

Ottawa County COVID-19 Epidemiology

January 19, 2023

Data as of January 14, 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 decreased to 8.5%, from 11.2% two weeks ago.
- Weekly case counts decreased 32% (+12% two weeks ago), from 184 two weeks ago to 126 last week.
- Cases among children increased 88% (-38% two weeks ago), from 8 two weeks ago to 15 last week.
- COVID-19 wastewater signals in Ottawa County are mixed, but all three sites have recently spiked or have been elevated. In
 Holland/Zeeland the latest signal has decreased and may be stabilizing; Grand Haven/Spring Lake 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 SUBSTANTIAL as of January 14, 2023. However, MI Safe Start Map positivity data indicates a rebound back to >10% positivity in recent days.

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 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 and influenza activity.
- 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

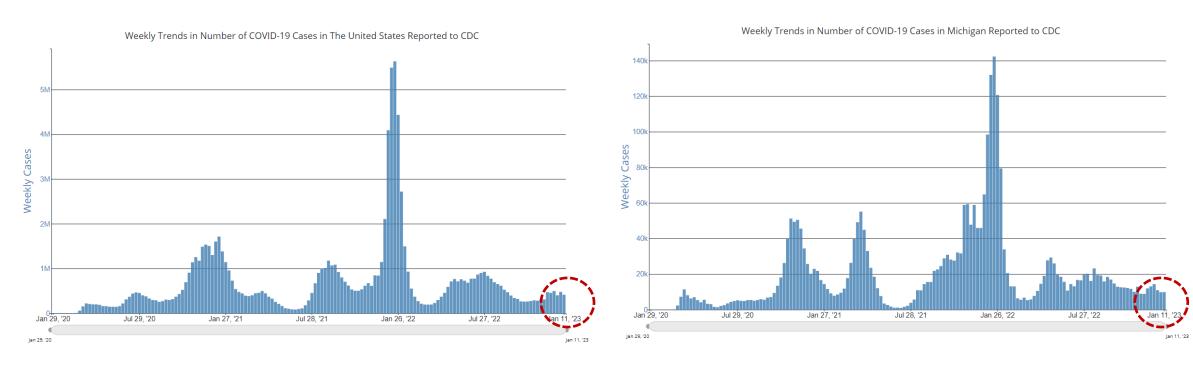
		Week Ending				
Metric	Goal	17-Dec-22	24-Dec-22	31-Dec-22	7-Jan-23	14-Jan-23
Positivity (All Ages)	NA	14.3%	12.5%	12.6%	11.2%	8.5%
Weekly Cases (All Ages)	<592	328	219	164	184	126
Weekly Cases in Children (0-17 years of age)	NA	42	23	13	8	15
Total Deaths (All Ages)	0	5	0	5	2	1
CDC COVID-19 Community 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

Michigan



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

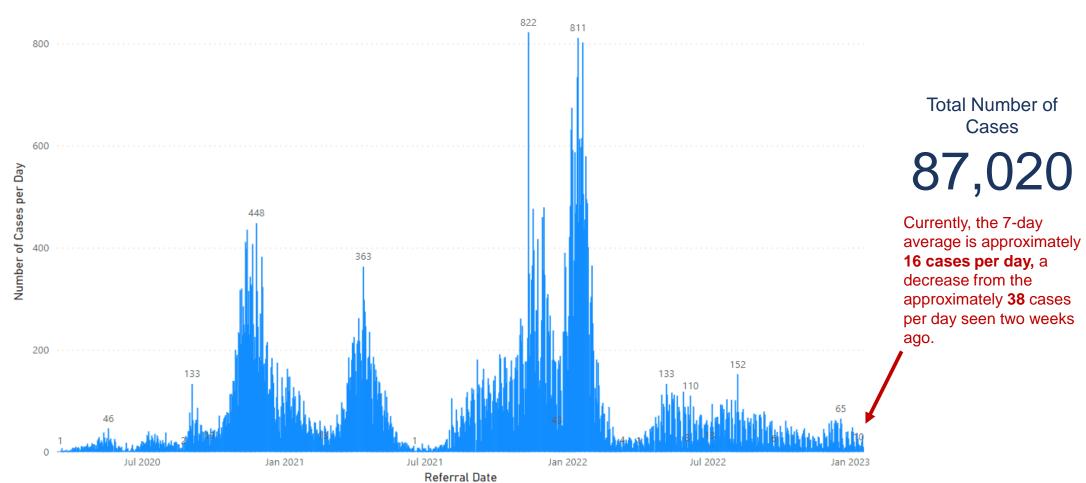
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. **Source:** https://covid.cdc.gov/covid-data-tracker/#trends dailycases

Data through January 11, 2023

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – January 18, 2023

Epidemiological Curve



Variants

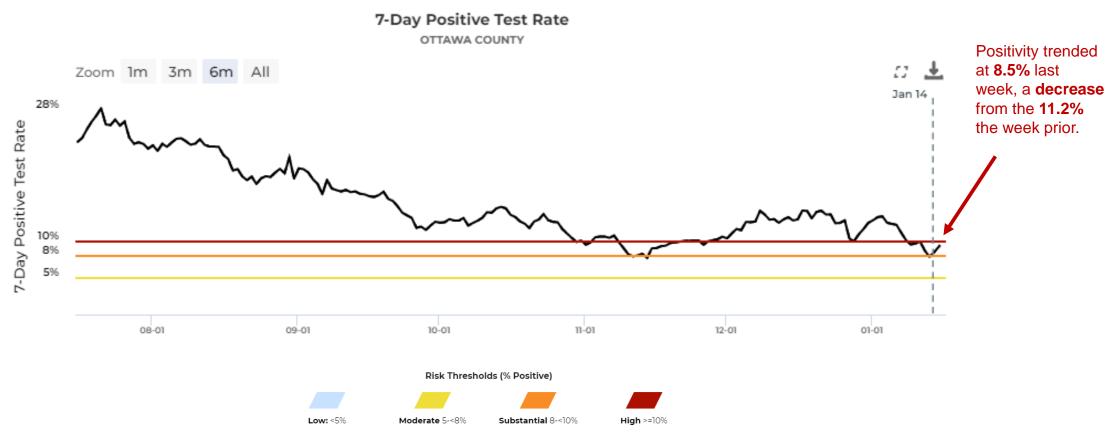
Notes: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Additionally, On November 12, 2021, MDHHS updated their database resulting in a backlog of cases being reported in one day.

