

MI COVID RESPONSE DATA AND MODELING UPDATE

NOTE: All data as of May 8 unless otherwise noted

May 11, 2021

Executive summary

Percent Positivity is down 14% and **Case Rate** is down 24% since last week. Positivity (10.8%, ↓1.8%) and case rates (311.5, ↓86.3) have decreased for four weeks

Michigan has the **2nd highest number of cases** (↔), and **highest case rate** (↔) in the last 7 days (source: CDC COVID Data Tracker)

Percent of inpatient beds occupied by individuals with COVID has decreased 17% since last week and are decreasing for 2 weeks. There are 13.2% (↓6.7%) inpatient beds occupied by COVID-19 patients.

Michigan has the **highest inpatient bed utilization** (↔), and the **highest adult ICU bed utilization** (↑1) (source: US HHS Protect)

Deaths have decreased 14% since last week. There were 431 COVID deaths (↓21) between April 25 and May 1, and the **Death Rate** is 6.2 deaths per million residents (↓0.3)

Michigan has the **5th highest number of deaths** (↔), and **highest death rate** (↑1) in the last 7 days (source: CDC COVID Data Tracker)

The 7-day average **state testing rate** has decreased to 3,198.1 tests/million/day (↓463.9). **Daily diagnostic tests (PCR)** is 31.8K per day (↓4.6), and the **weekly average for PCR and antigen tests** conducted in Michigan is 61.0K (↓7.7K).

7.5 million **COVID-19 vaccine** doses reported to MDHHS, 55% of Michigan population 16+ has at least one dose

Comparison across states: Summary

What we see today (data through 5/8):

- 0 states are seeing increasing 1 week case trends ($\geq 10\%$) (down vs. 5 last week)
- 6 states are seeing 1 week increases ($\geq 10\%$) in new COVID hospital admissions (down vs. 14 last week)
- Michigan, DC, Pennsylvania, Maryland and Florida have highest per capita hospitalized patient numbers.
- Midwest (case data from CDC as of 5/9):
 - Wisconsin with slight decrease in hospitalizations (63/M) and decrease in cases (77/100k last 7d)
 - Indiana with slight increase in hospitalizations (132/M), and decrease in cases (105/100k last 7d)
 - Illinois showing stable hospitalizations (152/M), and decrease cases (120/100k last 7d)
 - Ohio with stable hospitalizations (128/M) and decrease in cases (74/100k last 7d)
 - Michigan showing decrease in hospitalizations (252/M) and decrease in cases (190/100k last 7d)

COVID-19 Spread

Statewide positivity has decreased to 10.8%

- One week decrease of 14% (vs. 11% decrease last week)
- Decreasing for four weeks (41% decrease since April 8 high)
- Positivity is declining in most MERC regions and remains above 10% in four regions
 - Traverse City saw a slight increase in positivity since last week

Case rates (311.5 cases/million) are decreasing in the state (397.8 cases/million last week)

- One week decrease of 24% (vs. 30% decrease last week)
- Decreasing for four weeks (53% decrease since April 11 high)
- Cases per million are declining in all MERC regions
- Variants in Michigan: 7,764 confirmed B.1.1.7; 41 confirmed B.1.351; 259 confirmed B.1.427/B.1.429 ; 122 confirmed P.1
- Number of active outbreaks is up 4% from previous week
 - Reported school outbreaks have increased since last week (311 to 345)
 - In the past week, the highest number of new clusters have been identified in baseball/softball, volleyball, track and field, lacrosse, and soccer

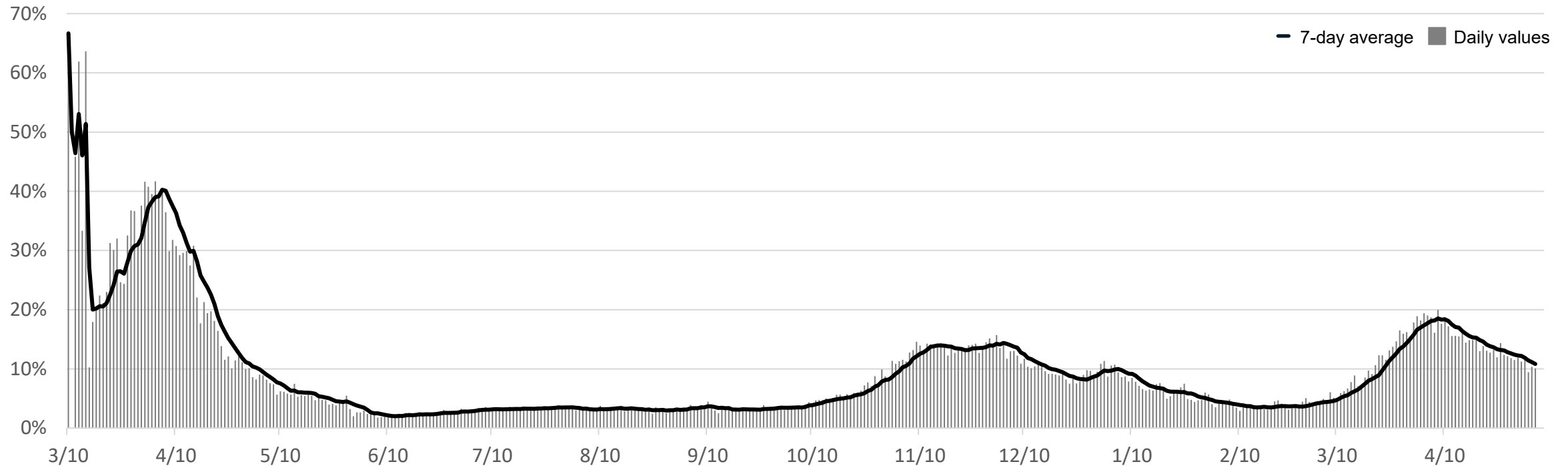
Confirmed and probable case indicators

Table Date: 5/8/2021 (7 days from date table was produced: 5/1/2021)

										Risk levels					
										Low	A	B	C	D	E
	Overall Risk Level	Absolute Cases (per million)	CDC Case Trend	Average Percent Positivity	Positivity Trend	Tests (per million)	% IP Beds Occupied by COVID-19 Cases	% Occupied IP Beds Trend	Absolute Deaths (per million)	Death Trend					
Detroit	E	302.6	decline [26 days]	9.9	Decrease - 4wk	3281.3	13.6	Decrease - 2wk	7.2	Increase - 7wk					
Grand Rapids	E	398.9	decline [20 days]	13.7	Decrease - 3wk	3510.9	14.5	Decrease - 2wk	4.8	Increase - 4wk					
Kalamazoo	E	321.4	decline [22 days]	11.8	Decrease - 3wk	2804.3	13.4	Decrease - 2wk	4.6	Decrease - 1wk					
Saginaw	E	360.4	decline [24 days]	14.6	Decrease - 3wk	2677.3	11.9	Decrease - 2wk	7.0	Decrease - 1wk					
Lansing	E	225.7	decline [28 days]	9.4	Decrease - 3wk	2555.8	16.3	Decrease - 2wk	4.6	Decrease - 1wk					
Traverse City	E	247.5	decline [25 days]	12.3	Increase - 1wk	2095.1	7.8	Decrease - 3wk	7.4	Decrease - 1wk					
Jackson	E	261.0	decline [23 days]	9.6	Decrease - 3wk	3338.0	13.7	Decrease - 2wk	3.8	<20 wkly deaths					
Upper Peninsula	E	210.2	decline [22 days]	5.8	Decrease - 3wk	2605.6	4.2	Decrease - 2wk	1.4	<20 wkly deaths					
Michigan	E	311.5	decline [25 days]	10.8	Decrease - 4wk	3198.1	13.2	Decrease - 2wk	6.2	Decrease - 1wk					
Cases	<div>Low: <7</div> <div>A: 7-20</div> <div>B: 20-40</div> <div>C: 40-70</div> <div>D: 70-150</div> <div>E: >=150</div>					Positivity	<div>Low: <3%</div> <div>A: 3-7%</div> <div>B: 7-10%</div> <div>C: 10-15%</div> <div>D: 15-20%</div> <div>E: >=20%</div>								

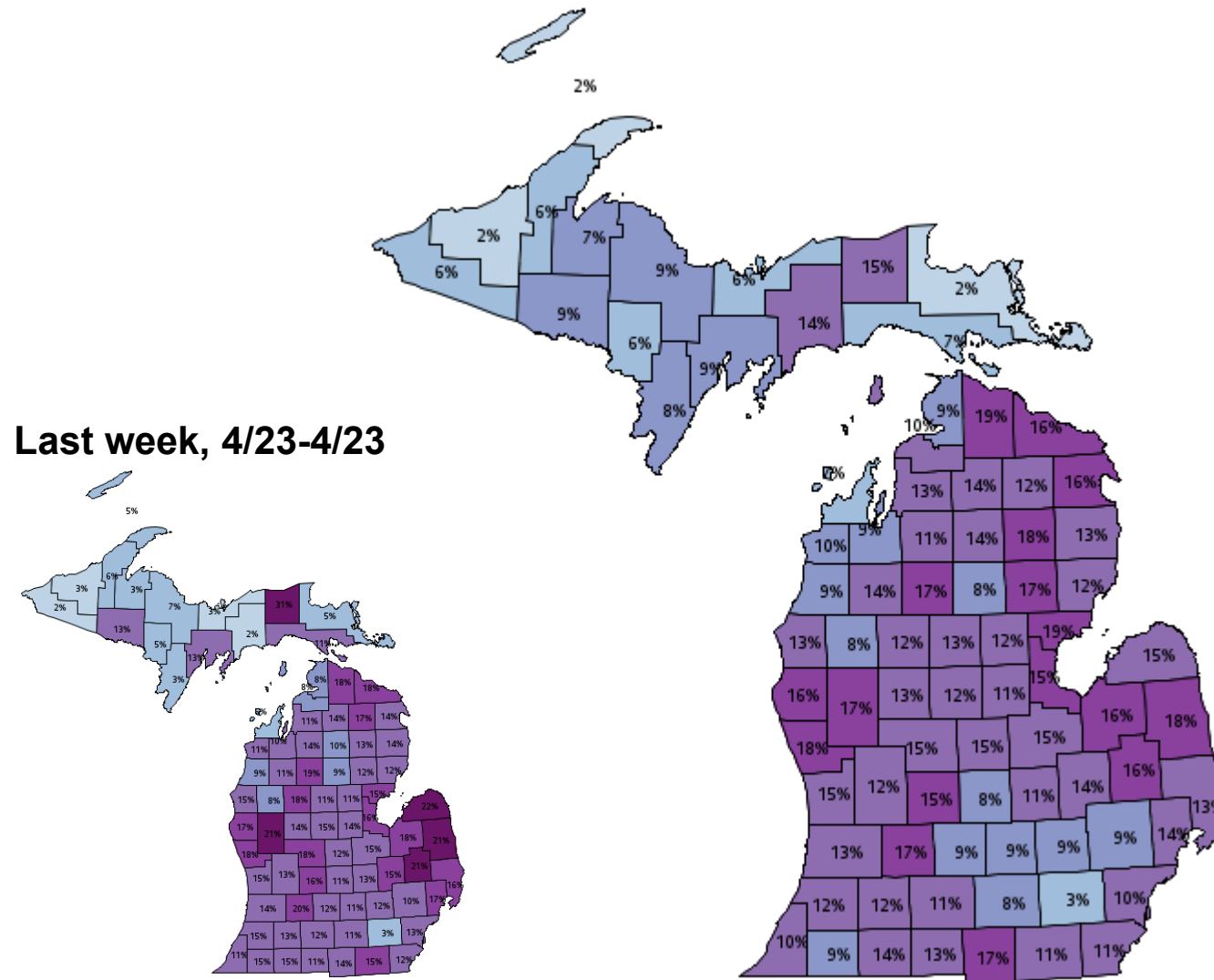
Statewide Positivity Trends

Daily positivity and 7-day rolling average positivity for Michigan



- Early in the pandemic, testing was not as robust as it has been since July 2020 to present
- Positivity is an indicator of whether we are testing enough to identify cases and an early indicator of SARS-CoV-2 transmission (as positivity decreases, we expect case rates to follow)
- **Positivity decreased by 14% between this week and last**
- Note: These are for PCR tests only and exclude tests conducted with Michigan Department of Corrections

Positivity by county, 4/30-5/6



Average positivity per day		# of counties	This week	Last week
<3%		3	4	
3-7%		7	9	
7-10%		18	6	
10-15%		38	42	
15-20%		17	17	
>=20%		0	5	

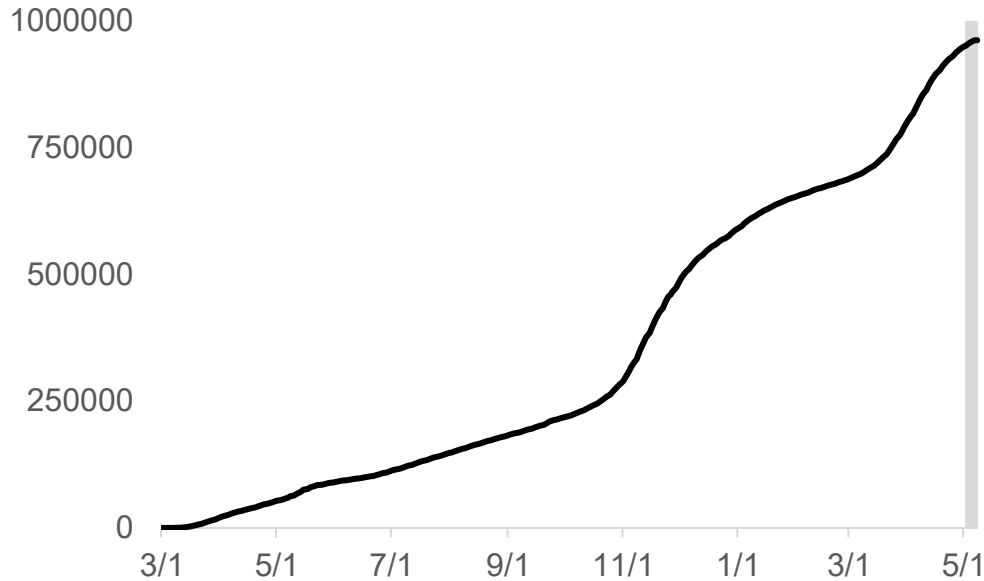
Updates since last week:

55 of 83 counties saw double digit positivity in the last week (9 county decrease)

