

Ottawa County COVID-19 Epidemiology

February 2, 2023

Data as of January 28, 2023, 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 decreases
 - Last week positivity increased to 13.1%, from 8.3% two weeks ago.
 - Weekly case counts decreased 2% (+12% two weeks ago), from 142 two weeks ago to 139 last week.
 - Cases among children increased 58% (-20% two weeks ago), from 12 two weeks ago to 19 last week.
 - COVID-19 wastewater signals in Ottawa County are mixed. In Holland/Zeeland the latest signals may be stabilizing; Grand Haven/Spring Lake signal has decreased and may be stabilizing, 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 January 30, 2023.
- Ottawa-area and regional hospitals have adequate capacity
 - In Ottawa County, 2% of all available beds and 0% of all ICU beds are occupied by COVID-19 patients.*
- Pediatric hospitalization rates in the US and in Michigan remain relatively
 - 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, 61.6% 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

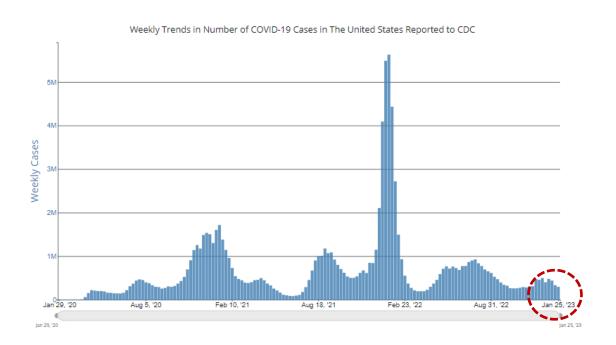
		Week Ending				
Metric	Goal	31-Dec-22	7-Jan-23	14-Jan-23	21-Jan-23	28-Jan-23
Positivity (All Ages)	NA	12.6%	11.2%	8.5%	8.3%	13.1%
Weekly Cases (All Ages)	<592	165	190	127	142	139
Weekly Cases in Children (0-17 years of age)	NA	13	13	15	12	19
Total Deaths (All Ages)	0	6	2	5	1	2
CDC COVID-19 Community Level (New)	Low	Low	Low	Low	Low	Low

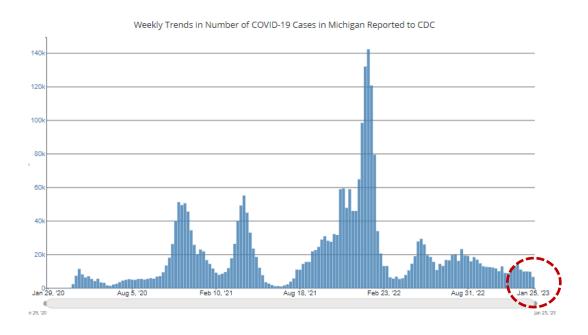
Please note that with updated CDC Community Levels, metrics and/or metric thresholds/goals may change.

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.

Variants

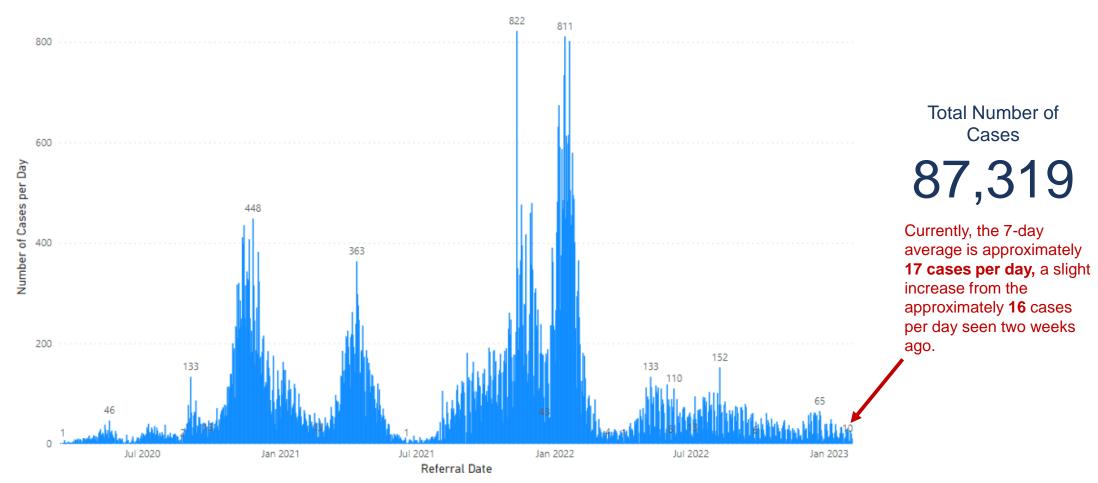
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

Data through January 25, 2023

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – February 1, 2023

Epidemiological Curve



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.

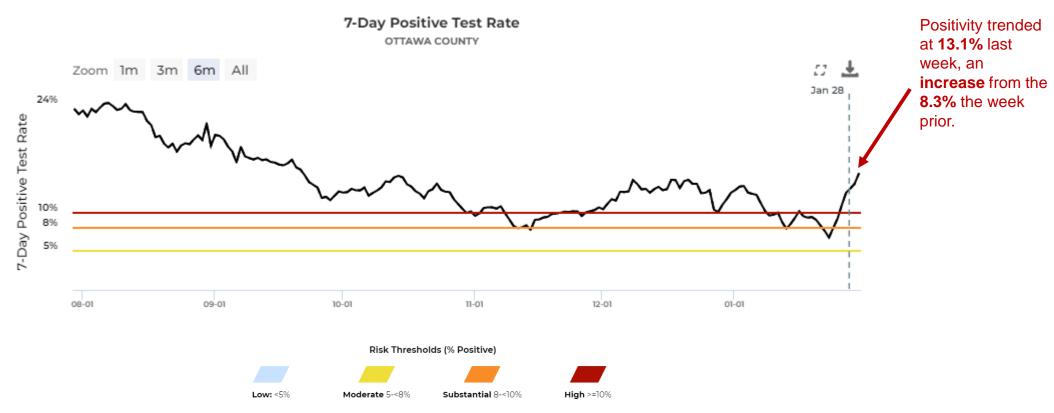
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Science Roundup

USA & MI

Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – January 28, 2023



Variants

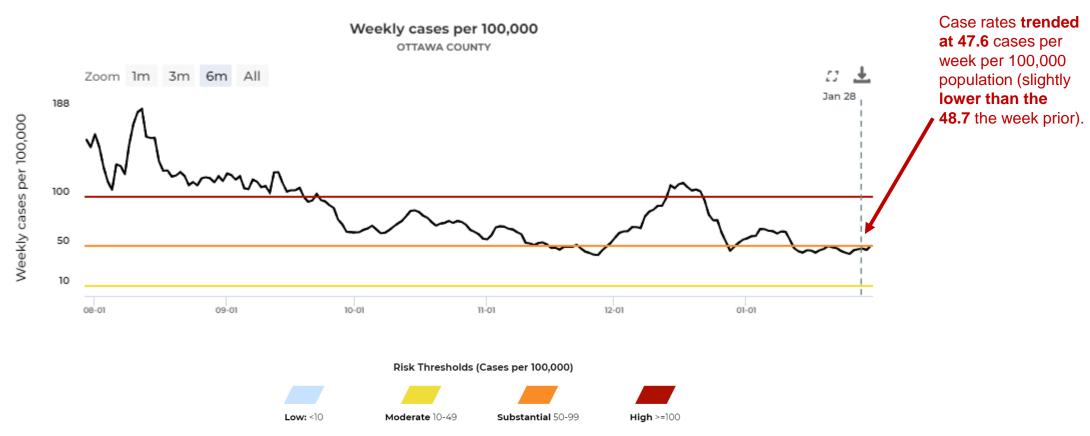
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

Note: Testing data and can be found at the following sources: 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 – January 28, 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.

