miOttawa Department of Public Health

Ottawa County COVID-19 Epidemiology

April 7, 2022

Data as of April 2, 2022, unless otherwise indicated

Executive Summary

- **Transmission in Michigan and the US remains low**

- **Ottawa community transmission levels remain low**
  - This past week positivity remained stable at 5.3%, compared to 5.4% seen two weeks ago.
  - Weekly case counts **decreased** 21% (+21% two weeks ago), from 149 two weeks ago to 126 last week.
  - Cases among children **increased** 38% (-35% two weeks ago), from 13 two weeks ago to 18 last week.
  - The Omicron variant remains the predominate local strain; the first Omicron subvariant BA.2 reported in Ottawa County was detected in a clinical sample collected March 6, 2022.

- **Ottawa-area and regional hospitals have improved capacity**
  - In Ottawa County, 4% of all available beds and 7% of all ICU beds are occupied by COVID-19 patients.*
  - One Ottawa-area hospital employed Emergency Department diversion last week.
  - All Ottawa hospitals have returned to usual care strategies.
  - No Ottawa-area hospitals reported critical staffing challenges over the last seven weeks.

- **Pediatric hospitalization rates in the US and in Michigan are improving**
  - Regional pediatric hospitalization census fell below the pandemic average the past three weeks.

- **Of Ottawa County residents aged 5+, 62.7% have completed at least their primary vaccination series**

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

Ottawa County Metrics by Week

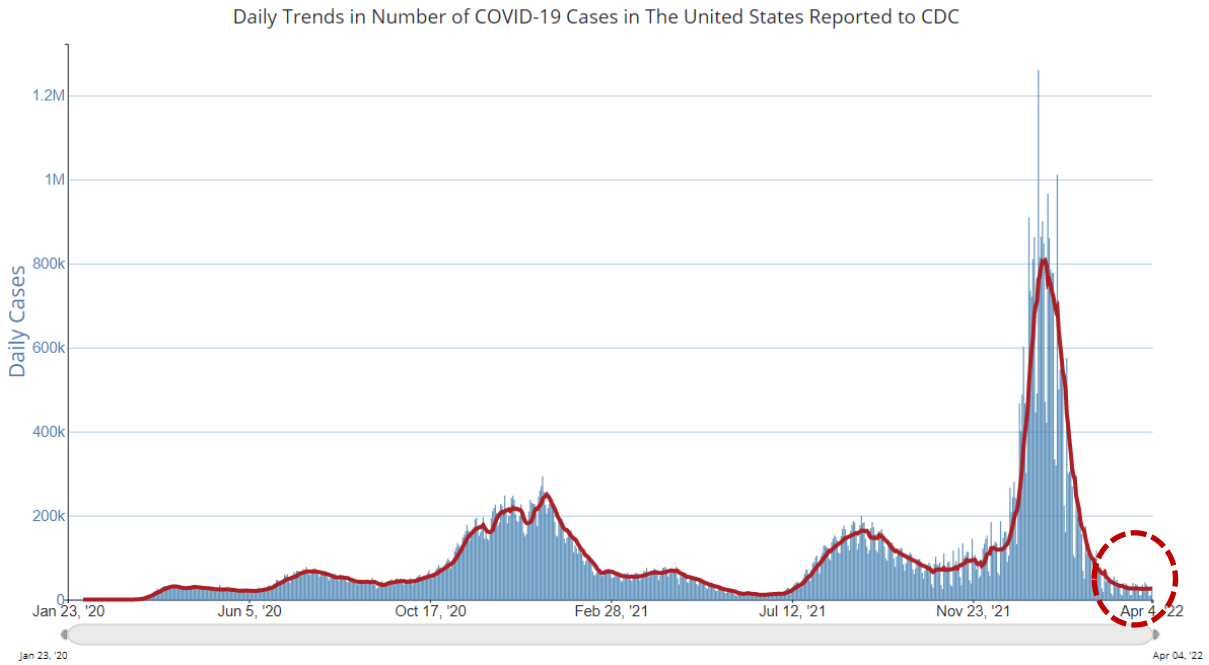
		Week Ending				
Metric	Goal	5-Mar-22	12-Mar-22	19-Mar-22	26-Mar-22	2-Apr-22
Positivity (All Ages)	NA	6.3%	4.9%	5.1%	5.4%	5.3%
Weekly Cases (All Ages)	<592	172	131	122	149	126
Weekly Cases in Children (0-17 years of age)	NA	33	26	20	13	18
Total Deaths (All Ages)	0	4	1	3	3	0
CDC COVID-19 Community Level (New)	Low	Low	Low	Low	Low	Low

Please note that with updated CDC Community Risk Transmission levels, metrics and/or metric thresholds/goals may change.

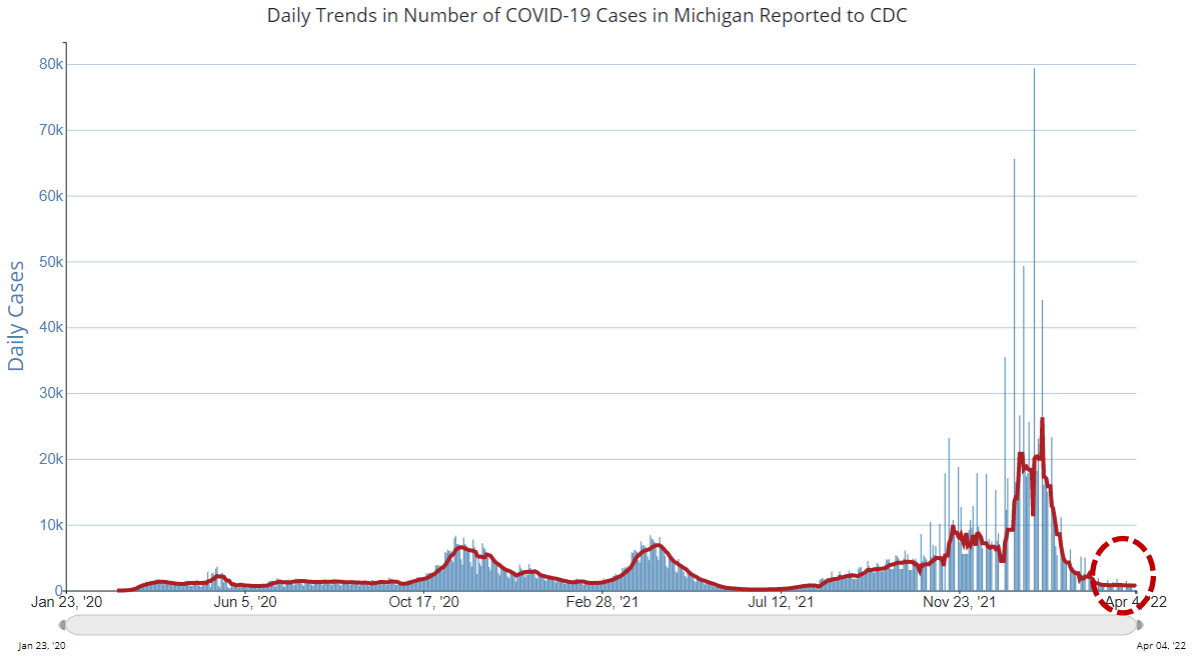
Notes: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases. Hospitalization and/or death may occur after initial infection, meaning the number of hospitalizations and deaths from recent weeks may increase

Case Trends in the USA and Michigan

USA



Michigan



Daily case counts in the US and Michigan **remain much lower than previous times in the pandemic**.

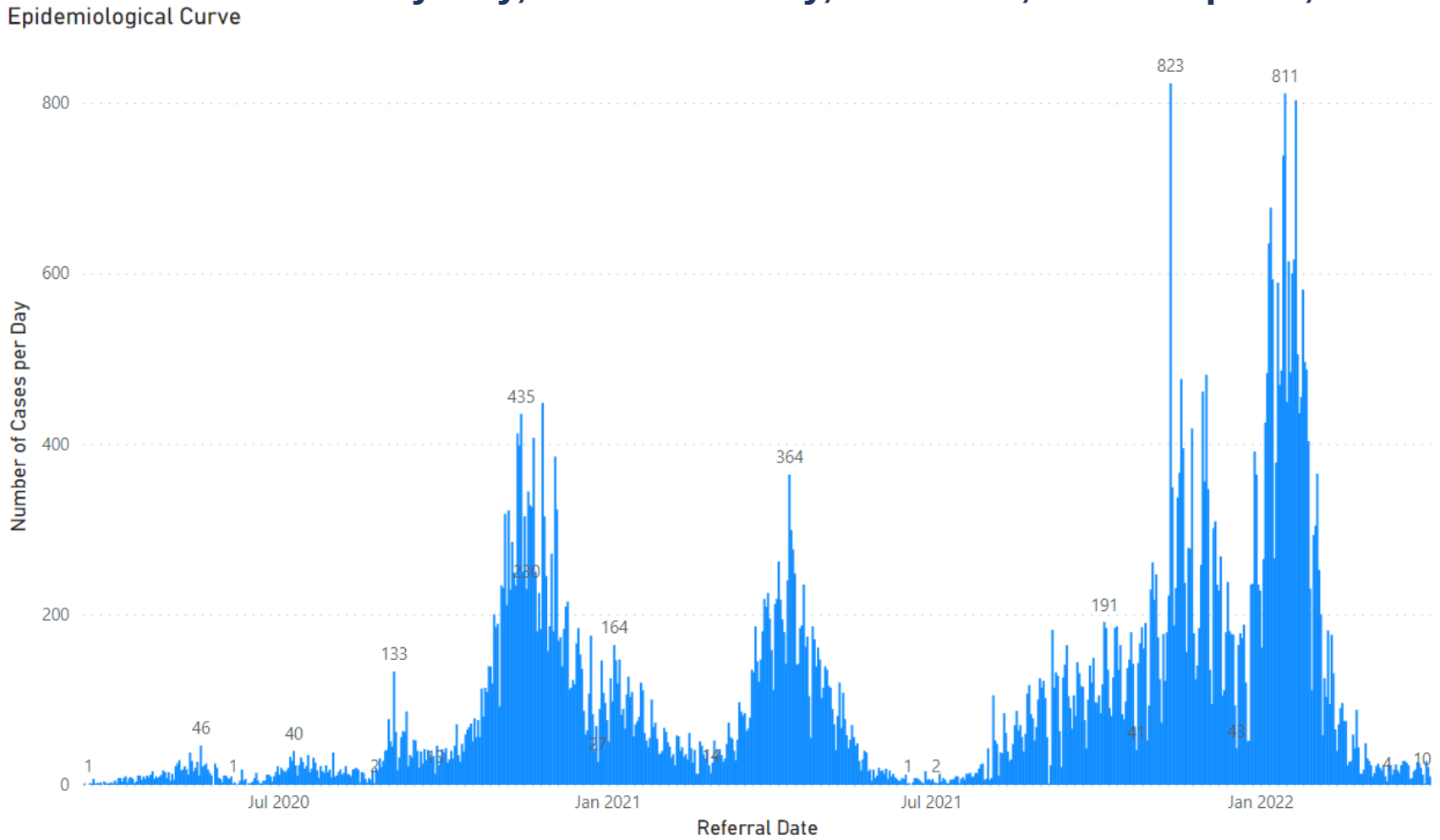
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases.

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

Data through April 4, 2022

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – April 6, 2022



Total Number of Cases

74,799

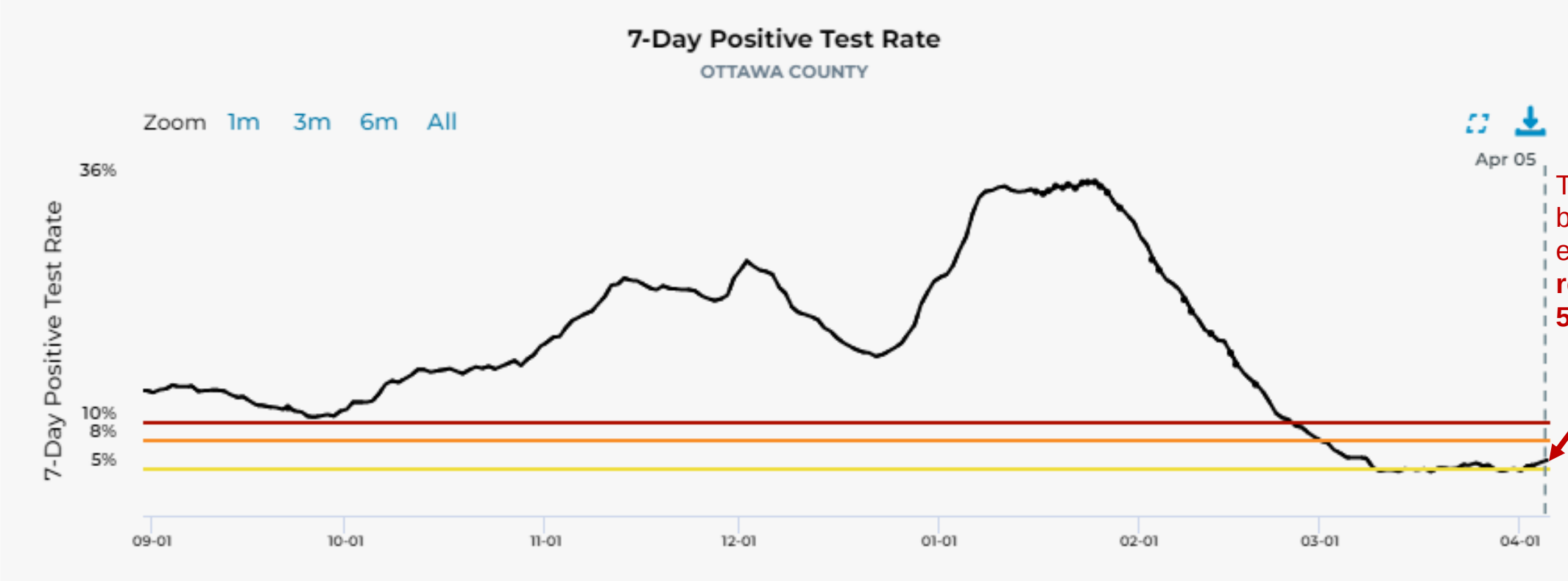
Currently the 7-day average is **17 cases per day,** similar to the 16 cases per day seen at last week at this time.

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, September 1, 2021 – April 05, 2022



Test positivity has been in decline for eight weeks, **remaining at a low 5.9% last week.**

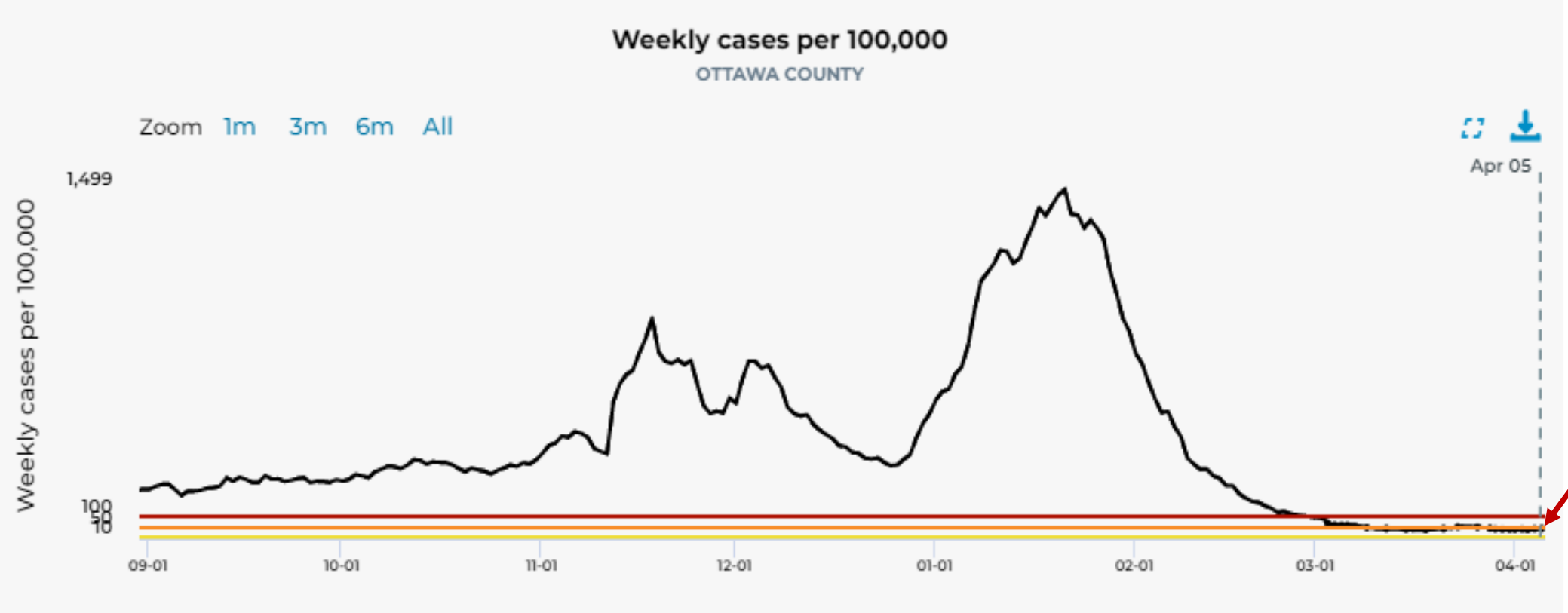
Please note that this visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

Note: Testing in Ottawa County has declined over the last 4 weeks, peaking at nearly 5,000 tests in week (week 6) and declining to about 1,800 tests last week (week 10): 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, September 1, 2021 – April 05, 2022



Case rates **remained low at 45** cases per week per 100,000 population (**about the same as 41** the week prior).

