

Ottawa County COVID-19 Epidemiology

November 24, 2021

Data as of November 20, 2021, unless otherwise indicated

Executive Summary

- **Transmission in both the US and Michigan is increasing**
- **Ottawa community transmission remains at pandemic highs**
 - Positivity remained elevated at 23.9% last week. The goal is to be less than 8%*.
 - Weekly case counts in Ottawa increased 14%, from 1,945 two weeks ago to 2,217 last week.
 - Cases among children increased 17%, from 486 two weeks ago to 567 last week.
- **Ottawa area and regional hospitals are experiencing high numbers of COVID-19 patients**
 - In Ottawa County, 36% of all available beds and 52% of ICU beds are occupied by COVID-19 patients.**
 - Regional healthcare systems are extremely strained and asking for the community to take preventive action.
 - Ottawa County hospitals may be repurposing patient care areas and using adaptive staffing strategies.
- **Pediatric hospitalizations across the US may be increasing; hospitalizations among children in Michigan continue to increase.**
 - At a large West Michigan healthcare system, weekly hospital census for children with COVID-19 reached the highest level seen through the pandemic two weeks ago, and remained elevated last week.
- **Of Ottawa County residents aged 5+, 56.5% are completely vaccinated**

*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.

**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.

Public Health Recommendations

- **Get vaccinated**
- **Stay home when sick & get tested**
- **Wear your mask in public indoor places**
- **Recent 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.

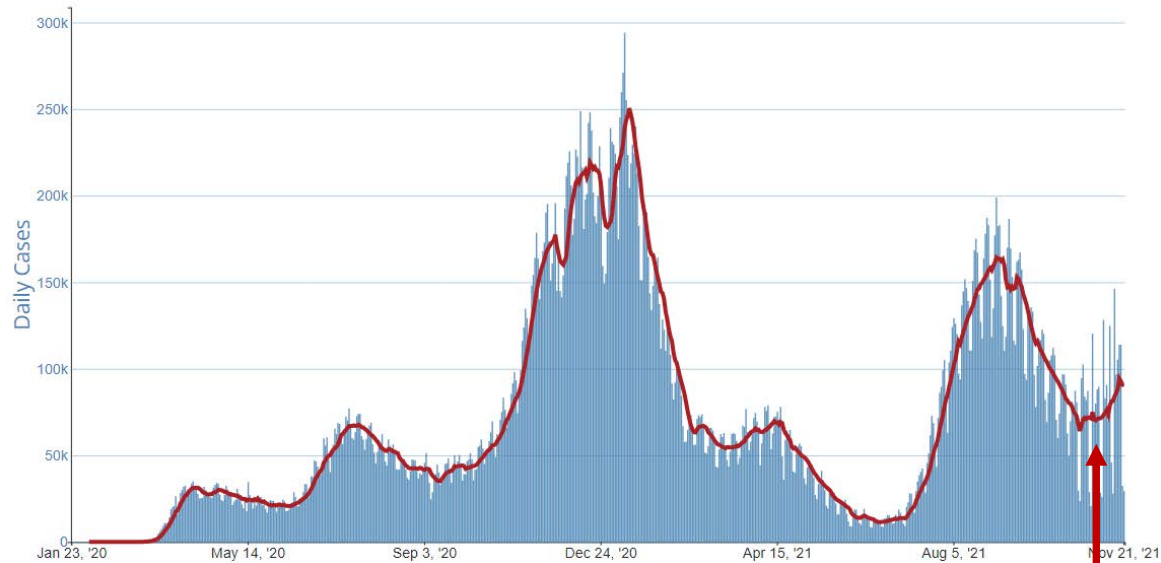
Ottawa County Metrics by Week

Metric	Goal	Week Ending				
		23-Oct-21	30-Oct-21	6-Nov-21	13-Nov-21	20-Nov-21
Positivity (All Ages)	<8%	16.0%	17.3%	21.2%	25.5%	23.9%
Weekly Cases (All Ages)	<147	848	935	1341	1945	2217
Weekly Cases in Children (0-17 years of age)	NA	163	219	351	486	567
Total COVID-19 Hospitalizations (All Ages)	0	33	28	33	34	41
Total Deaths (All Ages)	0	9	7	8	14	20
CDC Risk Transmission Level	Moderate	High	High	High	High	High

Case Trends in the USA and Michigan

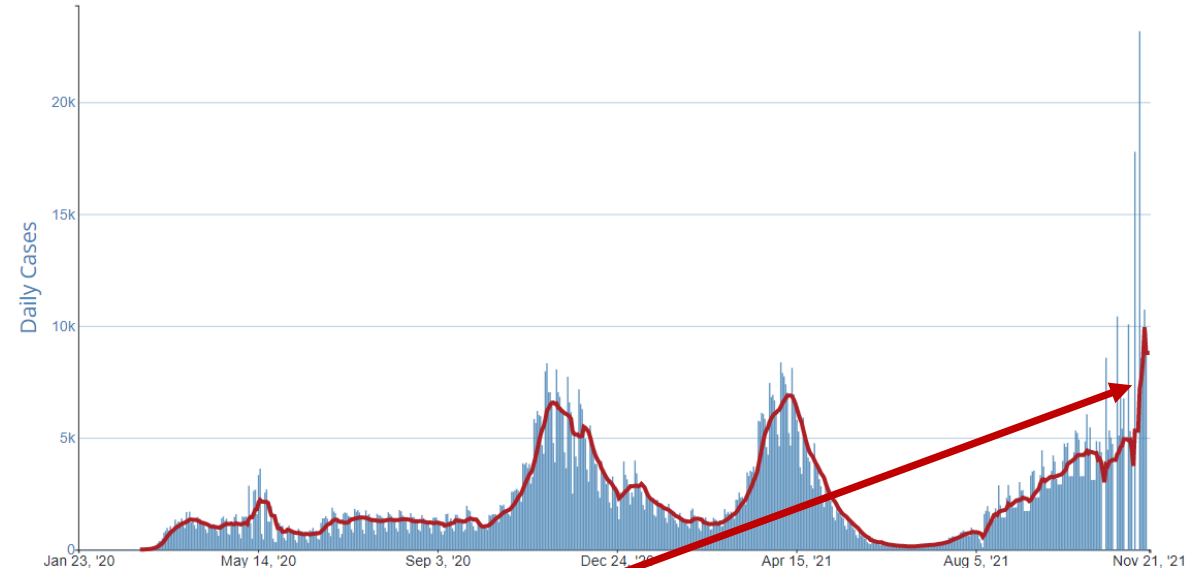
USA

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.

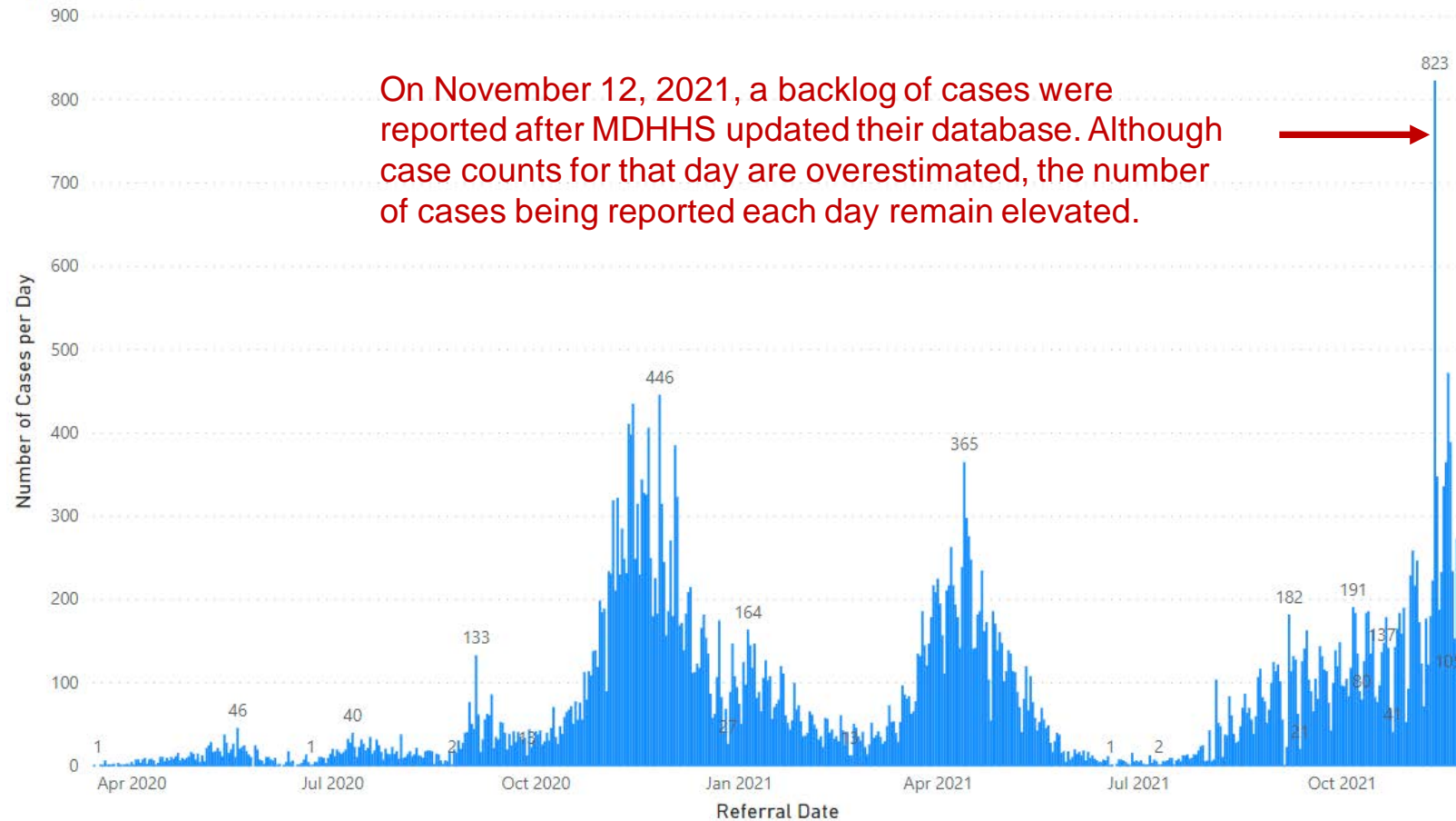
Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

