

Ottawa County COVID-19 Epidemiology

May 26, 2022

Data as of May 21, 2022, unless otherwise indicated

Executive Summary

- **Transmission in the US has been increasing, while transmission in Michigan may be slowing**
- **Ottawa County transmission may have slowed this past week**
 - This past week positivity **increased** slightly to 23.8%, from 22.9% seen two weeks ago.
 - Weekly case counts **decreased** 1% (+17% two weeks ago), from 545 two weeks ago to 542 last week.
 - Cases among children **increased** 7% (+12% two weeks ago), from 57 two weeks ago to 61 last week.
 - COVID-19 wastewater signals in Holland/Zeeland **may be trending down**.
 - Ottawa remains in the LOW CDC Community Level.
- **Ottawa-area and regional hospitals have adequate capacity**
 - In Ottawa County, 5% of all available beds and 0% 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 Ottawa County ED diversion.
- **Pediatric hospitalization rates in the US and in Michigan remain relatively low**
 - Regional pediatric hospitalization census fell below pandemic average last week.
- **Of Ottawa County residents aged 5+, 63.1% are fully 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.

Limitations

- **Case Counts, Case Rates, and Test Positivity**

With the widescale availability of at-home antigen tests for COVID-19 which are not reported or included in public health surveillance data, the case counts and case rates in this report underestimate the true burden of disease. However, it is expected that trends reflect the relative amount of transmission in the community.

- **Wastewater Surveillance**

Wastewater samples are collected from specific geographic sites in the county and may not reflect COVID-19 burden across the entire county population. However, detected trends generally correlate with case rates, therefore wastewater readings are displayed alongside countywide incidence rates in this report.

Ottawa County Metrics by Week

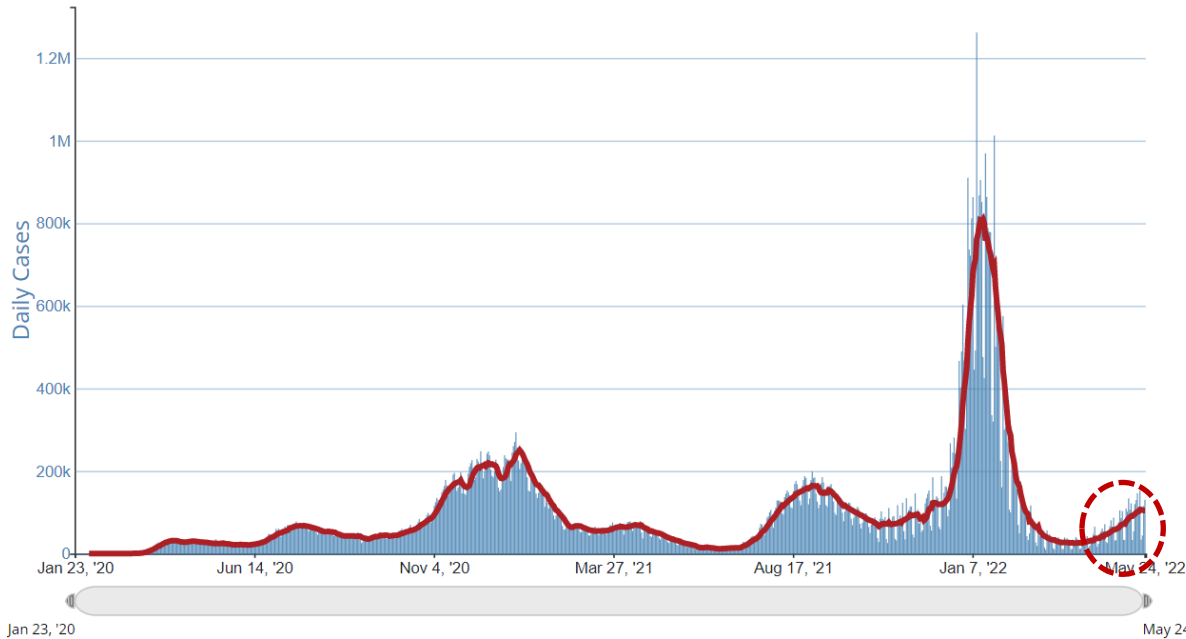
Metric	Goal	Week Ending				
		23-Apr-22	30-Apr-22	7-May-22	14-May-22	21-May-22
Positivity (All Ages)	NA	15.1%	16.3%	20.1%	22.9%	23.8%
Weekly Cases (All Ages)	<592	267	312	466	545	542
Weekly Cases in Children (0-17 years of age)	NA	27	42	51	57	61
Total Deaths (All Ages)	0	0	2	3	1	1
CDC COVID-19 Community 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

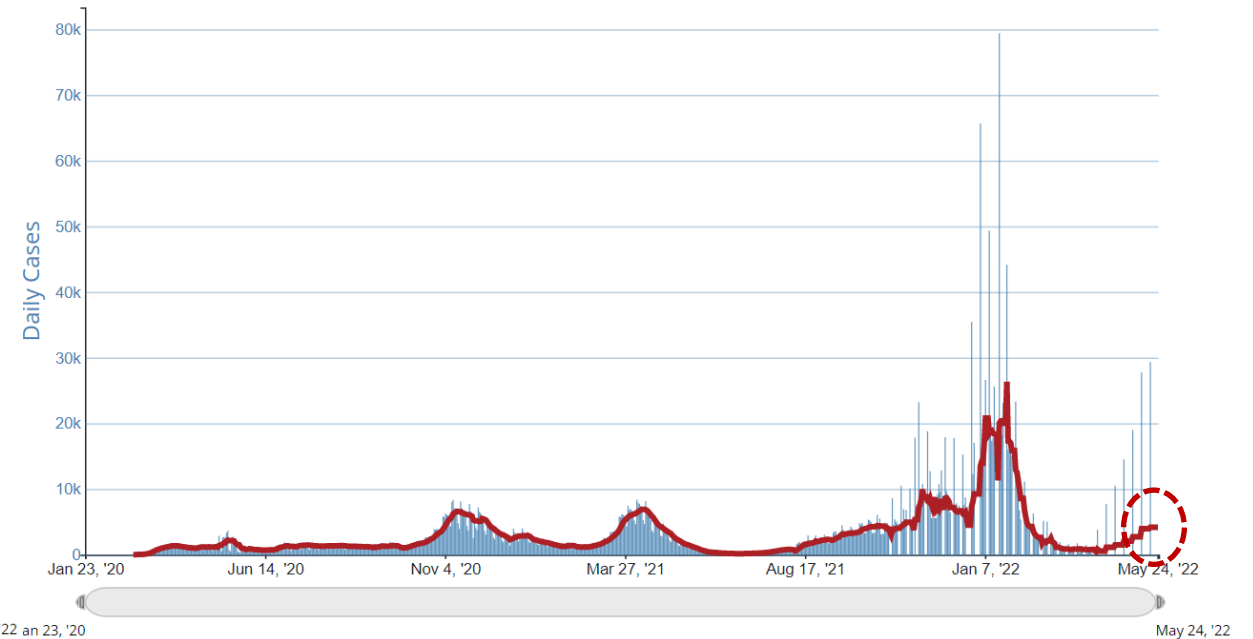
USA

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 lower than previous surges. **While cases continue to rise in the US, the uptrend in Michigan may have slowed.**

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.

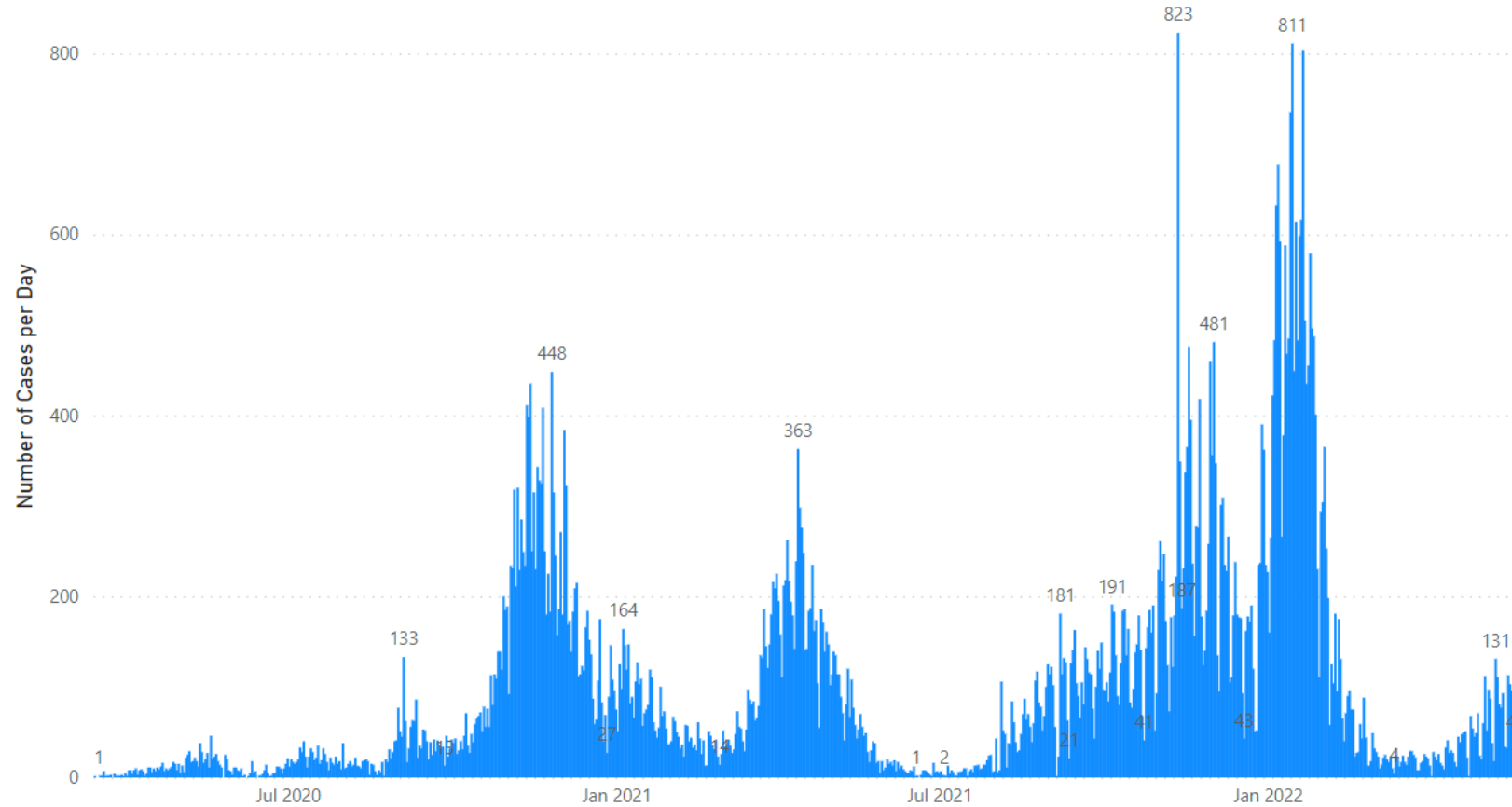
Source: https://covid.cdc.gov/covid-data-tracker/#trends_dailycases

