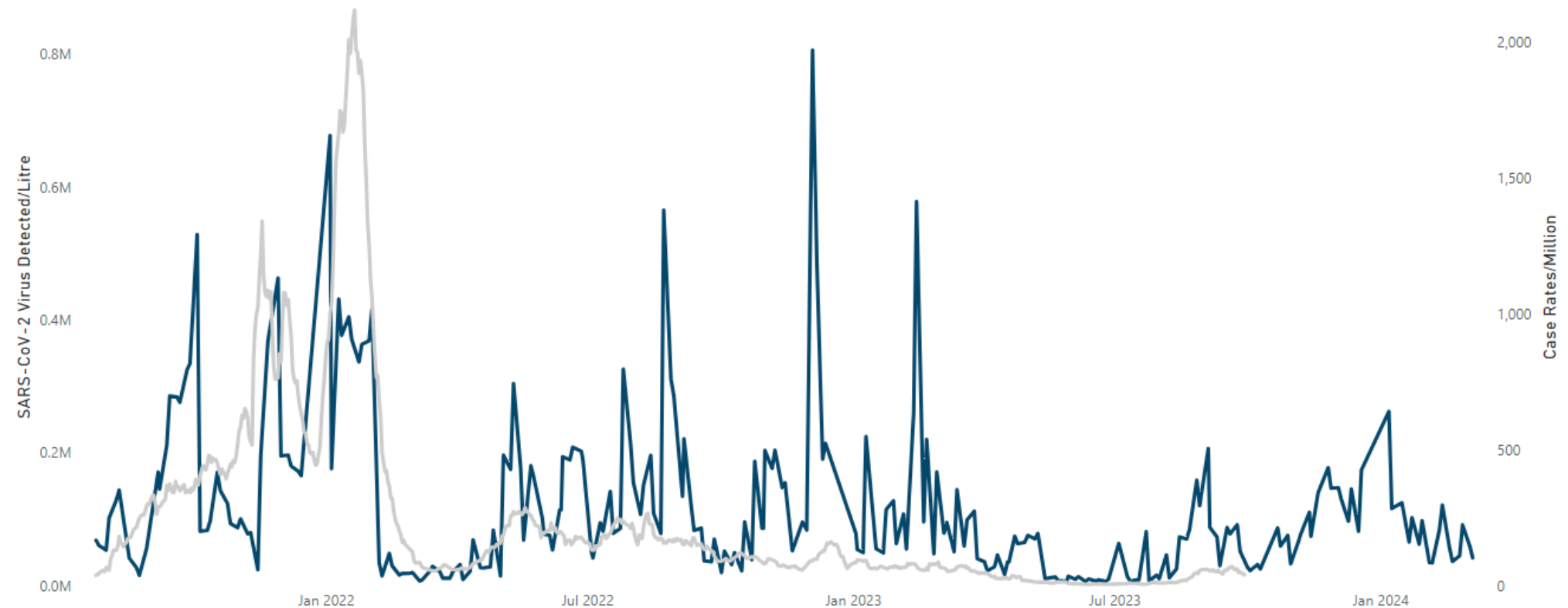
**Source:** Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. ([best@hope.edu](mailto:best@hope.edu))

