

# Ottawa County COVID-19 Epidemiology

May 26, 2023

*Data as of May 20, 2023, unless otherwise indicated.*

On May 11, 2023, the federal Public Health Emergency Declaration for COVID-19 expired. This change comes with a shift in reporting frequency and source data for some metrics reported by public health agencies, including data reported by Ottawa County Department of Public Health (OCDPH). **This surveillance report will be discontinued after May 26, 2023**, but historical reports will remain available online until further notice. COVID-19 surveillance will continue and updates on case counts will be included in monthly and annual OCDPH [communicable disease reports](#) alongside other reportable conditions. If future COVID-19 activity substantially threatens the community or challenges healthcare capacity, OCDPH will assess reinitiating this report.

# Executive Summary

- **Ottawa County transmission signals showing decreases**
  - Weekly case counts **decreased** 12% (-17% two weeks ago), from 25 two weeks ago to 22 last week.
  - Cases among children **decreased** 100% (+50% two weeks ago), from 3 two weeks ago to 0 last week.
  - COVID-19 wastewater signals in Ottawa County **are low**. In Holland/Zeeland the latest signals **are low and stable**; Grand Haven/Spring Lake and Allendale signals are **low**.
  - Based on national data, a variety of Omicron subvariants are likely circulating.
- **Ottawa-area and regional hospitals have adequate capacity**
  - In Ottawa County, 2% of all available beds and 0% of all ICU beds are occupied by COVID-19 patients.\*
- **Pediatric hospitalization rates in the US and in Michigan remain relatively low**
  - Regional COVID-19 pediatric hospitalization census remains low compared to the late 2021 and early 2022 Omicron surge.
- **Of Ottawa County residents aged 6 months and older, 61.8% have received their primary vaccine series.**

\*Some hospitals in Ottawa County immediately transfer acutely ill adults or children to regional hospitals that offer a higher level of care. This practice may reduce the proportion of beds occupied by COVID-19 patients in Ottawa and increase bed occupancy in urban centers with large hospitals, such as Kent County.

# Limitations

- **Case Counts, Case Rates, and Test Positivity**

With the widescale availability of at-home antigen tests for COVID-19, which are not reported or included in public health surveillance data, the case counts and case rates in this report underestimate the true burden of this disease. However, it is expected that increasing and decreasing trends reflect the relative amount of transmission in the community.

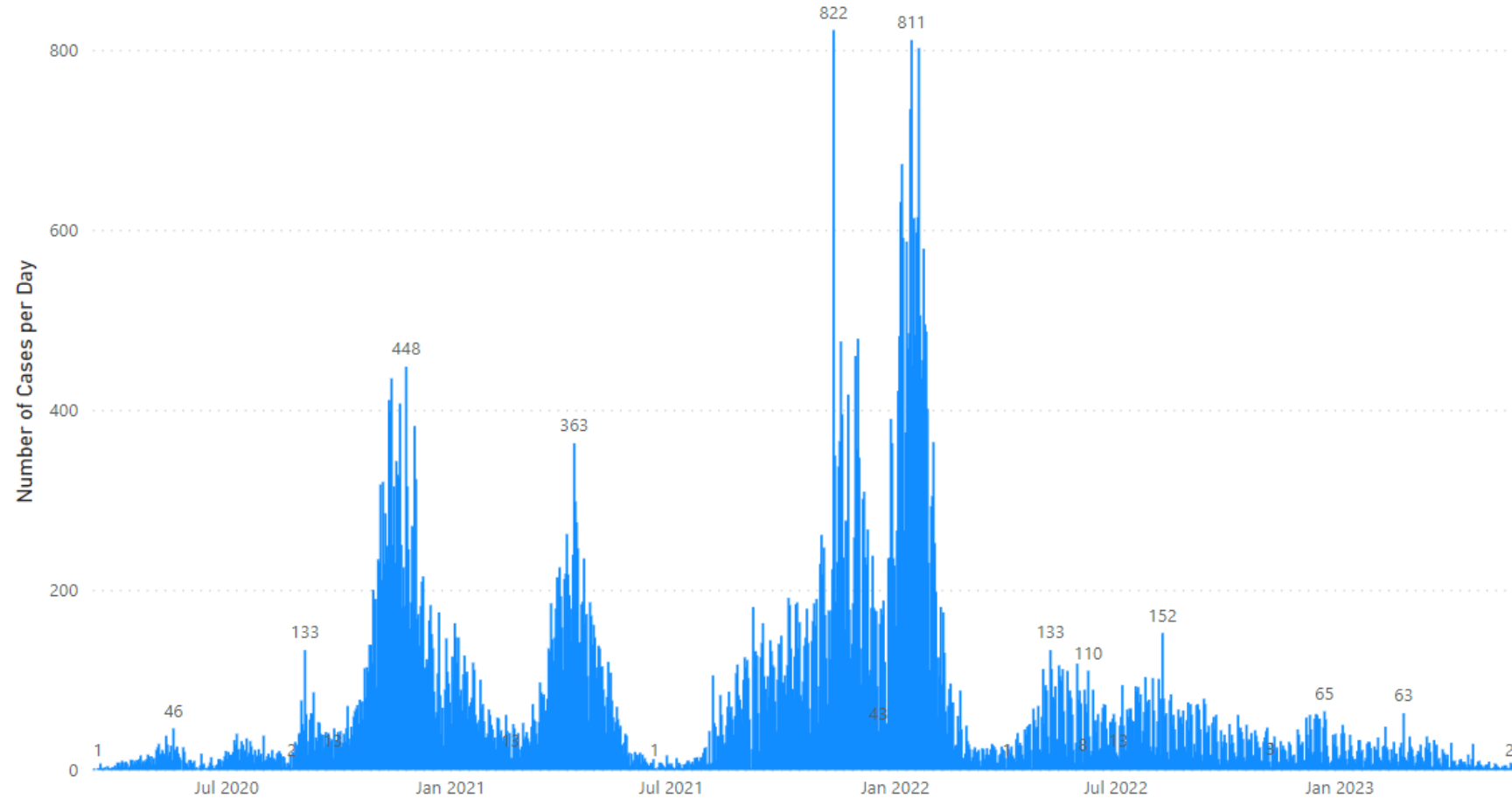
- **Wastewater Surveillance**

Wastewater samples are collected from specific geographic sites in the county and may not reflect COVID-19 burden across the entire county population. However, increases and decreases in detected trends generally correlate with case rates, therefore wastewater readings are displayed alongside countywide incidence rates in this report.

# Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – May 24, 2023

Epidemiological Curve



Total Number of Cases

88,803

Currently, the 7-day average is approximately **4 cases per day**, the same as the approximately **4 cases per day** seen two weeks ago.

**Notes:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Additionally, On November 12, 2021, MDHHS updated their database resulting in a backlog of cases being reported in one day.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System

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# Ottawa County Trends – Comparison of Case Rates by Year



**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower case rates.

**Source:** Internal Data

Data through May 24, 2023

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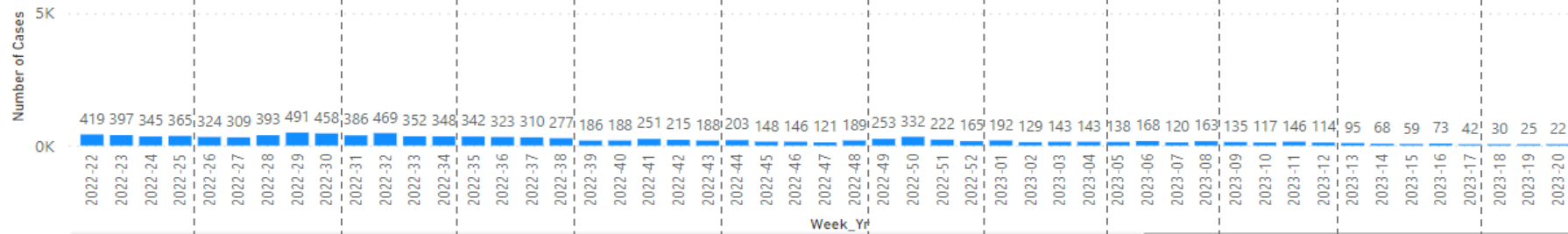
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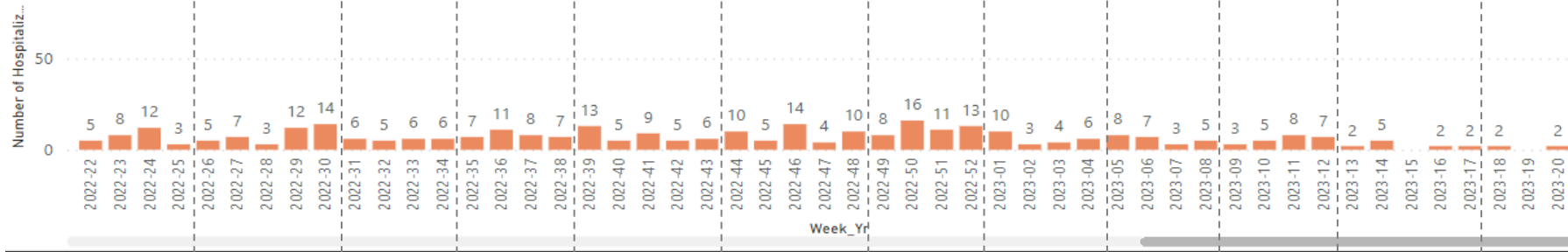
# Ottawa County – Cases, Hospitalizations, & Deaths by Week, All Ages

