

# Ottawa County COVID-19 Epidemiology

December 22, 2022

*Data as of December 17, 2022, unless otherwise indicated.*

# Executive Summary

- **Weekly reported cases in the US and in Michigan are stable and relatively low**
- **Ottawa County transmission signals are showing possible increases**
  - Last week positivity **increased** to 14.3%, from 13% two weeks ago.
  - Weekly case counts **increased** 28% (+34% two weeks ago), from 248 two weeks ago to 318 last week.
  - Cases among children **increased** 42% (+85% two weeks ago), from 24 two weeks ago to 34 last week.
  - COVID-19 wastewater signals in Ottawa County **are mixed, but all three sites have recently spiked or been elevated**. In Holland/Zeeland the latest signal **declined from a recent spike**; Grand Haven/Spring Lake is **elevated but plateaued**; Allendale's latest signal showed a **decline after a substantial increase**.
  - Based on national data, a variety of Omicron subvariants are likely circulating.
  - Ottawa's CDC Community Level is **LOW**.
  - Ottawa's CDC Transmission Level is **HIGH** as of December 22, 2022.
- **Ottawa-area and regional hospitals have adequate capacity**
  - In Ottawa County, 8% of all available beds and 7% of all ICU beds are occupied by COVID-19 patients.\*
- **Pediatric hospitalization rates in the US are increasing, but remain relatively low in Michigan**
  - Regional COVID-19 pediatric hospitalization census remains low compared to the late 2021 and early 2022 Omicron surge.
  - Regional pediatric bed occupancy and pediatric ICU occupancy have declined, following the recent [decline in RSV activity](#).
- **Of Ottawa County residents aged 6 months and older, 61.5% 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.

# Ottawa County Metrics by Week

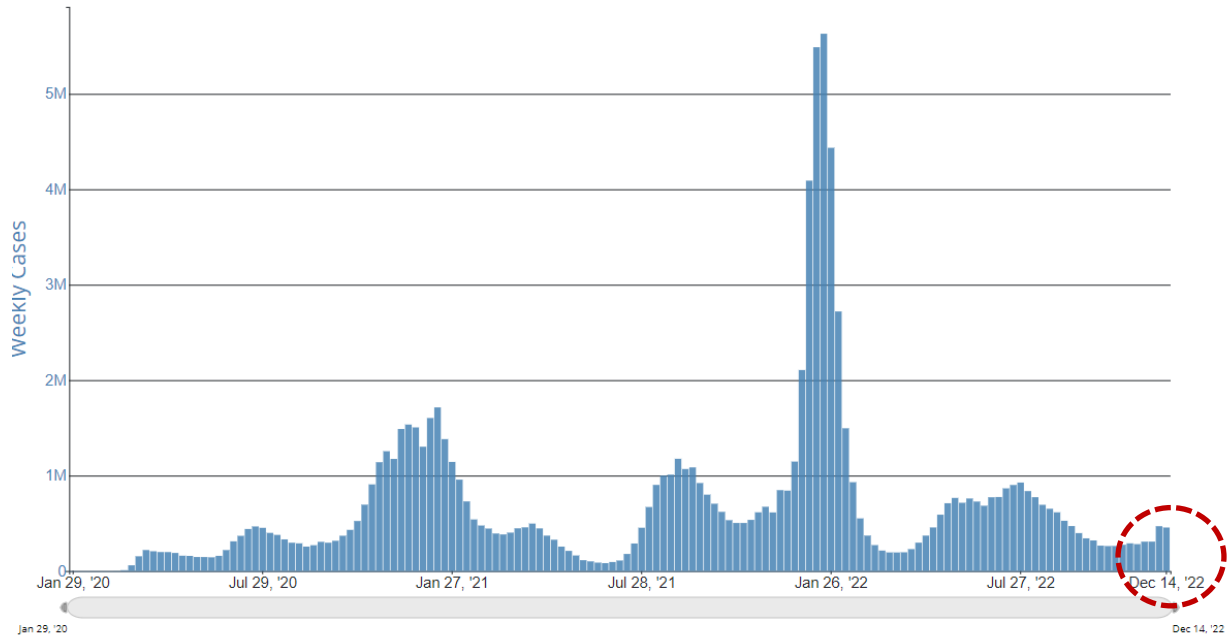
Metric	Goal	Week Ending				
		19-Nov-22	26-Nov-22	3-Dec-22	10-Dec-22	17-Dec-22
Positivity (All Ages)	NA	9.8%	9.6%	11.7%	13.0%	14.3%
Weekly Cases (All Ages)	<592	138	115	185	248	318
Weekly Cases in Children (0-17 years of age)	NA	11	14	13	24	34
Total Deaths (All Ages)	0	5	4	2	3	1
CDC COVID-19 Community Level (New)	Low	Low	Low	Low	Low	Low

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

# Weekly Case Trends in the USA and Michigan

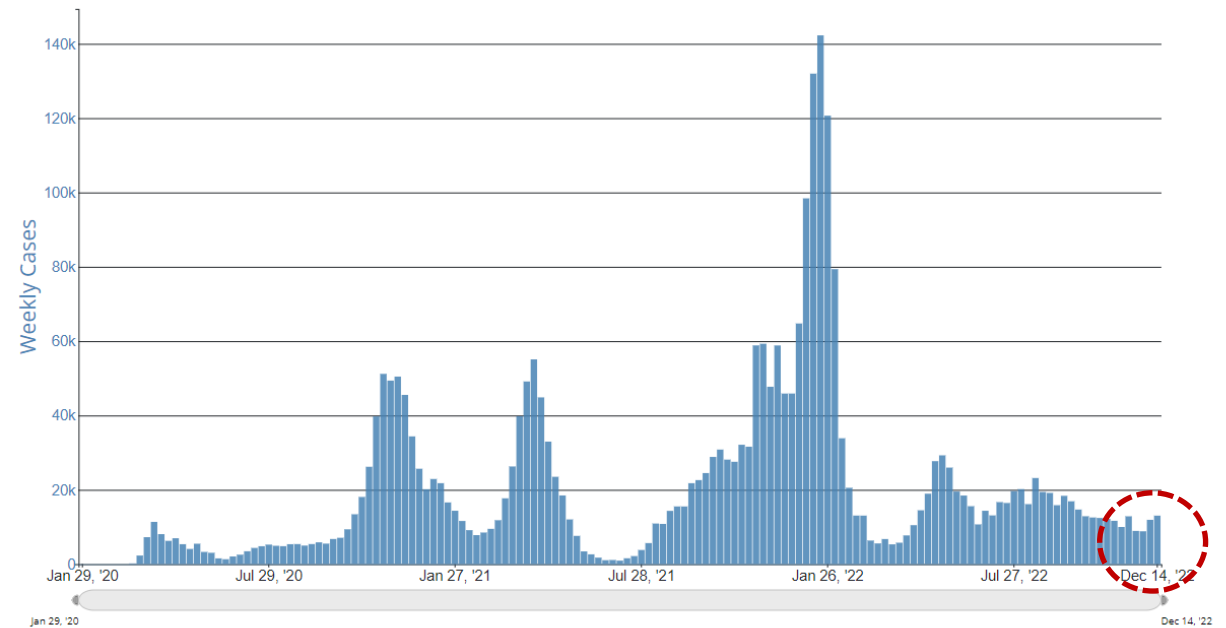
## USA

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



## Michigan

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



Weekly case counts in the US and Michigan remain lower than previous surges and are stable but may be increasing.

**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](https://covid.cdc.gov/covid-data-tracker/#trends_dailycases)

Data through December 14, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

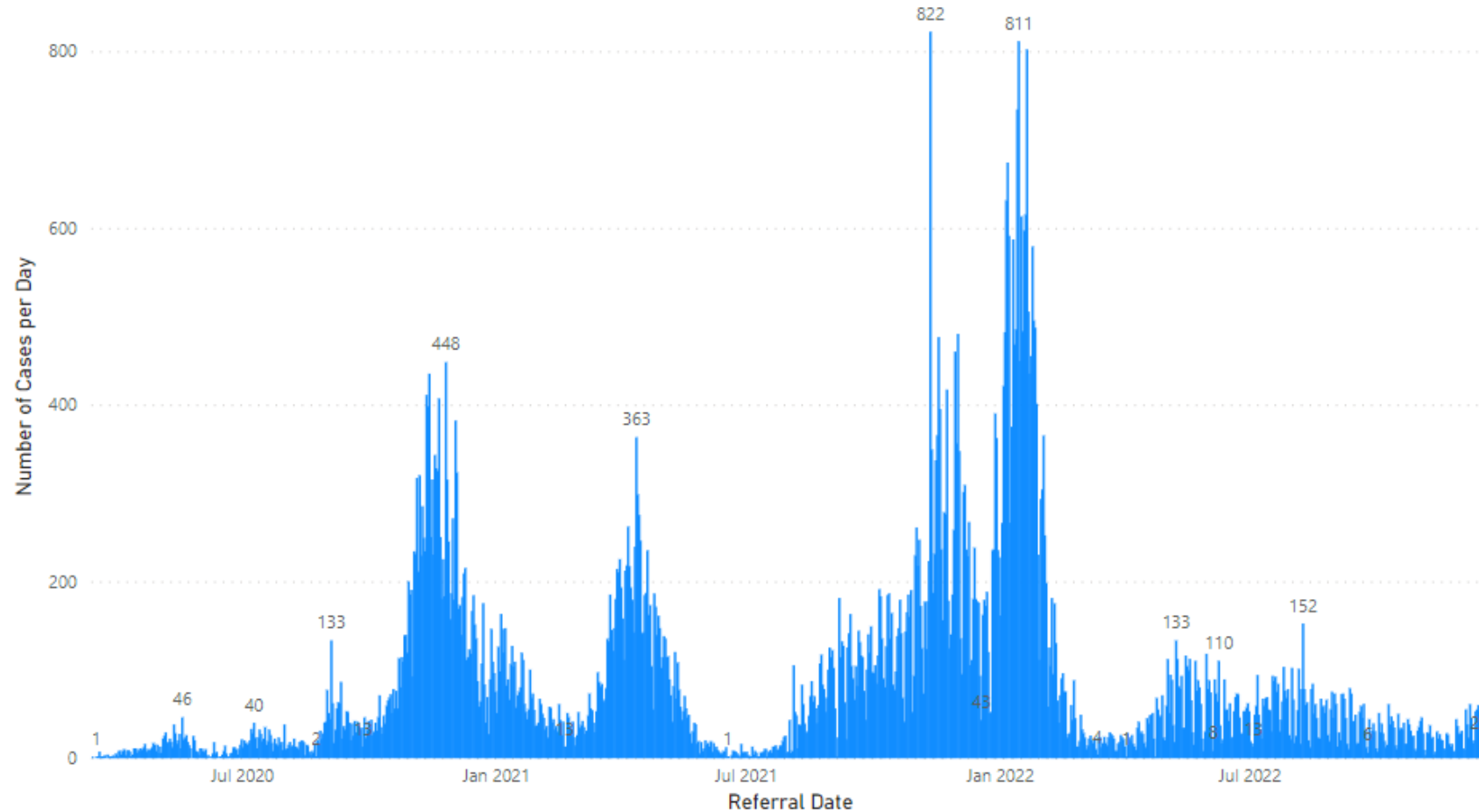
Media

Science  
Roundup

# Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – December 21, 2022

Epidemiological Curve



Total Number of Cases  
**86,370**

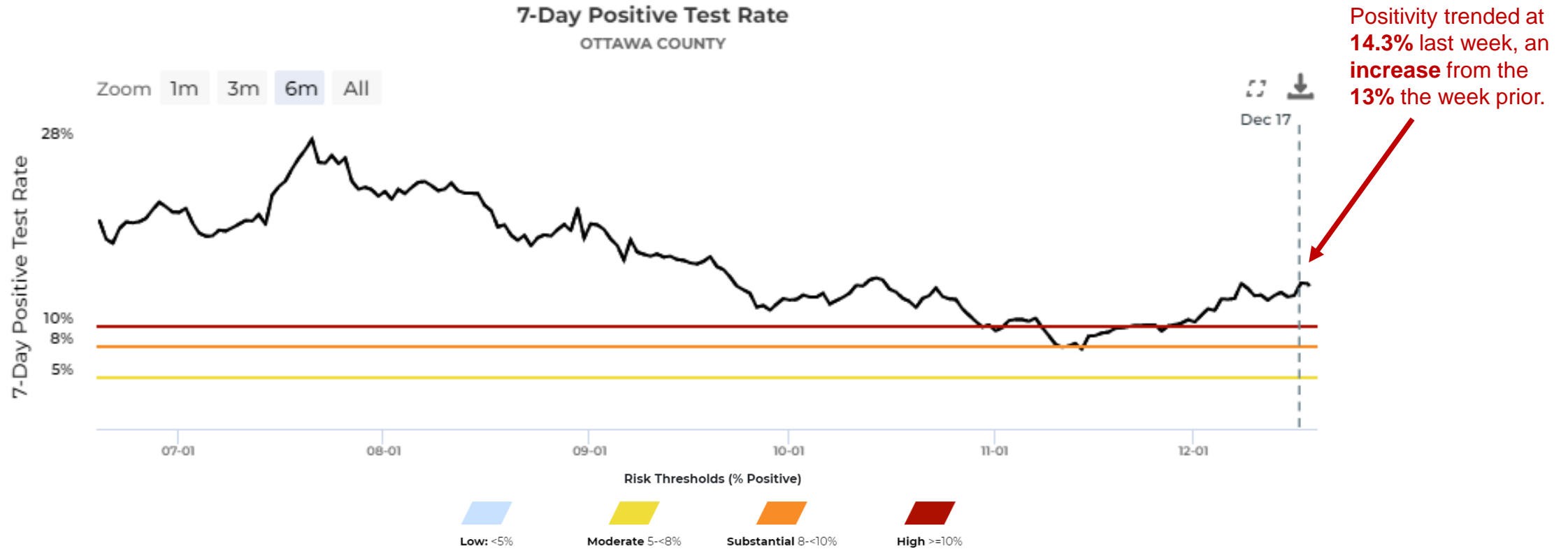
Currently, the 7-day average is approximately **38 cases per day**, an increase from the approximately **26 cases per day** seen two weeks ago.