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

Science Roundup

Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, April 1, 2022 – January 14, 2023



Variants

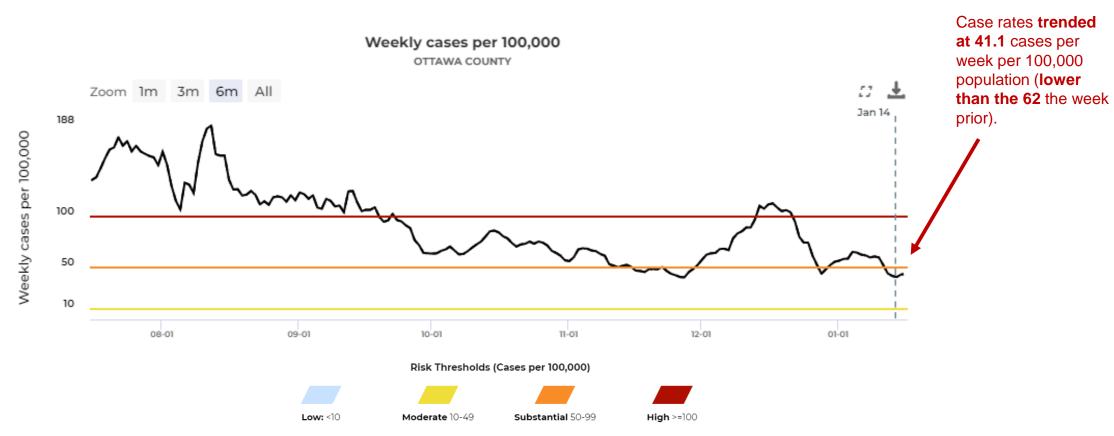
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

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 14, 2023



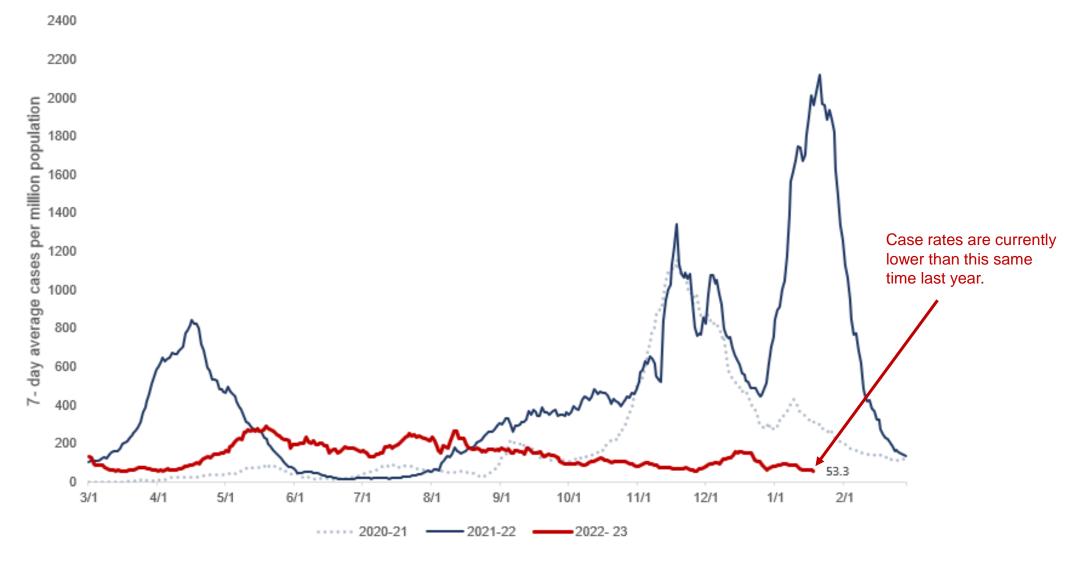
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

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

Science Roundup

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.

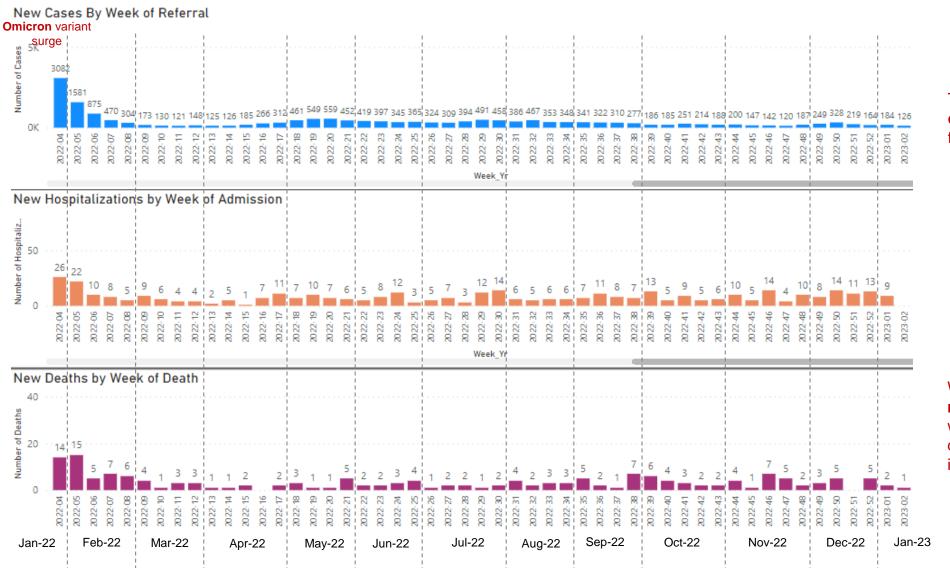
Source: Internal Data

Data through January 18, 2023

Science

Roundup

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



The weekly number of cases decreased 32% from week 1 to week 2.

Weekly COVID-19 deaths remain low. The current weekly average number of deaths over the last 4 weeks is 2 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 January 18, 2023

Variants

Other

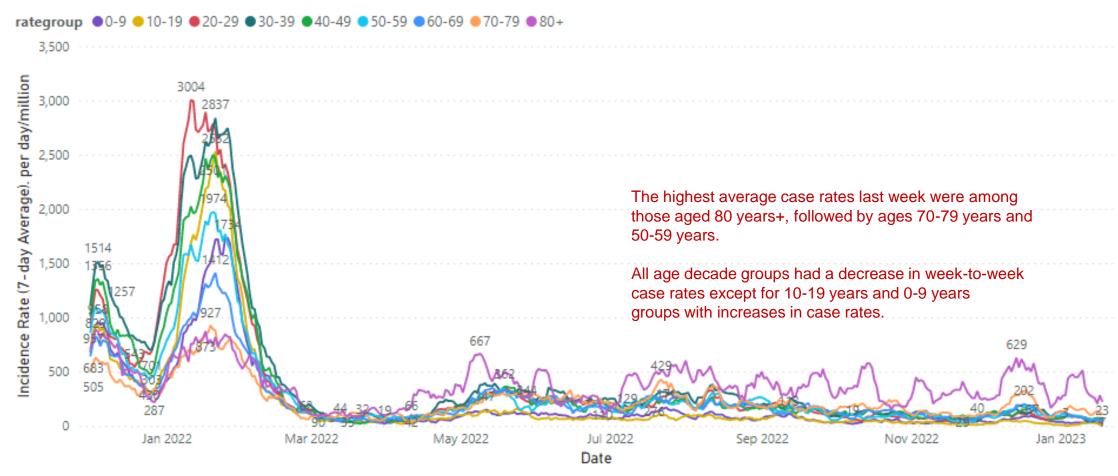
Hospitalization data include all Ottawa

ever been hospitalized for COVID-19 or complications. These data do not include Urgent Care visits, Emergency Department visits, or multiple hospitalizations for a single case.

Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, December 2021 – January 18, 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 January 18, 2023

Ottawa County Case Rate Trends by Age Decade

Daily new confirmed and probable cases per day per million by age group (daily average per week) Week 2 (January 8, 2023 – January 14, 2023)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	1.4	38.8	25%
10-19	1.3	29.1	200%
20-29	2.6	56.8	-36%
30-39	1.4	39.9	-57%
40-49	2.0	60.3	-36%
50-59	2.1	61.4	-35%
60-69	1.7	52.5	-40%
70-79	2.1	103.7	-32%
80+	3.0	269.5	-40%

Age groups with highest average case rates last week:

- 80+
- 70-79
- 50-59

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

- 10-19
- 2. 0-9

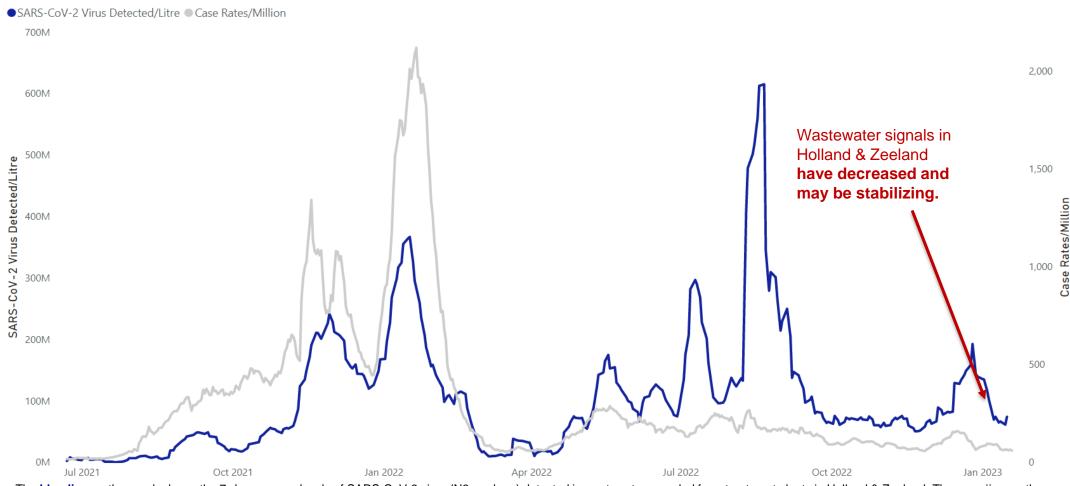
Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower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

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

Data as of January 18, 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.

Variants

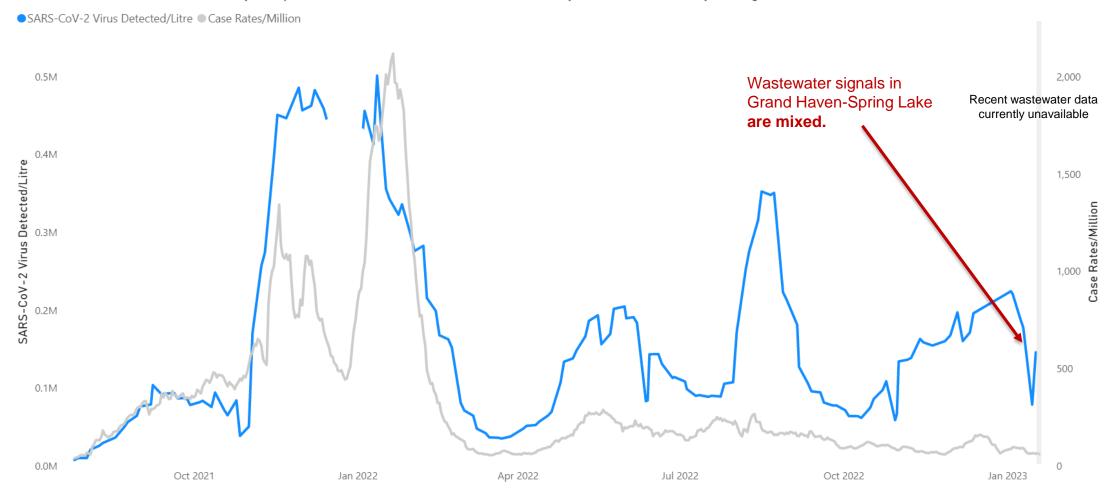
Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (best@hope.edu)

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

Data through January 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)

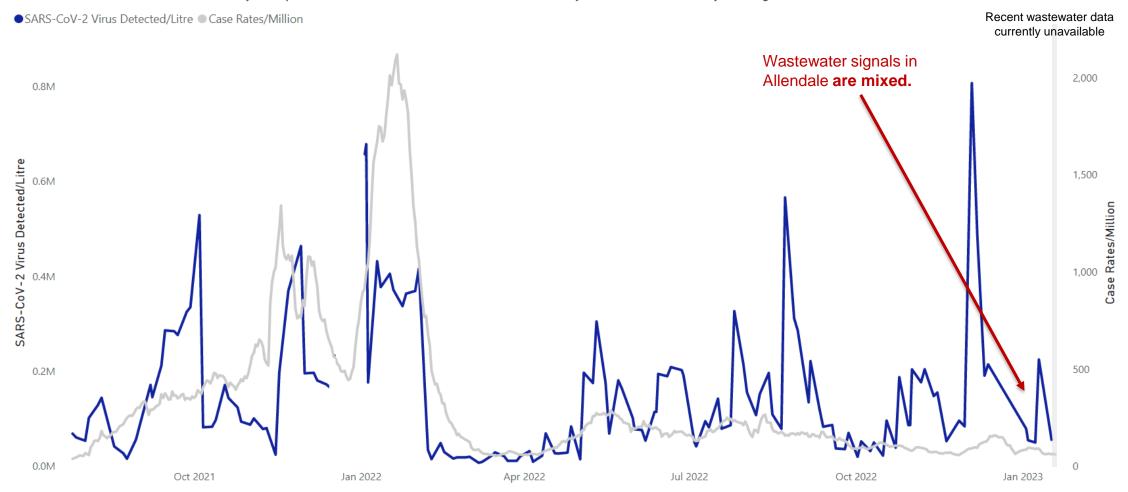
Additional Information: Michigan COVID-19 Wastewater Surveillance Pilot Project (arcgis.com), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov)

Data through January 17, 2023

els 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 17, 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
5-Nov-22	184	8%	16	-6%	200	6%
12-Nov-22	135	-27%	12	-25%	147	-27%
19-Nov-22	130	-4%	12	0%	142	-3%
26-Nov-22	104	-20%	16	33%	120	-15%
3-Dec-22	174	67%	13	-19%	187	56%
10-Dec-22	225	29%	24	85%	249	33%
17-Dec-22	286	27%	42	75%	328	32%
24-Dec-22	196	-31%	23	-45%	219	-33%
31-Dec-22	151	-23%	13	-43%	164	-25%
7-Jan-23	176	17%	8	-38%	184	12%
14-Jan-23	111	(-37%)	15	(88%)	126	-32%

Weekly case counts among children increased 88% last week, and cases in adults decreased 37%.