New Cases By Week of Referral



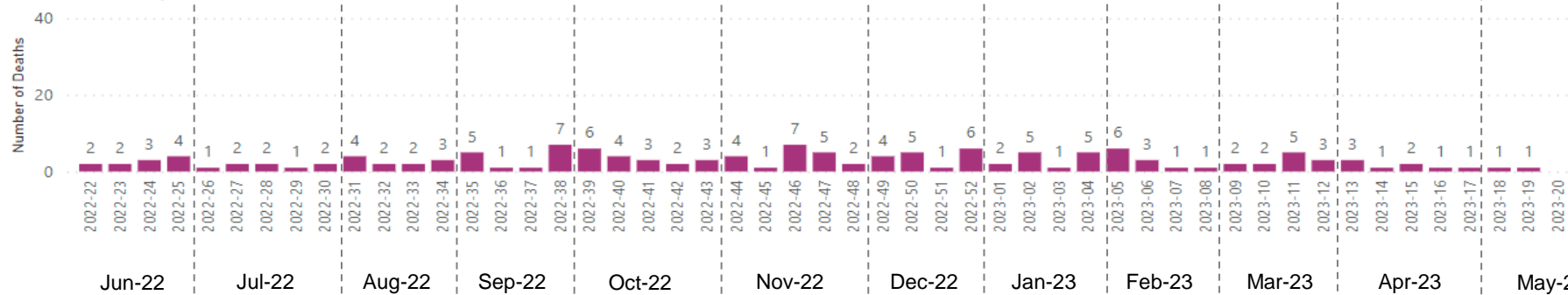
The weekly number of cases decreased 12% from week 19 to week 20.

New Hospitalizations by Week of Admission



Hospitalization data include all Ottawa County cases that have ever been hospitalized for COVID-19 or COVID-19 related complications. These data do not include Urgent Care visits, Emergency Department visits, or multiple hospitalizations for a single case.

New Deaths by Week of Death



Weekly COVID-19 deaths remain low. The current weekly average number of deaths over the last 4 weeks is about 1 death per week.

Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower number of cases.

Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

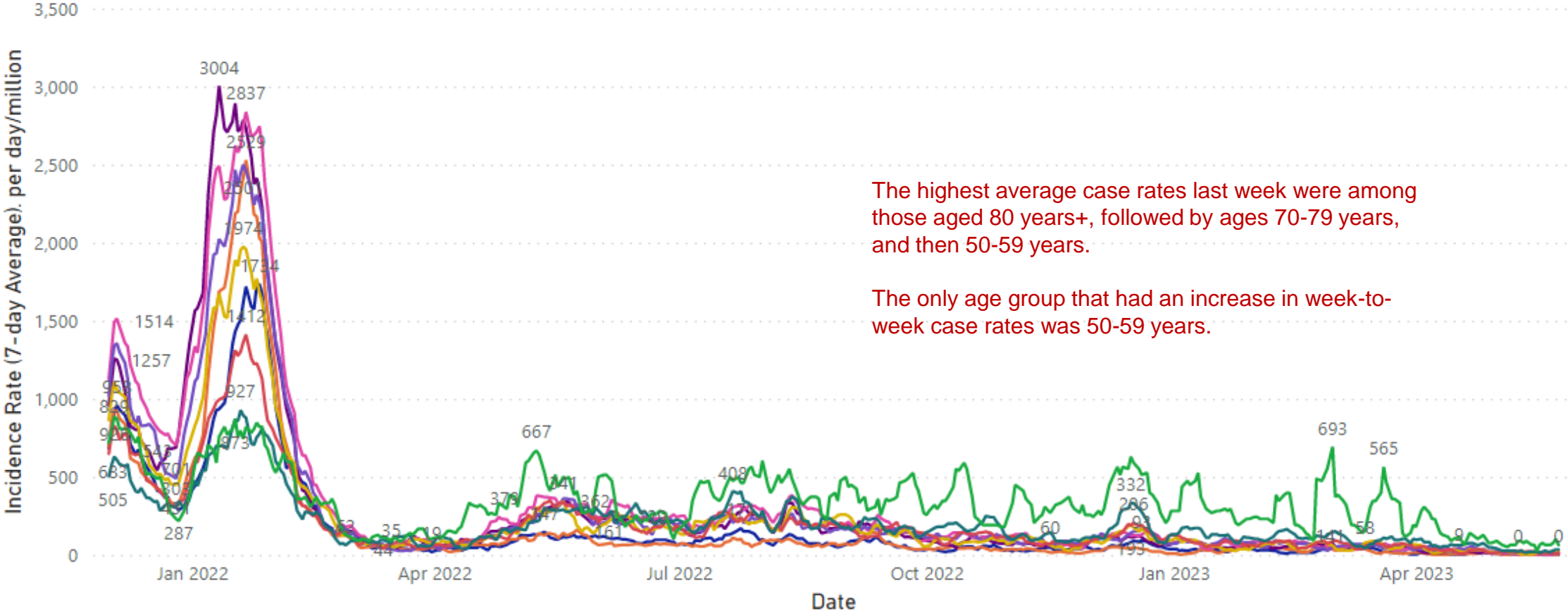
Data as of May 24, 2023

# Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, December 2021 – May 24, 2023

Incidence Rate (7-day Average)

rategroup ● 0-9 ● 10-19 ● 20-29 ● 30-39 ● 40-49 ● 50-59 ● 60-69 ● 70-79 ● 80+



The highest average case rates last week were among those aged 80 years+, followed by ages 70-79 years, and then 50-59 years.

The only age group that had an increase in week-to-week case rates was 50-59 years.

Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower rates.

Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Data as of May 24, 2023

# Ottawa County Case Rate Trends by Age Decade

Daily new confirmed and probable cases per day per million by age group (daily average per week)  
Week 20 (May 14, 2023 – May 20, 2023)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	0.0	0.0	-100%
10-19	0.0	0.0	0%
20-29	0.4	9.5	0%
30-39	0.0	0.0	-100%
40-49	0.4	13.0	0%
50-59	0.6	16.3	307%
60-69	0.4	13.2	-39%
70-79	0.4	20.8	0%
80+	0.7	63.8	-17%

Small numbers of cases in some age categories may cause substantial shifts in weekly case rates and percent change.

Because of these small numbers issues, interpret this data with caution.