**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)

# 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.

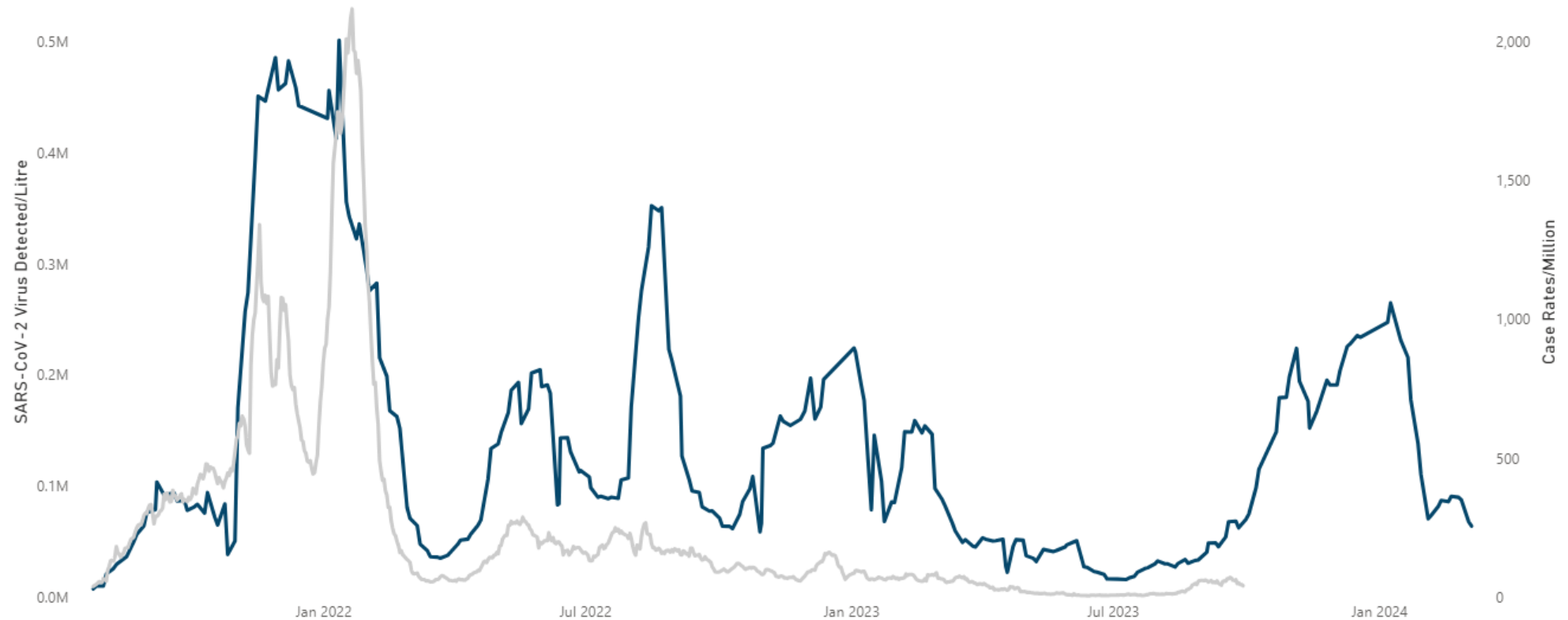
**Source:** Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Ryan Otter, Ph.D. ([otterr@gvsu.edu](mailto:otterr@gvsu.edu))

