

Ottawa County COVID-19 Epidemiology

October 13, 2022

Data as of October 8, 2022, unless otherwise indicated.

Executive Summary

- **Transmission in the US and in Michigan is stable and may be declining**
- **Ottawa County transmission signals are mostly declining**
 - Last week positivity **remained the same** at 12.6%.
 - Weekly case counts **decreased** 3% (-33% two weeks ago), from 186 two weeks ago to 180 last week.
 - Cases among children **decreased** 25% (+7% two weeks ago), from 16 two weeks ago to 12 last week.
 - COVID-19 wastewater signals in Ottawa County **are mixed; stable** in Holland/Zeeland, **decreasing** in Grand Haven/Spring Lake and **mixed** in Allendale.
 - Based on national data and local clinical variant sampling, the Omicron subvariant BA.5 likely predominates.
 - Ottawa's CDC Community Level is LOW.
- **Ottawa-area and regional hospitals have adequate capacity**
 - In Ottawa County, 3% of all available beds and 0% of all ICU beds are occupied by COVID-19 patients.*
- **Pediatric hospitalization rates in the US are increasing, but are relatively low and stable in Michigan**
 - Regional pediatric hospitalization census remains low compared to the late 2021 and early 2022 Omicron surge, and pediatric hospitalization census has declined in recent weeks.
- **Of Ottawa County residents aged 6 months and older, 60.7% are fully vaccinated.**

*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.

Ottawa County Metrics by Week

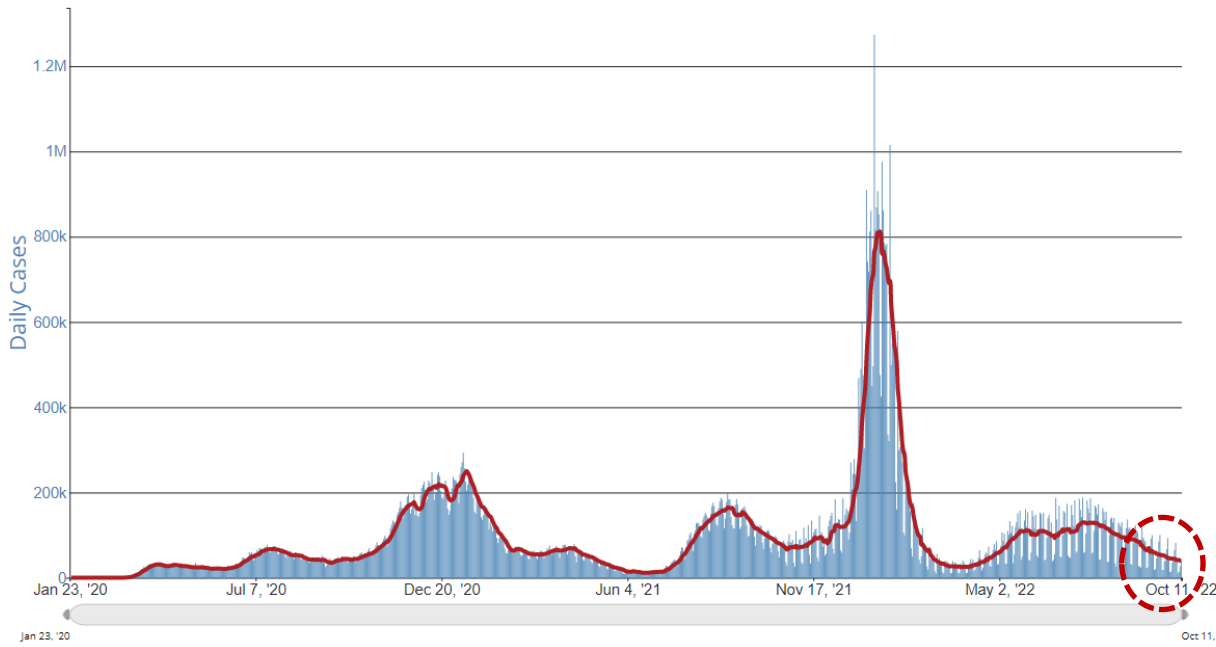
Metric	Goal	Week Ending				
		10-Sep-22	17-Sep-22	24-Sep-22	1-Oct-22	8-Oct-22
Positivity (All Ages)	NA	16.9%	16.1%	13.6%	12.6%	12.6%
Weekly Cases (All Ages)	<592	322	311	277	186	180
Weekly Cases in Children (0-17 years of age)	NA	44	35	15	16	12
Total Deaths (All Ages)	0	2	0	5	4	1
CDC COVID-19 Community Level (New)	Low	Low	Low	Low	Low	Low

Please note that with updated CDC Community Levels, metrics and/or metric thresholds/goals may change.

Case Trends in the USA and Michigan

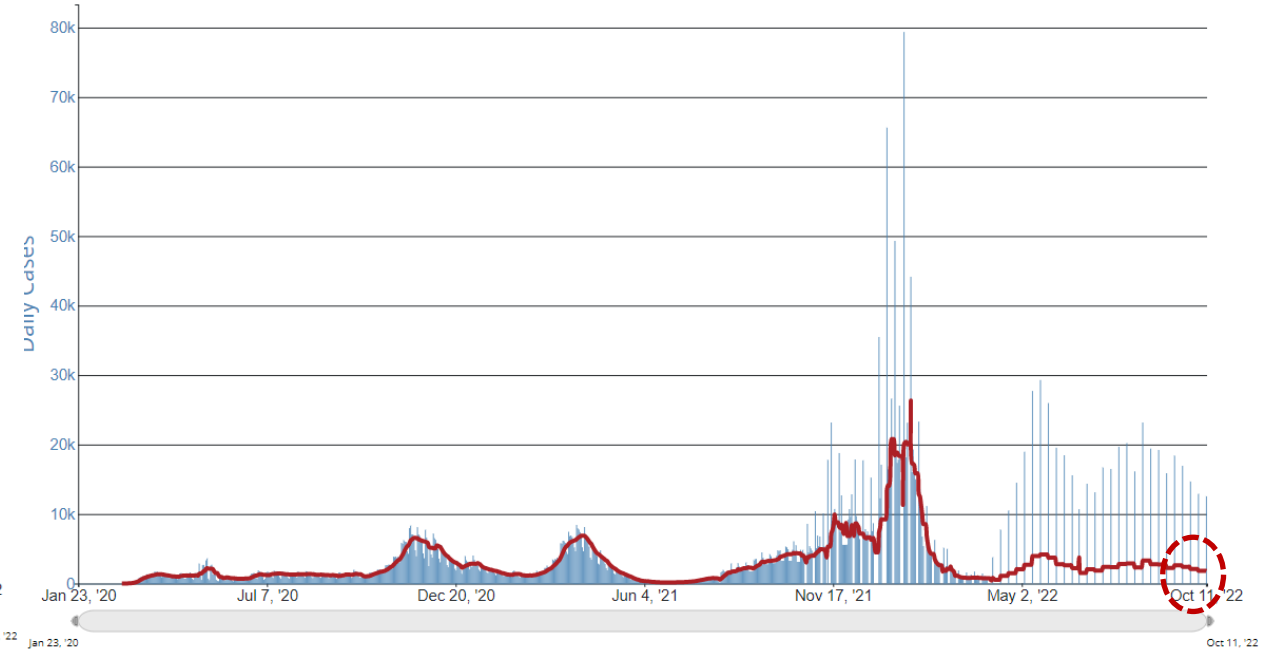
USA

Daily Trends in Number of COVID-19 Cases in The United States Reported to CDC



Michigan

Daily Trends in Number of COVID-19 Cases in Michigan Reported to CDC



Daily case counts in the US and Michigan remain lower than previous surges and may be stabilizing.

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.

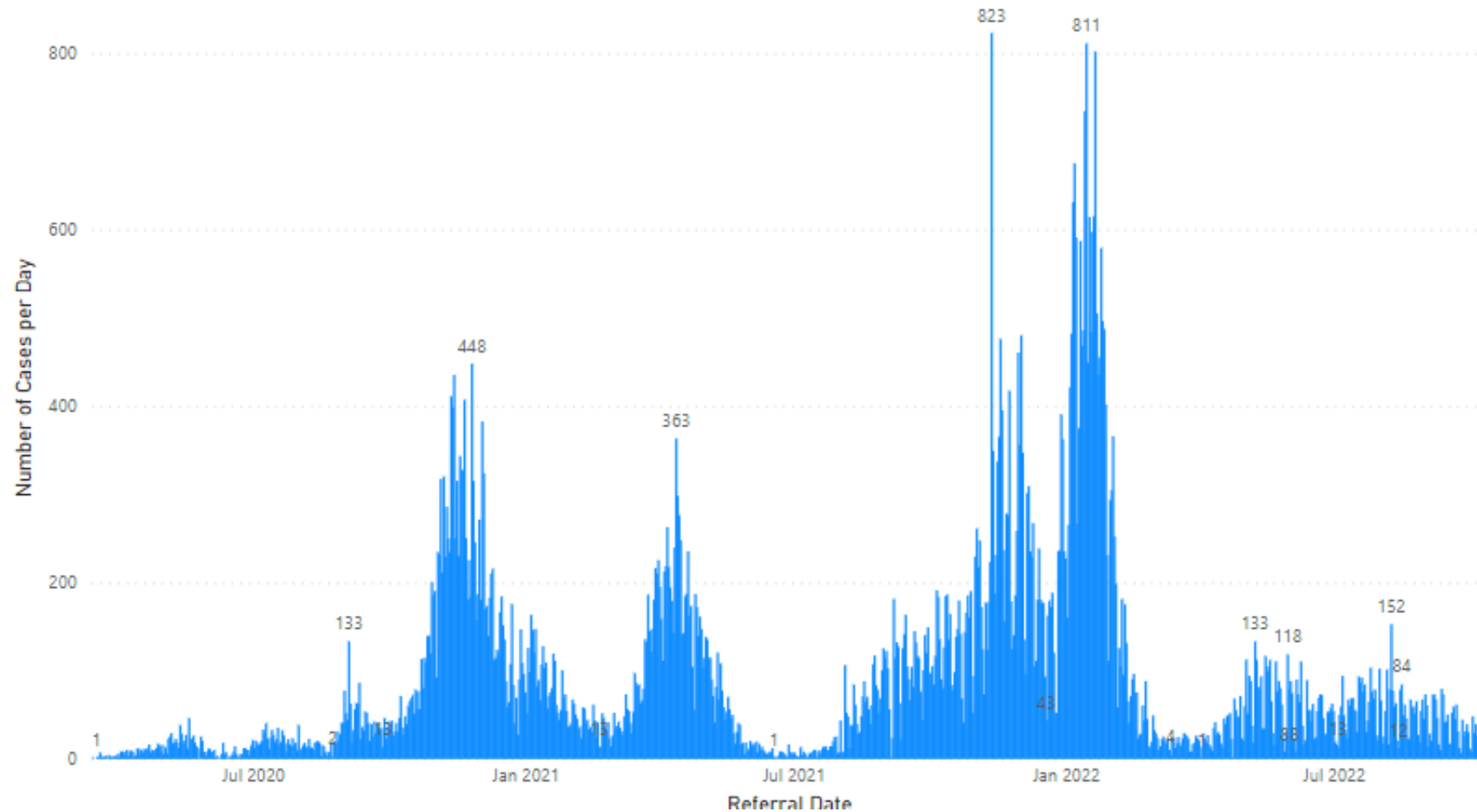
Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

Data through October 11, 2022

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – October 12, 2022

Epidemiological Curve



Total Number of Cases
84,345

Currently, the 7-day average is about **26 cases per day**, same as the approximately **26 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

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

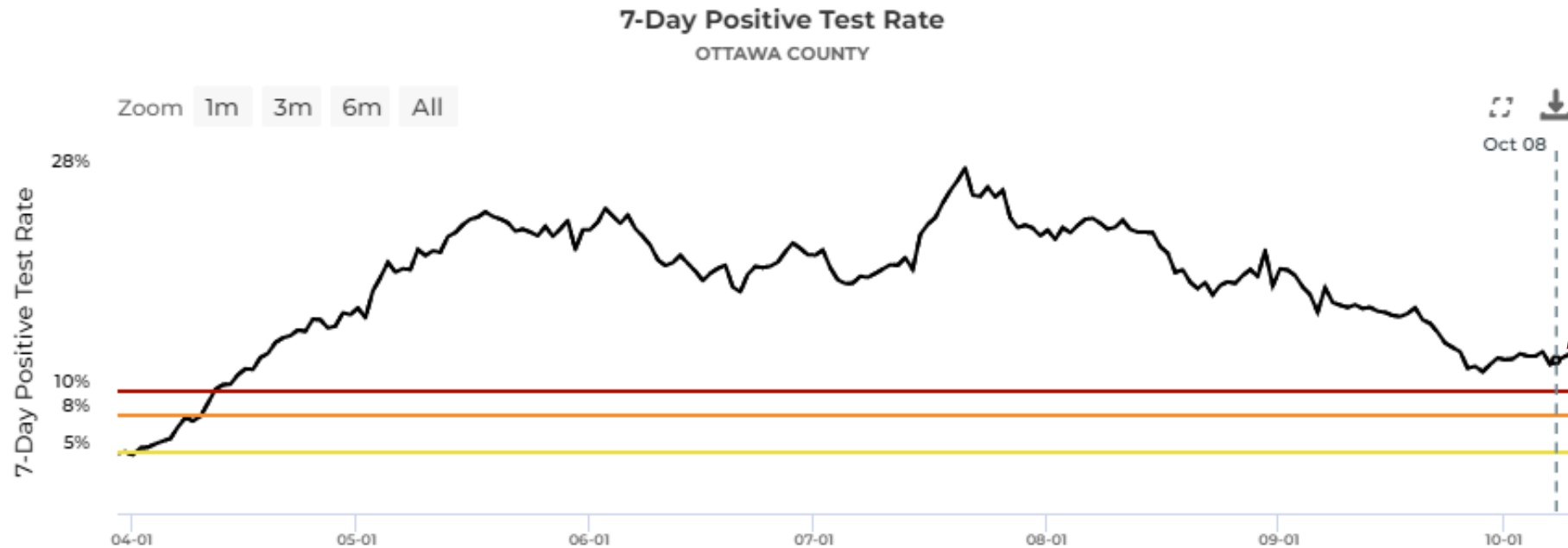
Other

Media

Science Roundup

Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – October 8, 2022



Positivity trended at **12.6%** last week and the week prior.



