

Ottawa County COVID-19 Epidemiology

April 28, 2022

Data as of April 23, 2022, unless otherwise indicated

Executive Summary

- **Transmission in Michigan and the US remains low, but may be increasing**
- **Ottawa community transmission levels remain low, but may be increasing**
 - This past week positivity **increased** to 15.1%, from 11.9% seen two weeks ago.
 - Weekly case counts **increased** 41% (44% two weeks ago), from 177 two weeks ago to 250 last week.
 - Cases among children **increased** 44% (38% two weeks ago), from 18 two weeks ago to 26 last week.
 - COVID-19 wastewater signals in Holland/Zeeland are **increasing**.
 - The Omicron variant remains the predominate local strain.
- **Ottawa-area and regional hospitals have adequate capacity**
 - In Ottawa County, 4% of all available beds and 6% of all ICU beds are occupied by COVID-19 patients.*
 - Ottawa County hospitals are utilizing usual care strategies, are reporting adequate staffing, and are minimizing ED diversion.
- **Pediatric hospitalization rates in the US and in Michigan remain low**
 - Regional pediatric hospitalization census remains low.
- **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.

**A slight decrease in primary series vaccination rates is noted in this report due to system enhancements and data quality improvements to the Michigan Care Improvement Registry (MCIR). Learn more [here](#).

Ottawa County Metrics by Week

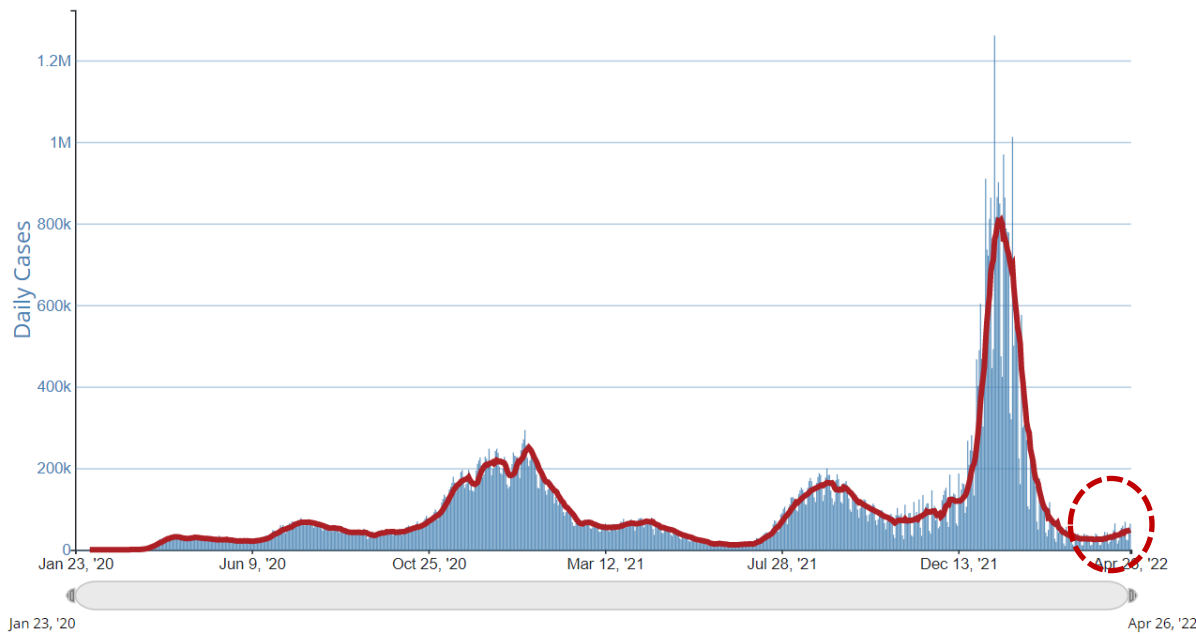
Metric	Goal	Week Ending				
		26-Mar-22	2-Apr-22	9-Apr-22	16-Apr-22	23-Apr-22
Positivity (All Ages)	NA	5.4%	5.3%	7.6%	11.9%	15.1%
Weekly Cases (All Ages)	<592	150	125	125	177	250
Weekly Cases in Children (0-17 years of age)	NA	13	17	13	18	26
Total Deaths (All Ages)	0	3	0	1	2	0
CDC COVID-19 Community 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.

Case Trends in the USA and Michigan

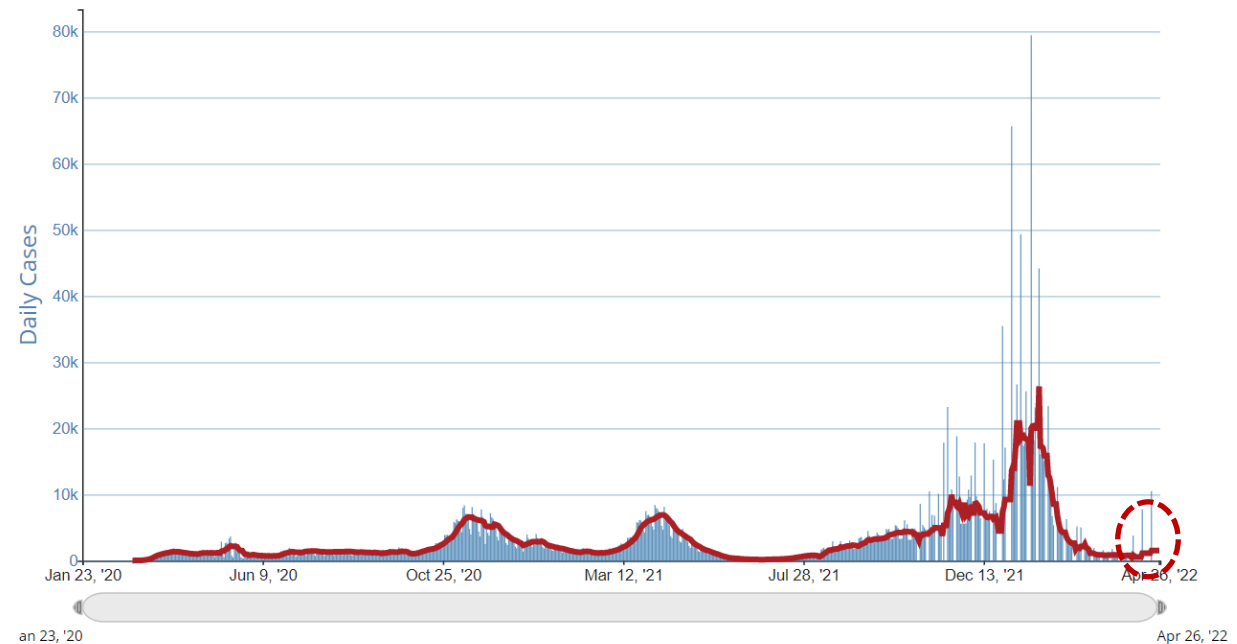
USA

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 remain much lower than previous times in the pandemic, but may be increasing.

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.

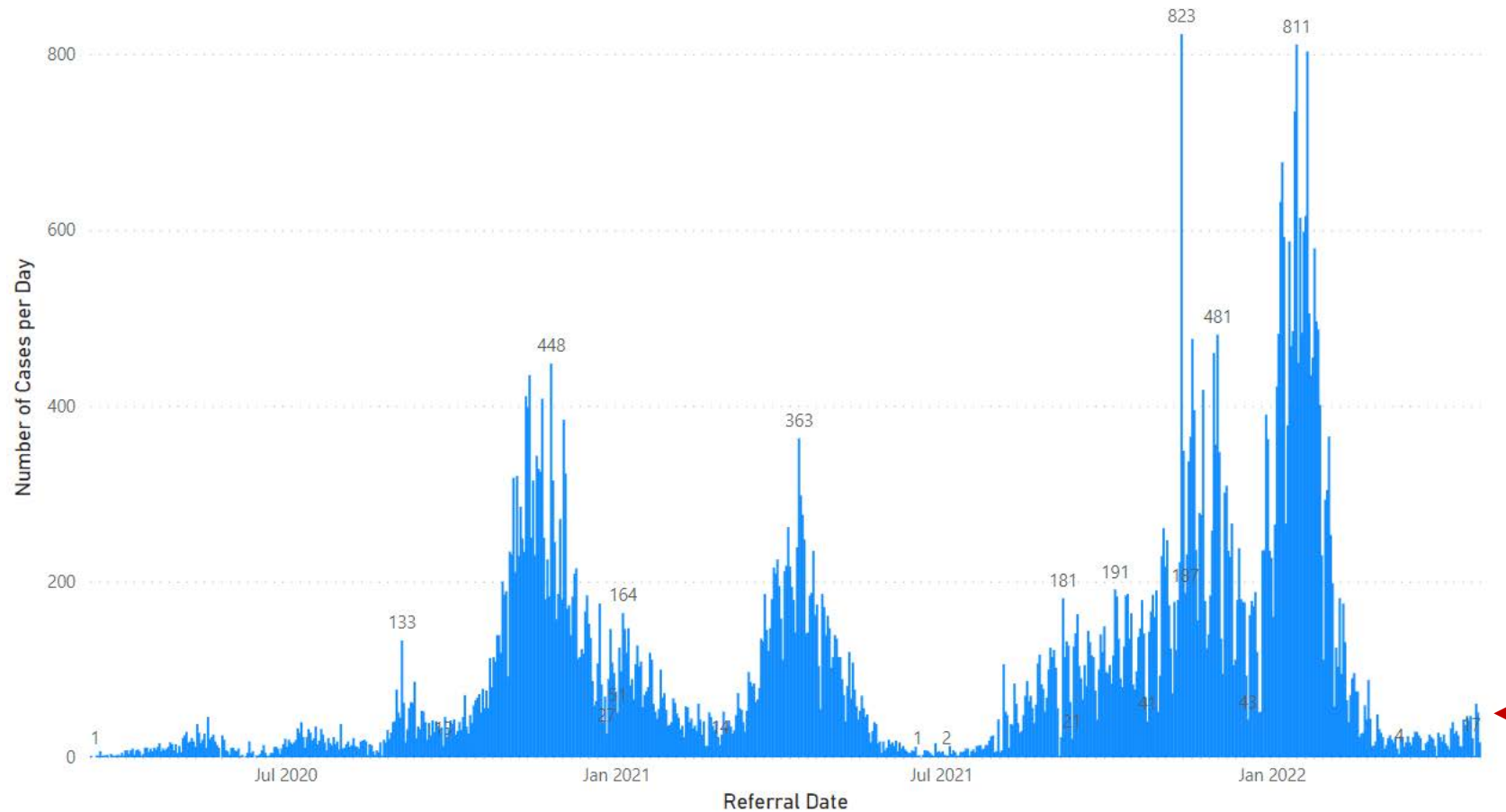
Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

Data through April 26, 2022

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – April 27, 2022

Epidemiological Curve



Total Number of Cases
75,359

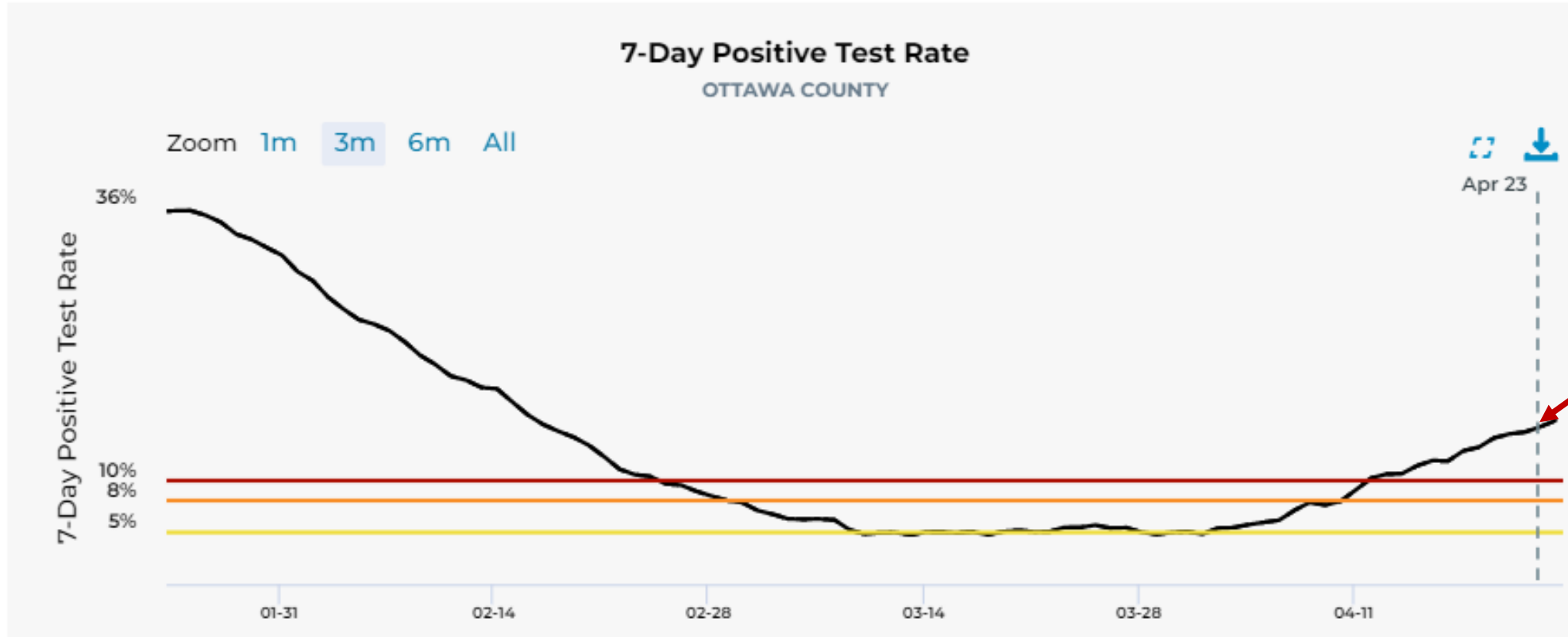
Currently the 7-day average is **34 cases per day**, an increase compared to the 26 cases per day reported last week at this time.