Data through May 24, 2022

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – May 25, 2022

Epidemiological Curve



Total Number of Cases
77,354

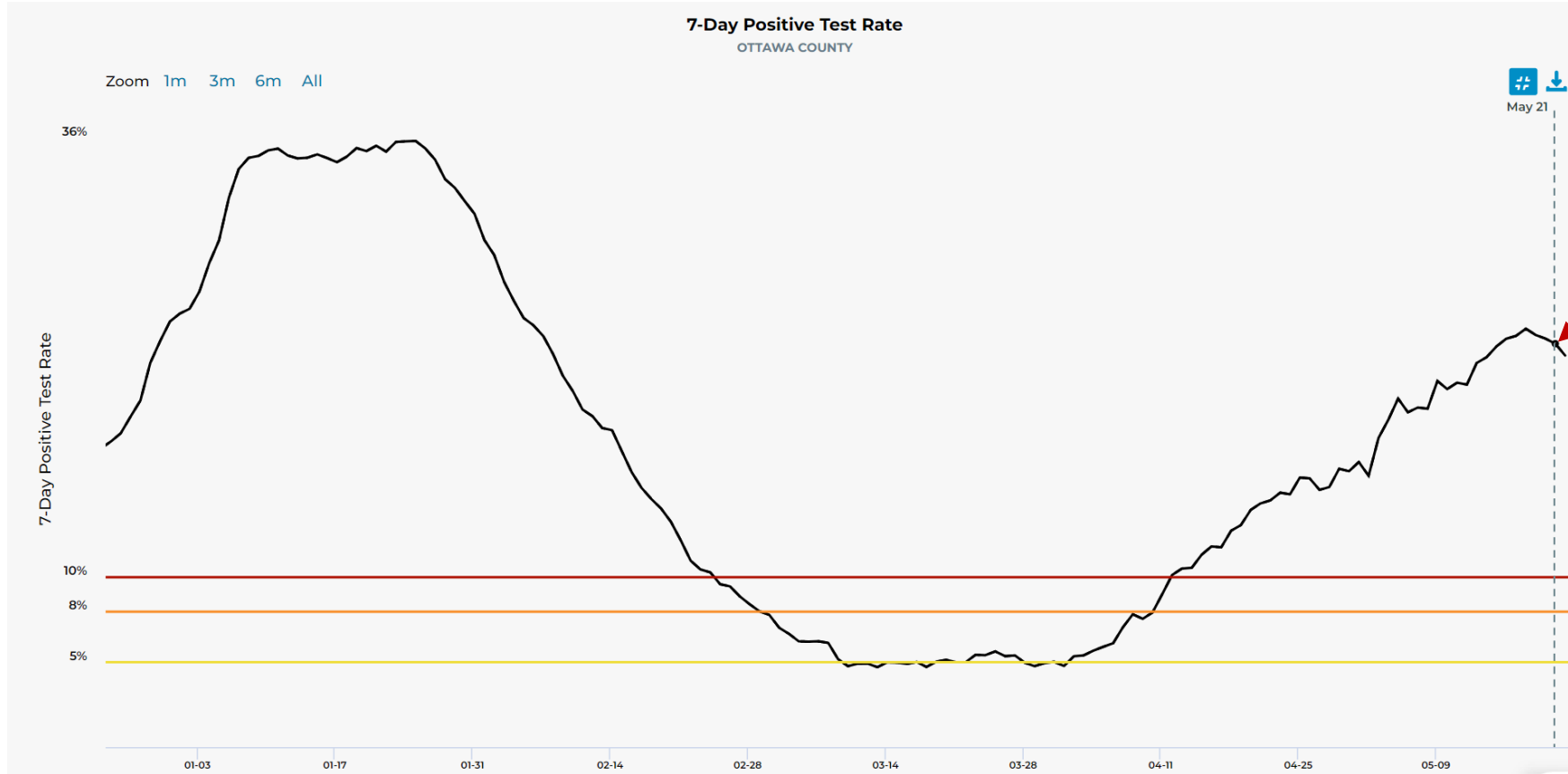
Currently, the 7-day average is **61 cases per day**, a slight decrease compared to the 70 cases per day reported last week at this time.

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 – May 21, 2022



Test positivity has been **increasing for the last 5 weeks**, reaching 23.8% last week.

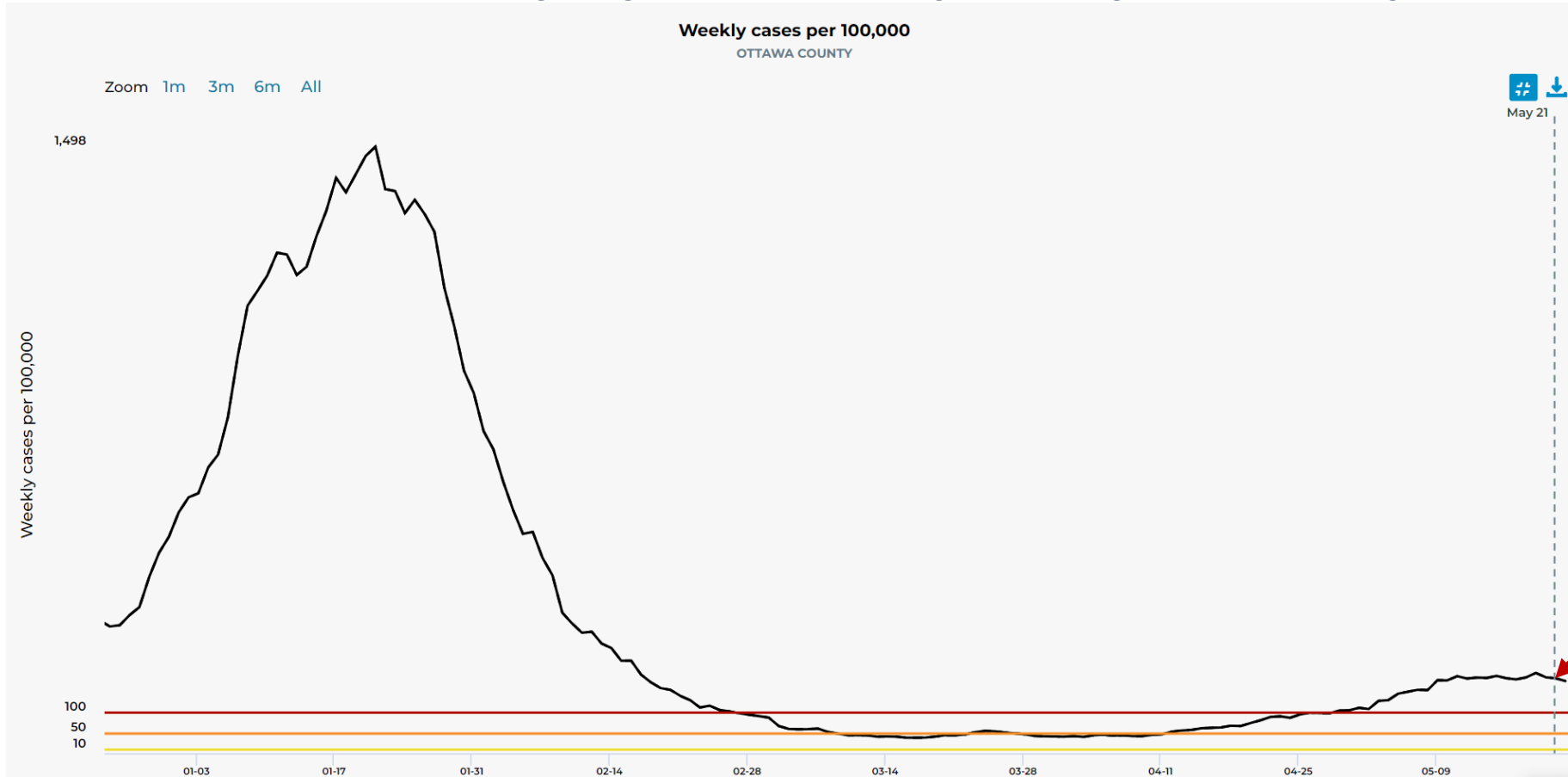
This visualization may change as CDC Community Transmission levels, metrics and/or metric thresholds/goals change.

Note: Testing data and can be found at the following sources: [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 – May 21, 2022



Case rates **remained low at 185.4 cases per week per 100,000 population (slightly lower than 185.7 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>

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science Roundup

Ottawa County Time Trends – Annual Comparison of Case Rates



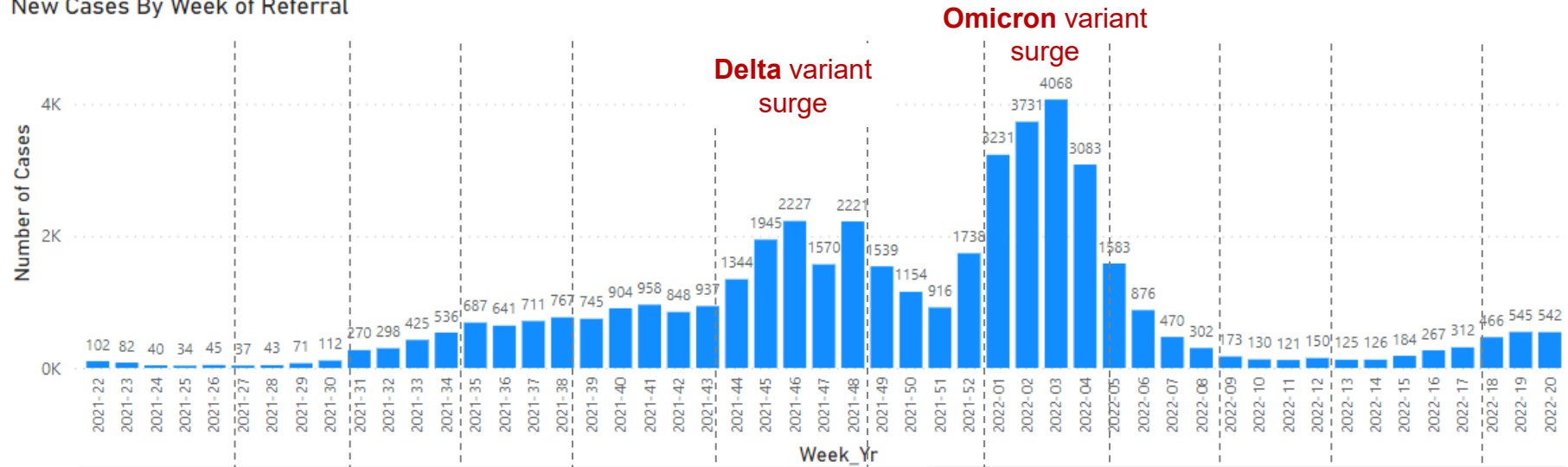
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

Source: Internal Data

Data through May 25, 2022

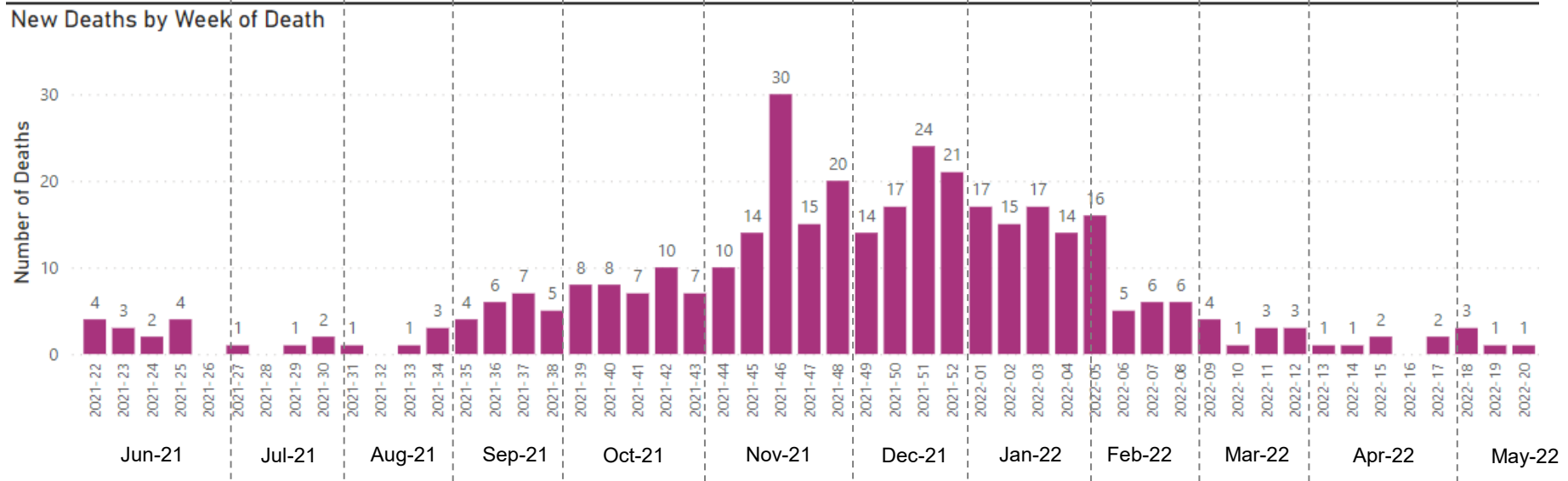
Ottawa County – Cases & Deaths by Week, All Ages

New Cases By Week of Referral



The weekly number of **cases decreased 1%** from week 19 to week 20.

New Deaths by Week of Death



Weekly COVID-19 **deaths have increased slightly**. The current weekly average number of deaths over the last 4 weeks stands at just **under 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.