Data through November 21, 2021

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – November 24, 2021

Epidemiological Curve



Total Number of Cases
48,258

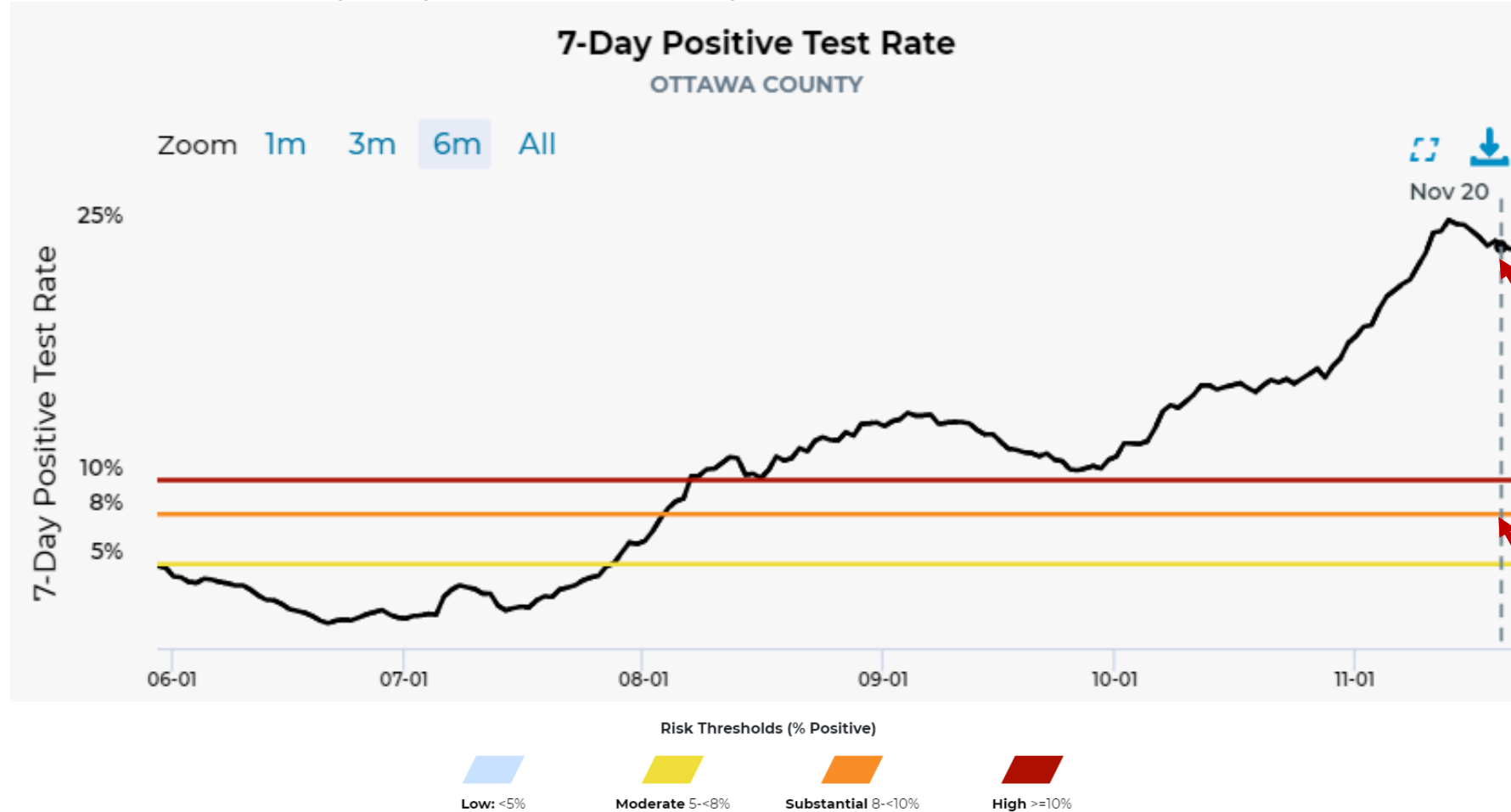
Currently the 7-day average is **287 cases per day**, similar to the 295 cases per day seen at a similar time last week. From week to week, cases **increased 14%** over the last 2 full weeks.

Note: As of November 2021, reports from local stores of a large grocery chain and a national pharmacy chain indicate that supplies of at-home COVID-19 tests remain in high demand. 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, which may further deflate case data. 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 – November 20, 2021



Test positivity reached 23.9% on November 20, 2021.

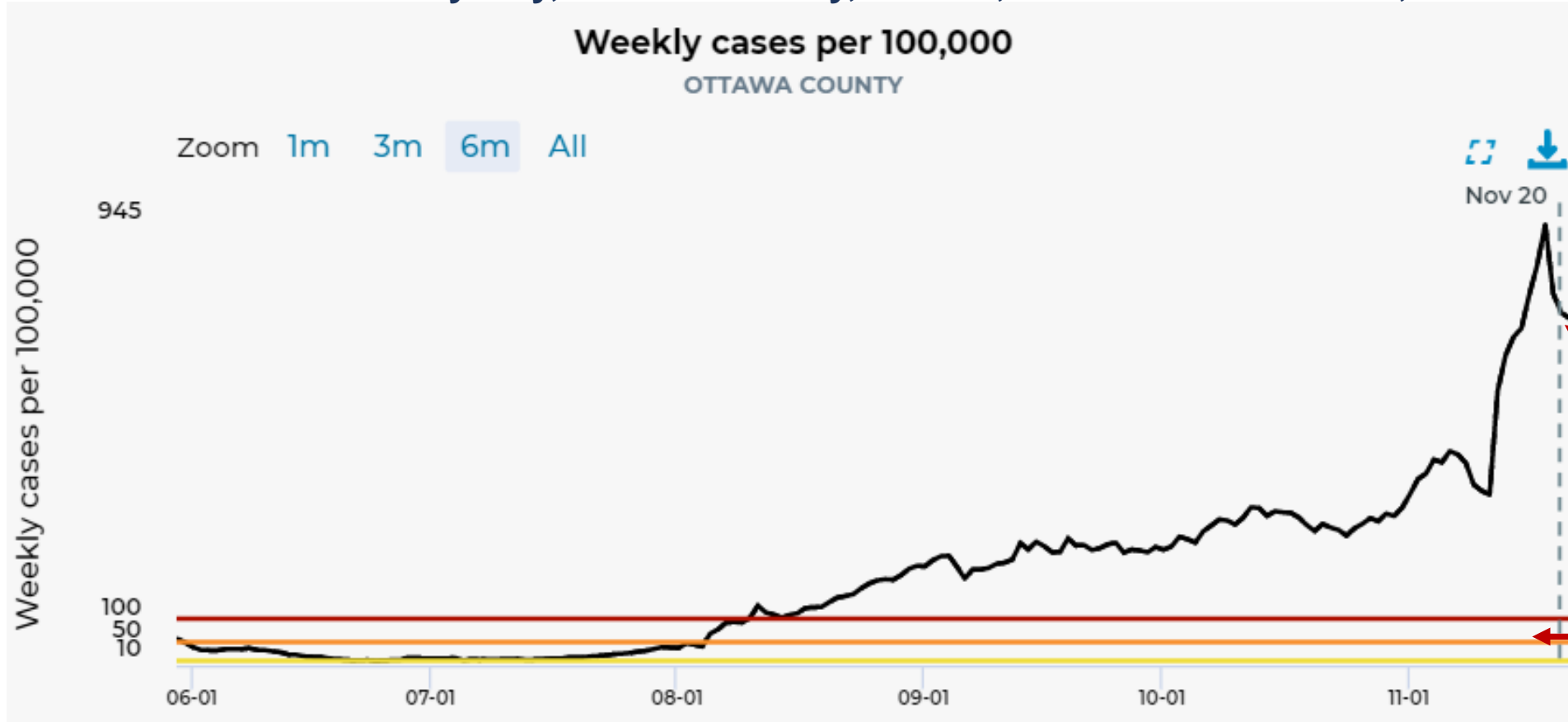
The goal is to have less than 8% of tests coming back positive.

Note: Testing in Ottawa County has remained stable with at least 6000-8000 tests conducted each week over the last 3.5 months; however, in the last 2 weeks testing has increased to 8000-9000 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 – November 20, 2021



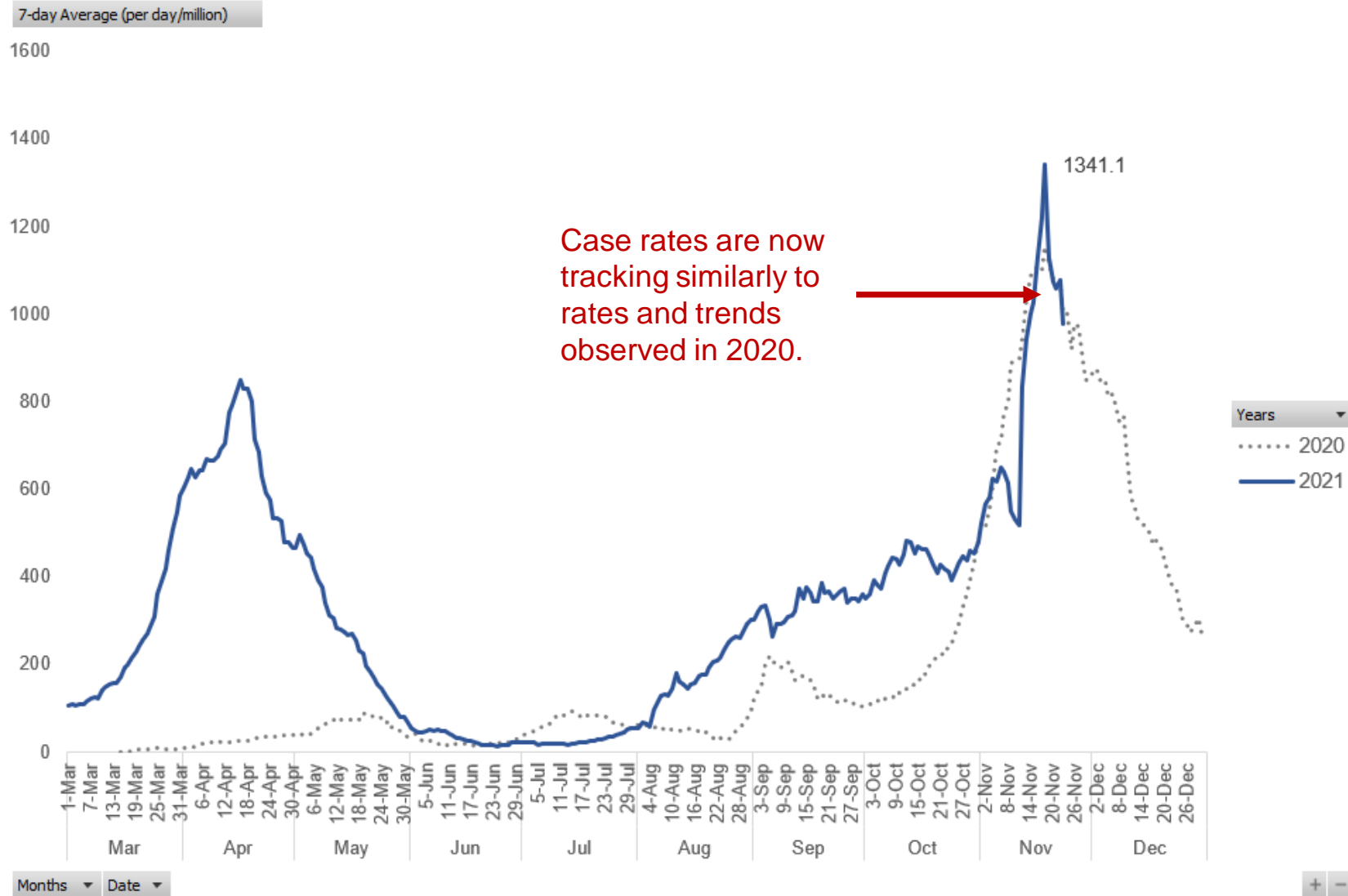
Case rates increased to 757 cases per week per 100,000 population (up from 659 the week prior).