**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

# Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – December 17, 2022



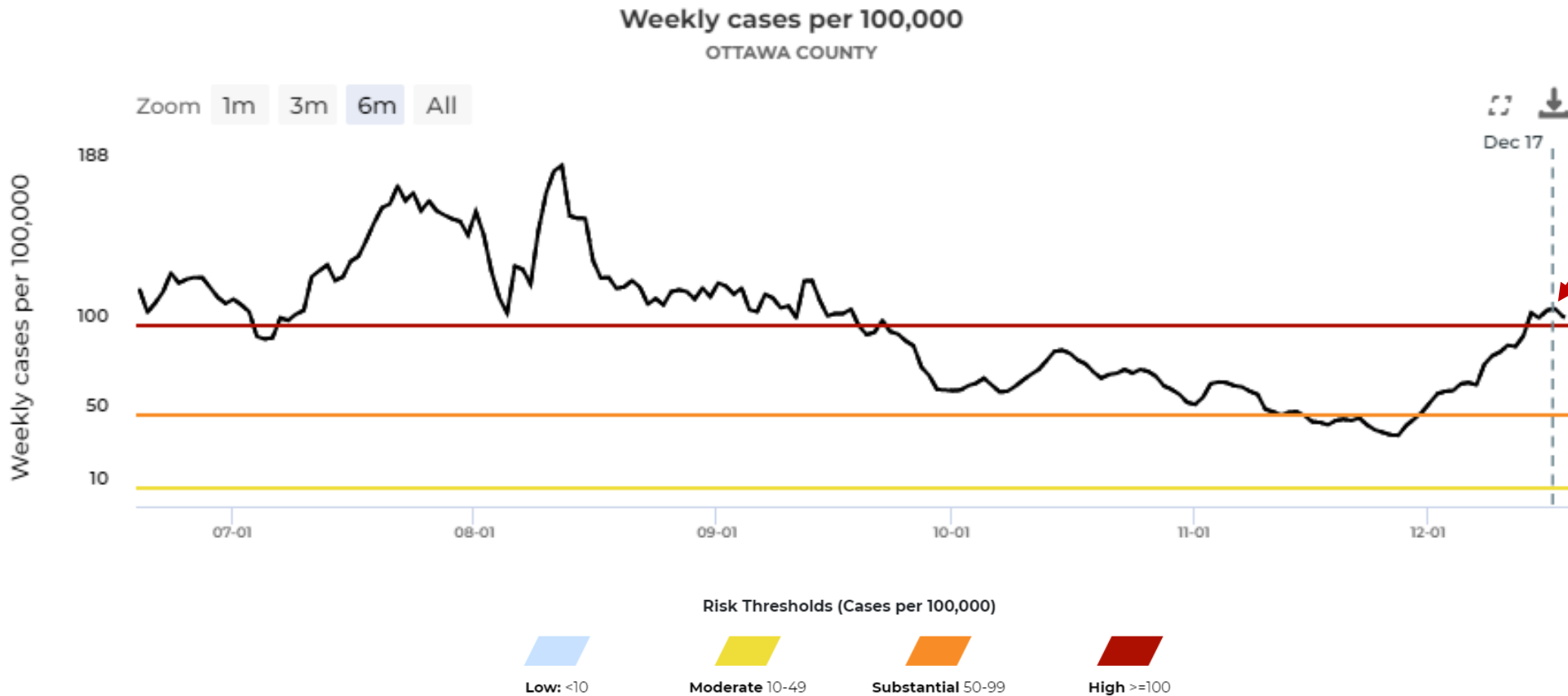
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

**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 – December 17, 2022



Case rates **trended at 109** cases per week per 100,000 population (**higher than the 85** the week prior).

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 are currently lower than this same time last year.

130

..... 2020-21 — 2021-22 — 2022-

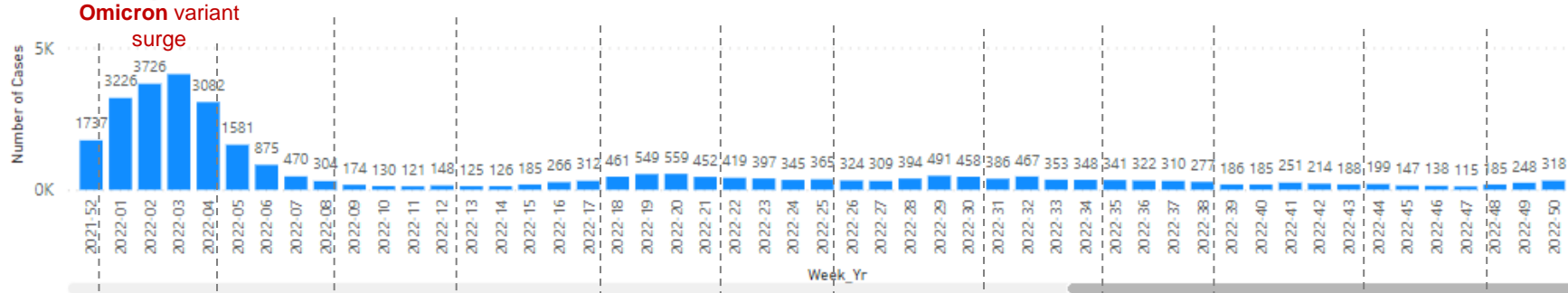
**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower case rates.

**Source:** Internal Data

Data through December 21, 2022

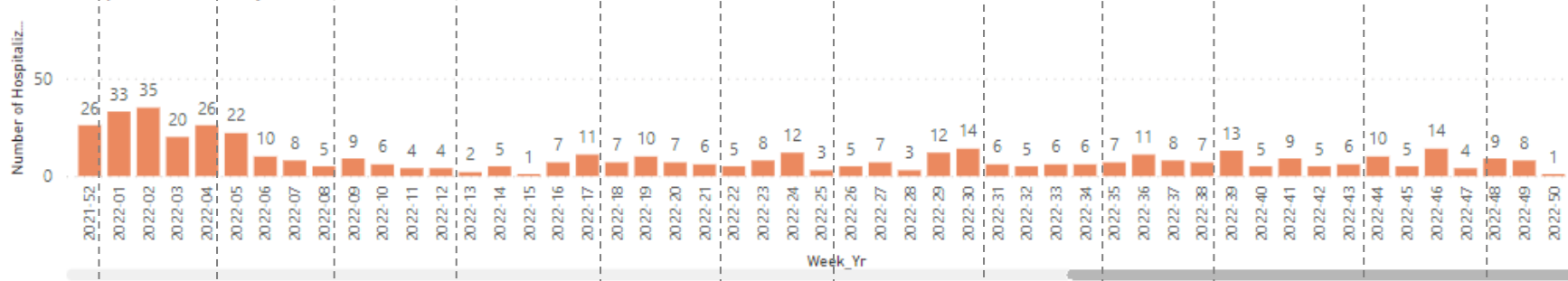
# Ottawa County – Cases, Hospitalizations, & Deaths by Week, All Ages

New Cases By Week of Referral



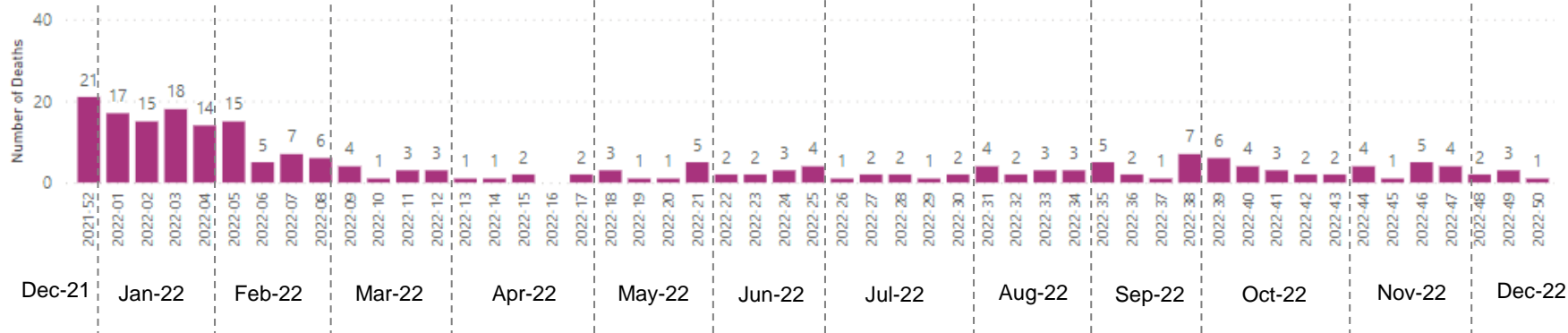
The weekly number of **cases increased 28%** from week 49 to week 50.

New Hospitalizations by Week of Admission



Due to a data delay hospitalization data for week 49 and 50 may be underestimated.

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 **3 deaths per week**.

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.

**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

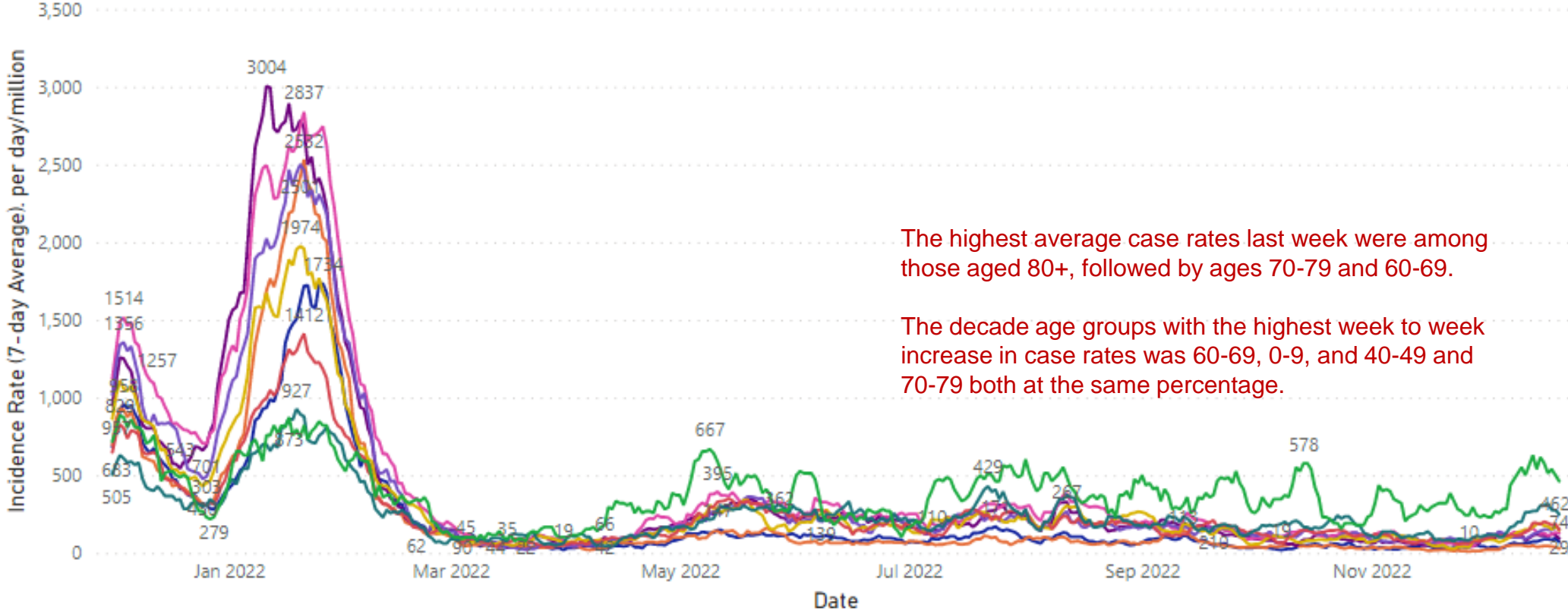
Data as of December 21, 2022

# Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, December 2021 – December 21, 2022

Incidence Rate (7-day Average)

ategroup ● 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 ages 70-79 and 60-69.