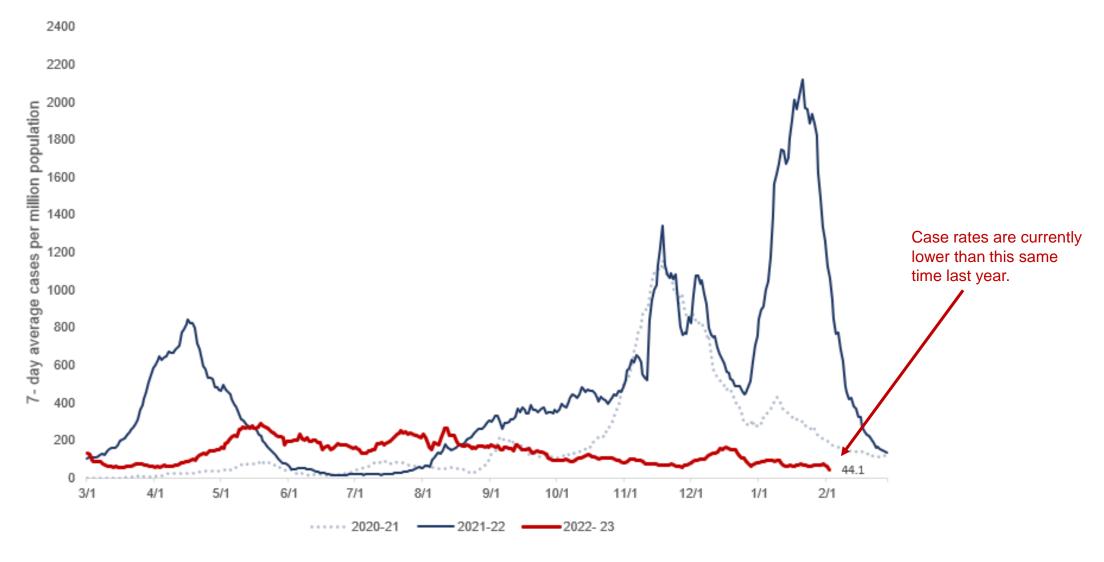
Source: MI Safe Start Map-Ottawa County

Spread

USA & MI

Science Roundup

Ottawa County Trends - Comparison of Case Rates by Year



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 case rates.

Source: Internal Data

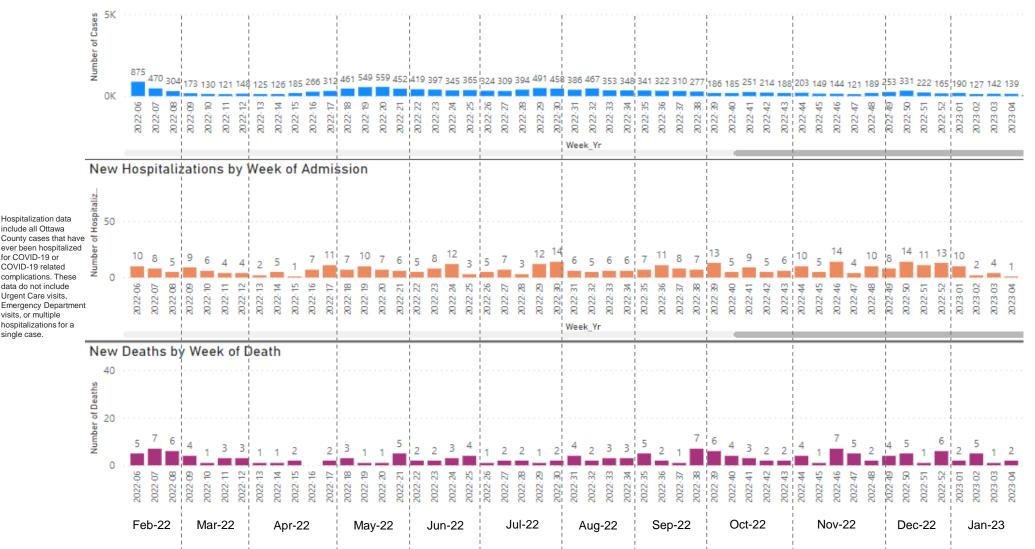
Data through February 1, 2023

Science

Roundup

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

New Cases By Week of Referral



The weekly number of cases decreased 2% from week 3 to week 4.

Weekly COVID-19 deaths remain low. The current weekly average number of deaths over the last 4 weeks is 3 deaths per week.

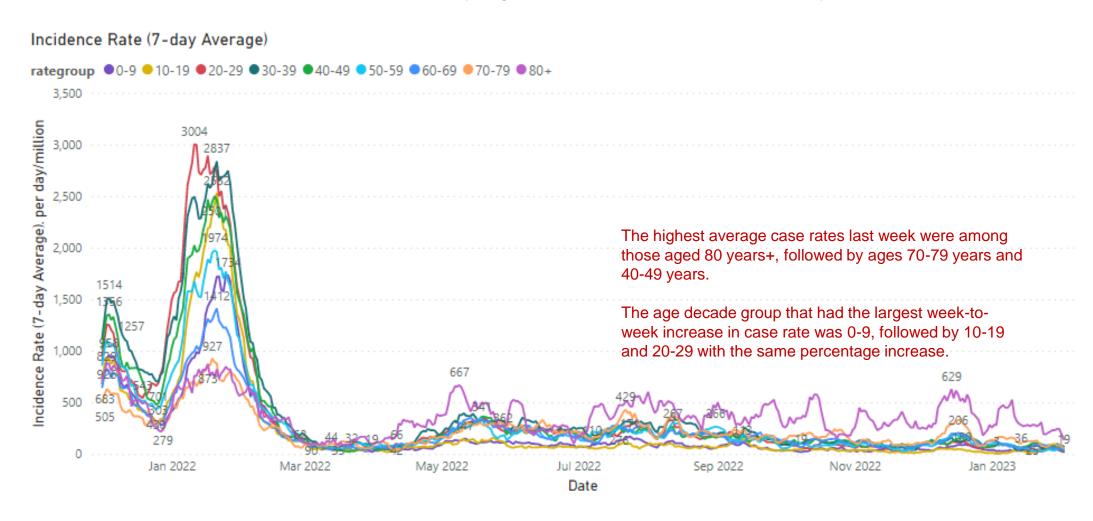
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower number of cases. Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Data as of February 1, 2023