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

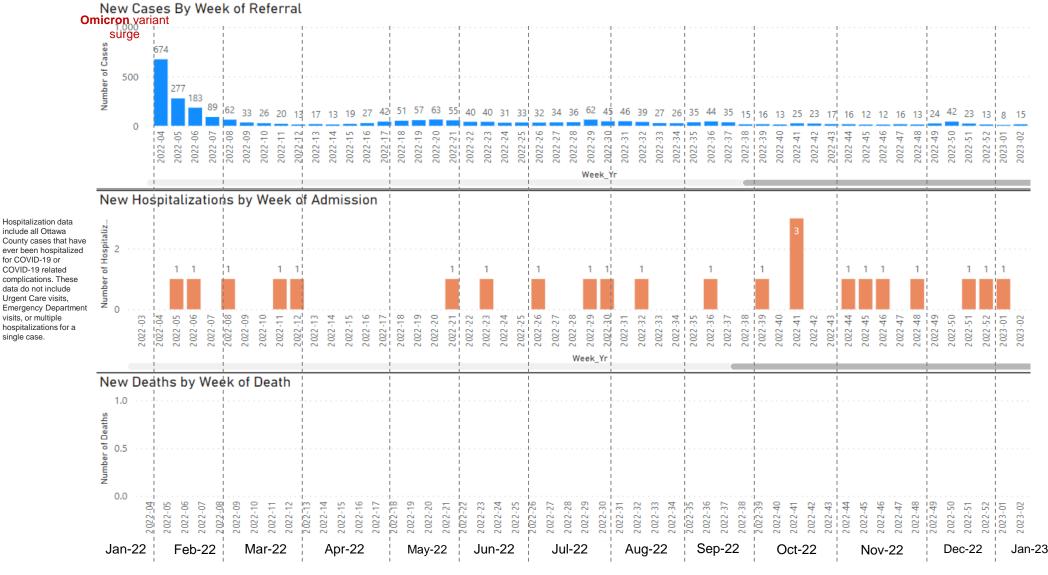
> Science Roundup

Children

Variants

Media

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



The weekly number of cases among children increased 88% from week 1 to week 2.

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

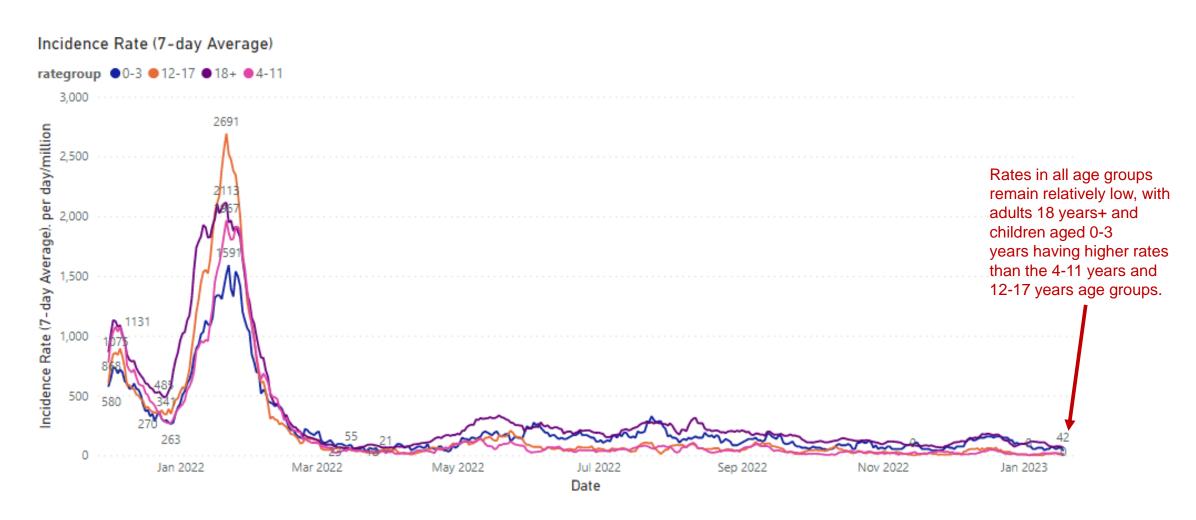
Data as of January 18, 2023

single case.

Children

Ottawa County – Case Rate Trends by Age

COVID-19 Case Rates by Age, includes School-Aged, December 2021 – January 18, 2023

