

# Ottawa County COVID-19 Epidemiology

December 15, 2021

*Data as of December 11, 2021, unless otherwise indicated*

# Executive Summary

- **Transmission in both the US and Michigan is increasing**
- **Ottawa community transmission levels remain elevated**
  - Positivity decreased to 21.6% last week. The goal is to be less than 8%.
  - Weekly case counts in Ottawa decreased 32%, from 2,242 two weeks ago to 1,532 last week.
  - Cases among children decreased 34%, from 456 two weeks ago to 302 last week.
  - The potential impact of Omicron on local transmission is unknown.
- **Ottawa area and regional hospitals are experiencing high numbers of COVID-19 patients**
  - In Ottawa County, 37% of all available beds and 81% of all ICU beds are occupied by COVID-19 patients.\*
  - Regional healthcare systems are extremely strained and asking for the community to take preventive action.
  - One regional healthcare system has received a federally assigned healthcare team to assist with surge capacity.
  - Ottawa County hospitals are repurposing patient care areas and using adaptive staffing strategies.
  - Some area hospitals are intermittently employing Emergency Department diversion, which occurs when a hospital and its emergency room are overloaded and cannot safely accept additional patients brought in by ambulance.
- **Pediatric hospitalizations across the US are increasing; hospitalizations among children in Michigan continue to increase.**
  - At a large West Michigan healthcare system, weekly hospital census for children with COVID-19 remains elevated.
- **Of Ottawa County residents aged 5+, 58.9% are completely 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.

# Ottawa County Metrics by Week

Metric	Goal	Week Ending				
		13-Nov-21	20-Nov-21	27-Nov-21	4-Dec-21	11-Dec-21
Positivity (All Ages)	<8%	25.5%	23.9%	23.1%	26.4%	21.6%
Weekly Cases (All Ages)	<147	1950	2240	1576	2242	1532
Weekly Cases in Children (0-17 years of age)	NA	487	568	341	456	302
Total COVID-19 Hospitalizations (All Ages)	0	40	56	57	43	34
Total Deaths (All Ages)	0	14	29	9	16	6
CDC Risk Transmission Level	Moderate	High	High	High	High	High

# Public Health Recommendations

- **Get vaccinated (start series or get booster)**
- **Stay home when sick & get tested**
- **Wear your mask in public indoor places**
- **November 2021 MDHHS Advisory:**

As such, on November 19, 2021, MDHHS is issuing the following advisory on the use of face masks. **This advisory takes effect immediately and remains in effect until further notice.**

**All Michiganders, regardless of vaccination status, should take the following actions to protect against COVID-19 and other respiratory illnesses:**

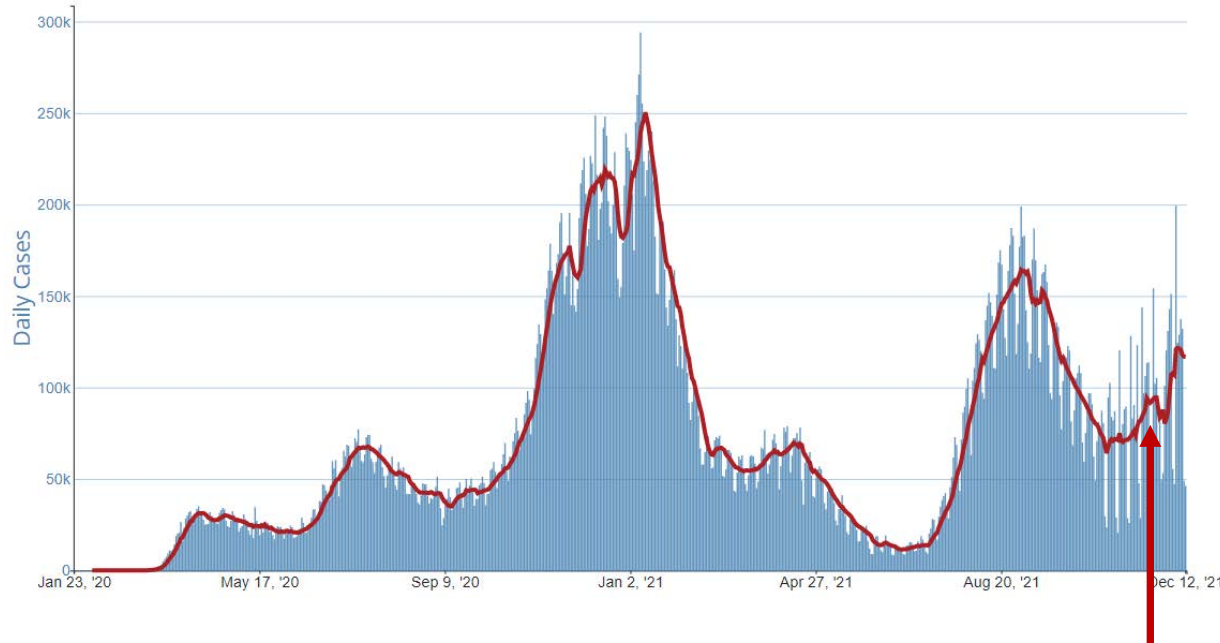
**Public Health Advisory:**

- (a) All persons in indoor public settings are advised to wear a face mask, regardless of their vaccination status.
- (b) Public establishments are advised to implement masking policies and encourage compliance with such policies.
- (c) Individuals who are not fully vaccinated or who are immunocompromised are advised to avoid large crowds or gatherings.

# Case Trends in the USA and Michigan

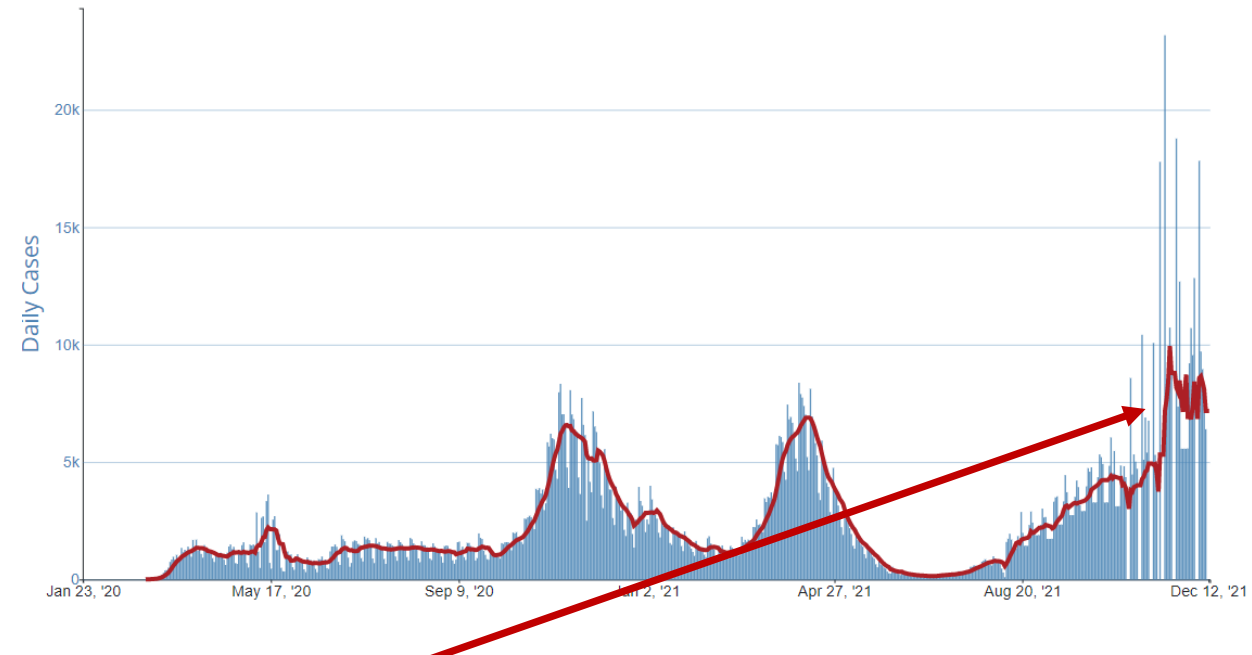
## USA

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



## Michigan

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



Both the US and Michigan  
are experiencing  
increasing trends.

Source: [https://covid.cdc.gov/covid-data-tracker/#trends\\_dailycases](https://covid.cdc.gov/covid-data-tracker/#trends_dailycases)

Data through December 12, 2021

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

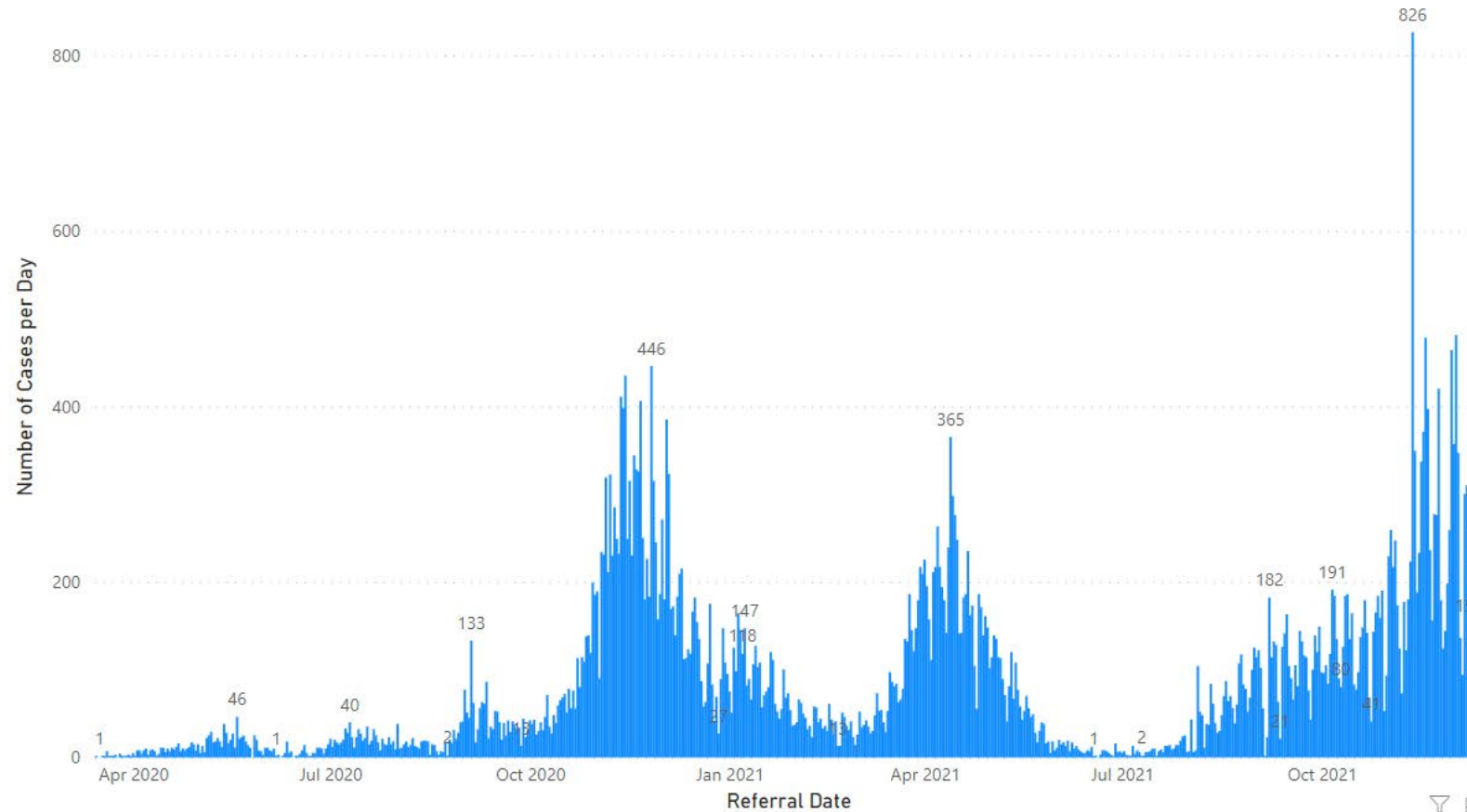
Media

Science  
Roundup

# Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – December 14, 2021

Epidemiological Curve



Total Number of Cases  
**53,275**

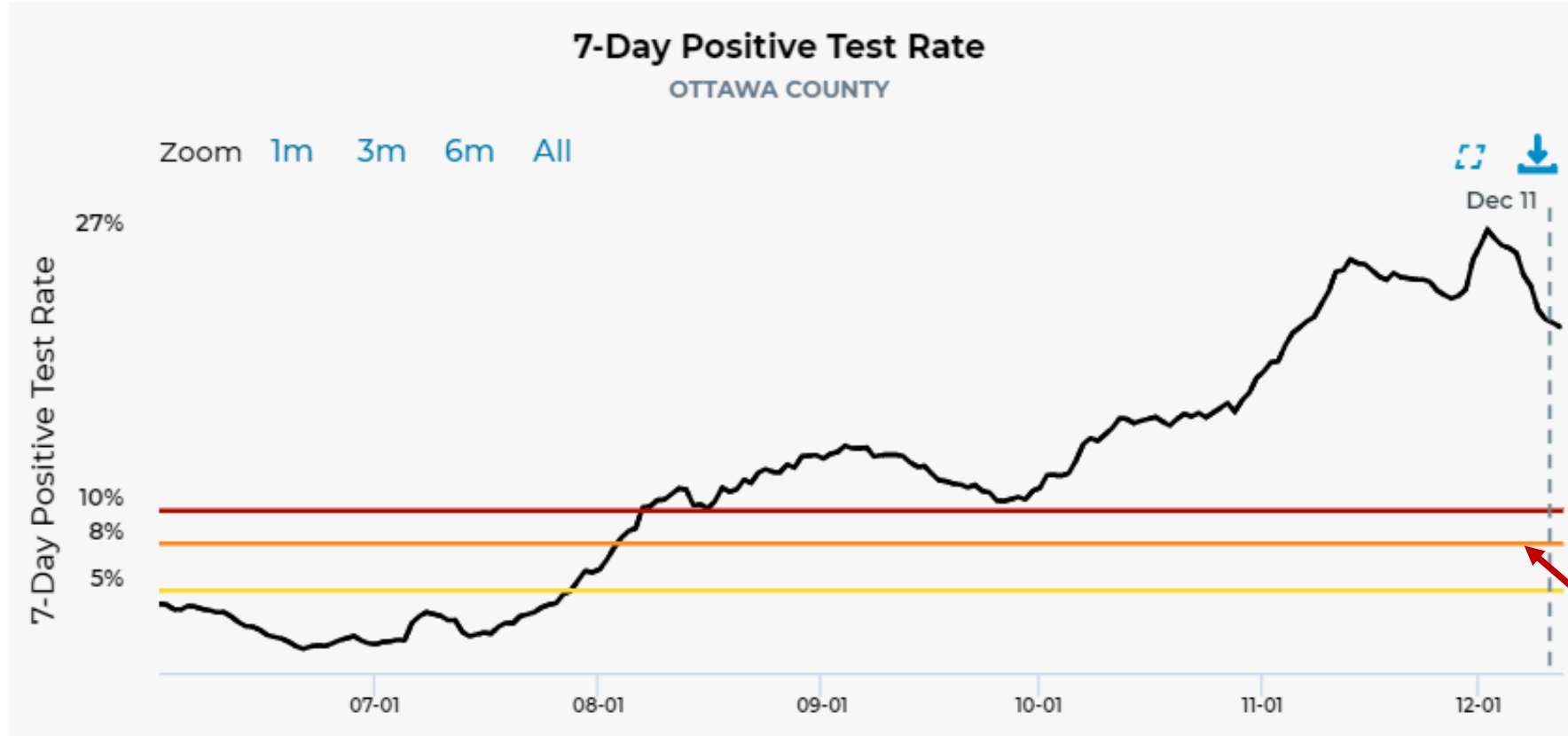
Currently the 7-day average is **181 cases per day**, lower than the 270 cases per day seen at a similar time last week.

