

# Ottawa County COVID-19 Epidemiology

March 16, 2023

Data as of March 11, 2023, unless otherwise indicated.

#### **Executive Summary**

- Weekly reported cases in the US and in Michigan are stable and relatively low
- Ottawa County transmission signals may be showing slight decreases
  - Last week positivity decreased to 10.4%, from 15.5% two weeks ago.
  - Weekly case counts decreased 19% (-17% two weeks ago), from 129 two weeks ago to 104 last week.
  - Cases among children increased 36% (-7% two weeks ago), from 14 two weeks ago to 19 last week.
  - COVID-19 wastewater signals in Ottawa County are mixed. In Holland/Zeeland the latest signals are stable; Grand Haven/Spring Lake signals are decreasing, and Allendale signals are mixed.
  - 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 March 16, 2023.
- Ottawa-area and regional hospitals have adequate capacity
  - In Ottawa County, 4% 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.

<sup>\*</sup>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

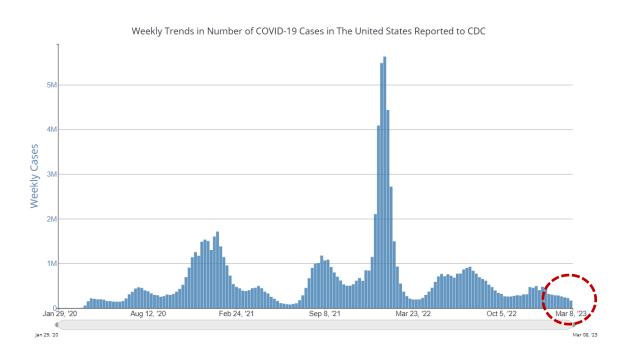
		Week Ending				
Metric	Goal	11-Feb-23	18-Feb-23	25-Feb-23	4-Mar-23	11-Mar-23
Positivity (All Ages)	NA	14.7%	13.0%	14.3%	15.5%	10.4%
Weekly Cases (All Ages)	<592	159	117	156	129	104
Weekly Cases in Children (0-17 years of age)	NA	8	6	15	14	19
Total Deaths (All Ages)	0	3	1	1	2	0
CDC COVID-19 Community Level (New)	Low	Low	Low	Low	Low	Low

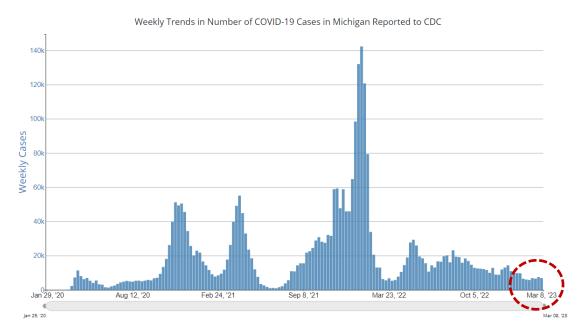
Please note that with updated CDC Community Levels, metrics and/or metric thresholds/goals may change.

# Weekly Case Trends in the USA and Michigan

USA

# Michigan





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

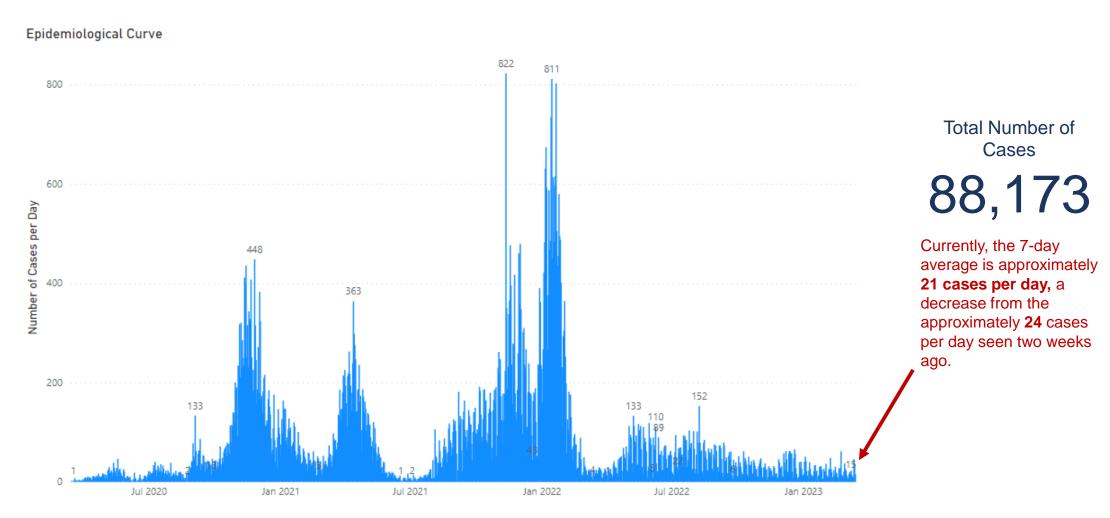
**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. **Source:** <a href="https://covid.cdc.gov/covid-data-tracker/#trends\_dailycases">https://covid.cdc.gov/covid-data-tracker/#trends\_dailycases</a>

Data through March 8, 2023

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 - March 15, 2023



**Variants** 

**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.

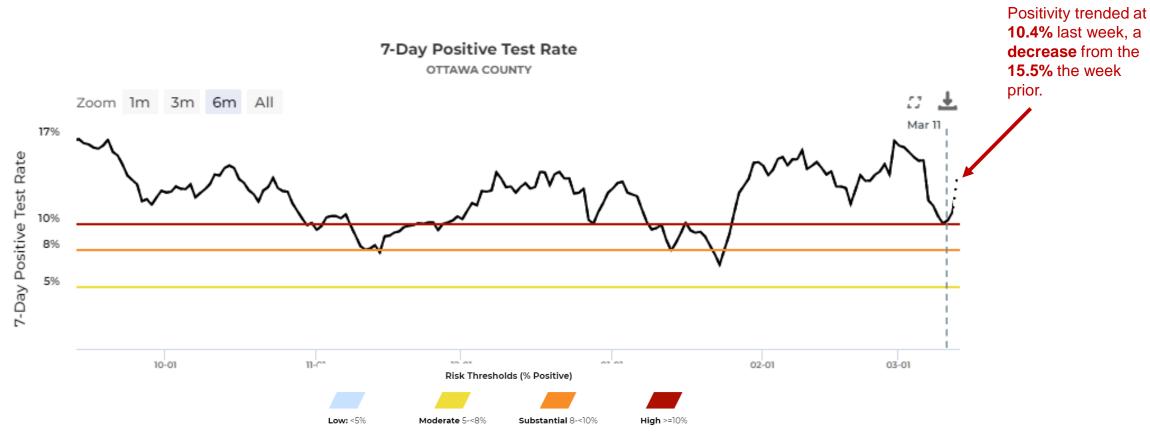
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

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Other

### Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – March 11, 2023



**Variants** 

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: <u>Testing Results | Ottawa County Covid-19 Case Summary Data (arcgis.com)</u> & <u>MI Safe Start Map</u>. 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.

