

# MI COVID RESPONSE DATA AND MODELING UPDATE

**NOTE:** All data as of May 22 unless otherwise noted

May 25, 2021



# Executive summary

**Percent Positivity** is down 20% and **Case Rate** is down 35% since last week. Positivity (6.6%, ↓1.9%) and case rates (127.1, ↓83.2) have decreased for six weeks

Michigan has the **3<sup>rd</sup> highest number of cases (↓1)**, and **3<sup>rd</sup> highest case rate (↓2)** in the last 7 days (source: CDC COVID Data Tracker)

**Percent of inpatient beds occupied by individuals with COVID** has decreased 23% since last week and are decreasing for 4 weeks. There are 7.4% (↓3.0%) inpatient beds occupied by COVID-19 patients.

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

**Deaths** have decreased 28% since last week. There were 335 COVID deaths (↓58) between May 9 and May 15, and the **Death Rate** is 4.2 deaths per million residents (↓1.2)

Michigan has the **7<sup>th</sup> highest number of deaths (↓4)**, and **4<sup>th</sup> highest death rate (↓3)** in the last 7 days (source: CDC COVID Data Tracker)

The 7-day average **state testing rate** has decreased to 2,428.8 tests/million/day (↓172.4). **Daily diagnostic tests (PCR)** is 24.1K per day (↓1.8), and the **weekly average for PCR and antigen tests** conducted in Michigan is 43.3K (↓7.1K).

8.2 million **COVID-19 vaccine** doses reported to CDC, 58.1% of Michigan population 16+ has at least one dose



# Comparison across states: Summary

What we see today (data through 5/22):

- 4 states are seeing increasing 1 week case trends ( $\geq 10\%$ ) (up from zero last week)
- 4 states are seeing 1 week increases ( $\geq 10\%$ ) in new COVID hospital admissions (up from 3 last week)
- DC, Michigan, West Virginia, Florida and Maryland have highest per capita hospitalized patient numbers.
- Midwest (case data from CDC as of 5/23):
  - Wisconsin with decrease in hospitalizations (51/M) and decrease in cases (47/100k last 7d)
  - Indiana with decrease in hospitalizations (111/M), and decrease in cases (70/100k last 7d)
  - Illinois showing decrease in hospitalizations (115/M), and decrease cases (72/100k last 7d)
  - Ohio with decrease in hospitalizations (104/M) and decrease in cases (55/100k last 7d)
  - Michigan showing decrease in hospitalizations (151/M) and decrease in cases (56/100k last 7d)



# COVID-19 Spread

Statewide positivity has decreased to 6.6%

- One week decrease of 20% (vs. 21% decrease last week)
- Decreasing for six weeks (65% decrease since April 8 high)
- Positivity is declining in all MERC regions and below 7% in five regions

Case rate (127.1 cases/million) is decreasing in the state (210.3 cases/million last week)

- One week decrease of 35% (vs. 34% decrease last week)
- Decreasing for six weeks (81% decrease since April 11 high)
- Cases per million are declining in all MERC regions
- Variants of Concern in Michigan: 10,536 confirmed B.1.1.7; 67 confirmed B.1.351; 292 confirmed B.1.427/B.1.429 ; 203 confirmed P.1
- Number of active outbreaks is down 28% from last week
  - Reported school outbreaks have decreased since last week (297 to 275)
  - High schools continue to experience the highest number of outbreaks (111)
  - In the past week, the highest number of new clusters have been identified in general athletics, and baseball/softball



# Confirmed and probable case indicators

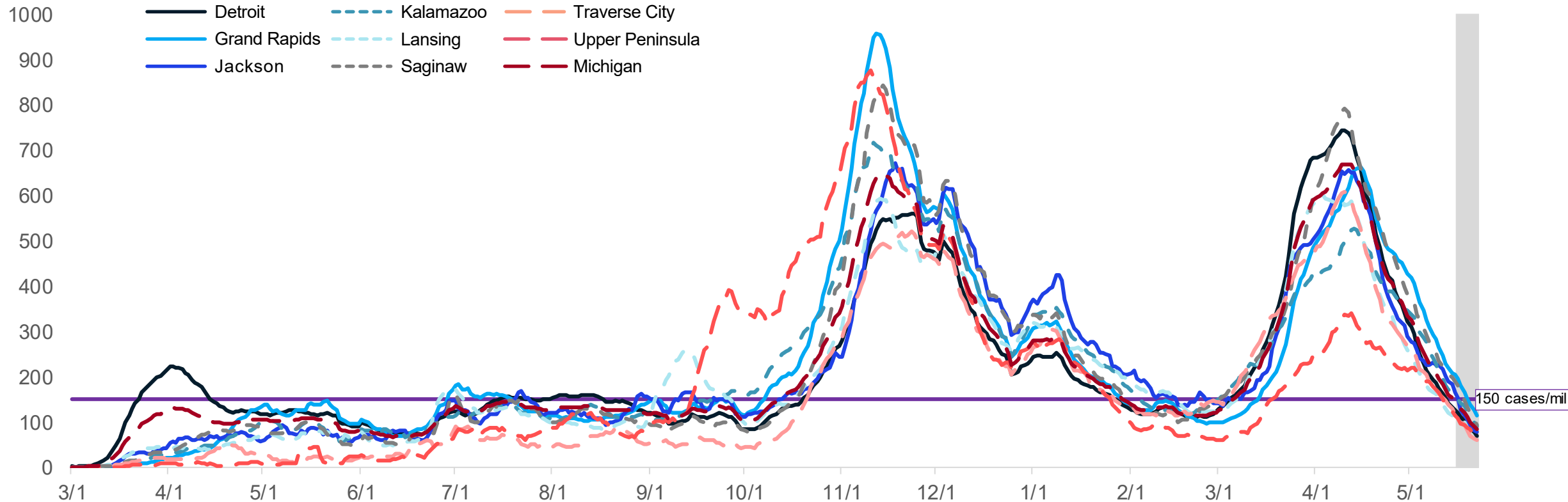
Table Date: 5/24/2021 (7 days from date table was produced: 5/17/2021)

	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	D	110.8	decline [42 days]	5.7	Decrease - 6wk	2430.1	7.1	Decrease - 4wk	4.7	Decrease - 2wk
Grand Rapids	E	181.7	decline [36 days]	9.1	Decrease - 5wk	2458.1	9.7	Decrease - 4wk	3.7	Decrease - 1wk
Kalamazoo	D	143.2	decline [38 days]	7.3	Decrease - 5wk	2141.3	8.4	Decrease - 4wk	2.1	Increase - 2wk
Saginaw	E	163.8	decline [40 days]	8.9	Decrease - 5wk	2947.5	6.5	Decrease - 4wk	6.5	Increase - 2wk
Lansing	D	100.7	decline [44 days]	5.9	Decrease - 5wk	1877.5	10.3	Decrease - 4wk	4.1	Decrease - 2wk
Traverse City	D	102.9	decline [41 days]	6.5	Decrease - 2wk	1679.5	4.4	Decrease - 5wk	4.2	<20 wkly deaths
Jackson	D	125.8	decline [40 days]	6.9	Decrease - 5wk	2523.4	10.3	Decrease - 4wk	2.8	<20 wkly deaths
Upper Peninsula	D	98.3	decline [38 days]	3.1	Decrease - 5wk	2293.8	2.5	Decrease - 4wk	2.4	<20 wkly deaths
Michigan	D	127.1	decline [41 days]	6.6	Decrease - 6wk	2428.8	7.4	Decrease - 4wk	4.2	Decrease - 2wk
Cases	<div><div>Low: &lt;7</div><div>A: 7-20</div><div>B: 20-40</div><div>C: 40-70</div><div>D: 70-150</div><div>E: &gt;=150</div></div>									
Positivity	<div><div>Low: &lt;3%</div><div>A: 3-7%</div><div>B: 7-10%</div><div>C: 10-15%</div><div>D: 15-20%</div><div>E: &gt;=20%</div></div>									



# Regional Case Rates

Average daily new confirmed and probable cases per million by MERC region (7-day rolling average)

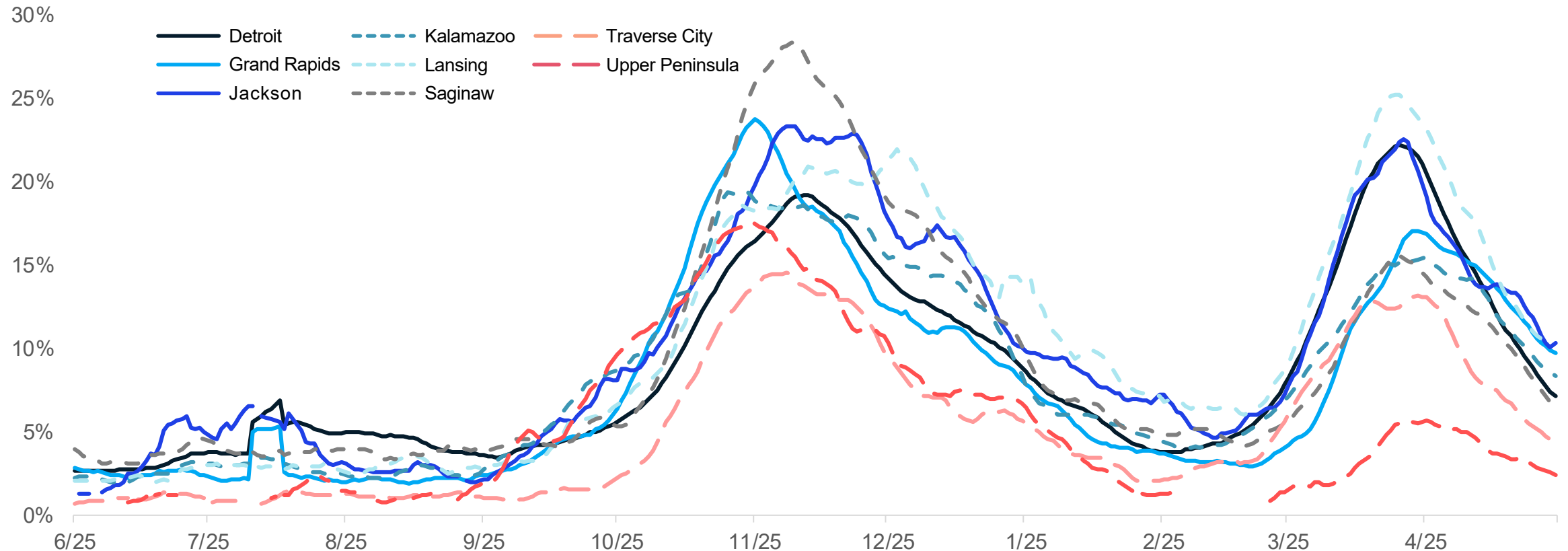


- All MERC regions have decreasing case rates
- Case rates for six MERC regions are below 150 cases per million (Risk Level D)



# Regional Percent of Inpatient Beds Occupied by Individuals with COVID

Average daily percent of inpatients beds with COVID+ individuals by MERC region (7-day rolling average)

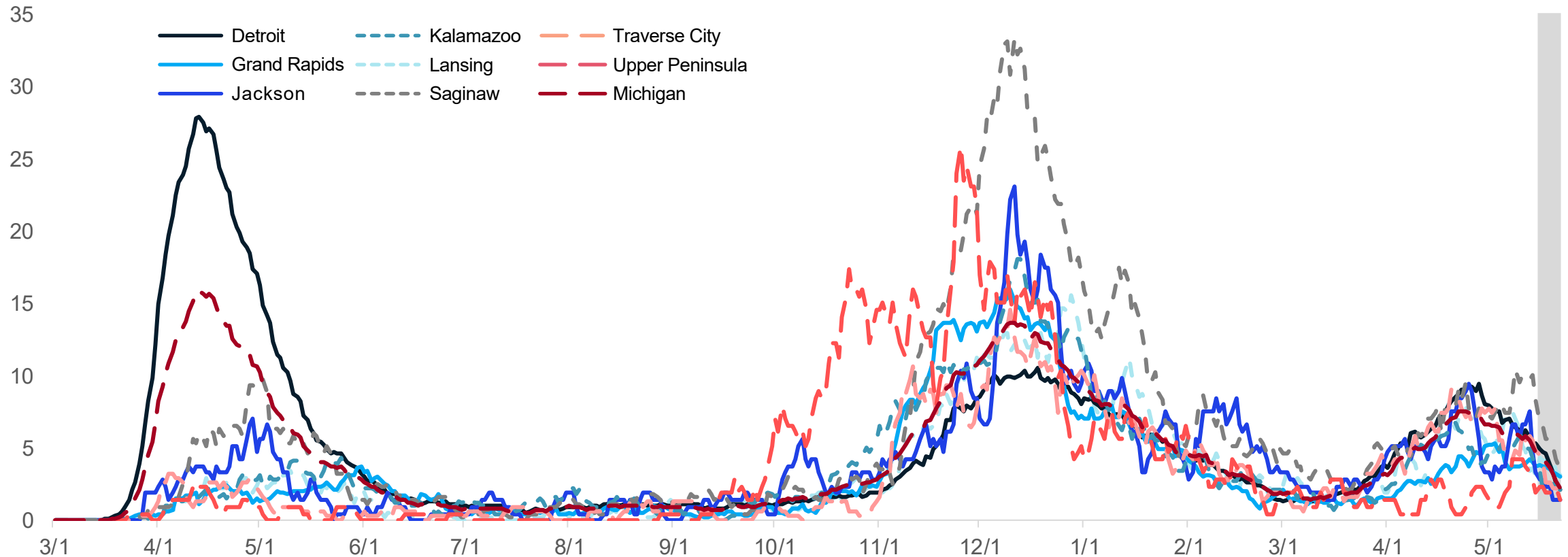


- **Note:** data became available by region in mid June
- All MERC regions have decreasing percent of inpatients beds occupied by COVID+ cases
- Six MERC regions are below 10% cases per million (Risk Level A)



# Regional Death Rates

Average daily deaths per million by MERC region (7-day rolling average)

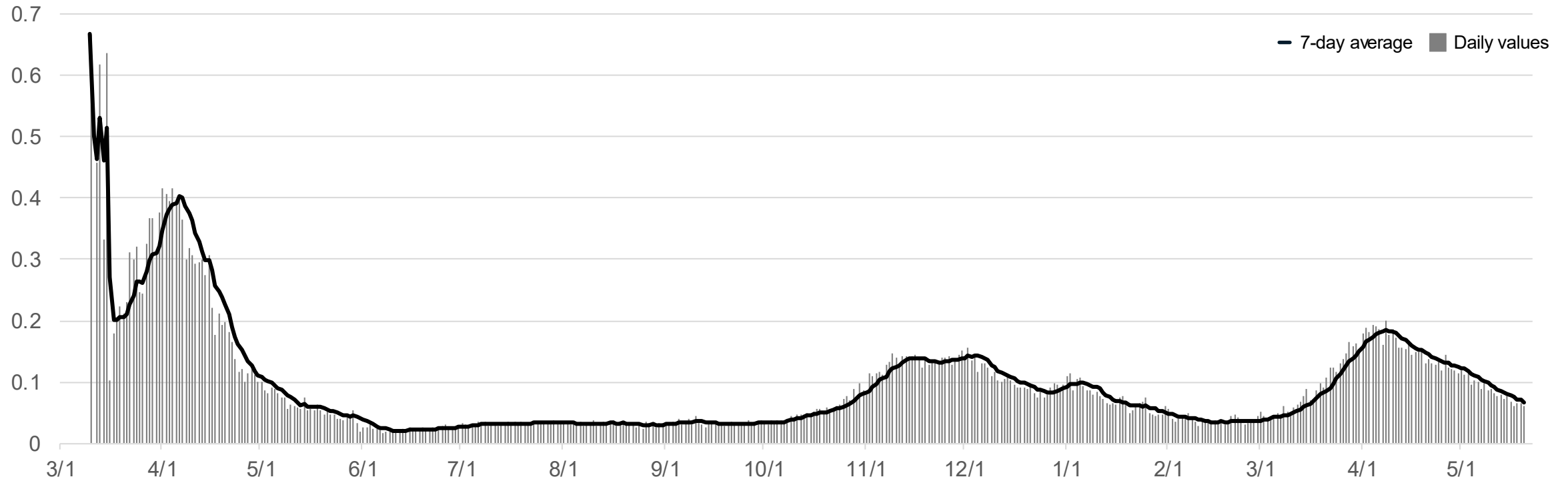


- Most MERC regions have decreasing death rates
- Most regional death rates during the third surge were lower in comparison with first and second surges



# Statewide Positivity Trends

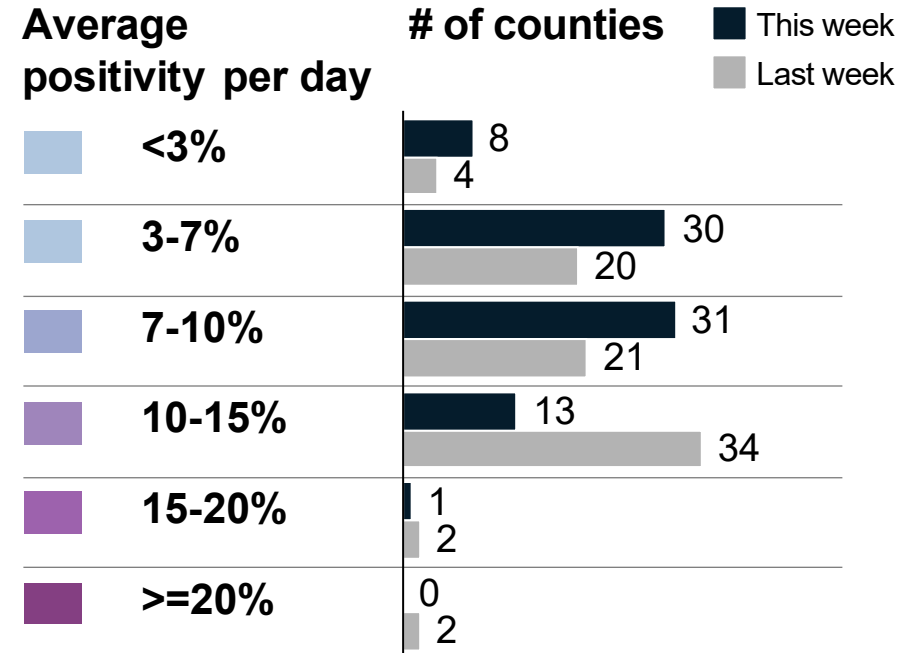
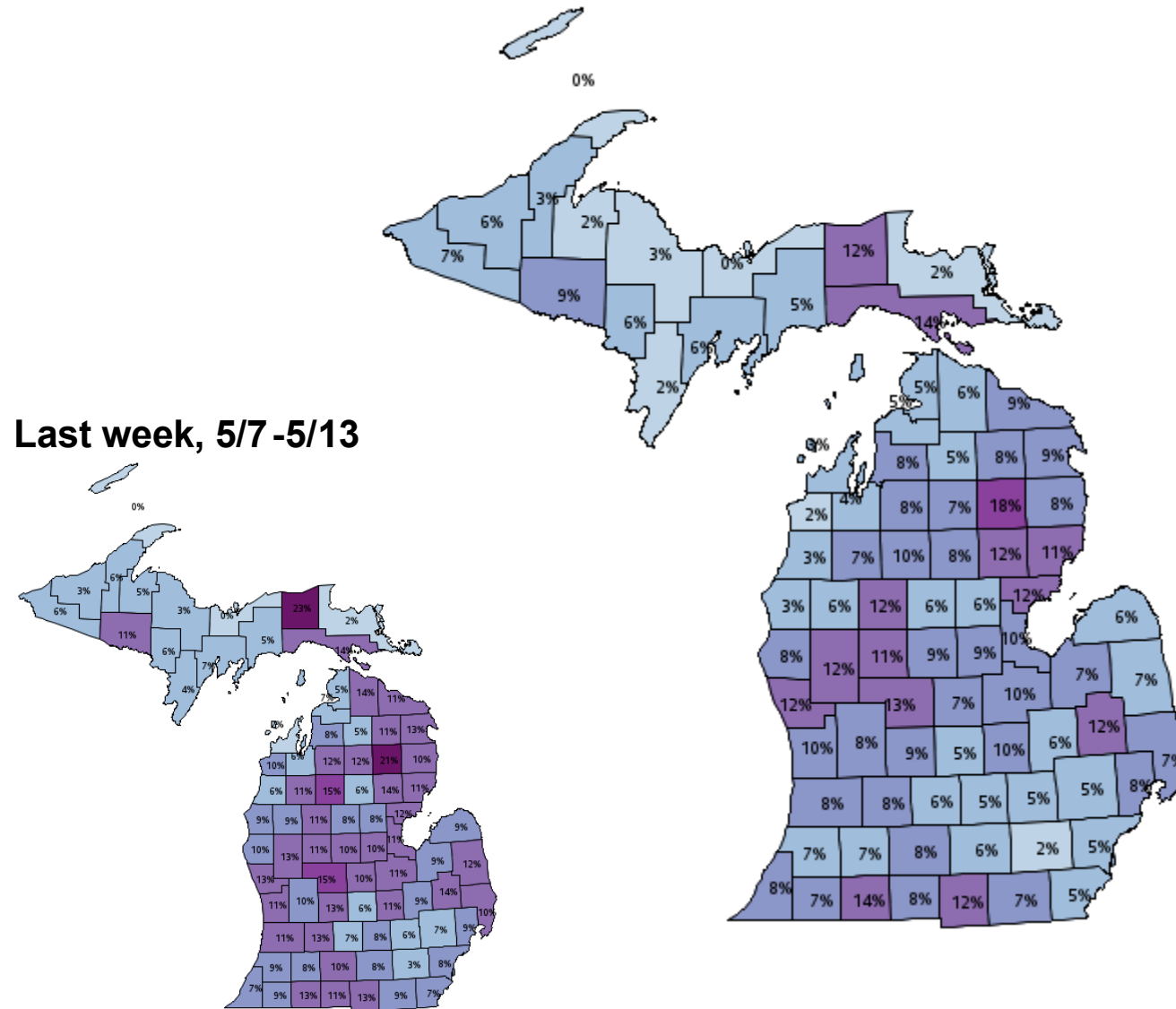
## Daily positivity and 7-day rolling average positivity for Michigan