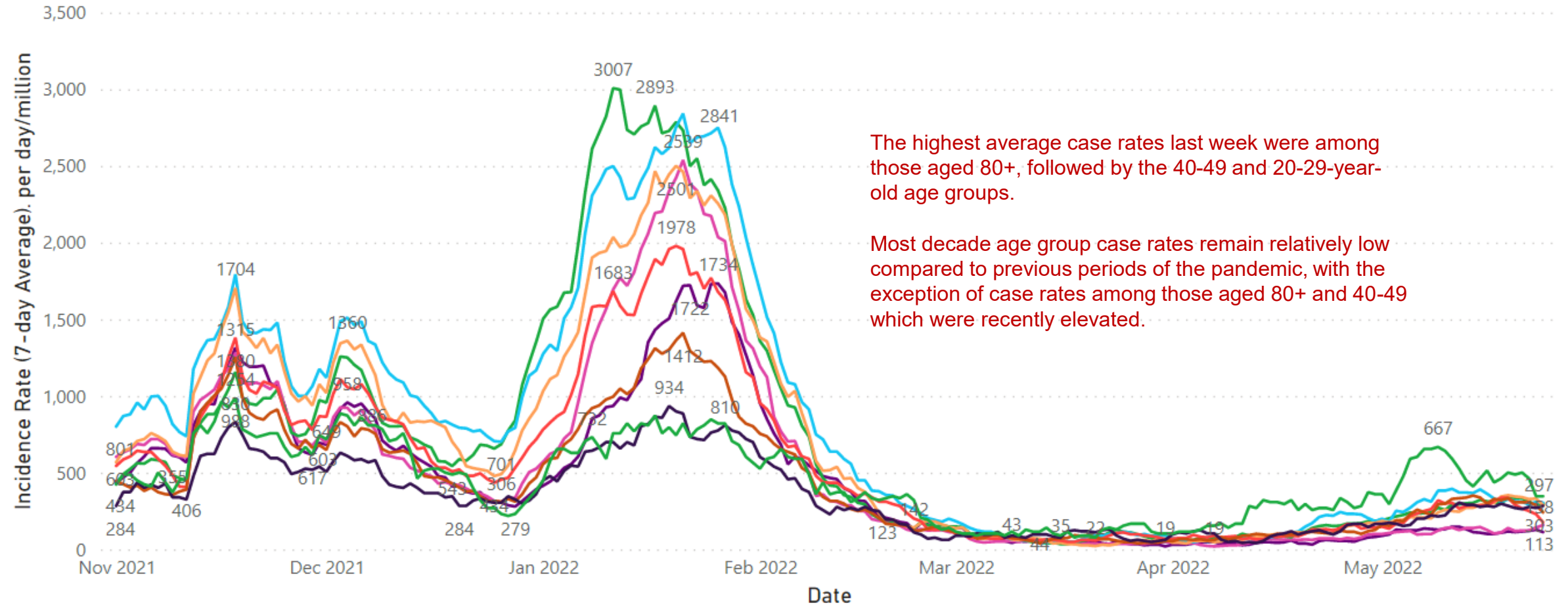
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age Decade

COVID-19 Case Rates by Age, November 2021 – May 25, 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 80+, followed by the 40-49 and 20-29-year-old age groups.

Most decade age group case rates remain relatively low compared to previous periods of the pandemic, with the exception of case rates among those aged 80+ and 40-49 which were recently elevated.

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 May 25, 2022

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 20 (May 15, 2022 – May 21, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	4.3	116.5	4%
10-19	5.4	122.6	-9%
20-29	14.9	328.6	11%
30-39	11.0	306.9	-16%
40-49	11.1	335.6	26%
50-59	9.3	266.3	-6%
60-69	10.0	306.9	-11%
70-79	5.4	263.0	-10%
80+	5.6	500.4	26%

Age groups with highest average case rates last week:

- 80+
- 40-49
- 20-29

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

- 80+
- 40-49
- 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.

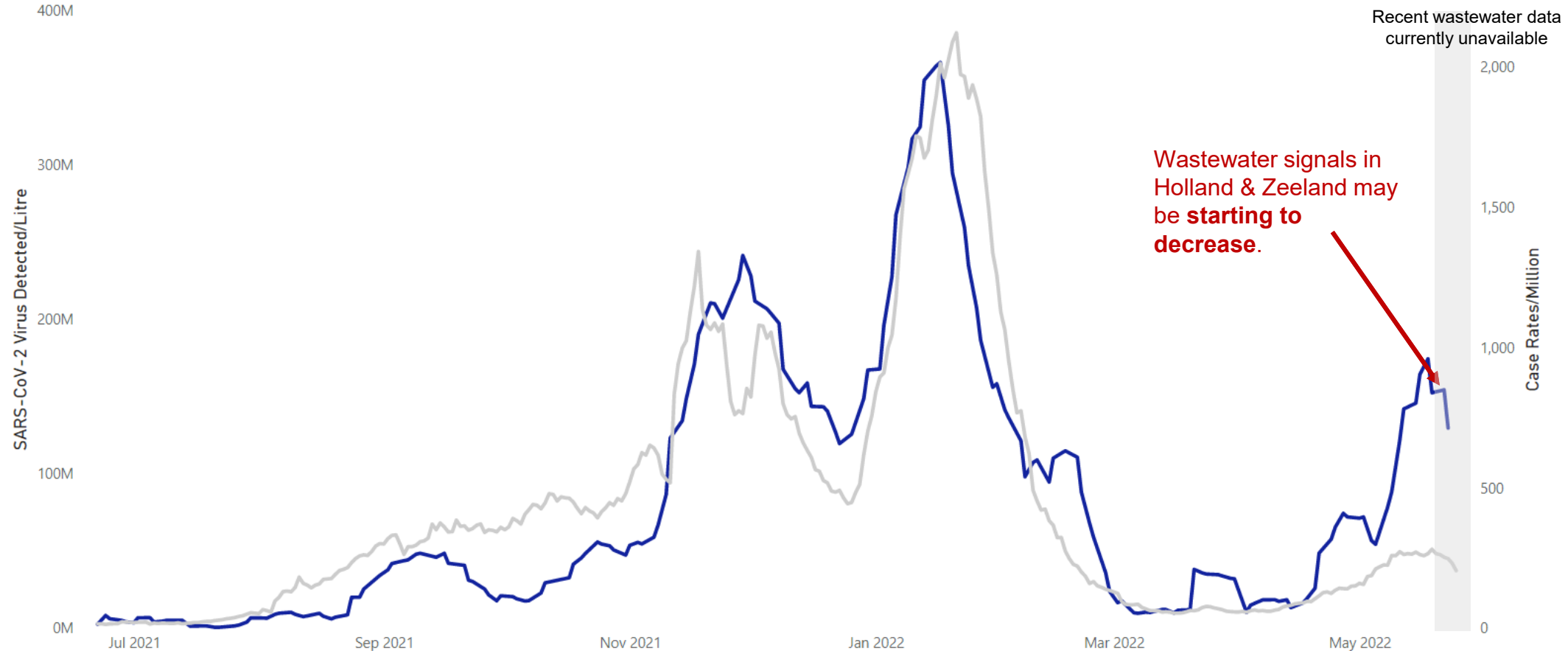
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System; CDC Wonder 2020 population

Data as May 25, 2022

Ottawa County Wastewater Surveillance

SARS-CoV-2 Virus Detected/Litre by Sample Date With COVID-19 Case Rates/Million by Referral Date (7-Day Averages)

● SARS-CoV-2 Virus Detected/Litre ● Case Rates/Million



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 \(SWEET\) \(michigan.gov\)](https://michigan.gov)

Data through May 23, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science Roundup

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
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	113	5%	13	-24%	126	1%
16-Apr-22	165	46%	19	46%	184	46%
23-Apr-22	240	45%	27	42%	267	45%
30-Apr-22	270	13%	42	56%	312	17%
7-May-22	415	54%	51	21%	466	49%
14-May-22	488	18%	57	12%	545	17%
21-May-22	481	-1%	61	7%	542	-1%

Adults

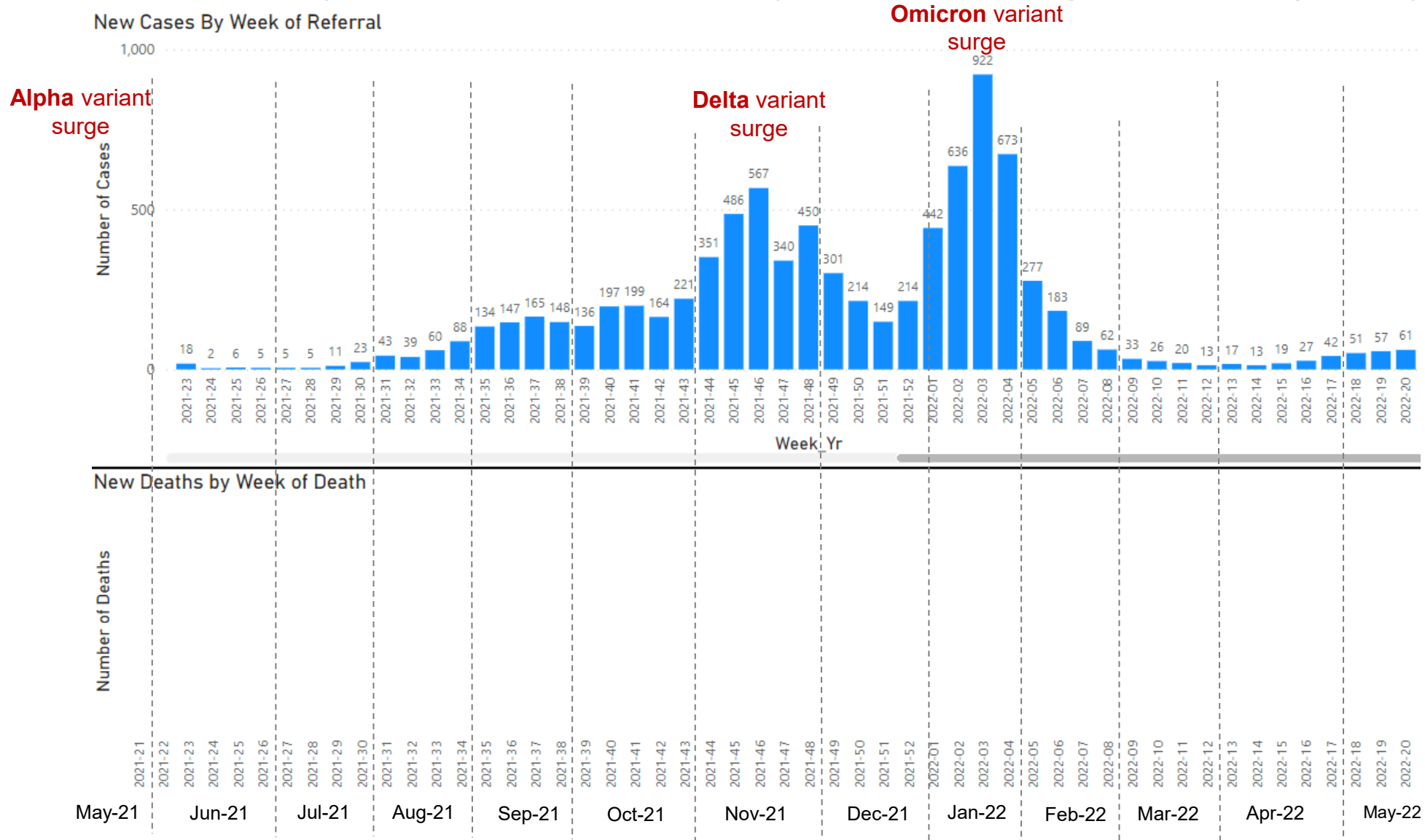
Children

Weekly case counts among **children increased 7%** last week, and cases in **adults decreased 1%**.

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



The weekly number of cases among children **increased 7%** from week 19 to week 20.