The decade age groups with the highest week to week increase in case rates was 60-69, 0-9, and 40-49 and 70-79 both at the same percentage.

**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 December 21, 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 50 (December 11, 2022 – December 17, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	3.3	89.3	54%
10-19	2.0	45.2	-13%
20-29	5.1	113.7	3%
30-39	4.6	127.5	7%
40-49	5.0	150.6	52%
50-59	6.1	176.0	30%
60-69	6.6	201.6	77%
70-79	6.3	304.7	52%
80+	6.4	577.6	13%

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

1. 80+
2. 70-79
3. 60-69

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

1. 60-69
2. 0-9
3. 40-49, 70-79

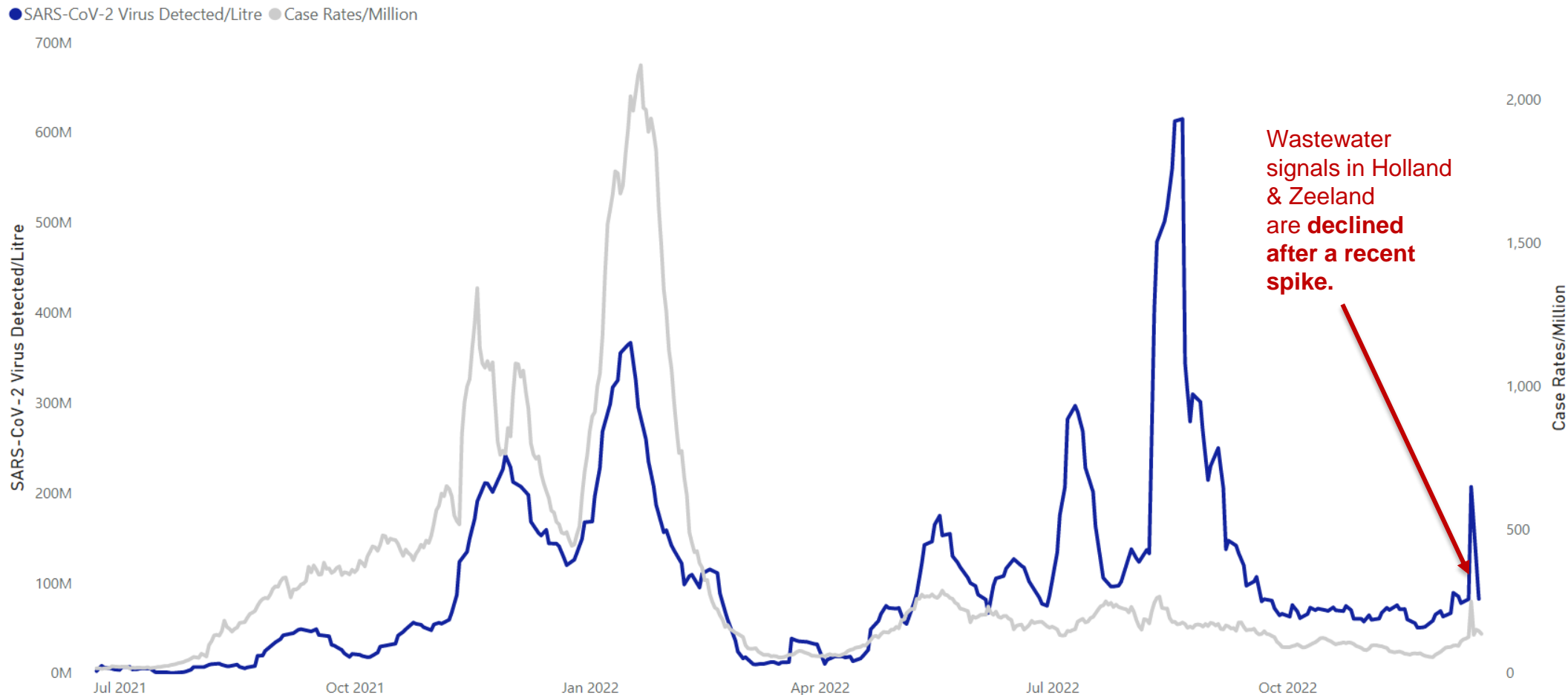
**Notes:** Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially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

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

Data as of December 21, 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](mailto:best@hope.edu))

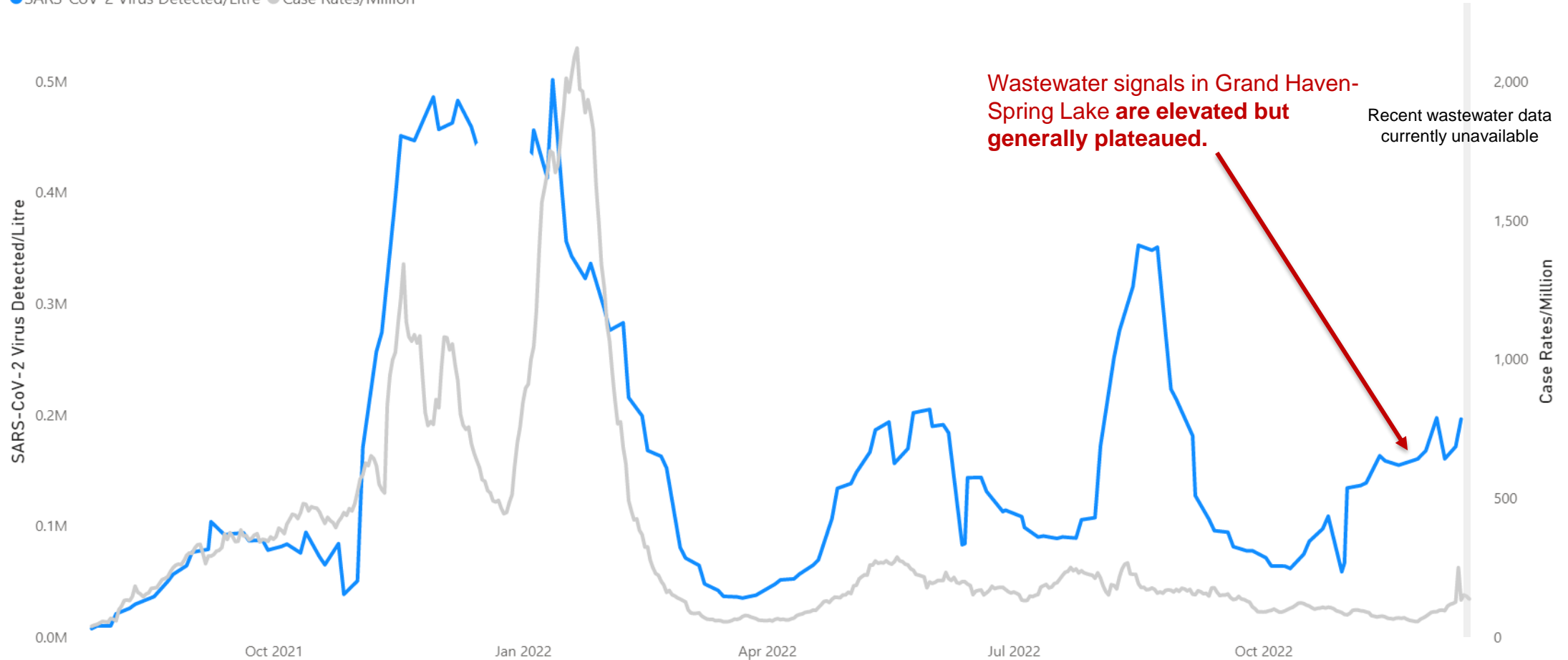
**Additional Information:** [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Data through December 15, 2022

# 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



Wastewater signals in Grand Haven-Spring Lake are elevated but generally plateaued.

Recent wastewater data currently unavailable

**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. ([rediske@gvsu.edu](mailto:rediske@gvsu.edu))

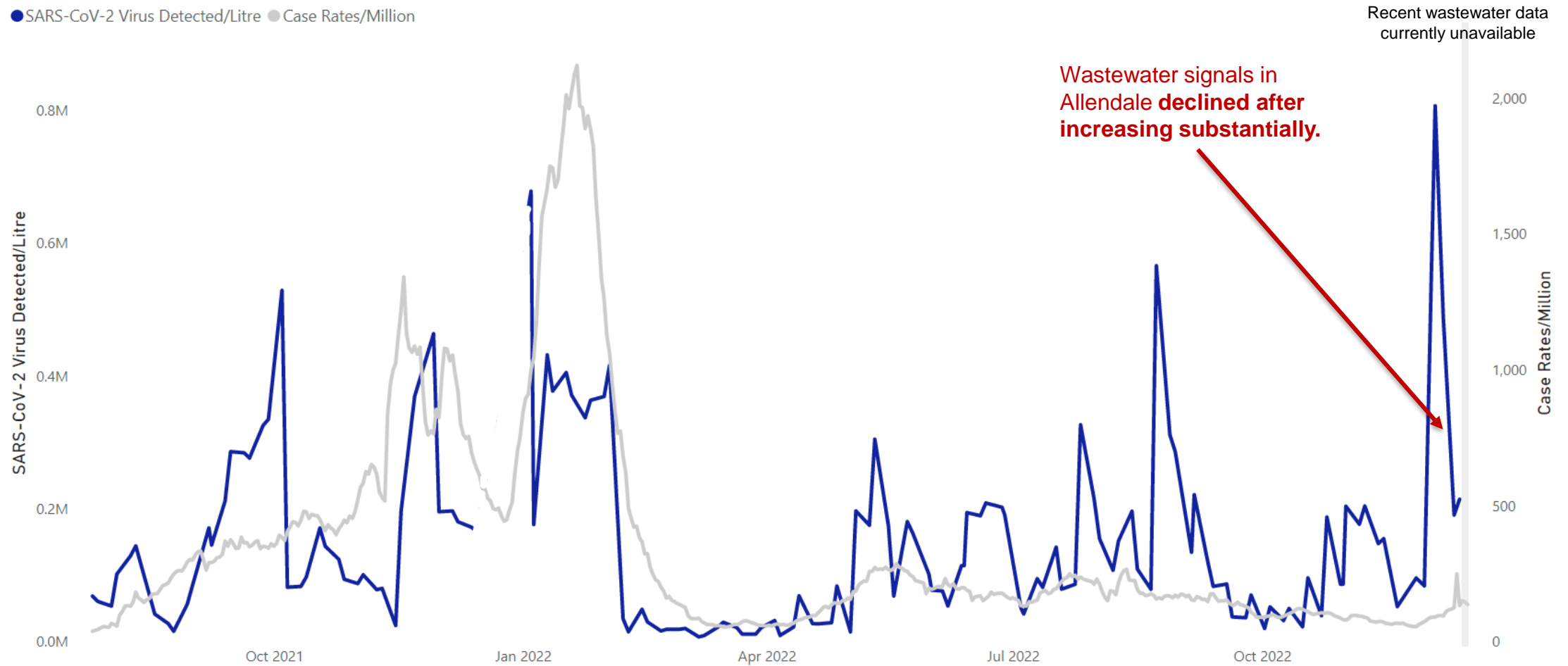
**Additional Information:** [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Data through December 13, 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)

● 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 December 13, 2022



# 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
8-Oct-22	172	1%	13	-19%	185	-1%
15-Oct-22	226	31%	25	92%	251	36%
22-Oct-22	191	-15%	23	-8%	214	-15%
29-Oct-22	171	-10%	17	-26%	188	-12%
5-Nov-22	183	7%	16	-6%	199	6%
12-Nov-22	135	-26%	12	-25%	147	-26%
19-Nov-22	127	-6%	11	-8%	138	-6%
26-Nov-22	101	-20%	14	27%	115	-17%
3-Dec-22	172	70%	13	-7%	185	61%
10-Dec-22	224	30%	24	85%	248	34%
17-Dec-22	284	27%	34	42%	318	28%

Weekly case counts among **children increased 42%** last week, and cases in **adults increased 27%**.