- 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 20% between this week and last**
- Note: These are for PCR tests only and exclude tests conducted with Michigan Department of Corrections



# Positivity by county, 5/14-5/20



## Updates since last week:

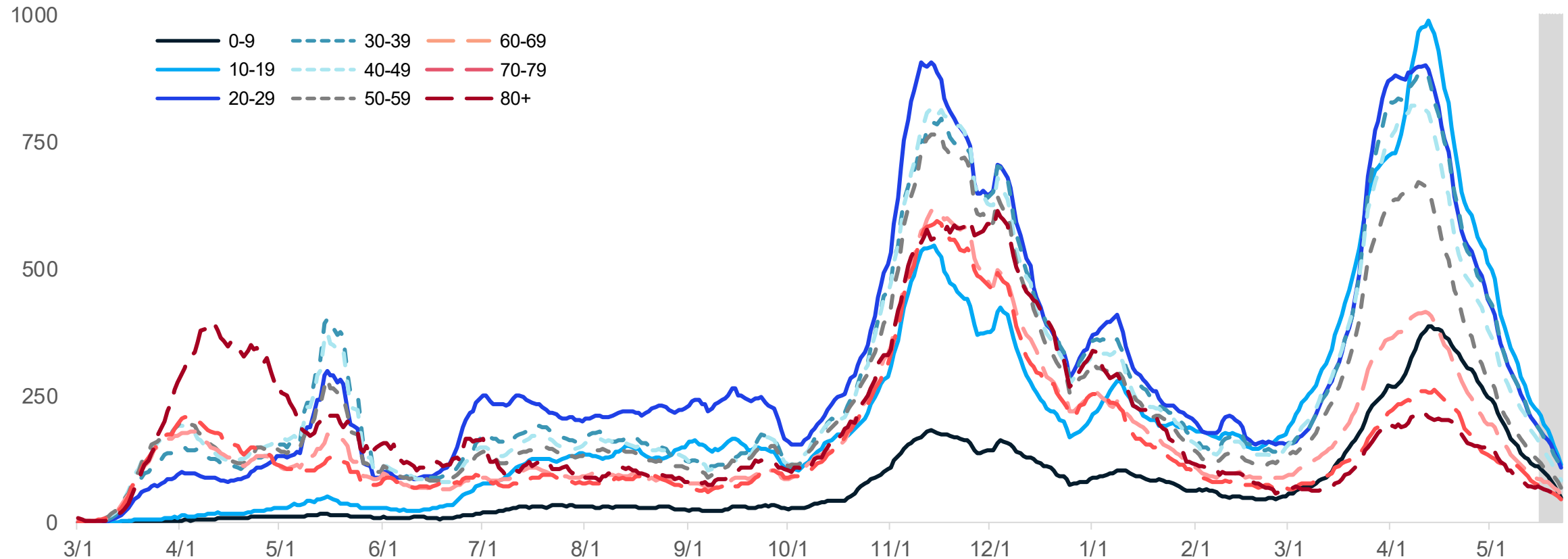
14 of 83 counties saw double digit positivity in the last week (24 county decrease)

45 of 83 counties saw positivity > 7% in the last week (14 county decrease)



# 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 age groups between 10 and 49 years are above 150 cases per million (Risk Level E)



# 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 ( $\Delta$ #)	% Change since 4/11/21* ( $\Delta$ #)
0-9	127.0	110.2	-30% (-55)	-71% (-309)
10-19	275.9	219.8	-33% (-134)	-77% (-949)
20-29	259.4	188.0	-33% (-130)	-79% (-982)
30-39	226.6	186.8	-34% (-116)	-79% (-848)
40-49	191.7	162.6	-34% (-99)	-80% (-768)
50-59	164.0	121.5	-33% (-82)	-82% (-732)
60-69	110.3	86.4	-32% (-51)	-79% (-420)
70-79	56.6	73.8	-36% (-31)	-72% (-143)
80+	29.9	72.1	-21% (-8)	-66% (-59)
Total <sup>¶</sup>	1,453.0	127.1	-34% (-714)	-78% (-5,235)

\* Highest 7-day avg. following spring 2021 surge

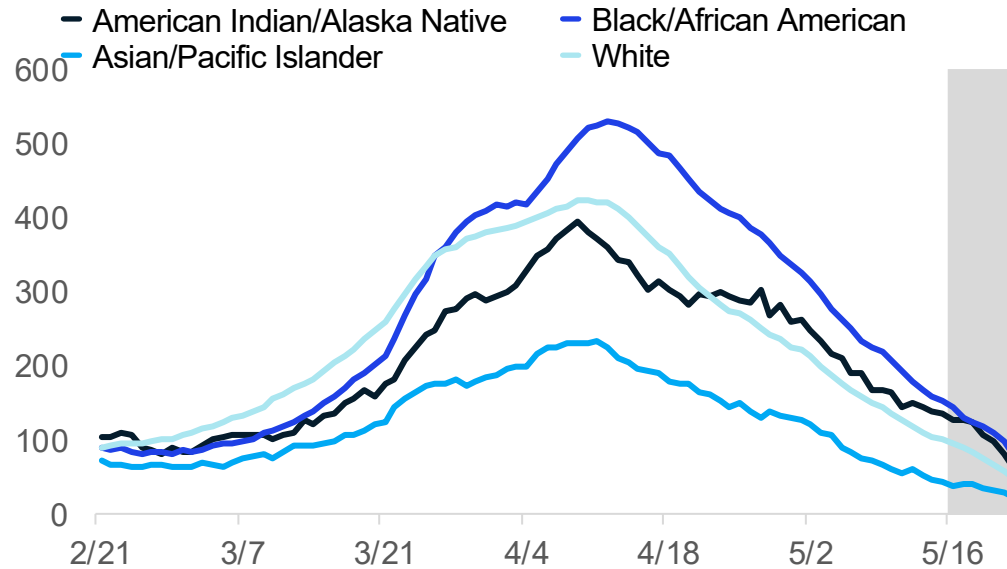
<sup>¶</sup> Total may not reflect state due to missing age data

- Average daily number of cases (275.9) and avg. daily case rate (219.8 cases/mil) are currently highest for those 10-19
- All age groups under 60 are experiencing an average of more than 100 cases per day
- Since April 11, case rates have decreased more than 65% for all age groups

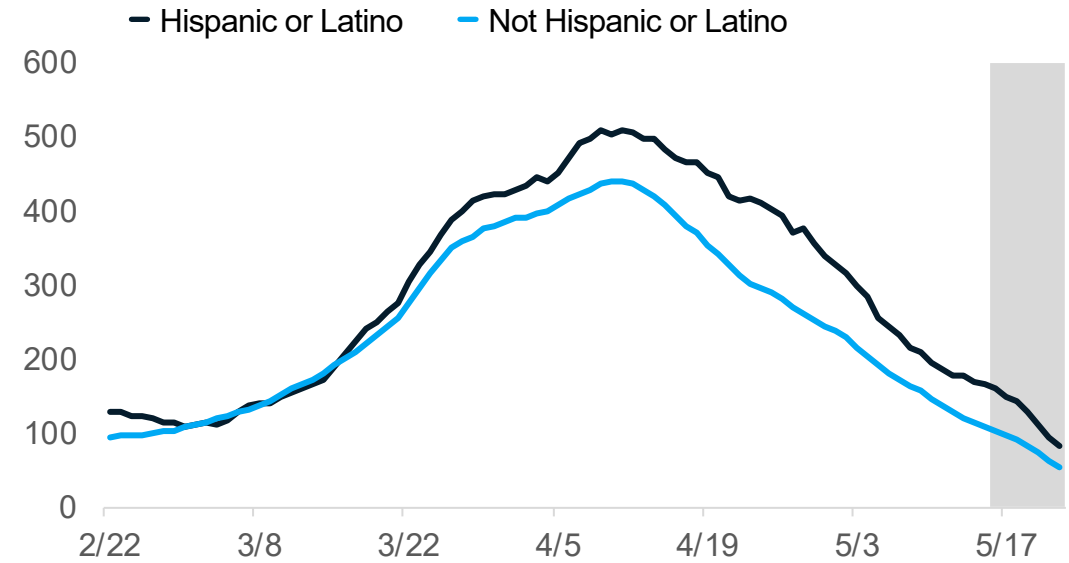


# Average daily new cases per million people by race and ethnicity

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



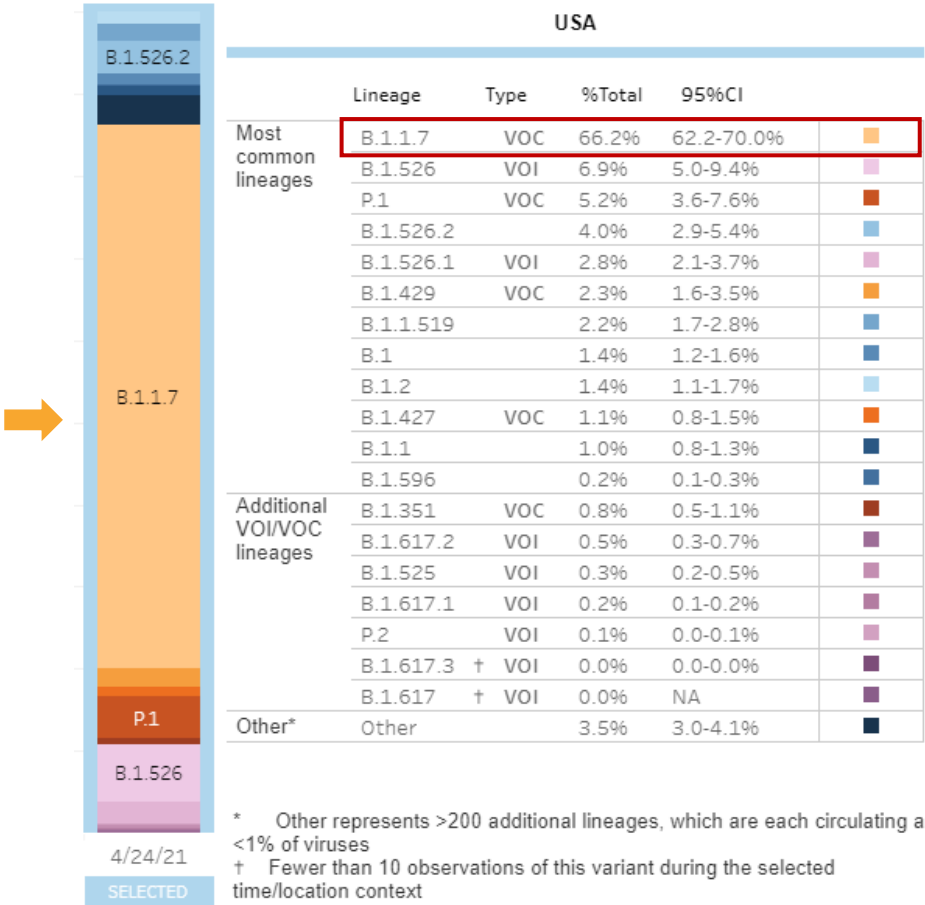
## Updates since last week:

- Cases per million are decreasing for all races and ethnicities
- **Blacks, American Indian/Alaskan Natives, and Hispanic/Latinos have the highest case rates**
- In the past 30 days, 27% of all cases represent unknown, multiple, or other races (20% of race is unknown, ↓3%)
- In the past 30 days, 25% of all cases have an unknown ethnicity reported (↓2%)

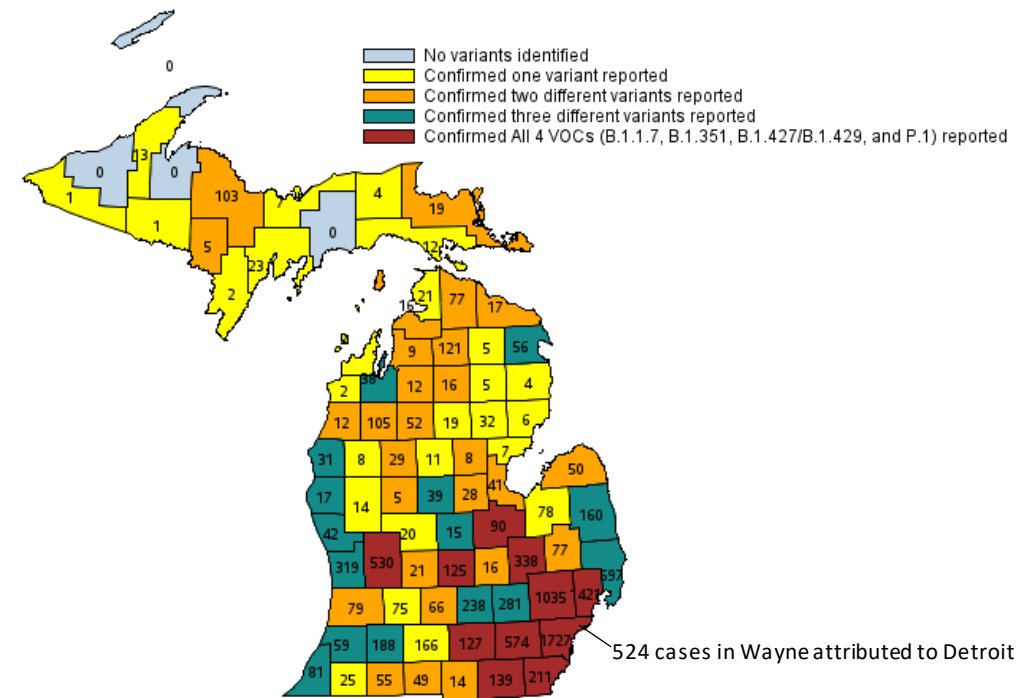


# Identified COVID-19 Cases Caused by All Variants of Concern (VOC) in US and Michigan

## SARS-CoV-2 Variants Circulating in the United States, Apr 11 – Apr 24



## Variants of Concern in Michigan, May 24



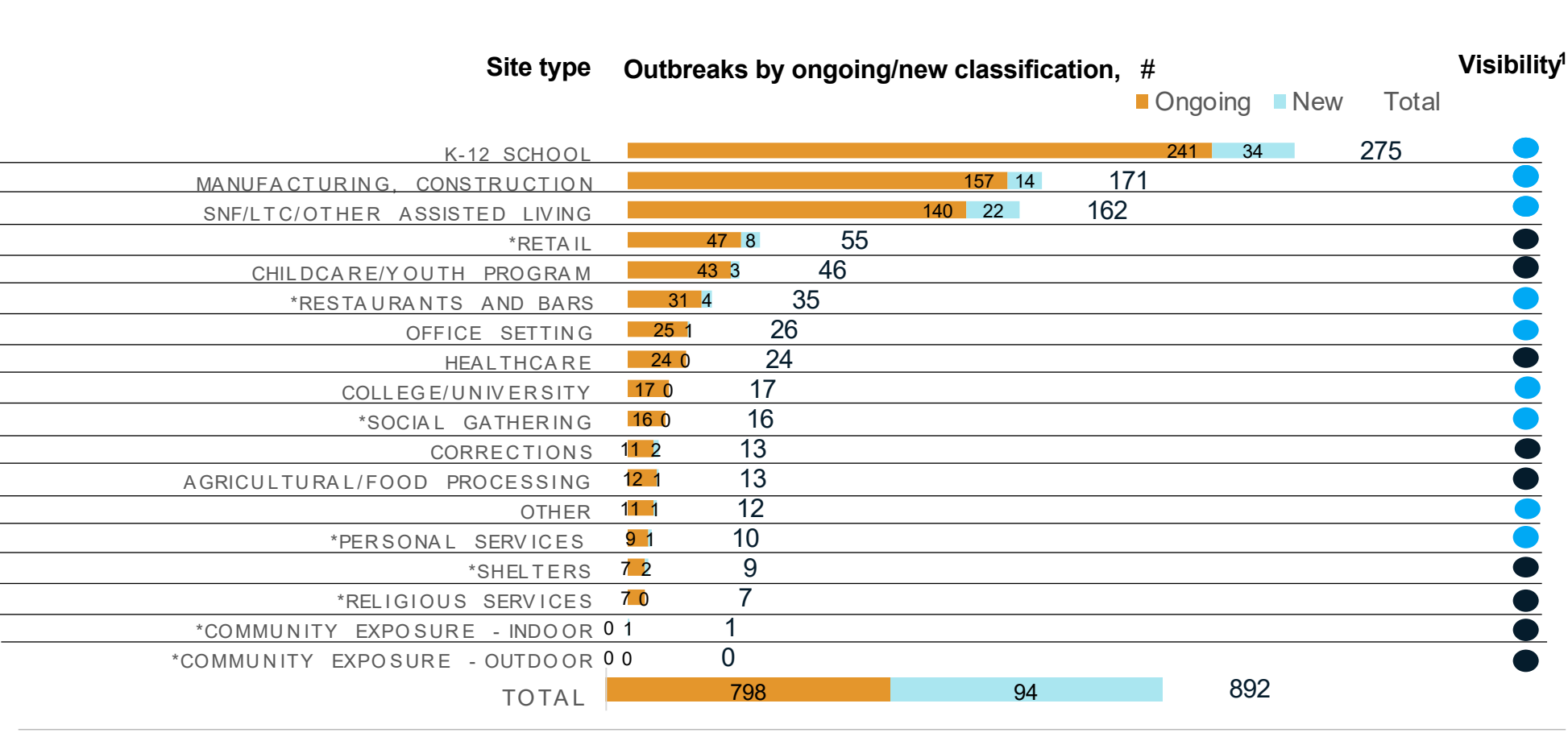
Variant	MI Reported Cases <sup>¶</sup>	# of Counties	CDC est. prevalence
B.1.1.7	10,536*	79	77.4%
B.1.351	67	20	0.6%
B.1.427/B.1.429	292	42	1.9%
P.1	203	28	2.0%



# Number of outbreak investigations by site type, week ending May 20

Pre-decisional, for discussion only      Draft

- Easier to identify outbreak
- Harder to identify outbreak



Total number of active outbreaks is down from previous week

Following K-12 (34), the greatest number of new outbreaks were reported in SNF/LTC (22), and manufacturing/construction (14)

LHDs reported new outbreaks in all settings except in Healthcare, College and Universities, Social Gathering, Religious Services, 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



# K-12 school outbreaks, recent and ongoing, week ending May 20

Number of reported outbreaks decreased since last week (297 to 275) including decreases in High Schools (118 to 111), Middle/Jr High (73 to 66), Pre K-Elementary (99 to 96), and Administrative (7 to 2).