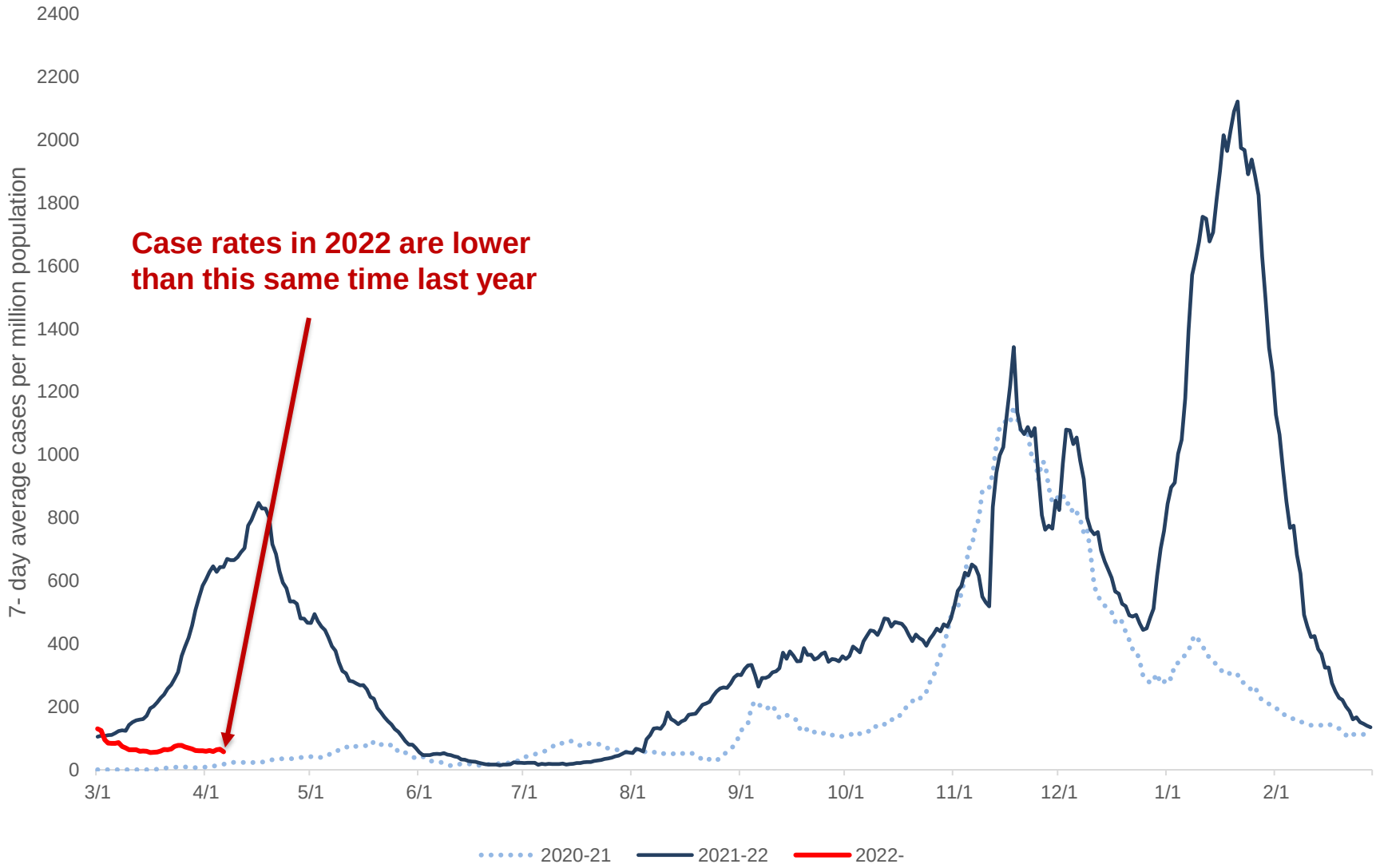
Please note that with updated CDC Community Transmission levels, metrics and/or metric thresholds/goals may change.

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

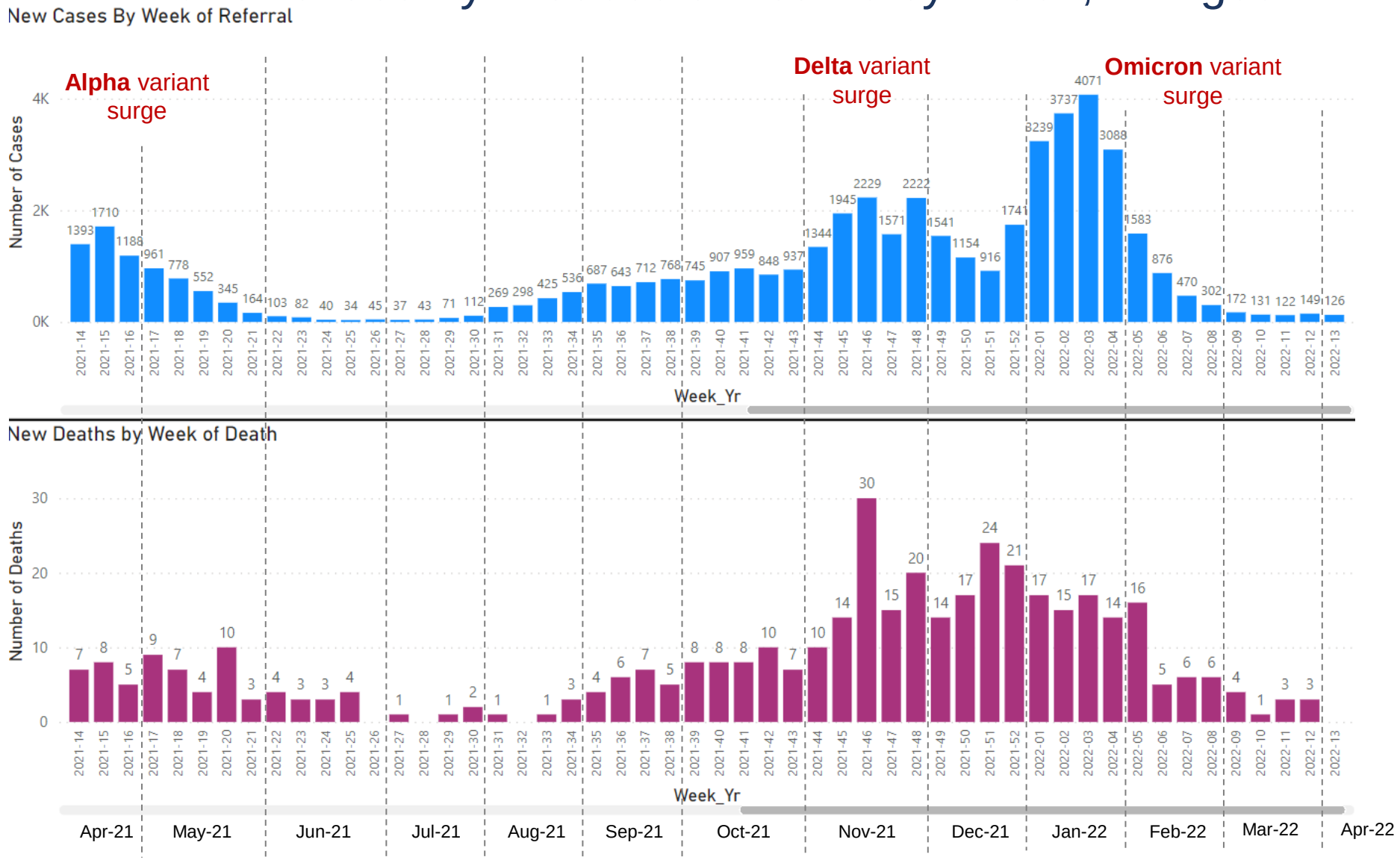
Ottawa County Time Trends – Annual Comparison of Case Rates



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 April 6, 2022

Ottawa County – Cases & Deaths by Week, All Ages



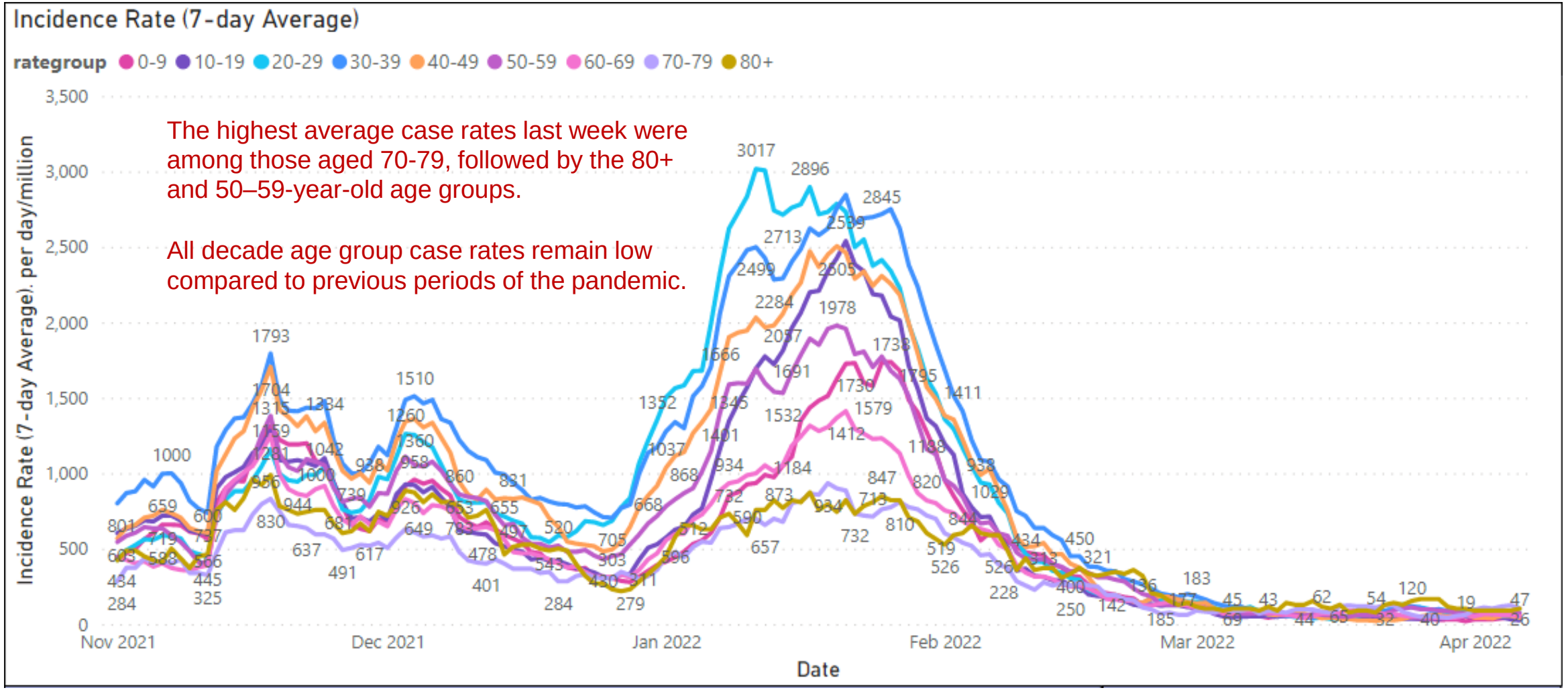
The weekly number of **cases decreased 15%** from week 12 to week 13.

Weekly COVID-19 **deaths have declined.** Current weekly average of deaths over the last 4 weeks stands at about **2 deaths per week.**

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, November 2021 – April 6, 2022



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 13 (March 27, 2022 – April 2, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	1.1	31.0	-12%
10-19	2.0	45.2	27%
20-29	2.6	56.8	-44%
30-39	2.4	67.8	-37%
40-49	1.4	43.1	-16%
50-59	2.6	73.7	-25%
60-69	2.1	65.7	36%
70-79	2.3	110.9	129%
80+	1.0	89.8	-46%

Please note that low case counts may make case rates unstable, reducing reliability. Be cautious using this data to inform decisions.

Age groups with highest average case rates last week:
1. 70-79
2. 80+
3. 50-59

Age groups with largest week-over-week <u>increase</u> in case rates:
1. 70-79
2. 60-69
3. 10-19

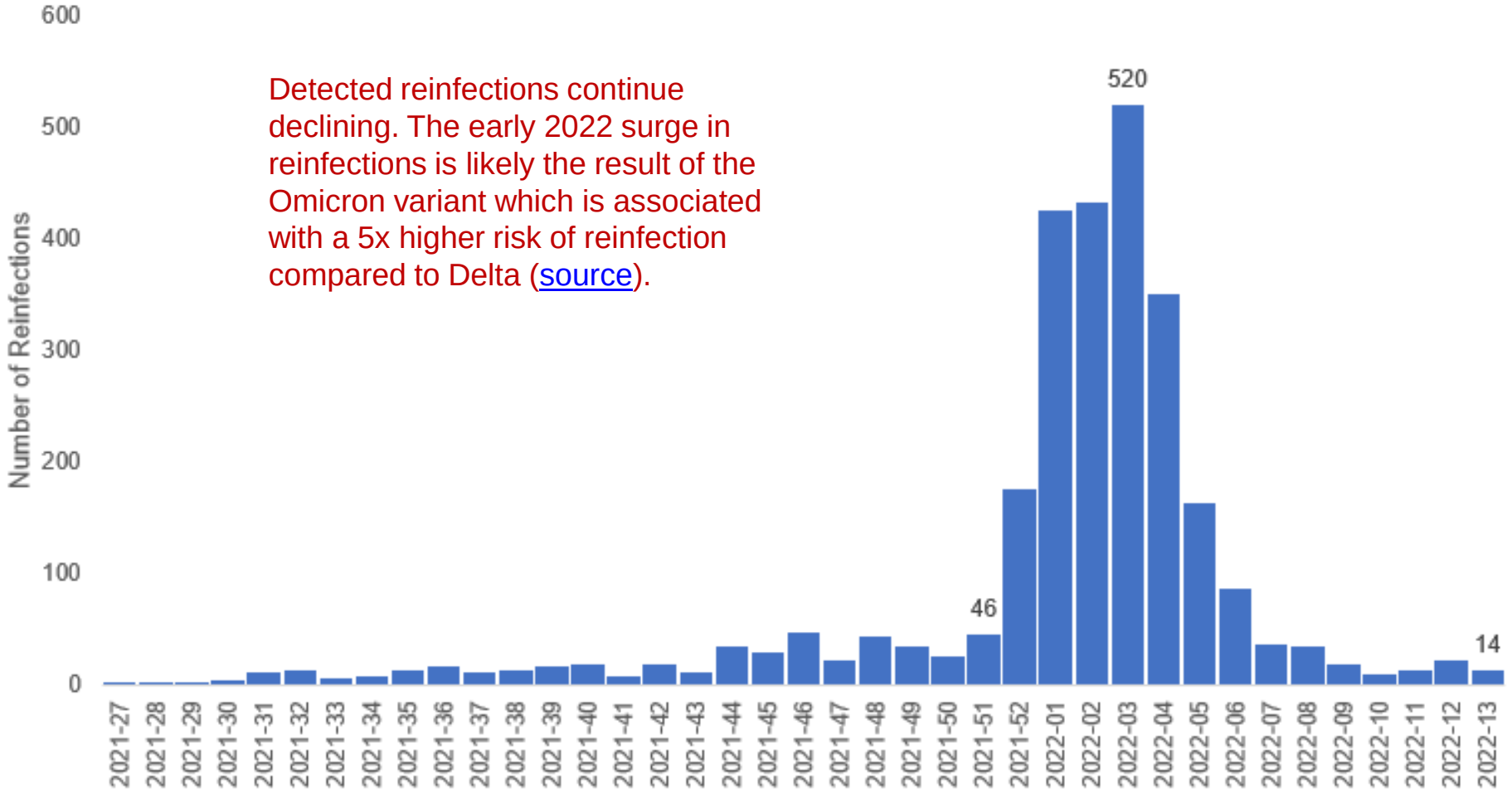
Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

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

Data as April 6, 2022

Ottawa County – Reinfections by Week

Detected reinfections continue declining. The early 2022 surge in reinfections is likely the result of the Omicron variant which is associated with a 5x higher risk of reinfection compared to Delta (source).



