

MI COVID RESPONSE DATA AND MODELING UPDATE

NOTE: All data as of April 24 unless otherwise noted

April 27, 2021

Executive summary

Percent Positivity (14.1, ↓2.3) is down 14% from last week

Case Rate (555.0, ↓87.4) is down 14% since last week.

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

Percent of inpatient beds occupied by individuals with COVID (19%, ↓ 0.3%) has decreased 2% since last week

Michigan has the **highest inpatient bed utilization** (↔), and **2nd highest adult ICU bed utilization** (↓) in the nation
(source: US HHS Protect)

Deaths have increased 25% since last week. There were 309 (↑ 52) deaths between Apr 17 and Apr 24, and the **Death Rate** is 5.5 deaths per million residents (↑ 1.1)

Michigan has the **5th highest number of deaths** (↔), and **2nd highest death rate** (↑9) in the last 7 days in the nation
(source: CDC COVID Data Tracker)

The 7-day average **daily diagnostic tests** reported to MDHHS **has increased** to 67,575 diagnostic tests (PCR + Ag)

6.58 million **COVID-19 vaccine** doses reported to MDHHS, 48.8% of Michigan population 16+ has at least one dose

Comparison across states: Summary

What we see today (data through 4/25):

- 5 states are seeing increasing 1 week case trends ($\geq 10\%$) (down vs. 13 last week)
- 12 states are seeing 1 week increases ($\geq 10\%$) in new COVID hospital admissions (up vs. 12 last week)
- Michigan, DC, Pennsylvania, Maryland and New Jersey have highest per capita hospitalized patient numbers.
- Midwest (case data from CDC as of 4/25):
 - Wisconsin with slight increase in hospitalizations (70/M) and stable cases (85/100k last 7d)
 - Indiana with stable hospitalizations (123/M), and decrease in cases (100/100k last 7d)
 - Illinois showing decrease in hospitalizations (163/M), and decrease in cases (148/100k last 7d)
 - Ohio with decrease in hospitalizations (142/M) and decrease in cases (95/100k last 7d)
 - Michigan showing decrease in hospitalizations (355/M) and decrease in cases (338/100k last 7d)

COVID-19 Spread

Statewide positivity has decreased to 14.1 %

- One week decrease of 14% (compared to 11% decrease last week)
- *Decreasing* for two weeks (371% *increase* since mid-February)
- Positivity is declining in all MERC regions. Grand Rapids and Saginaw remain above 15%

Case rates (555 cases/million) are decreasing in the state (642.4 cases/million last week)

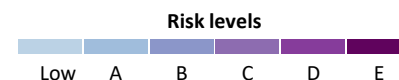
- A one week decrease of 14%
- Decreasing for 11 days
- Cases per million are declining in all MERC regions
- Variants in Michigan: 5,616 confirmed B.1.1.7; 26 confirmed B.1.351; 231 confirmed B.1.427/B.1.429 ; 66 confirmed P.1

Number of active outbreaks is steady from the previous week

- Reported school outbreaks is slightly decreased since last week (263 from 312)
- Since January, the most cases and clusters related to K-12 sports have been in basketball, hockey, and wrestling

Confirmed and probable case indicators

Table Date: 4/24/2021 (7 days from date table was produced: 4/17/2021)



| | 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 | E | 591.0 | decline [12 days] | 13.7 | Decrease - 2wk | 4551.6 | 21.1 | Increase - 8wk | 6.3 | Increase - 5wk |
| Grand Rapids | E | 601.0 | decline [6 days] | 16.3 | Decrease - 1wk | 4241.6 | 16.9 | Increase - 5wk | 3.2 | Increase - 2wk |
| Kalamazoo | E | 469.0 | decline [8 days] | 13.7 | Decrease - 1wk | 3103.6 | 15.4 | Increase - 7wk | 4.6 | Increase - 2wk |
| Saginaw | E | 592.1 | decline [10 days] | 17.1 | Decrease - 1wk | 3381.6 | 14.5 | Increase - 5wk | 5.8 | Increase - 1wk |
| Lansing | E | 447.9 | decline [14 days] | 13.6 | Decrease - 1wk | 3421.0 | 23.4 | Increase - 5wk | 6.3 | <20 wkly deaths |
| Traverse City | E | 445.4 | decline [11 days] | 14.1 | Decrease - 2wk | 2681.0 | 13.1 | Decrease - 1wk | 8.1 | <20 wkly deaths |
| Jackson | E | 564.4 | decline [9 days] | 14.1 | Decrease - 1wk | 4058.9 | 19.9 | Increase - 6wk | 4.2 | <20 wkly deaths |
| Upper Peninsula | E | 259.1 | decline [9 days] | 5.9 | Decrease - 1wk | 3195.7 | 5.6 | Increase - 5wk | 2.8 | <20 wkly deaths |
| Michigan | E | 555.0 | decline [11 days] | 14.1 | Decrease - 2wk | 4184.3 | 19.0 | Increase - 7wk | 5.5 | Increase - 5wk |

