

Ottawa County COVID-19 Epidemiology

May 19, 2022

Data as of May 14, 2022, unless otherwise indicated

Executive Summary

- **Transmission in Michigan and the US remains relatively low, but is increasing**
- **Ottawa County transmission remains low, but was increasing this past week**
 - This past week positivity **increased** to 22.9%, from 20.1% seen two weeks ago.
 - Weekly case counts **increased** 17% (+49% two weeks ago), from 465 two weeks ago to 543 last week.
 - Cases among children **increased** 12% (+21% two weeks ago), from 51 two weeks ago to 57 last week.
 - COVID-19 wastewater signals in Holland/Zeeland **continue trending up**.
 - The Omicron variant remains the predominate local strain.
 - Ottawa County may move from the Low to the Medium [CDC Community Level](#) in coming weeks.
- **Ottawa-area and regional hospitals have adequate capacity**
 - In Ottawa County, 5% 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 Ottawa County ED diversion.
- **Pediatric hospitalization rates in the US and in Michigan remain low**
 - Regional pediatric hospitalization census remains low but is increasing and has reached the pandemic average as of 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

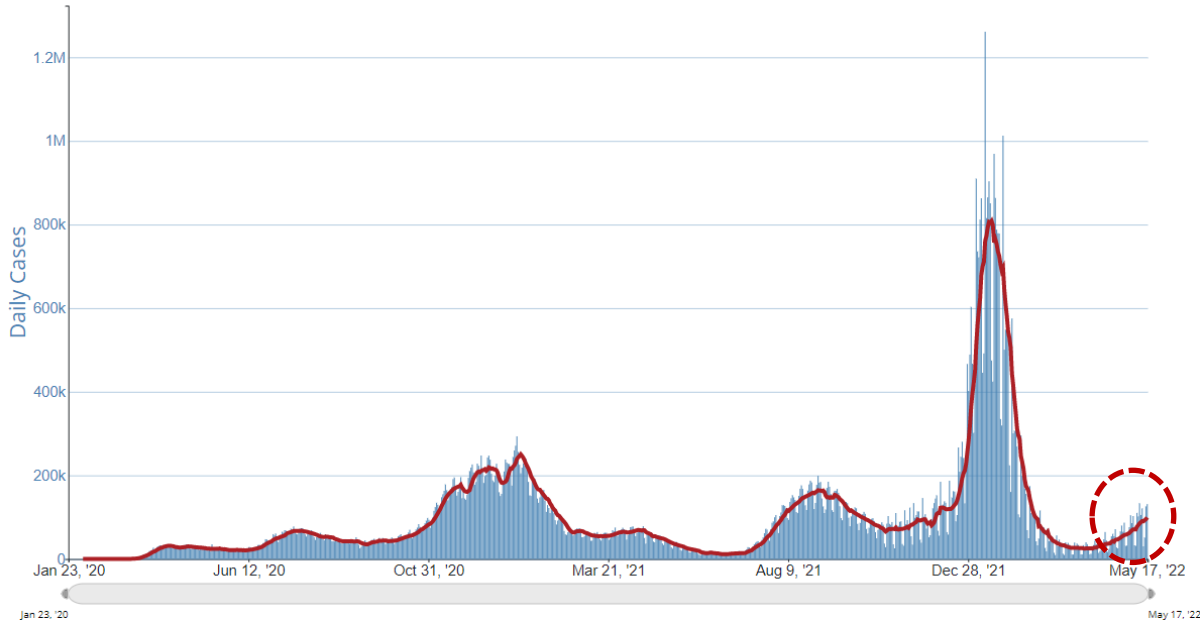
Metric	Goal	Week Ending				
		16-Apr-22	23-Apr-22	30-Apr-22	7-May-22	14-May-22
Positivity (All Ages)	NA	11.9%	15.1%	16.3%	20.1%	22.9%
Weekly Cases (All Ages)	<592	184	267	312	465	543
Weekly Cases in Children (0-17 years of age)	NA	19	27	42	51	57
Total Deaths (All Ages)	0	2	0	2	1	0
CDC COVID-19 Community 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

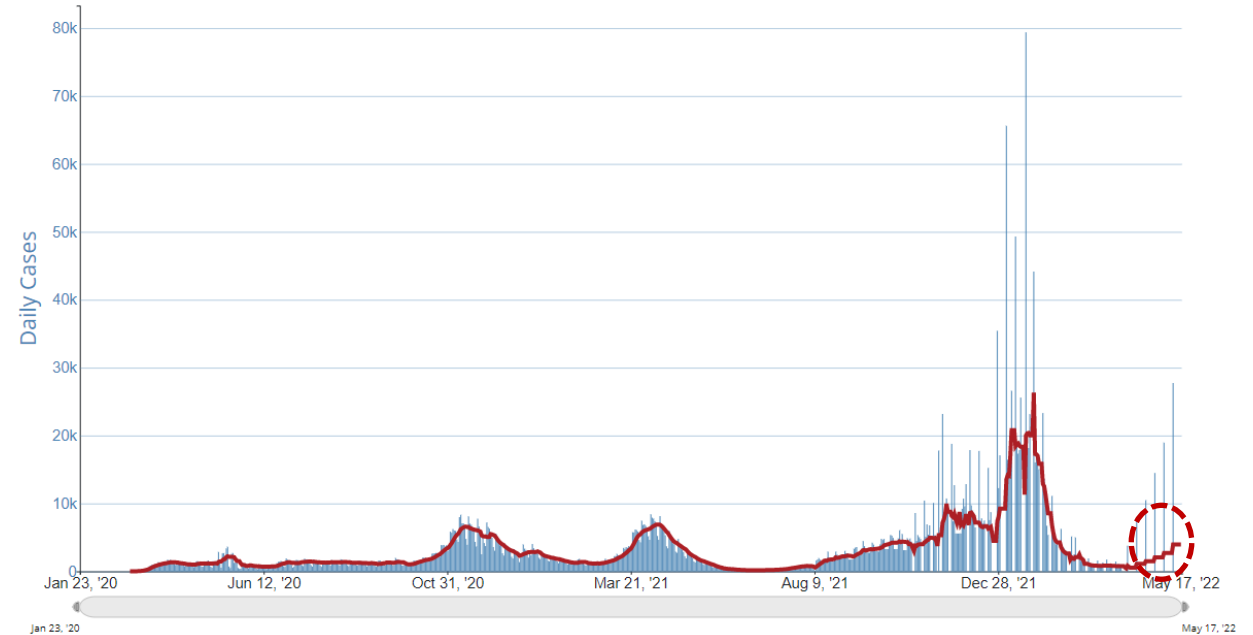
USA

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 lower than previous times in the pandemic but are increasing.

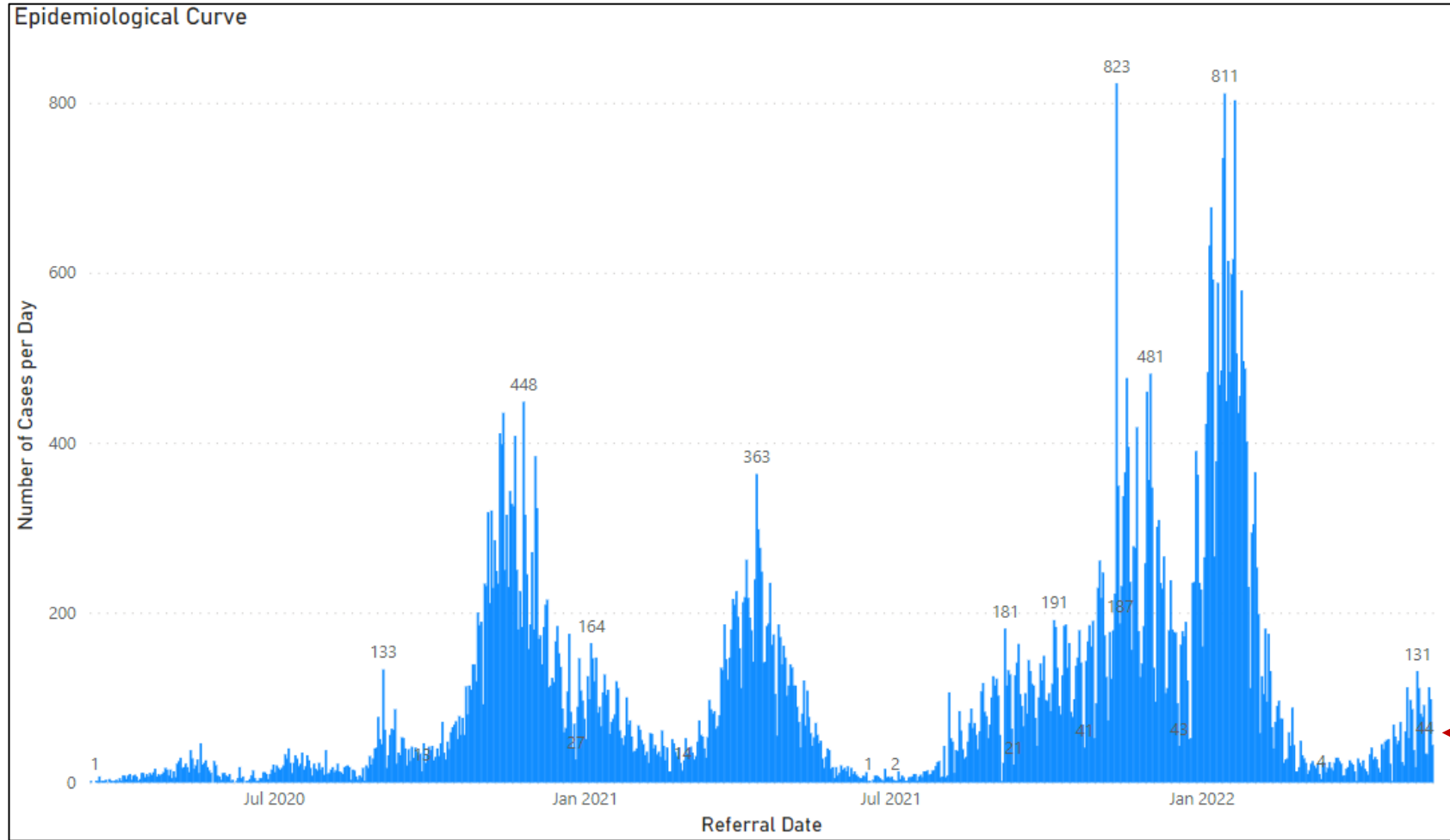
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases.

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

Data through May 17, 2022

Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – May 18, 2022



Total Number of Cases
76,866

Currently, the 7-day average is **70 cases per day**, a slight decrease compared to the 73 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

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

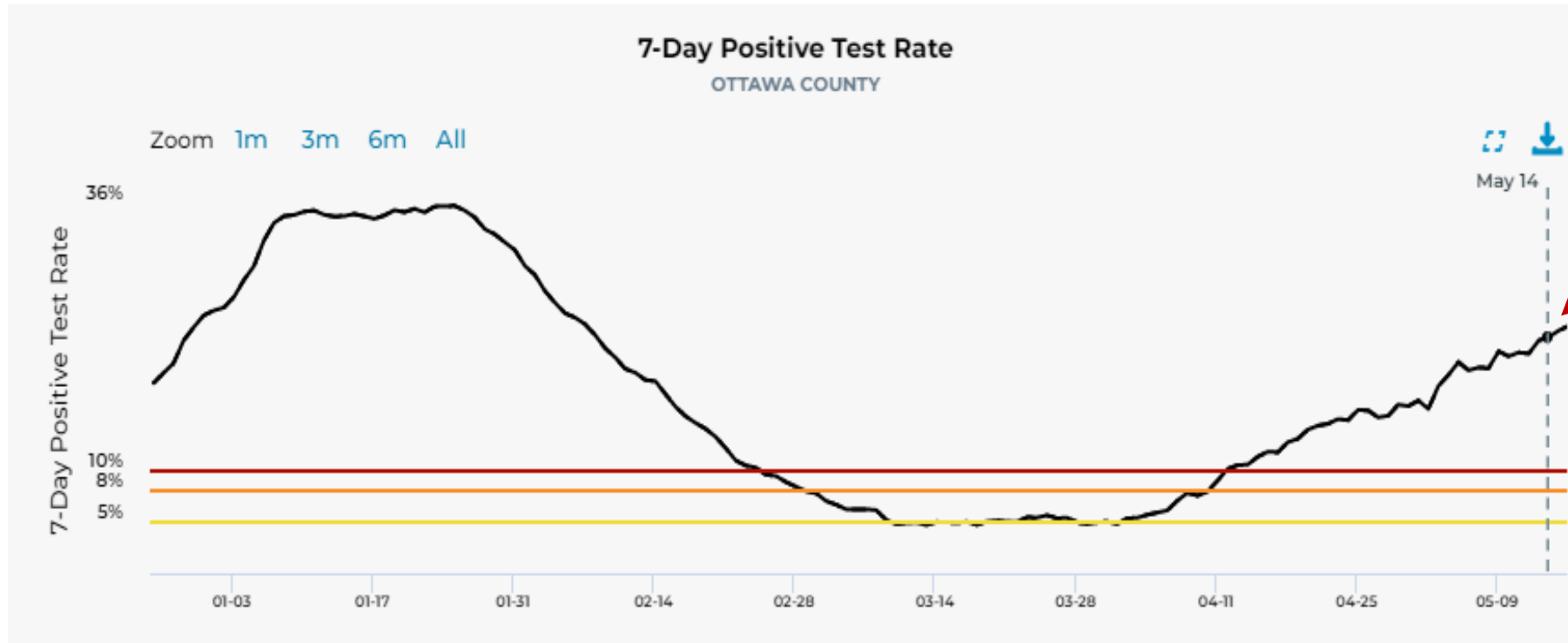
Other

Media

Science Roundup

Test Positivity in Ottawa County

COVID-19 Cases by Day, Ottawa County, January 1, 2022 – May 14, 2022



Test positivity has been **increasing for the last 5 weeks**, reaching 23% last week.