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 April 6, 2022

Ottawa County Weekly Case Counts and % Change, by Age

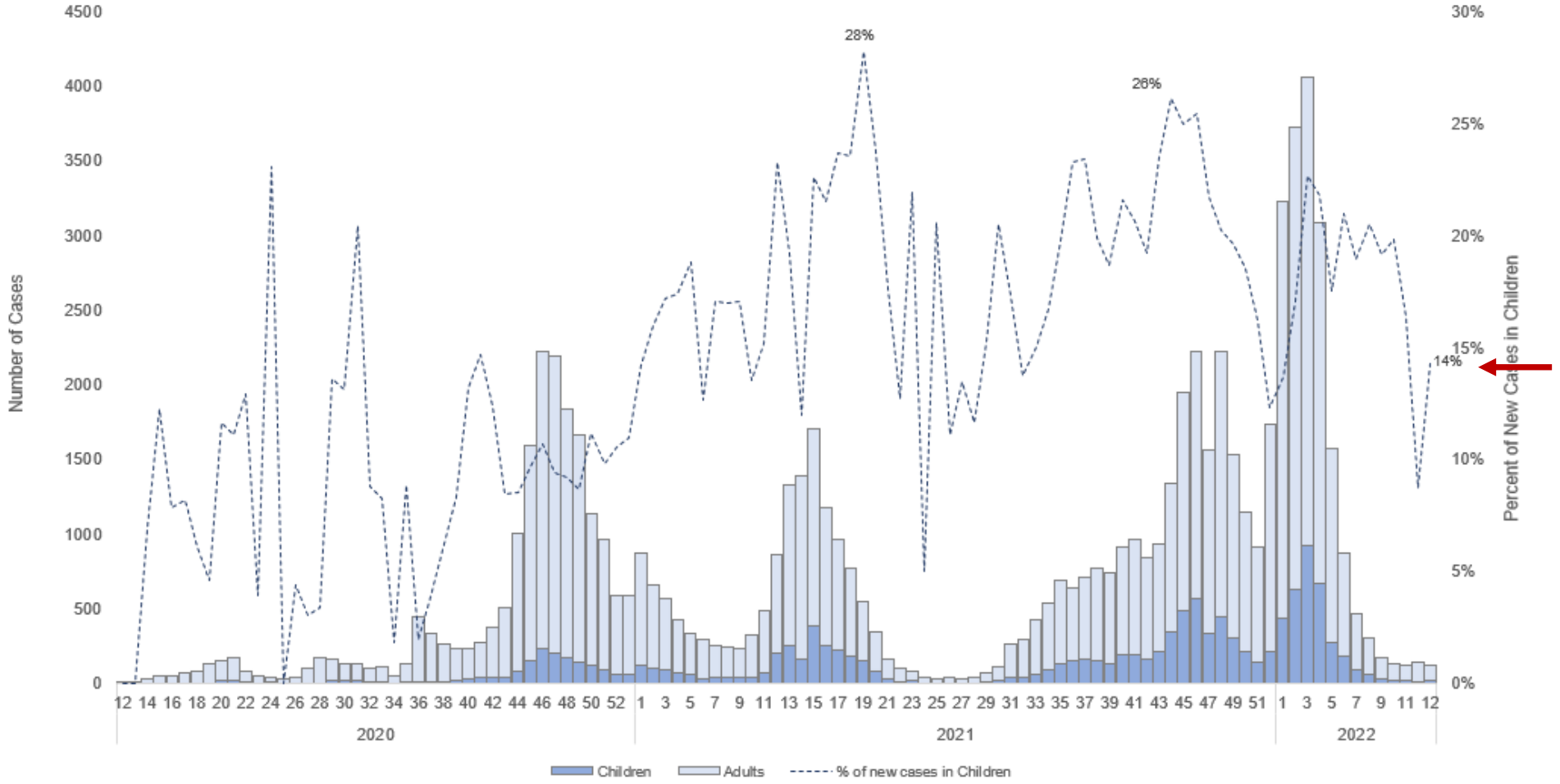
	Adults (18+)		Children (0-17 years)		Total	
Week Ending	Number	% Change from Previous Week	Number	% Change from Previous Week	Number	% Change from Previous Week
4-Dec-21	1771	44%	450	32%	2221	41%
11-Dec-21	1236	-30%	302	-33%	1538	-31%
18-Dec-21	940	-24%	214	-29%	1154	-25%
25-Dec-21	766	-19%	149	-30%	915	-21%
1-Jan-22	1525	99%	214	44%	1739	90%
8-Jan-22	2791	83%	443	107%	3234	86%
15-Jan-22	3094	11%	636	44%	3730	15%
22-Jan-22	3146	2%	923	45%	4069	9%
29-Jan-22	2412	-23%	674	-27%	3086	-24%
5-Feb-22	1304	-46%	277	-59%	1581	-49%
12-Feb-22	693	-47%	183	-34%	876	-45%
19-Feb-22	381	-45%	89	-51%	470	-46%
26-Feb-22	240	-37%	62	-30%	302	-36%
5-Mar-22	139	-42%	33	-47%	172	-43%
12-Mar-22	105	-24%	26	-21%	131	-24%
19-Mar-22	102	-3%	20	-23%	122	-7%
26-Mar-22	136	33%	13	-35%	149	22%
6-Apr-22	108	-21%	18	38%	126	-15%

Adults **Children**

Weekly case counts among **children increased 38%** last week, and cases in **adults decreased 21%.**

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)



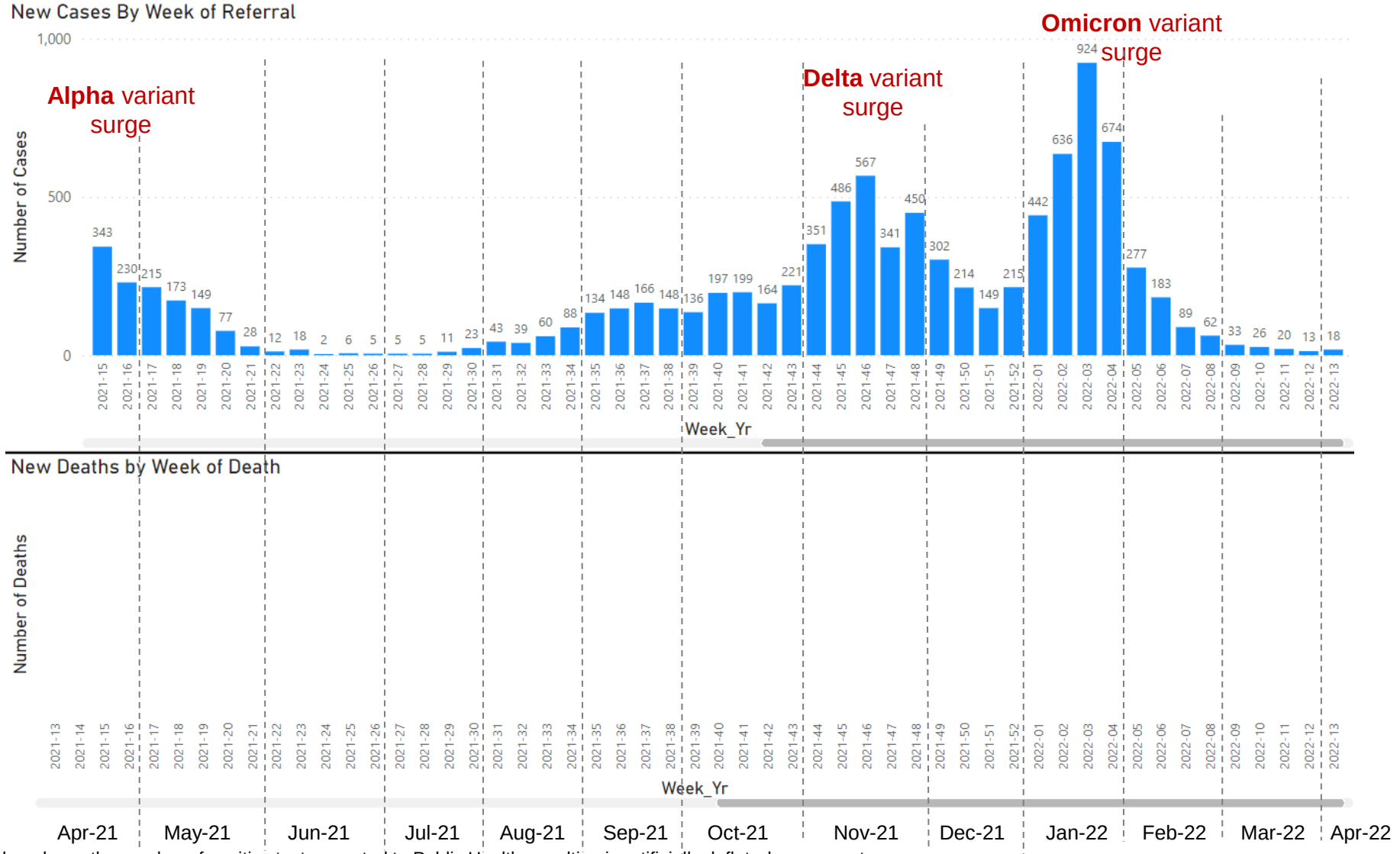
During Week 13 in 2022, children made up 14% of cases reported, lower compared to other times of the pandemic, and lower compared with recent weeks.

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 13, 2022

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

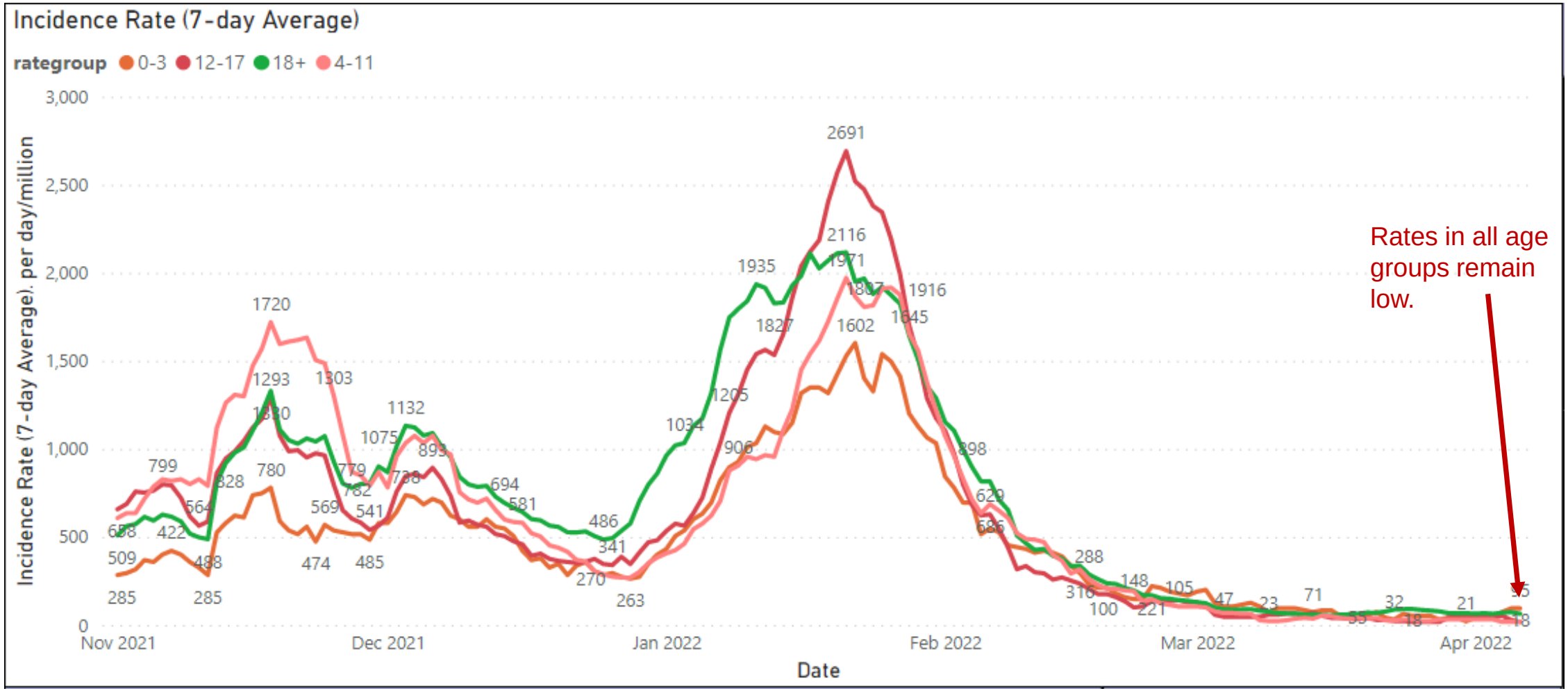


The weekly number of cases among children **increased 38%** from week 12 to week 13.

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

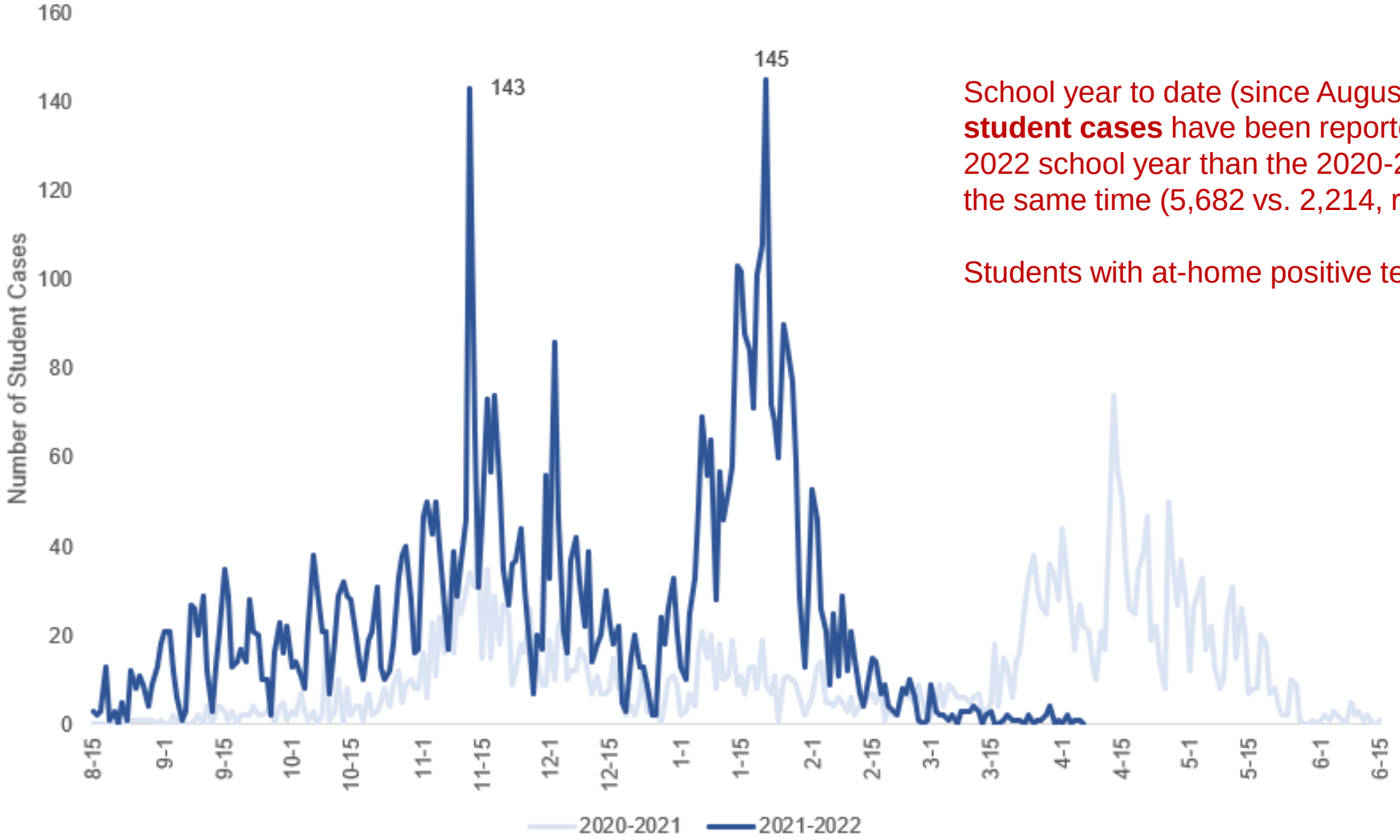
Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – April 6, 2022



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), **2.6x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,682 vs. 2,214, 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.