Region	Number of reported cases,#	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Region 1	350	13		45	2-35
Region 2n	158	18		62	2-11
Region 2s	45	7		13	2-8
Region 3	755	87		55	2-68
Region 5	158	4		24	2-42
Region 6	300	17		35	2-47
Region 7	132	14		28	2-28
Region 8	81	3		13	2-21
Total	1,979	163		275	2-68

Grade level	Number of reported cases,#	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Pre-school - elem.	461	65		96	2-64
Jr. high/middle school	451	54		66	2-68
High school	1,065	38		111	2-65
Administrative	2	6		2	2-6
Total	1,979	163		275	2-58

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  
124 clusters



367 cases  
60 clusters



283 cases  
73 clusters



108 cases  
23 clusters



81 cases  
41 clusters



55 cases  
16 clusters



52 cases  
19 clusters

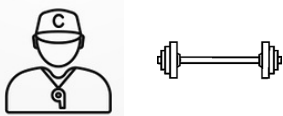


41 cases  
11 clusters

44 cases  
4 clusters



41 cases  
18 clusters



32 cases  
13 clusters



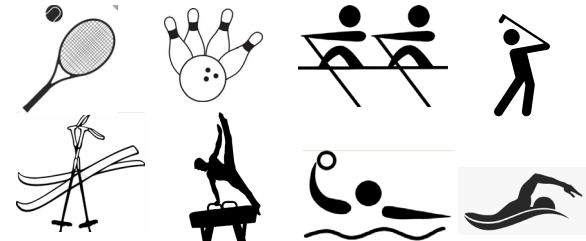
21 cases  
12 clusters



14 cases  
3 clusters



34 cases  
21 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)
- Largest number of new cases and clusters identified in past week are general athletics, baseball/softball, dance/pom, track, lacrosse, and volleyball
- Cases and clusters have occurred in 24 different sport settings



# COVID-19 and Healthcare Capacity and COVID Severity

Hospitalizations and ICU utilization are decreasing

- COVID-like illness (CLI) has fallen to 2.8% (vs. 3.9% last week)
- Hospital admissions are decreasing statewide and for most age groups
- Hospitalizations down 21% since last week (vs. 23% decline week prior)
- All regions are showing decline in hospitalization trends this week
- Volume of COVID-19 patients in intensive care has decreased 17% since last week (vs. 28% decline week prior)

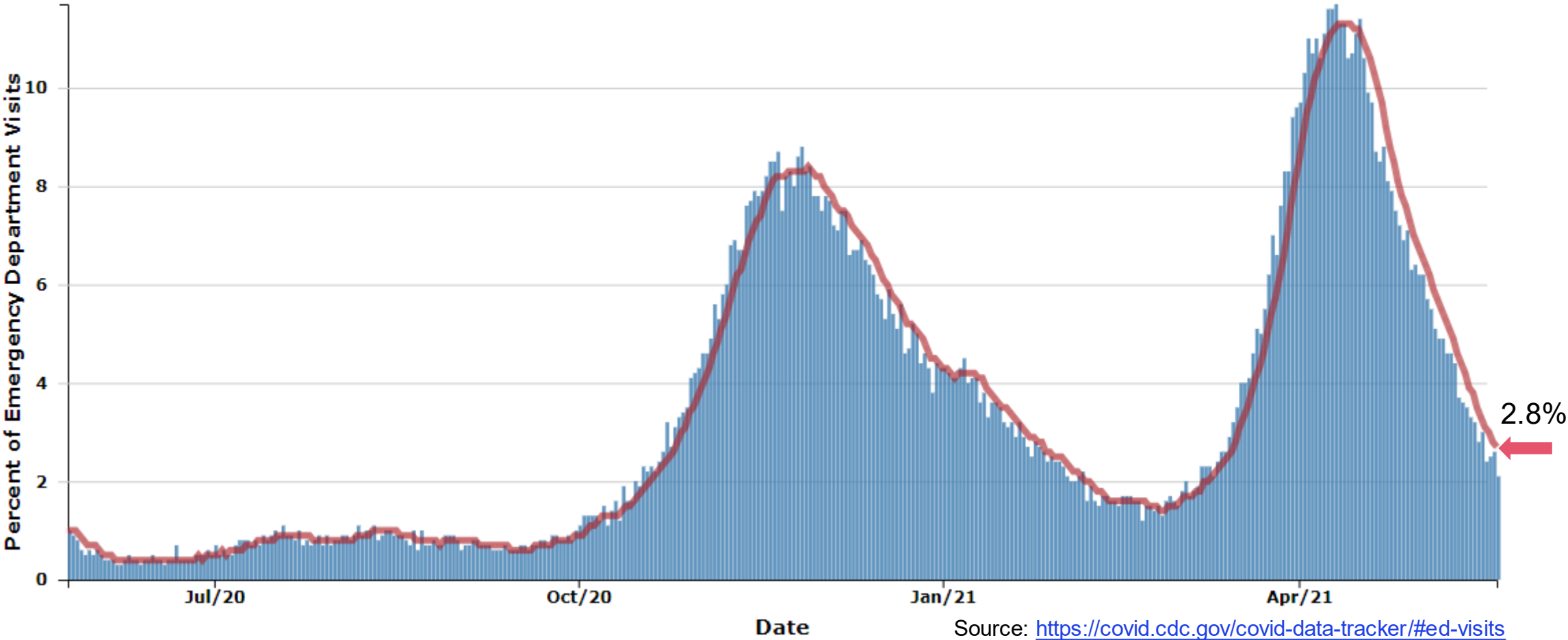
Death rate has decreased to 4.2 daily deaths per million people

- 28% decrease since last week (vs. 13% decrease last week)
- 44% decrease since April 24 peak
- Proportion of deaths among those under 60 years of age is slowly increasing



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

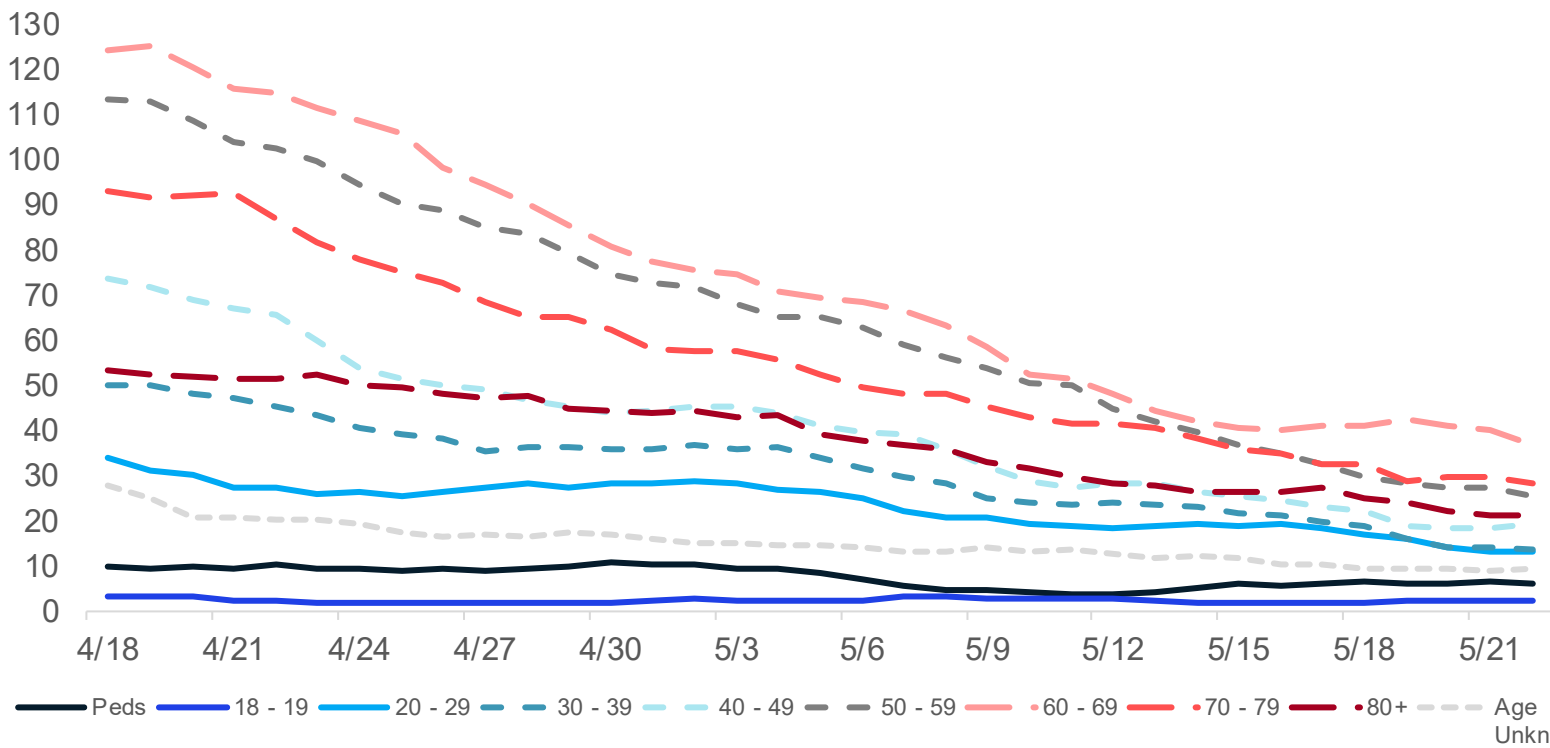
Percentage of ED visits with Diagnosed COVID-19 in Michigan





# 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	6.1	5% (1-5)	-17% (-1-5)
18-19	1-5	36% (1-5)	-56% (-1-5)
20-29	13.0	-31% (-5.9)	-61% (-20.7)
30-39	13.4	-38% (-8.3)	-72% (-35.0)
40-49	19.4	-24% (-6.0)	-75% (-58.4)
50-59	25.4	-31% (-11.3)	-78% (-89.0)
60-69	36.9	-9% (-3.9)	-71% (-91.4)
70-79	28.0	-21% (-7.6)	-67% (-57.4)
80+	21.3	-19% (-5.0)	-65% (-39.4)
Total <sup>¶</sup>	174.9	-22% (-49.6)	-71% (-426)

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

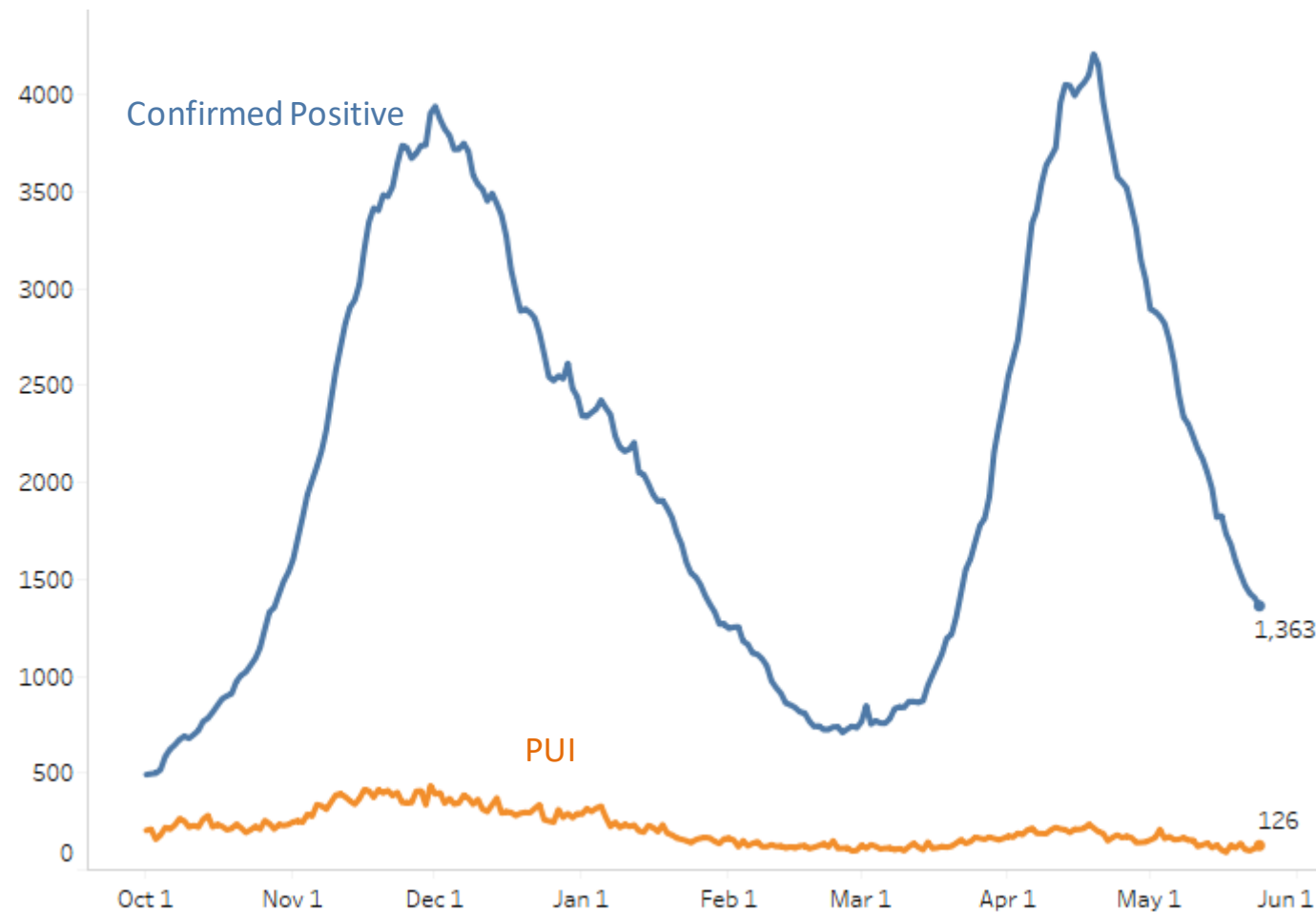
<sup>¶</sup> Total may not reflect state due to missing age data

- Currently, there are approximately 175 daily hospital admissions for COVID-19
- Over the past week, those 60-69 have seen the highest avg. daily hospital admissions (36 admissions)
- Since the Apr 14 high, those 30-69 have seen the > 70% decrease in avg. daily hospital admissions



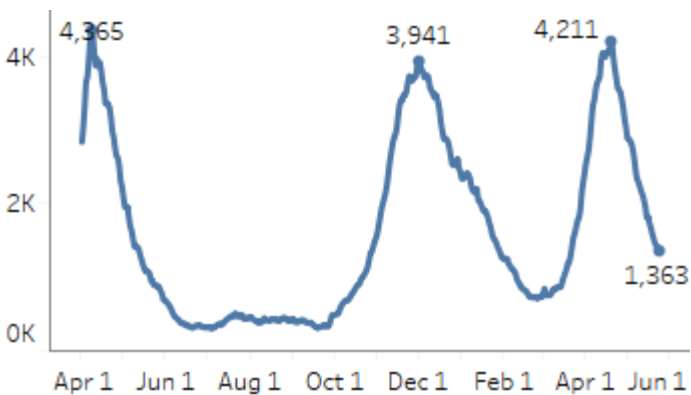
# Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 10/1/2020– 5/24/2021  
Confirmed Positive & Persons Under Investigation (PUI)



COVID+ census in hospitals continues to decline from the April 19<sup>th</sup> peak. This week is down 21% from the previous week (previous week was down 23%).

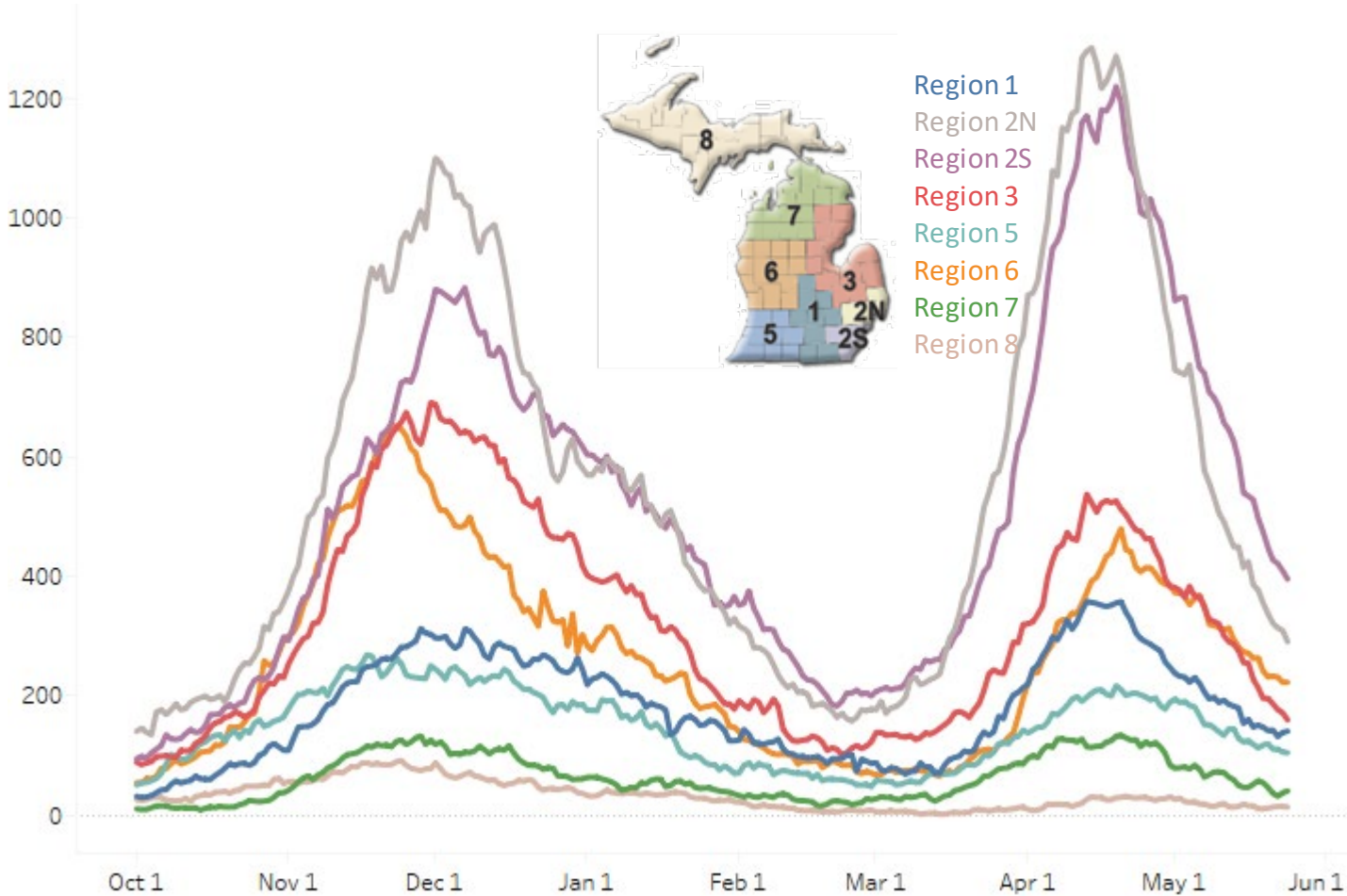
Hospitalized COVID Positive Long Term Trend (beginning March 2020)





# Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 10/1/2020– 5/24/2021  
Confirmed Positive by Region



All regions show decreasing hospitalization trends this week.

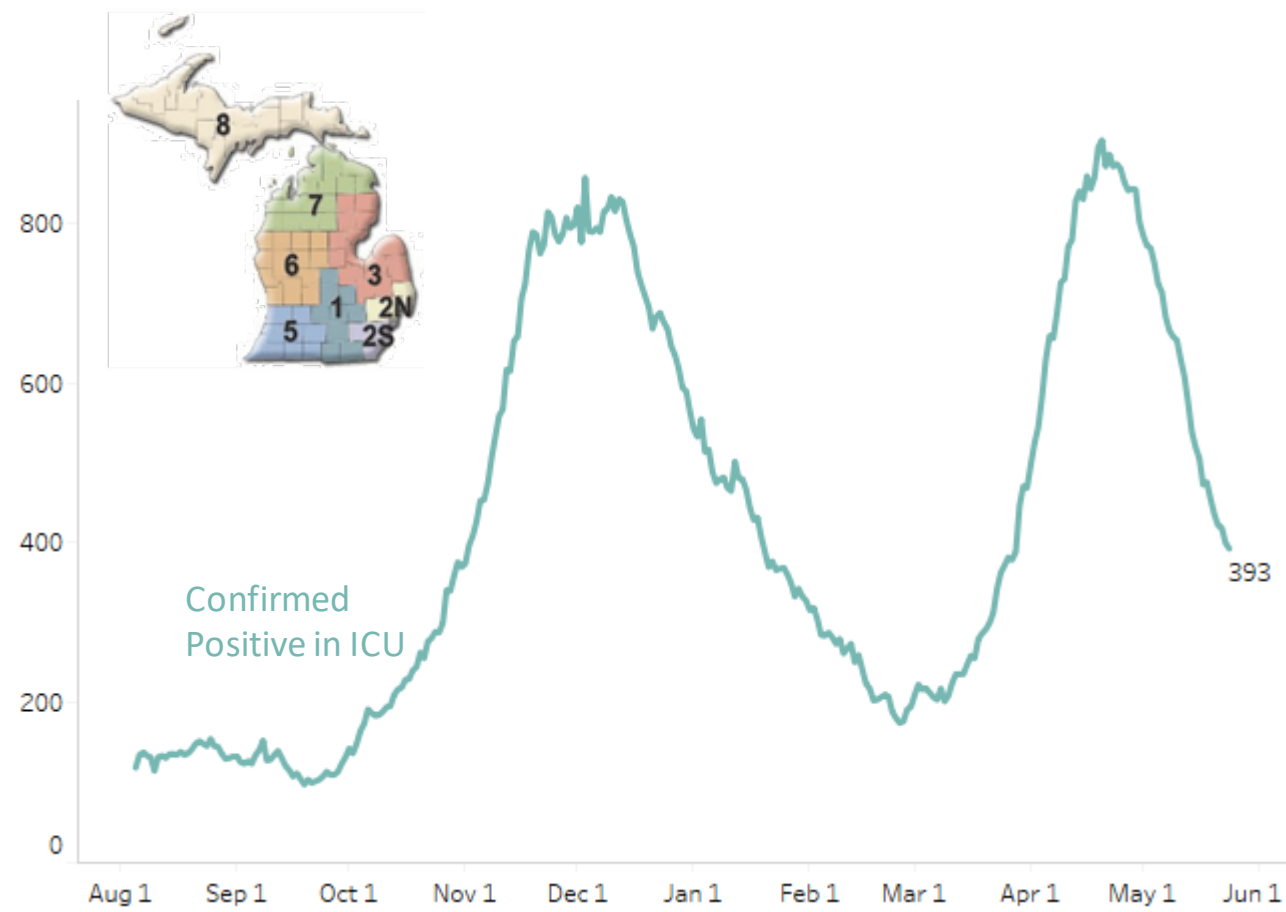
All regions are now below 200/M hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	140 (-5%)	129/M
Region 2N	290 (-25%)	131/M
Region 2S	395 (-25%)	177/M
Region 3	159 (-30%)	140/M
Region 5	104 (-12%)	109/M
Region 6	222 (-15%)	151/M
Region 7	40 (-22%)	80/M
Region 8	13 (-13%)	10/M



# Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 8/1/2020 – 5/24/2021  
Confirmed Positive in ICUs



Overall, volume of COVID+ patients in ICUs has decreased 17% from last week. Regions 5 and 8 have had increases in ICU census since last week.