**Notes:** Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases. Additionally, OCDPH has received reports of parents refusing COVID-19 testing for their children ill with respiratory symptoms, and hospitals forgoing confirmatory COVID-19 testing and relying on self-reported positive at-home tests to direct clinical care. On November 12, 2021, MDHHS updated their database resulting in a backlog of cases being reported in one day.

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

# Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, June 1, 2021 – December 11, 2021



Test positivity reached 21.6% on December 11, 2021.

The goal is to have less than 8% of tests coming back positive.

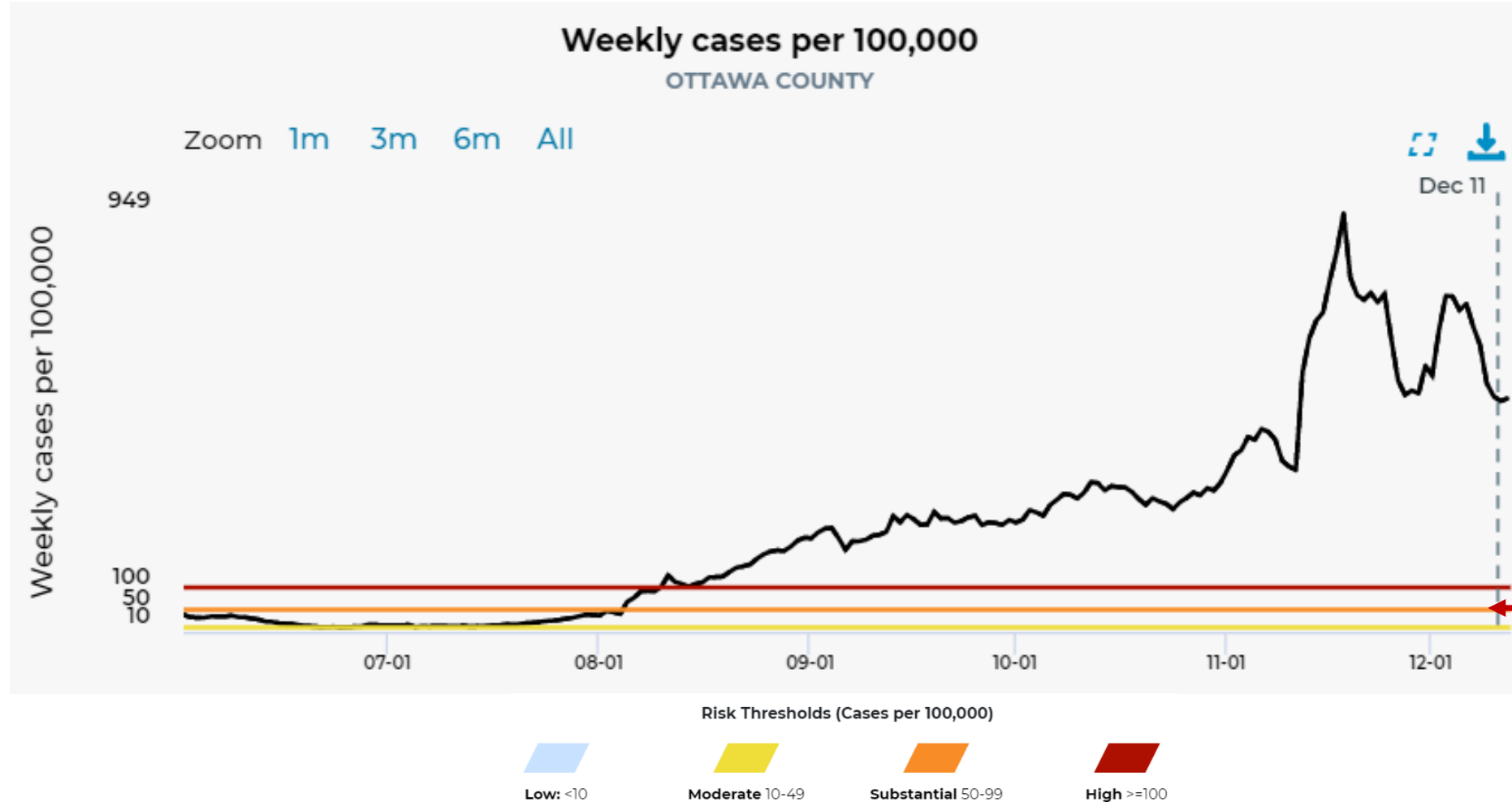


Note: Testing in Ottawa County has remained stable with at least 6000-10,000 tests each week: [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](#)

Source: <https://www.mistartmap.info/cdc-indicators?area=county%3Aottawa>

# Case Rates in Ottawa County – All Ages

COVID-19 Cases by Day, Ottawa County, June 1, 2021 – December 11, 2021



Case rates decreased to 523 cases per week per 100,000 population (down from 758 the week prior).

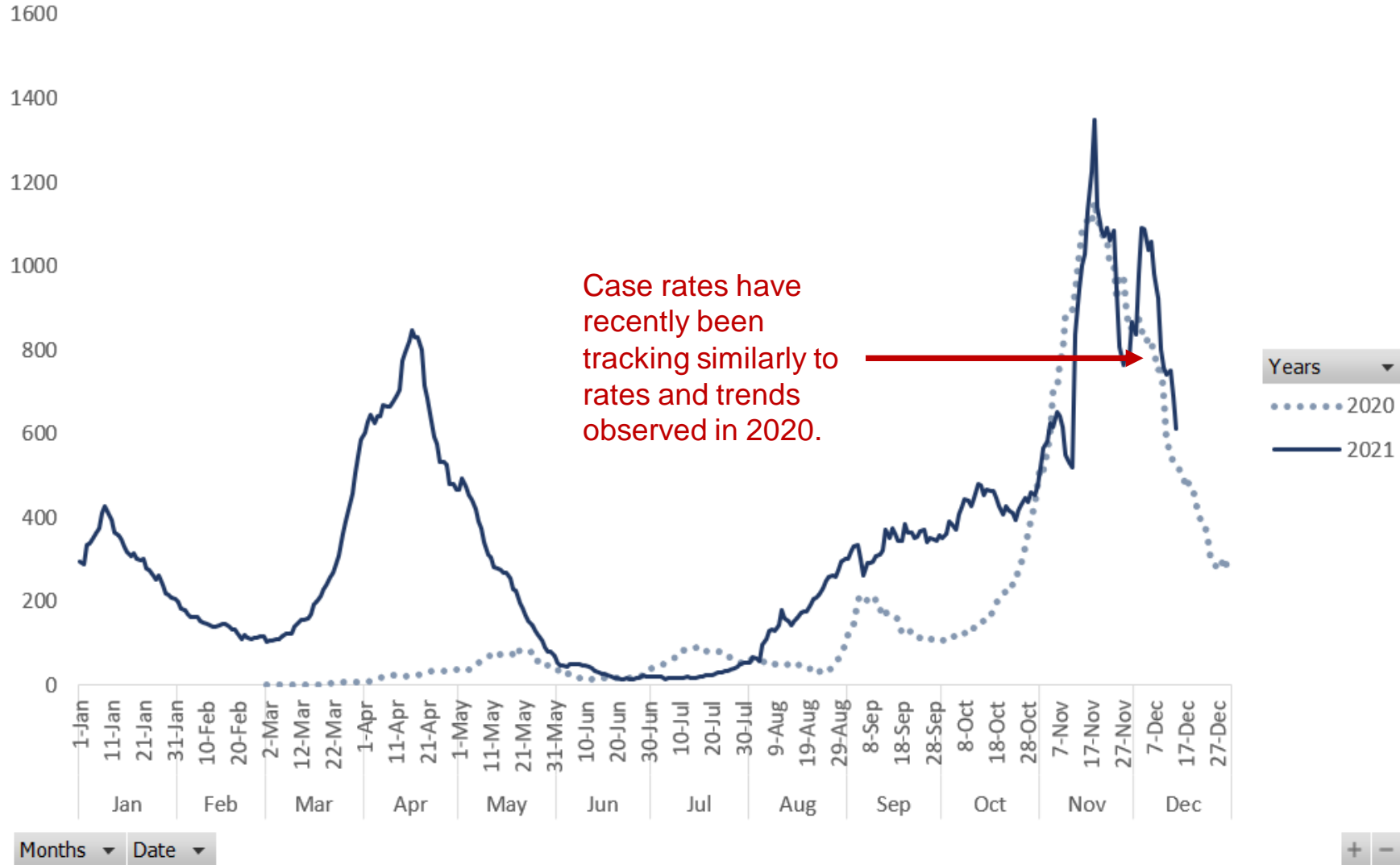
The goal is to have less than 50 cases per week per 100,000 population. In Ottawa County, this would be about 21 cases per day or less.

Source: <https://www.mistartmap.info/cdc-indicators?area=county%3Aottawa>



# Ottawa County Time Trends – Annual Comparison

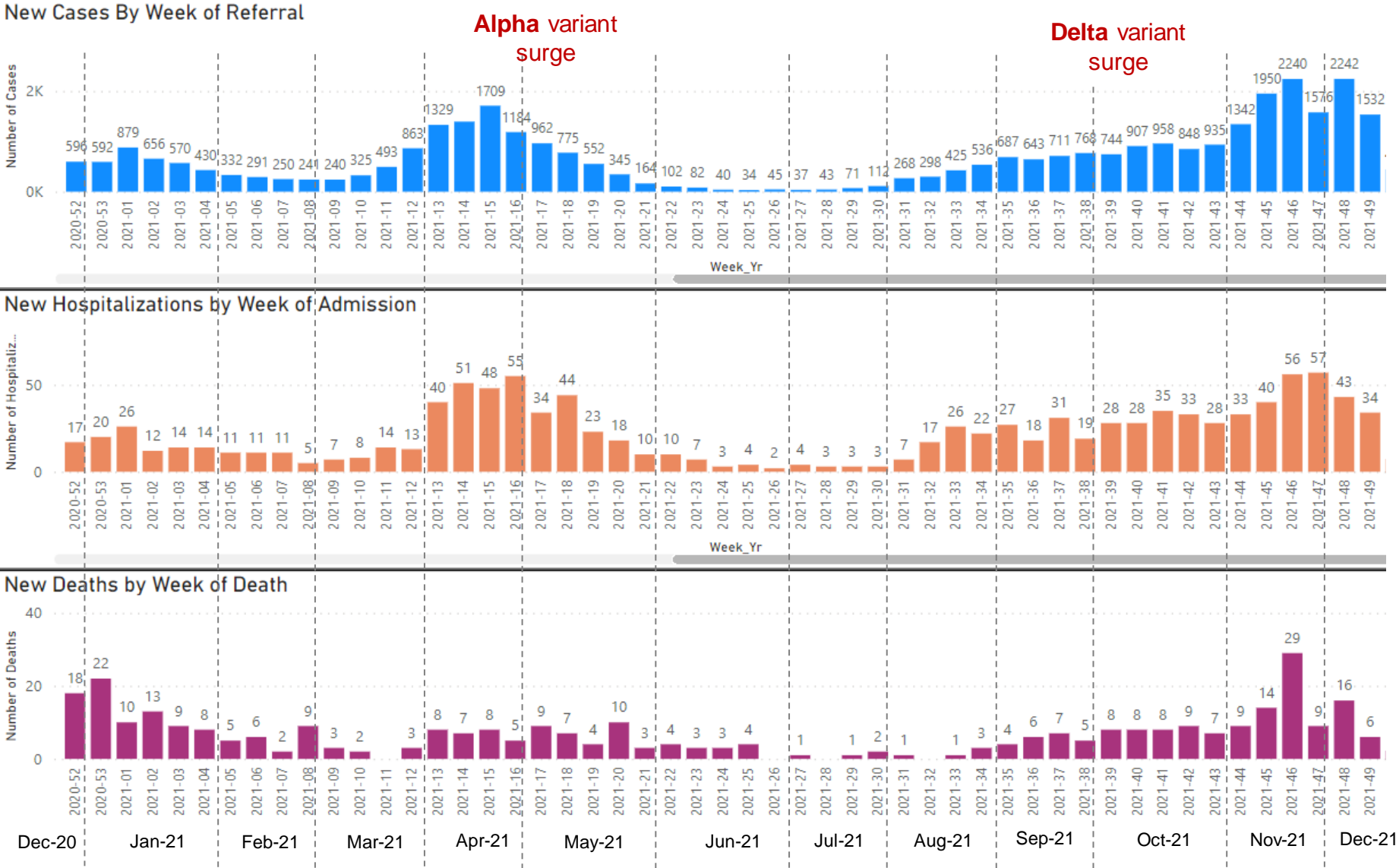
7-day Average (per day/million)



Source: Internal Data

Data through December 14, 2021

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



Hospitalizations and deaths in recent weeks may increase as data is updated.

Hospitalizations are likely underestimated because:

- (i) Hospitalization status is obtained only by manual review, and
- (ii) Hospitalization may occur after public health interview.

The weekly number of **cases decreased 32%** from week 48 to week 49.

The weekly number of **hospitalizations** has been increasing with an average of about **47 cases hospitalized** each week over the last month.

Weekly COVID-19 **deaths** have exceeded levels experienced in the spring 2021 wave. Current weekly average of deaths over the last 4 weeks stands at about **15 deaths per week**.

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

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

Week Ending	Adults (18+)		Children (0-17 years)		Total	
	Number	% Change from Previous Week	Number	% Change from Previous Week	Number	% Change from Previous Week
3-Jul-21	40		5		45	
10-Jul-21	32	-20%	5	0%	37	-18%
17-Jul-21	38	19%	5	0%	43	16%
24-Jul-21	60	58%	11	120%	71	65%
31-Jul-21	89	48%	23	109%	112	58%
7-Aug-21	224	152%	43	87%	267	138%
14-Aug-21	259	16%	39	-9%	298	12%
21-Aug-21	365	41%	60	54%	425	43%
28-Aug-21	449	23%	88	47%	537	26%
4-Sep-21	553	23%	134	52%	687	28%
11-Sep-21	496	-10%	148	10%	644	-6%
18-Sep-21	547	10%	165	11%	712	11%
25-Sep-21	620	13%	149	-10%	769	8%
2-Oct-21	608	-2%	136	-9%	744	-3%
9-Oct-21	714	17%	197	45%	907	22%
16-Oct-21	765	7%	199	1%	958	6%
23-Oct-21	685	-10%	163	-18%	848	-11%
30-Oct-21	716	5%	219	34%	935	10%
6-Nov-21	991	38%	351	60%	1342	44%
13-Nov-21	1463	48%	487	39%	1950	45%
20-Nov-21	1672	14%	568	17%	2240	15%
27-Nov-21	1235	-26%	341	-40%	1576	-30%
4-Dec-21	1786	45%	456	34%	2242	42%
11-Dec-21	1230	-31%	302	-34%	1532	-32%