Adults

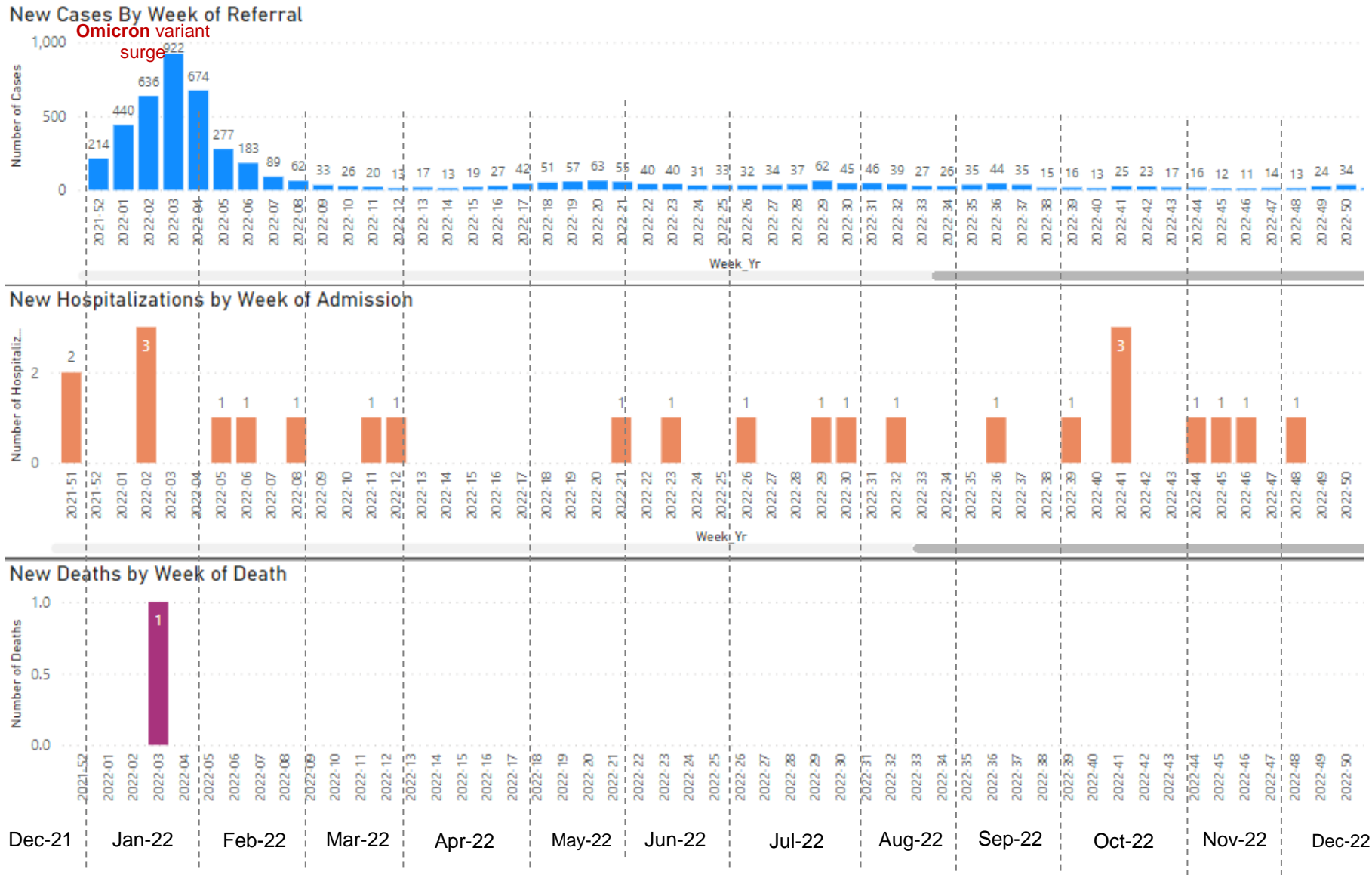
Children

**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)



The weekly number of cases among children **increased 42%** from week 49 to week 50.

Due to a data delay hospitalization data for week 49 and 50 may be underestimated.

The first COVID-19 associated death in a child occurred in January of 2022. The death certificate was completed in June of 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 counts.

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

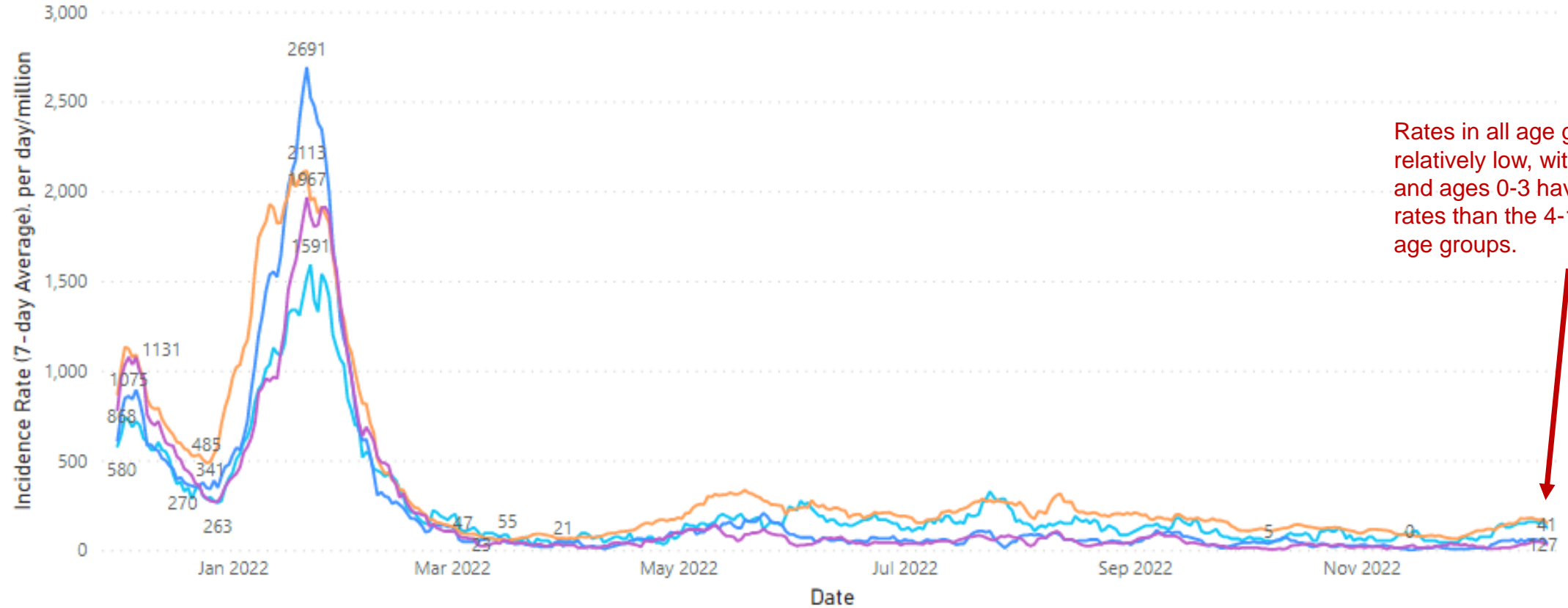
Data as of December 21, 2022

# Ottawa County – Case Rate Trends by Age

COVID-19 Case Rates by Age, includes School-Aged, December 2021 – December 21, 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+ and ages 0-3 having higher rates than the 4-11 and 12-17 age groups.



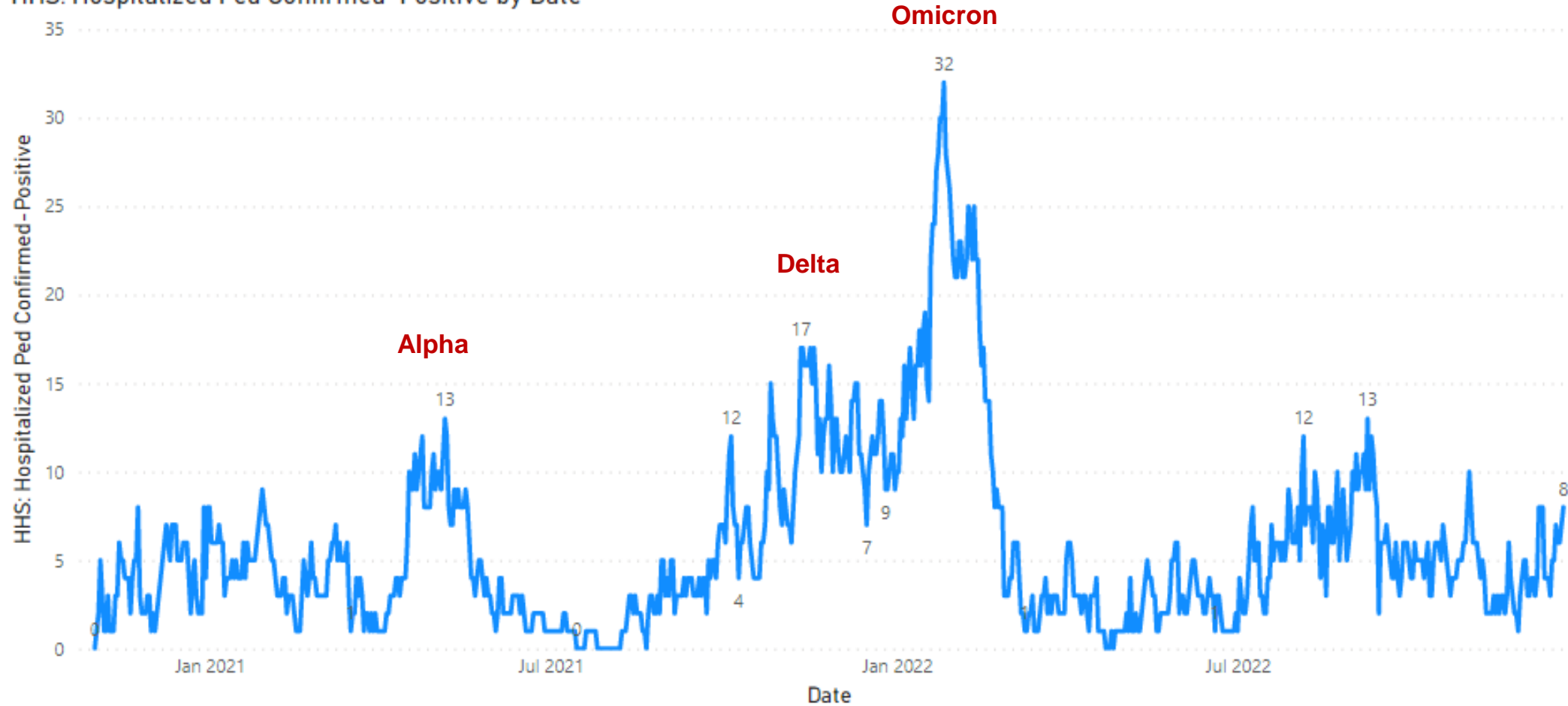
**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