**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)

# 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



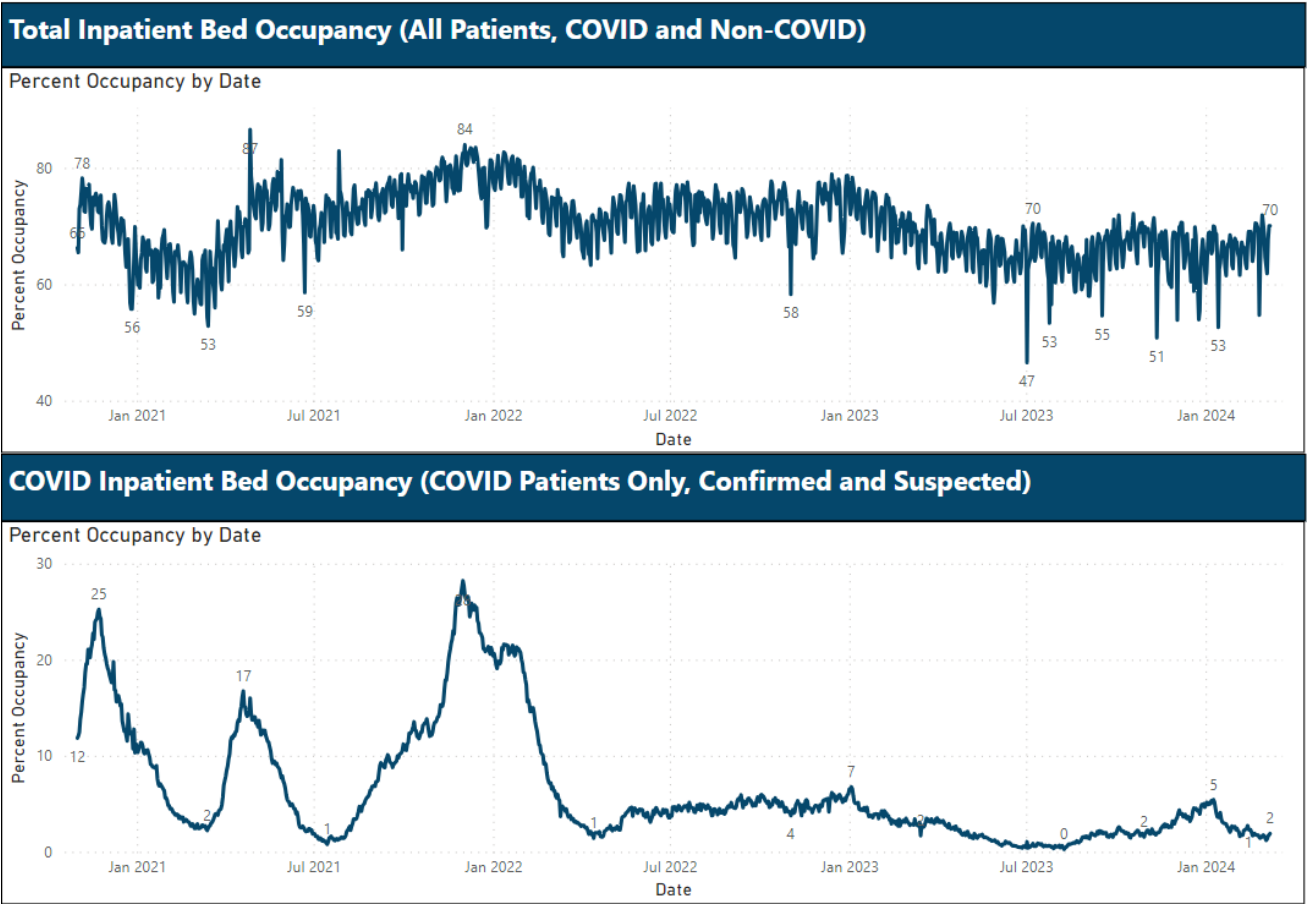
**Data Interpretation:** The **blue line** on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from the treatment plant in Grand