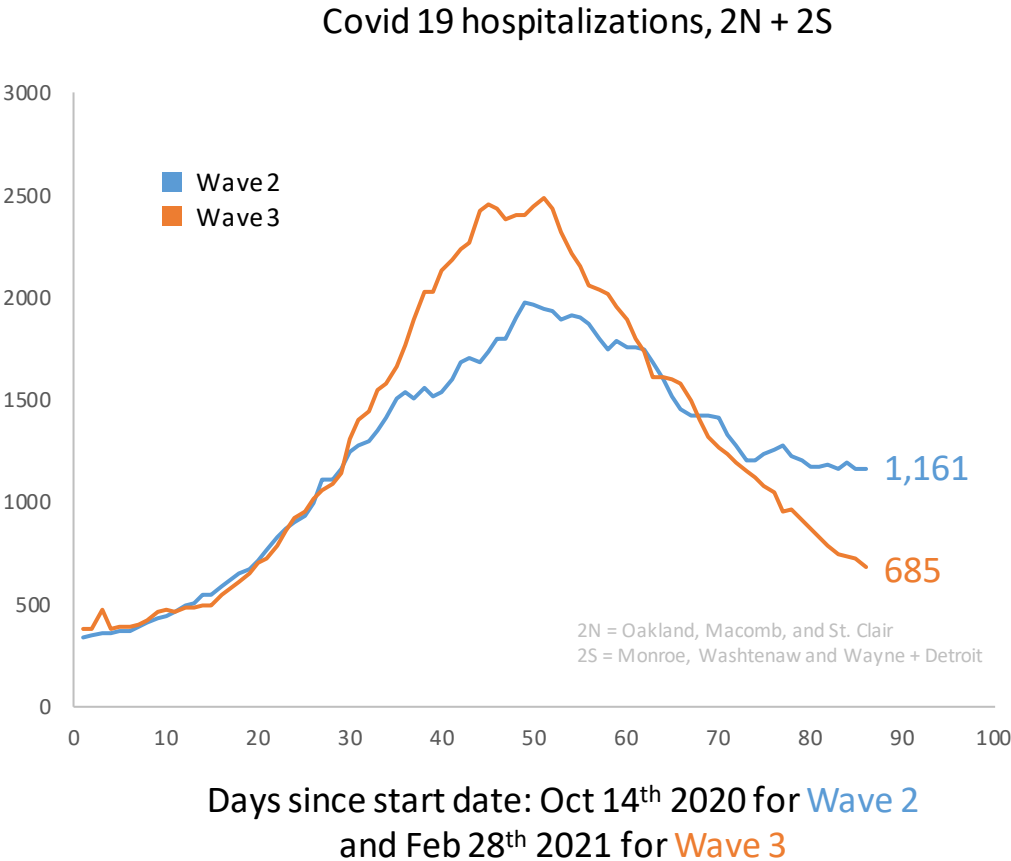
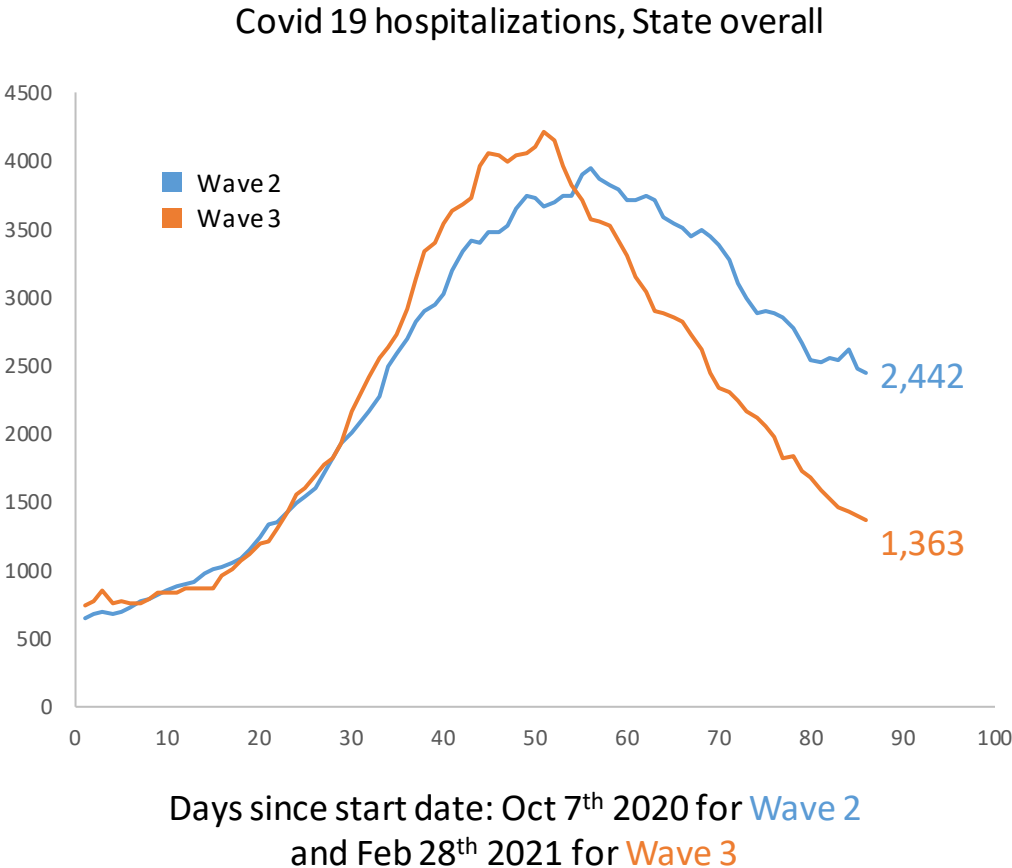
All regions have 25% or less of their ICU beds occupied with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	Adult ICU Occupancy	% of Adult ICU beds COVID+
Region 1	39 (-11%)	83%	20%
Region 2N	67 (-22%)	79%	11%
Region 2S	126 (-19%)	82%	16%
Region 3	47 (-22%)	89%	13%
Region 5	31 (+29%)	75%	19%
Region 6	64 (-19%)	83%	25%
Region 7	11 (-42%)	70%	6%
Region 8	8 (+33%)	63%	14%



# Wave 2 and 3 Comparison through 5/24

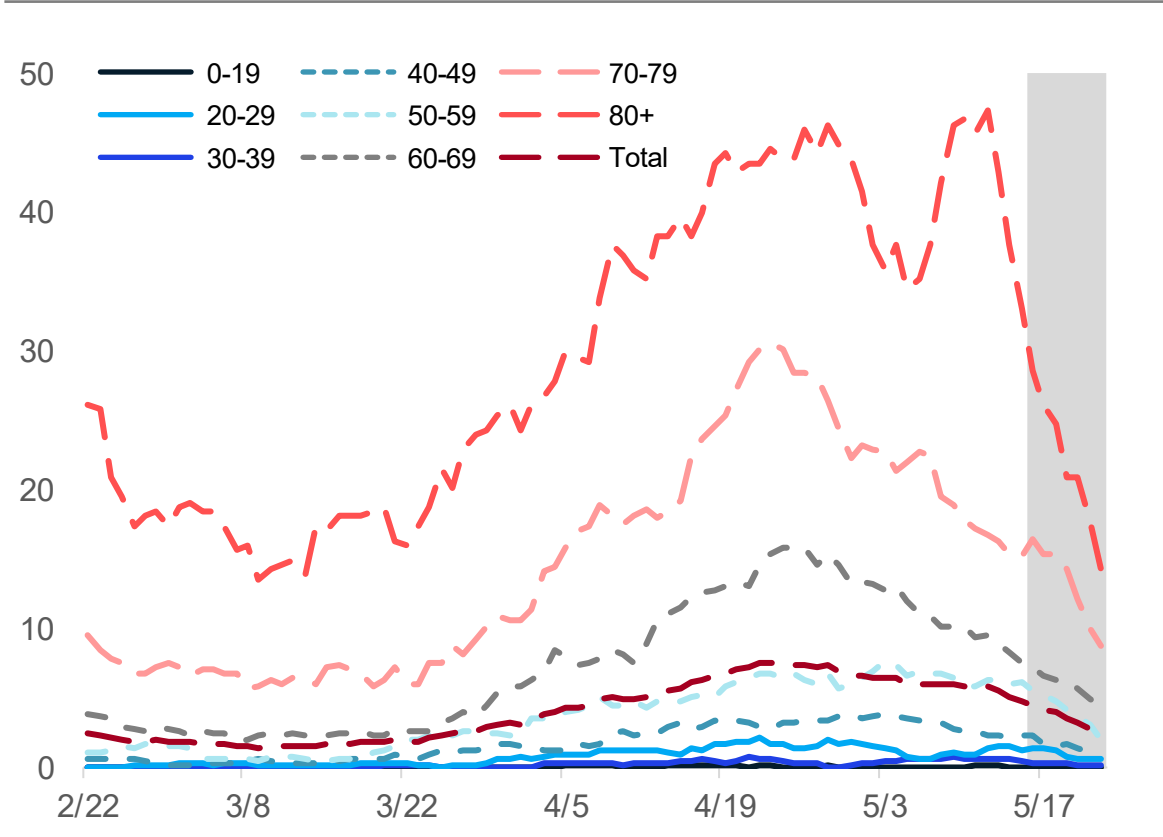
- Statewide hospitalizations are 44% lower than the previous wave when aligned to the same starting point. Regions 2N and 2S hospitalizations are 41% lower. The most recent wave continues to show a more rapid decline than the fall.





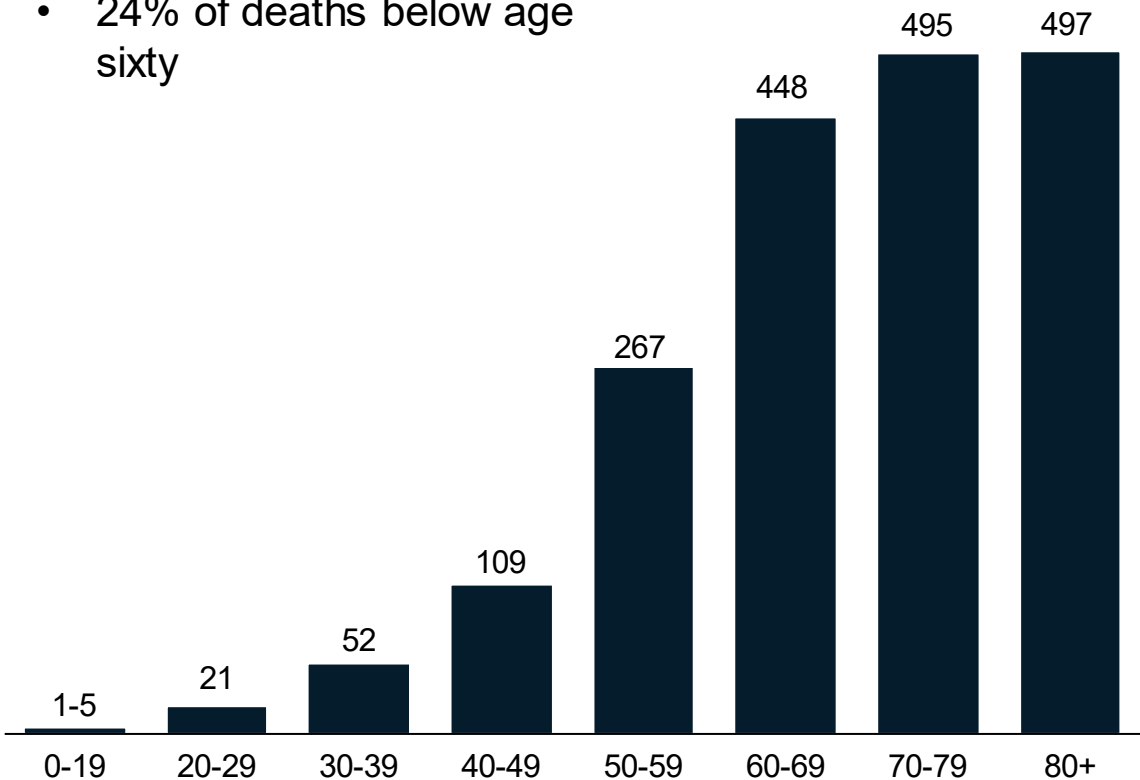
# Average and total new deaths, by age group

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 5/15/2021)

- 24% of deaths below age sixty



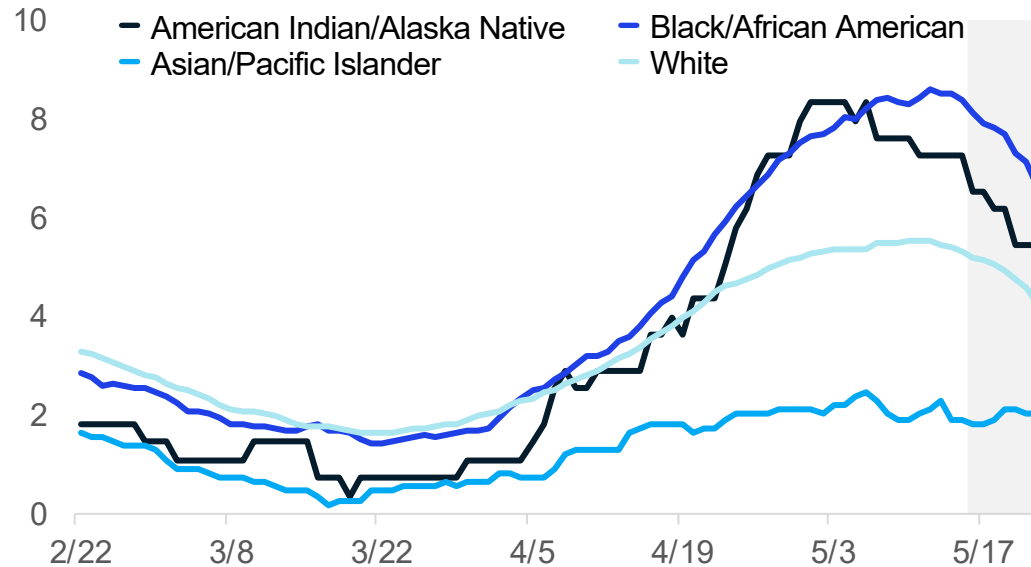
Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.

Source: MDHHS – Michigan Disease Surveillance System

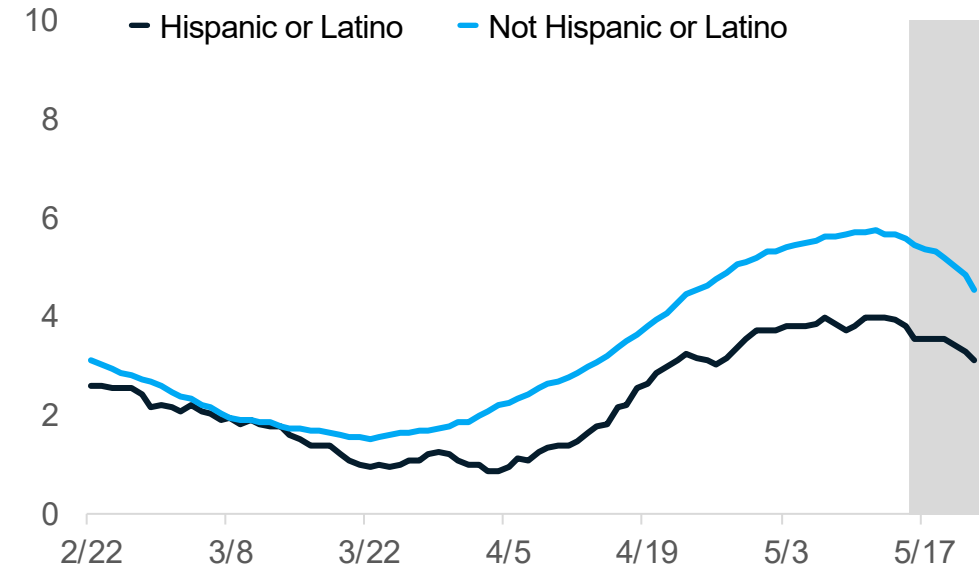


# 30-day rolling average daily deaths per million people by race and ethnicity

## 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
- All racial and ethnic groups are seeing a decrease or plateau 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)



# How is public health capacity?

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

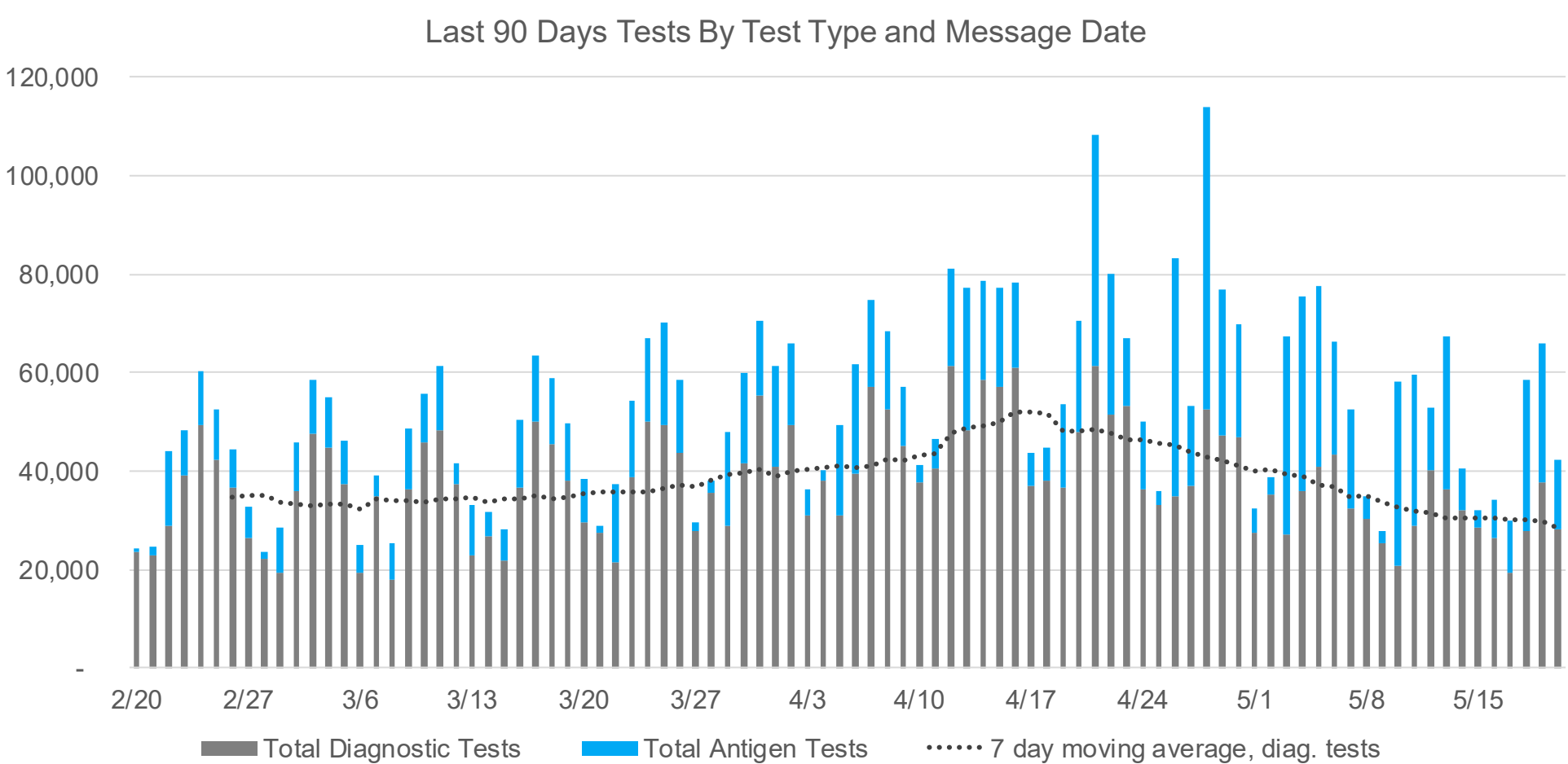
- PCR testing decreased since last week
- Percent of antigen tests have decreased since last week

Cases identified for investigations has declined

- Number of cases not investigated this week (3,676) is 37% lower than prior week (5,793)
  - 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

- 43,331 rolling 7-day average daily diagnostic tests reported to MDHHS (PCR + Ag) (↓)
- 28,538 average daily PCR tests (↓)
- 34.1% are antigen tests over the past week (↓)
- 6.6% positivity in PCR tests (↓)





# COVID-19 TESTING

Category>Event Type

- ☐ Community Pop Up
- ☐ Entry Point
- ☐ Neighborhood
- ☐ Recreation

Vendor

- ☐ CDC: eTrueNorth
- ☐ Honu: TrueMedIT

County > City

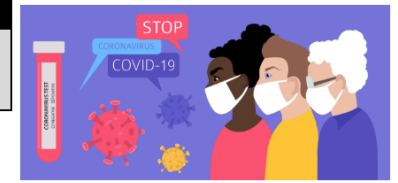
All

Region

All

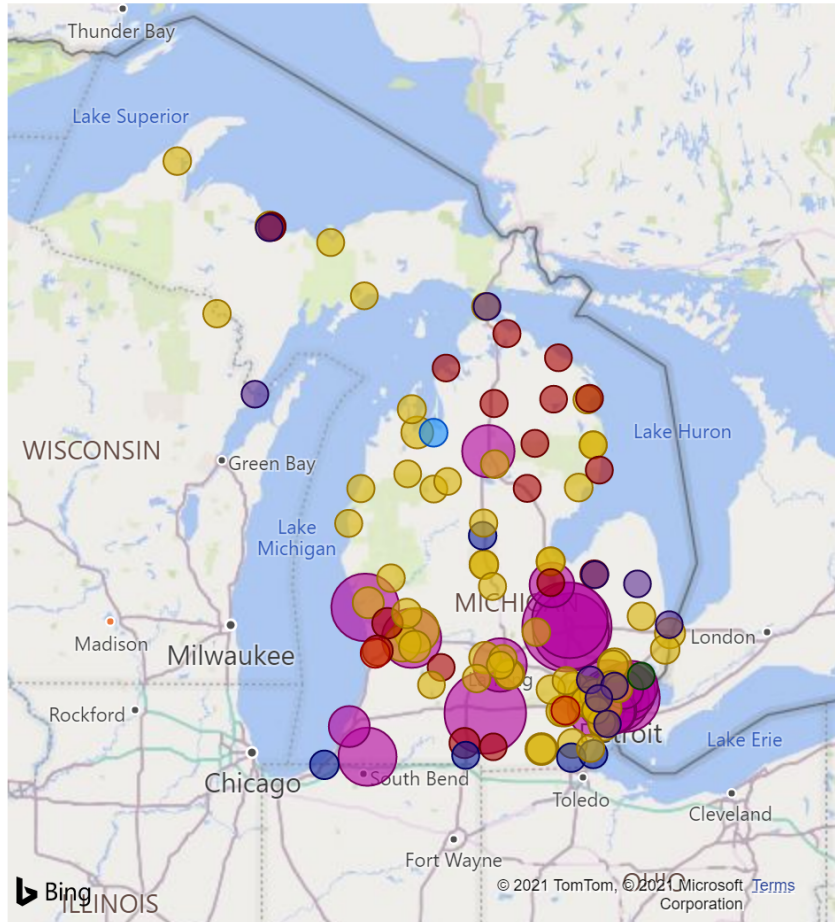
Total Tests

135,401



## MI COVID TESTING SITES

● Airport ● Event ● LHD ● Neighborhood ... ● Retail ● School ● State Park ▶



Type	Community Pop Up	# Events	Tested	C
Event	Tulip Time Festival	8	362	H
Event	UM Graduation	4	236	A
LHD	Alpena Fairgrounds / Merchants Building	1	41	A
LHD	Barry Eaton Health Dept	1	36	H
LHD	Branch Community Health Coldwater	11	525	C
LHD	Branch Community Health Hillsdale	1	9	H
LHD	Branch Community Health Three Rivers	1		T
LHD	Charlevoix Fire Dept	4	15	C
LHD	Cheboygan Fairgrounds	1	72	C
LHD	Coopersville United Methodist Church	9	589	C
LHD	Free Church	5	82	C
<b>Total</b>		<b>71</b>	<b>26,153</b>	

