

# Ottawa County COVID-19 Epidemiology

May 5, 2022

Republished on May 6 with  
Erratum corrected on Slide 31

*Data as of April 30, 2022, unless otherwise indicated*

# Executive Summary

- **Transmission in Michigan and the US remains low, but is increasing**
- **Ottawa community transmission levels remain low, but is increasing**
  - This past week positivity **increased** to 16.3%, from 15.1% seen two weeks ago.
  - Weekly case counts **increased** 19% (+38% two weeks ago), from 253 two weeks ago to 302 last week.
  - Cases among children **increased** 62% (+44% two weeks ago), from 26 two weeks ago to 42 last week.
  - COVID-19 wastewater signals in Holland/Zeeland **may be 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 13% 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+, 62.3% 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.

# Ottawa County Metrics by Week

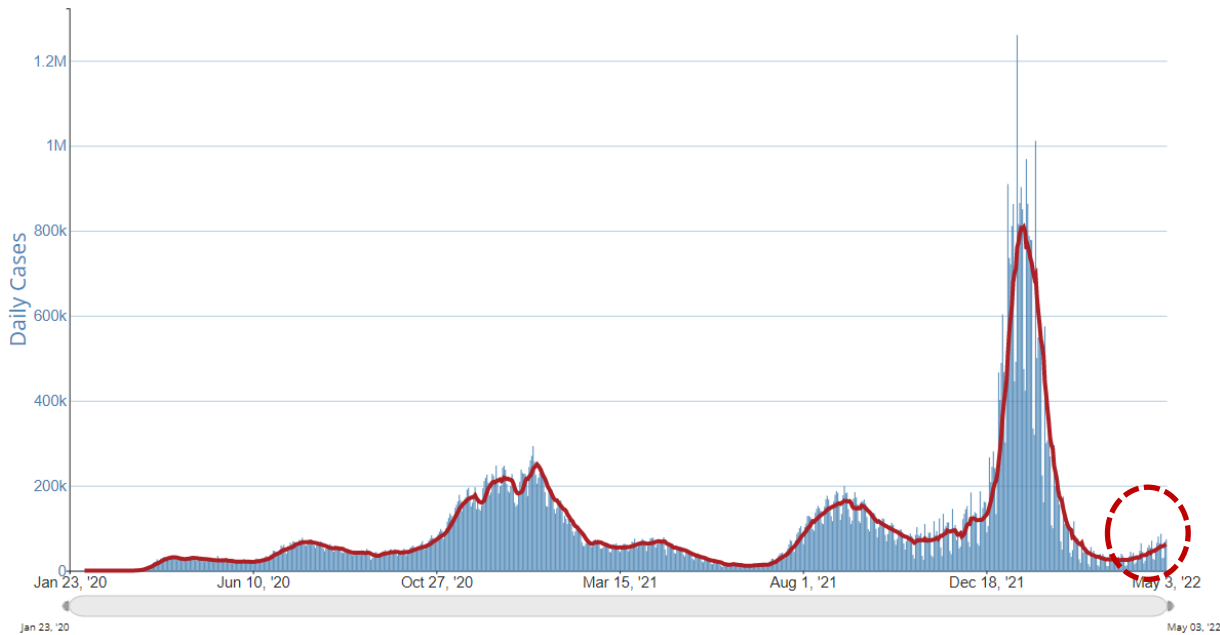
Metric	Goal	Week Ending				
		2-Apr-22	9-Apr-22	16-Apr-22	23-Apr-22	30-Apr-22
Positivity (All Ages)	NA	5.3%	7.6%	11.9%	15.1%	16.3%
Weekly Cases (All Ages)	<592	125	126	183	253	302
Weekly Cases in Children (0-17 years of age)	NA	17	13	18	26	42
Total Deaths (All Ages)	0	0	1	2	0	2
CDC COVID-19 Community 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

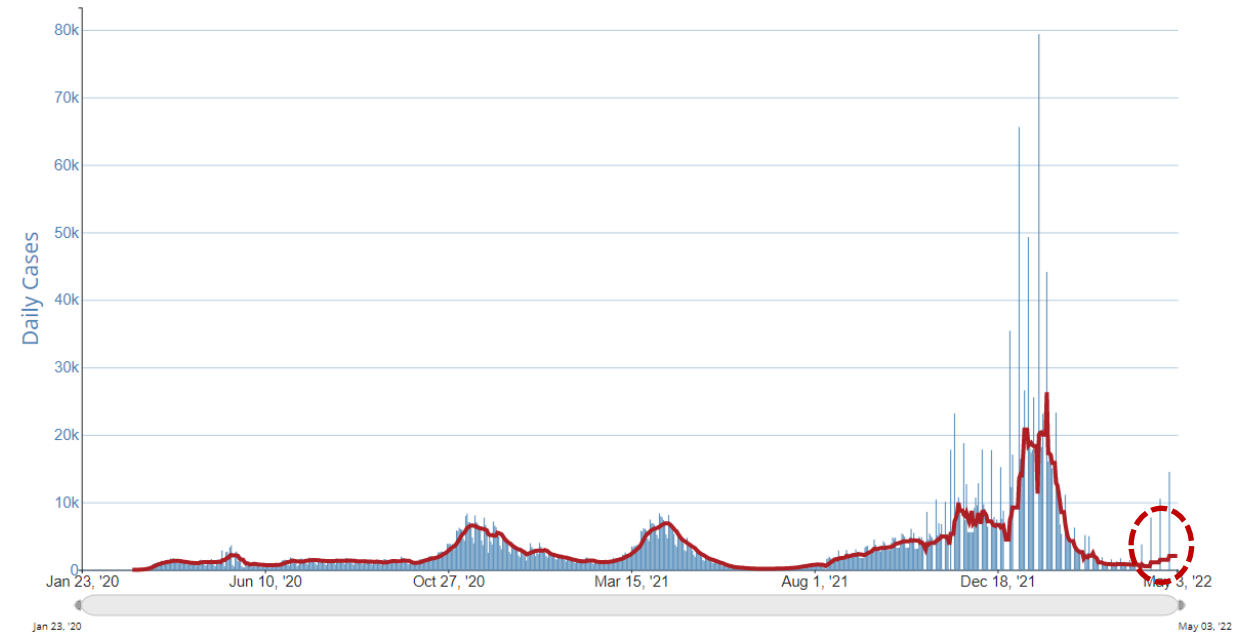
## USA

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 may be increasing.**

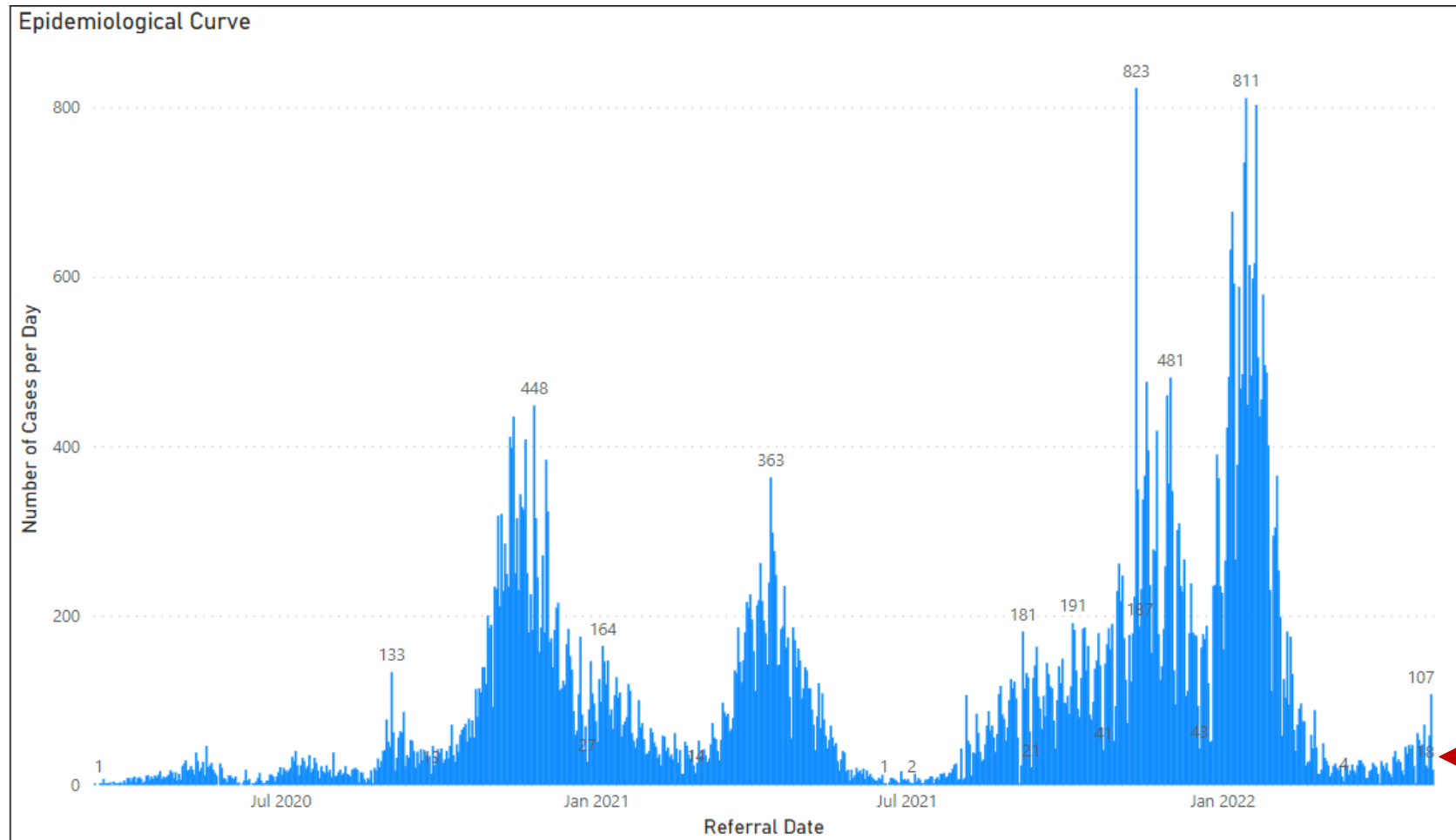
**Note:** Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in an artificially deflated number of cases.

**Source:** [https://covid.cdc.gov/covid-data-tracker/#trends\\_dailycases](https://covid.cdc.gov/covid-data-tracker/#trends_dailycases)

Data through May 03, 2022

# Case Trends in Ottawa County

COVID-19 Cases by Day, Ottawa County, March 15, 2020 – May 04, 2022



Total Number of Cases  
**75,746**

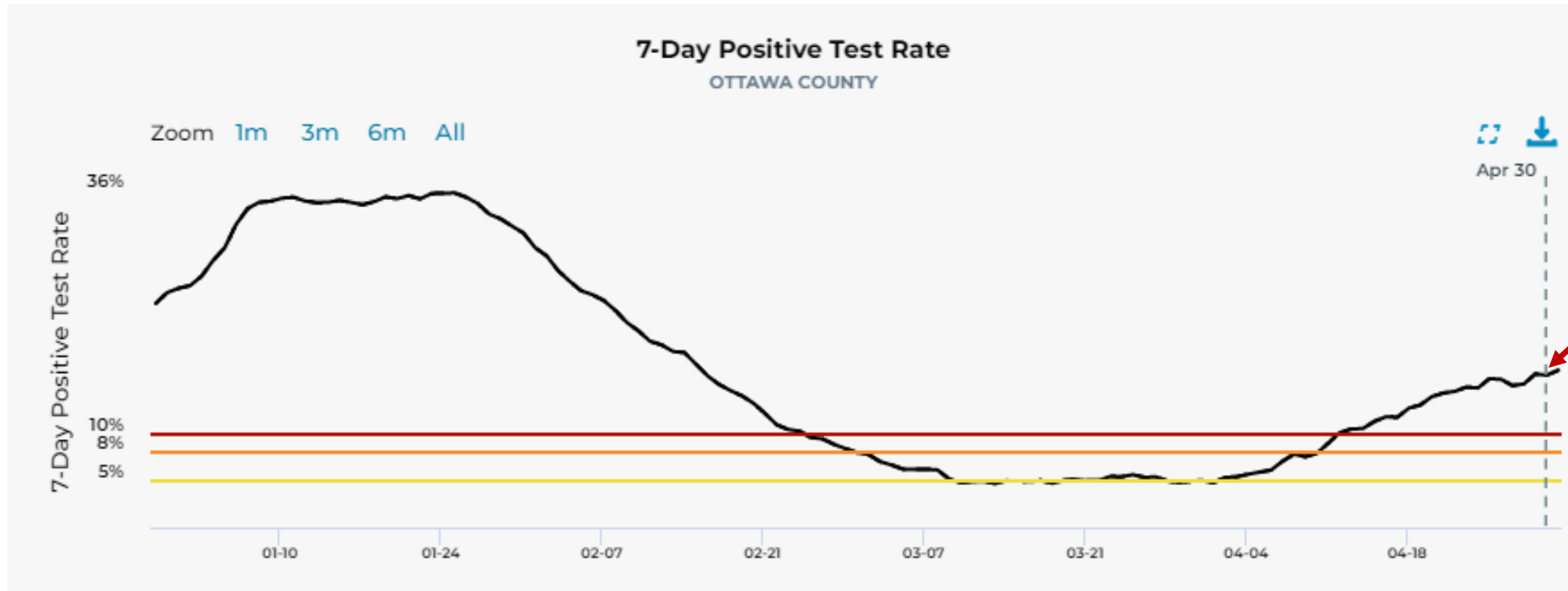
Currently the 7-day average is **49 cases per day**, an increase compared to the 34 cases per day reported last week at this time.

**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 30, 2022



Test positivity has been increasing for the last 3 weeks, reaching **16.3% last week.**

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

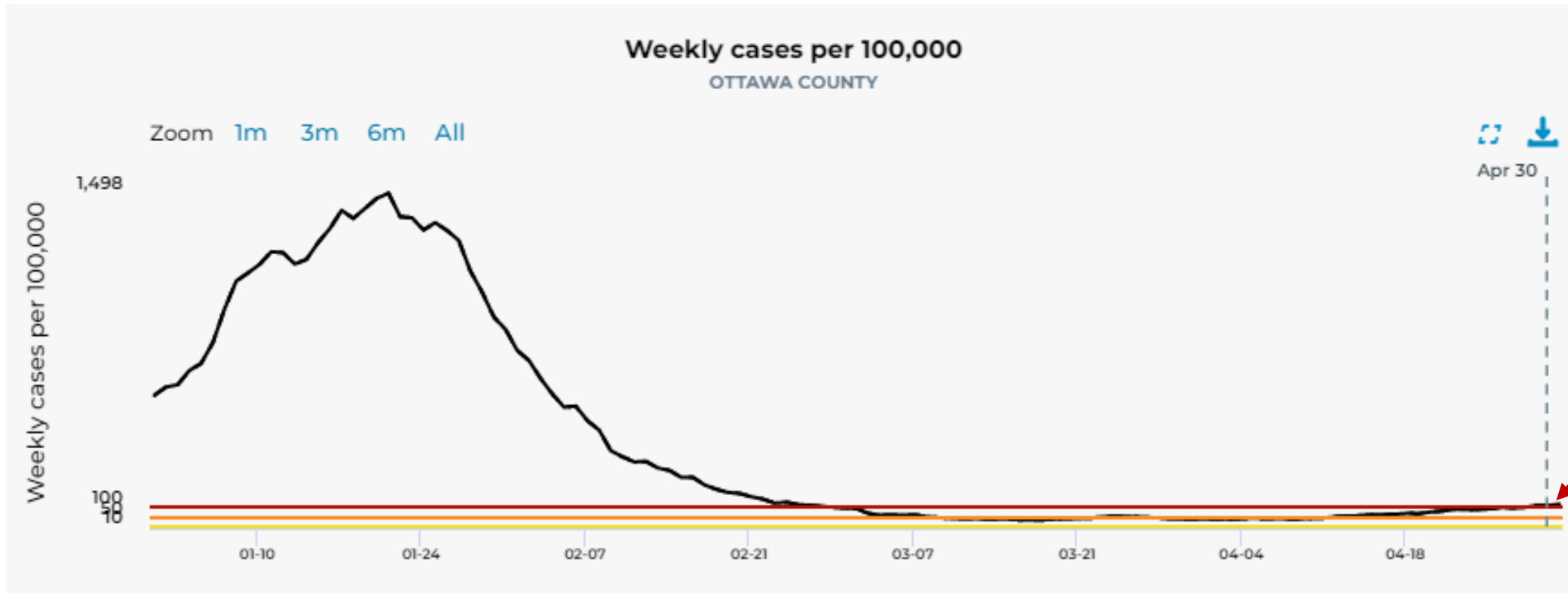


**Note:** Testing in Ottawa County increased to almost 1,900 tests last week (week 17) from about 1,600 two weeks ago (week 16): [Testing Results | Ottawa County Covid-19 Case Summary Data \(arcgis.com\)](https://www.mistartmap.info/mism-indicators?area=county%3Aottawa) & <https://www.mistartmap.info/mism-indicators?area=county%3Aottawa>. 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>

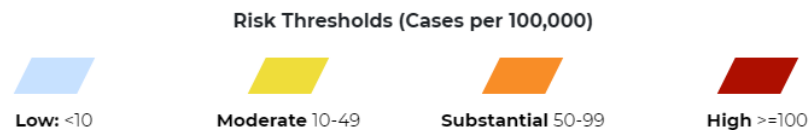
# Case Rates in Ottawa County – All Ages

## COVID-19 Cases by Day, Ottawa County, January 1, 2022 – April 30, 2022



Case rates **remained low at 102.5** cases per week per 100,000 population (but **higher than 85** the week prior).