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, January 1, 2022 – April 23, 2022



Test positivity has been increasing for the last 3 weeks, reaching **15.1% last week.**

This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

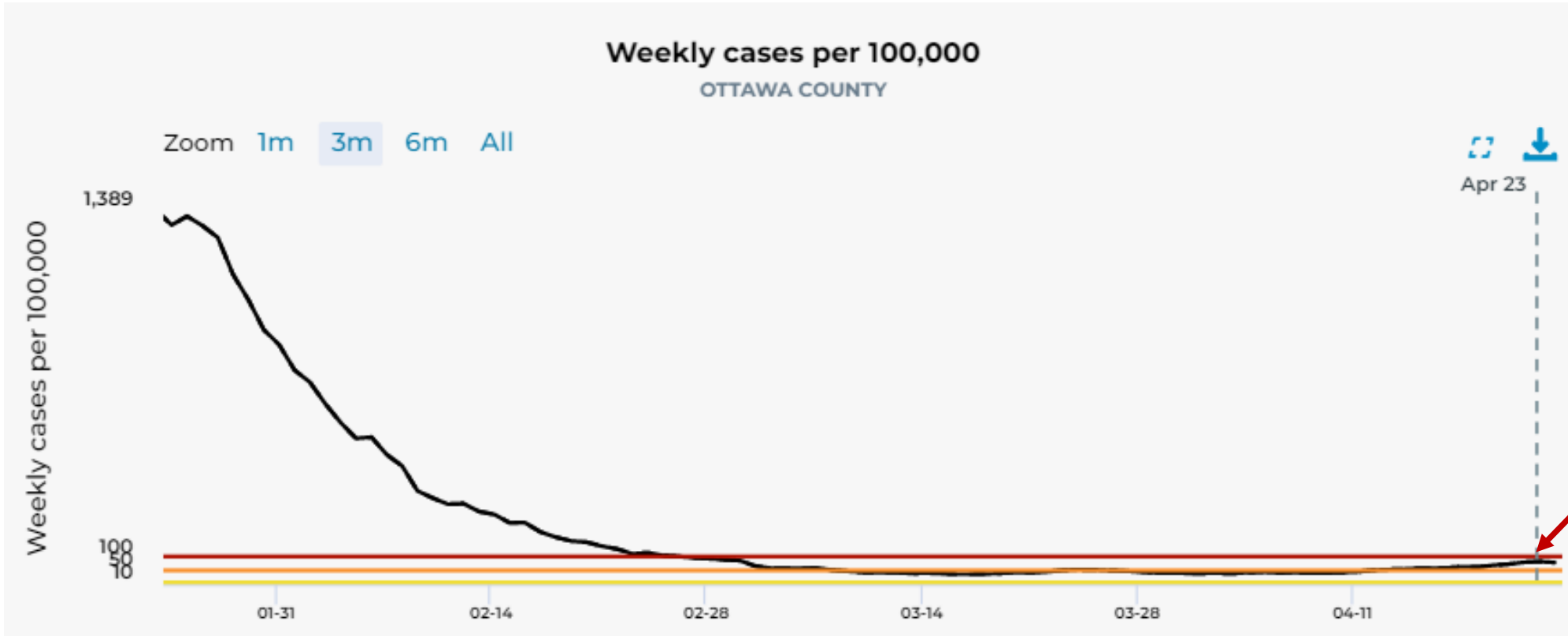


Note: Testing in Ottawa County has continued to decline over the last 4 weeks, with over 2,400 tests in week 13 and declining to about 1,600 tests last week (week 16): [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](https://www.arcgis.com) & <https://www.mistartmap.info/mism-indicators?area=county%3Aottawa>. 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, January 1, 2022 – April 23, 2022



Case rates **remained low at 85** cases per week per 100,000 population (but **higher than 60** the week prior).

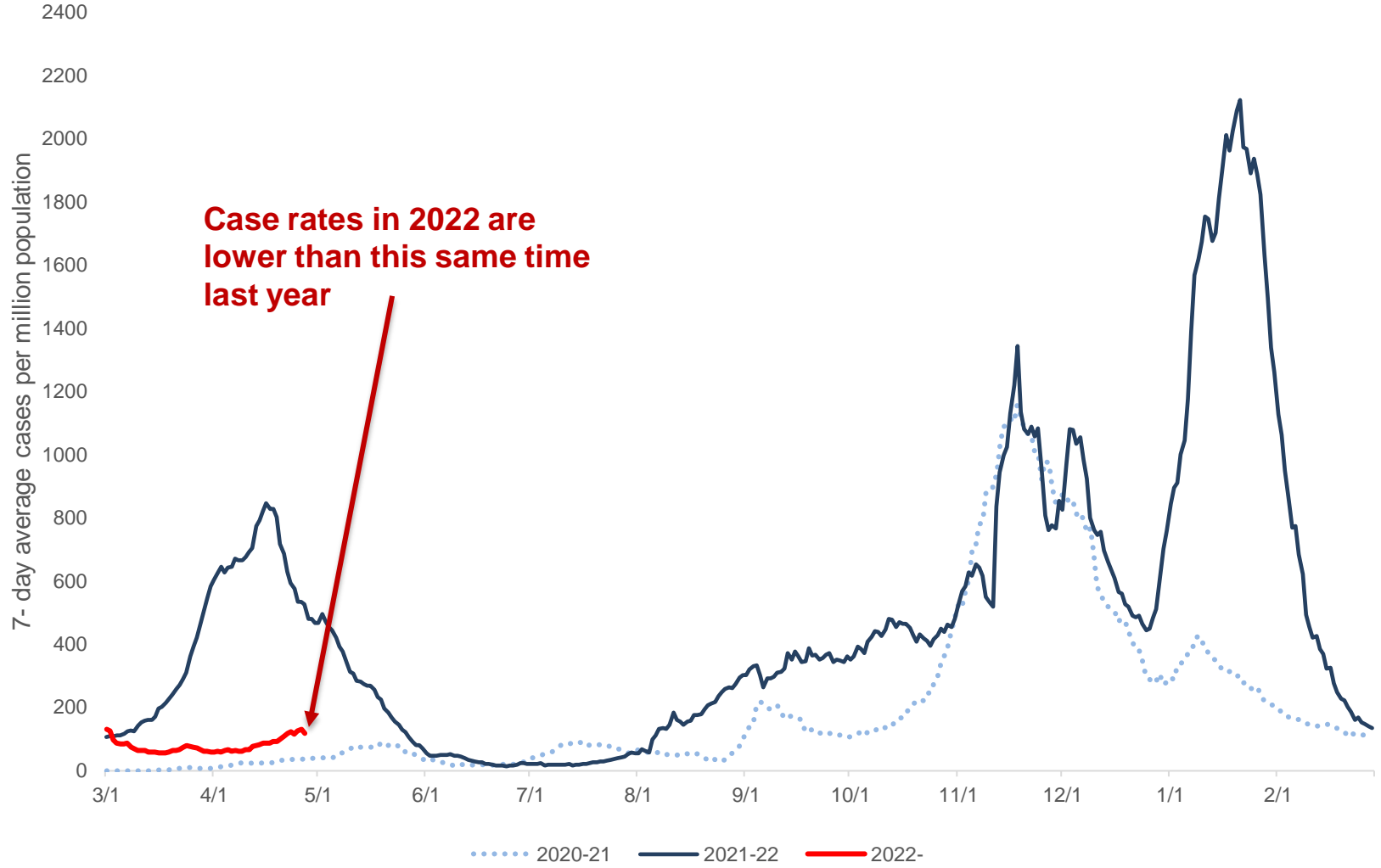
Please note that with updated CDC Community Transmission levels, metrics and/or metric thresholds/goals may change.



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

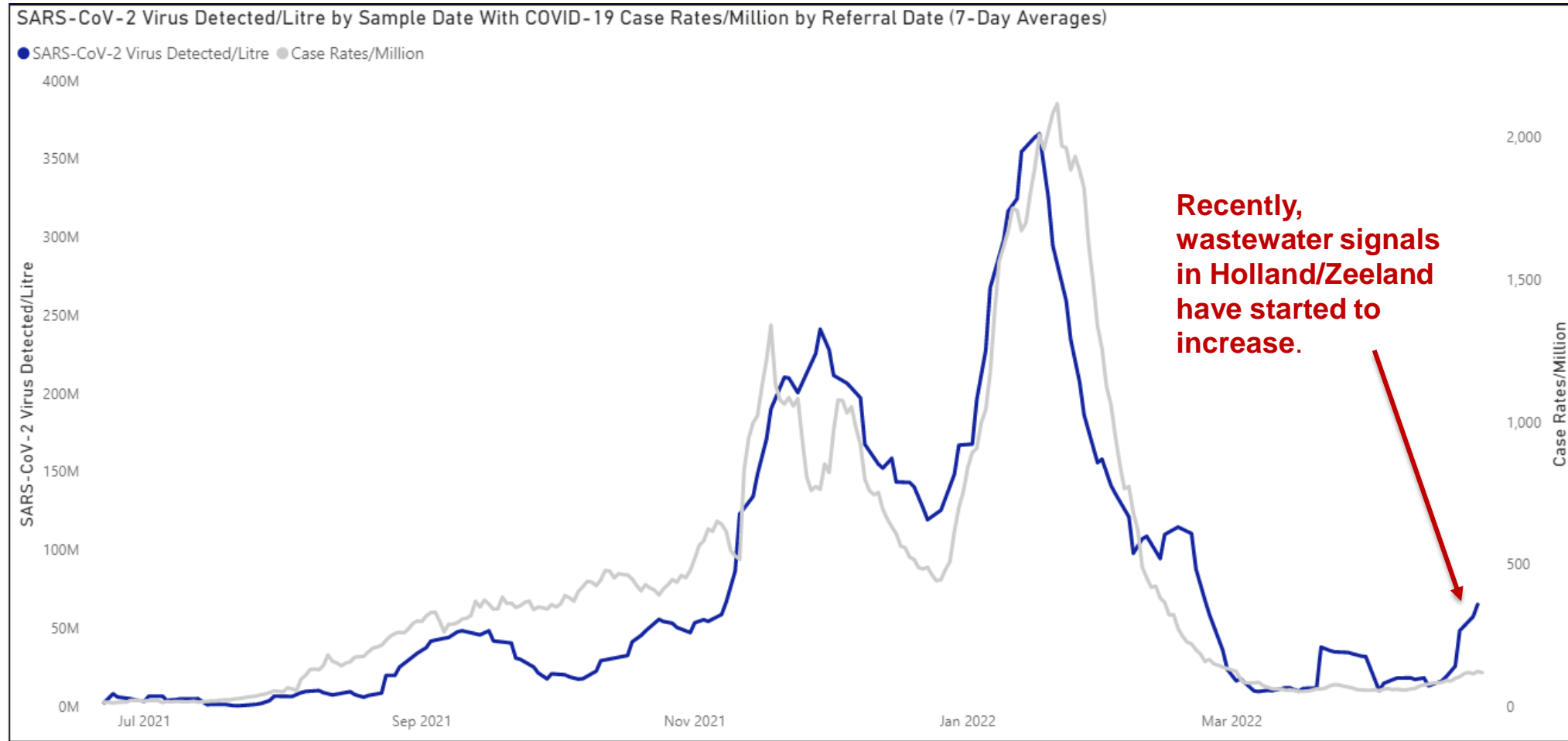


Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

Source: Internal Data

Data through April 27, 2022

Ottawa County Wastewater Surveillance



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

Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates. Display of wastewater data may change as analytical methods are refined.

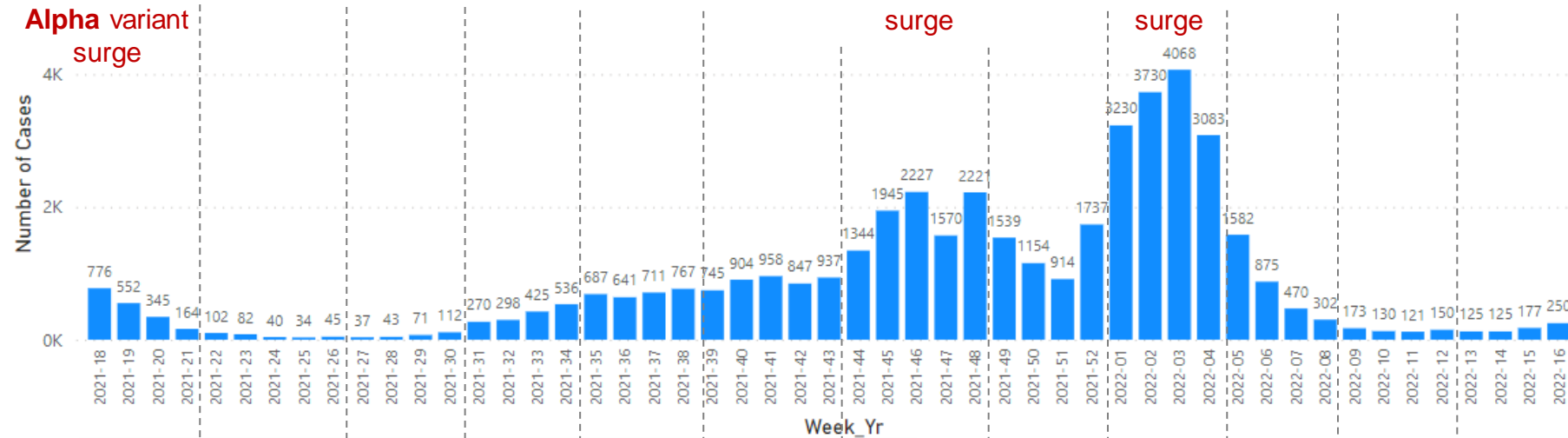
Source: Hope College Global Water Research Institute as part of the MDHHS SEWER-Network, Aaron Best, Ph.D. (best@hope.edu)

Additional Information: [Michigan COVID-19 Wastewater Surveillance Pilot Project \(arcgis.com\)](https://arcgis.com), [Coronavirus - Sentinel Wastewater Epidemiology Evaluation Project \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Data through April 27, 2022

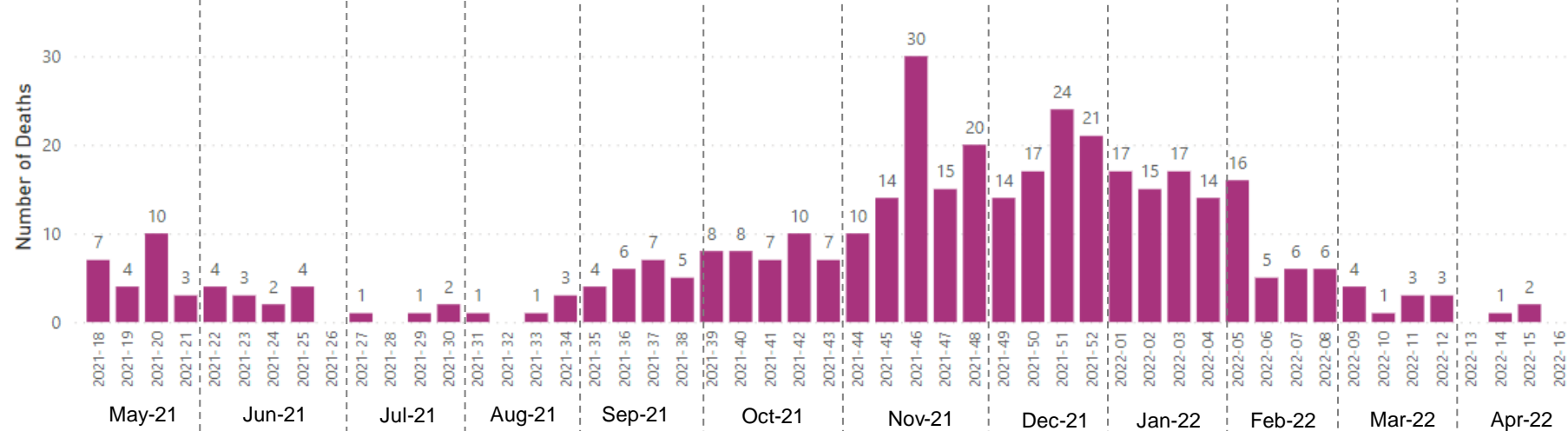
Ottawa County – Cases & Deaths by Week, All Ages

New Cases By Week of Referral



The weekly number of **cases increased 41%** from week 15 to week 16.

New Deaths by Week of Death



Weekly COVID-19 **deaths have declined**. Current weekly average of deaths over the last 4 weeks stands at about **1 death 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.