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

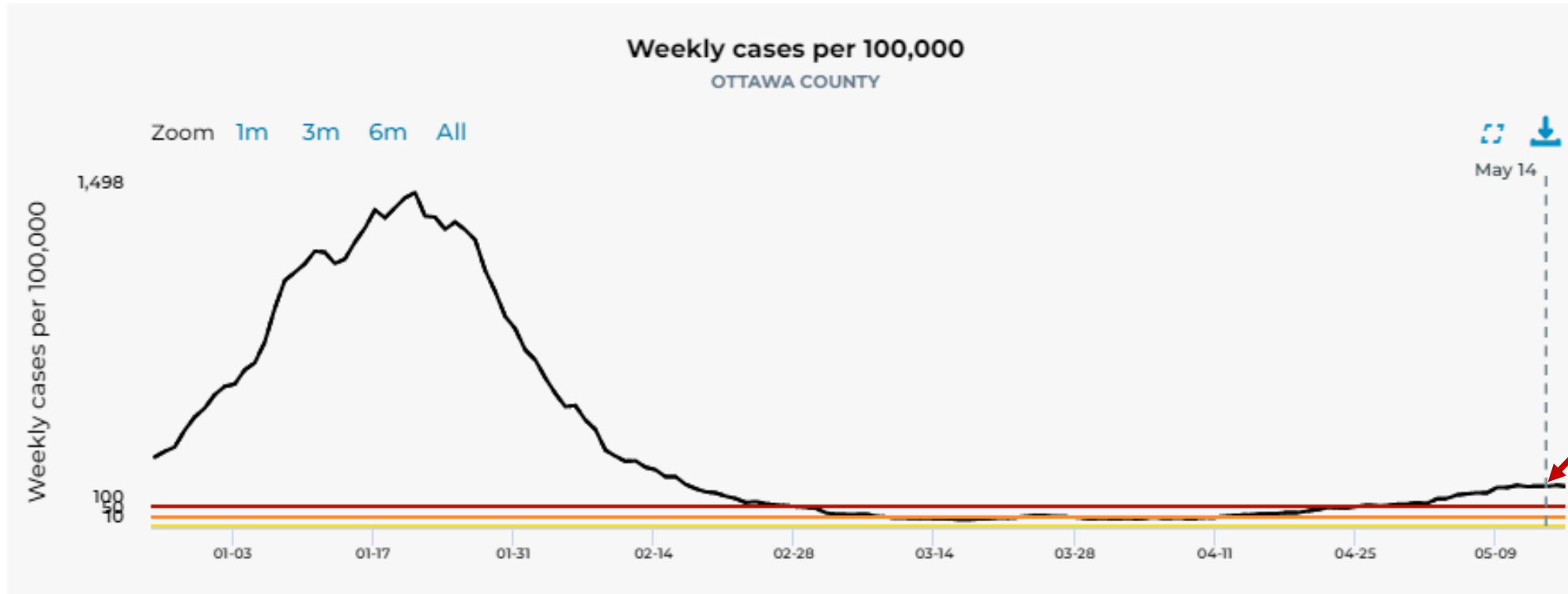


Note: Testing in Ottawa County increased to over 2,100 tests last week (week 18) from about 1,900 two weeks ago (week 17): [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](https://www.mistartmap.info/mism-indicators?area=county%3Aottawa) & <https://www.mistartmap.info/mism-indicators?area=county%3Aottawa>. 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 14, 2022



Case rates **remained low at 185.7** cases per week per 100,000 population (but **higher than 156** the week prior).

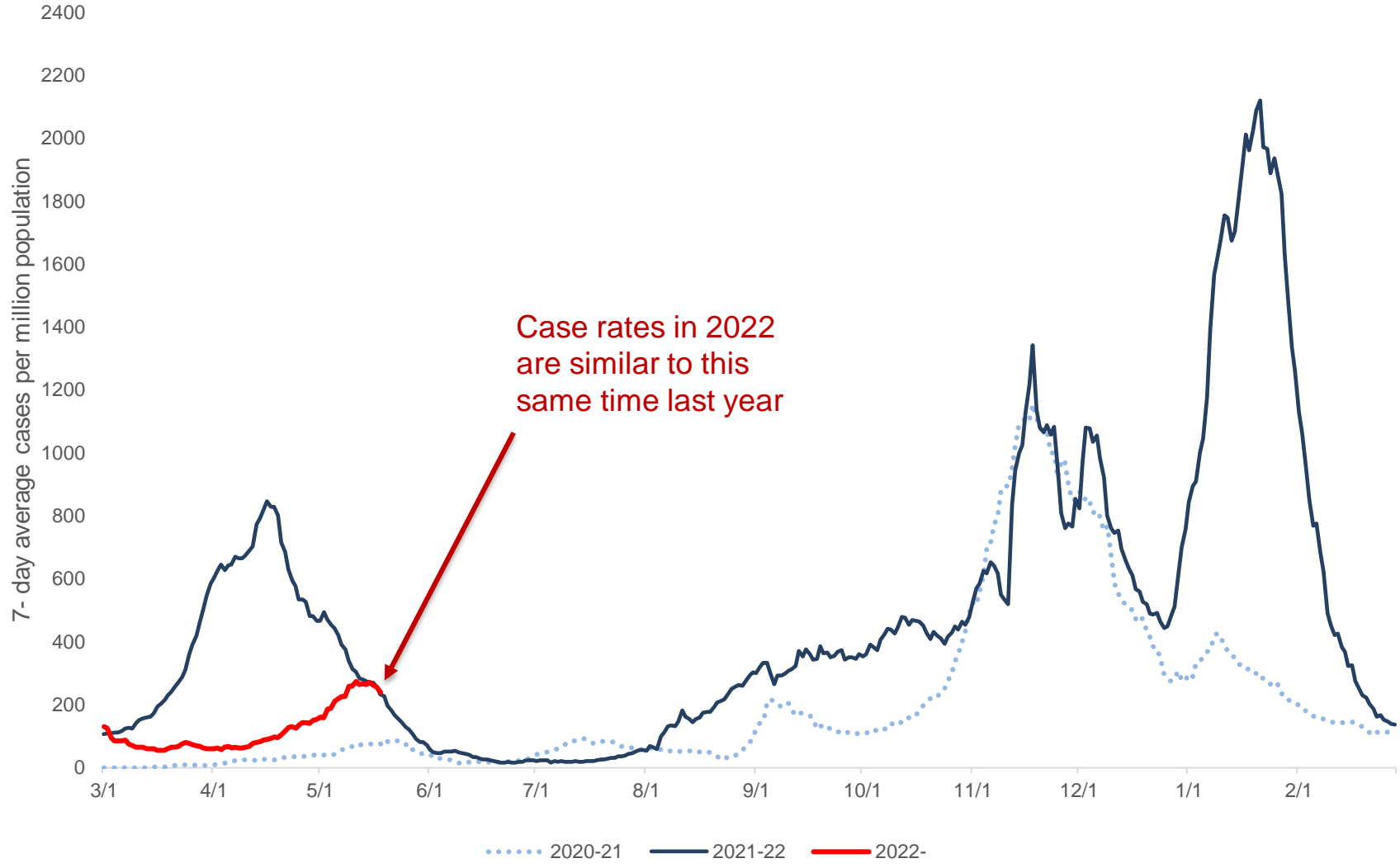
Please note that with updated CDC Community Transmission levels, metrics and/or metric thresholds/goals may change.



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

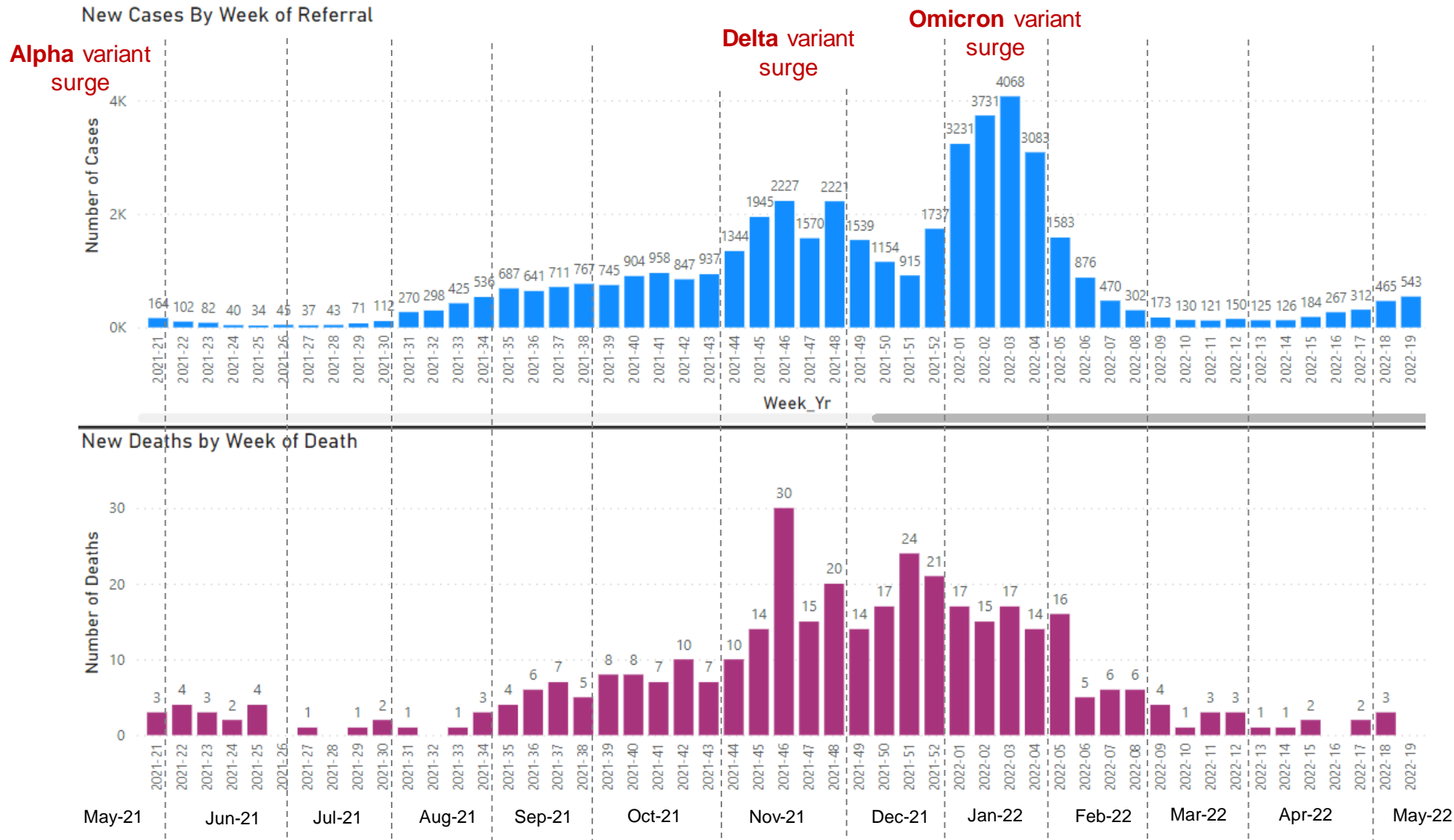


Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

Source: Internal Data

Data through May 18, 2022

Ottawa County – Cases & Deaths by Week, All Ages



The weekly number of **cases** increased **17%** from week 18 to week 19.

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.

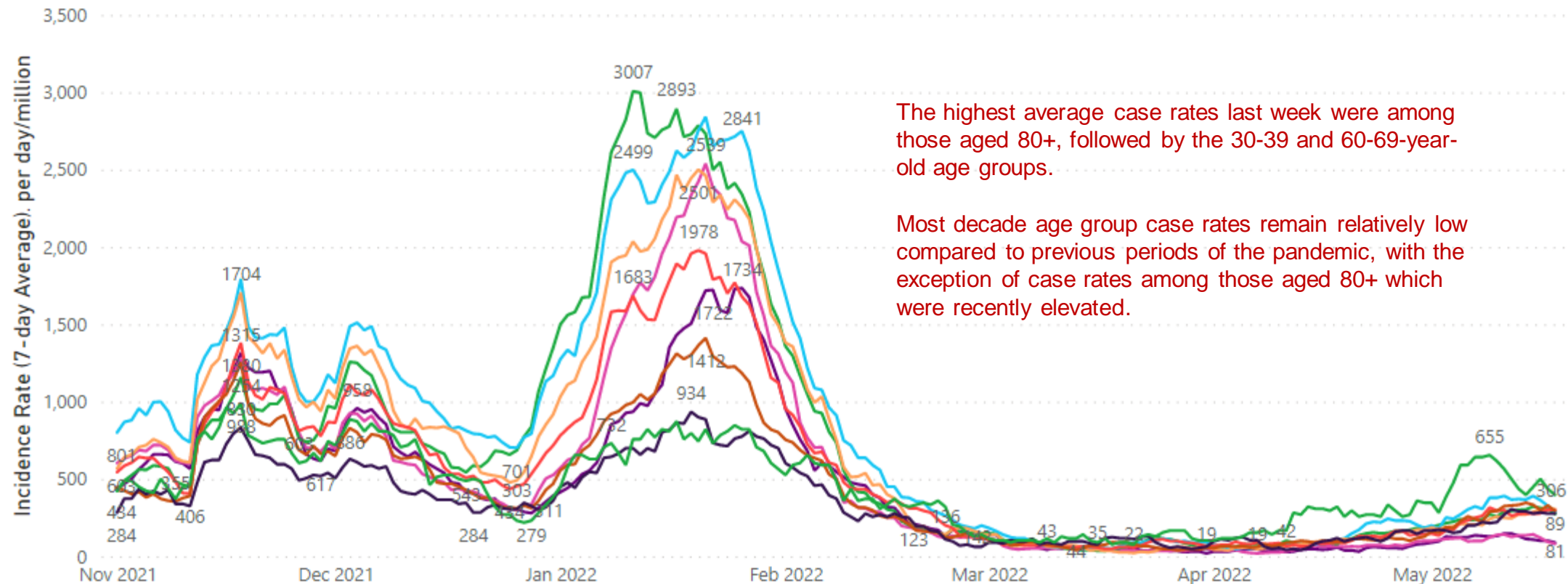
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age Decade

COVID-19 Case Rates by Age, November 2021 – May 18, 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 30-39 and 60-69-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+ 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 18, 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 19 (April 24, 2022 – May 14, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	4.1	112.4	-17%
10-19	5.9	132.3	32%
20-29	13.4	296.9	29%
30-39	13.1	366.6	14%
40-49	8.9	266.9	29%
50-59	9.7	278.4	11%
60-69	11.3	346.4	44%
70-79	6.0	290.6	45%
80+	4.4	398.0	-38%

Age groups with highest average case rates last week:

- 80+
- 30-39
- 60-69

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

- 70-79
- 60-69
- 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.

