

Ottawa County COVID-19 Epidemiology

September 1, 2022

Data as of August 27, 2022, unless otherwise indicated.

www.miOttawa.org/miHealth

Our Vision Healthy People

Executive Summary

• Transmission in the US and in Michigan is stable and may be declining

Ottawa County transmission signals are mixed

- Last week positivity **increased** to 19.5%, from 18.9% two weeks ago.
- Weekly case counts **decreased** 2% (-25% two weeks ago), from 340 two weeks ago to 332 last week.
- Cases among children decreased 4% (-31% two weeks ago), from 27 two weeks ago to 26 last week.
- COVID-19 wastewater signals in Ottawa County are **decreasing** in Holland/Zeeland, Grand Haven/Spring Lake and Allendale.
 Based on national data and local clinical variant sampling, the Omicron subvariant BA.5 likely predominates.
- Ottawa's CDC Community Level is LOW.
- Ottawa-area and regional hospitals have adequate capacity
 - In Ottawa County, 6% of all available beds and 0% of all ICU beds are occupied by COVID-19 patients.*
- Pediatric hospitalization rates in the US are increasing, but are relatively low and stable in Michigan
 - Regional pediatric hospitalization census remains low compared to the late 2021 and early 2022 Omicron surge; however, in recent weeks, daily pediatric hospitalization census has been increasing.

• Of Ottawa County residents aged 6 months and older, 60.2% are fully vaccinated.

*Some hospitals in Ottawa County immediately transfer acutely ill adults or children to regional hospitals that offer a higher level of care. This practice may reduce the proportion of beds occupied by COVID-19 patients in Ottawa and increase bed occupancy in urban centers with large hospitals, such as Kent County.

Limitations

Case Counts, Case Rates, and Test Positivity

With the widescale availability of at-home antigen tests for COVID-19, which are not reported or included in public health surveillance data, the case counts and case rates in this report underestimate the true burden of this disease. However, it is expected that increasing and decreasing trends reflect the relative amount of transmission in the community.

Wastewater Surveillance

Wastewater samples are collected from specific geographic sites in the county and may not reflect COVID-19 burden across the entire county population. However, increases and decreases in detected trends generally correlate with case rates, therefore wastewater readings are displayed alongside countywide incidence rates in this report.

Ottawa County Metrics by Week

| | | | | Week Ending | J | |
|----------------------------------------------|------|-----------|----------|-------------|-----------|-----------|
| Metric | Goal | 30-Jul-22 | 6-Aug-22 | 13-Aug-22 | 20-Aug-22 | 27-Aug-22 |
| Positivity (All Ages) | NA | 23.3% | 24.1% | 23.1% | 18.9% | 19.5% |
| Weekly Cases (All Ages) | <592 | 457 | 376 | 456 | 340 | 332 |
| Weekly Cases in Children (0-17 years of age) | NA | 45 | 46 | 39 | 27 | 26 |
| Total Deaths (All Ages) | 0 | 2 | 4 | 2 | 1 | 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.

Notes: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Hospitalization and/or death may occur after initial infection, meaning the number of hospitalizations and deaths from recent weeks may increase

Case Trends in the USA and Michigan

USA



Daily Trends in Number of COVID-19 Cases in The United States Reported to CDC Daily Trends in Number of COVID-19 Cases in Michigan Reported to CDC 80k 60k , Cases Daily Cases Daily (400k 20 200 10k Jan 23, '20 Jun 30, '20 Dec 6, '20 May 14, '21 Oct 20, '21 Mar 28, '22 Aug 30, '22 Jan 23, '20 Jun 30, '20 Dec 6, '20 May 14, '21 Oct 20, '21 Mar 28, '22 Aug 30, '22 Jan 23, '20 Aug 30, '22 Jan 23, '20 Aug 30, '22

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

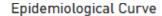
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

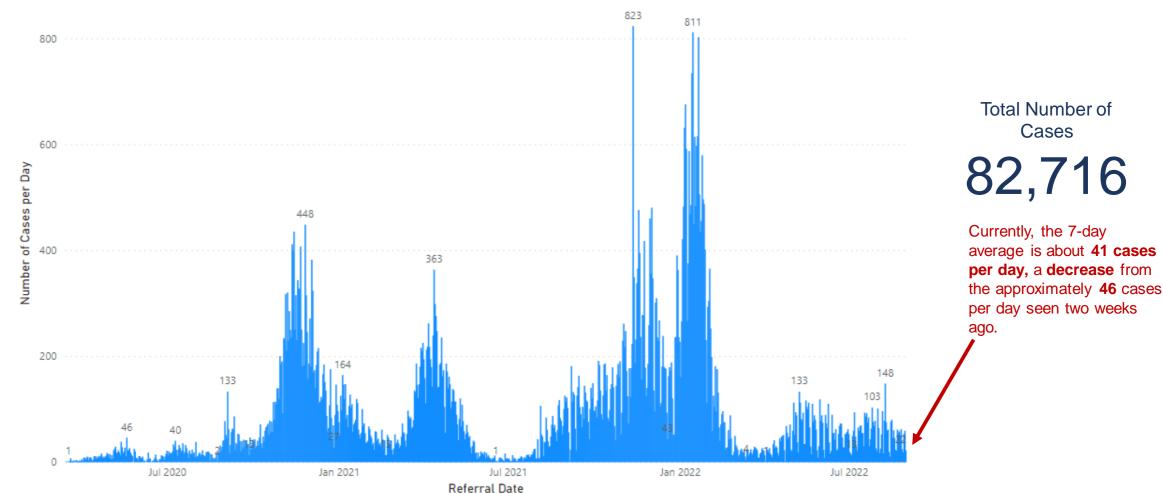
Data through August 30, 2022



Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – August 31, 2022





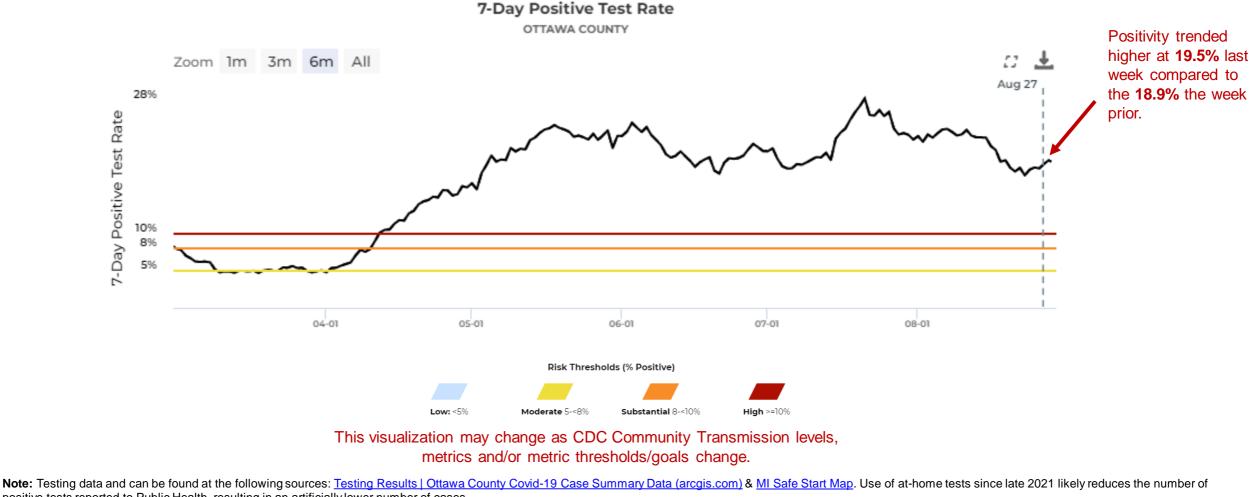
Notes: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in an artificially lower number of cases. Additionally, On November 12, 2021, MDHHS updated their database resulting in a backlog of cases being reported in one day.