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>

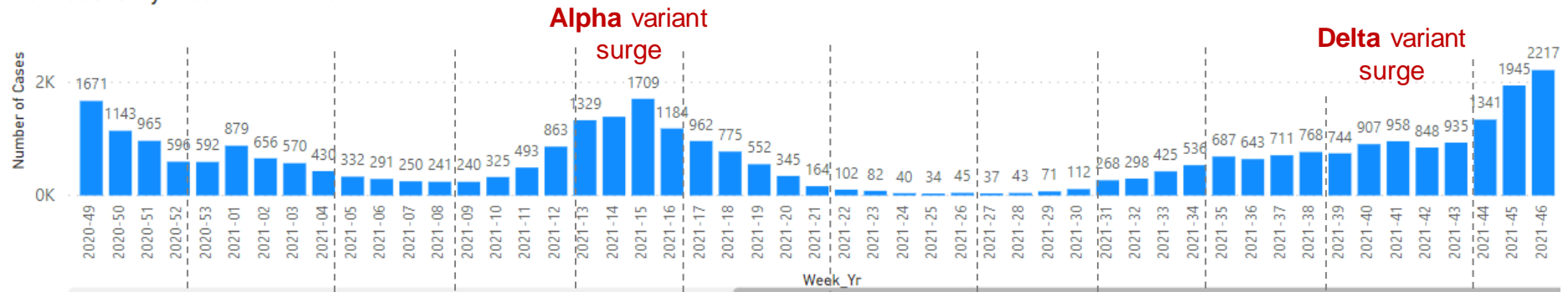
Ottawa County Time Trends – Annual Comparison



Source: Internal Data

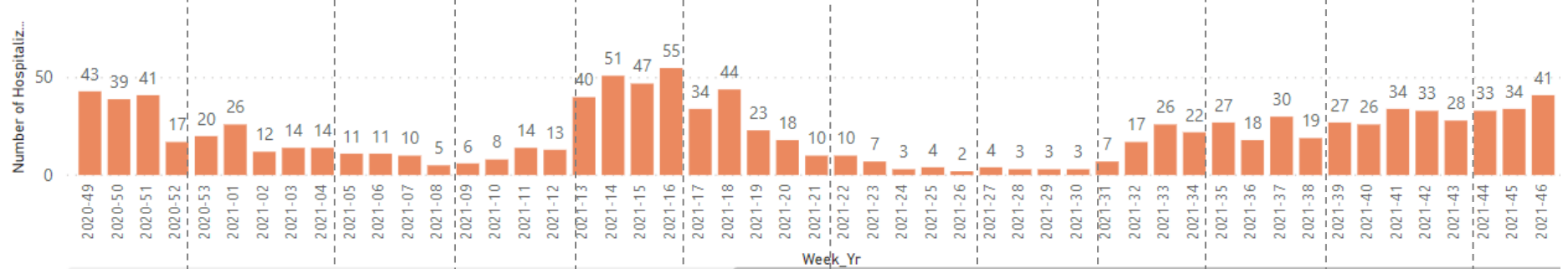
Ottawa County - Cases, Hospitalizations, & Deaths by Week, All Ages

New Cases By Week of Referral



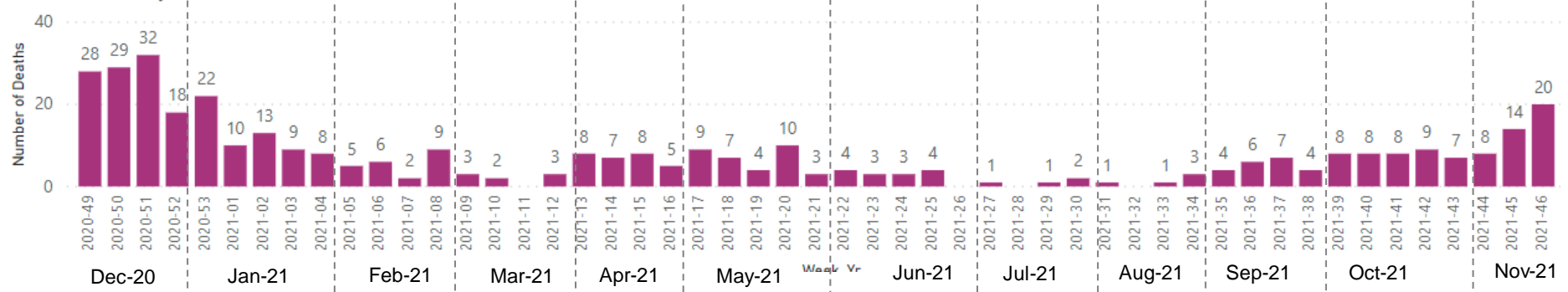
The weekly number of **cases** increased 14% last week.

New Hospitalizations by Week of Admission



The weekly number of **hospitalizations** has been increasing with an average of about **34 cases hospitalized** each week over the last month.

New Deaths by Week of Death



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 **12 deaths per week**.

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.

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	990	38%	351	60%	1341	43%
13-Nov-21	1459	47%	486	38%	1945	45%
20-Nov-21	1650	13%	567	17%	2217	14%

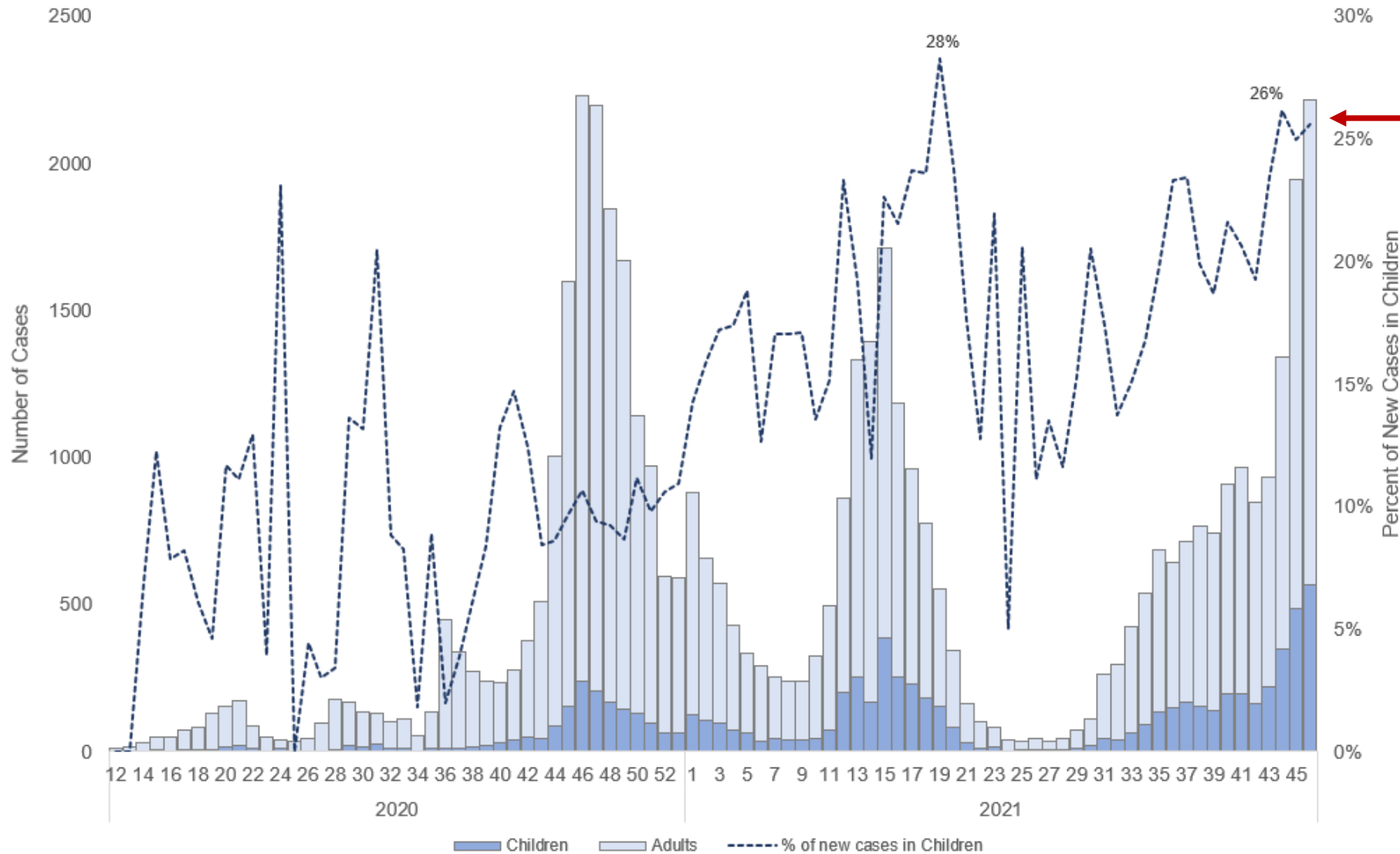
Adults

Children

Weekly case counts among children increased 17% last week, and cases in adults increased 13%.

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

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



Children make up a large proportion of cases reported. This past week, **25.6% of cases were in children**, the third consecutive week with over 25% of cases among children.

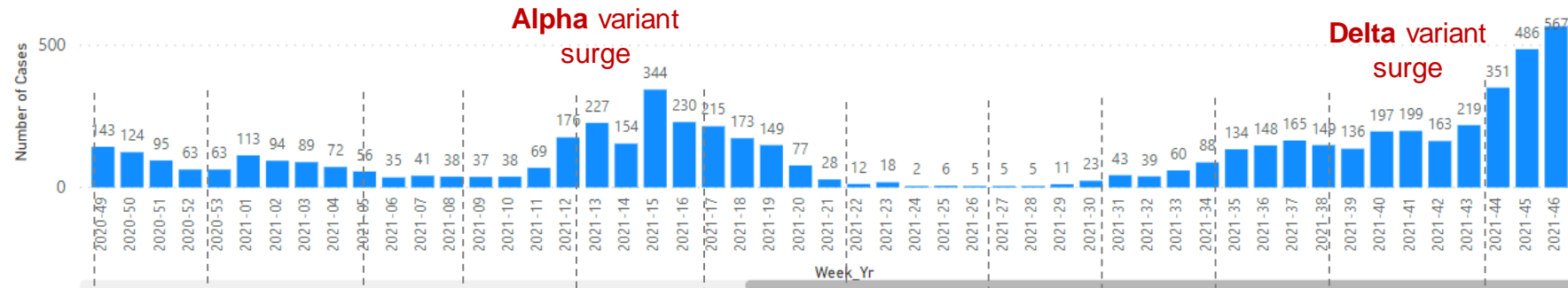
For comparison, children aged 0-17 make up about 23.5% of the population in Ottawa County.

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

Data through Week 46, 2021

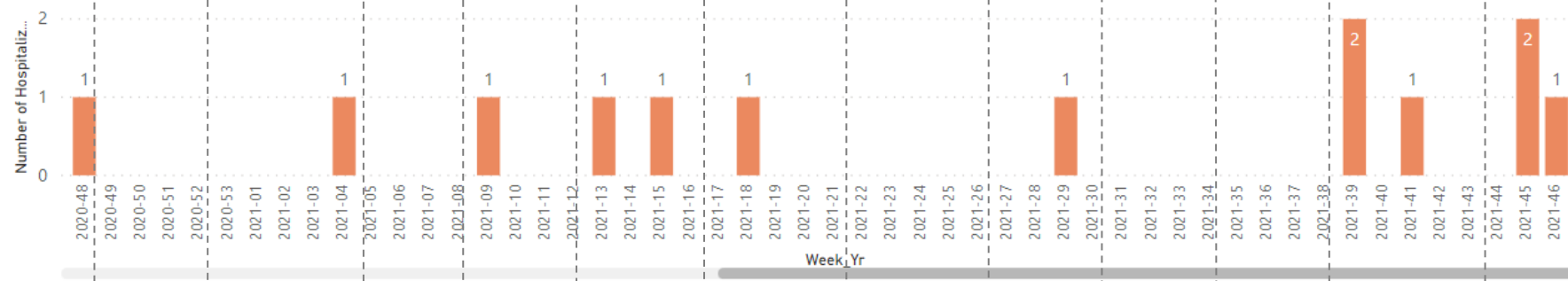
Ottawa County - Cases, Hospitalizations, & Deaths by Week Among Children (0-17 years)

New Cases By Week of Referral



The weekly number of cases among children **increased 17%** in the last 2 full weeks.

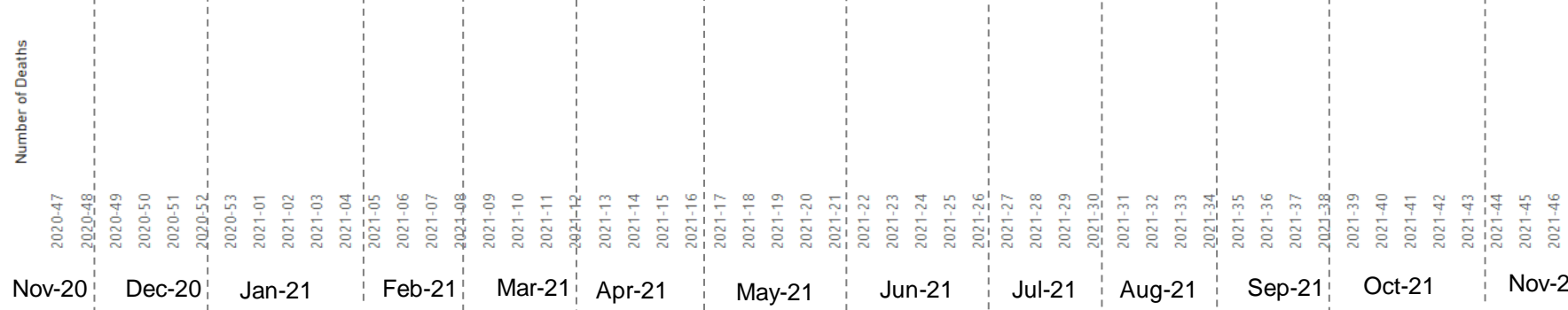
New Hospitalizations by Week of Admission



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.