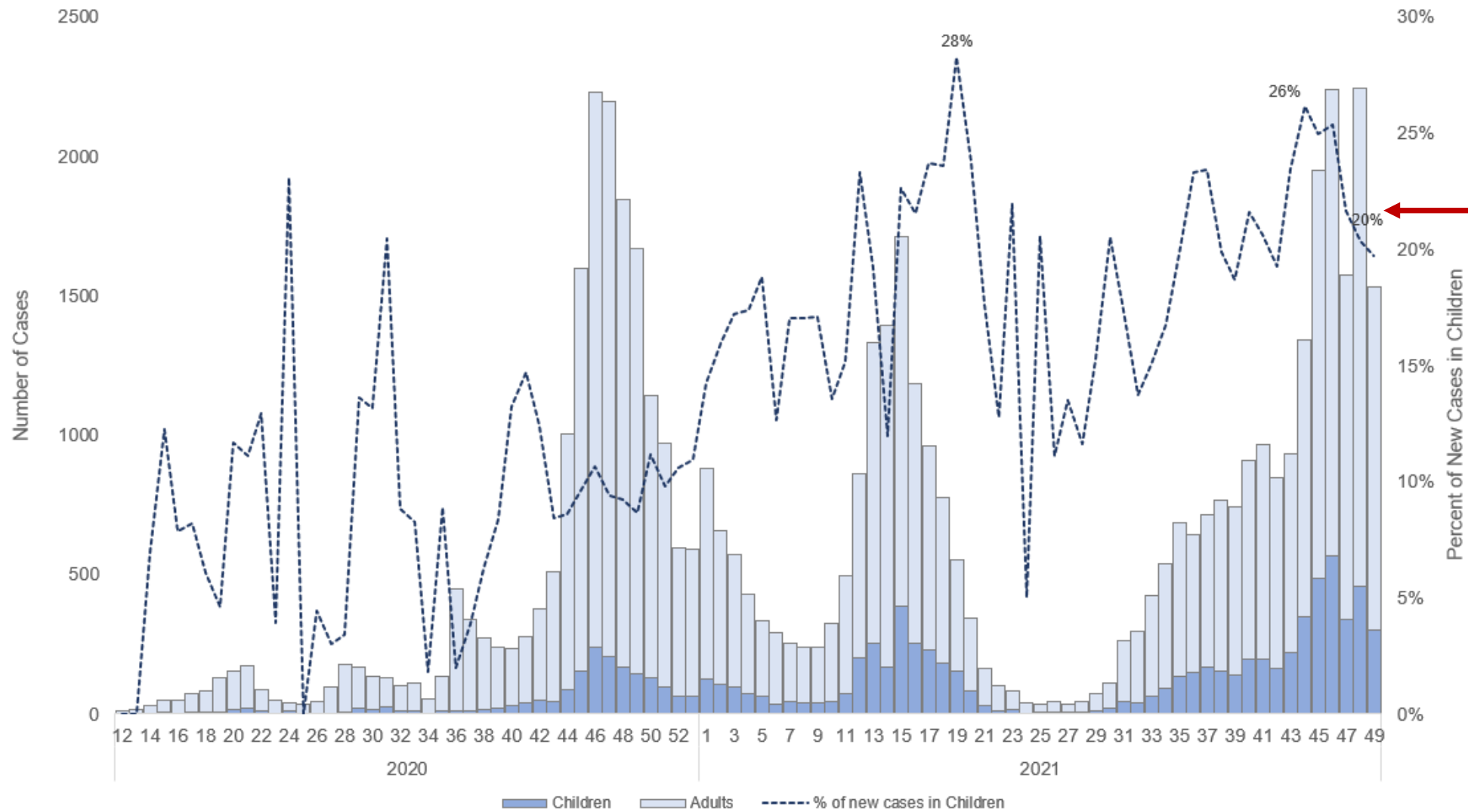
Adults

Children

Weekly case counts among children decreased 34% last week, and cases in adults decreased 31%.

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

# Ottawa County Weekly Case Counts and % in Children (0-17)



During week 48 and week 49, children make up **20%** of cases reported; a much higher proportion compared to other times during the pandemic, but lower than recent highs.

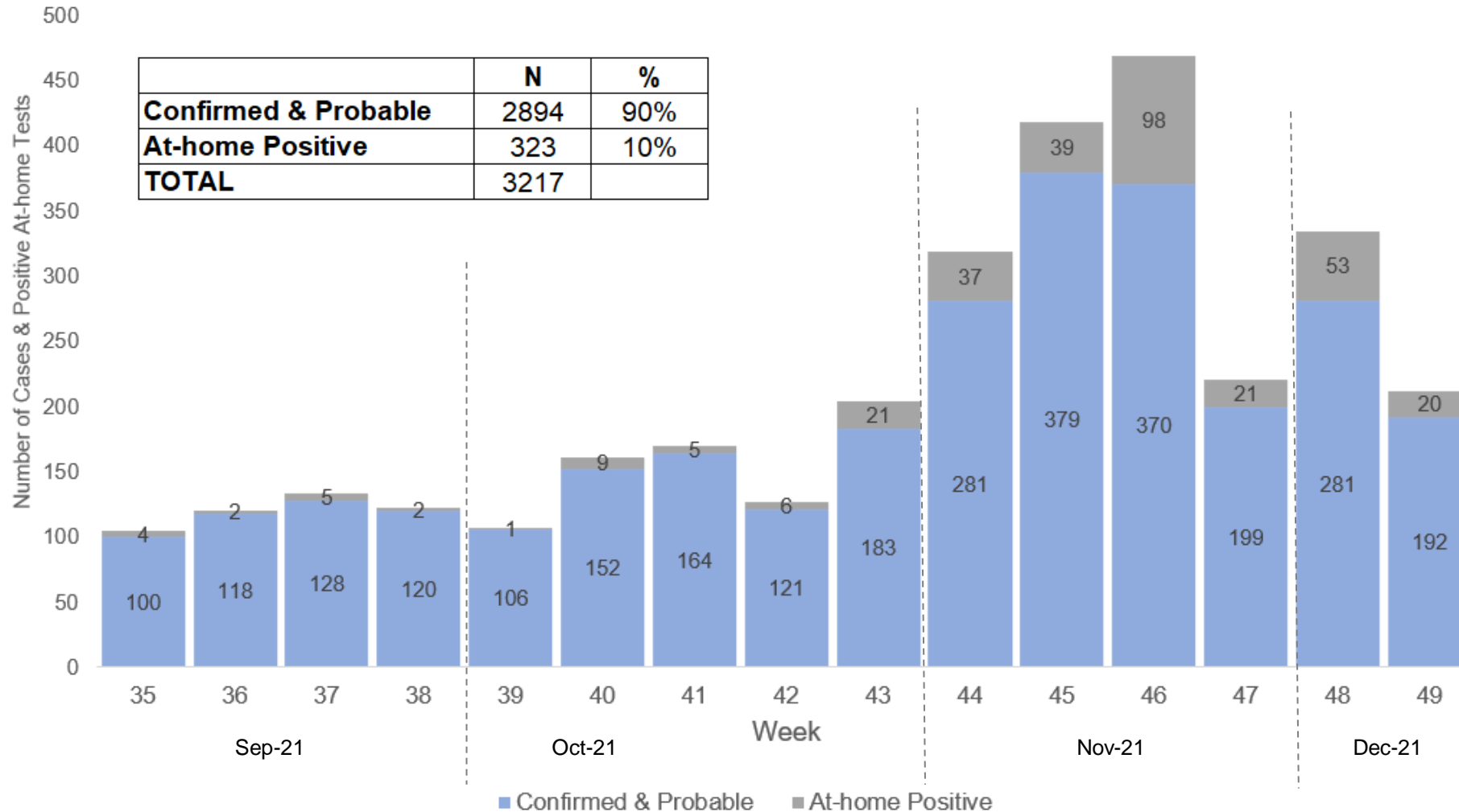
For comparison, children aged 0-17 make up about 23.5% of the population in Ottawa County.

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

Data through Week 49, 2021

# At-home Testing Among Ottawa County PreK – 12 School Students

August 29 – December 11, 2021



Positive at-home tests among school students in Ottawa County make up **at least 10% of case or positive testing events** from August 29 – December 11, 2021.

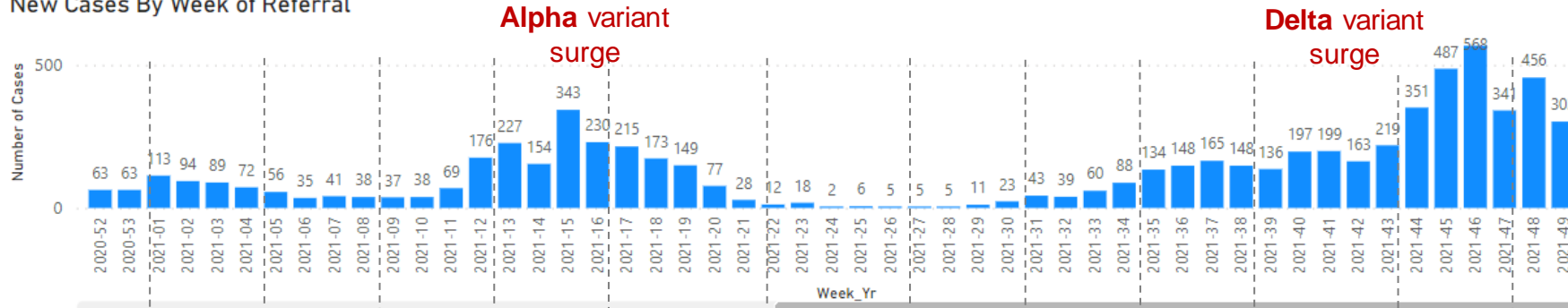
Because positive at-home tests are not reportable to Public Health, the number reported here is an underestimate.

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

Data from Week 35 - 49, 2021

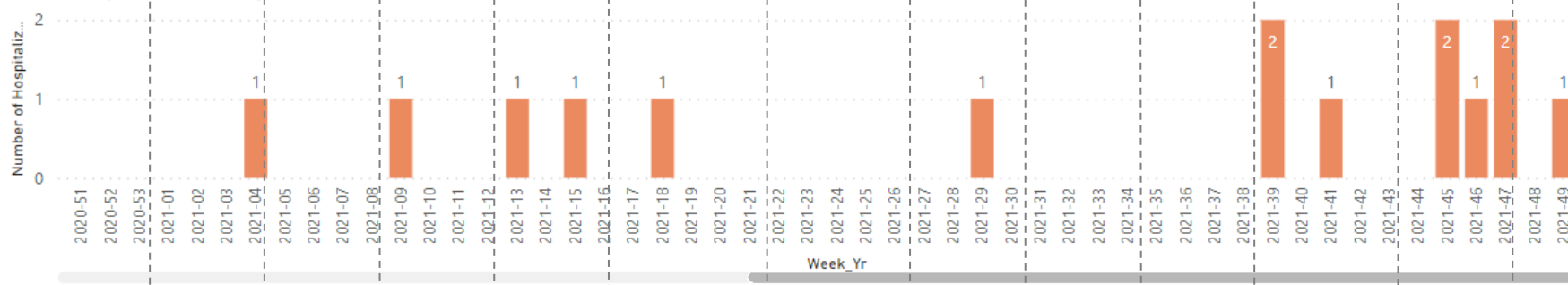
# Ottawa County - Cases, Hospitalizations, & Deaths by Week Among Children (0-17 years)

New Cases By Week of Referral



The weekly number of cases among children **decreased 34%** from week 48 to week 49.

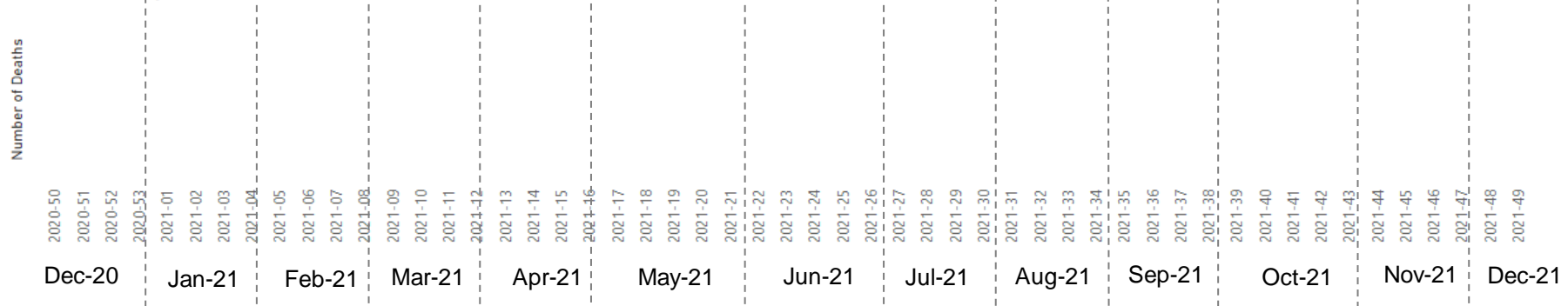
New Hospitalizations by Week of Admission



Hospitalizations are likely **underestimated** because:

- (i) Hospitalization status is obtained only by manual review, and
- (ii) Hospitalization may occur after public health interview.

New Deaths by Week of Death



Through the 2020-2021 school year nearly all school-aged children were in environments with:

- universal masking
- cohorting
- online learning
- social distancing
- mandatory quarantine for all close contacts
- testing (for high school athletes)

These mitigation strategies likely reduced case counts and hospitalizations among children.

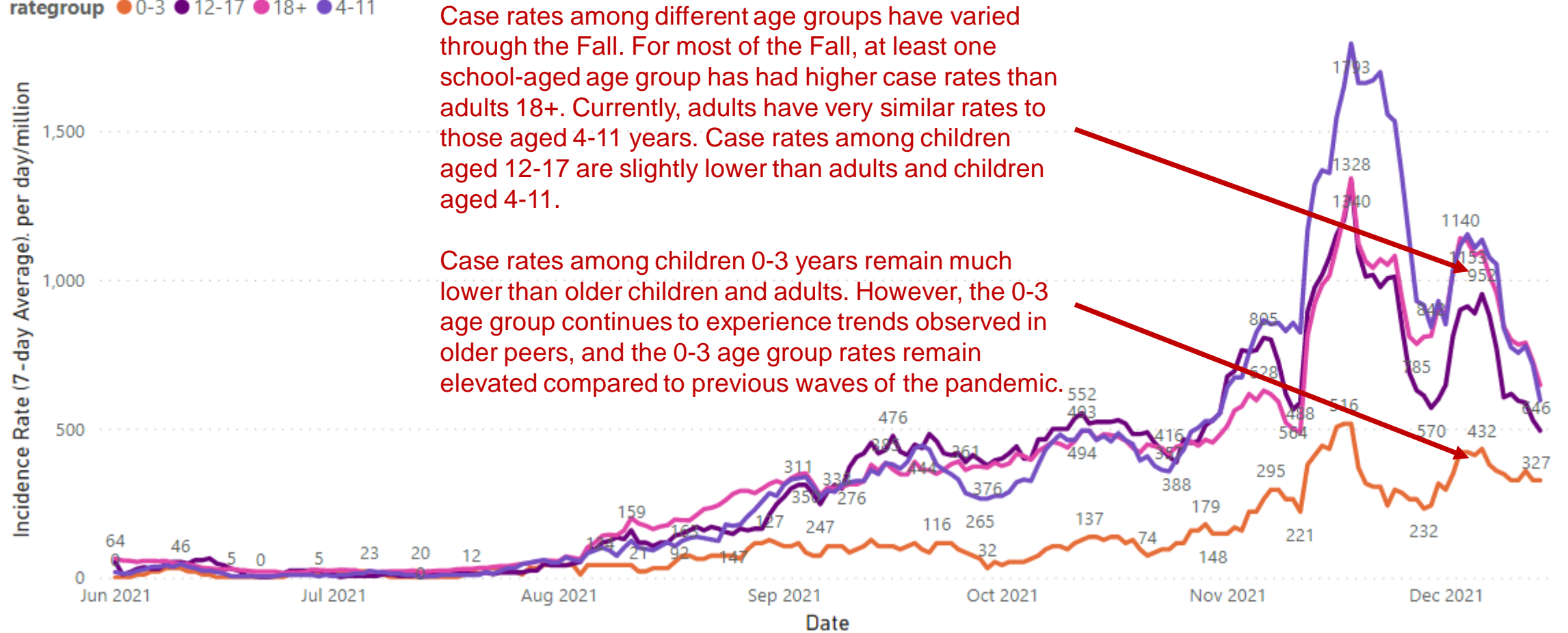
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

# Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, June 2021 – December 14, 2021