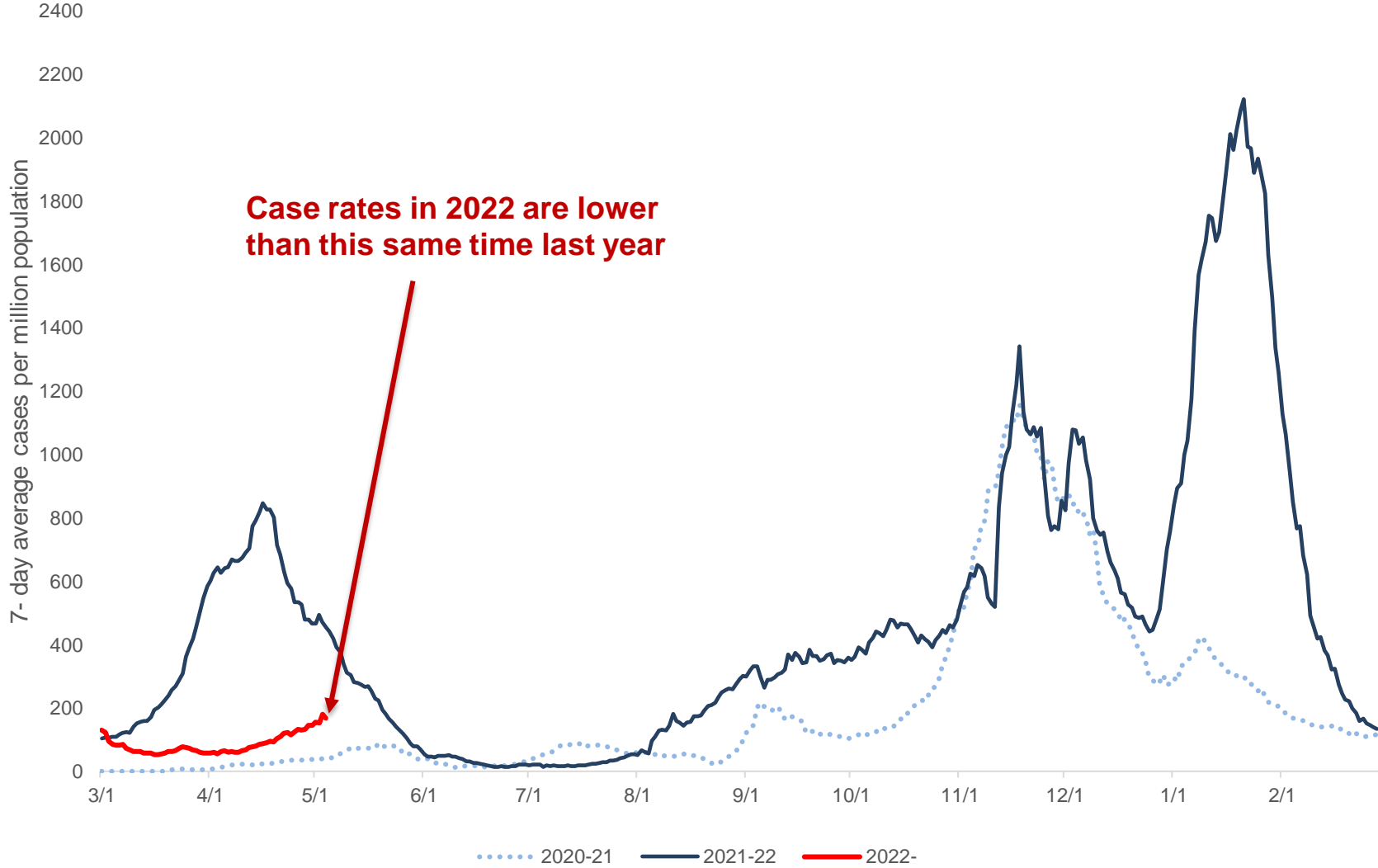
Please note that with updated CDC Community Transmission levels, metrics and/or metric thresholds/goals may change.



**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



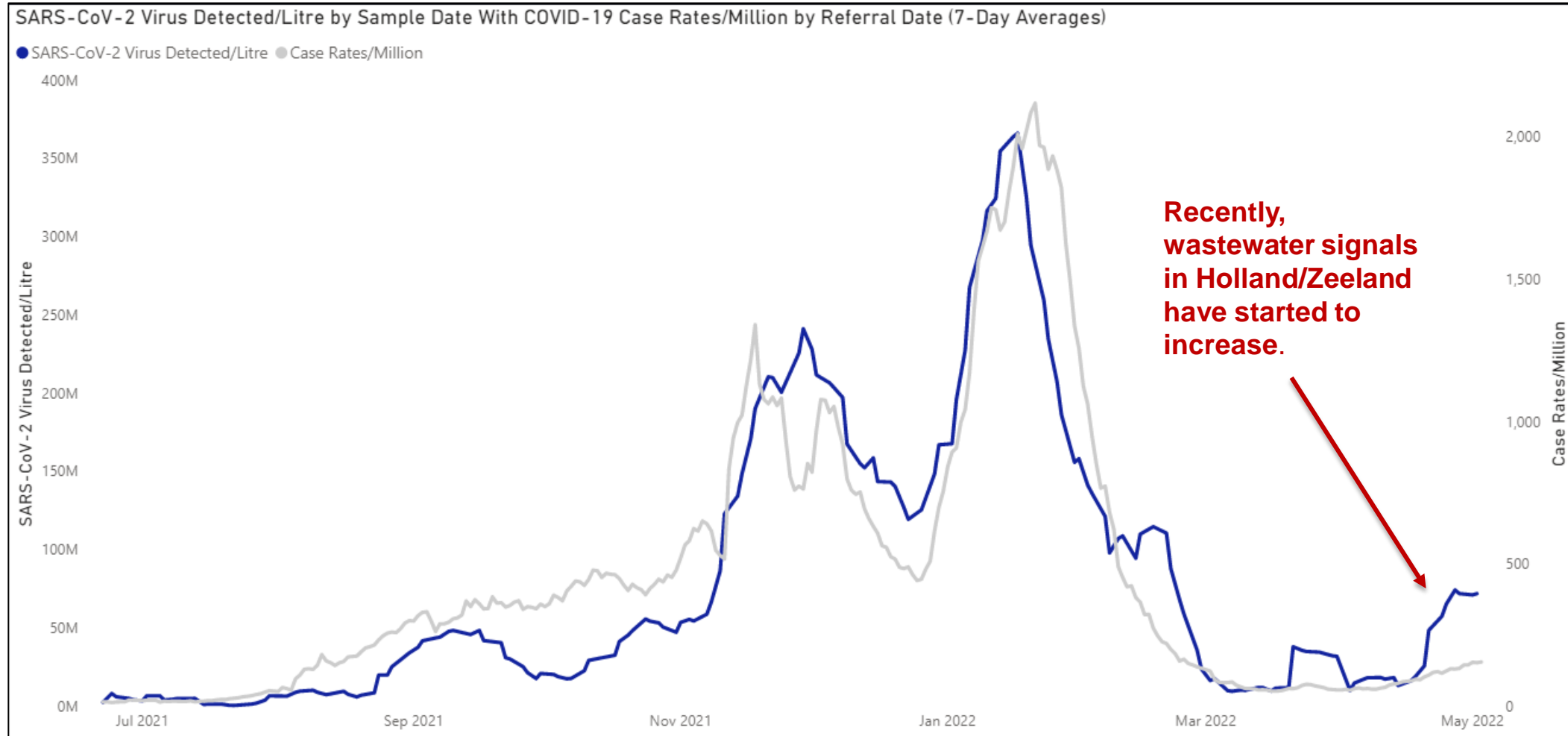
**Note:** Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

**Source:** Internal Data

Data through May 4, 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](mailto: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 3, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

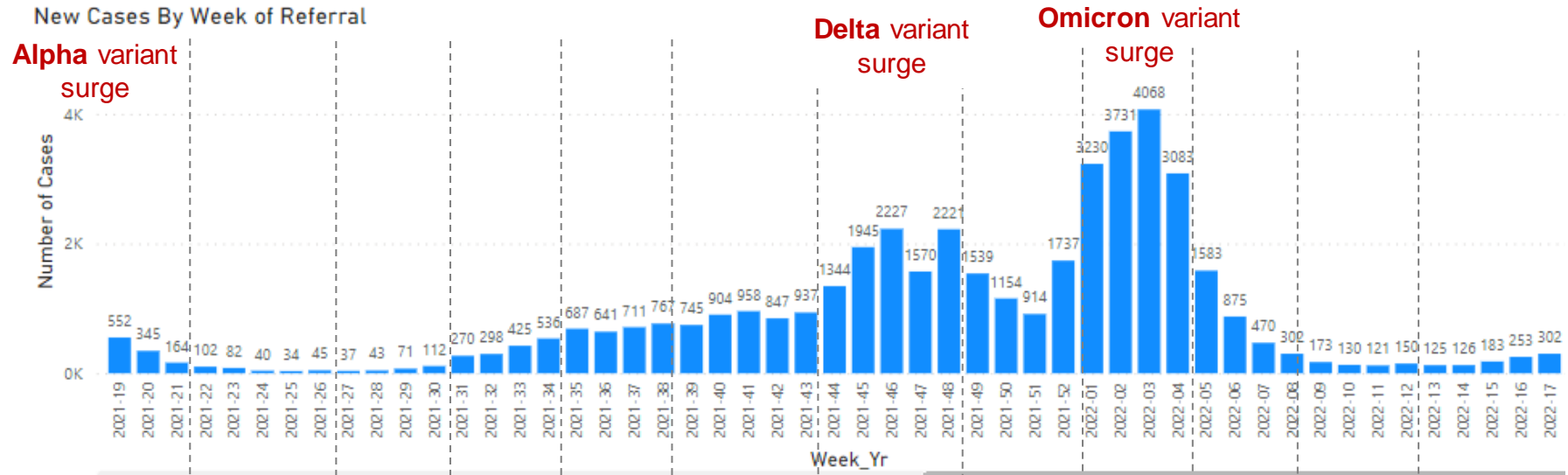
Risk Levels

Other

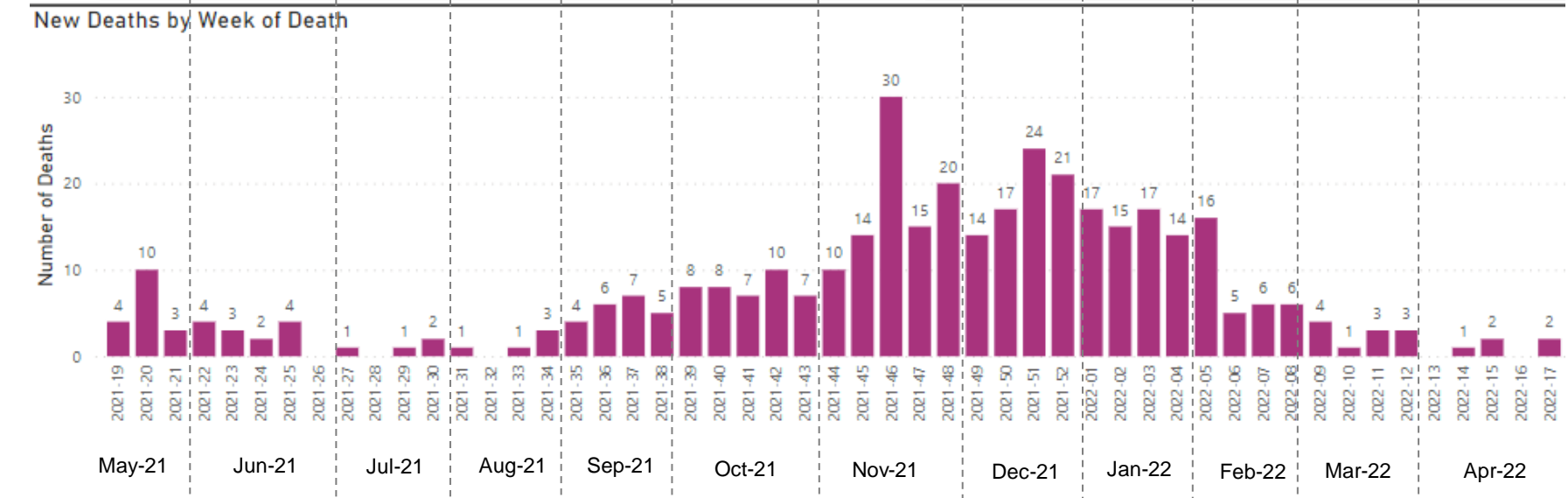
Media

Science  
Roundup

# Ottawa County – Cases & Deaths by Week, All Ages



The weekly number of **cases increased 19%** from week 16 to week 17.

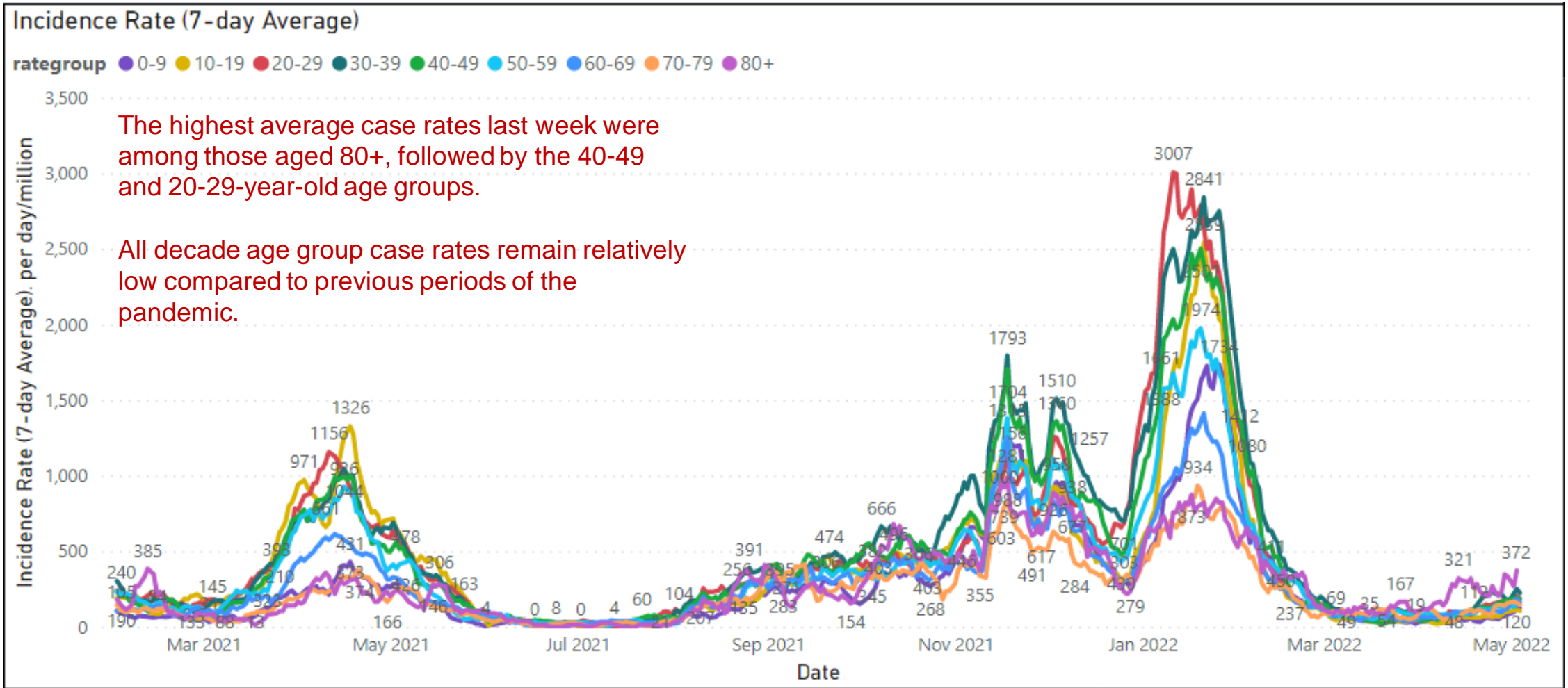


Weekly COVID-19 **deaths have declined.** Current weekly average of deaths over the last 4 weeks stands at about **1 death per week.**

**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 4, 2022



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

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

# Ottawa County - Case Rate Trends – by Age Decade

Daily new confirmed and probable cases per day per million by age group (daily average per week)

Week 17 (April 24, 2022 – April 30, 2022)

Age Decade (Years)	Average Daily Cases	Average Daily Case Rate	One Week % Rate Change
0-9	3.0	81.5	40%
10-19	4.4	100.0	41%
20-29	7.9	173.8	17%
30-39	6.0	167.4	-24%
40-49	5.9	176.6	37%
50-59	4.7	135.0	14%
60-69	4.0	122.7	27%
70-79	3.3	159.4	77%
80+	3.7	333.3	53%