**Age groups with highest average case rates last week:**

1. 80+
2. 70-79
3. 50-59

**Age groups with largest week-over-week increase in case rates:**

1. 50-59

**Notes:** Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower rates.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System; CDC Wonder 2020 population

Data as of May 24, 2023

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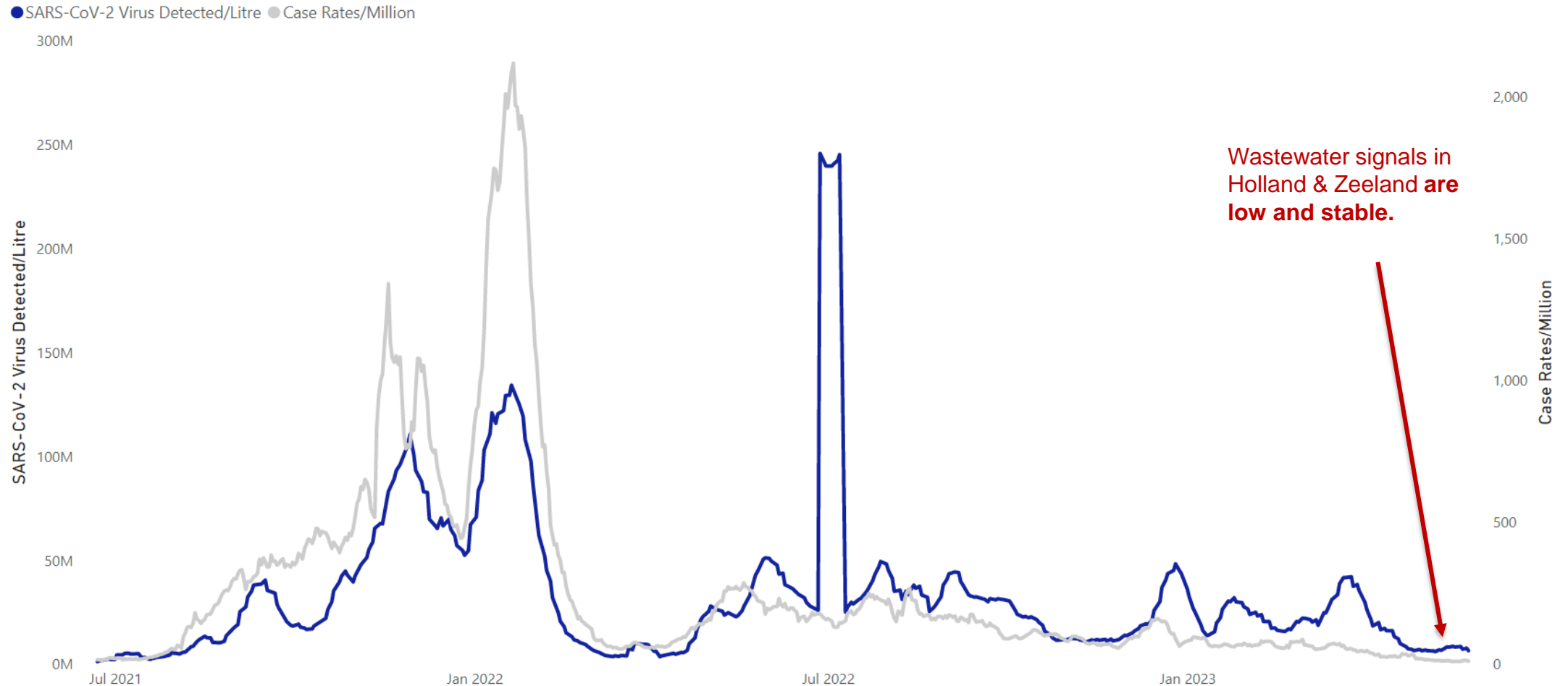
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# Holland-Zeeland Wastewater Surveillance

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.

**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)

Data through May 25, 2023

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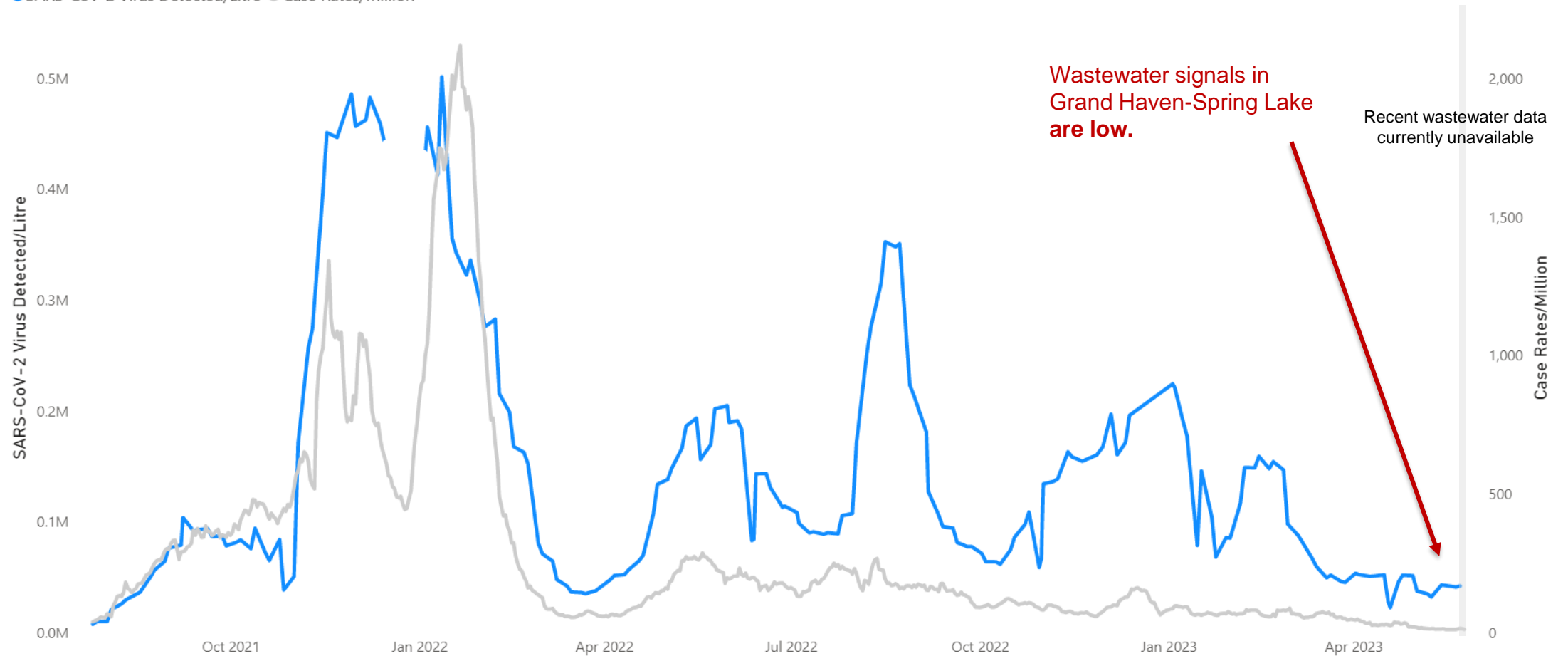
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# Grand Haven-Spring Lake Wastewater Surveillance

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.