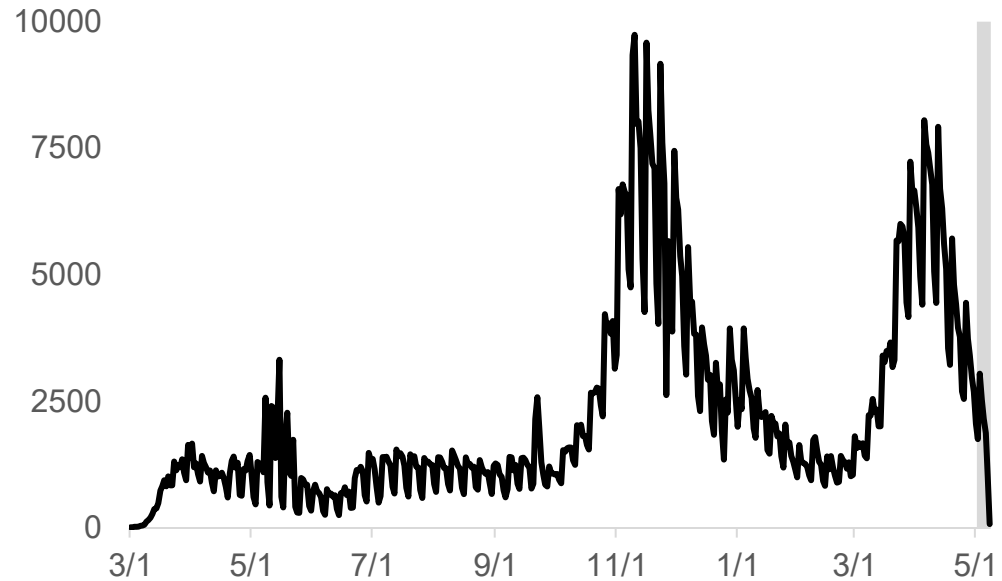
73 of 83 counties saw positivity > 7% in the last week (3 county increase)

COVID-19 cases by onset date: State of Michigan

Cumulative confirmed and probable cases, by date of onset of symptoms



New confirmed and probable cases, by date of onset of symptoms

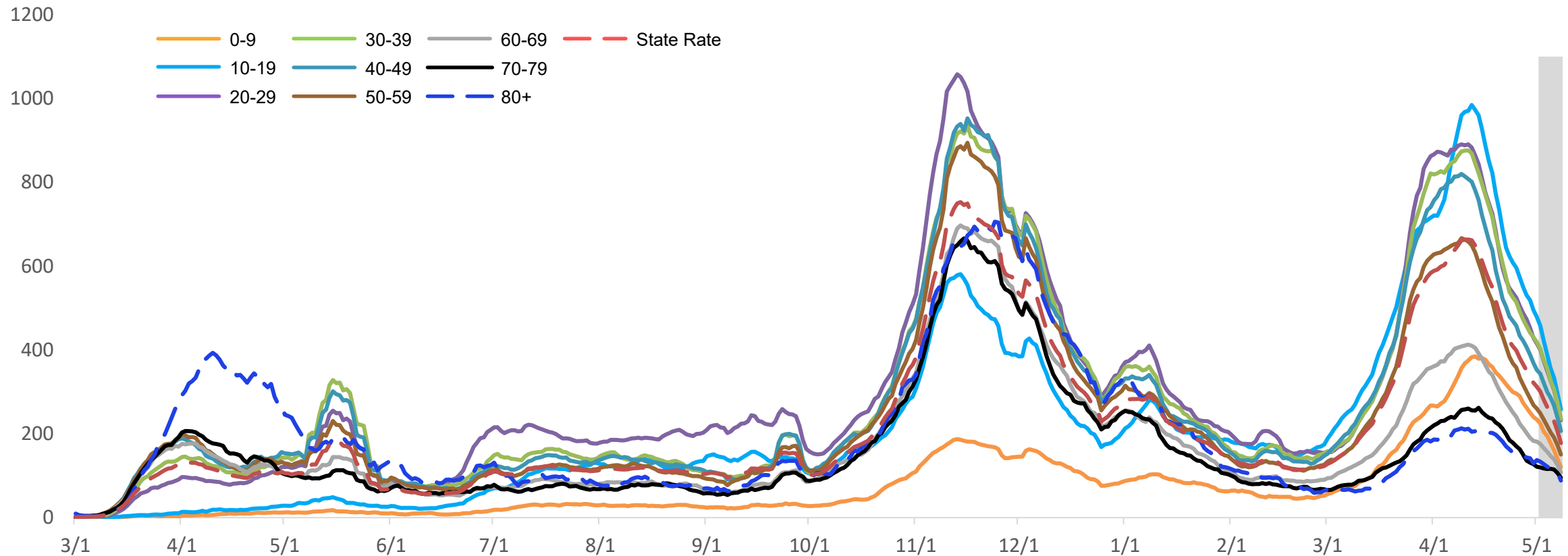


Updates since last week:

- Cases have decreased for four weeks
- Statewide case rate is at risk level E (above 150 cases/million)
- There are over 3,100 new cases per day (data through 4/24) which is down 855 from the prior week
- Over 960,000 cases since Mar 1, 2020

Age group: average new daily cases

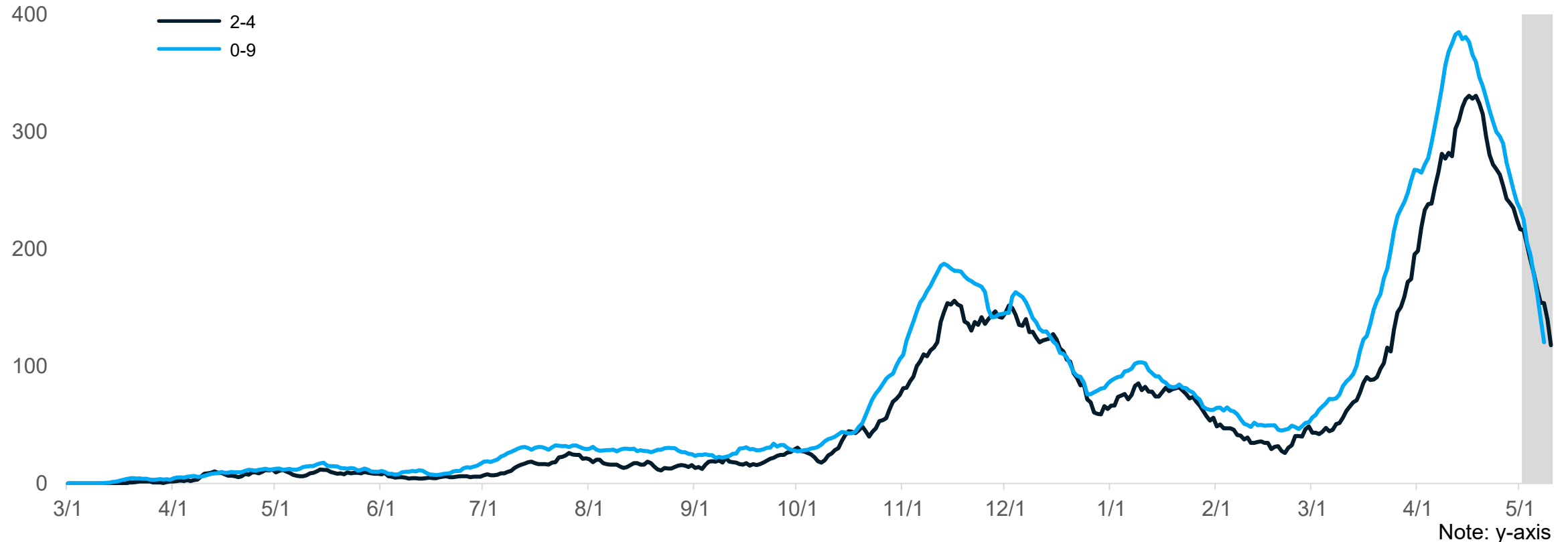
Daily new confirmed and probable cases per million by age group (7-day rolling average)



- All age groups by decade are decreasing
- Those aged 10-19 have the highest case rates, followed by 20-29 and 30-39 age groups
- Case rates for all age groups under 70 years are above 150 cases per million (Risk Level E)

Age group: average new daily cases

Daily new confirmed and probable cases per million by age group (7-day rolling average)



- Ages 0-9, including those 2-4, have seen case trends similar to the state
- Daily case rates for those aged 2-4 have peaked over 300 cases/mil in April
- Daily case rates for those aged 2-4 have been above 150 cases/million (Risk Level E) for over a month

Age group: average new daily cases and daily case rate

Daily new confirmed and probable cases per million by age group (7-day rolling average)

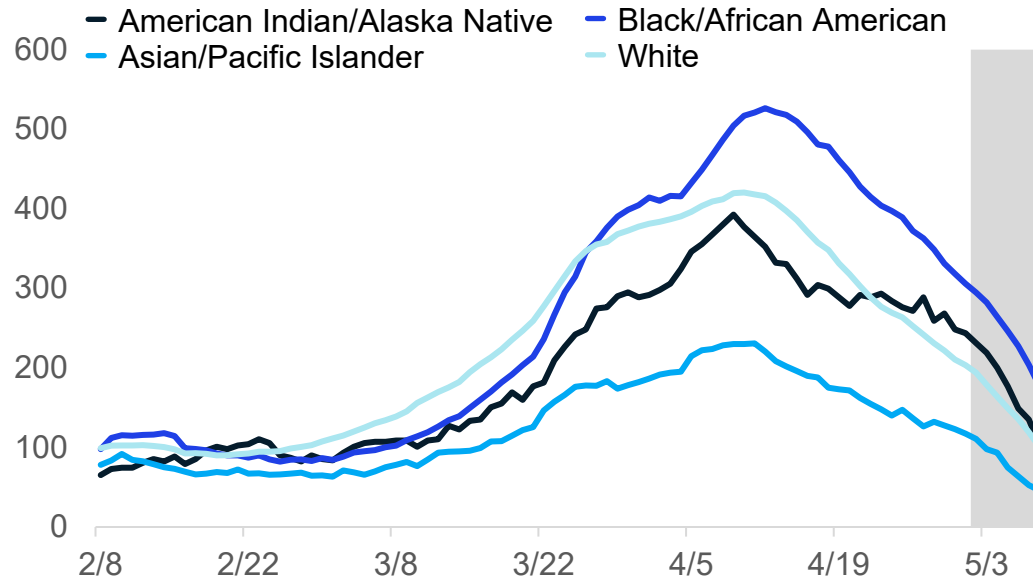
Age Group	Average daily cases	Average Daily Case Rate	One Week % Change (Δ #)	% Change since 4/11/21* (Δ #)
0-9	269.6	233.8	-22% (-66)	-38% (-141)
10-19	600.9	478.8	-21% (-129)	-51% (-492)
20-29	572.9	415.2	-23% (-121)	-53% (-475)
30-39	507.9	418.6	-20% (-107)	-52% (-458)
40-49	415.4	352.2	-25% (-117)	-56% (-456)
50-59	351.1	260.0	-29% (-108)	-61% (-399)
60-69	231.6	181.5	-28% (-70)	-56% (-231)
70-79	93.0	121.3	-32% (-57)	-53% (-139)
80+	56.9	137.3	-11% (-17)	-35% (-75)
Total [¶]	3,122.3	311.5	-24% (-855)	-53% (-3,512)

* Highest 7-day avg. following spring 2021 surge
¶ Total may not reflect state due to missing age data

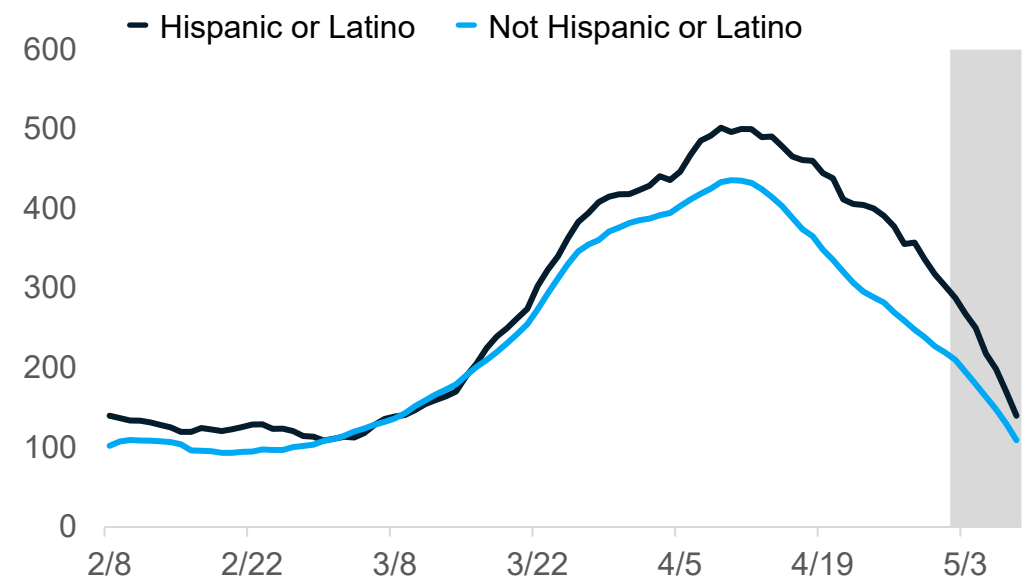
- Daily number of cases (600.9) and daily case rate (478.8 cases/mil) are currently highest for those 10-19
- All age groups under 60 are experiencing an average of more than 200 cases per day
- Since April 11, case rates have decreased more than 50% for those between the ages of 50 and 79

Average daily new cases per million people by race and ethnicity

Daily new confirmed and probable cases per million (7 day rolling average) by race category



Daily new confirmed and probable cases per million (7 day rolling average) by ethnicity category