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

| USA & MI | Sprood | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science |
|----------|--------|----------|-------------------|--------------|----------|--------------|-------|---------|---------|
| | Spread | Children | Tiospitalizations | vaccinations | valiants | INISK LEVEIS | Ouner | Ivieula | Roundup |

Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, January 1, 2022 – August 27, 2022

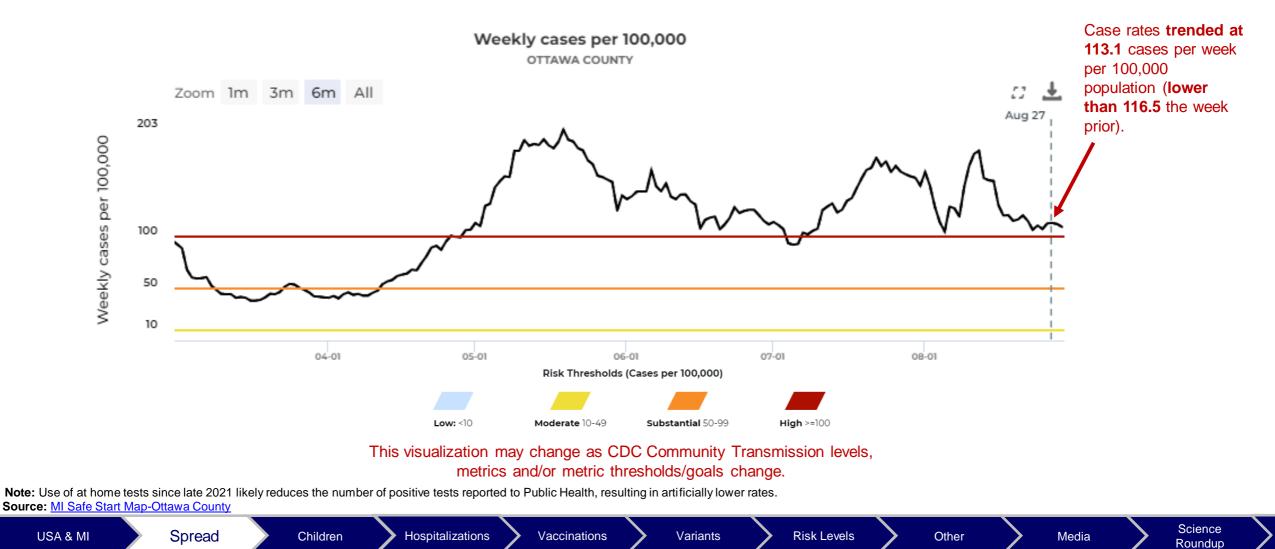


positive tests reported to Public Health, resulting in an artificially lower number of cases. Source: <u>MI Safe Start Map-Ottawa County</u>

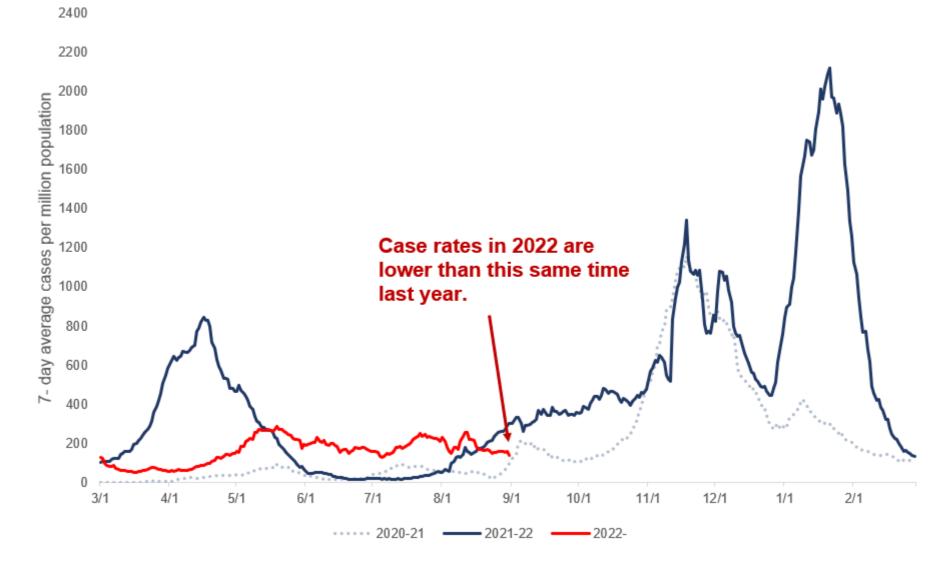
| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science |
|----------|--------|----------|-------------------|--------------|----------|-------------|-------|---------|---------|
| | Opreau | Children | riospitalizations | vaccinations | vanants | Misk Levels | Ouner | Ivieula | Roundup |

Case Rates in Ottawa County – All Ages

COVID-19 Cases by Day, Ottawa County, January 1, 2022 – August 27, 2022



Ottawa County Time Trends – Annual Comparison of Case



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

Hospitalizations

Spread

Children

Vaccinations Variants

Risk Levels

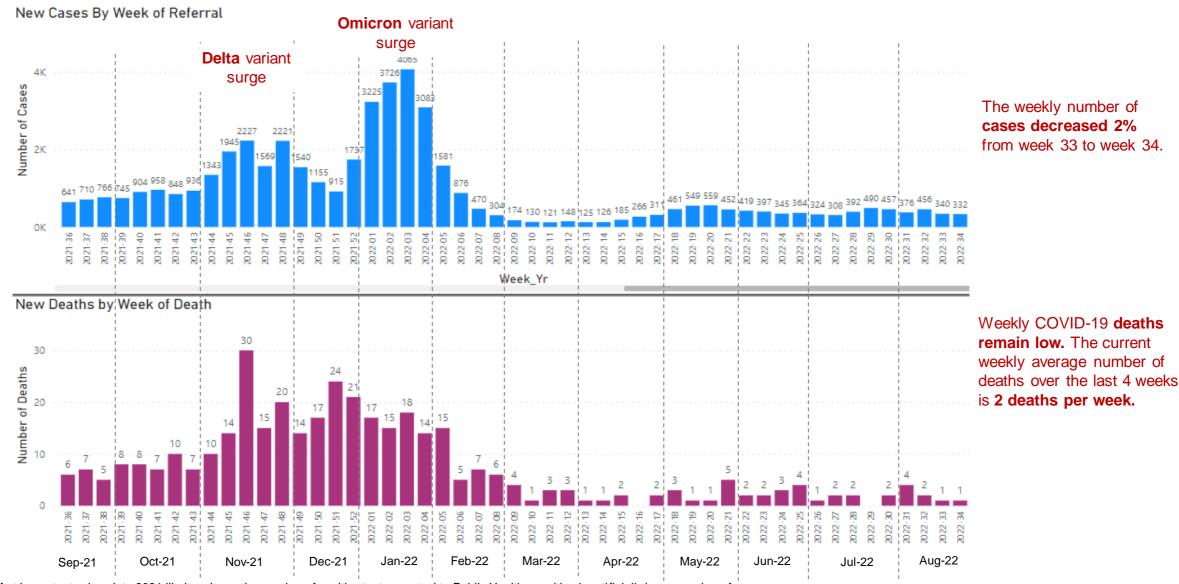
Other

Media

Science Roundup

Data through August 31, 2022

Ottawa County – Cases & Deaths by Week, All Ages

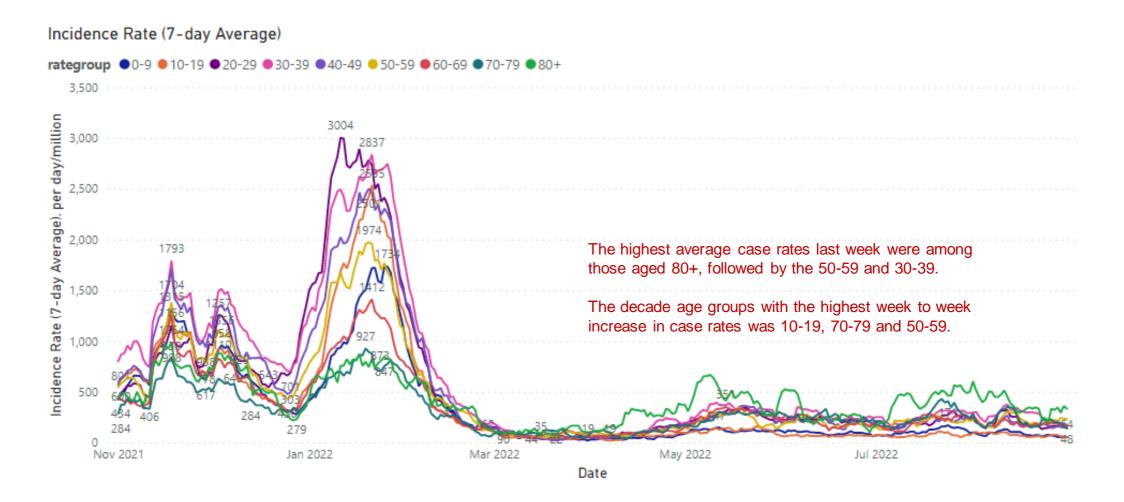


Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially lower number of cases. Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|
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Ottawa County Case Rate Trends by Age Decade