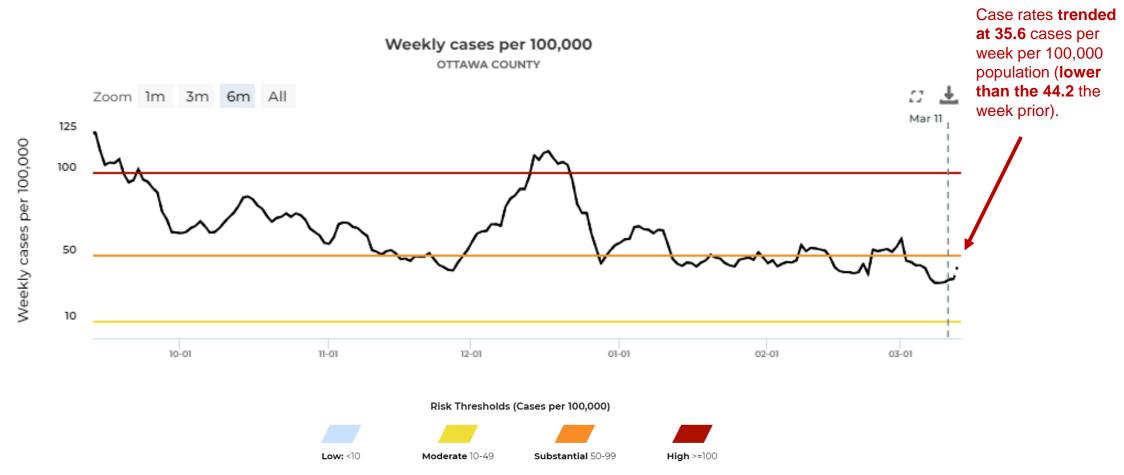
Source: MI Safe Start Map-Ottawa County

USA & MI

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# Case Rates in Ottawa County – All Ages

COVID-19 Cases by Day, Ottawa County, April 1, 2022 - March 11, 2023



**Variants** 

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

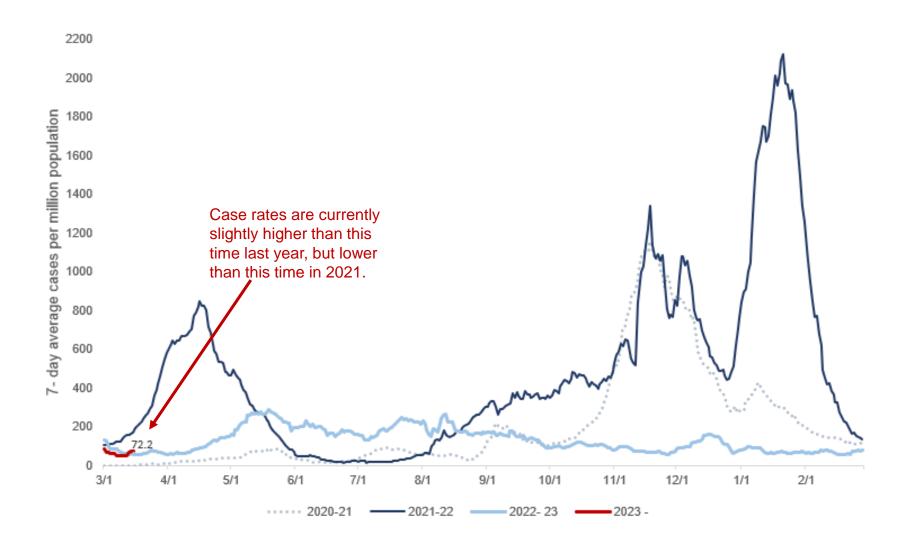
**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower rates.

Source: MI Safe Start Map-Ottawa County

USA & MI

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# Ottawa County Trends - Comparison of Case Rates by Year

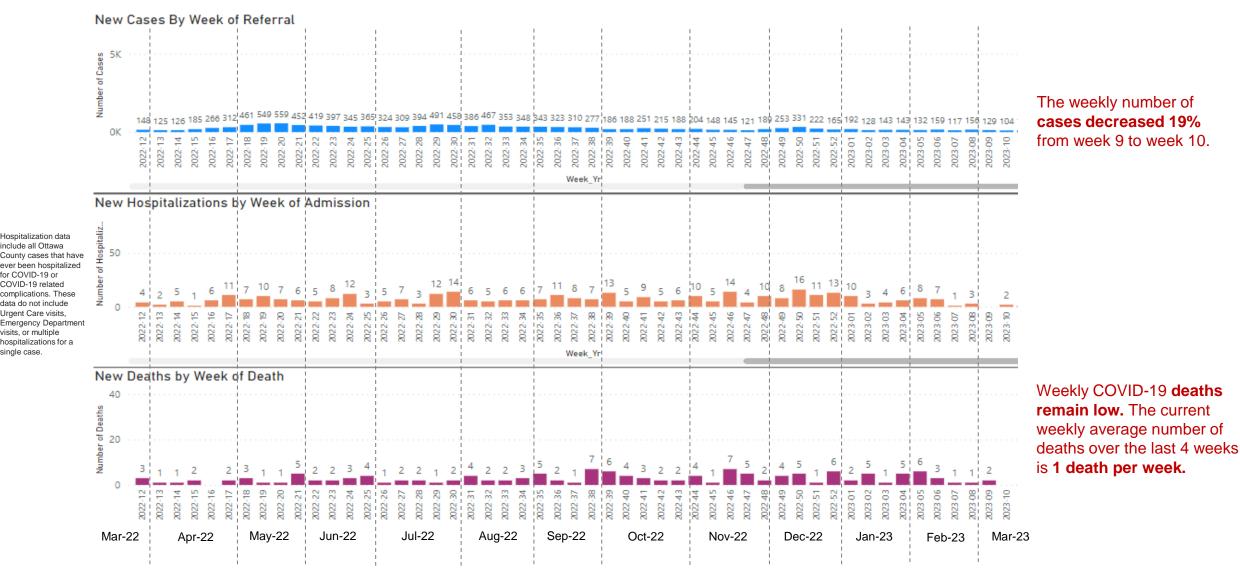


**Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower case rates.

Source: Internal Data

Data through March 15, 2023

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



**Variants** 

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 March 15, 2023

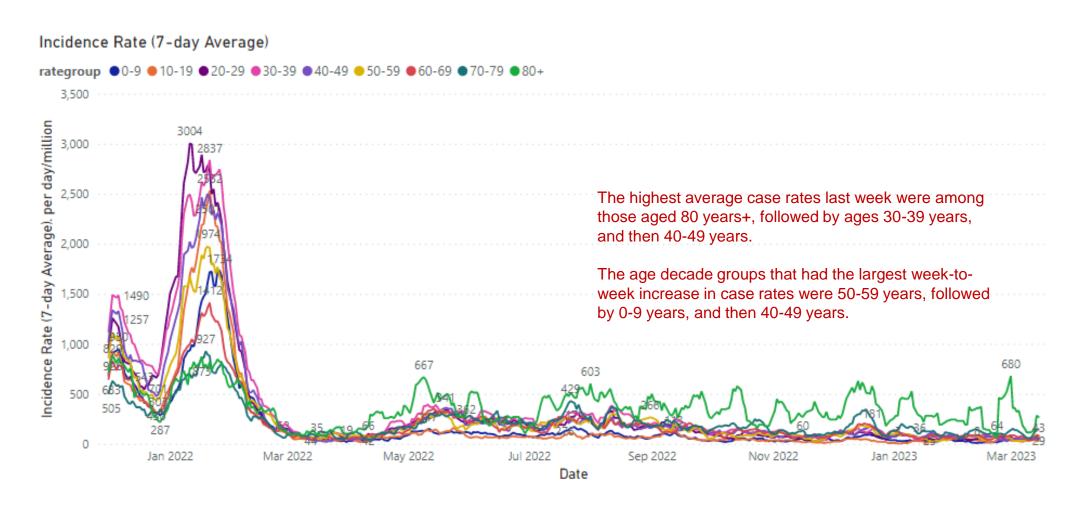
for COVID-19 or COVID-19 related

data do not include Urgent Care visits,

visits, or multiple hospitalizations for a single case

# Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, December 2021 - March 15, 2023