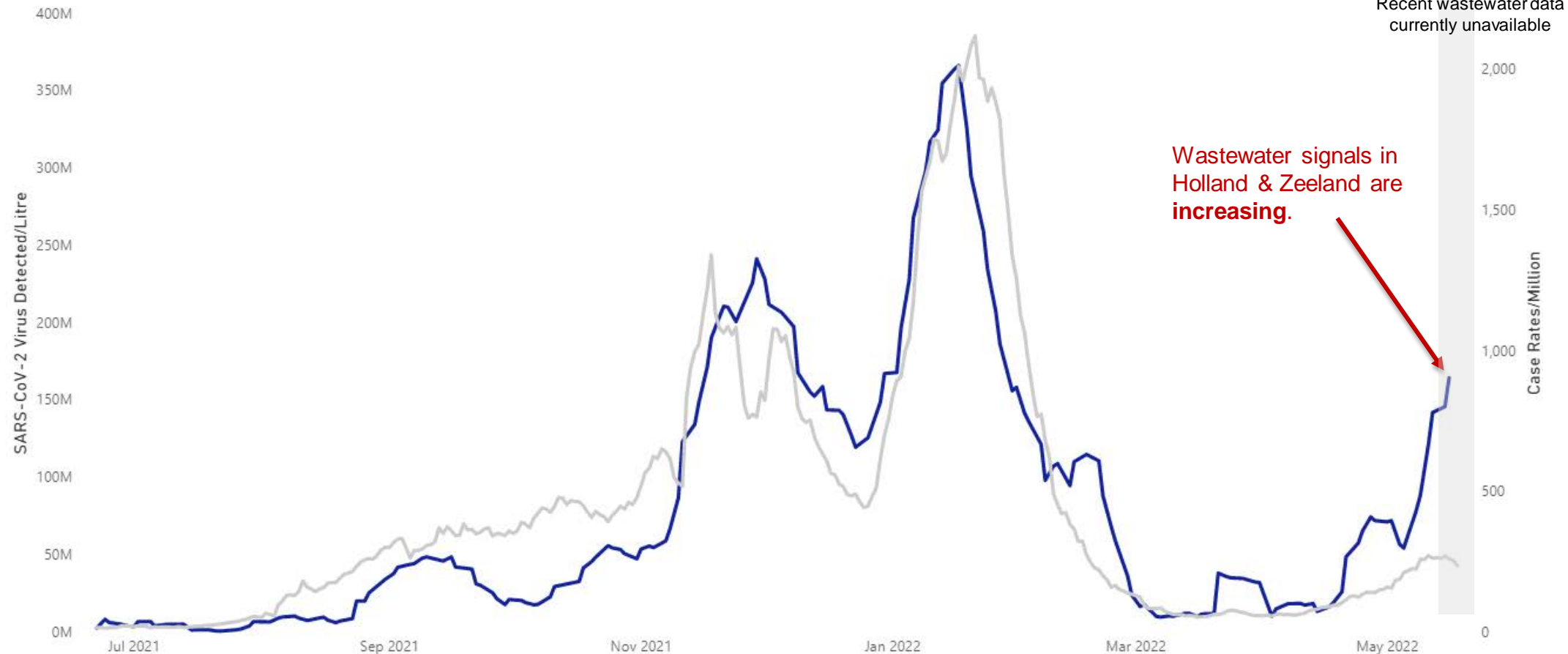
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System; CDC Wonder 2020 population

Data as May 19, 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 \(SWEEP\) \(michigan.gov\)](https://michigan.gov)

Data through May 16, 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
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	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	414	53%	51	21%	465	49%
14-May-22	486	17%	57	12%	543	17%

Adults

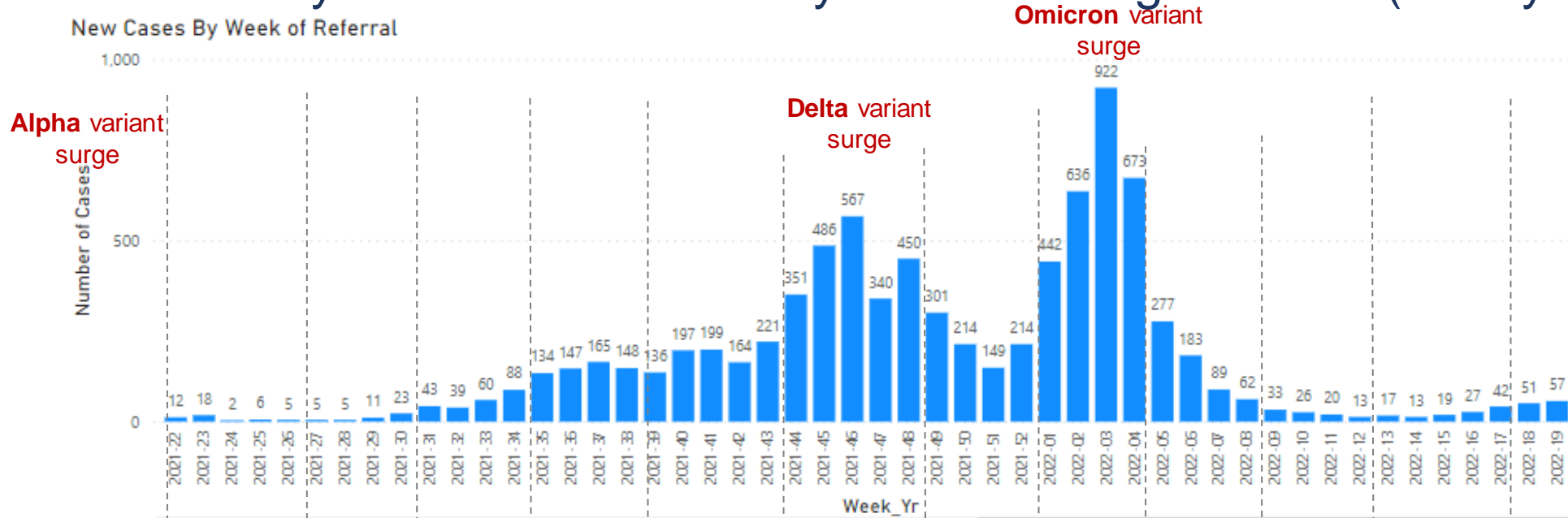
Children

Weekly case counts among **children increased 12%** last week, and cases in **adults increased 17%**.

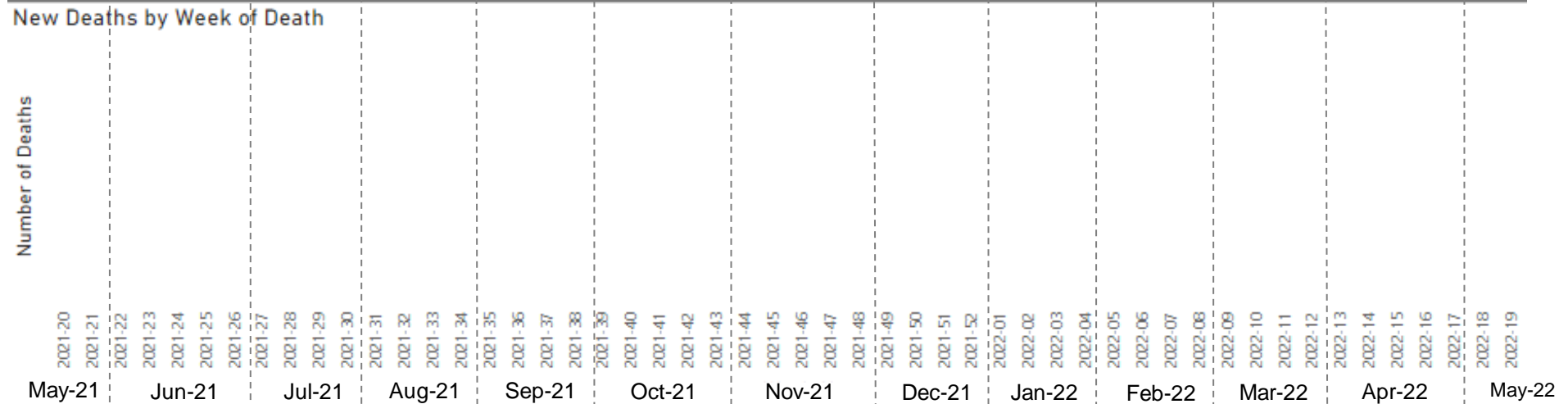
Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case counts.

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 12%** from week 18 to week 19.



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

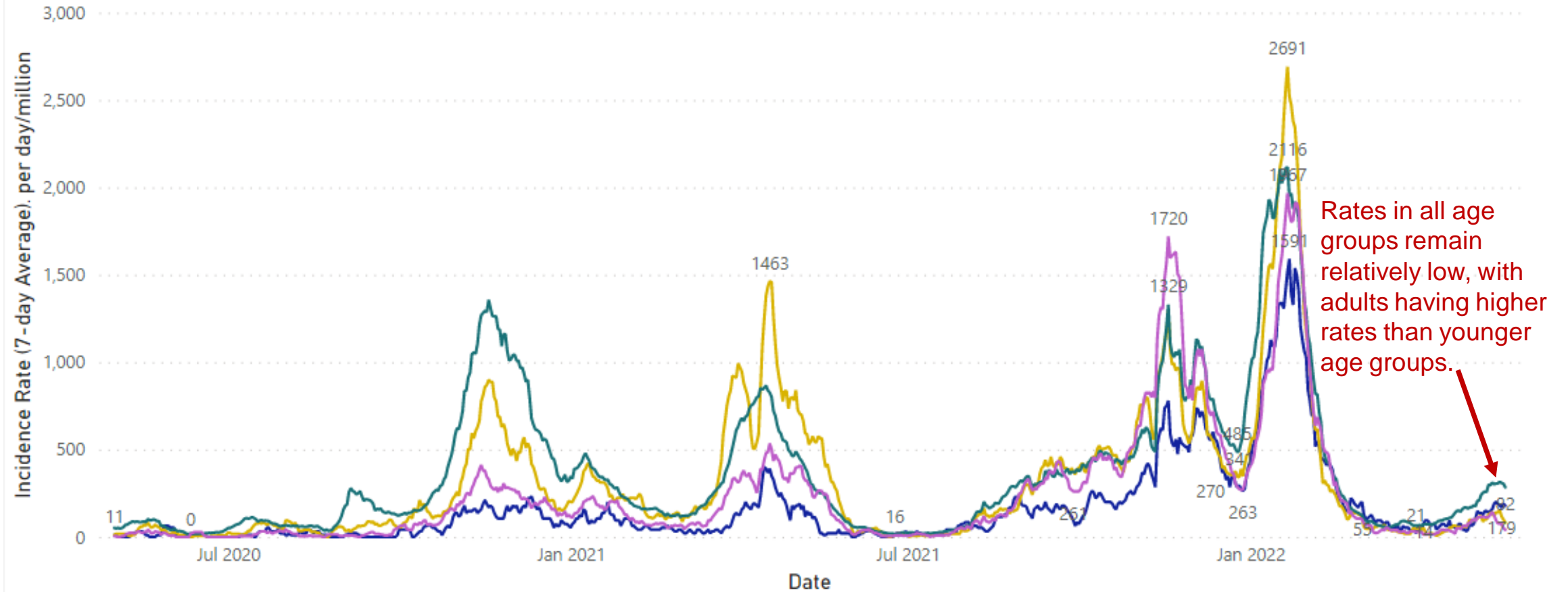
Source: Michigan Department of Health and Human Services, Michigan Disease Surveillance System

Ottawa County - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – May 18, 2022

Incidence Rate (7-day Average)

rategroup ● 0-3 ● 12-17 ● 18+ ● 4-11



Rates in all age groups remain relatively low, with adults having higher rates than younger age groups.