COVID-19 Case Rates by Age, November 2021 – August 31, 2022



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

| Source: Michigan Depa | rtment of Health and Hun | nan Services, Michigan | Disease Surveillance S | ystem | | | | Data | as of August 31, 2022 | |
|-----------------------|--------------------------|------------------------|------------------------|--------------|----------|-------------|-------|-------|-----------------------|---|
| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup | > |

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 32 (August 21, 2022 – August 27, 2022)

| Age Decade (Years) | Average Daily Cases | Average Daily Case Rate | One Week % Rate Change |
|-----------------------|------------------------|-------------------------------|------------------------------|
| 0-9 | 2.4 | 66.0 | 0% |
| 10-19 | 3.4 | 77.5 | 33% |
| 20-29 | 7.4 | 164.3 | -5% |
| 30-39 | 7.6 | 211.2 | -29% |
| 40-49 | 5.0 | 150.6 | -15% |
| 50-59 | 7.7 | 221.0 | 17% |
| 60-69 | 6.0 | 184.1 | 8% |
| 70-79 | 4.1 | 200.5 | 32% |
| 80+ | <mark>3.6</mark> | 320.7 | -4% |

Age groups with highest average case rates last week: 80+ 1. 2. 50-59

3. 30-39

Age groups with largest week-over-week increase in case rates: 10-19 70-79 2. 3. 50-59

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 August 31, 2022

Science

Roundup

USA & MI

Spread

Children

Vaccinations

Hospitalizations

Variants

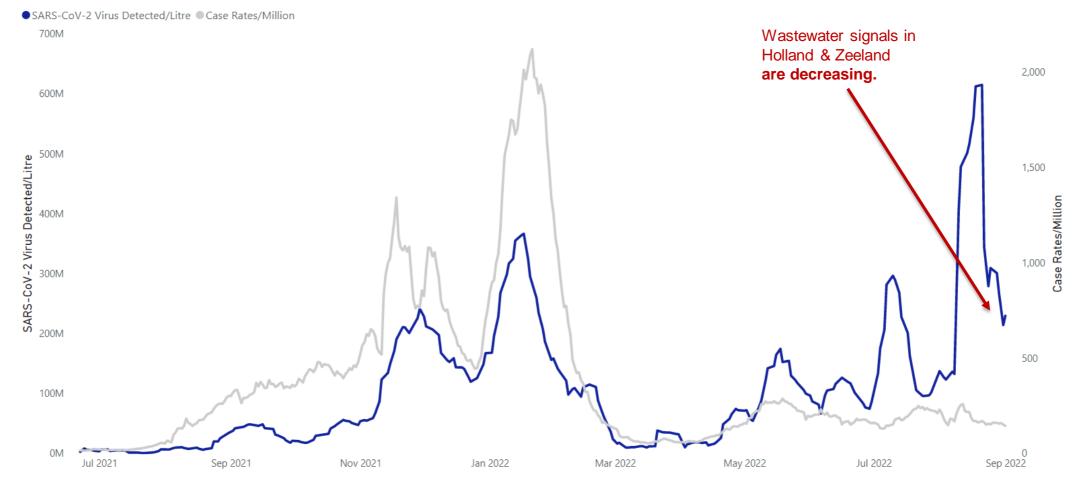
Risk Levels

Other

Media

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

Risk Levels

Vaccinations

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)

Hospitalizations

USA & MI

Spread

Children

Data through September 1, 2022

Media

Other

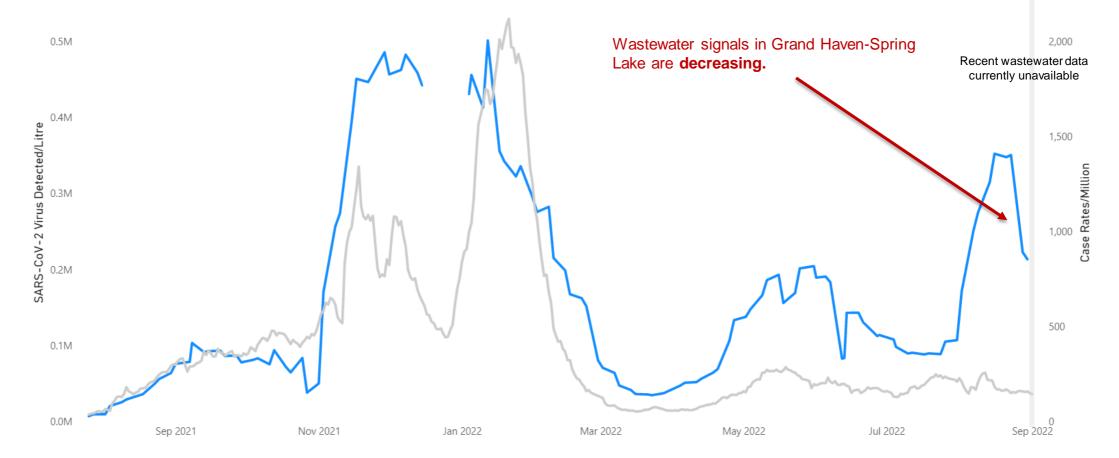
Science

Roundup

Grand Haven-Spring Lake Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)

● SARS-CoV-2 Virus Detected/Litre ● Case Rates/Million



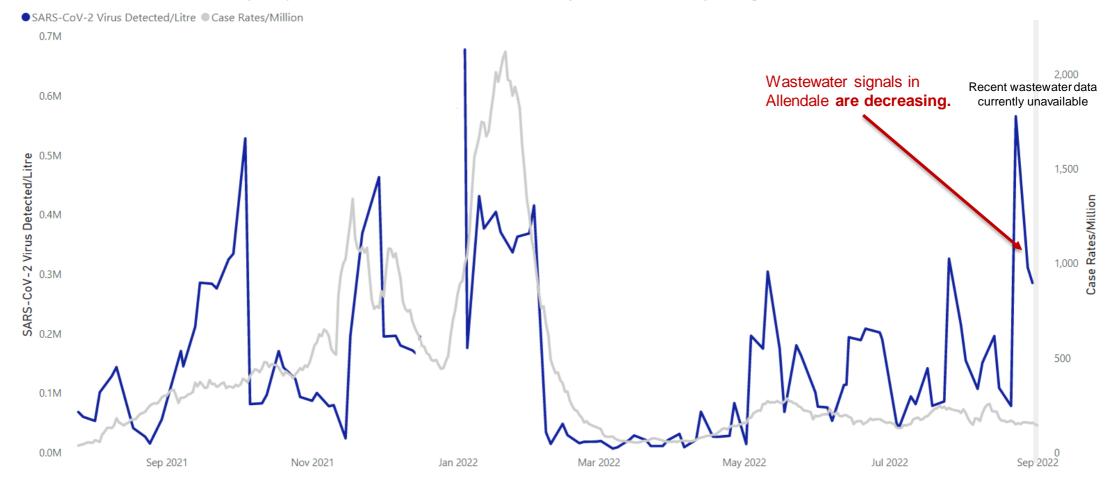
Data Interpretation: The **blue line** on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from the treatment plant in Grand Haven-Spring Lake. The gray line on the graph represents the 7-day average COVID-19 case rates/million for all of Ottawa County by referral date.

Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined. Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Richard Rediske, Ph.D. (redisker@gvsu.edu) Additional Information: Michigan COVID-19 Wastewater Surveillance Pilot Project (arcgis.com), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov) Data through August 30, 2022



Allendale Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)



Data Interpretation: The blue line on the graph shows the 7-day average levels of SARS-CoV-2 virus (N2 markers) detected in wastewater sampled from the treatment plant in Allendale. The gray line on the graph represents the 7-day average COVID-19 case rates/million for all of Ottawa County by referral date.

Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined. Source: Grand Valley State University Annis Water Resources Institute as part of the MDHHS SEWER-Network, Richard Rediske, Ph.D. (redisker@gvsu.edu) Additional Information: Michigan COVID-19 Wastewater Surveillance Pilot Project (arcgis.com), Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project (SWEEP) (michigan.gov) Data through August 30, 2022



Ottawa County Weekly Case Counts and % Change, by Age

| | Adult | s (18+) | Children (| 0-17 years) | Т | otal | |
|-------------|--------|--------------------------------|------------|--------------------------------|--------|--------------------------------|----------|
| Week Ending | Number | % Change from Previous Week | Number | % Change from Previous Week | Number | % Change from Previous Week | |
| 18-Jun-22 | 314 | -12% | 31 | -23% | 345 | -13% |] |
| 25-Jun-22 | 331 | 5% | 33 | 6% | 364 | 6% | |
| 2-Jul-22 | 292 | -12% | 32 | -3% | 324 | -11% |] |
| 9-Jul-22 | 274 | -6% | 34 | 6% | 308 | -5% | W |
| 16-Jul-22 | 354 | 29% | 38 | 12% | 392 | 27% | ar de |
| 23-Jul-22 | 428 | 21% | 62 | 63% | 490 | 25% | |
| 30-Jul-22 | 412 | -4% | 45 | -27% | 457 | -7% | a |
| 6-Aug-22 | 330 | -20% | 46 | 2% | 376 | -18% | |
| 13-Aug-22 | 417 | 26% | 39 | -15% | 456 | 21% | 1 |
| 20-Aug-22 | 313 | -25% | 27 | -31% | 340 | -25% | 1 |
| 27-Aug-22 | 306 | -2% | 26 | -4% | 332 | -2% | |

Adults

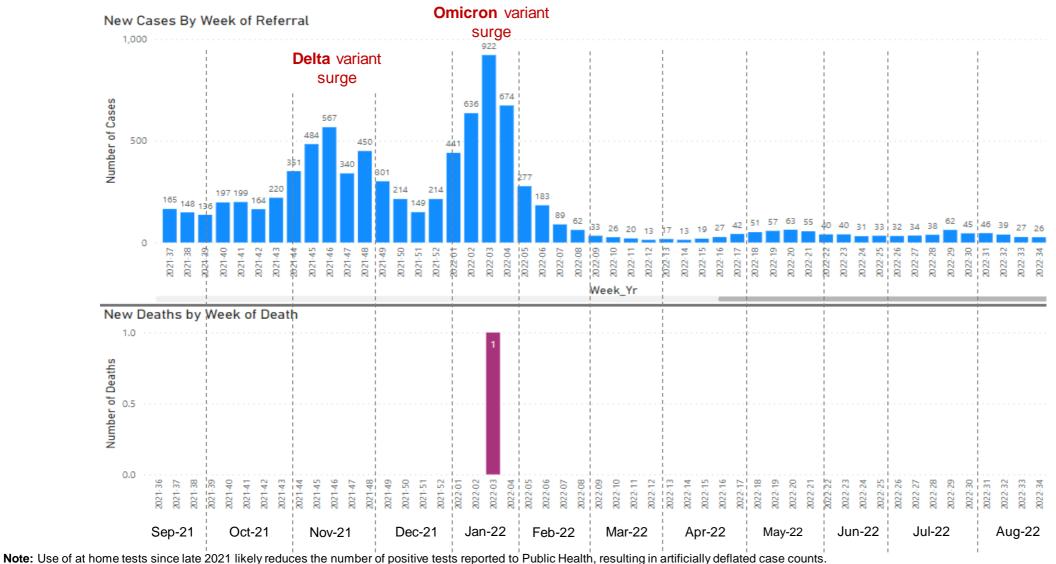
Children

Weekly case counts among children decreased 4% last week, and cases in adults decreased 2%.

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

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup | > |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|

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



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

USA & MI

Spread Children

Vaccinations

Hospitalizations

Variants

Risk Levels

Other

Media

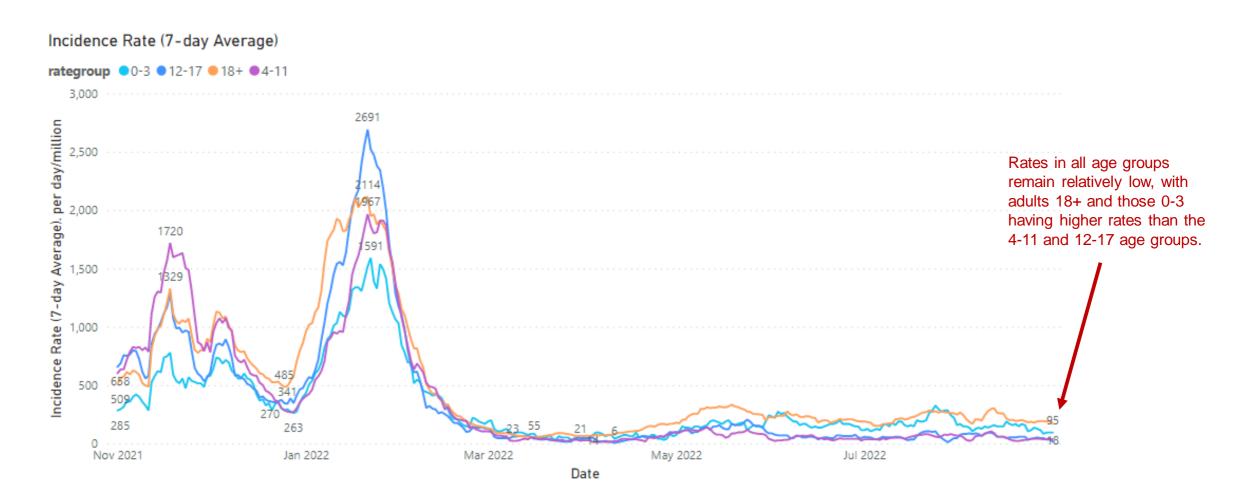
Science Roundup

The weekly number of cases among children **decreased 4%** from week 33 to week 34.

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

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – August 31, 2022



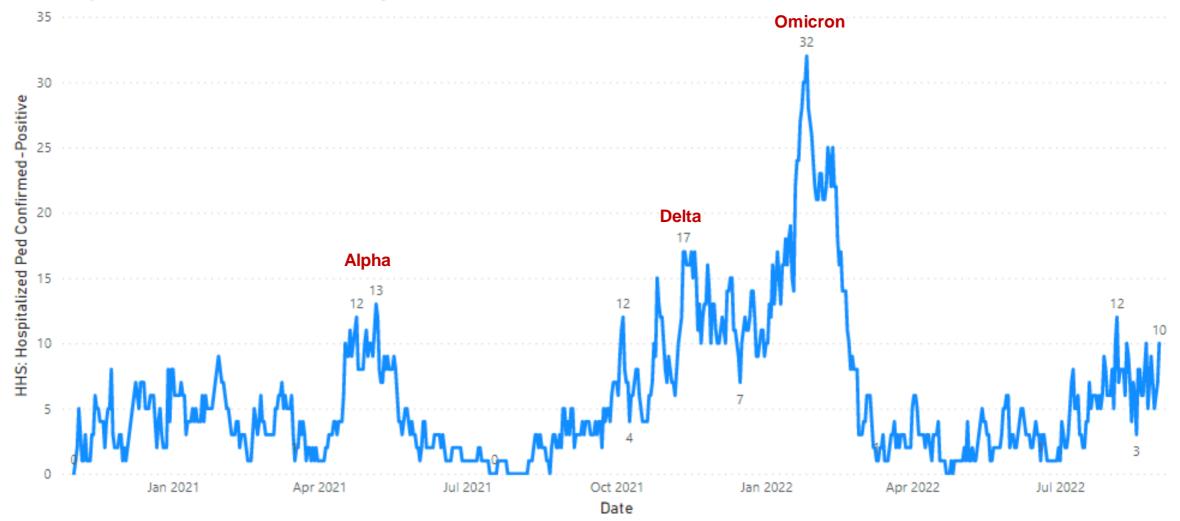
Note: Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup | > |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|

Data as of August 31, 2022

Daily Hospital Pediatric Census – West Michigan

HHS: Hospitalized Ped Confirmed-Positive by Date



Note: Data above includes persons younger than 18 years of age with confirmed COVID-19 hospitalized at West Michigan hospitals. Patients may be listed in more than one day. Data may change as information is updated. Includes patients that reside in counties across the region, including Ottawa County.

Data through August 31, 2022

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup | > |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|---|

Ottawa County MIS-C* Cases by Month

3 3 A total of 13 MIS-C cases have been reported in Ottawa County since the beginning of the pandemic. All were hospitalized, 2 2 6 were admitted to ICU, none Number of Cases died. These cases spent a cumulative 78 days in the hospital. Among cases in the last 8 months, none were vaccinated 1 1 1 against COVID-19, although 5 of the 8 were eligible. Vaccination effectively prevents MIS-C**. 0 April March April April August March June August October December January February June August October November December January February March May June July May July November May September July September 2020 2021 2022

Notes: Includes confirmed and probable cases.