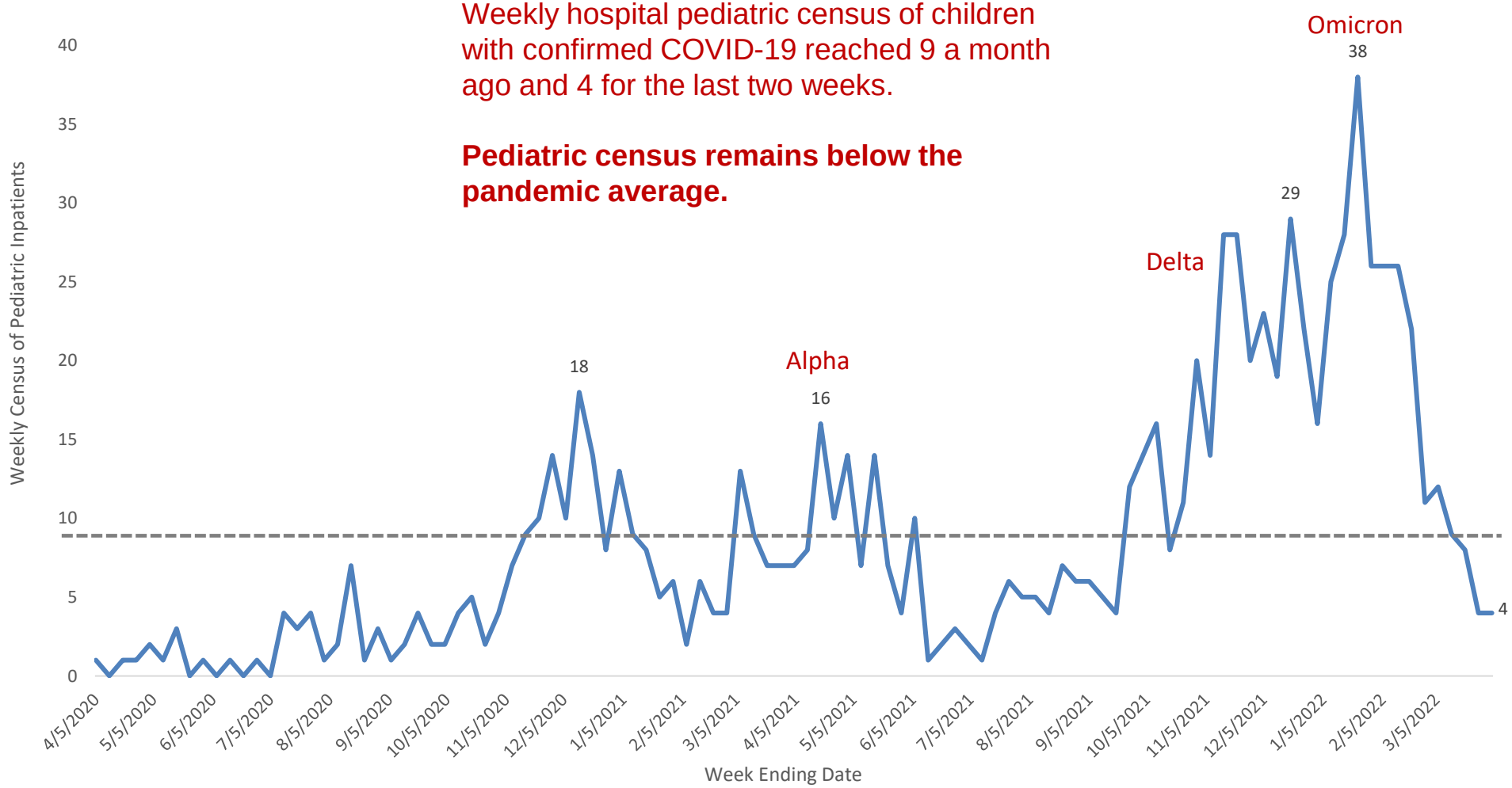
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System; Internal data systems

Data through April 6, 2022

Weekly Hospital Pediatric Census – A Regional Healthcare System

Weekly hospital pediatric census of children with confirmed COVID-19 reached 9 a month ago and 4 for the last two weeks.

Pediatric census remains below the pandemic average.



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.

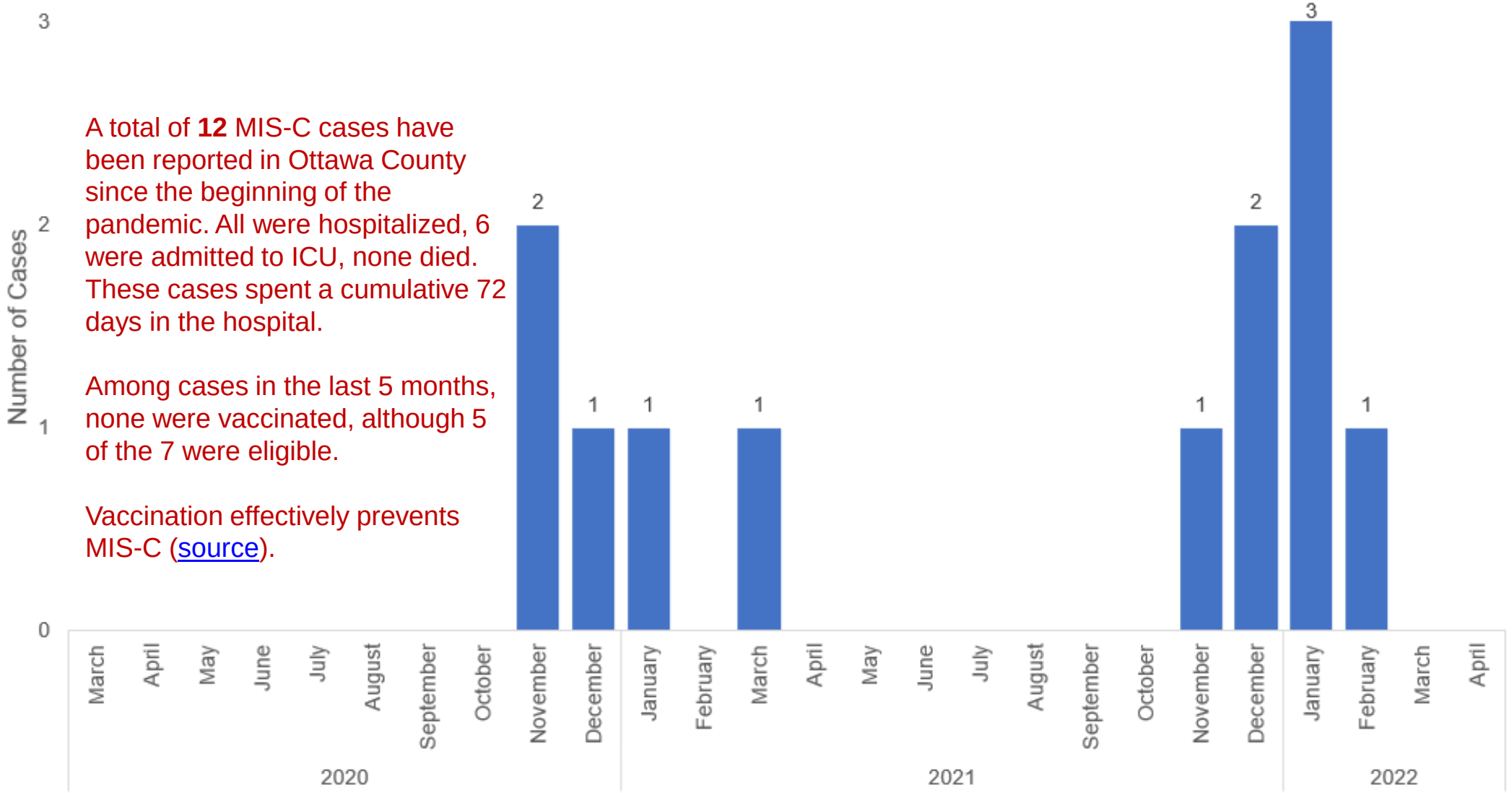
Data through March 27, 2022

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 5 months, none were vaccinated, although 5 of the 7 were eligible.

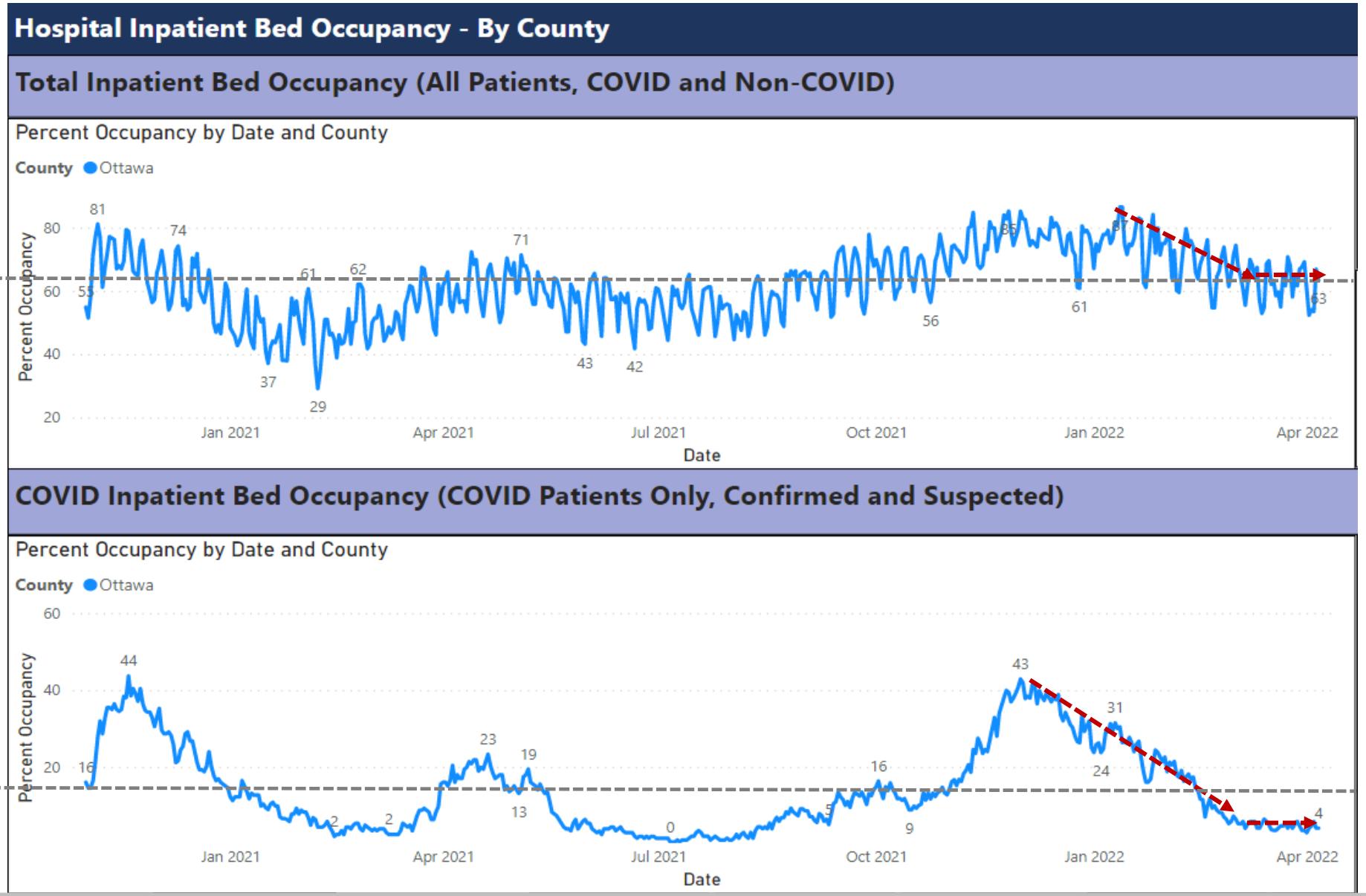
Vaccination effectively prevents MIS-C (source).



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 April 6, 2022

Ottawa County Hospital Capacity – All Beds



Pandemic Average

62%

14%

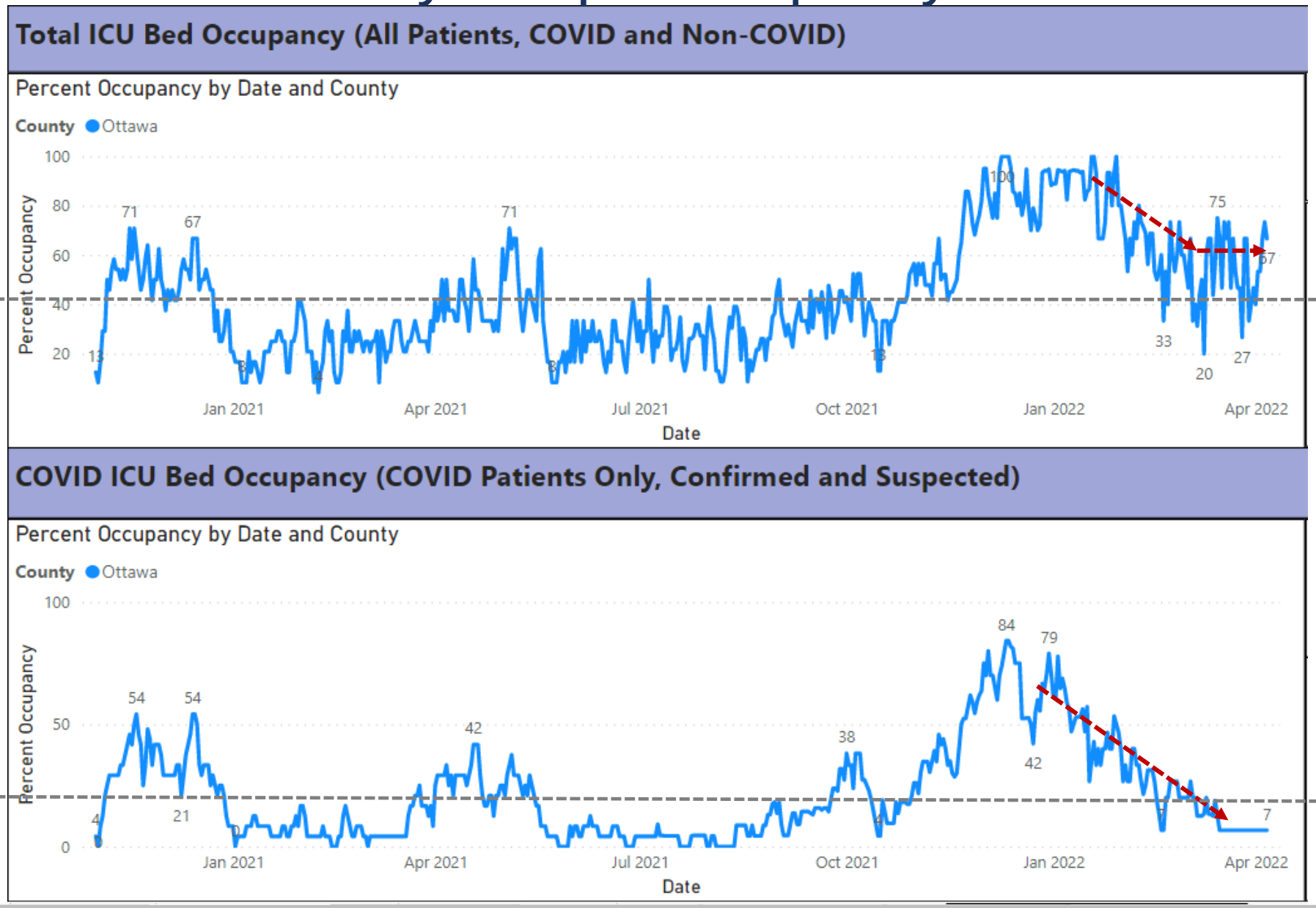
Total hospital bed occupancy **remains at the pandemic average.**

Currently **4%** of all inpatient beds are occupied by COVID-19 patients. The proportion of beds occupied by COVID-19 patients has plateaued, after a prolonged downtrend since December 2021.