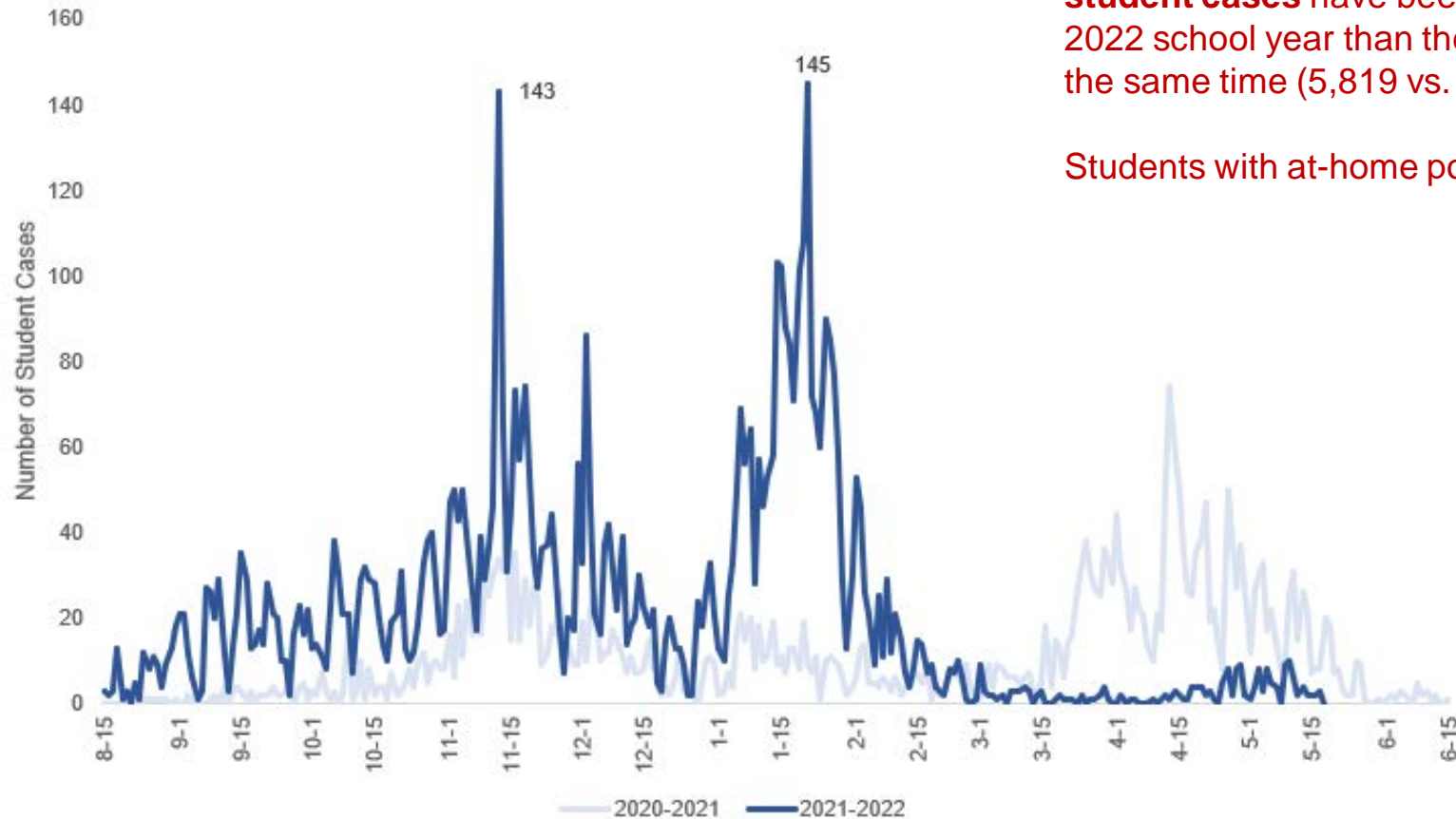


Note: Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

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

Data as of May 18, 2022

Ottawa County Cases in PreK-12 School Students



School year to date (since August 15), **1.8x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,819 vs. 3,309) respectively).

Students with at-home positive tests are not included.

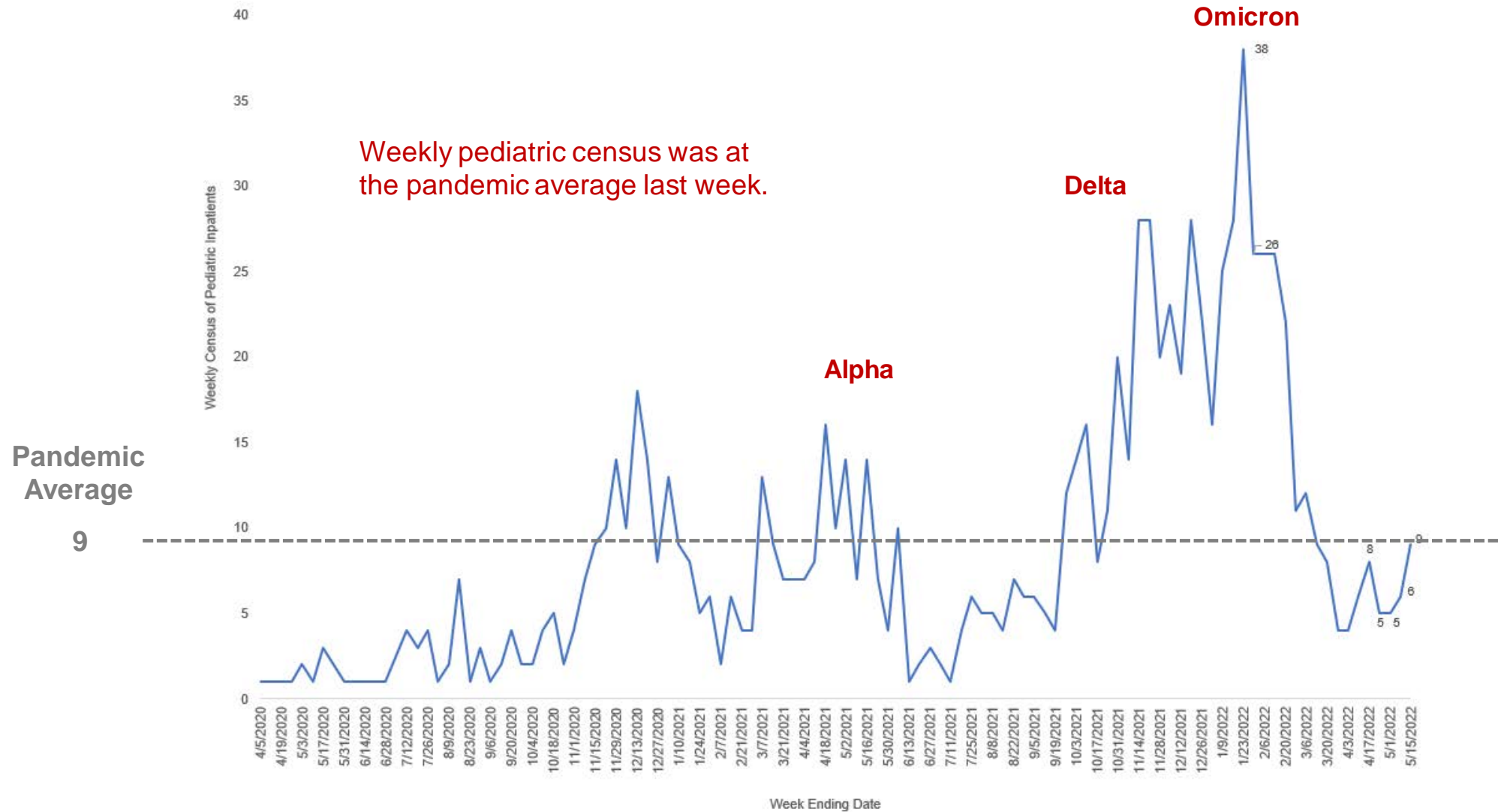
Method: Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

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 18, 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 15, 2022

Ottawa County Hospital Capacity – All Beds

Hospital Inpatient Bed Occupancy - By County

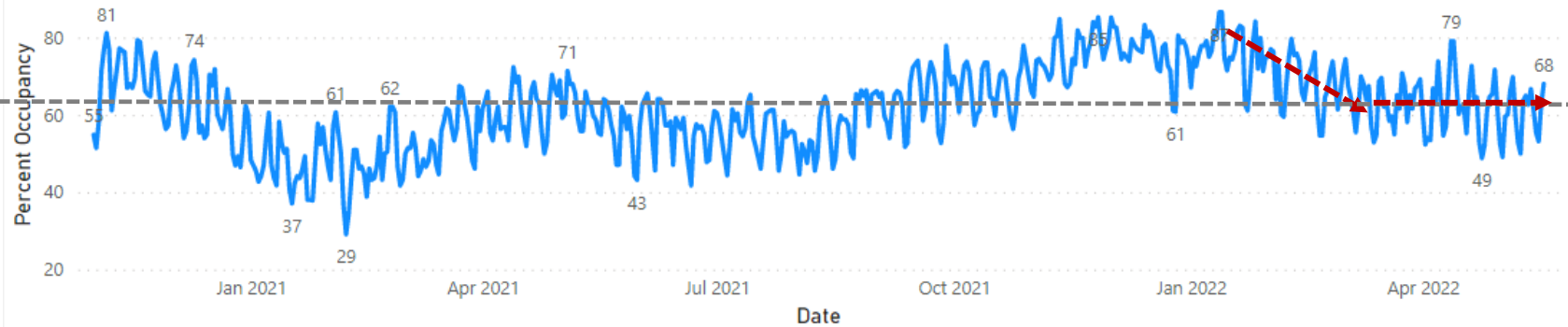
Total Inpatient Bed Occupancy (All Patients, COVID and Non-COVID)