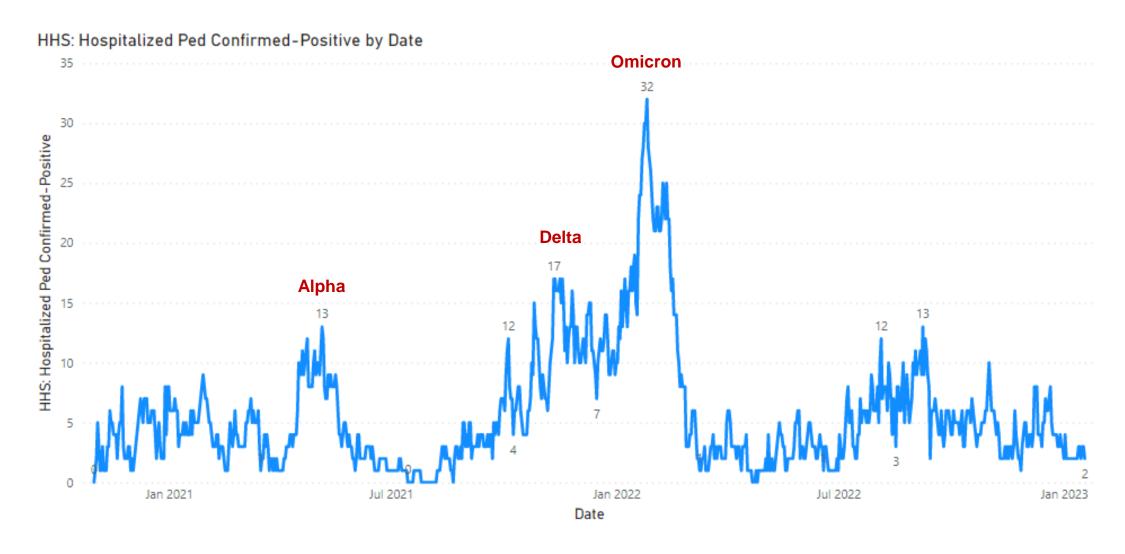


Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Data as of January 18, 2023

Children

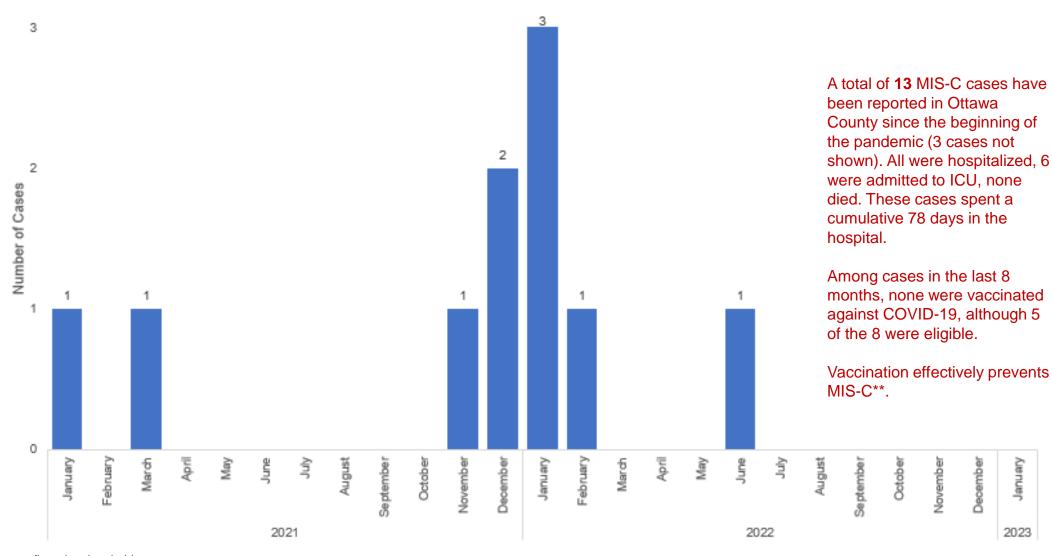
Daily Hospital Pediatric Census – West Michigan



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 January 18, 2023

Ottawa County MIS-C* Cases by Month



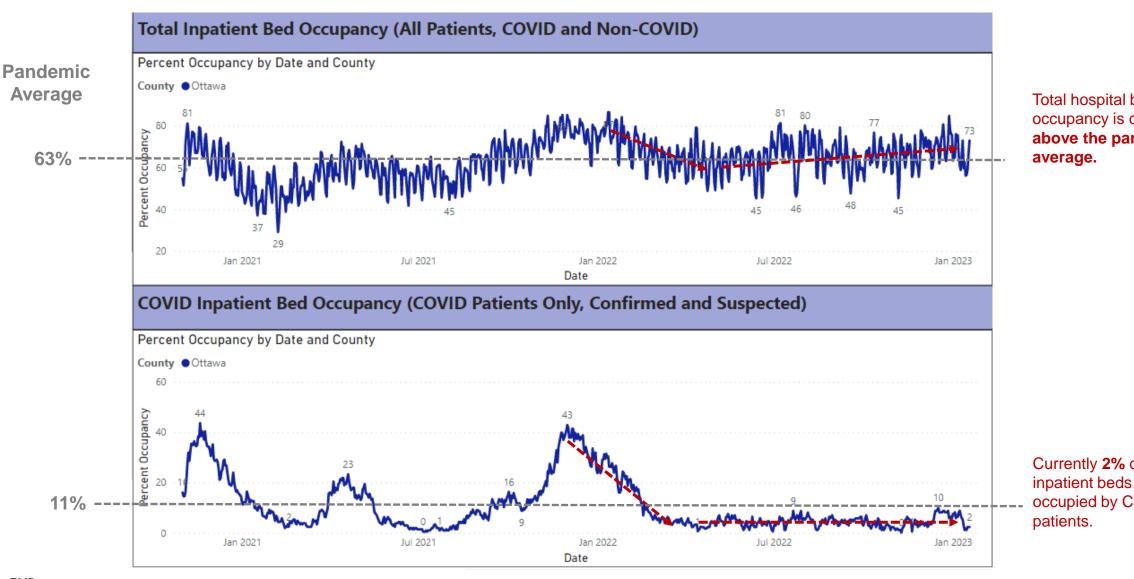
Notes: Includes confirmed and probable cases.

**Sources: MMWR & The Lancet

Data through January 18, 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



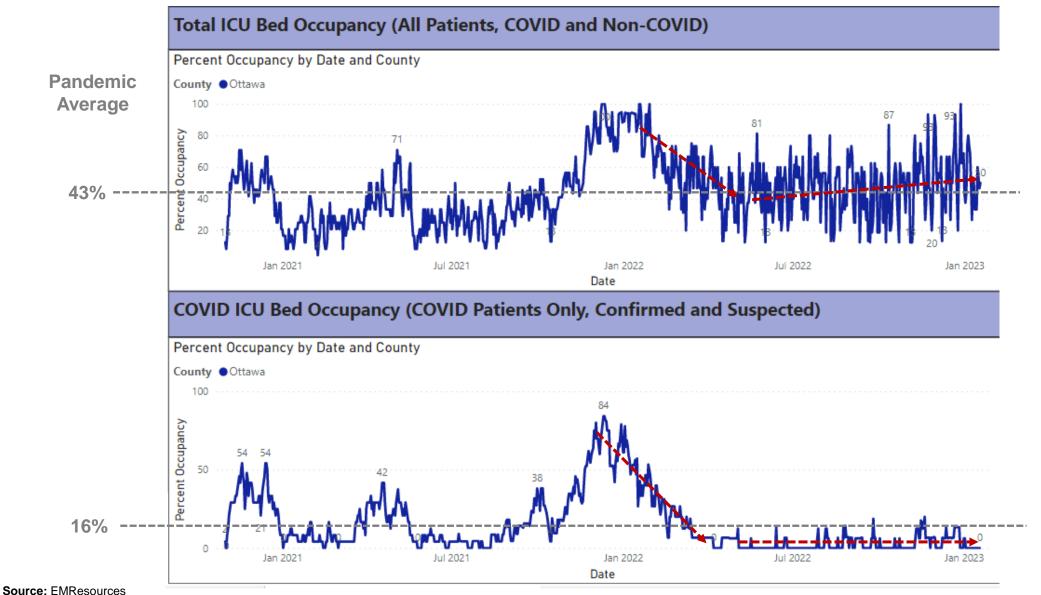
Total hospital bed occupancy is currently above the pandemic