Source: EMResources

Data through April 6, 2022

Ottawa County Hospital Capacity – ICU Beds



Overall ICU bed occupancy **is 67%, above the pandemic average**.

The proportion of ICU beds occupied by COVID-19 patients **is below the pandemic average.** Currently, **7%** of all ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through April 6, 2022

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

Unvaccinated people aged 5 years and older had:

1.6x
Risk of Becoming a COVID-19 Case

AND

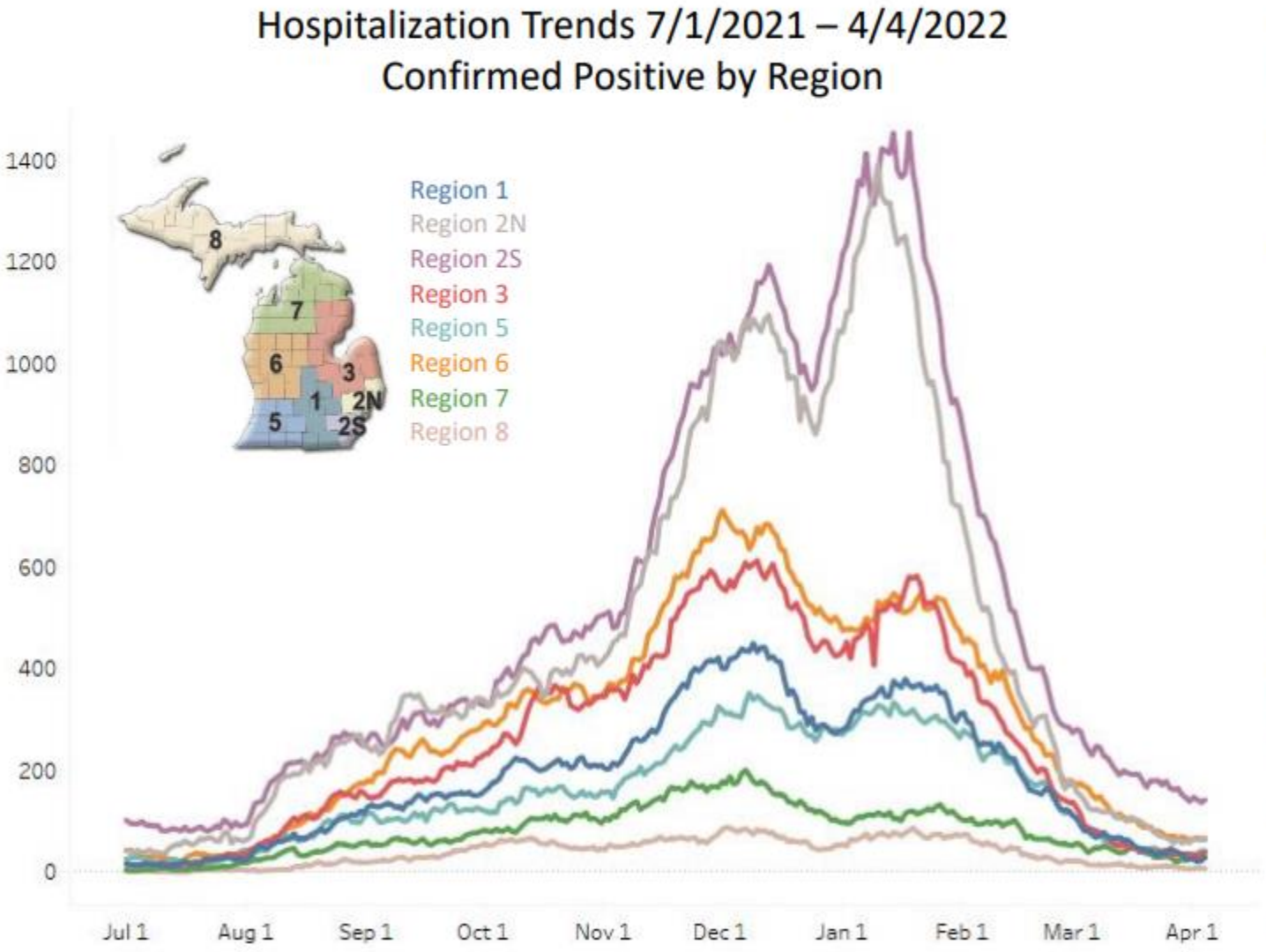
11.7x
Risk of Dying from COVID-19

10.7x
Risk of Being Hospitalized for COVID-19

in February 2022, compared to people vaccinated with at least a primary series.

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

Statewide Hospitalization Trends: Regional COVID+ Census



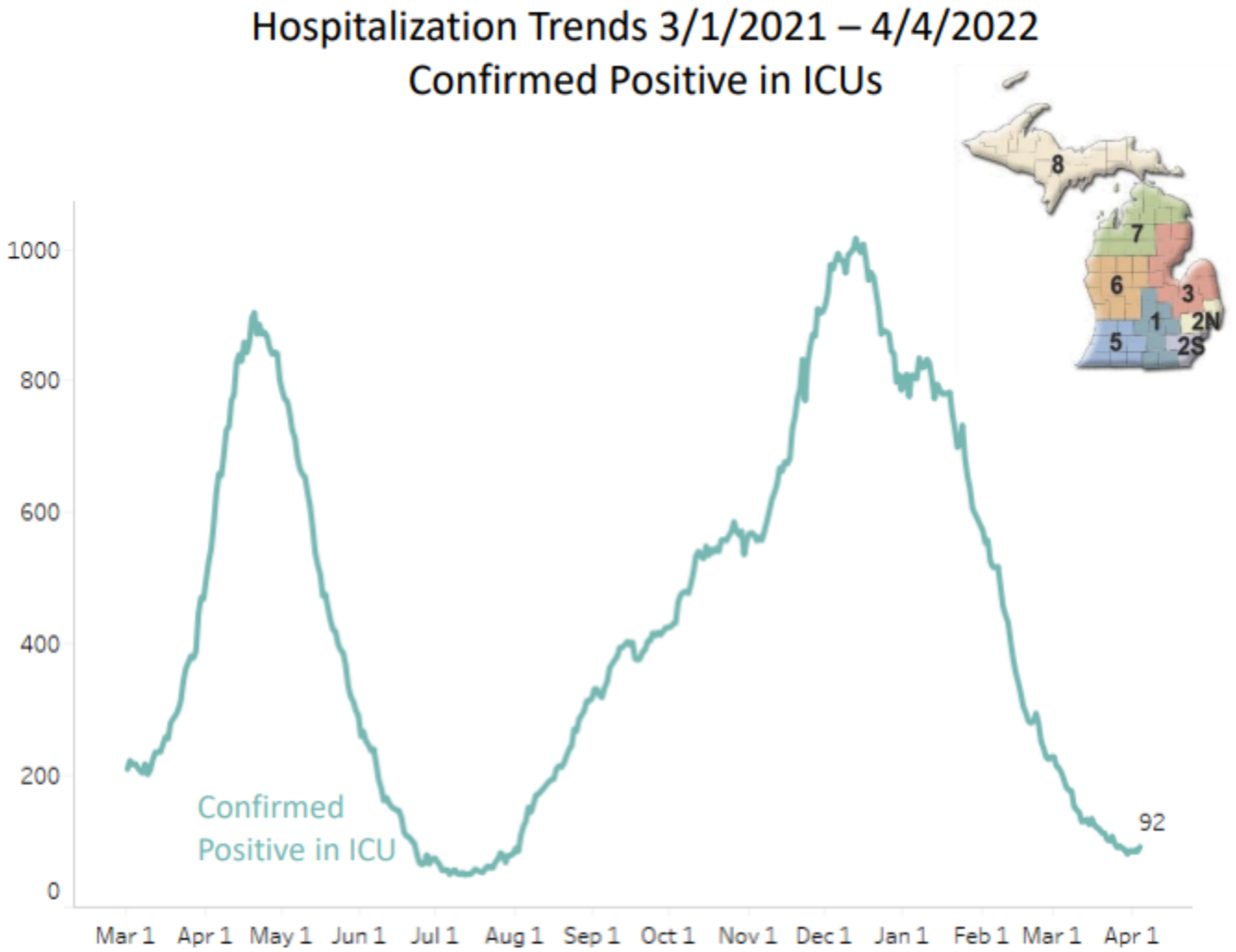
This week the COVID+ census has decreased in Regions 1, 3N, 2S, 6, and 8. The COVID+ census has increased in Regions 3, 5, and 7 which is a notable change in trajectory.

All regions have fewer than 65 hospitalizations/M.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	29 (-26%)	27/M
Region 2N	67 (-1%)	30/M
Region 2S	142 (-14%)	64/M
Region 3	39 (18%)	34/M
Region 5	42 (14%)	44/M
Region 6	64 (-6%)	44/M
Region 7	29 (45%)	58/M
Region 8	7 (-22%)	22/M

Source: MDHHS Data and Modelling: https://www.michigan.gov/documents/coronavirus/20220405_Data_and_modeling_update_vMEDIA_750812_7.pdf

Statewide Hospitalization Trends: ICU COVID+ Census



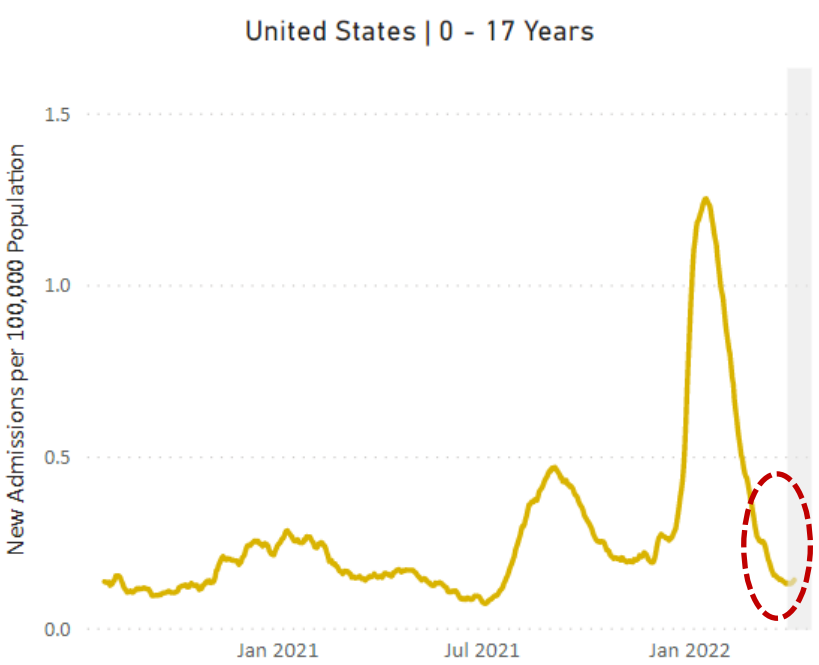
Overall, the census of COVID+ patients in ICUs has remained flat from last week (previous week was down by 20%). Several regions (2N, 2S, 6, 7) show increases this week.

All regions have 7% or fewer of ICU beds filled with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	2 (-67%)	69%	1%
Region 2N	11 (10%)	66%	2%
Region 2S	46 (7%)	75%	7%
Region 3	9 (-10%)	85%	3%
Region 5	5 (0%)	64%	3%
Region 6	10 (25%)	67%	4%
Region 7	9 (80%)	75%	7%
Region 8	0	56%	0%

Source: MDHHS Data and Modelling: https://www.michigan.gov/documents/coronavirus/20220405_Data_and_modeling_update_vMEDIA_750812_7.pdf

Pediatric Hospitalization Rates – USA, Georgia, Michigan

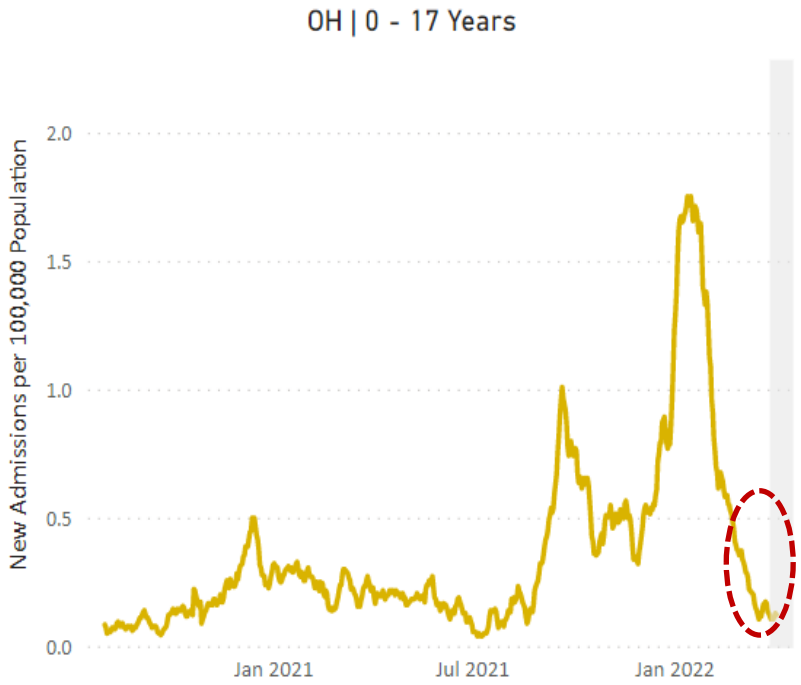


Pediatric hospitalization rates across the US, in Georgia, and in Michigan **show continued improvement**.

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

Accessed April 7, 2022

Pediatric Hospitalization Rates – Select Midwest States

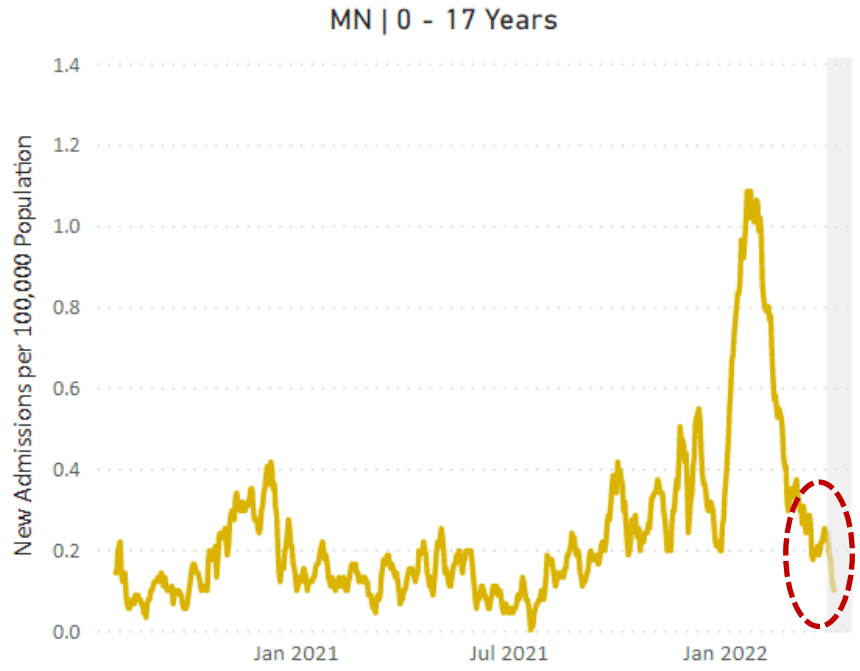


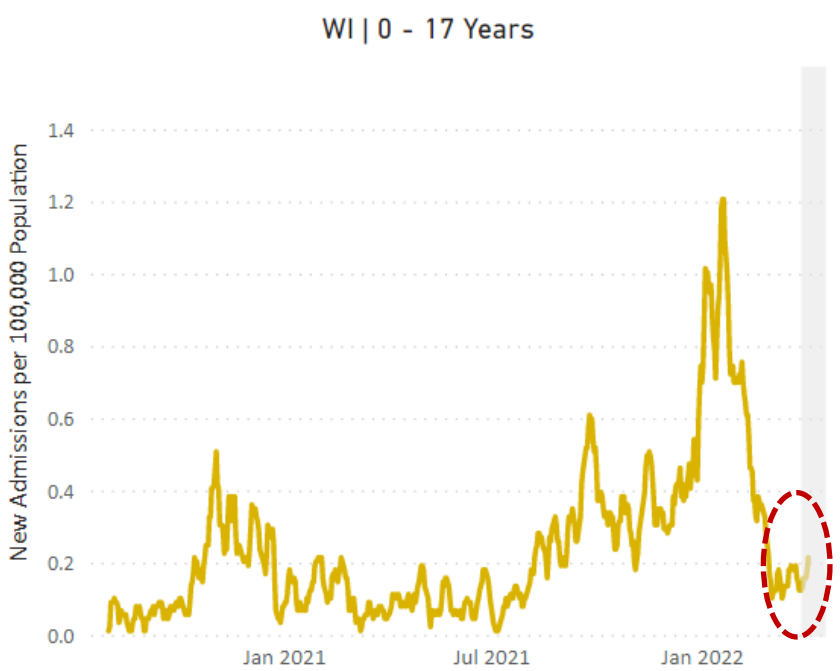
Ohio, Indiana, and Illinois are all showing **improving pediatric hospitalization rates**.

