

Ottawa County COVID-19 Epidemiology

February 24, 2022

Data as of February 19, 2022, unless otherwise indicated

Executive Summary

- **Transmission in Michigan and the US continues to decline**
- **Ottawa community transmission levels are decreasing**
 - This past week positivity declined to 14.1%, lower than 19.5% seen last week.
 - Weekly case counts **decreased** 47% (-45% two weeks ago), from 877 two weeks ago to 469 last week.
 - Cases among children **decreased** 52% (-34% two weeks ago), from 184 two weeks ago to 89 last week.
 - The Omicron variant continues to be detected through clinical and wastewater surveillance.
- **Ottawa-area and regional hospitals have improved capacity**
 - In Ottawa County, 8% of all available beds and 27% of all ICU beds are occupied by COVID-19 patients.*
 - No Ottawa-area hospitals employed Emergency Department diversion last week.**
 - Most Ottawa hospitals are returning to usual care strategies and reinitiating elective procedures.
 - No Ottawa-area hospitals reported critical staffing challenges last week (for the first time in 2022).
- **Pediatric hospitalization rates in the US and in Michigan are improving**
 - Although improving, regional pediatric hospitalization census remains elevated.
- **Of Ottawa County residents aged 5+, 62.1%*** 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.

**Emergency Department diversion may have the following [impacts](#): 1) delayed ambulance turnaround, 2) delayed treatment, 3) increasing short- and long-term mortality rates, 4) lost hospital revenue, 5) increased costs for more ICU care that would have been preventable with timely healthcare access.

***MDHHS recently conducted an update that impacted vaccine recipient addresses resulting a small reduction in Ottawa County vaccination rates (~1 percentage point).

Ottawa County Metrics by Week

Metric	Goal	Week Ending				
		22-Jan-22	29-Jan-22	5-Feb-22	12-Feb-22	19-Feb-22
Positivity (All Ages)	<8%	35.2%	33.0%	25.3%	19.5%	14.1%
Weekly Cases (All Ages)	<147	4067	3083	1582	877	469
Weekly Cases in Children (0-17 years of age)	NA	923	674	277	184	89
Total Deaths (All Ages)	0	17	13	13	6	5
CDC Risk Transmission Level	Moderate	High	High	High	High	High

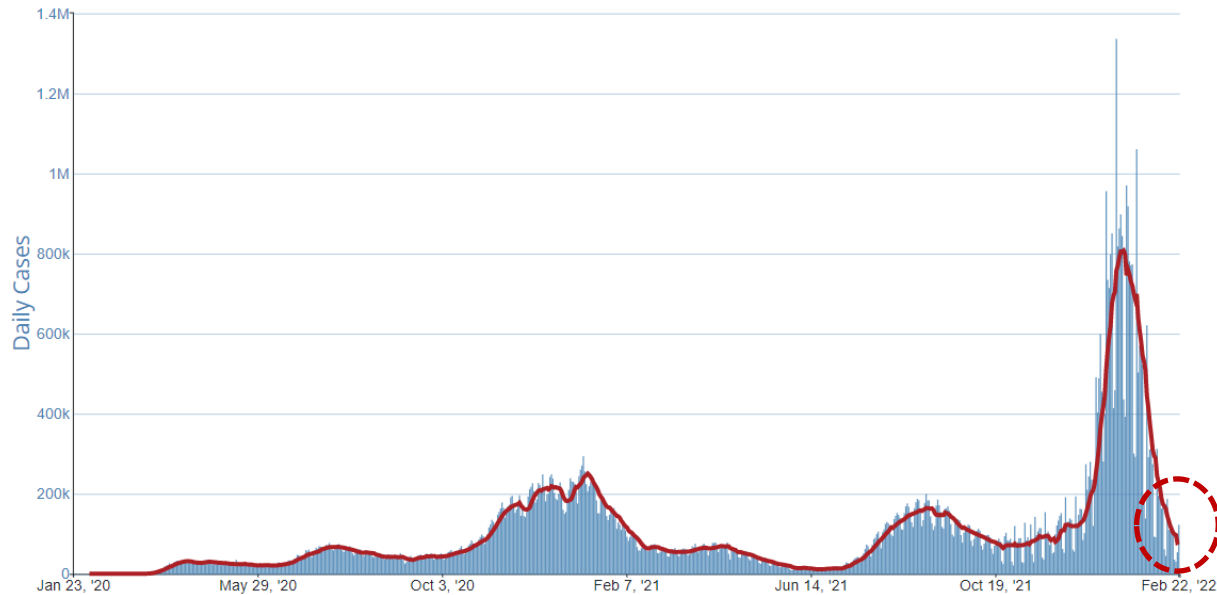
Due to reduced quality, hospitalization data has been removed from this visualization.

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. 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

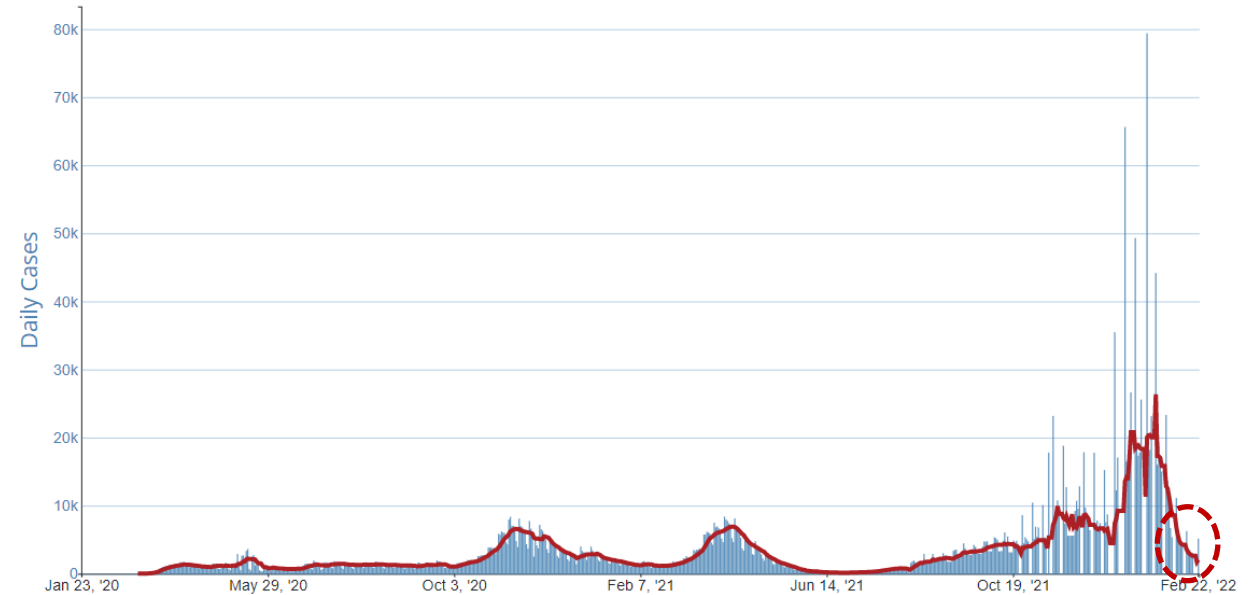
USA

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



Michigan

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



Daily case counts in the US and Michigan
are declining.

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases.

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

Data through February 22, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

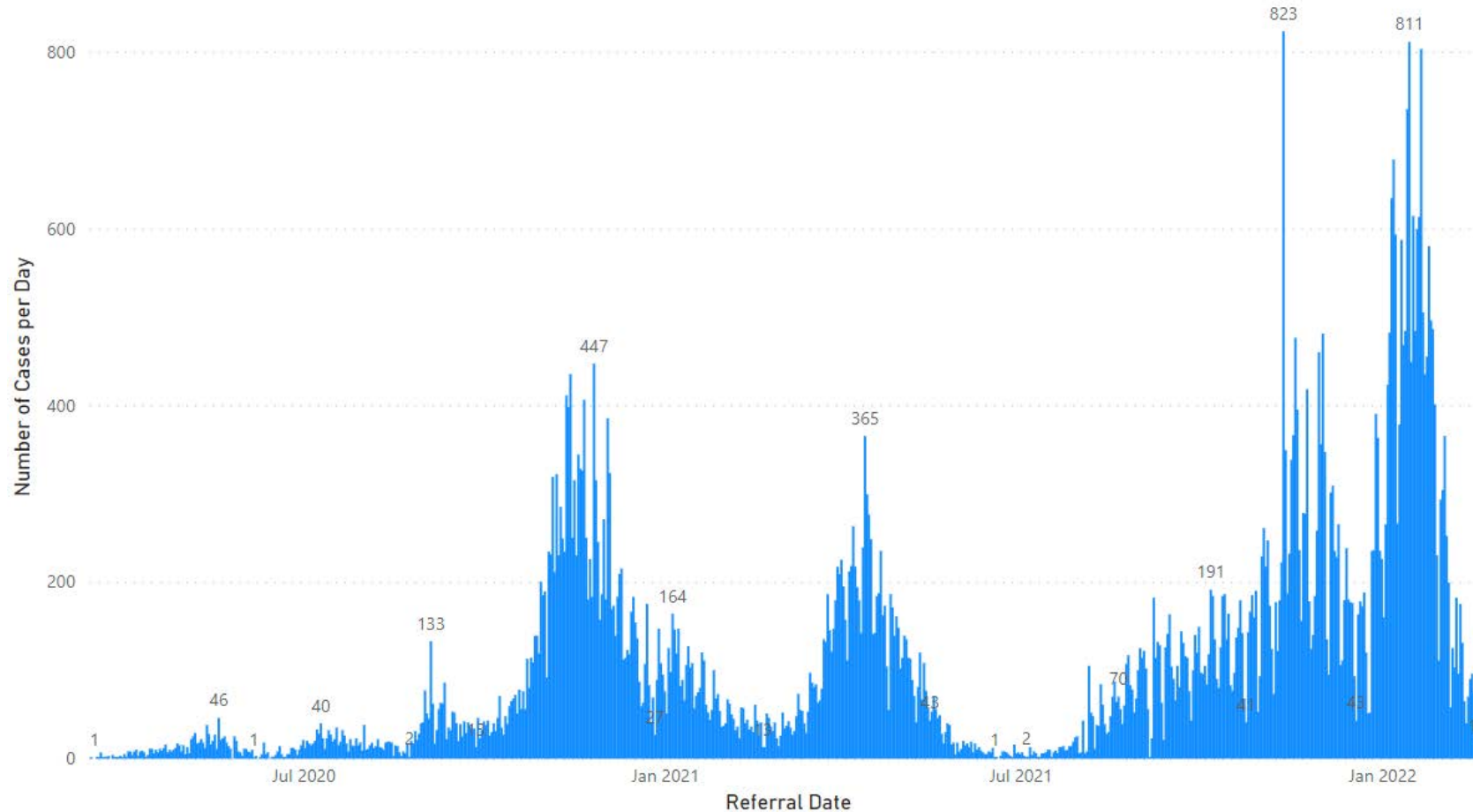
Media

Science
Roundup

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – February 23, 2022

Epidemiological Curve



Total Number of Cases
73,822

← Currently the 7-day average is **43 cases per day**, much lower than the 85 cases per day seen at a similar time last week.

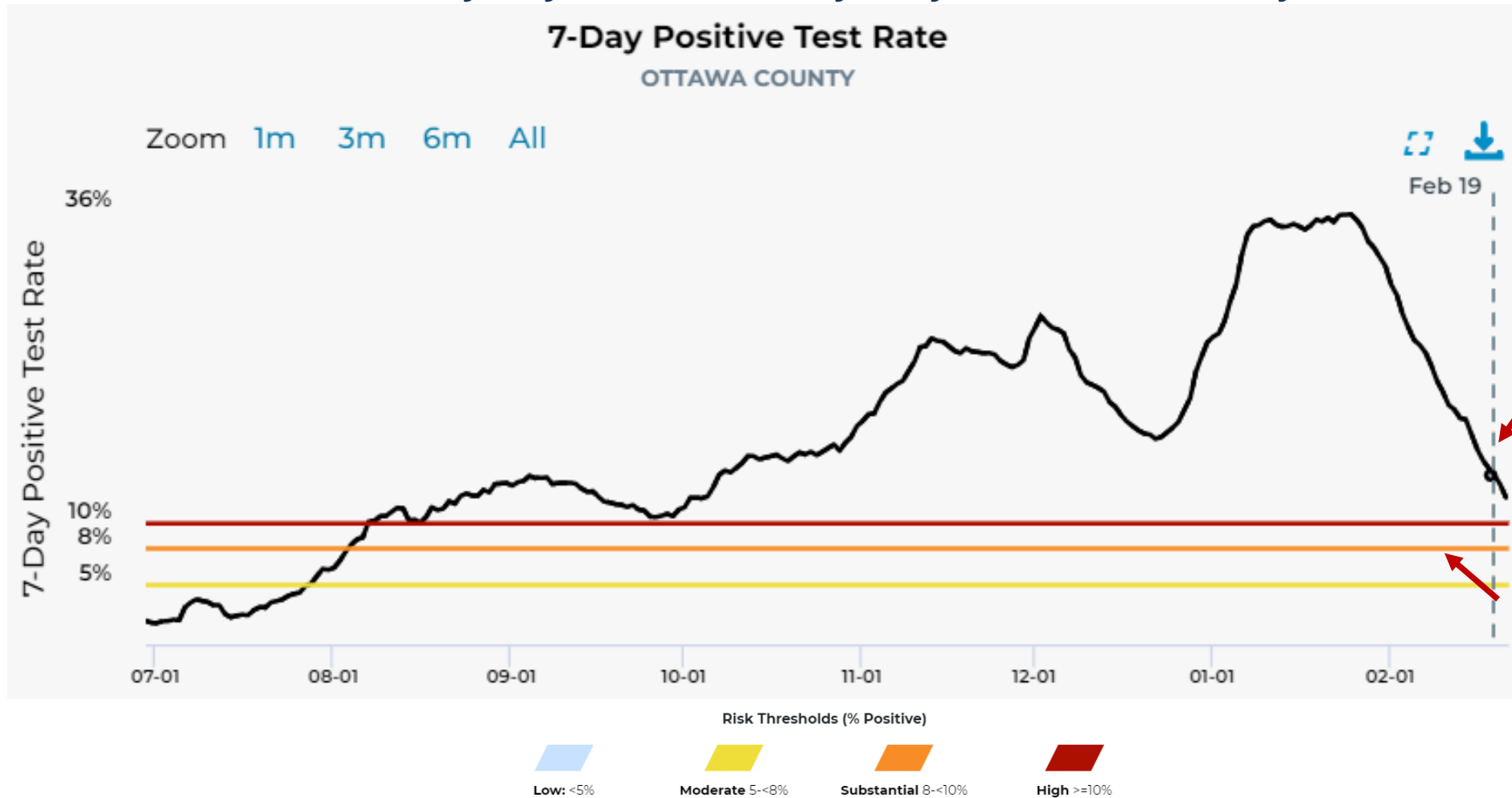
1 in every 17 people in Ottawa County was counted as a case from January 1 – February 23, 2022.

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, 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, July 1, 2021 – February 19, 2022



Test positivity has been in decline for four weeks, recently falling to 14.1%.