Pandemic Average

62%

Percent Occupancy by Date and County

County ● Ottawa



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

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

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

Percent Occupancy by Date and County

County ● Ottawa

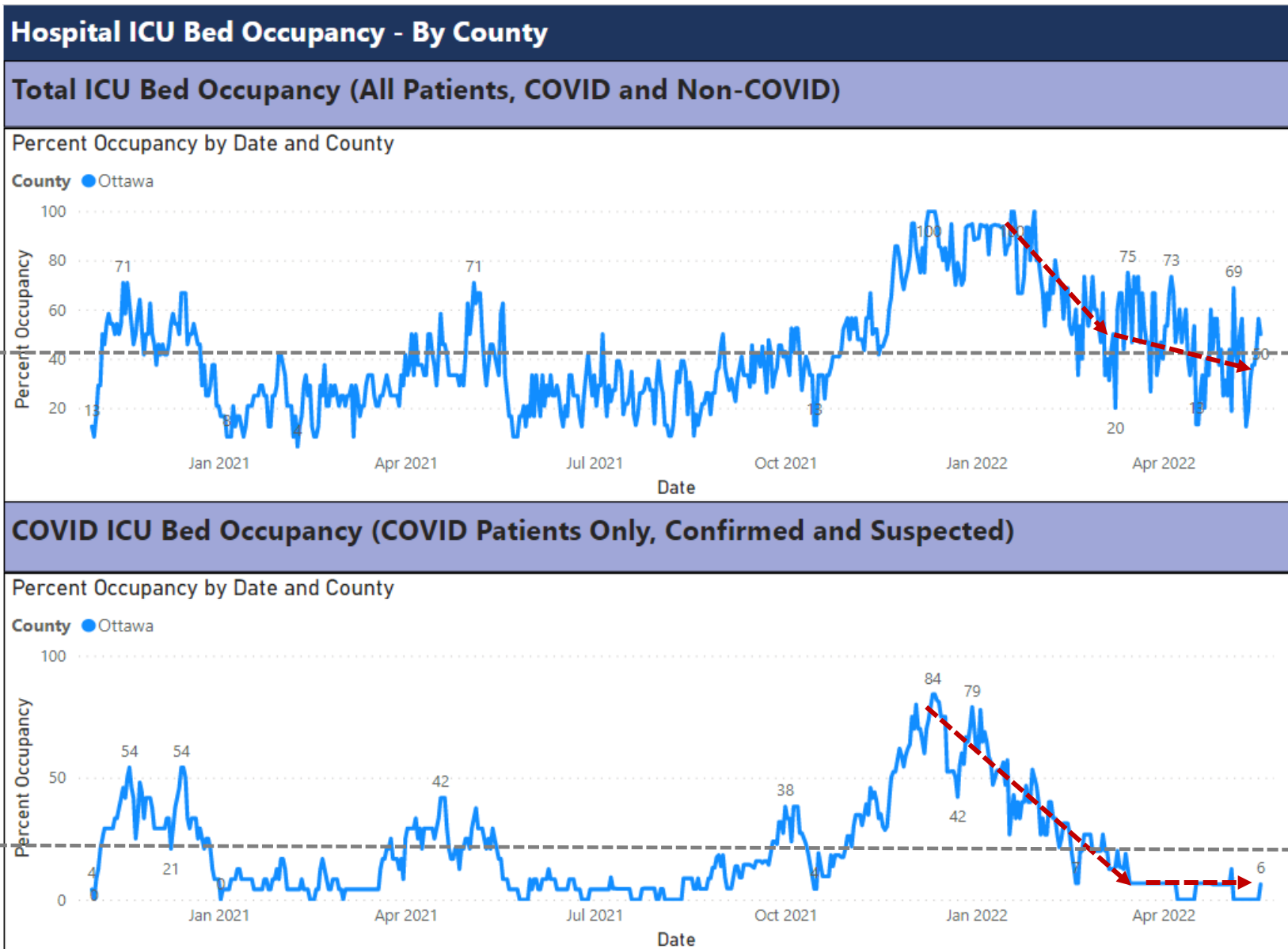
13%



Source: EMResources

Data through May 18, 2022

Ottawa County Hospital Capacity – ICU Beds



Pandemic Average

41%

20%

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

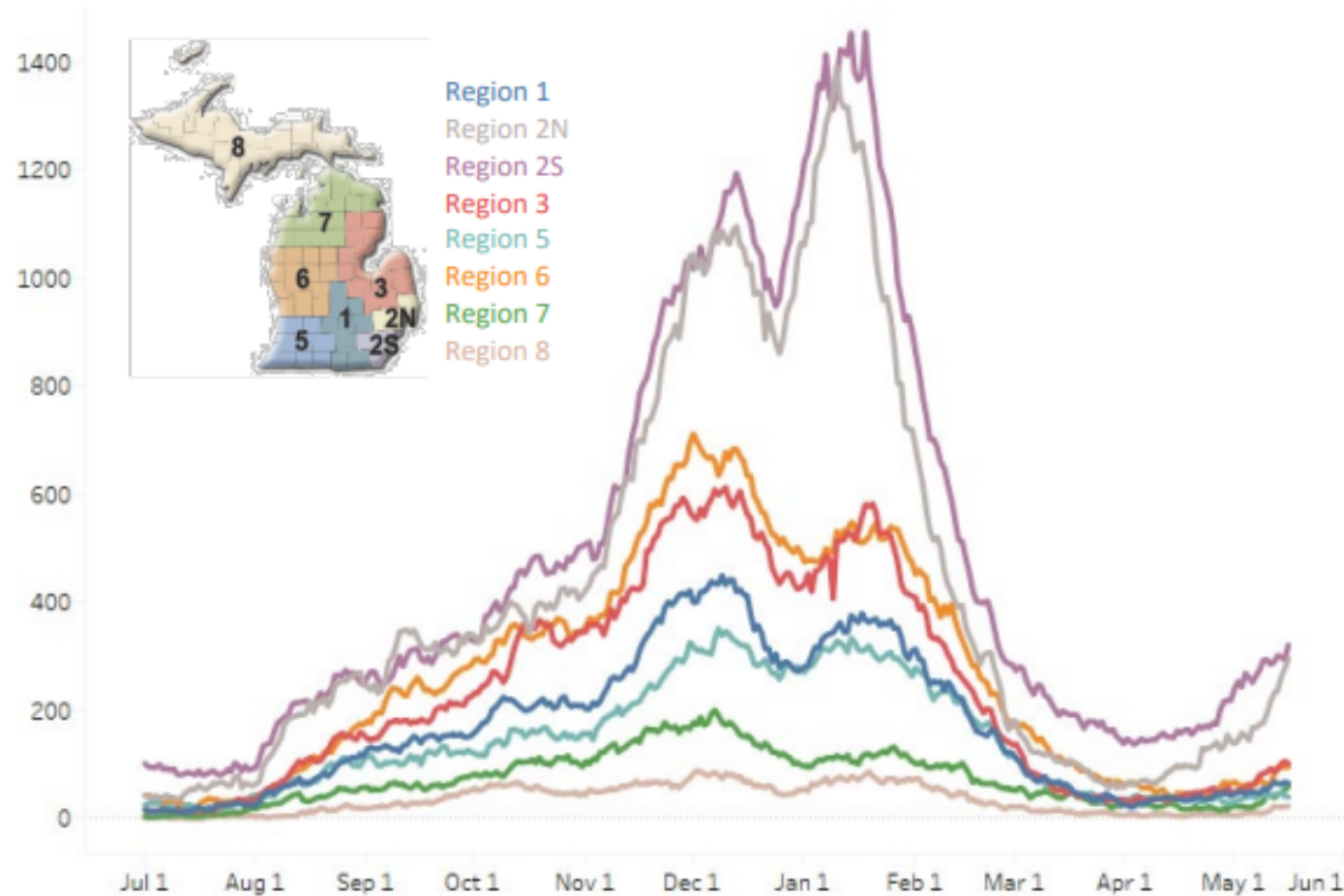
The proportion of ICU beds occupied by COVID-19 patients is **below the pandemic average**. Currently, **6%** of ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through May 18, 2022

Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 5/16/2022
Confirmed Positive by Region



This week the COVID+ census has increased in all regions except Region 5. The fastest growth was seen in Region 2N, 6, 7 and 8.

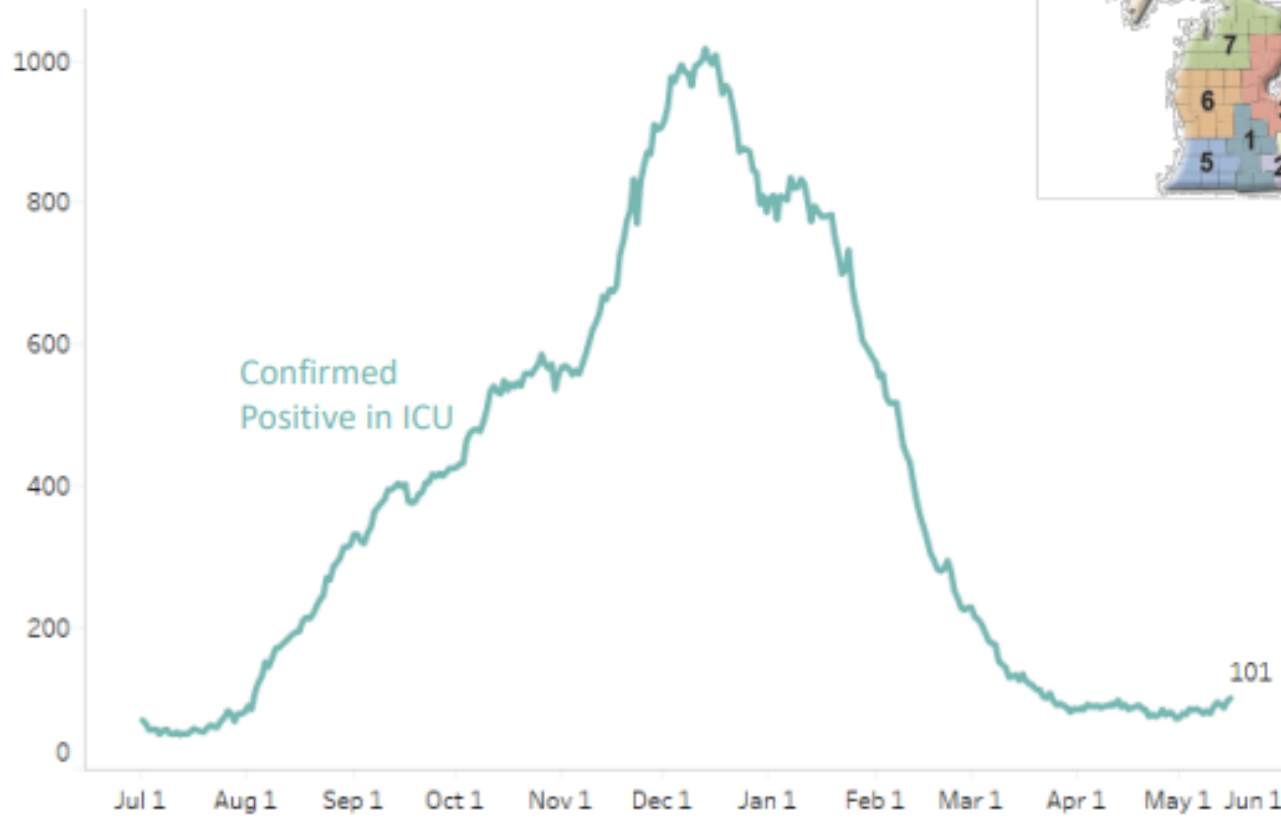
Regions 2N, 2S, and 7 now have greater than 100/Million population hospitalized with COVID.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	66 (18%)	61/M
Region 2N	295 (67%)	133/M
Region 2S	321 (10%)	144/M
Region 3	102 (21%)	90/M
Region 5	40 (-15%)	42/M
Region 6	96 (43%)	65/M
Region 7	59 (84%)	118/M
Region 8	23 (130%)	74/M

Source: MDHHS Data and Modelling: [MI COVID response Data and modeling update \(michigan.gov\)](https://www.michigan.gov/mdhhs/0,4570,7517_7518_7519_7520_7521,4_7522,4_7523,4_7524,4_7525,4_7526,4_7527,4_7528,4_7529,4_7530,4_7531,4_7532,4_7533,4_7534,4_7535,4_7536,4_7537,4_7538,4_7539,4_7540,4_7541,4_7542,4_7543,4_7544,4_7545,4_7546,4_7547,4_7548,4_7549,4_7550,4_7551,4_7552,4_7553,4_7554,4_7555,4_7556,4_7557,4_7558,4_7559,4_7560,4_7561,4_7562,4_7563,4_7564,4_7565,4_7566,4_7567,4_7568,4_7569,4_7570,4_7571,4_7572,4_7573,4_7574,4_7575,4_7576,4_7577,4_7578,4_7579,4_7580,4_7581,4_7582,4_7583,4_7584,4_7585,4_7586,4_7587,4_7588,4_7589,4_7590,4_7591,4_7592,4_7593,4_7594,4_7595,4_7596,4_7597,4_7598,4_7599,4_7600,4_7601,4_7602,4_7603,4_7604,4_7605,4_7606,4_7607,4_7608,4_7609,4_7610,4_7611,4_7612,4_7613,4_7614,4_7615,4_7616,4_7617,4_7618,4_7619,4_7620,4_7621,4_7622,4_7623,4_7624,4_7625,4_7626,4_7627,4_7628,4_7629,4_7630,4_7631,4_7632,4_7633,4_7634,4_7635,4_7636,4_7637,4_7638,4_7639,4_7640,4_7641,4_7642,4_7643,4_7644,4_7645,4_7646,4_7647,4_7648,4_7649,4_7650,4_7651,4_7652,4_7653,4_7654,4_7655,4_7656,4_7657,4_7658,4_7659,4_7660,4_7661,4_7662,4_7663,4_7664,4_7665,4_7666,4_7667,4_7668,4_7669,4_7670,4_7671,4_7672,4_7673,4_7674,4_7675,4_7676,4_7677,4_7678,4_7679,4_7680,4_7681,4_7682,4_7683,4_7684,4_7685,4_7686,4_7687,4_7688,4_7689,4_7690,4_7691,4_7692,4_7693,4_7694,4_7695,4_7696,4_7697,4_7698,4_7699,4_7700,4_7701,4_7702,4_7703,4_7704,4_7705,4_7706,4_7707,4_7708,4_7709,4_7710,4_7711,4_7712,4_7713,4_7714,4_7715,4_7716,4_7717,4_7718,4_7719,4_7720,4_7721,4_7722,4_7723,4_7724,4_7725,4_7726,4_7727,4_7728,4_7729,4_7730,4_7731,4_7732,4_7733,4_7734,4_7735,4_7736,4_7737,4_7738,4_7739,4_7740,4_7741,4_7742,4_7743,4_7744,4_7745,4_7746,4_7747,4_7748,4_7749,4_7750,4_7751,4_7752,4_7753,4_7754,4_7755,4_7756,4_7757,4_7758,4_7759,4_7760,4_7761,4_7762,4_7763,4_7764,4_7765,4_7766,4_7767,4_7768,4_7769,4_7770,4_7771,4_7772,4_7773,4_7774,4_7775,4_7776,4_7777,4_7778,4_7779,4_7780,4_7781,4_7782,4_7783,4_7784,4_7785,4_7786,4_7787,4_7788,4_7789,4_7790,4_7791,4_7792,4_7793,4_7794,4_7795,4_7796,4_7797,4_7798,4_7799,4_7800,4_7801,4_7802,4_7803,4_7804,4_7805,4_7806,4_7807,4_7808,4_7809,4_7810,4_7811,4_7812,4_7813,4_7814,4_7815,4_7816,4_7817,4_7818,4_7819,4_7820,4_7821,4_7822,4_7823,4_7824,4_7825,4_7826,4_7827,4_7828,4_7829,4_7830,4_7831,4_7832,4_7833,4_7834,4_7835,4_7836,4_7837,4_7838,4_7839,4_7840,4_7841,4_7842,4_7843,4_7844,4_7845,4_7846,4_7847,4_7848,4_7849,4_7850,4_7851,4_7852,4_7853,4_7854,4_7855,4_7856,4_7857,4_7858,4_7859,4_7860,4_7861,4_7862,4_7863,4_7864,4_7865,4_7866,4_7867,4_7868,4_7869,4_7870,4_7871,4_7872,4_7873,4_7874,4_7875,4_7876,4_7877,4_7878,4_7879,4_7880,4_7881,4_7882,4_7883,4_7884,4_7885,4_7886,4_7887,4_7888,4_7889,4_7890,4_7891,4_7892,4_7893,4_7894,4_7895,4_7896,4_7897,4_7898,4_7899,4_7900,4_7901,4_7902,4_7903,4_7904,4_7905,4_7906,4_7907,4_7908,4_7909,4_7910,4_7911,4_7912,4_7913,4_7914,4_7915,4_7916,4_7917,4_7918,4_7919,4_7920,4_7921,4_7922,4_7923,4_7924,4_7925,4_7926,4_7927,4_7928,4_7929,4_7930,4_7931,4_7932,4_7933,4_7934,4_7935,4_7936,4_7937,4_7938,4_7939,4_7940,4_7941,4_7942,4_7943,4_7944,4_7945,4_7946,4_7947,4_7948,4_7949,4_7950,4_7951,4_7952,4_7953,4_7954,4_7955,4_7956,4_7957,4_7958,4_7959,4_7960,4_7961,4_7962,4_7963,4_7964,4_7965,4_7966,4_7967,4_7968,4_7969,4_7970,4_7971,4_7972,4_7973,4_7974,4_7975,4_7976,4_7977,4_7978,4_7979,4_7980,4_7981,4_7982,4_7983,4_7984,4_7985,4_7986,4_7987,4_7988,4_7989,4_7990,4_7991,4_7992,4_7993,4_7994,4_7995,4_7996,4_7997,4_7998,4_7999,4_8000)

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 7/1/2021 – 5/16/2022
Confirmed Positive in ICUs