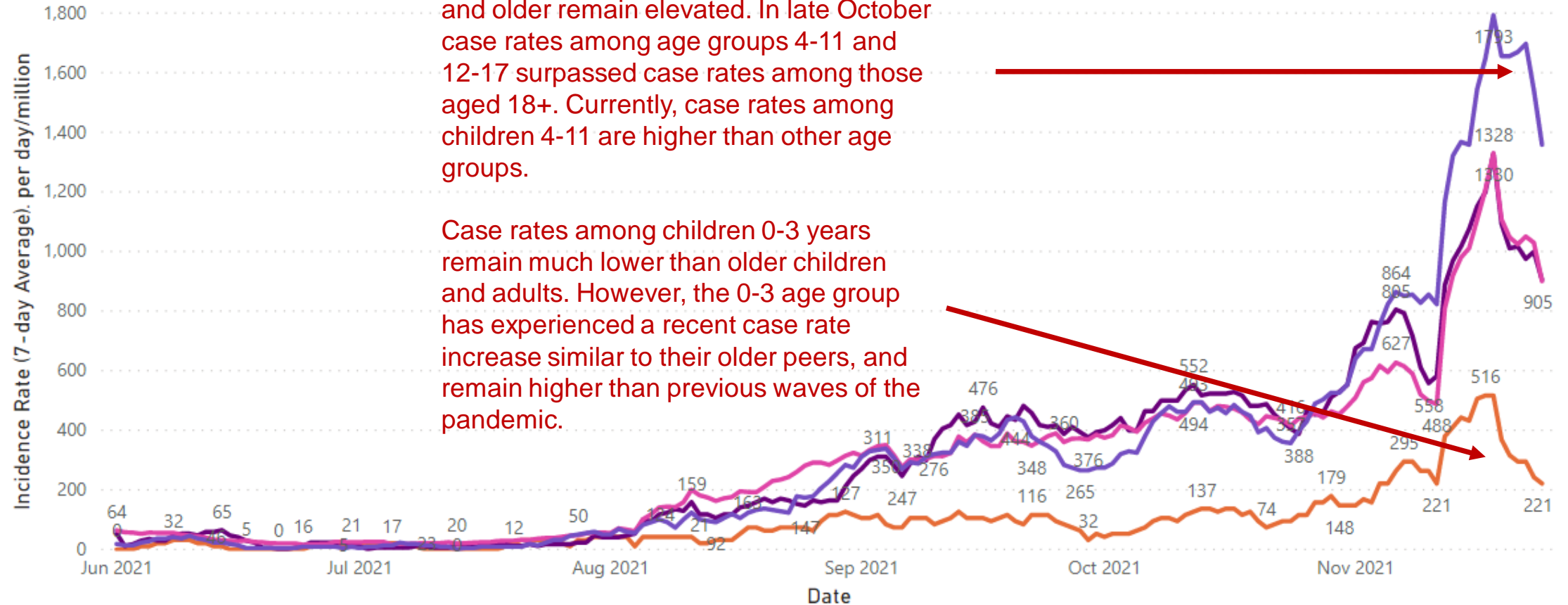
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, June 2021 – November 24, 2021

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



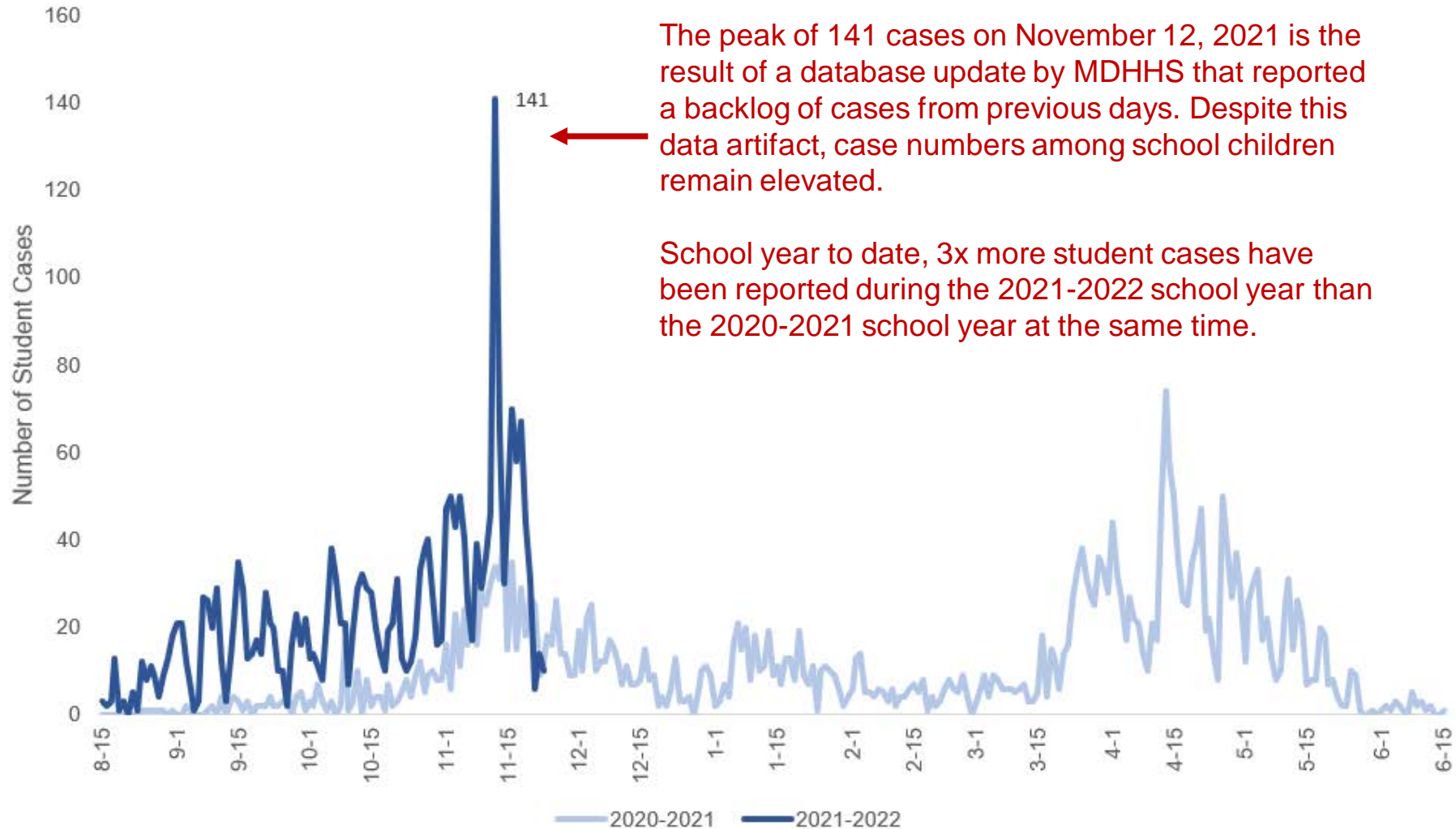
Case rates among children aged 4 years and older remain elevated. In late October case rates among age groups 4-11 and 12-17 surpassed case rates among those aged 18+. Currently, case rates among children 4-11 are higher than other age groups.

Case rates among children 0-3 years remain much lower than older children and adults. However, the 0-3 age group has experienced a recent case rate increase similar to their older peers, and remain higher than previous waves of the pandemic.

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

Data as of November 24, 2021

Ottawa County Cases in PreK-12 School Students



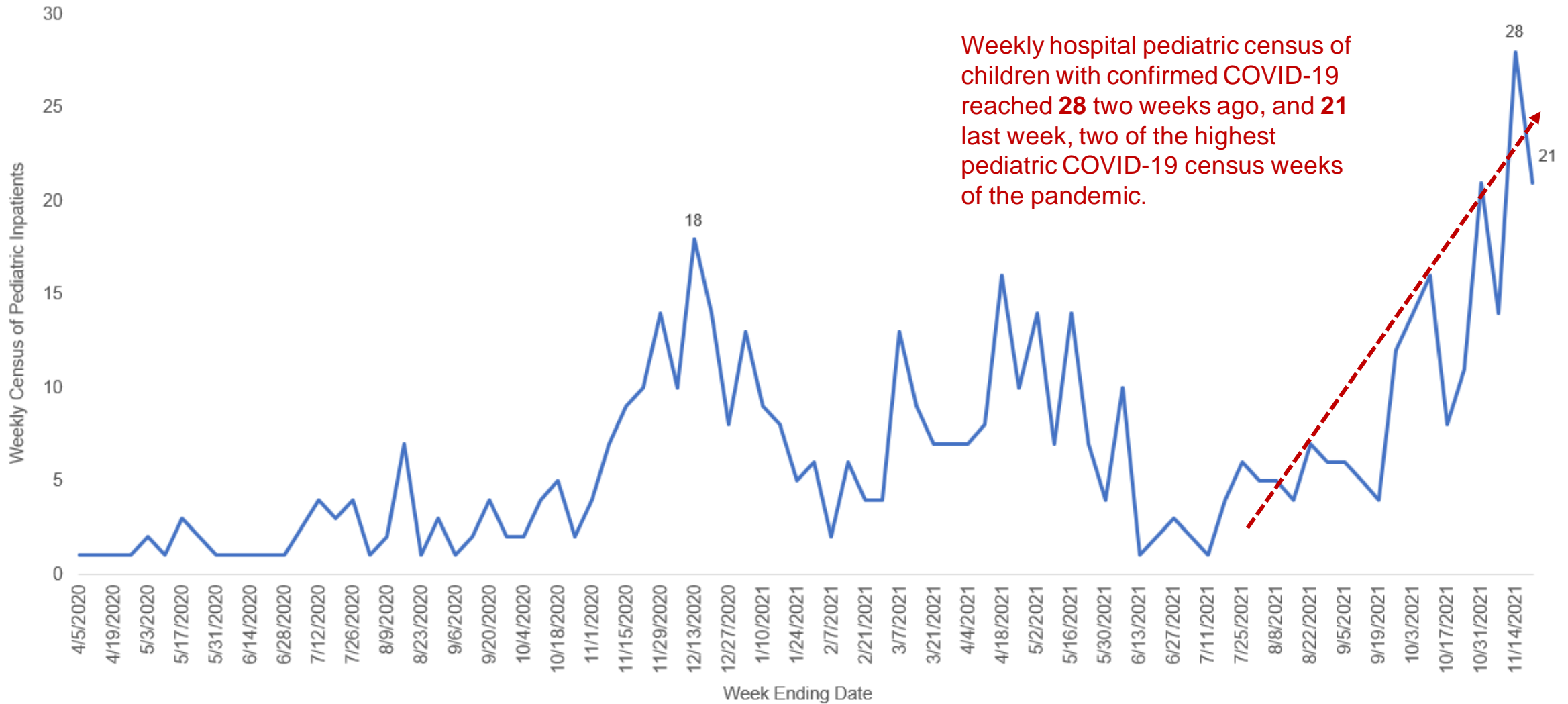
Method: Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

Note: Data may change as information is updated and methods are refined. Cases reported in 2021 will likely increase.

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

Data through November 24, 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.