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

Source: EMResources Data through January 18, 2023

Variants

Ottawa County Hospital Capacity – ICU Beds



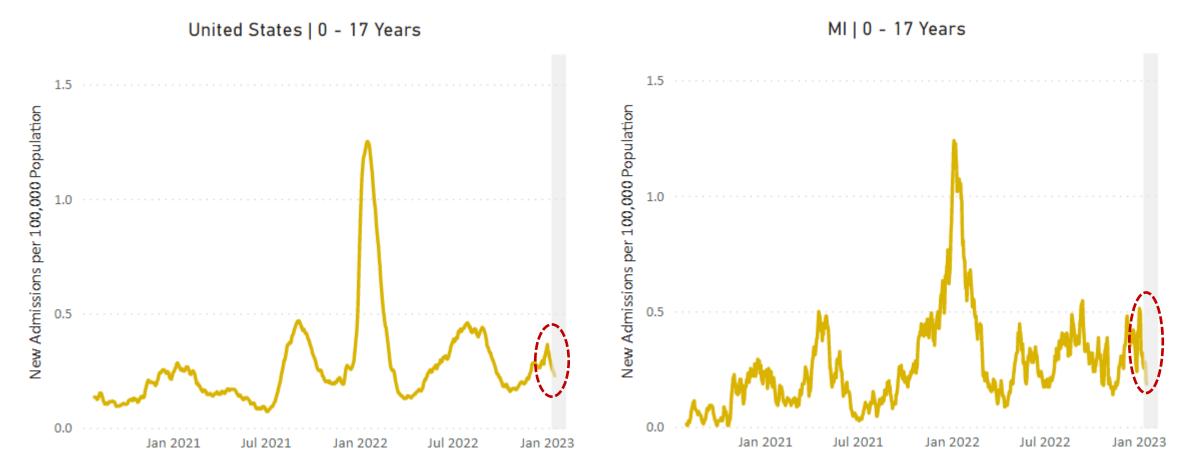
Total ICU bed occupancy varies considerably by day. Lately, ICU bed occupancy is above the pandemic average

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

Data through January 18, 2023

Science Roundup

Pediatric Hospitalization Rates – USA, Michigan



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

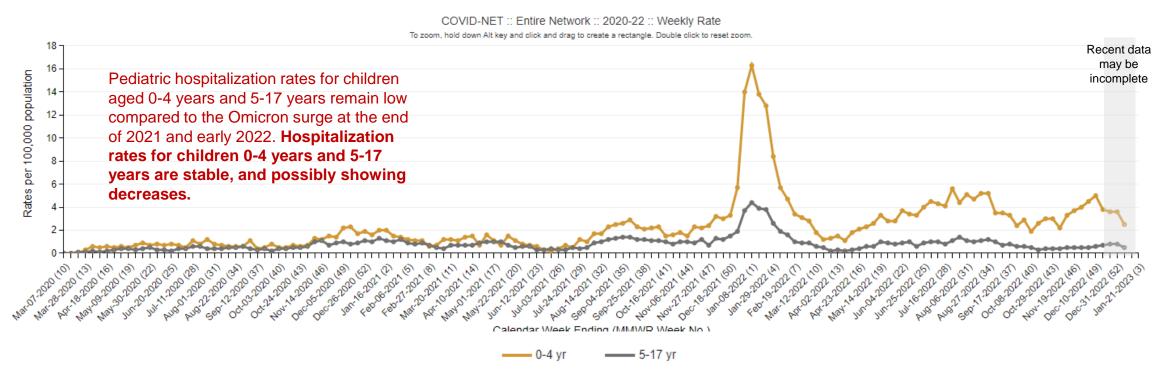
Source: https://covid.cdc.gov/covid-data-tracker/#new-hospital-admissions

Accessed January 19, 2023

Science

Roundup

Pediatric Hospitalization Rates by Age Group – USA



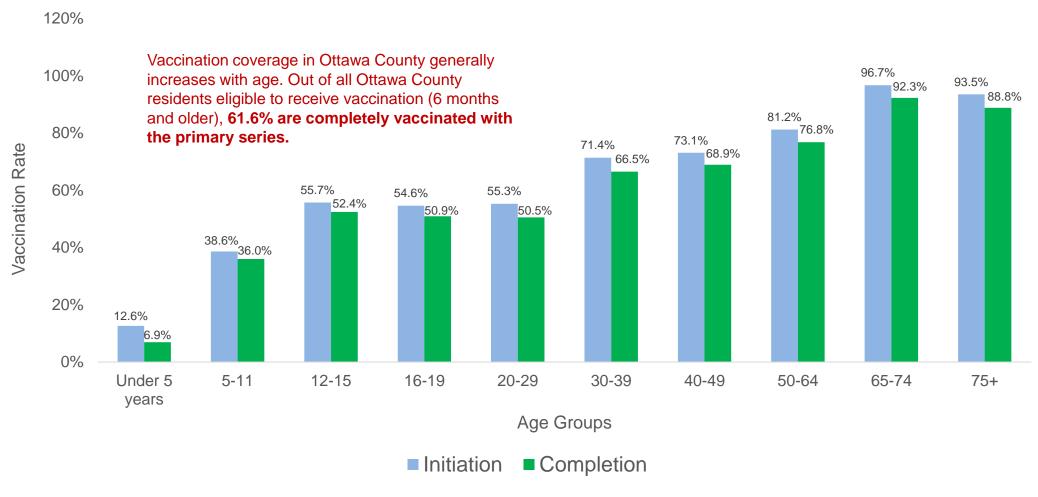
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 January 19 2023

Vaccination Coverage by Age (Primary Series Only)

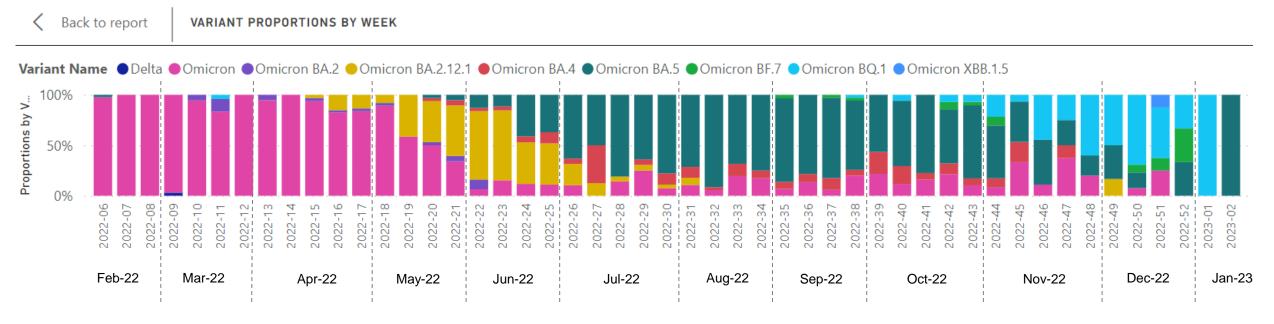


Notes: Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J. NovaVax doses are not included here.

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

Data through January 18, 2023

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).