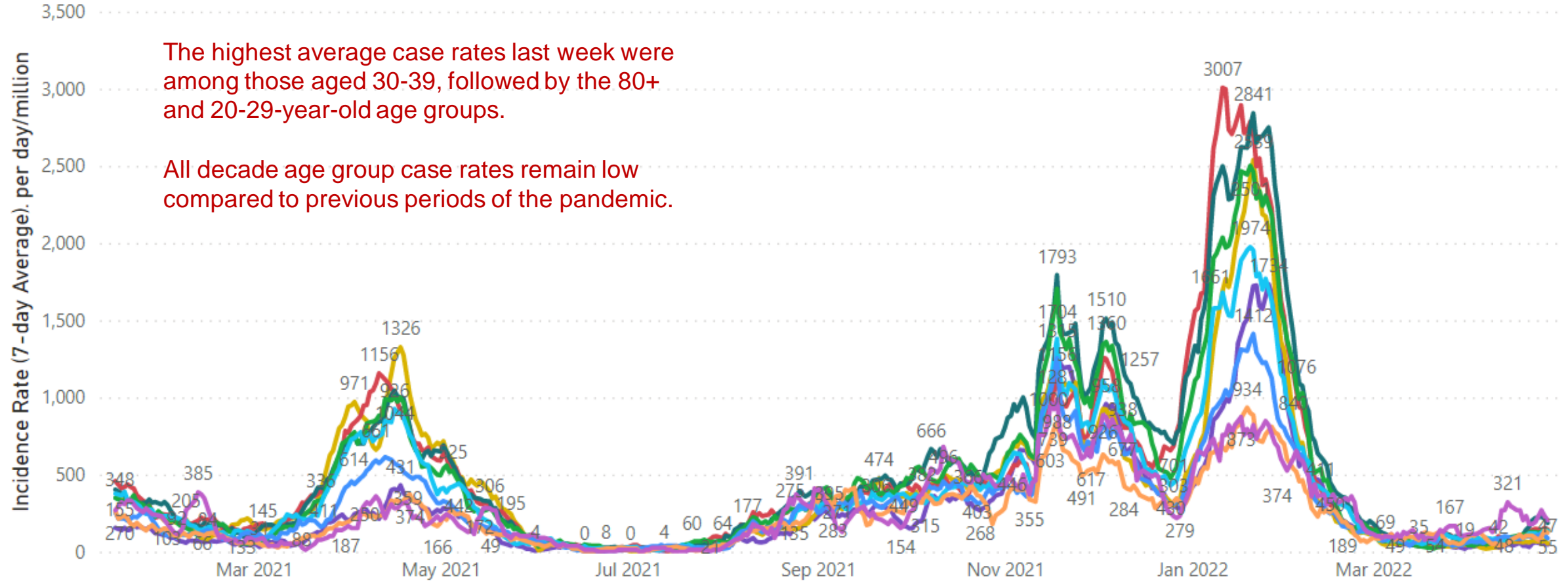
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age Decade

COVID-19 Case Rates by Age, November 2021 – April 27, 2022

Incidence Rate (7-day Average)

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



The highest average case rates last week were among those aged 30-39, followed by the 80+ and 20-29-year-old age groups.

All decade age group case rates remain low compared to previous periods of the pandemic.

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 16 (April 10, 2022 – April 23, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	2.1	58.1	36%
10-19	3.1	70.9	10%
20-29	6.7	148.4	96%
30-39	7.9	219.3	162%
40-49	4.3	129.3	30%
50-59	4.1	118.7	45%
60-69	3.1	96.4	5%
70-79	1.9	90.1	0%
80+	2.1	192.2	-32%

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

Age groups with highest average case rates last week:

- 30-39
- 80+
- 20-29

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

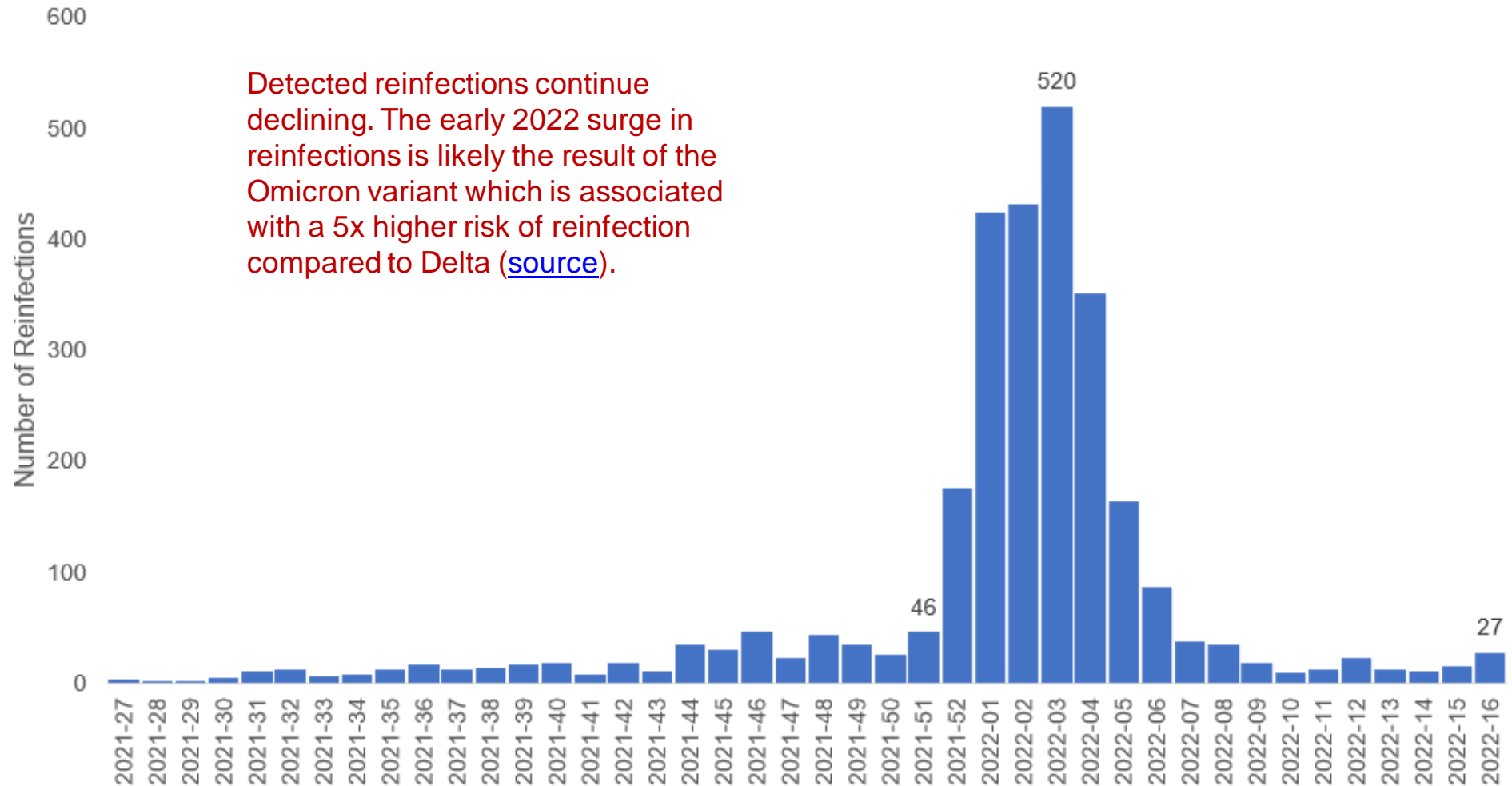
- 30-39
- 20-29
- 50-59

Notes: Average daily cases is calculated by summing the weekly total number of cases and dividing by seven. Cases counted in weeks of interest reflect referral date. Use of at home tests 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 28, 2022

Ottawa County – Reinfections by Week



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 27, 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
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	140	-42%	33	-47%	173	-43%
12-Mar-22	104	-26%	26	-21%	130	-25%
19-Mar-22	101	-3%	20	-23%	121	-7%
26-Mar-22	137	36%	13	-35%	150	24%
2-Apr-22	108	-21%	17	31%	125	-17%
9-Apr-22	112	4%	13	-24%	125	0%
16-Apr-22	159	42%	18	38%	177	42%
23-Apr-22	224	41%	26	44%	250	41%

Adults

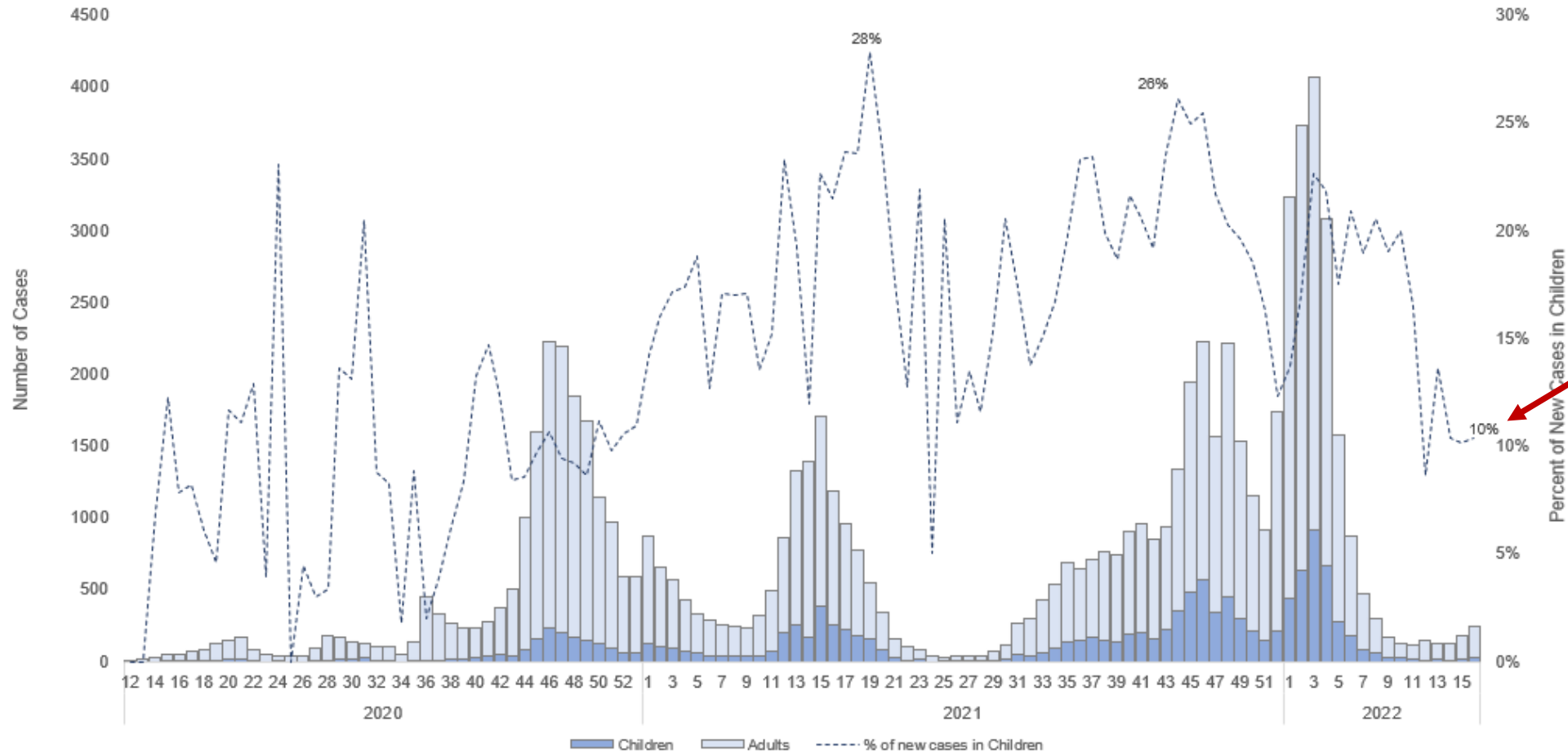
Children

Weekly case counts among **children increased 44%** last week, and cases in **adults increased 41%**.

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 16 in 2022, children made up 10% of cases reported, lower compared to other times of the pandemic, and lower compared with recent weeks.

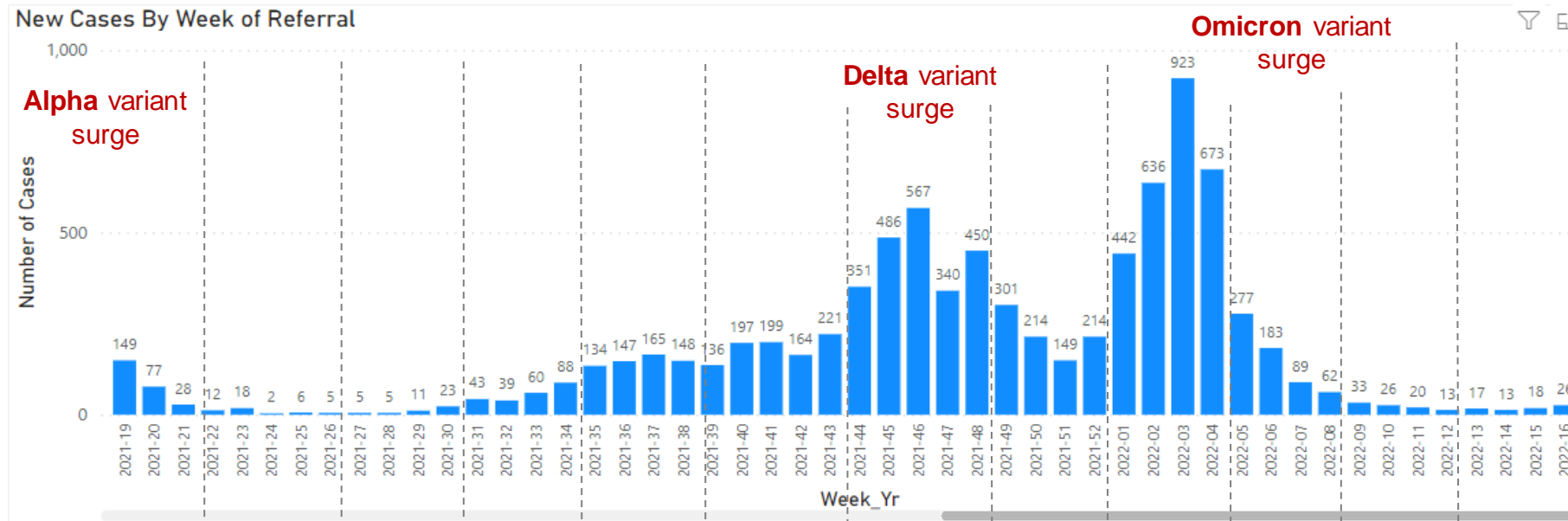
For comparison, children aged 0-17 make up about 23.5% of the population in Ottawa County.

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

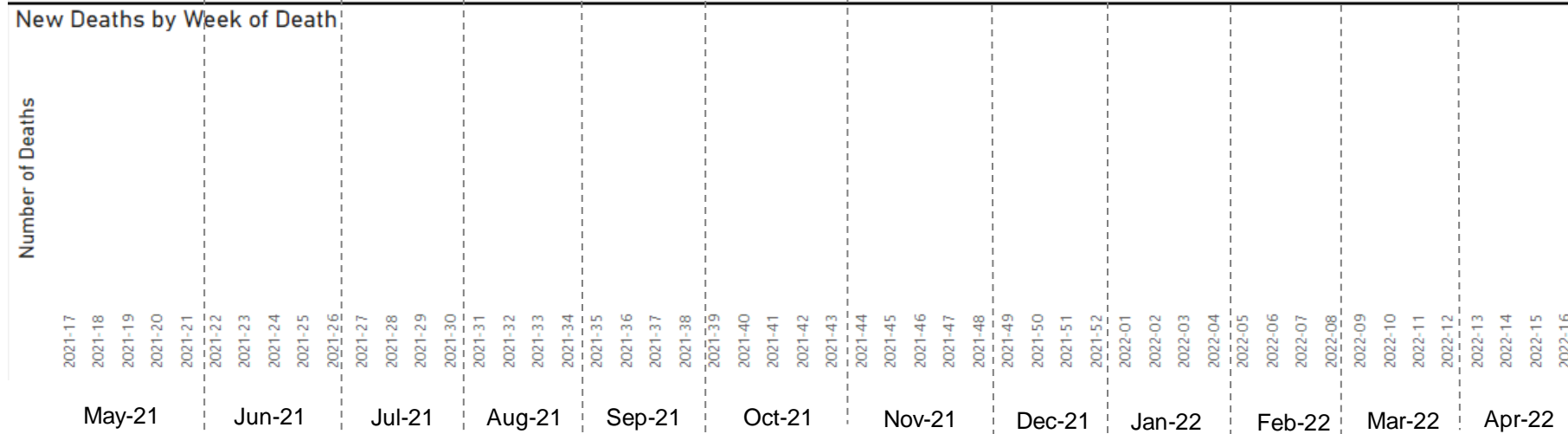
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System; CDC Wonder 2020

Data through Week 16, 2022

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



The weekly number of cases among children **increased 44%** from week 15 to week 16.