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:

- 80+
- 40-49
- 20-29

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

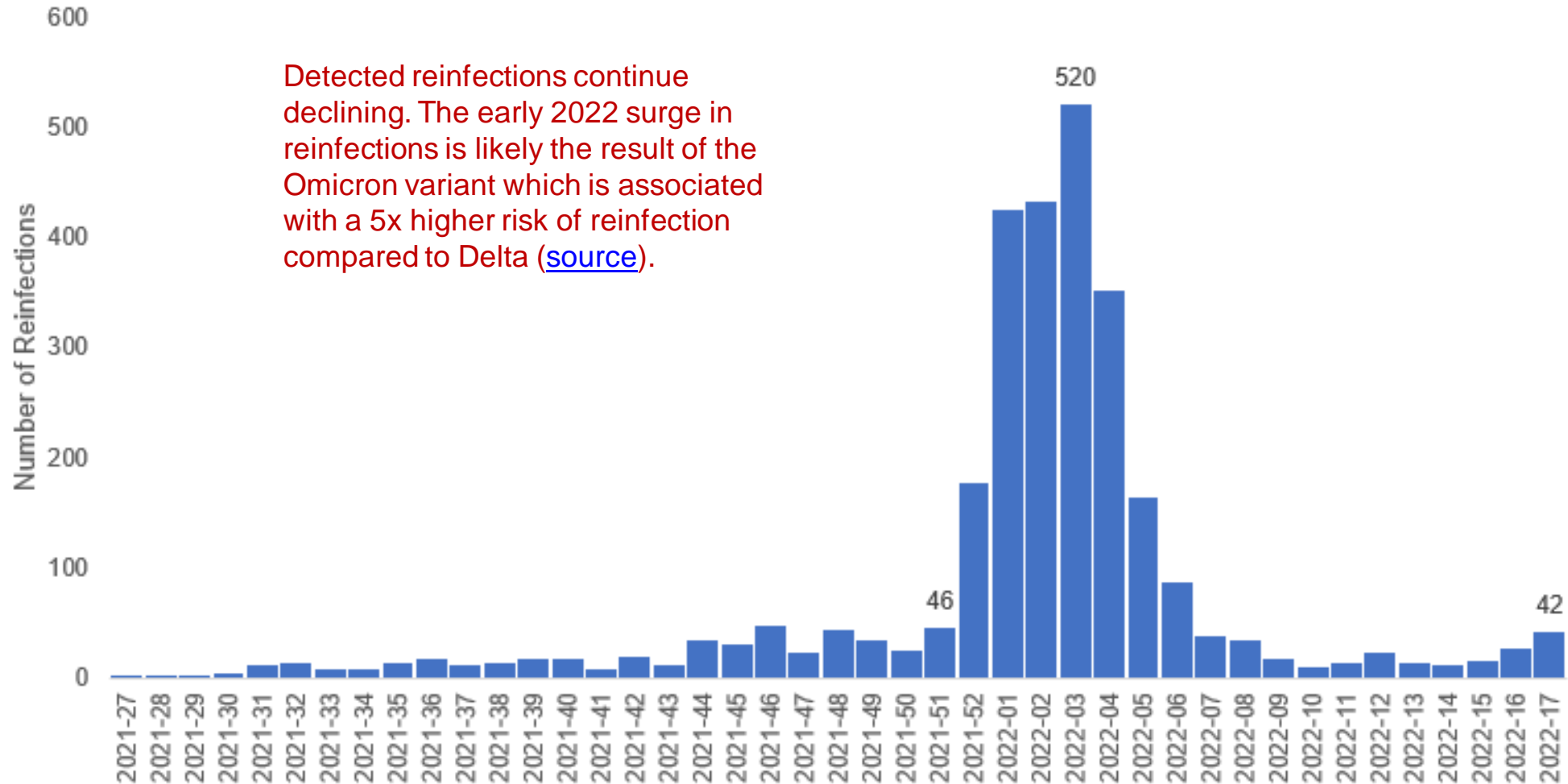
- 70-79
- 80+
- 10-19

**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 04, 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 30, 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	113	5%	13	-24%	126	1%
16-Apr-22	165	46%	18	38%	183	45%
23-Apr-22	227	38%	26	44%	253	38%
30-Apr-22	260	15%	42	62%	302	19%

Weekly case counts among **children increased 62%** last week, and cases in **adults increased 15%**.

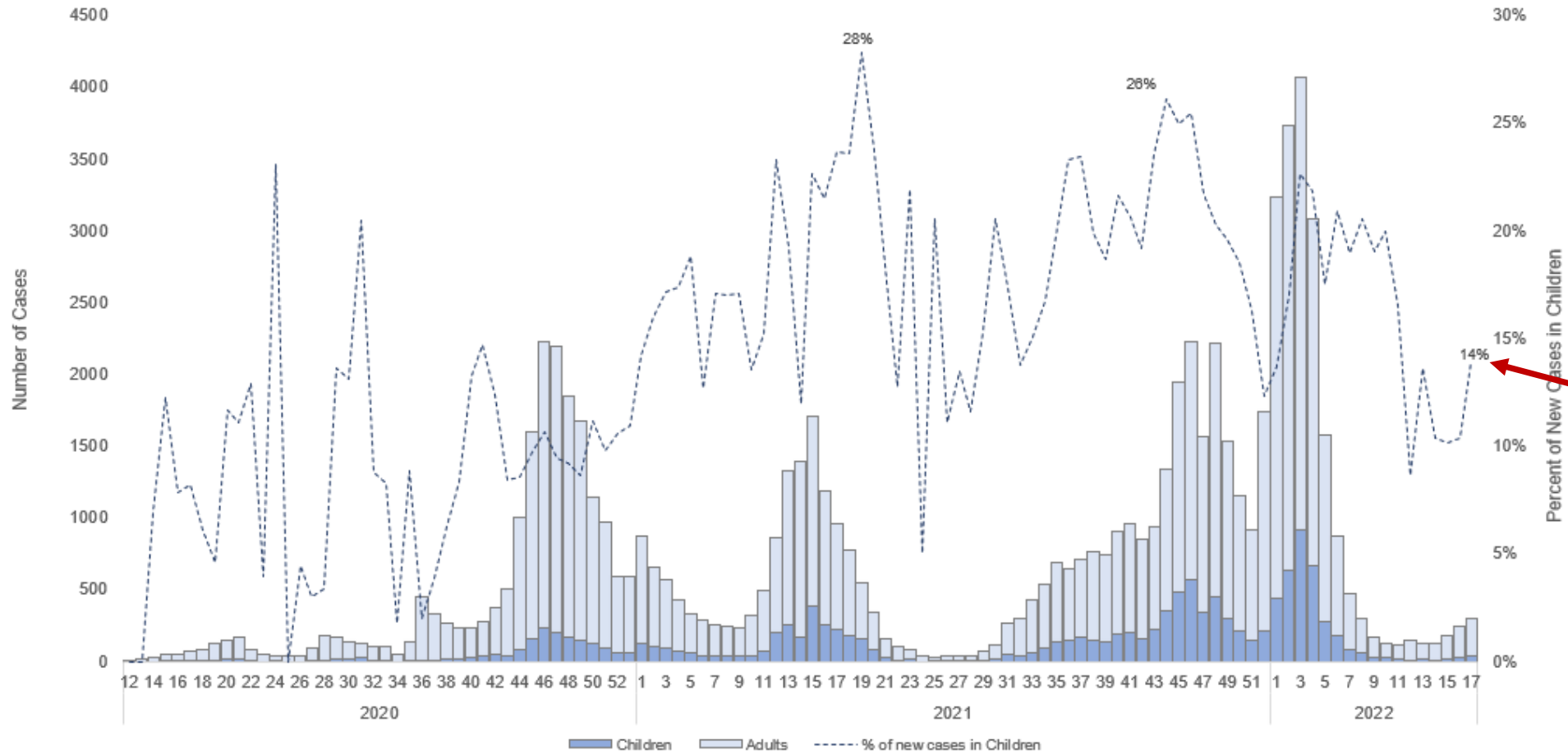
**Adults**

**Children**

**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 17 in 2022, children made up 14% of cases reported, lower compared to other times of the pandemic, but slightly higher compared with recent weeks.

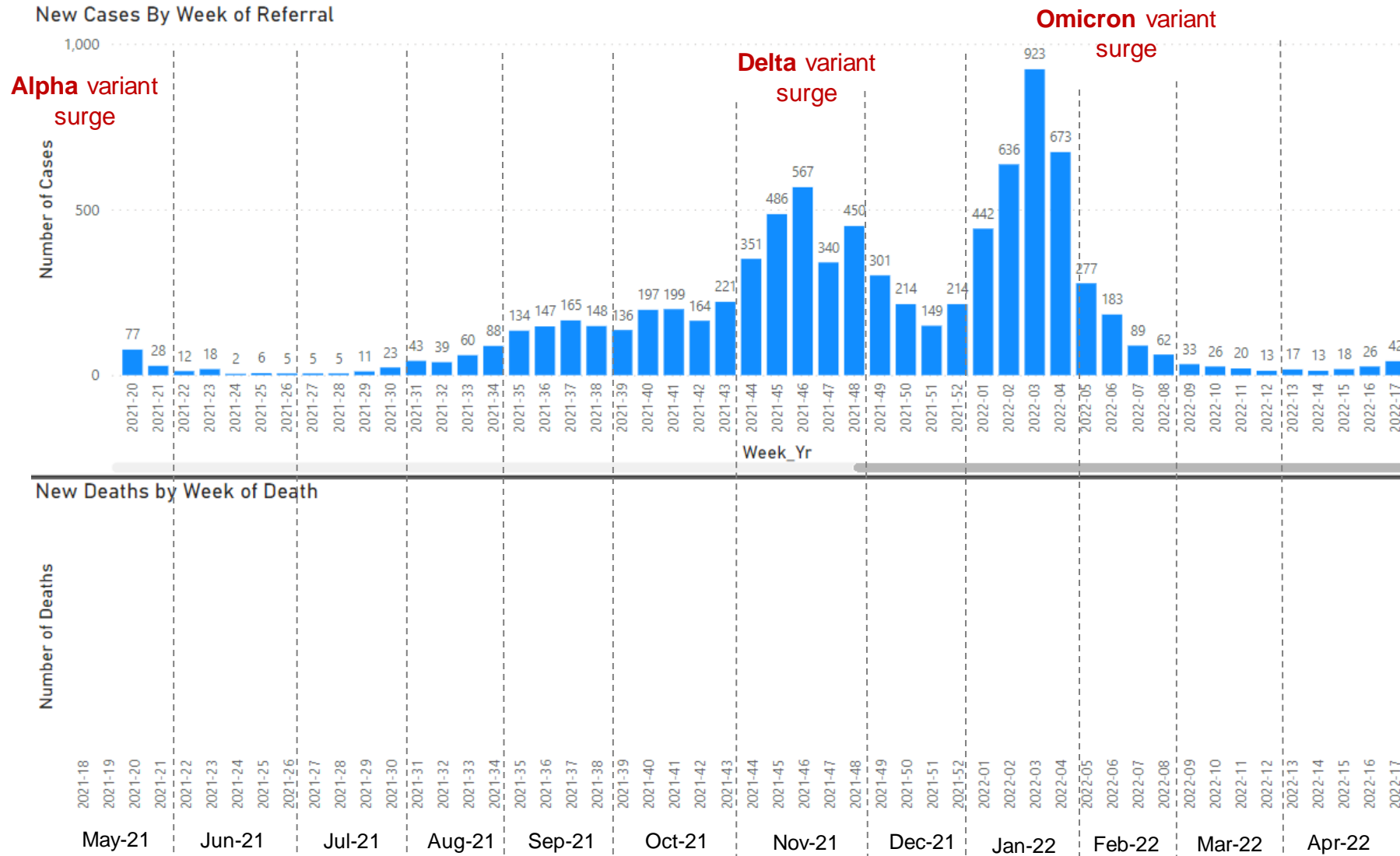
For comparison, children aged 0-17 make up about 23.5% of the population in Ottawa County.

**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 17, 2022

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



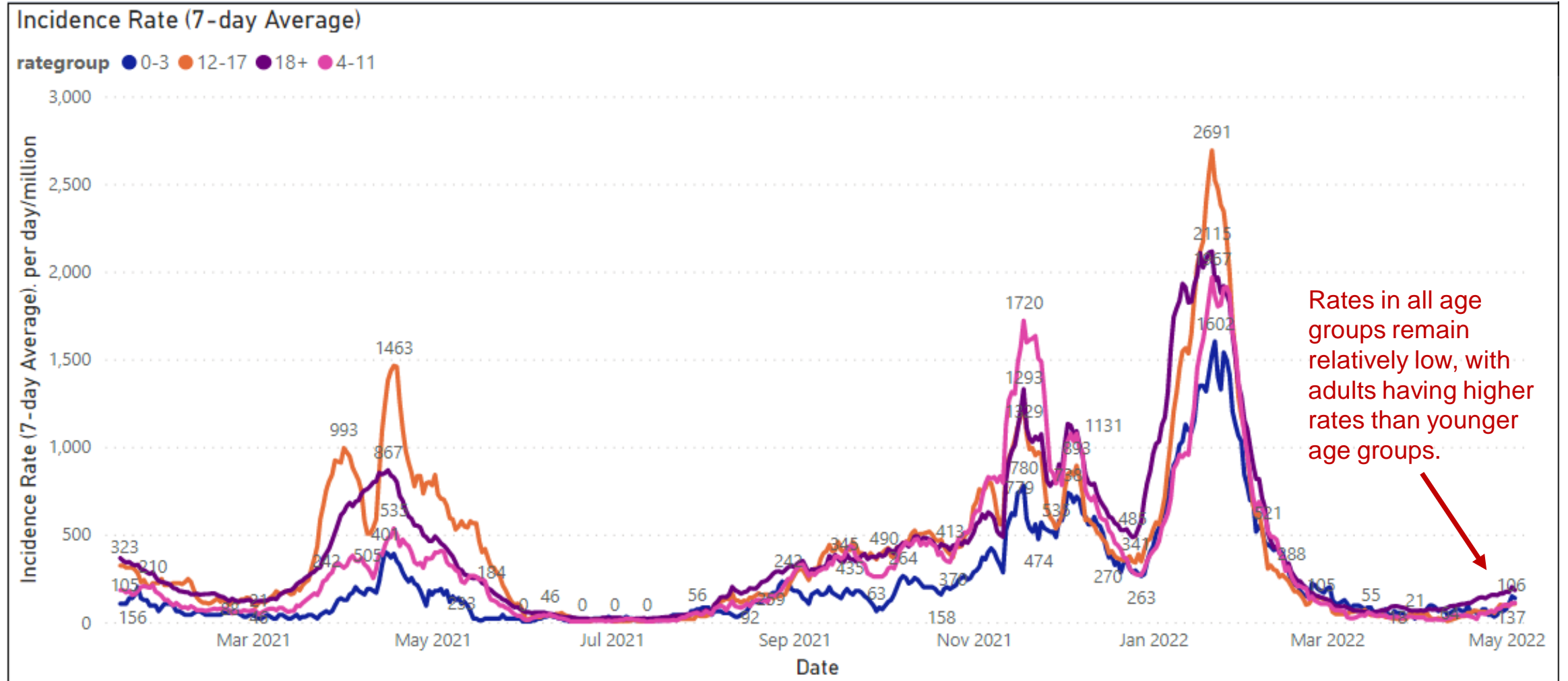
The weekly number of cases among children **increased 62%** from week 16 to week 17.