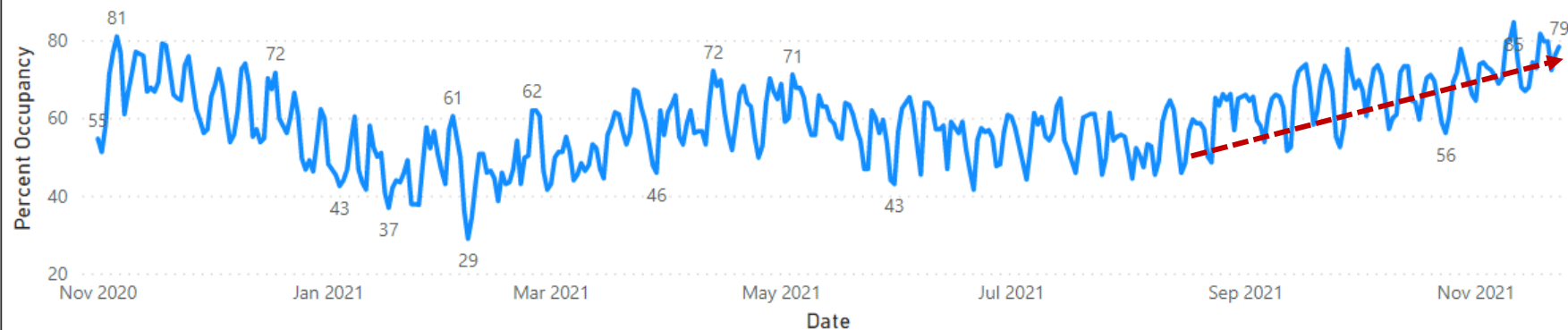
Data through November 21, 2021

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 **36%** of all inpatient beds are occupied by COVID-19 patients.

Source: EMResources

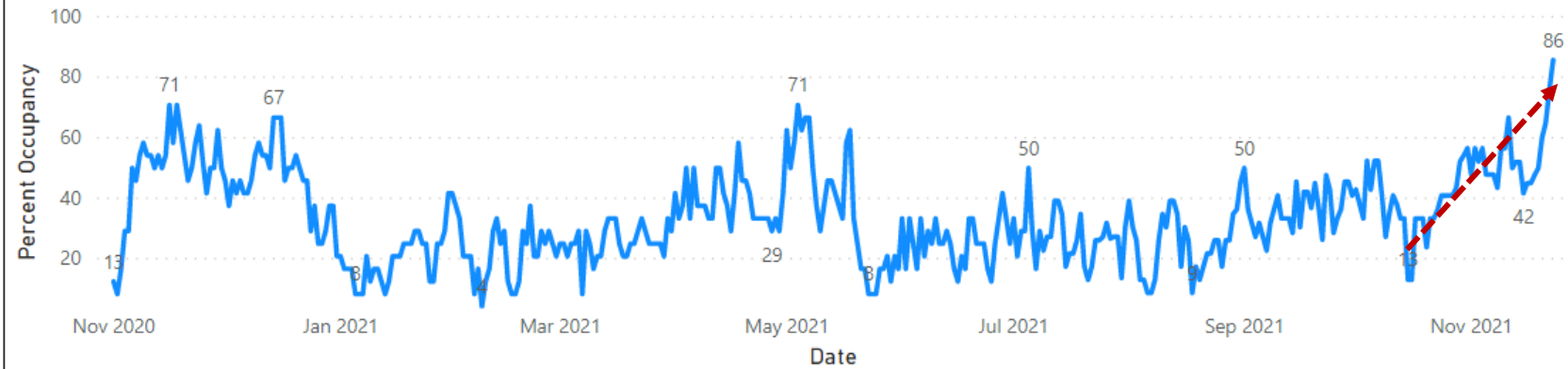
Data through November 23, 2021

Ottawa County Hospital Capacity – ICU Beds

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

Percent Occupancy by Date and County

County ● Ottawa

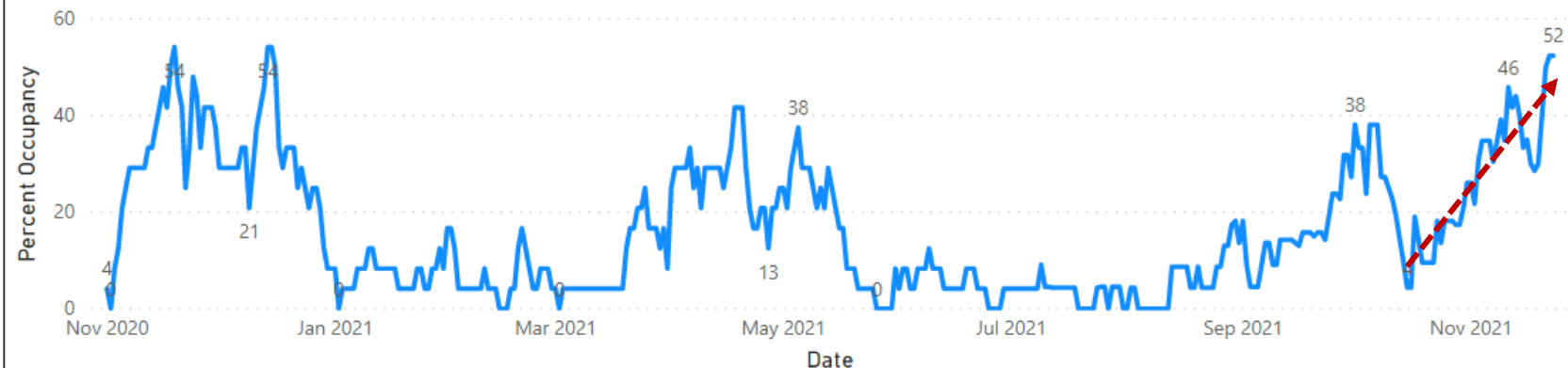


Overall ICU bed occupancy **has increased to the highest level of the pandemic.**

COVID ICU Bed Occupancy (COVID Patients Only, Confirmed and Suspected)

Percent Occupancy by Date and County

County ● Ottawa



The proportion of ICU beds occupied by COVID-19 patients is **increasing**. Currently, **52%** of ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through November 23, 2021

Pediatric Hospitalization Rates – USA, Georgia, Michigan

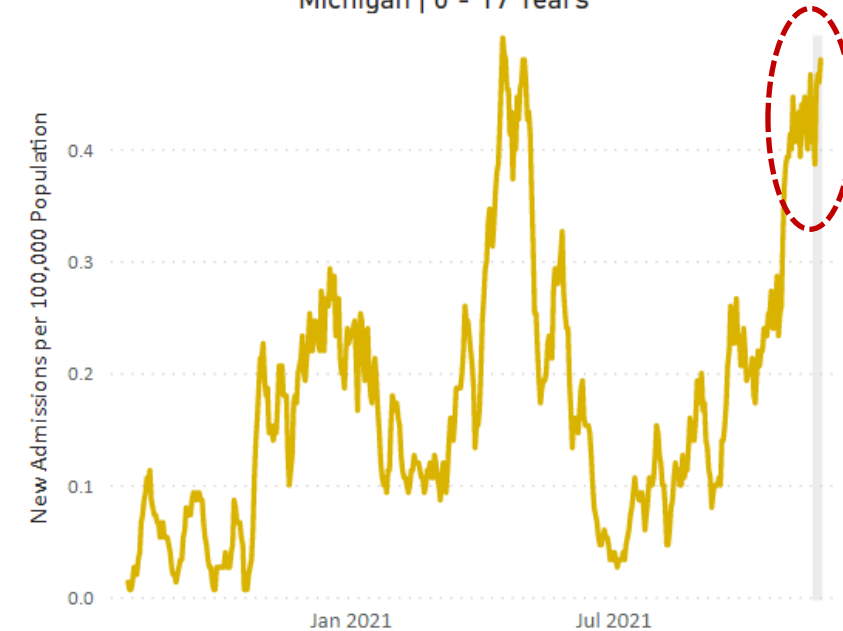
United States | 0 - 17 Years



Georgia | 0 - 17 Years



Michigan | 0 - 17 Years

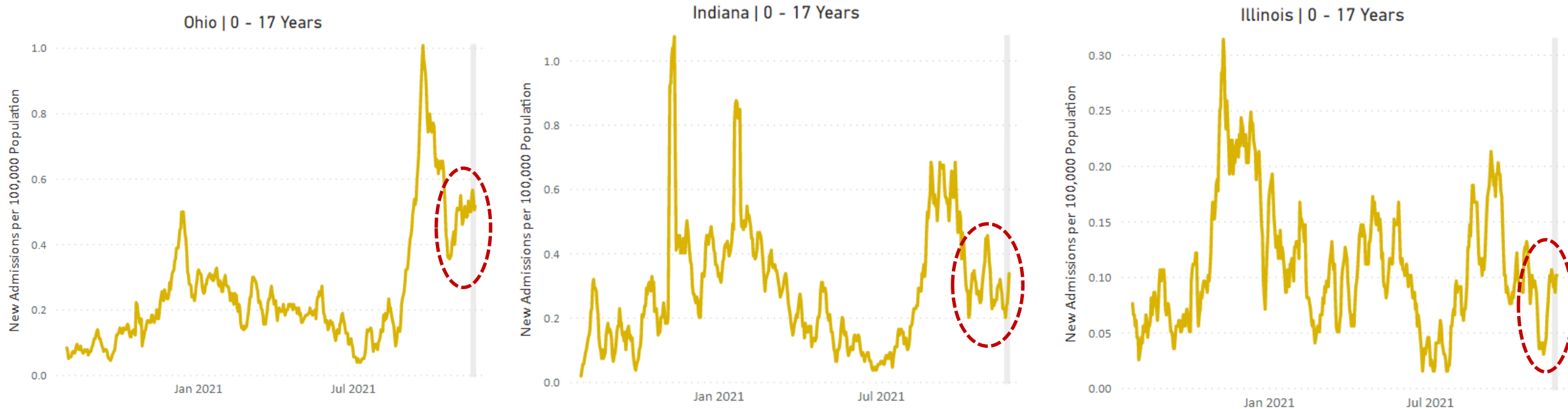


Pediatric hospitalization rates across the United States may be rebounding after a substantial decline. Most southern states (such as Georgia) have much lower rates than recent peaks. Michigan pediatric hospitalization rates continue to increase, reaching some of the highest rates experienced through the entire pandemic.

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

Accessed November 23, 2021

Pediatric Hospitalization Rates – Select Midwest States

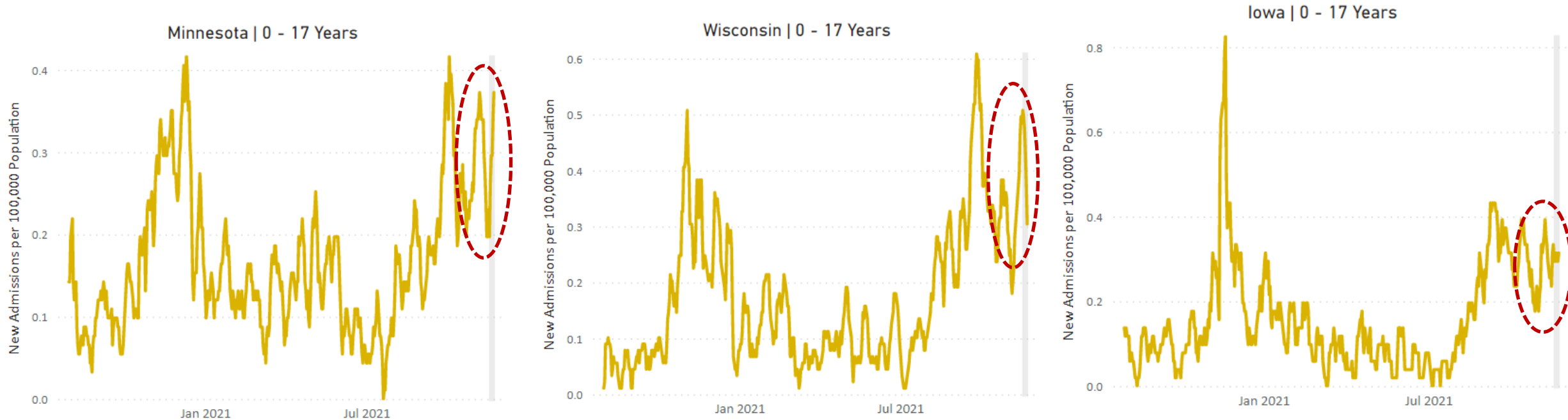


Pediatric hospitalization rates in some states across the Midwest are elevated. Ohio remains higher than usual and is showing recent increases. Indiana has plateaued while Illinois pediatric hospitalization rates may be rebounding.