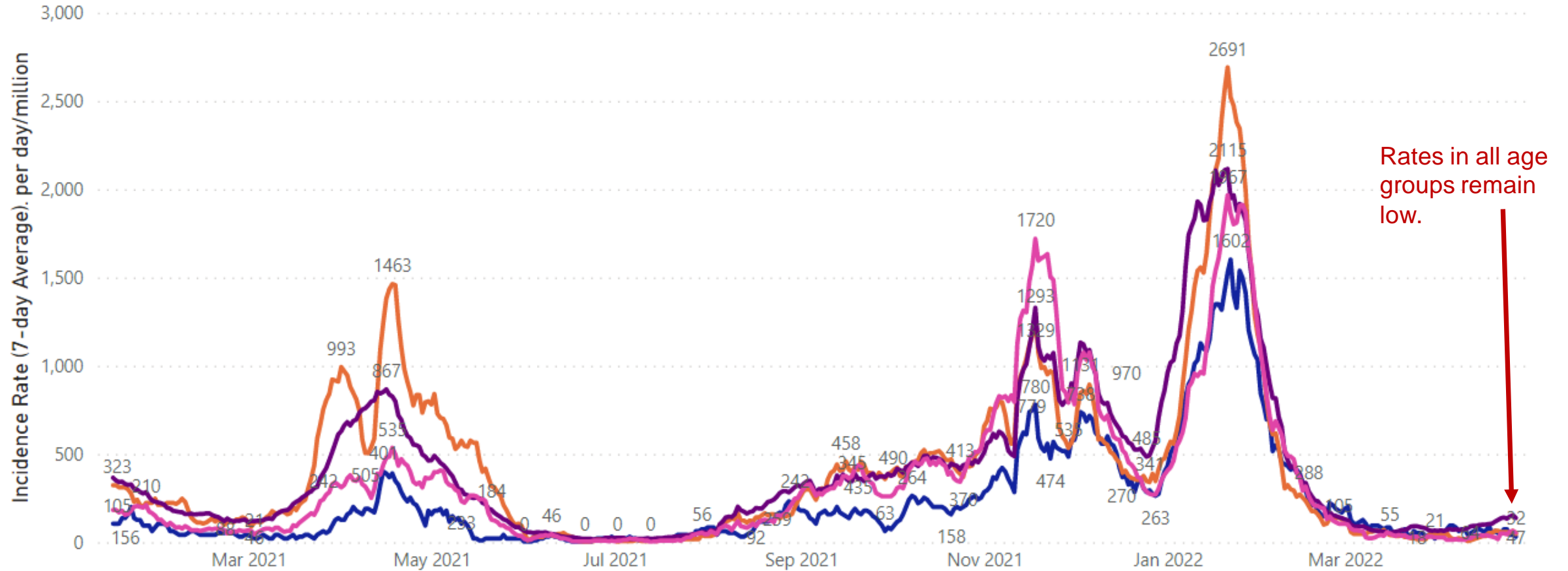
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – April 27, 2022

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



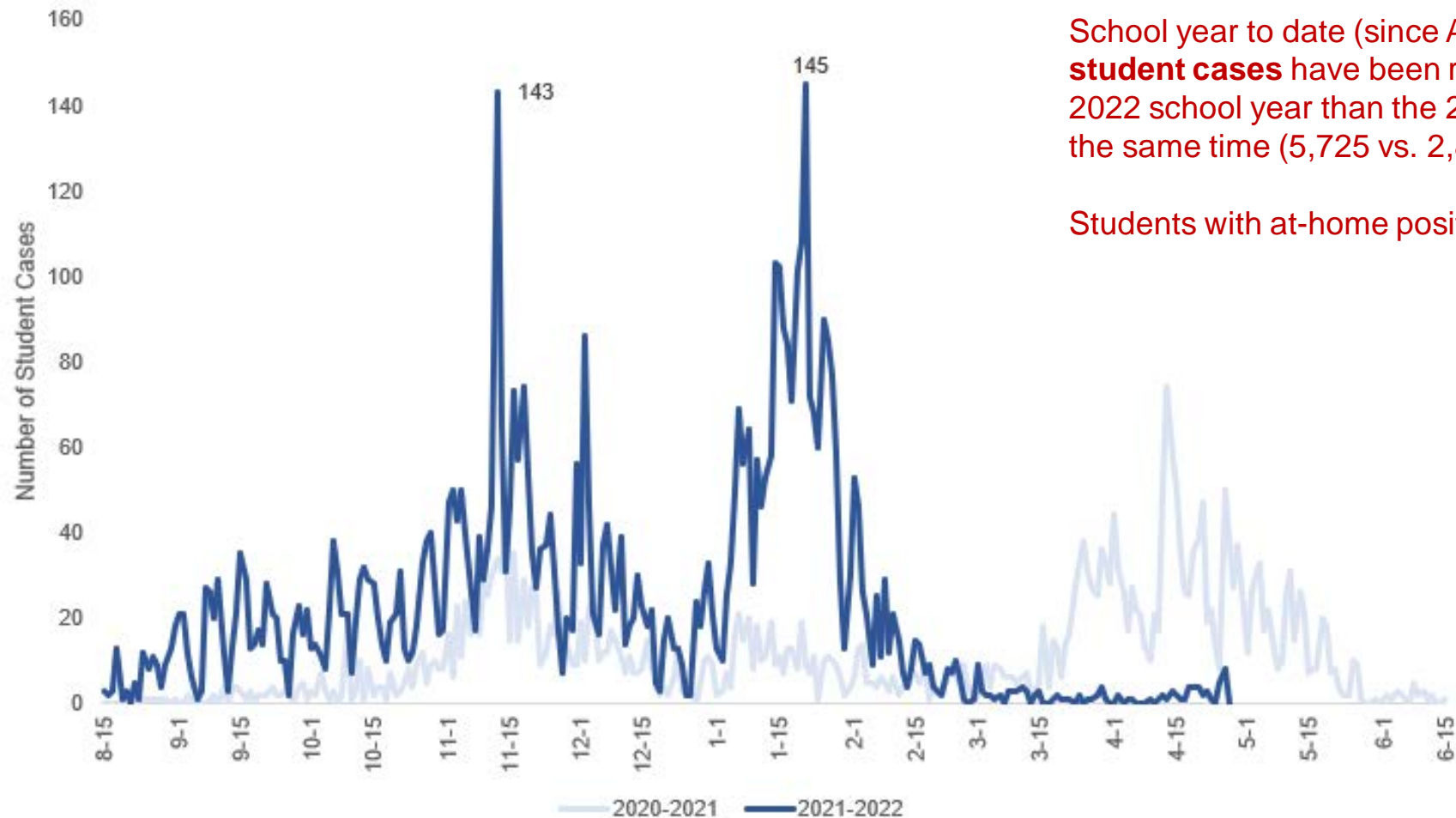
Rates in all age groups remain low.

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

Data as of April 27, 2022

Ottawa County Cases in PreK-12 School Students



School year to date (since August 15), **2x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,725 vs. 2,886) 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.

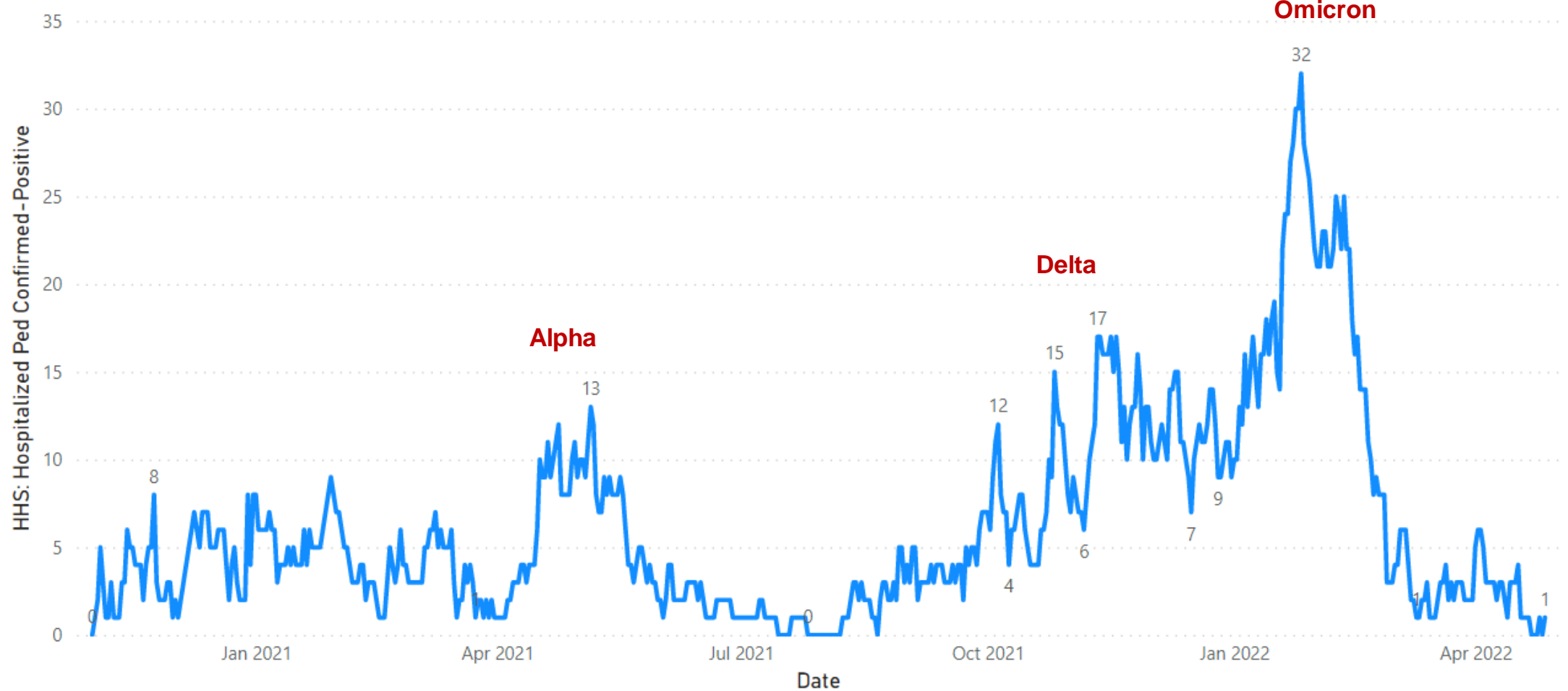
Note: Data may change as information is updated and methods are refined. Cases reported in 2022 will likely increase. The peak of 143 cases reported on November 12, 2021 is the result of a database update by MDHHS that reported a backlog of cases from the previous days. Use of at home tests likely reduces 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 27, 2022

Weekly Hospital Pediatric Census – A Regional Healthcare System

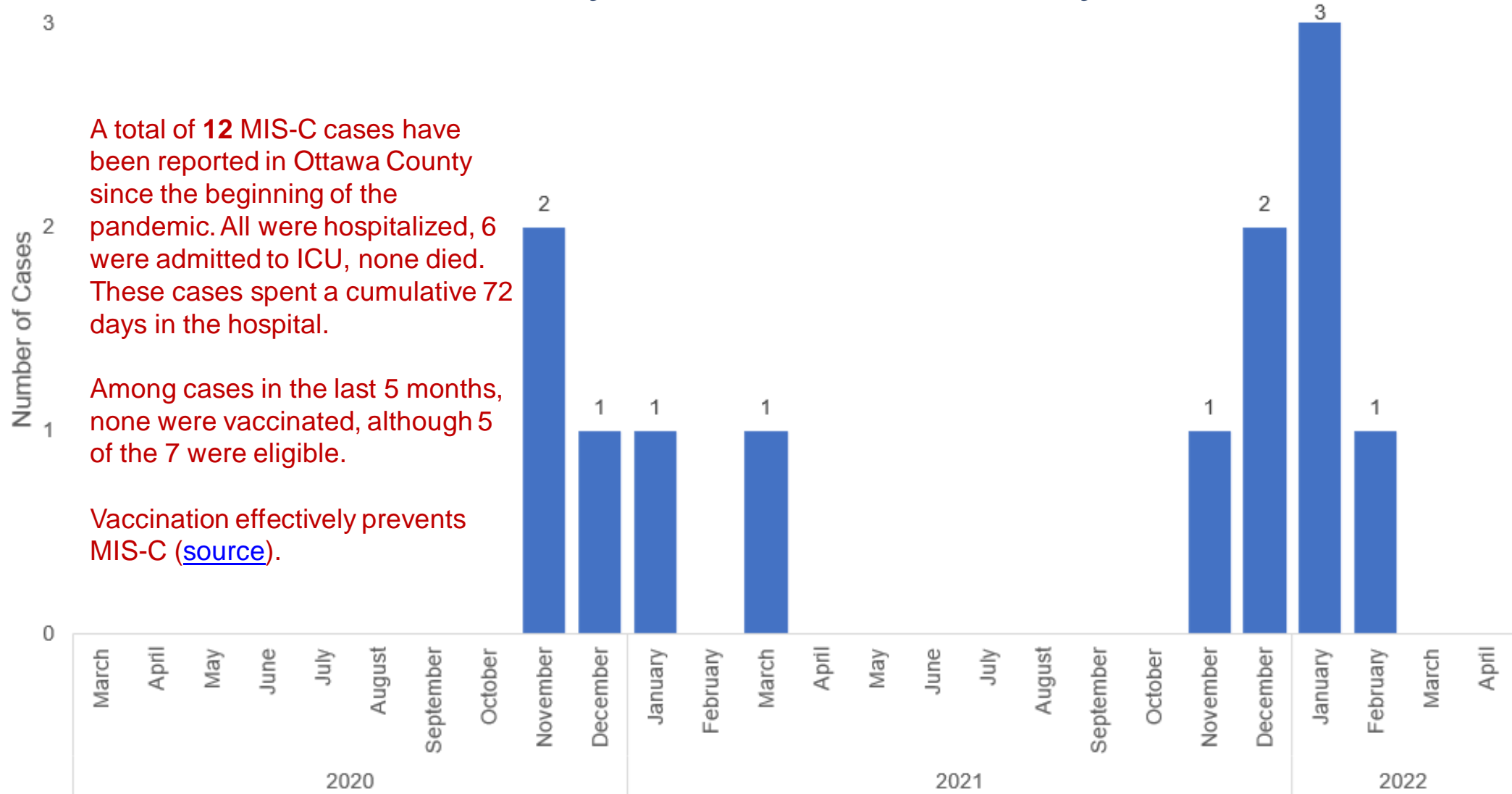
HHS: Hospitalized Ped Confirmed-Positive by Date



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 day. Data may change as information is updated. Includes patients that reside in counties across the region, including Ottawa County.

Data through April 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.