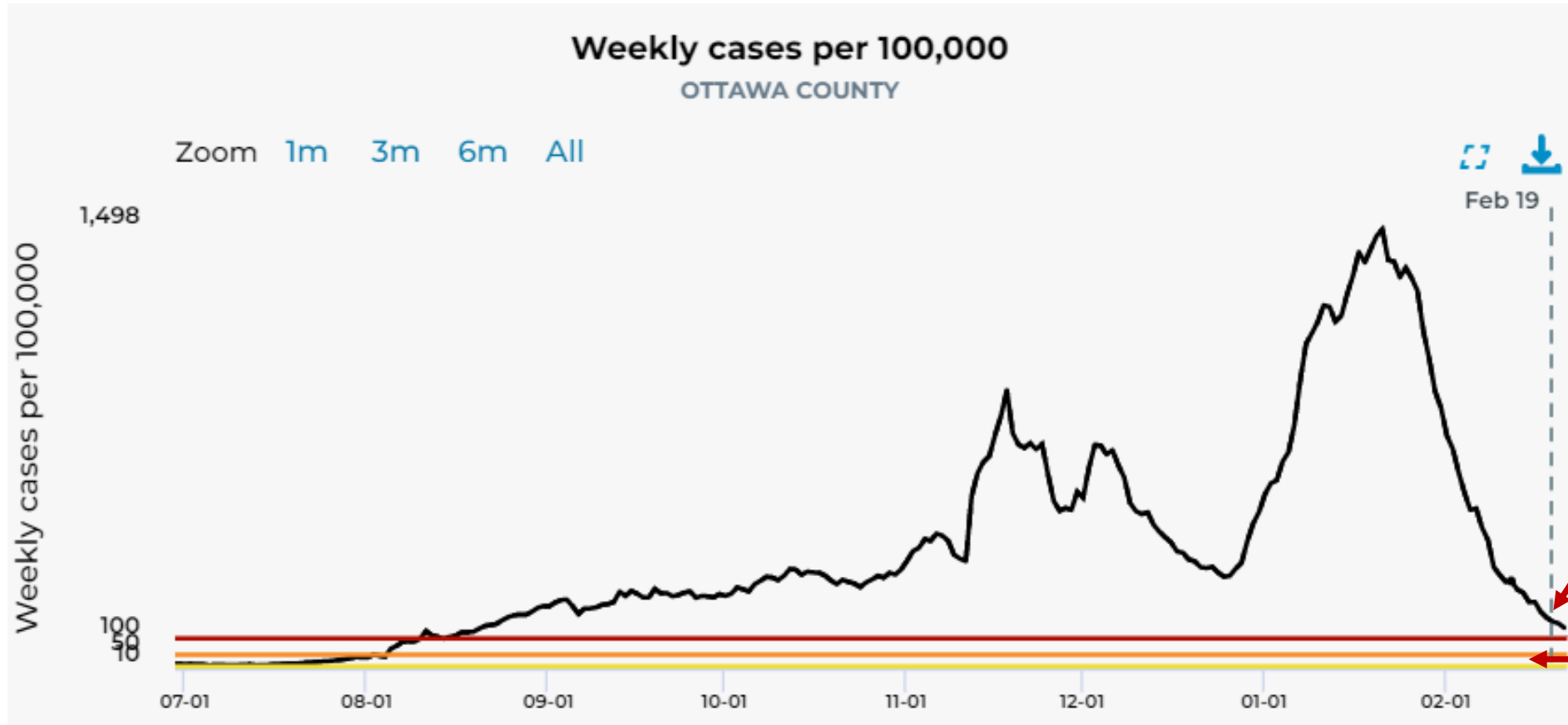
The goal is to have less than 8% of tests coming back positive.

Note: Testing in Ottawa County has declined over the last 4 weeks, peaking at nearly 12,000 tests in a week (week 3) and declining to about 5000 tests last week (week 6): [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](#) & <https://www.mistartmap.info/mism-indicators?area=county%3Aottawa>. Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases.

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

Case Rates in Ottawa County – All Ages

COVID-19 Cases by Day, Ottawa County, July 1, 2021 – February 19, 2022



Case rates **decreased to 161** cases per week per 100,000 population (**down from 295** 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.

Risk Thresholds (Cases per 100,000)



Low: <10



Moderate 10-49



Substantial 50-99



High >=100

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

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

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

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Ottawa County Time Trends – Annual Comparison of Case Rates



Through much of the late fall of 2021 case rates tracked similarly to 2020. After the first of the year 2022, rates increased sharply, deviating from trends observed in past year. However, rates are currently falling and may decline to levels observed last year at this time.

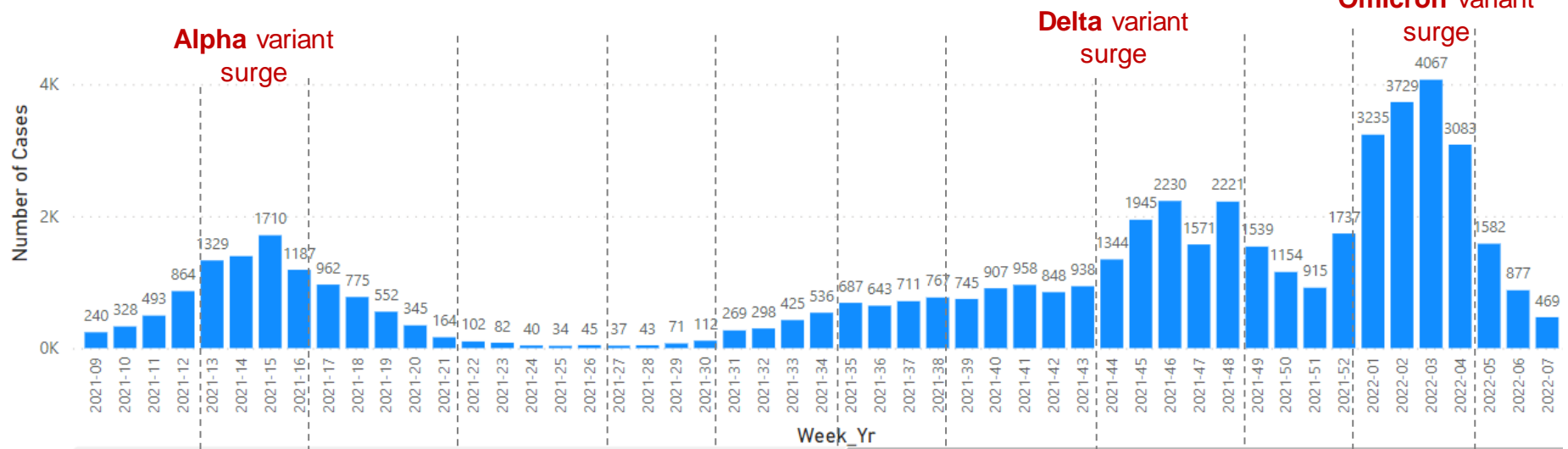
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

Source: Internal Data

Data through February 22, 2022

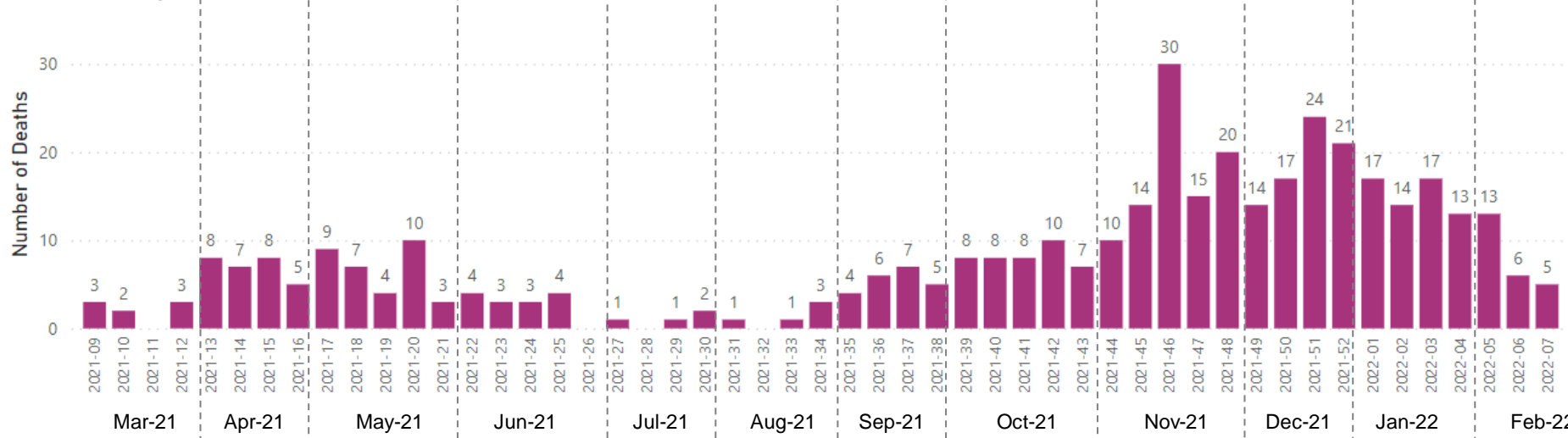
Ottawa County – Cases & Deaths by Week, All Ages

New Cases By Week of Referral



The weekly number of cases decreased 47% from week 6 to week 7.

New Deaths by Week of Death



Weekly COVID-19 deaths have reached levels experienced in the spring 2021 wave. Current weekly average of deaths over the last 4 weeks stands at about 9 deaths per week.

Due to reduced quality, hospitalization data has been removed from this visualization.

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated number of cases.

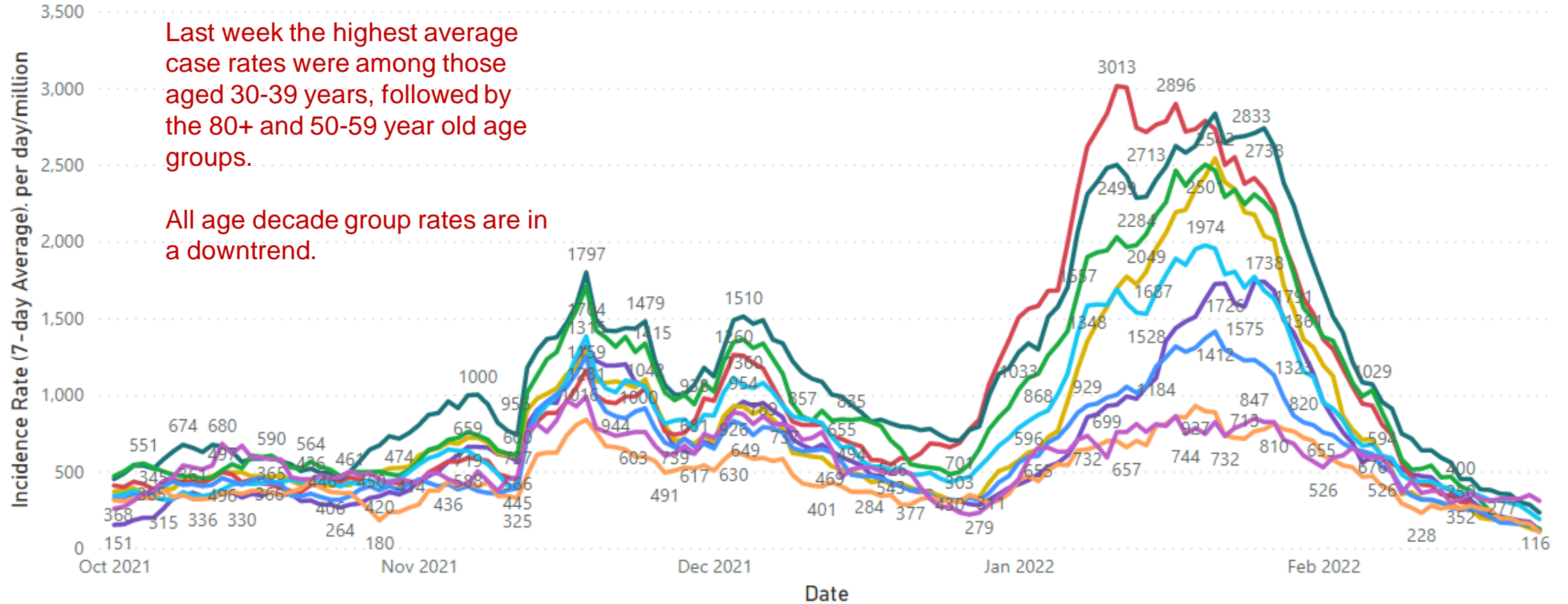
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age Decade

COVID-19 Case Rates by Age, October 2021 – February 23, 2022

Incidence Rate (7-day Average)

rategroup ● 0-9 ● 10-19 ● 20-29 ● 30-39 ● 40-49 ● 50-59 ● 60-69 ● 70-79 ● 80+



Note: Use of at home tests 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

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 7 (February 13, 2022 – February 19, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	7.4	201.7	-56%
10-19	8.0	180.6	-42%
20-29	8.6	189.5	-53%
30-39	12.7	354.6	-44%
40-49	6.3	189.5	-65%
50-59	10.9	311.3	-28%
60-69	5.6	170.9	-44%
70-79	4.0	193.7	-30%
80+	3.6	320.7	-14%

Age groups with highest average case rates last week:

- 30-39
- 80+
- 50-59

Age groups with largest week-over-week change in case rates:

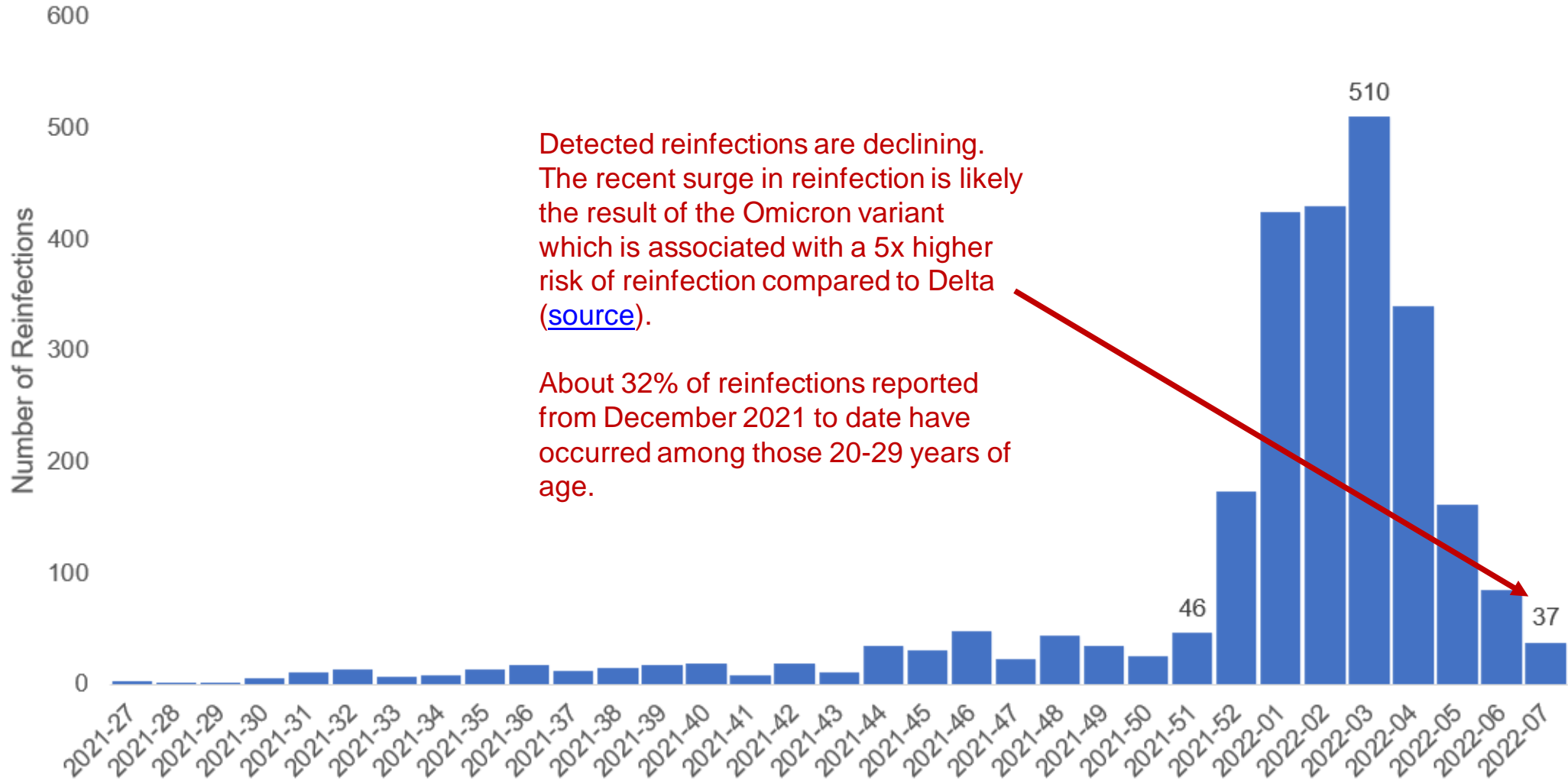
- 40-49
- 0-9
- 20-29

Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests 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; CDC Wonder 2020 population

Data as February 22, 2022

Ottawa County – Reinfections by Week



Detected reinfections are declining. The recent surge in reinfection is likely the result of the Omicron variant which is associated with a 5x higher risk of reinfection compared to Delta ([source](#)).