*MIS-C is a rare but serious condition affecting children, associated with recent COVID-19 infection. For more details on MIS-C please visit: https://www.cdc.gov/mis/index.html

**Sources: MMWR & The Lancet

Data through August 31, 2022

USA & MI

Children

Hospitalizations

Variants

Vaccinations

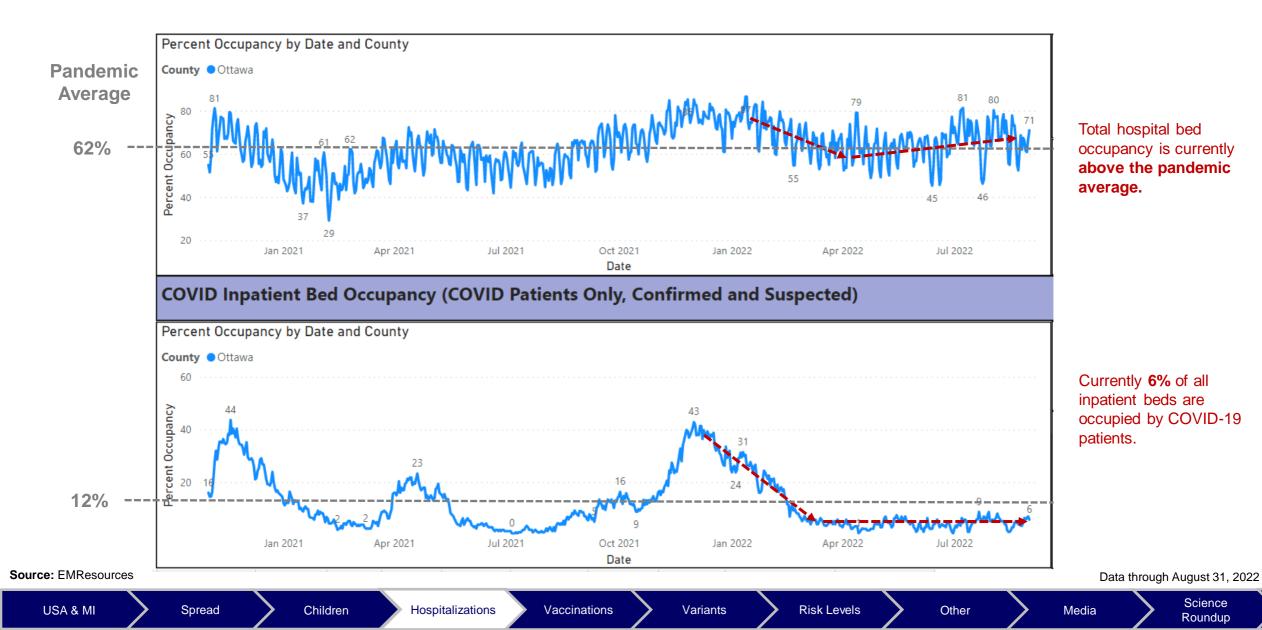
Risk Levels

Other

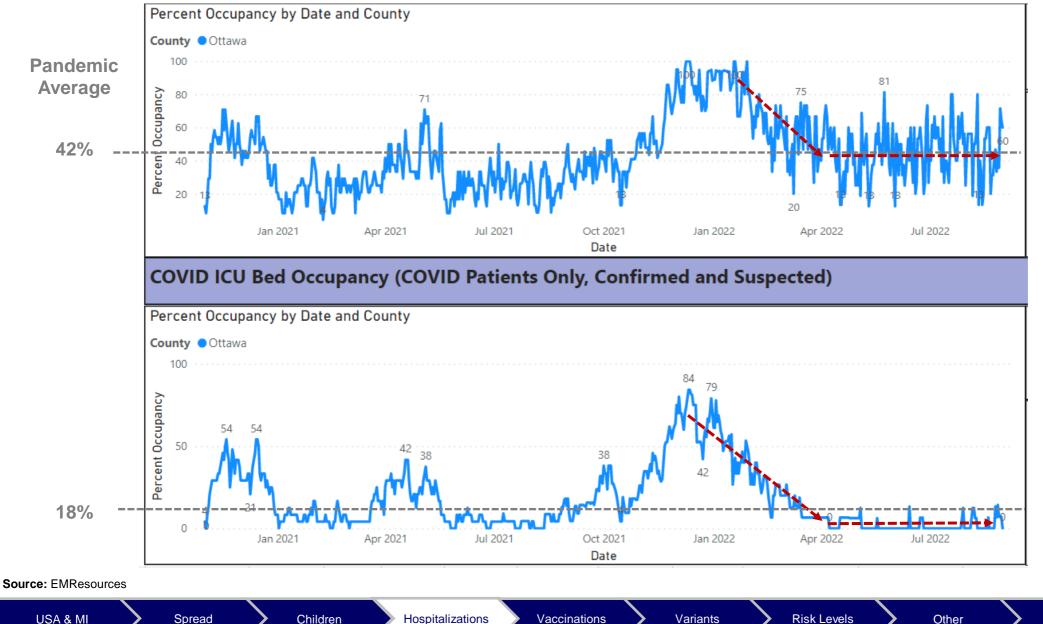
Media

Science Roundup

Ottawa County Hospital Capacity – All Beds



Ottawa County Hospital Capacity – ICU Beds



Total ICU bed occupancy varies considerably by day. As of late August, ICU bed occupancy was **above the pandemic average**

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

Media

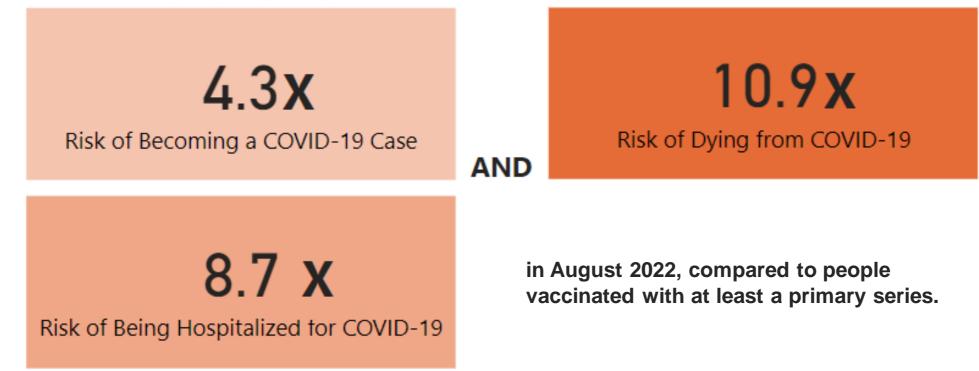
Data through August 31, 2022

Science

Roundup

Ottawa County Age-Standardized Rates of COVID-19 Cases, Hospitalizations, & Deaths by Vaccination Status

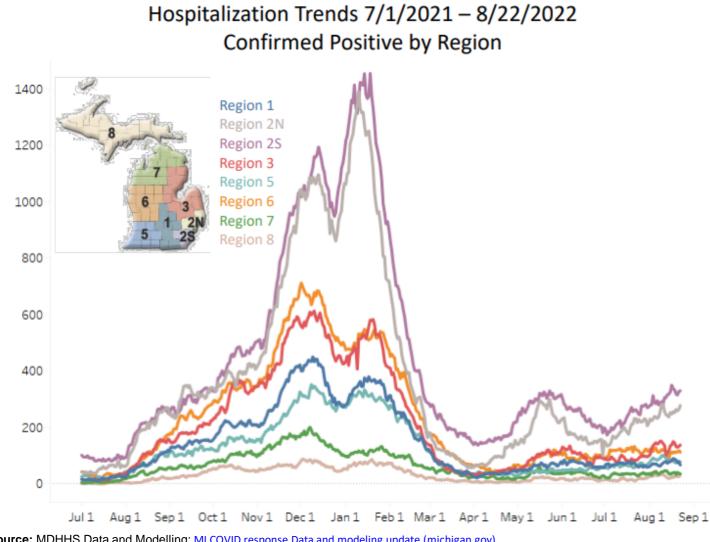
Unvaccinated people aged 5 years and older had:



Notes: For comparison to the nation please see: https://covid.cdc.gov/covid-data-tracker/#rates-by-vaccine-status Methods: Both probable and confirmed cases were included, denominators were obtained from CDC Wonder (2019), and standardized population is 2000 US population. Methods may be refined, resulting in updated data.