Cases

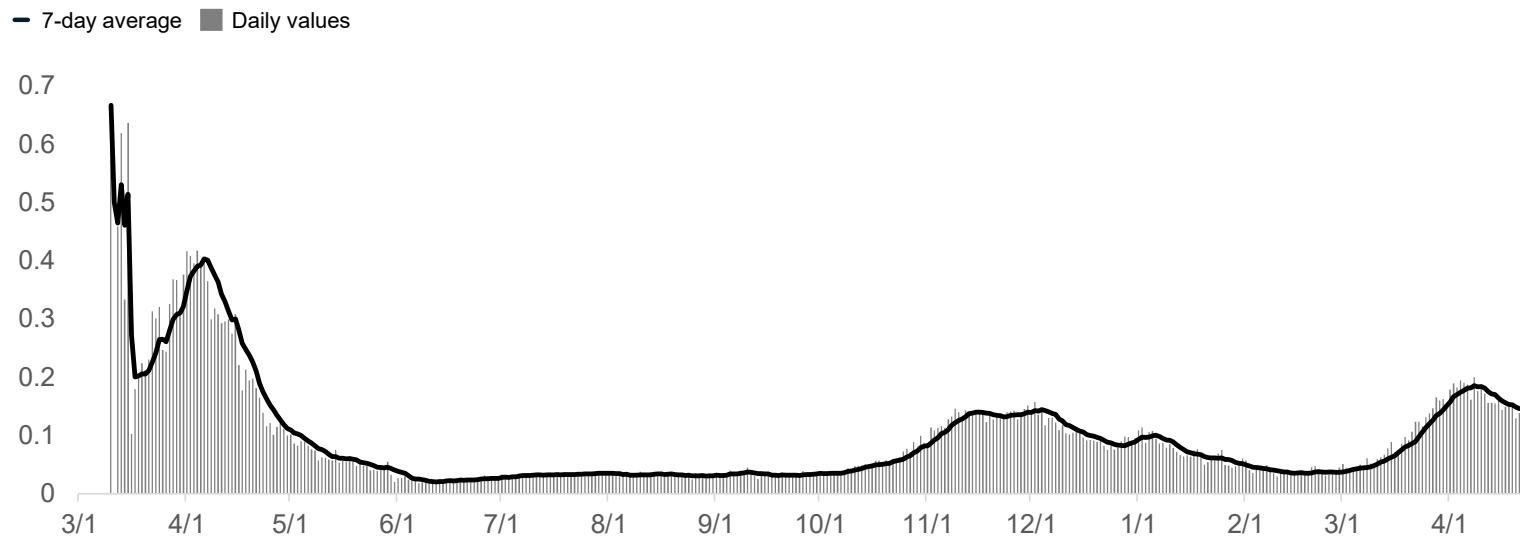


Positivity



Statewide Positivity Trends

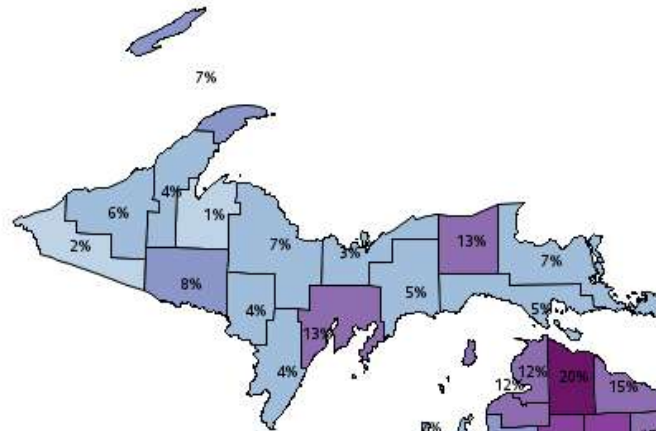
Daily positivity and 7-day rolling average positivity for Michigan