Variants

Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, December 2021 – February 1, 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 February 1, 2023

Science

Roundup

Risk Levels

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 4 (January 22, 2023 - January 28, 2023)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	1.6	42.6	121%
10-19	2.0	45.2	75%
20-29	3.0	66.3	75%
30-39	2.9	79.8	-5%
40-49	2.7	81.7	-21%
50-59	1.3	37.0	13%
60-69	1.9	57.1	-35%
70-79	2.0	96.9	-26%
80 +	2.6	230.9	-14%

Age groups with highest average case rates last week:

- +08
- 70-79
- 40-49

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

- 0 9
- 10-19
- 20-29

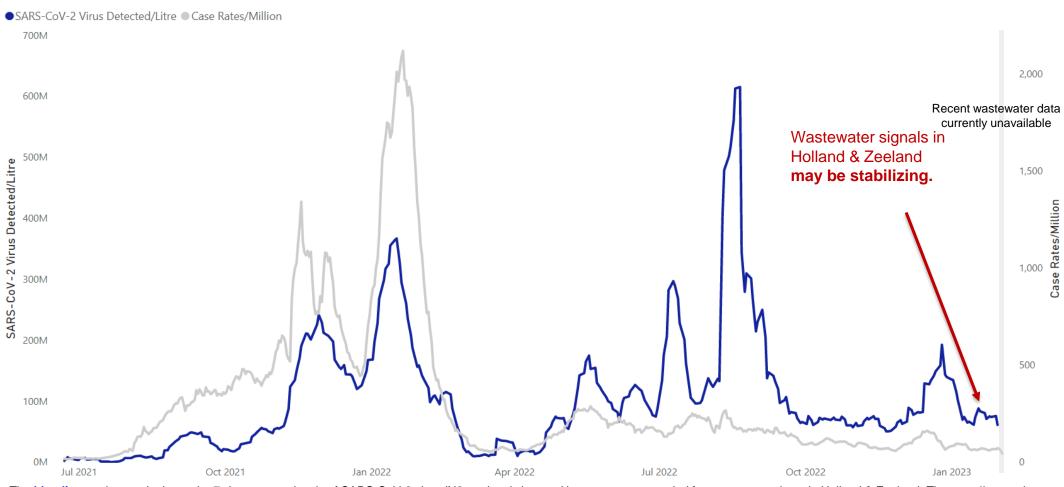
Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower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

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

Data as of February 1, 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.

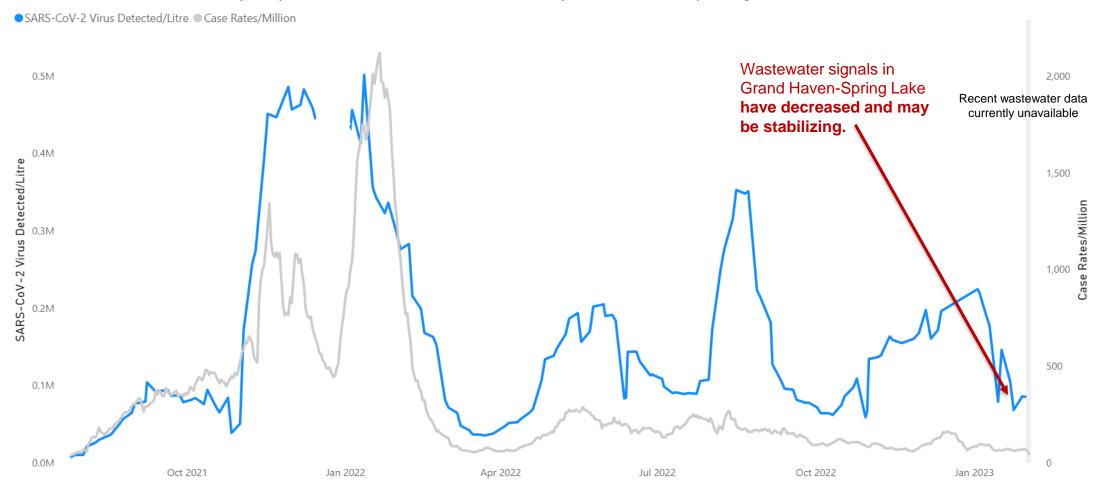
Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (best@hope.edu)

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

Data through January 30, 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)

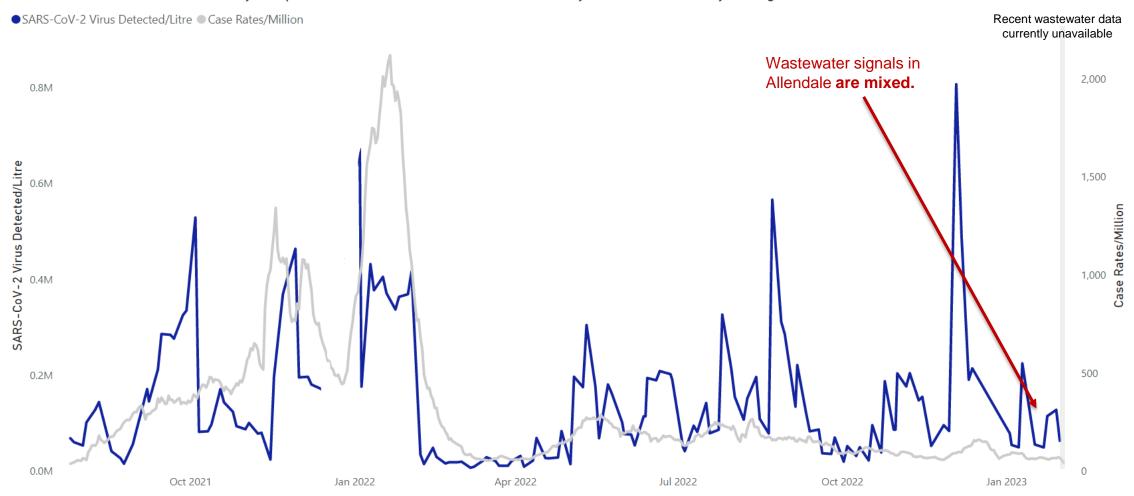
Additional Information: Michigan COVID-19 Wastewater Surveillance Pilot Project (arcgis.com), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov)

Data through January 31, 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 January 31, 2023

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
19-Nov-22	131	-3%	13	8%	144	-2%
26-Nov-22	105	-20%	16	23%	121	-16%
3-Dec-22	175	67%	14	-13%	189	56%
10-Dec-22	227	30%	26	86%	253	34%
17-Dec-22	288	27%	43	65%	331	31%
24-Dec-22	198	-31%	24	-44%	222	-33%
31-Dec-22	152	-23%	13	-46%	165	-26%
7-Jan-23	177	16%	13	0%	190	15%
14-Jan-23	112	-37%	15	15%	127	-33%
21-Jan-23	130	16%	12	-20%	142	12%
28-Jan-23	120	(-8%	19	58%	139	-2%

Weekly case counts among children increased 58% last week, and cases in adults decreased 8%.