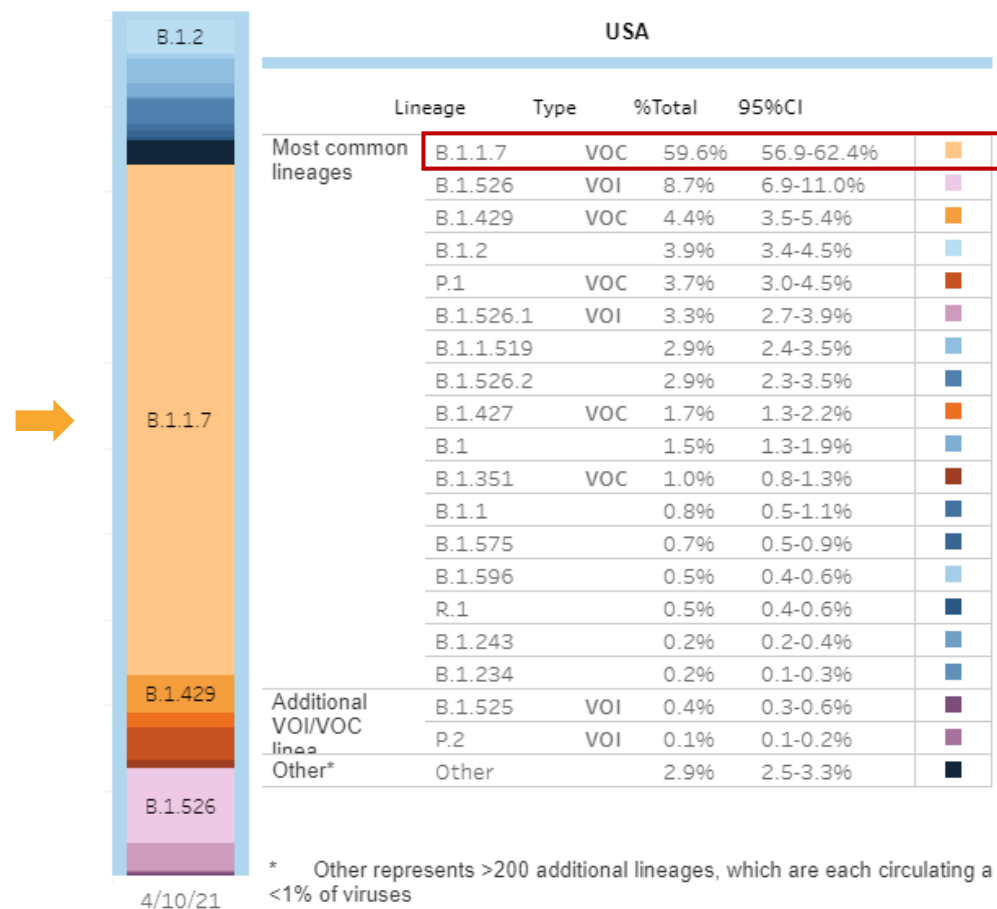


Updates since last week:

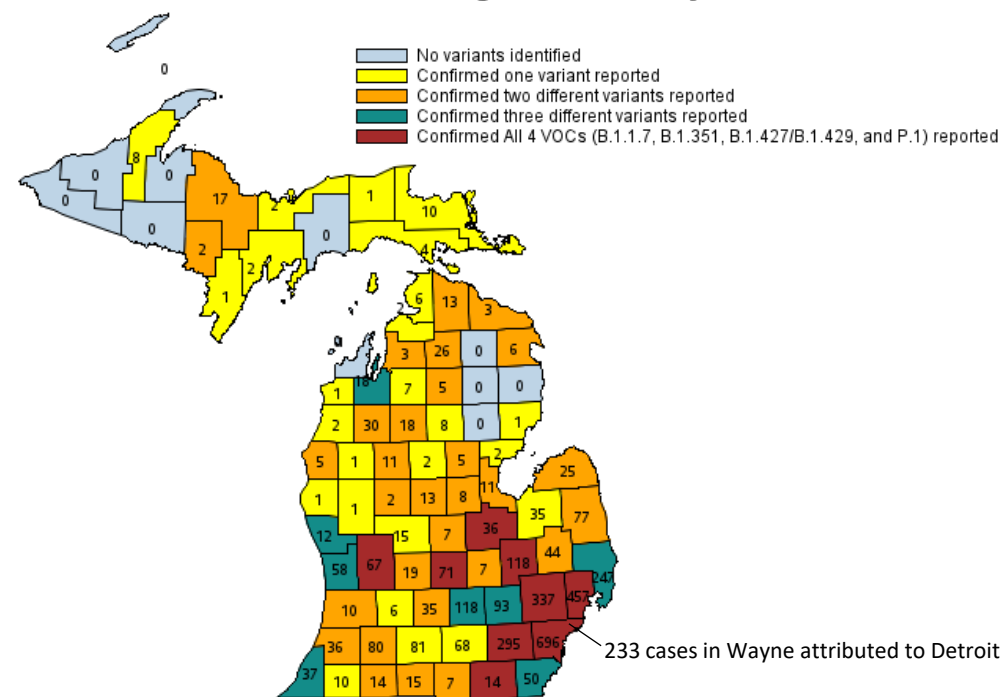
- Cases per million are decreasing for all races and ethnicities
- **Blacks and Hispanic/Latinos continue to have the highest case rates**
- In the past 30 days, 33% of all cases represent unknown, multiple, or other races (27% of race is unknown, ↓3%)
- In the past 30 days, 31% of all cases have an unknown ethnicity reported (↓3%)

Identified COVID-19 Cases Caused by All Variants of Concern (VOC) in US and Michigan

SARS-CoV-2 Variants Circulating in the United States, Mar 28 – Apr 10



Variants of Concern in Michigan, May 8



Variant	MI Reported Cases [¶]	# of Counties	CDC est. prevalence
B.1.1.7	7,764*	70	70.8%
B.1.351	41	18	0.4%
B.1.427/B.1.429	259	39	3.7%
P.1	122	21	1.2%

* 519 cases within MDOC; [¶] Numerous cases with county not yet determined

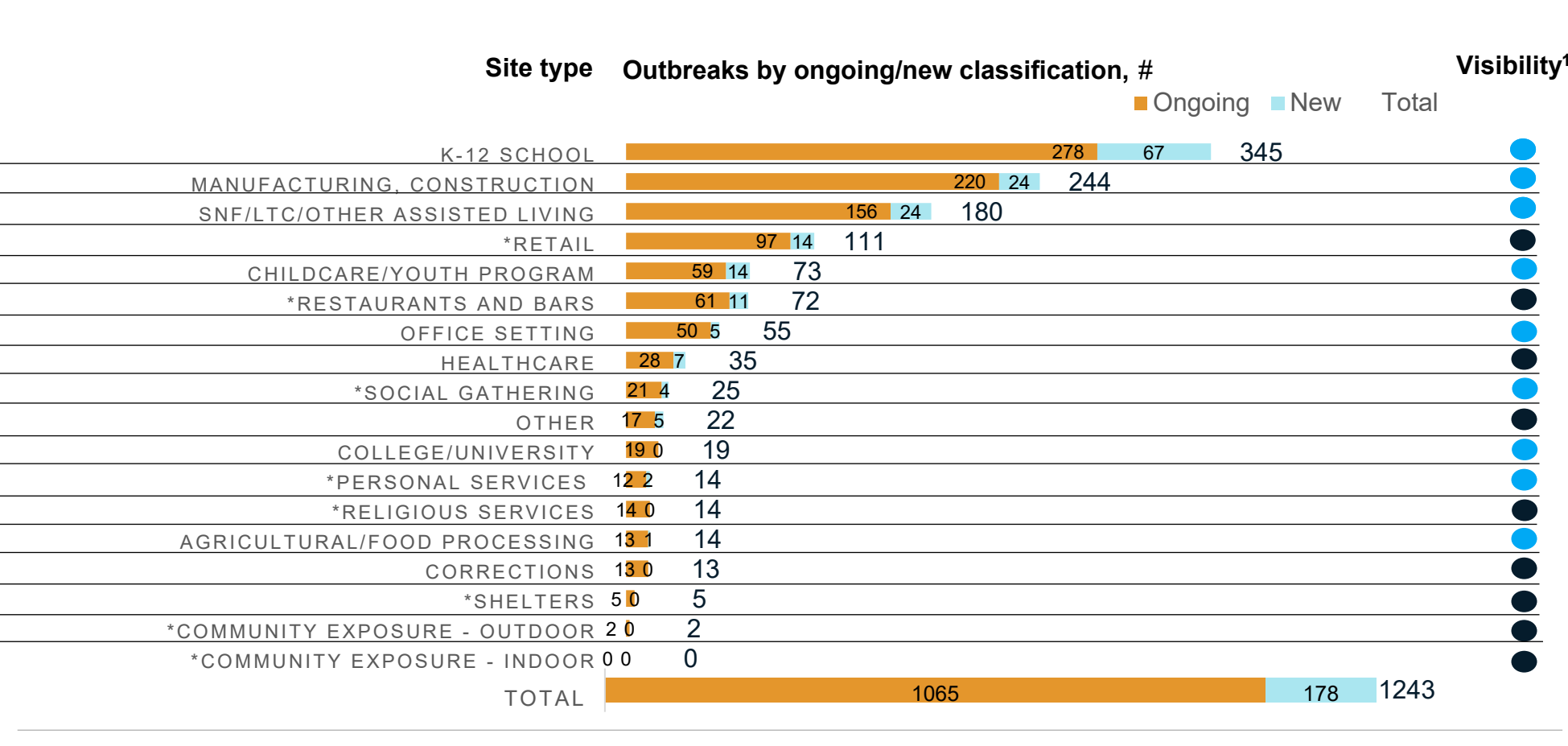
Data last updated May 10, 2021

Source: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions> and Michigan Disease Surveillance System (MDSS)

Number of outbreak investigations by site type, week ending May 6

Pre-decisional, for discussion only Draft

- Easier to identify outbreak
- Harder to identify outbreak



Total number of active outbreaks is about the same from previous week

Following K-12 (67), the greatest number of new outbreaks were reported in manufacturing/construction (24), SNF/LTC (24), childcare/youth programs (14), retail (14), and bars & restaurants (11).

LHDs reported new outbreaks in all settings except in College and Universities, Religious Services, Agriculture and Food Processing, Corrections, Shelters, and both Indoor and Outdoor Community Exposures.

1. Based on a setting's level of control and the extent of time patrons/residents spend in the particular setting, different settings have differing levels of ability to ascertain whether a case derived from that setting

NOTE: Many factors, including the lack of ability to conduct effective contact tracing in certain settings, may result in significant underreporting of outbreaks. This chart does not provide a complete picture of outbreaks in Michigan and the absence of identified outbreaks in a particular setting in no way provides evidence that, in fact, that setting is not having outbreaks.
Source: LHD Weekly Sitreps

COVID-19 K-12 Sports Related Clusters and Cases

Cumulative Since Jan 2021 through May 2021



491 cases
123 clusters



363 cases
56 clusters



280 cases
72 clusters



108 cases
23 clusters



65 cases
33 clusters



44 cases
4 clusters



48 cases
15 clusters



36 cases
9 clusters

27 cases
13 clusters



24 cases
11 clusters



19 cases
10 clusters



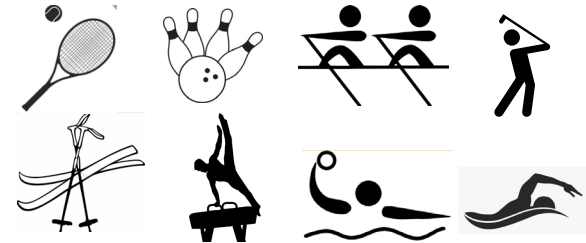
15 cases
8 clusters



14 cases
3 clusters



28 cases
17 clusters



- Cases identified by local public health which include school-affiliated and club/travel/regional sports (spectators, collegiate, and professional sports as well as secondary cases to collegiate/professional sports are excluded)
- Since January 2021, basketball, hockey, and wrestling have had the highest number of cases and clusters
- Largest number of new clusters identified in spring sports of baseball/softball, volleyball, lacrosse, soccer, and track
- Cases and clusters have occurred in 24 different sport settings

COVID-19 and Healthcare Capacity and COVID Severity

Multisystem Inflammatory Syndrome in Children (MIS-C) has been identified in 115 (↑9) children in Michigan

- Majority of cases are male, between the ages of 5-10, Caucasian, and non-Hispanic/Latino

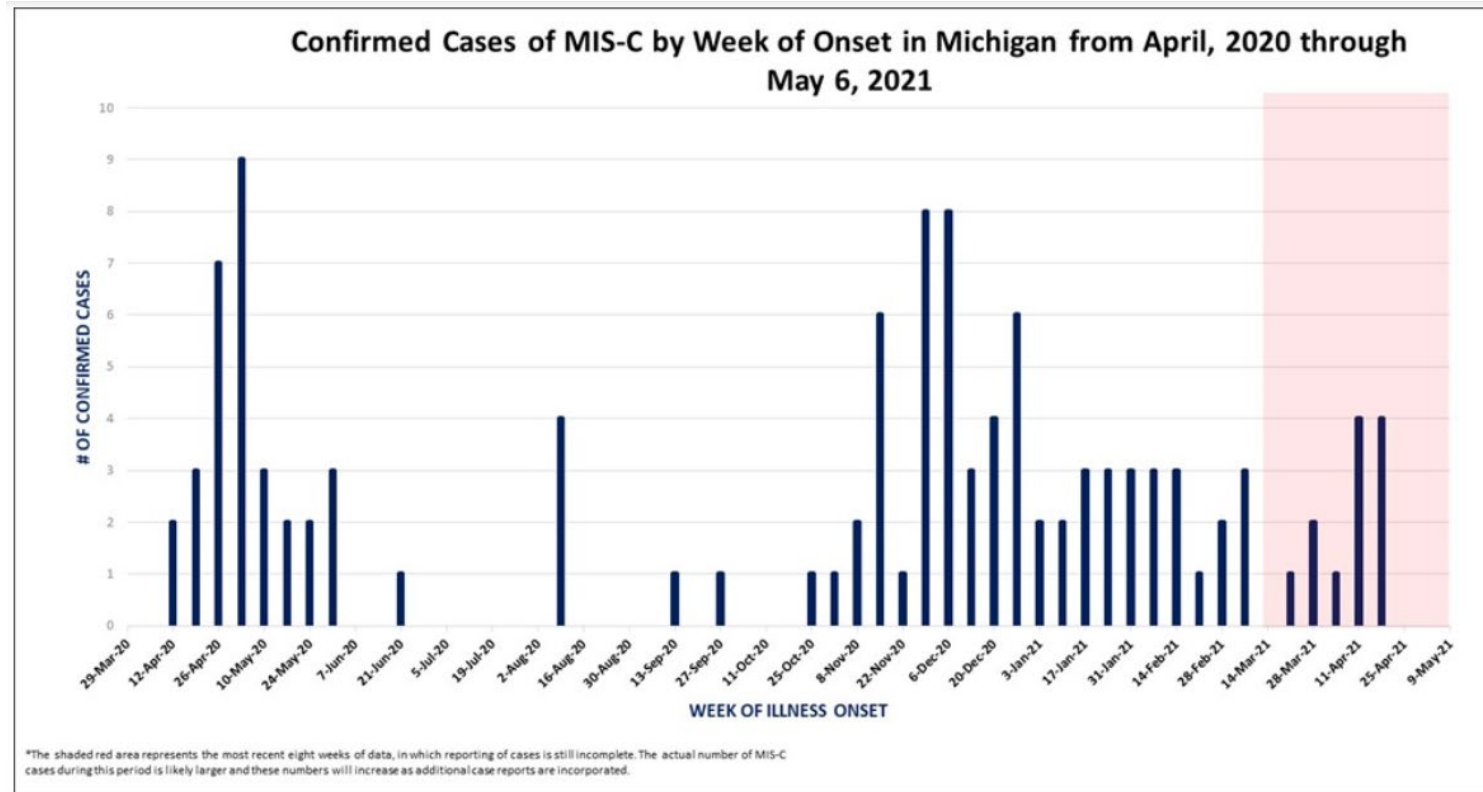
Hospitalizations and ICU utilization are decreasing