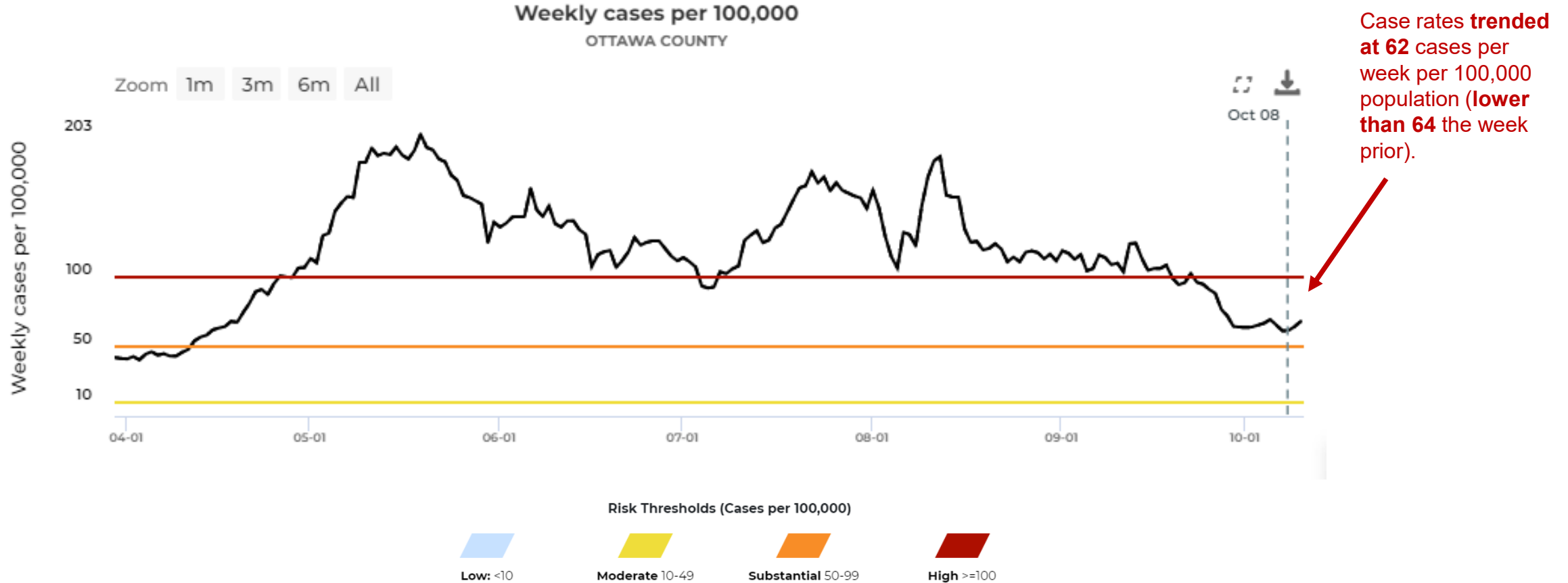
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

Note: Testing data and can be found at the following sources: [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](#) & [MI Safe Start Map](#). 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: [MI Safe Start Map-Ottawa County](#)

Case Rates in Ottawa County – All Ages

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – October 8, 2022



This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

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: [MI Safe Start Map-Ottawa County](#)

Ottawa County Trends – Comparison of Case Rates by Year



Case rates in fall of 2022 are lower than this same time last year.

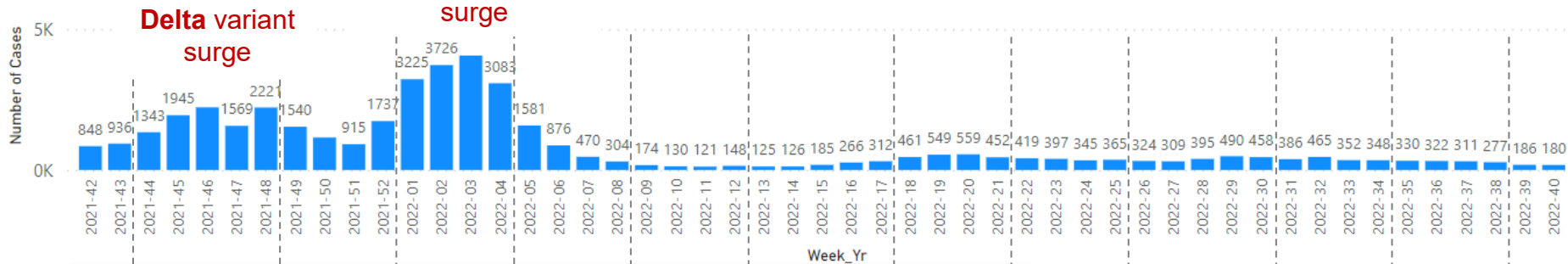
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower case rates.

Source: Internal Data

Data through October 12, 2022

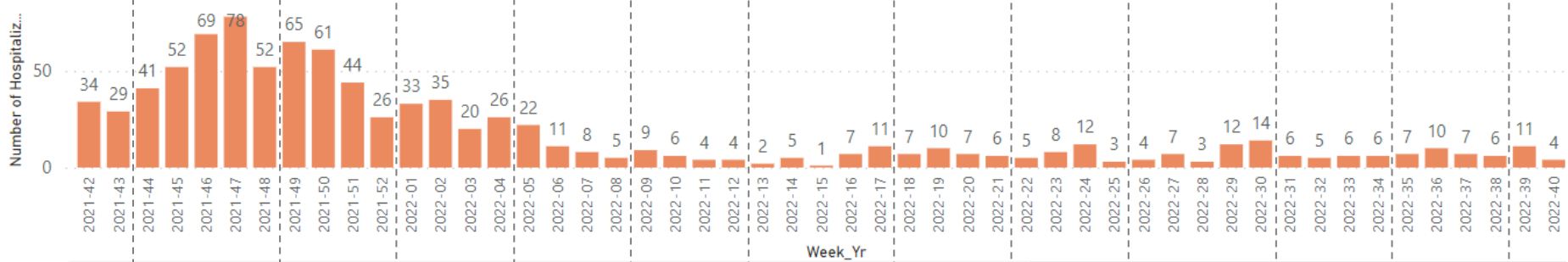
Ottawa County – Cases, Hospitalizations, & Deaths by Week, All Ages

New Cases By Week of Referral



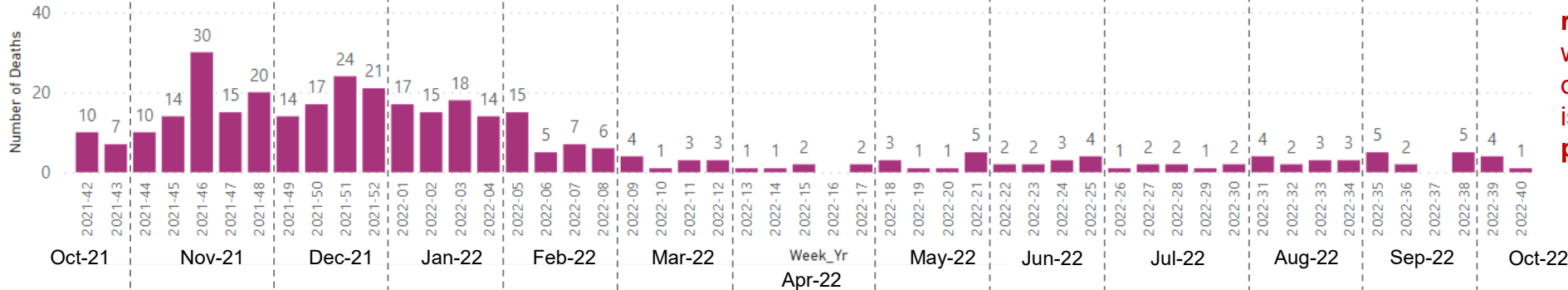
The weekly number of cases decreased 3% from week 39 to week 40.

New Hospitalizations by Week of Admission



Hospitalization data includes all Ottawa County cases that have ever been hospitalized for COVID-19 or COVID-19 related complications. This data does 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 approximately 3 deaths 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

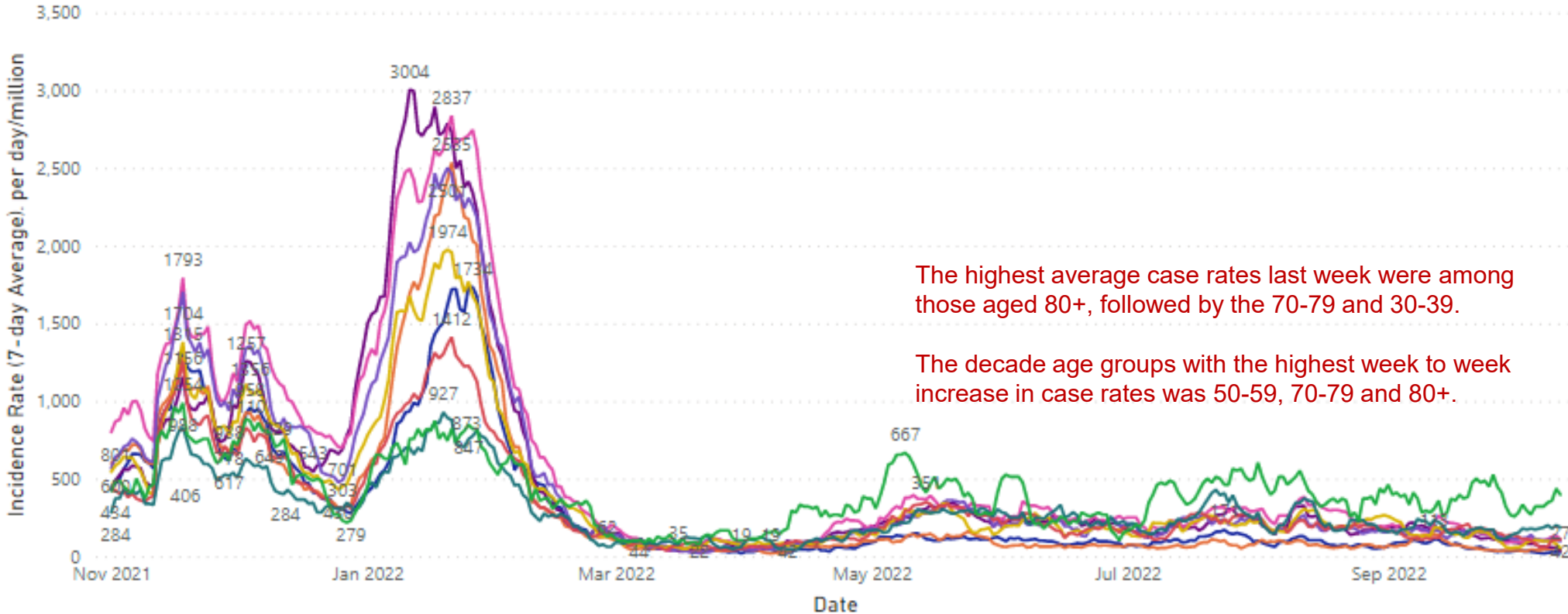
Data as of October 14, 2022

Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, November 2021 – October 12, 2022

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+, followed by the 70-79 and 30-39.

The decade age groups with the highest week to week increase in case rates was 50-59, 70-79 and 80+.