**Note:** 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.

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

Data through May 23, 2023

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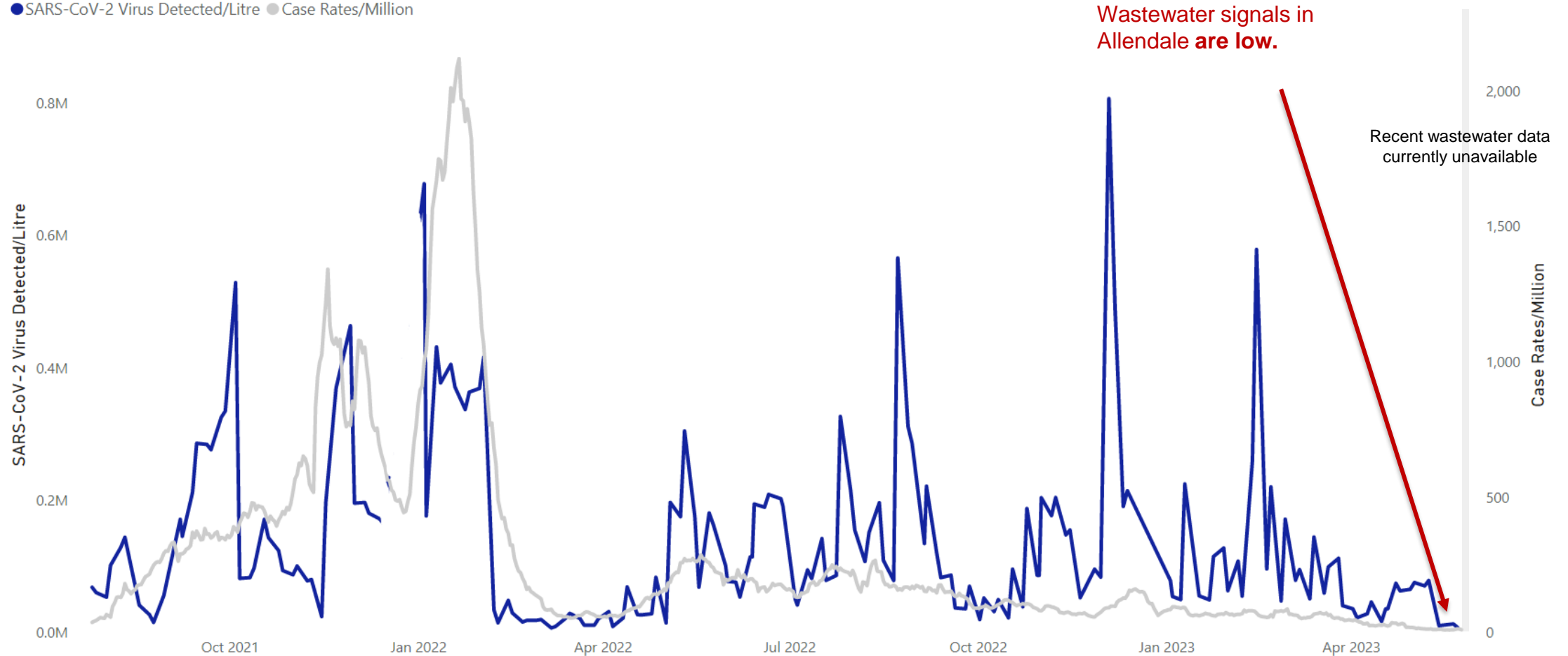
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# Allendale Wastewater Surveillance

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.

**Note:** 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.

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

Data through May 23, 2023

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# Ottawa County Weekly Case Counts and % Change, by Age

Week Ending	Adults (18+)		Children (0-17 years)		Total	
	Number	% Change from Previous Week	Number	% Change from Previous Week	Number	% Change from Previous Week
11-Mar-23	95	-21%	22	57%	117	-13%
18-Mar-23	136	43%	10	-55%	146	25%
25-Mar-23	108	-21%	6	-40%	114	-22%
1-Apr-23	89	-18%	6	0%	95	-17%
8-Apr-23	64	-28%	4	-33%	68	-28%
15-Apr-23	57	-11%	2	-50%	59	-13%
22-Apr-23	67	18%	6	200%	73	24%
29-Apr-23	35	-48%	7	17%	42	-42%
6-May-23	28	-20%	2	-71%	30	-29%
13-May-23	22	-21%	3	50%	25	-17%
20-May-23	22	0%	0	-100%	22	-12%

Adults

Children

Weekly case counts among **children decreased 100%** last week, and cases in **adults remained the same.**

**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System

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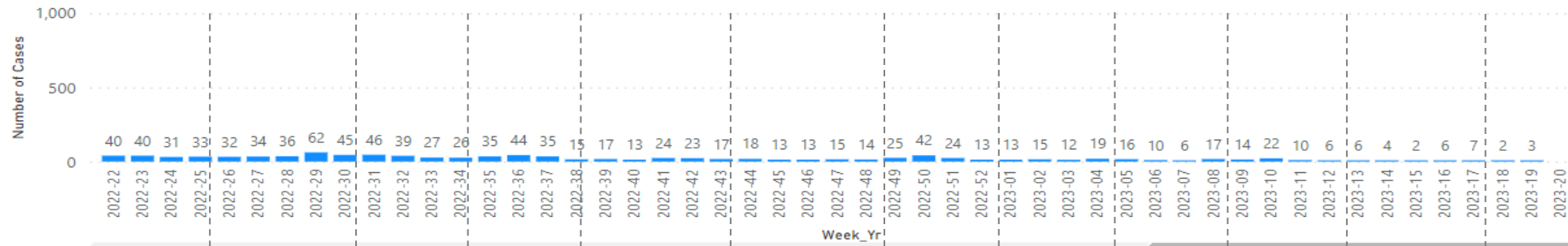
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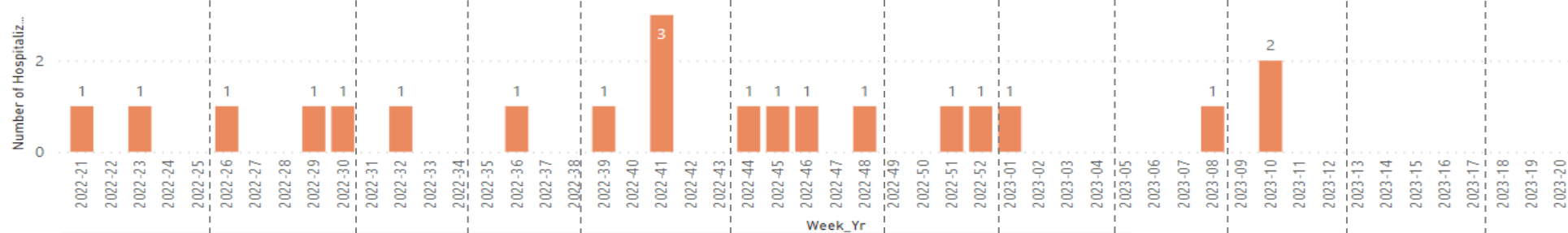
# Ottawa County – Cases, Hospitalizations, & Deaths by Week Among Children (0-17 years)

New Cases By Week of Referral



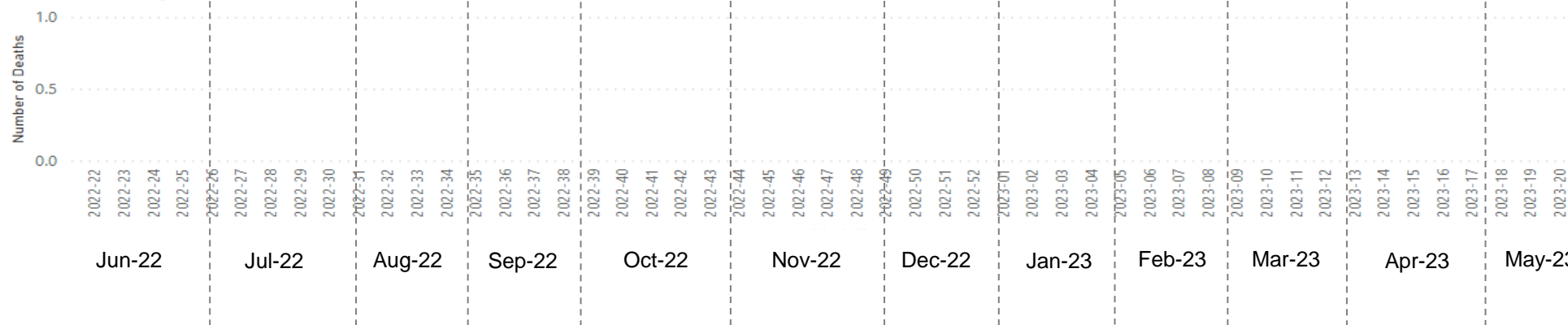
The weekly number of cases among children **decreased 100%** from week 19 to week 20. But the number of cases was very low.

New Hospitalizations by Week of Admission



Hospitalization data include all Ottawa County cases that have ever been hospitalized for COVID-19 or COVID-19 related complications. These data do not include Urgent Care visits, Emergency Department visits, or multiple hospitalizations for a single case.

New Deaths by Week of Death



There have not been any COVID-19 associated deaths in children since the first one occurred in early January of 2022 (not pictured).