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



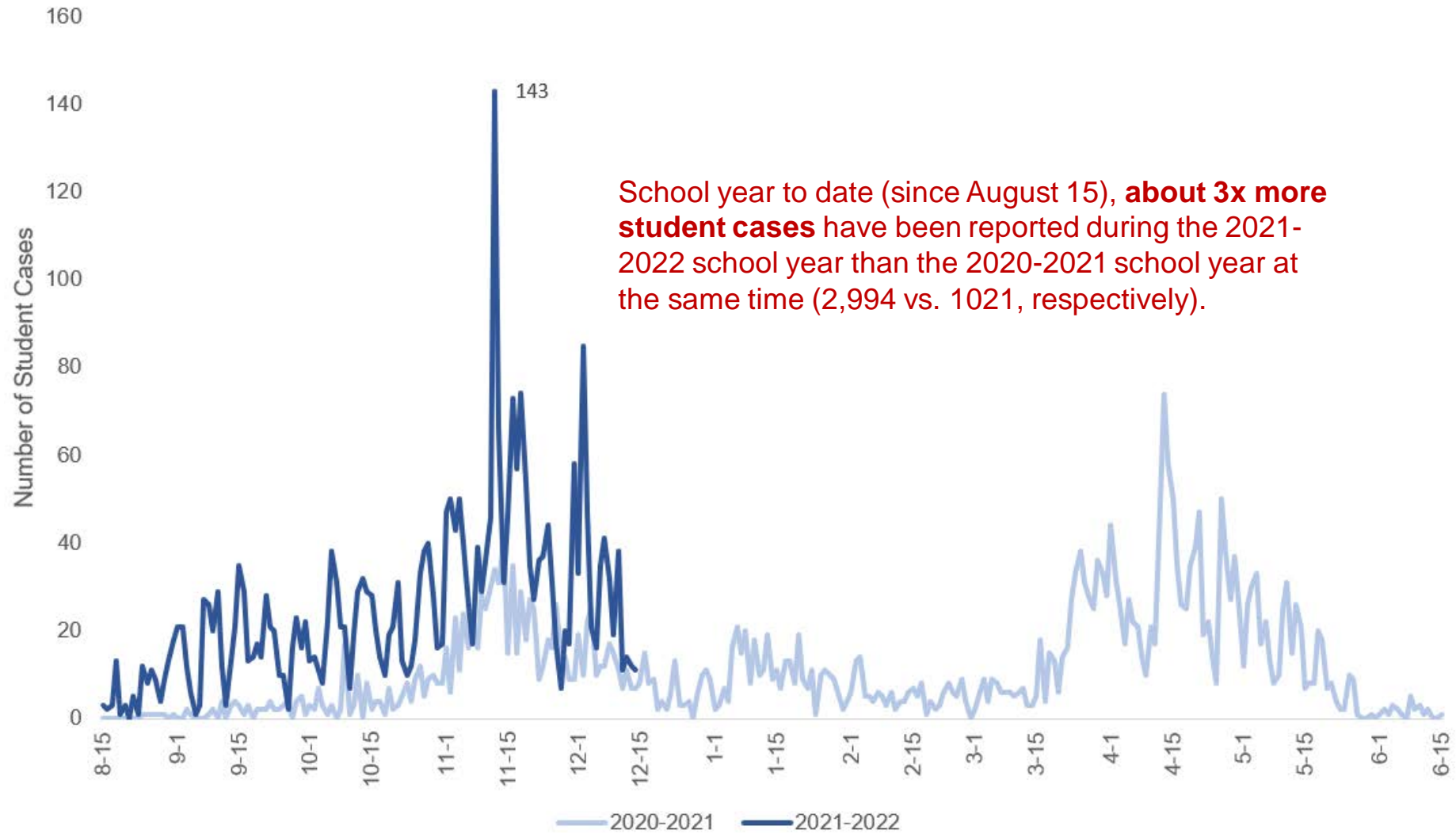
Case rates among different age groups have varied through the Fall. For most of the Fall, at least one school-aged age group has had higher case rates than adults 18+. Currently, adults have very similar rates to those aged 4-11 years. Case rates among children aged 12-17 are slightly lower than adults and children aged 4-11.

Case rates among children 0-3 years remain much lower than older children and adults. However, the 0-3 age group continues to experience trends observed in older peers, and the 0-3 age group rates remain elevated compared to previous waves of the pandemic.

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

Data as of December 14, 2021

# Ottawa County Cases in PreK-12 School Students



**Method:** Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

**Note:** Data may change as information is updated and methods are refined. Cases reported in 2021 will likely increase. The peak of 143 cases reported on November 12, 2021 is the result of a database update by MDHHS that reported a backlog of cases from the previous days.

**Source:** Michigan Department of Health and Human Services, Michigan Disease Surveillance System; Internal data systems

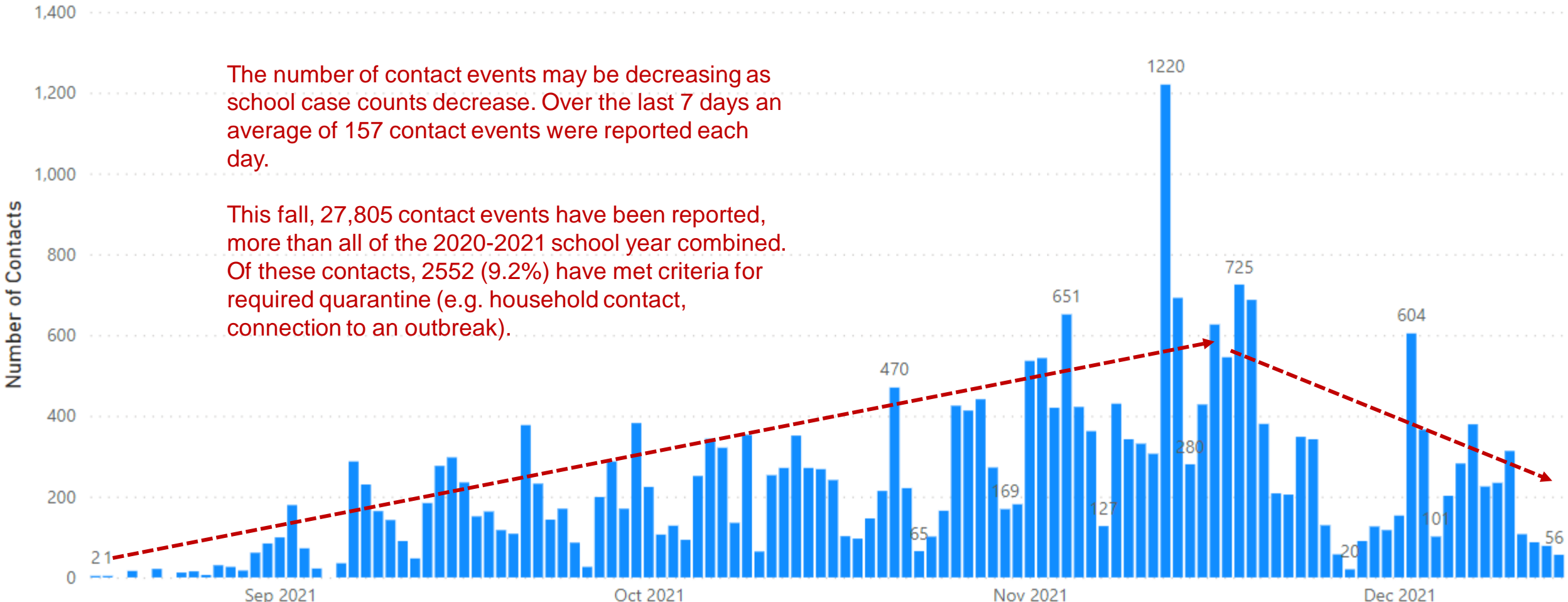
Data through December 14, 2021



# Ottawa County PreK-12 School Contact Events

## Contact Events by Day, Ottawa County, August 14, 2021 – December 14, 2021

Contacts by Case Referral Date



The number of contact events may be decreasing as school case counts decrease. Over the last 7 days an average of 157 contact events were reported each day.

This fall, 27,805 contact events have been reported, more than all of the 2020-2021 school year combined. Of these contacts, 2552 (9.2%) have met criteria for required quarantine (e.g. household contact, connection to an outbreak).

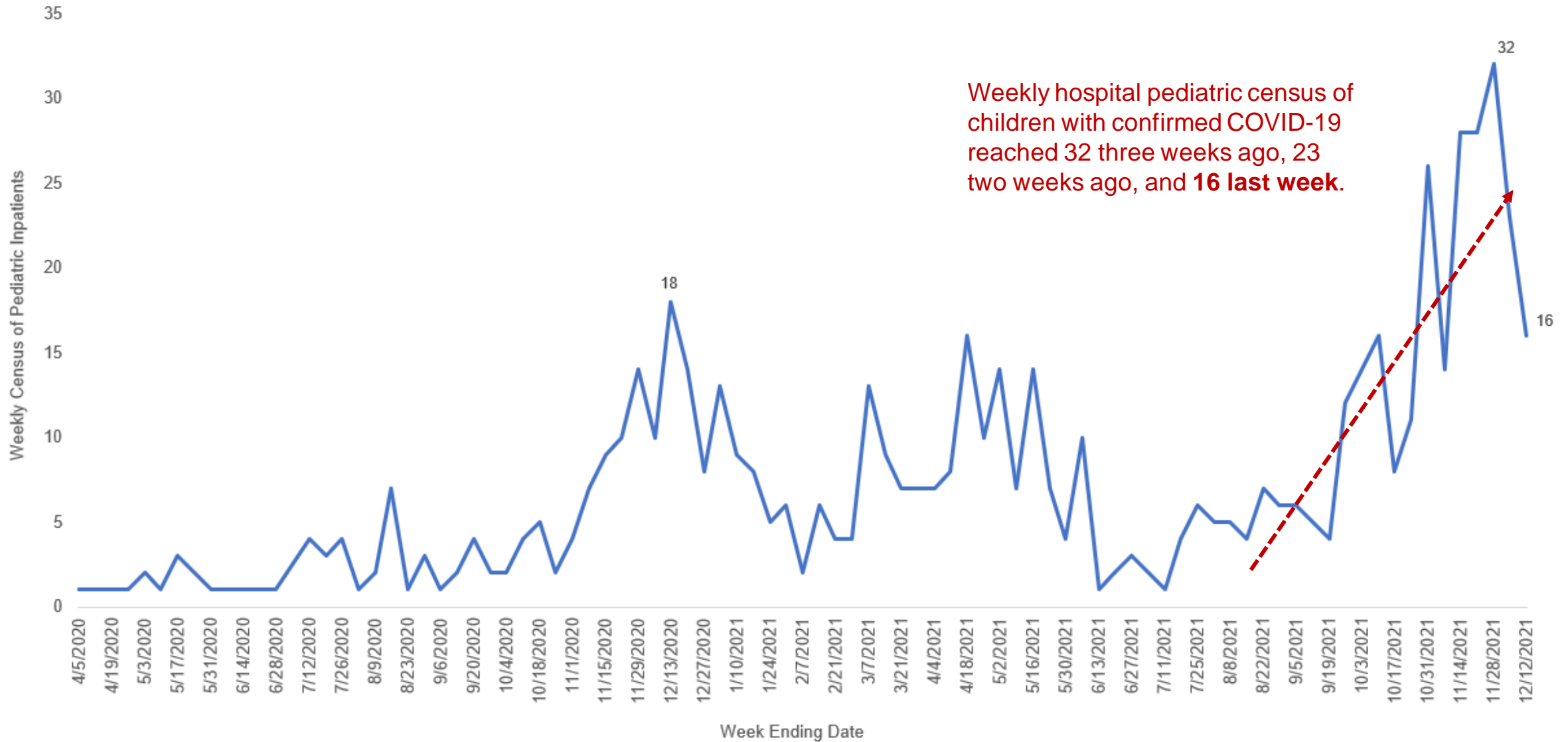
**Method:** Includes staff and student contact events to confirmed or probable case of COVID-19 in PreK-12 schools in Ottawa County.

**Note:** Duplicate events may be present. The peak of 1220 contacts on November 12, 2021 is the result of a database update by MDHHS that reported a backlog of cases from previous days. Contact events are instances when a person is identified as a close contact; a person may be a contact event multiple times.

**Source:** Internal data systems

Data through December 14, 2021

# Weekly Hospital Pediatric Census – A Regional Healthcare System



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

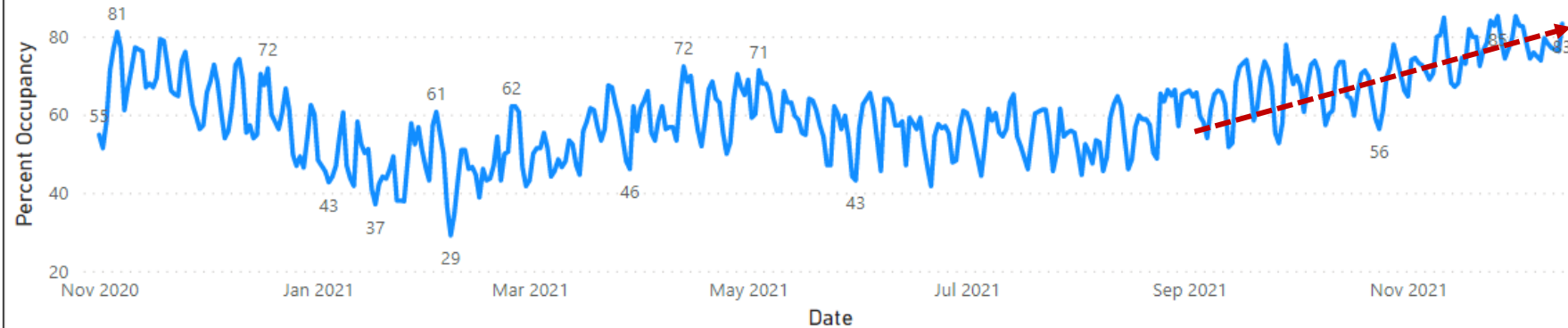
Data through December 12, 2021

# Ottawa County Hospital Capacity – All Beds

## Total Inpatient Bed Occupancy (All Patients, COVID and Non-COVID)

Percent Occupancy by Date and County

County ● Ottawa



## COVID Inpatient Bed Occupancy (COVID Patients Only, Confirmed and Suspected)

Percent Occupancy by Date and County

County ● Ottawa



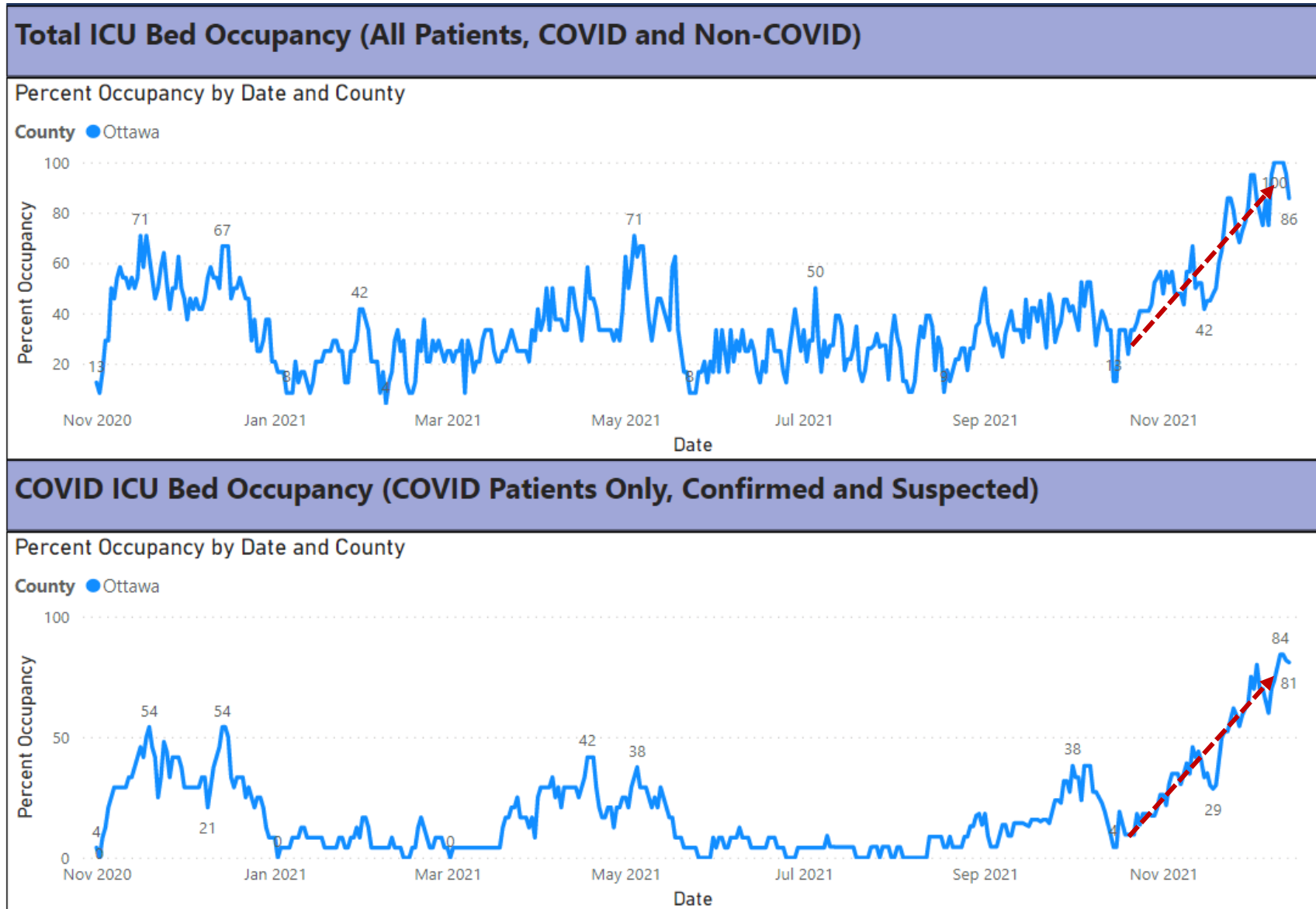
Total hospital bed occupancy is **increasing**, as is the proportion of beds occupied by COVID-19 patients.