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 October 12, 2022

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 40 (October 2, 2022 – October 8, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	0.7	19.3	-45%
10-19	2.0	45.2	17%
20-29	3.0	66.3	-28%
30-39	3.7	103.5	8%
40-49	3.4	103.3	-8%
50-59	3.4	98.3	71%
60-69	2.0	61.4	-55%
70-79	3.9	187.0	35%
80+	3.6	320.7	25%

Age groups with highest average case rates last week:

- 80+
- 70-79
- 30-39

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

- 50-59
- 70-79
- 80+

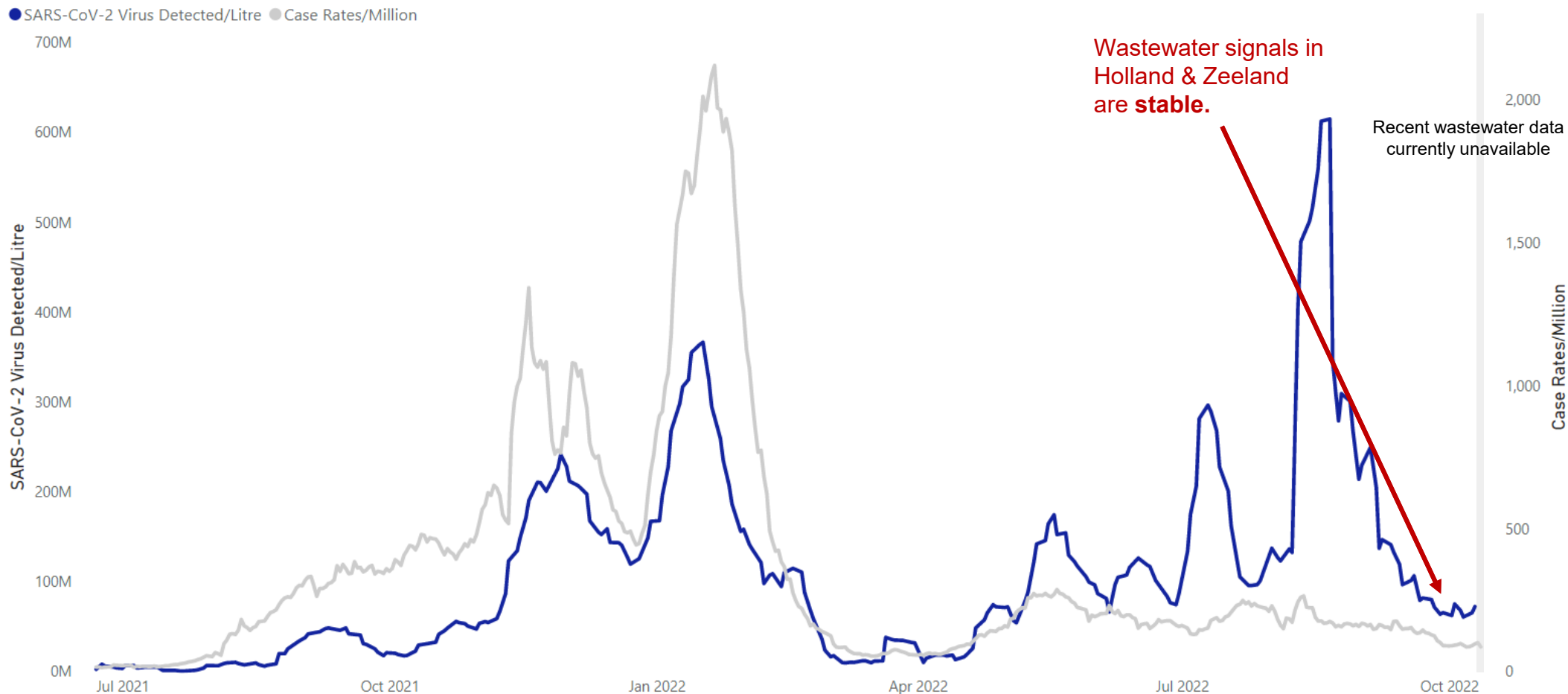
Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower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

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

Data as of October 12, 2022

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)

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 October 10, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

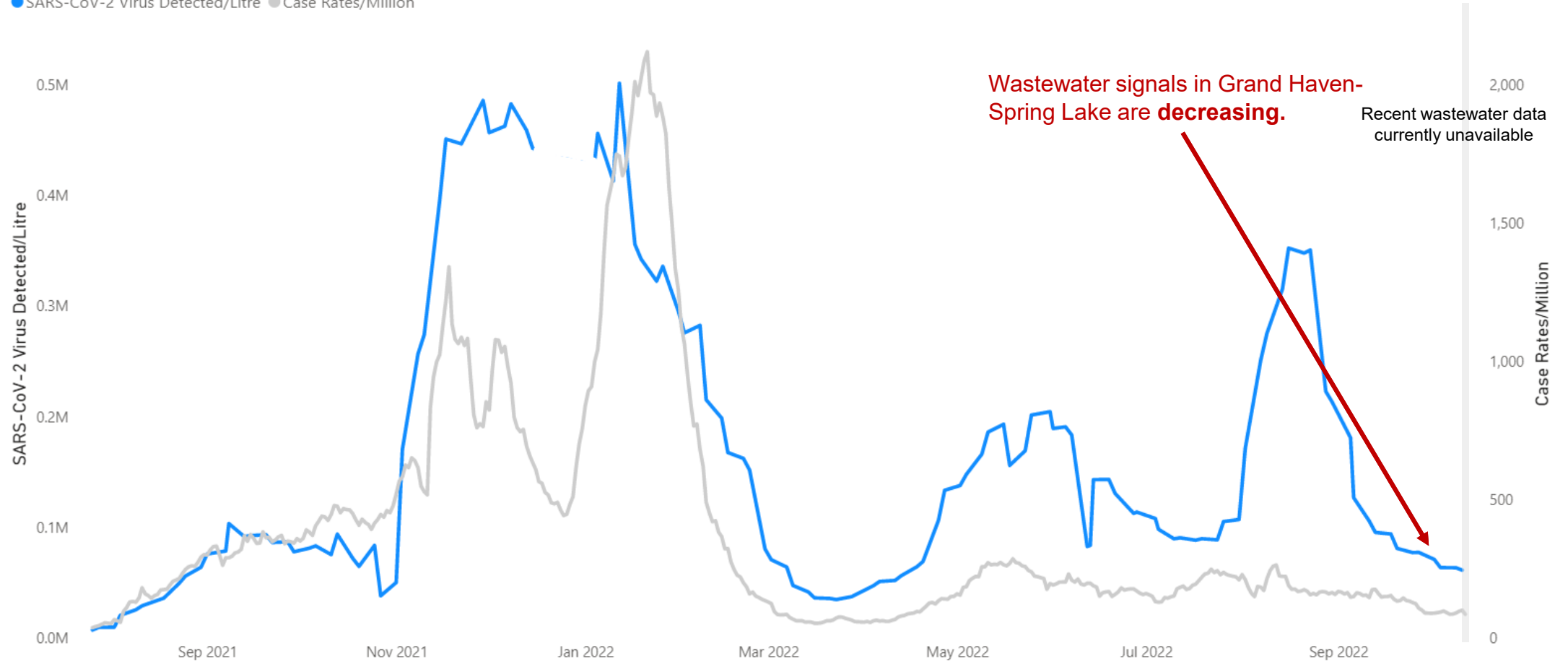
Media

Science
Roundup

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.

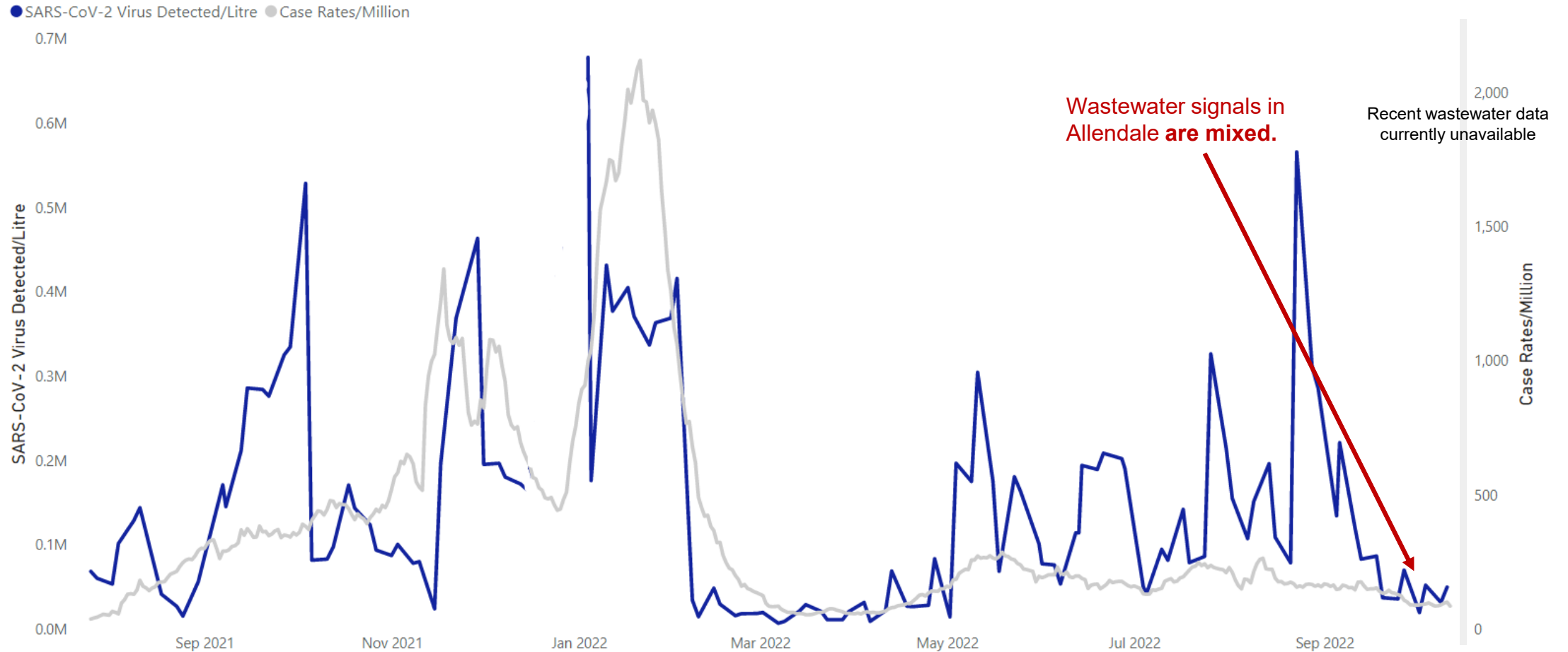
Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Richard Rediske, Ph.D. (redisker@gvsu.edu)

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)

Data through October 11, 2022

Allendale 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 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)

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 October 11, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

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Science
Roundup

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
30-Jul-22	413	-4%	45	-27%	458	-7%
6-Aug-22	340	-18%	46	2%	386	-16%
13-Aug-22	426	25%	39	-15%	465	20%
20-Aug-22	325	-24%	27	-31%	352	-24%
27-Aug-22	322	-1%	26	-4%	348	-1%
3-Sep-22	295	-8%	35	35%	330	-5%
10-Sep-22	278	-6%	44	26%	322	-2%
17-Sep-22	276	-1%	35	-20%	311	-3%
24-Sep-22	262	-5%	15	-57%	277	-11%
1-Oct-22	170	-35%	16	7%	186	-33%
8-Oct-22	168	-1%	12	-25%	180	-3%

Weekly case counts among **children decreased 25%** last week, and cases in **adults decreased 1%**.

Adults

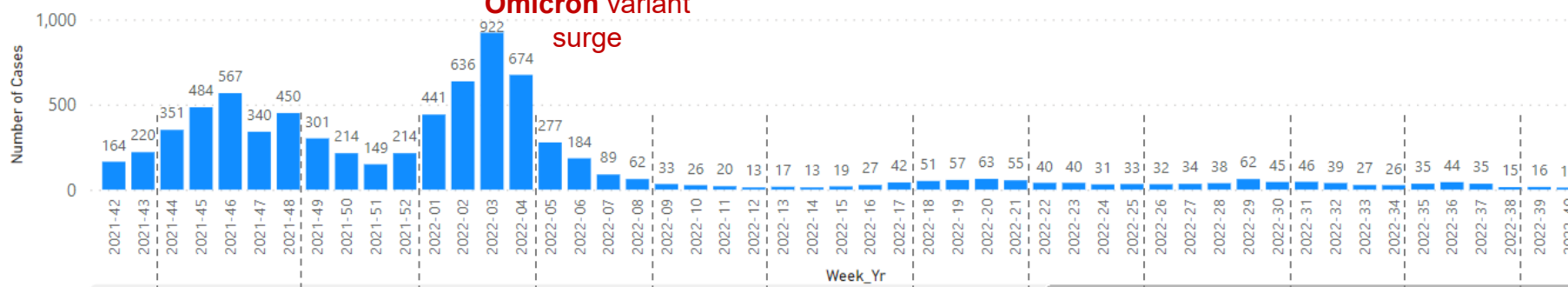
Children

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

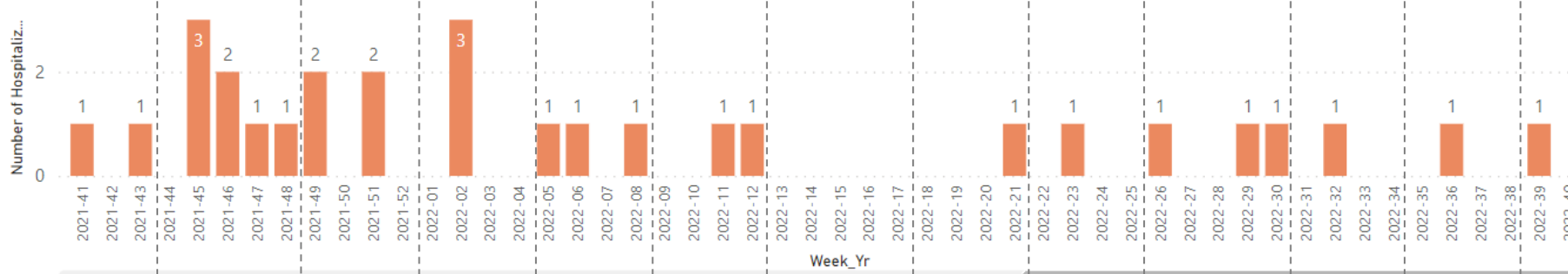
Ottawa County – Cases, Hospitalizations, & Deaths by Week Among Children (0-17 years)