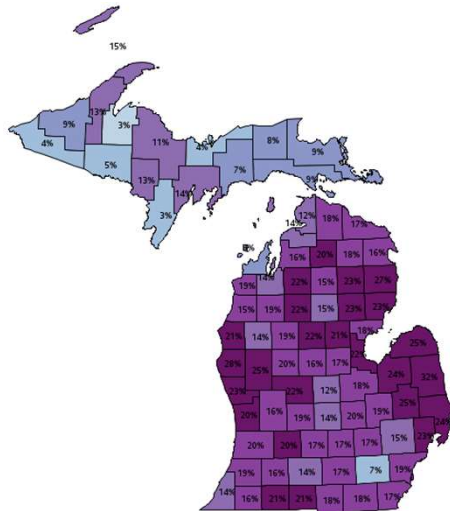
- Early in the pandemic, testing was not as robust as it has been since July 2020 to present
- Positivity is an indicator of whether we are testing enough to identify cases and an early indicator of SARS-CoV-2 Transmission (as positivity increases, we expect case rates to follow)
- Positivity decreased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

*Note: Testing was not as robust early in the pandemic
Source: MDHHS – Michigan Disease Surveillance System

Positivity by county, 4/16-4/22



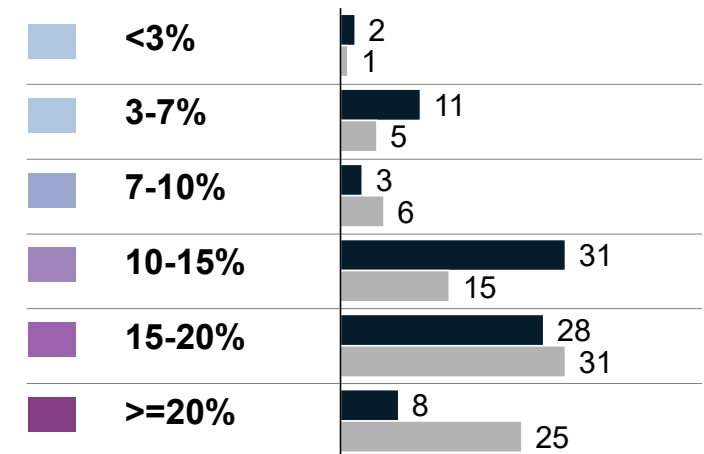
Last week, 4/9-4/15



Average positivity per day

of counties

■ This week
■ Last week



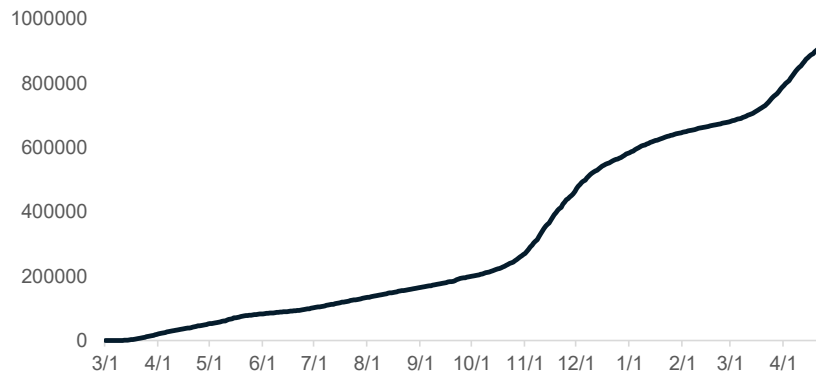
Updates since last week:

67 of 83 counties saw double digit positivity in the last week (4 county decrease)

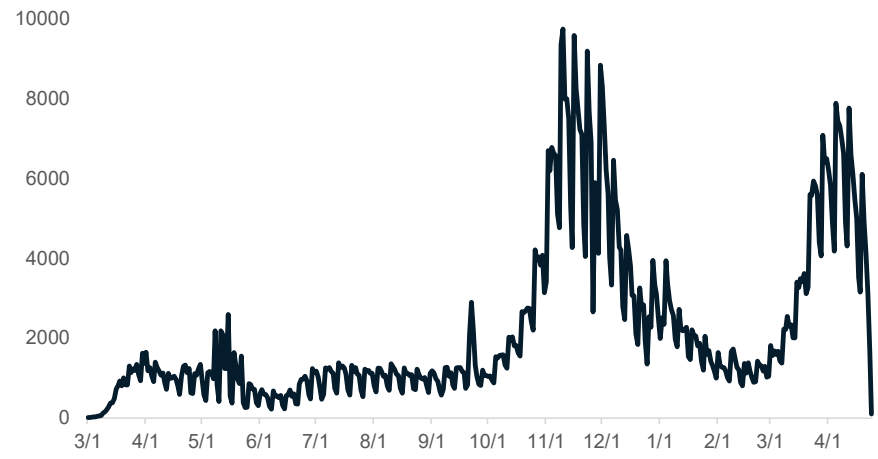
70 of 83 counties saw positivity > 7% in the last week (7 county decrease)