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|
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Statewide Hospitalization Trends: Regional COVID+ Census



This week hospitalizations have increased in Regions 2N, 2S, 3, 6, 7, and 8. Hospitalizations have decreased or remained flat in Regions 1 and 5.

Regions 2N, 2S, 3, AND 8 have greater than or equal to 100/million population hospitalized with COVID.

| Region | COVID+ Hospitalizations (% Δ from last week) | COVID+ Hospitalizations / MM |
|-----------|-------------------------------------------------|------------------------------------|
| Region 1 | 67 (-15%) | 62/M |
| Region 2N | 278 (10%) | 126/M |
| Region 2S | 330 (2%) | 148/M |
| Region 3 | 138 (2%) | 122/M |
| Region 5 | 78 (-7%) | 82/M |
| Region 6 | 112 (3%) | 76/M |
| Region 7 | 36 (6%) | 72/M |
| Region 8 | 31 (55%) | 100/M |

Source: MDHHS Data and Modelling: MI COVID response Data and modeling update (michigan.gov)

Spread

| USA & MI | |
|----------|--|
|----------|--|

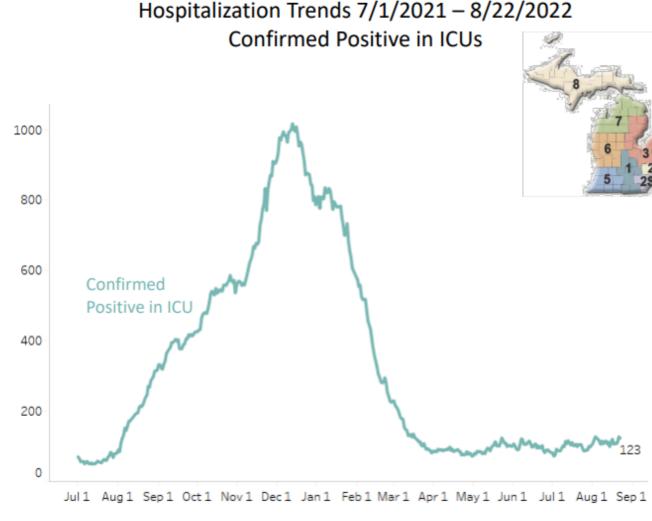
Risk Levels

Other

Media

Science Roundup

Statewide Hospitalization Trends: ICU COVID+ Census



Source: MDHHS Data and Modelling: <u>MI COVID response Data and modeling update (michigan.gov)</u>

Spread

Overall, the volume of COVID+ patients in ICUs has increased by 12% from last week. There are 123 COVID+ patients in ICU beds across the state.

ICU occupancy is greater than 85% in Regions 1 and 3. All regions have fewer than 10% of ICU beds occupied by COVID+ patients.

| Region | Adult COVID+ in ICU (% Δ from last week) | ICU Occupancy | % of ICU beds COVID+ |
|-----------|------------------------------------------------|------------------|-------------------------|
| Region 1 | 11 (-15%) | 89% | 6% |
| Region 2N | 30 (67%) | 66% | 5% |
| Region 2S | 42 (<mark>8%</mark>) | 75% | 6% |
| Region 3 | 13 (-24%) | 86% | 4% |
| Region 5 | 8 (100%) | 69% | 4% |
| Region 6 | 9 (-25%) | 72% | 4% |
| Region 7 | 7 (17%) | 82% | 5% |
| Region 8 | 3 (200%) | 56% | 5% |

USA & MI

Vaccinations

Variants

Risk Levels

Other

Media

Science

Roundup

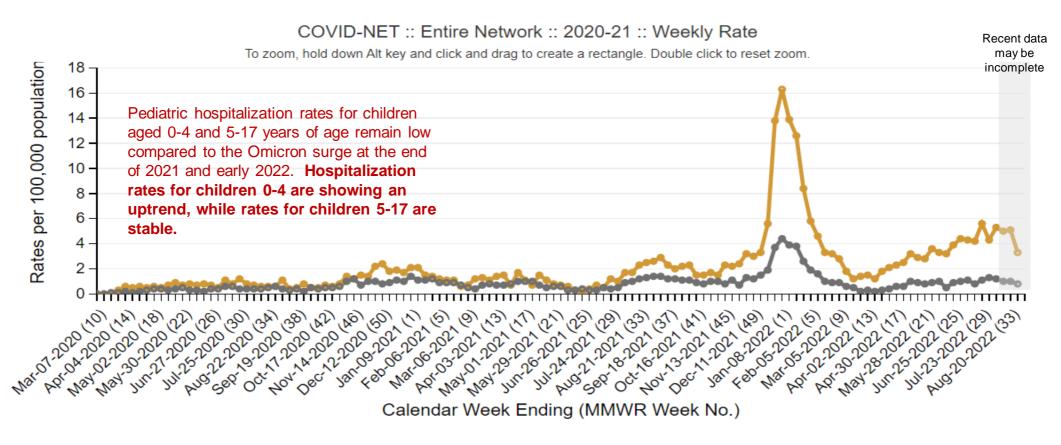
Pediatric Hospitalization Rates – USA, Michigan

United States | 0 - 17 Years MI | 0 - 17 Years 1.5 15 New Admissions per 100,000 Population New Admissions per 100,000 Population 1.0 0.5 0.5 0.0 0.0 Jul 2022 Jan 2021 Jul 2021 Jan 2022 Jan 2021 Jul 2021 Jan 2022 Jul 2022

Pediatric hospitalization rates across the US continue increasing. Rates in Michigan may also be increasing.



Pediatric Hospitalization Rates by Age Group – USA

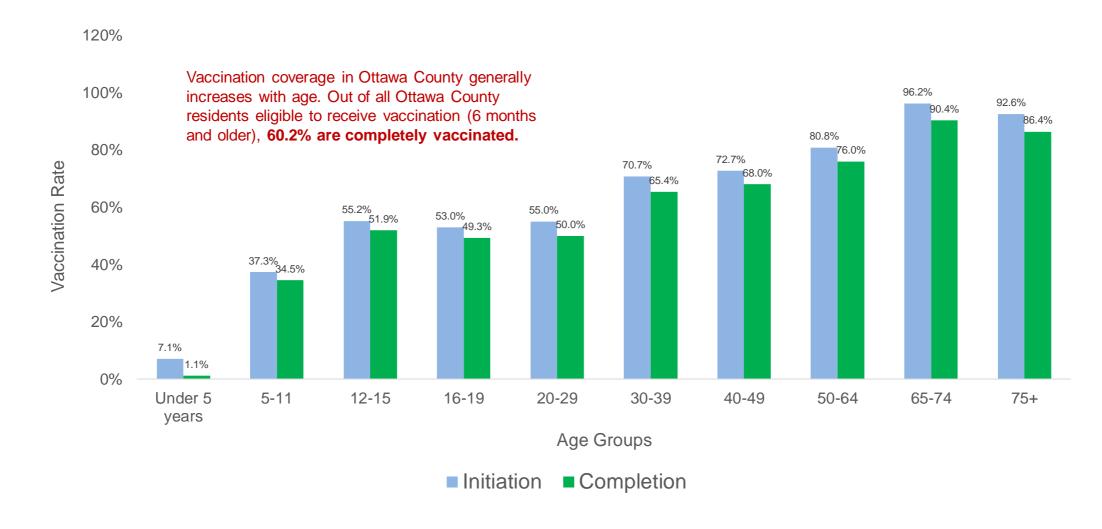


The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case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



Vaccination Coverage by Age



Notes:

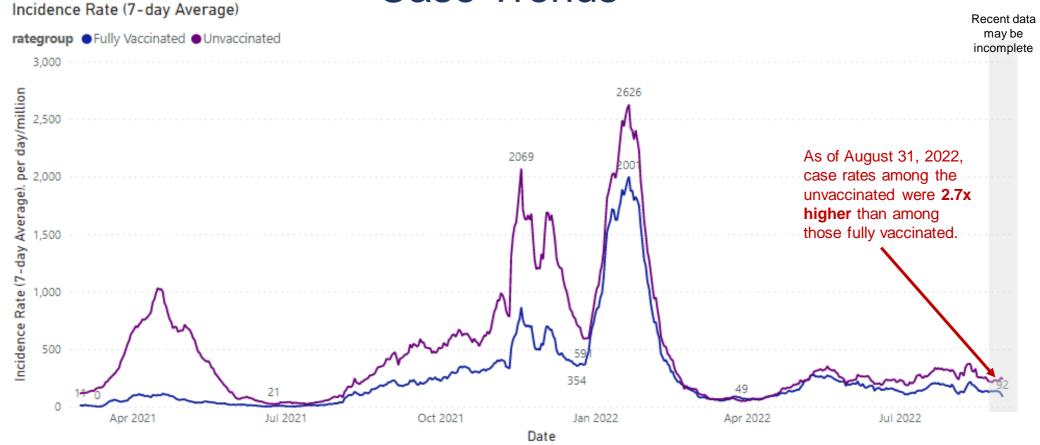
Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J.