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

Accessed November 23, 2021

Pediatric Hospitalization Rates – Select Midwest States

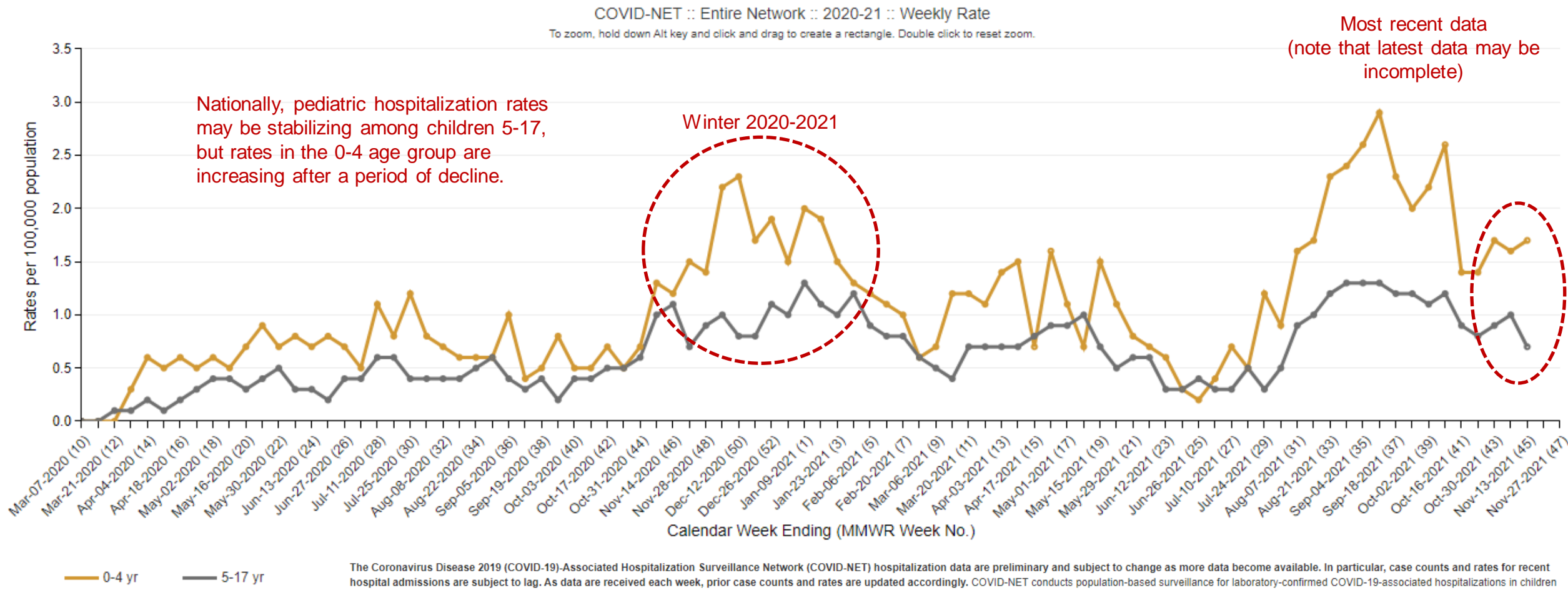


Pediatric hospitalization rates in Minnesota, and Wisconsin remain elevated, with Iowa showing a general plateau.

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

Accessed November 23, 2021

Pediatric Hospitalization Rates by Age Group – USA

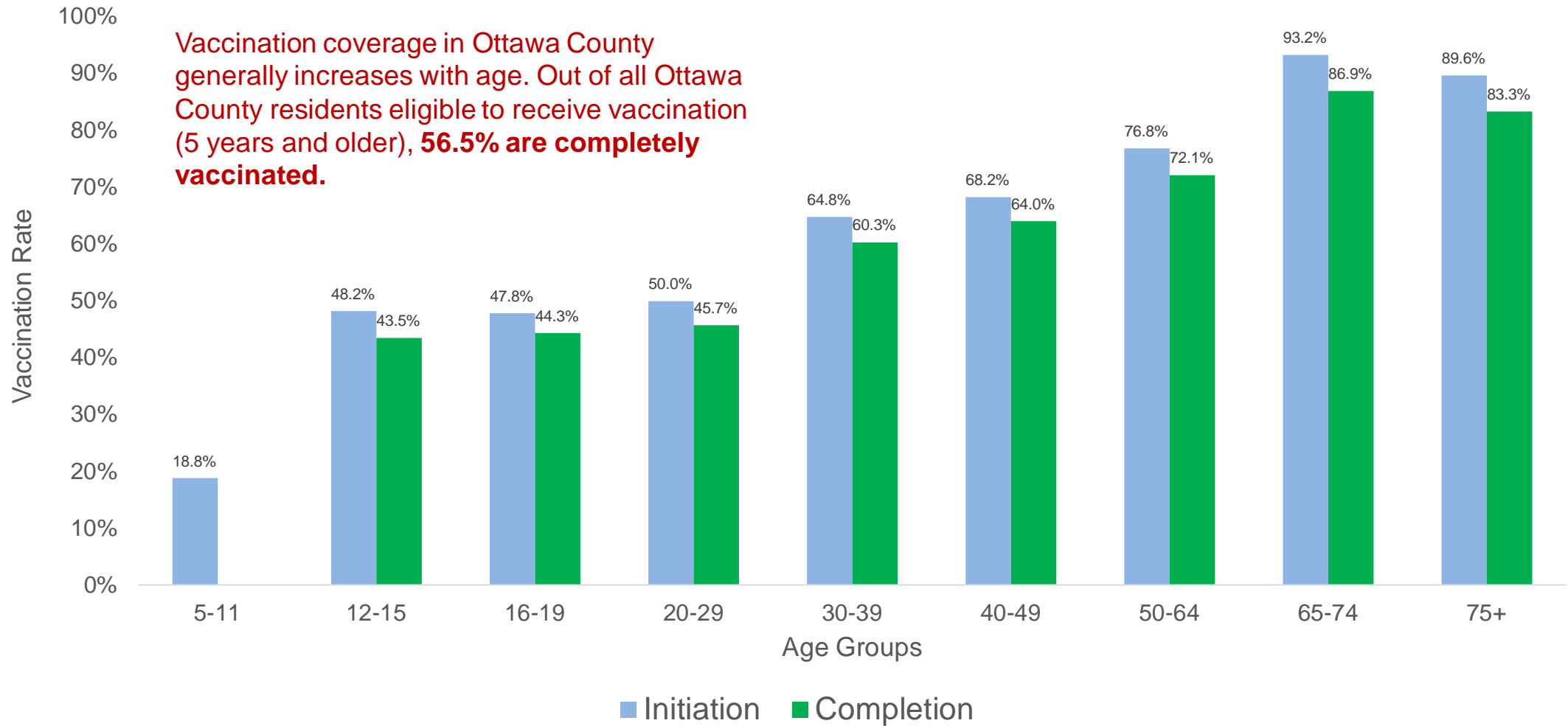


The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. As data are received each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

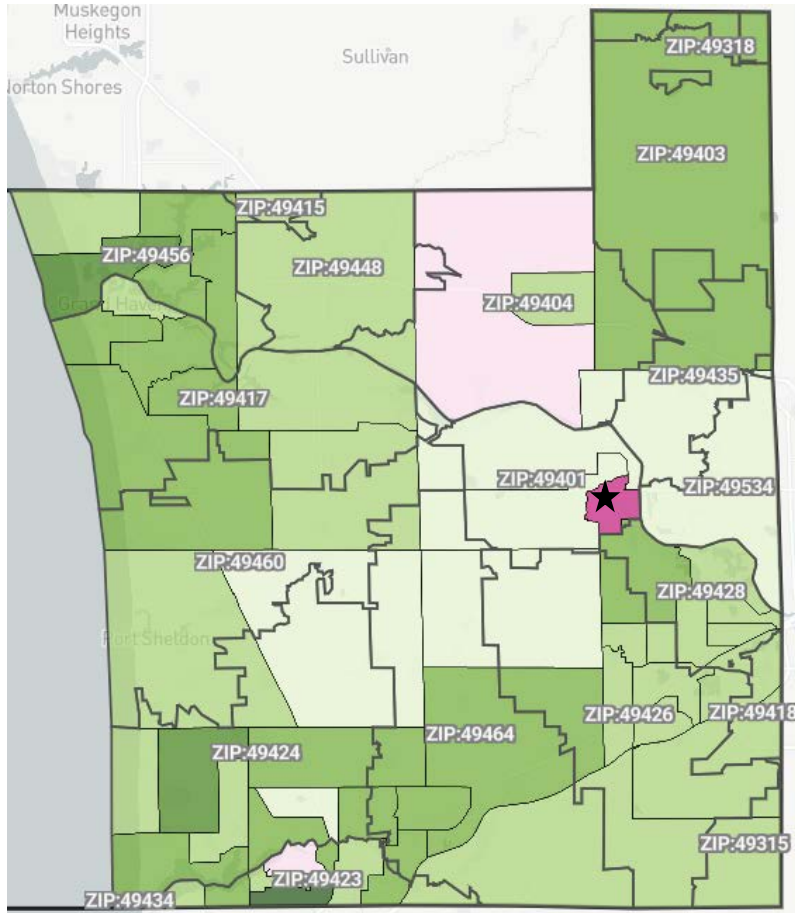
Completion is the percentage of people receiving 2 doses of Pfizer or Moderna or 1 dose of J&J.

Source: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Data through November 23, 2021

Vaccination Coverage by Place of Residence

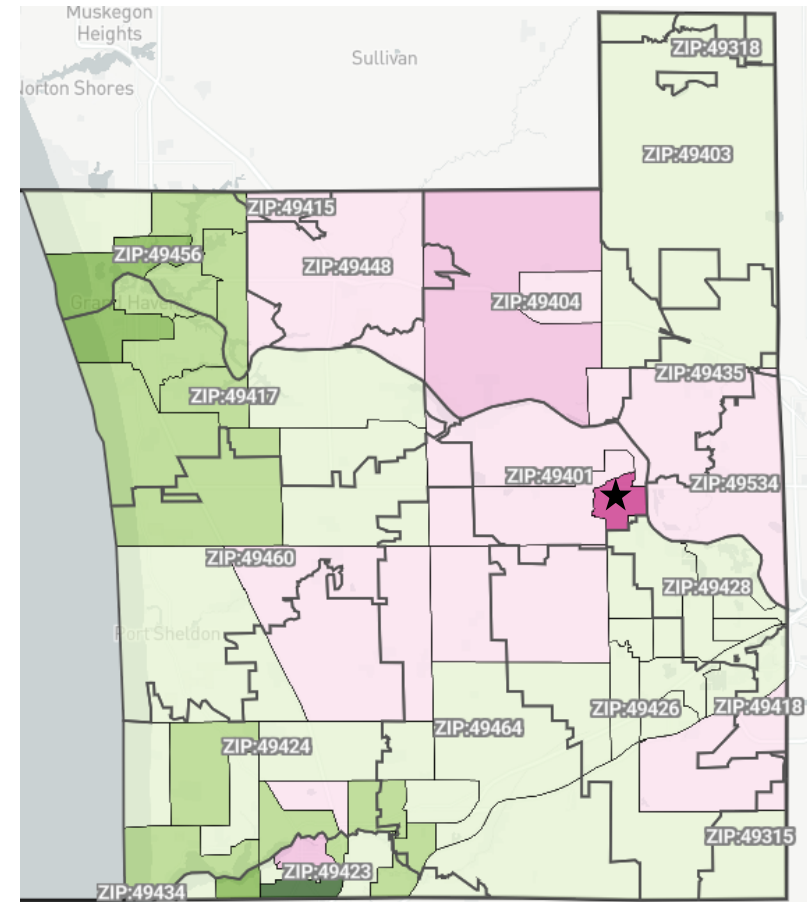
Fully vaccinated: % Ages 16+ years



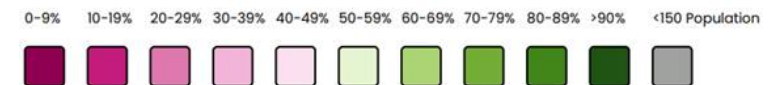
Color coded by: Fully Vaccinated (% Ages 16+)