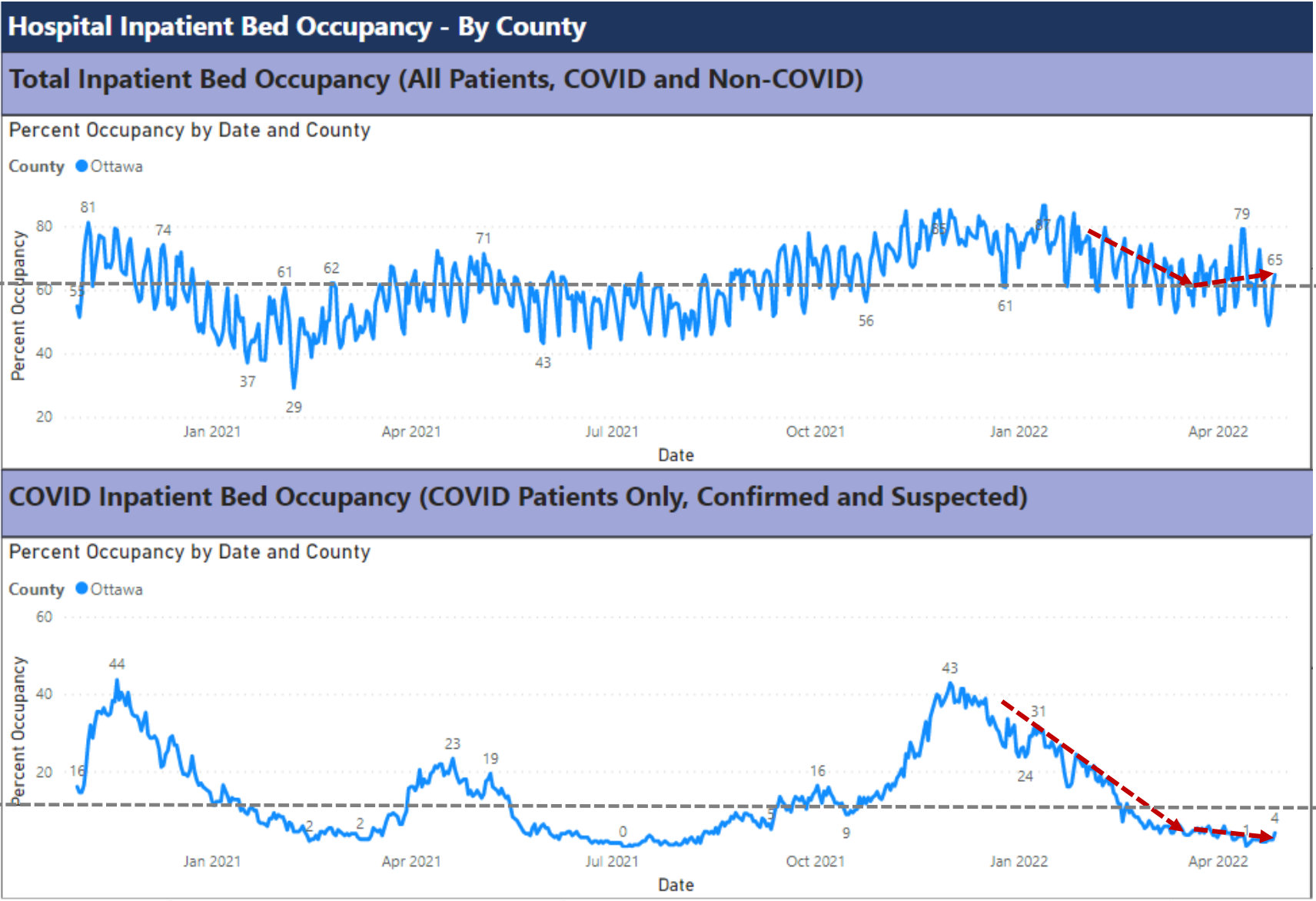
Vaccination effectively prevents MIS-C ([source](#)).

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 28, 2022

Ottawa County Hospital Capacity – All Beds



Pandemic Average

62%

Total hospital bed occupancy is **slightly above the pandemic average.**

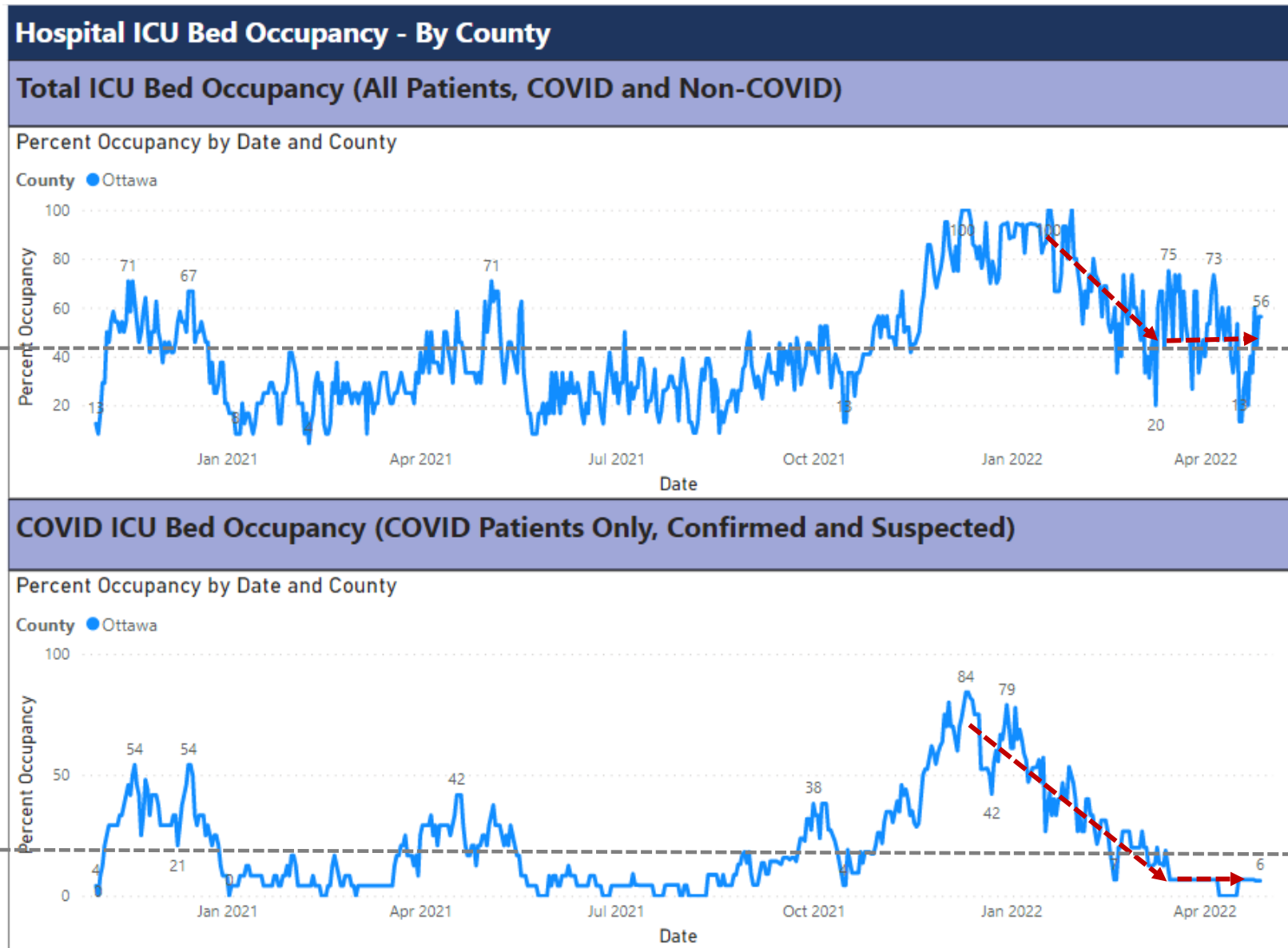
Currently **4%** of all inpatient beds are occupied by COVID-19 patients.

14%

Source: EMResources

Data through April 27, 2022

Ottawa County Hospital Capacity – ICU Beds



Pandemic Average

41%

21%

Overall ICU bed occupancy is **slightly above the pandemic average**.

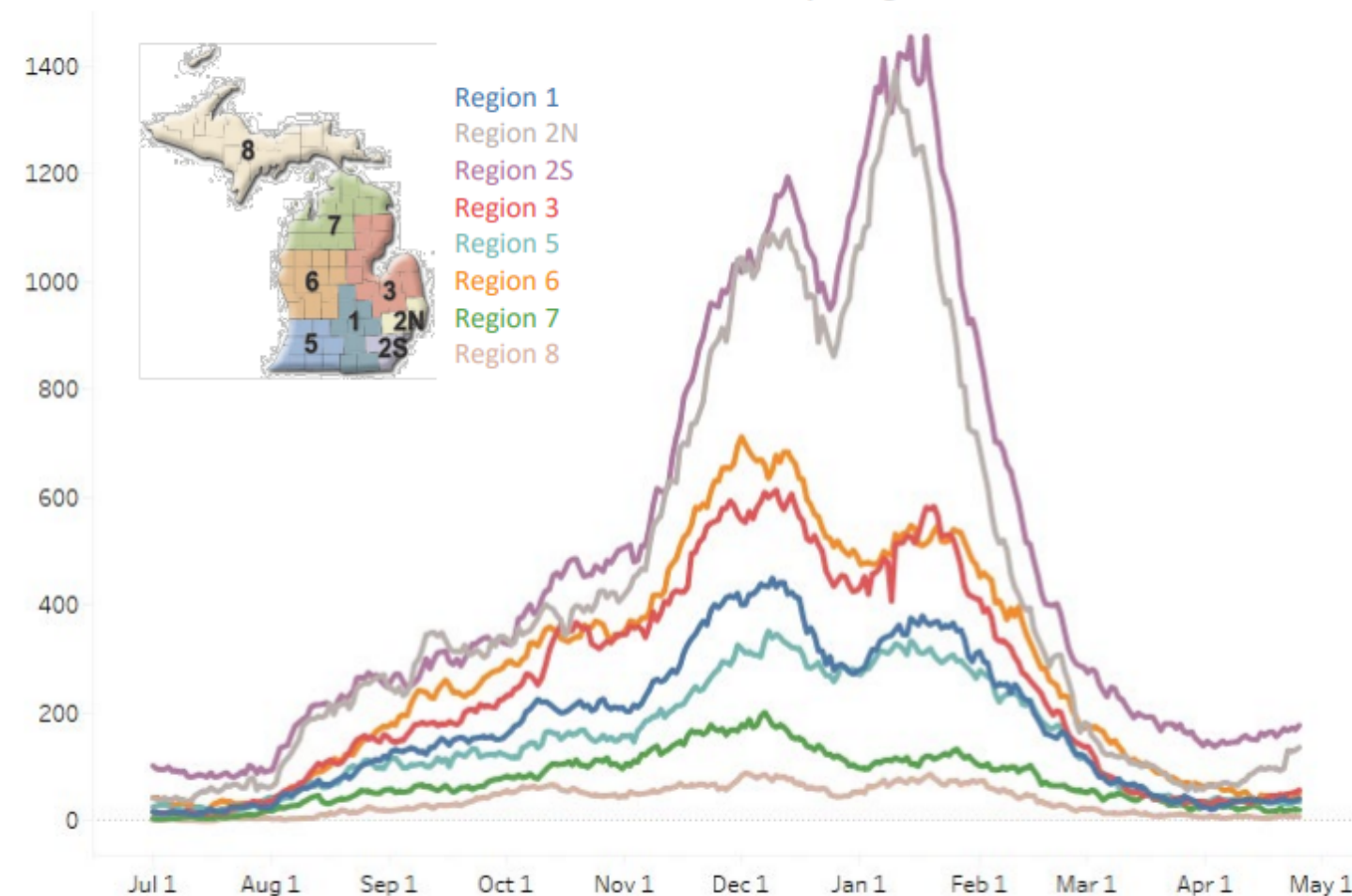
The proportion of ICU beds occupied by COVID-19 patients is **below the pandemic average**. Currently, **6%** of all ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through April 27, 2022

Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 4/25/2022
Confirmed Positive by Region



This week the COVID+ census has increased across all regions except Region 5, which is flat from last week.

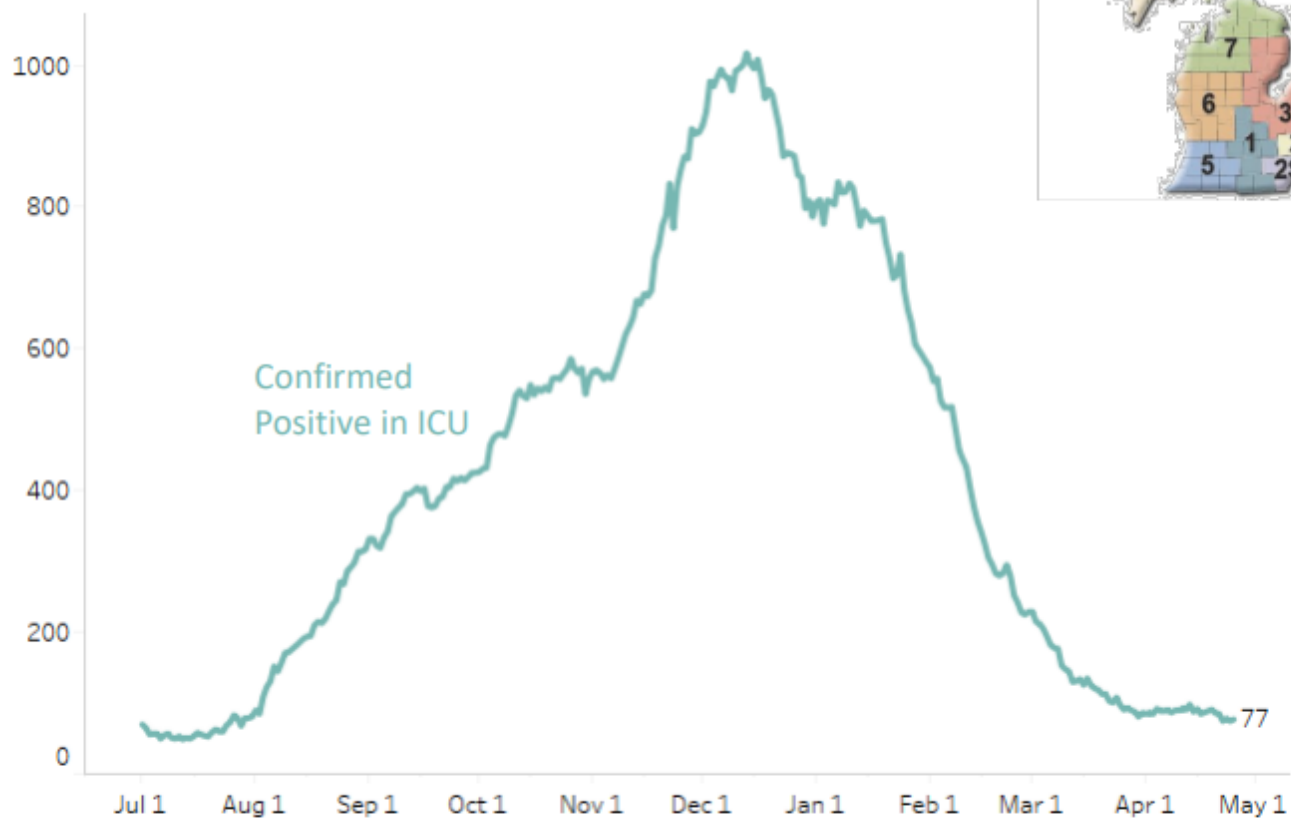
The highest growth rates are in Regions 1, 2N, 3 and 8.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	41 (21%)	38/M
Region 2N	136 (40%)	61/M
Region 2S	177 (7%)	79/M
Region 3	57 (24%)	50/M
Region 5	35 (0%)	37/M
Region 6	51 (16%)	35/M
Region 7	20 (11%)	40/M
Region 8	8 (33%)	26/M

Source: MDHHS Data and Modelling: https://www.michigan.gov/coronavirus/-/media/ProjectWebsites/coronavirus/Michigan-Data/Data-and-Modeling-Updates/20220426-Data-and-modeling-update_vMEDIA.pdf?rev=475334a2372740d0a9688be146893f9e&hash=A4C53AE49D5BC246E4AA0987B000601C

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 7/1/2021 – 4/25/2022
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased by 14% from last week. There are 77 COVID+ patients in ICU beds across the state. Region 2N has an increasing trend, all other regions have decreased or remained flat.