- COVID-like illness (CLI) has fallen to 5.3% (vs. 6.4% last week)
- Hospital admissions are decreasing statewide and for most age groups
- Hospitalizations down 22% since last week (vs. 19% decline week prior)
- All regions are showing decline in hospitalization trends this week
- Volume of COVID-19 patients in intensive care has decreased 15% since last week (vs. 10% decline week prior)

Death rate has decreased to 6.2 daily deaths per million people

- First decrease in mortality in two months
- 12% decrease since last week
- Proportion of deaths among those *under 60 years* of age is increasing

Multisystem Inflammatory Syndrome in Children (MIS-C)



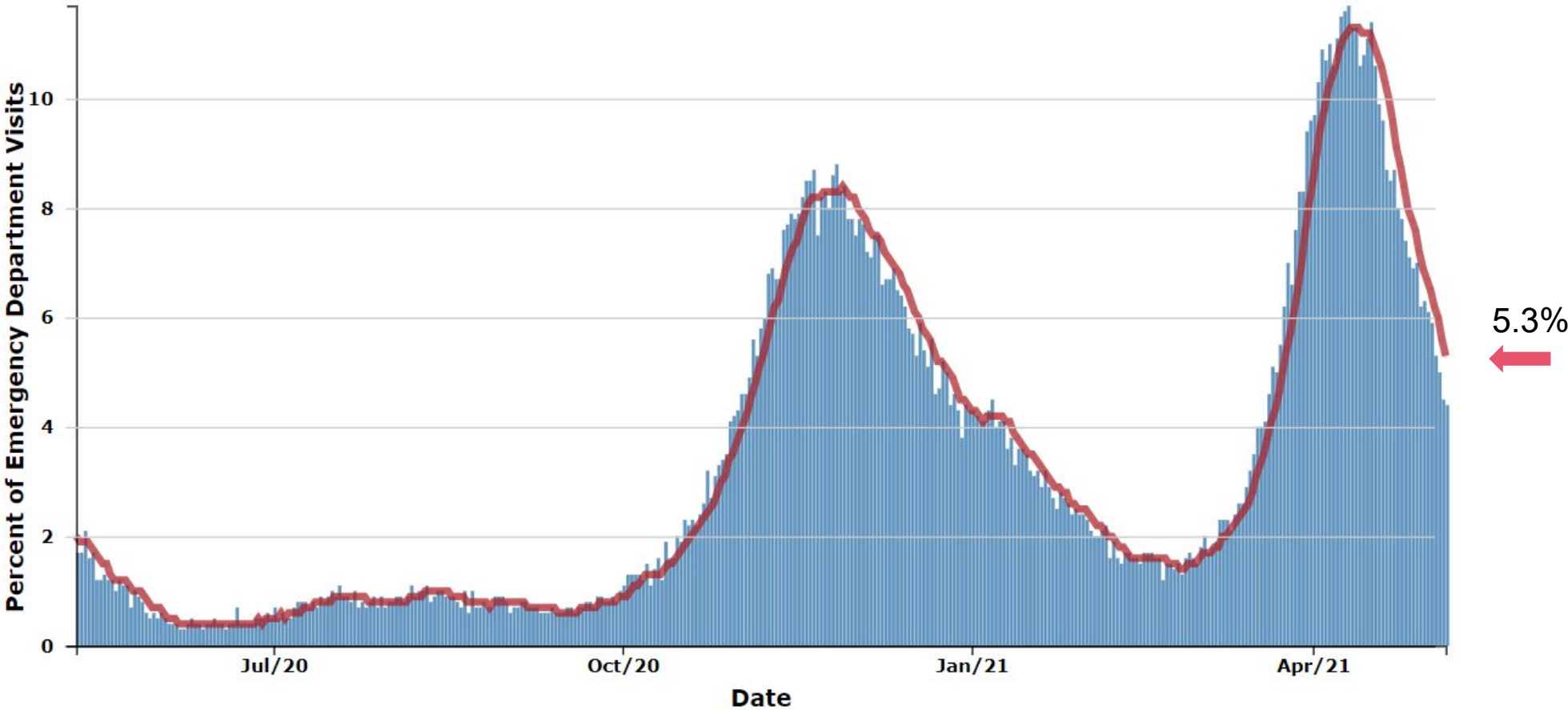
Red shading indicates the expected reporting lag for new cases. Cases with onset dates in this time period may not have been detected or reported yet.

Multisystem Inflammatory Syndrome in Children (MIS-C) Michigan Data Summary 5/6/2021

# Cases Confirmed and Reported to CDC*	115
MIS-C associated Deaths	5 or fewer
Cases admitted to ICU	80 (69.6%)
Onset Date Range	04/14/20 to 4/21/2021
Age Range	0-20 years

Michigan Trends in Emergency Department Visits for COVID-19-Like Illness (CLI)

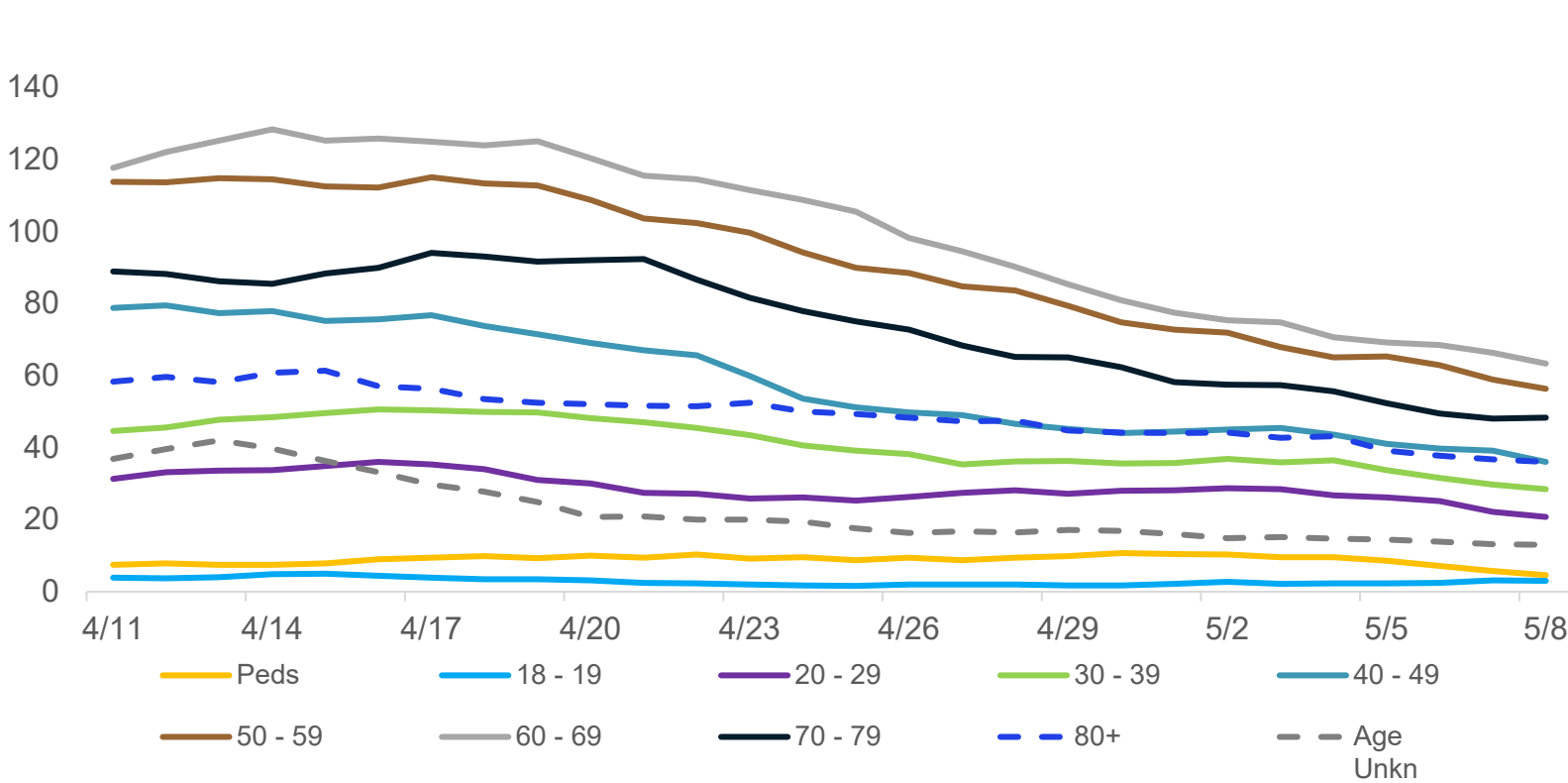
Percentage of ED visits with Diagnosed COVID-19 in Michigan



Source: <https://covid.cdc.gov/covid-data-tracker/#ed-visits>

Average Hospital Admissions by Age

Confirmed COVID-19 Hospital Admissions by Age Group - Statewide Rolling Weekly Average



Age Group	Daily Avg Adm.	One Week % Change (#)	% Change since 4/14* (#)
Peds	1-5	-56% (-5.9)	-38% (-1-5)
18-19	1-5	40% (1-5)	-38% (-1-5)
20-29	20.7	-26% (-7.4)	-39% (-13.0)
30-39	28.4	-20% (-7.3)	-41% (-20.0)
40-49	36.0	-19% (-8.4)	-54% (-41.9)
50-59	56.3	-23% (-16.4)	-51% (-58.1)
60-69	63.3	-18% (-14.1)	-51% (-65.0)
70-79	48.3	-17% (-9.9)	-43% (-37.1)
80+	36.0	-18% (-8.0)	-41% (-24.7)
Total [¶]	309.6	-20% (79.6)	-48% (-291)

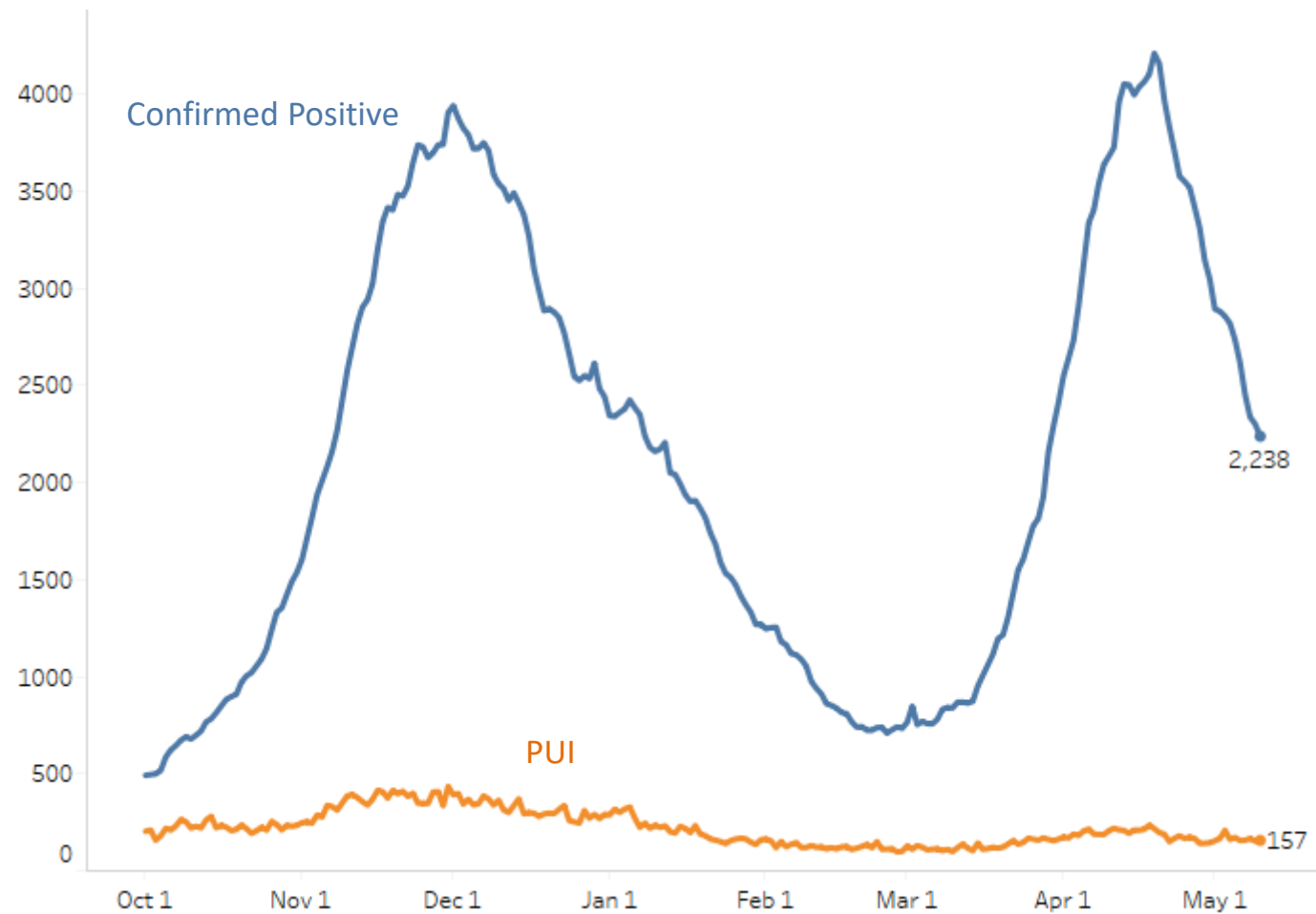
* Highest 7-day avg. hosp. adm. following Spring 2021 surge

¶ Total may not reflect state due to missing age data

- Currently, there are approximately 310 daily hospital admissions for COVID-19
- Over the past week, those 60-69 have seen the highest avg. daily hospital admissions (63 admissions)
- Since the Apr 14 high, those 40-69 have seen the > 50% decrease in avg. daily hospital admissions

Statewide Hospitalization Trends: Total COVID+ Census

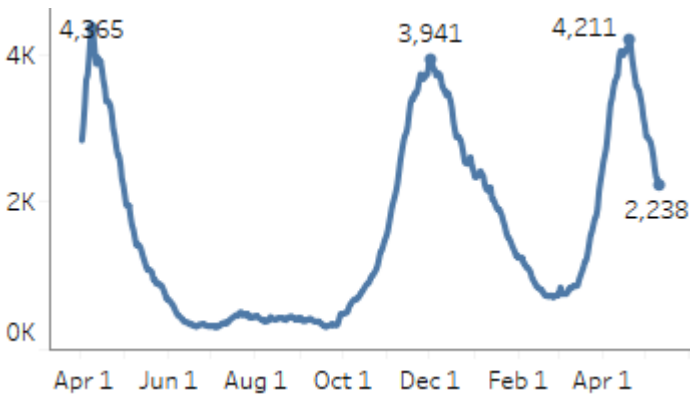
Hospitalization Trends 10/1/2020 – 5/10/2021
Confirmed Positive & Persons Under Investigation (PUI)



COVID+ census in hospitals continues to decline from the April 19th peak.