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

Data as of December 21, 2022

# Daily Hospital Pediatric Census – West Michigan

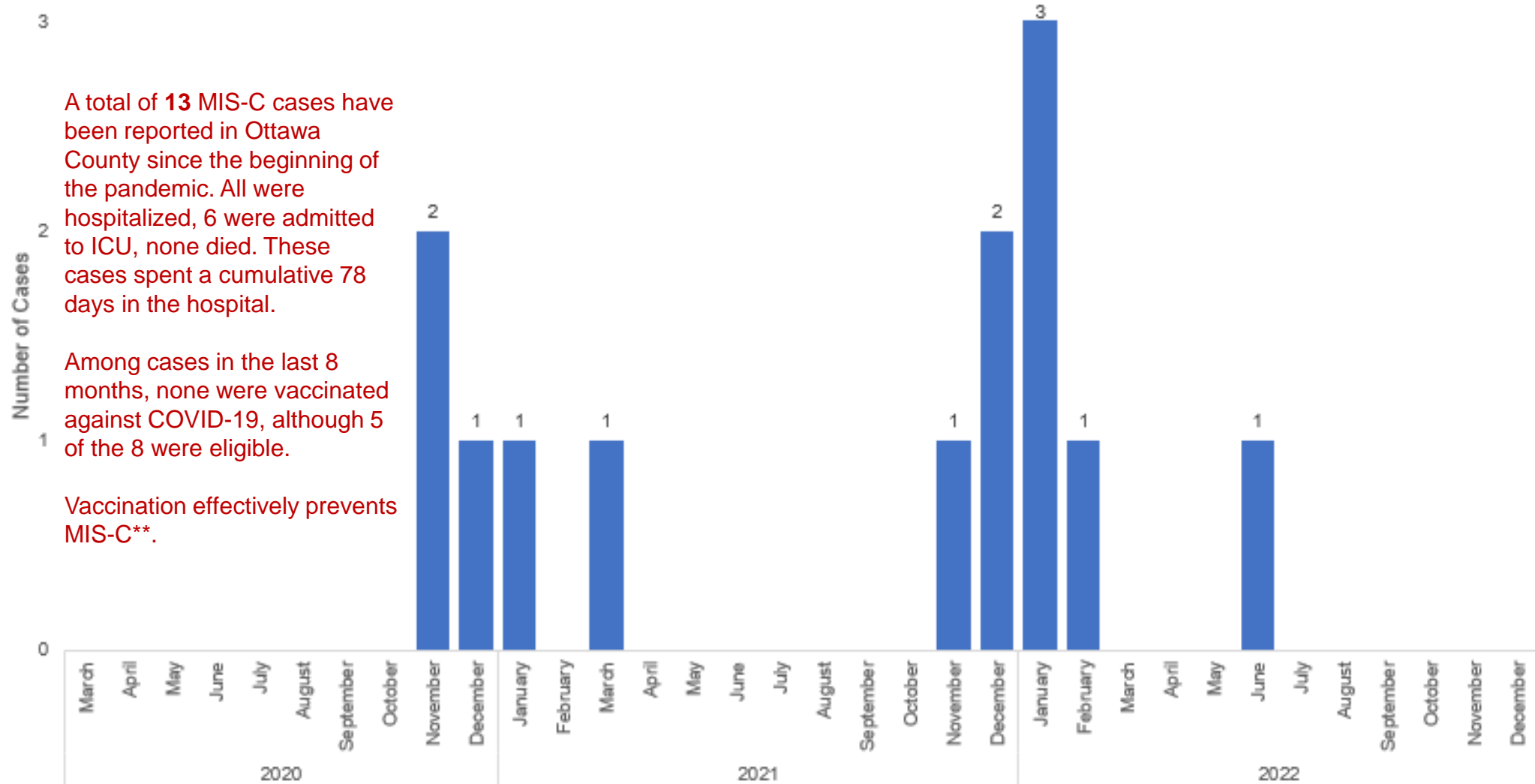
HHS: Hospitalized Ped Confirmed-Positive by Date



**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 December 21, 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>

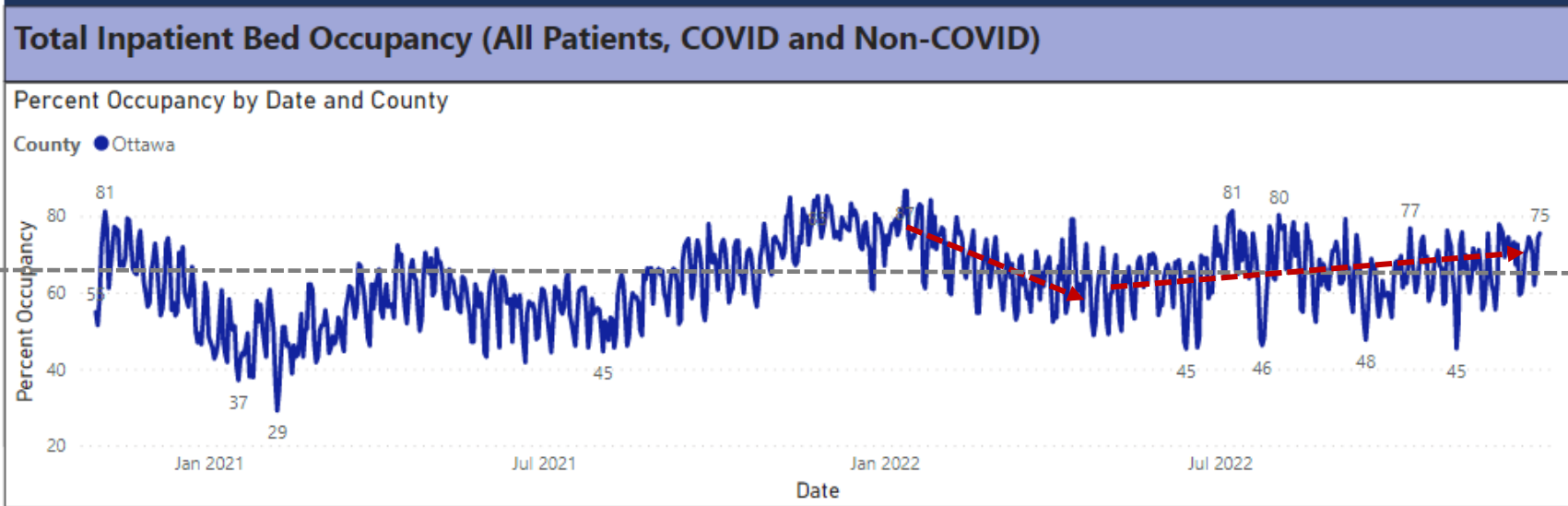
\*\*Sources: [MMWR](#) & [The Lancet](#)

Data through December 21, 2022

# Ottawa County Hospital Capacity – All Beds

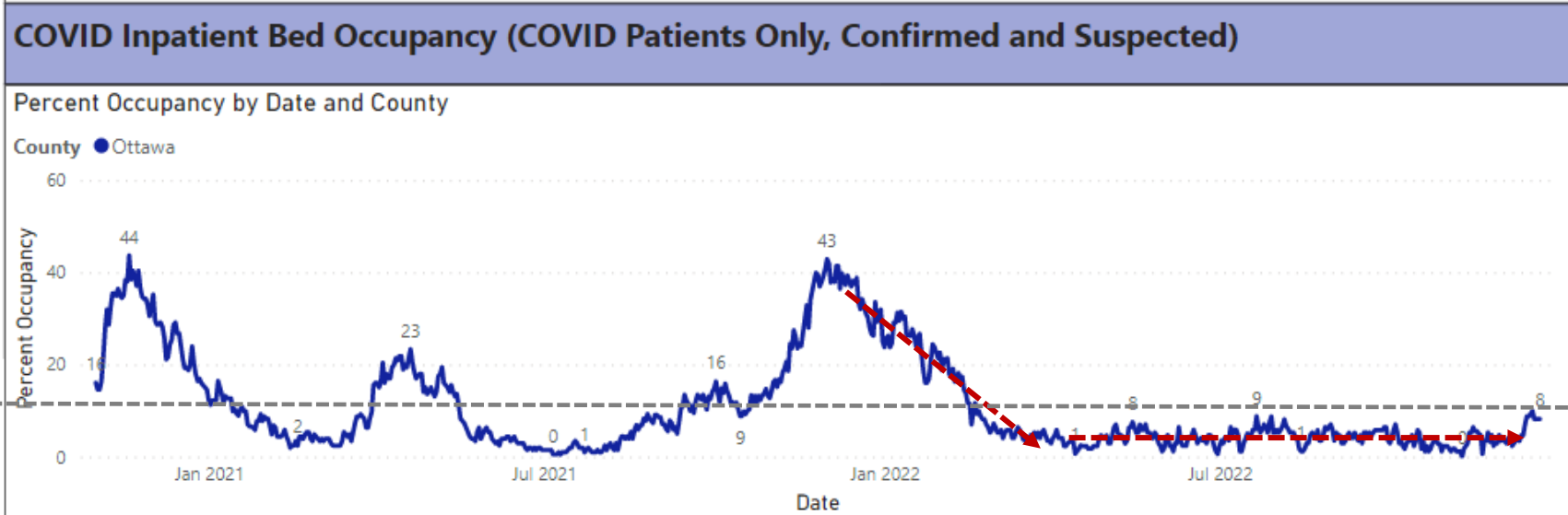
Pandemic Average

63%



Total hospital bed occupancy is currently above the pandemic average.

11%

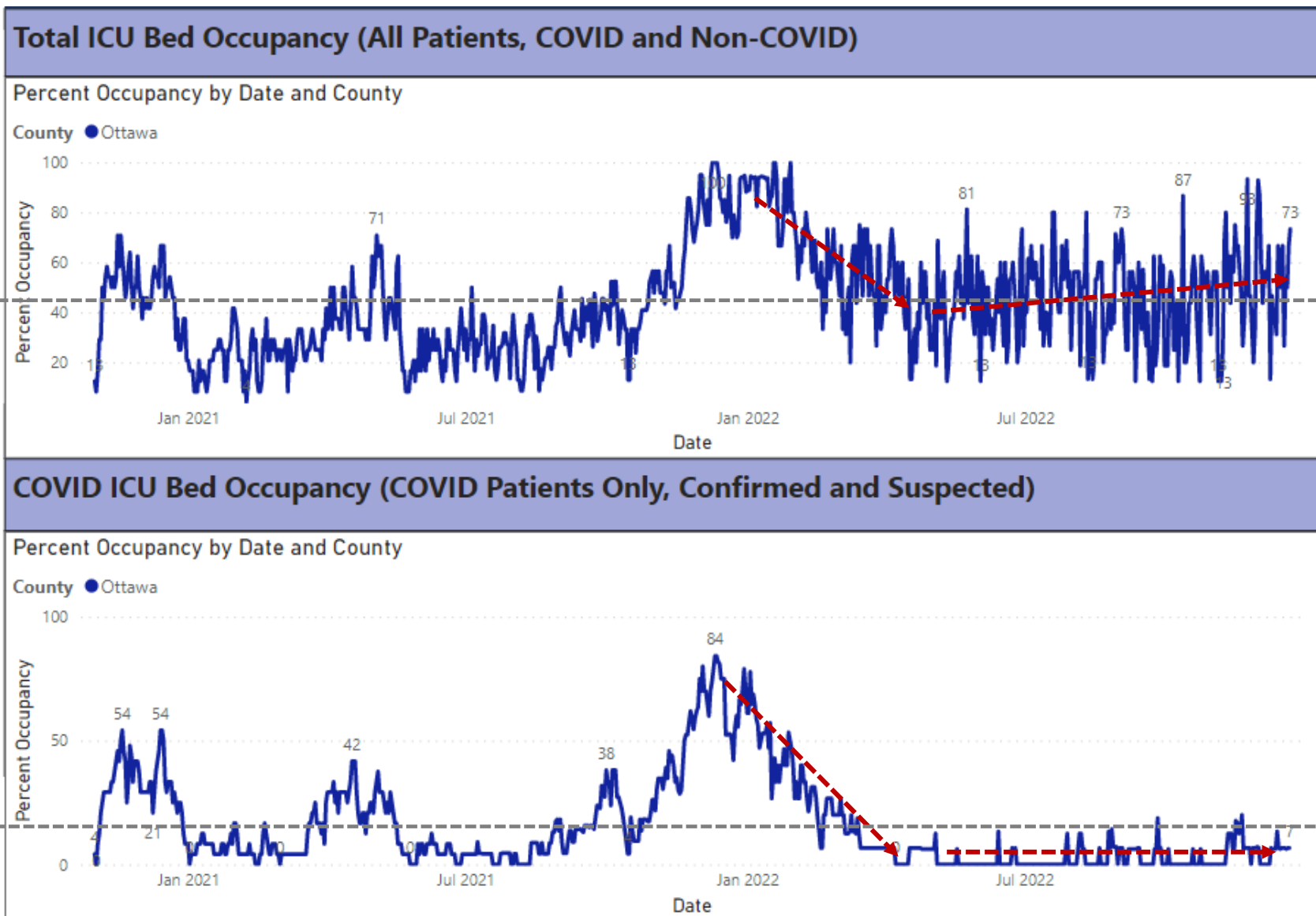


Currently 8% of all inpatient beds are occupied by COVID-19 patients.