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

Accessed April 7, 2022

Pediatric Hospitalization Rates – Select Midwest States



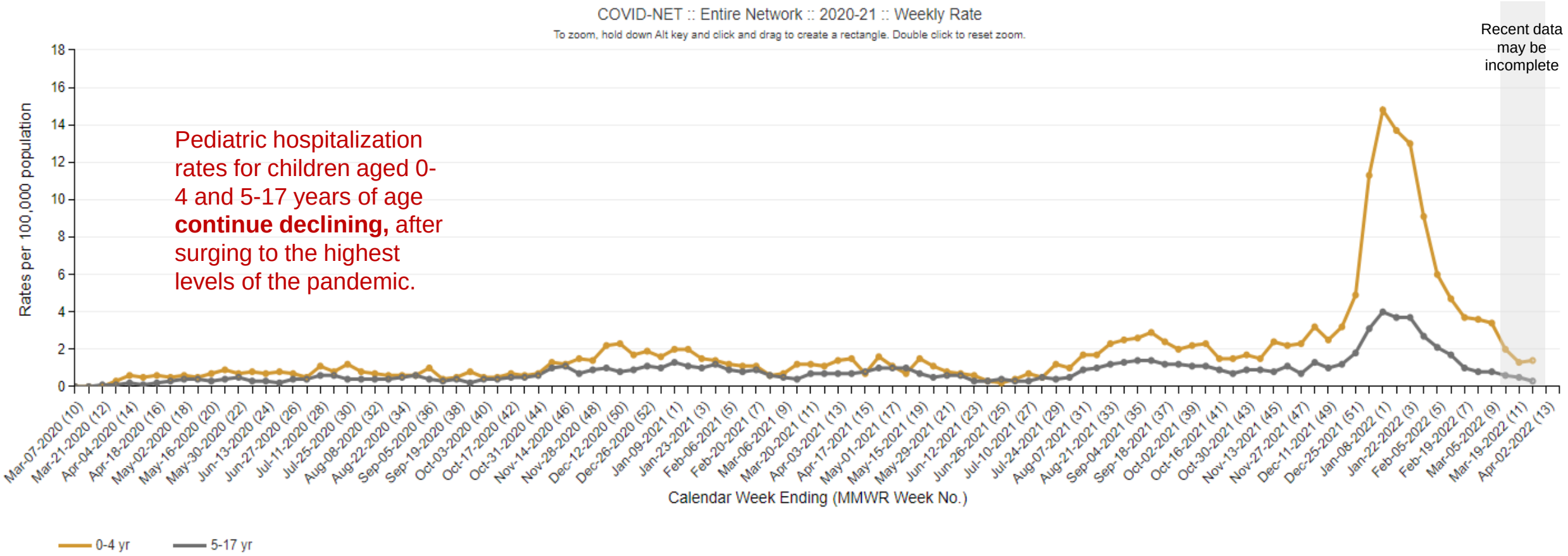


Pediatric hospitalization rates in Minnesota, Wisconsin, and Iowa **are low compared to other times in the pandemic**.

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

Accessed April 7, 2022

Pediatric Hospitalization Rates by Age Group – USA



Pediatric hospitalization rates for children aged 0-4 and 5-17 years of age **continue declining,** after surging to the highest levels of the pandemic.

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.

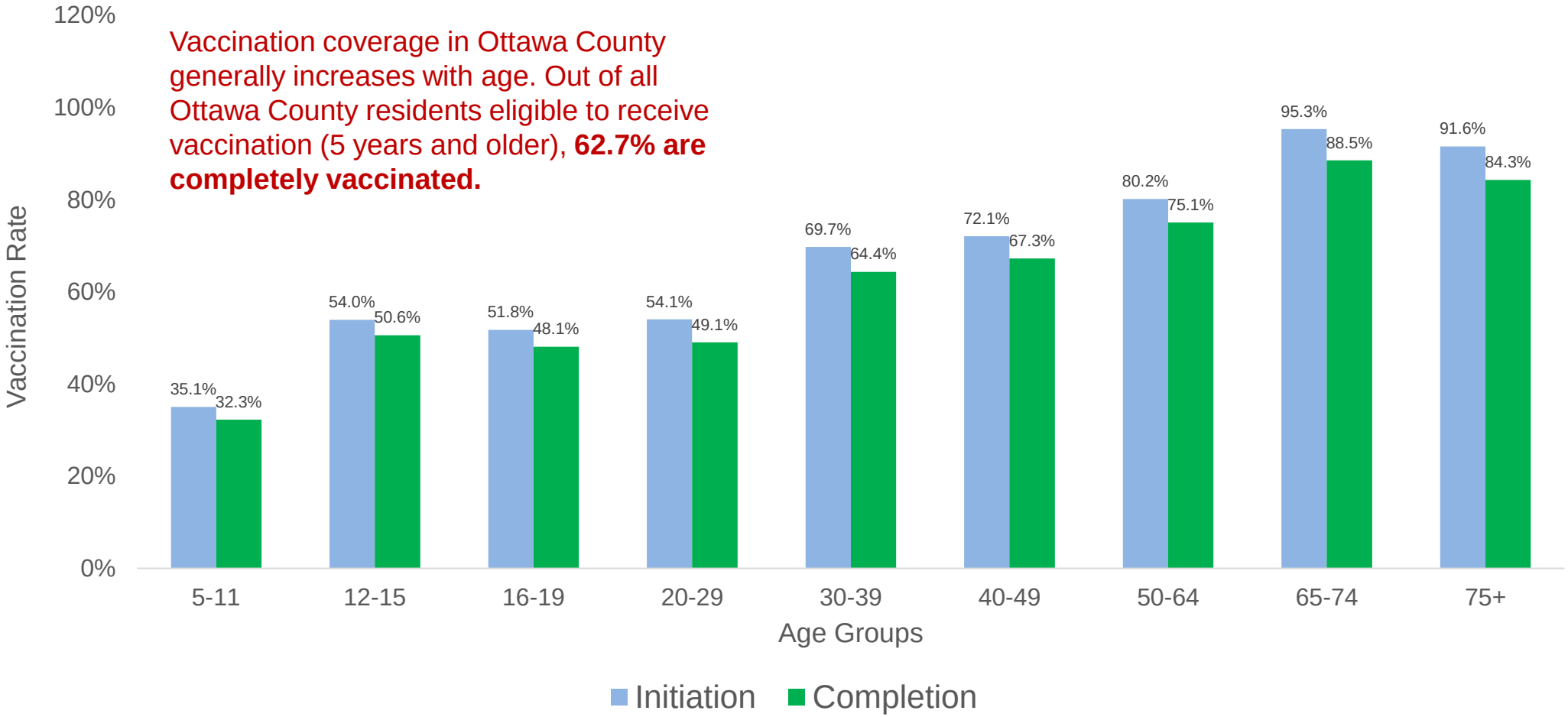
Starting MMWR week 48, MD data are temporarily removed from weekly rate calculations.

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

Accessed April 7, 2022

Vaccination Coverage by Age

Vaccination coverage in Ottawa County generally increases with age. Out of all Ottawa County residents eligible to receive vaccination (5 years and older), **62.7% are completely vaccinated.**



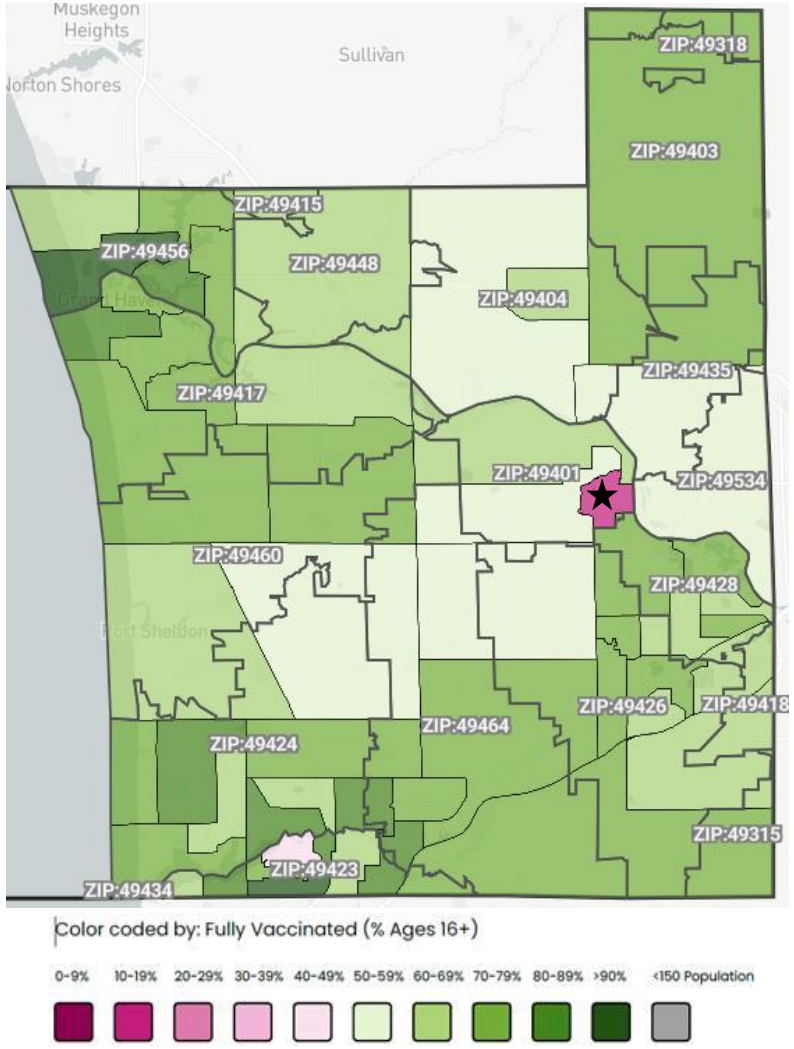
Notes:
Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J.

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

Data through April 6, 2022

Vaccination Coverage by Place of Residence

Fully vaccinated: % Ages 16+ years

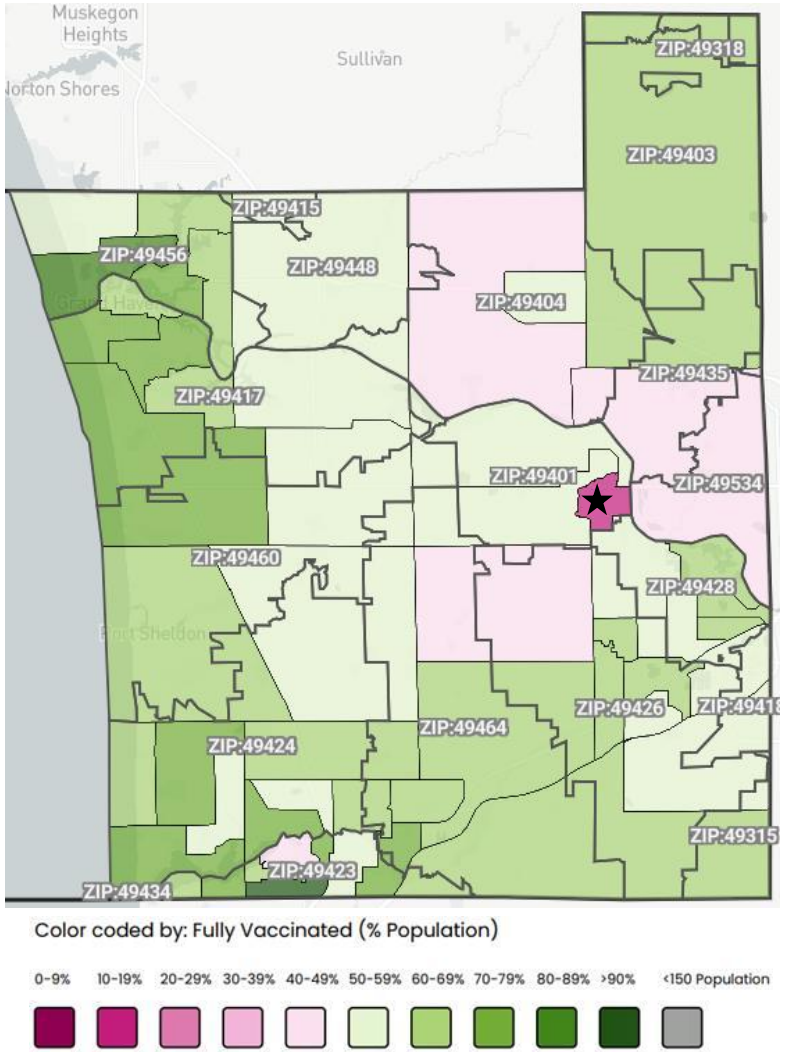


Vaccination rates vary across Ottawa County, but most areas have at least 50% of the population aged 16+ completely vaccinated **(left).**

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.*

Fully vaccinated: % Total Population



Source: MI-Lighthouse Internal Dashboard

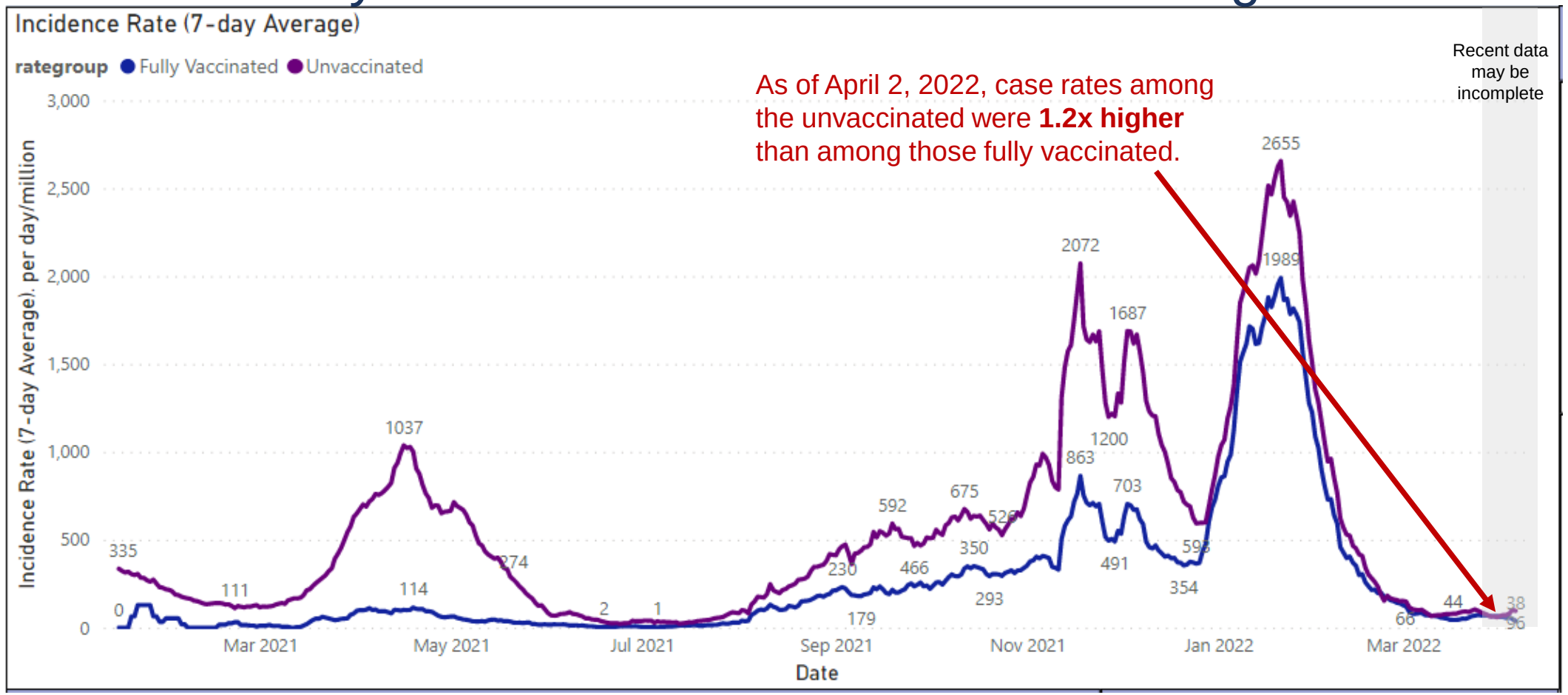
Data as of April 6, 2022

Cumulative Cases by Vaccination Status, Ottawa County, January 15, 2021 – April 2, 2022