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 – November 20, 2021

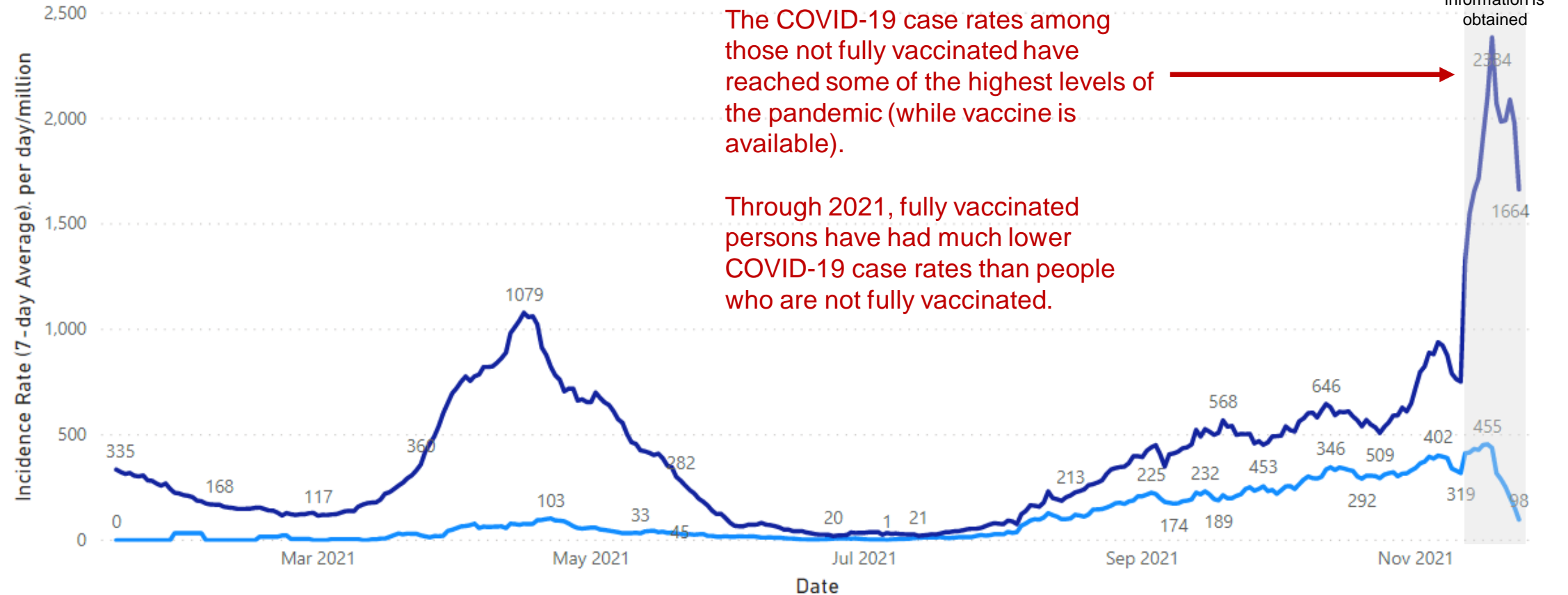
Fully Vaccinated People (154,273)		
Cases	Hospitalizations	Deaths
Percent of Cases in People Not Fully Vaccinated (22,892 / 27,409) 83.5%	Percent of Hospitalizations in People Not Fully Vaccinated (716 / 901) 79.5%	Percent of Deaths in People Not Fully Vaccinated (158 / 209) 75.6%
Total Cases Not Fully Vaccinated 22,892	Total Hospitalized Not Fully Vaccinated 716	Total Deaths Not Fully Vaccinated 158
Total Breakthrough Cases 4,517	Total Breakthrough Hospitalizations 185	Total Breakthrough Deaths 51
Percent of Fully Vaccinated People who Developed COVID-19 (4,517 / 154,273) 2.928%	Percent of Fully Vaccinated People who were Hospitalized for COVID-19 (185 / 154,273) 0.120%	Percent of Fully Vaccinated People who Died of COVID-19 (51 / 154,273) 0.033%
Percent of Cases who were Fully Vaccinated (4,517 / 27,409) 16.5%	Percent of Hospitalizations who were Fully Vaccinated (185 / 901) 20.5%	Percent of Deaths who were Fully Vaccinated (51 / 209) 24.4%
Total Cases 27,409	Total Hospitalizations 901	Total Deaths 209

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

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

Incidence Rate (7-day Average)

rategroup ● Fully Vaccinated ● Not Fully Vaccinated



The COVID-19 case rates among those not fully vaccinated have reached 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.

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

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

Variants – Wastewater Sampling – Holland/Zeeland

Sample Date	Site	Wuhan (parental)	Alpha	Beta	Gamma	Delta	Epsilon
9/2/2021	North Holland	Y	N	N	N	N	N
9/3/2021	Zeeland	N	N	N	N	Y	N
9/6/2021	North Holland	Y	N	N	N	Y	N
9/7/2021	Zeeland	N	N	N	N	N	N
9/9/2021	North Holland	N	N	N	N	Y	N
9/10/2021	Zeeland	N	N	N	N	Y	N
9/14/2021	Zeeland	N	N	N	N	Y	N
9/16/2021	North Holland	N	N	N	N	N	N
9/21/2021	Zeeland	N	N	N	N	Y	N
9/22/2021	North Holland	N	N	N	N	N	N
9/23/2021	Zeeland	N	N	N	N	Y	N
9/26/2021	North Holland	Y	N	N	N	Y	N
9/29/2021	North Holland	N	N	N	N	Y	N
9/30/2021	Zeeland	N	N	N	N	Y	N
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
10/17/2021	North Holland	Y	N	N	N	Y	N
10/11/2021	Zeeland	N	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
10/24/2021	North Holland	N	N	N	N	Y	N
10/21/2021	Zeeland	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
11/3/2021	North Holland	N	N	N	N	Y	N
11/7/2021	North Holland	N	N	N	N	Y	N
11/1/2021	Zeeland	N	N	N	N	Y	N
11/4/2021	Zeeland	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
11/14/2021	North Holland	Y	N	N	N	Y	N
11/11/2021	Zeeland	N	N	N	N	Y	N
11/15/2021	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 through mid-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.

Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (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 ¹ 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*

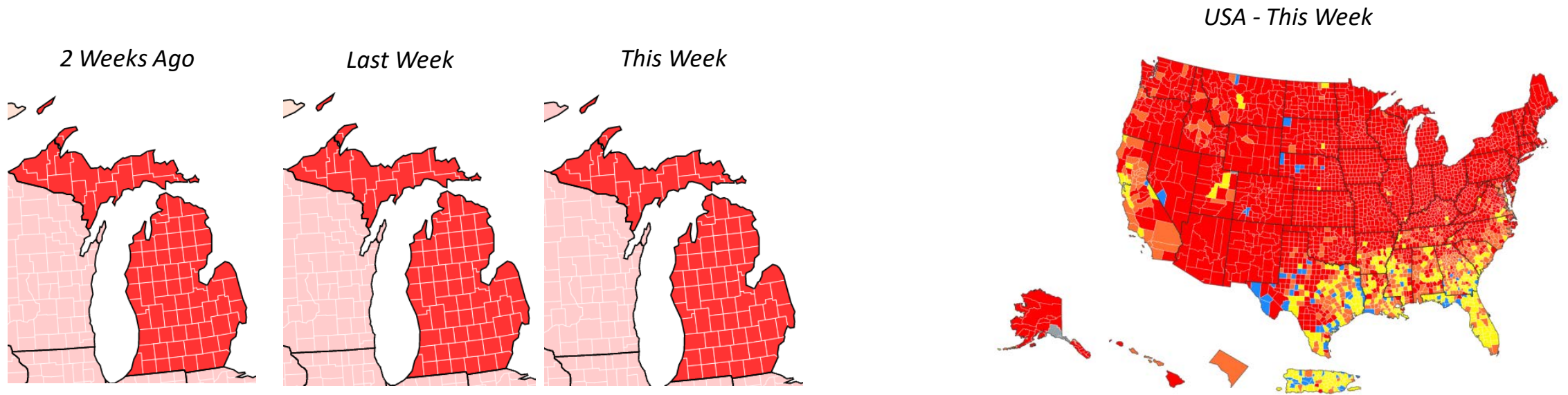
Ottawa is in the High category right now

*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 14+ weeks)
- Current Data:
 - Positivity = 23.41%
 - Case Rate = 861.12 cases per week per 100,000

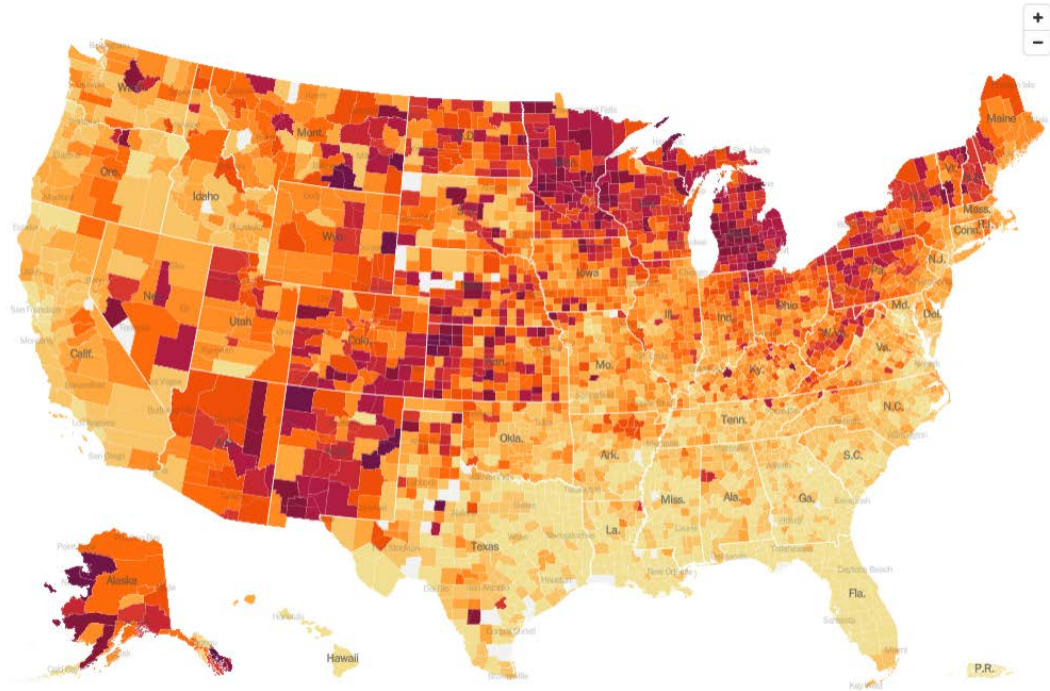


Data through November 19, 2021 for positivity and November 21, 2021 for case rates