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

USA & MI Spread Children Hospitalizations Vaccinations Variants Risk Levels Other Media Science Roundup

Data through August 31, 2022

Ottawa County COVID-19 Vaccination Breakthrough Case Trends



Method:

Daily case counts were obtained from the MDSS and summarized by referral date. Cases were compared to data from the State of Michigan immunization database to confirm COVID-19 vaccination status. Counts of persons completely vaccinated in Ottawa County were compiled from the Michigan COVID-19 vaccination dashboard. The total population denominator was obtained from CDC Wonder; the 2019 population estimate was used. Daily COVID-19 case rates were calculated and averaged over the previous 7 days; a rate of cases per day per million population was used. Cases ineligible for vaccination are included in this data. On December 22, 2021 this figure was updated to compare fully vaccinated and unvaccinated persons, to align more closely with <u>CDC data</u>; partially vaccinated persons were excluded. Fully vaccinated is defined as 2 or more doses of an mRNA vaccination or at least one dose of J&J. **Note:** Use of at home tests since late 2021 likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Children aged 6 months to 4 years to be included in future reports.

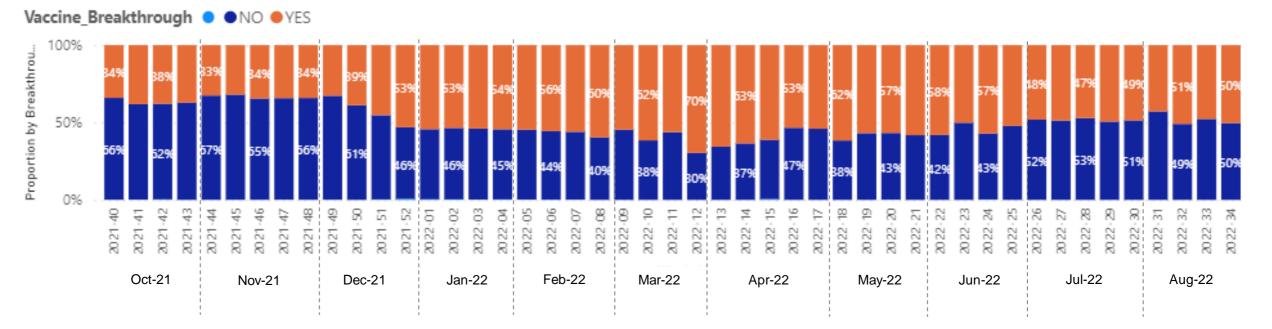
Sources:

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

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|
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Ottawa County COVID-19 Vaccination Breakthrough Case Trends

Breakthrough Proportions by Week



Science

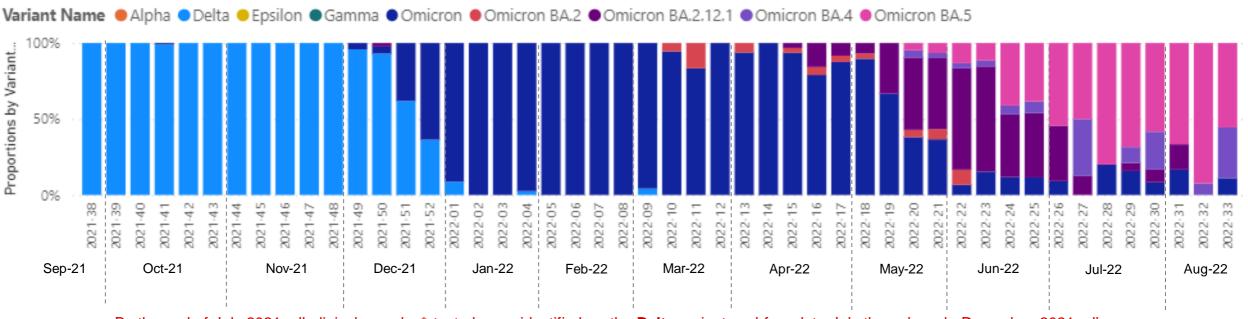
Roundup

Media

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

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|--|
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Variants – Clinical Samples from Ottawa County Residents



Variant Proportions by Week

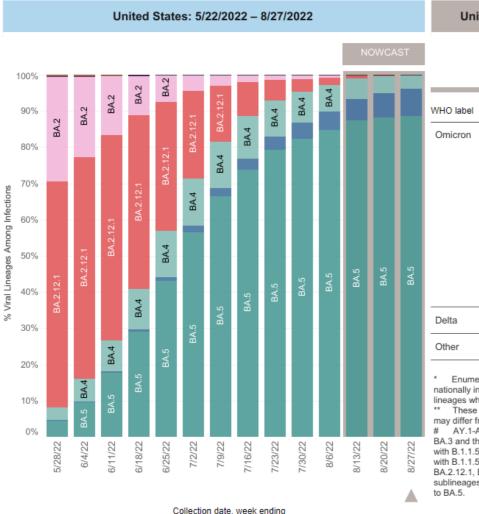
By the end of July 2021, all clinical samples* tested were identified as the **Delta** variant and from late July through early December 2021, all clinical samples submitted for variant testing continued to be identified as the **Delta** variant.

In mid-December 2021, the first **Omicron** positive sample was collected in an Ottawa County resident, and **Omicron** continues to be detected into 2022, with more recent additions of the **Omicron subvariants** BA.2.12.1 and BA.4/5 (first detected in clinical samples in late May 2022).

* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants. **Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup | |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|--|
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|--|

Variants – Clinical Samples from Across the USA



United States: 8/21/2022 - 8/27/2022 NOWCAST

| | USA | | | | | | | | | |
|-----------|-----------|----------|--------|------------|--|--|--|--|--|--|
| VHO label | Lineage # | US Class | %Total | 95%PI | | | | | | |
| Omicron | BA.5 | VOC | 88.7% | 87.3-89.8% | | | | | | |
| | BA.4.6 | VOC | 7.5% | 6.4-8.8% | | | | | | |
| | BA.4 | VOC | 3.6% | 3.3-3.8% | | | | | | |
| | BA.2.12.1 | VOC | 0.2% | 0.2-0.3% | | | | | | |
| | BA.2 | VOC | 0.0% | 0.0-0.0% | | | | | | |
| | B.1.1.529 | VOC | 0.0% | 0.0-0.0% | | | | | | |
| | BA.1.1 | VOC | 0.0% | 0.0-0.0% | | | | | | |
| Delta | B.1.617.2 | VBM | 0.0% | 0.0-0.0% | | | | | | |
| Other | Other* | | 0.0% | 0.0-0.0% | | | | | | |

 Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
 ** These data include Nowcast estimates, which are modeled projections that

may differ from weighted estimates generated at later dates

AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. For regional data, BA.1.1 and its sublineages are also aggregated with B.1.1.529, as they currently cannot be reliably called in each region. Except BA.2.12.1, BA.2 sublineages are aggregated with BA.2. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Sublineages of BA.5 are aggregated to BA.5. The **Omicron** variant and it's subvariants are estimated to account for 100% of all clinical samples collected in the United States the week ending August 27, 2022.

The BA.5 subvariant currently predominates.