Currently **37%** of all inpatient beds are occupied by COVID-19 patients.

Data through December 14, 2021

Source: EMResources

# Ottawa County Hospital Capacity – ICU Beds



Overall ICU bed occupancy **remains at one of the highest levels of the pandemic (86%).**

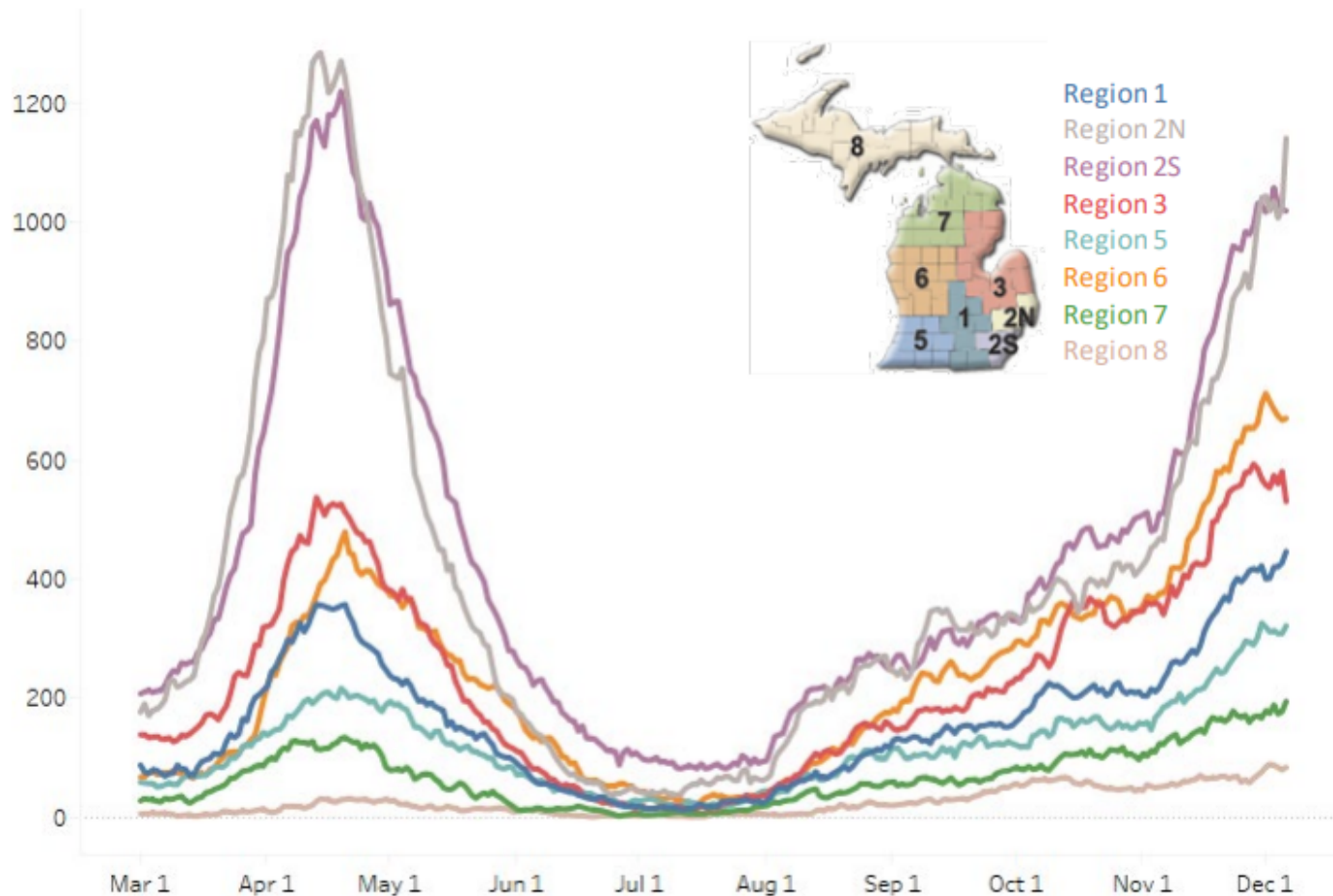
The proportion of ICU beds occupied by COVID-19 patients **remains elevated.** Currently, **81%** of all ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through December 14, 2021

# Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 3/1/2021 – 12/6/2021  
Confirmed Positive by Region



The COVID+ hospital census increased across all regions except Region 2S and 3. The fastest growth was in Regions 2N, 7 and 8.

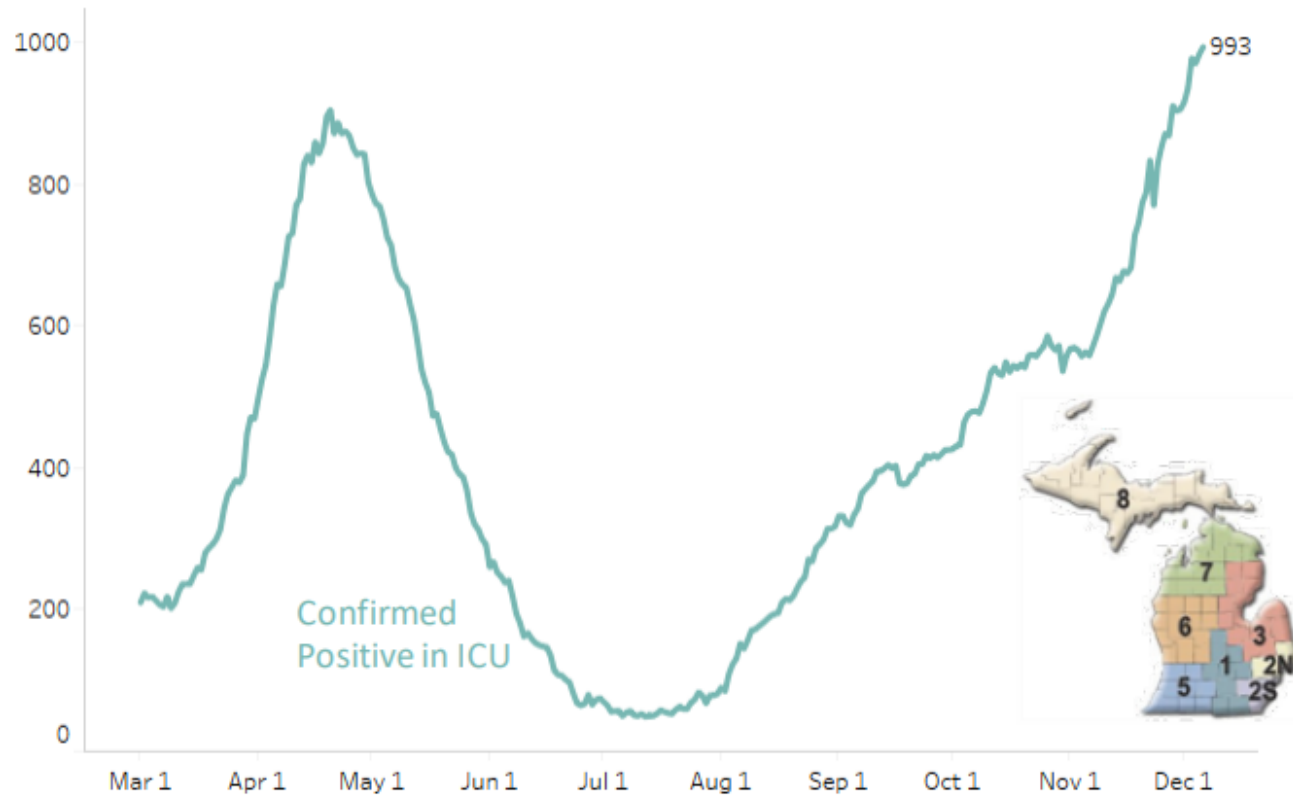
Regions 1, 2N, 2S, 3 and 6 now have greater than 400/Million population hospitalized and Region 2N is now >500/Million population hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	446 (8%)	412/M
Region 2N	1141 (14%)	515/M
Region 2S	1019 (-1%)	457/M
Region 3	530 (-10%)	467/M
Region 5	321 (7%)	337/M
Region 6	670 (1%)	457/M
Region 7	194 (15%)	388/M
Region 8	83 (19%)	267/M

Source: MDHHS Data and Modelling: [https://www.michigan.gov/documents/coronavirus/20211207\\_Data\\_and\\_modeling\\_update\\_vFINAL\\_743099\\_7.pdf](https://www.michigan.gov/documents/coronavirus/20211207_Data_and_modeling_update_vFINAL_743099_7.pdf)

# Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 12/6/2021  
Confirmed Positive in ICUs



The census of COVID+ patients in ICUs has increased 10% from last week. **ICU census now exceeds the spring 2021 peak.**

All Regions except 2N and 8 have adult ICU occupancy greater than 85% with Regions 1, 3 and 7 above 90% occupancy. Regions 1, 5, 6, 7 and 8 have >40% of adult ICU beds occupied with COVID+ patients while Regions 6 and 7 have >55% of adult ICU beds used for COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	Adult ICU Occupancy	% of Adult ICU beds COVID+
Region 1	100 (0%)	94%	48%
Region 2N	199 (20%)	82%	34%
Region 2S	220 (10%)	86%	31%
Region 3	126 (-2%)	93%	36%
Region 5	66 (8%)	89%	43%
Region 6	176 (12%)	87%	57%
Region 7	81 (29%)	90%	56%
Region 8	25 (-11%)	79%	40%

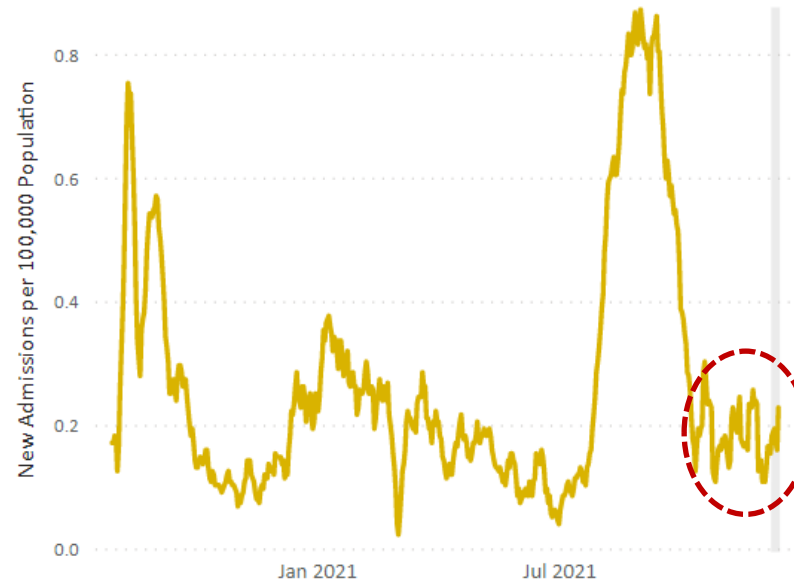
Source: MDHHS Data and Modelling: [https://www.michigan.gov/documents/coronavirus/20211207\\_Data\\_and\\_modeling\\_update\\_vFINAL\\_743099\\_7.pdf](https://www.michigan.gov/documents/coronavirus/20211207_Data_and_modeling_update_vFINAL_743099_7.pdf)

# Pediatric Hospitalization Rates – USA, Georgia, Michigan

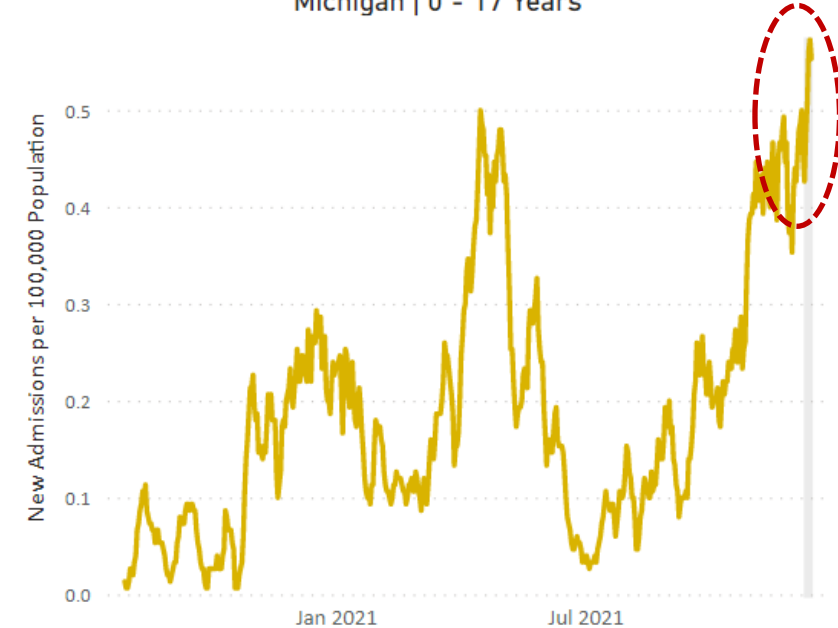
United States | 0 - 17 Years



Georgia | 0 - 17 Years



Michigan | 0 - 17 Years

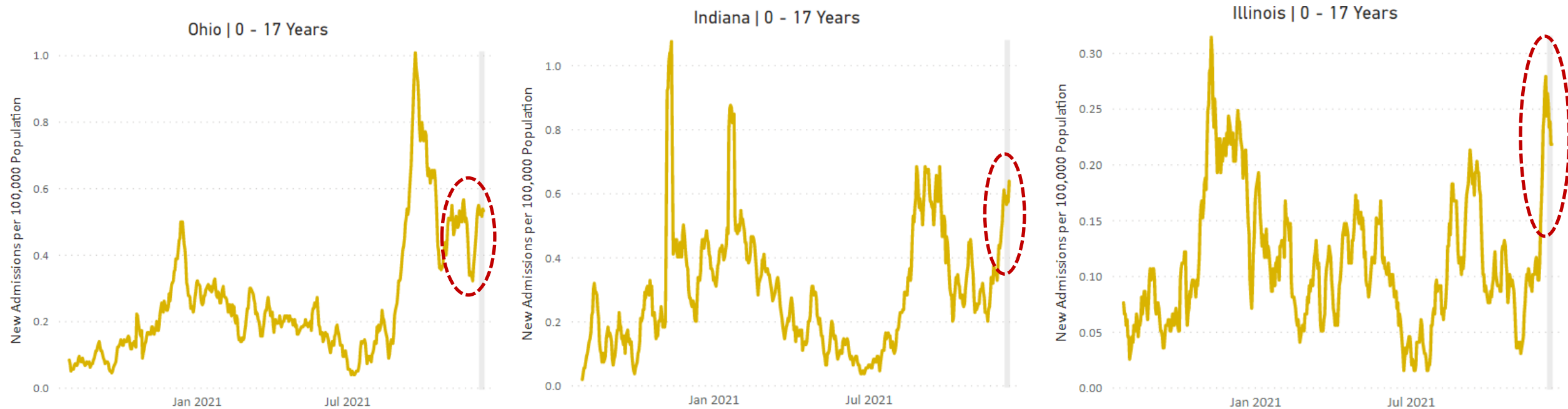


Pediatric hospitalization rates across the United States may be rebounding after a substantial decline. Most southern states (such as Georgia) have much lower rates than recent peaks. **Michigan pediatric hospitalization rates have reached the highest levels of the pandemic to date.**