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 March 15, 2023

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Other

#### 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 10 (March 5, 2023 – March 11, 2023)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	1.9	50.5	44%
10-19	1.6	35.5	10%
20-29	1.9	41.1	-19%
30-39	2.1	59.7	15%
40-49	1.9	56.0	18%
50-59	1.7	49.0	50%
60-69	1.4	43.9	-38%
70-79	1.0	48.4	-65%
80+	1.3	115.9	-64%

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

- +08
- 30-39
- 40-49

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

- 50-59
- 0-9
- 40-49

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.

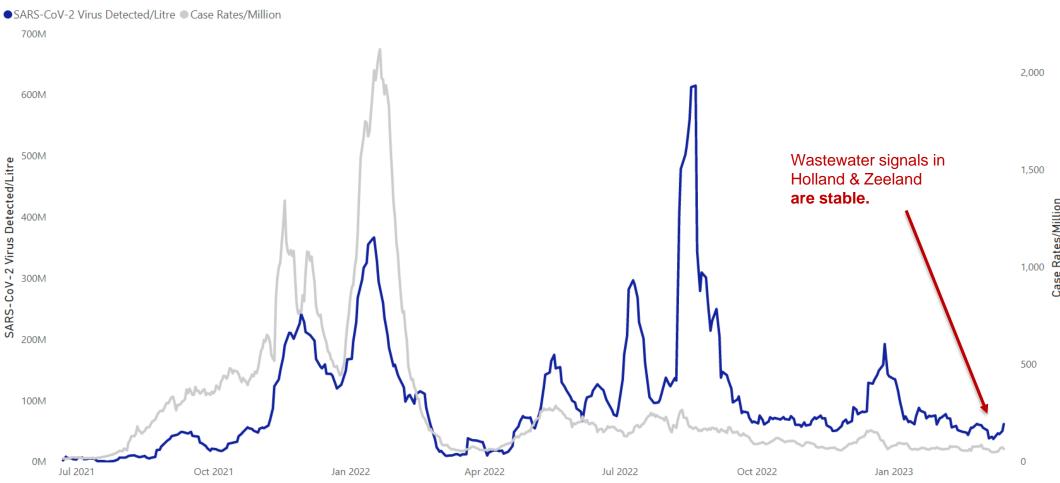
Variants

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

Data as of March 15, 2023

#### 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.

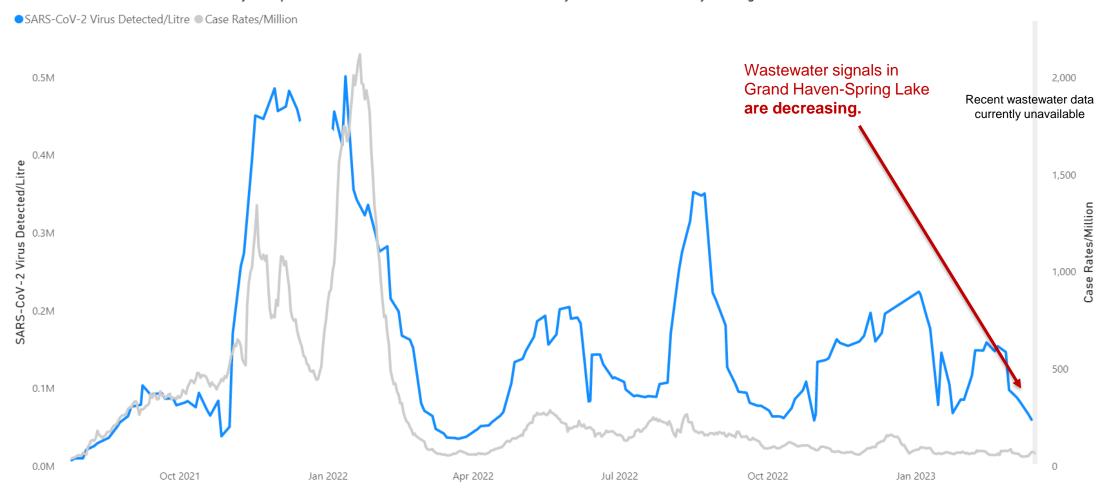
Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (best@hope.edu)

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

Data through March 16, 2023

### 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)



**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)

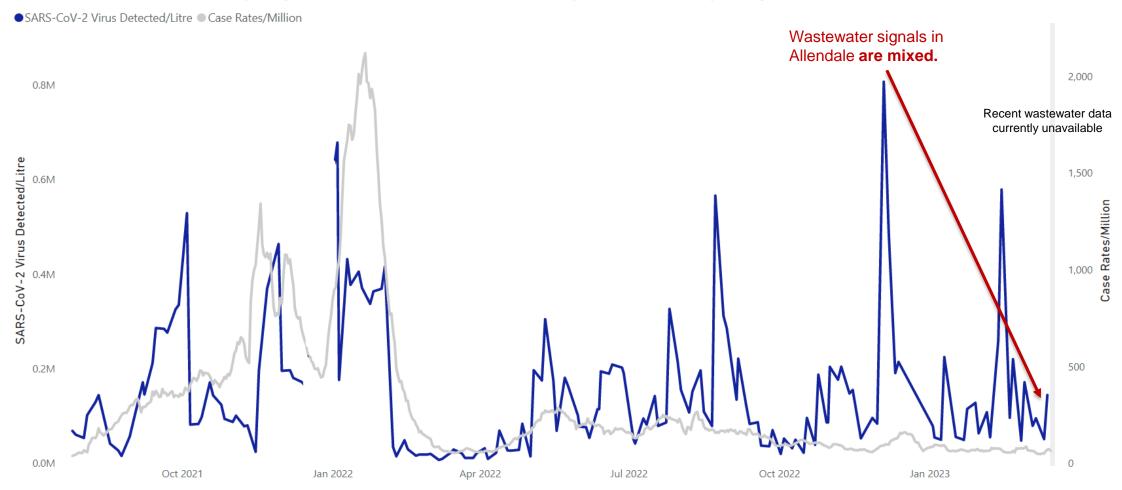
Additional Information: Michigan COVID-19 Wastewater Surveillance Pilot Project (arcgis.com), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov)