About 32% of reinfections reported from December 2021 to date have occurred among those 20-29 years of age.

Notes: *For the purposes of this slide a reinfection is considered any Ottawa County resident who was reported two or more times as a confirmed or probable case, with at least 90 days between each referral date. This definition utilizes only cases reported to public health. The gold-standard for determining reinfection includes the variant detected in each infection; comprehensive data on the variant detected are not available for most cases. Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

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

Data as of February 22, 2022

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
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	1662	14%	568	17%	2230	14%
27-Nov-21	1229	-26%	341	-40%	1570	-30%
4-Dec-21	1771	44%	450	32%	2221	41%
11-Dec-21	1236	-30%	302	-33%	1538	-31%
18-Dec-21	940	-24%	214	-29%	1154	-25%
25-Dec-21	766	-19%	149	-30%	915	-21%
1-Jan-22	1523	99%	214	44%	1737	90%
8-Jan-22	2792	83%	443	107%	3235	86%
15-Jan-22	3092	11%	636	44%	3728	15%
22-Jan-22	3144	2%	923	45%	4067	9%
29-Jan-22	2409	-23%	674	-27%	3083	-24%
5-Feb-22	1305	-46%	277	-59%	1582	-49%
12-Feb-22	693	-47%	184	-34%	877	-45%
19-Feb-22	380	-45%	89	-52%	469	-47%

Adults

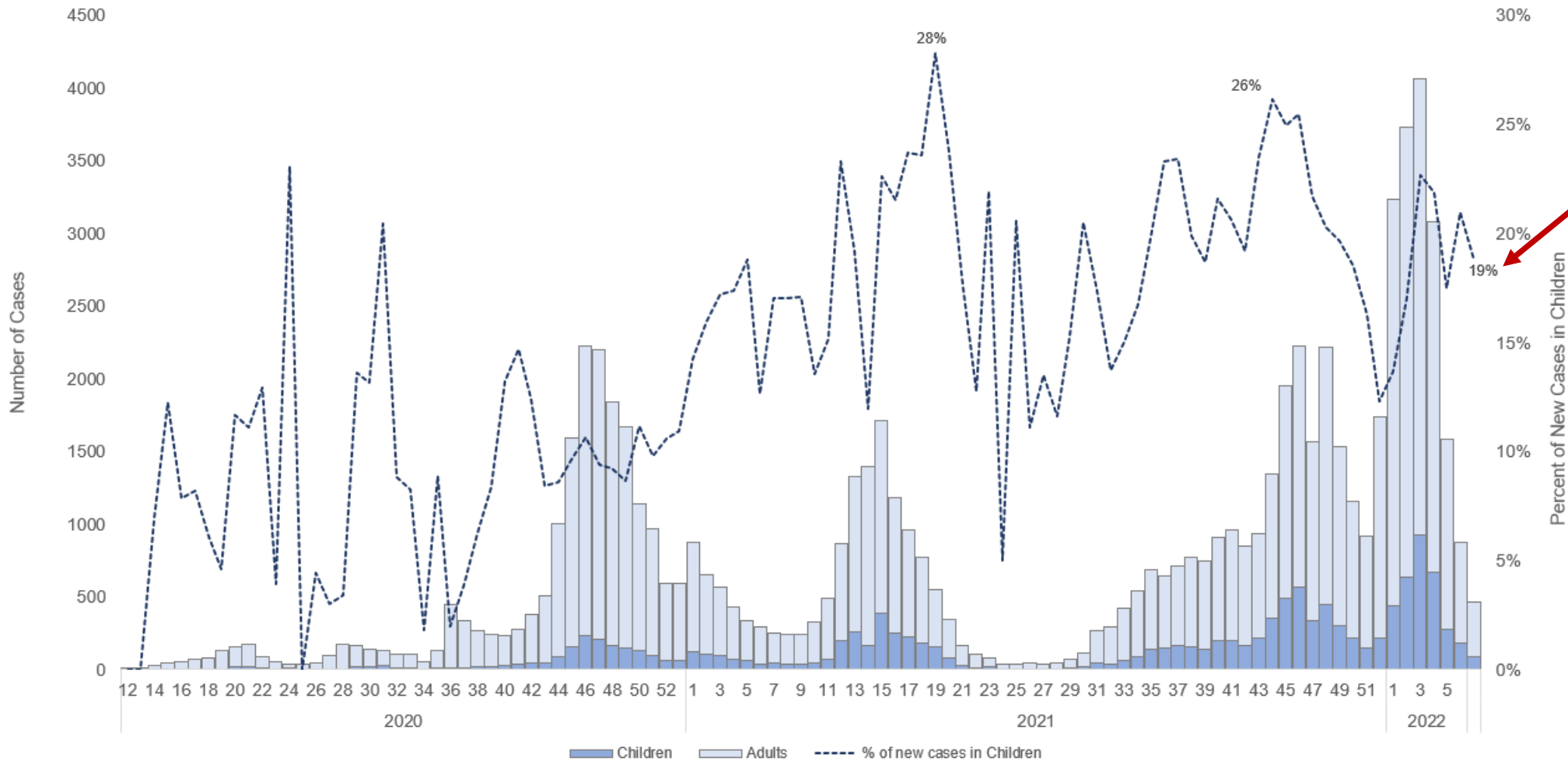
Children

Weekly case counts among **children decreased 52%** last week, and cases in **adults decreased 45%**.

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

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

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



During week 7 in 2022, children made up **19%** of cases reported, elevated compared to other times of the pandemic.

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

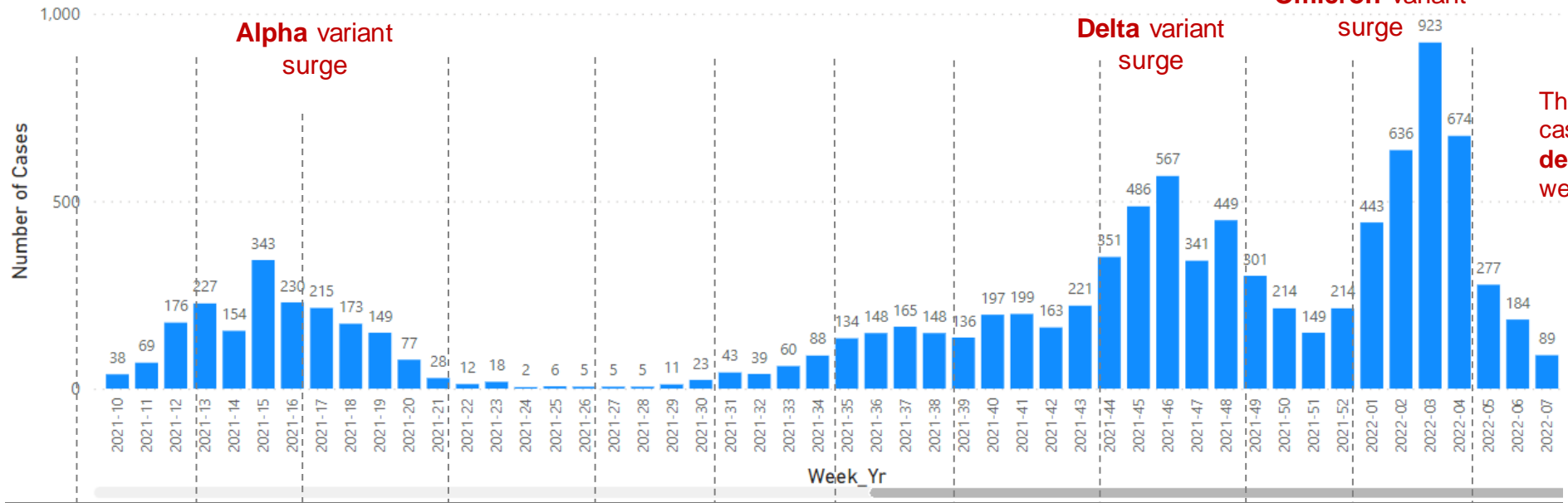
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

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

Data through Week 7, 2022

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

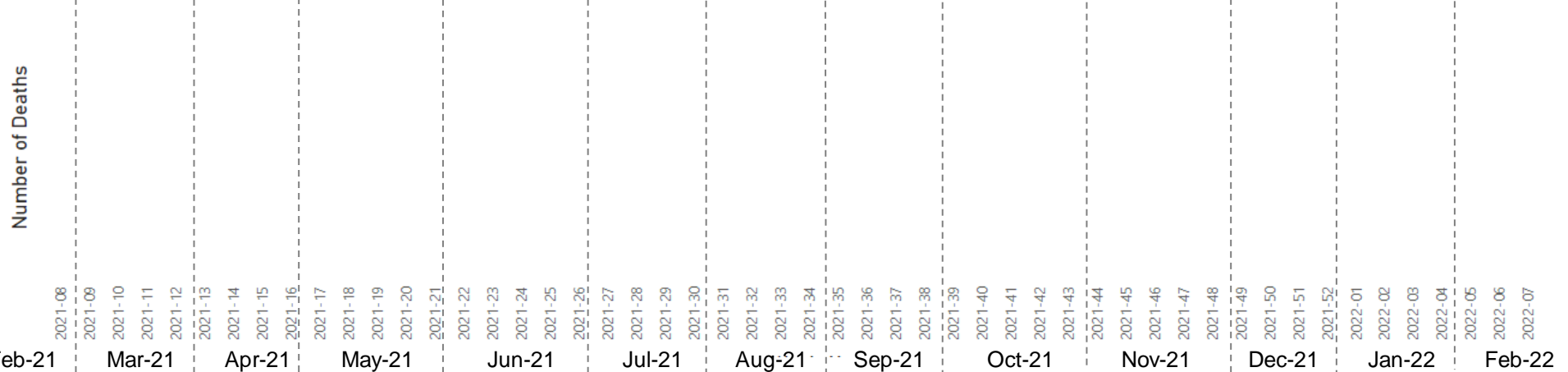
New Cases By Week of Referral



The weekly number of cases among children decreased 52% from week 6 to week 7.

Due to reduced quality, hospitalization data has been removed from this visualization.

New Deaths by Week of Death



Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

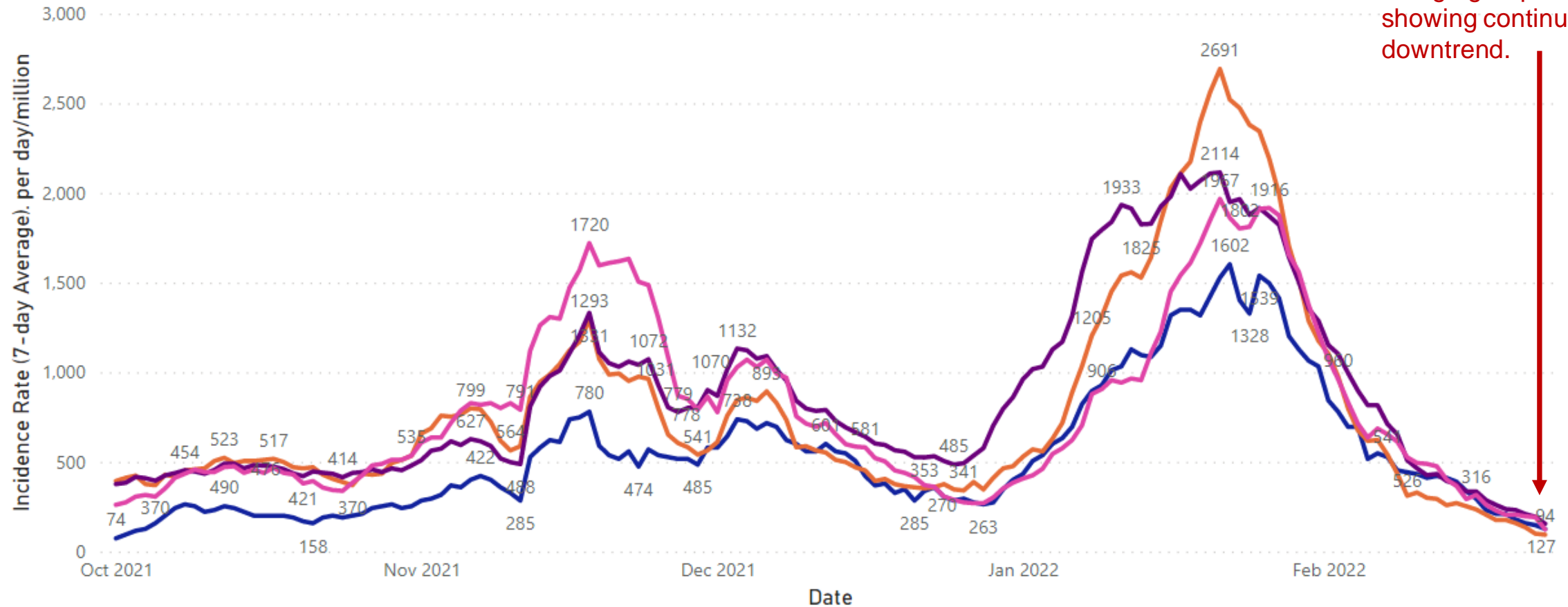
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, October 2021 – February 23, 2022