**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System

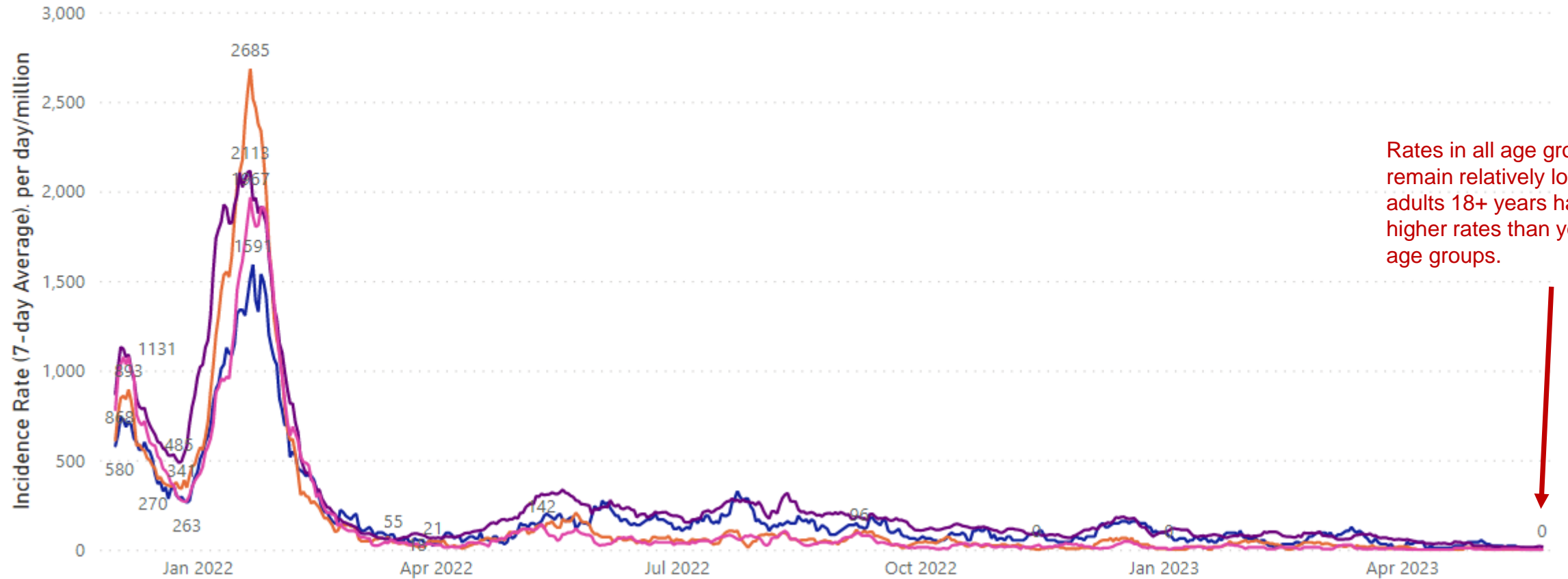
Data as of May 24, 2023

# Ottawa County – Case Rate Trends by Age

COVID-19 Case Rates by Age, includes School-Aged, December 2021 – May 24, 2023

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



Rates in all age groups remain relatively low, with adults 18+ years having higher rates than younger age groups.



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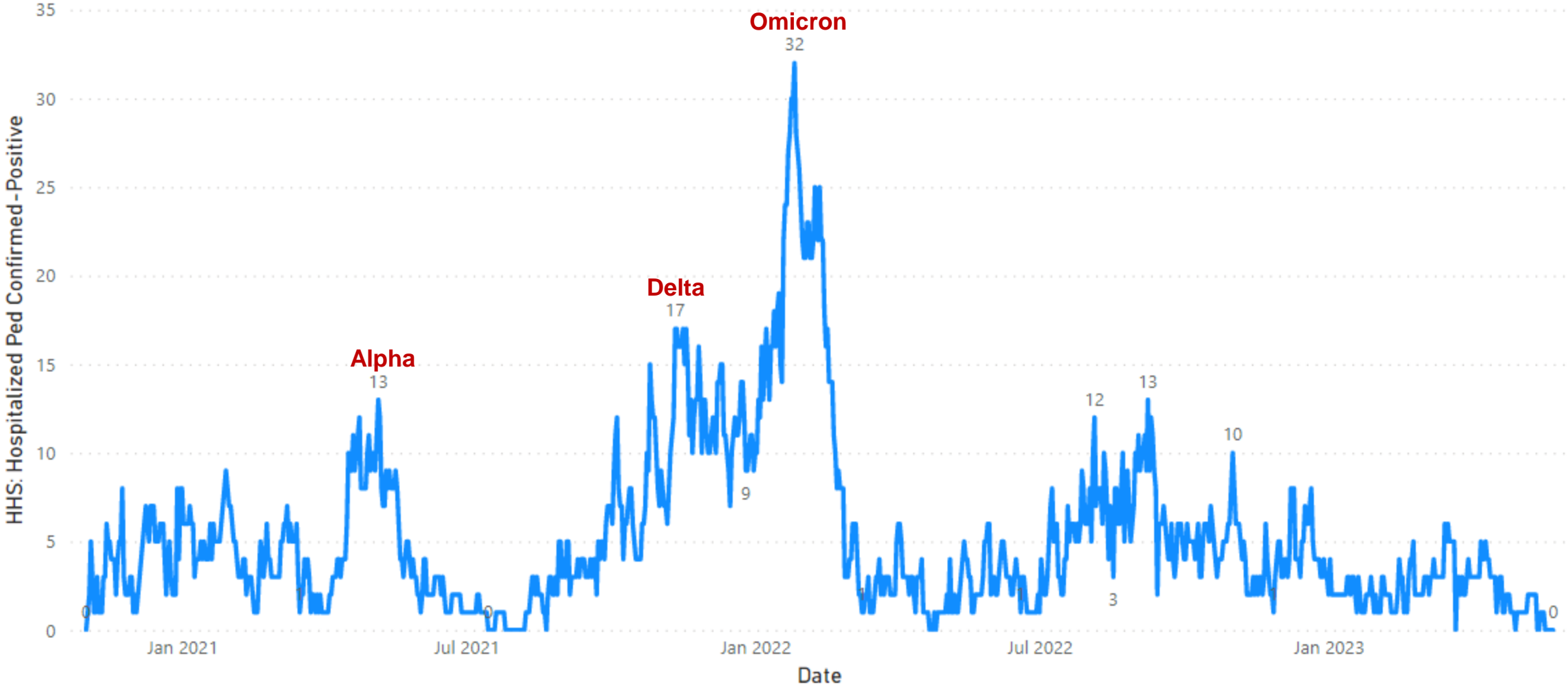
**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Data as of May 24, 2023

# Daily Hospital Pediatric Census – West Michigan

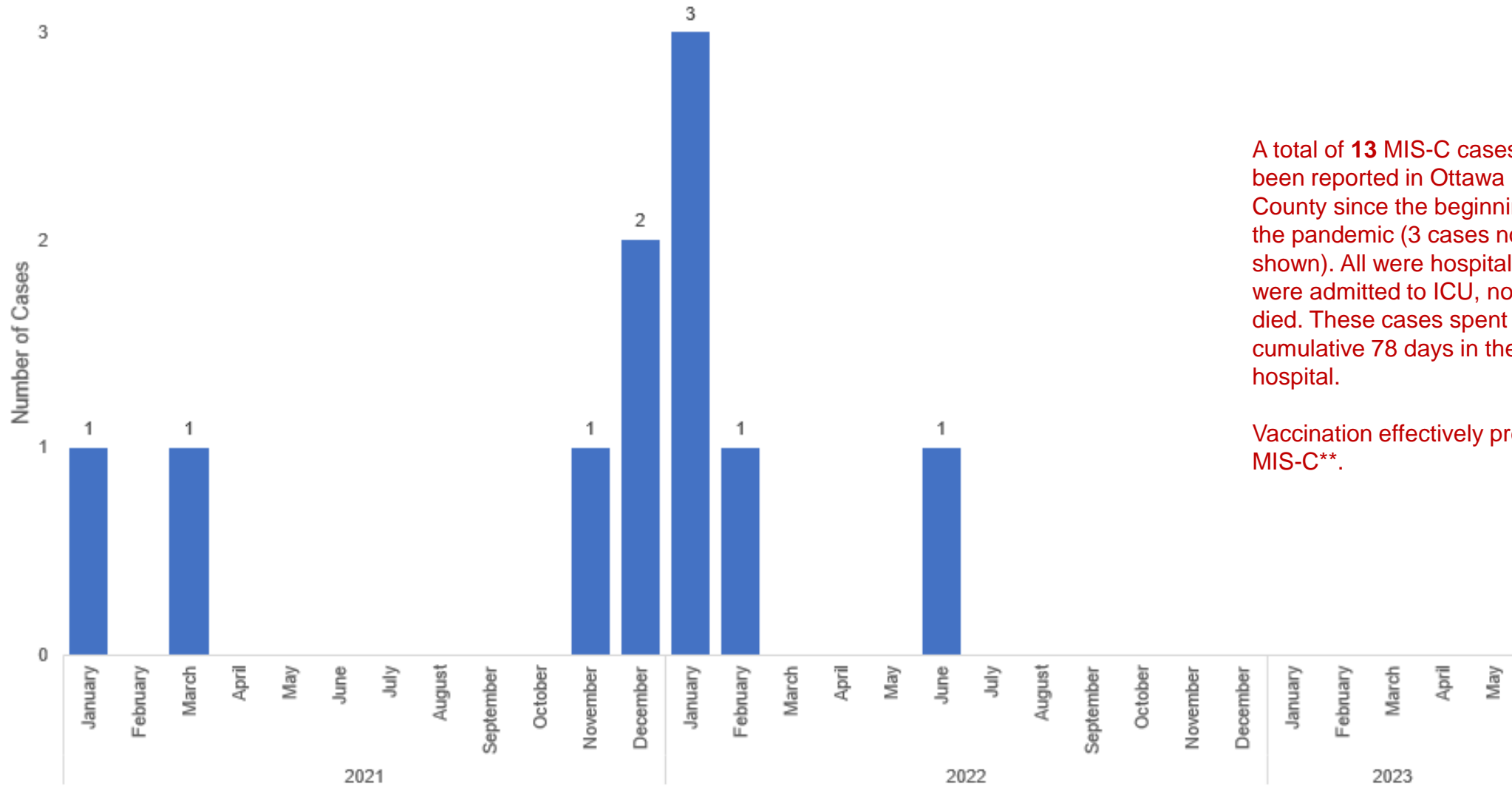
HHS: Hospitalized Ped Confirmed-Positive by Date