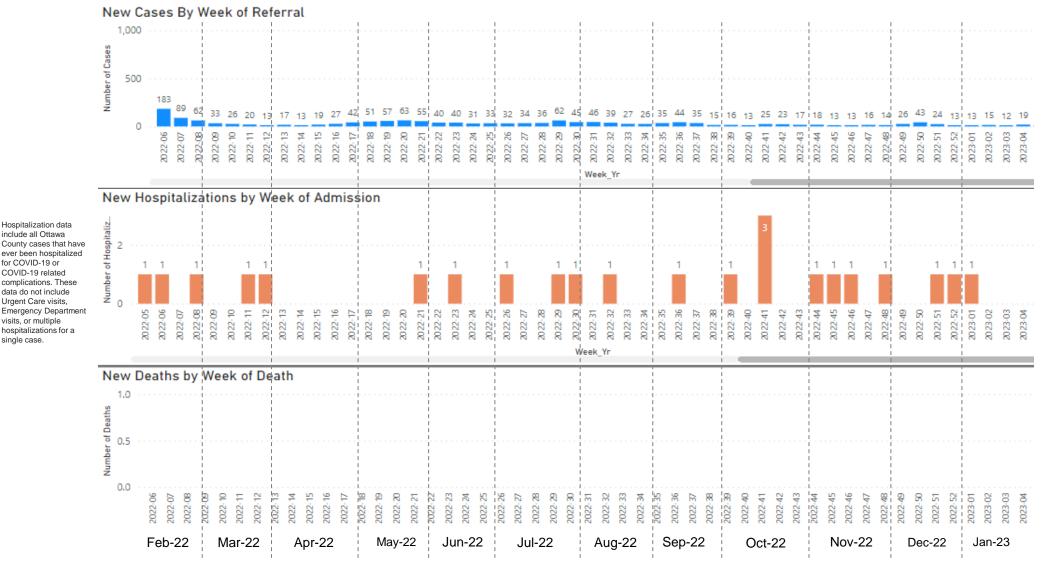
Children **Adults**

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

Children

Science Roundup

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



The weekly number of cases among children increased 58% from week 3 to week 4.

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

Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts. Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

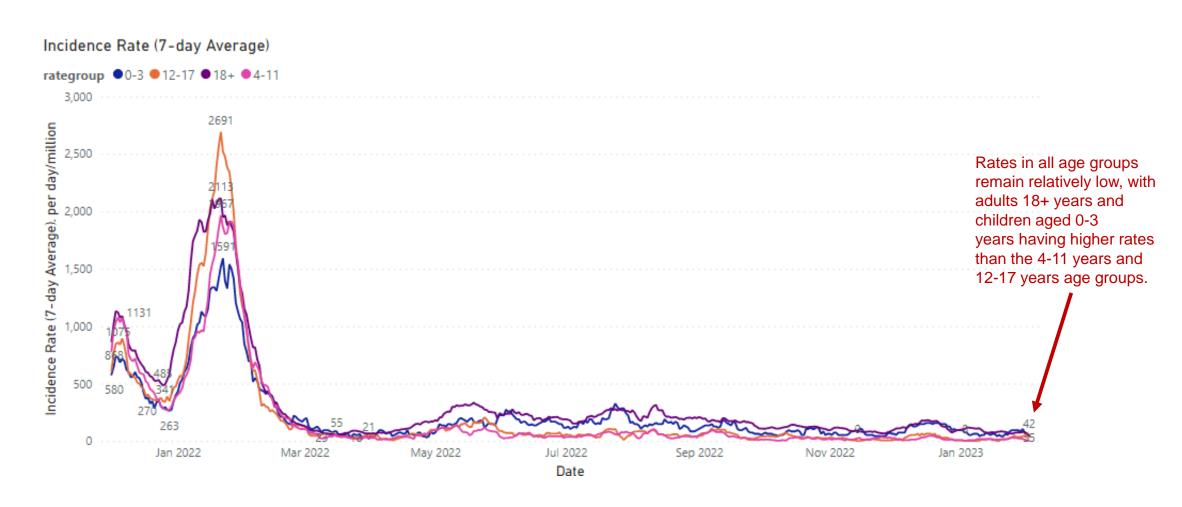
Data as of February 1, 2023

Hospitalization data include all Ottawa ever been hospitalized for COVID-19 or

hospitalizations for a single case.

Ottawa County – Case Rate Trends by Age

COVID-19 Case Rates by Age, includes School-Aged, December 2021 – February 1, 2023