**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 - Case Rate Trends – by Age

COVID-19 Case Rates by Age, includes School-Aged, November 2021 – May 04, 2022

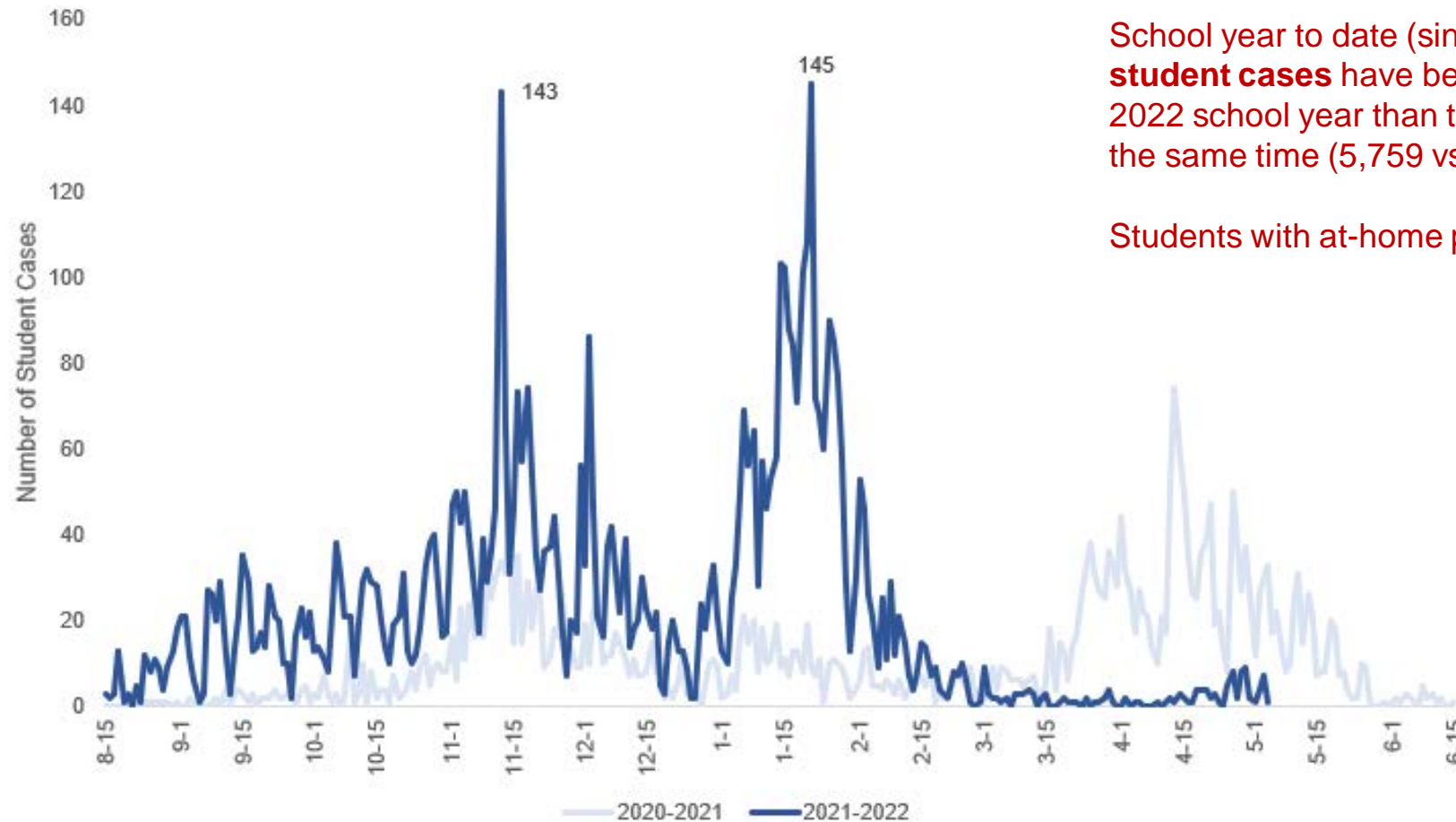


**Note:** Use of at home tests likely reduces the number of positive tests reported to Public Health, resulting in artificially deflated case rates.

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

Data as of May 4, 2022

# Ottawa County Cases in PreK-12 School Students



School year to date (since August 15), **1.9x more student cases** have been reported during the 2021-2022 school year than the 2020-2021 school year at the same time (5,759 vs. 3,078) respectively).

Students with at-home positive tests are not included.

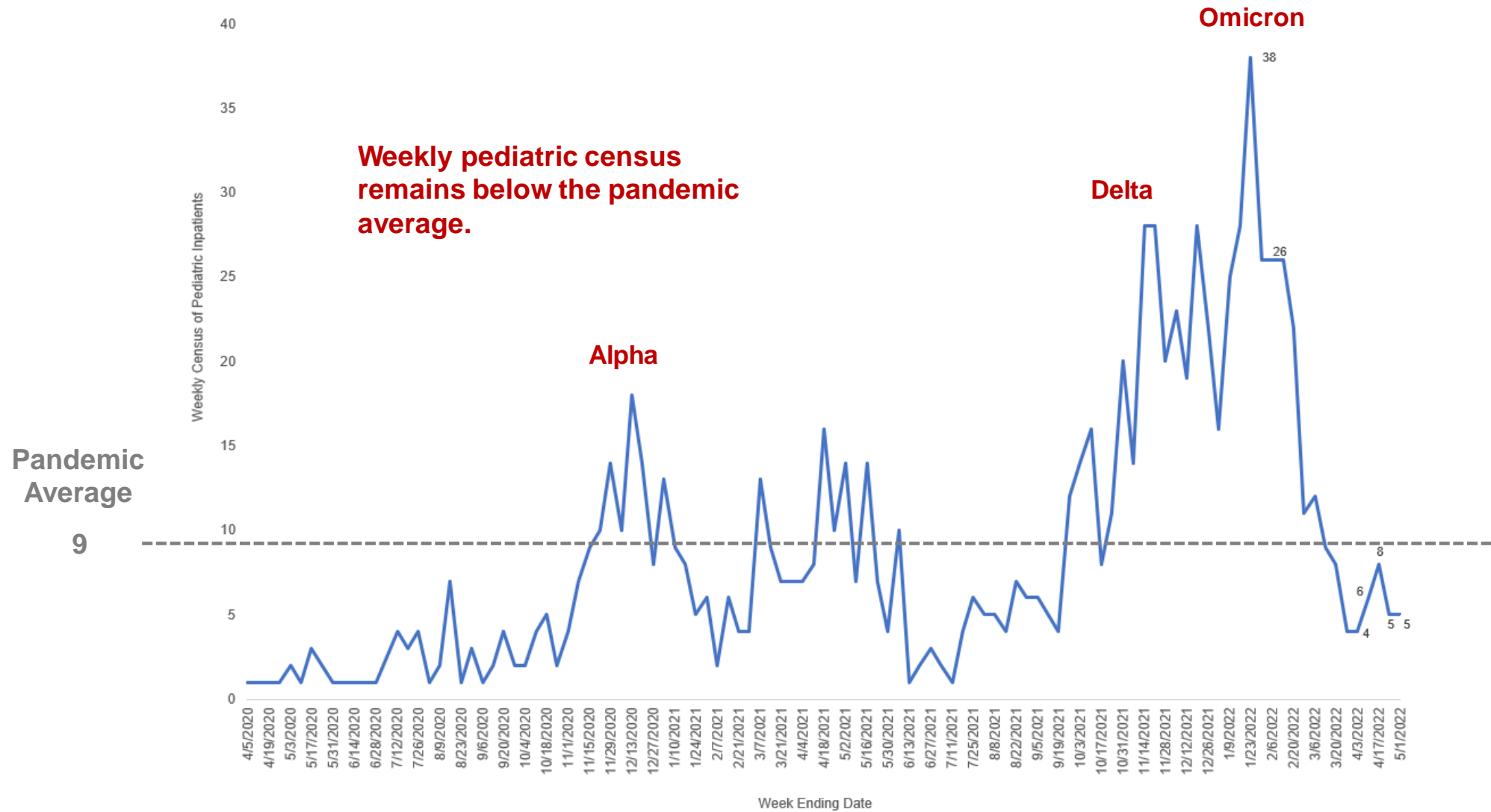
**Method:** Includes PreK-12 students known to attend a school in Ottawa County who are classified as a confirmed or probable case of COVID-19.

**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 4, 2022

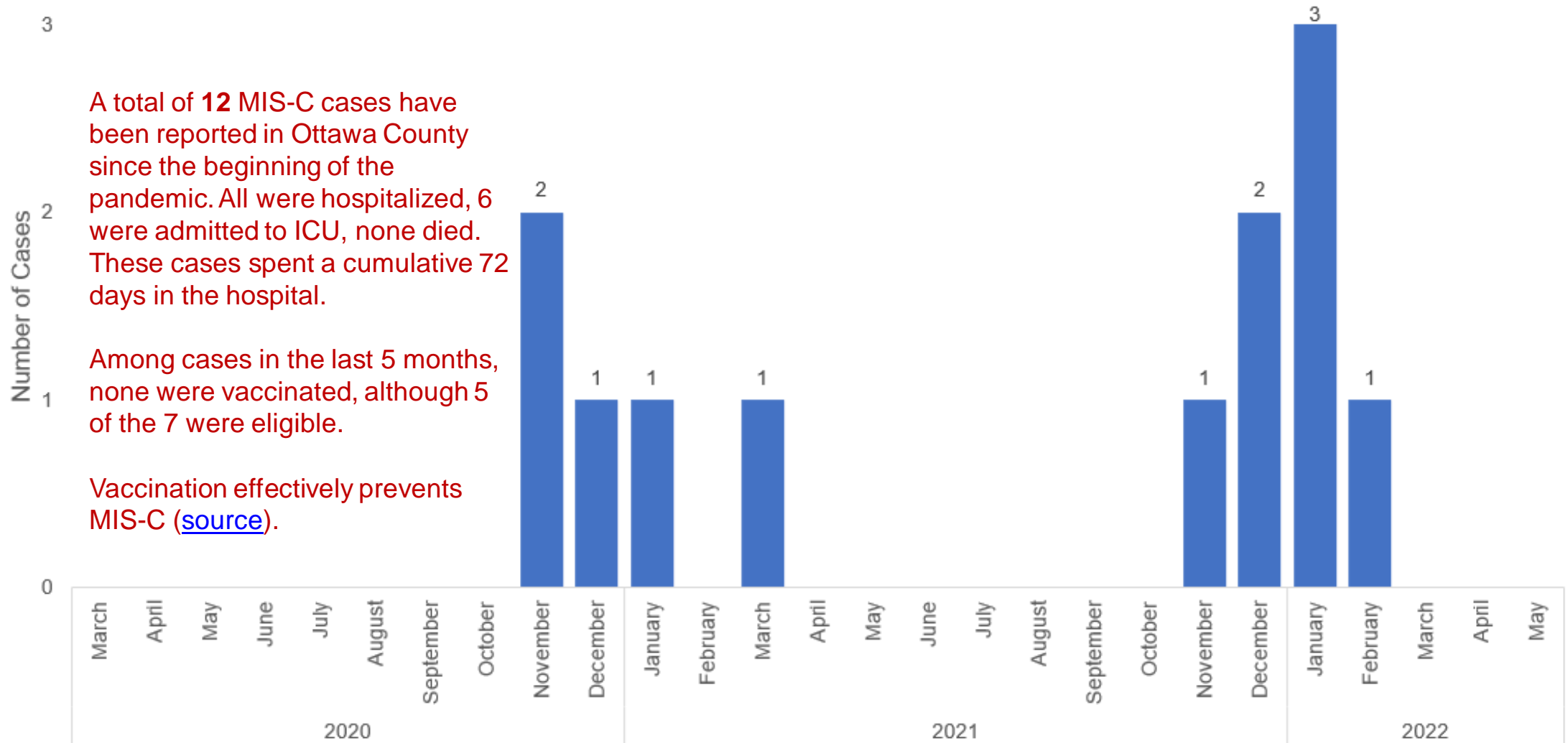
# Weekly Hospital Pediatric Census – A Regional Healthcare System



**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 4, 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.

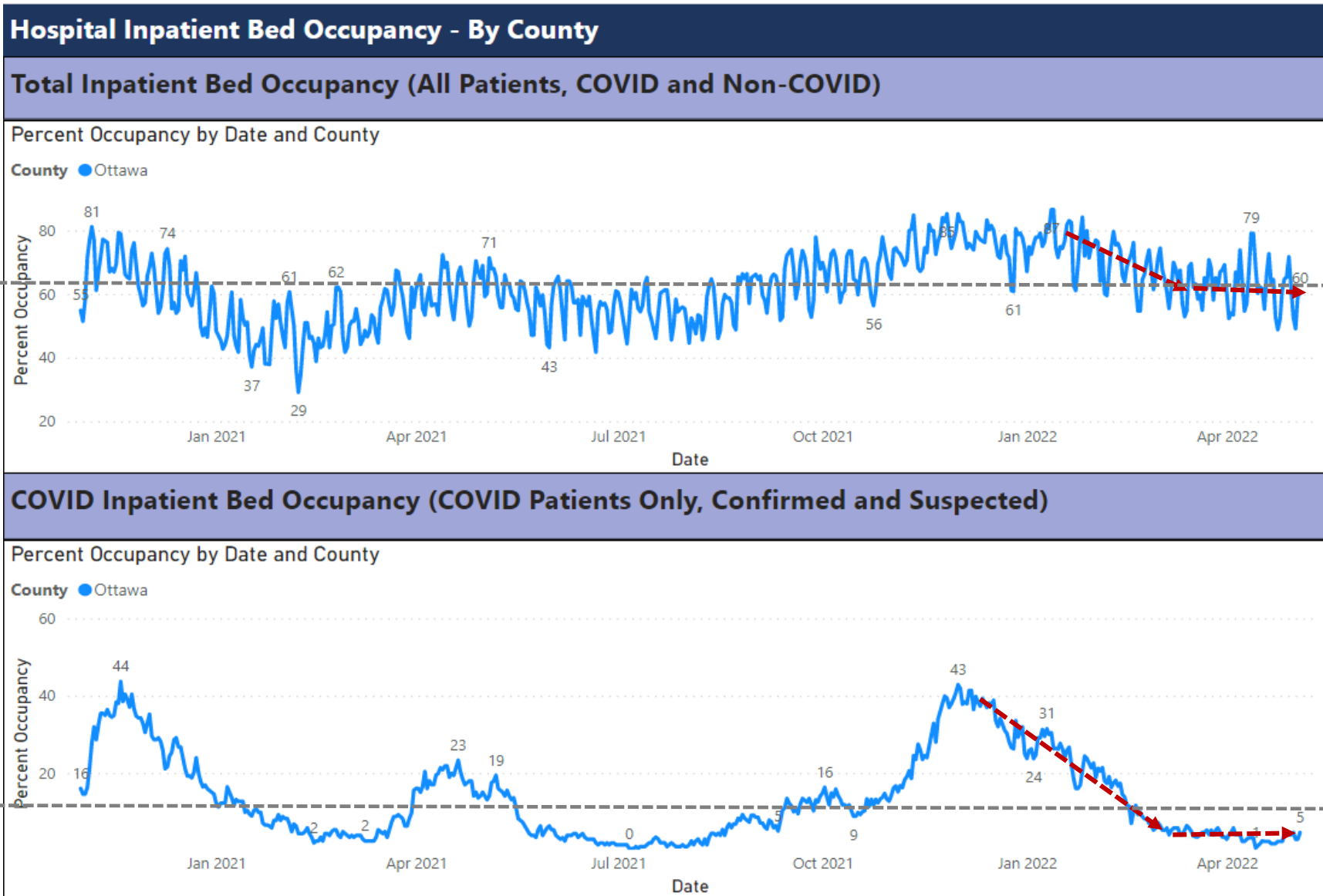
Vaccination effectively prevents MIS-C ([source](#)).

**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 May 4, 2022

# Ottawa County Hospital Capacity – All Beds



Pandemic Average

62%

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

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

14%

Source: EMResources

Data through May 4, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

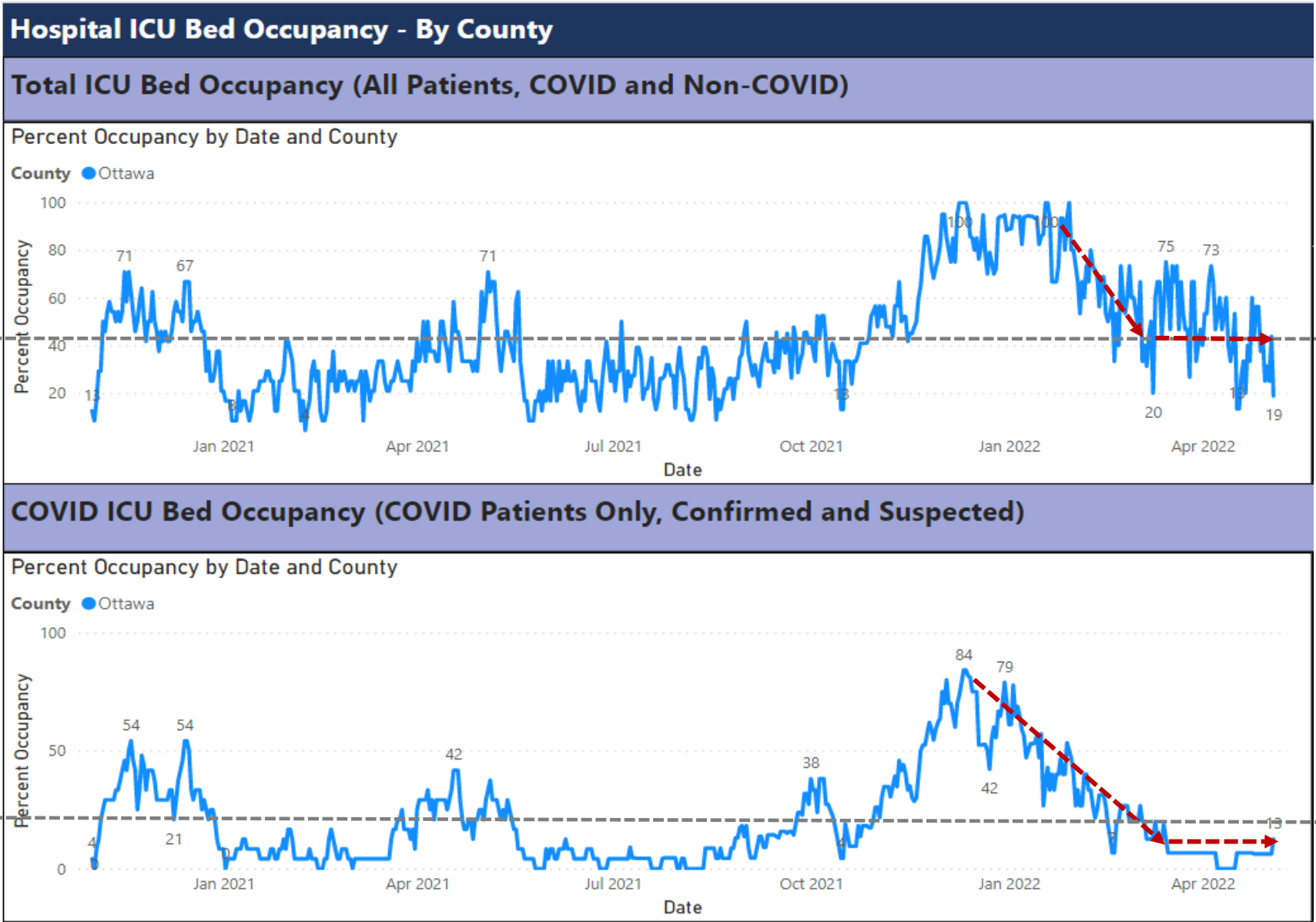
Risk Levels

Other

Media

Science Roundup

# Ottawa County Hospital Capacity – ICU Beds



Pandemic Average

41%

21%

Overall ICU bed occupancy is **below** the pandemic average.