Airport	Event Times	Tested
Cherry Capital Airport (TVC)	Wed 2pm-10pm Fri 12pm-8pm	164
<b>Total</b>		<b>164</b>

Welcome Center	Event Times	Tested
Clare: US-127/US-10 @ Mile #160	Daily 10am-5pm	124
Coldwater: I-69 North @ Mile #6	Daily 10am-5pm	64
Dundee: US-23 North @ Mile #8	Daily 10am-5pm	279
Monroe: I-75 North @ Mile #10	Daily 10am-5pm	223
New Buffalo: I-94 East @ Mile #0	Daily 10am-5pm	294
<b>Total</b>		<b>984</b>

Neighborhood Site	Event Times	Tested	City
Albion College - Washington Gardner	Mon 12pm-7pm Wed 12pm-7pm Fri 9am-5pm	8,317	Albion
All God's People Church	Tue 10am-3pm Wed 10am-3pm Thu 10am-6pm	3,770	Roseville
Bethel Baptist Church East	Mon 10am-5pm Wed 11am-7pm Fri 10am-5pm	6,409	Detroit
Bethel United Methodist Church	Tue 10am-4pm Wed 10am-4pm Thu 1pm-7pm	9,483	Flint
Christ Temple Church	Mon 10am-5pm Tue 10am-5pm Thu 12pm-7pm	6,209	Muskegon
Epicenter of Worship	Tue 11am-7pm Thu 10am-5pm Sun 11am-3pm	4,057	Lansing
Garfield Park Gym	Thu 3pm-8pm Fri 10am-6pm Sat 10am-2pm	4,946	Grand Rapids
Hartford Memorial Baptist Church	Mon 11am-5pm Fri 9am-4pm Sat 10am-2pm	2,869	Detroit
Historic King Solomon Site	Thu 12pm-8pm Fri 10am-6pm Sat 9am-2pm	5,277	Detroit
Hope Community Church	Mon 10am-5pm Wed 10am-5pm Thu 12pm-7pm	4,774	Niles
<b>Total</b>		<b>108,100</b>	

✈ Airport 🏠 Neighborhood Testing 🌳 Community Pop Up 🚗 Welcome Center





Facility

All

Last

12

Months

5/22/2020 - 5/21/2021

# Neighborhood Facility Testing

Region

All

Facility\_County

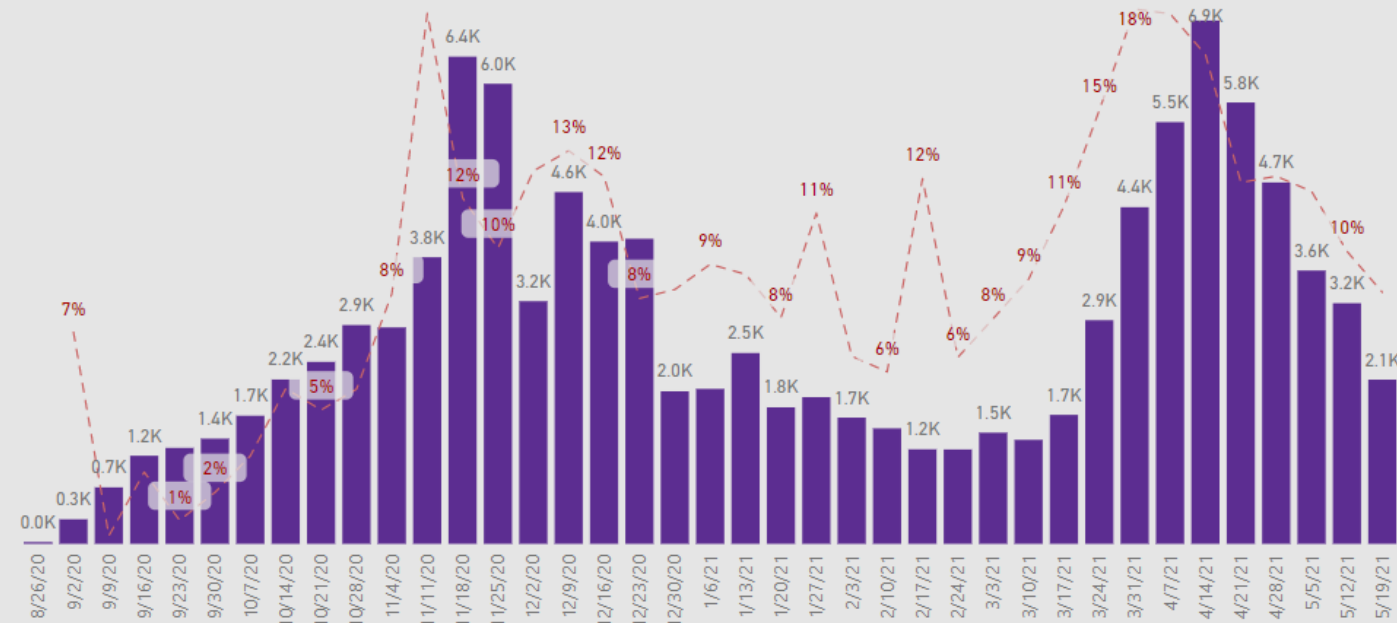
All

LHD

All

## Neighborhood Testing Events and Positivity by Week

● # Tested ● % Positivity



# Facilities

22

# Events

1,173

Sites Target Zip

100.0%

AVG Miles Tr...

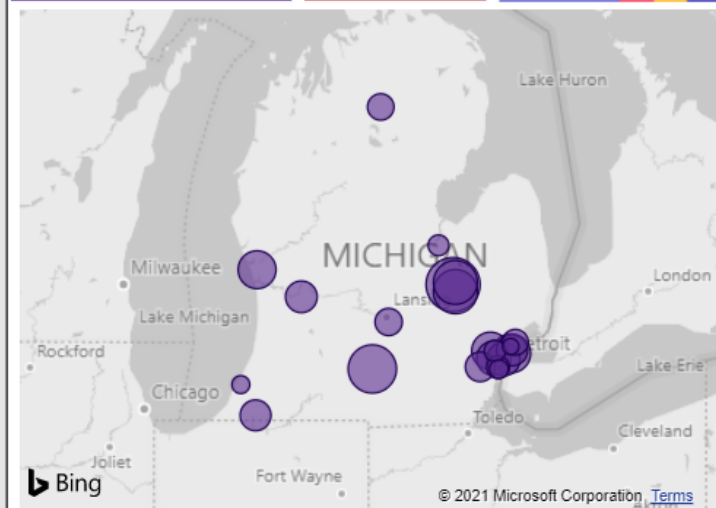
7.3

# Tests Collected

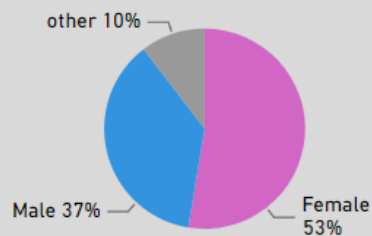
108,100

% Positivity

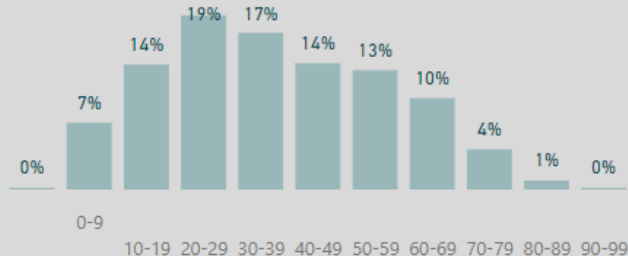
11.1%



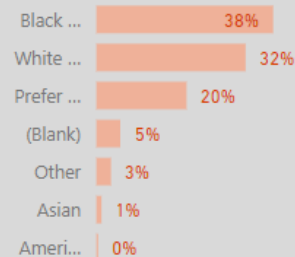
Gender



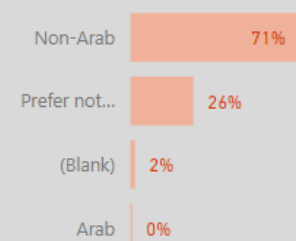
Age Range



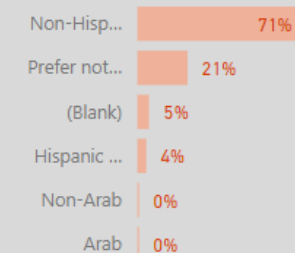
Race



Arab Ethnicity



Hispanic/Latino Ethnicity







# ANTIGEN RESULTS 19 & UNDER

## K-12 Schools & Other Sports/Clubs



Student Tests  
**507,773**

Positives  
**3,784**

% Positive  
**0.72%**

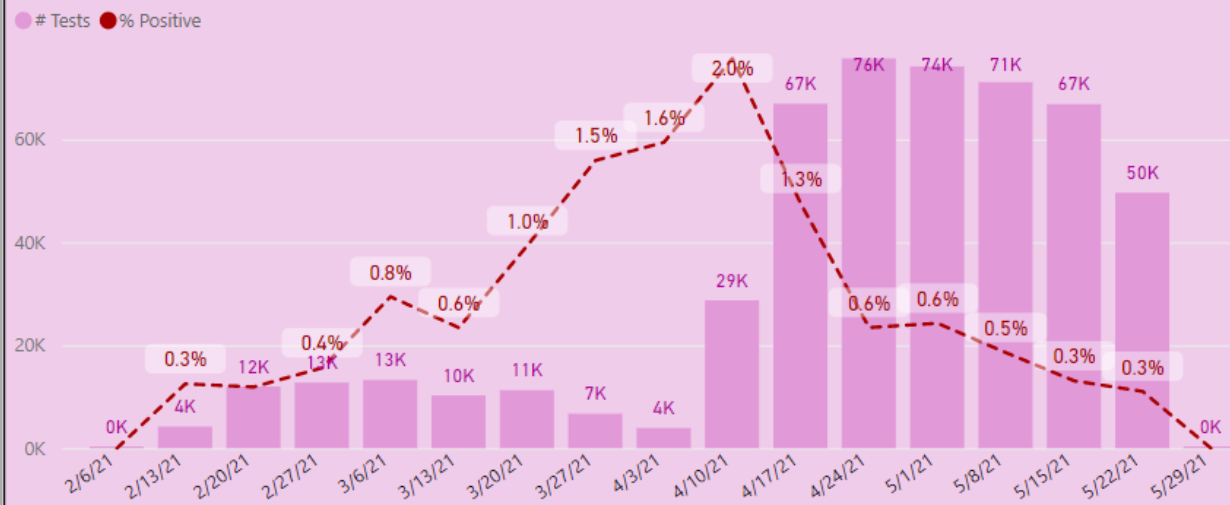
Youth Sports ...  
**20,099**

Positives  
**115**

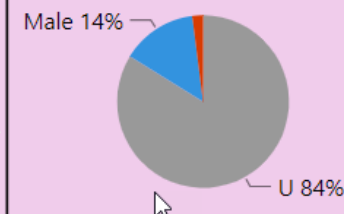
Positives  
**0.57%**

AGGREGATE NEGATIVES have no Age, Race, Gender, put in 19 & under for Schools & Clubs, lowers positivity

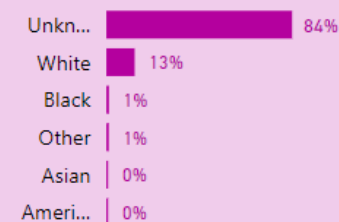
### K-12 SCHOOLS Testing Results - 19 & UNDER (with aggregate negatives)



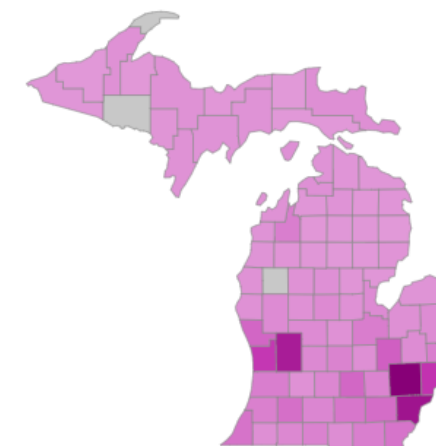
#### Gender



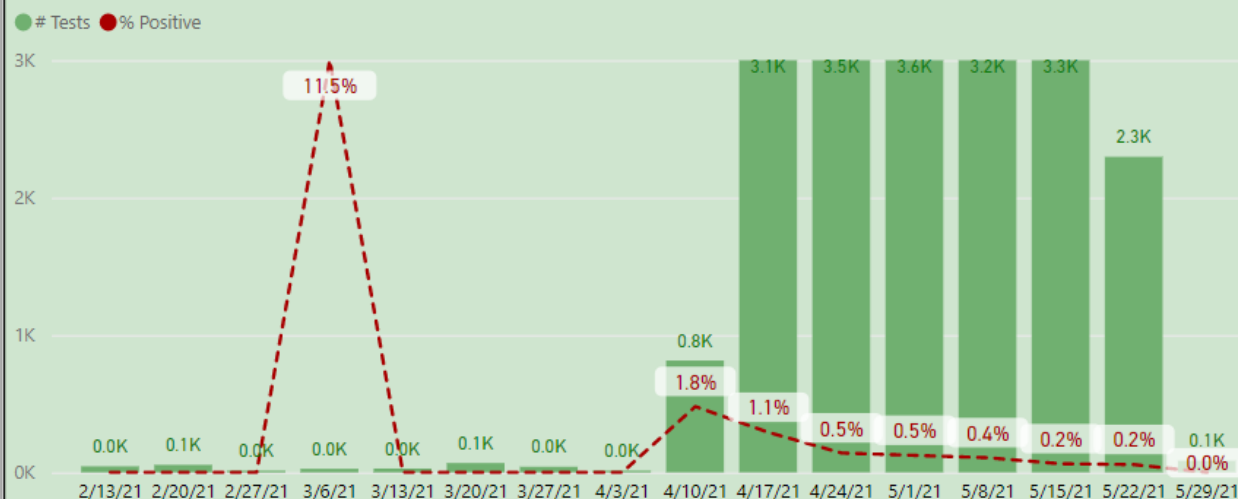
#### Race



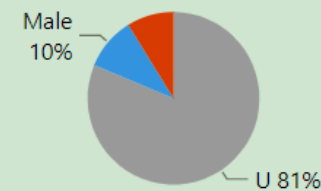
### K-12 Students Tested by County



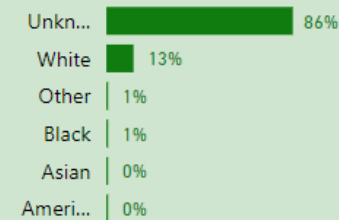
### OTHER (Non K-12/College) Testing Results - 19 & UNDER (with aggregate negatives)



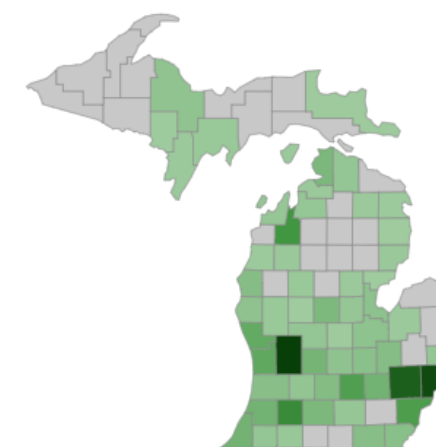
#### Gender



#### Race



### Youth Athlete (non K12) Tested by County





# College/University Antigen Testing

Total Tests Re...  
42,307

Positives  
413

Positives  
0.98%

Colleges/Uni...  
28

College/University

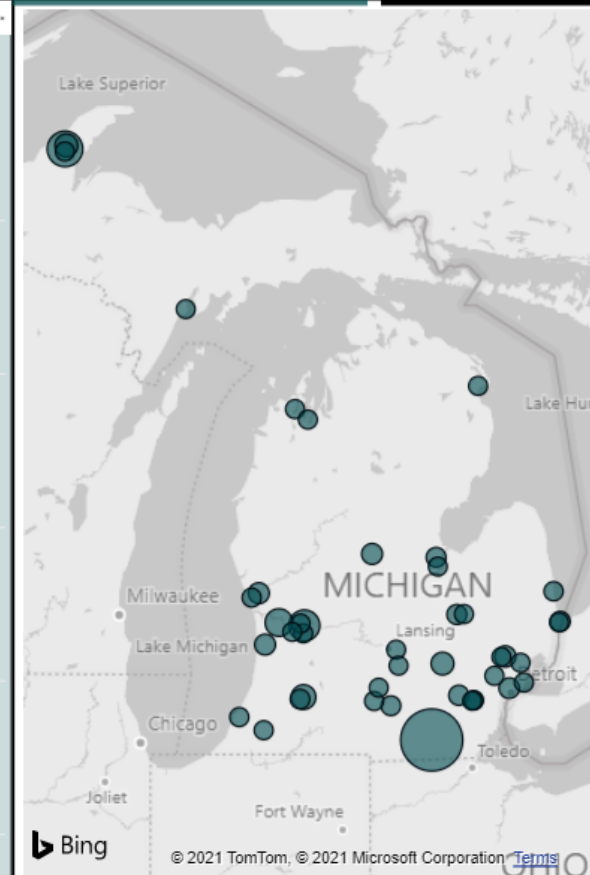
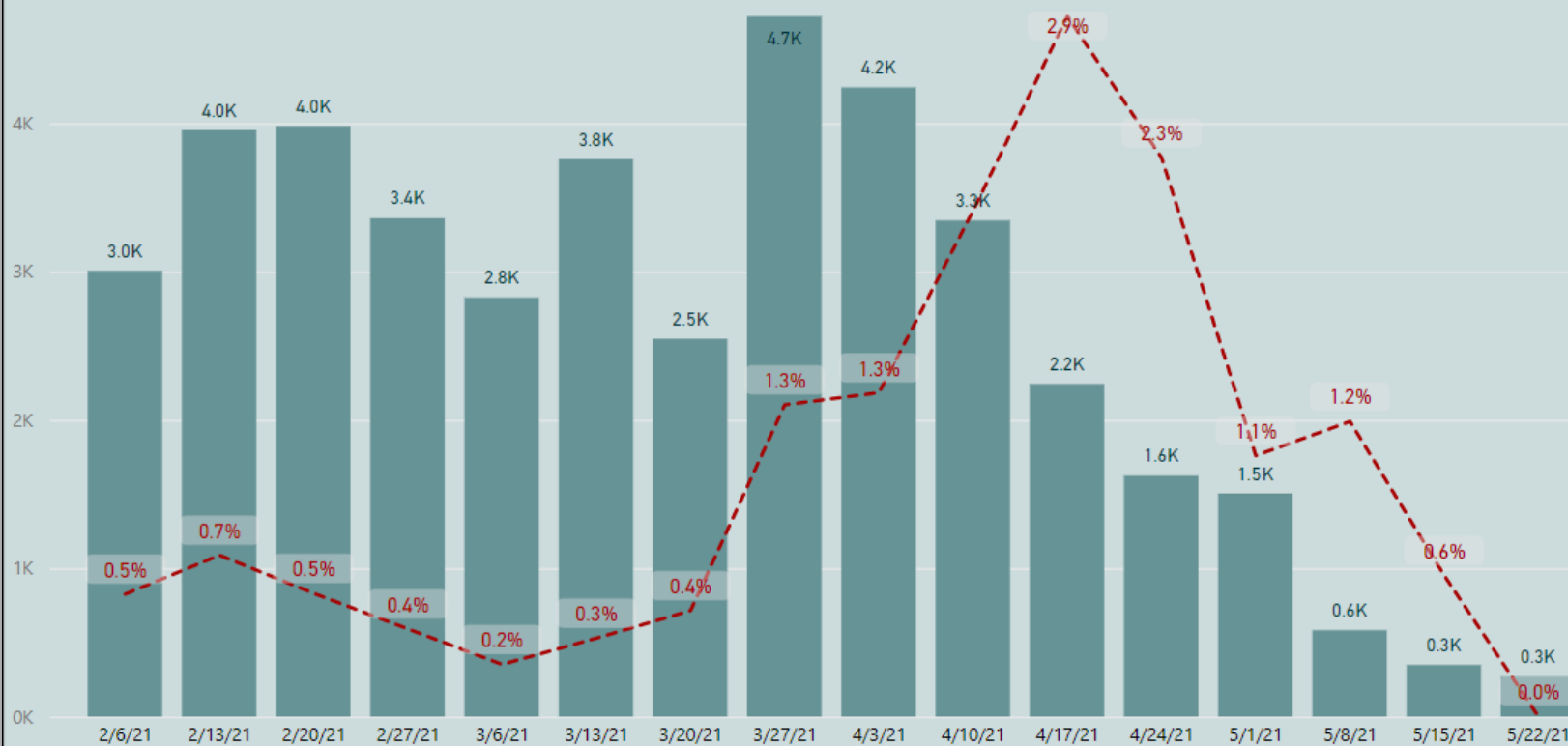
All