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

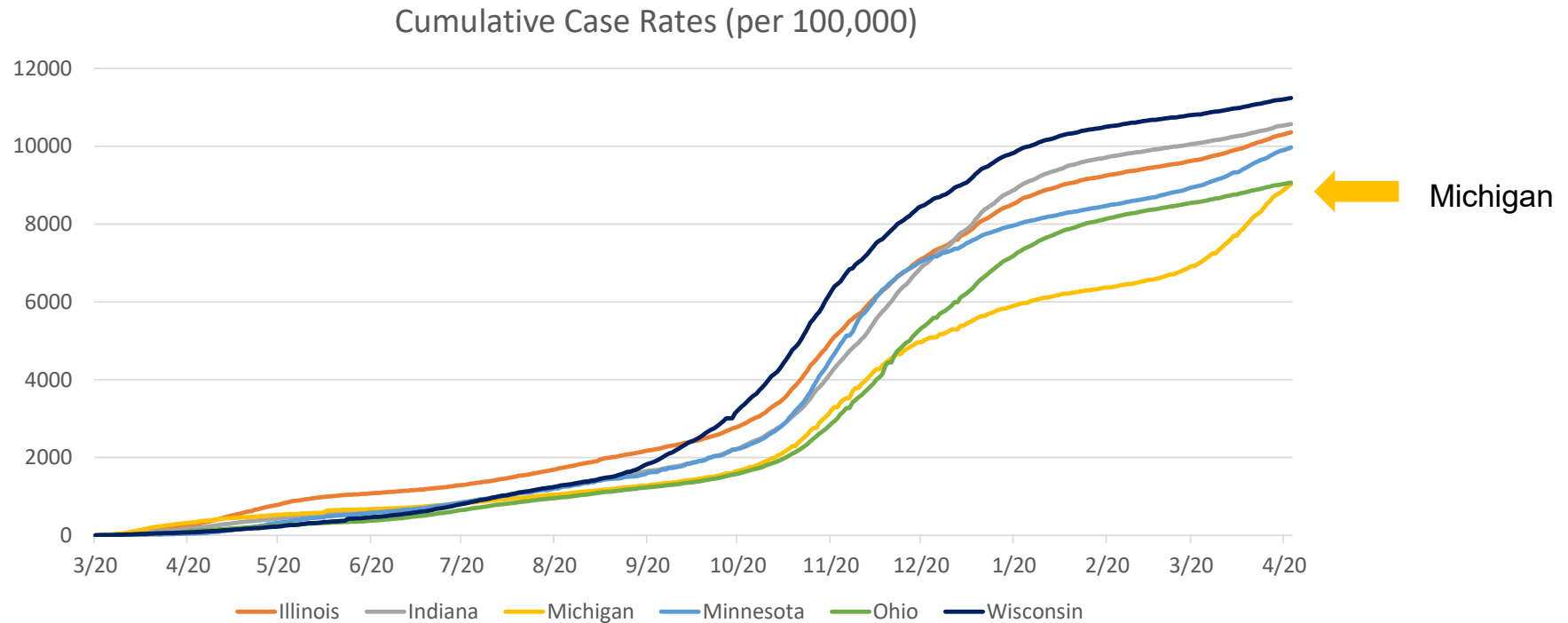


Updates since last week:

- Cumulative cases have passed 900,000
- There were an average of 3,305 new cases per day between 4/18-4/24, down from an average of 5,540 the week prior.