Data through March 14, 2023

Other Media Science Roundup

#### 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), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov)

Data through March 14, 2023

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

	Adults (18+)		Children (	0-17 years)	Total	
Week Ending	Number	% Change from Previous Week	Number	% Change from Previous Week	Number	% Change from Previous Week
31-Dec-22	152	-23%	13	-46%	165	-26%
7-Jan-23	179	18%	13	0%	192	16%
14-Jan-23	113	-37%	15	15%	128	-33%
21-Jan-23	131	16%	12	-20%	143	12%
28-Jan-23	123	-6%	20	67%	143	0%
4-Feb-23	116	-6%	16	-20%	132	-8%
11-Feb-23	151	30%	8	-50%	159	20%
18-Feb-23	111	-26%	6	-25%	117	-26%
25-Feb-23	141	27%	15	150%	156	33%
4-Mar-23	115	-18%	14	-7%	129	-17%
11-Mar-23	85	-26%	19	36%	104	-19%

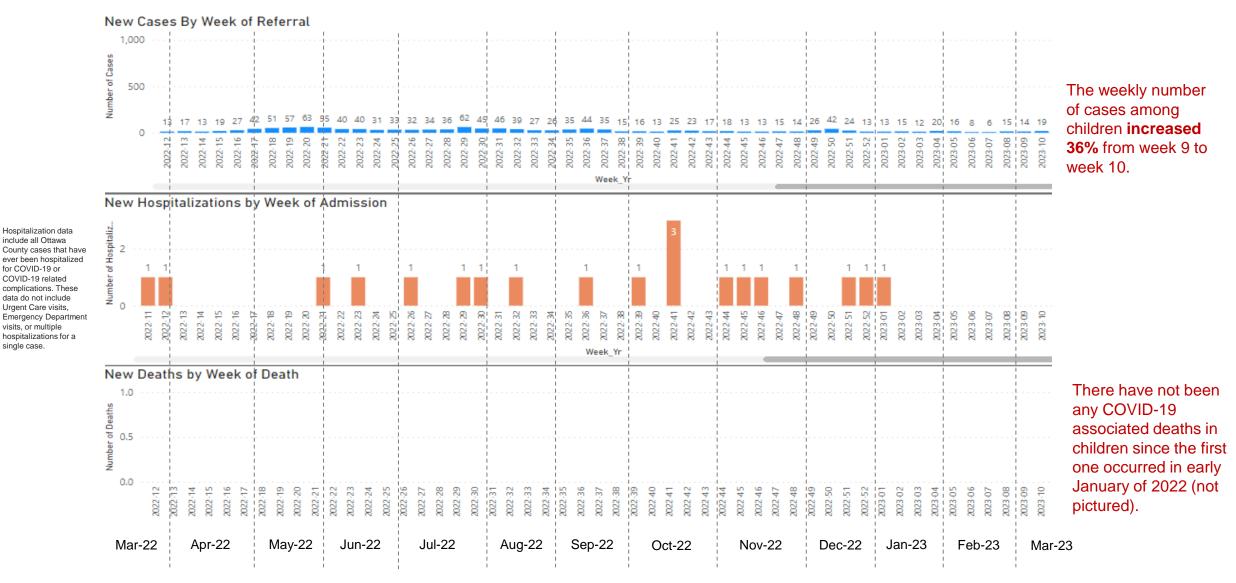
Weekly case counts among **children increased 36%** last week, and cases in **adults decreased 26%.** 

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

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



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 March 15, 2023

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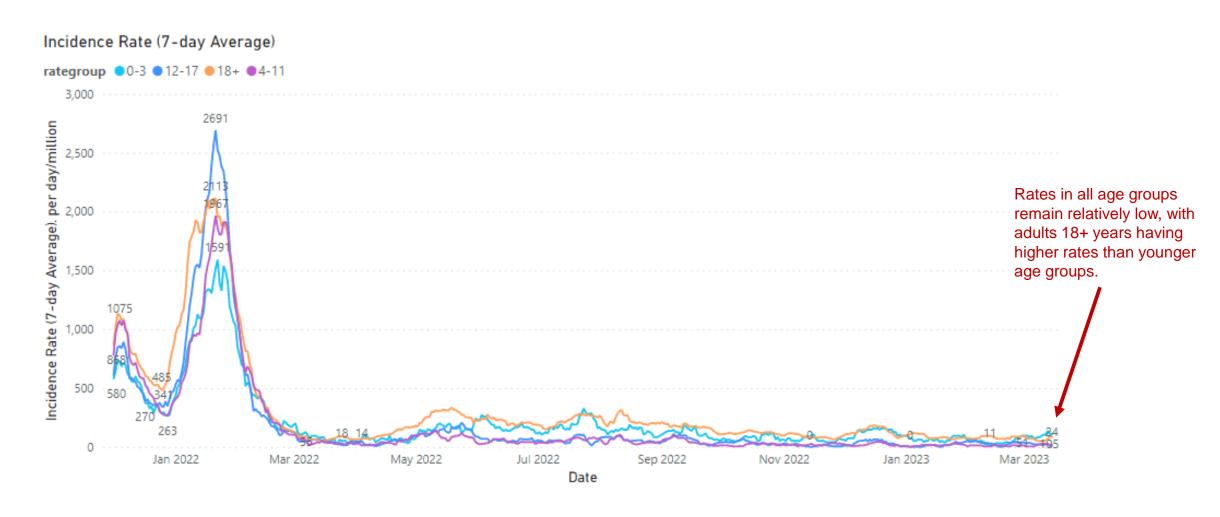
include all Ottawa

for COVID-19 or COVID-19 related

single case.

# Ottawa County - Case Rate Trends by Age

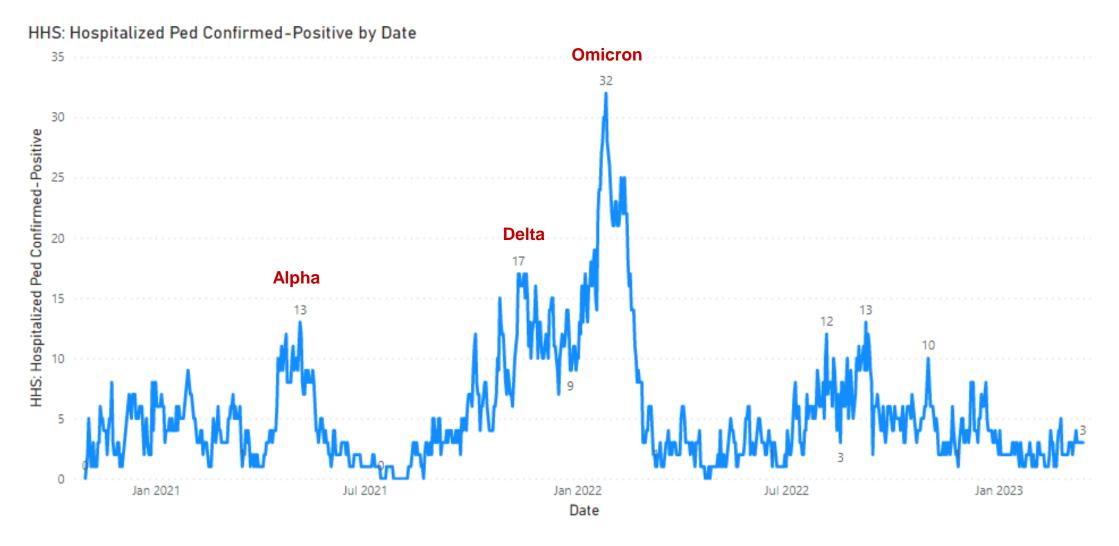
COVID-19 Case Rates by Age, includes School-Aged, December 2021 - March 15, 2023