New Cases By Week of Referral

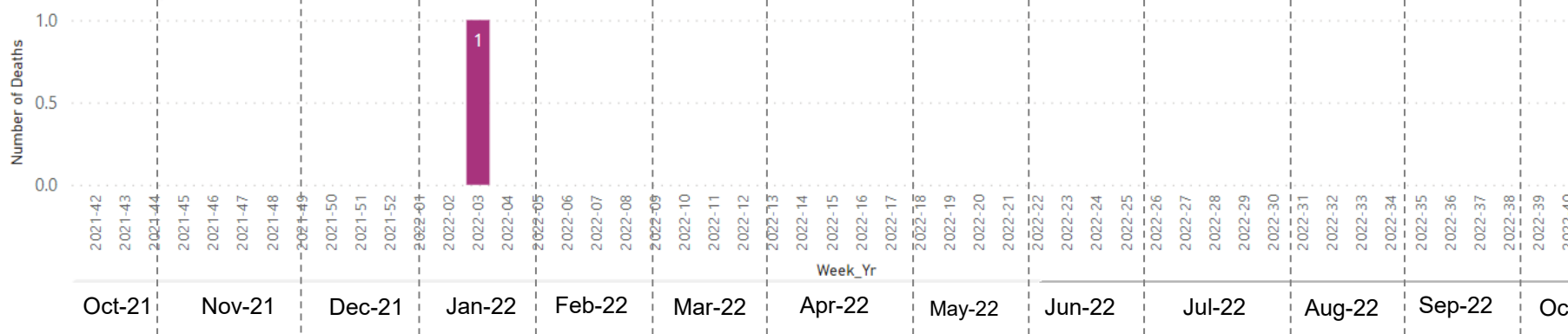


The weekly number of cases among children **decreased 25%** from week 39 to week 40.

New Hospitalizations by Week of Admission



New Deaths by Week of Death



The first COVID-19 associated death in a child occurred in January of 2022. The death was identified as a COVID-19 associated death in June of 2022, after the death certificate was completed.

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

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

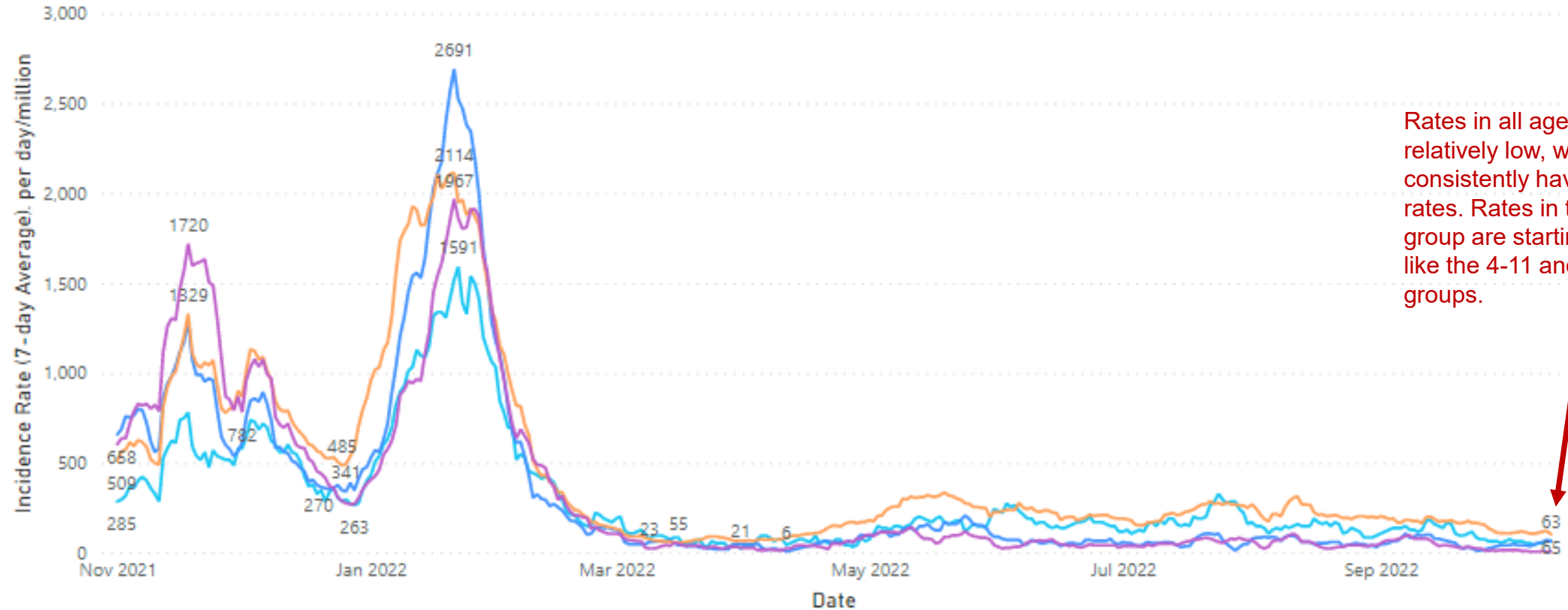
Data as of October 14, 2022

Ottawa County – Case Rate Trends by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – October 12, 2022

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



Rates in all age groups remain relatively low, with adults 18+ consistently having the highest rates. Rates in the 0-3 age group are starting to stabilize like the 4-11 and 12-17 age groups.

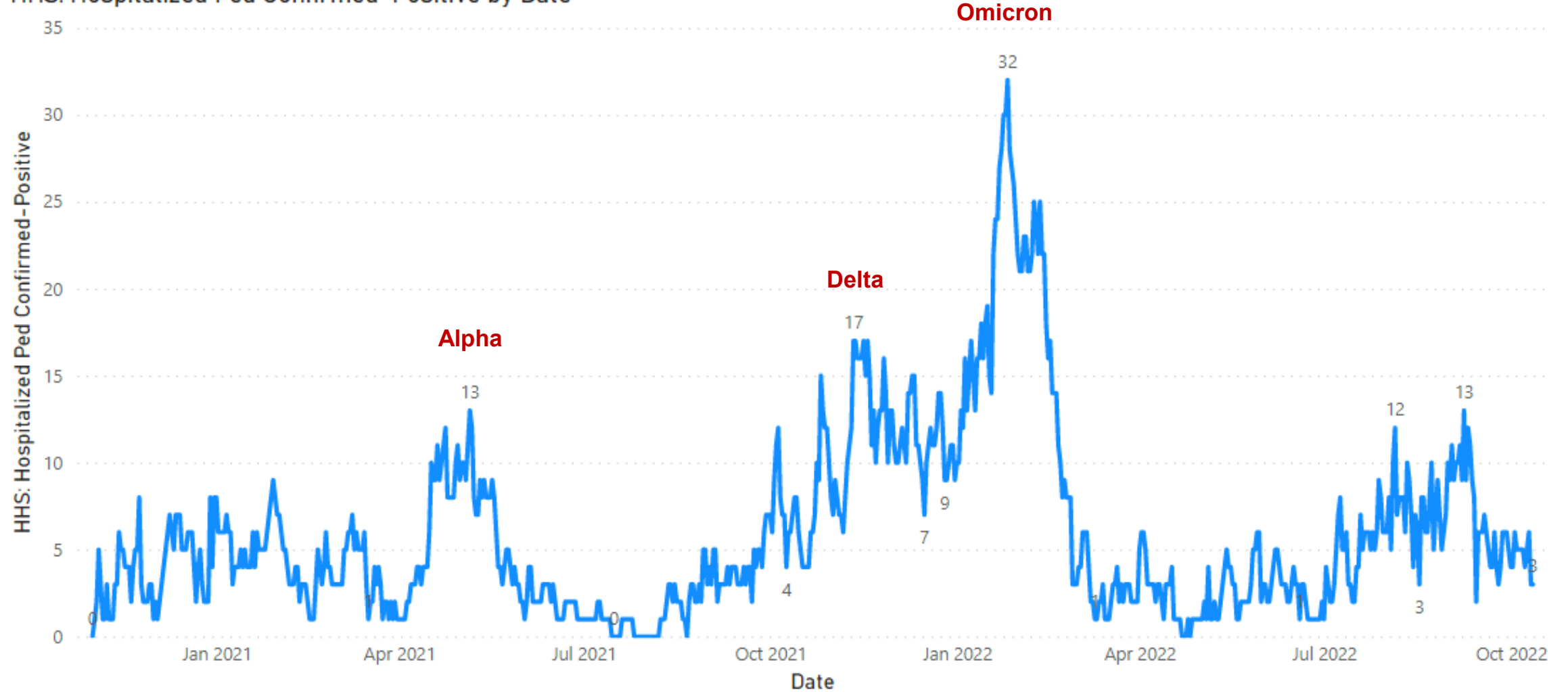
Data as of October 12, 2022

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

Daily Hospital Pediatric Census – West Michigan

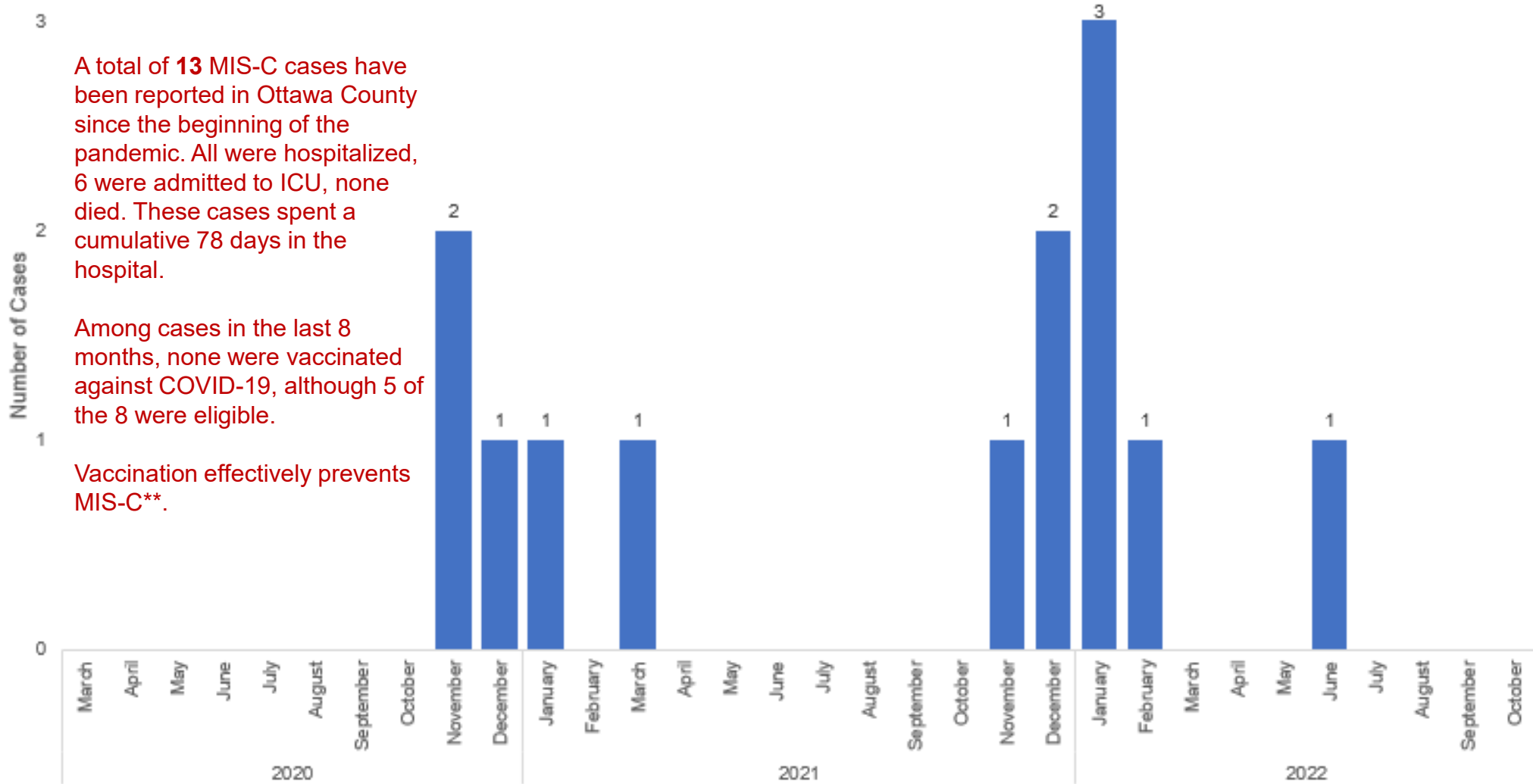
HHS: Hospitalized Ped Confirmed-Positive by Date



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 October 12, 2022

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. All were hospitalized, 6 were admitted to ICU, none died. These cases spent a cumulative 78 days in the hospital.

Among cases in the last 8 months, none were vaccinated against COVID-19, although 5 of the 8 were eligible.