**Note:** Data above includes persons younger than 18 years of age with confirmed COVID-19 hospitalized at West Michigan hospitals. Patients may be listed in more than one day. Data may change as information is updated. Includes patients that reside in counties across the region, including Ottawa County.

Data through May 24, 2023

# Ottawa County MIS-C\* Cases by Month



A total of **13** MIS-C cases have been reported in Ottawa County since the beginning of the pandemic (3 cases not shown). All were hospitalized, 6 were admitted to ICU, none died. These cases spent a cumulative 78 days in the hospital.

Vaccination effectively prevents MIS-C\*\*.

**Notes:** Includes confirmed and probable cases.

\*MIS-C is a rare but serious condition affecting children, associated with recent COVID-19 infection. For more details on MIS-C please visit: <https://www.cdc.gov/mis/index.html>

\*\*Sources: [MMWR](#) & [The Lancet](#)

Data through May 24, 2023



# Ottawa County Hospital Capacity – All Beds

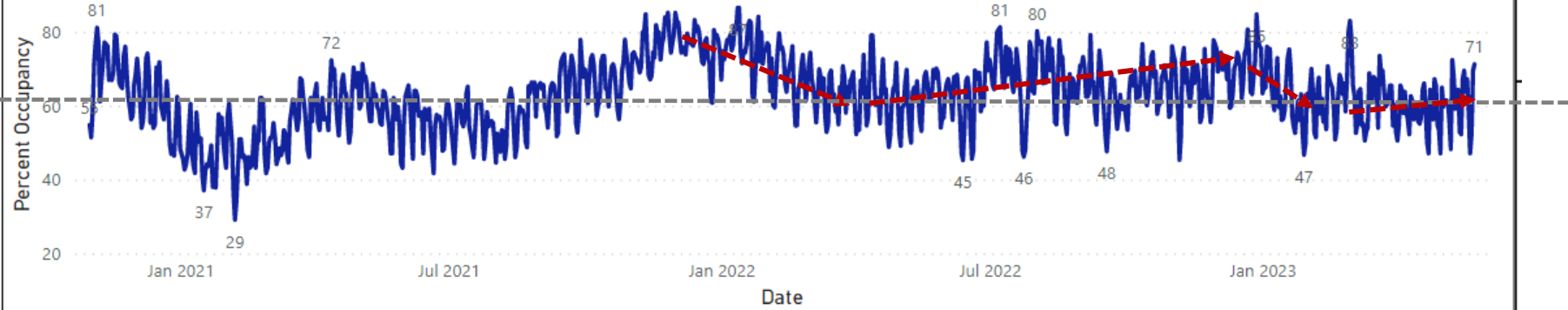
## Total Inpatient Bed Occupancy (All Patients, COVID and Non-COVID)

Pandemic Average

63%

### Percent Occupancy by Date and County

County ● Ottawa



Total hospital bed occupancy is slightly above the pandemic average.

## COVID Inpatient Bed Occupancy (COVID Patients Only, Confirmed and Suspected)

10%

### Percent Occupancy by Date and County

County ● Ottawa

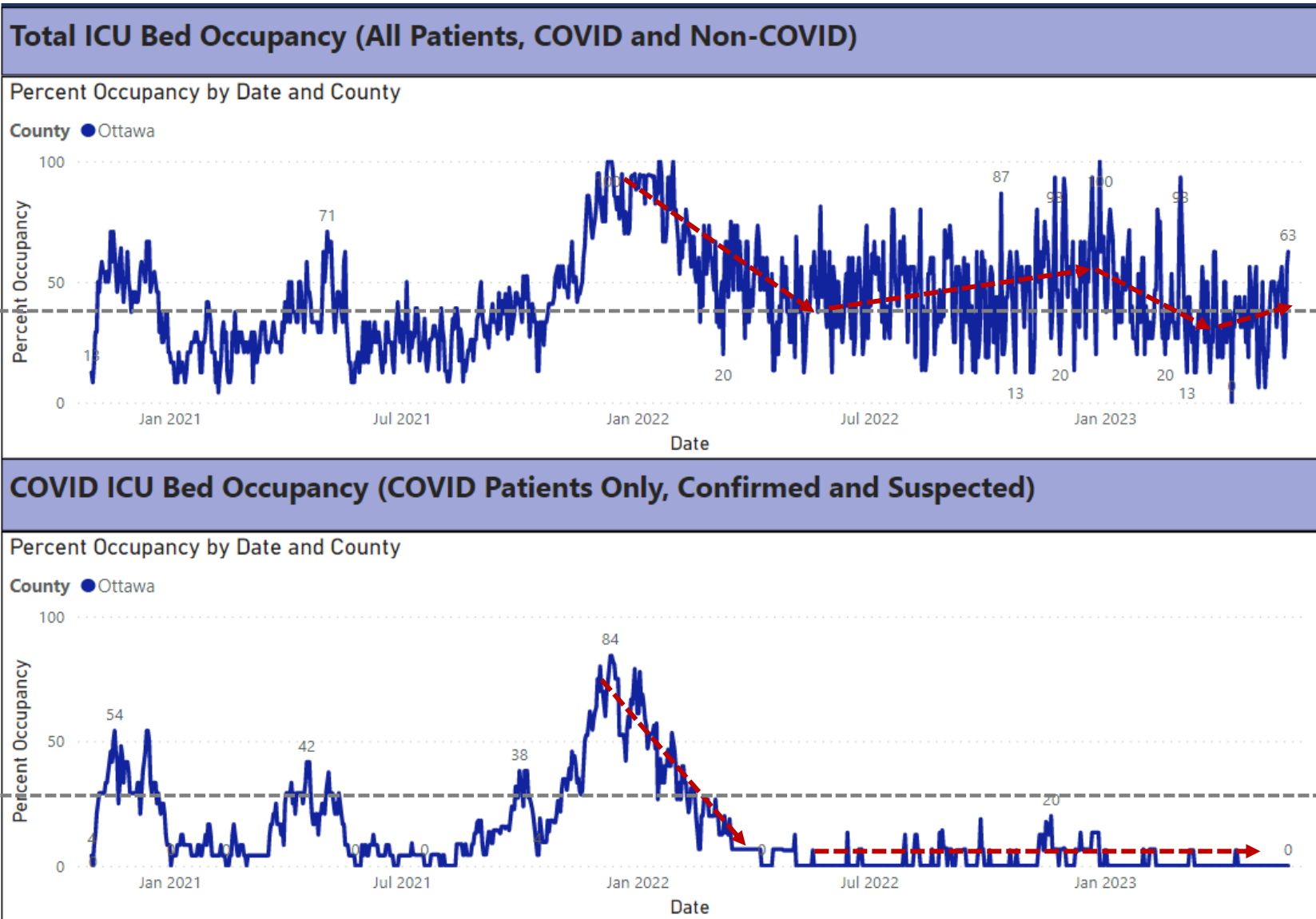


Currently 2% of all inpatient beds are occupied by COVID-19 patients.