Fully Vaccinated People (171,736)	
Cases	**Deaths**
Percent of Cases in People Not Fully Vaccinated (36,072 / 54,660) **66.0%**	Percent of Deaths in People Not Fully Vaccinated (286 / 440) **65.0%**
Total Cases Not Fully Vaccinated **36,072**	Total Deaths Not Fully Vaccinated **286**
Total Breakthrough Cases **18,588**	Total Breakthrough Deaths **154**
Percent of Fully Vaccinated People who Developed COVID-19 (18,588 / 171,736) **10.8%**	Percent of Fully Vaccinated People who Died of COVID-19 (154 / 171,736) **0.09%**
Percent of Cases who were Fully Vaccinated (18,588 / 54,660) **34.0%**	Percent of Deaths who were Fully Vaccinated (154 / 440) **35.0%**
Total Cases **54,660**	Total Deaths **440**

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

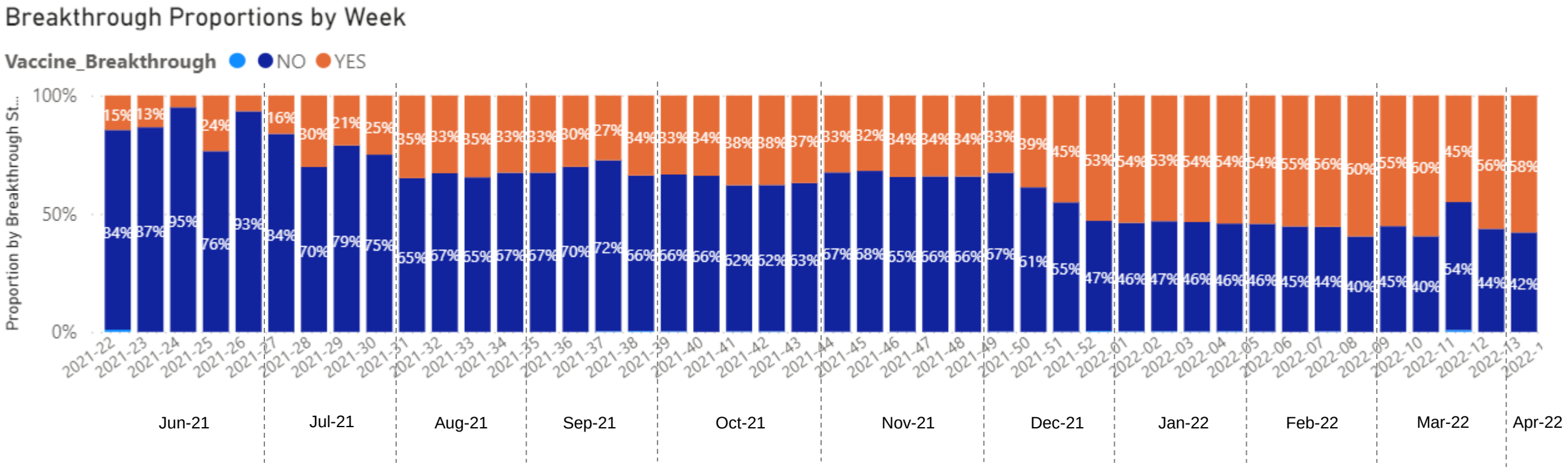


Method:
Daily case counts were obtained from the MDSS and summarized by referral date. Cases were compared to data from the State of Michigan immunization database to confirm COVID-19 vaccination status. Counts of persons completely vaccinated in Ottawa County were compiled from the Michigan COVID-19 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. Fully vaccinated is defined as 2 or more doses of an mRNA vaccination or at least one dose of J&J.
Note: Use of at home tests 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

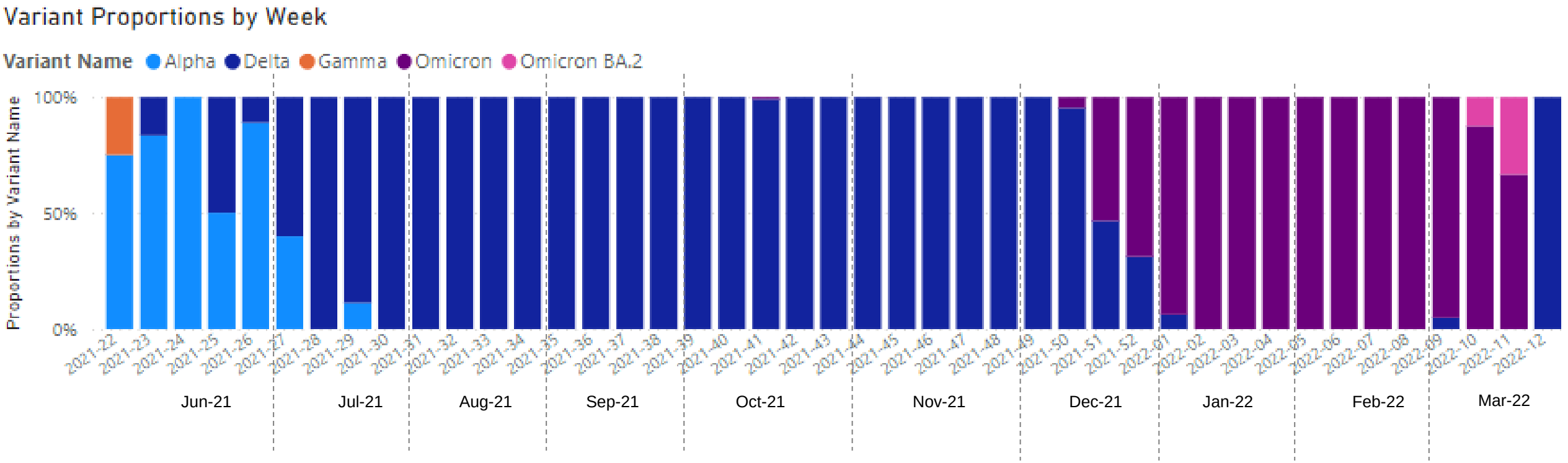
By Week



Through the Delta wave, which was most pronounced August through early December of 2021, about 34% of all cases reported to public heath were breakthrough cases. At the end of 2021 and into 2022, the proportion of vaccine breakthrough cases increased to roughly 54% 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

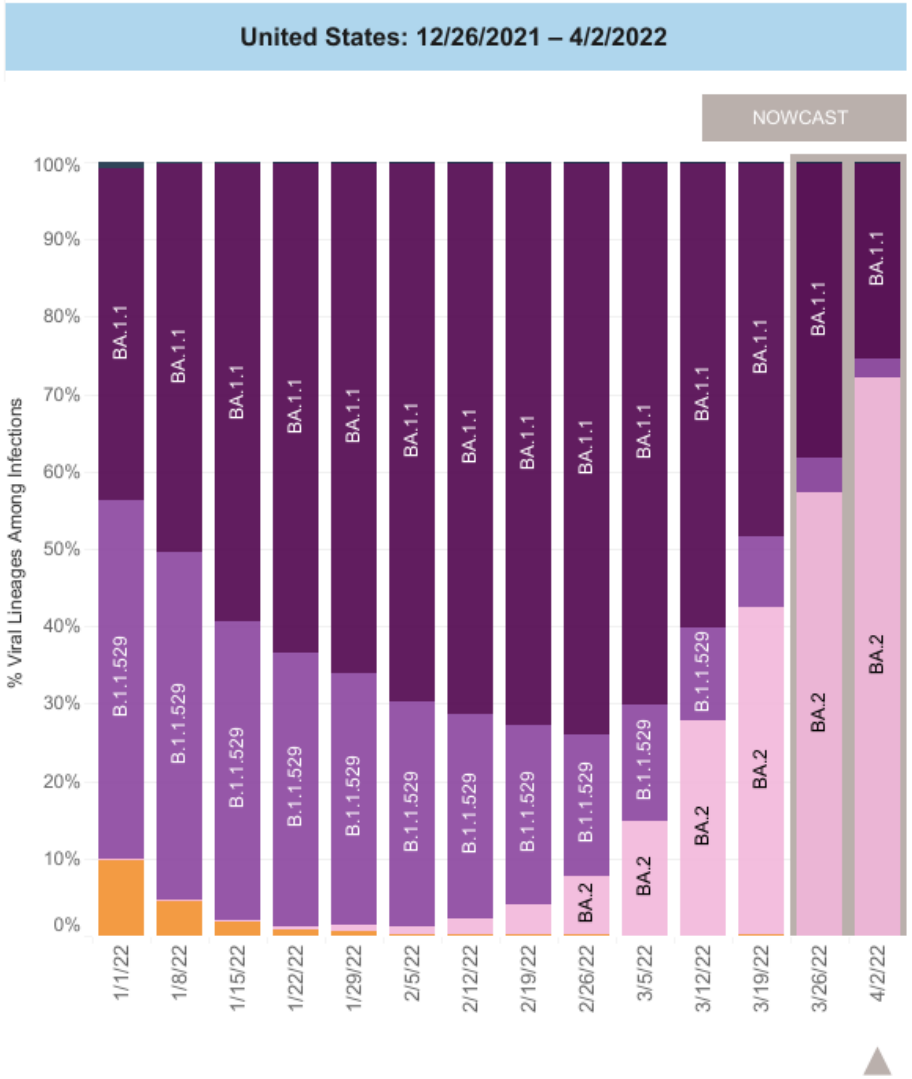


In June of 2021, most clinical samples* submitted for variant testing came back as the **Alpha** variant. By the end of July 2021, all clinical samples tested were returned as the **Delta** variant. From late July through early December 2021 all clinical samples submitted for variant testing came back 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.

***** 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



United States: 3/27/2022 – 4/2/2022 NOWCAST

USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.2	VOC	72.2%	68.1-75.9%
	BA.1.1	VOC	25.3%	21.9-29.1%
	B.1.1.529	VOC	2.5%	2.0-3.2%
Delta	B.1.617.2	VOC	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.0%

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
# AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. BA.1 and BA.3 are aggregated with B.1.1.529. For regional data, BA.1.1 is also aggregated with B.1.1.529, as it currently cannot be reliably called in each region.

The **Omicron** variant is estimated to account for close to 100% of all clinical samples collected in the United States the week ending April 02, 2022.

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

Source: CDC: https://covid.cdc.gov/covid-data-tracker/#variant-proportions

Accessed April 6, 2022

Variants – Wastewater Sampling – Holland/Zeeland

Sample Date	Site	Delta	Omicron
01/09/2022	North Holland	N	N
01/10/2022	Zeeland	N	Y
01/12/2022	North Holland	N	Y
01/13/2022	Zeeland	N	Y
01/16/2022	North Holland	N	Y
01/16/2022	North Holland	N	Y
01/17/2022	Zeeland	N	Y
01/23/2022	North Holland	N	Y
01/30/2022	North Holland	N	Y
01/31/2022	Zeeland	N	Y
02/06/2022	North Holland	N	Y
02/07/2022	Zeeland	N	N
02/13/2022	North Holland	N	Y
02/14/2022	Zeeland	N	Y
02/16/2022	North Holland	N	Y
02/17/2022	Zeeland	N	Y
2/20/2022	North Holland	N	Y
2/21/2022	Zeeland	N	Y
02/23/2022	North Holland	N	Y
02/24/2022	Zeeland	N	N
02/27/2022	North Holland	N	N
02/28/2022	Zeeland	N	N
03/02/2022	North Holland	N	N
03/03/2022	Zeeland	N	N
03/10/2022	Zeeland	N	N
03/13/2022	North Holland	N	N
03/14/2022	Zeeland	N	N
03/17/2022	Zeeland	N	N
03/21/2022	Zeeland	N	Y
03/23/2022	North Holland	N	N
03/24/2022	Zeeland	N	N
03/27/2022	North Holland	N	N

Y	= Detected
N	= Not Detected

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

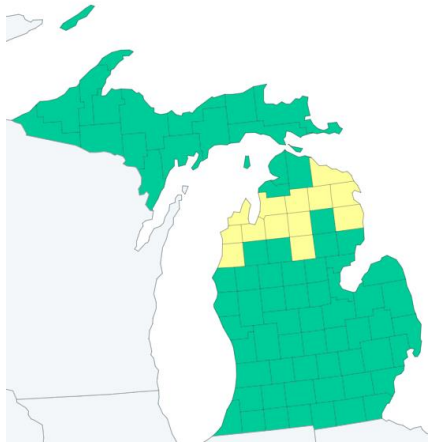
The **Omicron** variant has been detected in wastewater in Holland and Zeeland since early January 2022, with very little detection over the last four weeks – corresponding to reduced case rates and test positivity.

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

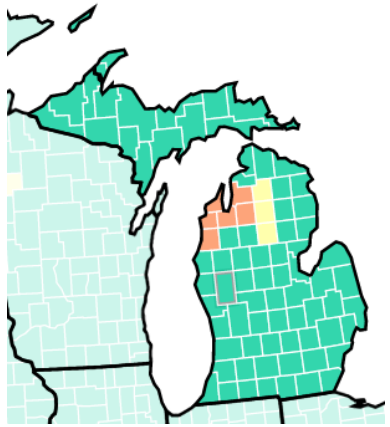
(NEW) CDC Community Risk Levels – Ottawa County

- Current Risk Level in Ottawa – LOW
- Current Data:
  - Case Rate (per 100k pop 7-day total) = **40.09**
  - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **2.2**
  - COVID Inpatient Hospital Bed Utilization (7-day average) = **3.8%**