Vaccination effectively prevents MIS-C**.

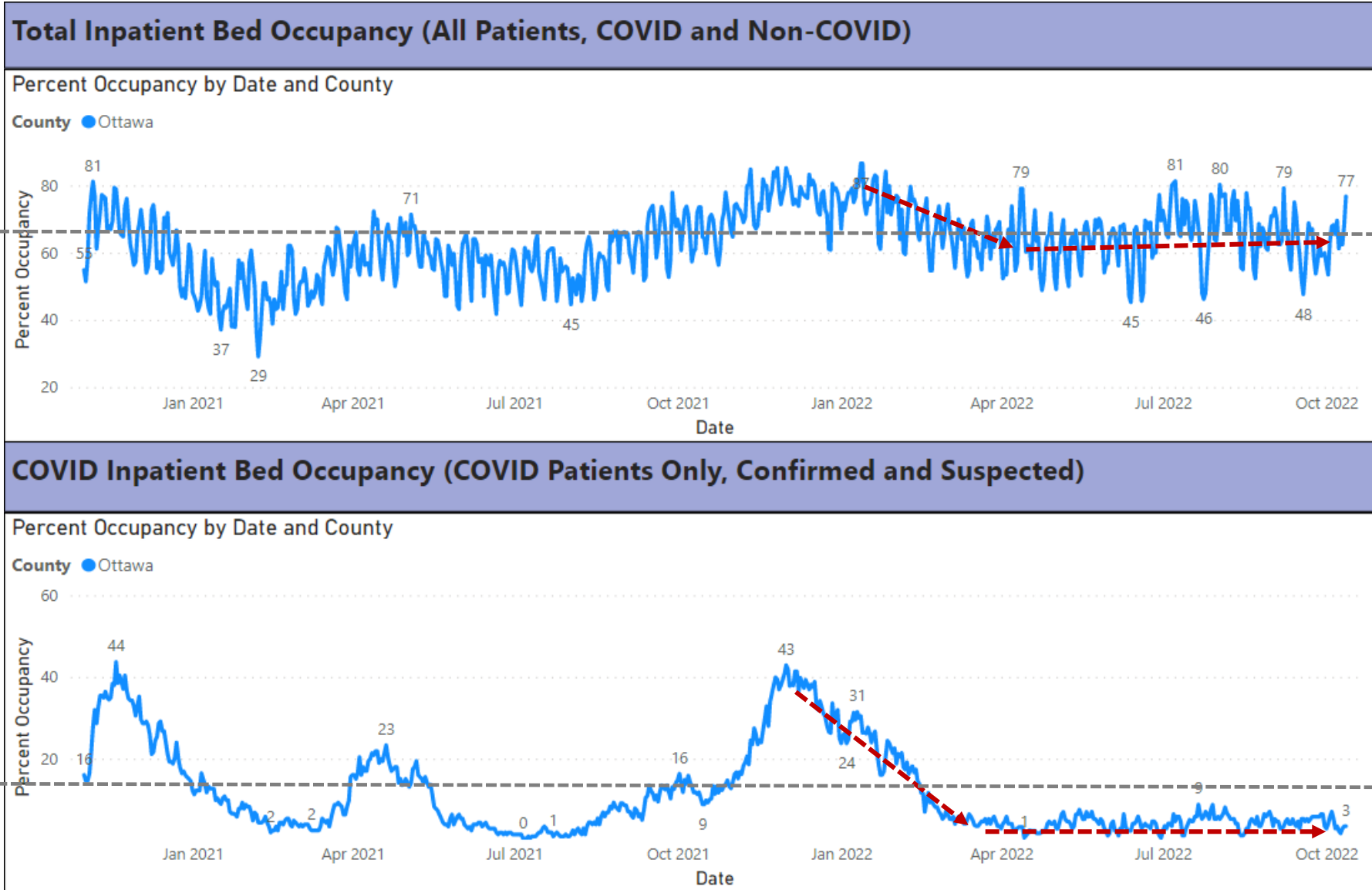
Notes: Includes confirmed and probable cases.

*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 October 13, 2022

Ottawa County Hospital Capacity – All Beds



Pandemic Average

63%

Total hospital bed occupancy is currently above the pandemic average.

12%

Currently 3% of all inpatient beds are occupied by COVID-19 patients.

Source: EMResources

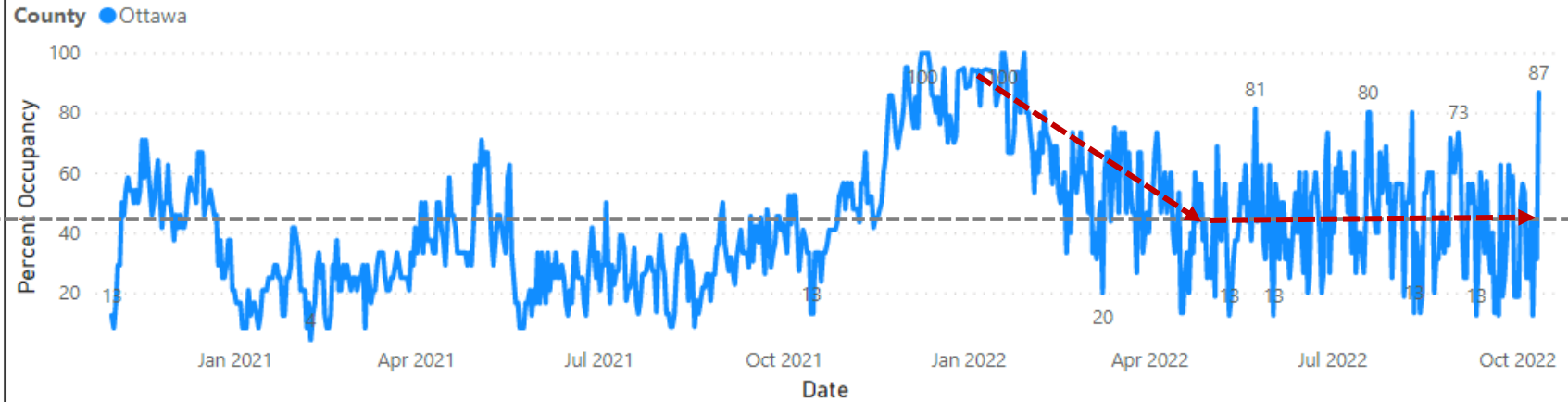
Data through October 12, 2022

Ottawa County Hospital Capacity – ICU Beds

Pandemic Average

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

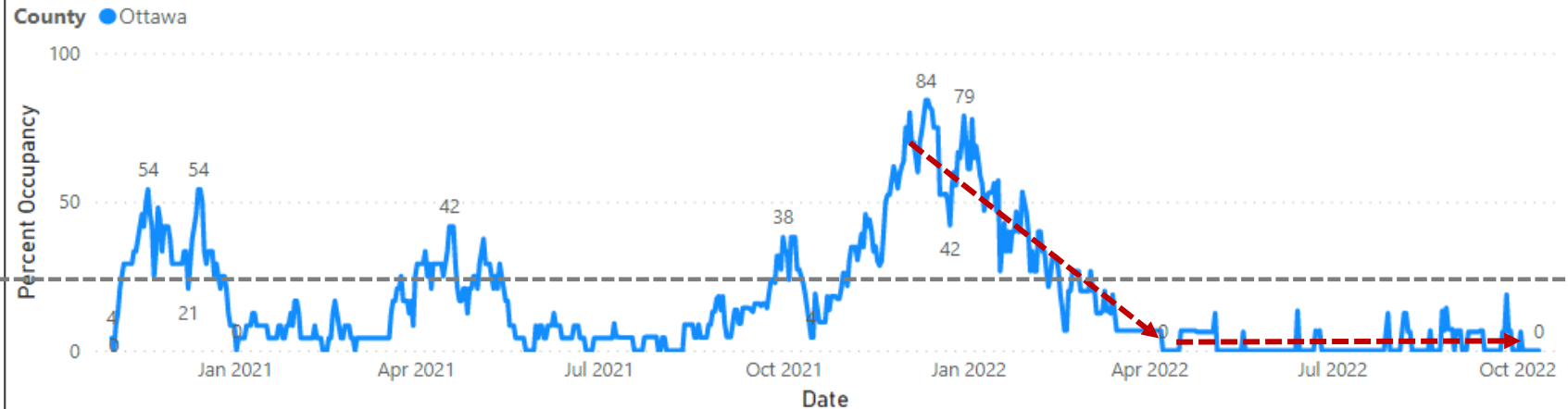
Percent Occupancy by Date and County



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

COVID ICU Bed Occupancy (COVID Patients Only, Confirmed and Suspected)

Percent Occupancy by Date and County

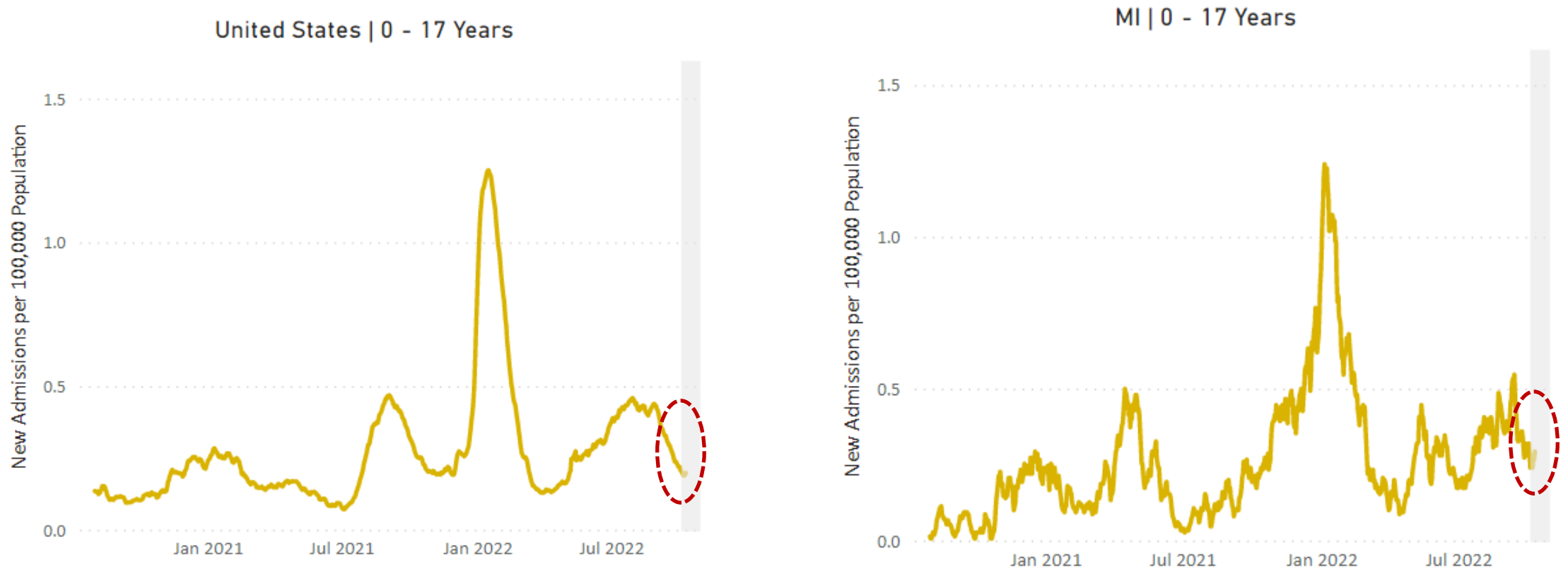


The proportion of ICU beds occupied by COVID-19 patients **is below the pandemic average**. Currently, **there are no** ICU beds occupied by COVID-19 patients.

Source: EMResources

Data through October 12, 2022

Pediatric Hospitalization Rates – USA, Michigan

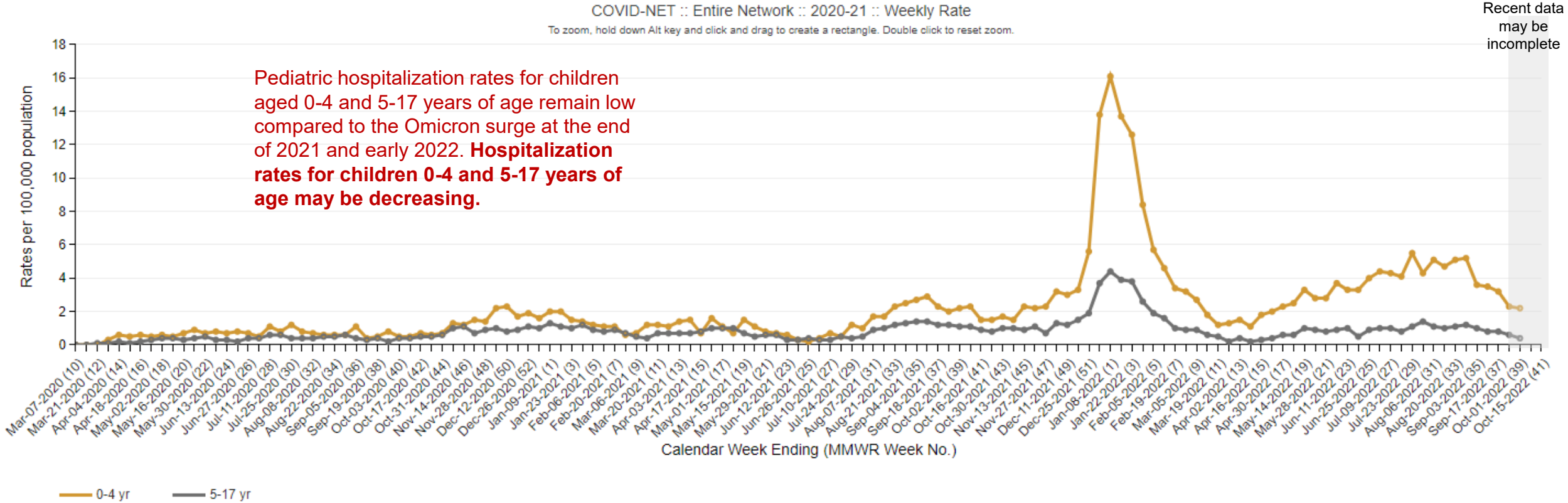


Pediatric hospitalization rates across the US and Michigan
are decreasing.