Haven / Spring Lake. The **gray line** on the graph represents the 7-day average COVID-19 case rates/million for all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

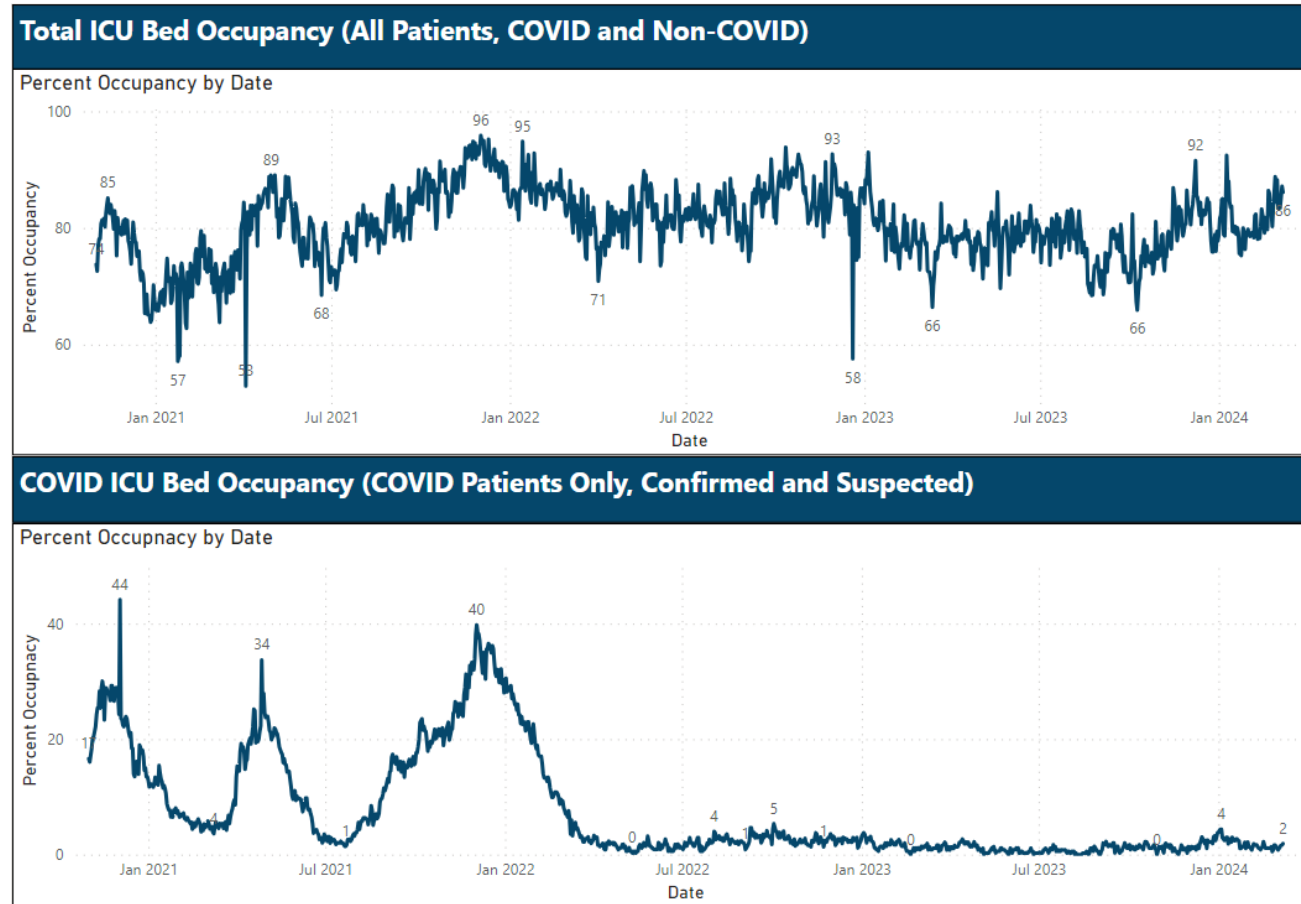
**Additional Information:** [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