Note: Case information sourced from MDHHS and reflects date of onset of symptoms (refers to lab-confirmed cases). Case spike on 5/12 is a result of batch of test results, not all of which have onset date of symptoms completed
Source: MDHHS – Michigan Disease Surveillance System

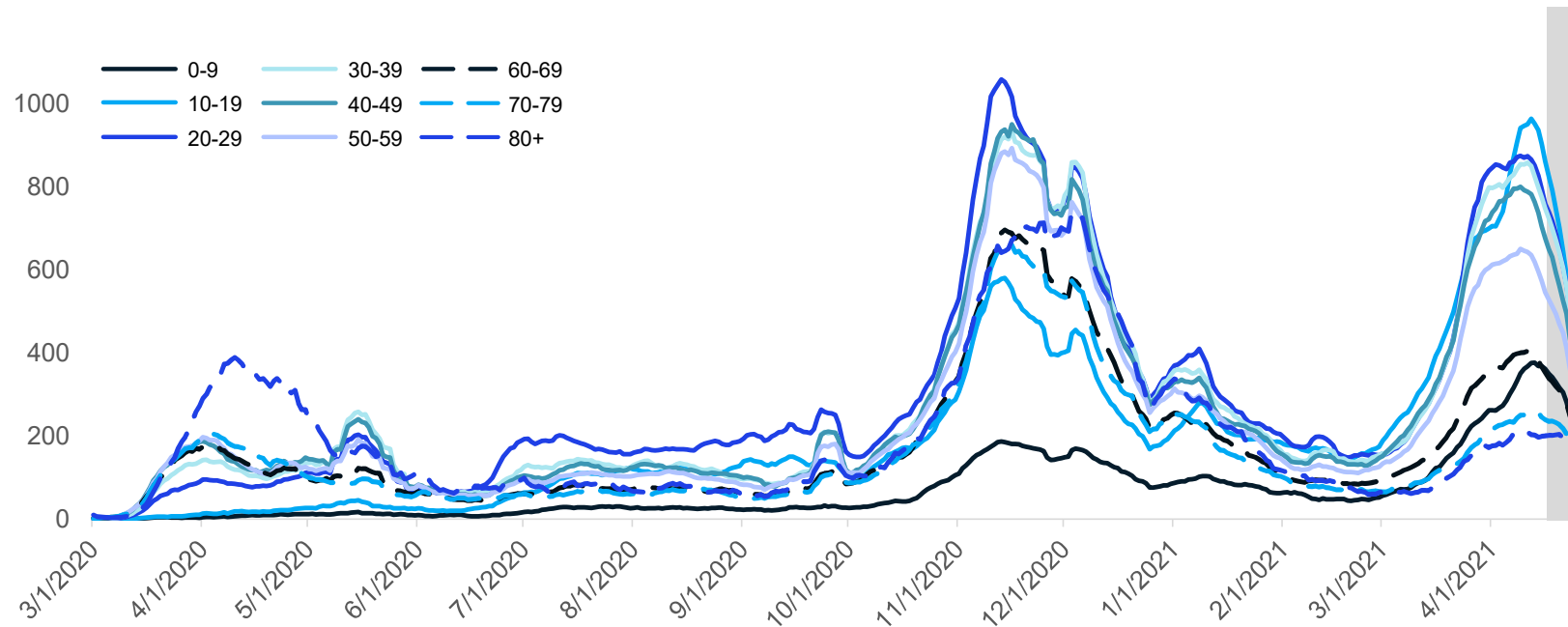
Cumulative COVID-19 Case Rates: Midwest Comparison



- Cumulative incidence per 100,000 cases in Michigan has been lower than other states in the Midwest following spring 2020 surge
- Michigan's mitigation policies helped control the spread of SARS-CoV-2 relative to other states in the Midwest, particular during surge in November and December
- The current trajectory in Michigan continues to bring us closer to case rates of our Midwest neighbors

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 plateauing or decreasing
- Those aged 10-19 have the highest case rates, followed by 20-29, then 30-39

Note: Case information sourced from MDHHS and reflects date of onset of symptoms
Source: MDHHS – Michigan Disease Surveillance System

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 #) |
|-----------|---------------------|-------------------------|-------------------------|
| 0-9 | 418.8 | 341.4 | 4.3% (17.4) |
| 10-19 | 1117.9 | 792.3 | -2.9% (33) |
| 20-29 | 1095.0 | 717.6 | -9.0% (108) |
| 30-39 | 939.8 | 699.7 | -9.5% (98.5) |
| 40-49 | 774.0 | 630.4 | -17.0% (158.3) |
| 50-59 | 833.2 | 512.3 | -5.1% (44.4) |
| 60-69 | 468.4 | 331.7 | -8.4% (42.7) |
| 70-79 | 187.7 | 235.7 | -0.5% (0.9) |
| 80+ | 83.2 | 201.4 | -1.0% (1.0) |