Source: <https://covid.cdc.gov/covid-data-tracker/#new-hospital-admissions>

Accessed October 13, 2022

Pediatric Hospitalization Rates by Age Group – USA



Recent data may be incomplete

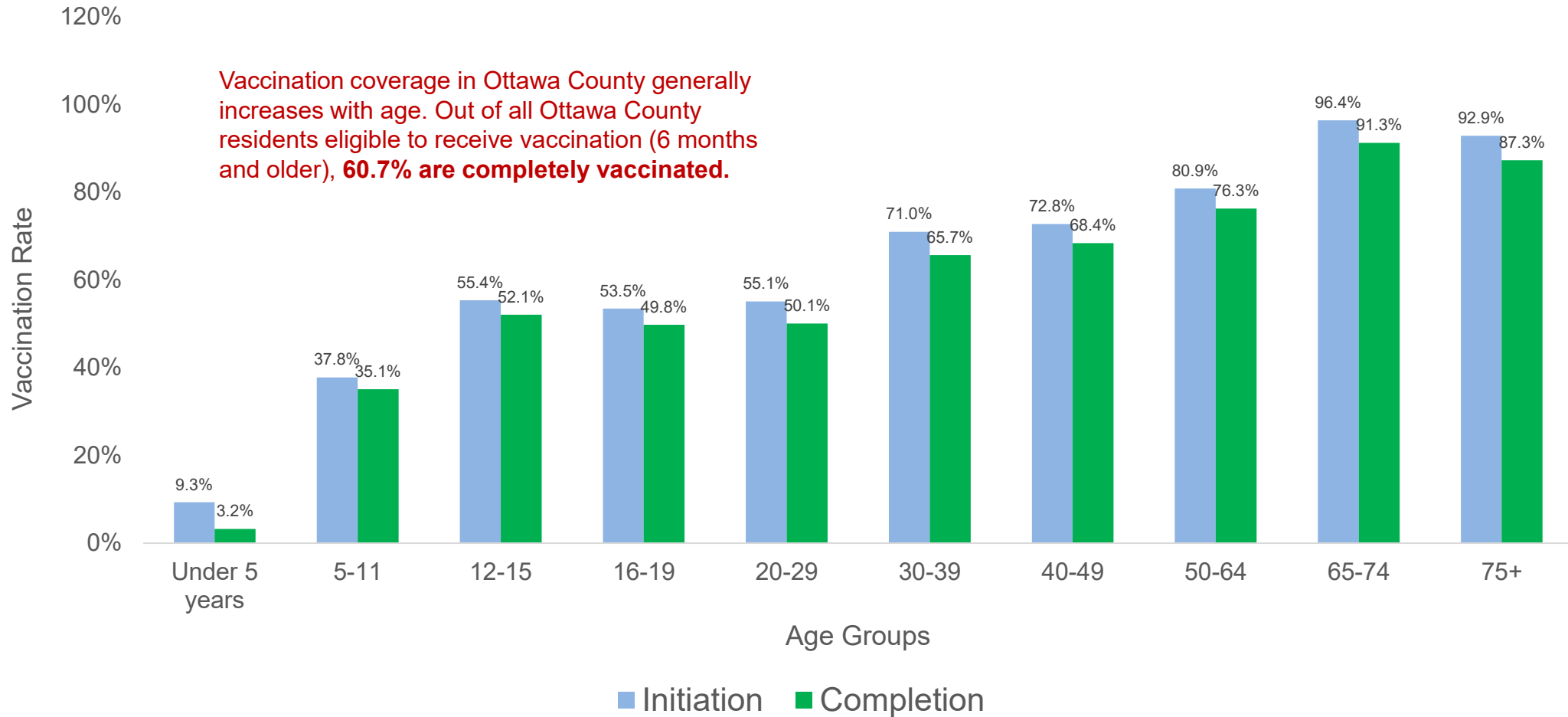
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case identification and reporting might increase around holidays or during periods of increased hospital utilization. As data are received each week, prior case counts and rates are updated accordingly. COVID-NET conducts population-based surveillance for laboratory-confirmed COVID-19-associated hospitalizations in children (less than 18 years of age) and adults. COVID-NET covers nearly 100 counties in the 10 Emerging Infections Program (EIP) states (CA, CO, CT, GA, MD, MN, NM, NY, OR, TN) and four Influenza Hospitalization Surveillance Project (IHSP) states (IA, MI, OH, and UT). Incidence rates (per 100,000 population) are calculated using the National Center for Health Statistics' (NCHS) vintage 2020 bridged-race postcensal population estimates for the counties included in the surveillance catchment area. The rates provided are likely to be underestimated as COVID-19 hospitalizations might be missed due to test availability and provider or facility testing practices.

Starting MMWR week 48, MD data are temporarily removed from weekly rate calculations.

Source: <https://covid.cdc.gov/covid-data-tracker/#covidnet-hospitalization-network>

Accessed October 13, 2022

Vaccination Coverage by Age



Notes:
Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J.

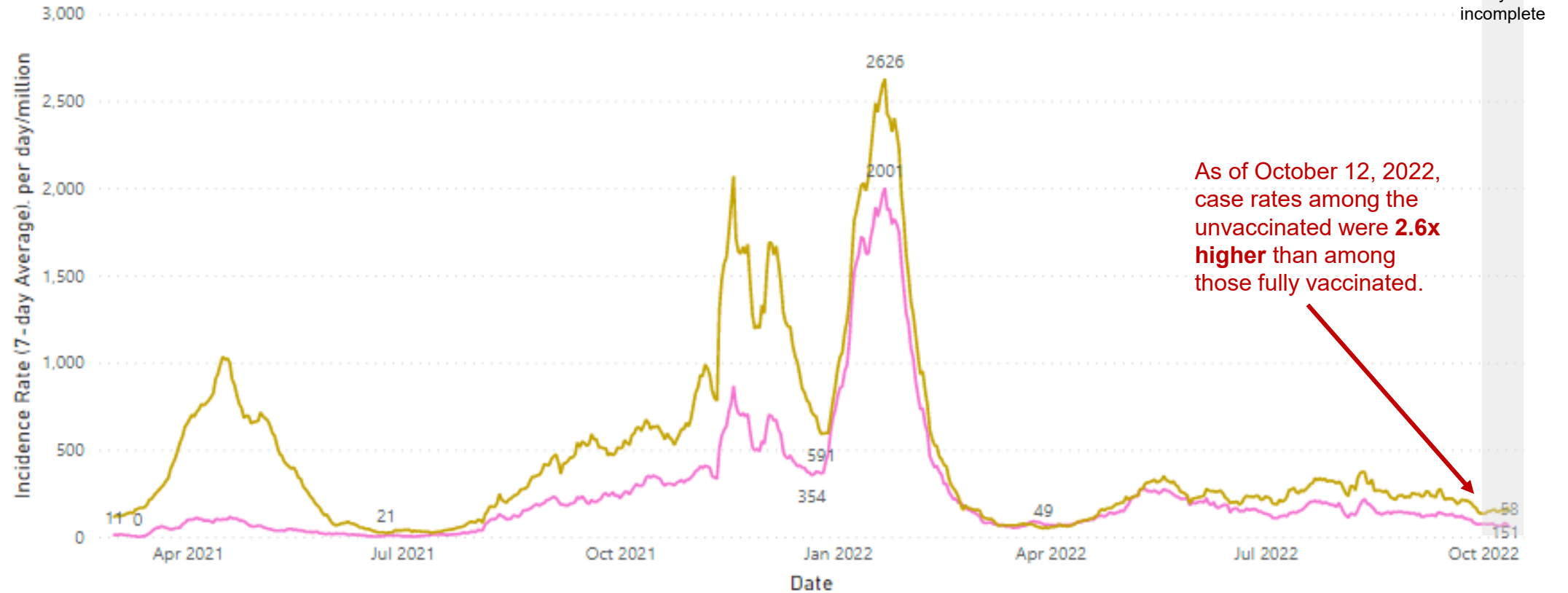
Source: <https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard>

Data through October 12, 2022

Ottawa County – COVID-19 Vaccination Breakthrough Case Trends

Incidence Rate (7-day Average)

rategroup ● Fully Vaccinated ● Unvaccinated



As of October 12, 2022, case rates among the unvaccinated were **2.6x higher** than among those fully vaccinated.

Method:

Daily case counts were obtained from the MDSS and summarized by referral date. Cases were compared to data from the State of Michigan immunization database to confirm COVID-19 vaccination status. Counts of persons completely vaccinated in Ottawa County were compiled from the Michigan COVID-19 vaccination dashboard. The total population denominator was obtained from CDC Wonder; the 2019 population estimate was used. Daily COVID-19 case rates were calculated and averaged over the previous 7 days; a rate of cases per day per million population was used. Cases ineligible for vaccination are included in this data. On December 22, 2021 this figure was updated to compare fully vaccinated and unvaccinated persons, to align more closely with [CDC data](#); partially vaccinated persons were excluded. Fully vaccinated is defined as 2 or more doses of an mRNA vaccination or at least one dose of J&J.

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. Children aged 6 months to 4 years to be included in future reports.

Sources:

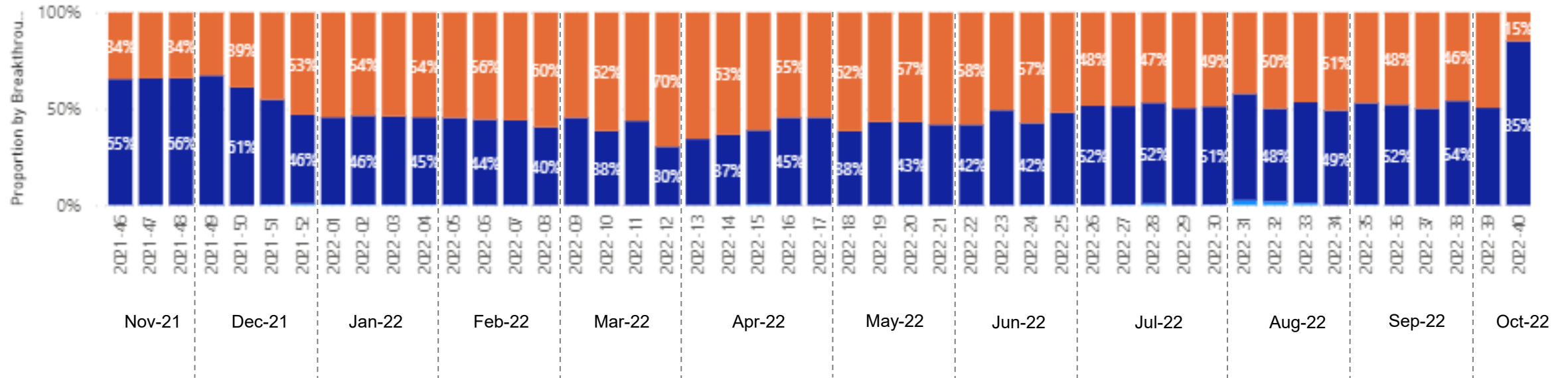
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
 MDHHS COVID-19 Dashboard: <https://www.michigan.gov/coronavirus/stats>

Ottawa County – COVID-19 Vaccination Breakthrough Case Trends

By Week

Breakthrough Proportions by Week

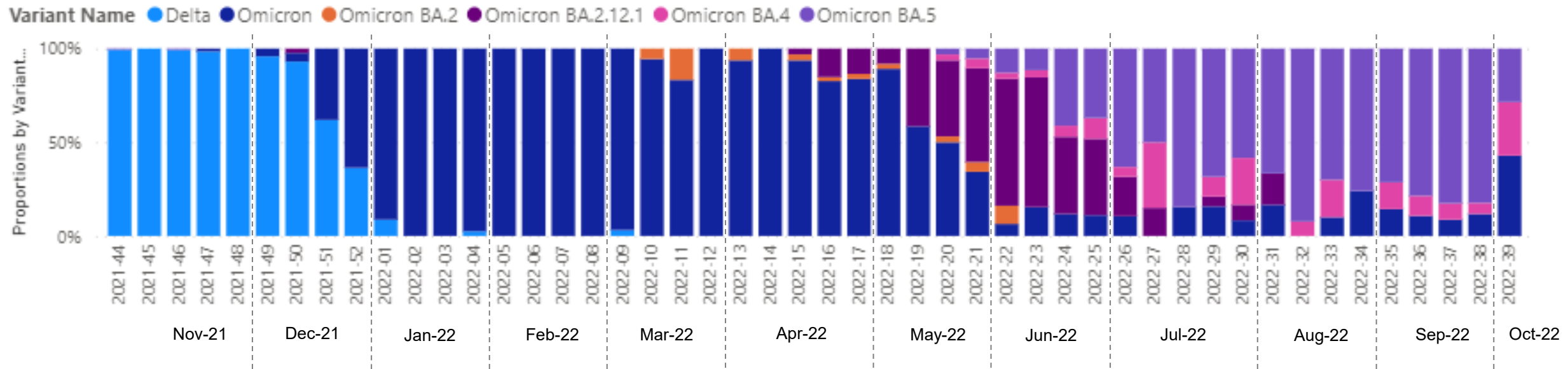
Vaccine_Breakthrough ● NO ● YES



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

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.