Week

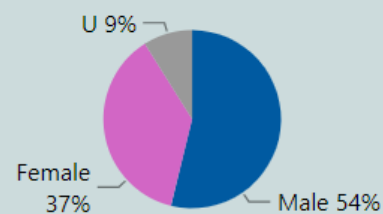
All

## Testing Results

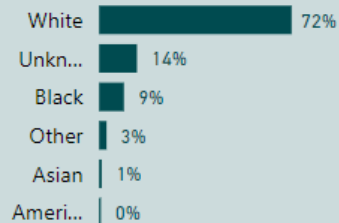
Tests % Positive



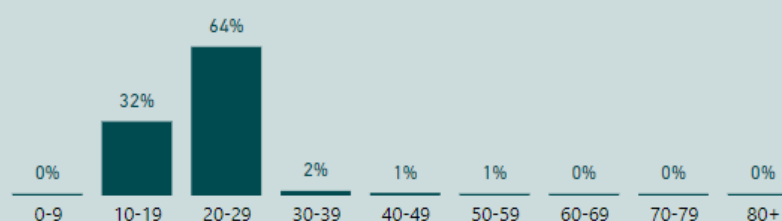
## Gender



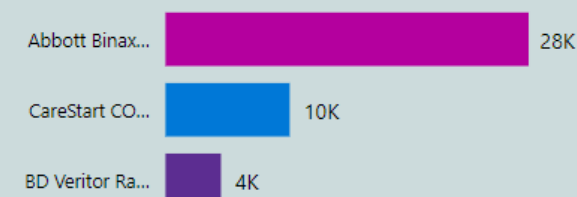
## Race



## Results by Age Buckets



## Antigen Test Types







Category

All

Site

All

Week Ending

All

## Community Testing Events/Pop Ups

Region

All

Facility\_County

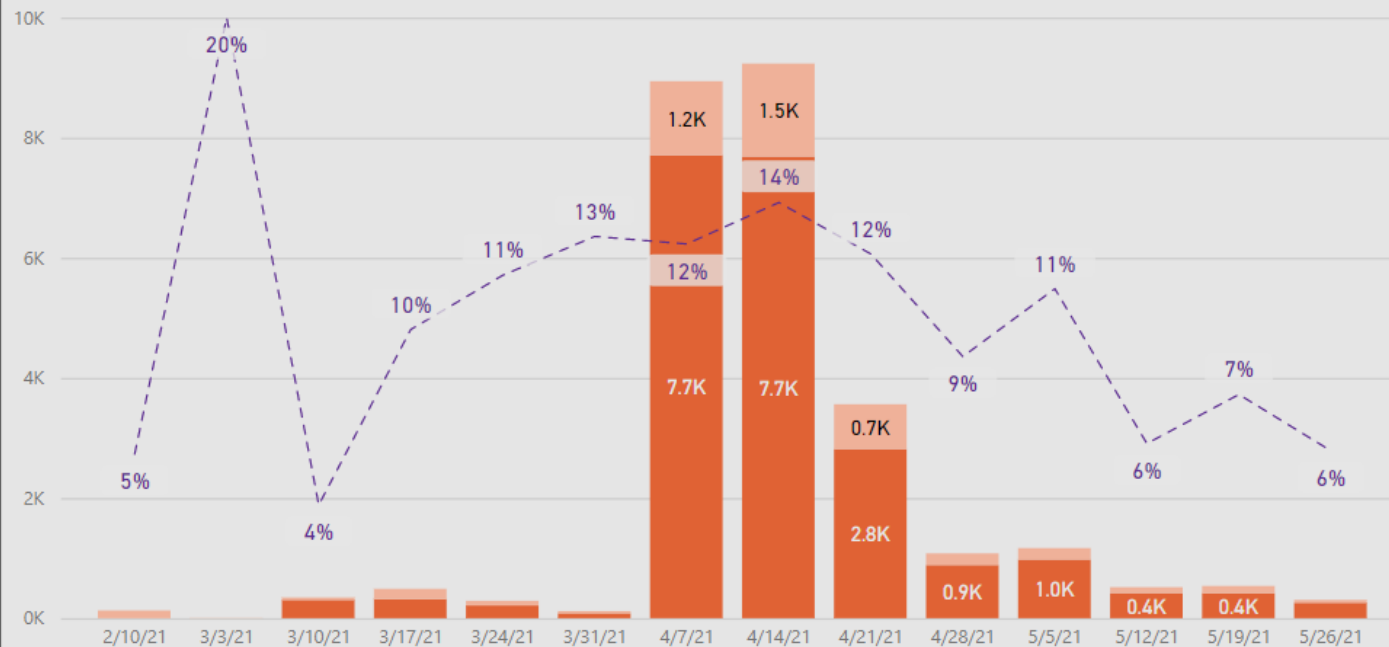
All

LHD

All

### School Event / Spring Break Pop up, Travel and Community Testing Events and Positivity by Week

Test Type ● Antigen ● Path DNA ● % Positivity



# Tests Collected

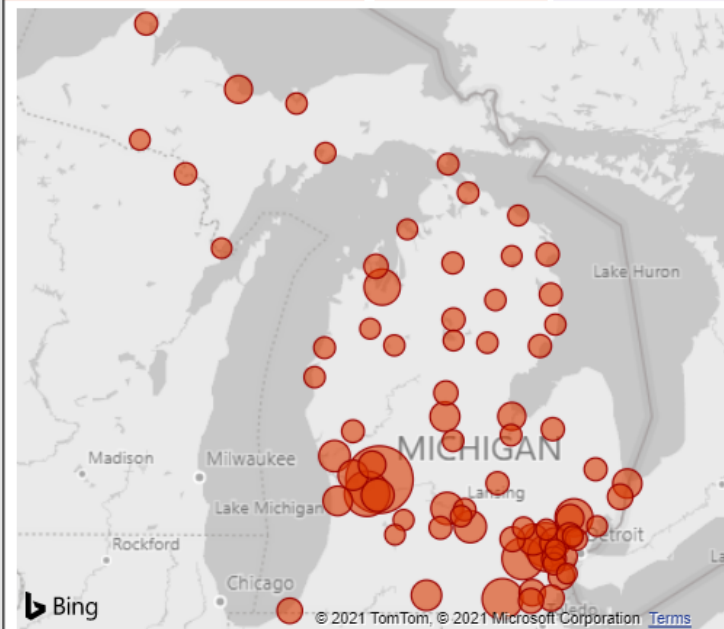
26,714

# Sites

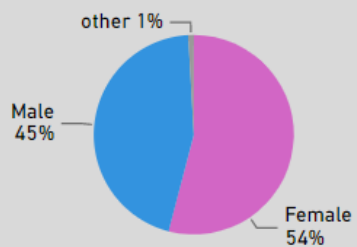
88

% Positivity

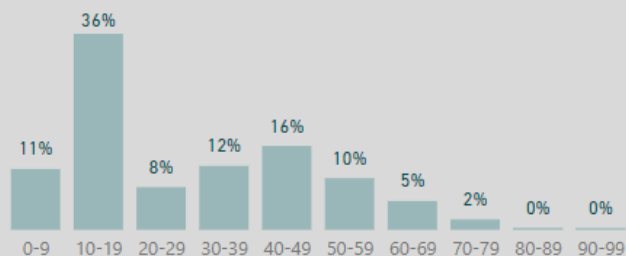
12.16%



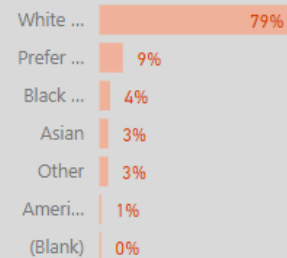
#### Gender



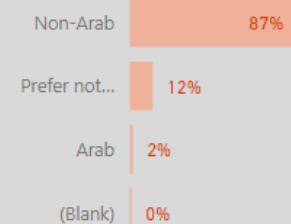
#### Age Range



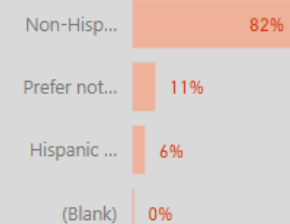
#### Race



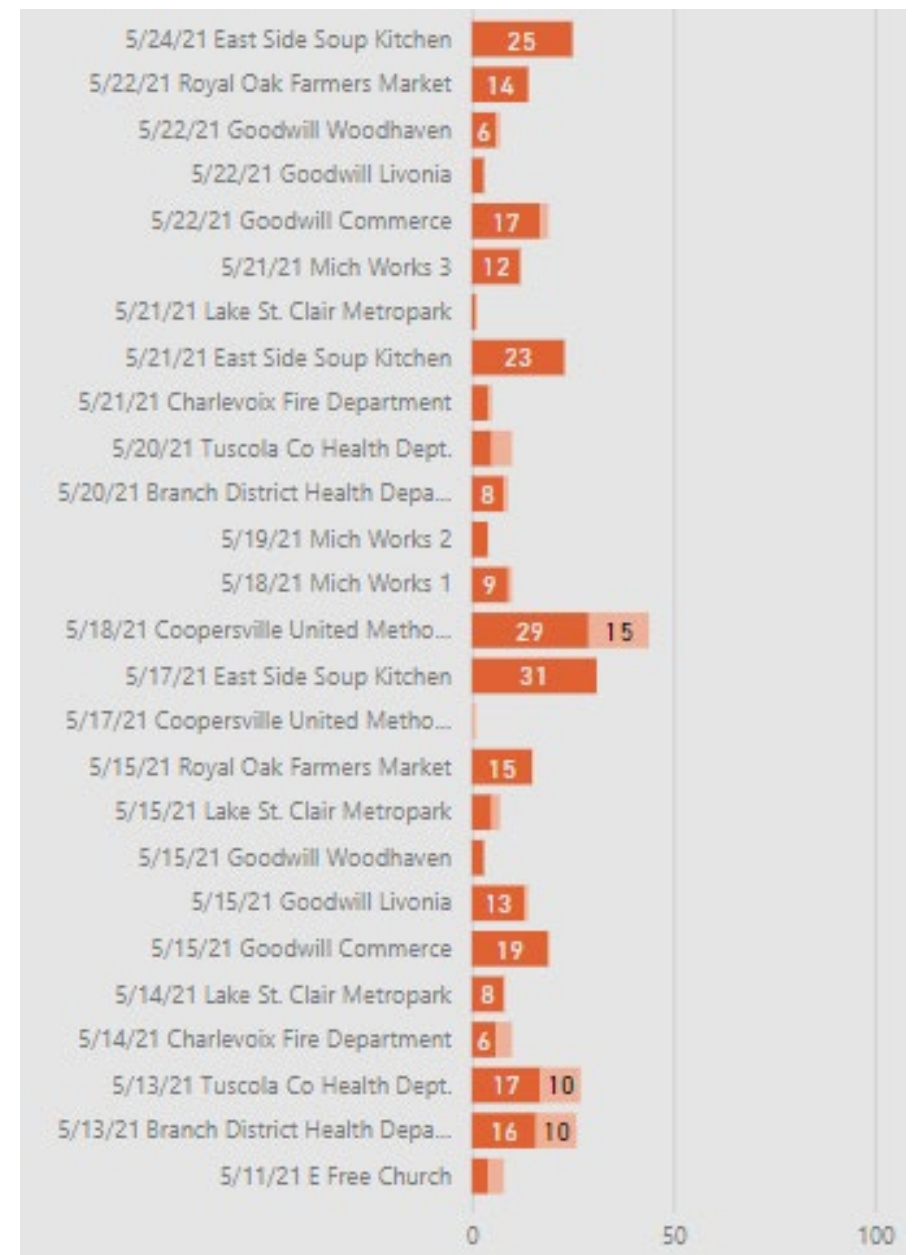
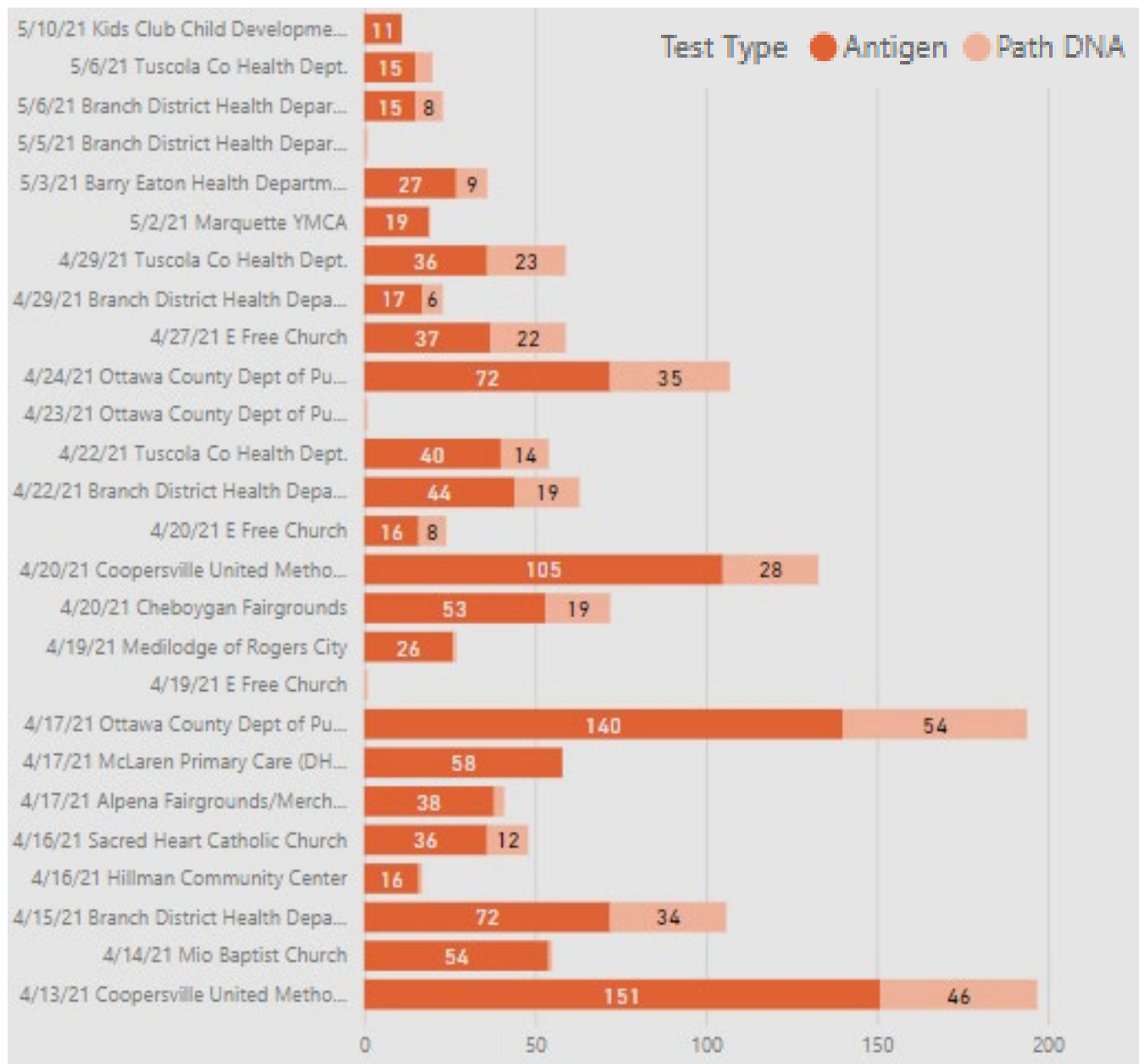
#### Arab Ethnicity



#### Hispanic/Latino Ethnicity



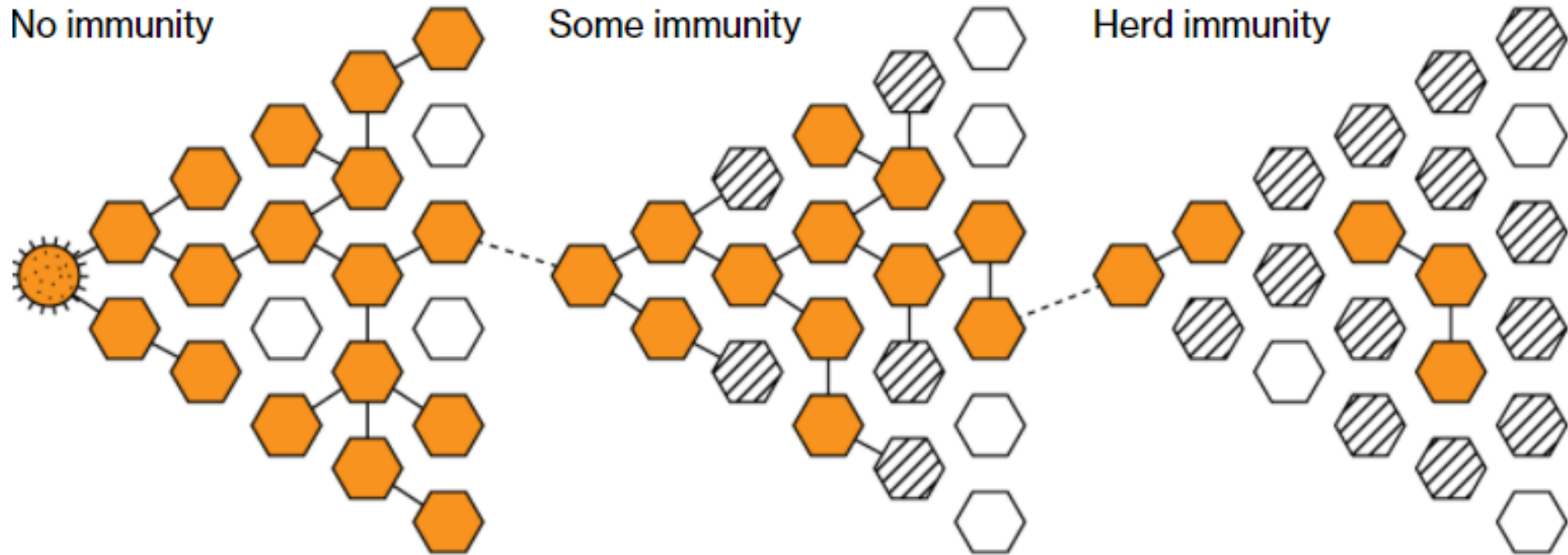




## Community Testing Events



# The Journey to Herd Immunity



## Mitigation

- **Widespread symptomatic testing** and contact tracing is needed to identify cases and prevent large-scale transmission.
- **Asymptomatic screening** is helpful to identify occult infections.

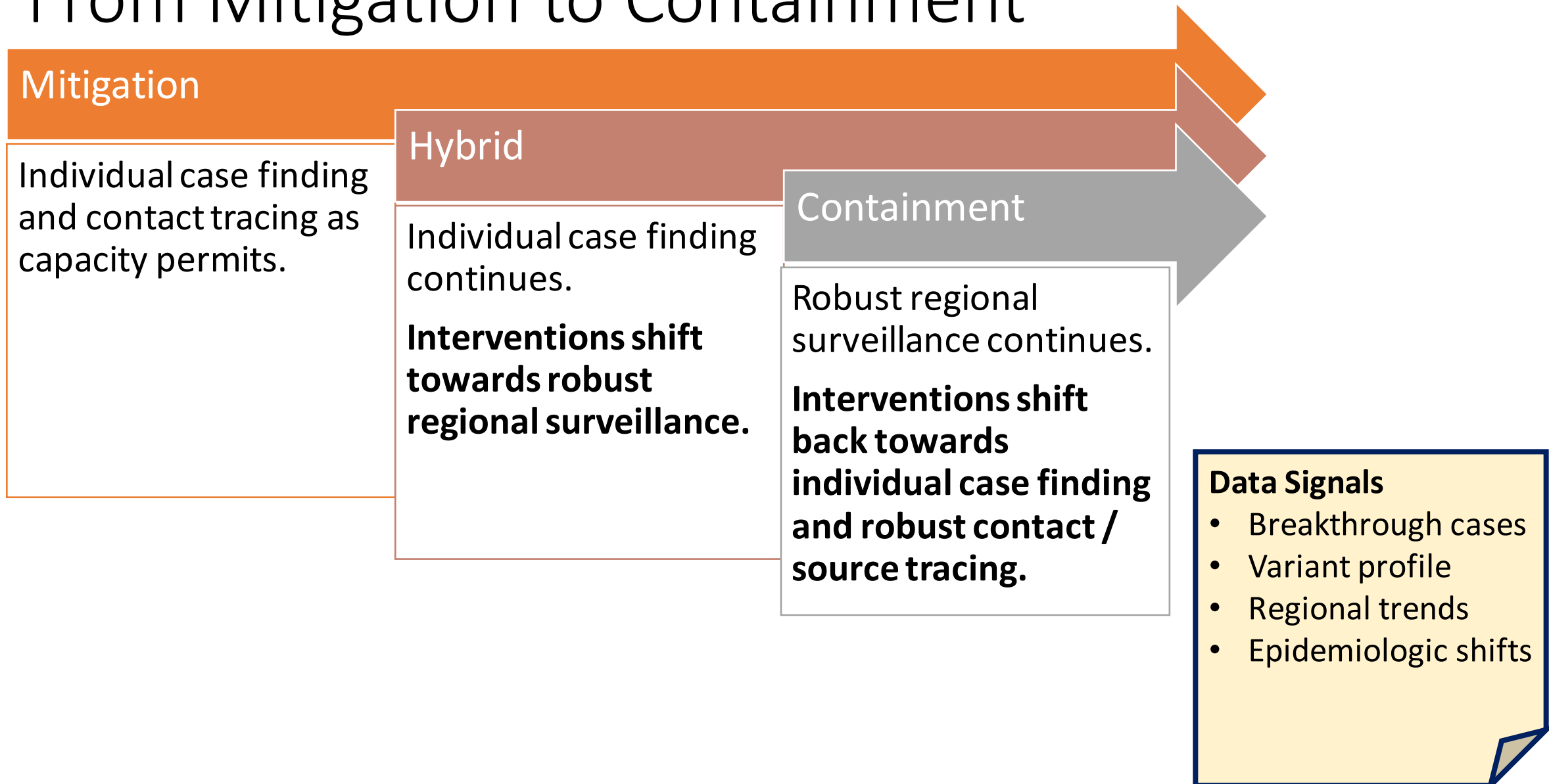
## Containment

- **Targeted testing** and case identification is needed to prevent outbreaks.
- **Surveillance** is needed to gauge the incidence of disease.