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

Accessed December 14, 2021

# Pediatric Hospitalization Rates – Select Midwest States



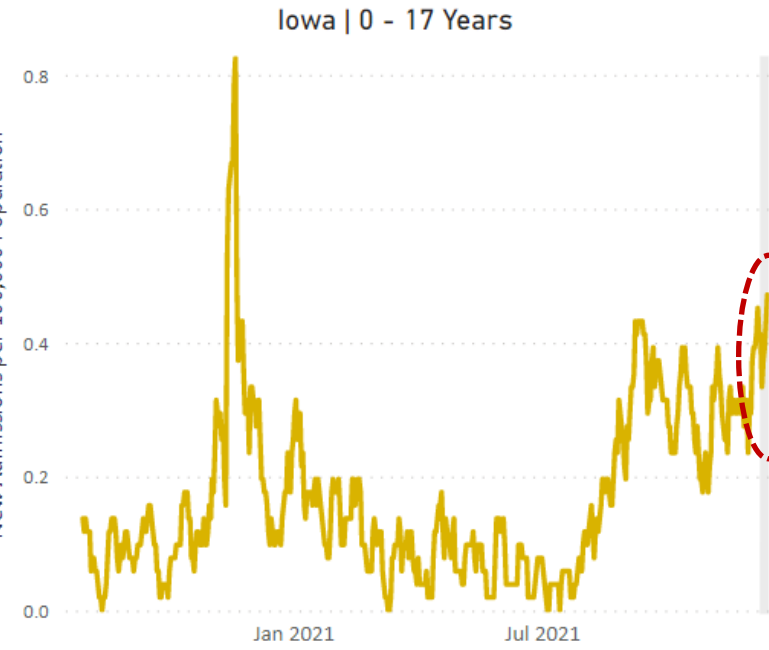
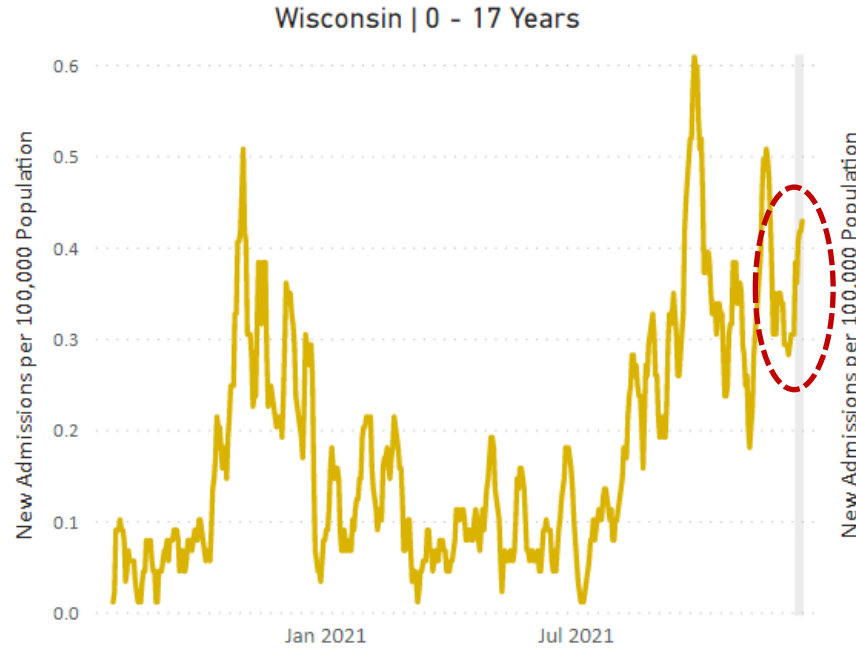
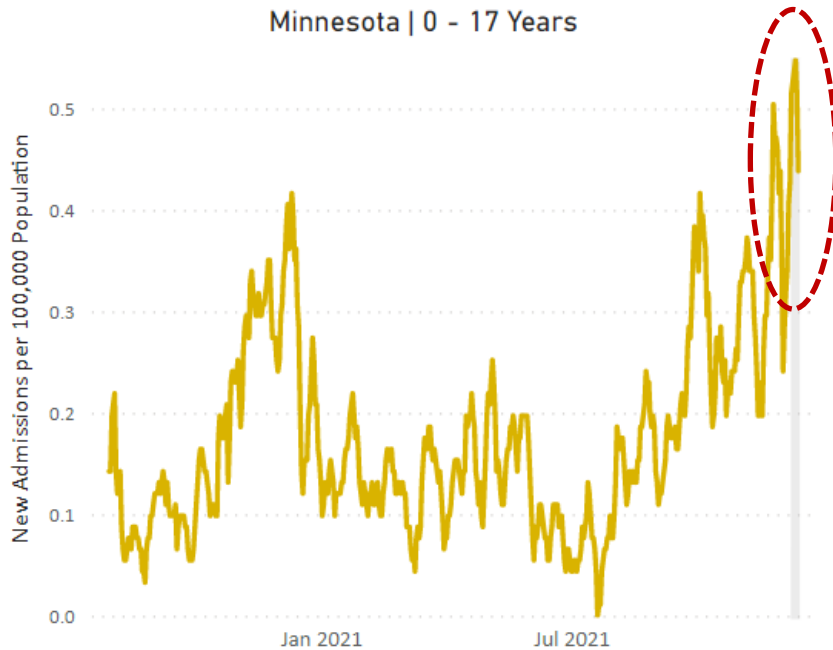
Ohio, Indiana, and Illinois are all showing a concerning rebound in pediatric hospitalization rates.

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

Accessed December 14, 2021

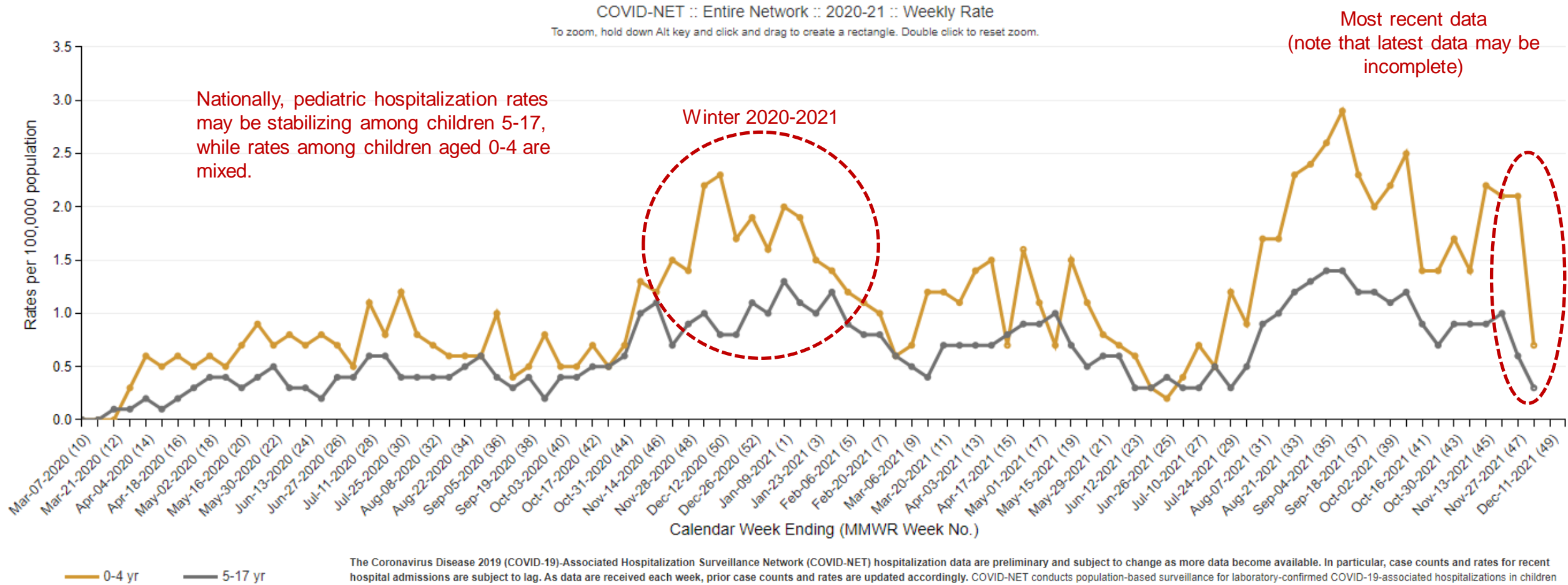


# Pediatric Hospitalization Rates – Select Midwest States



Pediatric hospitalization rates in Minnesota have reached pandemic highs, while Wisconsin and Iowa may be rebounding.

# Pediatric Hospitalization Rates by Age Group – USA

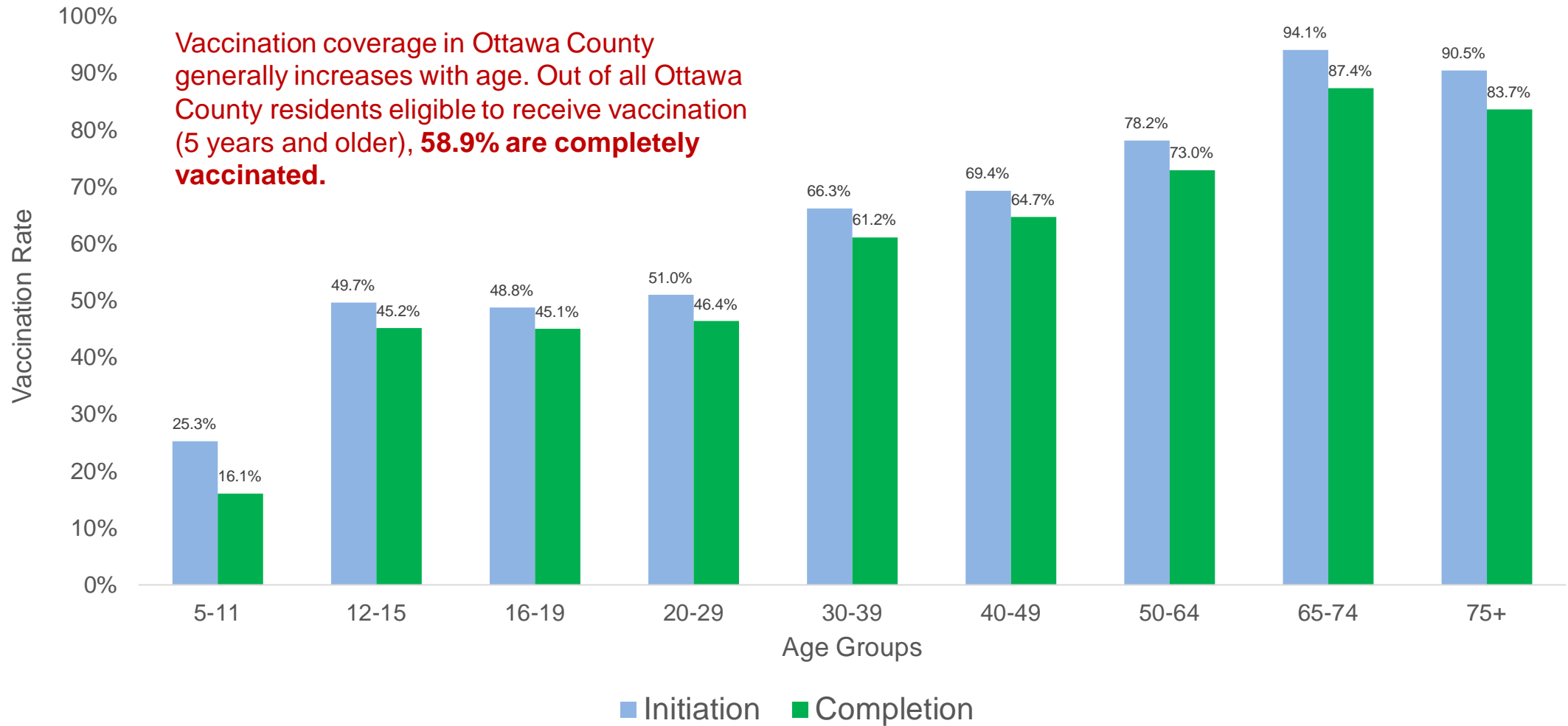


The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. As data are received each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

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

Accessed November 23, 2021

# Vaccination Coverage by Age



**Note:**

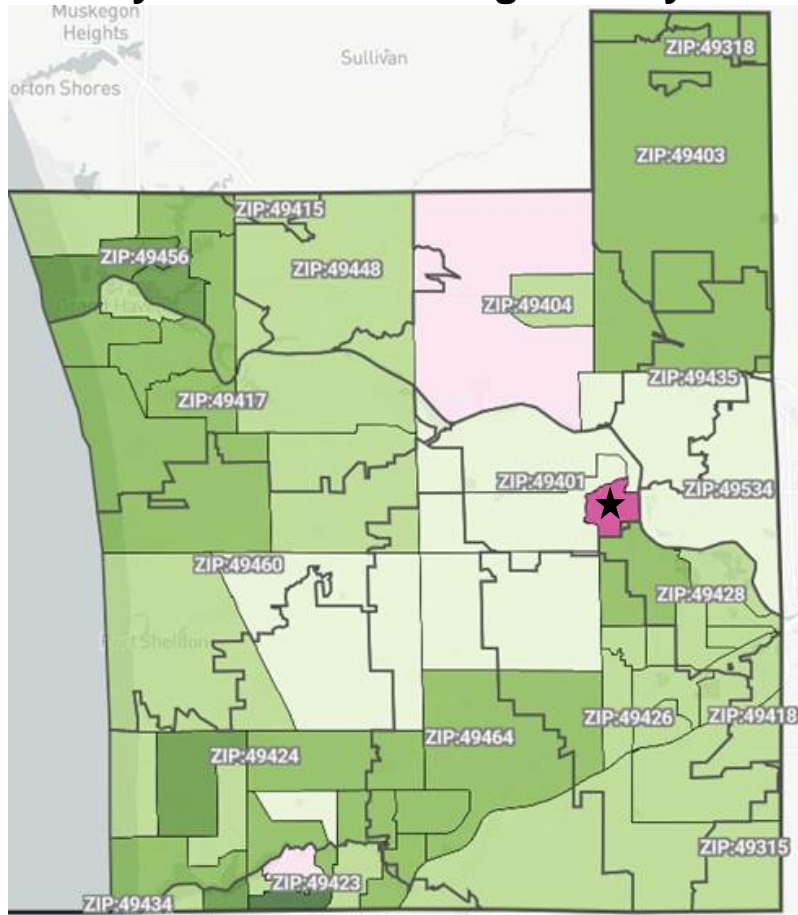
Completion is the percentage of people receiving 2 doses of Pfizer or Moderna or 1 dose of J&J.