In mid-December 2021, the first **Omicron** positive sample was collected in an Ottawa County resident, and **Omicron** continues to be detected into 2022, with more recent additions of the **Omicron subvariants BA.4/5** (first detected in clinical samples in late May 2022).

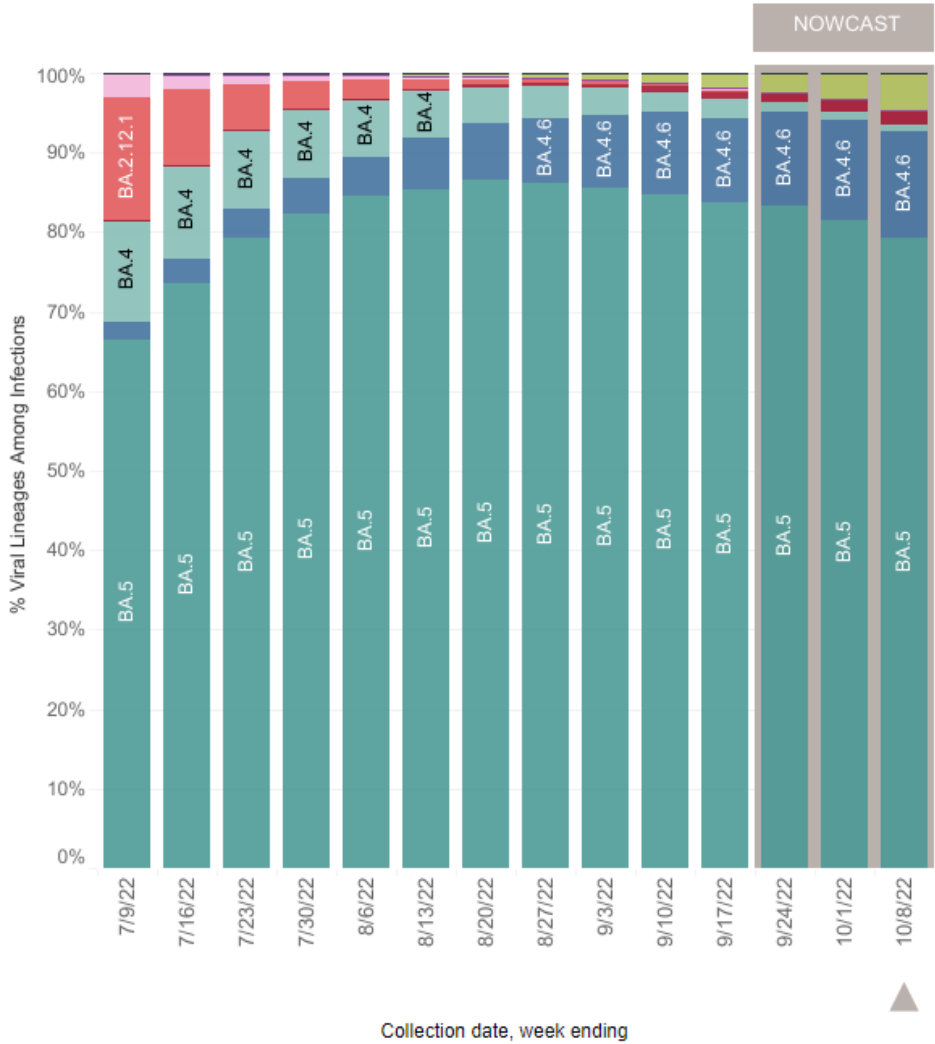
* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants.

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

Variants – Clinical Samples from Across the USA

United States: 7/3/2022 – 10/8/2022

United States: 10/2/2022 – 10/8/2022 NOWCAST



USA				
WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.5	VOC	79.2%	77.5-80.7%
	BA.4.6	VOC	13.6%	12.4-14.9%
	BF.7	VOC	4.6%	3.9-5.4%
	BA.2.75	VOC	1.8%	1.4-2.4%
	BA.4	VOC	0.8%	0.7-0.9%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
	BA.2	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
BA.1.1	VOC	0.0%	0.0-0.0%	
Delta	B.1.617.2	VBM	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 100% of all clinical samples collected in the United States the week ending October 8, 2022.

The BA.5 subvariant currently predominates.

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
 ** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
 # AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. 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 and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, sublineages of BA.5 are aggregated to BA.5. Sublineages of BA.1.1 and BA.2.75 are aggregated to the parental BA.1.1 and BA.2.75 respectively. Previously, BA.2.75 was aggregated with BA.2, and BF.7 was aggregated with BA.5. Lineages BA.4.6, BF.7, and many BA.2.75 contain the spike substitution R346T.

Source: CDC: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

Accessed October 13, 2022

Variants – Wastewater Sampling – Holland/Zeeland

Sample Date	Site	Delta	Omicron
08/08/2022	Zeeland	N	Y
08/10/2022	North Holland	N	Y
08/11/2022	Zeeland	N	Y
08/14/2022	North Holland	N	Y
08/15/2022	Zeeland	N	Y
08/17/2022	North Holland	N	Y
08/18/2022	Zeeland	N	Y
08/21/2022	North Holland	N	Y
08/22/2022	Zeeland	N	Y
08/24/2022	North Holland	N	Y
08/25/2022	Zeeland	N	Y
08/28/2022	North Holland	N	Y
08/29/2022	Zeeland	N	Y
08/31/2022	North Holland	N	Y
09/01/2022	Zeeland	N	Y
09/04/2022	North Holland	N	Y
09/11/2022	North Holland	N	Y
09/12/2022	Zeeland	N	Y
09/21/2022	North Holland	N	Y
09/22/2022	Zeeland	N	Y
09/25/2022	North Holland	N	Y
09/26/2022	Zeeland	N	Y
09/29/2022	Zeeland	N	Y
10/02/2022	North Holland	N	Y
10/03/2022	Zeeland	N	Y

Y = Detected
N = Not Detected

The **Delta** variant was consistently detected in Holland and Zeeland wastewater samples through all of November and December of 2021 (data not displayed here).

The **Omicron** variant, and its subvariants, has consistently been detected in wastewater in Holland and Zeeland since January 2022.

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

COVID-19 Community Levels

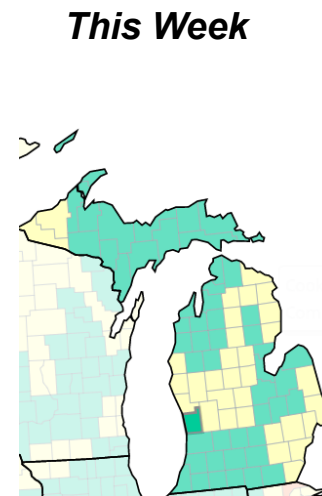
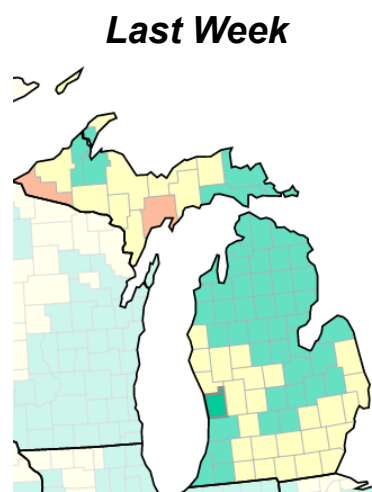
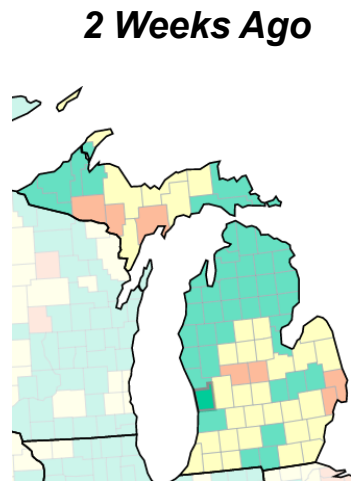
COVID-19 Community Levels – Use the Highest Level that Applies to Your Community				
New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	≥15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	≥10.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%

Note: The COVID-19 community level is determined by the higher of the new admissions and inpatient beds metrics, based on the current level of new cases per 100,000 population in the past 7 days.

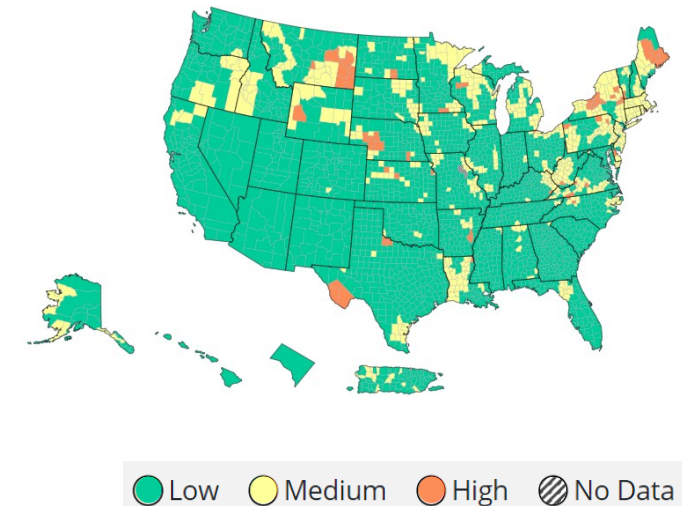
Source: <https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html>

CDC Community Levels – Ottawa County

- Current Community Level in Ottawa – **LOW**
- Michigan CDC Community Levels can now be viewed on the [MI Safe Start Map](#)
- Current Data:
 - Case Rate (per 100k pop 7-day total) = **67.51**
 - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **1.2**
 - COVID-19 Inpatient Hospital Bed Utilization (7-day average) = **3%**