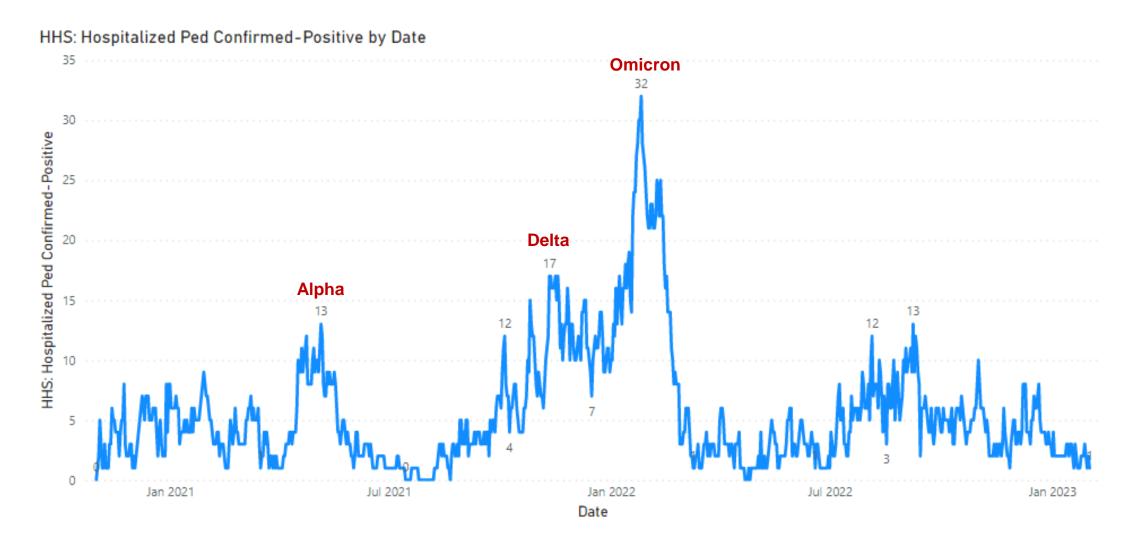


Variants

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 February 1, 2023

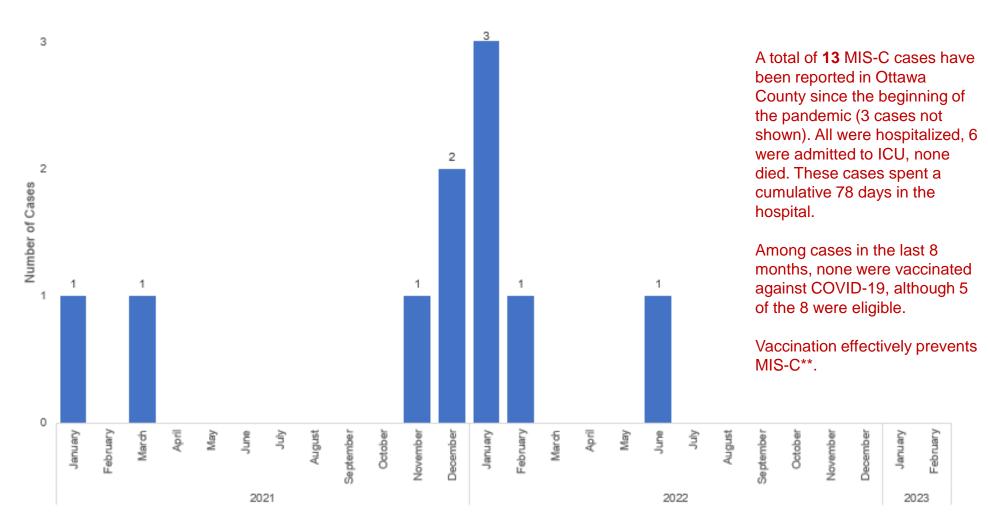
Daily Hospital Pediatric Census – West Michigan



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 February 1, 2023

Ottawa County MIS-C* Cases by Month



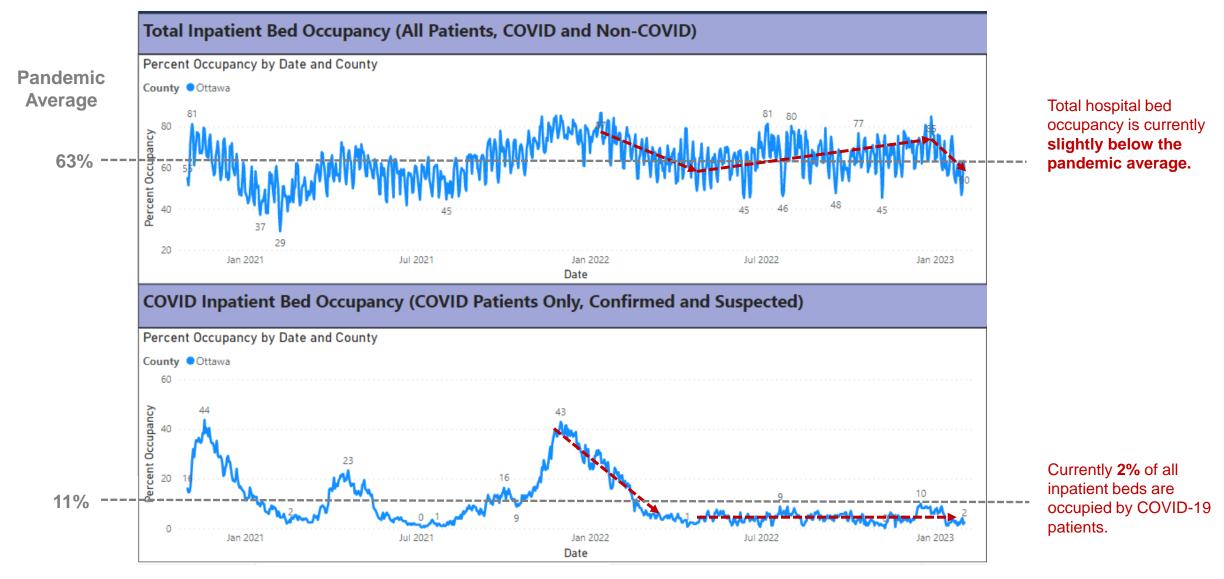
Notes: Includes confirmed and probable cases.