**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 March 15, 2023

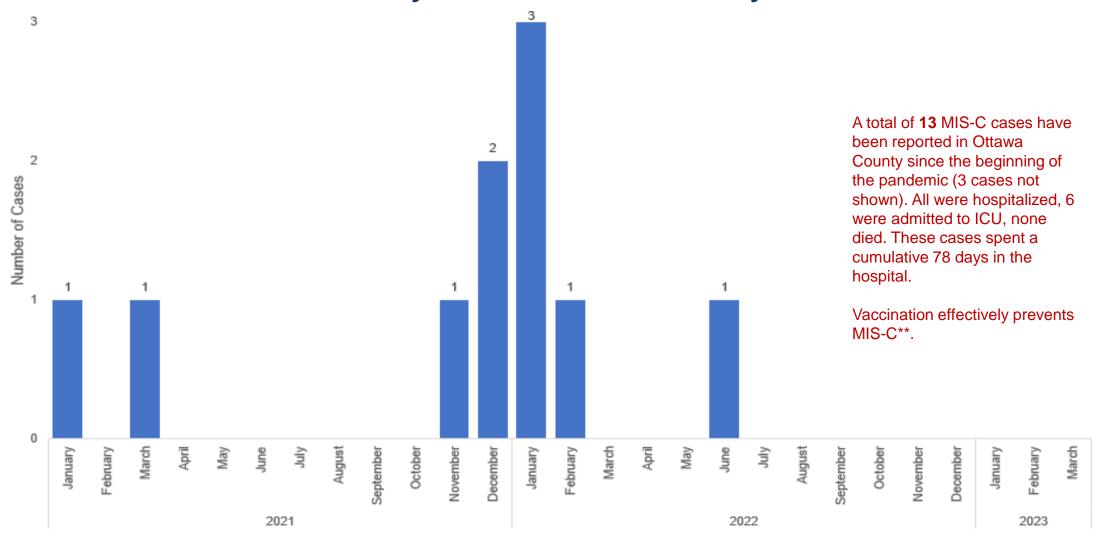
### Daily Hospital Pediatric Census – West Michigan



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 March 15, 2023

#### Ottawa County MIS-C\* Cases by Month



Notes: Includes confirmed and probable cases.