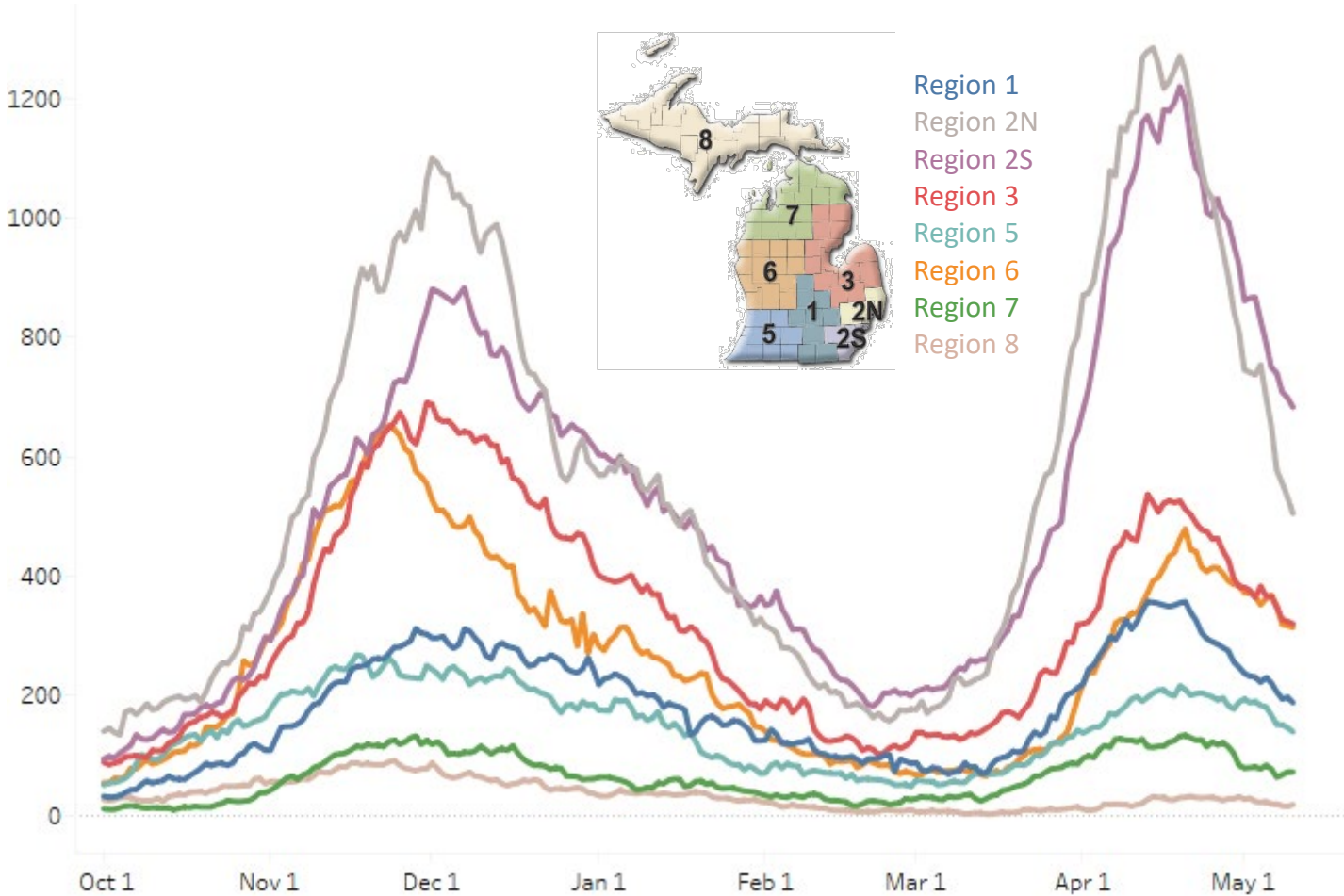
This week is down 22% from the previous week (previous week was down 19%).

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 10/1/2020 – 5/10/2021
Confirmed Positive by Region



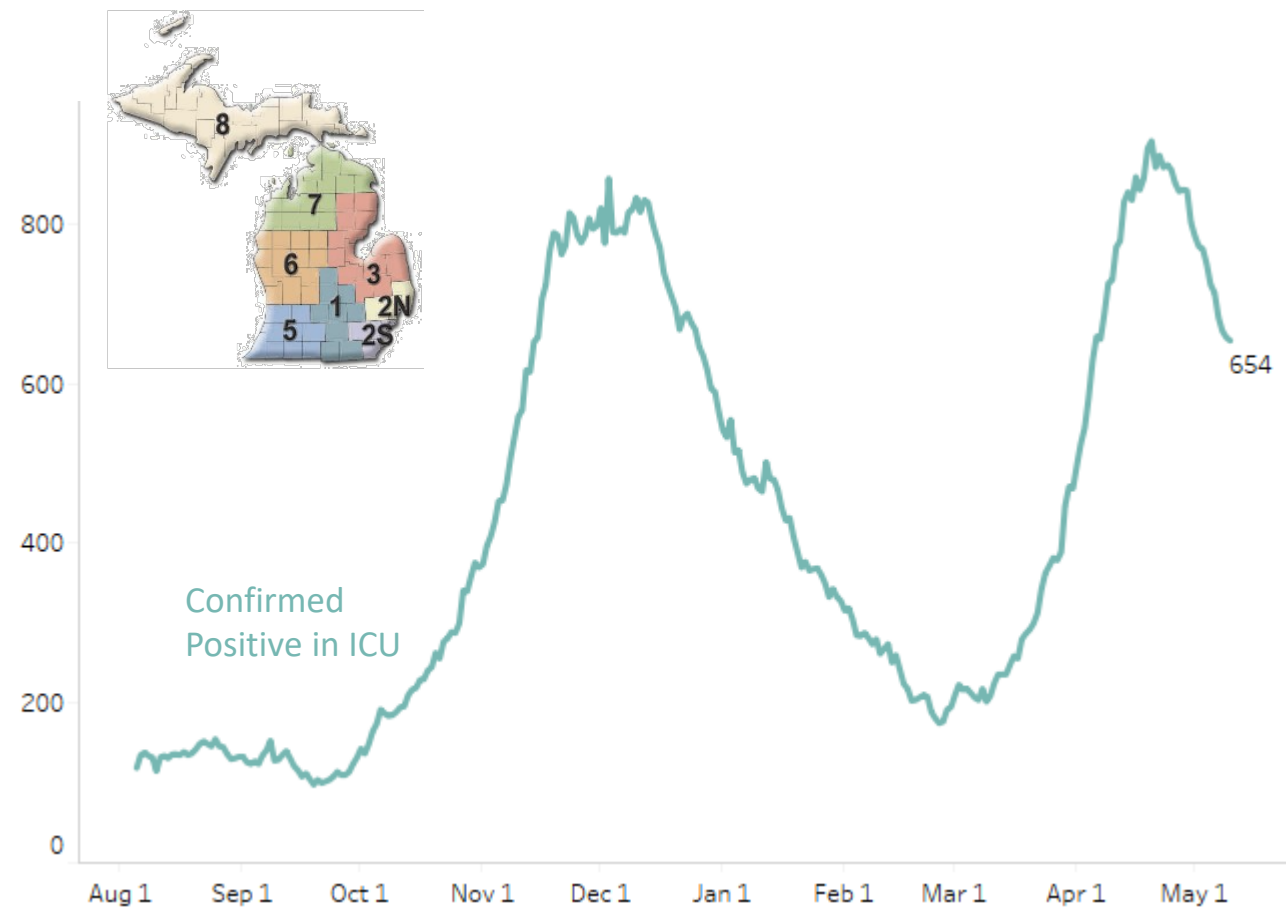
All regions are showing decreasing COVID+ census trends this week.

Only Region 2S is above 300/M population hospitalized and 4 regions (Regions 1, 5, 7, and 8) are now below 200/M hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	188 (-19%)	174/M
Region 2N	505 (-31%)	228/M
Region 2S	683 (-21%)	307/M
Region 3	320 (-12%)	282/M
Region 5	139 (-27%)	146/M
Region 6	314 (-14%)	214/M
Region 7	72 (-10%)	144/M
Region 8	17 (-23%)	55/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 8/1/2020 – 5/10/2021
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased 15% from last week, with all regions showing decreases.

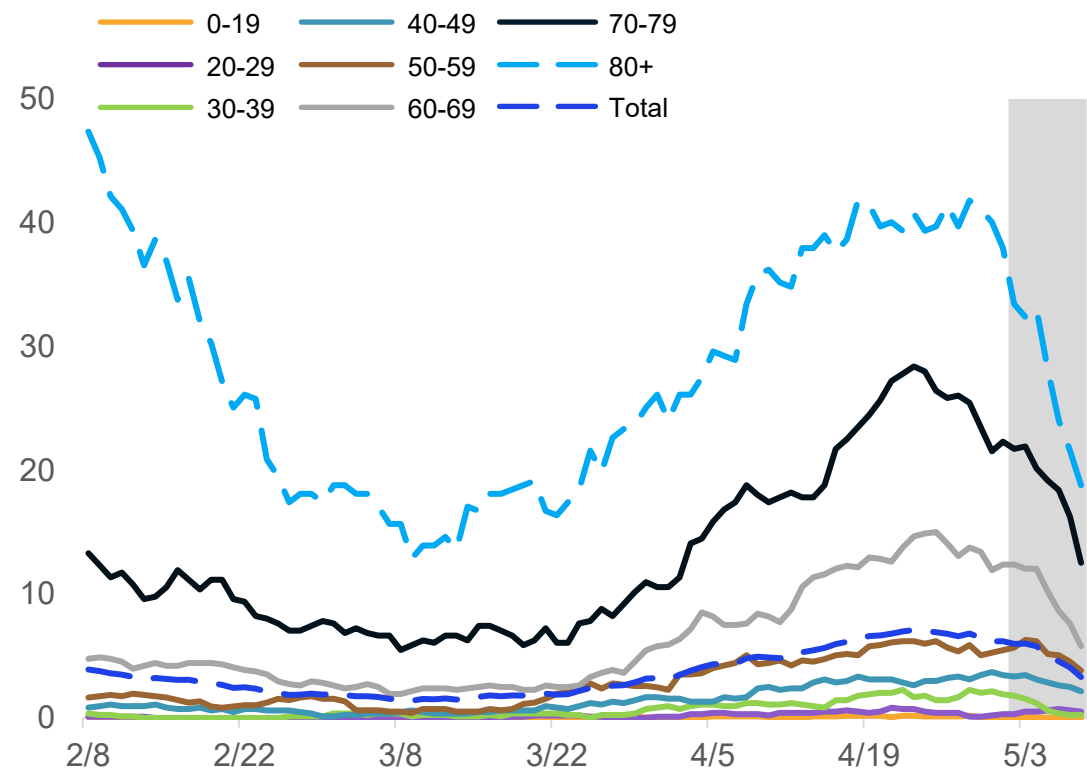
Region 6 continue to have >35% ICU beds occupied with COVID patients.