Source: EMResources

Data through December 21, 2022

# Ottawa County Hospital Capacity – ICU Beds



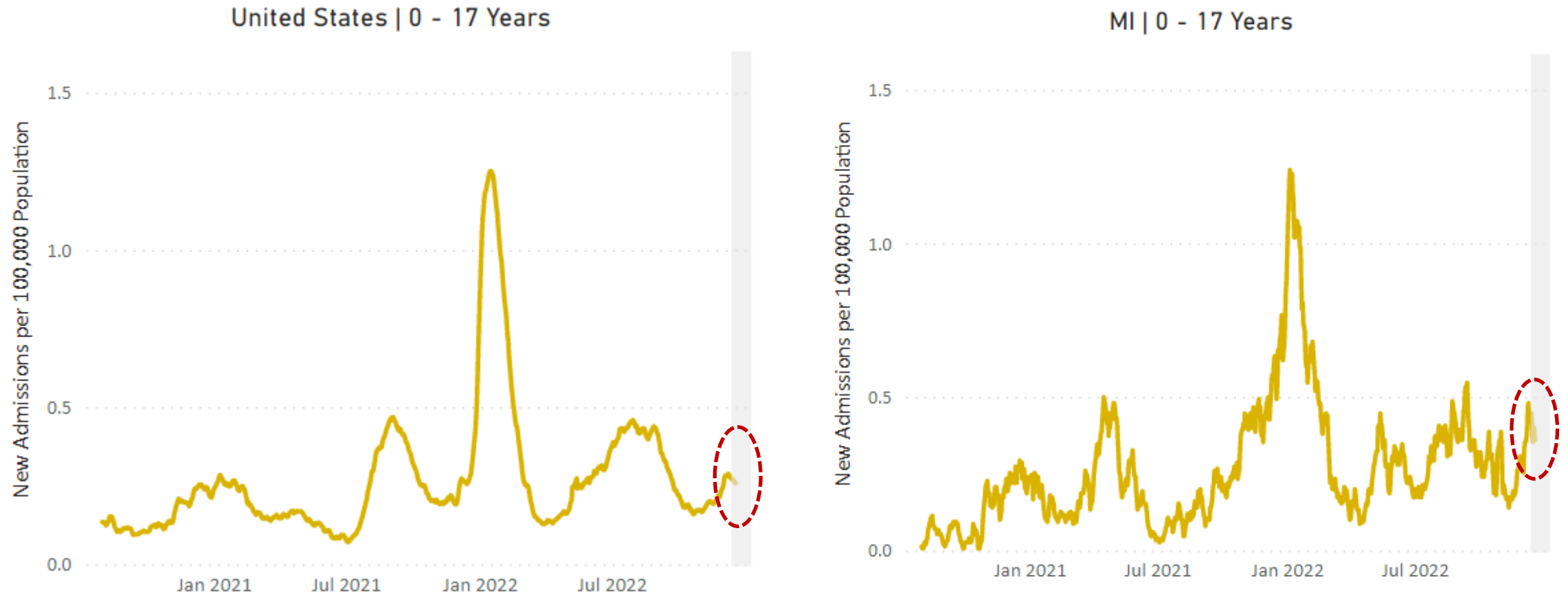
Total ICU bed occupancy varies considerably by day. Lately, ICU bed occupancy is above the **pandemic average**

The proportion of ICU beds occupied by COVID-19 patients is **below the pandemic average**. Currently, **7%** of ICU beds occupied by COVID-19 patients.

Source: EMResources

Data through December 21, 2022

# Pediatric Hospitalization Rates – USA, Michigan



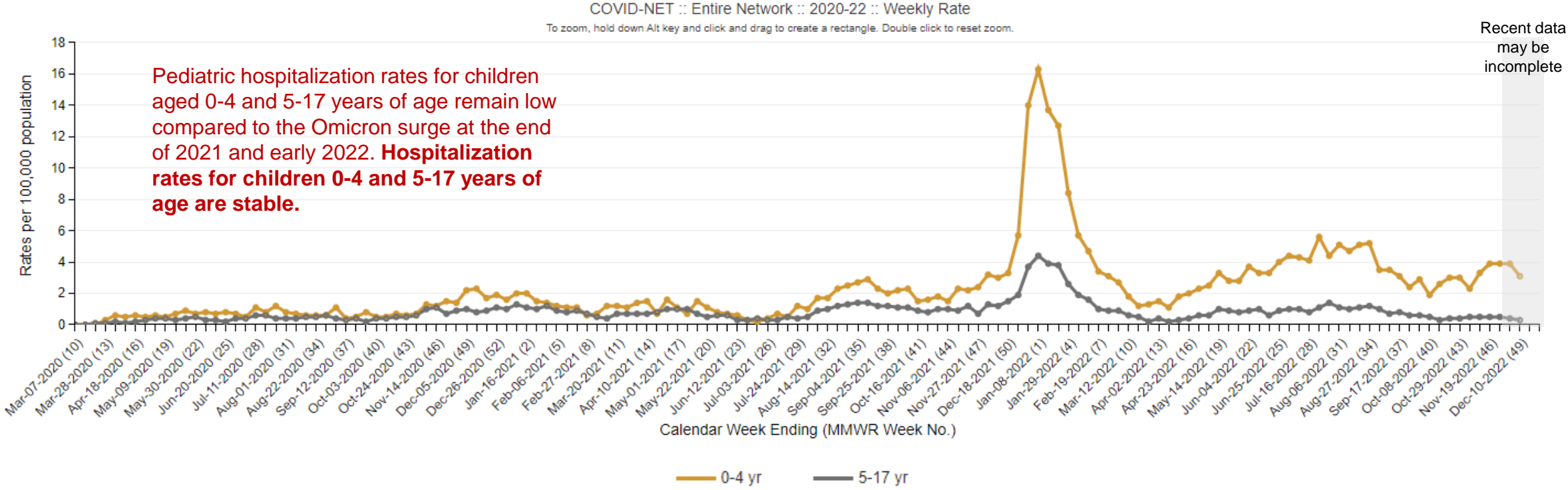
Pediatric COVID-19 hospitalization rates across the US and Michigan are showing recent **increases**.

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

Accessed December 21, 2022



# Pediatric Hospitalization Rates by Age Group – USA



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.

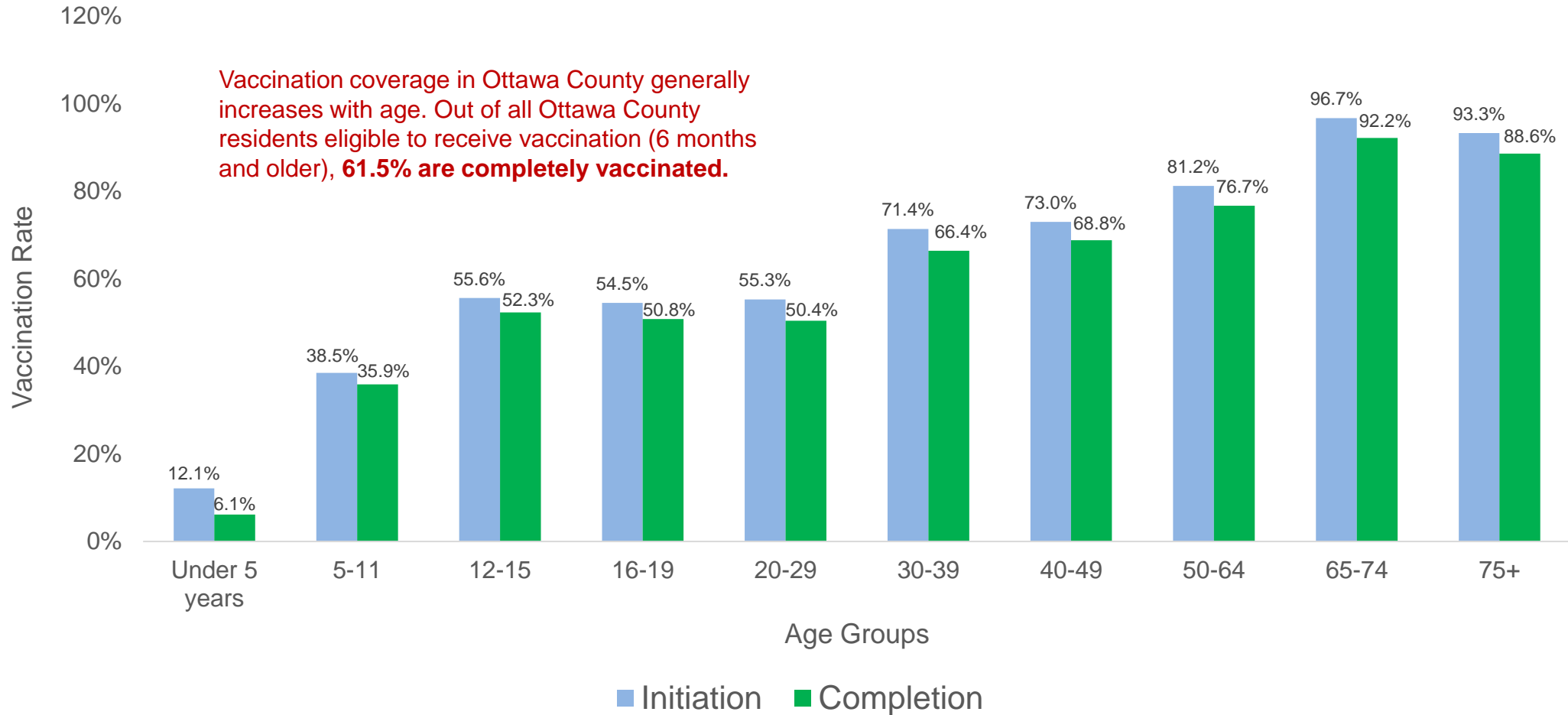
Starting MMWR week 48, MD data are temporarily removed from weekly rate calculations.

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

Accessed December 22, 2022



# 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.

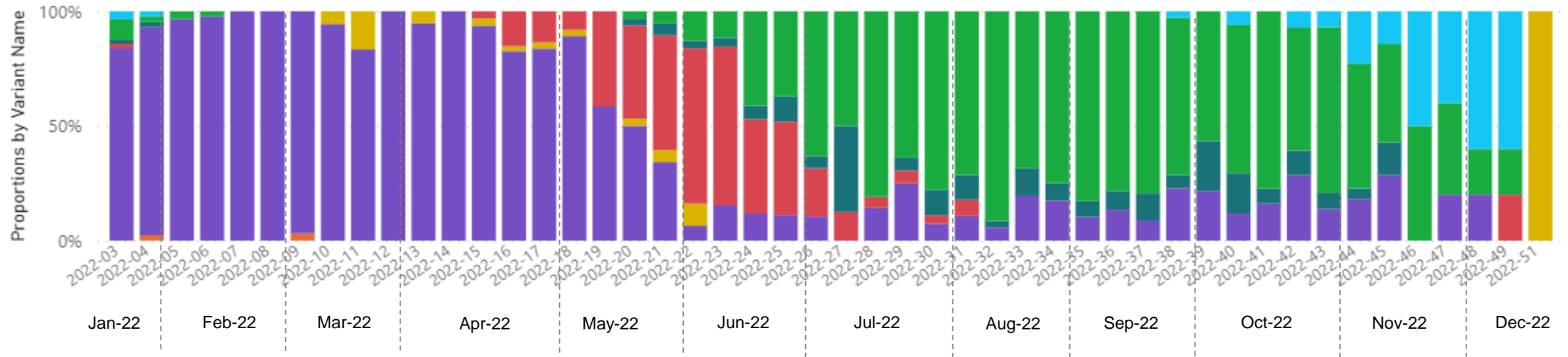
**Source:** <https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard>

Data through December 21, 2022

# Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

Variant Name ● Delta ● Omicron ● Omicron BA.2 ● Omicron BA.2.12.1 ● Omicron BA.4 ● Omicron BA.5 ● Omicron BQ.1



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, and **Omicron** continues to be detected through 2022, with more recent additions of the **Omicron subvariants** such as BQ.1 (first detected in clinical samples in late September 2022). Additional **Omicron subvariants** may be detected in clinical samples in the months ahead.

\* 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.

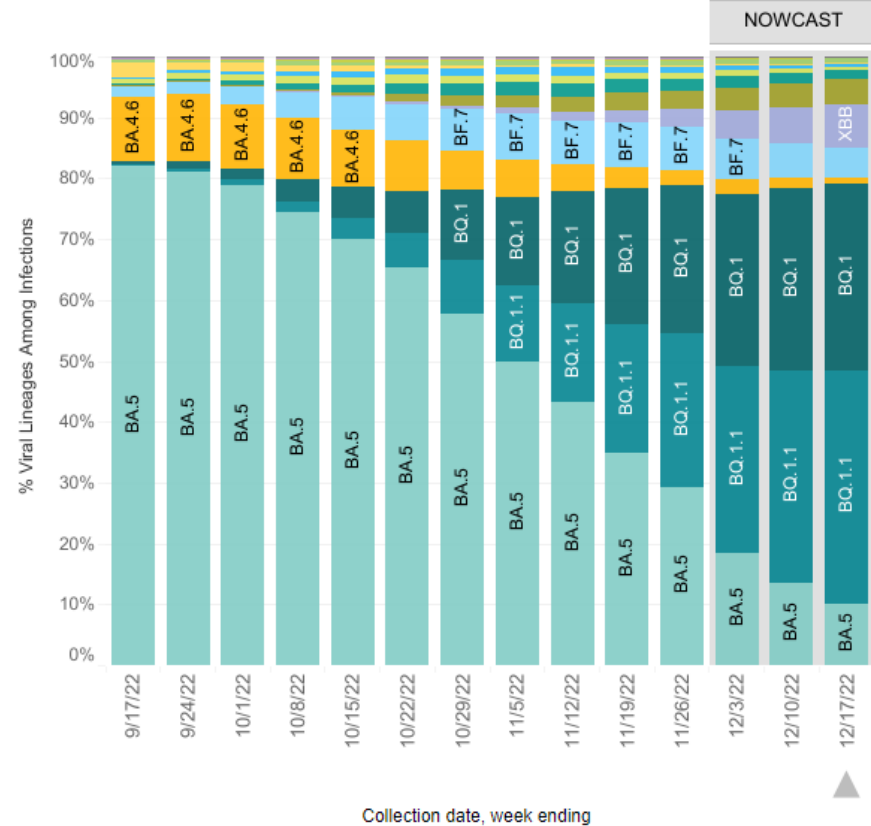
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

# Variants – Clinical Samples from Across the USA

United States: 12/11/2022 – 12/17/2022 NOWCAST

United States: 9/11/2022 – 12/17/2022

USA				
WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BQ.1.1	VOC	38.4%	35.7-41.3%
	BQ.1	VOC	30.7%	28.7-32.8%
	BA.5	VOC	10.0%	9.1-10.9%
	XBB	VOC	7.2%	4.2-11.9%
	BF.7	VOC	4.9%	4.2-5.6%
	BN.1	VOC	4.1%	3.5-4.7%
	BA.5.2.6	VOC	1.6%	1.3-1.8%
	BA.4.6	VOC	1.1%	1.0-1.3%
	BF.11	VOC	0.7%	0.5-0.9%
	BA.2	VOC	0.6%	0.3-1.1%
	BA.2.75	VOC	0.5%	0.4-0.6%
	BA.2.75.2	VOC	0.3%	0.2-0.4%
	BA.4	VOC	0.0%	0.0-0.0%
	BA.1.1	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
BA.2.12.1	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 more than 99% of all clinical samples collected in the United States the week ending December 17, 2022.