Source: EMResources

Data through May 24, 2023

# Ottawa County Hospital Capacity – ICU Beds



Total ICU bed occupancy varies considerably by day. Lately, ICU bed occupancy is **above the pandemic average**.

The proportion of ICU beds occupied by COVID-19 patients is **below the pandemic average**. Currently, **0%** of ICU beds occupied by COVID-19 patients.

Source: EMResources

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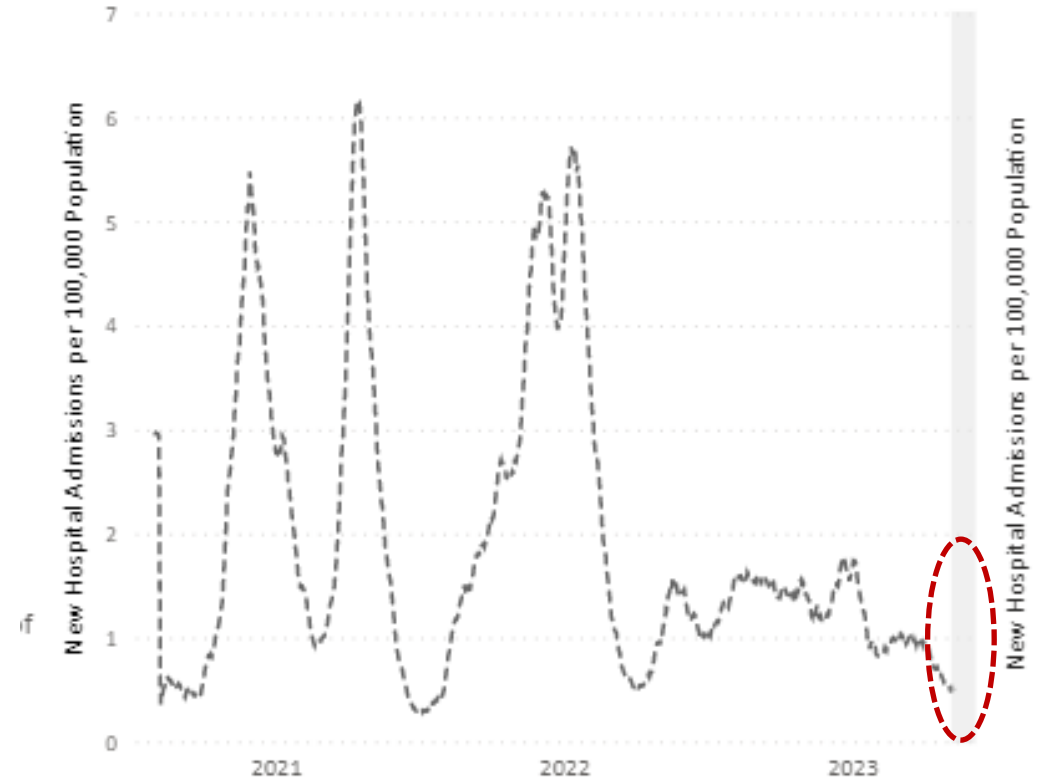
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# Pediatric Hospitalization Rates – USA, Michigan

## USA

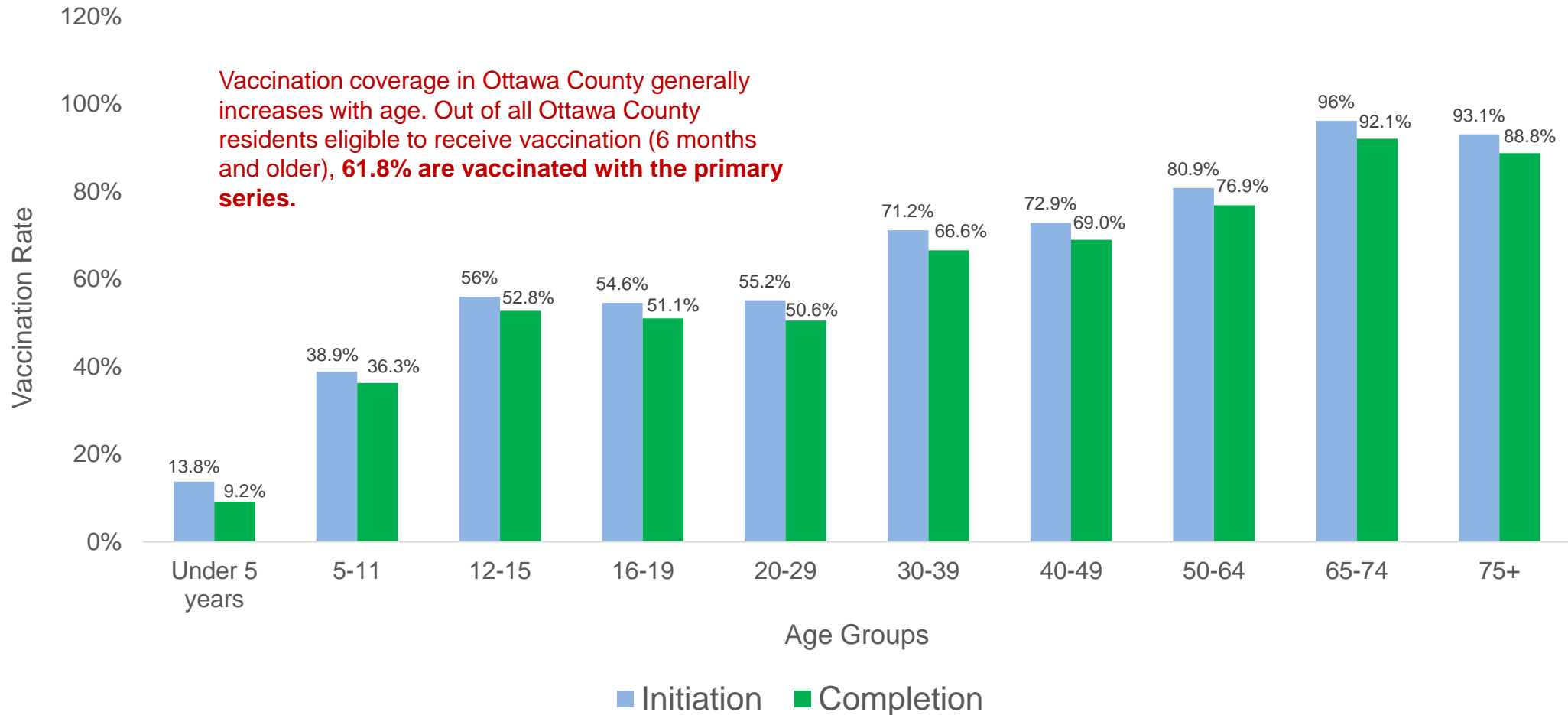


## Michigan



Pediatric COVID-19 hospitalization rates across the US and Michigan are decreasing.