Region	Adult COVID+ in ICU (% Δ from last week)	Adult ICU Occupancy	% of Adult ICU beds COVID+
Region 1	50 (-11%)	93%	25%
Region 2N	122 (-22%)	85%	20%
Region 2S	214 (-14%)	86%	27%
Region 3	97 (-9%)	90%	26%
Region 5	36 (-16%)	77%	22%
Region 6	102 (-6%)	85%	38%
Region 7	27 (-33%)	71%	15%
Region 8	6 (-26%)	66%	10%

Hospital bed capacity updated as of 5/7

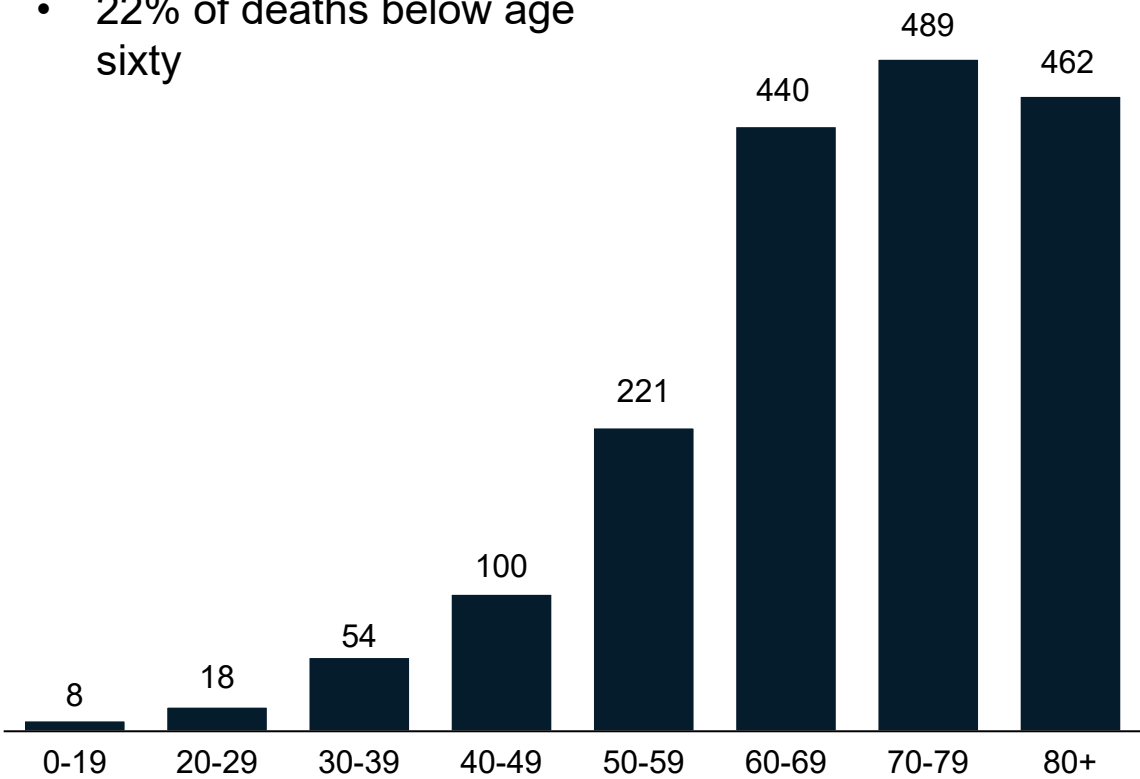
Average and total new deaths, by age group

Daily confirmed and probable deaths per million by age group (7 day rolling average)



Total confirmed and probable deaths by age group (past 30 days, ending 5/1/2021)

- 22% of deaths below age sixty

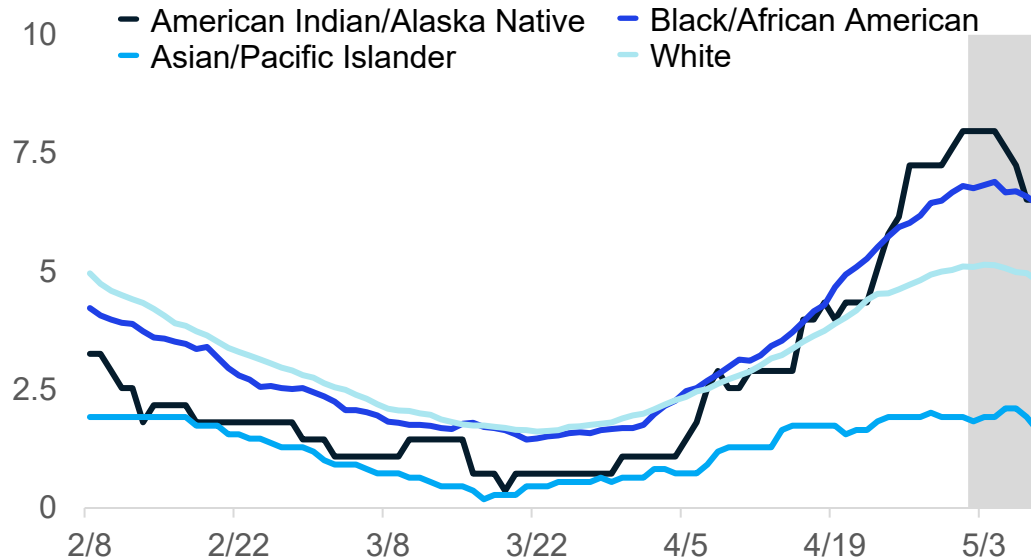


Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.

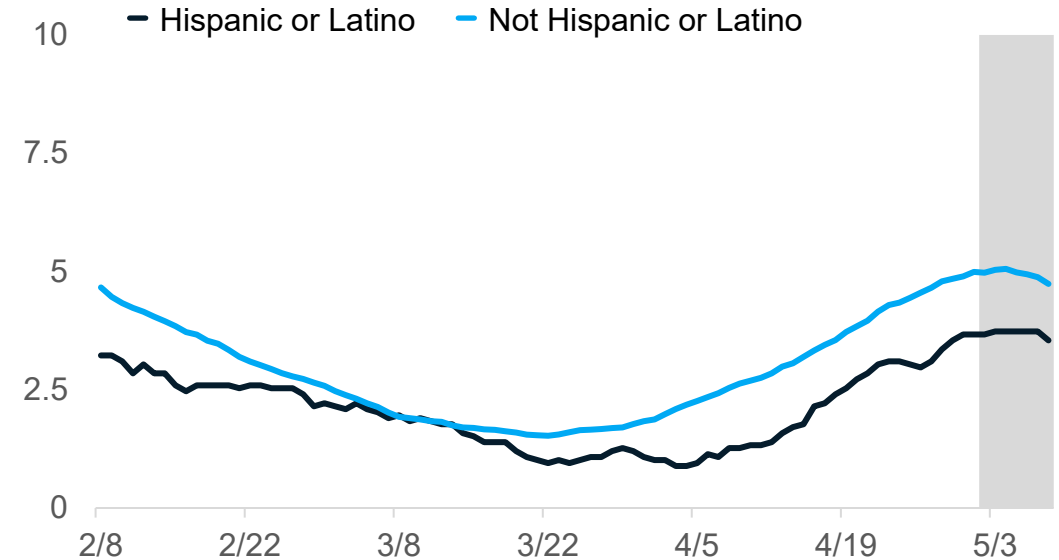
Source: MDHHS – Michigan Disease Surveillance System

30-day rolling average daily deaths per million people by race and ethnicity

Average daily deaths per million people by race



Average daily deaths per million people by ethnicity



Updates since last week:

- Deaths are a lagging indicator of cases
- Several racial and ethnic groups are seeing an increase in COVID deaths
- **American Indian/Alaskan Natives, Blacks and Non-Hispanics/Latinos have the most reported deaths per capita**
- Deaths are not adjusted for confounders (e.g., age, sex, comorbidities)

Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.

Source: MDHHS – Michigan Disease Surveillance System

How is public health capacity?

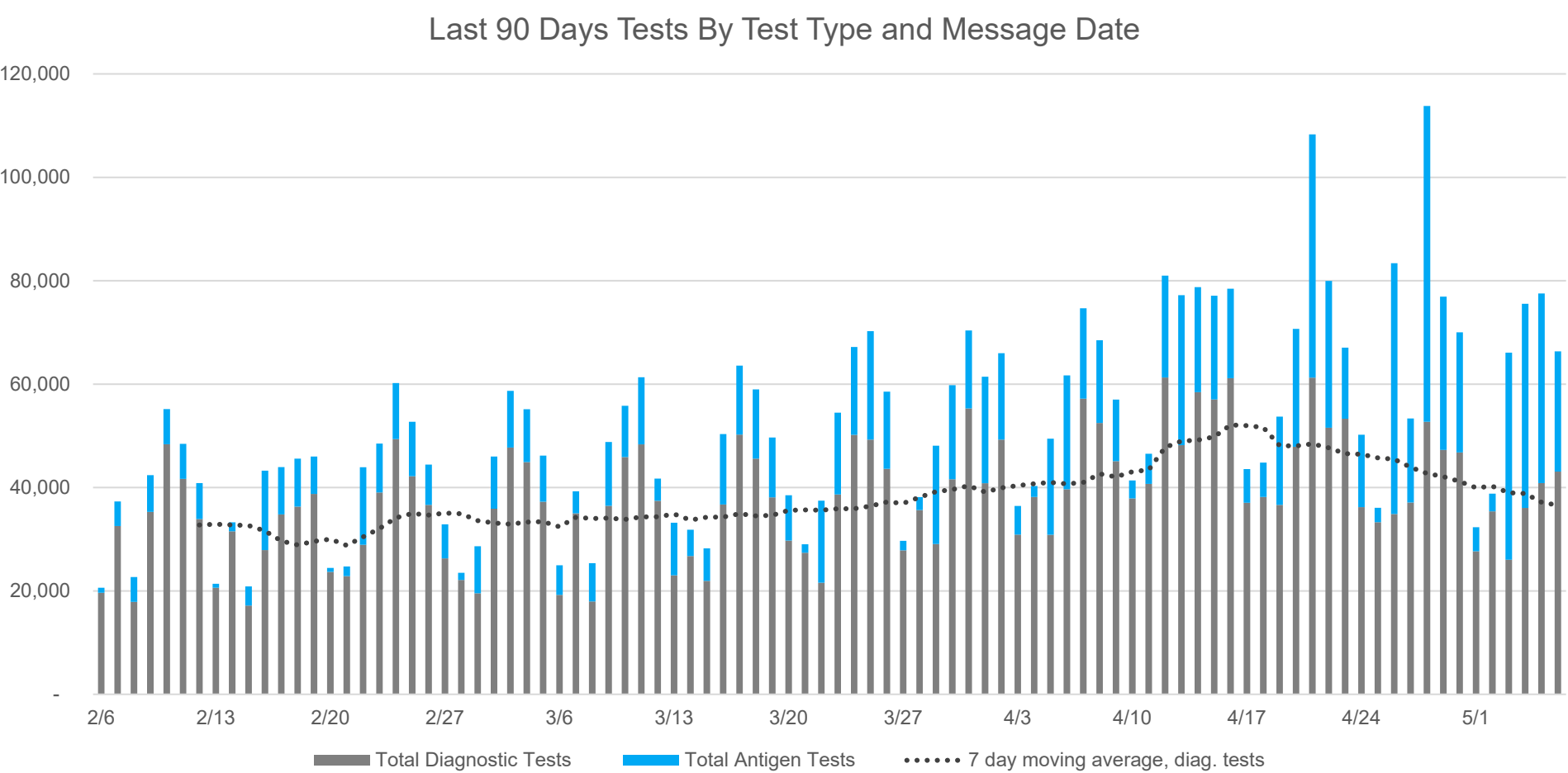
Diagnostic testing volume (PCR and antigen) has decreased slightly from last week

- PCR testing decreased since last week
- Percent of antigen tests have increased since last week

Cases identified for investigations has declined

- Number of cases not investigated this week (10,165) is 36% lower than prior week (15,881)
 - As cases have decreased, the percent of interviews attempted has improved
- Consistent low proportion of cases interviewed with a source of known infection (indicating community acquisition)
- Consistent low proportion of those quarantining when their symptoms begin (indicating no effective halt in community transmission)

Daily diagnostic tests, by message date



Weekly Update

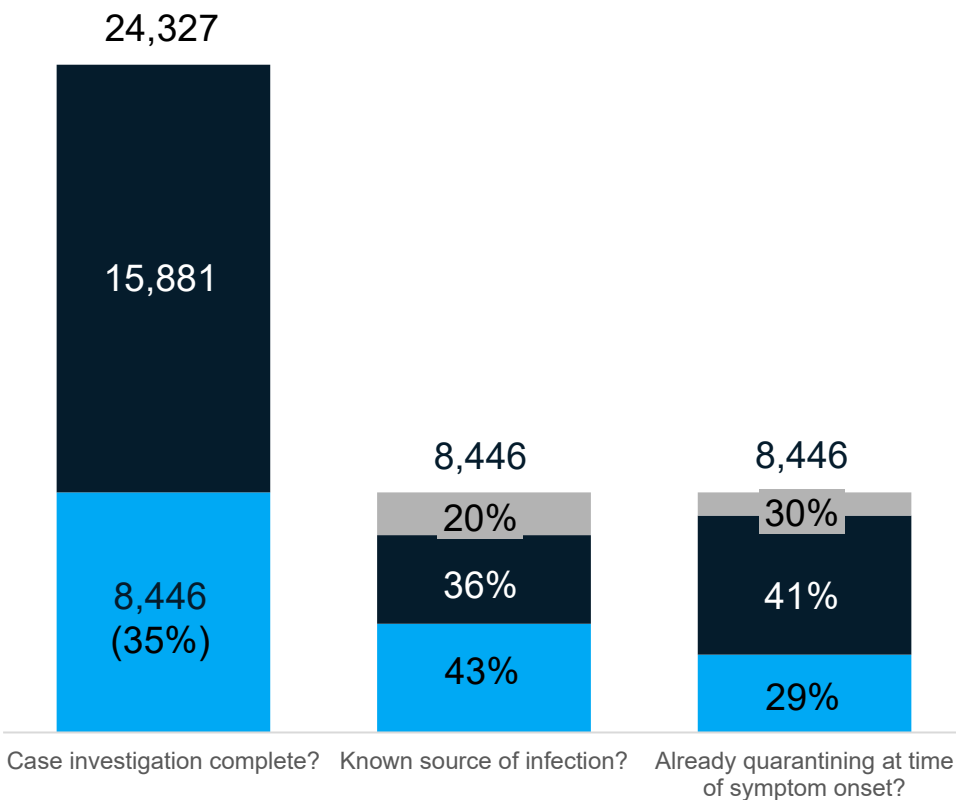
- 60,950 rolling 7-day average daily diagnostic tests reported to MDHHS (PCR + Ag) (↓)
- 36,556 average daily PCR tests (↓)
- 40.0% are antigen tests over the past week (↑)
- 10.8% positivity in PCR tests (↓)

New Case Investigation Metrics (Statewide)

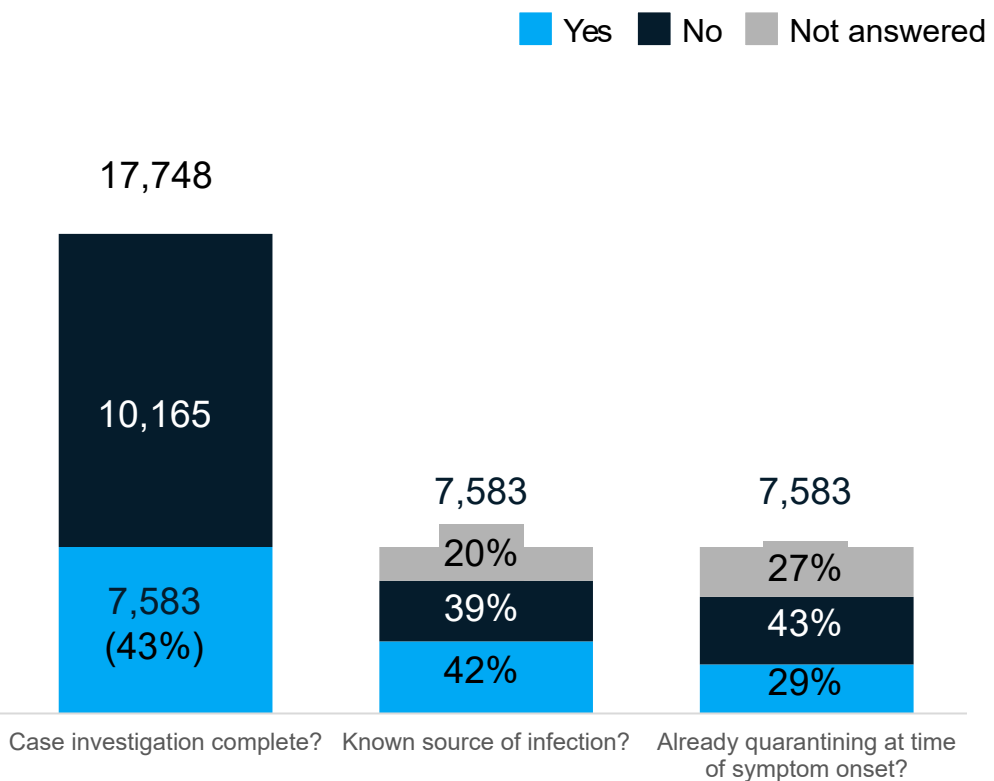
New Communicable Disease metrics this week:

- Number of cases identified for investigations (↓), and percent of completed interviews (↑) have improved from prior week
- 42% of investigated cases having a known source (43% last week, 50% week prior)
- 29% of investigated cases noted that they were quarantining before symptoms (29% last week)

04/24-04/30 Case report form information



05/01-05/07 Case report form information



COVID-19 Vaccination

Eligibility

- FDA [authorized](#) Pfizer-BioNTech COVID-19 Vaccine for emergency use in adolescents 12 and older.
- [Advisory Committee on Immunization Practices](#) meeting on May 12 to discuss a recommendation for the use of this vaccine for the prevention of COVID-19 in persons aged 12 years and older.