# Ottawa County Inpatient Bed Occupancy



- Total hospital bed occupancy is 70%.
- Currently, 2% of all inpatient beds are occupied by COVID-19 patients.

# Ottawa County Intensive Care Unit (ICU) Bed Occupancy



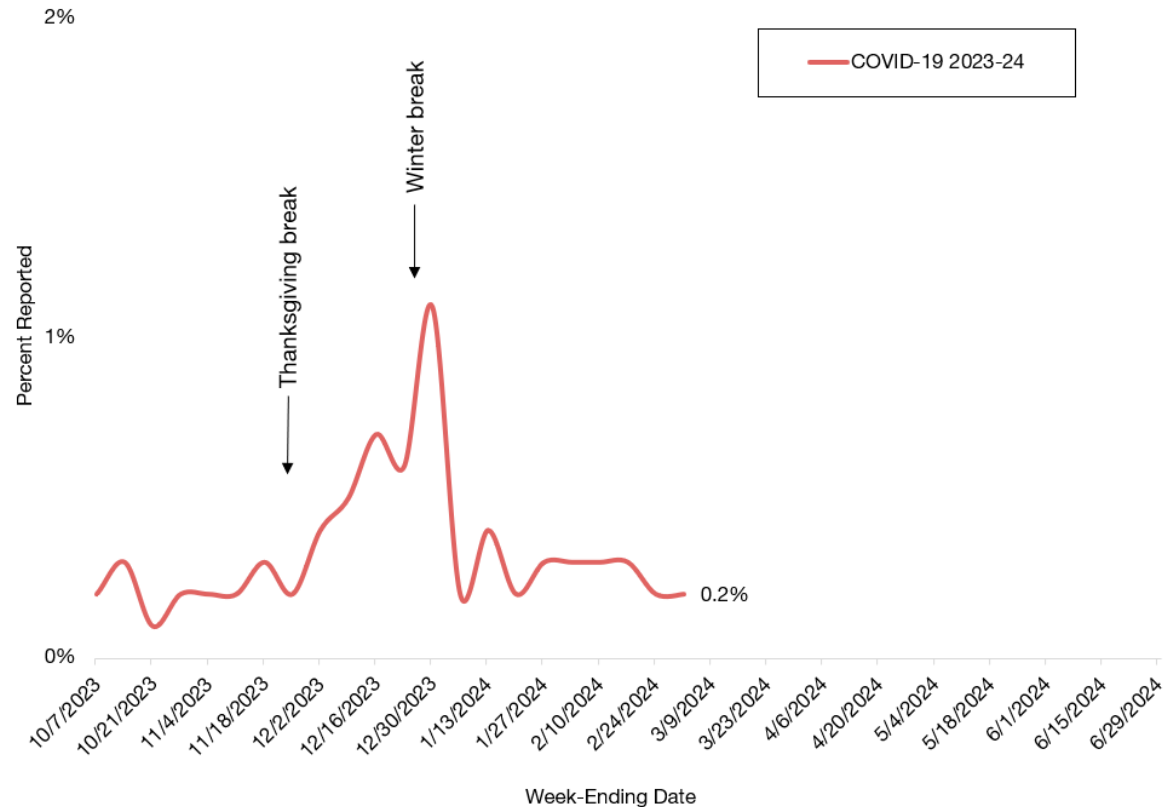
ICU = Intensive Care Unit

- Total ICU bed occupancy varies considerably by day. Currently, ICU bed occupancy is 86%.
- As of March 7, 2024, 2% 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 22 schools/child care facilities reported cases weekly.

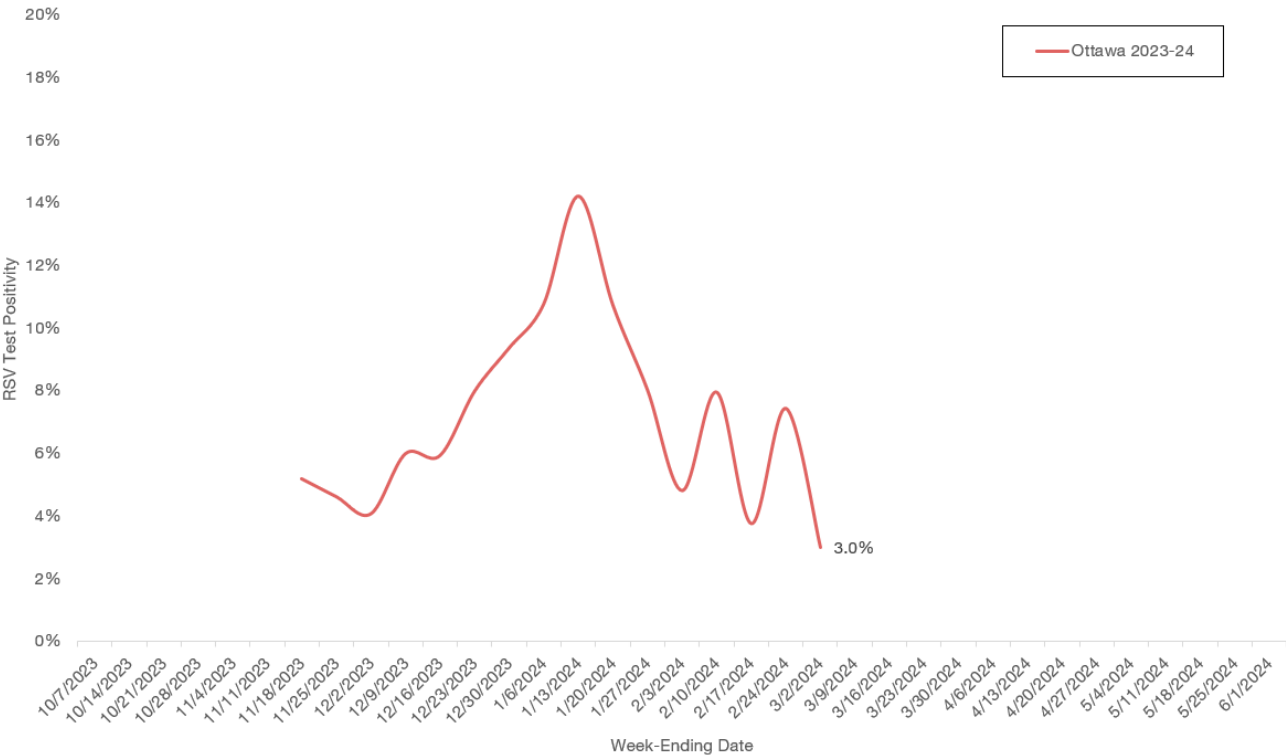
- During week 9, the proportion of COVID-19 student/staff cases reported in Ottawa County school/child care settings was 0.2%, the same as that reported the previous week.
- The surveillance system supporting this data source is new as of Fall 2023. As a novel surveillance system, it will continue to be monitored for its utility in describing COVID-19 activity in schools and child care settings.