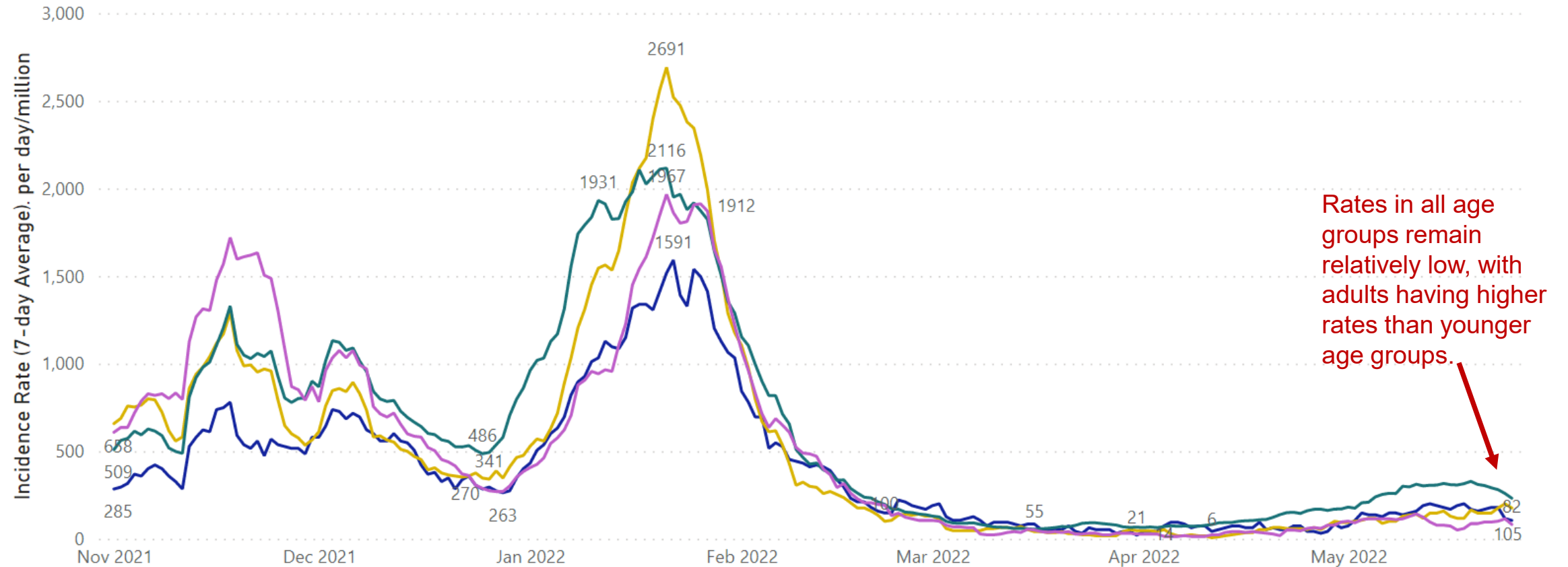
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – May 25, 2022

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



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 May 25, 2022

USA & MI

Spread

Children

Hospitalizations

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Variants

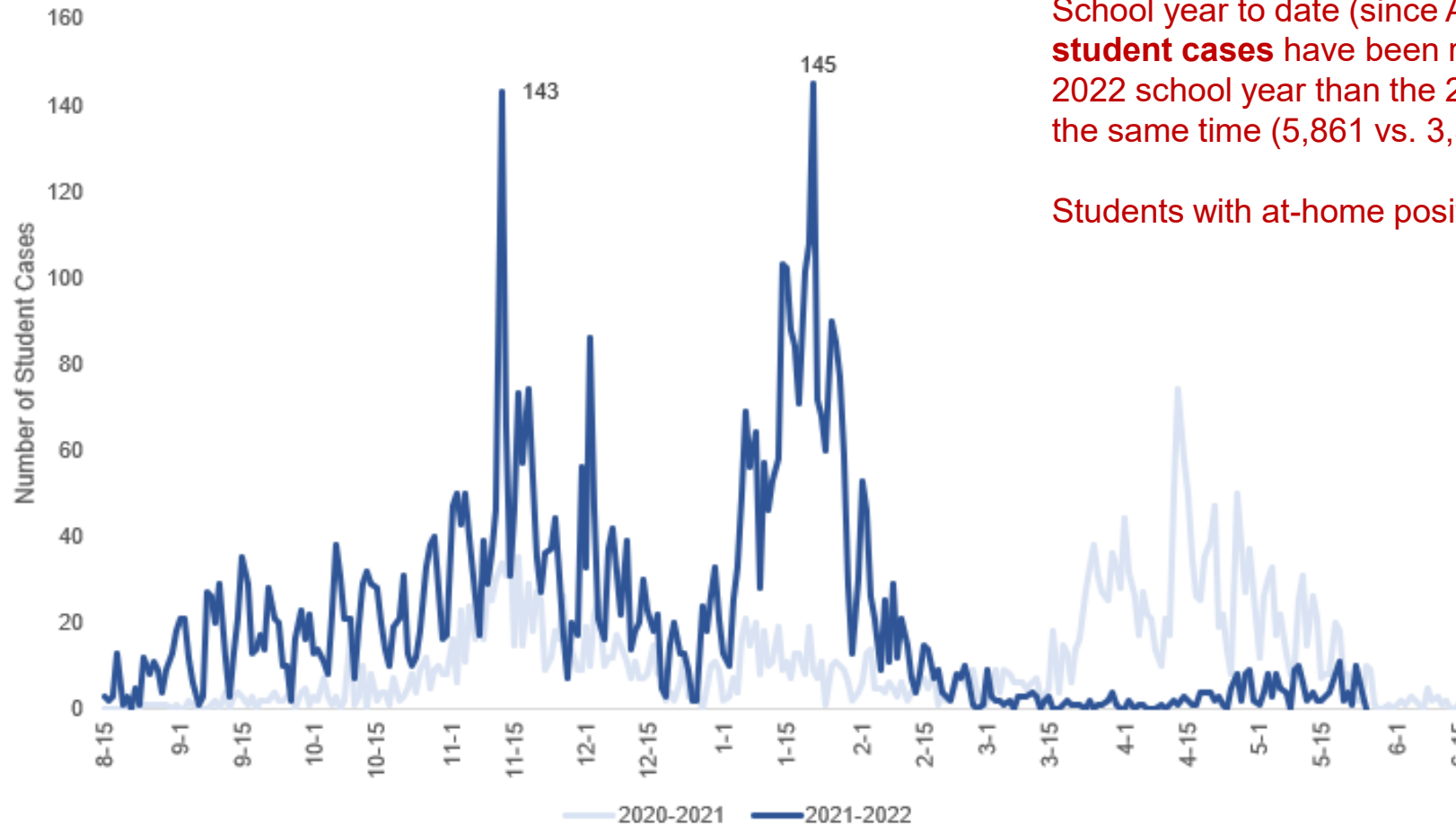
Risk Levels

Other

Media

Science Roundup

Ottawa County Cases in PreK-12 School Students



School year to date (since August 15), **1.7x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,861 vs. 3,360) respectively).

Students with at-home positive tests are not included.

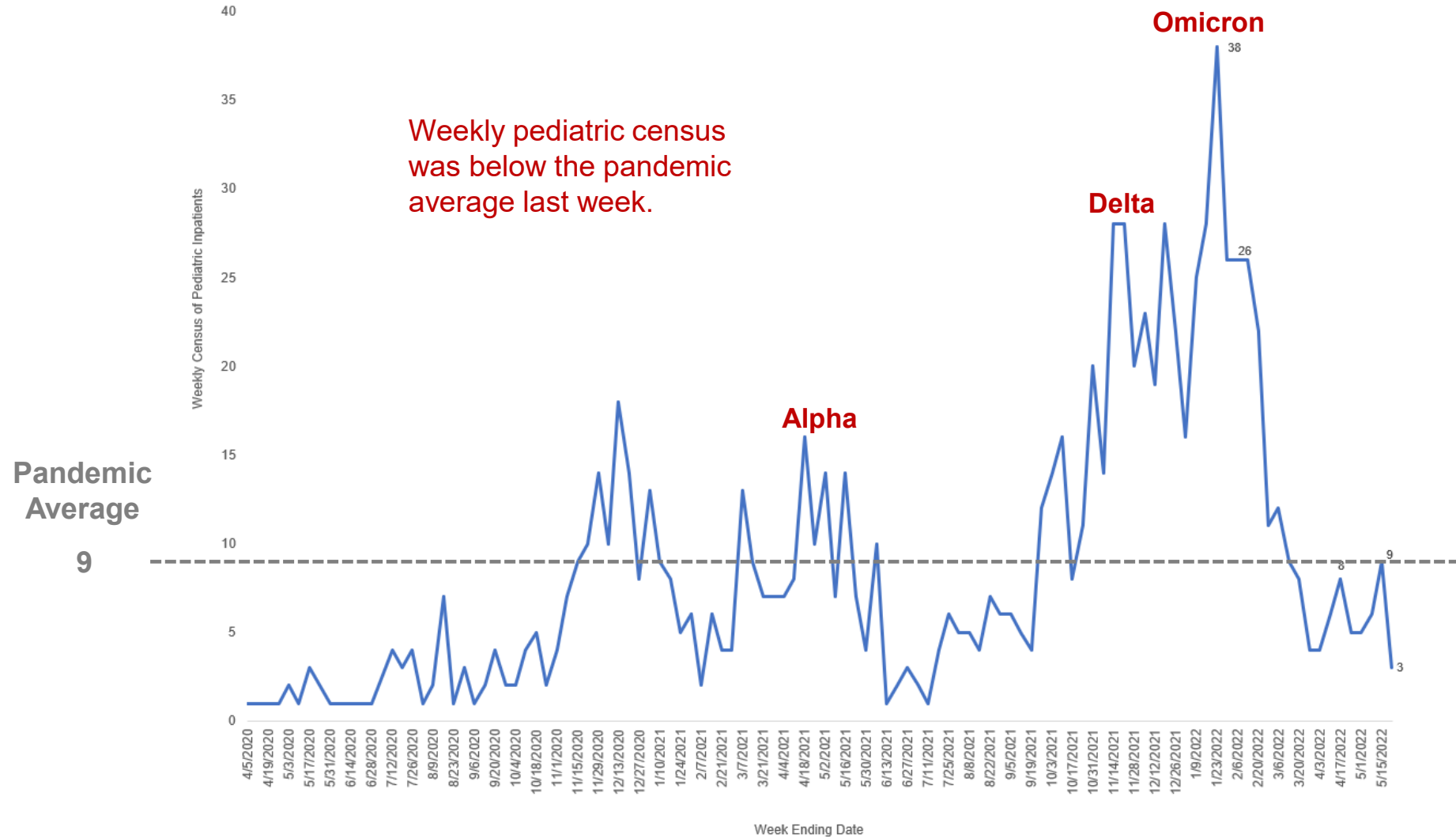
Method: Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

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 May 25, 2022

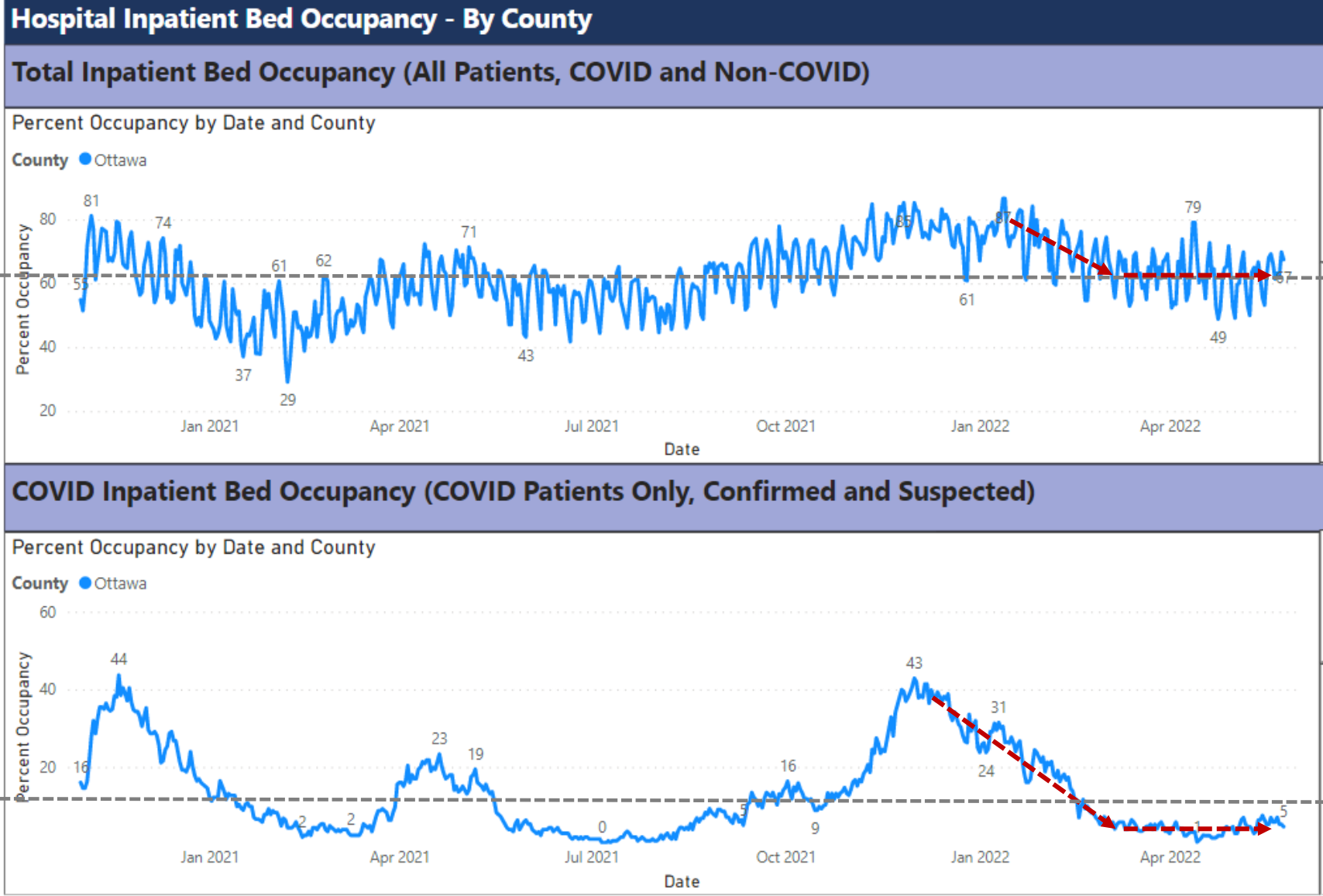
Weekly Hospital Pediatric Census – A Regional Healthcare System



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 May 22, 2022

Ottawa County Hospital Capacity – All Beds



Pandemic Average

62%

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

Currently **5%** of all inpatient beds are occupied by COVID-19 patients.