USA - This Week

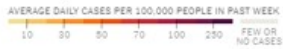


COVID-19 Case Rates by County Across the US

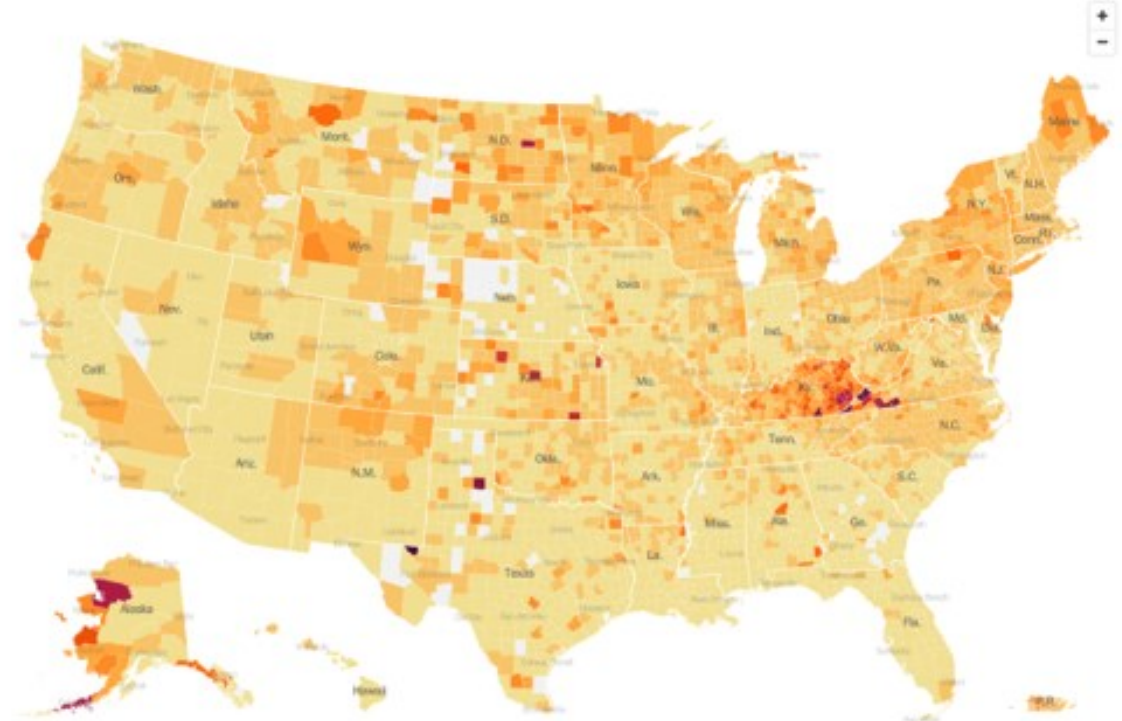
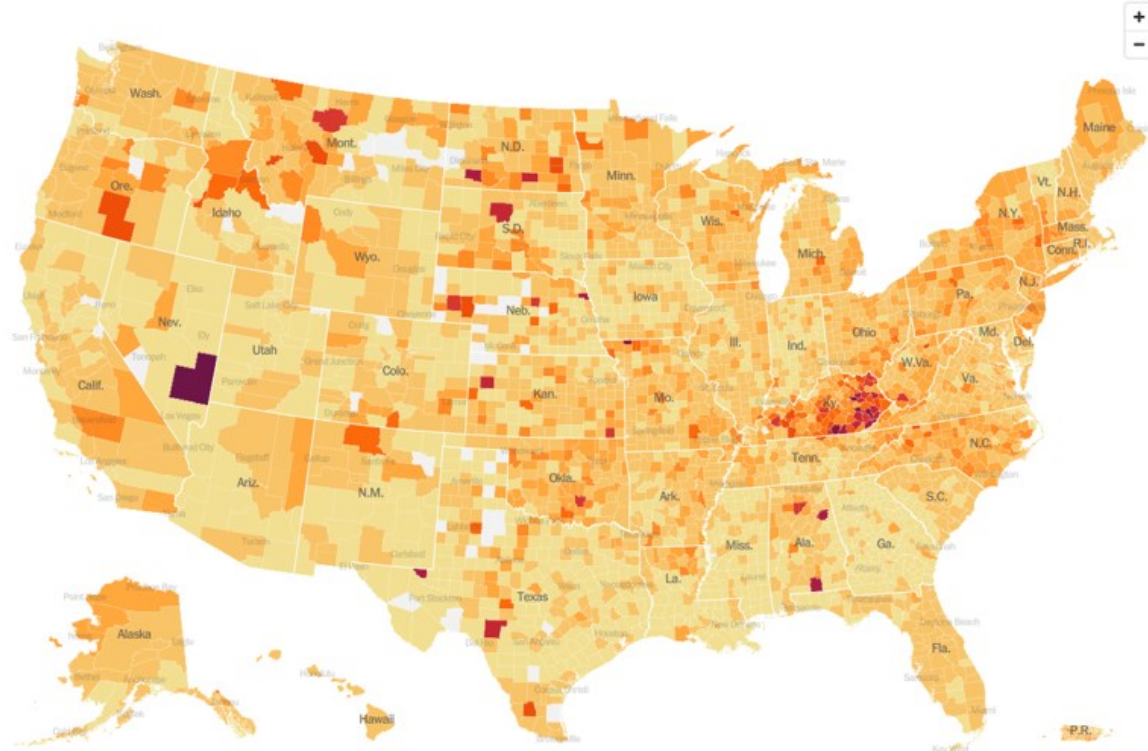
Last Week

This Week

Hot spots



Hot spots



Case rates across the nation
may be improving.

Source: <https://www.nytimes.com/interactive/2021/us/covid-cases.html>

Accessed October 13, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

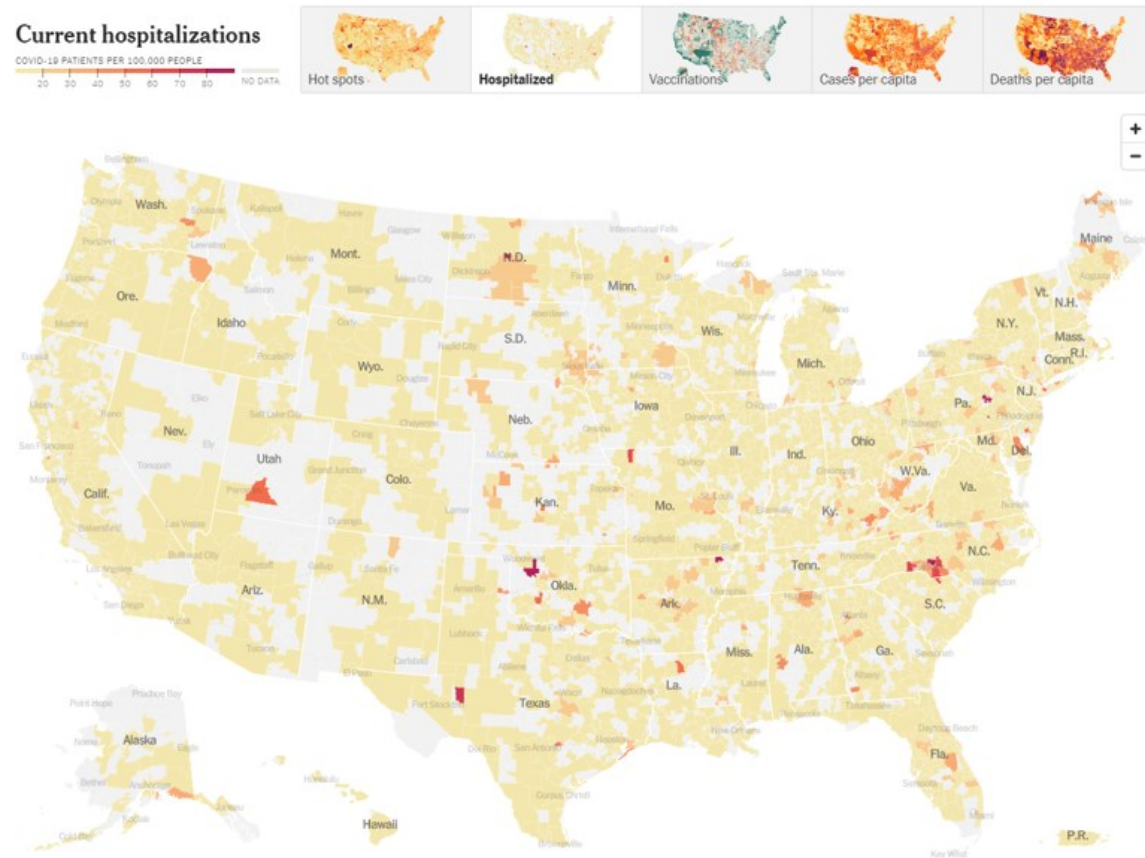
Other

Media

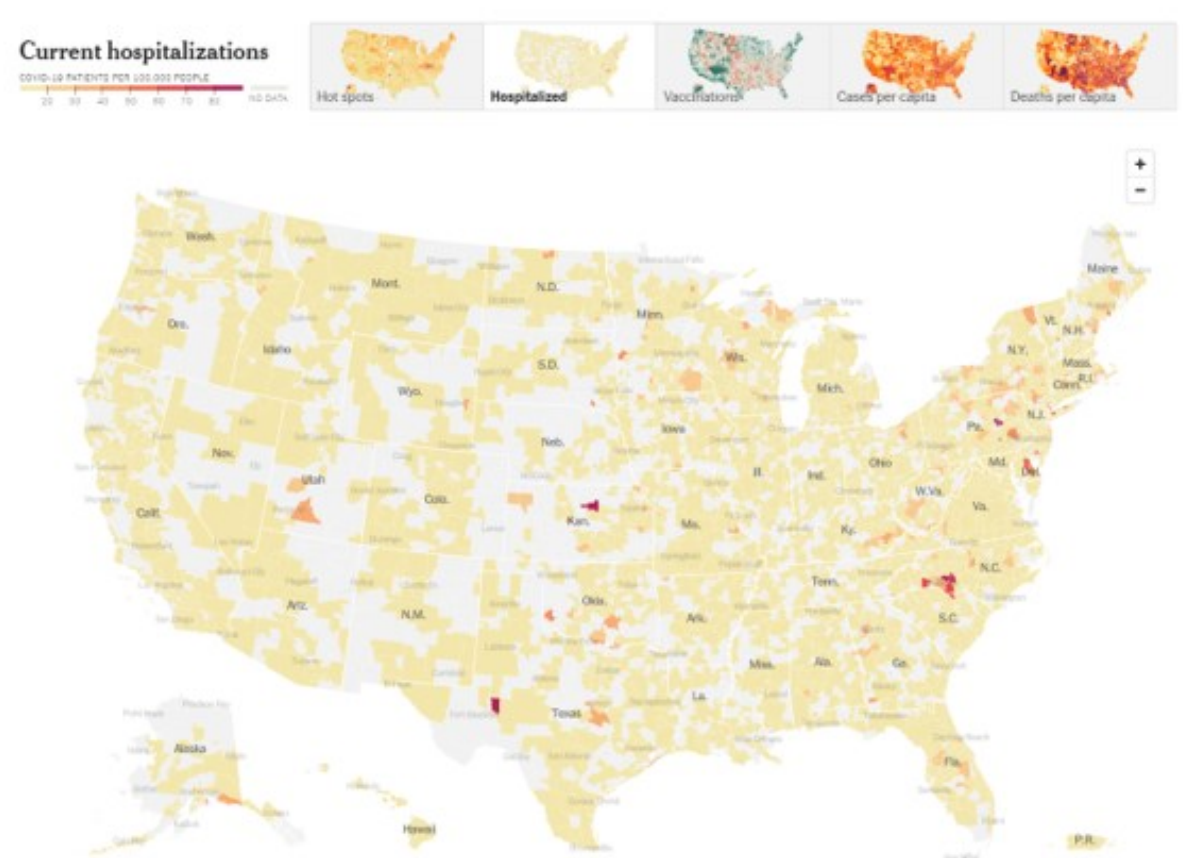
Science
Roundup

COVID-19 Hospitalization Rates by County Across the US

Last Week



This Week



Hospitalization rates remain relatively low across most of the nation.

Source: <https://www.nytimes.com/interactive/2021/us/covid-cases.html>

Accessed October 13, 2022

COVID-19 News Headlines

Michigan reports 12,548 new COVID-19 cases, 152 deaths

[Michigan reports 12,548 new COVID-19 cases, 152 deaths \(freep.com\)](#)

Michigan health providers work to reverse falling childhood vaccination rates in pandemic's wake

[Michigan health providers work to reverse falling childhood vaccination rates in pandemic's wake \(secondwavemedia.com\)](#)

Coronavirus (COVID-19) Update: FDA Authorizes Moderna and Pfizer-BioNTech Bivalent COVID-19 Vaccines for Use as a Booster Dose in Younger Age Groups

[Coronavirus \(COVID-19\) Update: FDA Authorizes Moderna and Pfizer-BioNTech Bivalent COVID-19 Vaccines for Use as a Booster Dose in Younger Age Groups | FDA](#)

U.S. hospitals brace for an unprecedented winter of viruses

[How bad will flu and Covid be this winter? Hospitals brace for rough season. \(nbcnews.com\)](#)

More free COVID tests available for Michigan residents

[More free COVID tests available for Michigan residents | State | grandhaventribune.com](#)

Omicron BA.4.6 subvariant makes up nearly 14% of COVID variants in U.S. - CDC

[Omicron BA.4.6 subvariant makes up nearly 14% of COVID variants in U.S. - CDC | Reuters](#)

Science Roundup

Effectiveness of a Second COVID-19 Vaccine Booster Dose Against Infection, Hospitalization, or Death Among Nursing Home Residents — 19 States, March 29–July 25, 2022

[Effectiveness of a Second COVID-19 Vaccine Booster Dose Against Infection, Hospitalization, or Death Among Nursing Home Residents — 19 States, March 29–July 25, 2022 | MMWR \(cdc.gov\)](#)



This study found that among the study participants, having received a second COVID-19 vaccine booster dose was 74% effective at 60 days against severe COVID-19 related outcomes (including hospitalization or death) and 90% effective against death alone compared with receipt of a single booster dose.

Protective Effect of Previous SARS-CoV-2 Infection against Omicron BA.4 and BA.5 Subvariants

[Protective Effect of Previous SARS-CoV-2 Infection against Omicron BA.4 and BA.5 Subvariants | NEJM](#)



Epidemiologic data shows that a previous SARS-CoV-2 infection of any variant was 35% effective in preventing reinfection with Omicron BA.4 and BA.5 subvariants and a previous Omicron specific infection was 76% effective.

Adverse Childhood Experiences During the COVID-19 Pandemic and Associations with Poor Mental Health and Suicidal Behaviors Among High School Students — Adolescent Behaviors and Experiences Survey, United States, January–June 2021

[MMWR, Adverse Childhood Experiences During the COVID-19 Pandemic and Associations with Poor Mental Health and Suicidal Behaviors Among High School Students — Adolescent Behaviors and Experiences Survey, United States, January–June 2021 \(cdc.gov\)](#)



A study involving data from high school students from U.S. public and private schools between January and June 2021 found that the prevalence of poor current mental health and past-year suicide attempts among adolescents reporting four or more Adverse Childhood Experiences (ACEs) during the COVID-19 pandemic were four and 25 times as high as those without ACEs, respectively. Exposure to specific ACE types (e.g., emotional abuse) were associated with higher prevalence of poor mental health and suicidal behaviors.

Misrepresentation and Nonadherence Regarding COVID-19 Public Health Measures

[Misrepresentation and Nonadherence Regarding COVID-19 Public Health Measures | Public Health | JAMA Network Open | JAMA Network](#)



A national survey completed by more than 1,700 people in the United States found public honesty and compliance were lacking in the first two years of the COVID-19 pandemic. These findings suggest that misrepresentation and nonadherence regarding COVID-19 public health measures constitute a serious public health challenge.