Administration

- 8th among all states for doses administered; 8th for number fully vaccinated ([CDC data tracker](#) 5/10/2021)
- 77.2% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 5/9/2021)
- Weekly doses administered declined for four weeks

Coverage

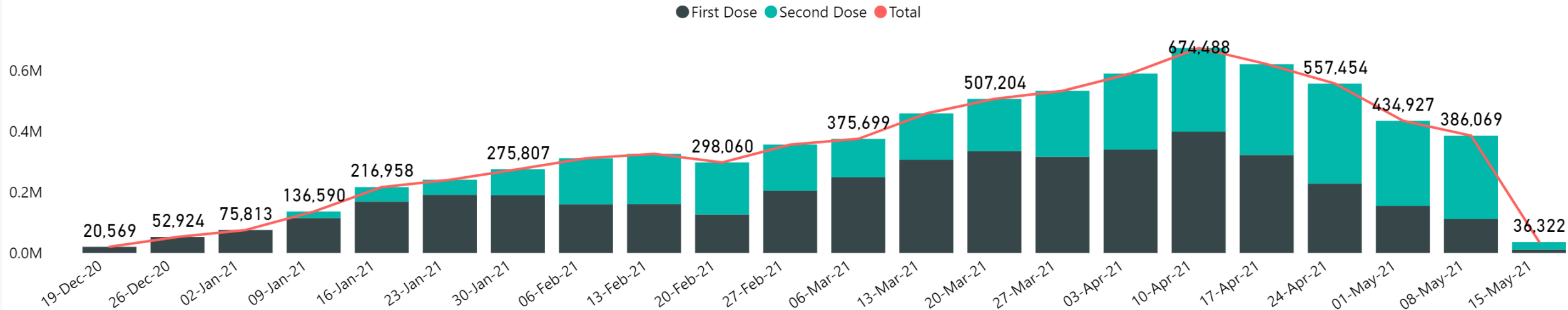
- 55% of MI residents age 16+ initiated vaccination and 44.7% completed the series ([CDC data tracker](#) 5/10/21)
- Coverage is highest among 65-75 and 75+ age groups, but more than 67% of people 50-64 have started vaccine
- Initiation coverage was highest among Asian, Native Hawaiian or Pacific Islander individuals (MI Covid Vaccine Dashboard 5/11/21)

Vaccinated Individuals Who Test Positive

- Number of cases who are fully vaccinated (n=4,031) is not in excess of what might be expected with vaccines with 95% efficacy.

Doses Delivered and Administered, and Coverage as of 5/11

COVID Vaccine Doses Administered by Date / Week Ending Date (K = Thousand, M = Million)



10,118,055 doses delivered to Michigan providers*

7,735,604 doses Administered (CDC tracker) – MI detail on 7,489,457

- 61,550 in Ohio

77.2% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 5/9/2021)

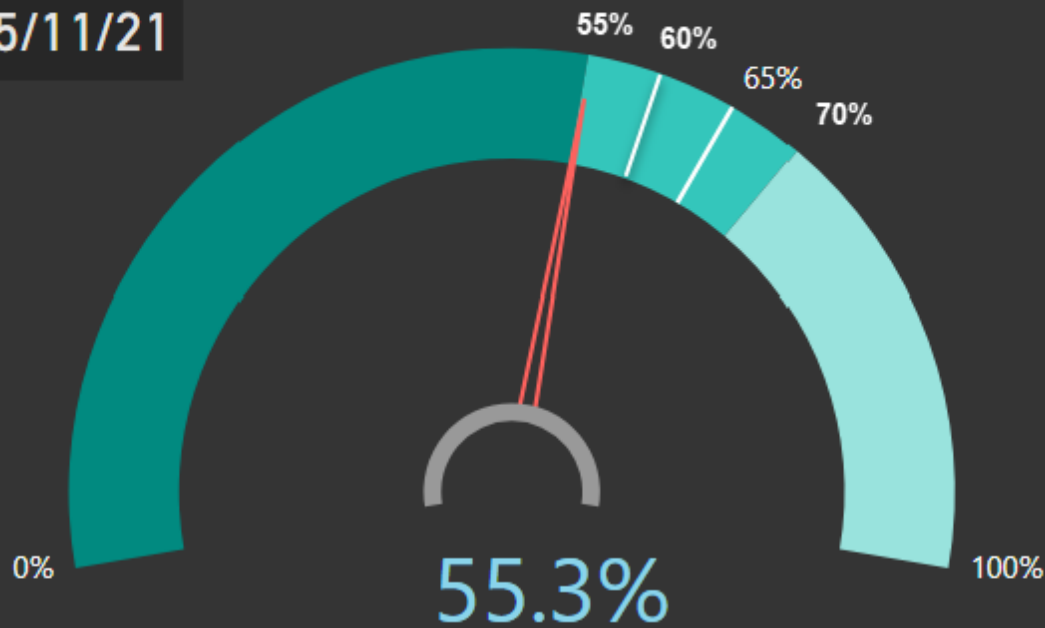
- Last two weeks less than 500,000 doses administered in a week
- 386,069 doses administered last week (down ~48,800 doses over previous week). Loss is in first doses.

*Includes state allocated doses ordered by State of Michigan, SOM allocation transferred to federal programs, and federal doses from federal programs to Michigan providers. Does not include federal doses sent to federal providers (i.e., Veteran's Administration hospitals, federal prison system, or Department of Defense programs). The State of Michigan does not have control over how much vaccine is allocated or administered by Federal program.

55.3% of 16+ years have had at least one dose of vaccine

Michigan Vacc to Normal Tracker

Data as of:
5/11/21



4,474,136 MI residents age 16+ with 1+ dose = 55.3%

Milestone achieved 5/10/2021
55% (4,453,304 residents age 16+), plus 2 weeks

STEP 1 start date: 5/24/2021

STEP 2: 60% (4,858,150 residents age 16+), plus 2 weeks

STEP 3: 65% (5,262,996 residents age 16+), plus 2 weeks

STEP 4: 70% (5,667,842 residents age 16+), plus 2 weeks

Coverage Demographics as of 5/11/2021

55% of MI residents age 16+ have initiated COVID vaccination (CDC)

3,621,896 people completed series (CDC)

Age Group (Michigan dashboard)

- 67.5% of those 50+ started vaccine series vs 38.8% of 16-49 years
- 69.6% people aged 65 or older have completed their vaccine series

Race/Ethnicity

- Initiation coverage highest among those of Asian, Native Hawaiian or Pacific Islander Race (44.9%) then NH (Non-Hispanic) White (39.7%), American Indian (39.3%), NH Black or African American (26.8%) Races, and Hispanic (29.8%) ethnicity

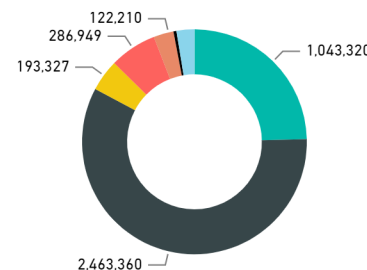
- 24.6% data missing or unknown

COVID Vaccination - State Level Race Metrics

Dashboard Updated: May 11, 2021. "Completion" is the percentage of Michigan residents receiving 2 doses of Pfizer or Moderna or 1 dose of J&J. "Initiation" is the percentage who have received either 1 or more doses of ANY vaccine. See the "Learn More" page to learn how percentages are calculated.

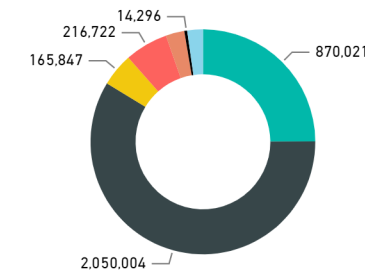
Dose Initiation by Ethnicity - Race

Unknown NH White NH Other ... NH Black

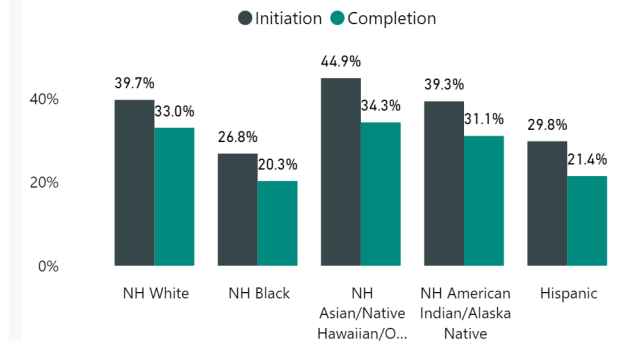


Dose Completion by Ethnicity - Race

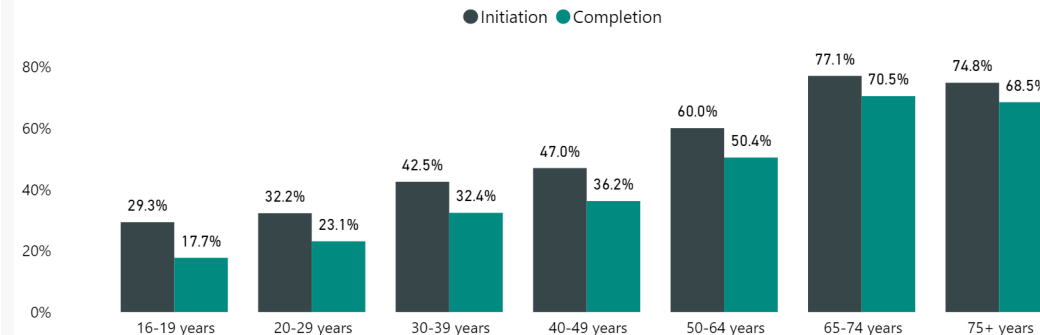
Unknown NH White NH Other ... NH Black



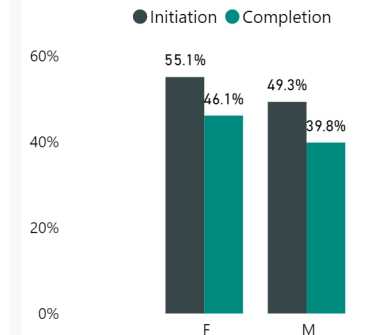
Coverage by Race - State Level



Coverage by Age Group



Coverage by Sex



Potential COVID-19 Vaccination Breakthrough Cases

Process:

- Michigan part of CDC's nationwide investigation ([COVID-19 Breakthrough Case Investigations and Reporting | CDC](#))
- Weekly match COVID-19 cases to records of all fully vaccinated persons
- Absence of a positive test less than 45 days prior to the post-vaccination positive test
- Send data to CDC and, if available, gather respiratory specimens for whole genome sequencing

Michigan Data (1/1/21 through 5/4/21):

- 4,937 cases met criteria based on a positive test 14 or more days after being fully vaccinated
- Less than 1% of people who were fully vaccinated met this case definition
 - Includes 59 deaths (56 persons age 65 years or older)
 - 199 cases were hospitalized

Summary Points:

- Number of potential cases identified to date is not in excess of what might be expected with vaccines with 95% efficacy.
- Proportions of those symptomatic, hospitalized, and who died are all lower than those who are unvaccinated.
- Continue to encourage precautions while out in public, including wearing masks, washing hands and social distancing, even after receiving the vaccine until more Michiganders have been able to be vaccinated.