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11

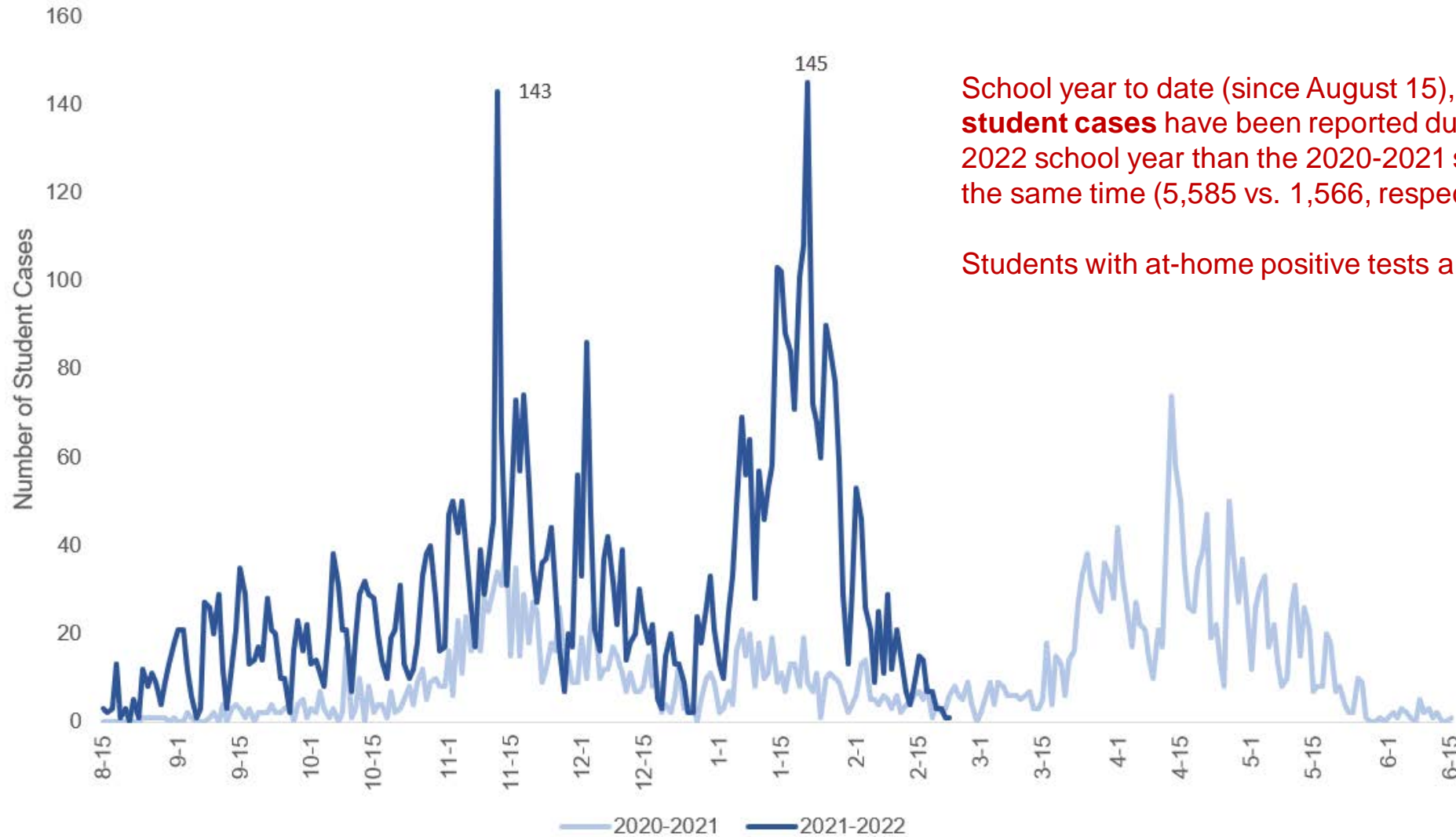


All age groups are showing continued downtrend.

Note: Use of at home tests 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

Ottawa County Cases in PreK-12 School Students



School year to date (since August 15), **3.6x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,585 vs. 1,566, respectively).

Students with at-home positive tests are not included.

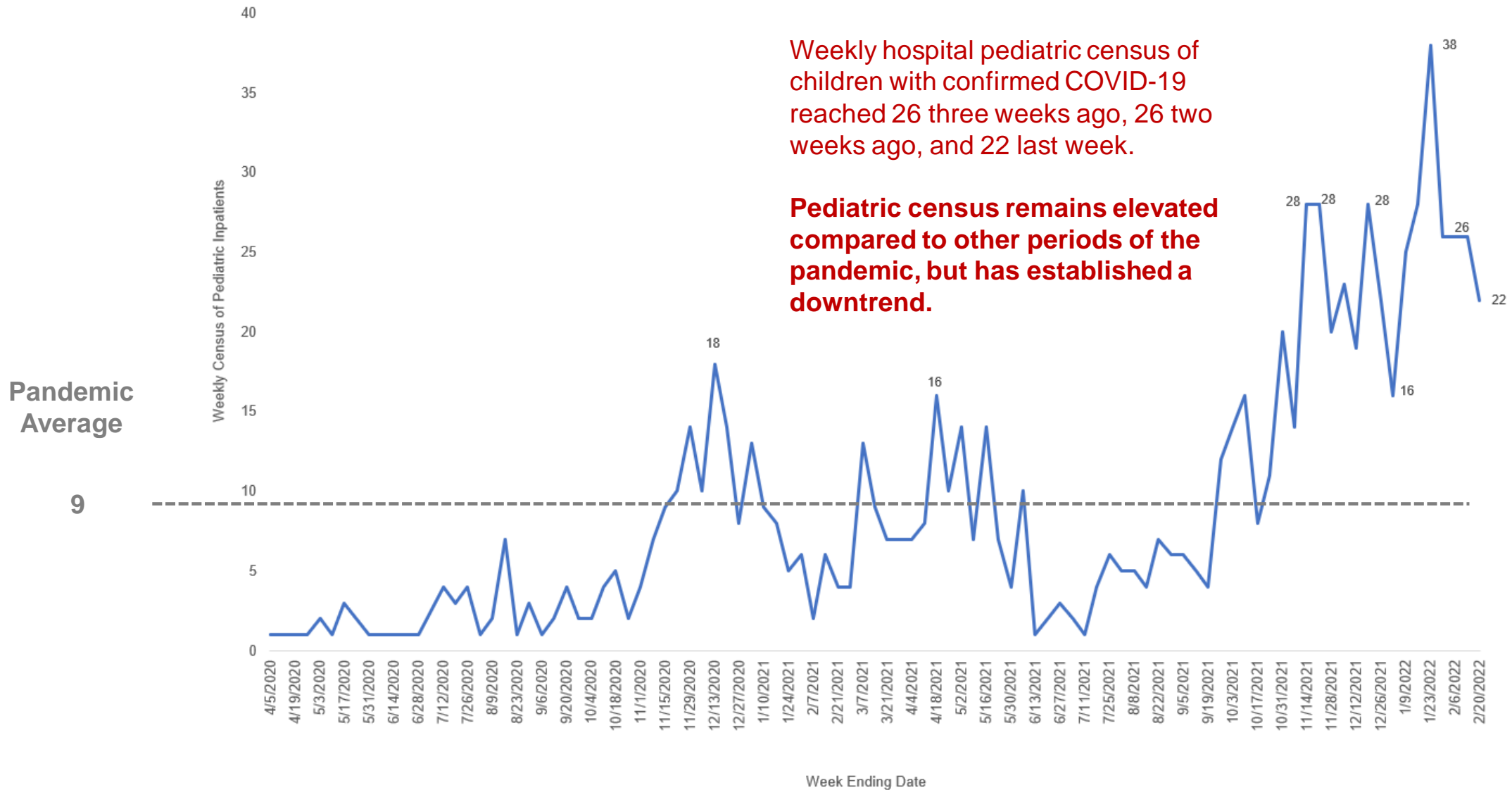
Method: Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

Note: Data may change as information is updated and methods are refined. Cases reported in 2022 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. Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

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

Data through February 22, 2022

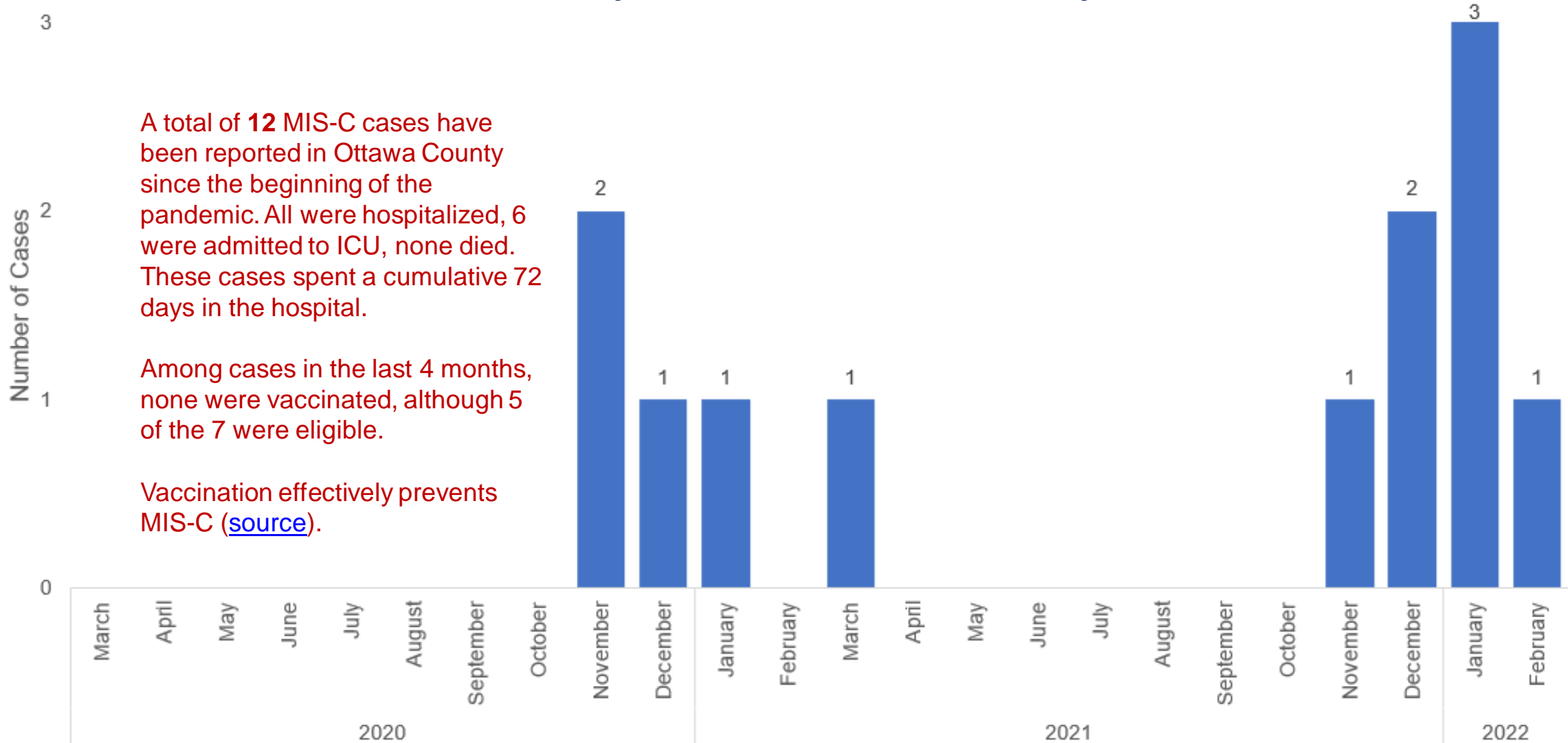
Weekly Hospital Pediatric Census – A Regional Healthcare System



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 February 20, 2022

Ottawa County MIS-C* Cases by Month



A total of **12** MIS-C cases have been reported in Ottawa County since the beginning of the pandemic. All were hospitalized, 6 were admitted to ICU, none died. These cases spent a cumulative 72 days in the hospital.

Among cases in the last 4 months, none were vaccinated, although 5 of the 7 were eligible.

Vaccination effectively prevents MIS-C ([source](#)).

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>

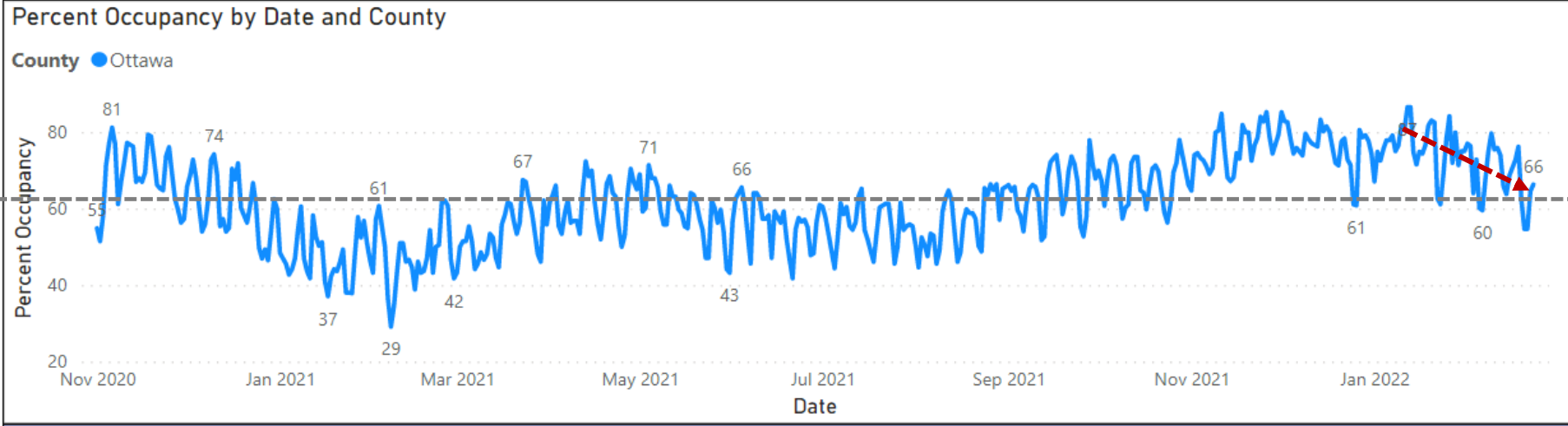
Data through February 22, 2022

Ottawa County Hospital Capacity – All Beds

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

Pandemic Average

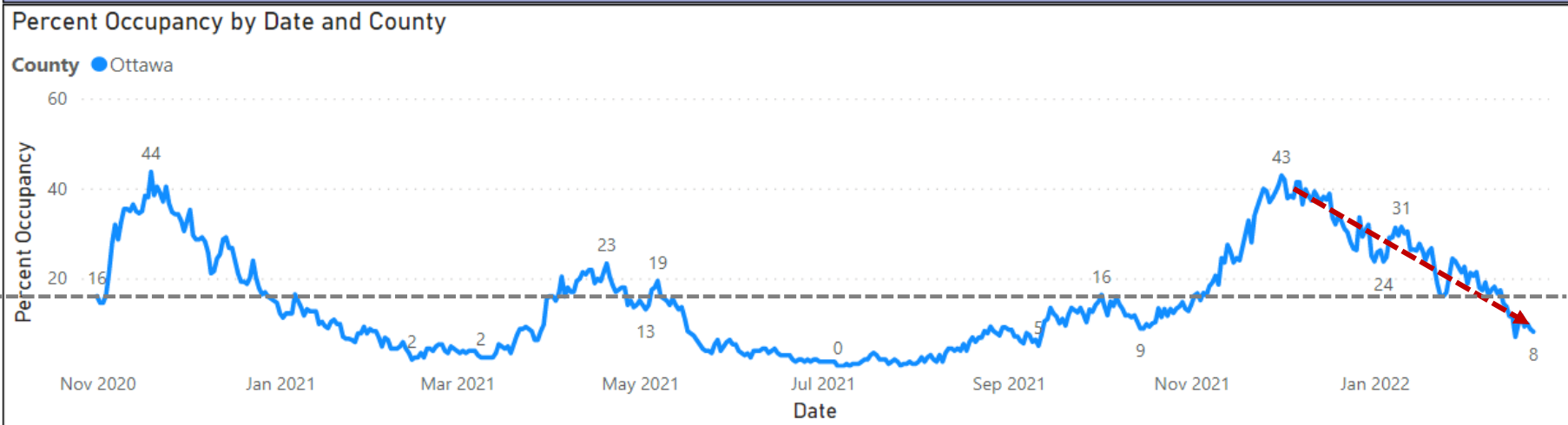
62%



Total hospital bed occupancy has declined to about the pandemic average.