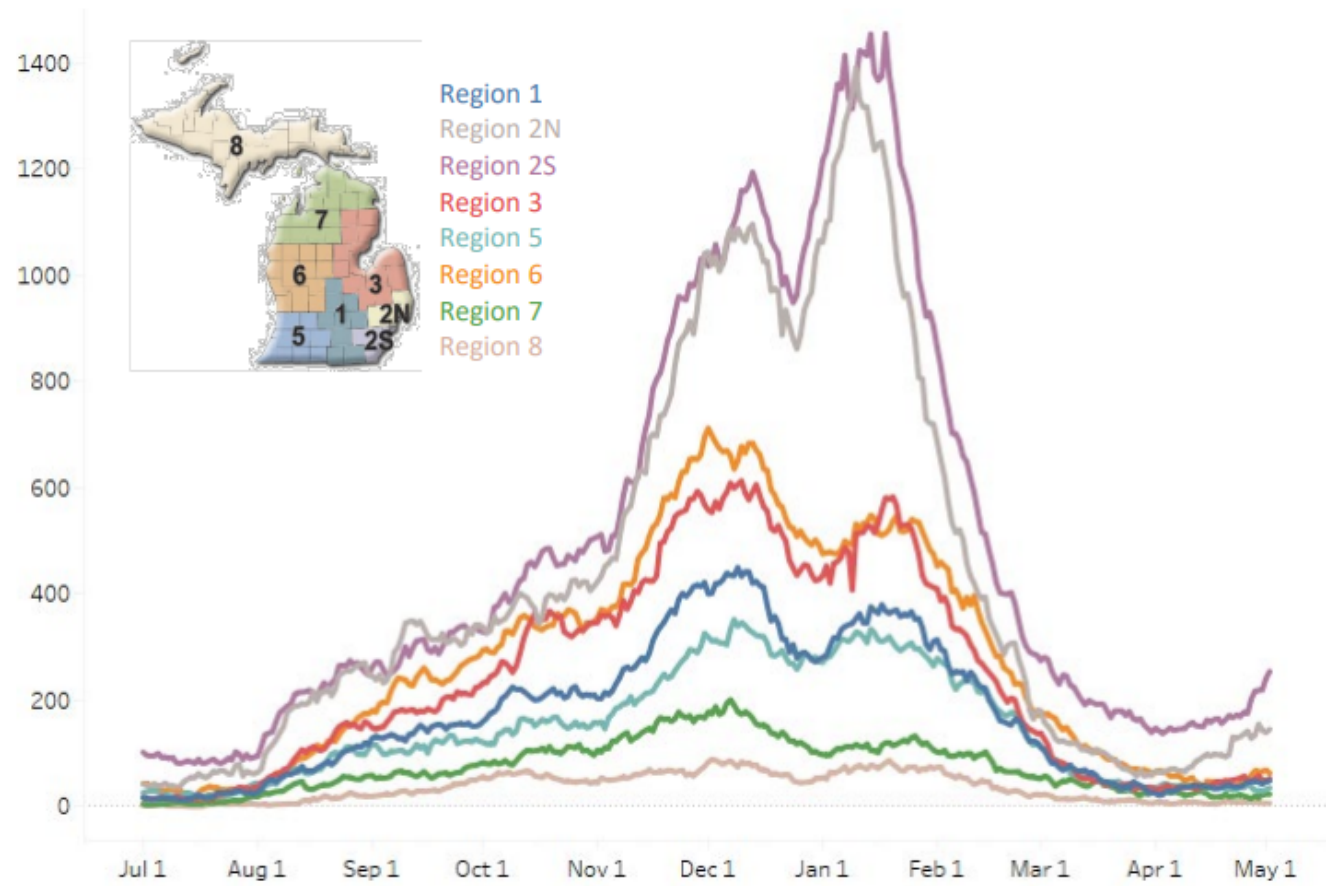
The proportion of ICU beds occupied by COVID-19 patients is **below** the pandemic average. Currently, **13%** of all ICU beds are occupied by COVID-19 patients.

Source: EMResources

Data through May 4, 2022

# Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 5/2/2022  
Confirmed Positive by Region



This week the COVID+ census in hospitals has increased in Regions 1, 2S, 2N, 6, and 7. Regions 3 and 8 showed decreases while Region 5 was stable.

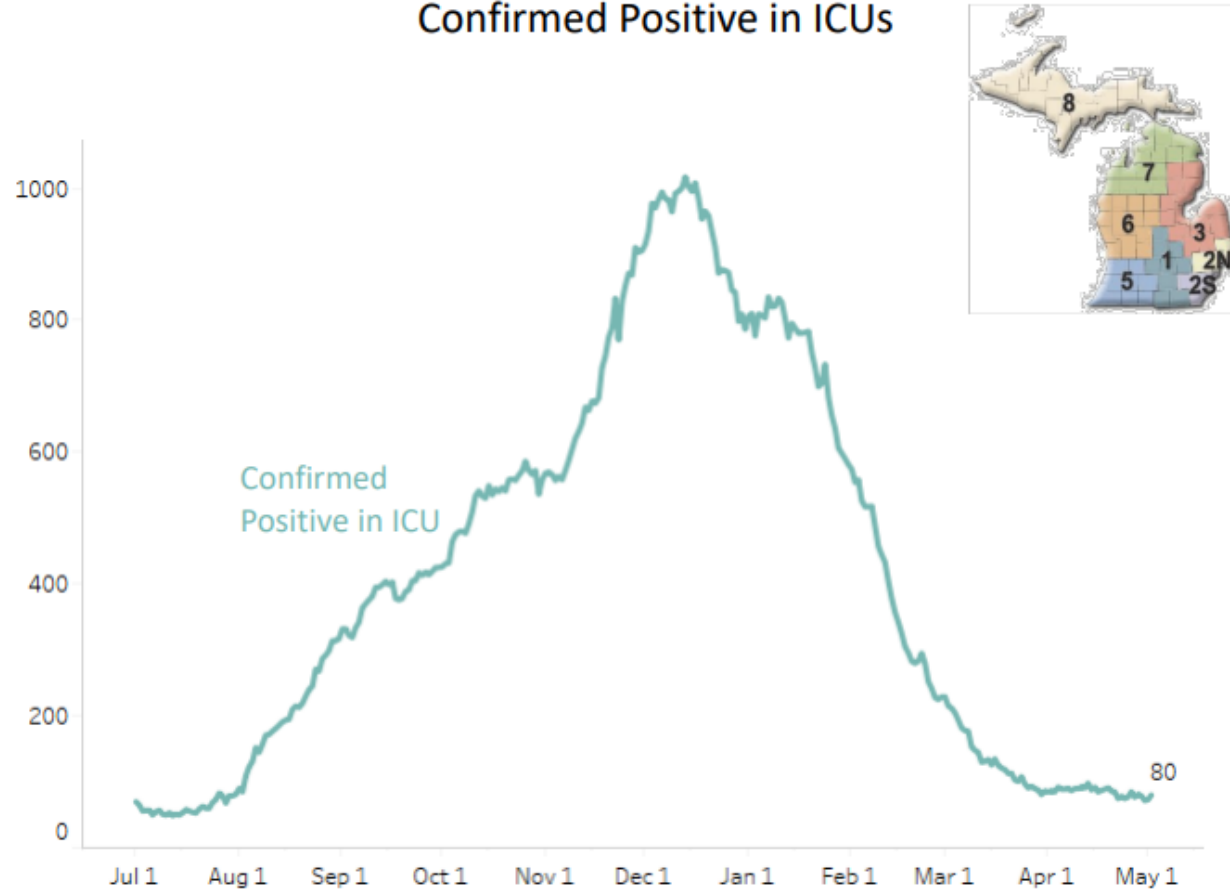
Region 2S now has >100/Million population hospitalized with COVID.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	48 (17%)	44/M
Region 2N	145 (7%)	65/M
Region 2S	254 (44%)	114/M
Region 3	53 (-7%)	47/M
Region 5	35 (0%)	37/M
Region 6	63 (24%)	43/M
Region 7	23 (15%)	46/M
Region 8	6 (-25%)	19/M

Source: MDHHS Data and Modelling: [MI COVID response Data and modeling update \(michigan.gov\)](https://www.michigan.gov/mdhhs/0,4570,7-153_173_174_175_176_177_178_179_180_181_182_183_184_185_186_187_188_189_190_191_192_193_194_195_196_197_198_199_200_201_202_203_204_205_206_207_208_209_210_211_212_213_214_215_216_217_218_219_220_221_222_223_224_225_226_227_228_229_230_231_232_233_234_235_236_237_238_239_240_241_242_243_244_245_246_247_248_249_250_251_252_253_254_255_256_257_258_259_260_261_262_263_264_265_266_267_268_269_270_271_272_273_274_275_276_277_278_279_280_281_282_283_284_285_286_287_288_289_290_291_292_293_294_295_296_297_298_299_300_301_302_303_304_305_306_307_308_309_310_311_312_313_314_315_316_317_318_319_320_321_322_323_324_325_326_327_328_329_330_331_332_333_334_335_336_337_338_339_340_341_342_343_344_345_346_347_348_349_350_351_352_353_354_355_356_357_358_359_360_361_362_363_364_365_366_367_368_369_370_371_372_373_374_375_376_377_378_379_380_381_382_383_384_385_386_387_388_389_390_391_392_393_394_395_396_397_398_399_400_401_402_403_404_405_406_407_408_409_410_411_412_413_414_415_416_417_418_419_420_421_422_423_424_425_426_427_428_429_430_431_432_433_434_435_436_437_438_439_440_441_442_443_444_445_446_447_448_449_450_451_452_453_454_455_456_457_458_459_460_461_462_463_464_465_466_467_468_469_470_471_472_473_474_475_476_477_478_479_480_481_482_483_484_485_486_487_488_489_490_491_492_493_494_495_496_497_498_499_500_501_502_503_504_505_506_507_508_509_510_511_512_513_514_515_516_517_518_519_520_521_522_523_524_525_526_527_528_529_530_531_532_533_534_535_536_537_538_539_540_541_542_543_544_545_546_547_548_549_550_551_552_553_554_555_556_557_558_559_560_561_562_563_564_565_566_567_568_569_570_571_572_573_574_575_576_577_578_579_580_581_582_583_584_585_586_587_588_589_590_591_592_593_594_595_596_597_598_599_600_601_602_603_604_605_606_607_608_609_610_611_612_613_614_615_616_617_618_619_620_621_622_623_624_625_626_627_628_629_630_631_632_633_634_635_636_637_638_639_640_641_642_643_644_645_646_647_648_649_650_651_652_653_654_655_656_657_658_659_660_661_662_663_664_665_666_667_668_669_670_671_672_673_674_675_676_677_678_679_680_681_682_683_684_685_686_687_688_689_690_691_692_693_694_695_696_697_698_699_700_701_702_703_704_705_706_707_708_709_710_711_712_713_714_715_716_717_718_719_720_721_722_723_724_725_726_727_728_729_730_731_732_733_734_735_736_737_738_739_740_741_742_743_744_745_746_747_748_749_750_751_752_753_754_755_756_757_758_759_760_761_762_763_764_765_766_767_768_769_770_771_772_773_774_775_776_777_778_779_780_781_782_783_784_785_786_787_788_789_790_791_792_793_794_795_796_797_798_799_800_801_802_803_804_805_806_807_808_809_810_811_812_813_814_815_816_817_818_819_820_821_822_823_824_825_826_827_828_829_830_831_832_833_834_835_836_837_838_839_840_841_842_843_844_845_846_847_848_849_850_851_852_853_854_855_856_857_858_859_860_861_862_863_864_865_866_867_868_869_870_871_872_873_874_875_876_877_878_879_880_881_882_883_884_885_886_887_888_889_890_891_892_893_894_895_896_897_898_899_900_901_902_903_904_905_906_907_908_909_910_911_912_913_914_915_916_917_918_919_920_921_922_923_924_925_926_927_928_929_930_931_932_933_934_935_936_937_938_939_940_941_942_943_944_945_946_947_948_949_950_951_952_953_954_955_956_957_958_959_960_961_962_963_964_965_966_967_968_969_970_971_972_973_974_975_976_977_978_979_980_981_982_983_984_985_986_987_988_989_990_991_992_993_994_995_996_997_998_999_1000,000)

# Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 7/1/2021 – 5/2/2022  
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has increased only slightly from last week, by 4%. There are 80 COVID+ patients in ICU beds across the state.

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	9 (80%)	83%	5%
Region 2N	21 (5%)	70%	4%
Region 2S	31 (0%)	81%	5%
Region 3	4 (-43%)	87%	1%
Region 5	5 (25%)	69%	3%
Region 6	6 (0%)	67%	3%
Region 7	4 (33%)	79%	3%
Region 8	0 (-100%)	54%	0%

Source: MDHHS Data and Modelling: [MI COVID response Data and modeling update \(michigan.gov\)](https://www.michigan.gov/mdhhs/0,4570,7-293_14277_14278_14279_14280_14281_14282_14283_14284_14285_14286_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_14501_14502_14503_14504_14505_14506_14507_14508_14509_14510_14511_14512_14513_14514_14515_14516_14517_14518_14519_14520_14521_14522_14523_14524_14525_14526_14527_14528_14529_14530_14531_14532_14533_14534_14535_14536_14537_14538_14539_14540_14541_14542_14543_14544_14545_14546_14547_14548_14549_14550_14551_14552_14553_14554_14555_14556_14557_14558_14559_14560_14561_14562_14563_14564_14565_14566_14567_14568_14569_14570_14571_14572_14573_14574_14575_14576_14577_14578_14579_14580_14581_14582_14583_14584_14585_14586_14587_14588_14589_14590_14591_14592_14593_14594_14595_14596_14597_14598_14599_14600_14601_14602_14603_14604_14605_14606_14607_14608_14609_14610_14611_14612_14613_14614_14615_14616_14617_14618_14619_14620_14621_14622_14623_14624_14625_14626_14627_14628_14629_14630_14631_14632_14633_14634_14635_14636_14637_14638_14639_14640_14641_14642_14643_14644_14645_14646_14647_14648_14649_14650_14651_14652_14653_14654_14655_14656_14657_14658_14659_14660_14661_14662_14663_14664_14665_14666_14667_14668_14669_14670_14671_14672_14673_14674_14675_14676_14677_14678_14679_14680_14681_14682_14683_14684_14685_14686_14687_14688_14689_14690_14691_14692_14693_14694_14695_14696_14697_14698_14699_14700_14701_14702_14703_14704_14705_14706_14707_14708_14709_14710_14711_14712_14713_14714_14715_14716_14717_14718_14719_14720_14721_14722_14723_14724_14725_14726_14727_14728_14729_14730_14731_14732_14733_14734_14735_14736_14737_14738_14739_14740_14741_14742_14743_14744_14745_14746_14747_14748_14749_14750_14751_14752_14753_14754_14755_14756_14757_14758_14759_14760_14761_14762_14763_14764_14765_14766_14767_14768_14769_14770_14771_14772_14773_14774_14775_14776_14777_14778_14779_14780_14781_14782_14783_14784_14785_14786_14787_14788_14789_14790_14791_14792_14793_14794_14795_14796_14797_14798_14799_14800_14801_14802_14803_14804_14805_14806_14807_14808_14809_14810_14811_14812_14813_14814_14815_14816_14817_14818_14819_14820_14821_14822_14823_14824_14825_14826_14827_14828_14829_14830_14831_14832_14833_14834_14835_14836_14837_14838_14839_14840_14841_14842_14843_14844_14845_14846_14847_14848_14849_14850_14851_14852_14853_14854_14855_14856_14857_14858_14859_14860_14861_14862_14863_14864_14865_14866_14867_14868_14869_14870_14871_14872_14873_14874_14875_14876_14877_14878_14879_14880_14881_14882_14883_14884_14885_14886_14887_14888_14889_14890_14891_14892_14893_14894_14895_14896_14897_14898_14899_14900_14901_14902_14903_14904_14905_14906_14907_14908_14909_14910_14911_14912_14913_14914_14915_14916_14917_14918_14919_14920_14921_14922_14923_14924_14925_14926_14927_14928_14929_14930_14931_14932_14933_14934_14935_14936_14937_14938_14939_14940_14941_14942_14943_14944_14945_14946_14947_14948_14949_14950_14951_14952_14953_14954_14955_14956_14957_14958_14959_14960_14961_14962_14963_14964_14965_14966_14967_14968_14969_14970_14971_14972_14973_14974_14975_14976_14977_14978_14979_14980_14981_14982_14983_14984_14985_14986_14987_14988_14989_14990_14991_14992_14993_14994_14995_14996_14997_14998_14999_15000)