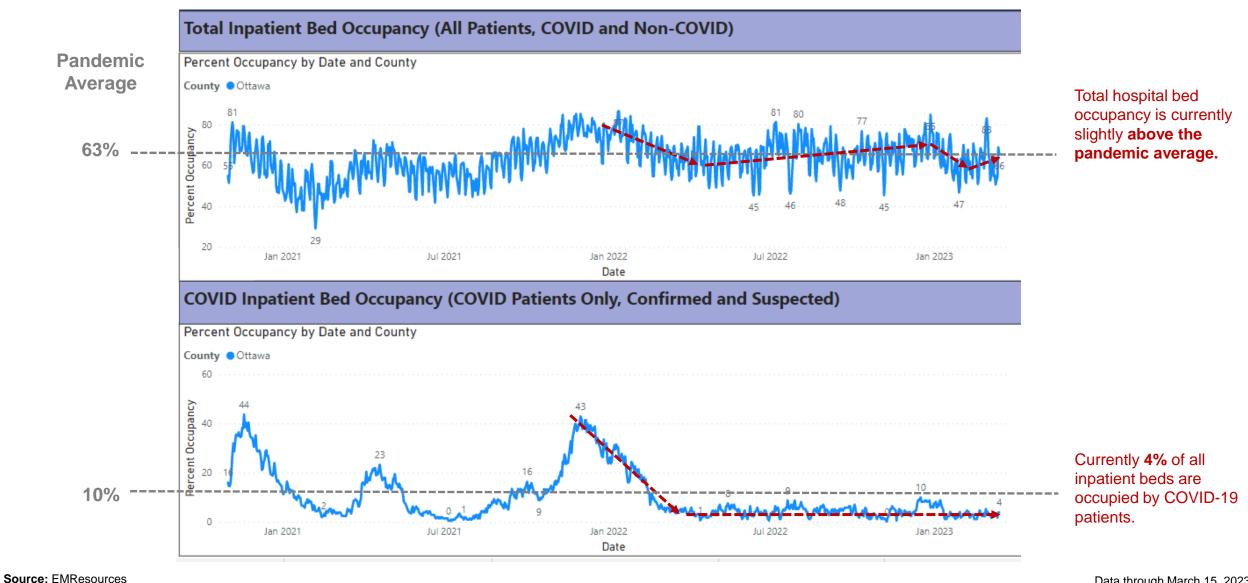
\*\*Sources: MMWR & The Lancet

Data through March 15, 2023

Other

<sup>\*</sup>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

# Ottawa County Hospital Capacity – All Beds

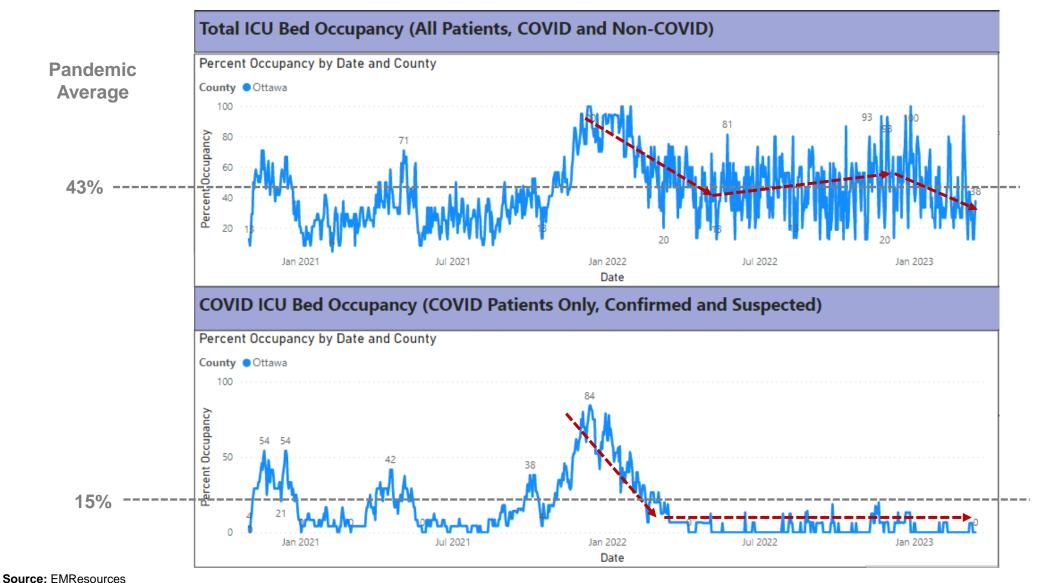


Data through March 15, 2023

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Spread

#### Ottawa County Hospital Capacity – ICU Beds



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

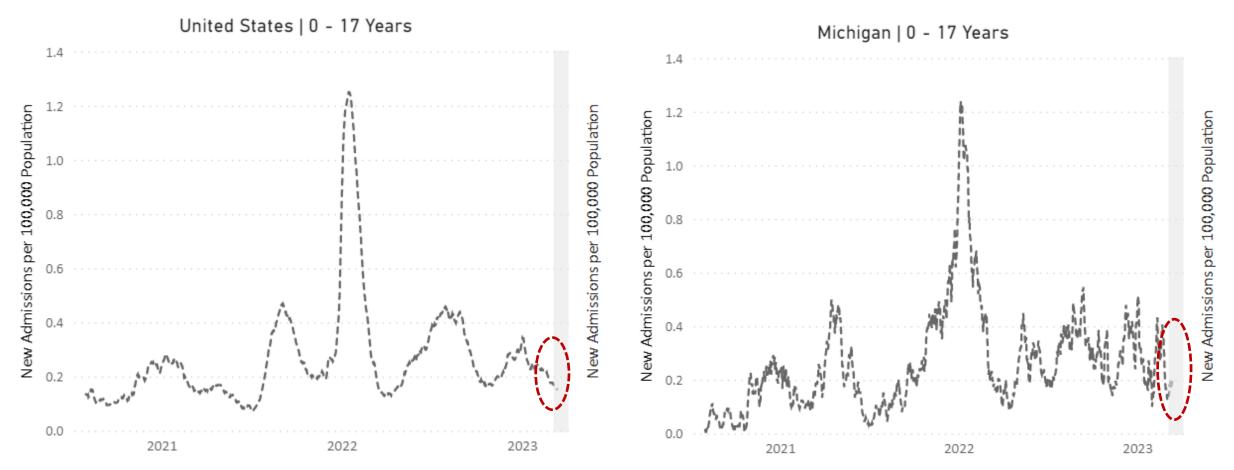
The proportion of ICU beds occupied by COVID-19 patients is below the pandemic average. Currently, 0% of ICU beds occupied by COVID-19 patients.

Data through March 15, 2023

**Variants** 

Other

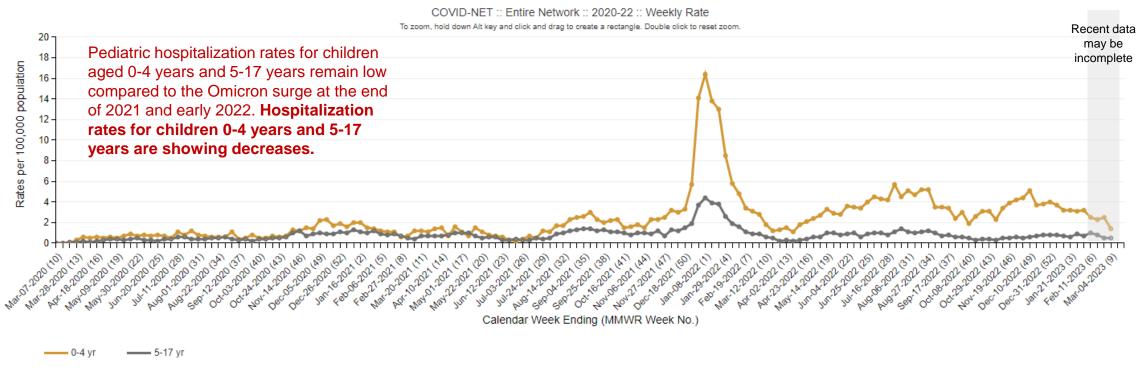
# Pediatric Hospitalization Rates – USA, Michigan



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

Source: https://covid.cdc.gov/covid-data-tracker/#new-hospital-admissions Accessed March 16, 2023

# Pediatric Hospitalization Rates by Age Group – USA



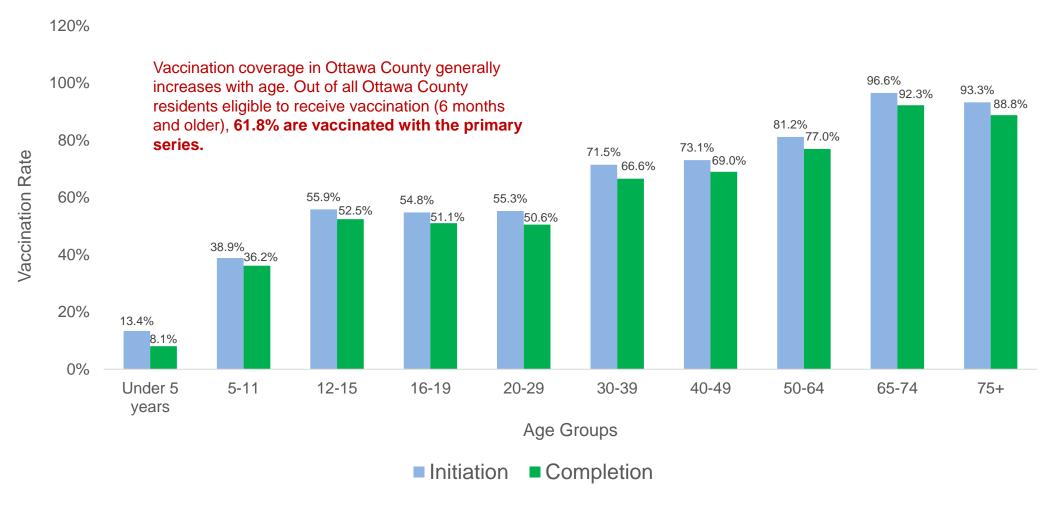
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 [March 2020-May 2022], 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. The NCHS bridged-race data used for the denominator for race data provides population data for children ages 0–1 year. To calculate rates of hospitalization among children ages <6 months and 6 months to <12 months, the population for children ages 0–1 year is halved.

Starting MMWR week 22 of 2022, IA data are removed from weekly rate calculations.

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

Accessed March 16, 2023

# 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

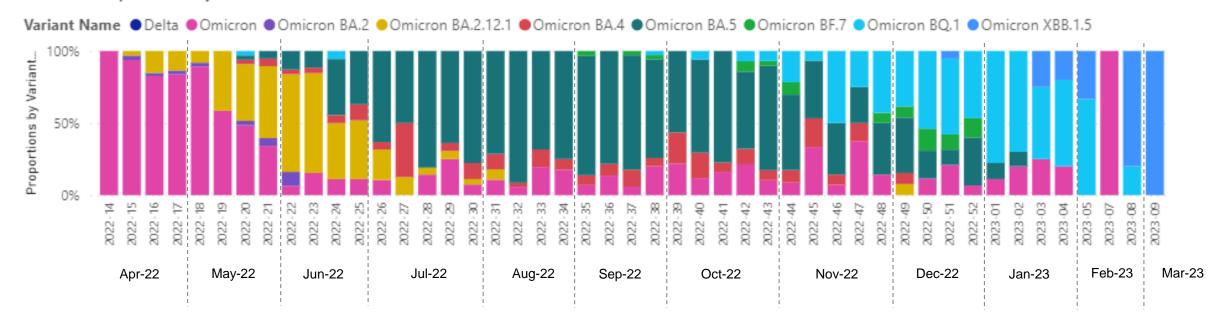
Data through March 15, 2023

Science

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### 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. Additional Omicron subvariants may be detected in clinical samples in the months ahead.