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

15%

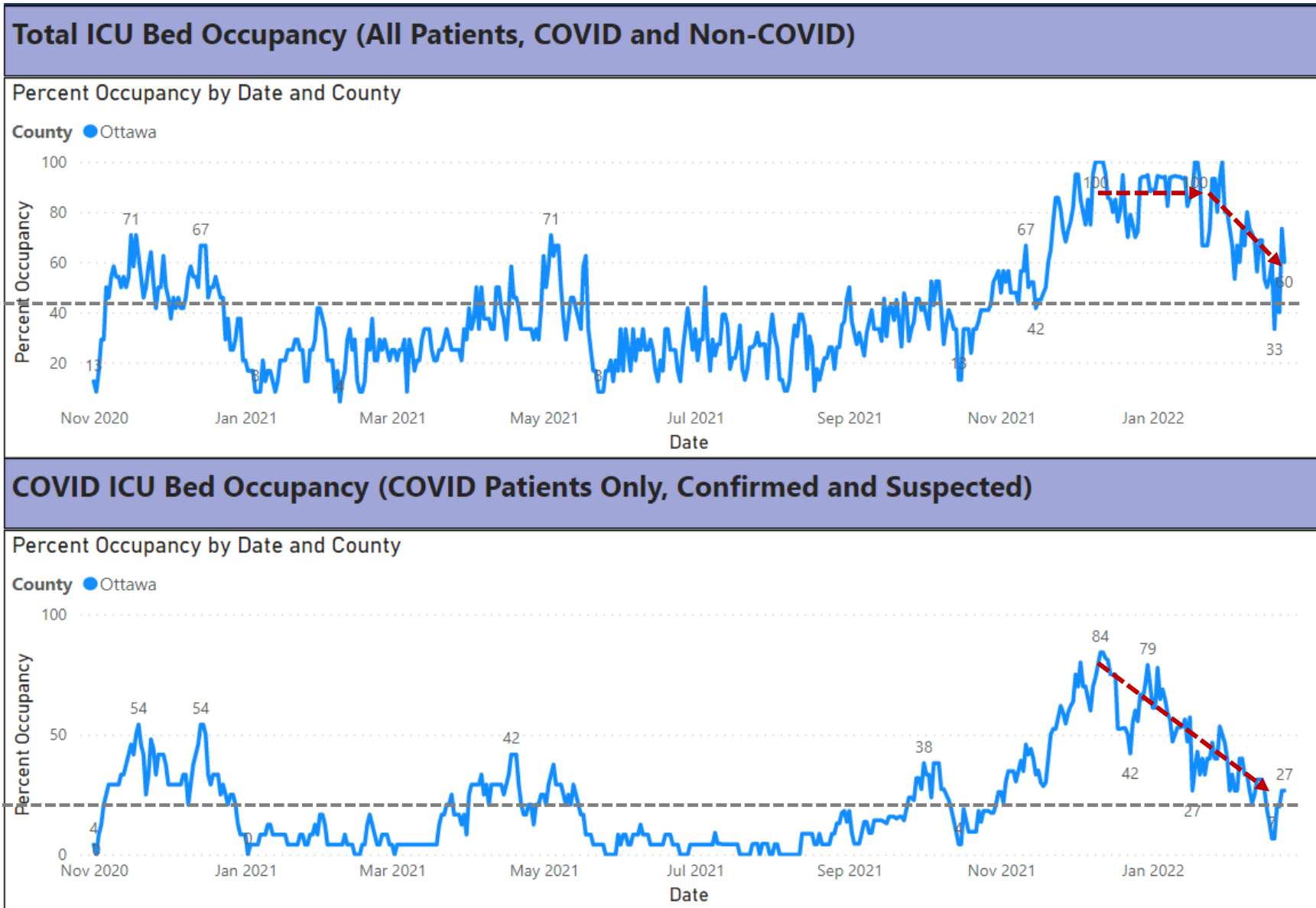


Currently 8% of all inpatient beds are occupied by COVID-19 patients. The proportion of beds occupied by COVID-19 patients is in a downtrend, after peaking in early December 2021.

Source: EMResources

Data through February 23, 2022

Ottawa County Hospital Capacity – ICU Beds



Source: EMResources

Data through February 23, 2022

Spectrum Health Hospitalized COVID-19 Patients

Spectrum Health COVID-19 Hospitalizations



February 22, 2022

Spectrum Health currently has 182 hospitalized COVID-19 patients. Of these, **130 (71%) are unvaccinated**, **40 (22%) are vaccinated***, and **12 (7%) are up to date****.

Vaccinated and up to date patients are, on average, 7 years older (63 vs 56) and have an average of 4 co-morbidities compared to 3 for unvaccinated patients.



Of those 182 patients, 36 are currently in the ICU. Of these, **31 (86%) are unvaccinated**, **3 (8%) are vaccinated**, and **2 (6%) are up to date**.



Of those 36 ICU patients, 21 are on ventilators. Of these, **18 (85%) are unvaccinated**, **2 (10%) are vaccinated**, and **1 (5%) is up to date**.

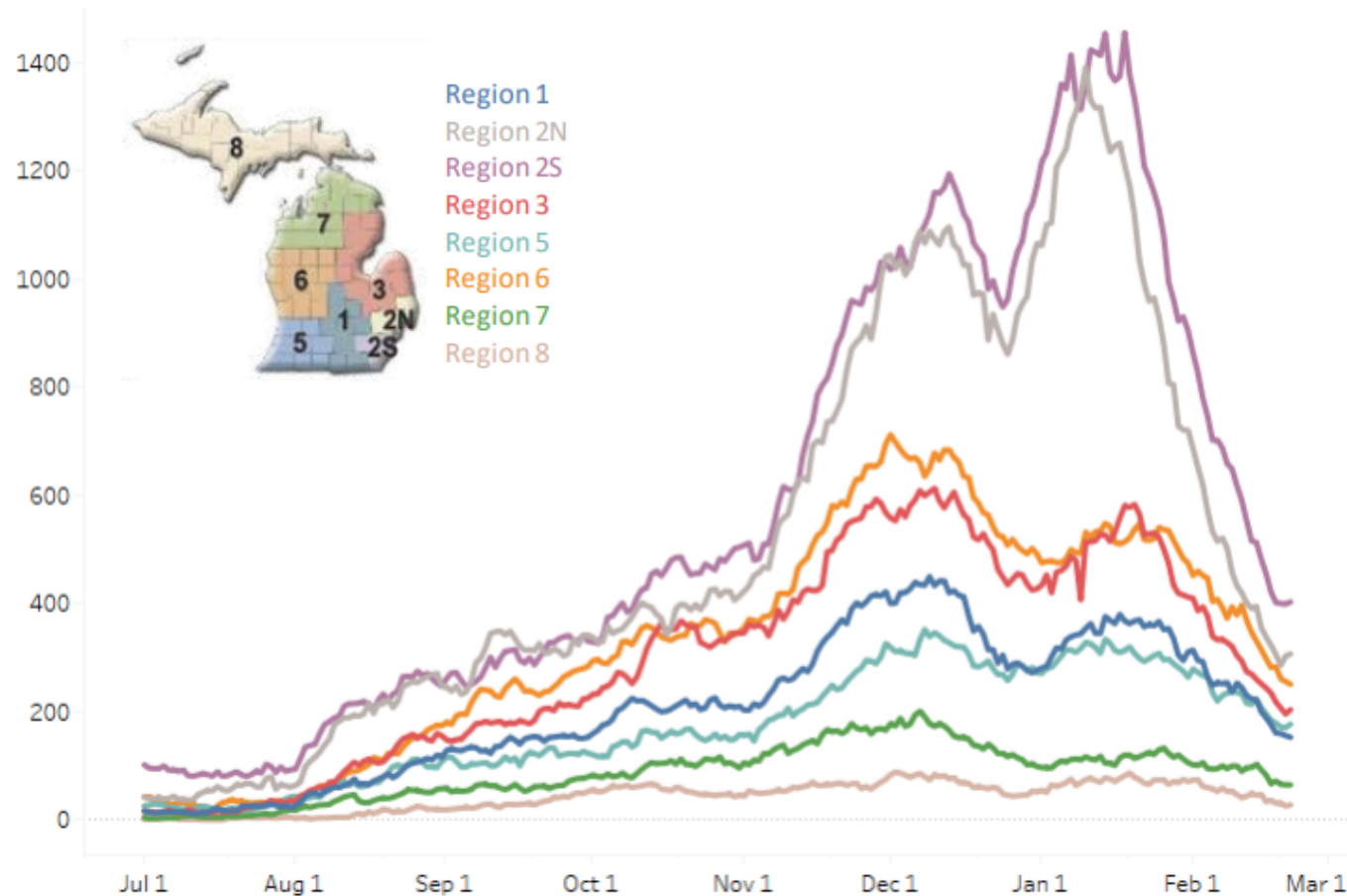


Data includes pediatric and adult COVID-19 positive inpatients across all Spectrum Health Hospitals.
*Vaccinated means a person has received their primary series of COVID-19 vaccines.
**Up to date means a person has received all recommended COVID-19 vaccines, including any booster dose(s) when eligible.

Source: <https://www.facebook.com/spectrumhealth/photos/a.126445034231/10159032286769232/>

Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 2/21/2022
Confirmed Positive by Region



This week hospitalizations have decreased in all regions.

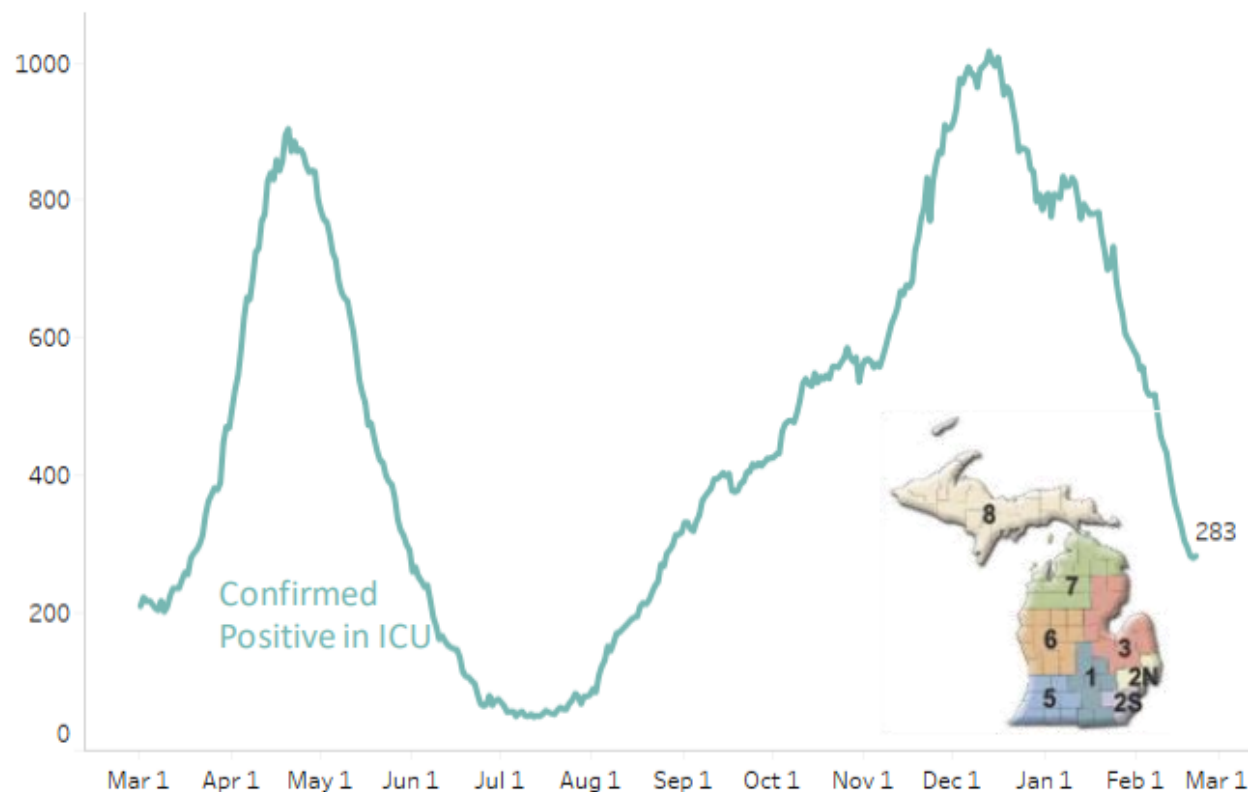
All regions have fewer than 200 hospitalizations/M.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	153 (-31%)	141/M
Region 2N	307 (-22%)	139/M
Region 2S	403 (-21%)	181/M
Region 3	204 (-22%)	180/M
Region 5	177 (-21%)	186/M
Region 6	251 (-24%)	171/M
Region 7	65 (-37%)	130/M
Region 8	28 (-39%)	90/M

Source: MDHHS Data and Modelling: https://www.michigan.gov/documents/coronavirus/20220222_Data_and_modeling_update_vPRESENT_002_748652_7.pdf

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 2/21/2022
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased by 21% from last week (previous week was down by 31%). All regions show decreasing trends in ICU census.

All regions have ICU occupancy below 85%. All regions have less than 20% of ICU beds filled with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	24 (-27%)	72%	13%
Region 2N	44 (-29%)	73%	8%
Region 2S	85 (-12%)	79%	12%
Region 3	44 (-27%)	84%	14%
Region 5	22 (-15%)	70%	12%
Region 6	41 (-20%)	79%	17%
Region 7	17 (-19%)	81%	13%
Region 8	6 (-14%)	57%	10%

Source: MDHHS Data and Modelling: https://www.michigan.gov/documents/coronavirus/20220222_Data_and_modeling_update_vPRESENT_002_748652_7.pdf

Pediatric Hospitalization Rates – USA, Georgia, Michigan



Pediatric hospitalization rates across the US, in Georgia, and in Michigan **show continued improvement.**

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

Accessed February 24, 2022

Pediatric Hospitalization Rates – Select Midwest States

OH | 0 - 17 Years



IN | 0 - 17 Years



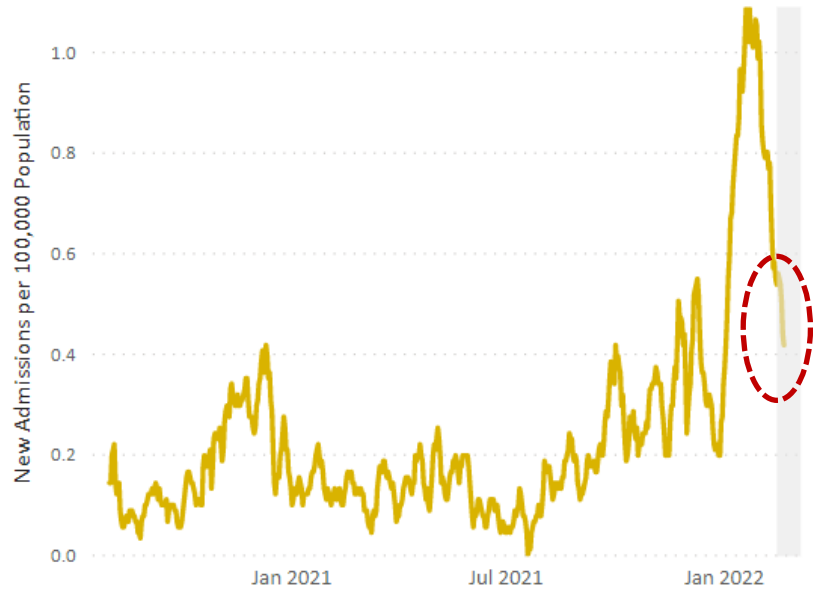
IL | 0 - 17 Years



Ohio, Indiana, and Illinois are all showing **improving pediatric hospitalization rates.**