Other Public Health Indicators

Provisional Data on Suicide Deaths

- Compared to 2019, the provisional number of suicide deaths in Michigan in 2020 have not increased
- Nationally, provisional death data also does not show increases in suicide deaths

Provisional Data on Suicide Deaths in 2020

- Compared to data from 2017-2019, the provisional number of suicide deaths in Michigan in 2020 have not increased¹
- Nationally, provisional death data also does not show increases in suicide deaths²
- Future years may see an increase in suicide deaths as mental health has been negatively impacted due to the pandemic
- Nationally, declined mental health has also impacted deaths due to other causes (e.g., unintentional injuries and drug overdoses) which were increasing prior to the pandemic but have continued to increase² but this occurrence hasn't been seen in NVDRS data in Michigan¹

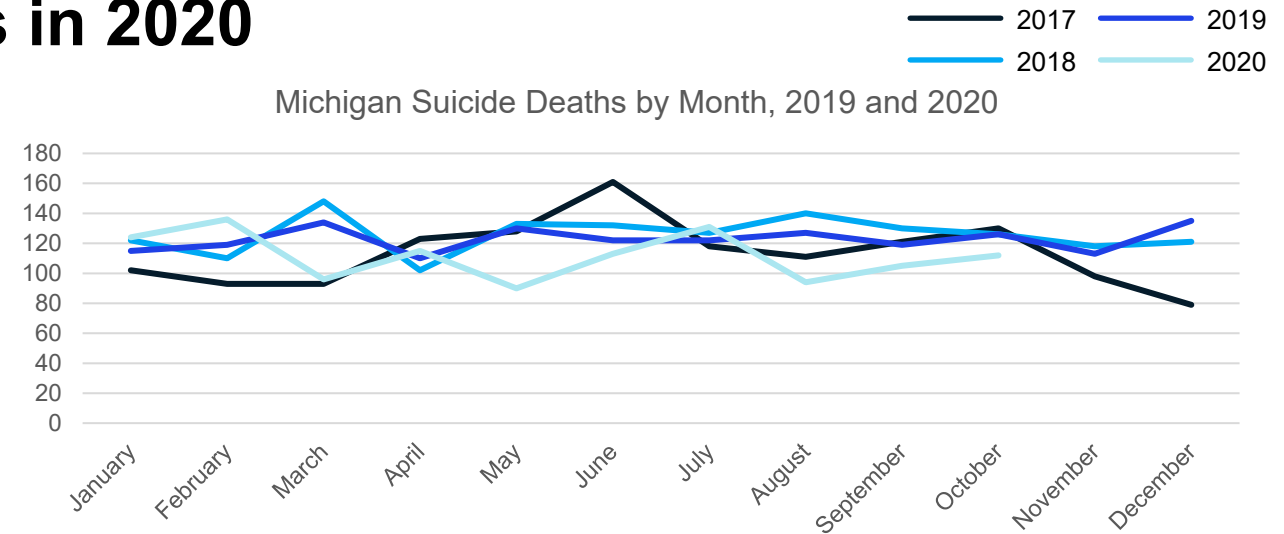


Table. Number of Deaths for Leading Causes of Death, US, 2015-2020^a

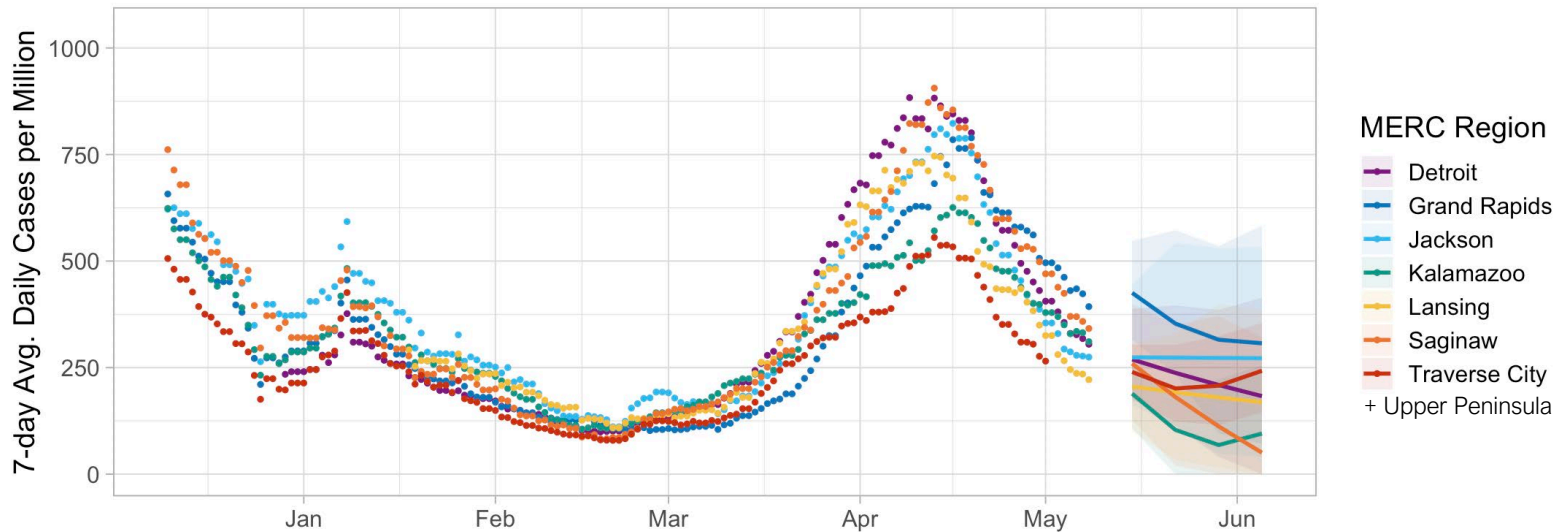
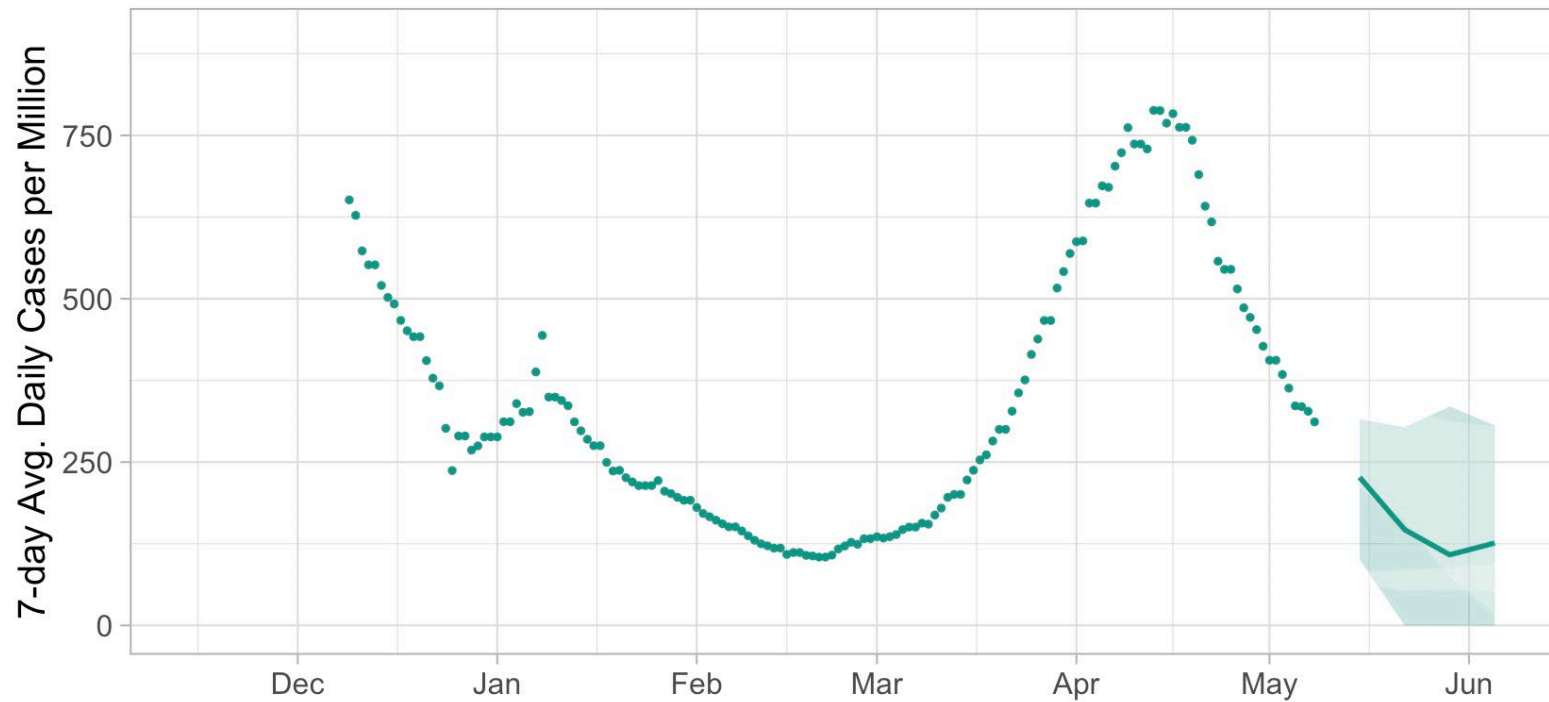
Cause of death	No. of deaths by year					
	2015	2016	2017	2018	2019	2020
Total deaths	2 712 630	2 744 248	2 813 503	2 839 205	2 854 838	3 358 814
Heart disease	633 842	635 260	647 457	655 381	659 041	690 882
Cancer	595 930	598 038	599 108	599 274	599 601	598 932
COVID-19 ^b						345 323
Unintentional injuries	146 571	161 374	169 936	167 127	173 040	192 176
Stroke	140 323	142 142	146 383	147 810	150 005	159 050
Chronic lower respiratory diseases	155 041	154 596	160 201	159 486	156 979	151 637
Alzheimer disease	110 561	116 103	121 404	122 019	121 499	133 382
Diabetes	79 535	80 058	83 564	84 946	87 647	101 106
Influenza and pneumonia	57 062	51 537	55 672	59 120	49 783	53 495
Kidney disease	49 959	50 046	50 633	51 386	51 565	52 260
Suicide	44 193	44 965	47 173	48 344	47 511	44 834

^a Leading causes are classified according to underlying cause and presented according to the number of deaths among US residents. For more information, see the article by Heron.⁴ Source: National Center for Health Statistics. National Vital Statistics System: mortality statistics (<http://www.cdc.gov/nchs/deaths.htm>). Data for 2015-2019 are final; data for 2020 are provisional.

^b Deaths with confirmed or presumed COVID-19, coded to *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* code U07.1 as the underlying cause of death.

Michigan cases projected to continue decline in coming weeks—potentially some slowing

- All regions also projected to decline or plateau
- Projections suggest statewide 7-day average will be below 250 cases/million in coming weeks
- Line is the ridge regression model projection, and the shaded region represents the 95% confidence region (2.5% and 97.5% quantiles).
- Projections are based on previous data on cases, hospitalizations, and deaths, as well as data on mobility and vaccinations.
- Cases are plotted by report date.



Sources: Data from MDHHS/JHU,
[UM Ridge Regression Model](#)



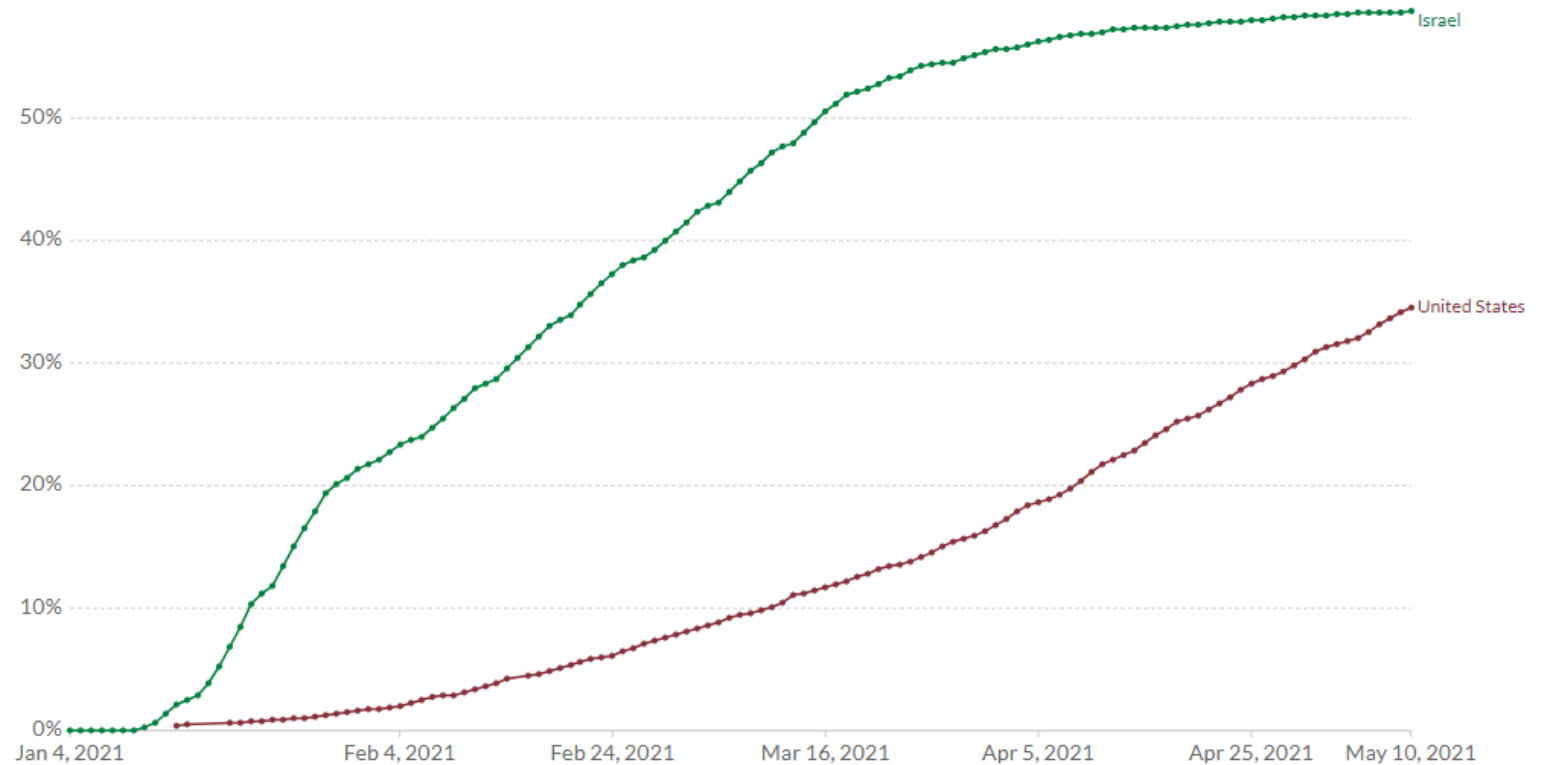
COVID-19 and Vaccination in Israel

- Israel has had one of the fastest national vaccination campaigns
- Nearly 60% of population in Israel fully vaccinated against SARS-CoV-2
- Israel's campaign focused on those most susceptible to severe outcomes of COVID-19, with over 85% of those 60+ vaccinated within two months

Share of the population fully vaccinated against COVID-19

Share of the total population that have received all doses prescribed by the vaccination protocol. This data is only available for countries which report the breakdown of doses administered by first and second doses.

LINEAR LOG



Source: Official data collated by Our World in Data

Our World
in Data

CC BY

COVID-19 and Vaccination in Israel

- Compared to peak values, there was
 - 77% drop in cases
 - 45% drop in positive test percentage
 - 68% drop in hospitalizations
 - 67% drop in severe hospitalizations
- Even after adjusting for other factors like lockdowns, case rates dropped more dramatically for those of older age and in cities with higher vaccination coverage
- Recently, Israel has lifted outdoor mask mandate and resumed in person schooling

Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