# From Mitigation to Containment



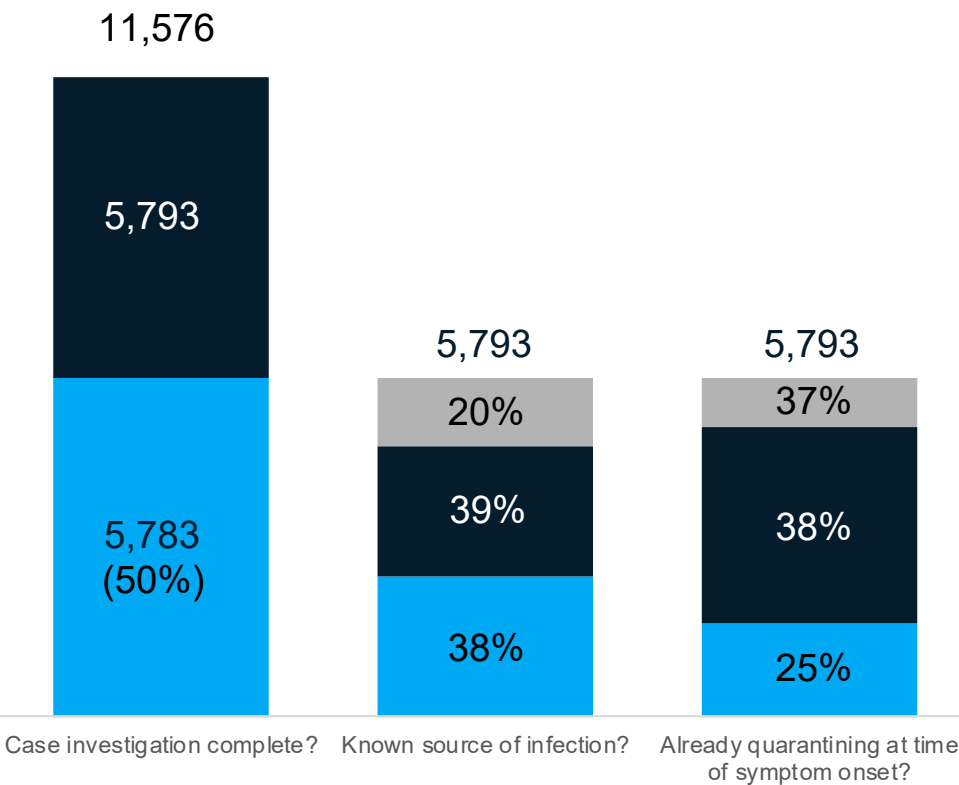


# New Case Investigation Metrics (Statewide)

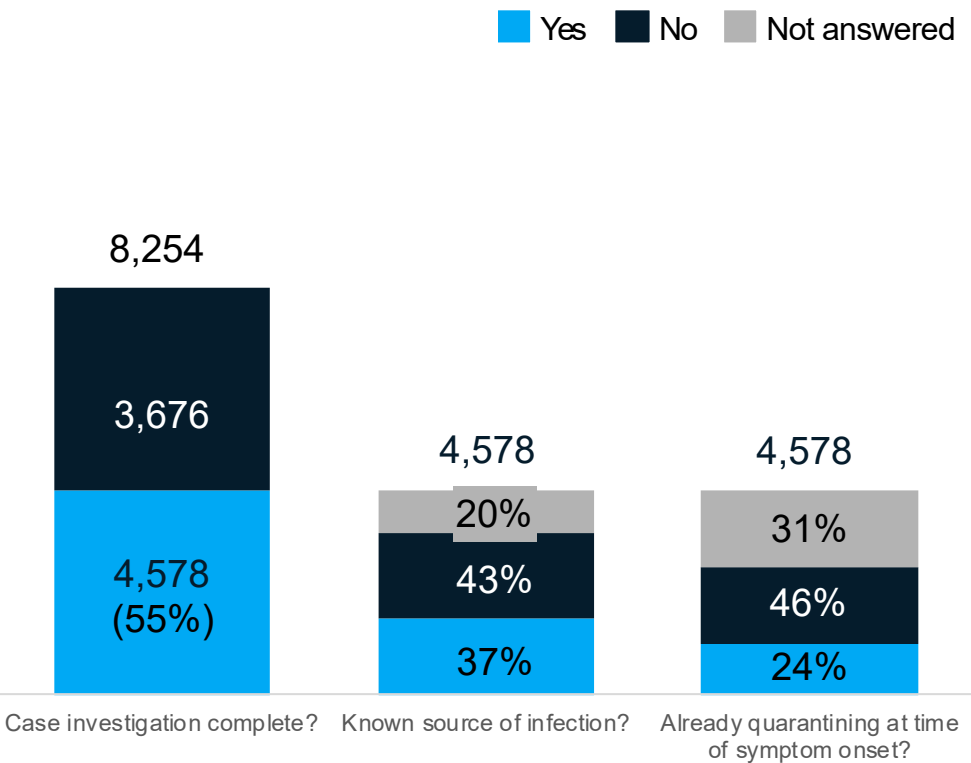
New Communicable Disease metrics this week:

- Number of cases identified for investigations (↓), and percent of completed interviews (↑) have improved from prior week
- 37% of investigated cases having a known source (38% last week, 42% week prior)
- 24% of investigated cases noted that they were quarantining before symptoms (25% last week)

05/08-05/14 Case report form information



05/15-05/21 Case report form information





# COVID-19 Vaccination

## **Administration**

9th state in doses delivered, first doses provided and number of completed individuals (5/24/21)

78.0% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 5/23/2021)

Weekly doses administered declined for four weeks, but seeing uptick in first doses this week

Federal LTC-Pharmacy partnership wrapping up after administering vaccine to staff and residents of 4,067 LTC Facilities

12-15 year olds most frequently vaccinated in pharmacies, LHD, hospital and pediatrician offices

## **Coverage**

58.1% of MI residents age 16+ initiated vaccination and 4.08M completed the series ( [CDC data tracker](#) 5/24/21)

Coverage highest among 65-75 and 75+ age groups, with 69.5% of people 50-64 completed their series

Initiation highest among Asian, Native Hawaiian or Pacific Islander and American Indian/Alaskan Native individuals (MI Covid Vaccine Dashboard 5/24/21)

Less than 1% of Vaccinated Individuals Later Tested Positive for COVID -19 (Number of cases who are fully vaccinated (n= 6,187))

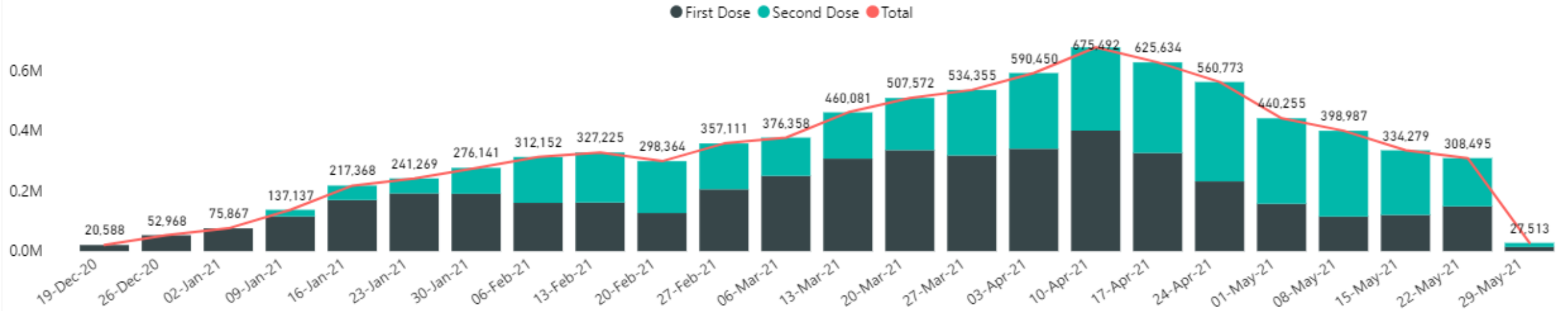
**Vaccines are effective in real world, including with single dose**

**National vaccine safety monitoring continues**



# Doses Delivered and Administered, and Coverage as of 5/25

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



10,805,945 doses delivered to Michigan providers (up 406,730 from 10,399,215)\*

8,474,785 doses Administered (CDC tracker) – MI has detail on 8,156,434 (96%)

78.0% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 5/23/2021) – 77.4% last week

- Last three weeks less than 400,000 doses administered in a week
- 308,495 doses administered last week (down ~16,550 doses over previous week).
- Increase in first doses occurring among those 40 and younger; particularly those 20 and younger
- 12-15 years most frequently vaccinated in pharmacy (40,320 doses), LHD (17,313 doses), hospitals (10,776) and pediatric offices (4,739)

\*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.



# Coverage Demographics as of 5/25/2021

**4,081,032 people** completed series (CDC)

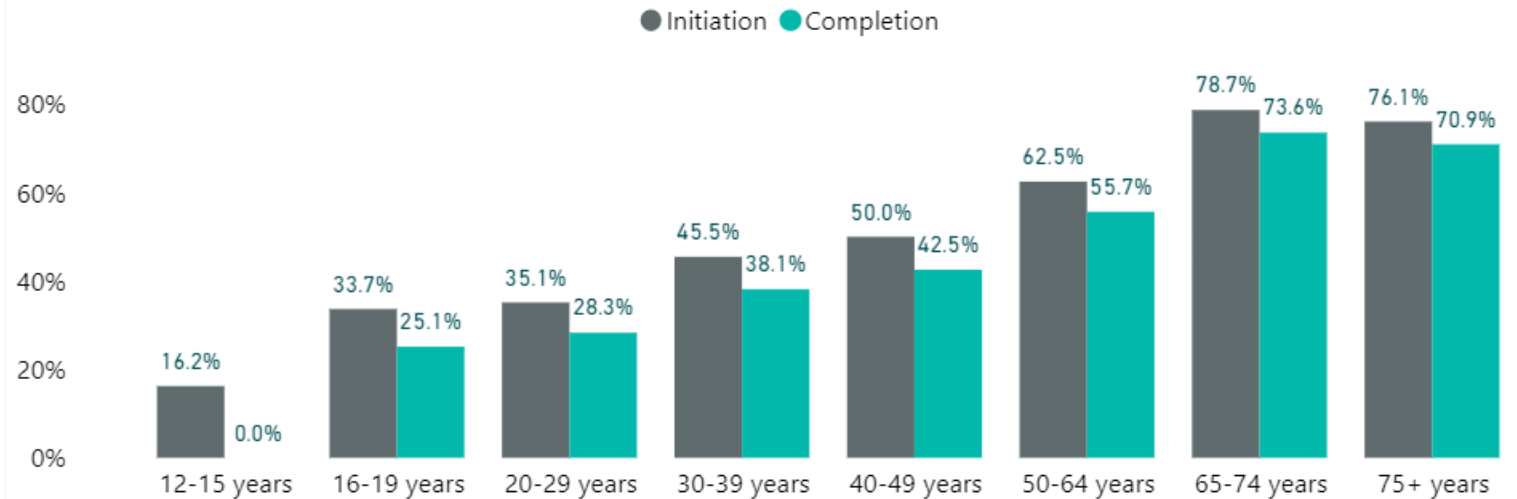
Age Group (Michigan dashboard)

- 39.3% people age 12-49 initiated vaccination (up from 36.9% last week)
- 69.5% people aged 50 or older have completed their vaccine series

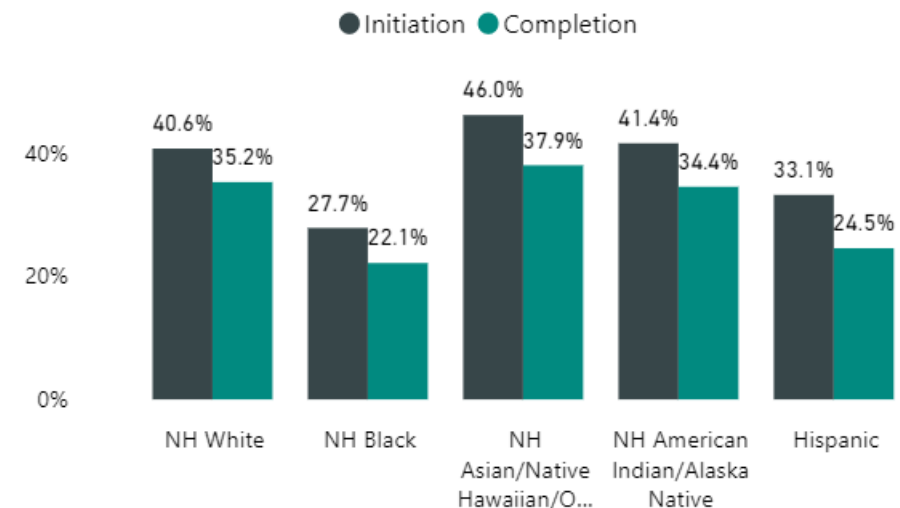
Race/Ethnicity for 12 and older

- Initiation coverage highest among those of Asian, Native Hawaiian or Pacific Islander Race (46.01%) then NH (Non-Hispanic) American Indian (41.4%), NH White (40.6%), NH Black or African American (27.7%) Races. Initiation is at 33.1% for those of Hispanic ethnicity
- 23.5% data missing or unknown

COVID Vaccine Coverage by Age Group



Coverage by Race - State Level





# Federal Long-Term Care and Retail Pharmacy Partnership wrapping up

**289,206 vaccines administered to staff and residents of 4,067 Long-Term Care Facilities**

Pharmacy Phase	Activation Date	Facilities Assigned for Scheduling	Facilities with First Clinic Completed	First Dose Clinics Completed %	Second Dose Clinics Completed %	Facilities with Third Clinic Completed	Total Vaccines Administered (Residents & Staff)	Additional Clinics Scheduled Over Next 7 Days (includes today)
CVS Part A (Skilled Nursing Facilities)	12/28/2020	269	269	100%	100%	100.0%	68,675	0
CVS Part B (Other Long Term Care Facilities)	01/04/2021	717	717	100%	100%	100.0%	68,257	0
Walgreens Part A (Skilled Nursing Facilities)	12/28/2020	145	145	100%	100%	100.0%	34,912	0
Walgreens Part B (Other Long Term Care Facilities)	01/04/2021	2178	2178	100%	100%	99.6%	100,159	9
Managed Health Care Associates	01/27/2021	758	758	100%	100%	9.0%	17,203	1
Totals		4067	4067	100%	100.0%	99.8%	289,206	10

CVS Data Source: <https://cvshealth.com/sites/default/files/cvs-health-covid-19-vaccination-data.pdf>

Walgreens Data Source: <https://www.walgreens.com/topic/findcare/long-term-care-facility-covid-vaccine.jsp#stayinformed>

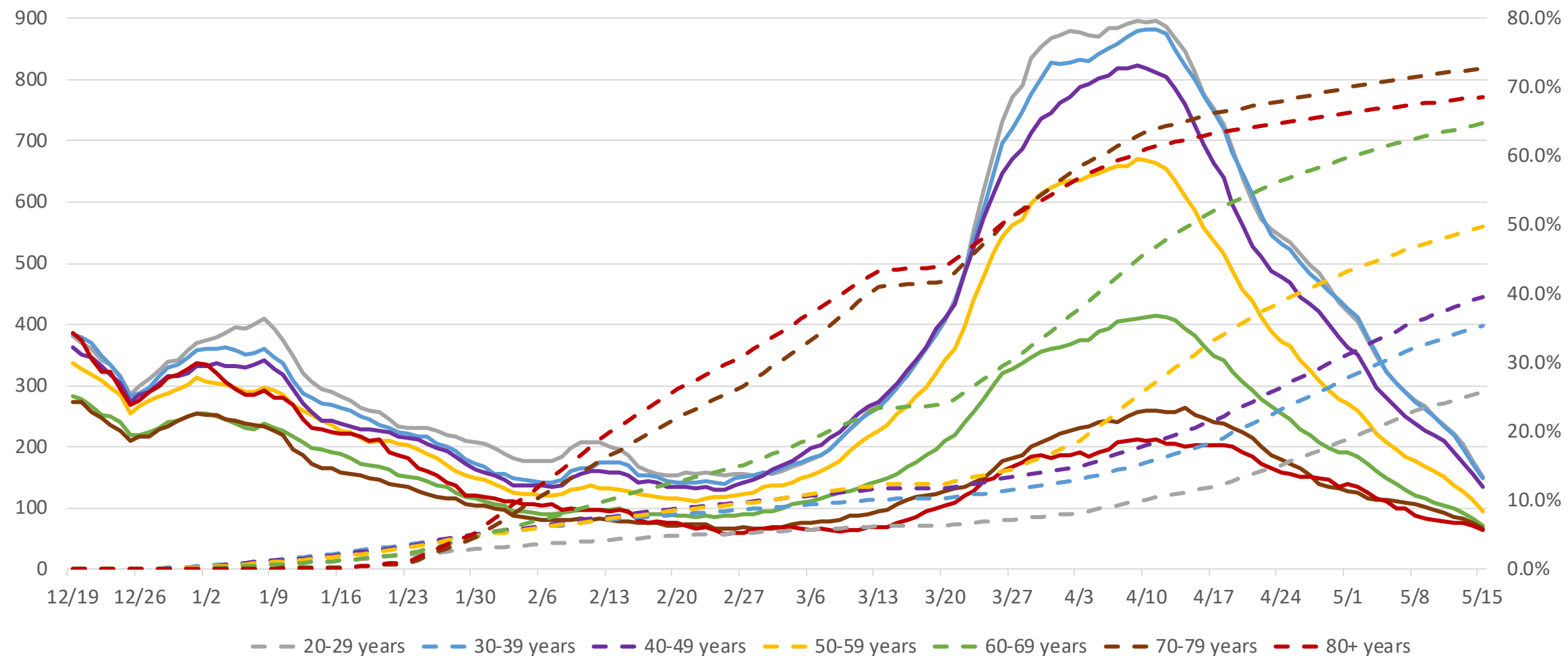
Managed Health Care Associates Source: MHA [email report]



# Comparing Vaccine Coverage and Case Rate Trends (Dec 19 – May 15)

Solid lines – case rates per million

Dashed lines – vaccine coverage (%)



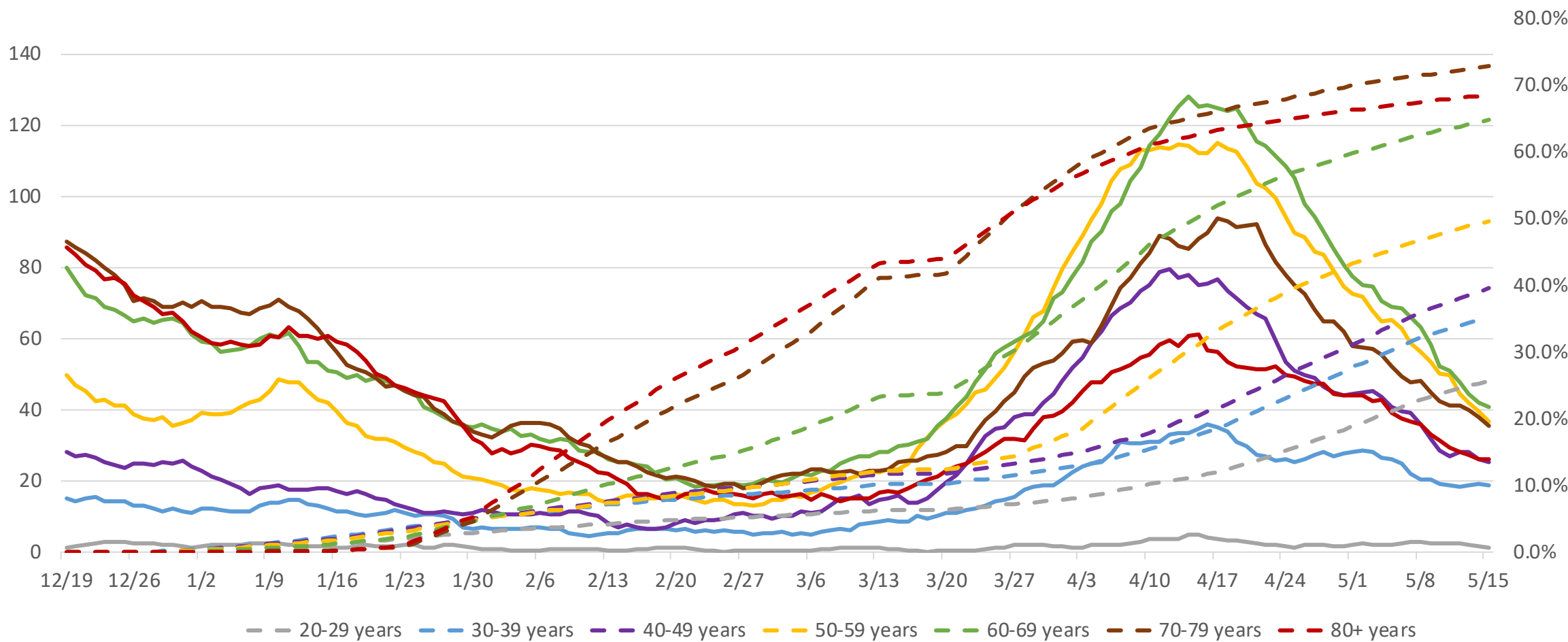
Source: Michigan Disease Surveillance System (MDSS) and Immunization Program



# Vaccine Coverage and Hospital Admissions Trends (Dec 19 – May 15)

Solid lines – Number of hospital admissions

Dashed lines – vaccine coverage (%)



Source: Michigan Disease Surveillance System (MDSS) and Immunization Program

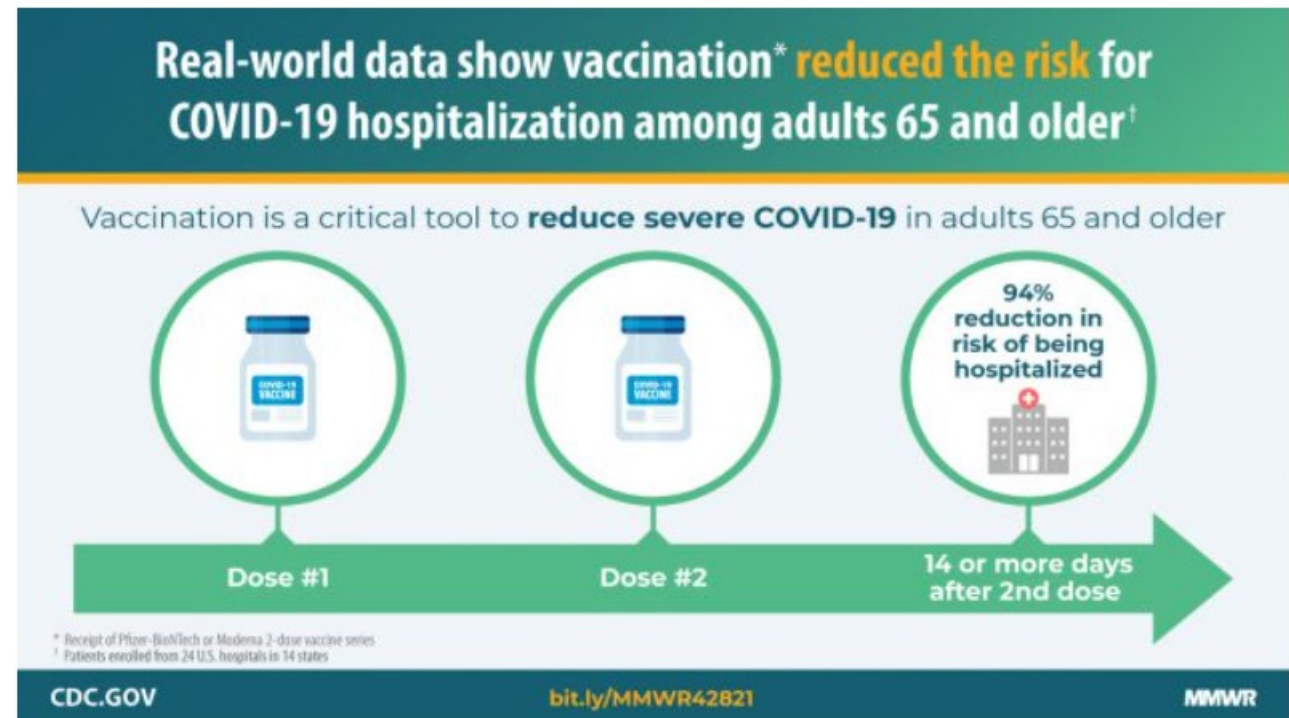


# Real World Conditions: COVID-19 vaccines protect older adults

**Partial vaccination can save lives in long term care.** Partial vaccination with Pfizer was 63% effective against infection in residents of a skilled nursing facility experiencing an outbreak in Connecticut.