13%

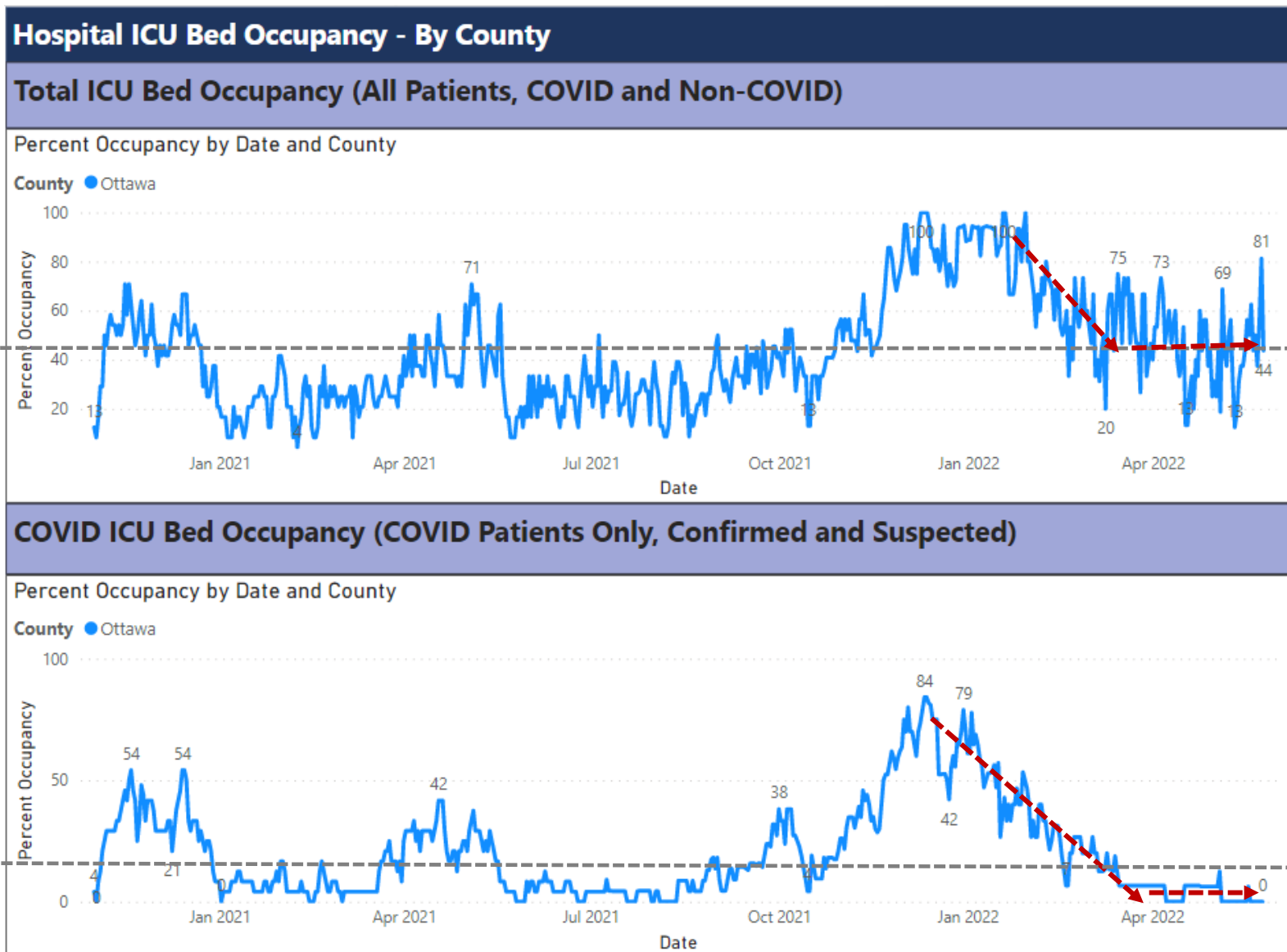
Source: EMResources

Data through May 25, 2022

Ottawa County Hospital Capacity – ICU Beds

Pandemic Average

42%



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, **0%** of ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through May 25, 2022

USA & MI

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Risk Levels

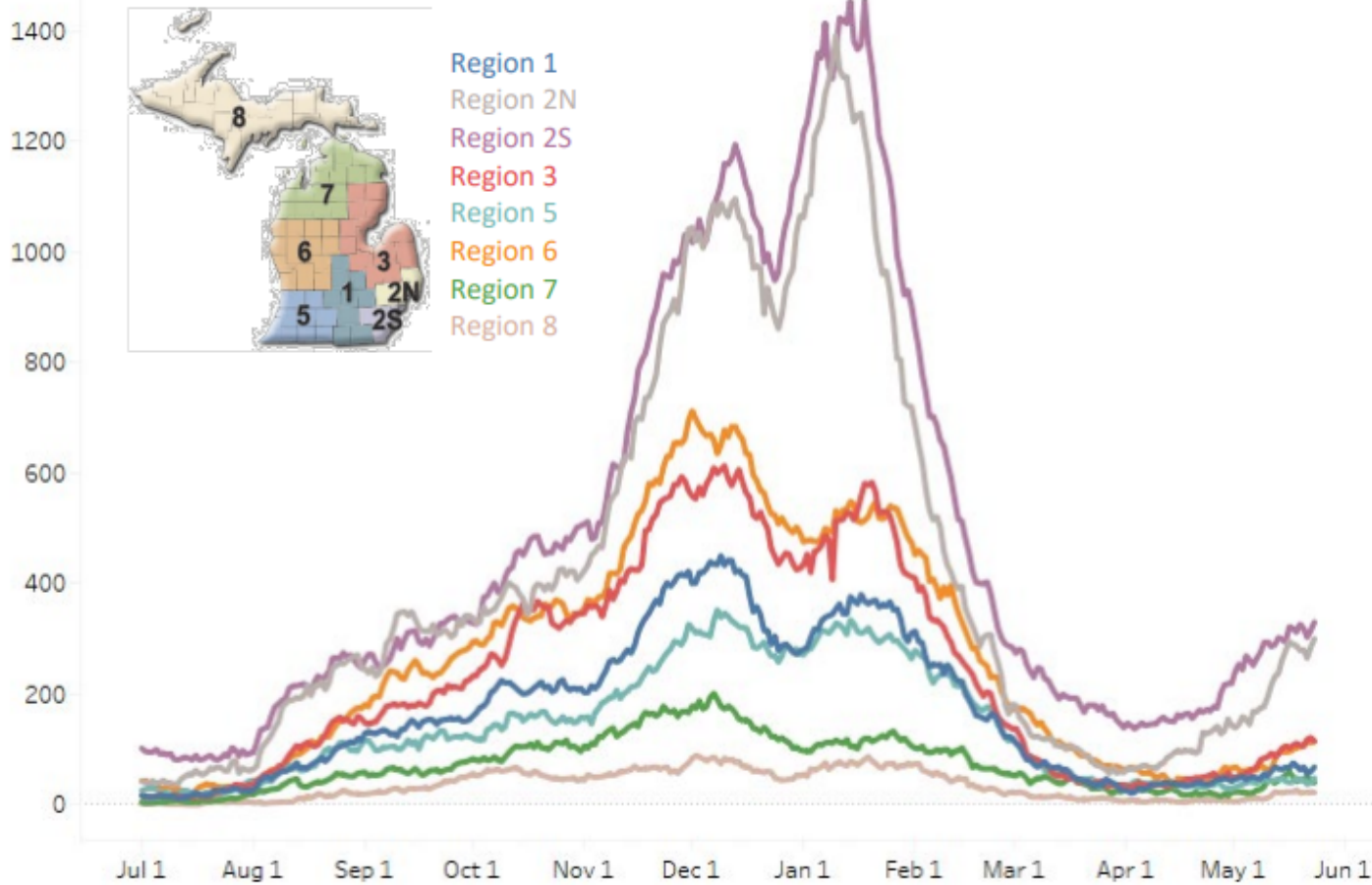
Other

Media

Science Roundup

Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 5/23/2022
Confirmed Positive by Region



This week hospitalizations have increased in all regions except Regions 7 and 8. The fastest growth was seen in Regions 5 and 6 while growth in the SE was very low compared to prior weeks.

Regions 2N, 2S, and 3 have greater than 100 hospitalizations/M

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	68 (3%)	63/M
Region 2N	300 (2%)	135/M
Region 2S	330 (3%)	148/M
Region 3	115 (13%)	101/M
Region 5	48 (20%)	50/M
Region 6	114 (19%)	78/M
Region 7	40 (-32%)	80/M
Region 8	22 (-4%)	71/M

Source: MDHHS Data and Modelling: [MI COVID response Data and modeling update \(michigan.gov\)](https://michigan.gov/mdhhs/0,4570,7-293_14287_14288_14289_14290_14291_14292_14293_14294_14295_14296_14297_14298_14299_14300_14301_14302_14303_14304_14305_14306_14307_14308_14309_14310_14311_14312_14313_14314_14315_14316_14317_14318_14319_14320_14321_14322_14323_14324_14325_14326_14327_14328_14329_14330_14331_14332_14333_14334_14335_14336_14337_14338_14339_14340_14341_14342_14343_14344_14345_14346_14347_14348_14349_14350_14351_14352_14353_14354_14355_14356_14357_14358_14359_14360_14361_14362_14363_14364_14365_14366_14367_14368_14369_14370_14371_14372_14373_14374_14375_14376_14377_14378_14379_14380_14381_14382_14383_14384_14385_14386_14387_14388_14389_14390_14391_14392_14393_14394_14395_14396_14397_14398_14399_14400_14401_14402_14403_14404_14405_14406_14407_14408_14409_14410_14411_14412_14413_14414_14415_14416_14417_14418_14419_14420_14421_14422_14423_14424_14425_14426_14427_14428_14429_14430_14431_14432_14433_14434_14435_14436_14437_14438_14439_14440_14441_14442_14443_14444_14445_14446_14447_14448_14449_14450_14451_14452_14453_14454_14455_14456_14457_14458_14459_14460_14461_14462_14463_14464_14465_14466_14467_14468_14469_14470_14471_14472_14473_14474_14475_14476_14477_14478_14479_14480_14481_14482_14483_14484_14485_14486_14487_14488_14489_14490_14491_14492_14493_14494_14495_14496_14497_14498_14499_14500,00.html)

Pediatric Hospitalization Rates – USA, Michigan

United States | 0 - 17 Years



MI | 0 - 17 Years



Pediatric hospitalization rates across the US seem to be flattening. Rates in Michigan **may be reversing into a potential downtrend.**

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

Accessed May 26, 2022

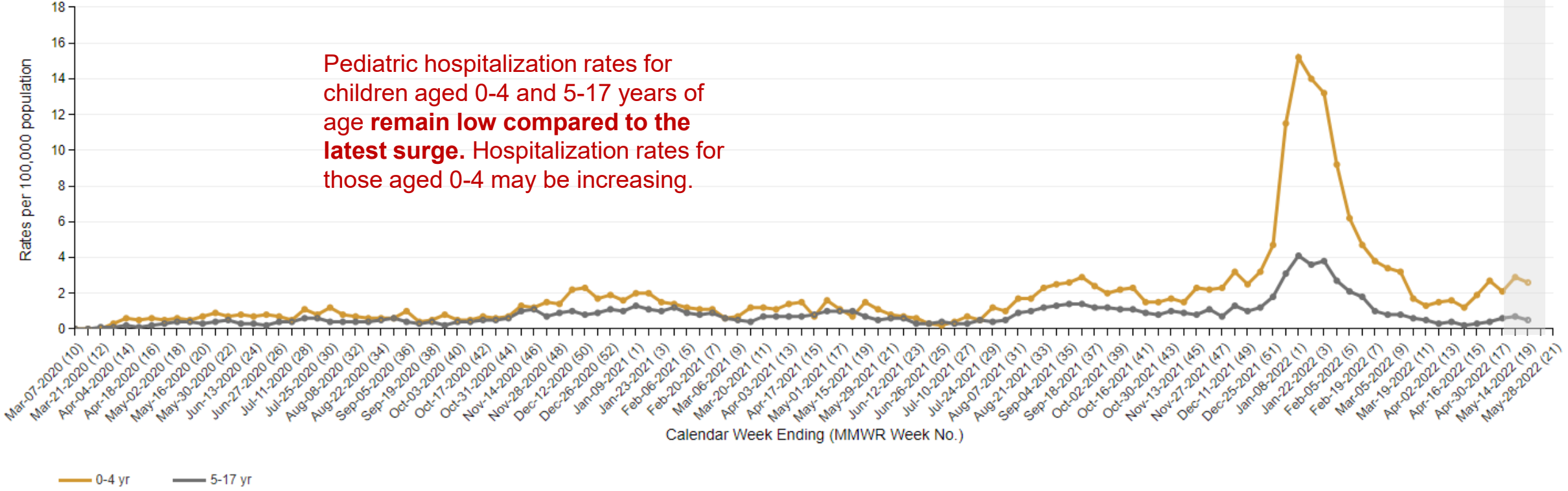
Pediatric Hospitalization Rates by Age Group – USA

COVID-NET :: Entire Network :: 2020-21 :: Weekly Rate

To zoom, hold down Alt key and click and drag to create a rectangle. Double click to reset zoom.