**Variants** 

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Media

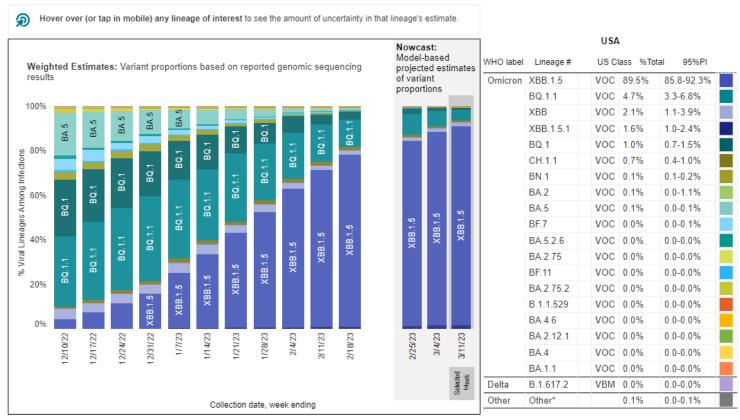
Other

<sup>\*</sup> 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 Weeks of 12/4/2022 -3/11/2023

#### Nowcast Estimates in United States for 3/5/2023 - 3/11/2023



The **Omicron** variant and it's subvariants are estimated to account for more than 99% of all clinical samples collected in the United States the week ending March 11, 2023.

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

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

Accessed March 15, 2023

Other

USA & MI

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.

<sup>#</sup> 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 XBB.1.5 and its sublineages, sublineages of XBB are aggregated to XBB. Except XBB.1.5.1, 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.1.5.1 was aggregated to XBB.1.5. Lineages BA.2.75.2, XBB, XBB.1.5, XBB.1.5.1, 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 face 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.

**Variants** 

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

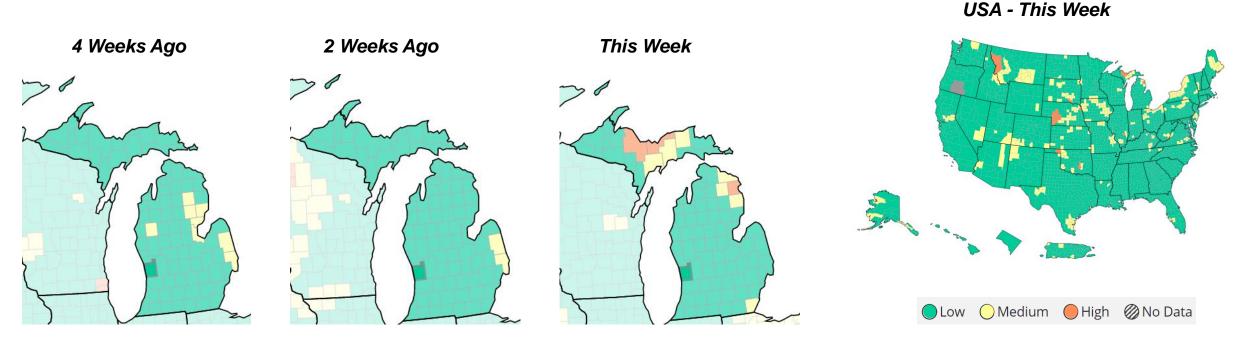
Other

# 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) = 2
- Percent of staffed inpatient beds in use by patients with COVID-19 (7-day average) = 2.3%

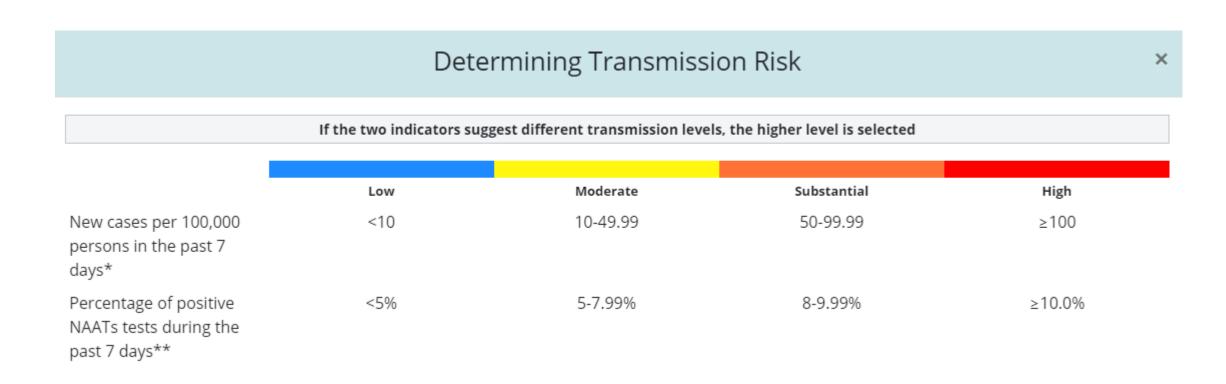


**Variants** 

Source: CDC COVID Data Tracker: Community Levels

Data updated by CDC on March 16, 2023 Ottawa Hospitalization data as of March 14, 2023

### **COVID-19 Community Transmission Levels**



 $\textbf{Source:} \ \underline{\text{https://covid.cdc.gov/covid-data-tracker/\#county-view?list\_select\_state=all\_states\&data-type=Risk}$ 