Variants – Wastewater Sampling – Holland/Zeeland

| Sample Date | Site | Delta | Omicron |
|-------------|---------------|-------|---------|
| 07/03/2022 | North Holland | N | Y |
| 07/04/2022 | Zeeland | N | Y |
| 07/06/2022 | North Holland | N | Y |
| 07/10/2022 | North Holland | N | Y |
| 07/11/2022 | Zeeland | N | Y |
| 07/13/2022 | North Holland | N | Y |
| 07/14/2022 | Zeeland | N | Y |
| 07/17/2022 | North Holland | N | Y |
| 07/18/2022 | Zeeland | N | Y |
| 07/21/2022 | Zeeland | N | Y |
| 07/21/2022 | North Holland | N | Y |
| 07/24/2022 | North Holland | N | Y |
| 07/25/2022 | Zeeland | N | Y |
| 07/27/2022 | North Holland | N | Y |
| 07/28/2022 | Zeeland | N | Y |
| 07/31/2022 | North Holland | N | Y |
| 08/01/2022 | Zeeland | N | Y |
| 08/03/2022 | North Holland | N | Y |
| 08/04/2022 | Zeeland | N | Y |
| 08/07/2022 | North Holland | N | Y |
| 08/08/2022 | Zeeland | N | Y |
| 08/10/2022 | North Holland | N | Y |
| 08/11/2022 | Zeeland | N | Y |
| 08/14/2022 | North Holland | N | Y |
| 08/15/2022 | Zeeland | N | Y |
| 08/17/2022 | North Holland | N | Y |
| 08/18/2022 | Zeeland | N | Y |
| 08/24/2022 | North Holland | N | Y |
| 08/25/2022 | Zeeland | N | Y |
| 08/28/2022 | North Holland | N | Y |
| 08/29/2022 | Zeeland | N | Y |

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

The **Omicron** variant has been detected in wastewater in Holland and Zeeland since early January 2022, with renewed, frequent detection through May (January through June not displayed here). Detection remains consistent through July and August.



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

| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup |
|----------|--------|----------|------------------|--------------|----------|-------------|-------|-------|--------------------|
| | | | | | | | | | |

COVID-19 Community Levels

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

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

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

|--|

> Spread

Children Hospitalizations

Vaccinations

Variants Risk

Risk Levels

Other

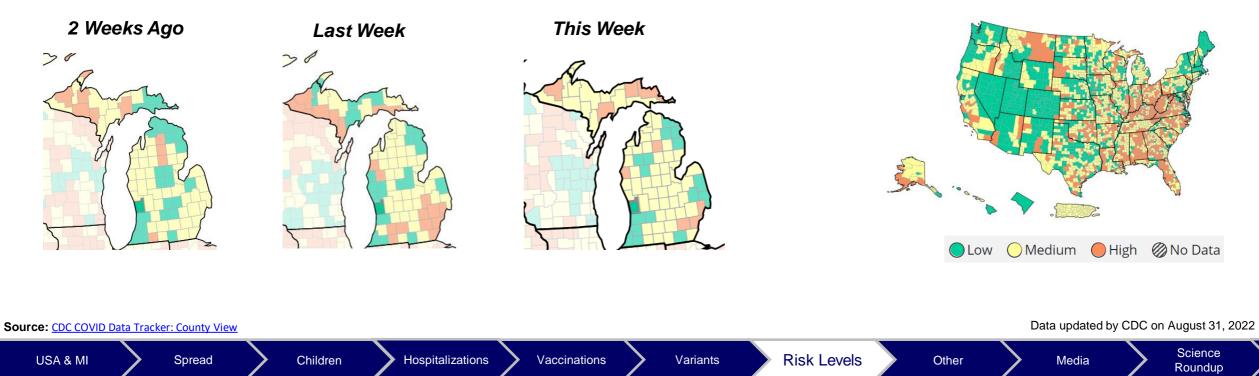
Media

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CDC Community Levels – Ottawa County

- Current Community Level in Ottawa LOW
- Michigan CDC Community Levels can now be viewed on the MI Safe Start Map
- Current Data:
 - Case Rate (per 100k pop 7-day total) = 114.79
 - COVID-19 Hospital Admissions (per 100K pop 7-day total) = 4.6
 - COVID-19 Inpatient Hospital Bed Utilization (7-day average) = 6.5%





COVID-19 Case Rates by County Across the US

This Week Last Week Hot spots Hot spots AVERAGE DAILY CASES PER 100.000 PEOPLE IN PAST WEEK AVERAGE DAILY CASES PER 100.000 PEOPLE IN PAST WED

Case rates across the nation may be increasing.

Source: https://www.pytimes.com/interactive/2021/us/covid_cases.html

| Source: <u>mips.//www.ny</u> | /Imes.com/interactive/2 | | | | | | | Acc | essed August 30, 2022 |
|------------------------------|-------------------------|----------|------------------|--------------|----------|-------------|-------|-------|-----------------------|
| USA & MI | Spread | Children | Hospitalizations | Vaccinations | Variants | Risk Levels | Other | Media | Science Roundup |

COVID-19 Hospitalization Rates by County Across the US

This Week Last Week **Current hospitalizations Current hospitalizations** COVID-10 PATIENTS PER 100,000 PEOPLE PATIENTS PER 100.000 P.R. Hospitalization rates remain relatively

low across most of the nation, with increases in some areas.

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

USA & MI

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Accessed August 30, 2022

COVID-19 News Headlines

Michigan reports 19,414 new COVID cases, 135 new deaths

Michigan reports 19,414 new COVID cases, 135 new deaths - mlive.com

Coronavirus Tracker | CDC: 'High' COVID-19 risk drops to nine Michigan counties

Michigan covid cases, coronavirus vaccine numbers, MI COVID-19 map | Bridge Michigan

Spectrum Health relaxing COVID-era visitor restrictions at West Michigan hospitals

<u>Visitor rules relaxed at Spectrum Health West Michigan locations</u> (hollandsentinel.com)

US government to end free at-home Covid test program this week

Free Covid-19 tests: US government to end at-home test program this week - CNNPolitics

Pfizer and BioNTech Announce Updated COVID-19 Vaccine Data Supporting Efficacy in Children 6 Months through 4 Years of Age

Pfizer and BioNTech Announce Updated COVID-19 Vaccine Data Supporting Efficacy in Children 6 Months through 4 Years of Age | Pfizer

Other

Coronavirus (COVID-19) Update: FDA Authorizes Moderna, Pfizer-BioNTech Bivalent COVID-19 Vaccines for Use as a Booster Dose

FDA Authorizes Moderna, Pfizer-BioNTech Bivalent COVID-19 Vaccines for Use as a Booster Dose

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Assessing the impact of COVID-19 on mortality: A population-based matched case-control study

https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(22)00453-0/fulltext Results from this study from 2020 – prior to the availability of COVID-19 vaccinations – found that people that tested positive for COVID-19 had a threefold increased risk of death, regardless of underlying disorders.

Randomized Trial of Metformin, Ivermectin, and Fluvoxamine for Covid-19

Randomized Trial of Metformin, Ivermectin, and Fluvoxamine for Covid-19 | NEJM

Laboratory-Confirmed COVID-19–Associated Hospitalizations Among Adults During SARS-CoV-2 Omicron BA.2 Variant Predominance — COVID-19–Associated Hospitalization Surveillance Network, 14 States, June 20, 2021–May 31, 2022

Laboratory-Confirmed COVID-19–Associated Hospitalizations Among Adults During SARS-CoV-2 Omicron BA.2 Variant Predominance — COVID-19–Associated Hospitalization Surveillance Network, 14 States, June 20, 2021–May 31, 2022 | MMWR (cdc.gov)

Safety Monitoring of Pfizer-BioNTech COVID-19 Vaccine Booster Doses Among Children Aged 5–11 Years — United States, May 17–July 31, 2022

Safety Monitoring of Pfizer-BioNTech COVID-19 Vaccine Booster Doses Among Children Aged 5–11 Years — United States, May 17–July 31, 2022 | MMWR (cdc.gov)

Children

In this double-blind, randomized, placebo-controlled trial, investigators found that among overweight or obese outpatients with COVID-19, none of three repurposed drugs (metformin, ivermectin, and fluvoxamine) reduced the risk of serious disease including the occurrence of hypoxemia, ED visit, hospitalization, or death associated with COVID-19

Findings in this report suggest that increased hospitalization rates among adults aged ≥65 years compared with rates among younger adults were most pronounced during the Omicron BA.2-predominant period. In addition, hospitalization rates among unvaccinated adults were approximately triple those of vaccinated adults.

This study was conducted to analyze the effect of booster doses of BNT162b2 in US children aged 5-11 years old. The study showed that local and systemic reactions were common among the study participants after Pfizer-BioNTech third dose vaccination (e.g., injection site pain, fatigue, headache), but reports of serious adverse events were rare. No reports of myocarditis or death after 3rd dose were received.

Other

USA & MI

Hospitalizations

Vaccinations **Variants**

Risk Levels

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