The BA.5 subvariant has been supplanted by other Omicron subvariants such as BQ.1.1, BQ.1, XBB, BF.7 and others.

\* 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  
 # 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, BA.2.75.2, BN.1, XBB 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, BF.11, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. For all the lineages listed in the above table, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB was aggregated with other. Lineages BA.2.75.2, XBB, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

# COVID-19 Community Levels

TABLE 1. COVID-19 Community Levels, Indicators, and Thresholds

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%

Please note that the Community Levels indicators for hospital admission and occupancy shown here apply to COVID-19 patients only.

While Ottawa County COVID-19 admissions and hospital occupancy have remained <10% for many months, reducing infections and preventing hospitalizations for/with COVID-19 is important to ensure capacity in local hospitals that may be facing substantial occupancy challenges from RSV, influenza, and other conditions.

The COVID-19 community level is determined by the higher of the *new admissions* and *inpatient beds occupied* 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>

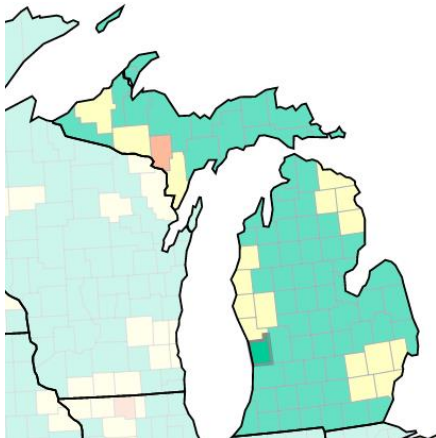
# CDC Community Levels – Ottawa County

- Current Community Level in Ottawa – **LOW**
  - Ottawa and Michigan’s CDC Community Levels can be viewed on the [CDC website](#) and on the [MI Safe Start Map](#).

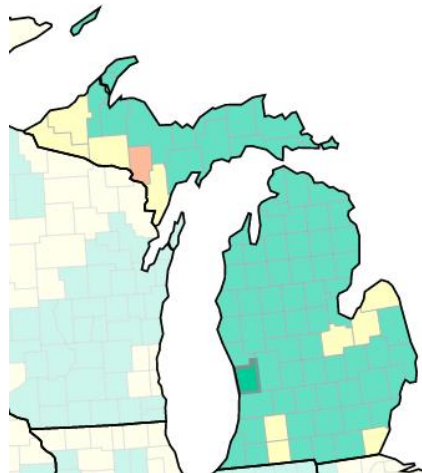
Current Data:

- New COVID-19 Hospital Admissions (per 100K pop 7-day total) = **6.3**
- Percent of staffed inpatient beds in use by patients with COVID-19 (7-day average) = **7.6%**

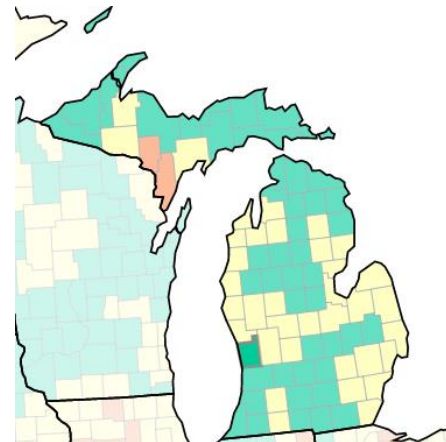
**4 Weeks Ago**



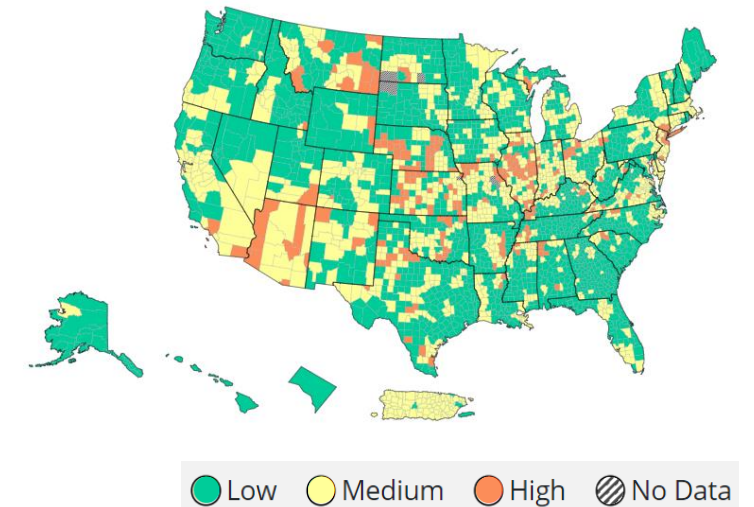
**2 Weeks Ago**



**This Week**



**USA - This Week**



● Low ● Medium ● High ● No Data

Data updated by CDC on December 14, 2022. Ottawa Hospitalization data as of December 19, 2022.

Source: [CDC COVID Data Tracker: Community Levels](#)

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other


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# COVID-19 Community Transmission Levels

## Determining Transmission Risk

If the two indicators suggest different transmission levels, the higher level is selected



	Low	Moderate	Substantial	High
New cases per 100,000 persons in the past 7 days*	<10	10-49.99	50-99.99	≥ 100
Percentage of positive NAATs tests during the past 7 days**	<5%	5-7.99%	8-9.99%	≥ 10.0%

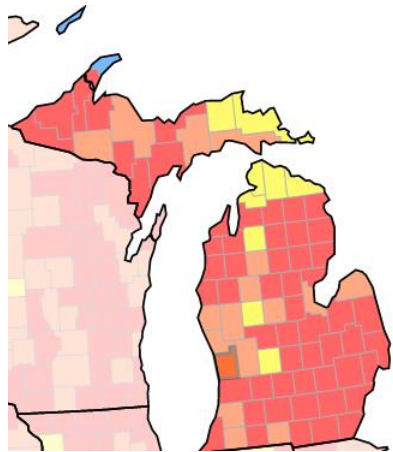
Source: [https://covid.cdc.gov/covid-data-tracker/#county-view?list\\_select\\_state=all\\_states&data-type=Risk](https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&data-type=Risk)



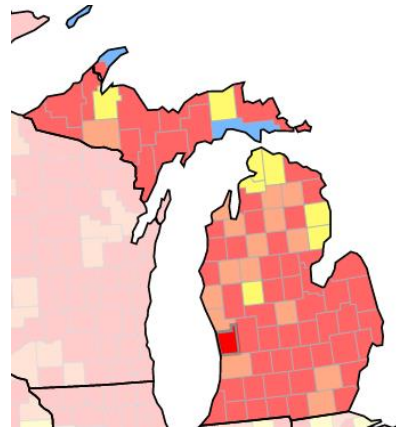
# CDC Community Transmission Levels – Ottawa County

- Current Community Transmission Level in Ottawa – **HIGH**
  - Ottawa and Michigan’s CDC Community Transmission Levels can be viewed on [CDC’s website](#) and on the MI Safe Start Map.
- Current Data:
  - Case Rate (per 100k pop 7-day total) = **90.81**
  - Percent Test Positivity (last 7 days) = **13%**

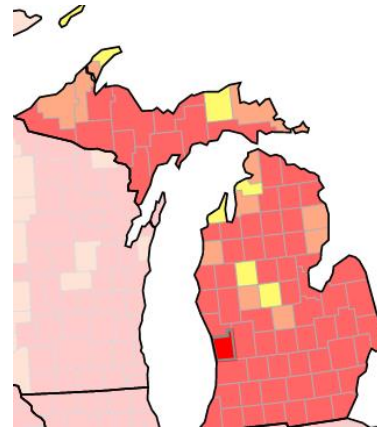
**4 Weeks Ago**



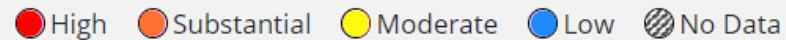
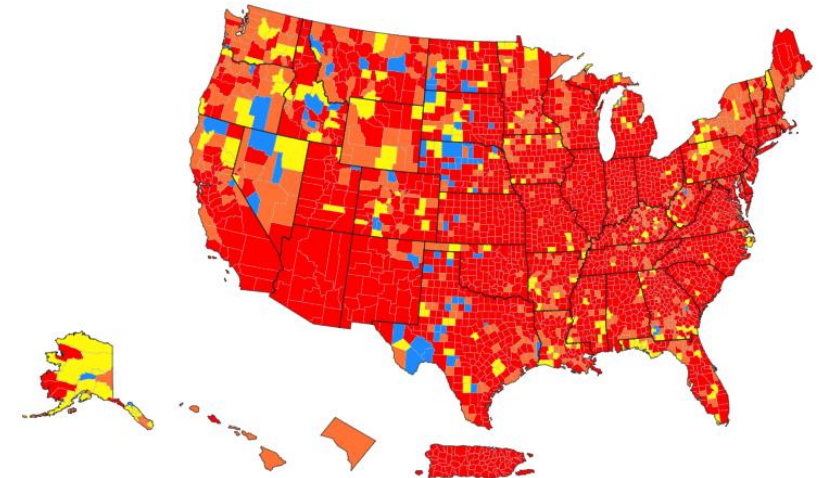
**2 Weeks Ago**



**This Week**



**USA - This Week**



Data updated by CDC on December 14, 2022. Rate data for Ottawa as of December 14, 2022; positivity data for Ottawa as of December 18, 2022.

Source: [CDC COVID Data Tracker: Community Transmission](#)