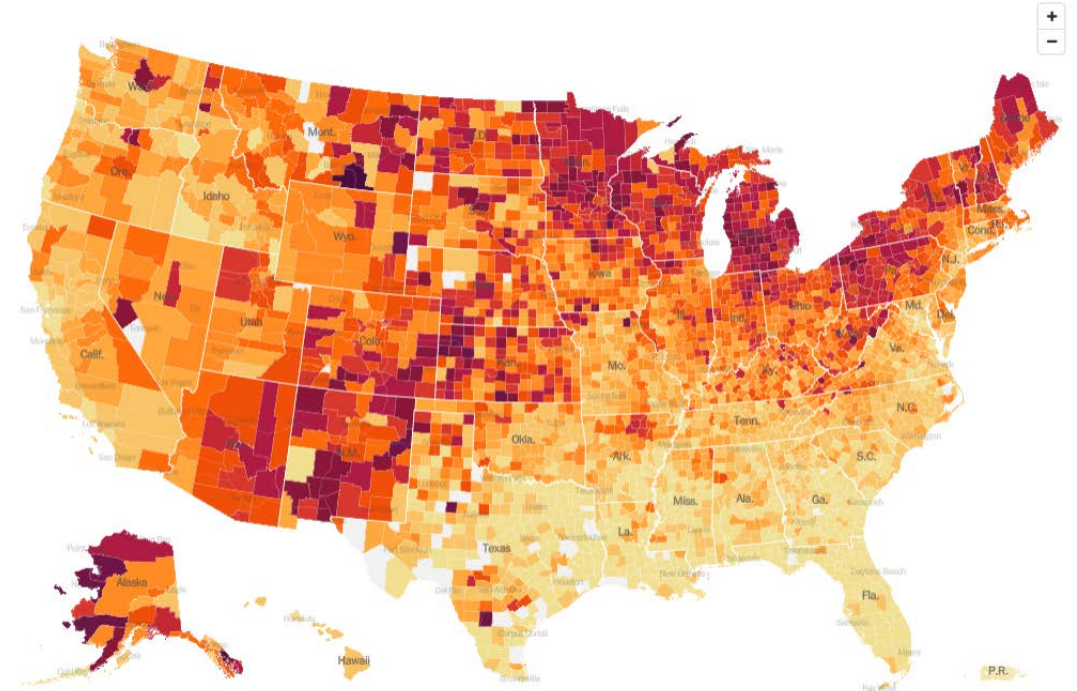
Source: <https://covid.cdc.gov/covid-data-tracker/#county-view>

COVID-19 Case Rates by County Across the US

Last Week



This Week



Case rates in the deep South have improved substantially and Appalachia remains stable. Alaska, the upper Midwest, some western states, and New England are experiencing elevated case rates. Michigan is experiencing particularly elevated case rates.

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

Accessed November 23, 2021

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

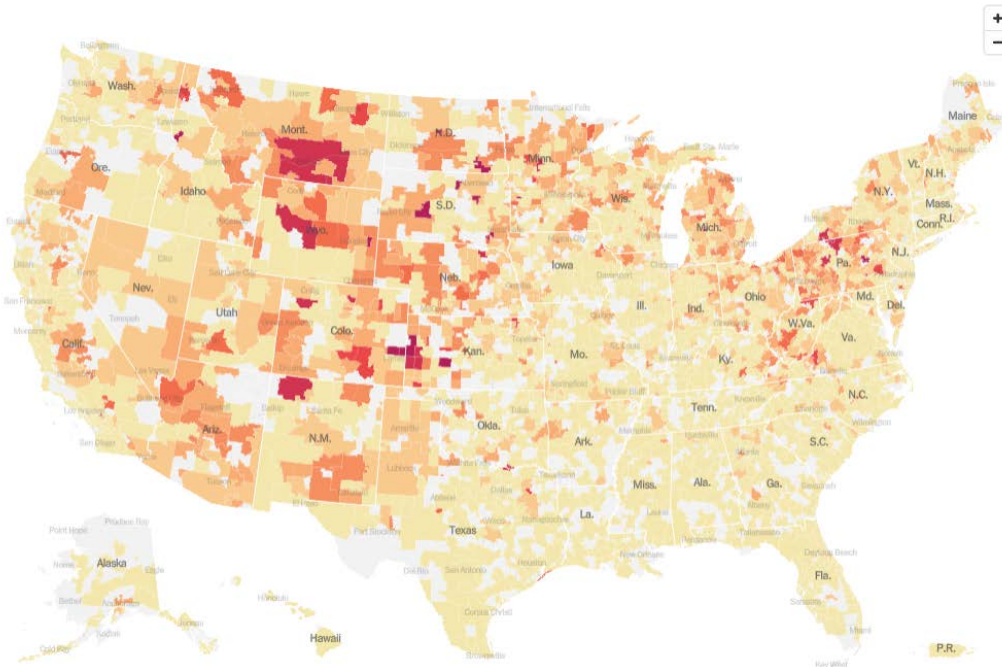
Other

Media

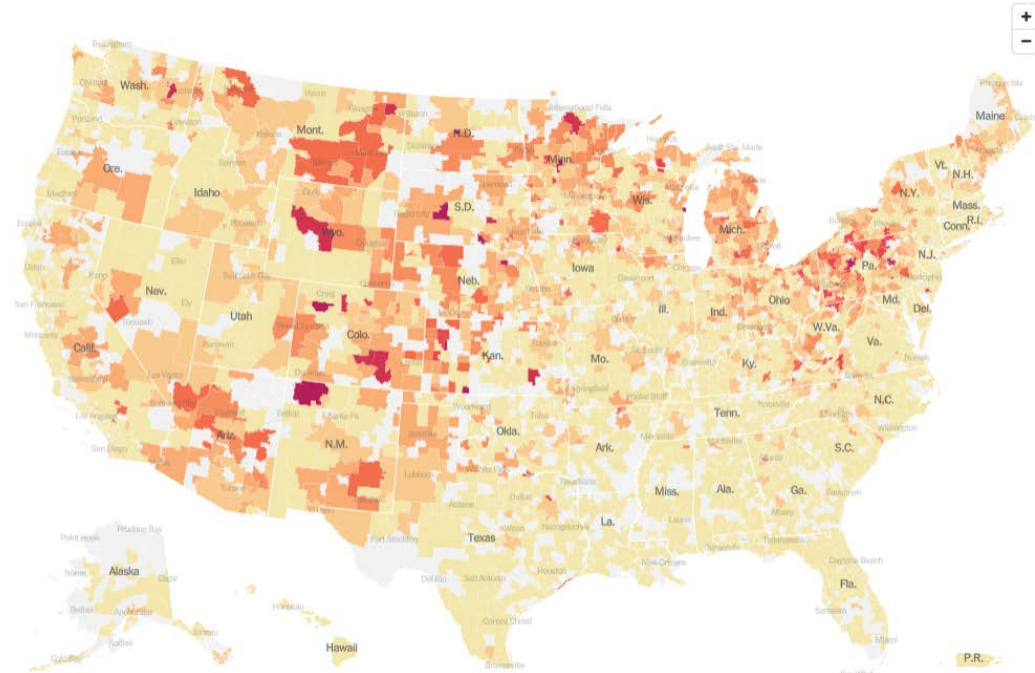
Science Roundup

COVID-19 Hospitalization Rates by County Across the US

Last Week



This Week



Hospitalization rates continue to improve in the South and Appalachia, while some western states – particularly Montana and Wyoming – are experiencing elevated hospitalization rates. Pockets of Colorado, western Kansas, New Mexico, and Pennsylvania are also seeing elevated hospitalizations. More areas in Michigan are seeing higher hospitalization rates this week.

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

Accessed November 23, 2021

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science
Roundup

Potential COVID-19 Oral Antiviral Medication

Manufacturer (Drug Name)	Who is it for?	How is it given?	When should it be taken?	How well does it work?	When will it be available?
Merck (Molnupiravir)	Patients in the study had mild-to-moderate Covid-19, were within five days of symptom onset when dosed, and had at least one risk factor associated with poor disease outcomes	4 pills twice a day for 5 days	Within 5 days of when symptoms begin	Reduced hospitalizations by 50% and prevented deaths entirely when it was given within five days of when symptoms began.	Will be discussed at FDA's Antimicrobial Drugs Advisory Committee Meeting November 30
Pfizer: (Paxlovid + ritonavir)	This study was in patients with risk factors for severe Covid who were unvaccinated. A second study is testing the drug in lower-risk patients and those who have been vaccinated, potentially making it an option for treating breakthrough infections.	3 pills twice a day for 5 days	Within 3 to 5 days of when symptoms begin	Reduced the rate of hospitalization due to COVID-19 or death by nearly 90% in patients treated within three days of symptom onset. Similar results were found when treated within five days of symptom onset.	Pending EUA, U.S. will receive doses starting in 2021 and throughout 2022 as part of contract agreement with Pfizer

Source(s):

1. <https://www.fda.gov/advisory-committees/advisory-committee-calendar/november-30-2021-antimicrobial-drugs-advisory-committee-meeting-announcement-11302021-11302021#event-information>
2. <https://www.statnews.com/2021/11/15/8-lingering-questions-about-the-new-covid-pills-from-merck-and-pfizer/>
3. <https://www.hhs.gov/about/news/2021/11/18/biden-administration-secures-10-million-courses-pfizers-covid-19-oral-antiviral-medicine-as-additional-tool-reduce-hospitalizations-save-lives.html>
4. <https://www.statnews.com/2021/10/01/mercks-antiviral-pill-reduces-hospitalization-of-covid-patients-a-possible-game-changer-for-treatment/>
5. <https://www.statnews.com/2021/11/05/experimental-pfizer-pill-prevents-covid-hospitalizations-and-deaths/>

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 & Letters

Spectrum Health enters 'Red Zone' for first time since start of pandemic

<https://www.fox17online.com/news/coronavirus/spectrum-health-enters-red-zone-for-first-time-since-start-of-pandemic>

Michigan issues mask advisory as COVID-19 cases rise to worrying levels

<https://www.mlive.com/public-interest/2021/11/michigan-issues-mask-advisory-as-covid-19-cases-rise-to-worrying-levels.html>

'We're setting records we don't want to be setting': COVID cases surging in Ottawa County

<https://www.fox17online.com/homepage-showcase/were-setting-records-we-dont-want-to-be-setting-covid-cases-surging-in-ottawa-county>

3 more West Michigan school districts cancel classes the week of Thanksgiving

<https://www.mlive.com/news/muskegon/2021/11/3-more-west-michigan-school-districts-cancel-classes-the-week-of-thanksgiving.html>

Holland, Hamilton districts will close entire week of Thanksgiving due to increase in COVID cases

<https://www.hollandsentinel.com/story/news/education/2021/11/19/significant-increase-covid-cases-causes-hamilton-schools-adjust-schedule/868209002/>

Education

Local schools extend Thanksgiving break due to COVID

https://www.grandhaventribune.com/news/education/local-schools-extend-thanksgiving-break-due-to-covid/article_8b34e5cd-4837-5a42-8d8c-76794b7f51b5.html

Science Roundup

Risk for Stillbirth Among Women With and Without COVID-19 at Delivery Hospitalization — United States, March 2020–September 2021

Early Release / November 19, 2021 / 70

[Risk for Stillbirth Among Women With and Without COVID-19 at Delivery Hospitalization — United States, March 2020–September 2021 | MMWR\(cdc.gov\)](https://www.cdc.gov/mmwr/volumes/70/wr/mm7046a5.htm?s_cid=mm7046a5_w)



A CDC published study showed that pregnant women with COVID-19 were at higher risk of delivering a stillborn baby than women without COVID-19.

Impact of Hospital Strain on Excess Deaths During the COVID-19 Pandemic — United States, July 2020–July 2021

Weekly / November 19, 2021 / 70(46):1613–1616

https://www.cdc.gov/mmwr/volumes/70/wr/mm7046a5.htm?s_cid=mm7046a5_w



Another CDC published study demonstrated that ICU bed utilization of 75% is associated with excess deaths two weeks later.

Of note, Ottawa County ICU bed utilization is currently 86%.

Myocardial Infarction, Stroke, and Pulmonary Embolism After BNT162b2 mRNA COVID-19 Vaccine in People Aged 75 Years or Older

<https://jamanetwork.com/journals/jama/fullarticle/2786667>



A research letter published in JAMA exploring cardiovascular events after Pfizer vaccination among people 75 years and older found no evidence of increased risk of heart attack, stroke, or pulmonary embolism.