Source: [https://www.michigan.gov/coronavirus/0,9753,7-406-98178\\_103214\\_103272-547150--,00.html](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html)

Data through December 14, 2021

# Vaccination Coverage by Place of Residence

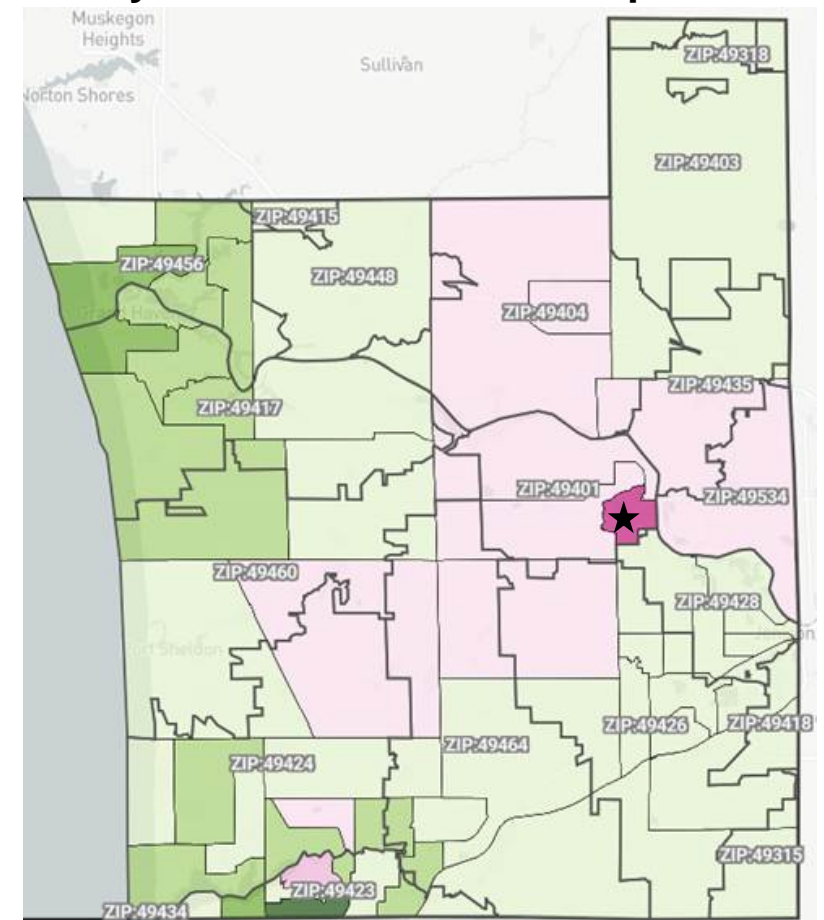
Fully vaccinated: % Ages 16+ years



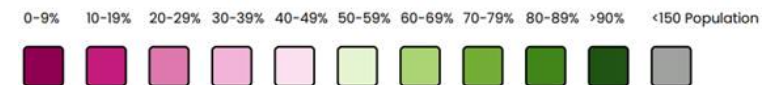
Color coded by: Fully Vaccinated (% Ages 16+)



Fully vaccinated: % Total Population



Color coded by: Fully Vaccinated (% Population)



Vaccination rates vary across Ottawa County, but most areas have at least 50% of the population aged 16+ completely vaccinated (**left**).

When considering the entire population (not just those aged 16+), there are pockets of the county with much higher and much lower vaccination rates (**right**).

★ The vaccination rate for this census tract is likely underestimated because census estimates in this tract may be inflated by seasonal students at a large university.

Source: MI-Lighthouse Internal Dashboard

# Cumulative Cases by Vaccination Status, Ottawa County, January 15, 2021 – December 11, 2021

Fully Vaccinated People (158,785 )		
Cases	Hospitalizations	Deaths
Percent of Cases in People Not Fully Vaccinated (25,867 / 32,788) <b>78.9%</b>	Percent of Hospitalizations in People Not Fully Vaccinated (850 / 1069) <b>79.5%</b>	Percent of Deaths in People Not Fully Vaccinated (179 / 253) <b>70.8%</b>
Total Cases Not Fully Vaccinated <b>25,867</b>	Total Hospitalized Not Fully Vaccinated <b>850</b>	Total Deaths Not Fully Vaccinated <b>179</b>
Total Breakthrough Cases <b>6,921</b>	Total Breakthrough Hospitalizations <b>219</b>	Total Breakthrough Deaths <b>74</b>
Percent of Fully Vaccinated People who Developed COVID-19 (6,921 / 158,785) <b>4.359%</b>	Percent of Fully Vaccinated People who were Hospitalized for COVID-19 (219 / 158,785) <b>0.138%</b>	Percent of Fully Vaccinated People who Died of COVID-19 (74 / 158,785) <b>0.047%</b>
Percent of Cases who were Fully Vaccinated (6,921 / 32,788) <b>21.1%</b>	Percent of Hospitalizations who were Fully Vaccinated (219 / 1069) <b>20.5%</b>	Percent of Deaths who were Fully Vaccinated (74 / 253) <b>29.2%</b>
Total Cases <b>32,788</b>	Total Hospitalizations <b>1069</b>	Total Deaths <b>253</b>

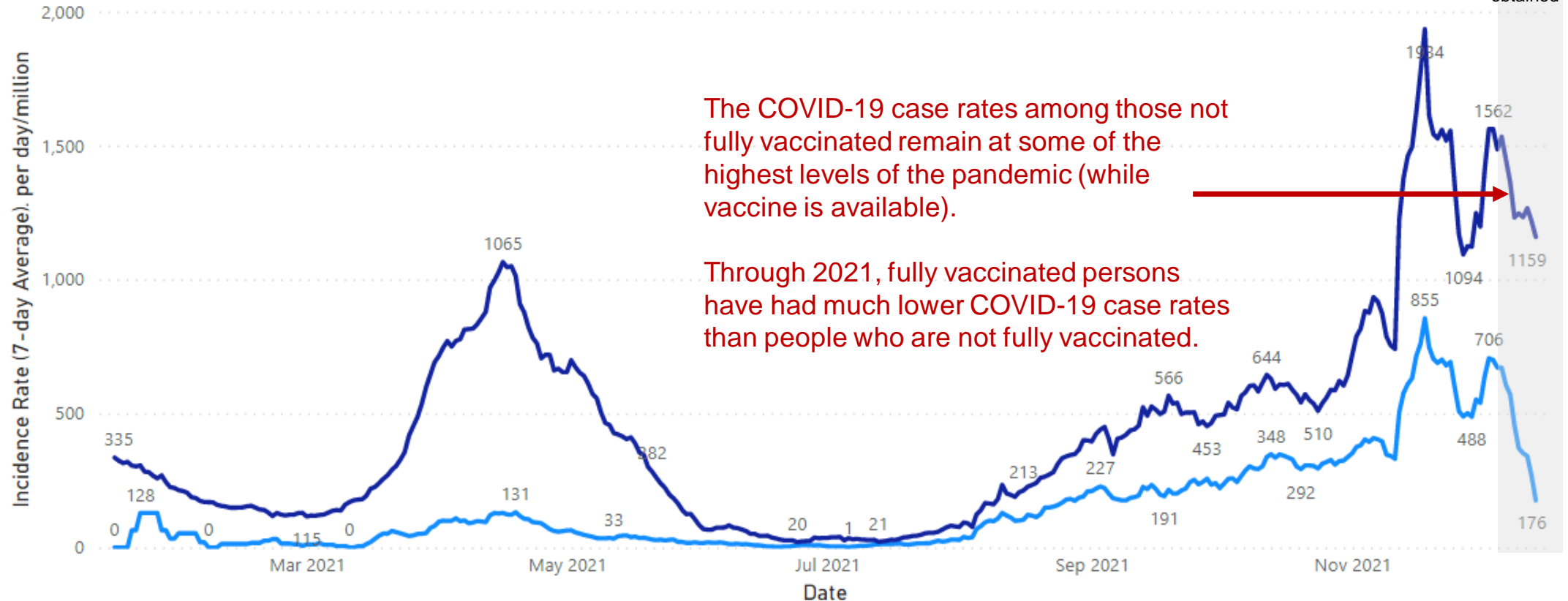
Sources:  
Michigan Department of Health and Human Services, Michigan Disease Surveillance System  
MDHHS COVID-19 Dashboard: [https://www.michigan.gov/coronavirus/0,9753,7-406-98178\\_103214\\_103272-547150--,00.html](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html)

# Ottawa County COVID-19 Vaccination Breakthrough Case Trends

Incidence Rate (7-day Average)

rategroup ● Fully Vaccinated ● Not Fully Vaccinated

Data in shaded area may be updated as new information is obtained



The COVID-19 case rates among those not fully vaccinated remain at some of the highest levels of the pandemic (while vaccine is available).

Through 2021, fully vaccinated persons have had much lower COVID-19 case rates than people who are not fully vaccinated.

**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.

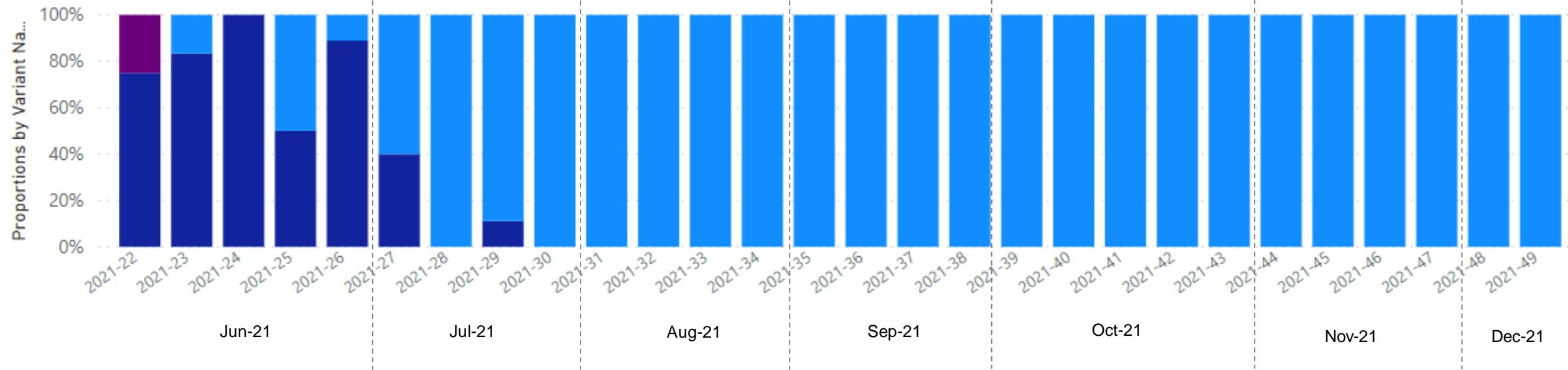
**Sources:**

Michigan Department of Health and Human Services, Michigan Disease Surveillance System  
 MDHHS COVID-19 Dashboard: [https://www.michigan.gov/coronavirus/0,9753,7-406-98178\\_103214\\_103272-547150--,00.html](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html)

# Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

Variant Name ● Alpha ● Delta ● Gamma



In June of 2021, most clinical samples\* submitted for variant testing came back as the **Alpha** variant. By the end of July 2021, all clinical samples tested were returned as the **Delta** variant. Since late July 2021 all clinical samples submitted for variant testing came back positive for the **Delta** variant, indicating that **Delta** remains the predominate variant in Ottawa County. Currently, there is little local evidence of any newly emerging variant. However, surveillance for the **Omicron** variant is underway which may result in local detection of **Omicron**.

\* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR

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

# Variants – Wastewater Sampling – Holland/Zeeland

Sample Date	Site	Wuhan (parental)	Alpha	Beta	Gamma	Delta	Epsilon
10/3/2021	North Holland	Y	N	N	N	Y	N
10/4/2021	Zeeland	N	N	N	N	Y	N
10/6/2021	North Holland	N	N	N	N	N	N
10/7/2021	Zeeland	N	N	N	N	Y	N
10/10/2021	North Holland	N	N	N	N	Y	N
10/11/2021	Zeeland	N	N	N	N	Y	N
10/17/2021	North Holland	Y	N	N	N	Y	N
10/18/2021	Zeeland	N	N	N	N	Y	N
10/20/2021	North Holland	Y	N	N	N	N	N
10/21/2021	Zeeland	N	N	N	N	Y	N
10/24/2021	North Holland	N	N	N	N	Y	N
10/25/2021	Zeeland	N	N	N	N	Y	N
10/27/2021	North Holland	N	N	N	N	Y	N
10/28/2021	Zeeland	N	N	N	N	Y	N
10/31/2021	North Holland	N	N	N	N	Y	N
11/1/2021	Zeeland	N	N	N	N	Y	N
11/3/2021	North Holland	N	N	N	N	Y	N
11/4/2021	Zeeland	N	N	N	N	Y	N
11/7/2021	North Holland	N	N	N	N	Y	N
11/8/2021	Zeeland	N	N	N	N	Y	N
11/10/2021	North Holland	N	N	N	N	Y	N
11/11/2021	Zeeland	N	N	N	N	Y	N
11/14/2021	North Holland	Y	N	N	N	Y	N
11/15/2021	Zeeland	N	N	N	N	Y	N
11/17/2021	North Holland	N	N	N	N	Y	N
11/18/2021	Zeeland	N	N	N	N	N	N
11/21/2021	North Holland	N	N	N	N	Y	N
11/22/2021	Zeeland	N	N	N	N	N	N
11/24/2021	North Holland	N	N	N	N	Y	N
11/24/2021	Zeeland	N	N	N	N	Y	N
11/28/2021	North Holland	N	N	N	N	Y	N
11/29/2021	Zeeland	N	N	N	N	Y	N
12/1/2021	North Holland	N	N	N	N	N	N
12/2/2021	Zeeland	N	N	N	N	Y	N
12/5/2021	North Holland	N	N	N	N	Y	N
12/6/2021	Zeeland	N	N	N	N	Y	N
12/8/2021	North Holland	N	N	N	N	Y	N
12/9/2021	Zeeland	N	N	N	N	Y	N

Y = Detected  
N = Not Detected

The **Delta** variant was consistently detected in Holland and Zeeland wastewater samples through all October and November 2021, with no other variants detected in that same time frame. This data indicate that Delta remains the dominant variant in Ottawa County; there is little evidence of Delta being supplanted by a competing variant at this time. Surveillance is ongoing for the **Omicron** variant.

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



# CDC Community Risk Transmission Levels & Metrics

Indicator - If the two indicators suggest different transmission levels, the higher level is selected	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days	0-9.99	10-49.99	50-99.99	≥ 100
Percentage of NAATs <sup>1</sup> that are positive during the past 7 days	0-4.99%	5-7.99%	8-9.99%	≥ 10.0%

Ottawa's goal is to be in the Moderate category\*

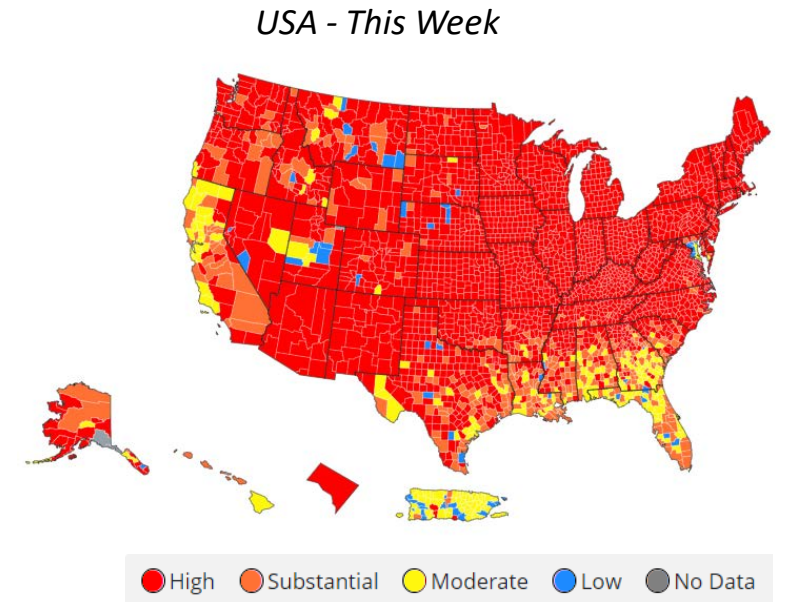
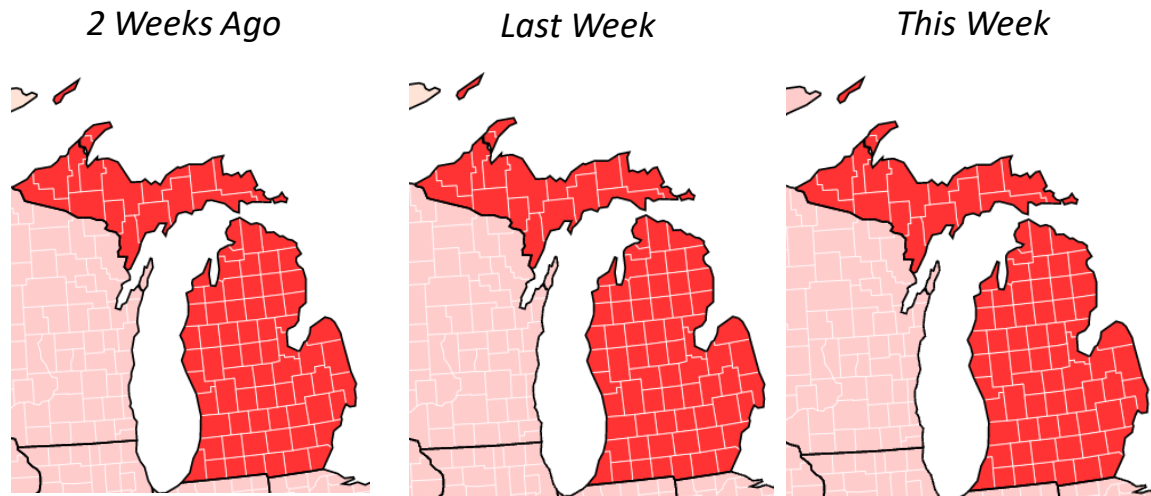
Ottawa is in the High category right now

\*After further analysis of Ottawa County case rate data, positivity data, and CDC Community Transmission Levels, on October 8, 2021 the Ottawa County Department of Public Health (OCDPH) relaxed one of the criteria that may be used to rescind the current school mask order. The criterion that set a threshold of a CDC Community Transmission Level of Low for 7 consecutive days was changed to a threshold of Moderate for 14 consecutive days.