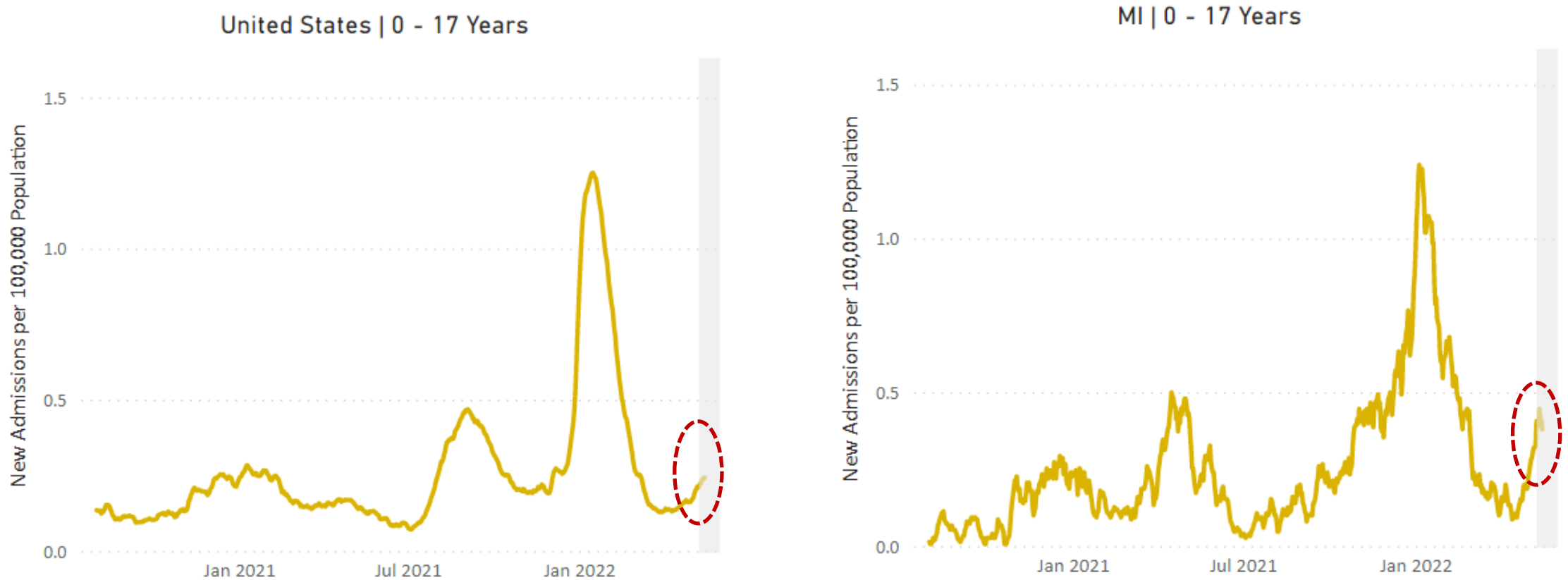
Overall, the census of COVID+ patients in ICUs has increased by 22% from last week. There are 101 COVID+ patients in ICU beds across the state. Region 2N is driving the statewide increase.

In Region 8, COVID+ patients fill 10% of ICU beds.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	6 (-25%)	88%	3%
Region 2N	31 (182%)	67%	6%
Region 2S	37 (9%)	82%	6%
Region 3	9 (29%)	86%	3%
Region 5	1 (-89%)	69%	1%
Region 6	3 (50%)	67%	1%
Region 7	8 (-20%)	78%	6%
Region 8	6 (200%)	71%	10%

Source: MDHHS Data and Modelling: [MI COVID response Data and modeling update \(michigan.gov\)](https://michigan.gov/mdhhs)

Pediatric Hospitalization Rates – USA, Georgia, Michigan



Pediatric hospitalization rates across the US and Michigan are reversing into a potential uptrend.

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

Accessed May 19, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

Other

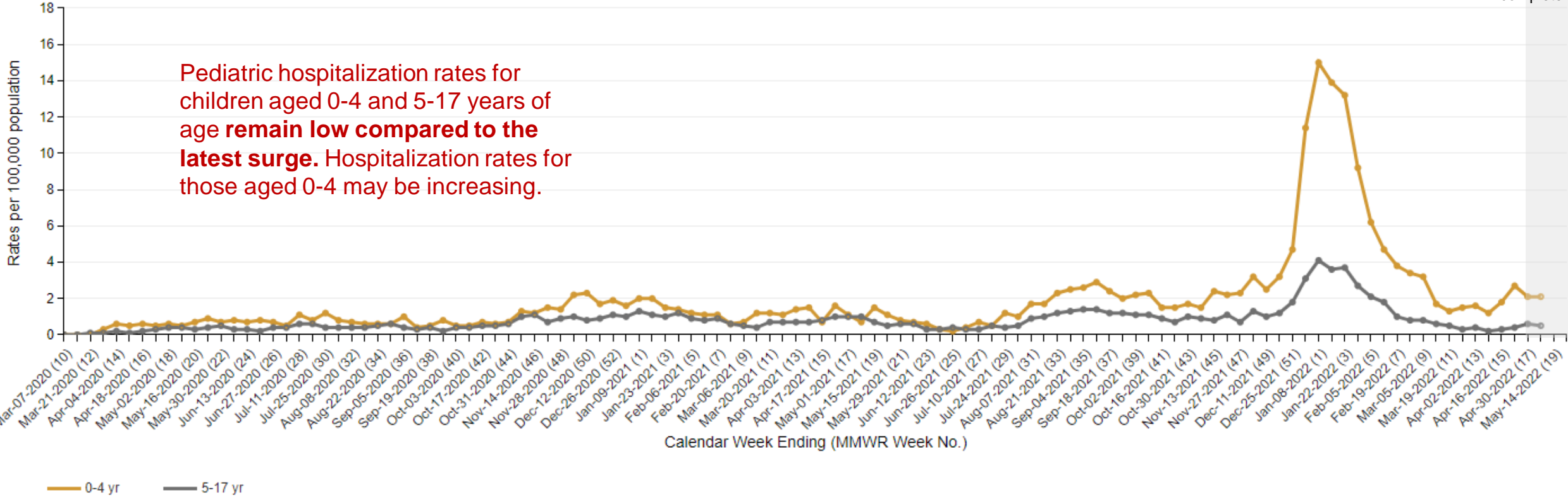
Media

Science
Roundup

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



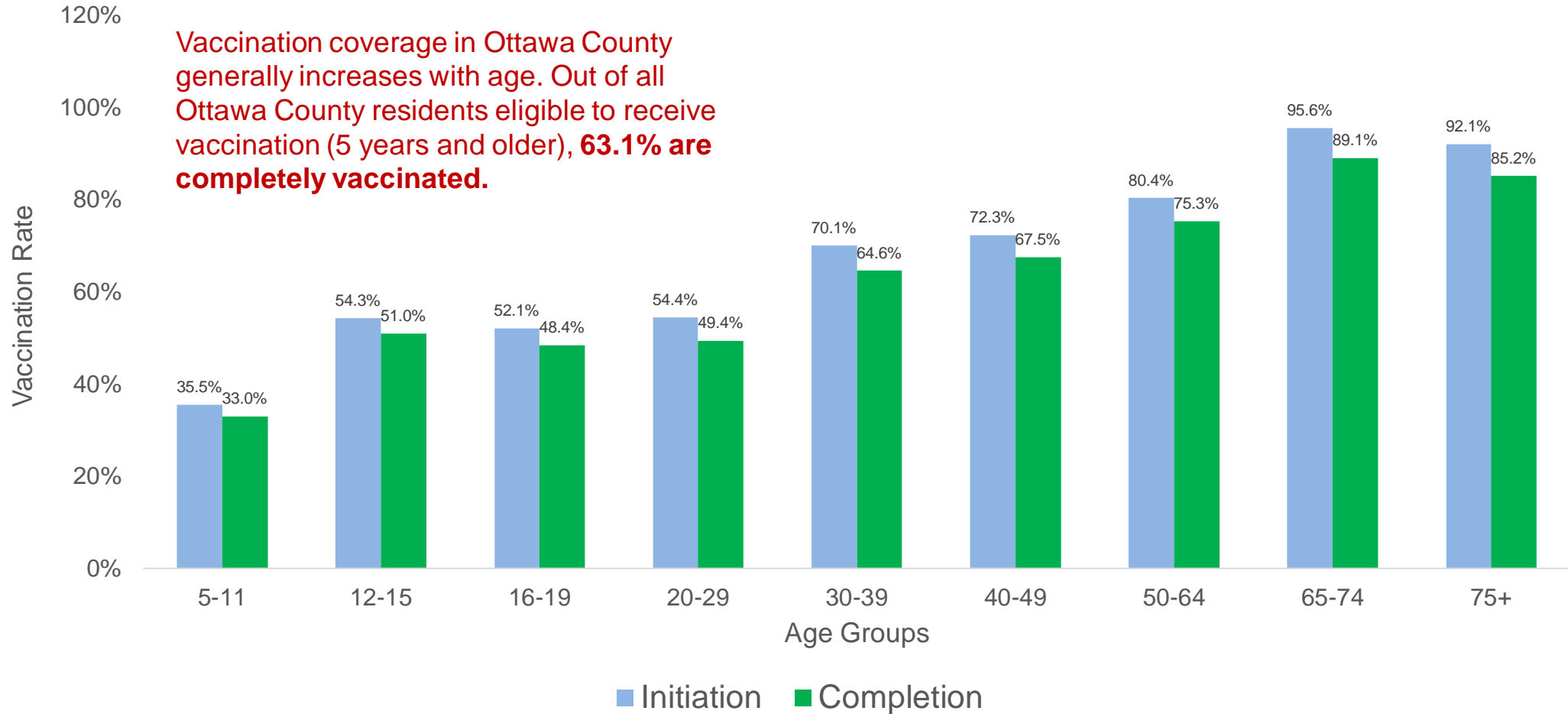
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 18, 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 18, 2022

Cumulative Cases by Vaccination Status, Ottawa County, January 15, 2021 – May 18, 2022

Fully Vaccinated People (172,849)	
Cases	Deaths
Percent of Cases in People Not Fully Vaccinated (36,761 / 56,506) 65.1%	Percent of Deaths in People Not Fully Vaccinated (290 / 446) 65.0%
Total Cases Not Fully Vaccinated 36,761	Total Deaths Not Fully Vaccinated 290
Total Breakthrough Cases 19,745	Total Breakthrough Deaths 156
Percent of Fully Vaccinated People who Developed COVID-19 (19,745 / 172,849) 11.4%	Percent of Fully Vaccinated People who Died of COVID-19 (156 / 172,849) 0.09%
Percent of Cases who were Fully Vaccinated (19,745 / 56,506) 34.9%	Percent of Deaths who were Fully Vaccinated (156 / 446) 35.0%
Total Cases 56,506	Total Deaths 446

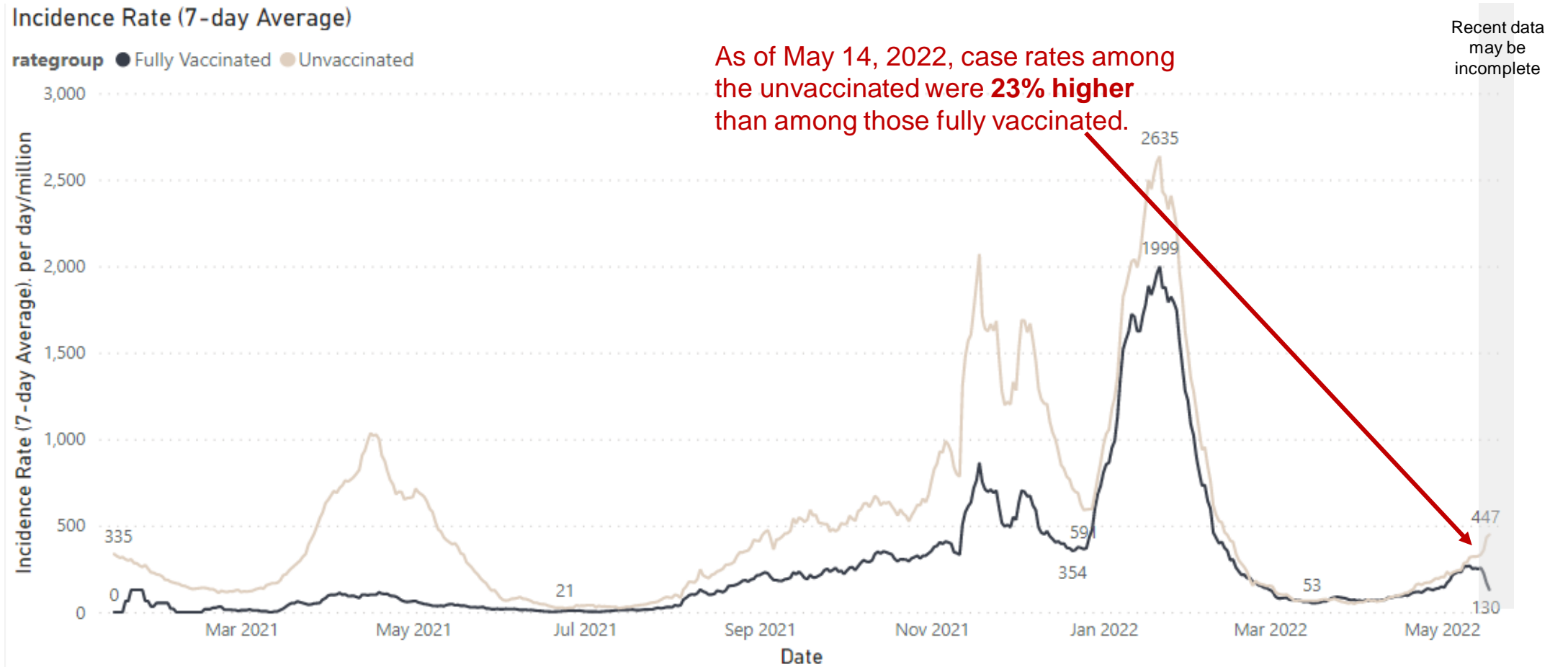
Note:

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



As of May 14, 2022, case rates among the unvaccinated were **23% 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:

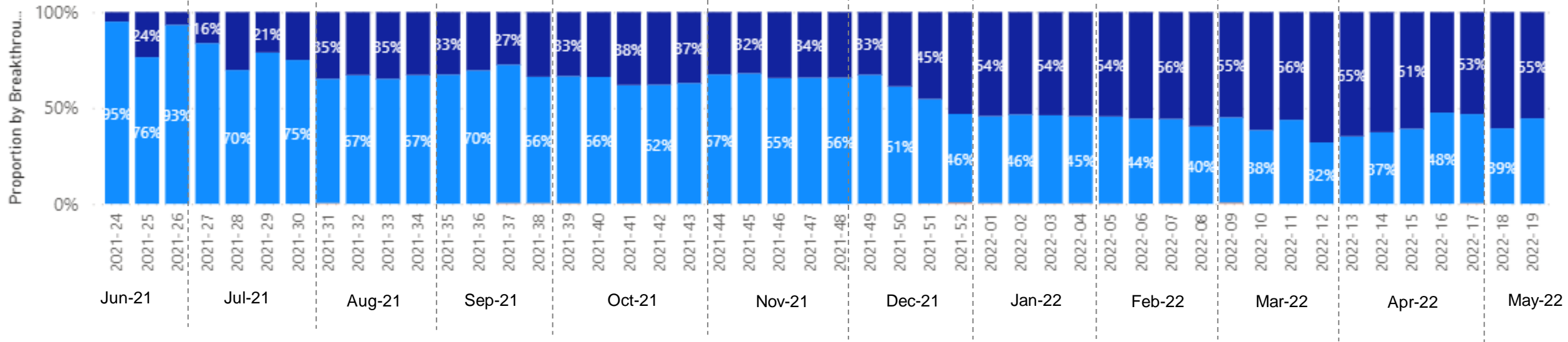
Michigan Department of Health and Human Services, Michigan Disease Surveillance System
 MDHHS COVID-19 Dashboard: https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Ottawa County COVID-19 Vaccination Breakthrough Case Trends

By Week

Breakthrough Proportions by Week

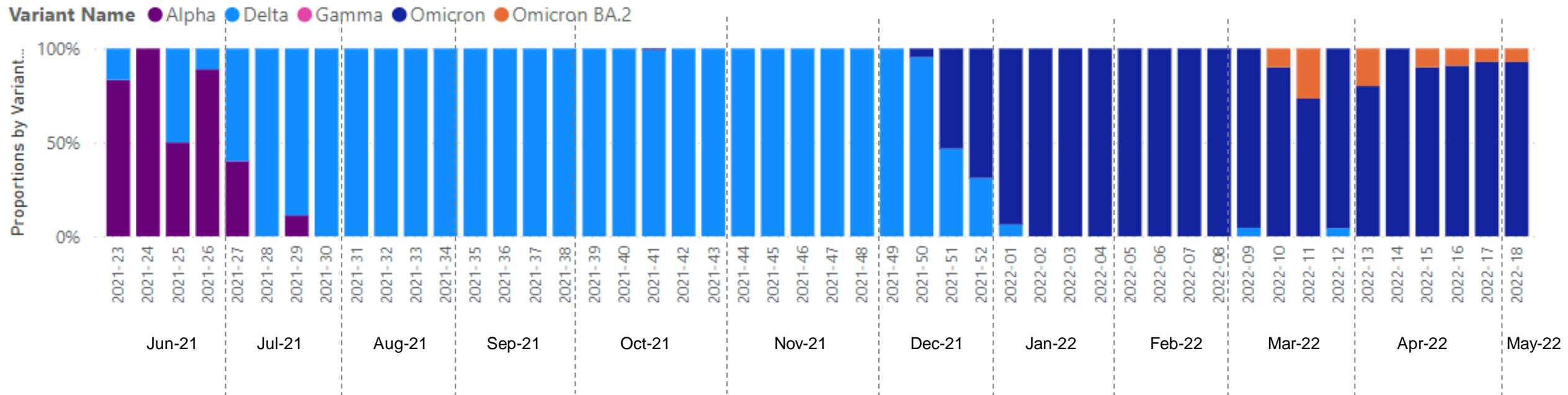
Vaccine_Breakthrough ● ● NO ● YES



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

Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

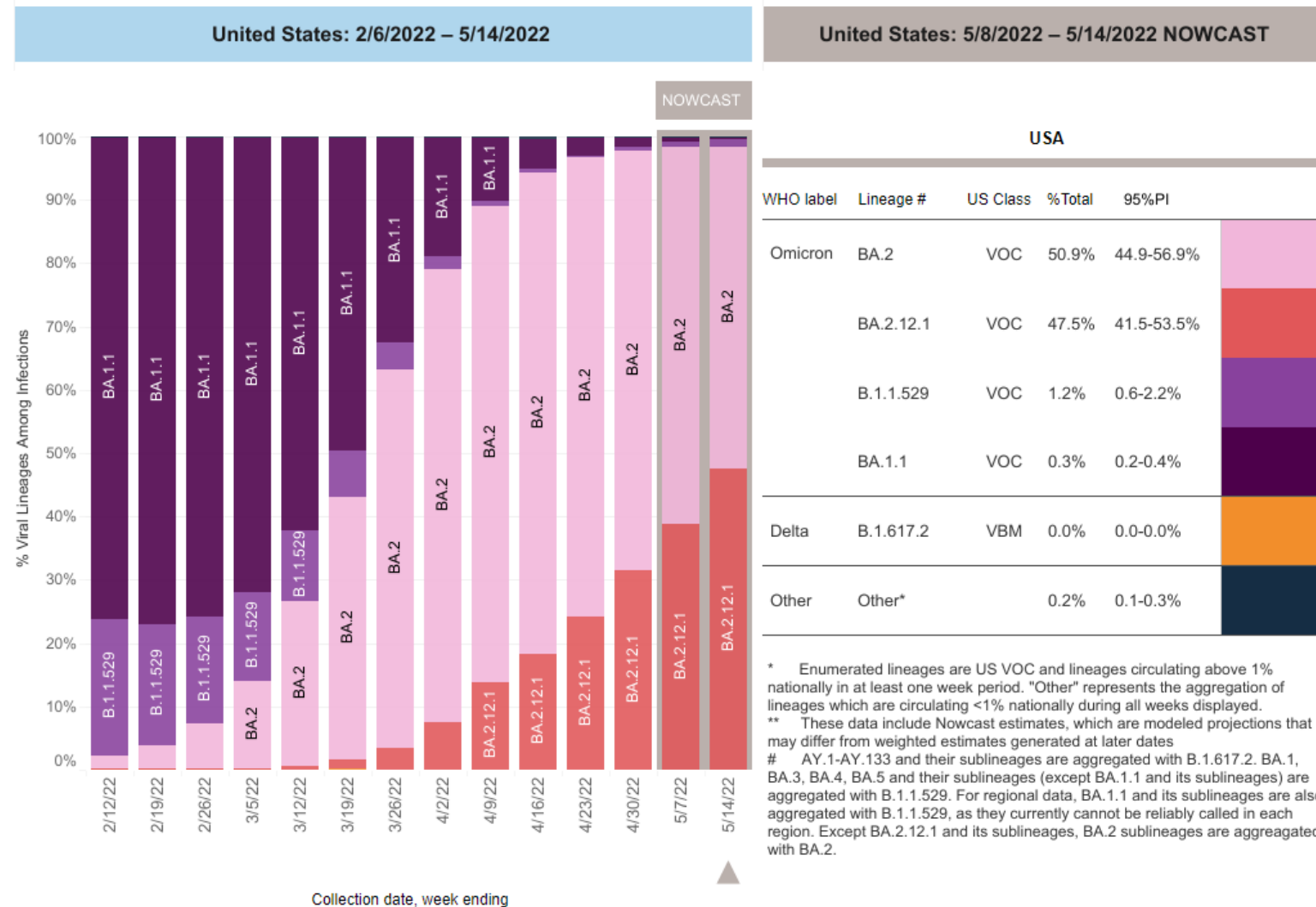


In June of 2021, most clinical samples* submitted for variant testing were identified as the **Alpha** variant. By the end of July 2021, all clinical samples tested were identified as the **Delta** variant. From late July through early December 2021 all clinical samples submitted for variant testing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



The **Omicron** variant is estimated to account for nearly 100% of all clinical samples collected in the United States the week ending May 14, 2022.

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

Variants – Wastewater Sampling – Holland/Zeeland

Y = Detected
N = Not Detected

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
05/01/2022	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

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 May 2022.

COVID-19 Community Levels

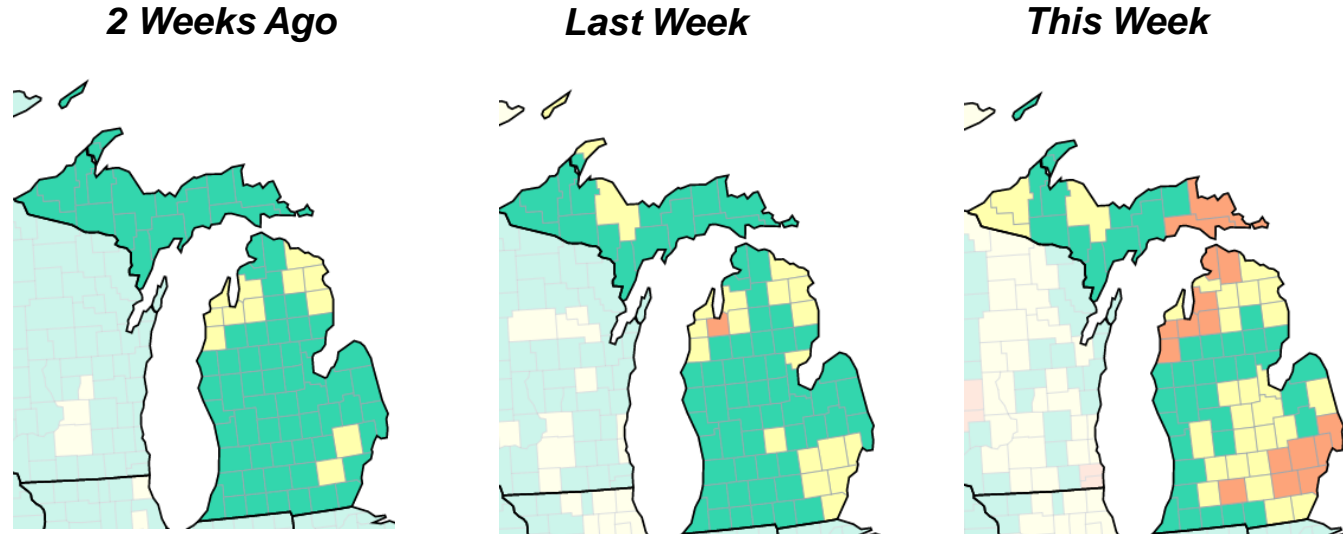
COVID-19 Community Levels – Use the Highest Level that Applies to Your Community				
New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds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

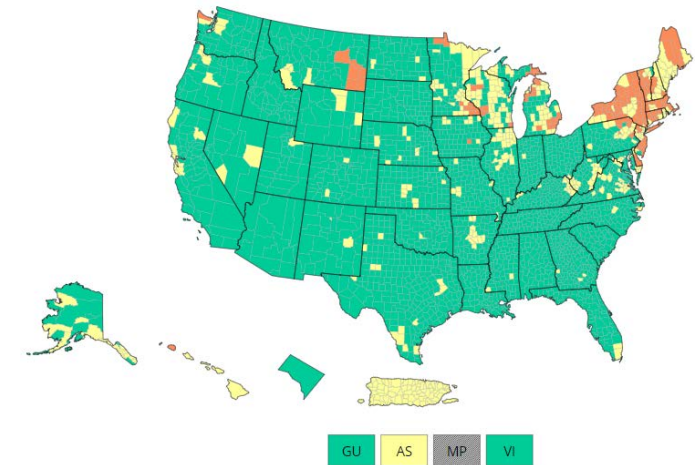
Source: <https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html>

CDC Community Levels – Ottawa County

- Current Community Level in Ottawa – **LOW**
- Current Data:
 - Case Rate (per 100k pop 7-day total) = **192.24**
 - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **4.4**
 - COVID Inpatient Hospital Bed Utilization (7-day average) = **4.7%**