Pediatric Hospitalization Rates – Select Midwest States

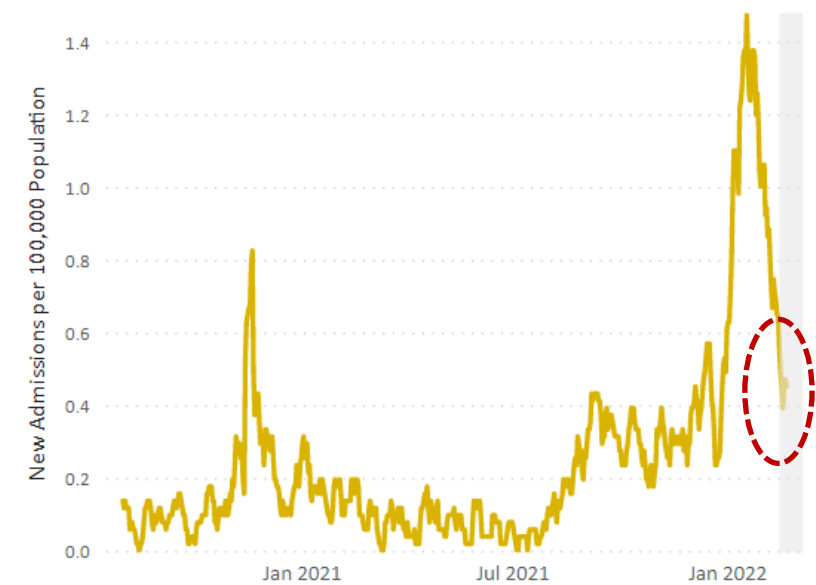
MN | 0 - 17 Years



WI | 0 - 17 Years



IA | 0 - 17 Years

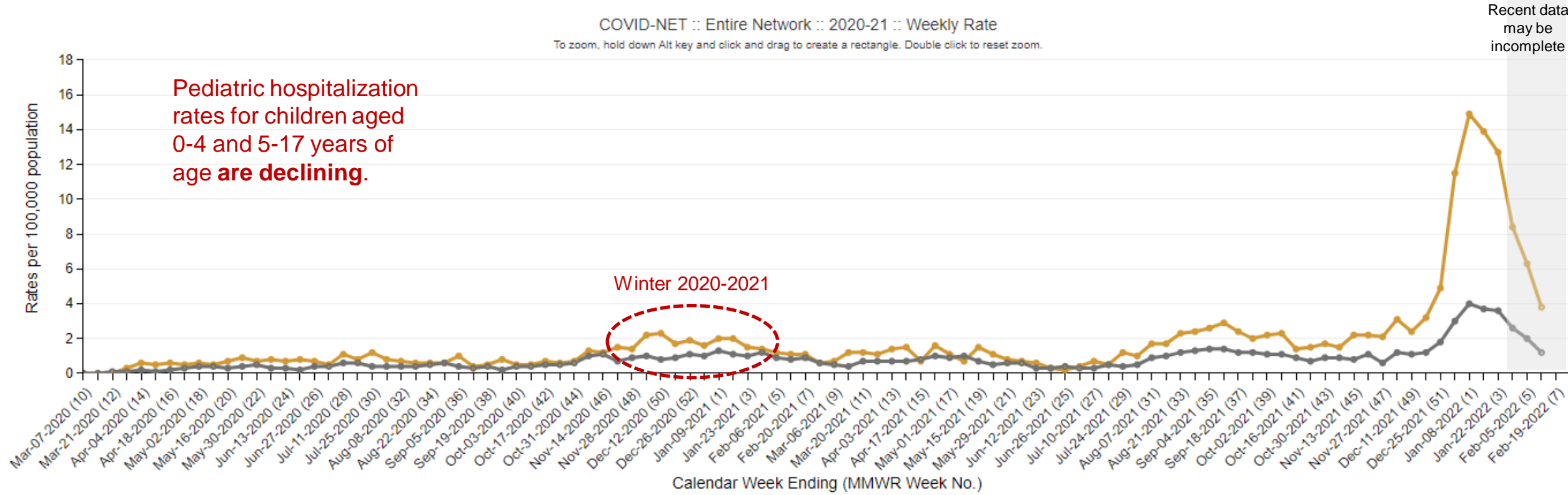


Pediatric hospitalization rates in Minnesota, Wisconsin, and Iowa are declining.

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

Accessed February 24, 2022

Pediatric Hospitalization Rates by Age Group – USA



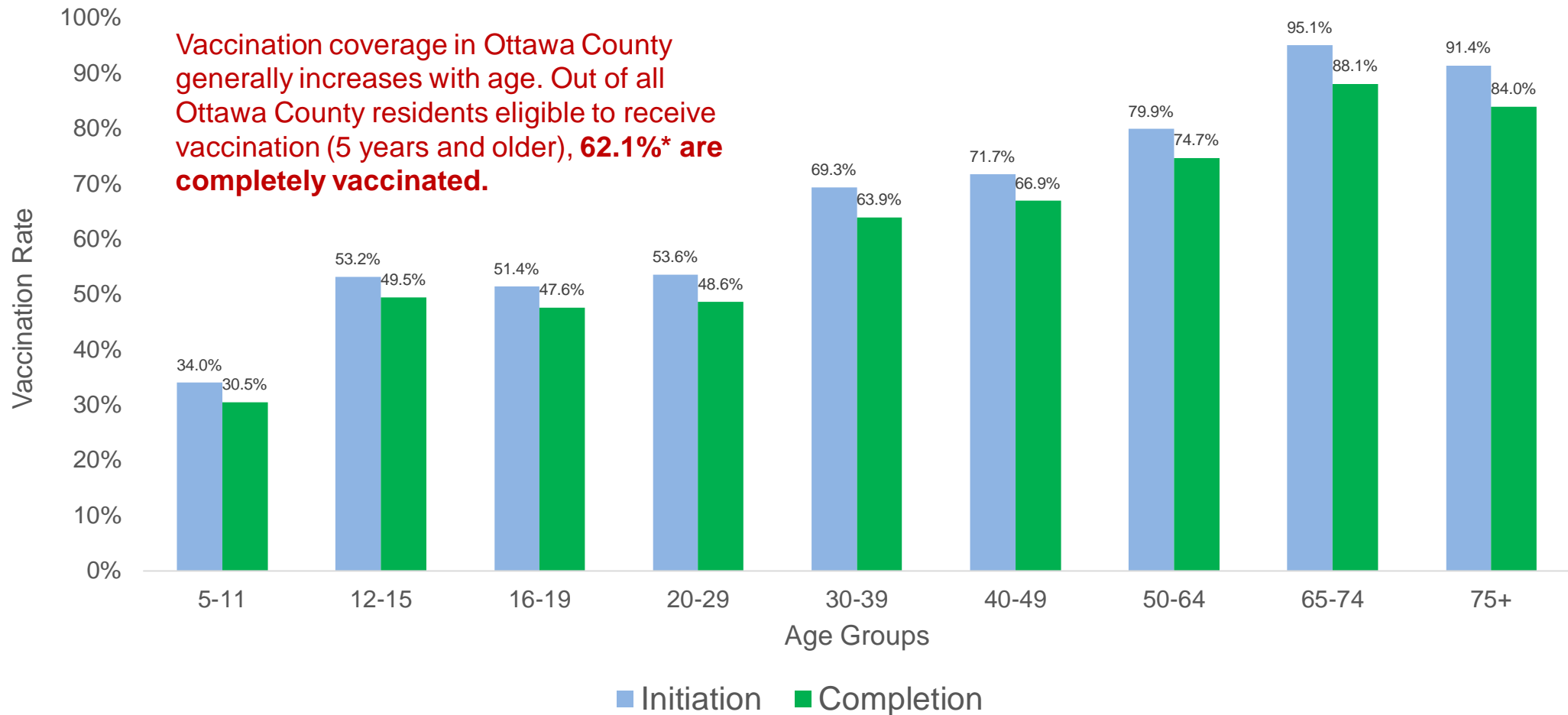
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case identification and reporting might increase around holidays or during periods of increased hospital utilization. As data are received each week, prior case counts and rates are updated accordingly. COVID-NET conducts population-based surveillance for laboratory-confirmed COVID-19-associated hospitalizations in children (less than 18 years of age) and adults. COVID-NET covers nearly 100 counties in the 10 Emerging Infections Program (EIP) states (CA, CO, CT, GA, MD, MN, NM, NY, OR, TN) and four Influenza Hospitalization Surveillance Project (IHSP) states (IA, MI, OH, and UT). Incidence rates (per 100,000 population) are calculated using the National Center for Health Statistics' (NCHS) vintage 2020 bridged-race postcensal population estimates for the counties included in the surveillance catchment area. The rates provided are likely to be underestimated as COVID-19 hospitalizations might be missed due to test availability and provider or facility testing practices.

Starting MMWR week 48, MD data are temporarily removed from weekly rate calculations.

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

Accessed February 24, 2022

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.

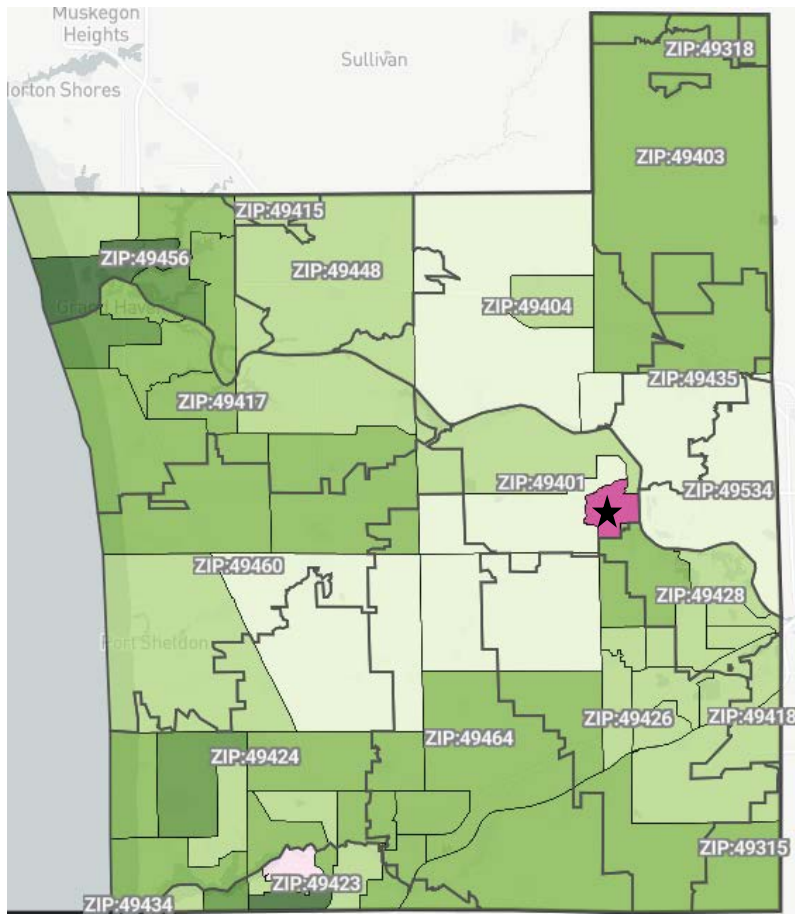
*MDHHS recently conducted an update that impacted vaccine recipient addresses resulting a small reduction in Ottawa County vaccination rates (~1 percentage point).

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

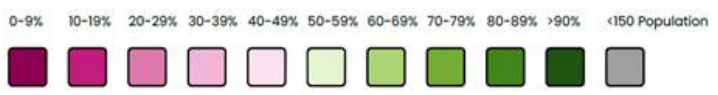
Data through February 22, 2022

Vaccination Coverage by Place of Residence

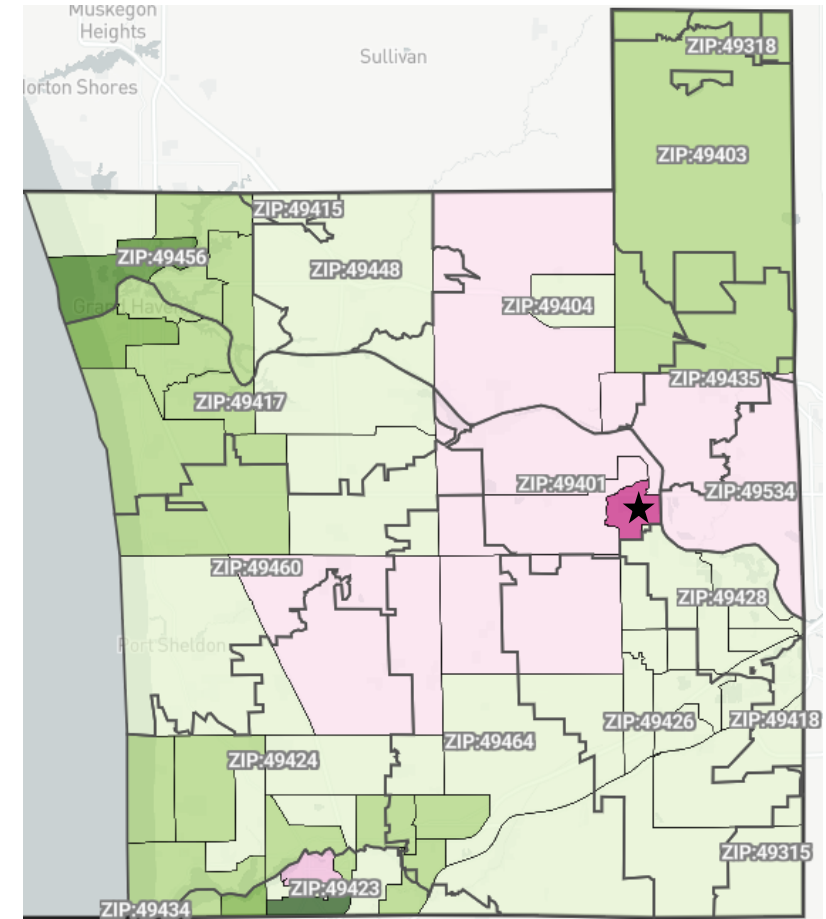
Fully vaccinated: % Ages 16+ years



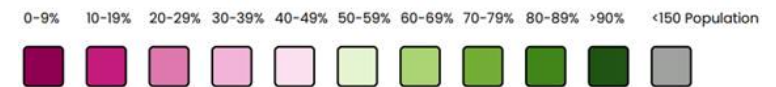
Color coded by: Fully Vaccinated (% Ages 16+)



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.

Cumulative Cases by Vaccination Status, Ottawa County, January 15, 2021 – February 19, 2022

Fully Vaccinated People (169,868)	
Cases	Deaths
Percent of Cases in People Not Fully Vaccinated (35,708 / 53,619) 66.6%	Percent of Deaths in People Not Fully Vaccinated (274 / 418) 65.6%
Total Cases Not Fully Vaccinated 35,708	Total Deaths Not Fully Vaccinated 274
Total Breakthrough Cases 17,911	Total Breakthrough Deaths 144
Percent of Fully Vaccinated People who Developed COVID-19 (17,911 / 169,868) 10.5%	Percent of Fully Vaccinated People who Died of COVID-19 (144 / 169,868) 0.09%
Percent of Cases who were Fully Vaccinated (17,911 / 53,619) 33.4%	Percent of Deaths who were Fully Vaccinated (144 / 418) 34.4%
Total Cases 53,619	Total Deaths 418

Due to reduced quality, hospitalization data has been removed from this visualization.

Note:

MDHHS recently conducted an update that impacted vaccine recipient addresses resulting a small reduction in Ottawa County vaccination rates (~1 percentage point).