Source: <https://covid.cdc.gov/covid-data-tracker/#county-view>

# CDC Community Transmission Risk Levels – Ottawa County

- Current Risk Level in Ottawa – **HIGH** (for last 17+ weeks)
- Current Data:
  - Positivity = 20.37%
  - Case Rate = 528.39 cases per week per 100,000

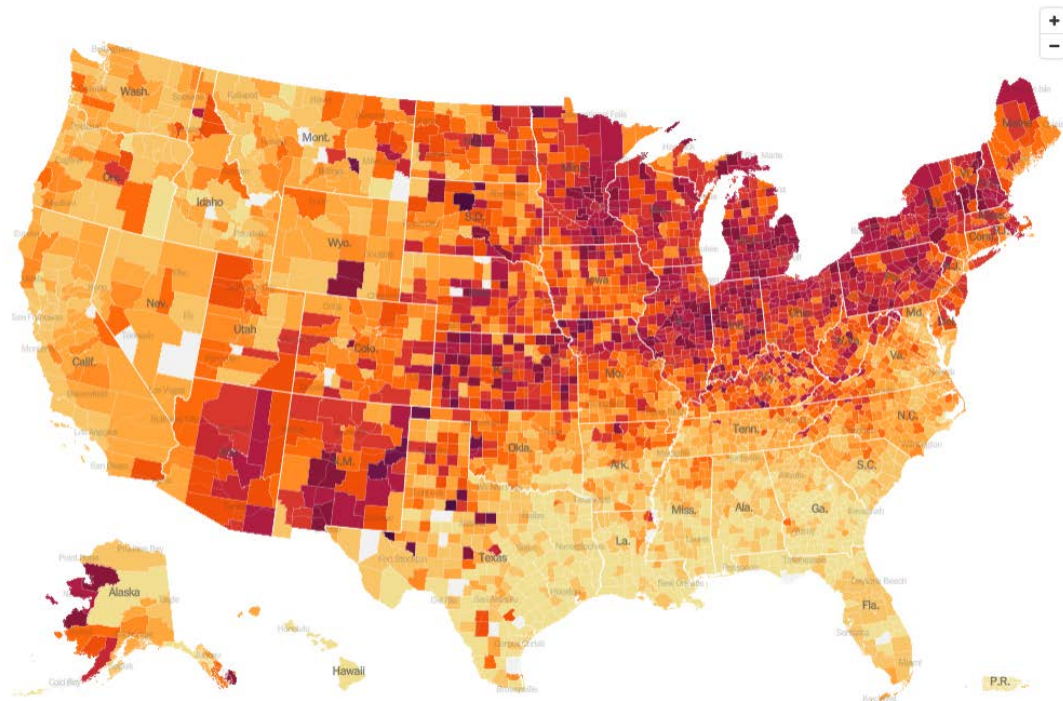


Data through December 10, 2021 for positivity and December 12, 2021 for case rates

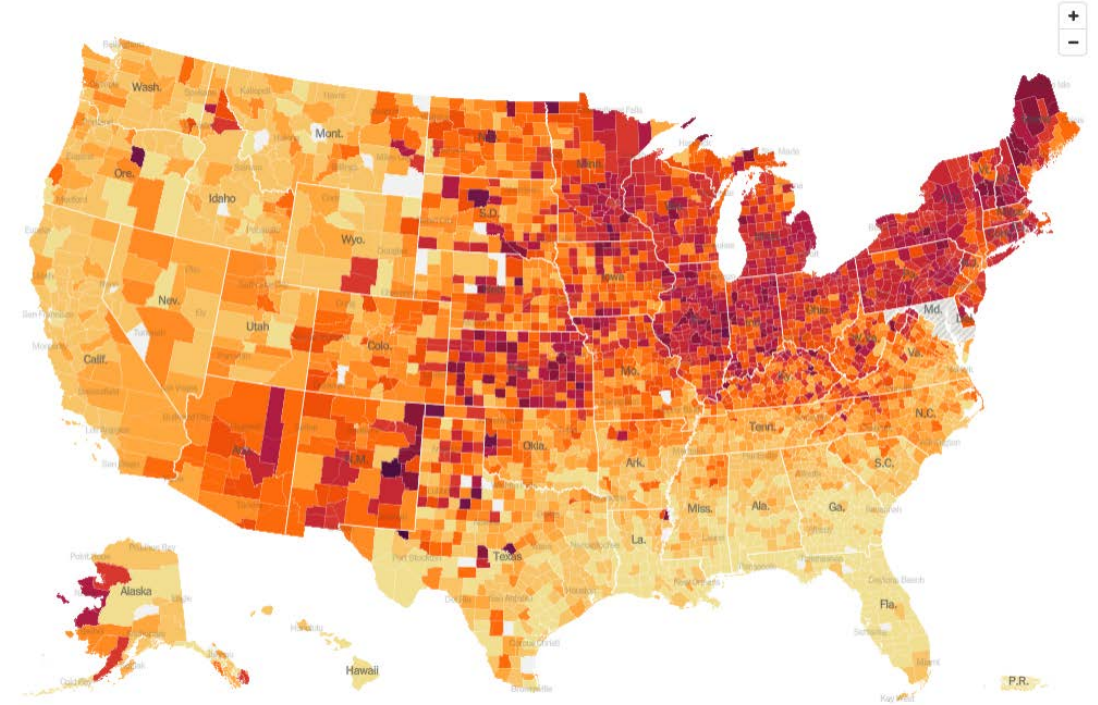
Source: <https://covid.cdc.gov/covid-data-tracker/#county-view>

# COVID-19 Case Rates by County Across the US

Last Week



This Week



Case rates in the deep South have improved substantially, while case rates in a few western states, the Midwest and New England are experiencing elevated case rates. Michigan continues to display high case rates.

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

Accessed December 14, 2021

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science  
Roundup

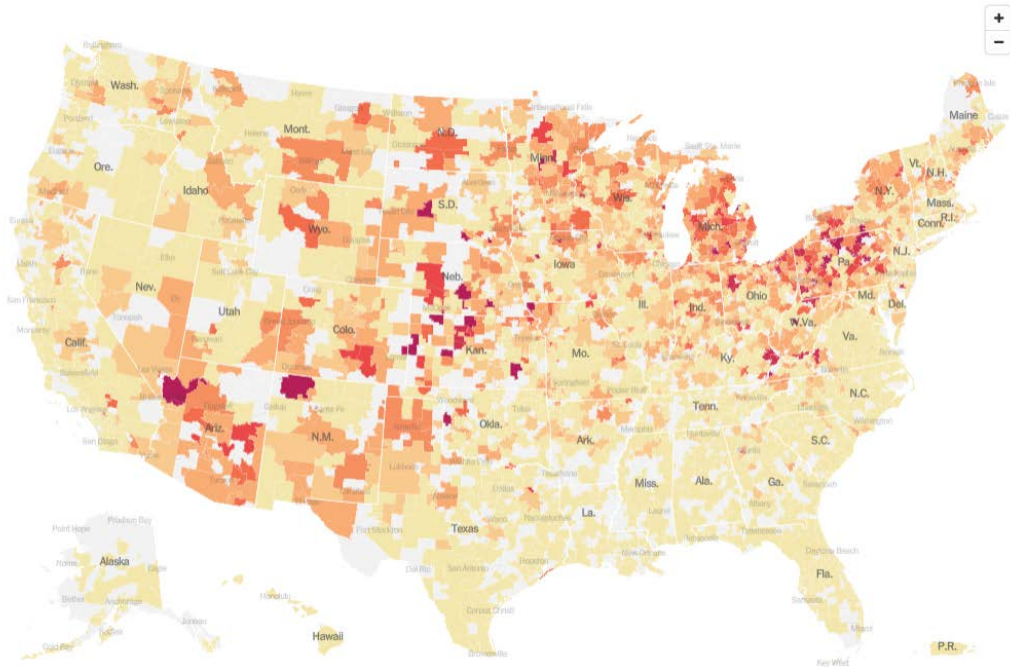
# COVID-19 Hospitalization Rates by County Across the US

Last Week

Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE

20 30 40 50 60 70 80 NO DATA

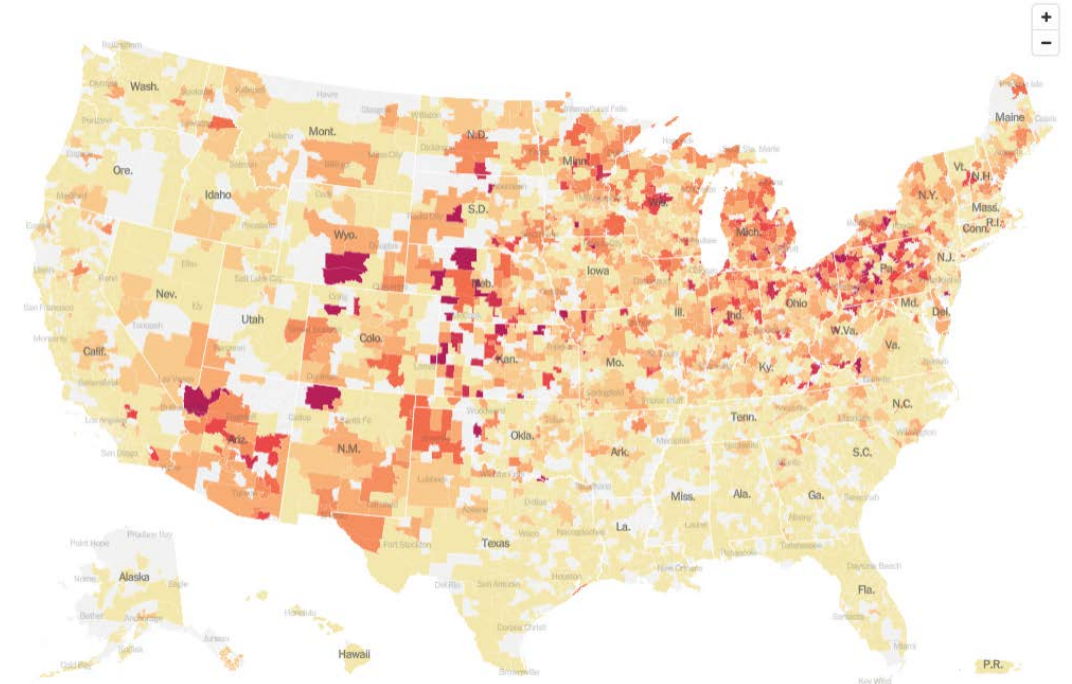


This Week

Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE

20 30 40 50 60 70 80 NO DATA



Hospitalization rates remain lower in the South and Appalachia, while some western and midwestern states are experiencing elevated hospitalization rates. Pennsylvania continues showing high hospitalization rates. Michigan continued to experience elevated hospitalization rates this week.

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

Accessed December 14, 2021

USA & MI

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# States and Michigan Counties with School Masking Requirements

- **States/Districts (18):** California, Connecticut, Delaware, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, New Mexico, New Jersey, New York, Nevada, Oregon, Pennsylvania, Rhode Island, Virginia, Washington, & Washington D.C.
- **Michigan Counties (15):**
  - **PreK/K-6:** Kalamazoo, Kent, Marquette, Ottawa
  - **K-12:** Antrim, Benzie, Charlevoix, Emmet, Genesee, Ingham, Leelanau, Oakland, Otsego, Washtenaw, and Wayne
- **Rescinded County Mask Mandates (6):**
  - Allegan, Barry, Berrien, Eaton, Iron, Dickinson

**Notes:** List may not be comprehensive; because children aged 5-11 years are now eligible for vaccination, Ottawa and Kent County's PreK-6 mask mandate is scheduled for rescinding on January 2, 2022. Kalamazoo County plans to rescind their school mask order on December 17 and Genesee County on December 22, 2021.

# COVID-19 News Headlines

## First case of omicron identified in Michigan in Kent County

<https://www.detroitnews.com/story/news/local/michigan/2021/12/09/michigan-omicron-variant-case-coronavirus-pandemic-testing-kent-county-man-vaccinated/6425725001/>

## 'It's already here': Wastewater program indicates Omicron variant might already be in other counties

<https://www.wzzm13.com/article/news/local/its-already-here-wastewater-program-indicates-omicron-variant-might-already-be-in-other-counties/69-ff7a97d7-81ba-4a88-9393-2bbd82012f88>

## Michigan health officials say get tested for COVID-19, but not at emergency rooms, urgent care

<https://www.mlive.com/public-interest/2021/12/health-officials-say-get-tested-for-covid-19-but-not-at-emergency-rooms-urgent-care.html>

## Record-high Michigan COVID-19 hospitalizations still rising

<https://www.hollandsentinel.com/story/news/coronavirus/2021/12/09/record-high-michigan-covid-19-hospitalizations-still-rising/6445726001/>

## Full hospitals leading to patient diversion amid latest COVID surge

<https://www.hollandsentinel.com/story/news/healthcare/2021/12/10/full-hospitals-leading-patient-diversion-amid-latest-covid-surge/6445421001/>

# Science Roundup

## **SARS-CoV-2 Omicron has extensive but incomplete escape of Pfizer BNT162b2 elicited neutralization and requires ACE2 for infection**

[SARS-CoV-2 Omicron has extensive but incomplete escape of Pfizer BNT162b2 elicited neutralization and requires ACE2 for infection | medRxiv](#)

← Data from a small preprint study suggests that the Pfizer vaccine may be less effective against the Omicron variant.

## SARS-CoV-2 B.1.1.529 (Omicron) Variant — United States, December 1–8, 2021

[https://www.cdc.gov/mmwr/volumes/70/wr/mm7050e1.htm?s\\_cid=mm7050e1\\_w](https://www.cdc.gov/mmwr/volumes/70/wr/mm7050e1.htm?s_cid=mm7050e1_w)

← A report by CDC showed that Omicron had been detected in at least 22 states. Of the 43 cases in the report, 1 had been hospitalized and none had died.

## BNT162b2 Vaccine Booster and Mortality Due to Covid-19

<https://www.nejm.org/doi/full/10.1056/NEJMoa2115624>

← A large study out of Israel showed that people aged 50+ who received a booster at least 5 months after receiving their second Pfizer dose had a 90% lower mortality than those that had not received a booster.