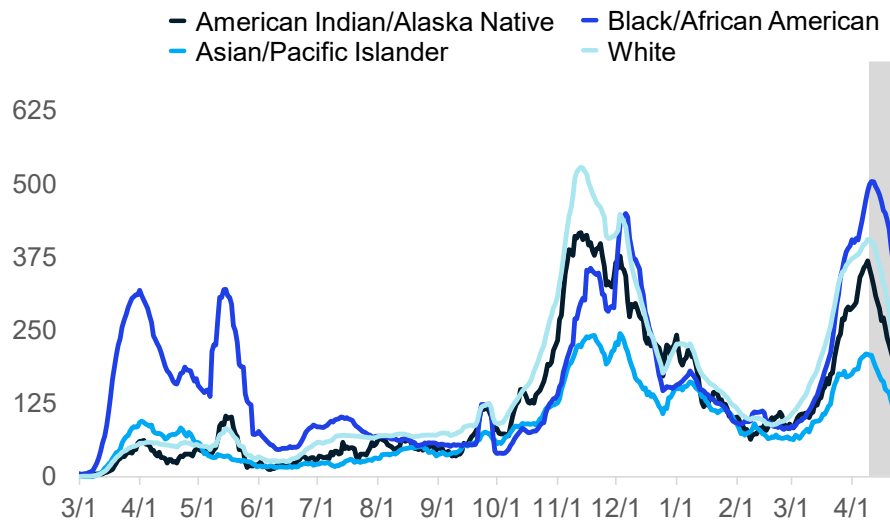
* Lowest 7-day avg. following winter surge

† Total may not reflect state due to missing age data

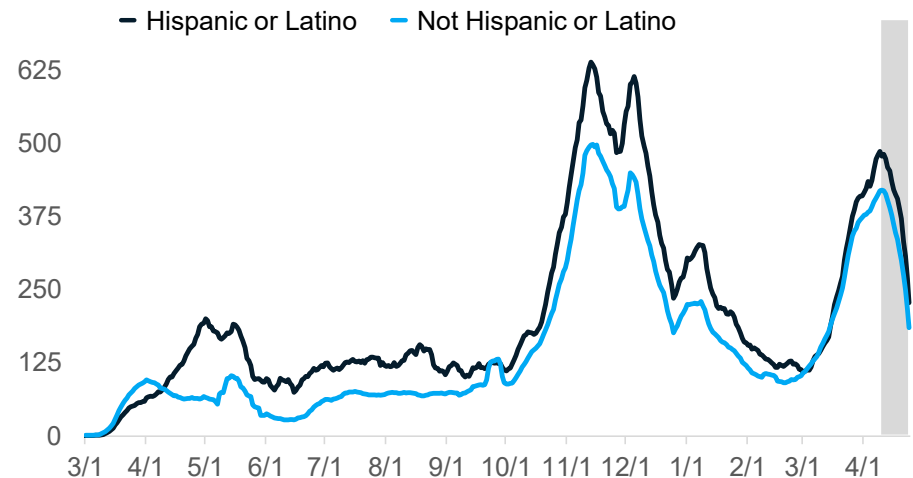
- Avg. daily number of cases and average daily case rate are highest for age group 10-19.
- Ages 10 and older continue to have decreased case counts this week. Age group 0-9 had an increased case count.

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



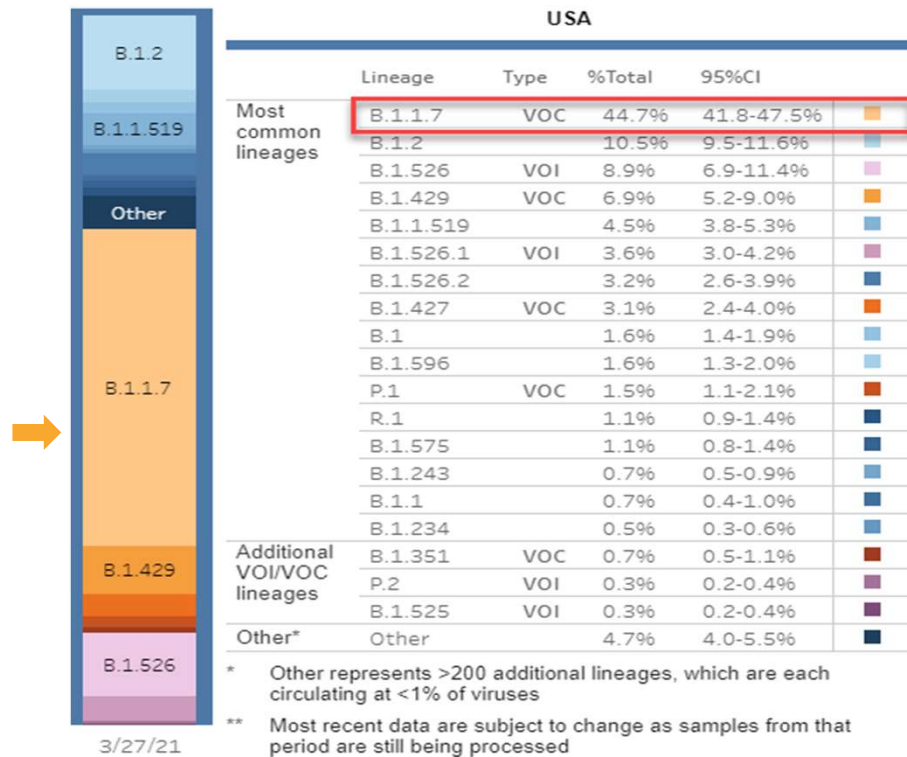
Updates since last week:

- Cases per million are decreasing for all races and ethnicities
- Most recent data show that Black and Hispanic/Latino populations have the highest case rates
- In the past 30 days, 37% of all cases represent unknown, multiple, or other races (31% of race is unknown, ↑1%)
- In the past 30 days, 35% of all cases have an unknown ethnicity reported (↑2%)

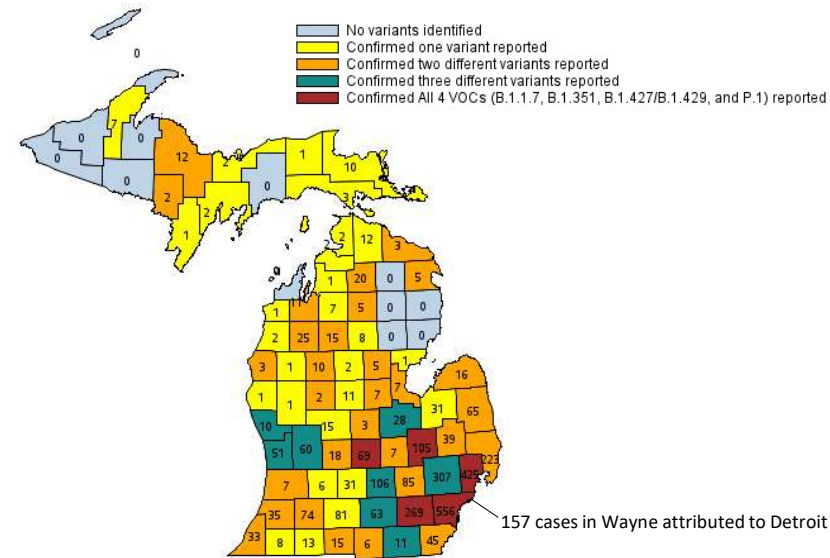
Note: Case information sourced from MDHHS and reflects date of death of confirmed and probable cases.
Source: MDHHS – Michigan Disease Surveillance System