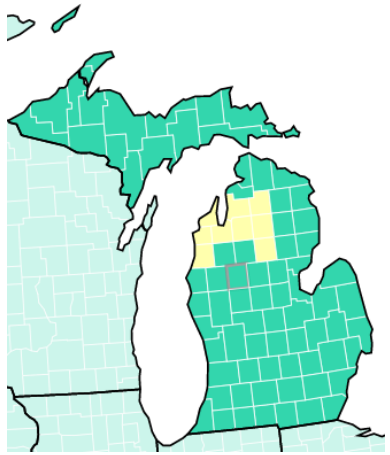
2 Weeks Ago



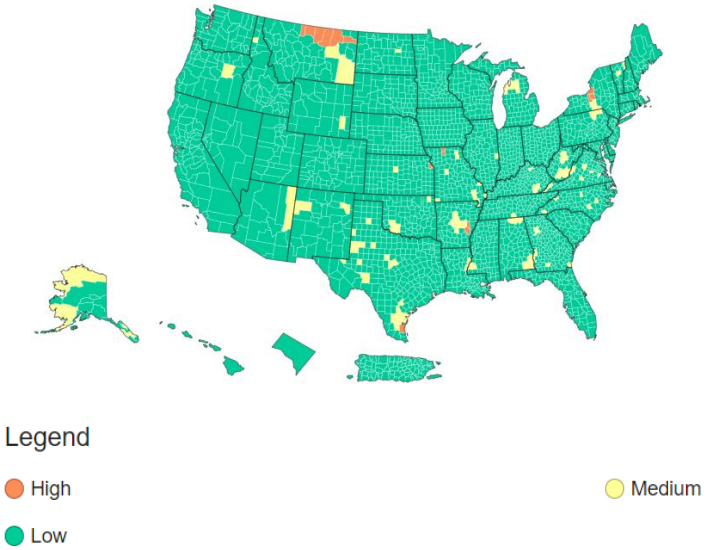
Last Week



This Week



USA - This Week

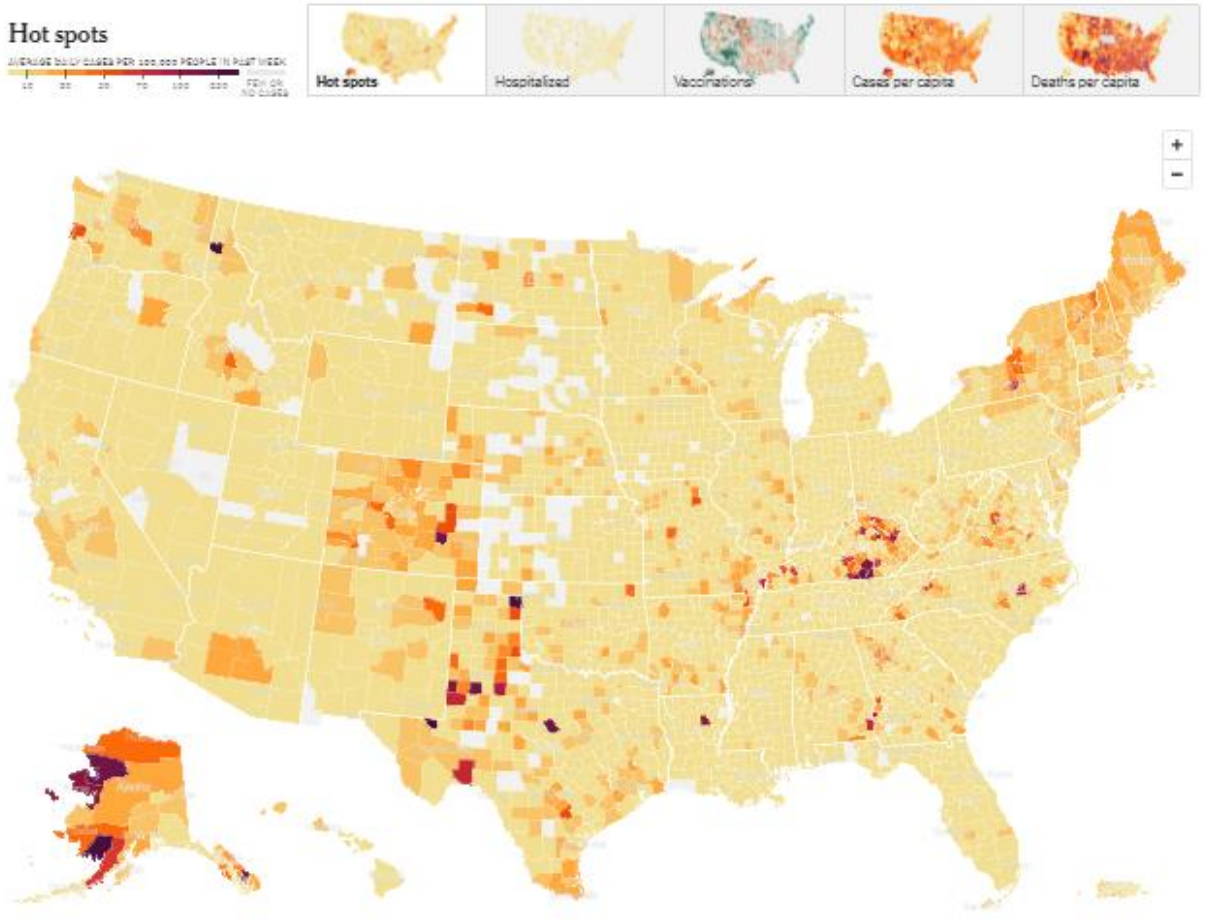


Source: https://www.cdc.gov/coronavirus/2019-ncov/your-health/covid-by-county.html

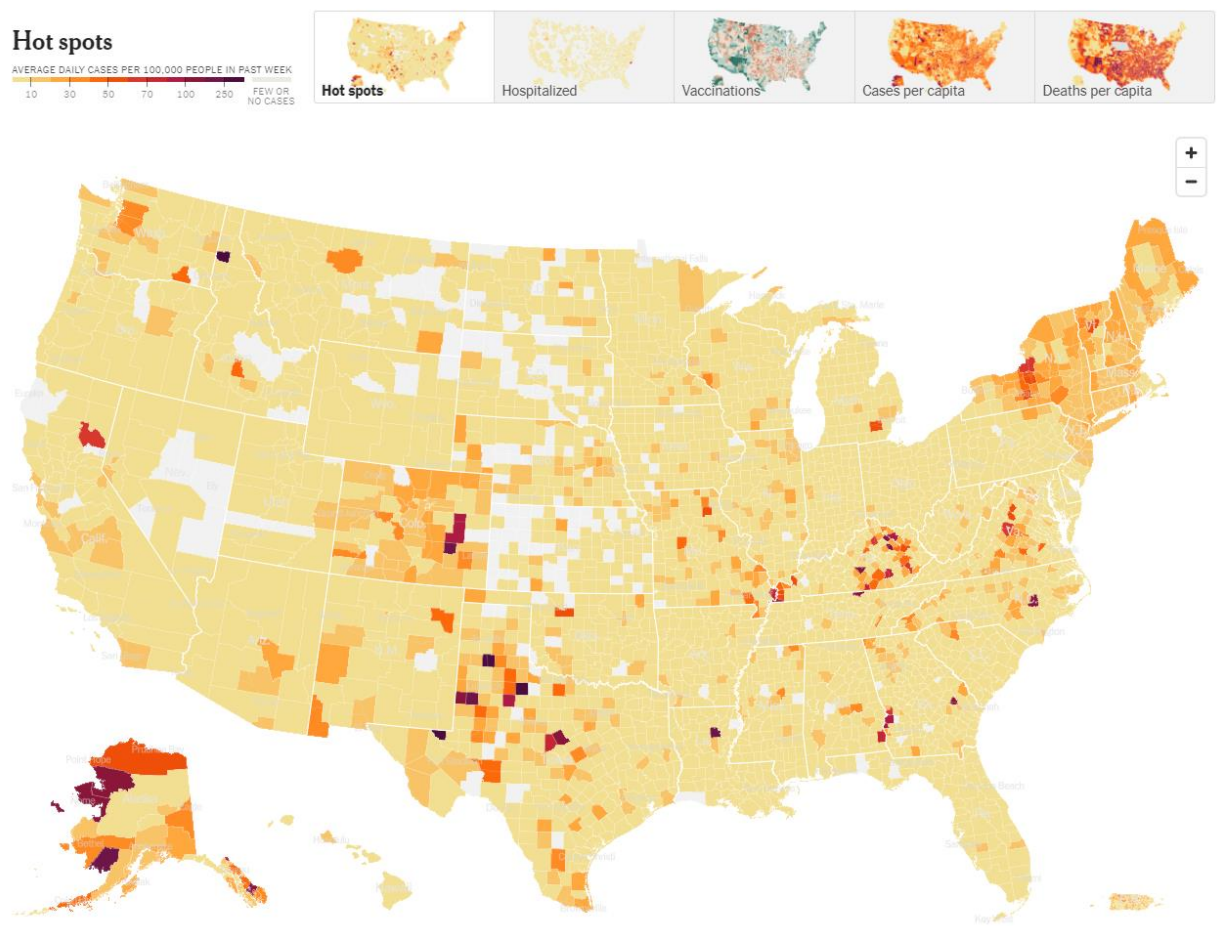
Data updated by CDC on April 7, 2022

COVID-19 Case Rates by County Across the US

Last Week



This Week



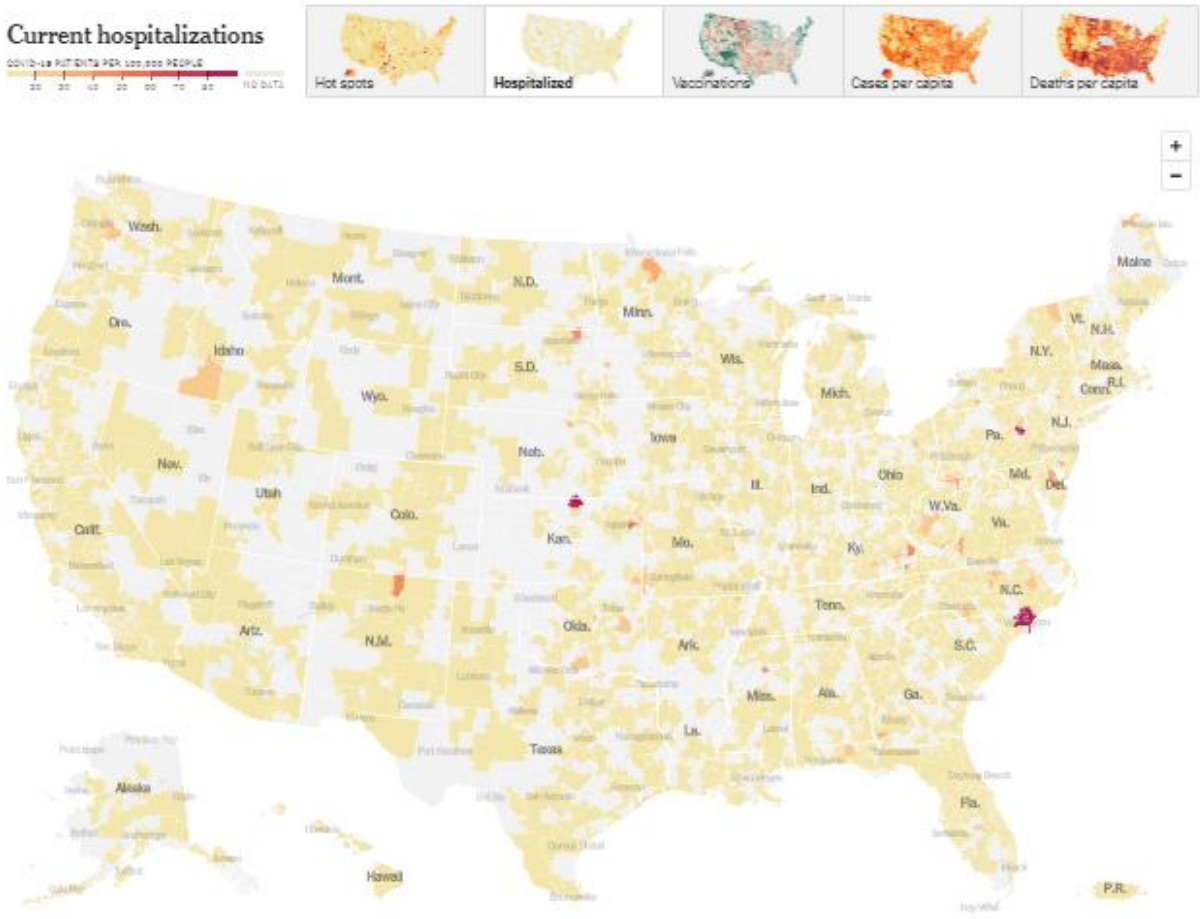
Case rates remain low across the nation.

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

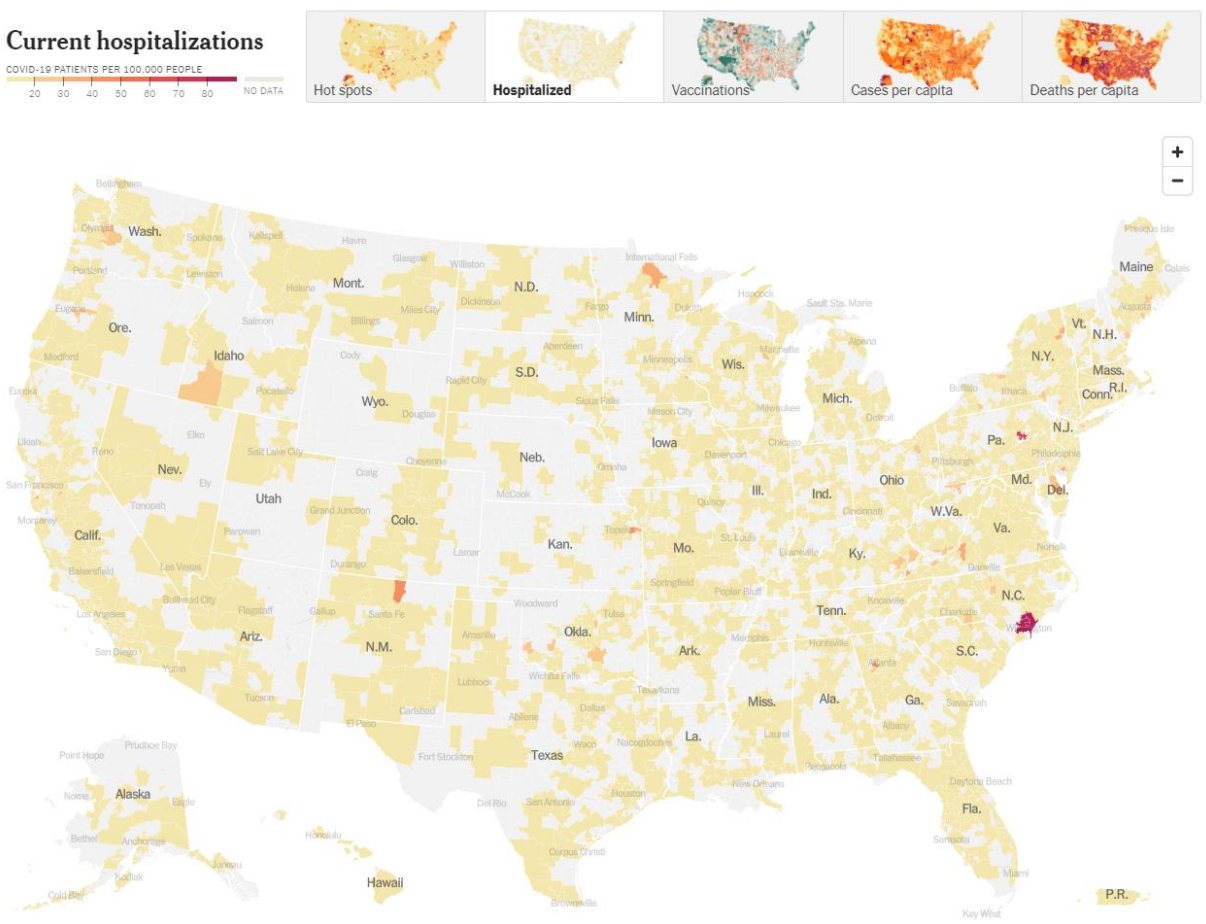
Accessed April 7, 2022

COVID-19 Hospitalization Rates by County Across the US

Last Week



This Week



Hospitalization rates remain low across the nation.

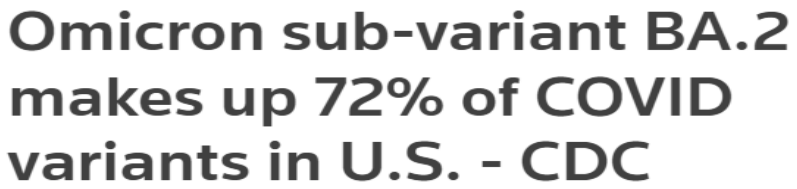
Source: https://www.nytimes.com/interactive/2021/us/covid-cases.html

Accessed April 7, 2022

COVID-19 News Headlines

‘Urgent COVID needs’ will get $10 billion under Senate agreement - mlive.com

Local libraries gear up for post-pandemic | Local News | grandhaventribune.com



Omicron sub-variant BA.2 makes up 72% of COVID variants in U.S. - CDC | Reuters

At-home COVID test kits available at Holland, Fennville libraries (hollandsentinel.com)

Science Roundup

Cardiac Complications After SARS-CoV-2 Infection and mRNA COVID-19 Vaccination — PCORnet, United States, January 2021–January 2022

https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7114e1-H.pdf

A study found that the incidences of cardiac complications after SARS-CoV-2 infection or mRNA COVID-19 vaccination were low overall but were higher after infection than after vaccination for both males and females in all age groups.

Association of COVID-19 Vaccination During Early Pregnancy With Risk of Congenital Fetal Anomalies

https://jamanetwork.com/journals/jamapediatrics/fullarticle/2790805

Findings from a retrospective study suggest that COVID-19 vaccination during early pregnancy is not associated with an increased risk of fetal structural anomalies identified with ultrasonography.

Incidence Rates and Clinical Outcomes of SARS-CoV-2 Infection With the Omicron and Delta Variants in Children Younger Than 5 Years in the US

https://jamanetwork.com/journals/jamapediatrics/fullarticle

A cohort study found that the incidence rate of SARS-CoV-2 infection with Omicron variant was 6 to 8 times that of Delta variant in children younger than 5 years, but severe clinical outcomes were less frequent than with Delta variant.

Protection by a Fourth Dose of BNT162b2 against Omicron in Israel

https://www.nejm.org/doi/full

A study done in Israel found that rates of confirmed SARS-CoV-2 infection and severe Covid-19 were lower after a fourth dose of BNT162b2 vaccine than after only three doses.