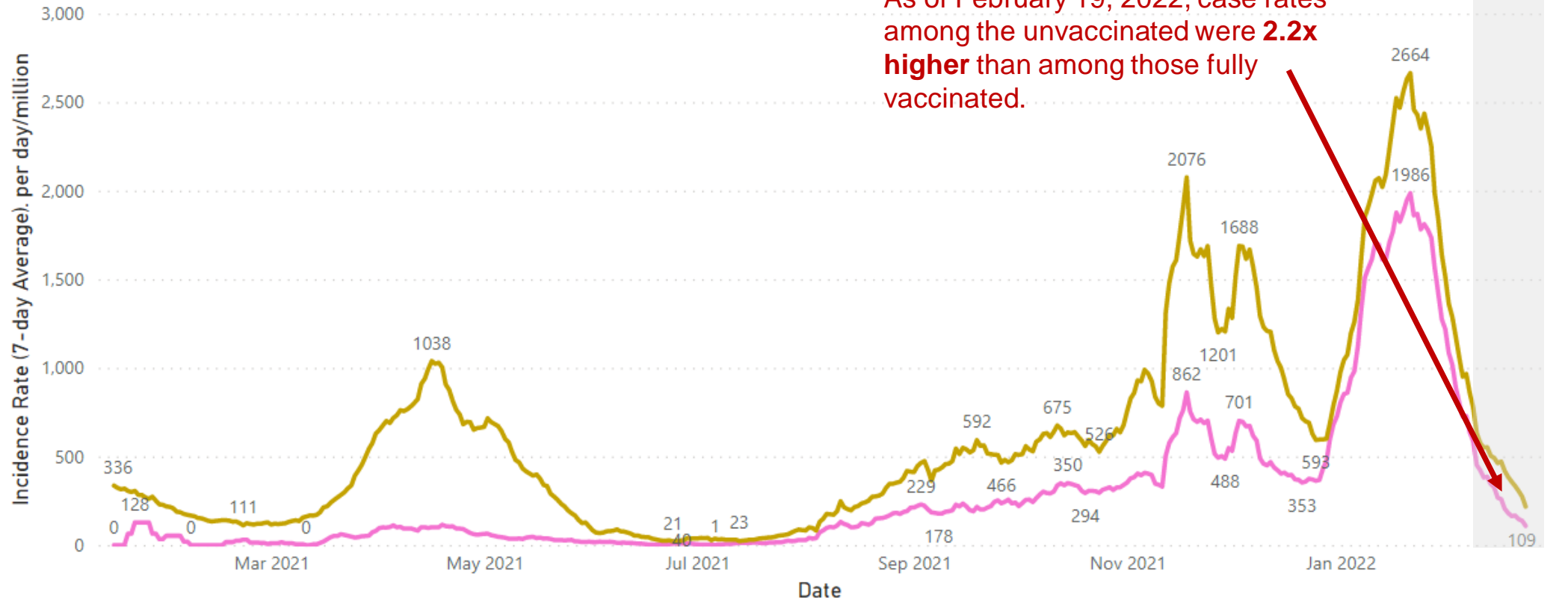
Sources:

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 ● Unvaccinated



As of February 19, 2022, case rates among the unvaccinated were **2.2x higher** than among those 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. On December 22, 2021 this figure was updated to compare fully vaccinated and unvaccinated persons, to align more closely with [CDC data](#); partially vaccinated persons were excluded.

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

Sources:

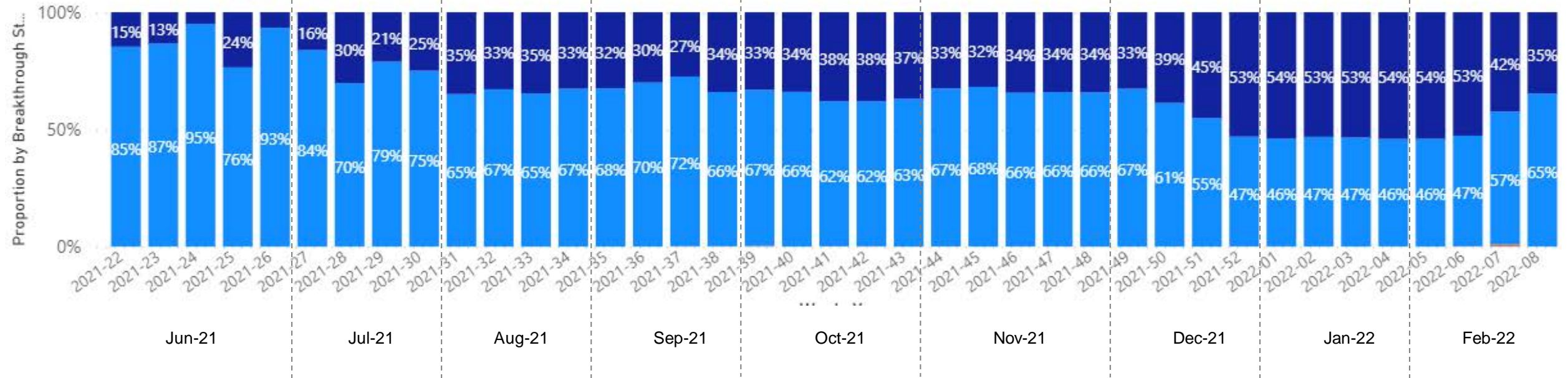
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
 MDHHS COVID-19 Dashboard: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

By Week

Breakthrough Proportions by Week

Vaccine_Breakthrough ● ● NO ● YES



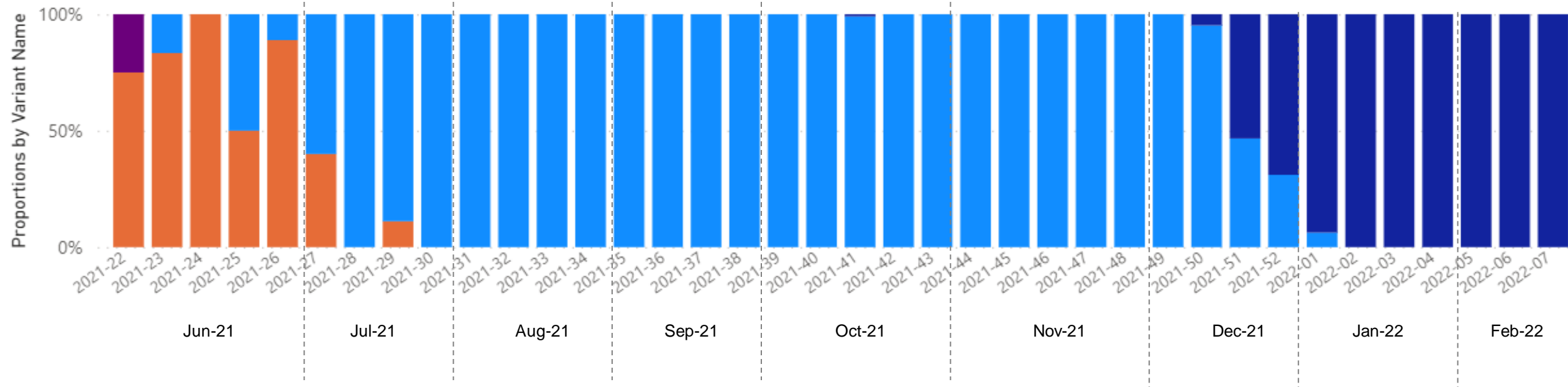
Through the Delta wave, which was most pronounced August through early December of 2021, about 34% of all cases reported to public health were breakthrough cases. At the end of 2021 and into 2022, the proportion of vaccine breakthrough cases increased to roughly 50% of cases reported each week. Weekly breakthrough rates observed in Ottawa County are similar to [other geographies reporting this same data](#).

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

Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

Variant Name ● Alpha ● Delta ● Gamma ● Omicron

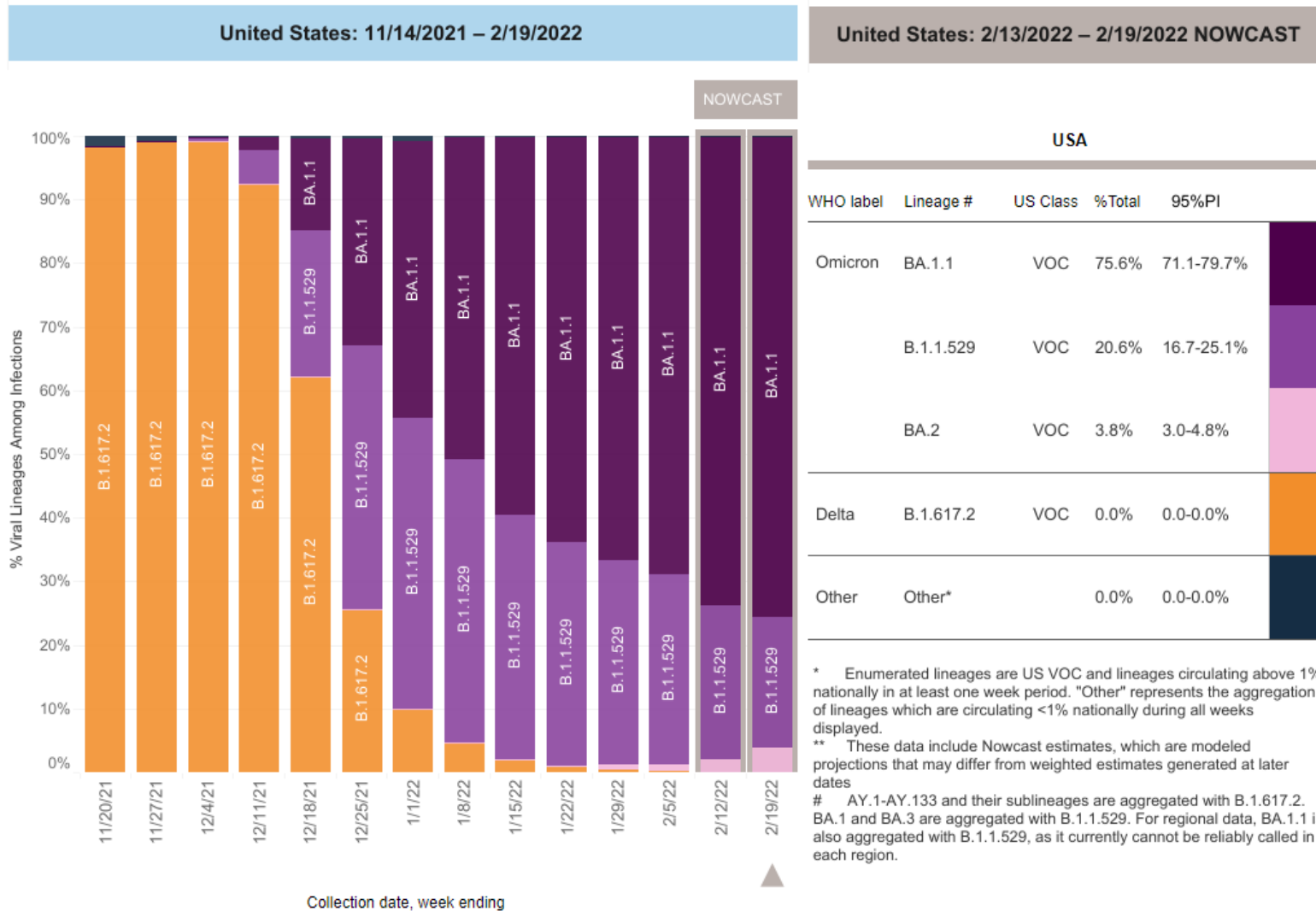


In June of 2021, most clinical samples* submitted for variant testing came back as the **Alpha** variant. By the end of July 2021, all clinical samples tested were returned as the **Delta** variant. From late July through early December 2021 all clinical samples submitted for variant testing came back positive for the **Delta** variant. In mid-December 2021, the first **Omicron** positive samples were collected in an Ottawa County resident, and **Omicron** continues to be detected into 2022 (along with **Delta** in wastewater).

* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants.

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

Variants – Clinical Samples from Across the USA



The **Omicron** variant is estimated to account for close to 100% of all clinical samples collected in the United States the week ending February 19, 2022.

Omicron subvariants are also circulating, but their impact on transmission in near-term is unknown.

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%

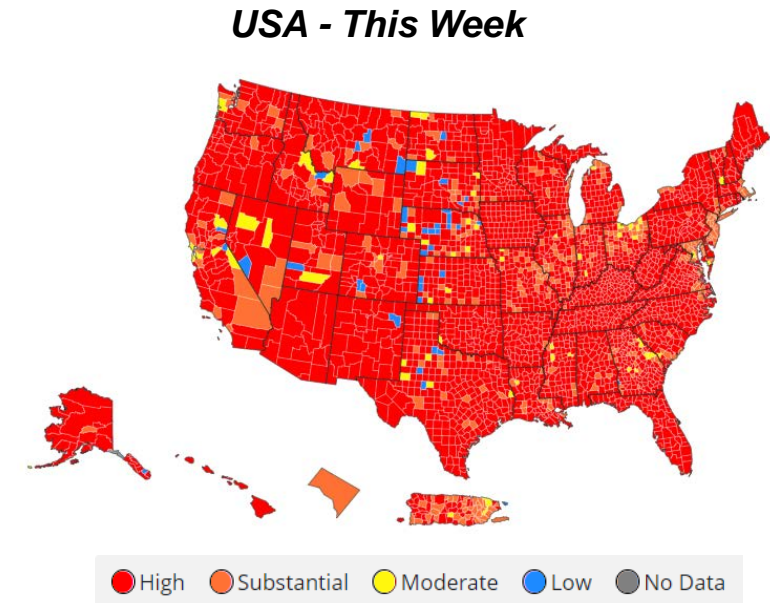
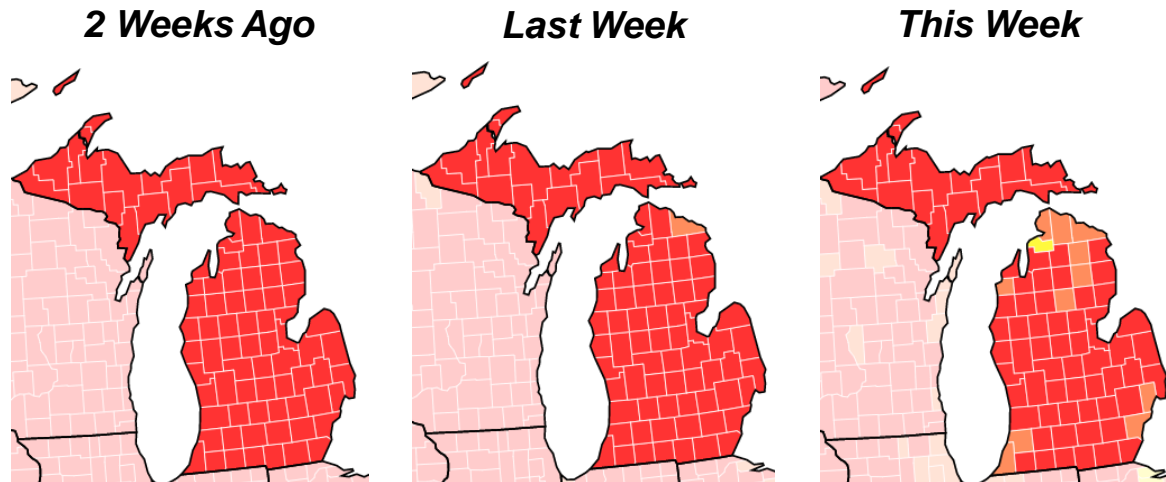
Ottawa's goal is to be in the Moderate category*

Ottawa is in the High category right now

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 27+ weeks)
- Current Data:
 - Positivity = 12.97%
 - Case Rate = 118.56 cases per week per 100,000



Data through February 21, 2022
for case rates and through
February 19, 2022 for positivity.