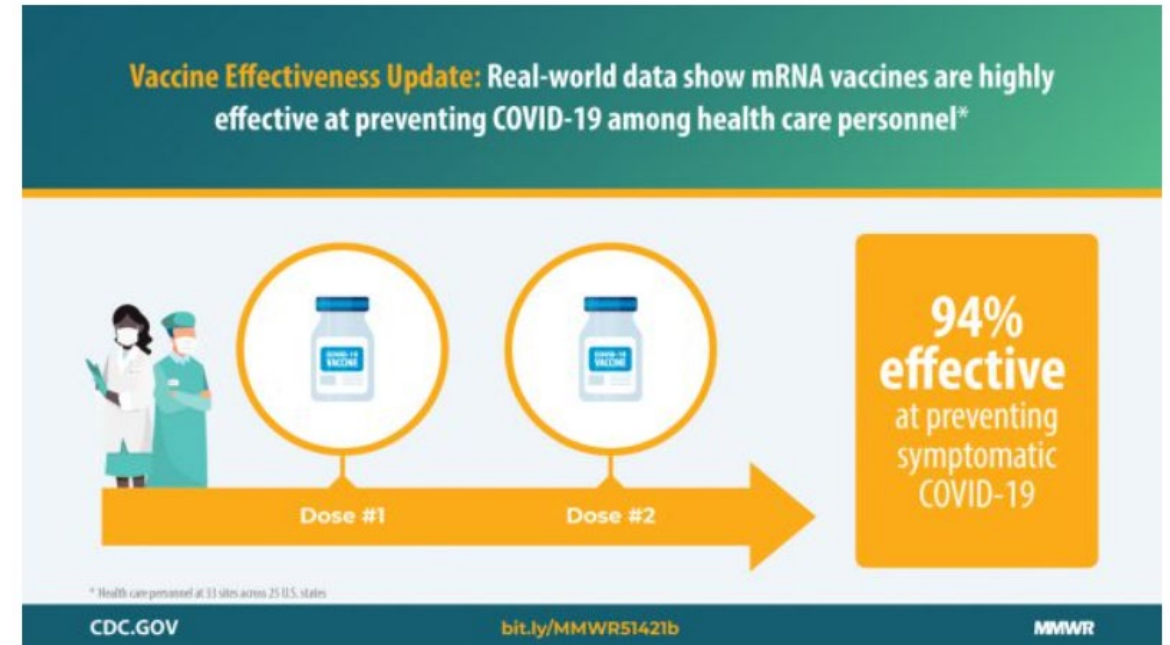
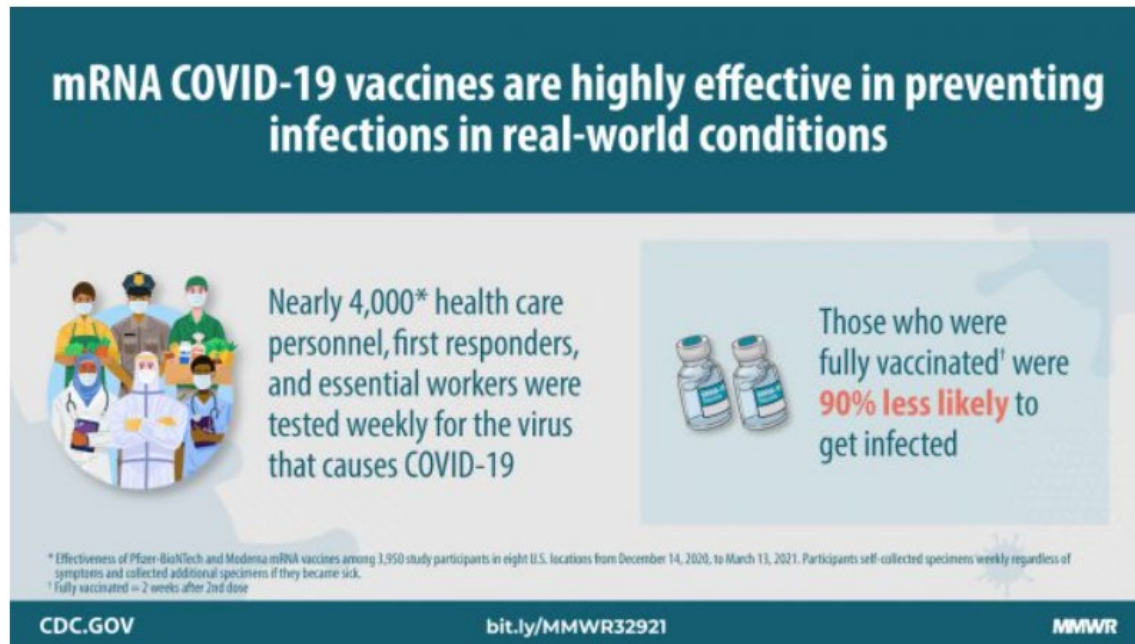
To optimize vaccine impact among this vulnerable population, high coverage with the complete 2-dose series is recommended. (Britton et al, MMWR 3/19/21 70(11):396-401)

**Vaccine is a critical tool to reduce severe COVID 19 in Adults 65 and older.** In a multistate network of US hospitals, receipt of Pfizer or Moderna vaccines was 94% effective against COVID-19 hospitalization among those fully vaccinated and 64% effective among partially vaccinated adults (Tenforde et al. MMWR 5/7/21; 70(18); 674-679)





# Real world conditions: COVID-19 vaccines provide protection to first responders and health care workers, even at one dose



In a study of health care workers enrolled at 33 sites across the US, a single dose of Pfizer or Moderna vaccine was found to be 82% effective against symptomatic COVID-19 and 2 doses to be 94% effective.



# Potential COVID-19 Vaccination Breakthrough Cases

Michigan part of CDC's nationwide investigation ([COVID-19 Breakthrough Case Investigations and Reporting | CDC](#))

Michigan Data (1/1/21 through 5/18/21):

- 6,187 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 109 deaths (102 persons age 65 years or older)
  - 312 cases were hospitalized
- Vaccine breakthrough cases are expected. COVID-19 vaccines are effective and are a critical tool to bring the pandemic under control. However, no vaccines are 100% effective at preventing illness in vaccinated people. There will be a small percentage of fully vaccinated people who still get sick, are hospitalized, or die from COVID-19.
- There is some evidence that vaccination may make illness less severe for those who are vaccinated and still get sick.
- To date, no unexpected patterns have been identified in the case demographics or vaccine characteristics among people with reported vaccine breakthrough infections.



# Vaccine Safety Monitoring

National Safety Monitoring System

Health care providers report

CDC and FDA manage review and analyze

- Identify potential patient risk factors
- Assess safety of newly licensed vaccines
- Determine and address possible reporting clusters (e.g., suspected localized or product-/batch-/lot-specific adverse event reporting)

Complicated process aggregating the data nationally and making use of specific expertise in multiple fields

Michigan does not attempt to summarize or analyze the VAERS report data or determine potential safety signal

**VAERS** Vaccine Adverse Event Reporting System  
www.vaers.hhs.gov

About VAERS | Report an Adverse Event | VAERS Data | Resources | Submit Follow-Up Information

Completion Status | Report an Adverse Event - Patient Information | Instructions | en Español

☐ Patient Information  
☐ Reporter Information  
☐ Facility Information  
☐ Vaccine Information  
☐ Additional Information

**Note:** Fields marked with an \* are essential and should be completed.

**Item 1**

Patient first name:  Patient last name:

Street address:

City:  State:  County:


Zip code:  Phone:  Email:

**Item 2**

\* Date of birth (☒ mm/dd/yyyy or ☐ mm/yyyy)

**Item 3**

\* Sex:  
☐ Male ☐ Female ☐ Unknown

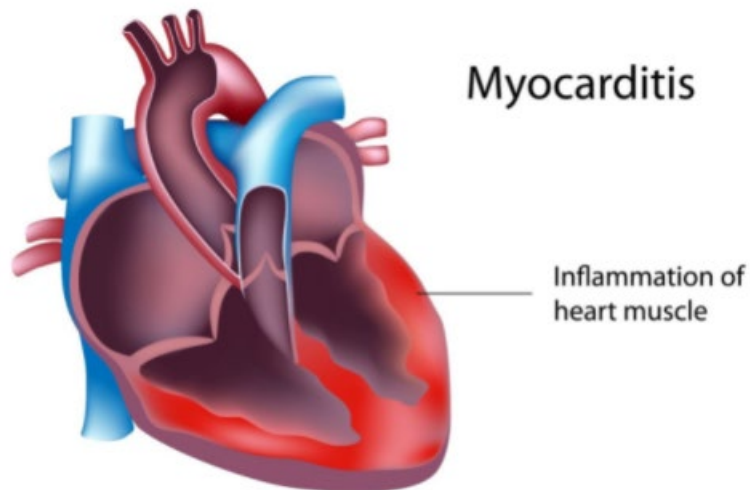




# Myocarditis after mRNA COVID-19 Vaccines

- Very few cases reported
- Does not seem to be in excess of the general population

COVID-19 VaST Work Group Technical Report – May 17, 2021



- predominantly in adolescents and young adults,
- more often in males than females,
- more often following dose 2 than dose 1, and
- typically within 4 days after vaccination.

Most cases appear to be mild, and follow-up of cases is ongoing.



# Comparison of B.1.1.7 to non-B.1.1.7 in Michigan

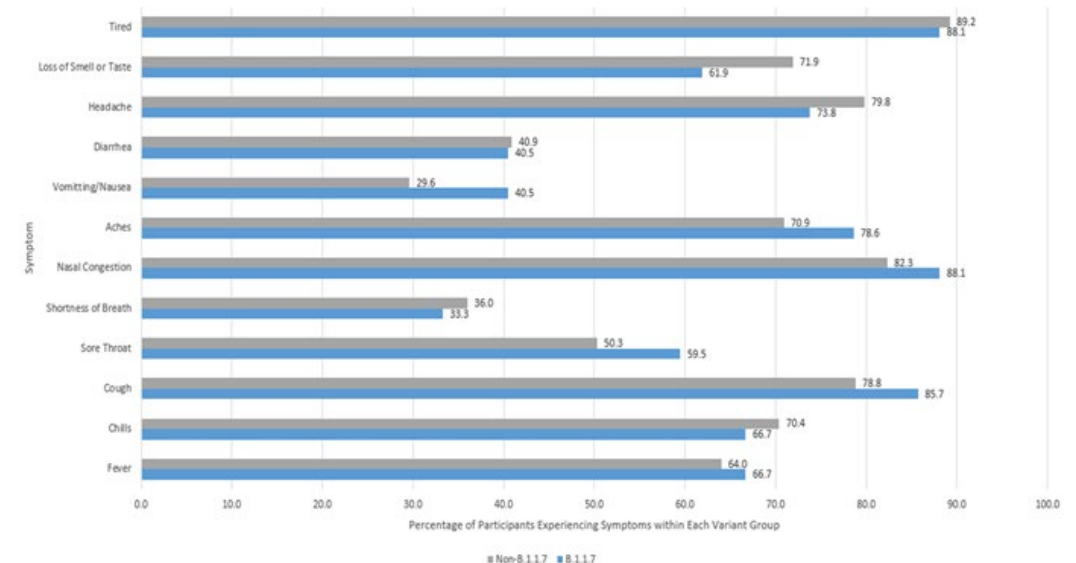
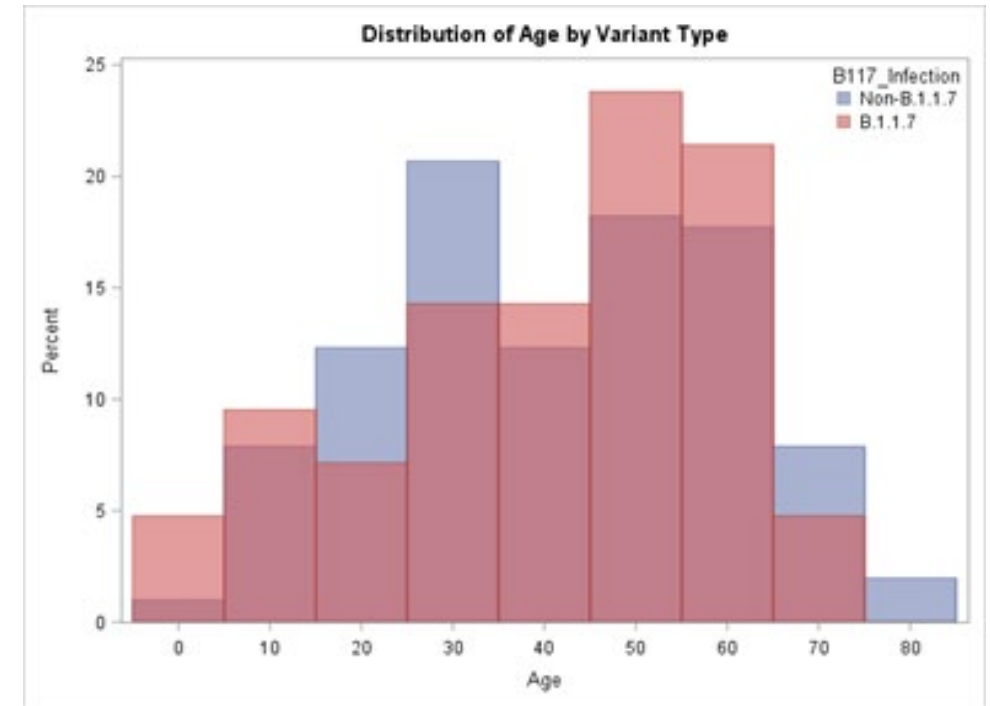
## *Preliminary Results*

Ongoing CDC-funded study of vaccine effectiveness in preventing mild to moderate SARS-CoV-2 infection:

- Comparison of 42 B.1.1.7 vs 203 non-B.1.1.7
- Participants seeking outpatient testing (not hospitalized)
- Analysis of vaccine effectiveness for variants pending

### Early Findings:

- B.1.1.7 more common in 40-69 and <19 age groups
- ↑ need for follow-up care (n.s.; preliminary)
- ↑ sore throat, cough, aches, nasal congestion
- ↓ headache and loss of smell or taste





# Overview of metrics for individuals <12 years

	Region	Population (<12 yrs)	7-day Average Number of Daily Cases (<12 yrs)	7-day Average Number of Daily Cases (<12 yrs) per Million	7-day Average Number of Daily Deaths (<12 yrs)	7-day Average Number of Daily Pediatric Hospitalizations
1	Detroit	735529	77.4	105.23039	0	53.0
2	Grand Rapids	230120	32.9	142.96889	0	9.9
3	Kalamazoo	140422	16.1	114.65440	0	3.4
4	Saginaw	78759	11.3	143.47567	0	1.1
5	Lansing	78140	6.6	84.46378	0	9.0
6	Traverse City	53099	4.1	77.21426	0	0.0
7	Jackson	41274	1.6	38.76532	0	0.7
8	Upper Peninsula	34645	3.4	98.13826	0	0.0
99	Michigan	1391988	153.7	110.41762	0	77.1

Data as of 5/24; case data 5/17, hospitalization data 5/24. Hospitalization data is for pediatric patients (<18)



# Unacast mobility patterns in MI

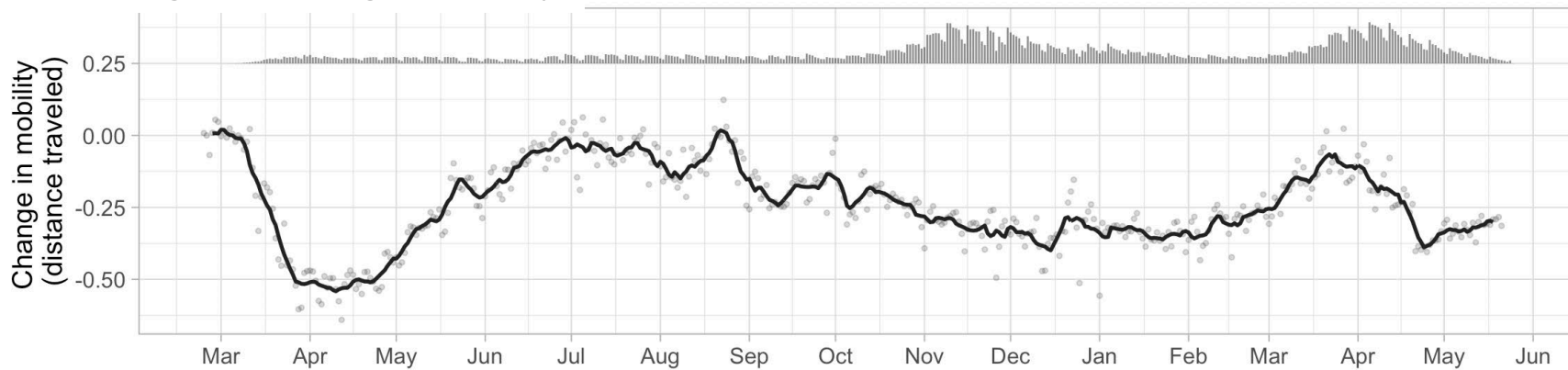
- All metrics recently decreased preceding case decreases
- Most recent data appears to be more plateaued at levels similar to winter
- Cases shown as bars at top of each chart
- Data through 5/21/21 (data as of 5/25/21)

Unacast social distancing scoreboard

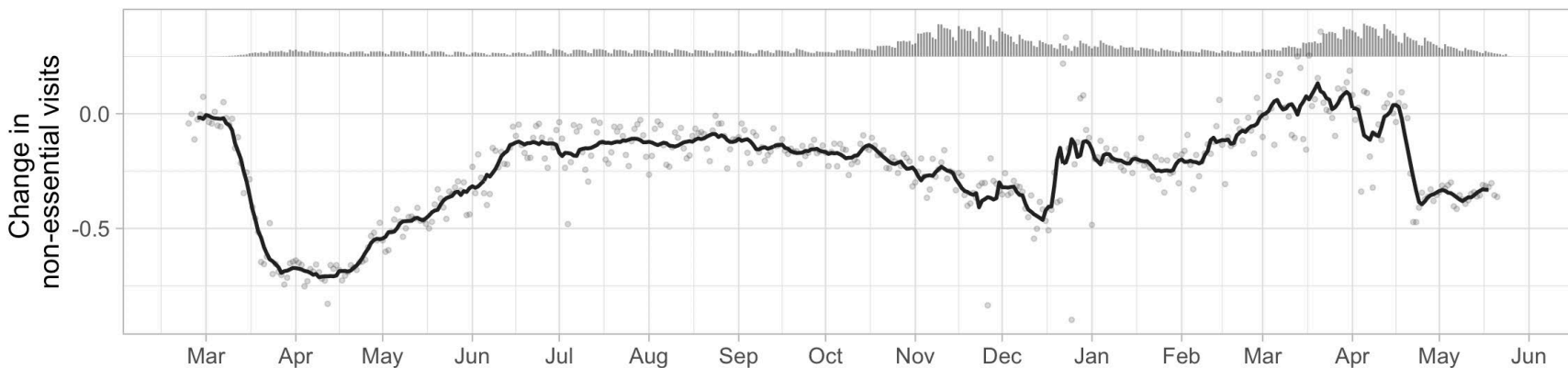
<https://www.unacast.com/covid19/social-distancing-scoreboard>



Change in average mobility



Change in non-essential visits



Difference in encounter density