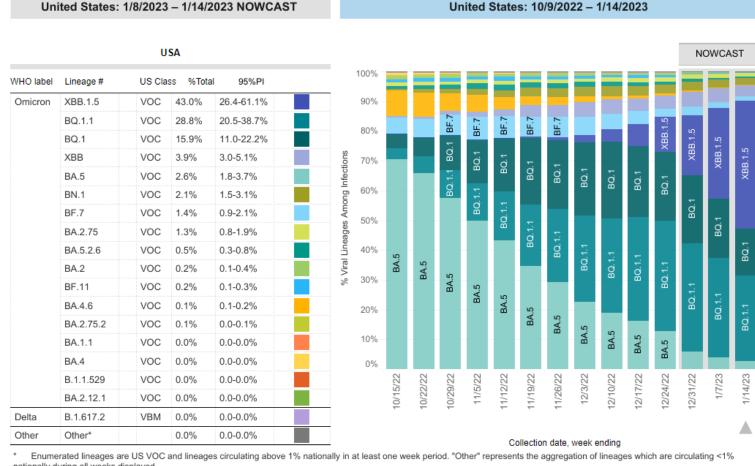
In mid-December 2021, the first **Omicron** positive sample was collected in an Ottawa County resident (data not displayed here), and **Omicron** continues to be detected through 2022, with more recent additions of the **Omicron subvariants** such as BQ.1 and XBB.1.5. Additional **Omicron subvariants** may be detected in clinical samples in the months ahead.

Science Roundup

Variants

^{*} 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



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 14, 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 January 18, 2023

Risk Levels

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. Except XBB.1.5, sublineages of XBB are aggregated to XBB. For all the lineages listed in the above table, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB.1.5 was aggregated to XBB. 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 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

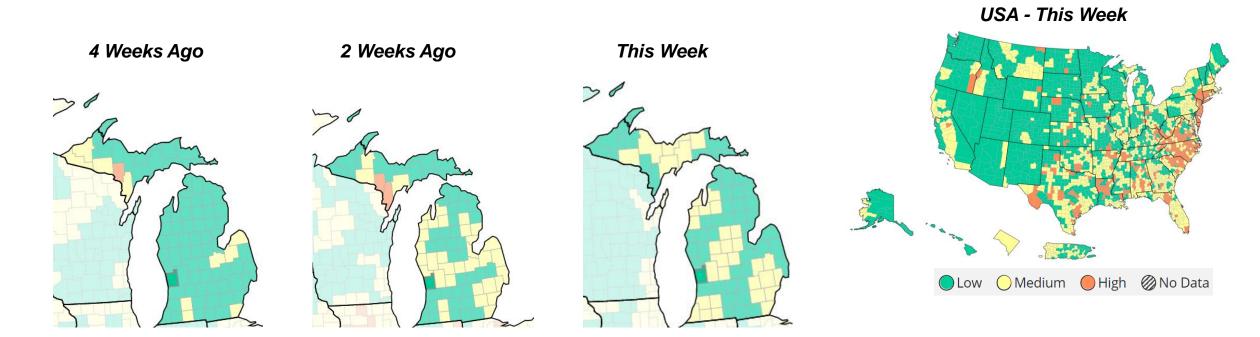
USA & MI

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) = 1.2
- Percent of staffed inpatient beds in use by patients with COVID-19 (7-day average) = 2.8%



Source: CDC COVID Data Tracker: Community Levels

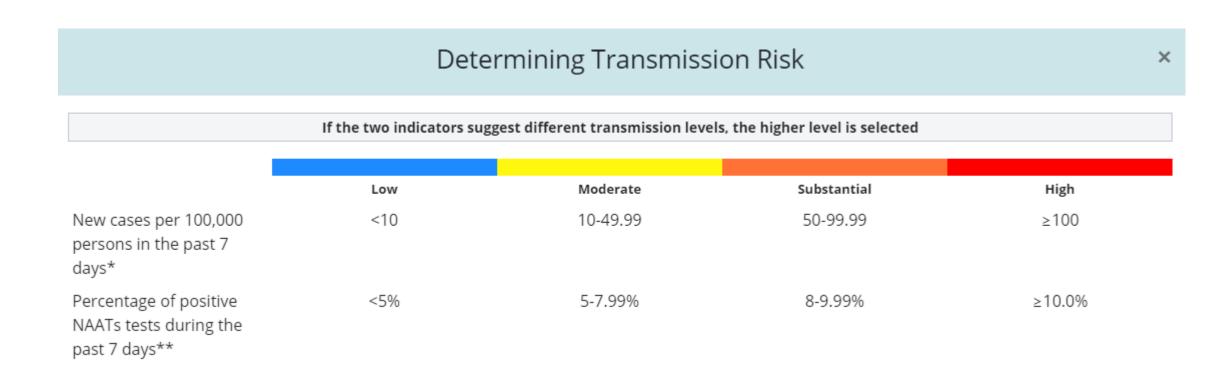
Data updated by CDC on January 19, 2023. Ottawa Hospitalization data as of January 17, 2023.

Hospitalizations

Other

Risk Levels

COVID-19 Community Transmission Levels



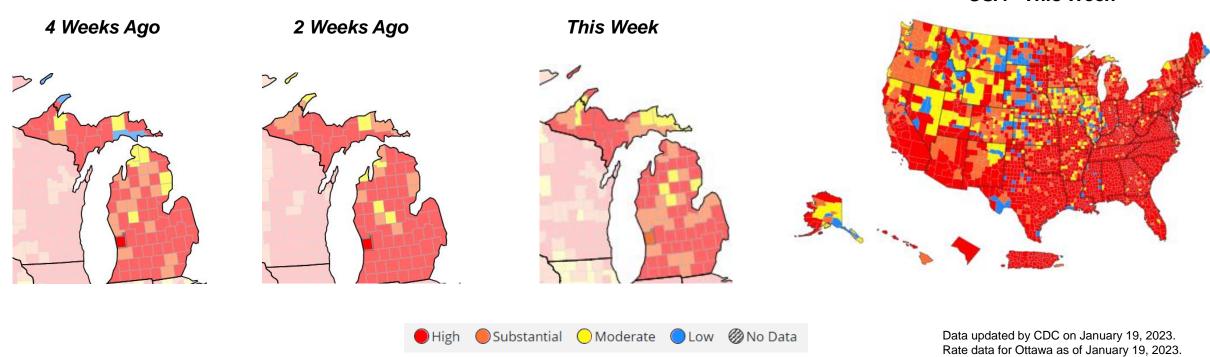
Source: https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&data-type=Risk



CDC Community Transmission Levels – Ottawa County

- Current Community Transmission Level in Ottawa SUBSTANTIAL
 - 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) = 48
 - Percent Test Positivity (last 7 days) = 9.1%