Recent data may be incomplete

Pediatric hospitalization rates for children aged 0-4 and 5-17 years of age remain low compared to the latest surge. Hospitalization rates for those aged 0-4 may be increasing.



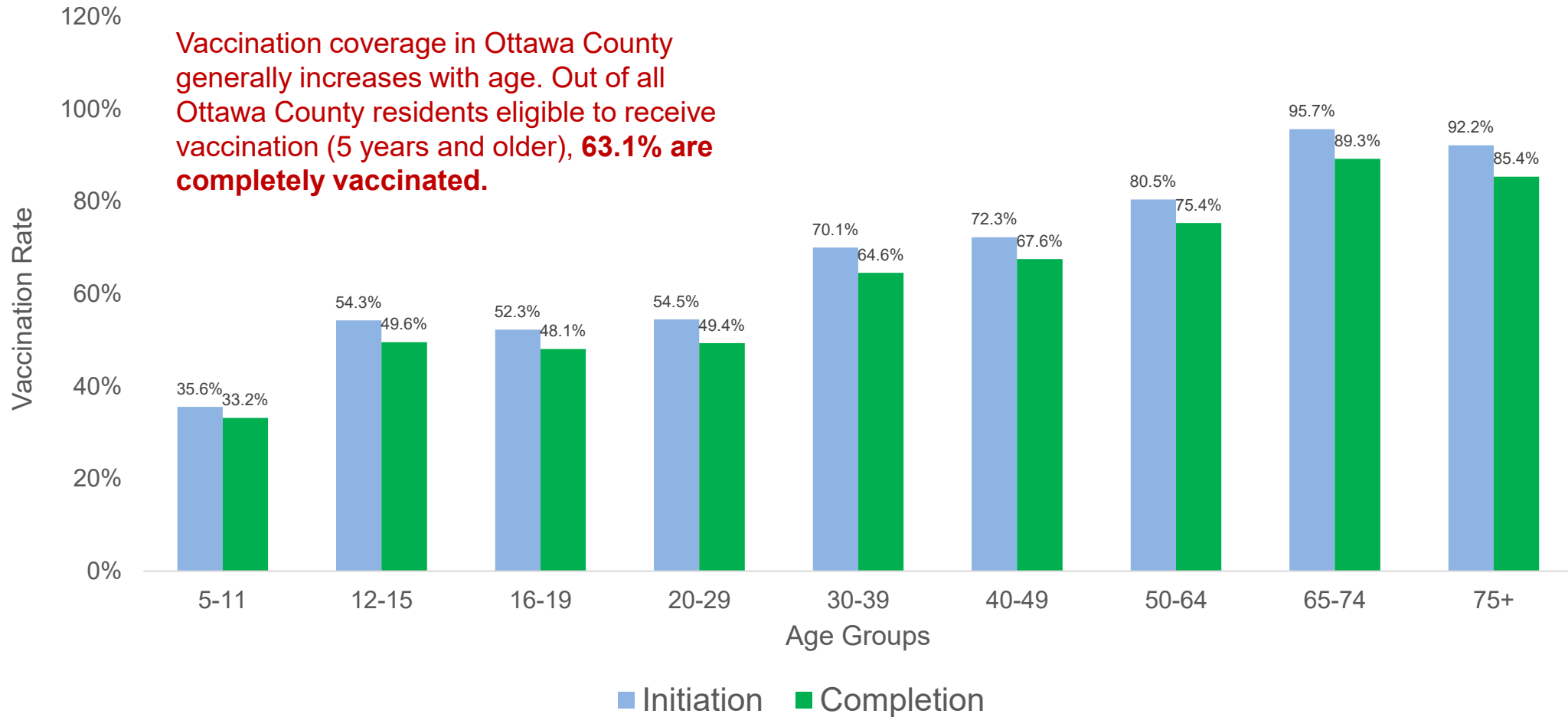
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 May 26, 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 May 25, 2022

Cumulative Cases by Vaccination Status, Ottawa County, January 15, 2021 – May 21, 2022

Fully Vaccinated People (173,005)	
Cases	Deaths
Percent of Cases in People Not Fully Vaccinated (36,999 / 57,054) 64.8%	Percent of Deaths in People Not Fully Vaccinated (292 / 448) 65.2%
Total Cases Not Fully Vaccinated 36,999	Total Deaths Not Fully Vaccinated 292
Total Breakthrough Cases 20,055	Total Breakthrough Deaths 156
Percent of Fully Vaccinated People who Developed COVID-19 (20,055 / 173,005) 11.6%	Percent of Fully Vaccinated People who Died of COVID-19 (156 / 173,005) 0.09%
Percent of Cases who were Fully Vaccinated (20,055 / 57,054) 34.8%	Percent of Deaths who were Fully Vaccinated (156 / 448) 35.2%
Total Cases 57,054	Total Deaths 448

Note:

Fully vaccinated is defined as 2 or more doses of an mRNA vaccination or at least one dose of J&J.

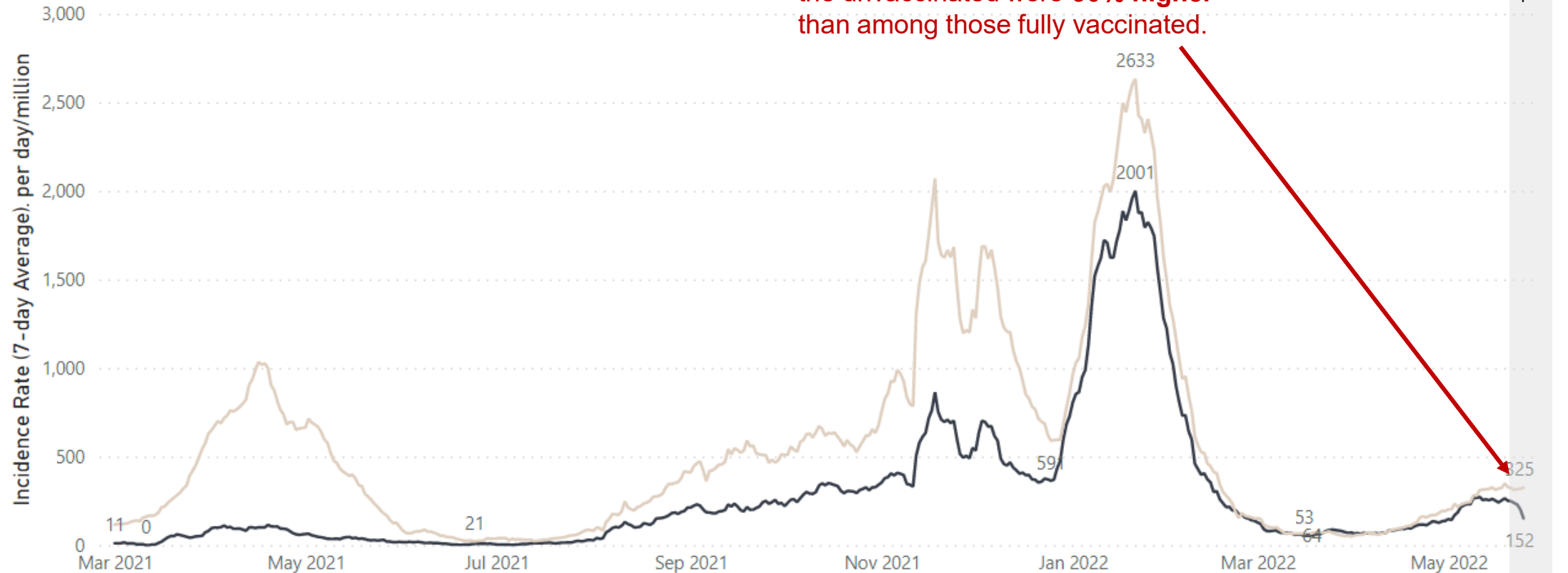
Sources:

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 May 21, 2022, case rates among the unvaccinated were **30% 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:

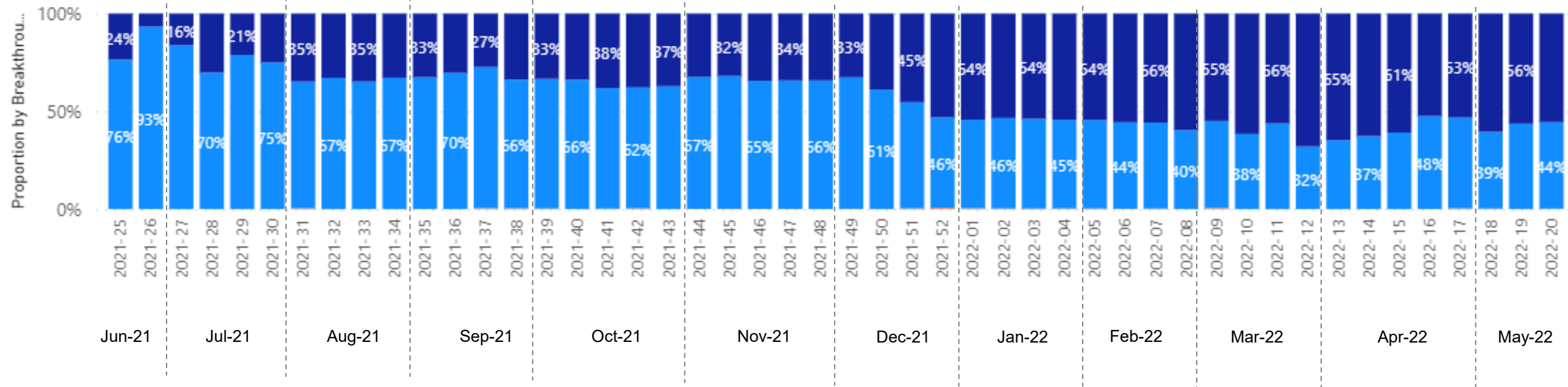
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
 MDHHS COVID-19 Dashboard: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