All regions have 5% or fewer ICU beds filled with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	5 (-38%)	81%	3%
Region 2N	20 (25%)	70%	4%
Region 2S	31 (-16%)	79%	5%
Region 3	7 (-13%)	80%	2%
Region 5	4 (-50%)	69%	2%
Region 6	6 (0%)	72%	3%
Region 7	3 (-40%)	72%	2%
Region 8	1 (0%)	54%	2%

Source: MDHHS Data and Modelling: https://www.michigan.gov/coronavirus/-/media/ProjectWebsites/coronavirus/Michigan-Data/Data-and-Modeling-Updates/20220426-Data-and-modeling-update_vMEDIA.pdf?rev=475334a2372740d0a9688be146893f9e&hash=A4C53AE49D5BC246E4AA0987B000601C

Pediatric Hospitalization Rates – USA, Georgia, Michigan

United States | 0 - 17 Years



GA | 0 - 17 Years



MI | 0 - 17 Years



Pediatric hospitalization rates across the US, in Georgia, and in Michigan **remained low**.

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

Accessed April 27, 2022

Pediatric Hospitalization Rates – Select Midwest States



Ohio, Indiana, and Illinois are all showing relatively low pediatric hospitalization rates.

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

Accessed April 27, 2022

Pediatric Hospitalization Rates – Select Midwest States



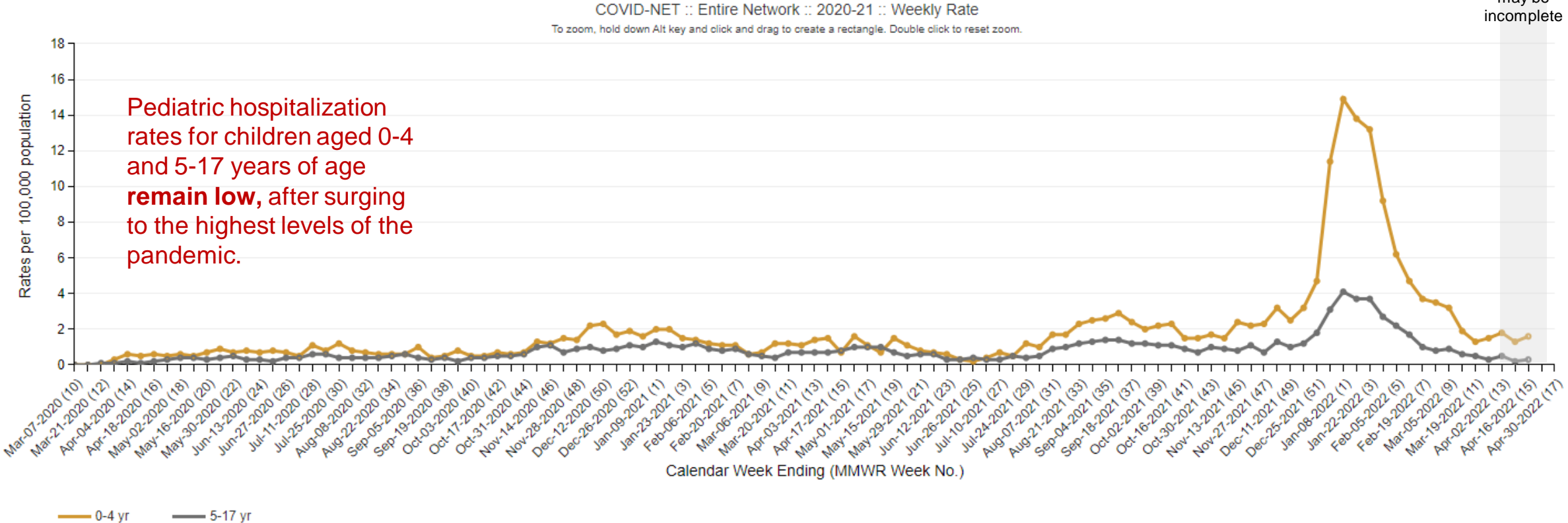
Pediatric hospitalization rates in Minnesota, Wisconsin, and Iowa are low compared to other times in the pandemic.

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

Accessed April 27, 2022

Pediatric Hospitalization Rates by Age Group – USA

Recent data may be incomplete



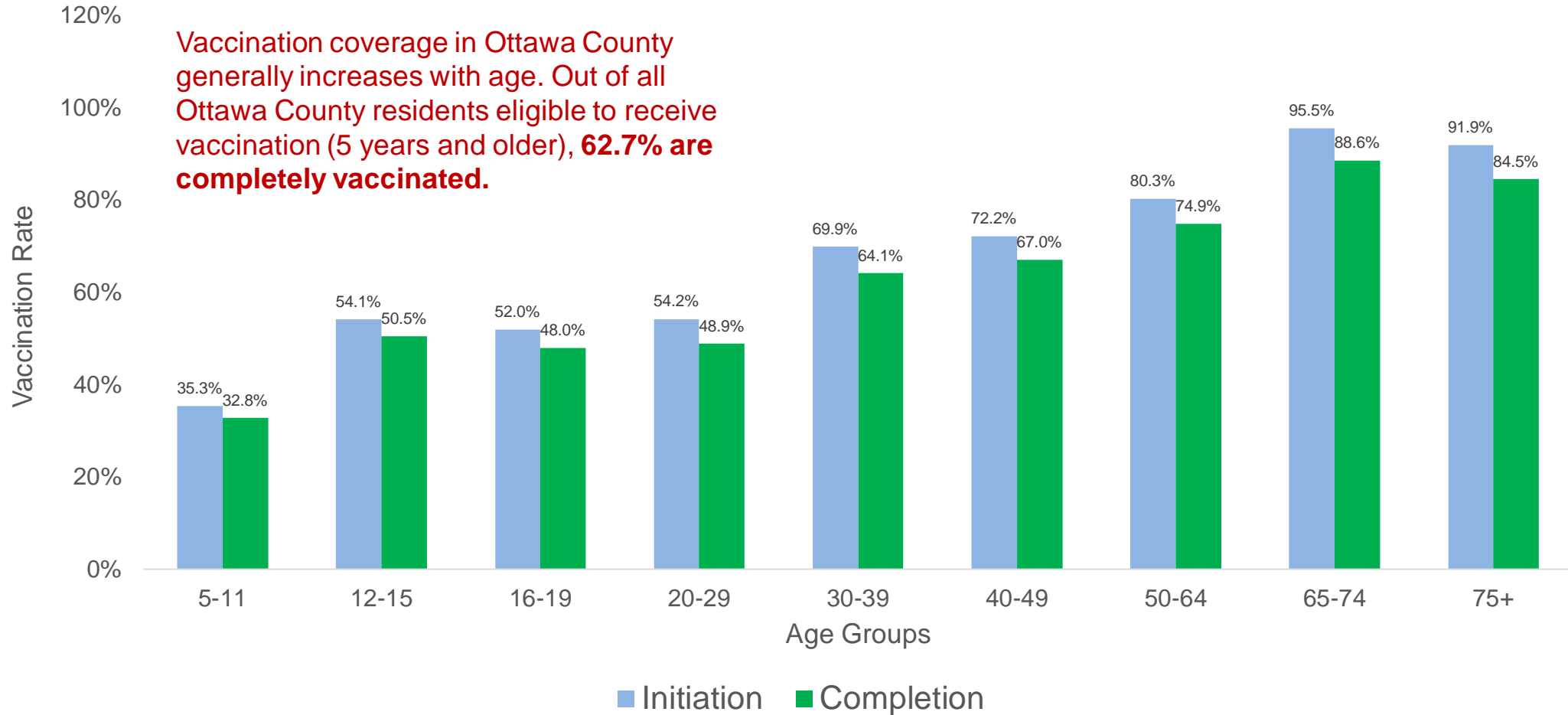
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 28, 2022

Vaccination Coverage by Age



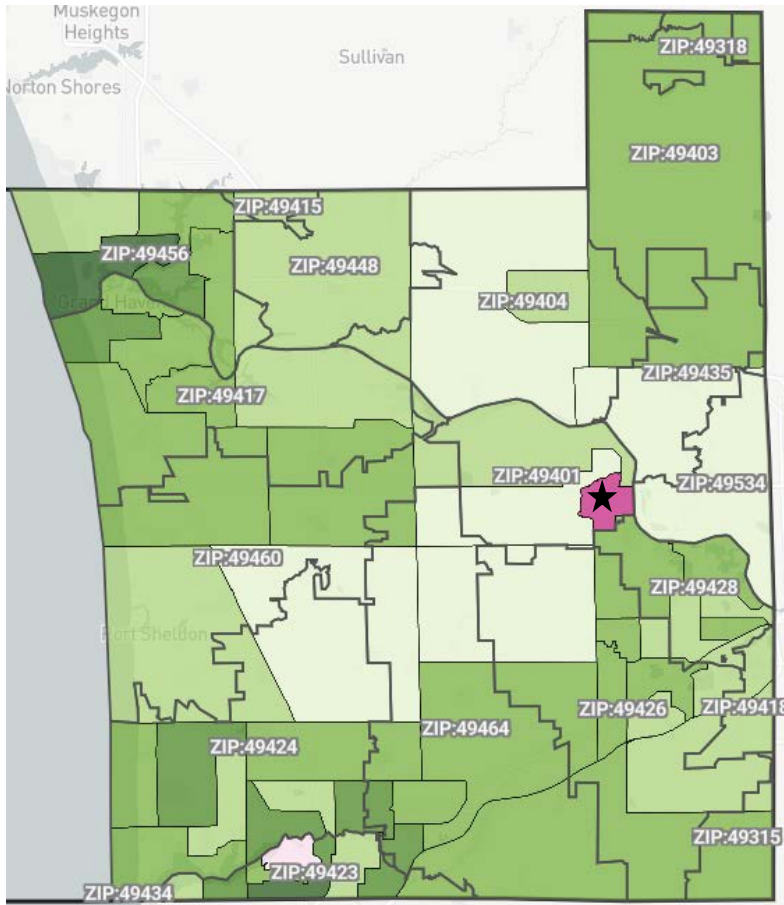
Notes:
Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J.

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

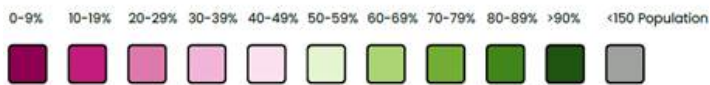
Data through April 27, 2022

Vaccination Coverage by Place of Residence

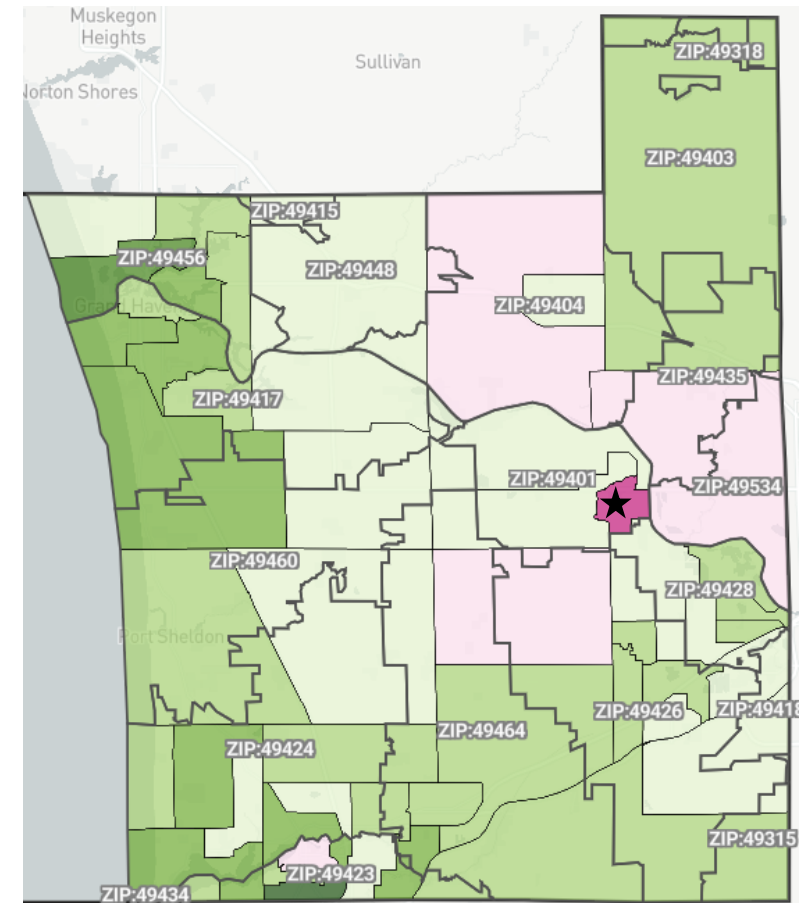
Fully vaccinated: % Ages 16+ years



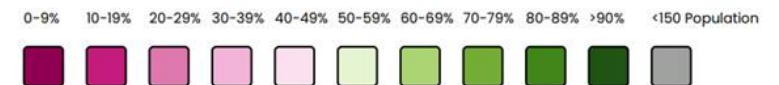
Color coded by: Fully Vaccinated (% Ages 16+)



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 – April 23, 2022

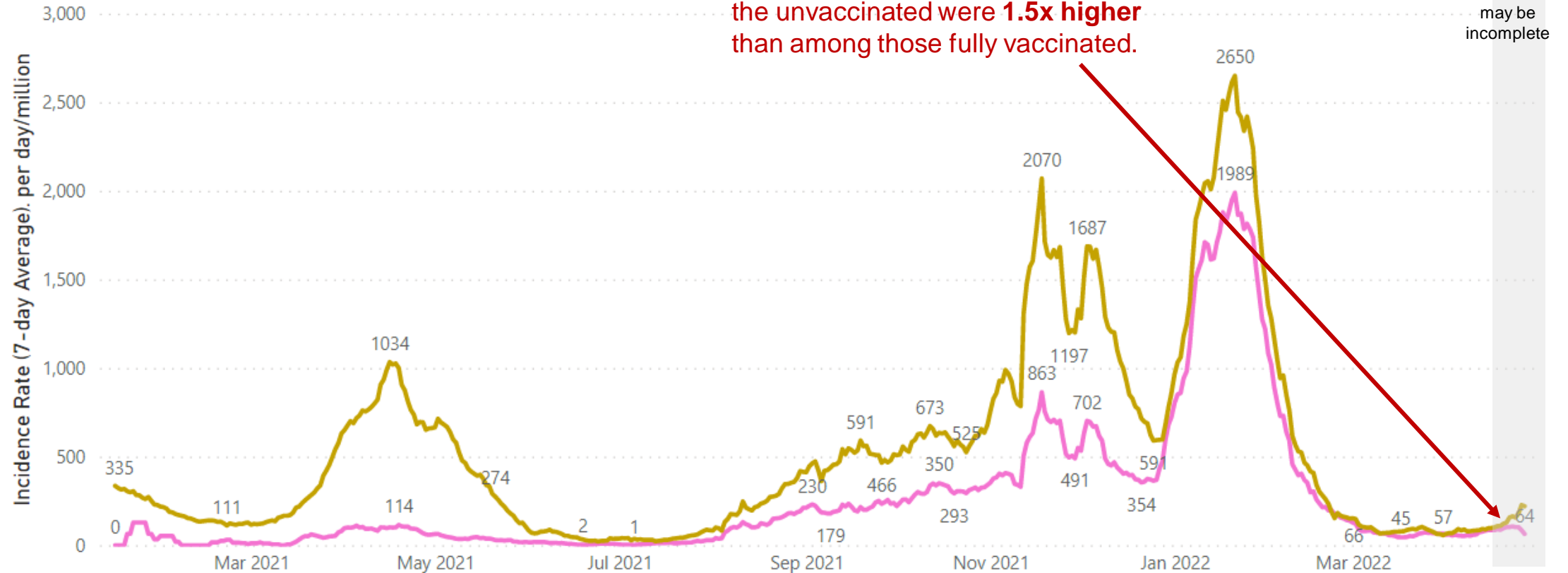
Fully Vaccinated People (172,540)	
Cases	Deaths
Percent of Cases in People Not Fully Vaccinated (36,288 / 55,156) 65.8%	Percent of Deaths in People Not Fully Vaccinated (287 / 441) 65.1%
Total Cases Not Fully Vaccinated 36,288	Total Deaths Not Fully Vaccinated 287
Total Breakthrough Cases 18,868	Total Breakthrough Deaths 154
Percent of Fully Vaccinated People who Developed COVID-19 (18,868 / 172,540) 10.9%	Percent of Fully Vaccinated People who Died of COVID-19 (154 / 172,540) 0.09%
Percent of Cases who were Fully Vaccinated (18,868 / 55,156) 34.2%	Percent of Deaths who were Fully Vaccinated (154 / 441) 34.9%
Total Cases 55,156	Total Deaths 441