# Pediatric Hospitalization Rates – USA, Georgia, Michigan

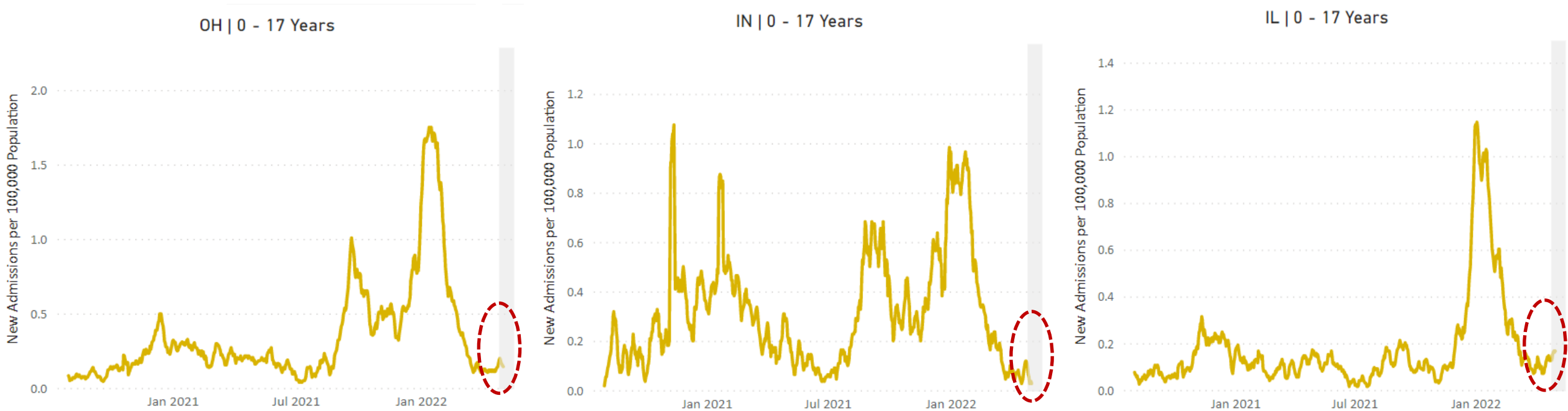


Pediatric hospitalization rates across the US, in Georgia, and in Michigan **are low compared to other times in the pandemic, but may be increasing.**

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

Accessed May 5, 2022

# Pediatric Hospitalization Rates – Select Midwest States



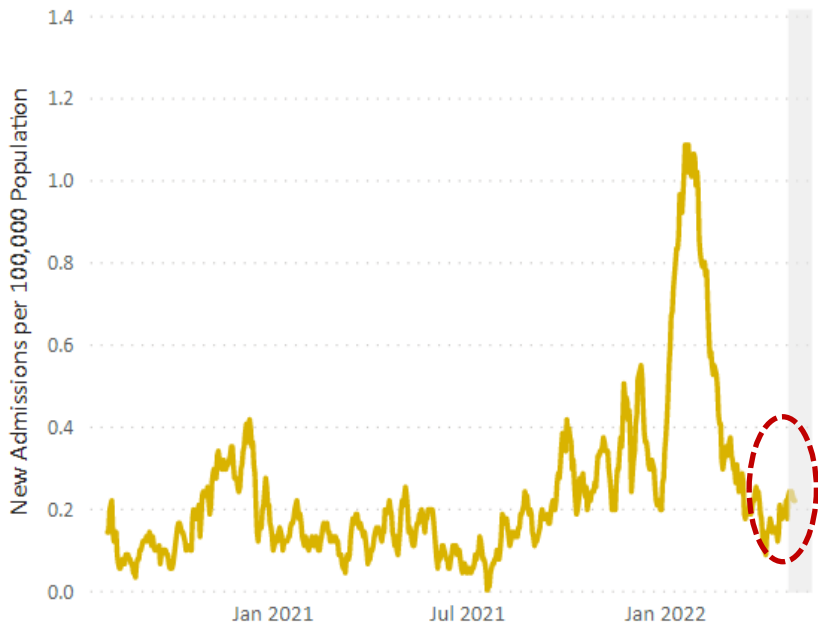
Ohio, Indiana, and Illinois are all showing relatively low pediatric hospitalization rates, with some potential uptrend in Illinois.

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

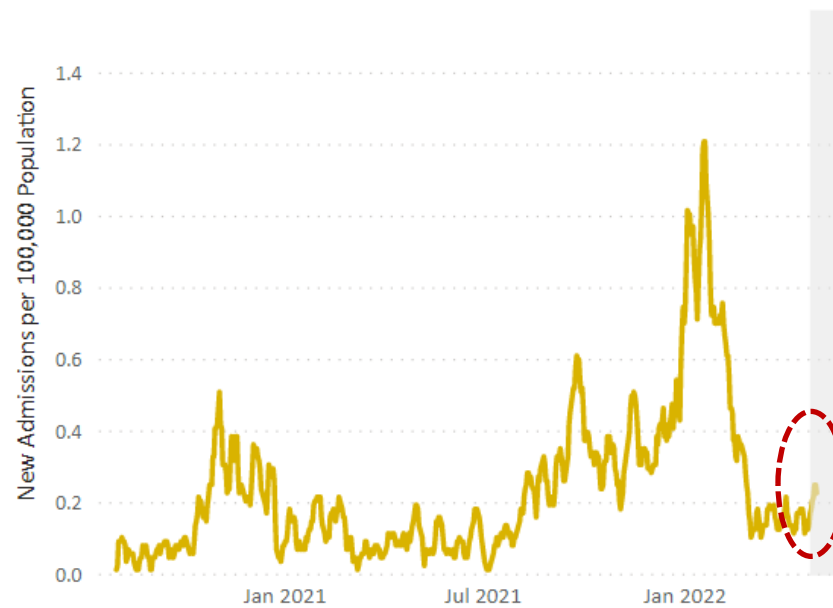
Accessed May 5, 2022

# Pediatric Hospitalization Rates – Select Midwest States

MN | 0 - 17 Years



WI | 0 - 17 Years



IA | 0 - 17 Years



Pediatric hospitalization rates in Minnesota and Wisconsin may be reversing, while Iowa rates remain low.

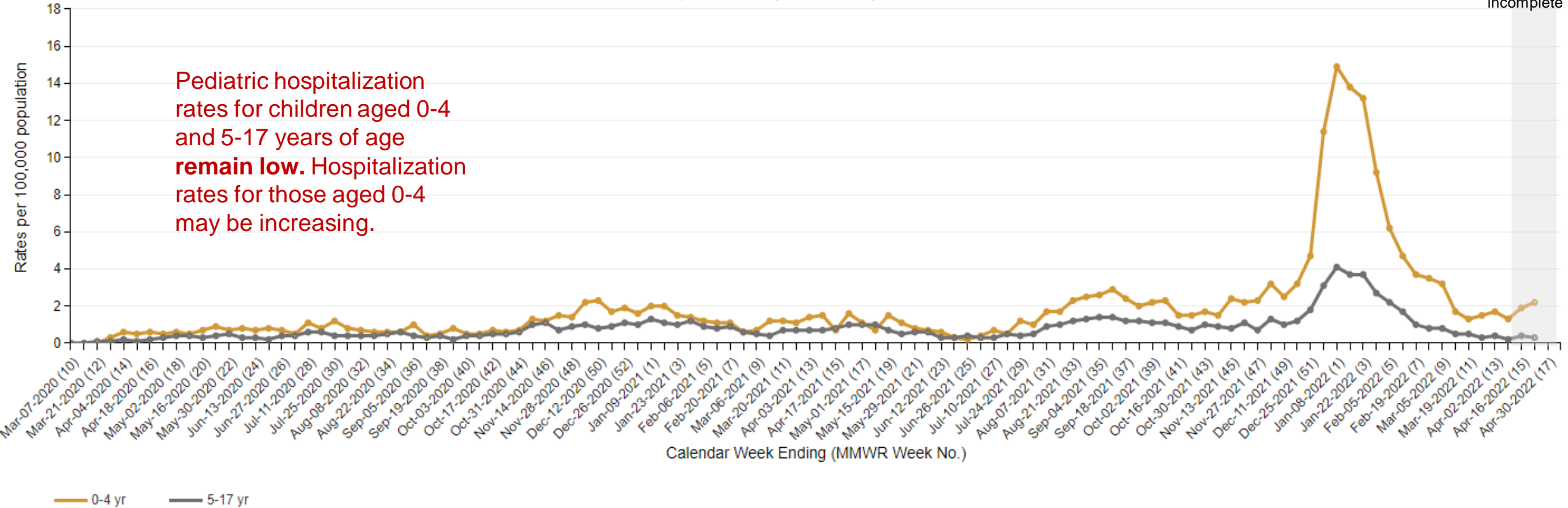
Source: <https://covid.cdc.gov/covid-data-tracker/#new-hospital-admissions>

Accessed May 5, 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



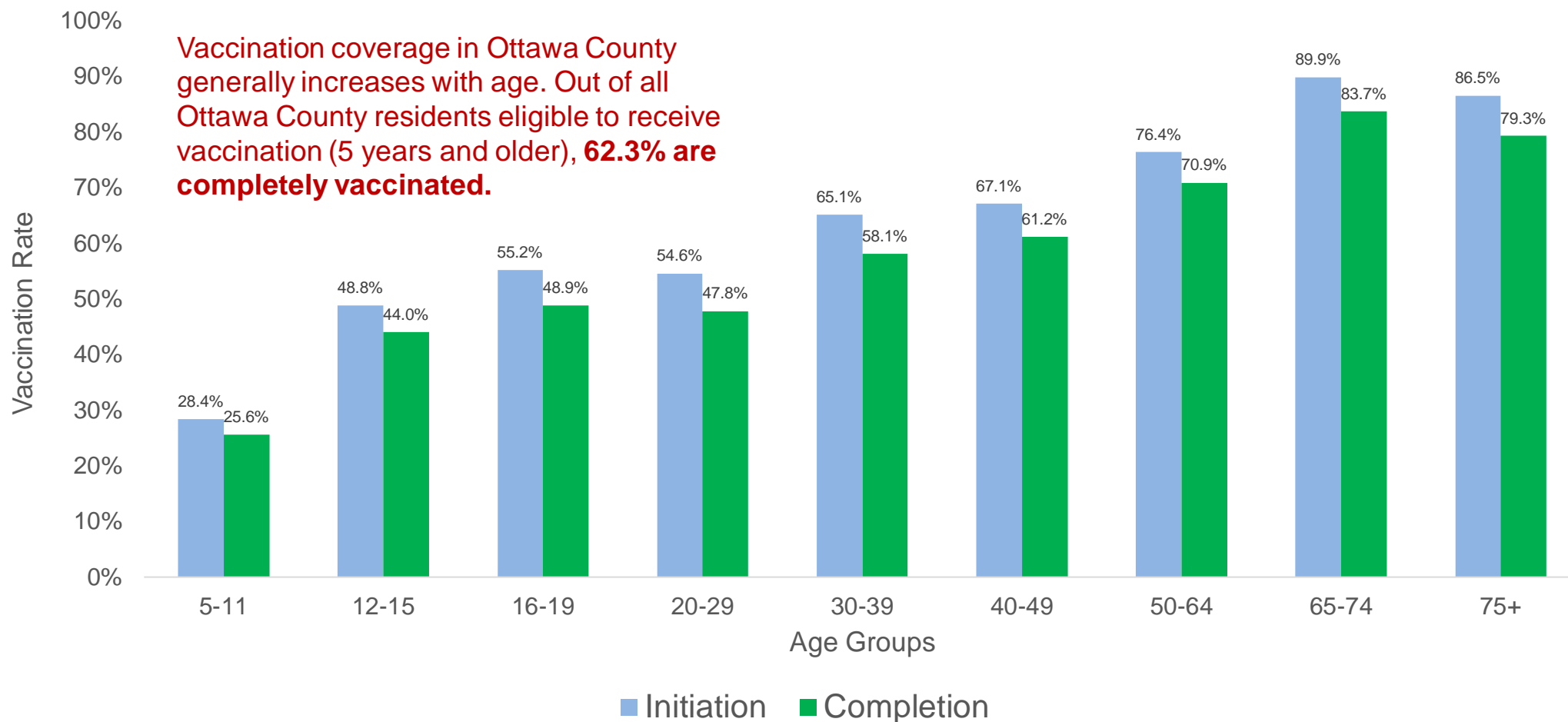
The Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Lag for COVID-NET case 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 5, 2022

# Vaccination Coverage by Age



**Notes:**

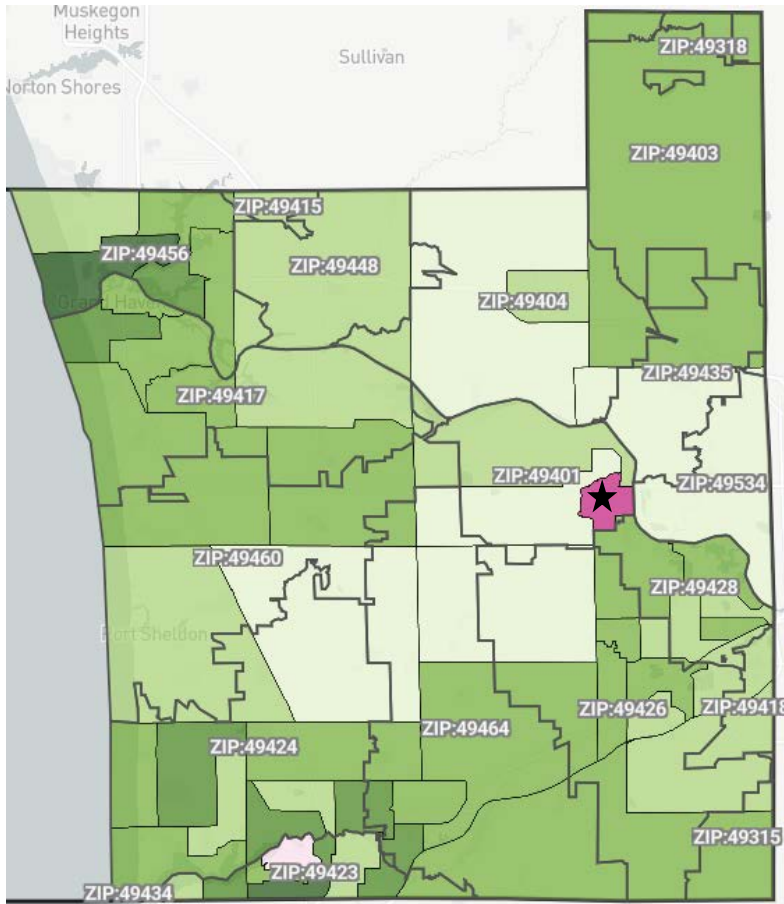
Completion is the percentage of people receiving at least 2 doses of Pfizer or Moderna or 1 dose of J&J.