# Respiratory Syncytial Virus (RSV) Surveillance

*MMWR Week 9: February 25, 2024 – March 2, 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.

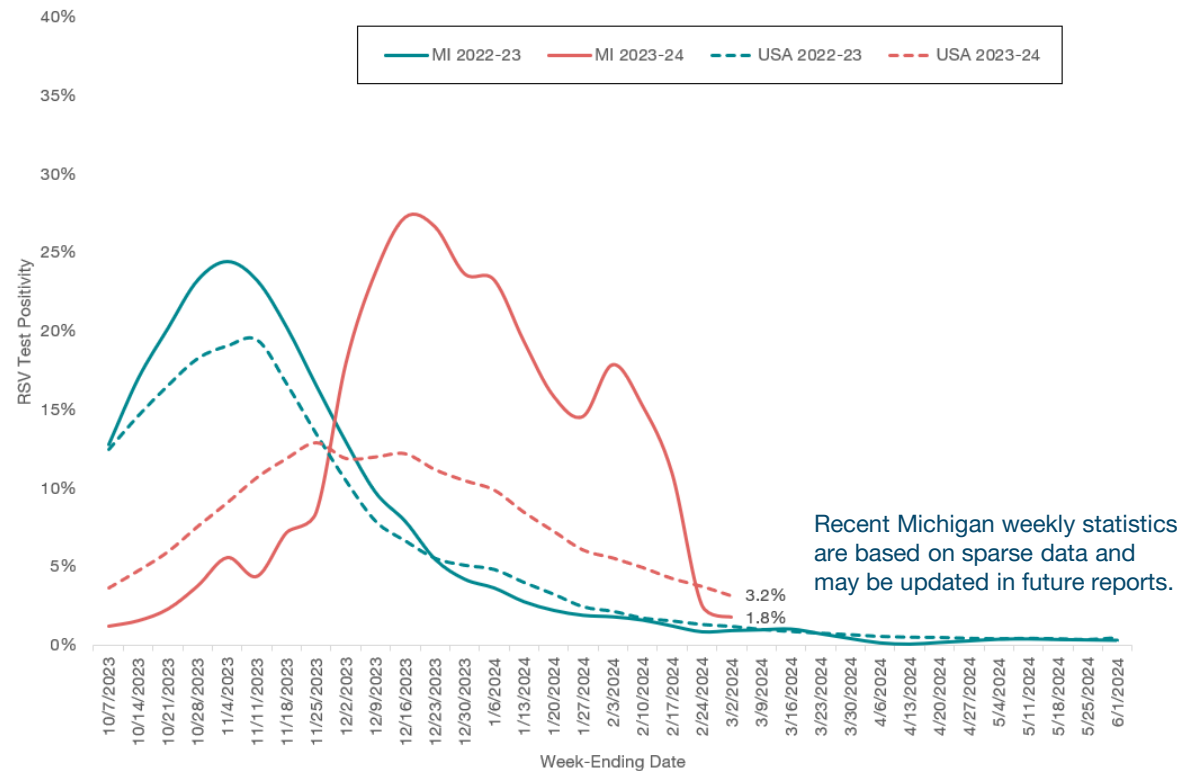
Table 5: RSV Positive Tests Reported in Ottawa County – Last 8 Weeks

MMWR Week	Week-Ending Date	Total RSV	Total Tested	Positivity
2	1/13/2024	34	239	14.2%
3	1/20/2024	23	214	10.7%
4	1/27/2024	16	199	8.0%
5	2/3/2024	10	207	4.8%
6	2/10/2024	22	276	8.0%
7	2/17/2024	11	291	3.8%
8	2/24/2024	24	322	7.5%
9	3/2/2024	10	331	3.0%

- During week 9, Ottawa County RSV positivity decreased to 3.0%.
- 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