Sources:
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
MDHHS COVID-19 Dashboard: <https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard>

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

Incidence Rate (7-day Average)

rategroup ● Fully Vaccinated ● Unvaccinated



As of April 23, 2022, case rates among the unvaccinated were **1.5x 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. 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:

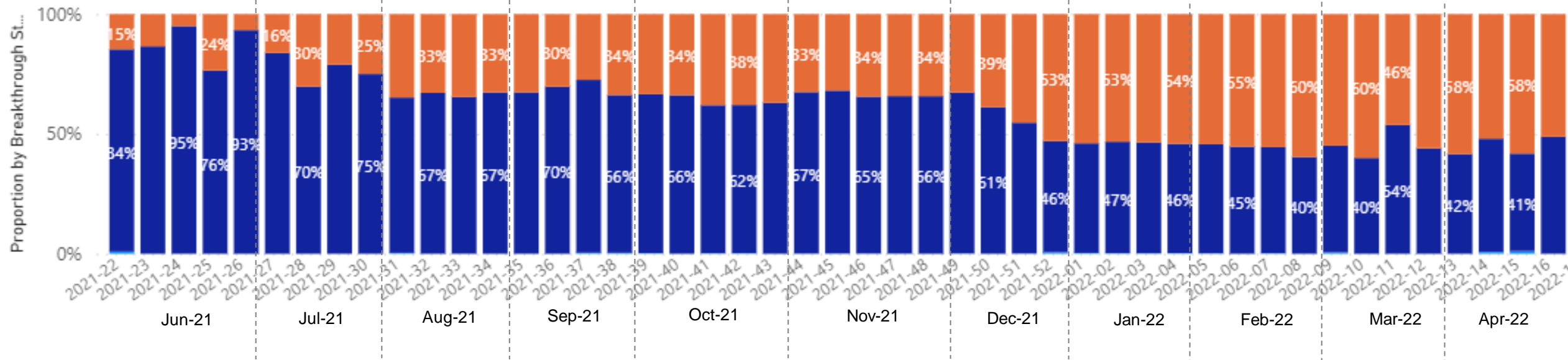
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
 MDHHS COVID-19 Dashboard: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

By Week

Breakthrough Proportions by Week

Vaccine_Breakthrough ● NO ● YES

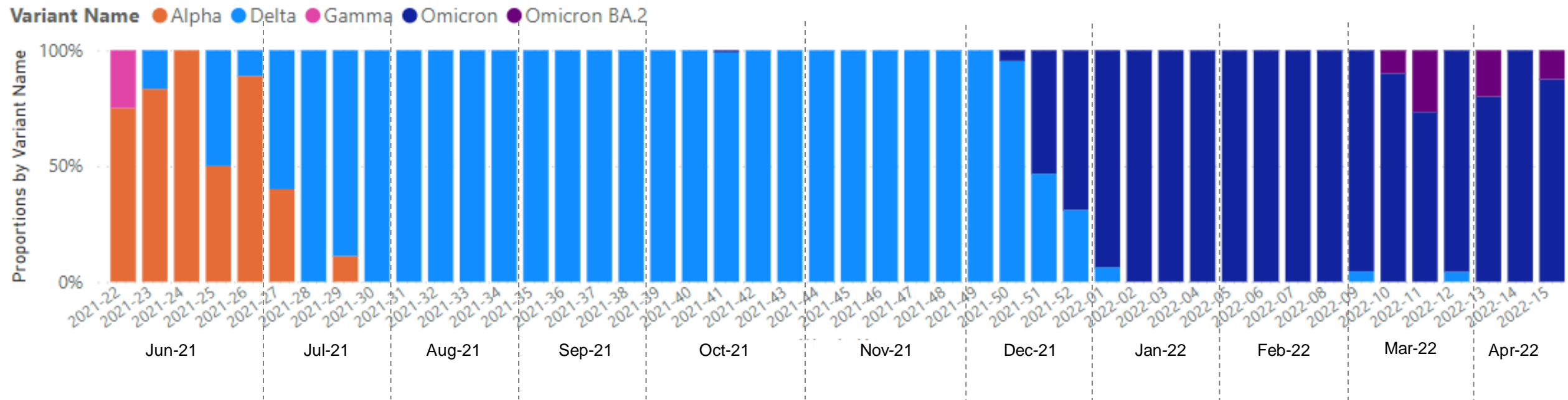


Through the Delta wave, which was most pronounced August through early December of 2021, about 34% of all cases reported to public health were breakthrough cases. At the end of 2021 and into 2022, the proportion of vaccine breakthrough cases increased to roughly 54% of cases reported each week. Weekly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

Variant Proportions by Week



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, including the BA.2 variant.

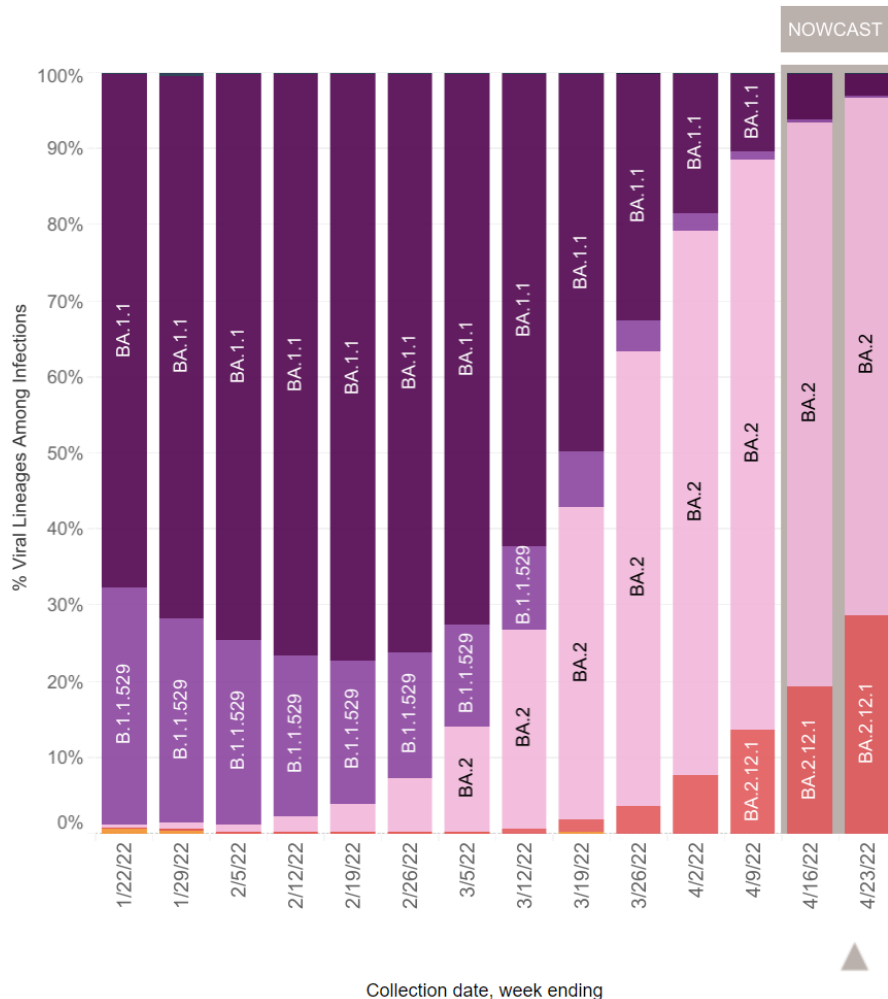
* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants.

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

Variants – Clinical Samples from Across the USA

United States: 1/16/2022 – 4/23/2022

United States: 4/17/2022 – 4/23/2022 NOWCAST



USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.2	VOC	68.1%	61.3-74.2%
	BA.2.12.1	VOC	28.7%	22.3-36.0%
	BA.1.1	VOC	2.8%	2.3-3.3%
	B.1.1.529	VOC	0.2%	0.1-0.3%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.2%	0.1-0.6%

The **Omicron** variant is estimated to account for close to 100% of all clinical samples collected in the United States the week ending April 23, 2022.

Omicron subvariants are also circulating, with BA.2 variants predominating.

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
 ** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
 # AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. BA.1, BA.3, BA.4, BA.5 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. For regional data, BA.1.1 and its sublineages are also aggregated with B.1.1.529, as they currently cannot be reliably called in each region. Except BA.2.12.1, BA.2 sublineages are aggregated with BA.2.

Collection date, week ending

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

Accessed April 27, 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
01/13/2022	Zeeland	N	N
01/16/2022	North Holland	N	Y
01/16/2022	North Holland	N	Y
01/17/2022	Zeeland	N	Y
01/17/2022	Zeeland	N	N
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
04/03/2022	North Holland	N	N
04/04/2022	Zeeland	N	N
04/17/2022	North Holland	N	N
04/18/2022	Zeeland	N	N
04/20/2022	North Holland	N	N
04/21/2022	Zeeland	N	N
04/24/2022	North Holland	N	N
04/25/2022	Zeeland	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 less detection in recent weeks.

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

Variants – Wastewater Sampling – Grand Haven/Spring Lake

N	=Not Detected
Y	=Detected
	=Not Tested

Date	Sample Name	Wuhan (parental)	Delta	Epsilon	Alpha	Omicron
1/4/2022	Grand Haven Spring Lake Wastewater	N	Y	N		Y
1/5/2022	Allendale Wastewater Treatment Plant	N	Y	N		Y
1/10/2022	Allendale Wastewater Treatment Plant	N	Y	Y		Y
1/10/2022	Grand Haven Spring Lake Wastewater	N	Y	N		Y
1/12/2022	Allendale Wastewater Treatment Plant	N	Y	Y		Y
1/19/2022	Allendale Wastewater Treatment Plant	N	Y	N		Y
1/19/2022	Grand Haven Spring Lake Wastewater	N	Y	N		Y
1/24/2022	Allendale Wastewater Treatment Plant	N	N	N		Y
1/24/2022	Grand Haven Spring Lake Wastewater	N	Y	N		Y
1/31/2022	Allendale Wastewater Treatment Plant	N	Y	N		Y
1/31/2022	Grand Haven Spring Lake Wastewater	N	Y	N		Y
2/2/2022	Allendale Wastewater Treatment Plant	N	Y	N		Y
2/2/2022	Grand Haven Spring Lake Wastewater	N	N	N		Y
4/13/2022	Allendale Wastewater Treatment Plant	Y	N	N	N	Y
4/20/2022	Grand Haven Spring Lake Wastewater	Y	N	N	N	Y

The **Omicron BA.1** variant was consistently detected in Grand Haven, Spring Lake, and Allendale wastewater samples since January 2022.

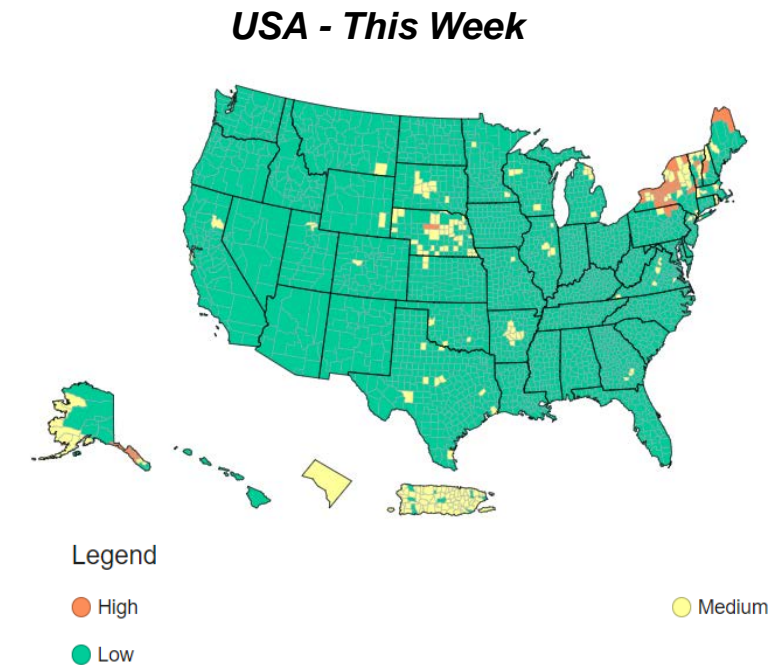
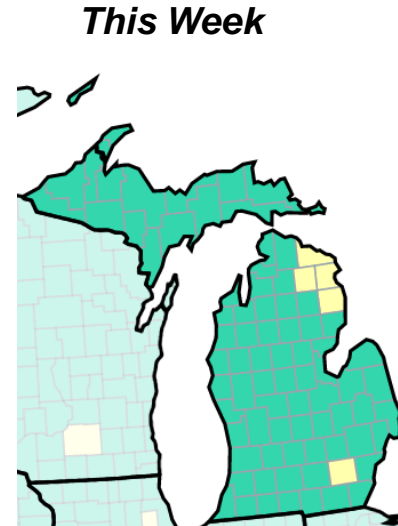
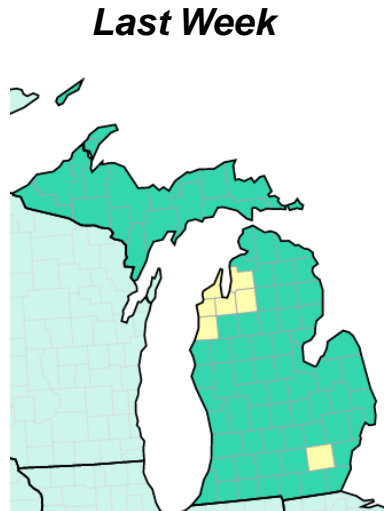
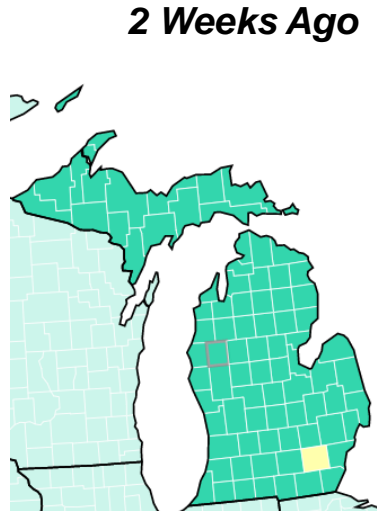
While the **Omicron BA.2** variant has consistently been detected in Grand Haven, Spring Lake, and Allendale wastewater samples the last few weeks.