# COVID-19 Case Rates by County Across the US

Two Weeks Ago

This Week

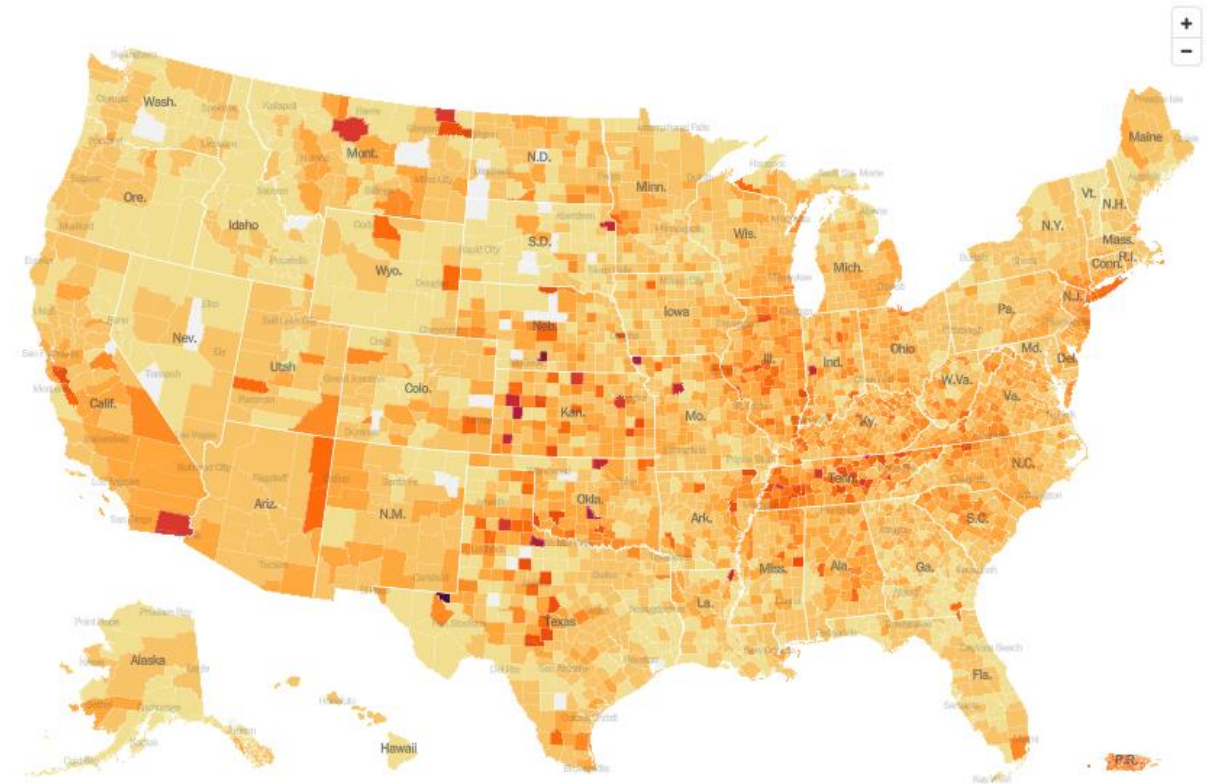
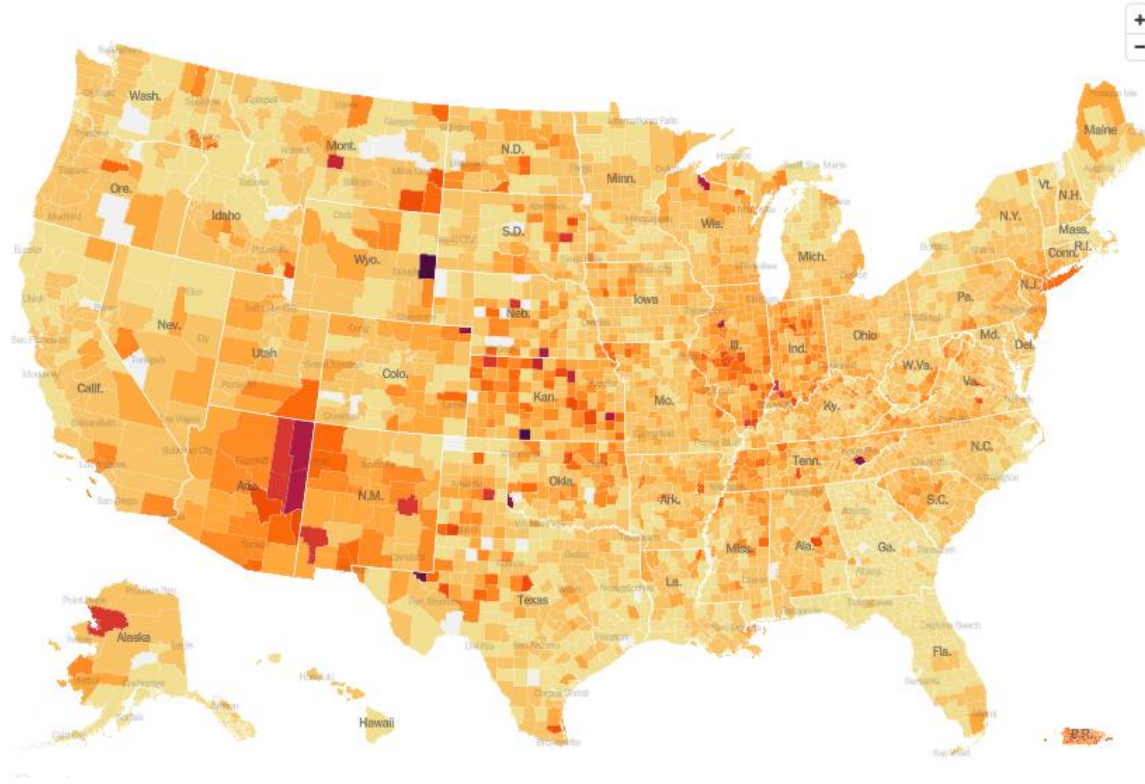
Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK  
10 20 30 40 50 60 70 80 90 100 120 150 200  
FEW OR NO CASES



Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK  
10 20 30 40 50 60 70 80 90 100 120 150 200  
FEW OR NO CASES



Case rates across the nation may be increasing.

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

Accessed December 22, 2022

USA & MI

Spread

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Vaccinations

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Roundup



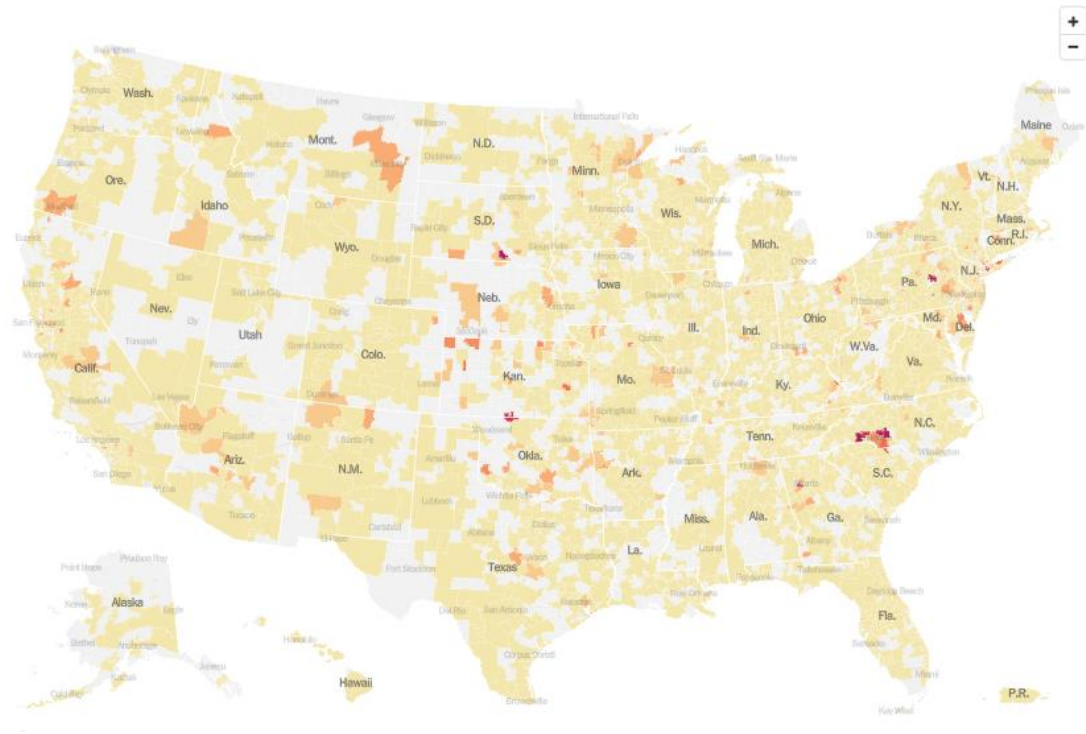
# COVID-19 Hospitalization Rates by County Across the US

*Two Weeks Ago*

Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE

20 30 40 50 60 70 80 NO DATA

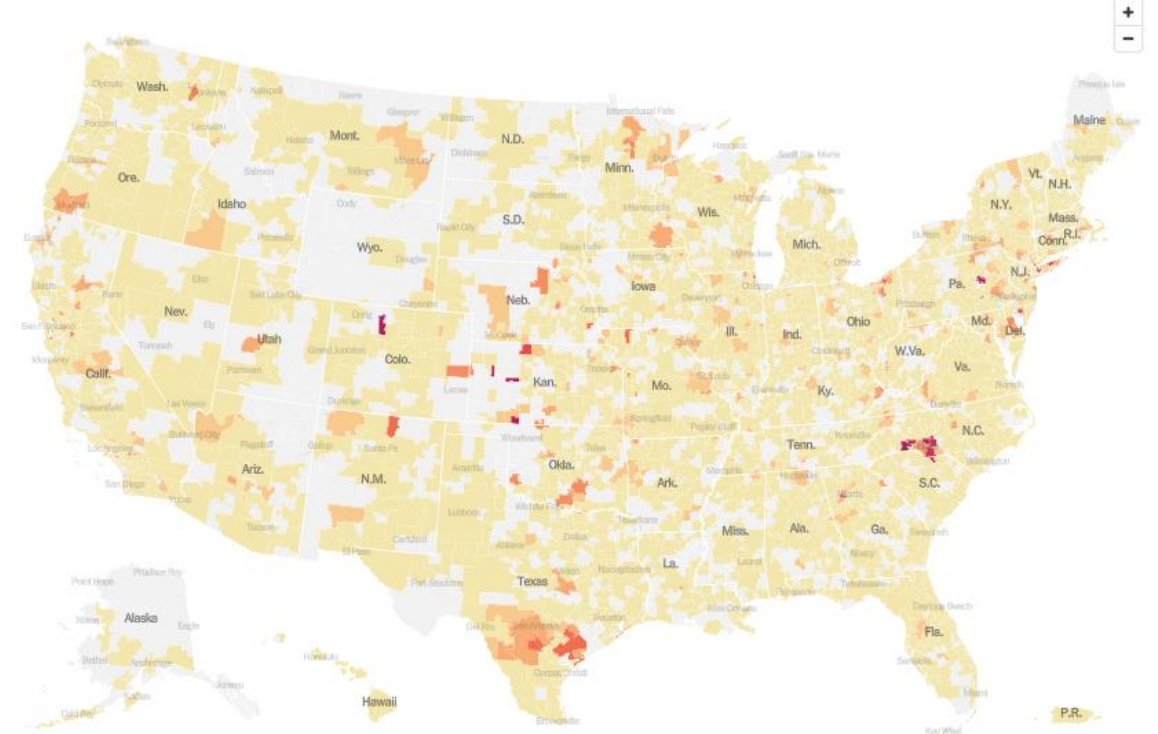


*This Week*

Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE

20 30 40 50 60 70 80 NO DATA



Hospitalization rates remain relatively low across most of the nation but may be increasing in some areas.

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

Accessed December 22, 2022

USA & MI

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# COVID-19 News Headlines

## Hospital warns of 'tragic battle' as Covid spreads in China

<https://www.nbcnews.com/news/world/hospital-warns-tragic-battle-covid-spreads-china-rcna62902>

## RSV, flu, COVID-19: 'Tripledemic' concerns rise as holidays approach

<https://www.mlive.com/news/2022/12/rsv-flu-covid-19-tripledemic-concerns-rise-as-holidays-approach.html>

## Michigan health officials expecting uptick in flu, COVID cases

<https://www.wzzm13.com/article/news/health/michigan-flu-covid-cases-increasing/69-2ee350bd-210e-4be7-af80-5adb0ebf14e7>

## Kids 6 months to 4 yrs now eligible for bivalent COVID booster

<https://www.mlive.com/public-interest/2022/12/kids-6-months-to-4-yrs-now-eligible-for-bivalent-covid-booster.html>

# Science Roundup

## Mortality in the United States, 2021

<https://www.cdc.gov/nchs/data/databriefs/db456.pdf>



The data from the National Center for Health Statistics showed life expectancy numbers fell for a second consecutive year. In 2021, life expectancy was the lowest since 1996 falling from 77 years in 2020 to 76.4 years in 2021, with men seeing a 0.7 years drop and women a 0.6 years drop. COVID-19 was the third leading cause of death in 2021.

## Two Years of U.S. COVID-19 Vaccines Have Prevented Millions of Hospitalizations and Deaths

<https://www.commonwealthfund.org/blog/2022/two-years-covid-vaccines-prevented-millions-deaths-hospitalizations>



The findings of this non-peer reviewed evaluation found that US vaccination programs from December 12, 2020 to November 30, 2022 likely prevented 120 million infections, 18 million hospitalizations, and 3 million deaths.

## SARS-CoV-2 Spike triggers barrier dysfunction and vascular leak via integrins and TGF- $\beta$ signaling

<https://www.nature.com/articles/s41467-022-34910-5>



This study explored the mechanisms behind SARS-CoV-2-triggered vascular leak, finding a potential pathway that could be a starting point for developing of therapies targeting COVID-19.

## Effectiveness of mRNA-1273, BNT162b2, and BBIBP-CorV vaccines against infection and mortality in children in Argentina, during predominance of delta and omicron covid-19 variants: test negative, case-control study

<https://www.bmj.com/content/379/bmj-2022-073070>



This study estimated the effectiveness of two COVID-19 vaccine doses to be 61% among children and 67% adolescents in Argentina during the Delta variant predominant period, and 16% and 26%, respectively, during the Omicron predominant period. This study also estimated vaccine effectiveness against death to be 67% in children and 98% in adolescents during the Omicron wave. Waning effectiveness against infection over time was noted.