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

Data through May 4, 2022

# Vaccination Coverage by Place of Residence

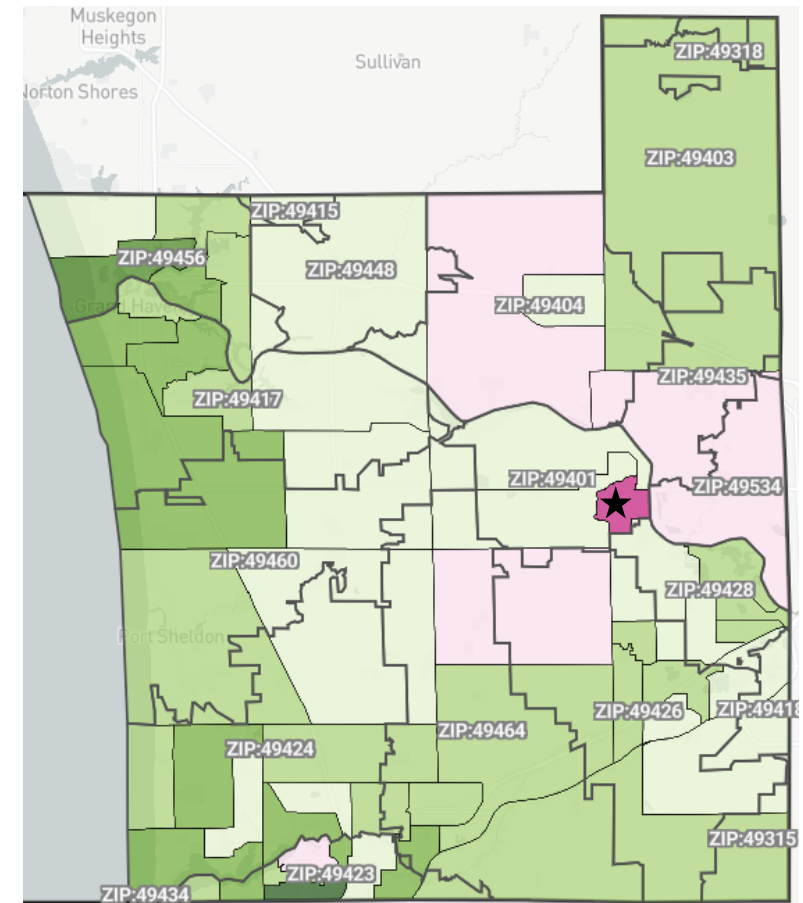
Fully vaccinated: % Ages 16+ years



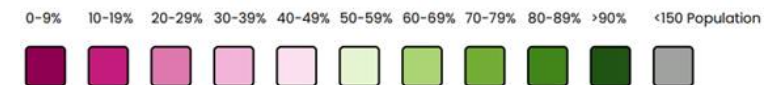
Color coded by: Fully Vaccinated (% Ages 16+)



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 30, 2022

Fully Vaccinated People (170,589)	
Cases	Deaths
Percent of Cases in People Not Fully Vaccinated (36,564 / 55,738) <b>65.6%</b>	Percent of Deaths in People Not Fully Vaccinated (288 / 444) <b>64.9%</b>
Total Cases Not Fully Vaccinated <b>36,564</b>	Total Deaths Not Fully Vaccinated <b>288</b>
Total Breakthrough Cases <b>19,174</b>	Total Breakthrough Deaths <b>156</b>
Percent of Fully Vaccinated People who Developed COVID-19 (19,174 / 170,589) <b>11.2%</b>	Percent of Fully Vaccinated People who Died of COVID-19 (156 / 170,589) <b>0.09%</b>
Percent of Cases who were Fully Vaccinated (19,174 / 55,738) <b>34.4%</b>	Percent of Deaths who were Fully Vaccinated (156 / 444) <b>35.1%</b>
Total Cases <b>55,738</b>	Total Deaths <b>444</b>

## Erratum:

Numbers reported on May 5 were summarized using a window of time that omitted data from early 2021, resulting in lower than actual numbers.

The data at right was corrected on May 6 to reflect numbers from January 15, 2021 – April 30, 2022.

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>

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

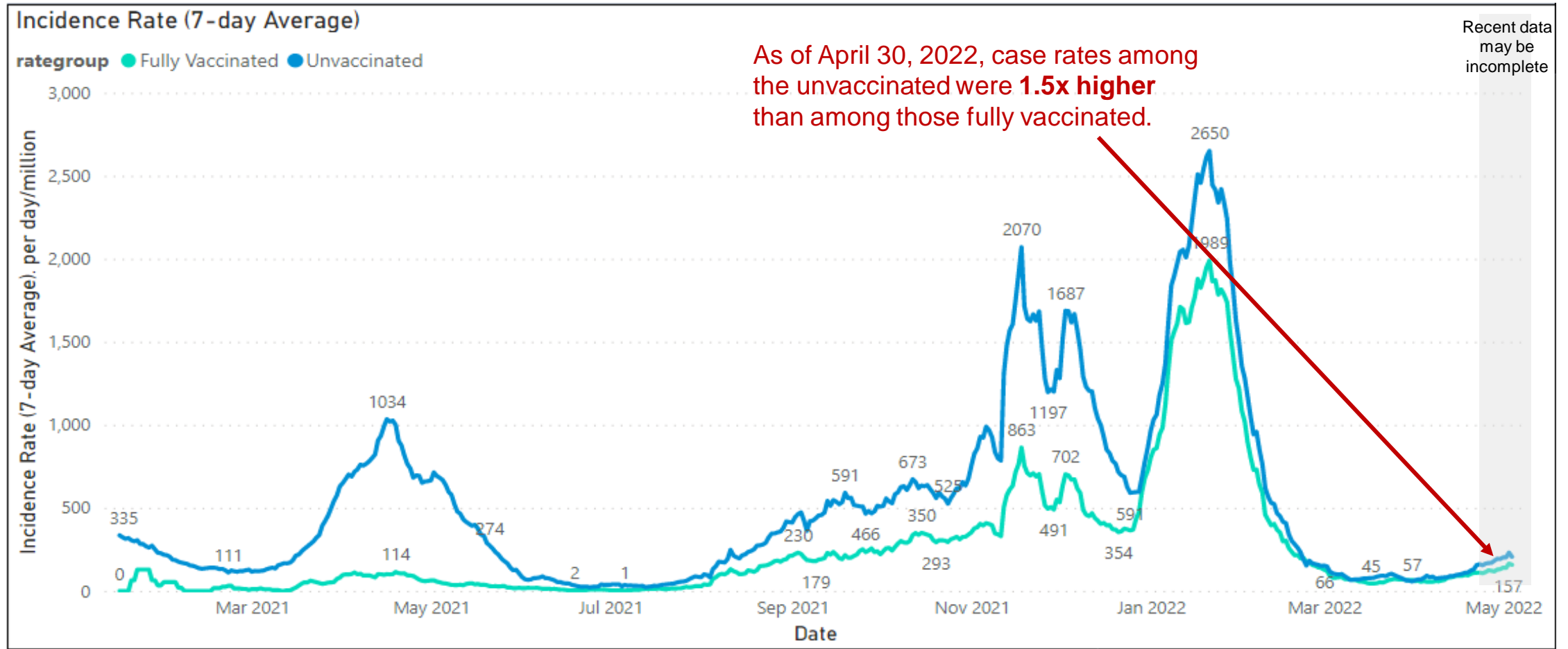
Risk Levels

Other

Media

Science  
Roundup

# Ottawa County COVID-19 Vaccination Breakthrough Case Trends



As of April 30, 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](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html)

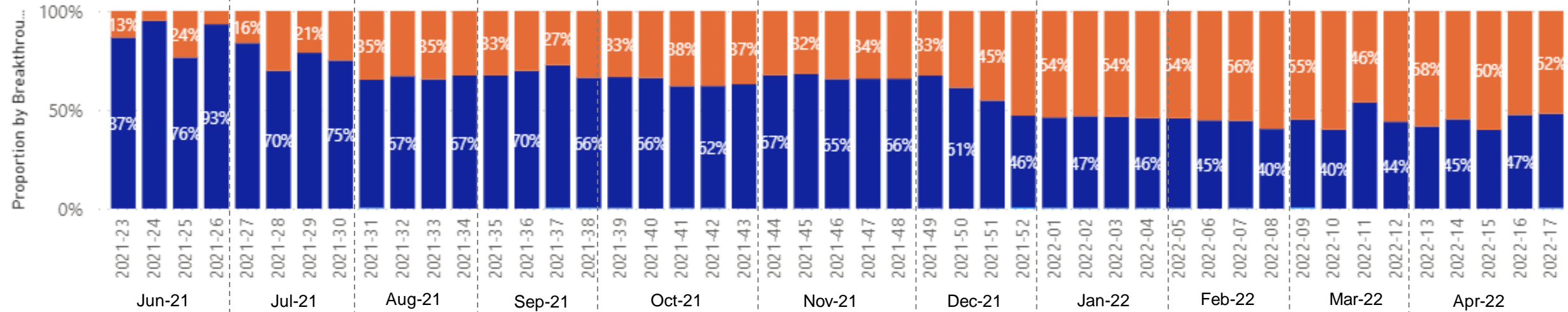


# Ottawa County COVID-19 Vaccination Breakthrough Case Trends

## By Week

Breakthrough Proportions by Week

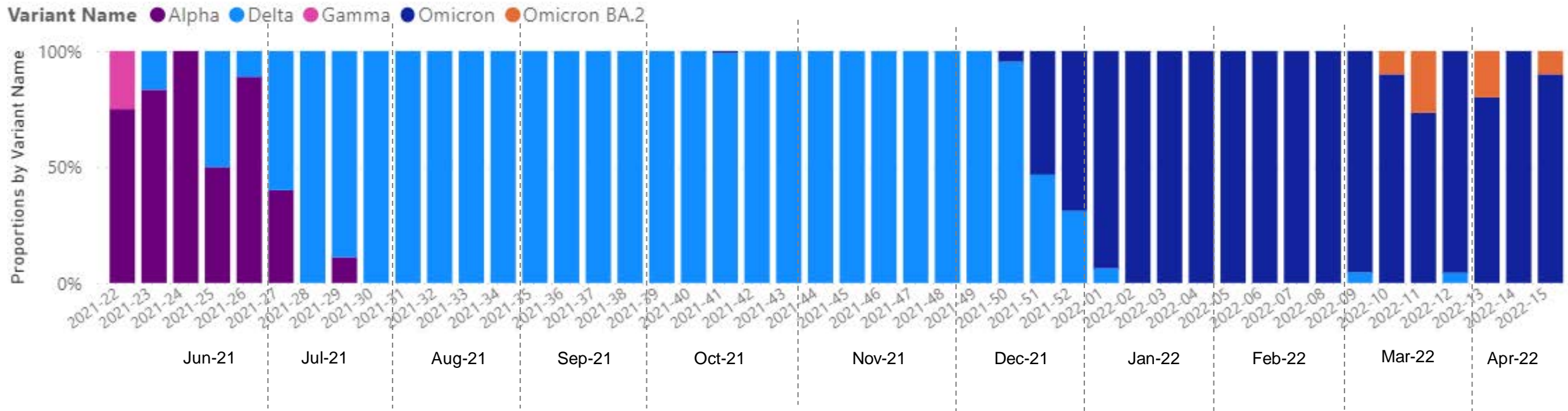
Vaccine\_Breakthrough ● NO ● YES



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

# Variants – Clinical Samples from Ottawa County Residents

Variant Proportions by Week

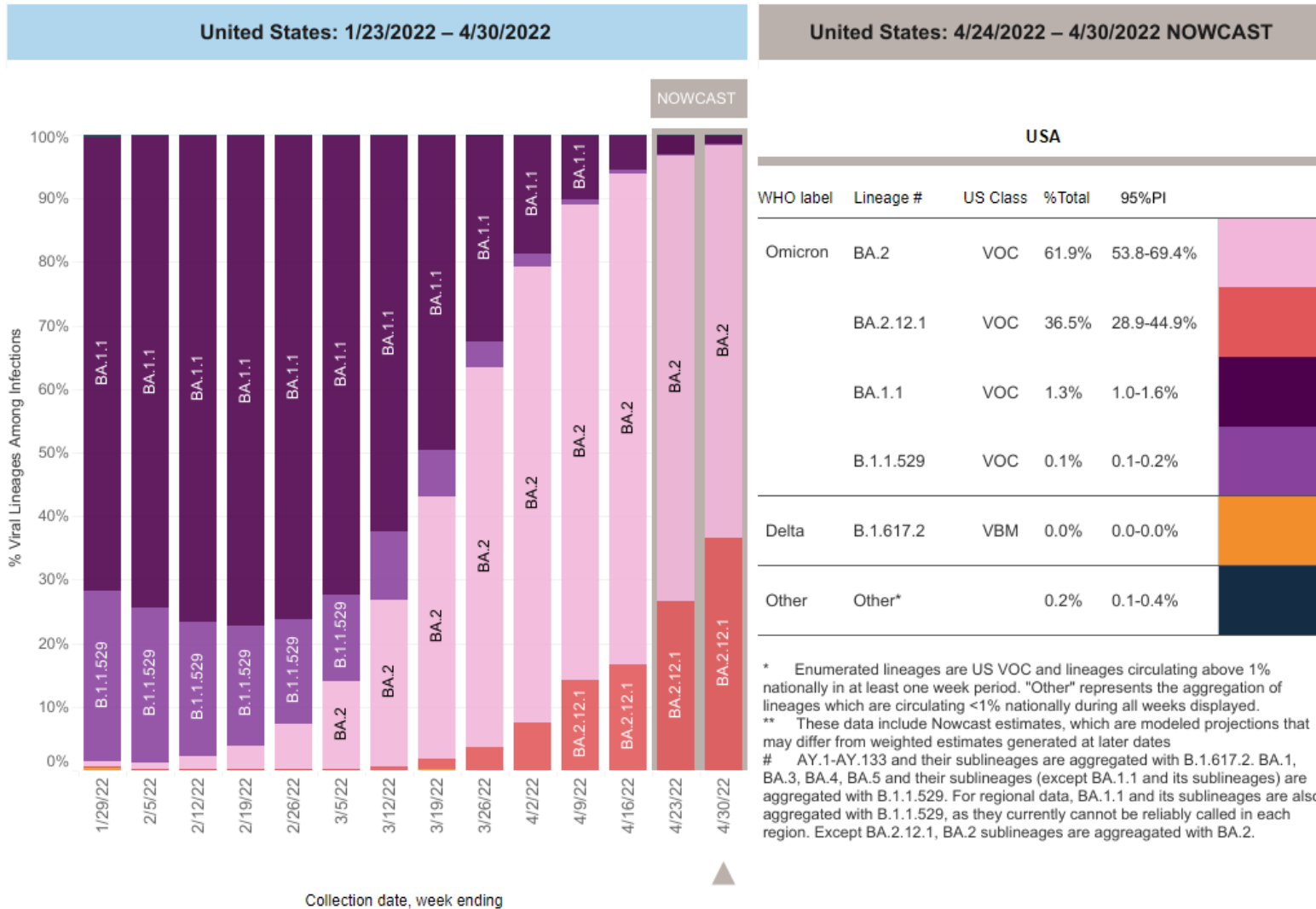


In June of 2021, most clinical samples\* submitted for variant testing came back as the **Alpha** variant. By the end of July 2021, all clinical samples tested were returned as the **Delta** variant. From late July through early December 2021 all clinical samples submitted for variant testing came back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



The **Omicron** variant is estimated to account for close to 100% of all clinical samples collected in the United States the week ending April 30, 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
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
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

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 more detection over the last week.


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

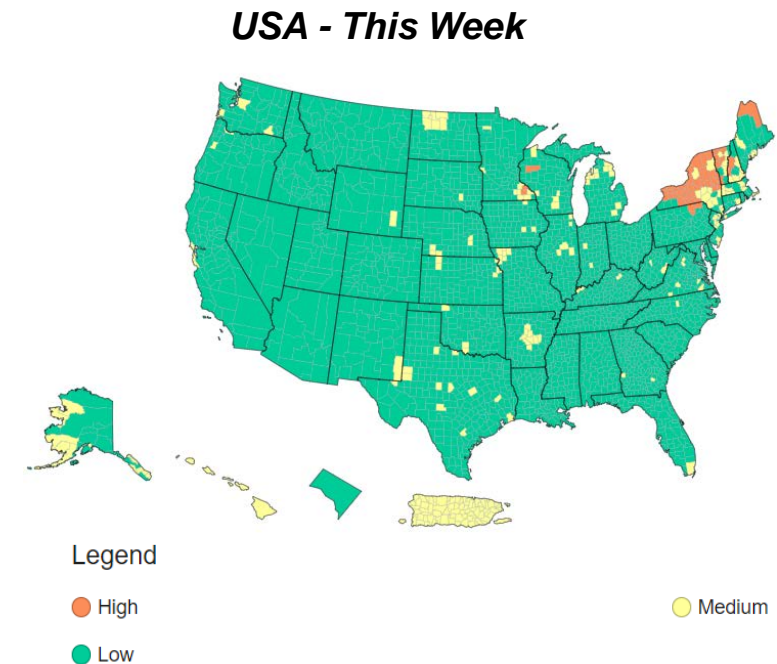
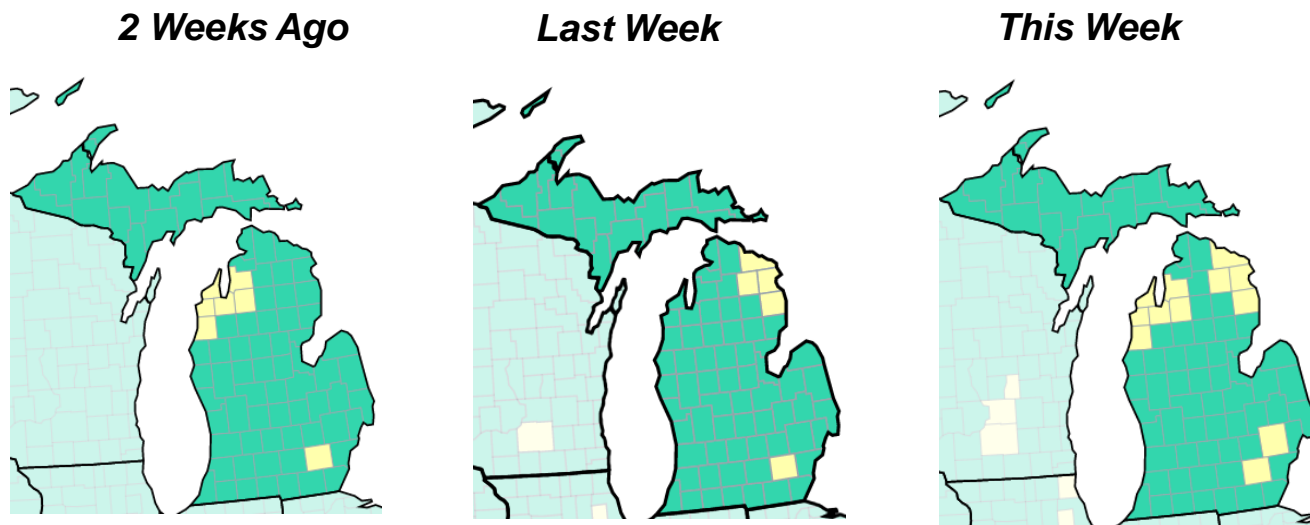
The **Omicron** variant was consistently detected in Grand Haven, Spring Lake, and Allendale wastewater samples since January 2022.