By Week

Breakthrough Proportions by Week

Vaccine_Breakthrough ● ● NO ● YES

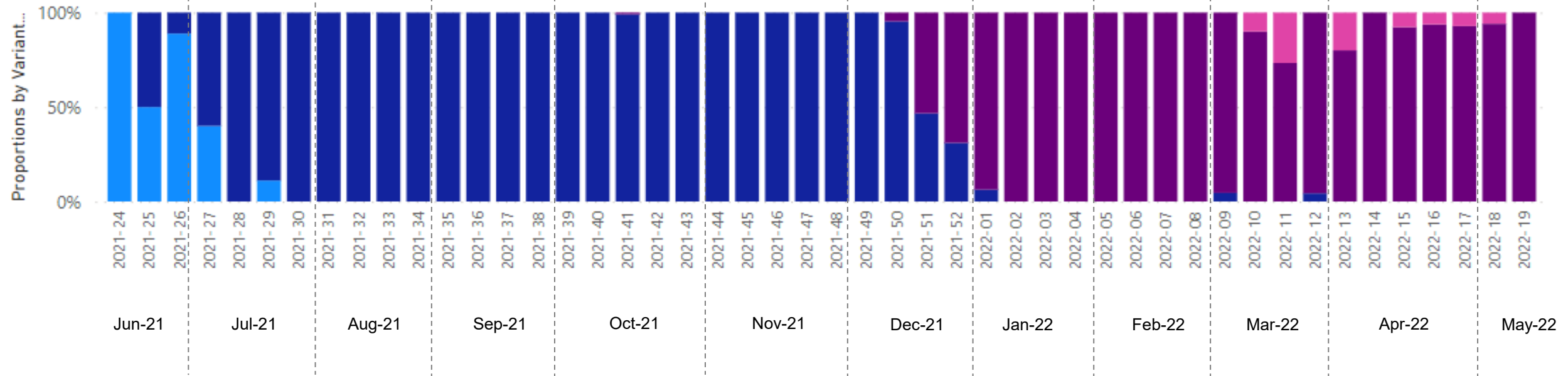


Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

Variant Name ● Alpha ● Delta ● Gamma ● Omicron ● Omicron BA.2



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

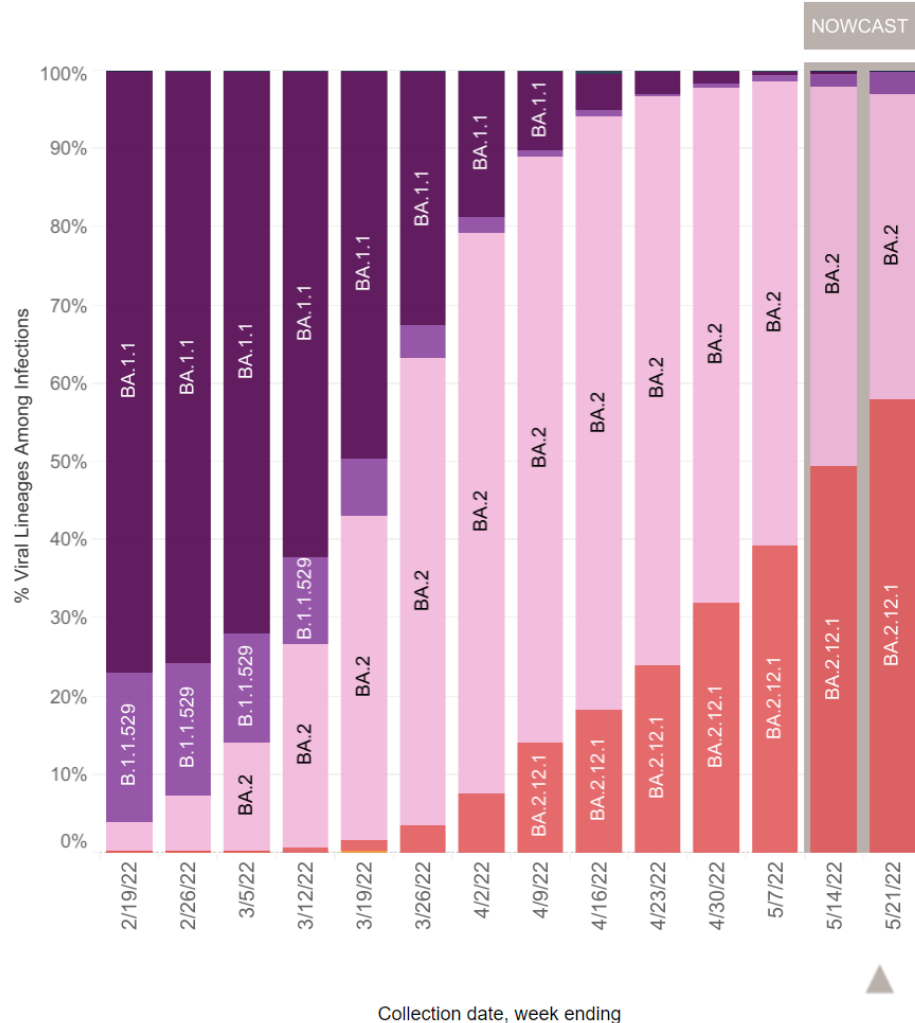
* Swabs from Ottawa County residents that tested positive for COVID-19 by PCR; only a small proportion of all COVID-19 positive tests are tested for variants.

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

Variants – Clinical Samples from Across the USA

United States: 2/13/2022 – 5/21/2022

United States: 5/15/2022 – 5/21/2022 NOWCAST



USA				
WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.2.12.1	VOC	57.9%	52.8-62.9%
	BA.2	VOC	39.1%	34.2-44.2%
	B.1.1.529	VOC	2.8%	1.6-4.9%
	BA.1.1	VOC	0.1%	0.1-0.1%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.1%	0.1-0.2%

The **Omicron** variant is estimated to account for nearly 100% of all clinical samples collected in the United States the week ending May 21, 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 and its sublineages, BA.2 sublineages are aggregated with BA.2.

Collection date, week ending

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

Accessed May 26, 2022

Variants – Wastewater Sampling – Holland/Zeeland

Sample Date	Site	Delta	Omicron
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
04/27/2022	North Holland	N	Y
04/28/2022	Zeeland	N	Y
05/01/2022	North Holland	N	Y
05/02/2022	Zeeland	N	Y
05/08/2022	North Holland	N	N
05/09/2022	Zeeland	N	Y
05/11/2022	North Holland	N	N
05/12/2022	Zeeland	N	N
05/15/2022	North Holland	N	Y
05/16/2022	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 (January and February not displayed here), with renewed, frequent detection in late April and early-mid May 2022.

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
4/25/2022	Grand Haven Spring Lake Wastewater	Y				Y
4/27/2022	Allendale Wastewater Treatment Plant	Y				Y
5/4/2022	Allendale Wastewater Treatment Plant	Y				Y
5/4/2022	Grand Haven Spring Lake Wastewater	Y				Y



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

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

COVID-19 Community Levels

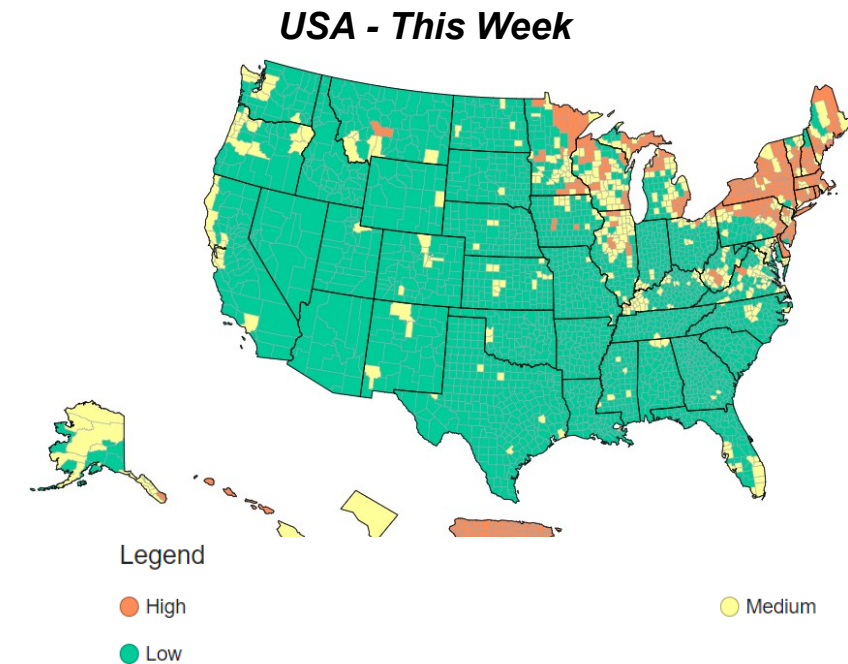
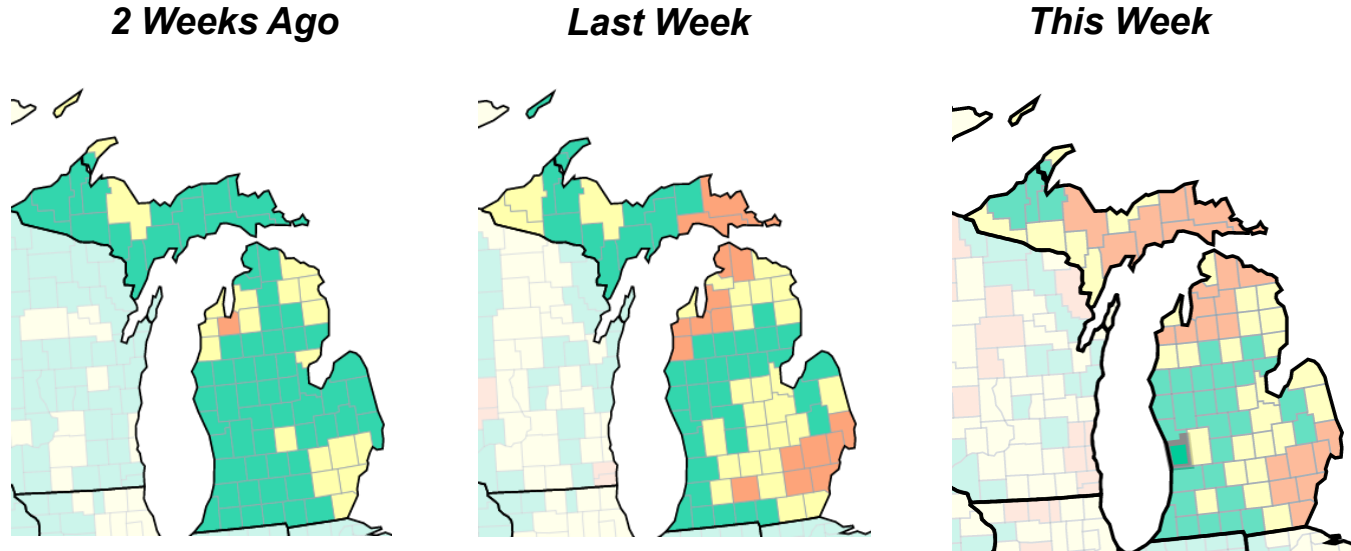
COVID-19 Community Levels – Use the Highest Level that Applies to Your Community				
New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	≥15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	≥10.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%

Note: The COVID-19 community level is determined by the higher of the new admissions and inpatient beds metrics, based on the current level of new cases per 100,000 population in the past 7 days.

Source: <https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html>

CDC Community Levels – Ottawa County

- Current Community Level in Ottawa – **LOW**
- Current Data:
 - Case Rate (per 100k pop 7-day total) = **186.75**
 - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **4.1**
 - COVID Inpatient Hospital Bed Utilization (7-day average) = **4.6%**



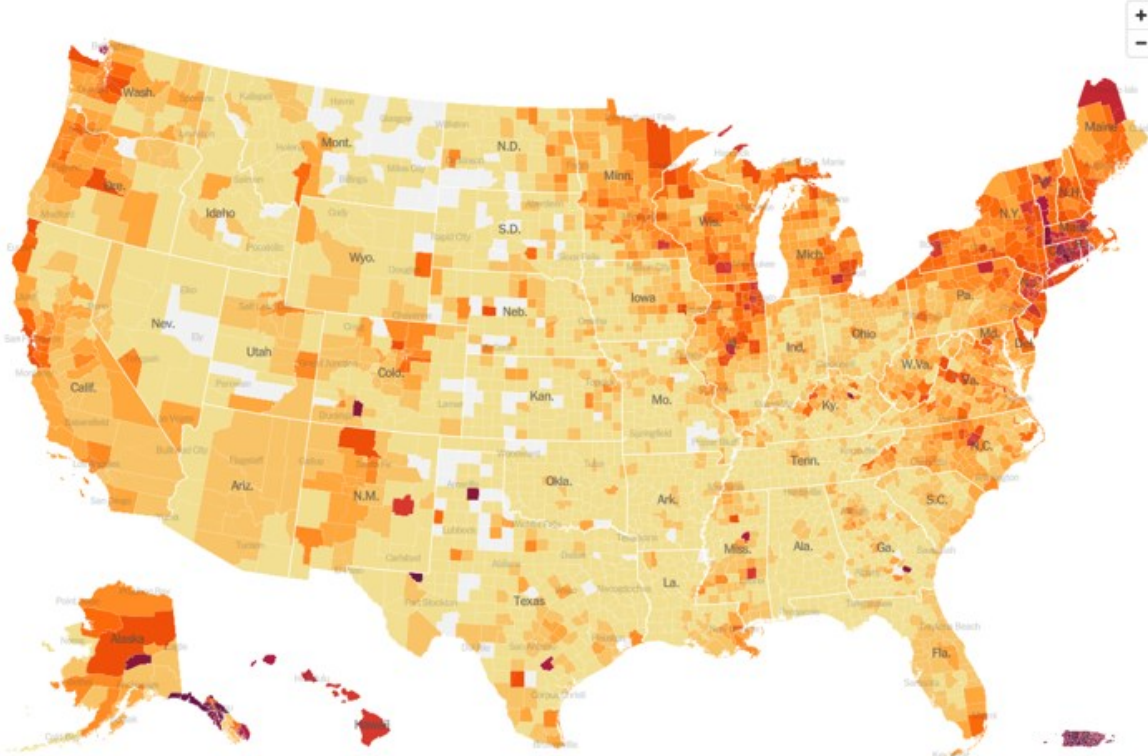
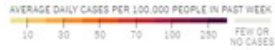
Source: <https://www.cdc.gov/coronavirus/2019-ncov/your-health/covid-by-county.html>