Source: MDHHS SEWER Network grant and the Annis Water Resources Institute at GVSU

(NEW) CDC Community Risk Levels – Ottawa County

- Current Risk Level in Ottawa – **LOW**
- Current Data:
 - Case Rate (per 100k pop 7-day total) = **63.74**
 - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **1.2**
 - COVID Inpatient Hospital Bed Utilization (7-day average) = **1.9%**



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

Data updated by CDC
on April 27, 2022

COVID-19 Case Rates by County Across the US

Last Week

This Week

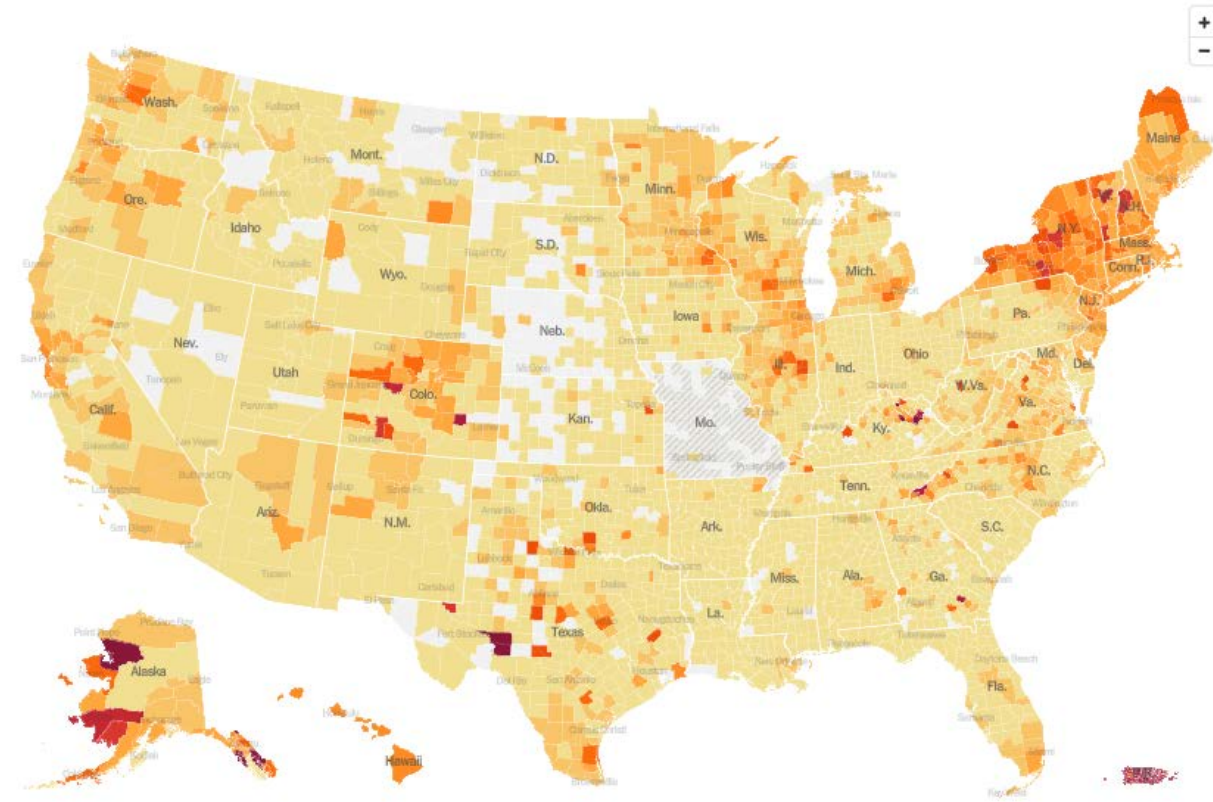
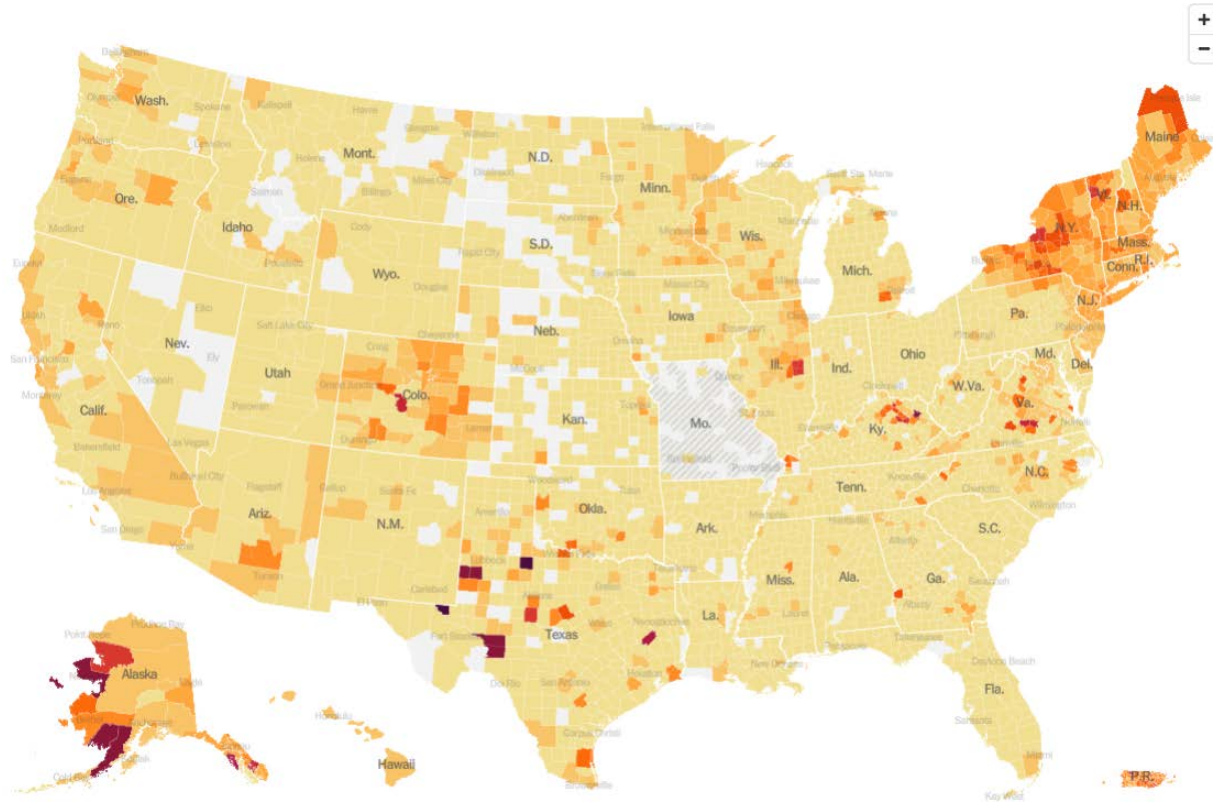
Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK
10 30 50 70 100 250
FEW OR MISSING NO CASES DATA



Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK
10 30 50 70 100 250
FEW OR MISSING NO CASES DATA



Generally, case rates remain low across the nation, with more pronounced increases noted in some geographies.

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

Accessed April 28, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science
Roundup

COVID-19 Hospitalization Rates by County Across the US

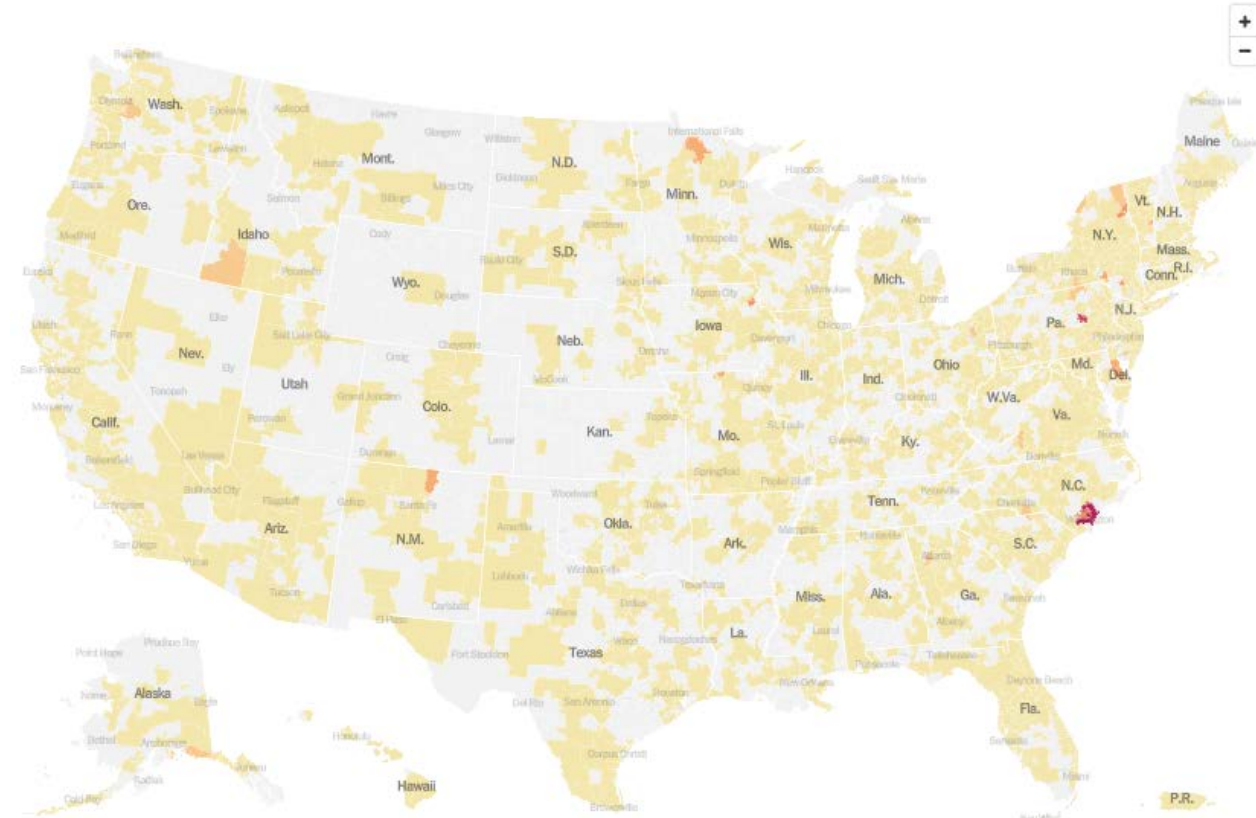
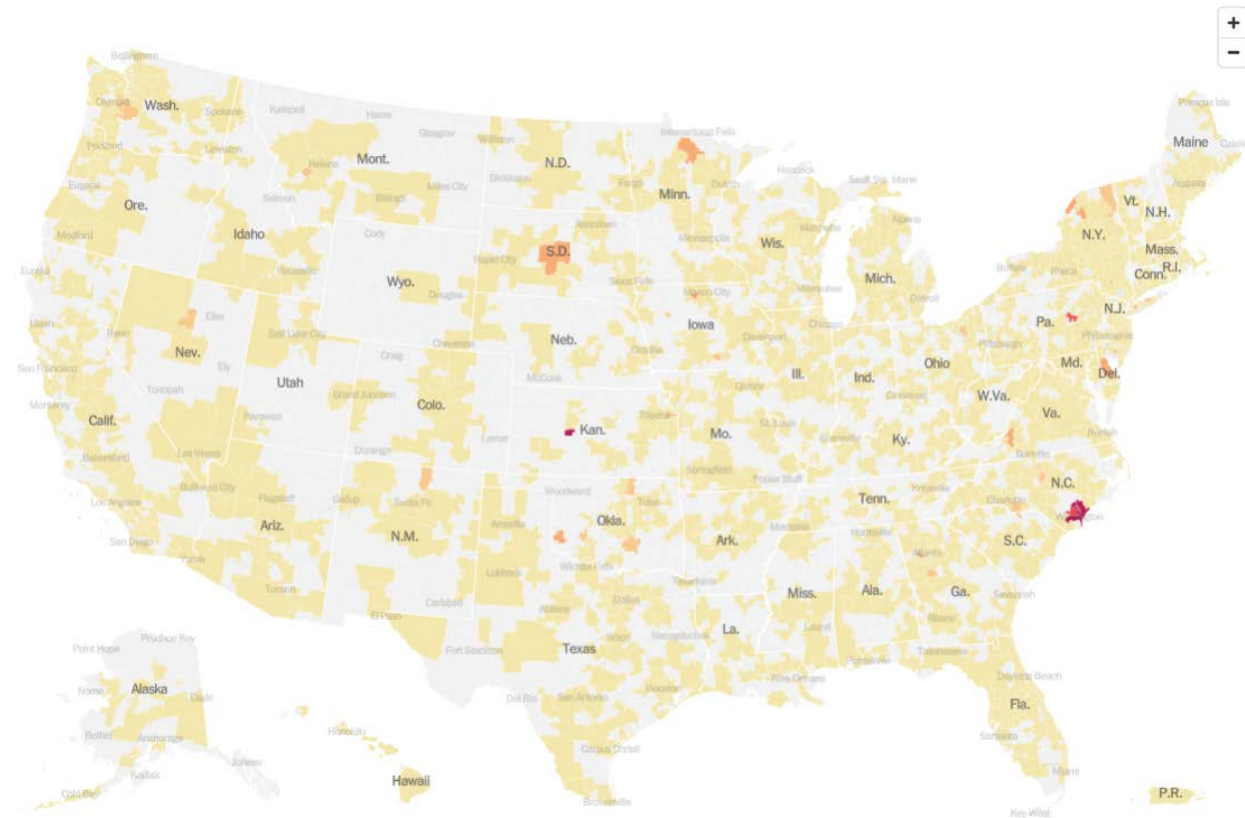
Last Week

This Week

Current hospitalizations



Current hospitalizations



Hospitalization rates remain low across the nation.

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

Accessed April 28, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

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Other

Media

Science Roundup

COVID-19 News Headlines

Michigan warns of increasing COVID-19 cases, especially in southeast, as BA.2 circulates

<https://www.mlive.com/public-interest/2022/04/michigan-warns-of-increasing-covid-19-cases-especially-in-southeast-as-ba2-circulates.html>

Spring COVID spike at University of Michigan dying down as semester ends

[Spring COVID spike at University of Michigan dying down as semester ends - mlive.com](https://www.mlive.com/public-interest/2022/04/michigan-warns-of-increasing-covid-19-cases-especially-in-southeast-as-ba2-circulates.html)

The Coronavirus Has Infected More Than Half of Americans, the C.D.C. Reports

[The Coronavirus Has Infected More Than Half of Americans, the C.D.C. Reports - The New York Times \(nytimes.com\)](https://www.nytimes.com/2022/04/07/health/covid-19-cases.html)

MDHHS, local health depts. cautious of COVID surge in coming weeks

<https://www.wzzm13.com/article/news/health/coronavirus/local-health-depts-cautious-of-covid-surge-in-coming-weeks/69-6f941b50-f587-499e-a9b1-a143f0b5c61f>

Science Roundup

COVID-19 Vaccination and Estimated Public Health Impact in California

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2791453>



In a modelling study using data from the California Department of Public Health, COVID-19 vaccination was estimated to have prevented more than 1.5 million COVID-19 cases, 72,000 hospitalizations, and 19,000 deaths during the first 10 months of vaccination, through October 16, 2021.

Comparing the human milk antibody response after vaccination with four COVID-19 vaccines: A prospective, longitudinal cohort study in the Netherlands

[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(22\)00123-7/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00123-7/fulltext)



A cohort study that included 134 vaccinated lactating women conducted in the Netherlands between January 06, 2021, and July 31, 2021, found that maternal vaccination during lactation with an mRNA-based vaccine resulted in higher SARS-CoV-2 antibody responses in human milk compared to vector-based vaccines.

Intramuscular AZD7442 (Tixagevimab–Cilgavimab) for Prevention of Covid-19

<https://www.nejm.org/doi/full/10.1056/NEJMoa2116620>



An ongoing phase 3 clinical trial found that a single dose of intramuscularly injected AZD7442 (Tixagevimab-Cilgavimab) had efficacy for the prevention of Covid-19, without evident safety concerns.

Seroprevalence of Infection-Induced SARS-CoV-2 Antibodies — United States, September 2021–February 2022

https://www.cdc.gov/mmwr/volumes/71/wr/mm7117e3.htm?s_cid=mm7117e3_w



A CDC-published study found that as of February 2022, about 75% of children and adolescents had evidence of recent COVID-19 infection. About 1/3 of those infections likely occurred in just the previous 3 months. The largest increases in recent infections were among age groups with the lowest vaccination coverage.