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

# (NEW) CDC Community Risk Levels – Ottawa County

- Current Risk Level in Ottawa – **LOW**
- Current Data:
  - Case Rate (per 100k pop 7-day total) = **95.26**
  - COVID-19 Hospital Admissions (per 100K pop 7-day total) = **1.2**
  - COVID Inpatient Hospital Bed Utilization (7-day average) = **2%**



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

Data updated by CDC on May 4, 2022

# COVID-19 Case Rates by County Across the US

*Last Week*

*This Week*

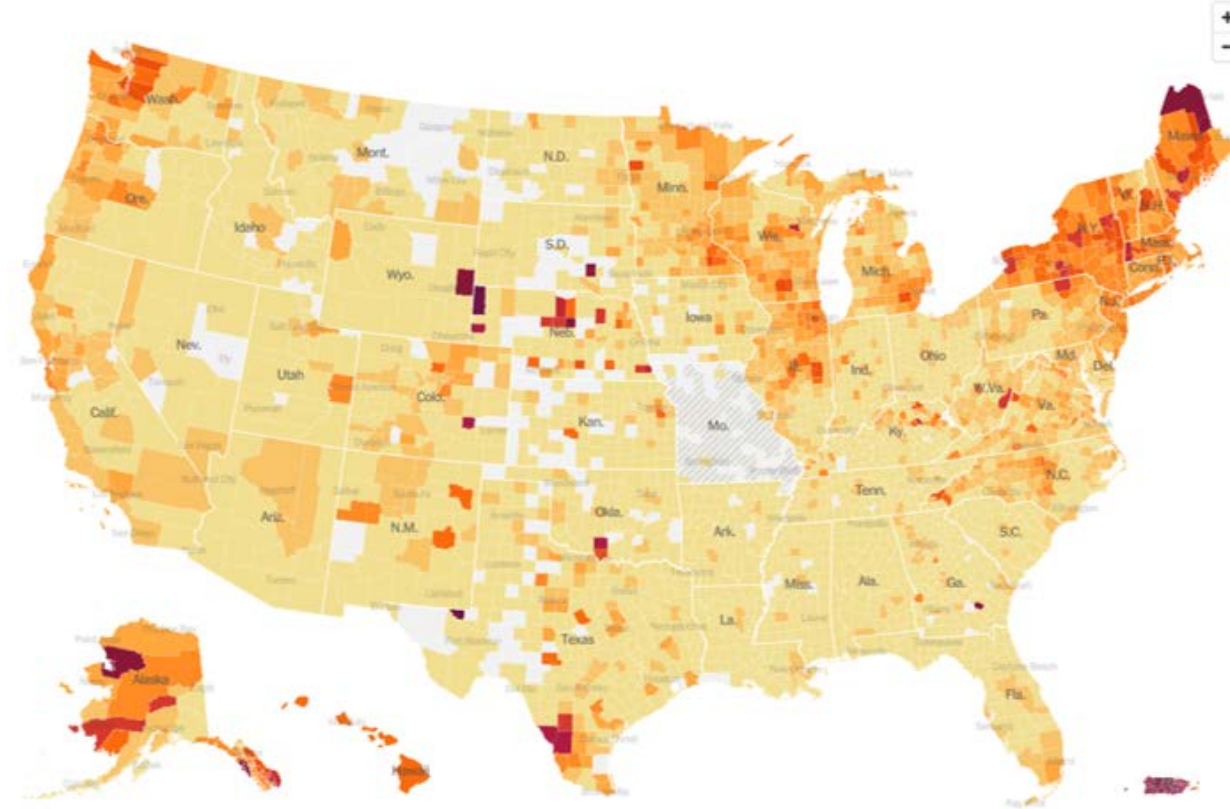
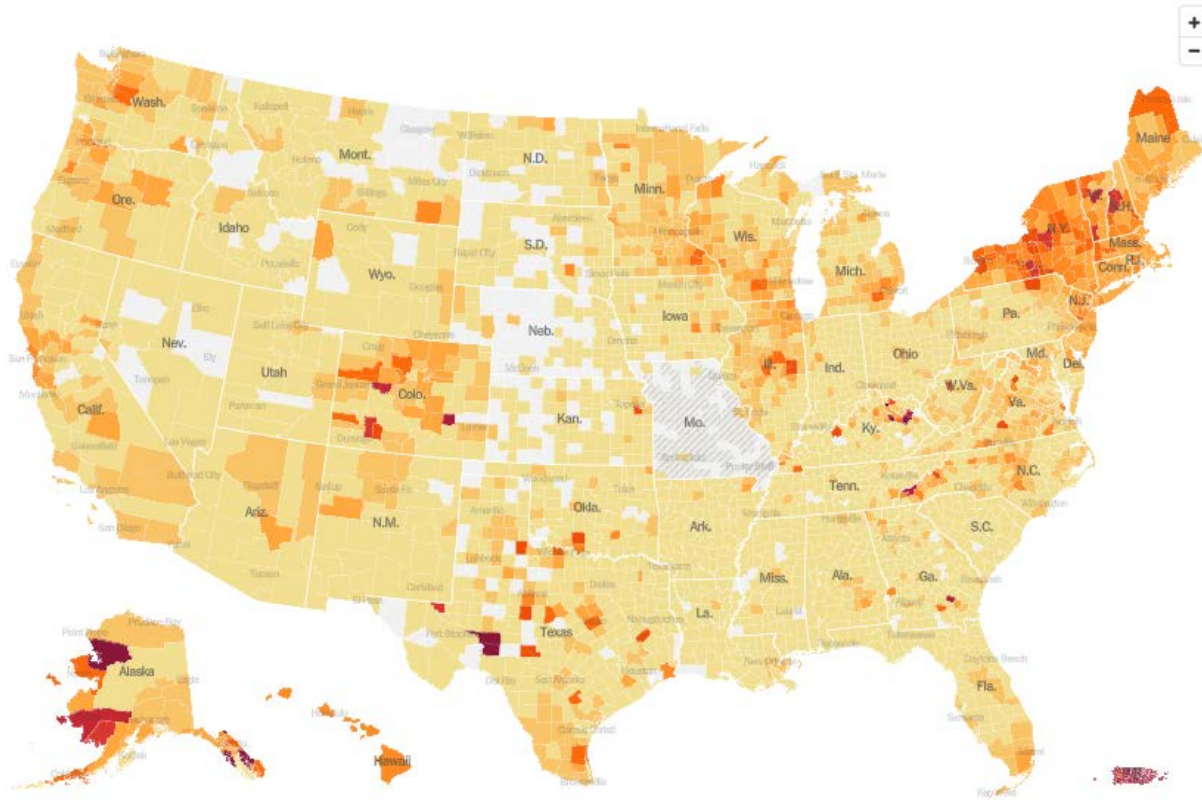
Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK  
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250  
FEW OR MISSING NO CASES DATA



Hot spots

AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK  
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250  
FEW OR MISSING NO CASES DATA



**Case rates may be increasing across the nation**

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

Accessed May 5, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

Risk Levels

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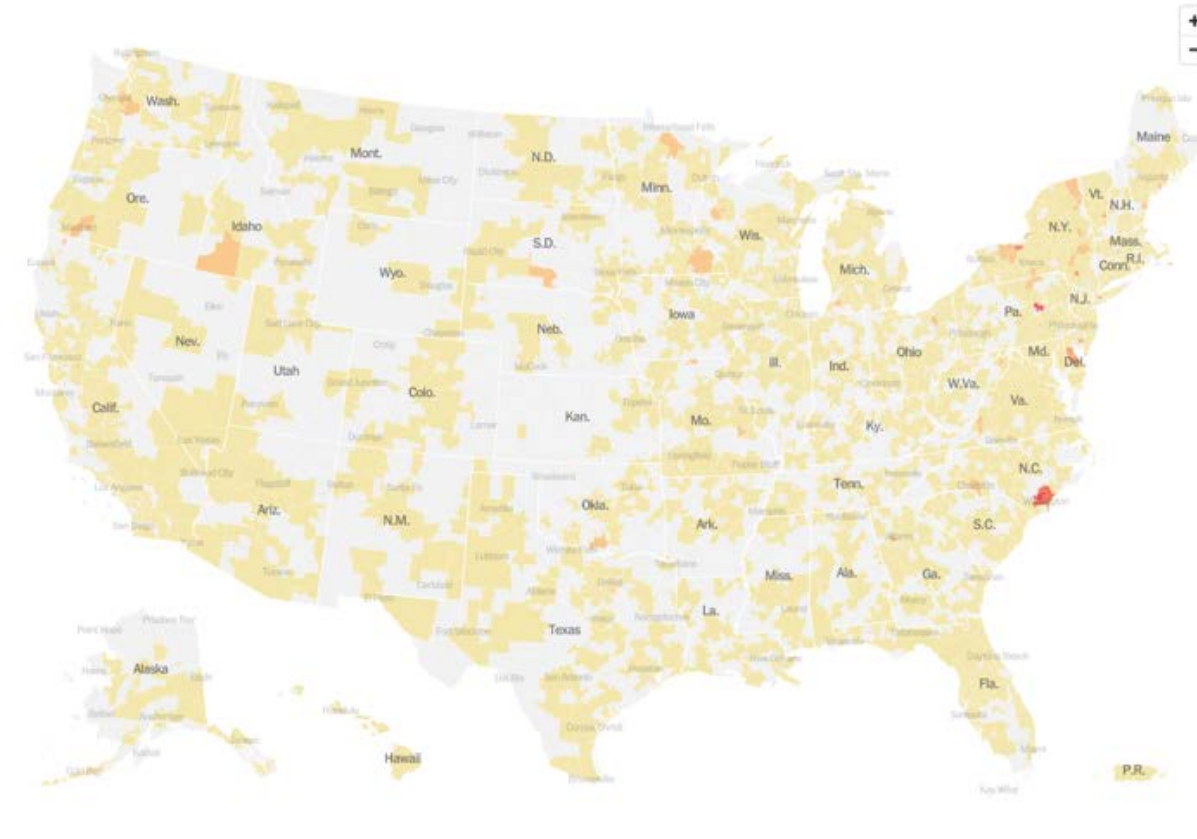
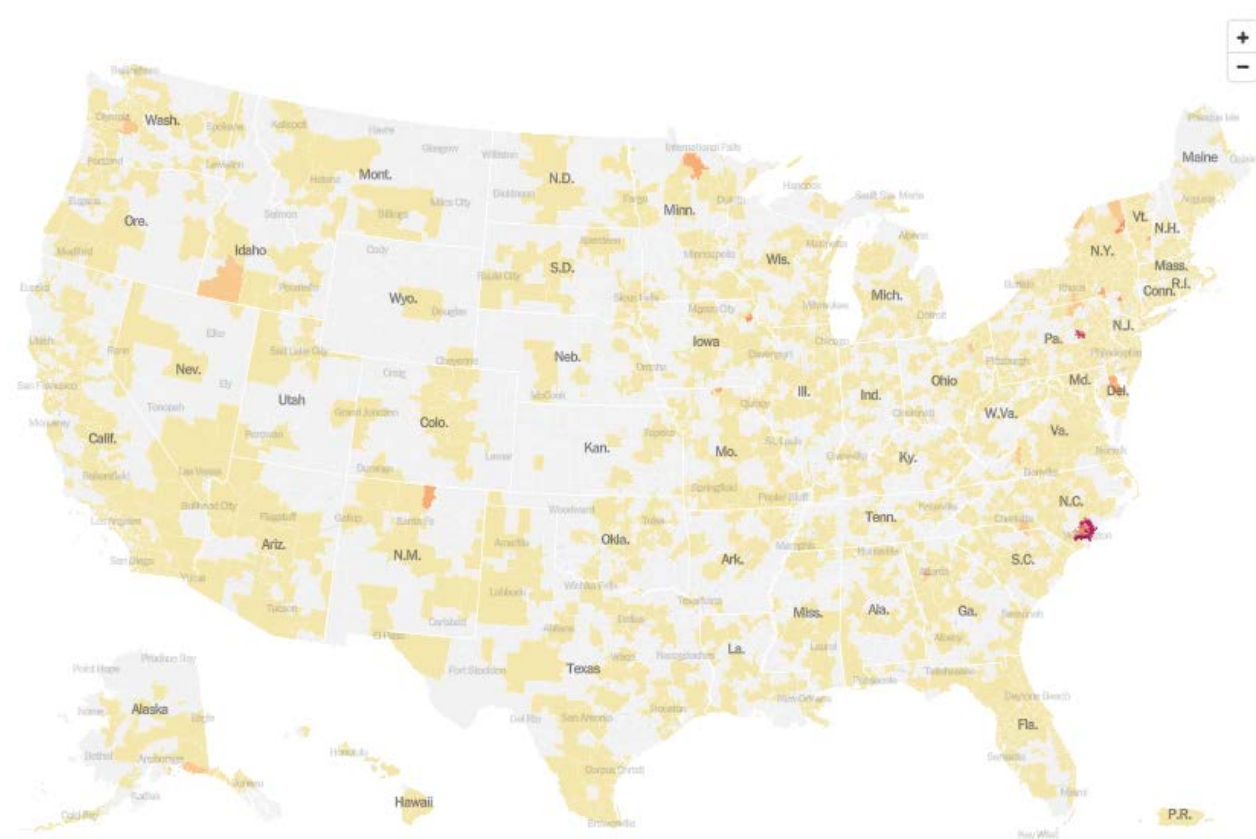
# COVID-19 Hospitalization Rates by County Across the US

*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 May 05, 2022

USA & MI

Spread

Children

Hospitalizations

Vaccinations

Variants

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# COVID-19 News Headlines

## **Spring surge pushes beyond metro Detroit: Michigan COVID data for Thursday, May 5**

[Spring surge pushes beyond metro Detroit: Michigan COVID data for Thursday, May 5 - mlive.com](https://www.mlive.com/news/detroit/article-20220505-spring-surge-pushes-beyond-metro-detroit-michigan-covid-data-for-thursday-may-5.html)

## **Covid's toll in the U.S. reaches a once unfathomable number: 1 million deaths**

[Covid's toll in the U.S. reaches a once unfathomable number: 1 million deaths \(cnbc.com\)](https://www.cnn.com/2022/04/28/health/covid-toll-us-1-million-deaths/index.html)

## **FDA sets June meetings on COVID vaccines for youngest children**

<https://ktul.com/news/nation-world/fda-sets-june-meetings-on-covid-vaccines-for-youngest-children-coronavirus-authorization-pfizer-vaccine-moderna-food-and-drug-administration>

## **Federal money has run out for COVID testing, treatment, vaccination for uninsured**

<https://www.mlive.com/public-interest/2022/04/federal-money-has-run-out-for-covid-testing-treatment-vaccination-for-uninsured.html>

## **CDC Recommendation for Masks and Travel**

[CDC Recommendation for Masks and Travel | CDC Online Newsroom | CDC](https://www.cdc.gov/media/releases/2022/s0428-cdc-recommends.html)

# Science Roundup

## Hyper inflammatory syndrome following COVID-19 mRNA vaccine in children: A national post-authorization pharmacovigilance study

[https://www.thelancet.com/journals/lanep/article/PIIS2666-7762\(22\)00086-2/fulltext](https://www.thelancet.com/journals/lanep/article/PIIS2666-7762(22)00086-2/fulltext)

← A French population-based surveillance study of COVID-19 vaccines found that very few cases of hyper-inflammatory syndrome with multi-organ involvement occurred following COVID-19 mRNA vaccination in 12–17-year-old children, compared with MIS-C occurrence after infection with COVID-19.

## Initial SARS-CoV-2 viral load is associated with disease severity: a retrospective cohort study

<https://academic.oup.com/ofid/advance-article/doi/10.1093/ofid/ofac223/6576478?login=false>

← A study out of the Netherlands found that high COVID-19 viral loads may increase the risk of hospitalization and mortality.

## Remdesivir and three other drugs for hospitalised patients with COVID-19: final results of the WHO Solidarity randomised trial and updated meta-analyses

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)00519-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00519-0/fulltext)

← A large WHO funded trial found that Remdesivir had a small effect at preventing death or progression to ventilation among COVID-19 patients, but no detectable effect on reducing mortality in patients already ventilated.

## Comparison of Home Antigen Testing With RT-PCR and Viral Culture During the Course of SARS-CoV-2 Infection

[Comparison of Home Antigen Testing With RT-PCR and Viral Culture During the Course of SARS-CoV-2 Infection | Infectious Diseases | JAMA Internal Medicine | JAMA Network](#)

← A cohort study of 225 adults and children with reverse transcription–polymerase chain reaction (RT-PCR)–confirmed SARS-CoV-2 infection found that antigen test sensitivity was 64% and 84% when compared with same-day RT-PCR and viral culture, respectively. Antigen test sensitivity was 77% 4 days after illness onset, with further slight sensitivity increases on days 5-6.