**Sources: MMWR & The Lancet

Data through February 1, 2023

^{*}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



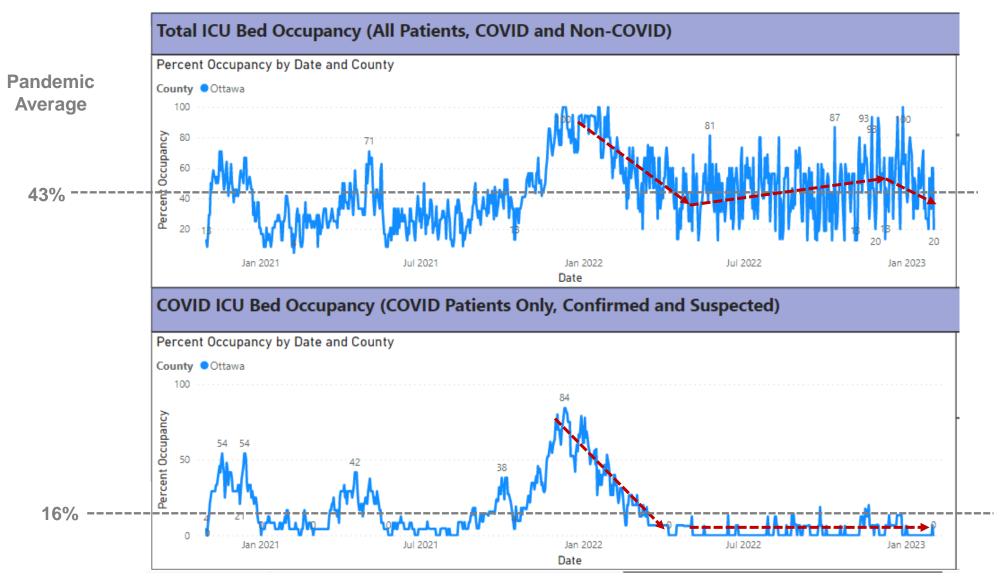
Source: EMResources

Data through February 1, 2023

Variants

Spread

Ottawa County Hospital Capacity – ICU Beds



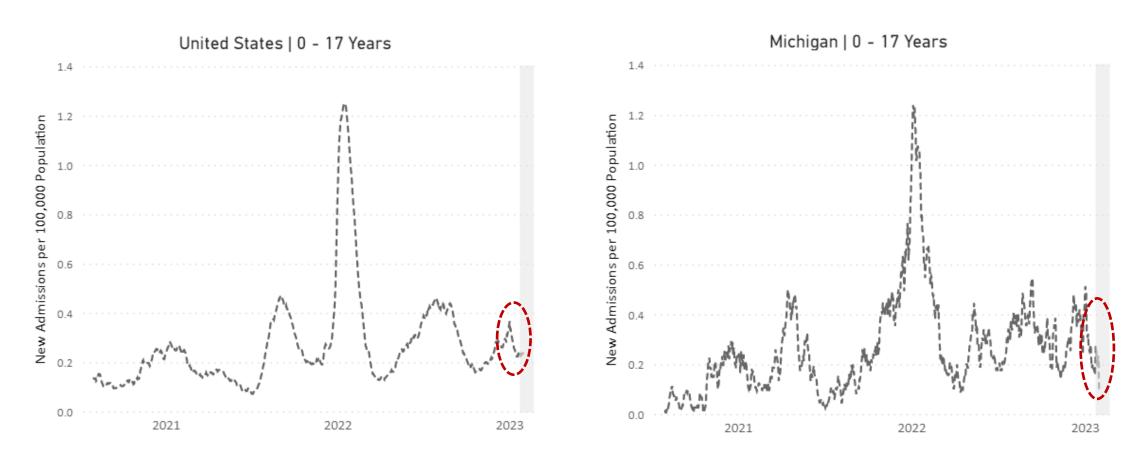
Total ICU bed occupancy varies considerably by day. Lately, ICU bed occupancy is below the pandemic average

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.

Source: EMResources

Data through February 1, 2023

Pediatric Hospitalization Rates – USA, Michigan



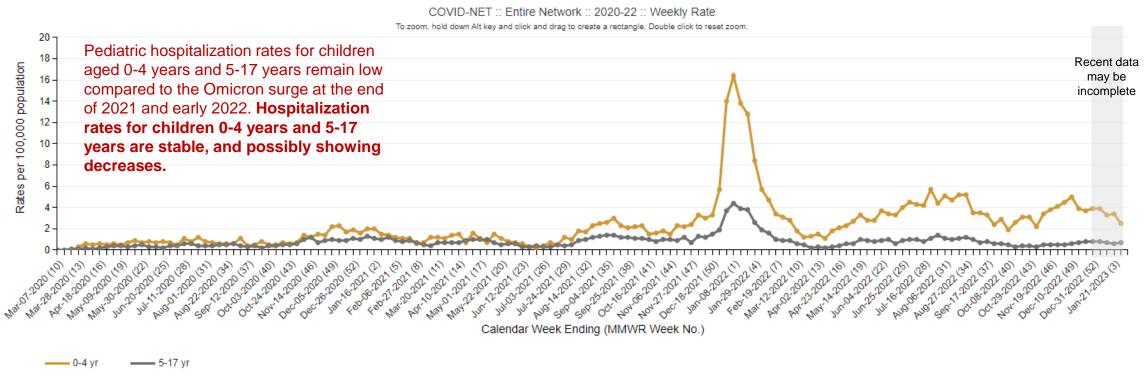
Pediatric COVID-19 hospitalization rates across the US and Michigan are showing recent **decreases**.

Variants

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

Accessed February 2, 2023

Pediatric Hospitalization Rates by Age Group – USA



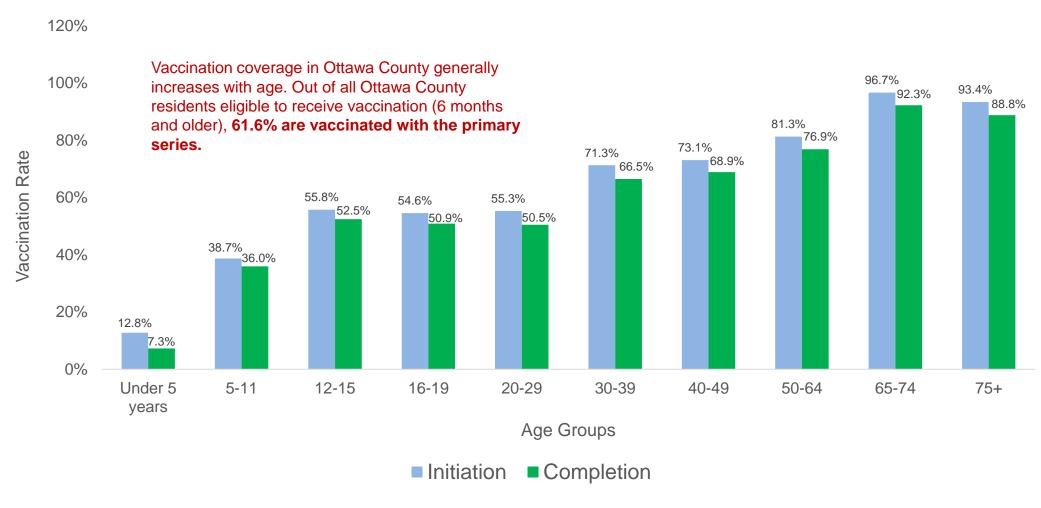
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 February 2, 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.

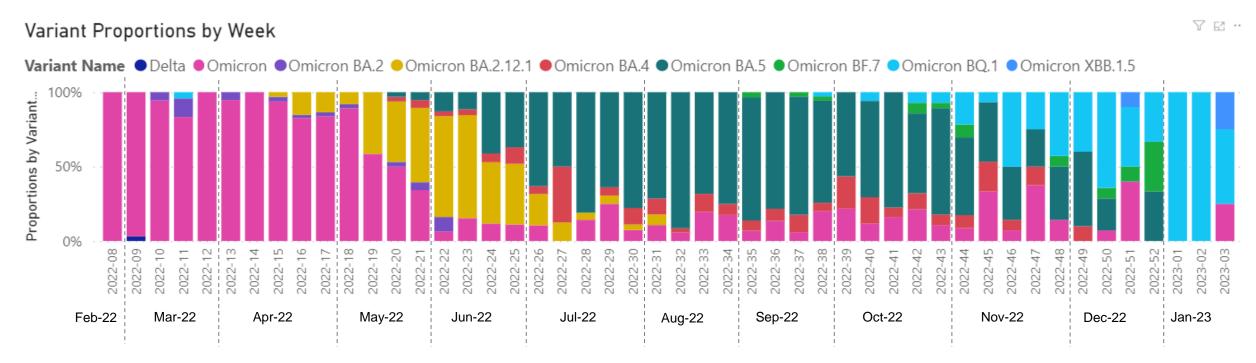
Source: https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard

Data through February 2, 2023

Science

Roundup

Variants – Clinical Samples from Ottawa County Residents



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

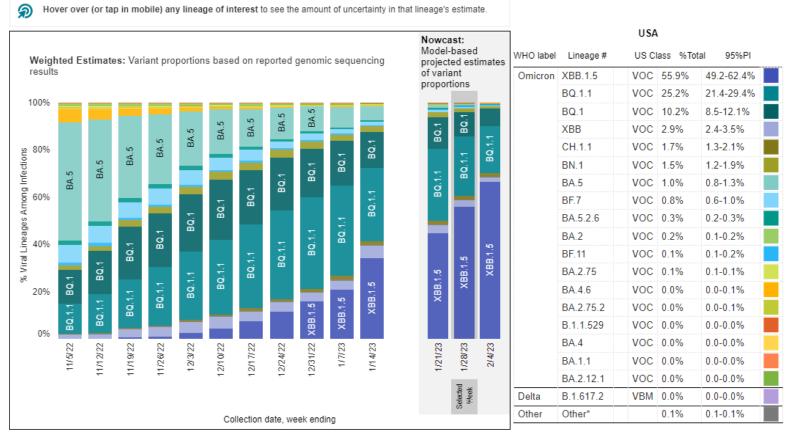
Science Roundup

^{*} 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 10/30/2022 -2/4/2023

Nowcast Estimates in United States for 1/22/2023 - 1/28/2023



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 January 28, 2023.

The BA.5 subvariant has been supplanted by other Omicron subvariants such as XBB.1.5, BQ.1.1, BQ.1, and others.

Source: CDC: https://covid.cdc.gov/covid-data-tracker/#variant-proportions Accessed February 2, 2023

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

[#] 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, sublineages of XBB are aggregated to XBB. For all the other lineages listed, their sublineages are aggregated to the listed parental lineages respectively. Previously, CH.1.1 was aggregated to BA.2.75. Lineages BA.2.75.2, XBB, XBB.1.5, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6 and BQ.1.1 contain the spike substitution

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

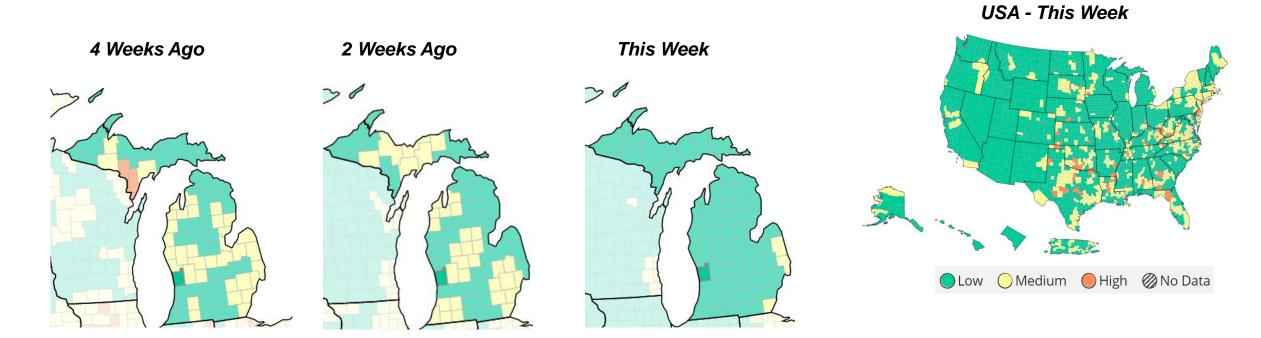
USA & MI

CDC Community Levels – Ottawa County

- Current Community Level in Ottawa LOW
 - Ottawa and Michigan's CDC Community Levels can be viewed on the <u>CDC website</u> and on the <u>MI Safe</u> <u>Start Map</u>.

Current Data:

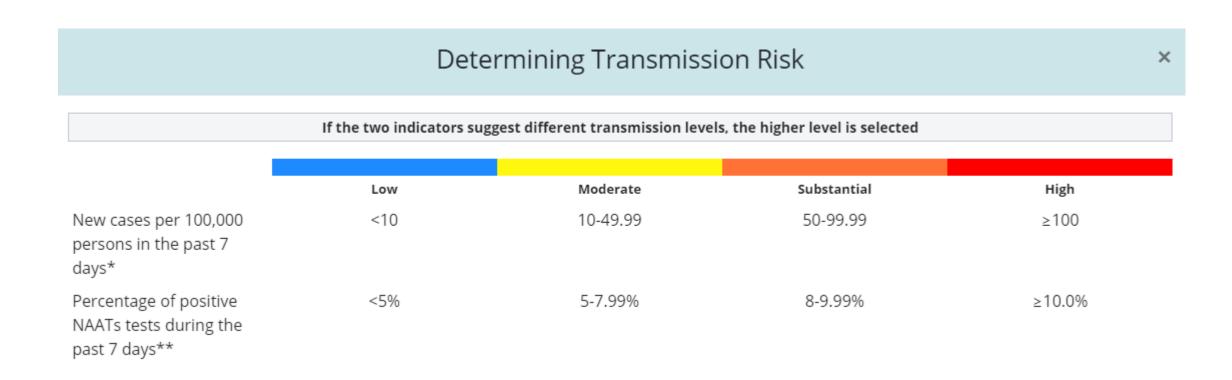
- New COVID-19 Hospital Admissions (per 100K pop 7-day total) = 1.7
- Percent of staffed inpatient beds in use by patients with COVID-19 (7-day average) = 1.8%



Source: CDC COVID Data Tracker: Community Levels

Data updated by CDC on February 2, 2023. Ottawa Hospitalization data as of January 31, 2023.

COVID-19 Community Transmission Levels

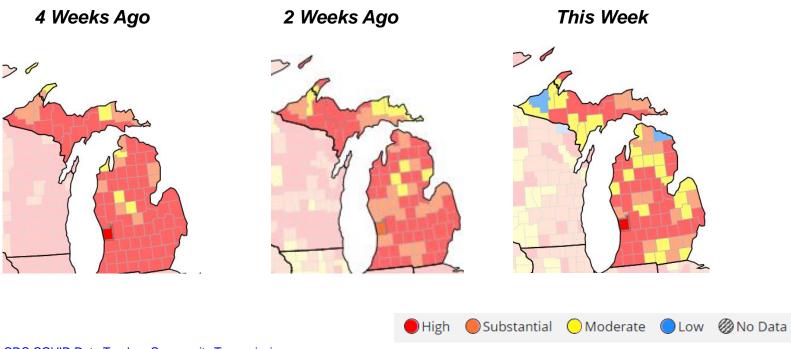


Source: https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&data-type=Risk

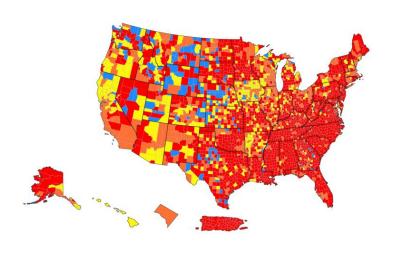


CDC Community Transmission Levels – Ottawa County

- 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) = 49.3
 - Percent Test Positivity (last 7 days) = **13.8%**