Data updated by CDC
on May 25, 2022

COVID-19 Case Rates by County Across the US

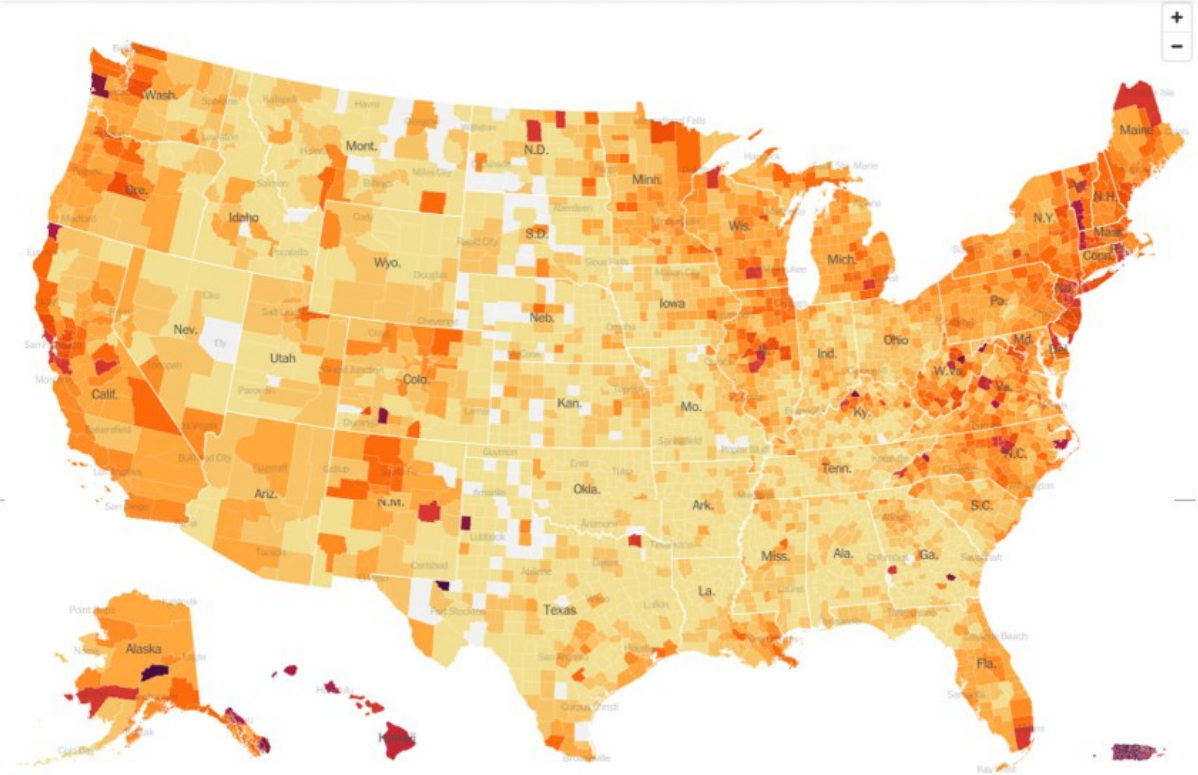
Last Week

Hot spots



This Week

Hot spots



Case rates may be increasing across the nation.

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

Accessed May 26, 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

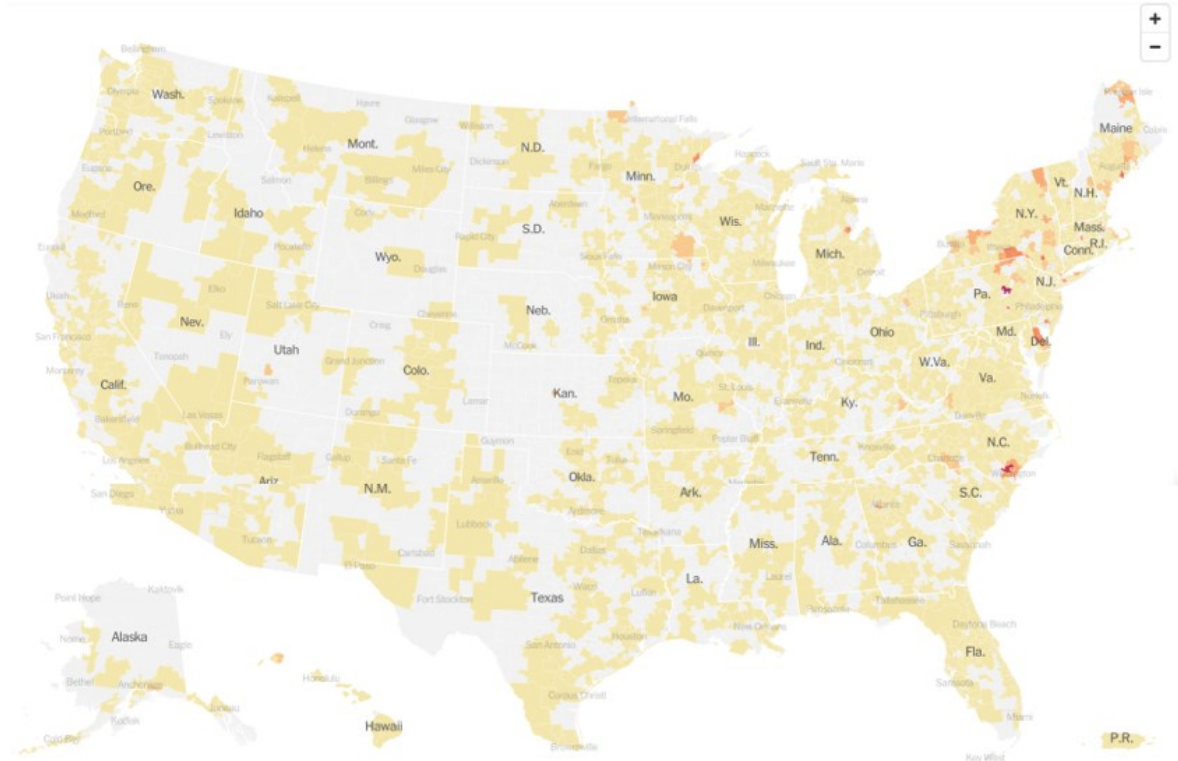
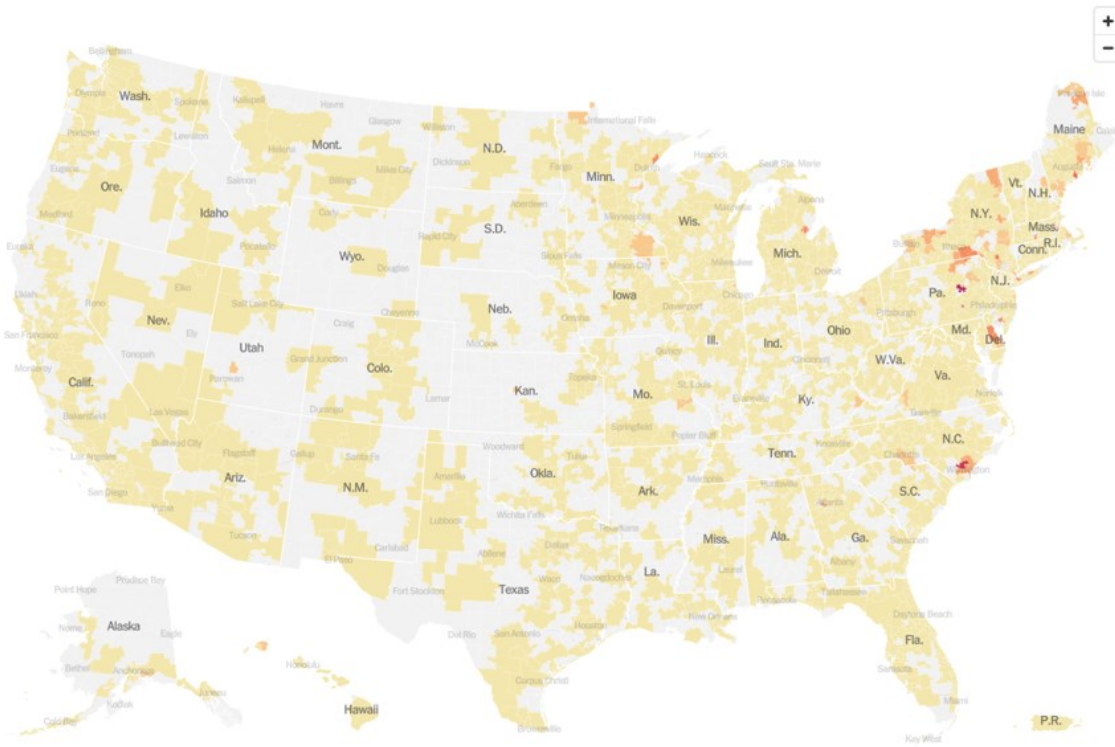
Current hospitalizations

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



Hot spots

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



Hospitalization rates remain low across the nation.

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

Accessed May 26, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

Media

Science Roundup

COVID-19 News Headlines

212 students and staff hit by COVID outbreaks across Michigan schools

[212 students and staff hit by COVID outbreaks across Michigan schools - mlive.com](https://www.mlive.com/news-michigan/2021/05/212-students-and-staff-hit-by-covid-outbreaks-across-michigan-schools/)

1 in 5 Adult Covid Survivors in the U.S. May Develop Long Covid, Says CDC

[1 in 5 Adult Covid Survivors in the U.S. May Develop Long Covid, Says CDC - The New York Times \(nytimes.com\)](https://www.nytimes.com/2021/05/13/health/covid-long-term-effects.html)

'When Will Kids under Five Get COVID Vaccines?' and Other Questions

['When Will Kids under Five Get COVID Vaccines?' and Other Questions - Scientific American](https://www.scientificamerican.com/article/when-will-kids-under-five-get-covid-vaccines-and-other-questions/)

Two Holland-area schools on outbreak report as COVID-19 cases rise

[Holland, Hamilton schools added to COVID-19 outbreak list \(hollandsentinel.com\)](https://www.holland Sentinel.com/story/news/2021/05/13/holland-hamilton-schools-added-to-covid-19-outbreak-list/)

WHO chief: COVID pandemic is 'most certainly not over'

[WHO chief: COVID pandemic is 'most certainly not over' | Health Care | grandhaventribune.com](https://www.grandhaventribune.com/news/2021/05/13/who-chief-covid-pandemic-is-most-certainly-not-over/)

Science Roundup

Post-COVID Conditions Among Adult COVID-19 Survivors Aged 18–64 and ≥65 Years — United States, March 2020–November 2021

[Post-COVID Conditions Among Adult COVID-19 Survivors Aged 18–64 and ≥65 Years — United States, March 2020–November 2021 | MMWR \(cdc.gov\)](#)



Findings from a large EHR database analysis of U.S. adults have found that one in five COVID-19 survivors aged 18–64 years and one in four survivors aged ≥65 years experienced at least one incident condition that might be attributable to previous COVID-19.

Vaccine effectiveness against COVID-19 breakthrough infections in patients with cancer (UKCCEP): a population-based test-negative case-control study

[Vaccine effectiveness against COVID-19 breakthrough infections in patients with cancer \(UKCCEP\): a population-based test-negative case-control study - The Lancet Oncology](#)



A population-based study in the UK found that COVID-19 vaccination is effective for individuals with cancer, conferring varying levels of protection against breakthrough infections. However, effectiveness was lower in persons with cancer, compared to the general population.

The impact of COVID-19 on essential health service provision for endemic infectious diseases in the South-East Asia region: A systematic review

[The impact of COVID-19 on essential health service provision for endemic infectious diseases in the South-East Asia region: A systematic review - The Lancet Regional Health - Southeast Asia](#)



A review of studies across countries in the South-East Asia Regions (SEAR) found evidence that the COVID-19 pandemic was associated with a significant disruption to tuberculosis, HIV, and dengue services.

Effectiveness of Homologous and Heterologous Covid-19 Boosters against Omicron

[Effectiveness of Homologous and Heterologous Covid-19 Boosters against Omicron | NEJM](#)



In a test-negative, case-control study of over 500,000 rapid and NAAT tests to assess the effectiveness of four vaccination regimens against symptomatic infection found that a single booster dose of an mRNA vaccine in recipients of a single priming dose of J&J vaccine provided protection close to that of a three-dose mRNA vaccine regimen.