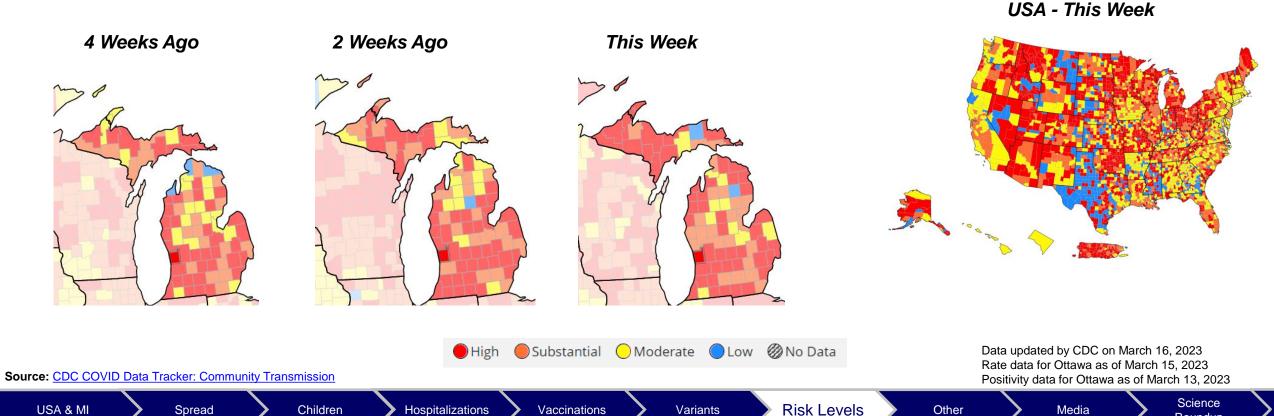
USA & MI

Variants

Other

# CDC Community Transmission Levels – Ottawa County

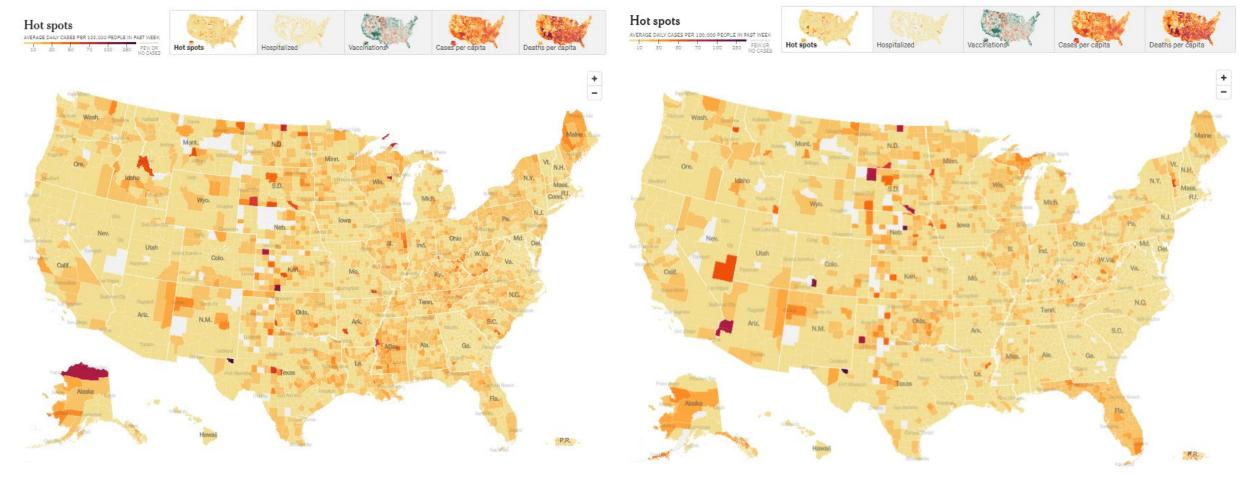
- Current Community Transmission Level in Ottawa HIGH
  - Ottawa and Michigan's CDC Community Transmission Levels can be viewed on <u>CDC's website</u> and on the <u>MI Safe Start Map</u>.
- Current Data:
  - Case Rate (per 100k pop 7-day total) = **50.37**
  - Percent Test Positivity (last 7 days) = 10.7%



Roundup

# COVID-19 Case Rates by County Across the US

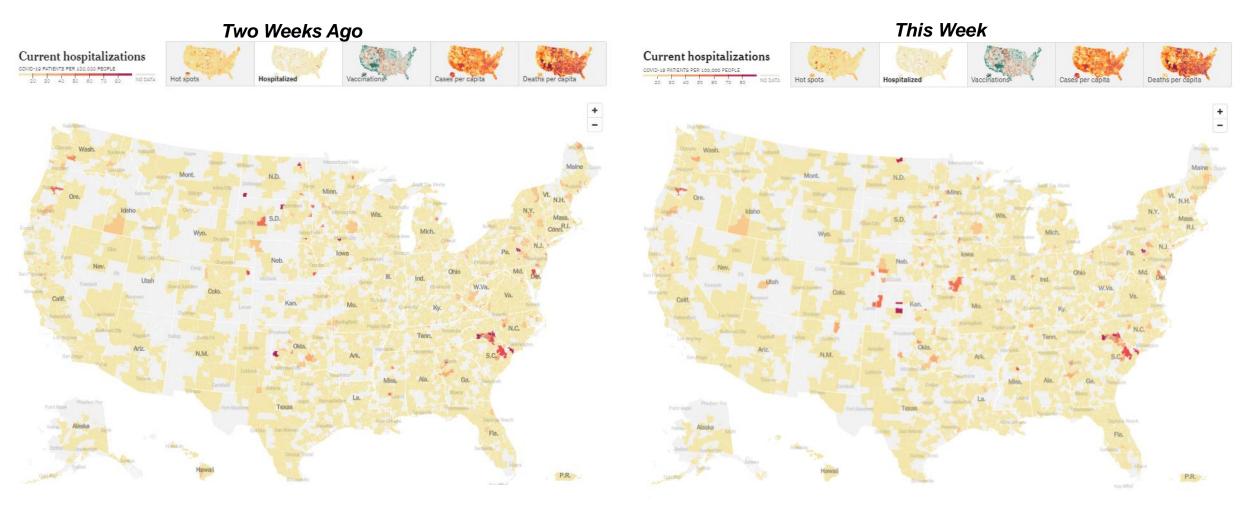
#### This Week Two Weeks Ago



Case rates across the nation appear to be stable, with regional variability.

Source: https://www.nytimes.com/interactive/2021/us/covid-cases.html Accessed March 16, 2023

# COVID-19 Hospitalization Rates by County Across the US



Hospitalization rates remain relatively low across most of the nation.

Source: https://www.nytimes.com/interactive/2021/us/covid-cases.html Accessed March 16, 2023

#### **COVID-19 News Headlines**

#### China to fully reopen borders to foreigners, but near-term hurdles remain

https://www.nbcnews.com/news/world/china-fully-reopen-bordersforeigners-visas-rcna74801

#### House votes to declassify info about origins of COVID-19

https://abcnews.go.com/Politics/wireStory/house-votes-declassify-infoorigins-covid-19-97770035

#### Michigan adds 7,438 cases, 73 deaths from COVID-19

https://www.detroitnews.com/story/news/local/michigan/2023/03/14/michiga n-adds-7438-cases-73-deaths-from-covid-19/70008409007/

#### West Michigan reflects on 3 years of COVID-19

https://www.wzzm13.com/article/news/health/west-michigan-reflects-on-3vears-of-covid-19/69-038318c8-be52-4610-8c39-1c8a6baa094b

> Science Roundup

#### Science Roundup

Assessment of the Risk of Venous Thromboembolism in Nonhospitalized Patients With COVID-19

A large retrospective cohort study conducted on outpatients with COVID-19 found the overall risk of venous thromboembolism (VTE) was low, and selected patient characteristics were associated with higher rates of VTE in the first 30 days after COVID-19 diagnosis.

https://iamanetwork.com/journals/jamanetworkopen/fullarticle/2802356

Estimated Effectiveness of Prior SARS-CoV-2 BA.1 or BA.2 Infection and Booster Vaccination Against Omicron BA.5 Subvariant Infection



This nationwide South Korean population-based case-control study, found that greater protection from SARS-CoV-2 infection during BA.5 period was associated with prior SARS-CoV-2 infection during BA.1/BA.2 periods, and was also associated with the number of booster doses, compared to the two-dose vaccination.

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2802258

Impact of antibody-level on viral shedding in B.1.617.2 (Delta) variant-infected patients analyzed using joint model of longitudinal and time-to-event data



A small study done in China observed that the duration of viral shedding may be shortened with the combination of vaccination and higher antibody levels.

https://www.aimspress.com/article/doi/10.3934/mbe.2023390

Association of Antenatal COVID-19-Related Stress With Postpartum Maternal Mental Health and Negative Affectivity in Infants



Vaccinations

This small cohort study consisting of participants in Australia, the UK, and the US who were pregnant during the COVID-19 pandemic, found that COVID-19-related stress during pregnancy was associated with postpartum maternal mental health and infant negative affectivity, emphasizing the need to prioritize antenatal mental health care during pandemics.

Other

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2802388

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