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

COVID-19 Case Rates by County Across the US

Last Week

Hot spots

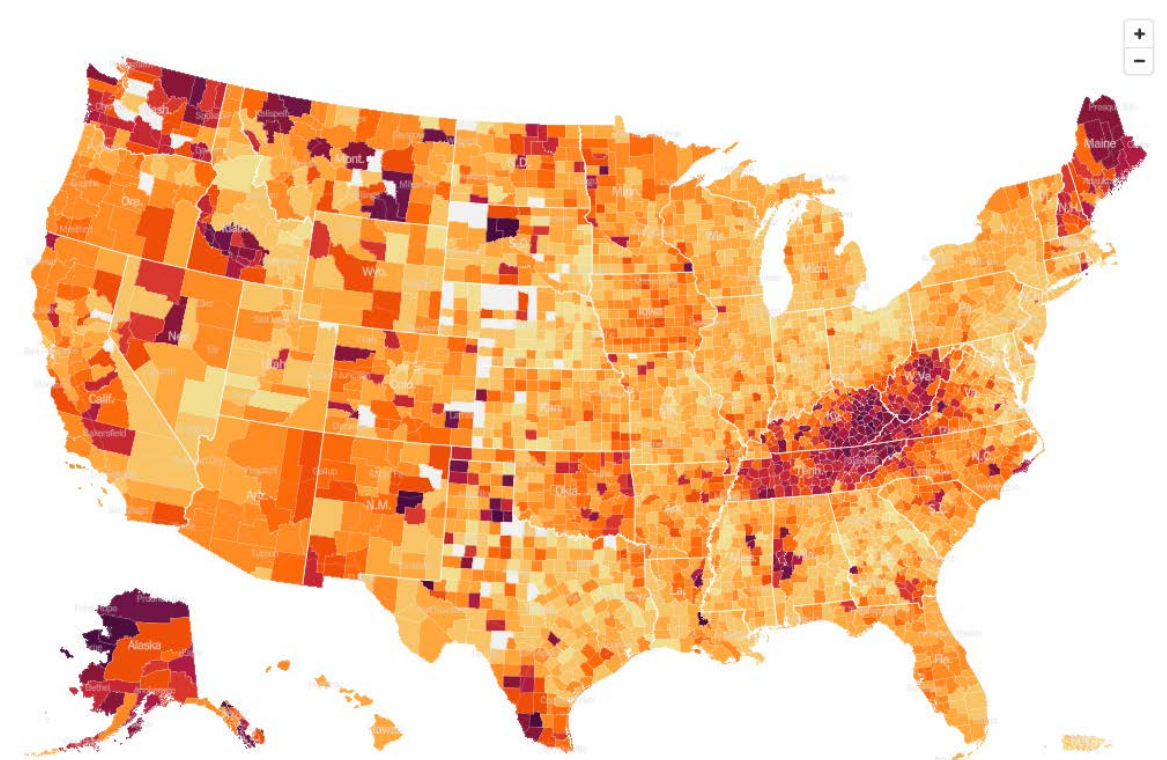
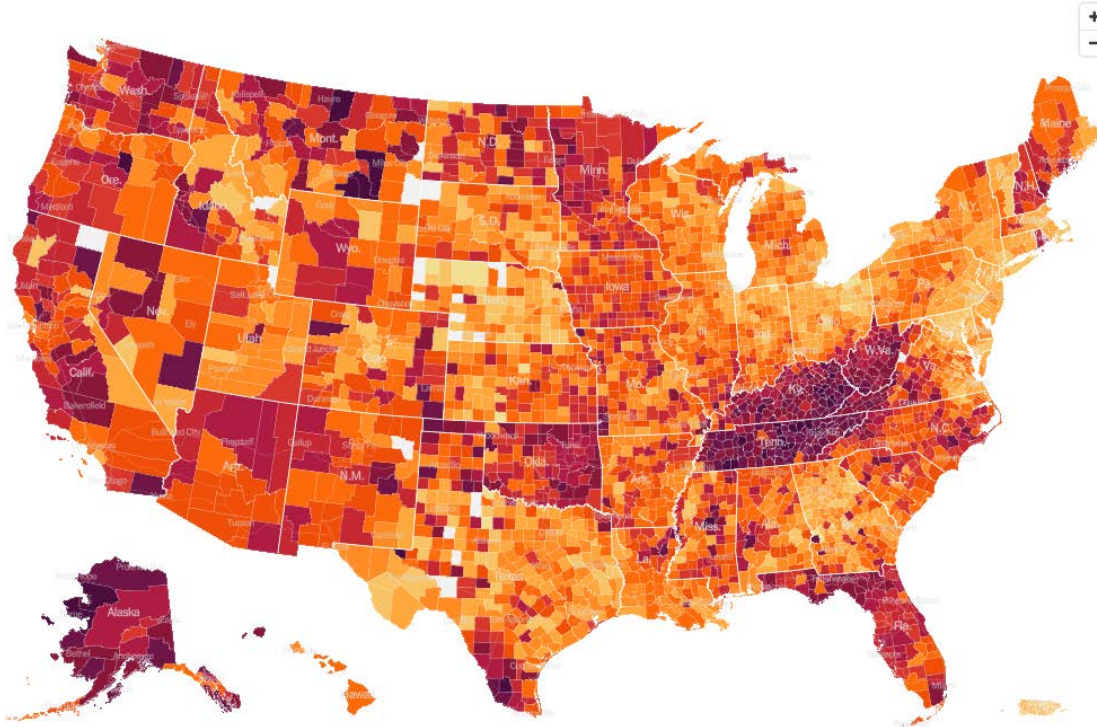
AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK
10 30 50 70 100 200 FEW OR NO CASES



This Week

Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK
10 30 50 70 100 200 FEW OR NO CASES



Case rate improvements are noted across the nation.

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

Accessed February 23, 2022

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

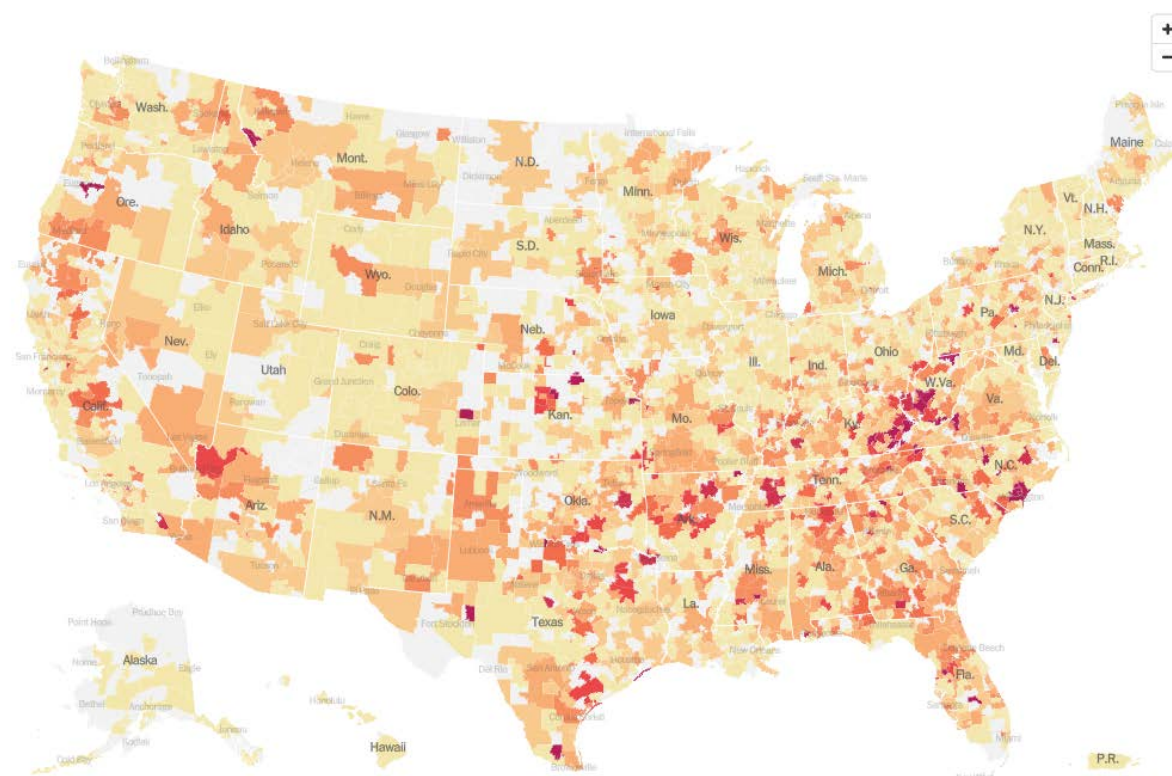
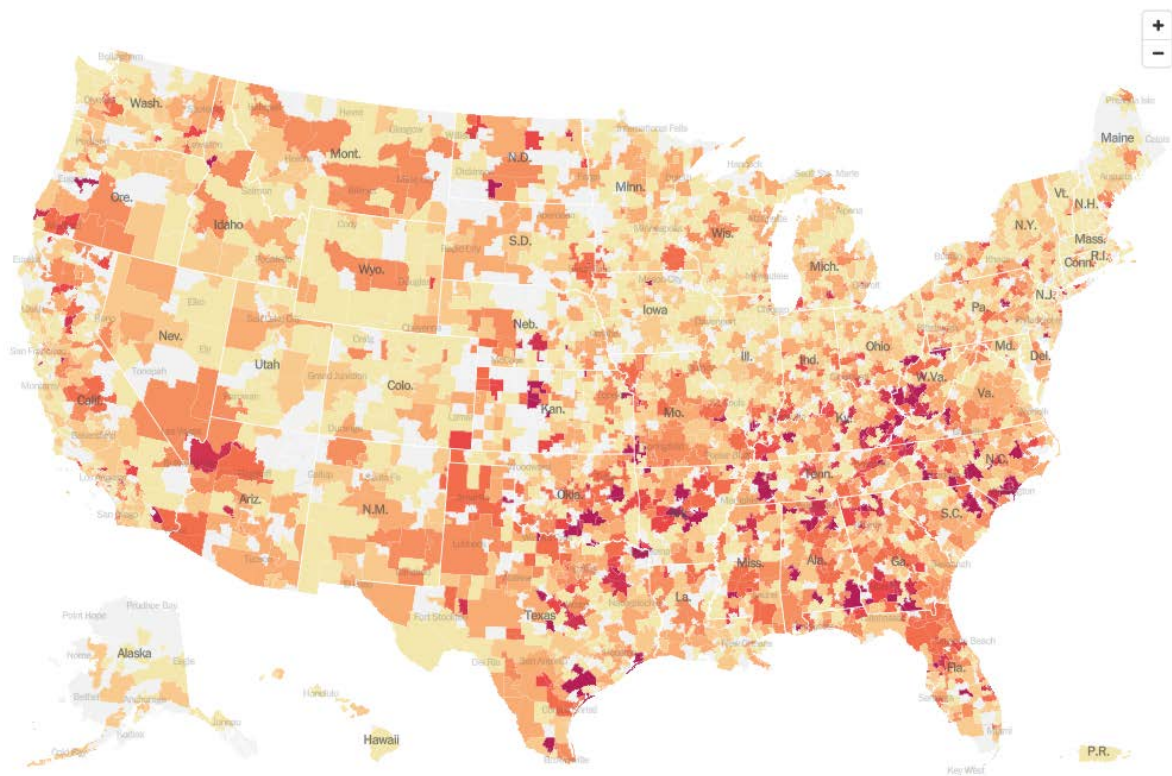
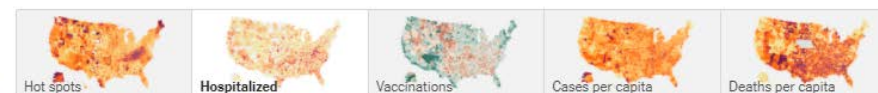
Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE
20 30 40 50 60 70 80 NO DATA



Current hospitalizations

COVID-19 PATIENTS PER 100,000 PEOPLE
20 30 40 50 60 70 80 NO DATA



Hospitalization rates continue to improve across the nation.

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

Accessed February 23, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science Roundup

Status of School Mask Rules

Place	Status	Tentative Rescind Date
State		
California	In place	-
Connecticut	In place	February 28, 2022
Deleware	In place	March 31, 2022
Hawaii	In place	-
Illinois	Court proceedings in process	Court proceedings in process
Maryland	In place	By March 1, 2022
Massachusetts	In place	February 28, 2022
New Mexico	Rescinded	-
New Jersey	In place	March 7, 2022
New York	In place	-
Nevada	Rescinded	-
Oregon	In place	March 31, 2022
Rhode Island	In place	March 4, 2022
Washington	In place	March 21, 2022
Washington D.C.	In place	-
Michigan County		
Antrim	Rescinded	-
Benzie	Rescinded	-
Charlevoix	Rescinded	-
Emmet	Rescinded	-
Ingham	Rescinded	-
Leelanau	Rescinded	-
Oakland	In place	March 1, 2022
Otsego	Rescinded	-
Washtenaw	In place	February 28, 2022
Wayne	In place	March 1, 2022
Ottawa School District		
Black River	In place	-
Holland Public	Rescinded	-
Grand Haven Public	In place	February 28, 2022

Note: Information is changing rapidly, lists may not be comprehensive or up-to-date.

As of February 23, 2022

COVID-19 News Headlines

Michigan COVID data for Thursday, Feb. 17: Cases 8 times lower than 4 weeks ago

<https://www.mlive.com/public-interest/2022/02/michigan-covid-data-for-thursday-feb-17-cases-8-times-lower-than-4-weeks-ago.html>

Michigan doctor urges COVID vaccine as new data shows it protects babies too

<https://www.mlive.com/public-interest/2022/02/michigan-doctor-urges-covid-vaccine-as-new-data-shows-it-protects-babies-too.html>

Holland Public Schools to Ease Mask Requirements

<https://whtc.com/2022/02/17/holland-public-schools-to-ease-mask-requirements/>

Michigan health department updates mask guidance

<https://www.woodtv.com/health/coronavirus/michigan-health-department-updates-mask-guidance/>

Covid infections plummet 90% from U.S. pandemic high, states lift mask mandates

<https://www.cnbc.com/2022/02/22/covid-infections-plummet-90percent-from-us-pandemic-high-states-lift-mask-mandates.html>

Sanofi, GSK to seek approval for COVID vaccine candidate

<https://www.reuters.com/business/healthcare-pharmaceuticals/sanofi-gsk-seek-covid-19-vaccine-candidate-approval-2022-02-23/>

Science Roundup

Occurrence and significance of Omicron BA.1 infection followed by BA.2 reinfection

<https://www.medrxiv.org/content/10.1101/2022.02.19.22271112v1>

← A pre-print study published by Danish researchers found that reinfection with an Omicron subvariant after initial Omicron infection is likely rare.

Contribution of Individual- and Neighborhood-Level Social, Demographic, and Health Factors to COVID-19 Hospitalization Outcomes FREE

<https://www.acpjournals.org/doi/10.7326/M21-2615#ta1-M212615>

← A study of people hospitalized with COVID-19 in Michigan hospitals found that people living in high-vulnerability zip codes had a higher probability of poor outcomes compared to those from lower-vulnerability zip codes.

Effectiveness of mRNA-1273 against SARS-CoV-2 Omicron and Delta variants

<https://www.nature.com/articles/s41591-022-01753-y>

← A large study published by Kaiser Permanente found that 2 doses of Moderna vaccination were 44% effective at preventing Omicron infection (14-90 days after last dose), and 3 doses were 47% effective at preventing Omicron infection more than 60 days after last dose.

COVID-19 Incidence Among 6th-12th Grade Students by Vaccination Status FREE

<https://publications.aap.org/pediatrics/article/doi/10.1542/peds.2022-056230/184855/COVID-19-Incidence-Among-6th-12th-Grade-Students>

← A school cohort study published out of North Carolina found that vaccine effectiveness was 89.1% against symptomatic infection through the Fall 2021 semester.