Children



Source: CDC COVID Data Tracker: Community Transmission

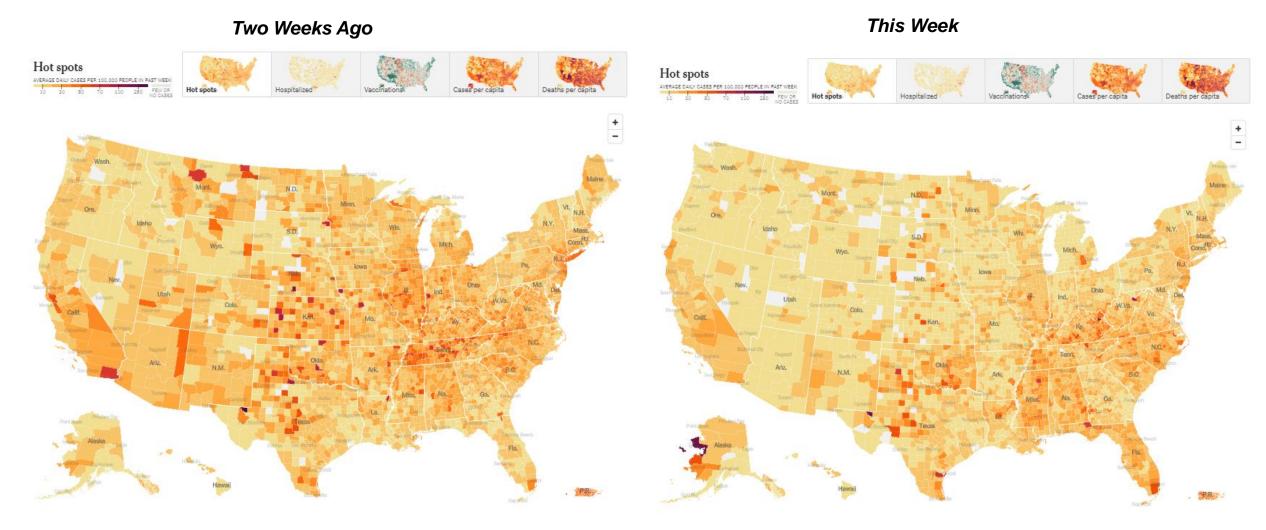
USA & MI

Positivity data for Ottawa as of January 16, 2023.

Media

USA - This Week

COVID-19 Case Rates by County Across the US

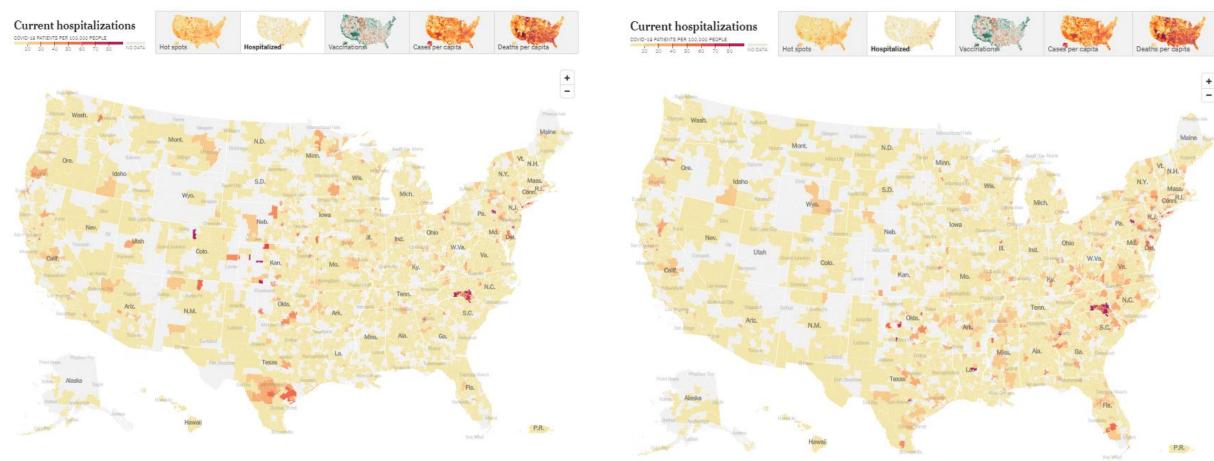


Case rates across the nation may be decreasing.

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

COVID-19 Hospitalization Rates by County Across the US

Two Weeks Ago This Week



Hospitalization rates remain relatively low across most of the nation.

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

COVID-19 News Headlines

China's Covid Deaths Expected to Surge to 36,000 a Day Over Lunar New Year

https://www.bloomberg.com/news/articles/2023-01-18/china-s-covid-deathsto-peak-at-36-000-a-day-over-lunar-new-vear-analysts

US XBB.1.5 levels continue steady rise

https://www.cidrap.umn.edu/covid-19/us-xbb15-levels-continue-steadvrise

CDC & FDA Identify Preliminary COVID-19 Vaccine Safety Signal for Persons Aged 65 Years and Older

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/bivalentboosters.html

Israel says has not found a link between Pfizer COVID shot and stroke

https://www.reuters.com/business/healthcare-pharmaceuticals/israel-sayshas-not-found-link-between-pfizer-covid-shot-stroke-2023-01-19/

No Michigan counties at highest COVID risk level this week, CDC says

https://www.mlive.com/public-interest/2023/01/no-michigan-counties-at-highestcovid-risk-level-this-week-cdc-says.html

> Science Roundup

Risk Levels

Science Roundup

Adverse maternal, fetal, and newborn outcomes among pregnant women with SARS-CoV-2 infection: an individual participant data meta-analysis



This sequential, prospective meta-analysis including 12 studies in 12 countries found that risk of maternal death, severe maternal morbidities and neonatal morbidity increase if maternal SARS-CoV-2 infection is detected at any time during pregnancy. No evidence was found of an increased risk of stillbirth or intrauterine growth.

https://gh.bmj.com/content/bmjgh/8/1/e009495.full.pdf

Codetections of Other Respiratory Viruses Among Children Hospitalized With COVID-19



A cross-sectional study assessing a subgroup of 1670 hospitalized children found that respiratory virus codetections, such as RSV and rhinovirus/enterovirus, may increase severity of illness in children less than 5 years old hospitalized with SARS-CoV-2.

https://publications.aap.org/pediatrics/article/doi/10.1542/peds.2022-059037/190475/Codetections-of-Other-Respiratory-Viruses-Among

COVID-19 Convalescent Plasma for the Treatment of Immunocompromised Patients: A Systematic Review and Meta-analysis



This systematic review and meta-analysis found that transfusion of COVID-19 convalescent plasma in treating COVID-19 in immunocompromised patients was associated with a decrease in mortality.

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2800275

Effect of Fluvoxamine vs Placebo on Time to Sustained Recovery in Outpatients With Mild to Moderate COVID-19





Variants

A double-blind placebo-controlled randomized clinical trial evaluated the efficacy of low-dose fluvoxamine in treating mild to moderate symptomatic COVID-19 found fluvoxamine did not improve time to recovery and did not affect secondary outcomes, including hospitalization, urgent care visits, emergency department visits, or death through day 28 among study participants.

Other

Science Roundup

Vaccinations