USA - This Week



Legend

High

Low

Medium

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

Data updated by CDC
on May 18, 2022

USA & MI

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Other

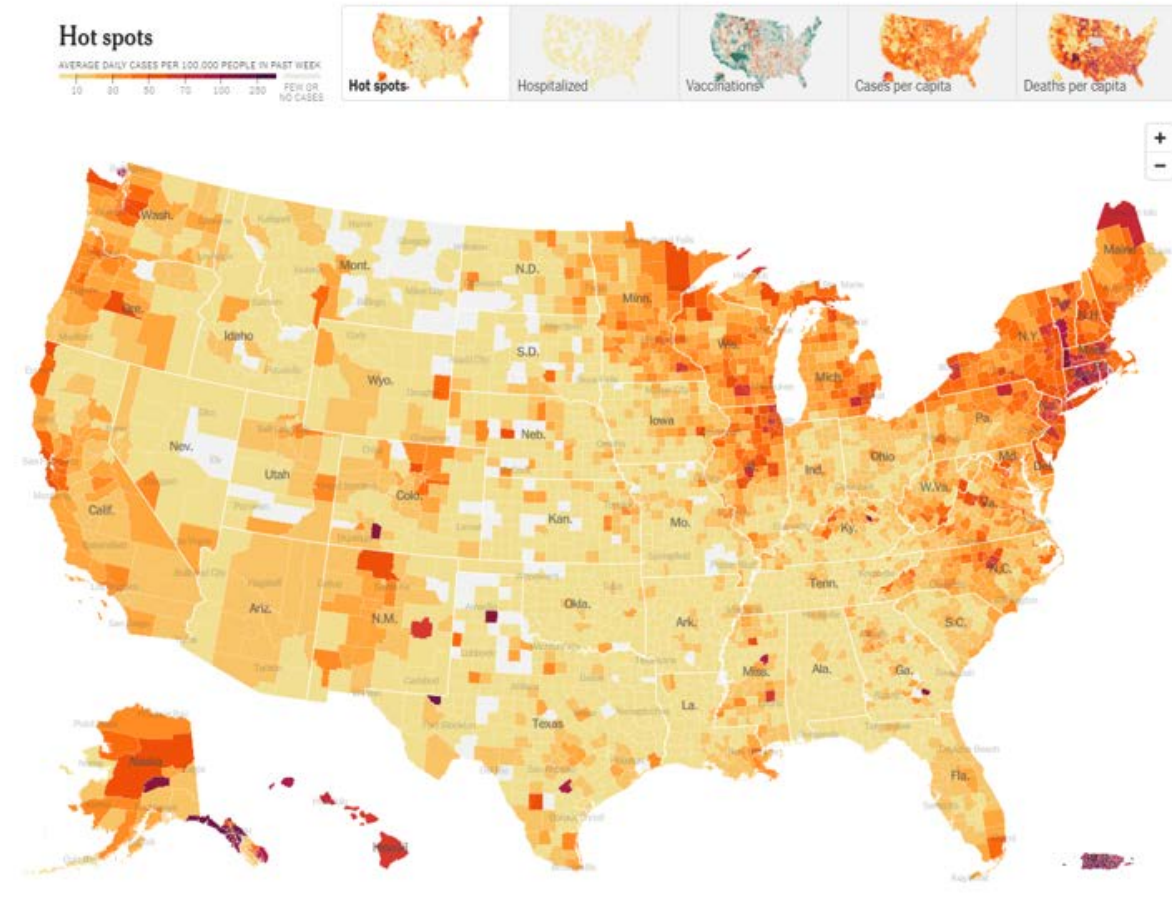
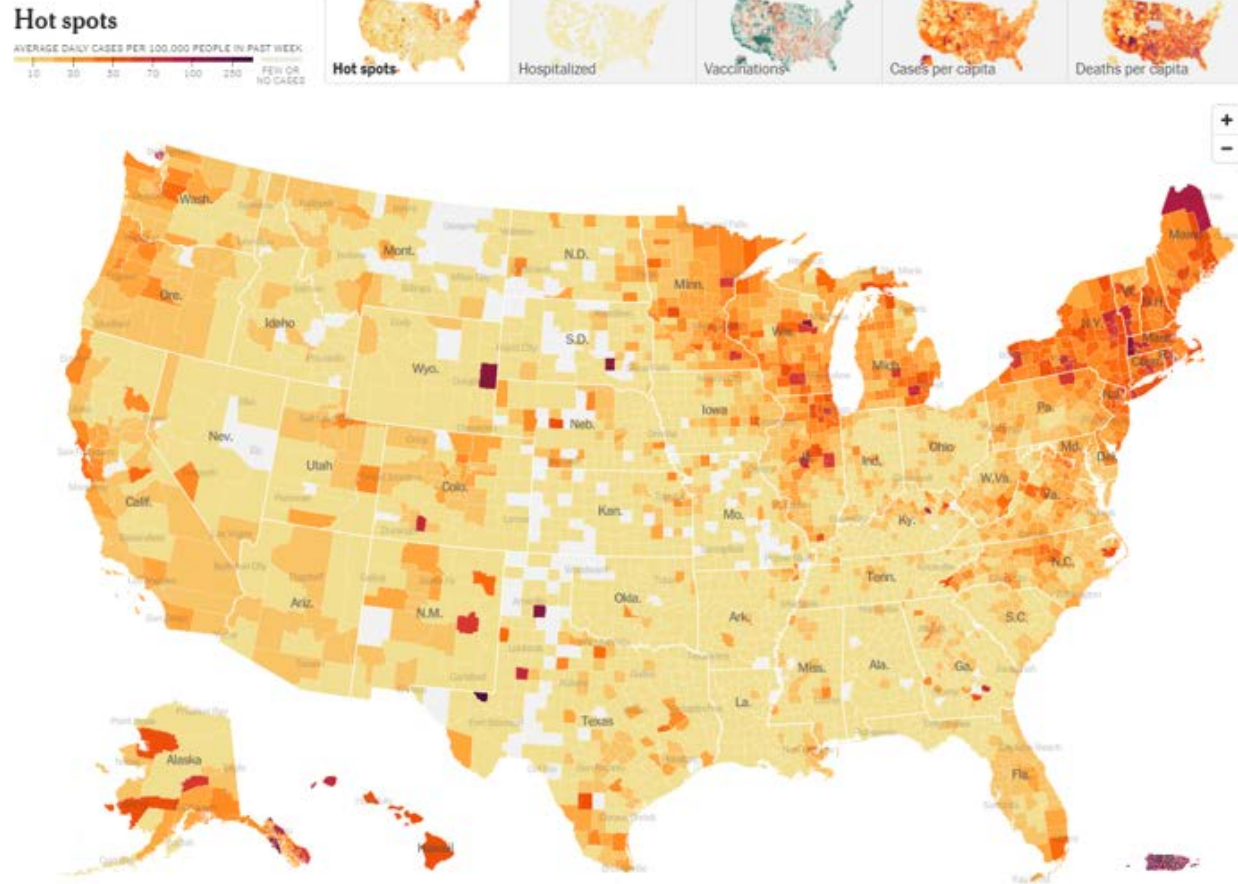
Media

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COVID-19 Case Rates by County Across the US

Last Week

This Week



Case rates may be increasing across the nation.

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

Accessed May 19, 2022

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COVID-19 Hospitalization Rates by County Across the US

Last Week

This Week

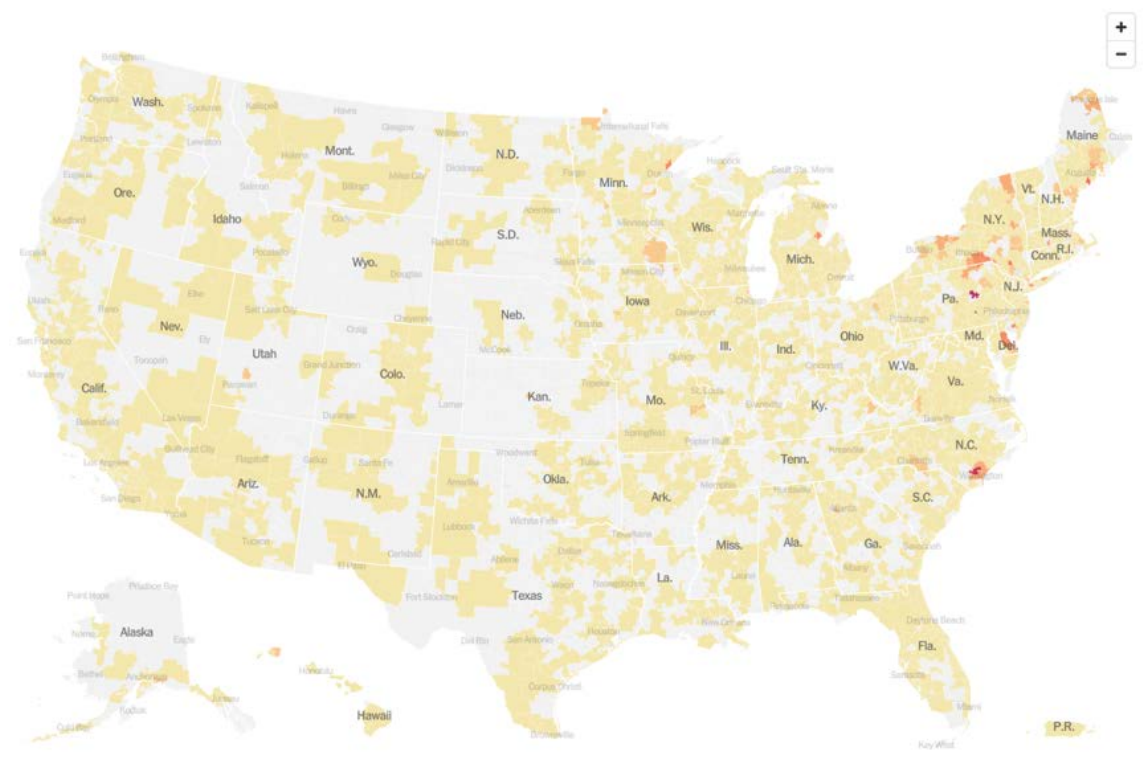
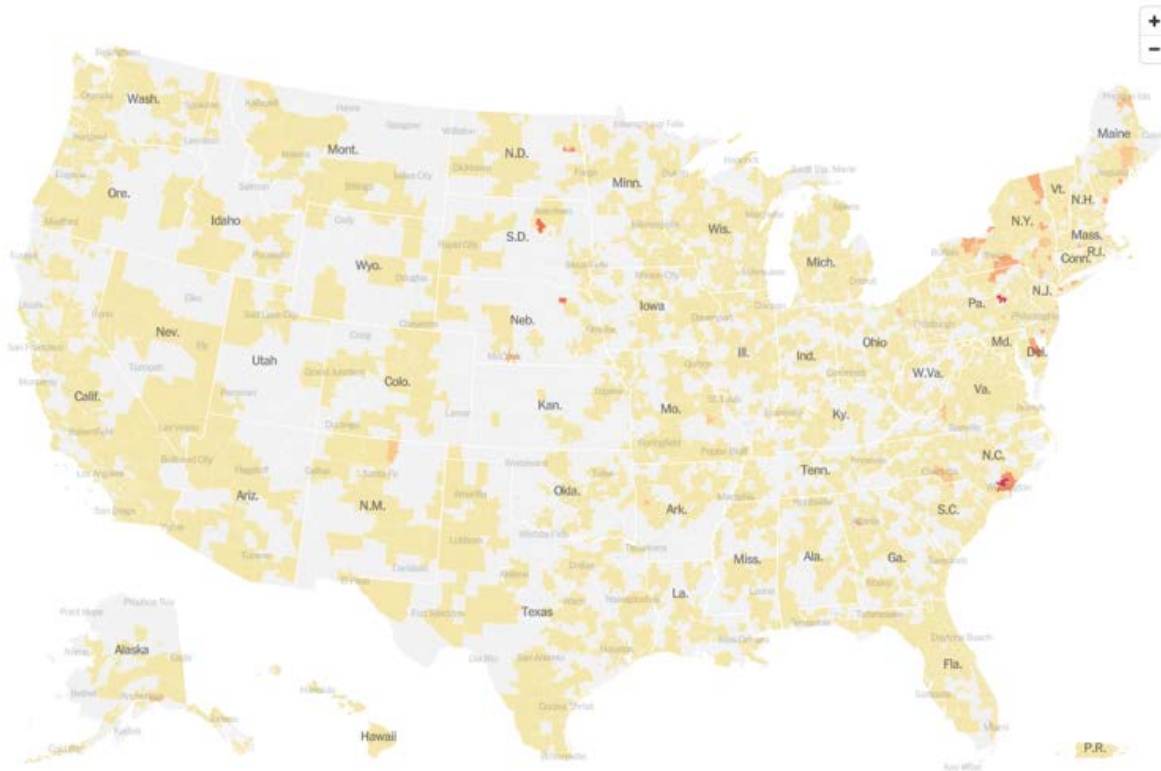
Current hospitalizations

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



Current hospitalizations

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



Hospitalization rates remain low across the nation.

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

Accessed May 19, 2022

USA & MI

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COVID-19 News Headlines

Mask mandates reinstated at several Ford, GM, Stellantis facilities in Michigan

[Mask mandates reinstated at several Ford, GM, Stellantis facilities in Michigan - mlive.com](#)

343 infected with COVID across Michigan's latest school outbreaks

[343 infected with COVID across Michigan's latest school outbreaks - mlive.com](#)

CDC: COVID-19 community risk map shows increase of cases in West Michigan

[CDC: COVID-19 risk map shows increase of West Michigan cases \(fox17online.com\)](#)

FDA authorizes Pfizer Covid-19 booster shots for children ages 5 to 11

[FDA authorizes Pfizer Covid-19 boosters for children ages 5-11 - CNN](#)

Coronavirus (COVID-19) Update: FDA Authorizes First COVID-19 Test Available without a Prescription That Also Detects Flu and RSV

[Coronavirus \(COVID-19\) Update: FDA Authorizes First COVID-19 Test Available without a Prescription That Also Detects Flu and RSV | FDA](#)

Science Roundup

Remdesivir for the treatment of COVID-19: A systematic review and meta-analysis

[Remdesivir for the treatment of COVID-19: A systematic review and meta-analysis - Clinical Microbiology and Infection](#)

← Findings from a meta-analysis that involved 9,157 hospitalized adults with COVID-19 found that remdesivir very likely reduces mortality for nonventilated patients with COVID-19 that require supplemental oxygen therapy.

Modeling transmission of SARS-CoV-2 Omicron in China

[Modeling transmission of SARS-CoV-2 Omicron in China | Nature Medicine](#)

← A Chinese modelling study of COVID-19 transmission found that the level of immunity induced by the March 2022 vaccination campaign (in China) would be insufficient to prevent an Omicron wave that would exceed healthcare capacity. The study suggested that non-pharmaceutical interventions, further vaccination, and access to antivirals could prevent healthcare from being overwhelmed.

Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19–Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection — United States, June 2021–February 2022

[Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19–Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection — United States, June 2021–February 2022](#)

← A CDC study found that COVID-19 mRNA vaccination can prevent hospitalization after reinfection in persons previously infected with COVID-19 with 35% vaccine effectiveness after dose 2, and 68% after a booster dose.

Safety of COVID-19 Vaccination in US Children Ages 5–11 Years

[Safety of COVID-19 Vaccination in US Children Ages 5–11 Years | Pediatrics | American Academy of Pediatrics \(aap.org\)](#)

← Safety findings for the Pfizer vaccine from 3 US monitoring systems that involved 48,795 children (5–11 yrs.) show that most reported adverse events were mild, and no safety signals were observed in active surveillance.