USA - This Week

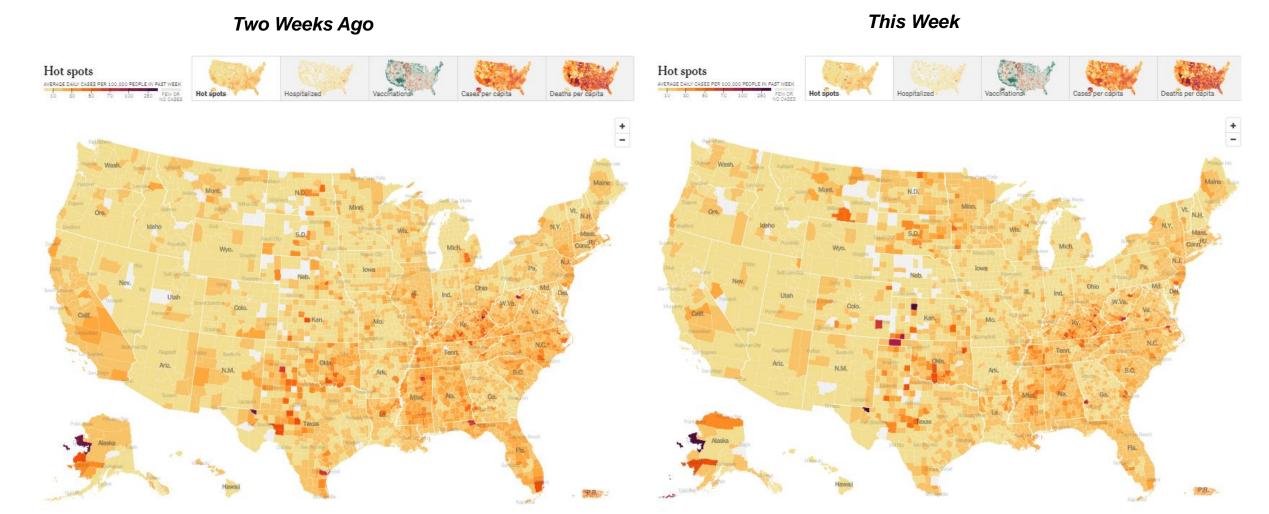


Data updated by CDC on February 2, 2023. Rate data for Ottawa as of February 2, 2023. Positivity data for Ottawa as of January 30, 2023.

Source: CDC COVID Data Tracker: Community Transmission

Science Roundup

COVID-19 Case Rates by County Across the US



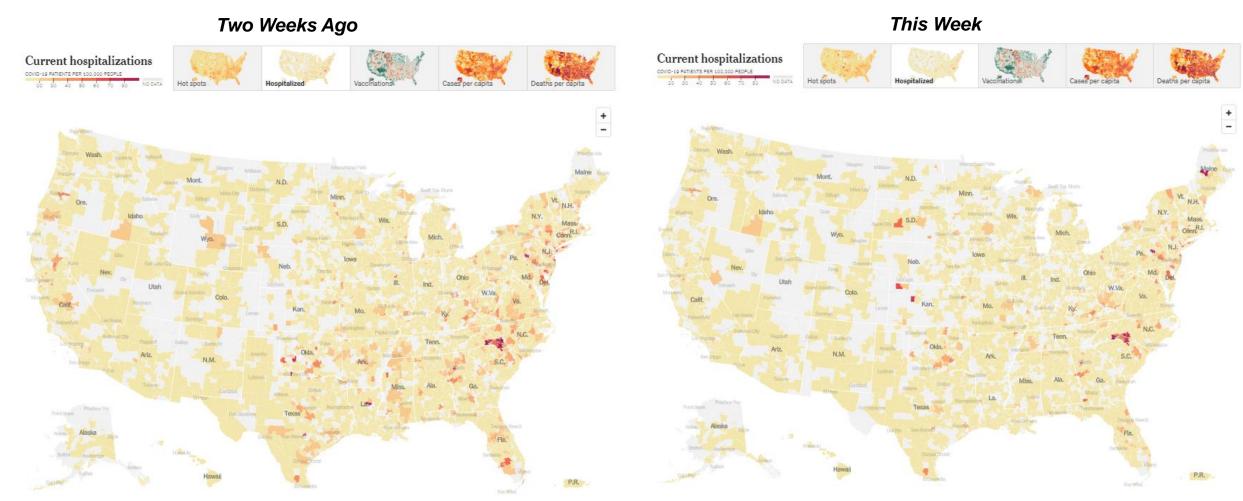
Case rates across the nation appear to be stable.

Source: https://www.nytimes.com/interactive/2021/us/covid-cases.html
Accessed February 2, 2023

Variants

Children

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 February2, 2023

COVID-19 News Headlines

Biden administration to wind down COVID emergencies in May

https://www.cidrap.umn.edu/covid-19/biden-administration-wind-down-covidemergencies-may

WHO: COVID still an emergency, but at 'inflection point'

https://www.cidrap.umn.edu/covid-19/who-covid-still-emergencyinflection-point

Michigan COVID cases continue decline while deaths tick up again

https://www.mlive.com/public-interest/2023/01/michigan-covid-casescontinue-decline-while-deaths-tick-up-again.html

US proposes once-a-year COVID shots for most **Americans**

https://www.mlive.com/news/2023/01/us-proposes-once-a-vear-covidshots-for-most-americans.html

Science Roundup

Effectiveness of Bivalent Boosters against Severe Omicron Infection



This large cohort study found that although effectiveness waned over time, the bivalent COVID-19 boosters provided substantial additional protection among study participants who had previously been vaccinated or boosted, with a higher level of effectiveness compared to that of the monovalent boosters.

https://www.nejm.org/doi/full/10.1056/NEJMc2215471

Persistent COVID-19 Symptoms at 6 Months After Onset and the Role of Vaccination Before or After SARS-CoV-2 Infection



A cohort study found the risk of persistent COVID-19 symptoms was higher among those who reported moderate or severe illness, and among those who were unvaccinated. These findings also suggest that COVID-19 may be associated with increased health care utilization within 6 months of illness onset.

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2800554

Examination of Adverse Reactions After COVID-19 Vaccination Among Patients With a History of Multisystem Inflammatory Syndrome in Children



The findings of this cross-sectional study of patients with a history of MIS-C suggest that the COVID-19 vaccine administered at least 90 days after a MIS-C diagnosis is just as safe as when administered among the general population.

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2799939

Physical interventions to interrupt or reduce the spread of respiratory viruses



masking in the community might have little to no effect on respiratory illness outcomes, and hand washing may reduce the spread of respiratory viruses. Authors note that low adherence with the interventions, high risk of bias, and variation in outcome

This review of 78 randomized control trials, including studies

conducted prior to the COVID-19 pandemic, suggests that

measures hinders the ability to draw firm conclusions.

https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006207.pub6/full

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Risk Levels