# Vaccination Coverage by Age (Primary Series Only)



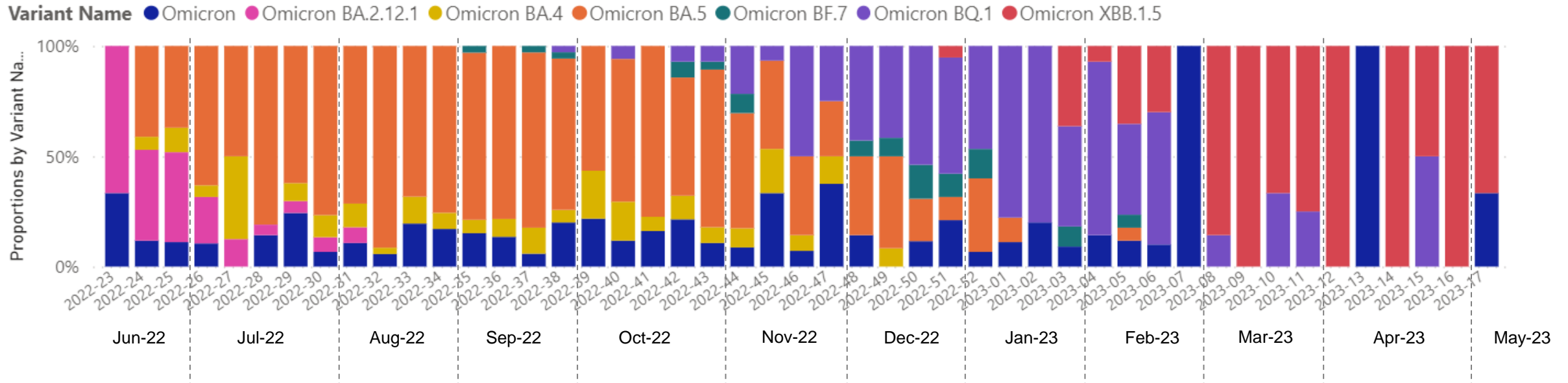
**Notes:** Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J. NovaVax doses are not included here.

**Source:** <https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard>

Data through May 25, 2023

# Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week



By the end of July 2021 through early December 2021, all clinical samples\* tested were identified as the **Delta** variant (data not displayed here).

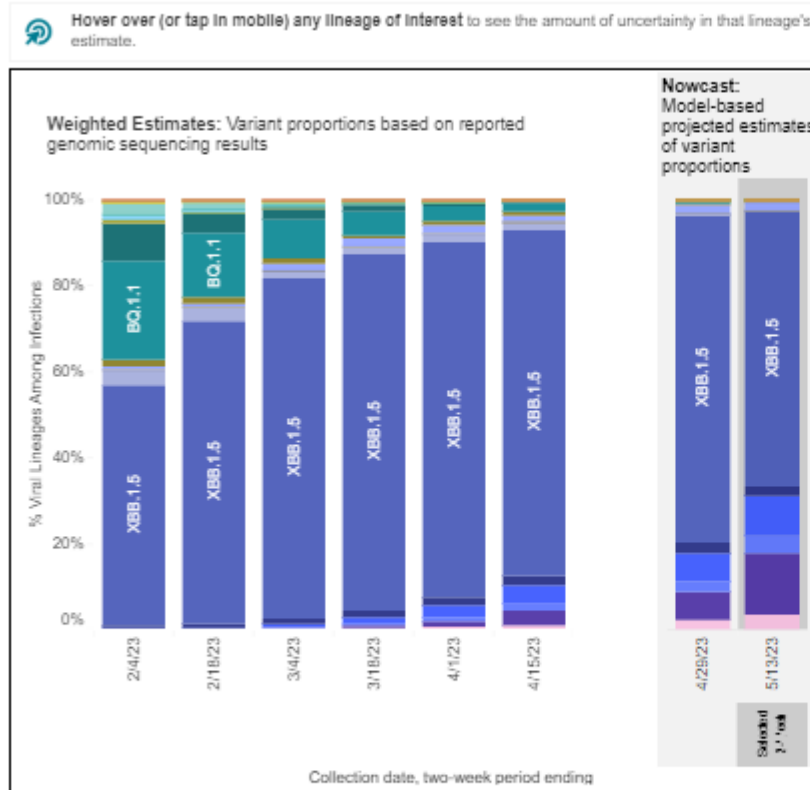
In mid-December 2021, the first **Omicron** positive sample was collected in an Ottawa County resident (data not displayed here), and **Omicron** continues to be detected into 2023, with more recent additions of the **Omicron subvariants** such as BQ.1 and XBB.1.5.

\* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants.

Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

# Variants – Clinical Samples from Across the USA

Weighted and Nowcast Estimates in United States for 2-Week Periods in 1/22/2023 – 5/13/2023



Nowcast Estimates in United States for 4/30/2023 – 5/13/2023

USA				
WHO label	Lineage #	US Class	%Total	95%PI
Omicron	XBB.1.5	VOC	84.0%	59.1-88.6%
	XBB.1.16	VOC	14.3%	11.1-18.1%
	XBB.1.9.1	VOC	9.2%	8.0-10.6%
	XBB.1.9.2	VOC	4.0%	3.2-5.1%
	XBB.2.3	VOC	3.5%	1.9-6.3%
	XBB.1.5.1	VOC	2.4%	1.9-3.0%
	FD.2	VOC	1.8%	0.8-4.0%
	BQ.1.1	VOC	0.3%	0.1-0.5%
	CH.1.1	VOC	0.2%	0.2-0.4%
	XBB	VOC	0.2%	0.1-0.4%
	BQ.1	VOC	0.0%	0.0-0.1%
	BN.1	VOC	0.0%	0.0-0.0%
	BA.5	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.1%
	BA.2	VOC	0.0%	0.0-0.0%
	BA.2.75	VOC	0.0%	0.0-0.0%
	BF.7	VOC	0.0%	0.0-0.0%
	BA.5.2.6	VOC	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.0%

The **Omicron** variant and its subvariants are estimated to account for more than 99% of all clinical samples collected in the United States the week ending May 13, 2023.

The BQ.1.1 subvariant has been supplanted by other Omicron subvariants, predominately XBB.1.5.

\* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one 2-week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all 2-week periods displayed.

# BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. Except BA.2.12.1, BA.2.75, XBB and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.2.75.2, CH.1.1 and BN.1, BA.2.75 sublineages are aggregated with BA.2.75. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, BF.11, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. Except the lineages shown and their sublineages, sublineages of XBB are aggregated to XBB. Except XBB.1.5.1 and FD.2, sublineages of XBB.1.5 are aggregated to XBB.1.5. For all the other lineages listed, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB.2.3 and XBB.1.16 were aggregated to XBB. Lineages BA.2.75.2, XBB, XBB.1.5, XBB.1.5.1, FD.2, XBB.1.9.1, XBB.1.9.2, XBB.1.16, XBB.2.3, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

# COVID-19 News Headlines

## Here's what Pfizer and Moderna say is next for their Covid vaccines

<https://www.cnbc.com/2023/05/22/covid-vaccines-pfizer-moderna.html>

## The Covid emergency is over. Calculating the final toll is just beginning.

<https://www.nbcnews.com/meet-the-press/data-download/covid-national-emergency-ends-was-overall-impact-rcna85456>

## China's New Covid Wave Set to See 65 Million Cases a Week

<https://www.bloomberg.com/news/articles/2023-05-22/china-s-new-covid-wave-set-to-see-65-million-cases-a-week#xj4y7vzkg>

## Here's how COVID-19 data reporting is changing in Michigan

<https://www.mlive.com/public-interest/2023/05/heres-how-covid-19-data-reporting-is-changing-in-michigan.html>

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# Science Roundup

## COVID-19 Booster Vaccination in Early Pregnancy and Surveillance for Spontaneous Abortion

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2805029>



This case-control study of people with pregnancies at 6 to 19 weeks' gestation found no association between the administration of the COVID-19 booster vaccination and spontaneous abortion (miscarriage) before 20 weeks of pregnancy.

## Prevalence of Mental Health Diagnoses in Commercially Insured Children and Adolescents in the US Before and During the COVID-19 Pandemic

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2805056>



A cross-sectional study assessing mental illness among US youths during the COVID-19 pandemic found that although both boys and girls experienced increases in mental illnesses, female adolescents demonstrated a higher increase in mental illness, particularly eating disorders.

## Factors Associated with Receipt of mRNA-1273 Vaccine at a United States National Retail Pharmacy During the COVID-19 Pandemic

<https://www.sciencedirect.com/science/article/pii/S0264410X23003833>



A study assessing Walgreens pharmacy vaccination data found that over 80% of patients received their second dose of Moderna COVID-19 vaccine on time per the Centers for Disease Control and Prevention recommendations.

## Long COVID risk and pre-COVID vaccination in an EHR-based cohort study from the RECOVER program

<https://www.nature.com/articles/s41467-023-38388-7>



Findings from this study suggest that receiving a COVID-19 vaccination prior to becoming infected is associated with lower risk of experiencing persistent symptoms 45 days after infection.