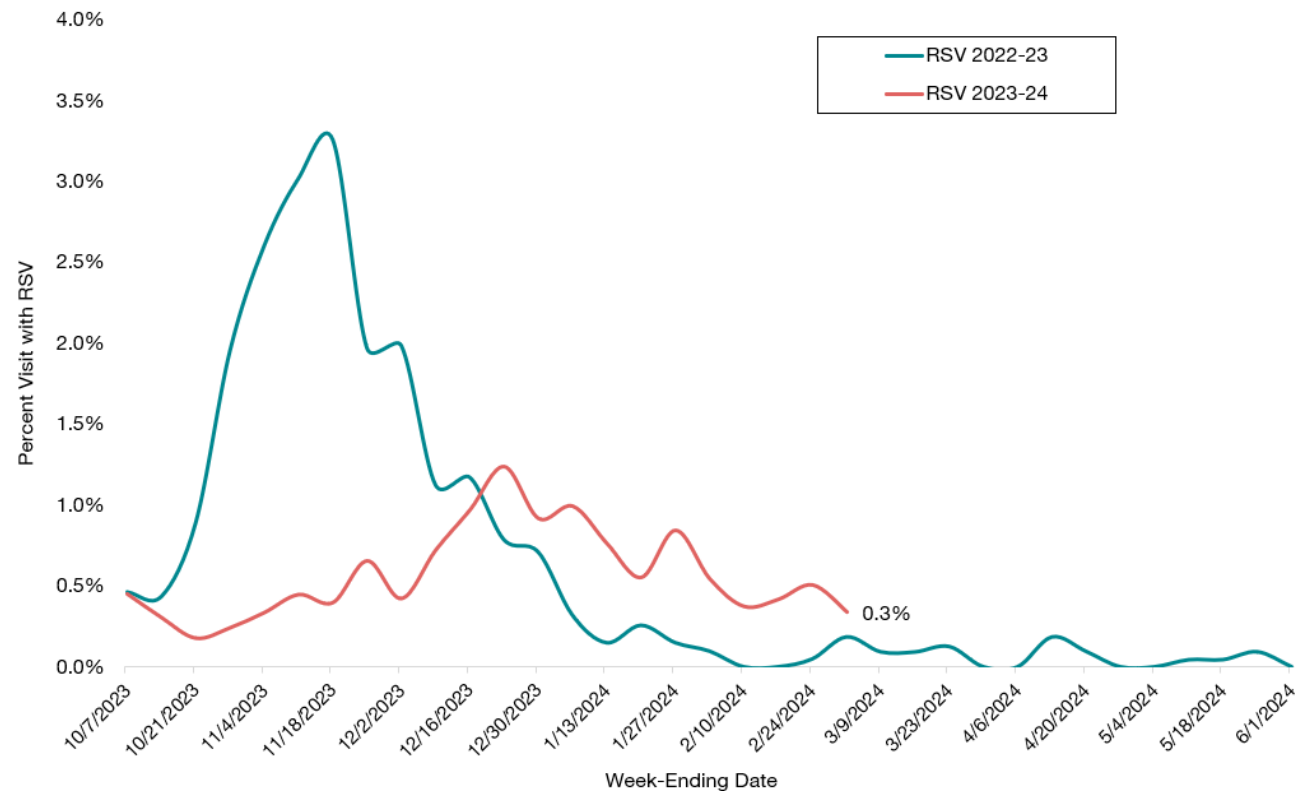


\*RSV positivity is the percent of RSV PCR tests conducted by reporting laboratories that have a positive result. Michigan data displayed are 3-week moving averages. US data displayed are 5-week moving averages.  
**Note:** Due to reporting delays, recent statistics may be updated as more data is obtained.

- During week 9, RSV positivity in the US decreased to 3.2%.
- Michigan RSV positivity decreased to 1.8% during week 9.

# 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
2	1/13/2024	17	2226	0.8%
3	1/20/2024	11	1987	0.6%
4	1/27/2024	18	2128	0.8%
5	2/3/2024	12	2205	0.5%
6	2/10/2024	9	2412	0.4%
7	2/17/2024	10	2397	0.4%
8	2/24/2024	13	2565	0.5%
9	3/2/2024	9	2660	0.3%

- During week 9, Ottawa County Emergency Department and Urgent Care visits with RSV illnesses decreased slightly to 0.3% from 0.5% the previous week.

# 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>