Identified COVID-19 Cases With Variants of Concern, US and Michigan

SARS-CoV-2 Variants Circulating in the United States, Mar 14 – Mar 27



Emergent Variants of Cases in Michigan, Apr 24



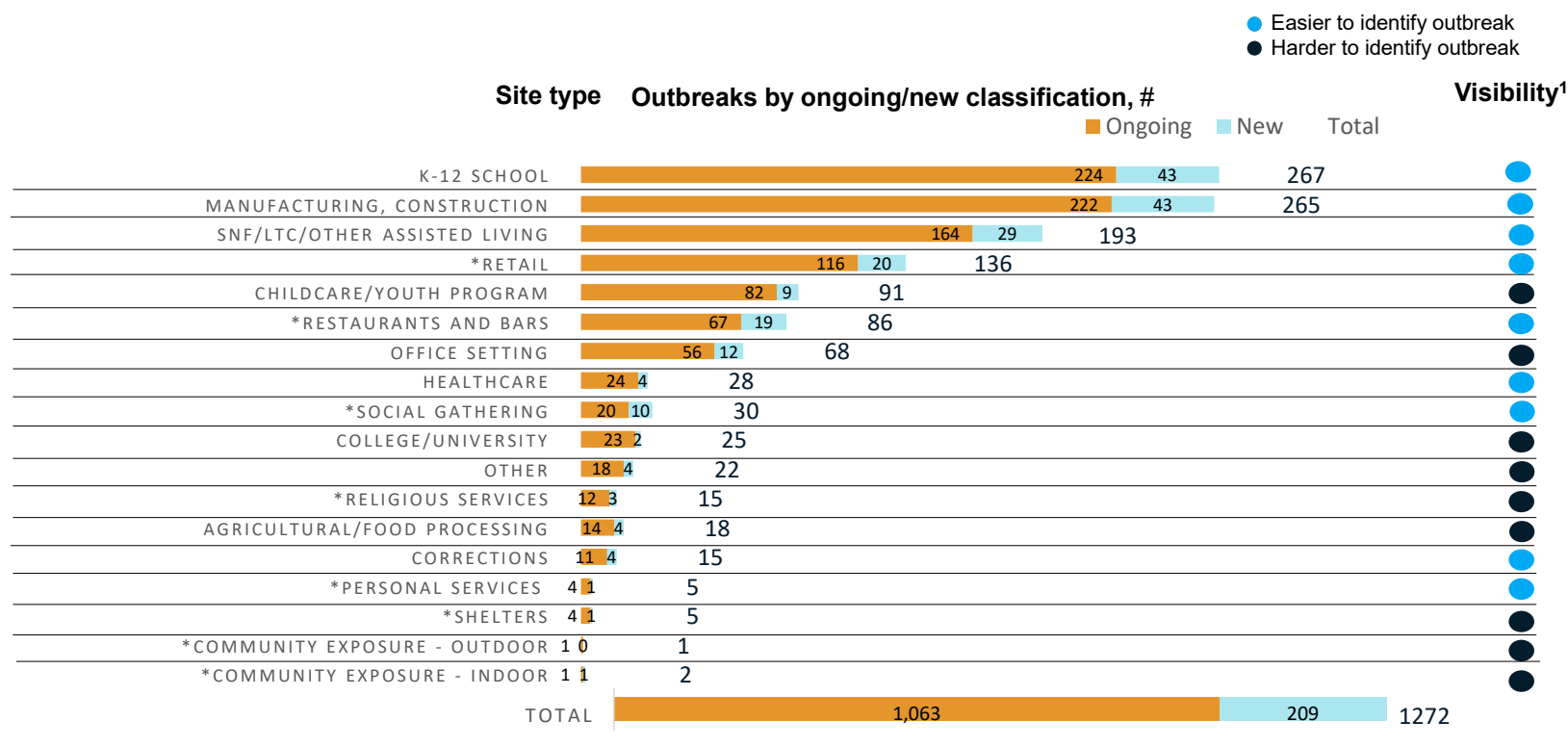
| Variant | MI Reported Cases [¶] | # of Counties | CDC est. prevalence |
|-----------------|--------------------------------|---------------|---------------------|
| B.1.1.7 | 5,616* | 67 | 59.7% |
| B.1.351 | 26 | 13 | 0.1% |
| B.1.427/B.1.429 | 231 | 38 | 5.8% |
| P.1 | 66 | 14 | 0.3% |

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

Data last updated April 24, 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 Apr 24



Total number of active outbreaks is steady from previous week (1272 from 1261)

K-12 schools and manufacturing/construction reported the highest new outbreaks this week (43 each), followed by SNF/LTC/ALC (29), retail (20), and restaurants and bars (19).

LHDs reported new outbreaks in all settings except college/universities and outdoor community exposures.

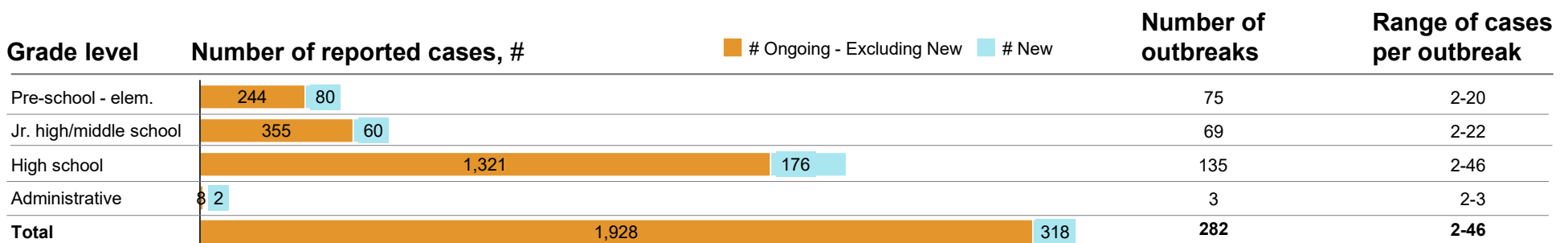
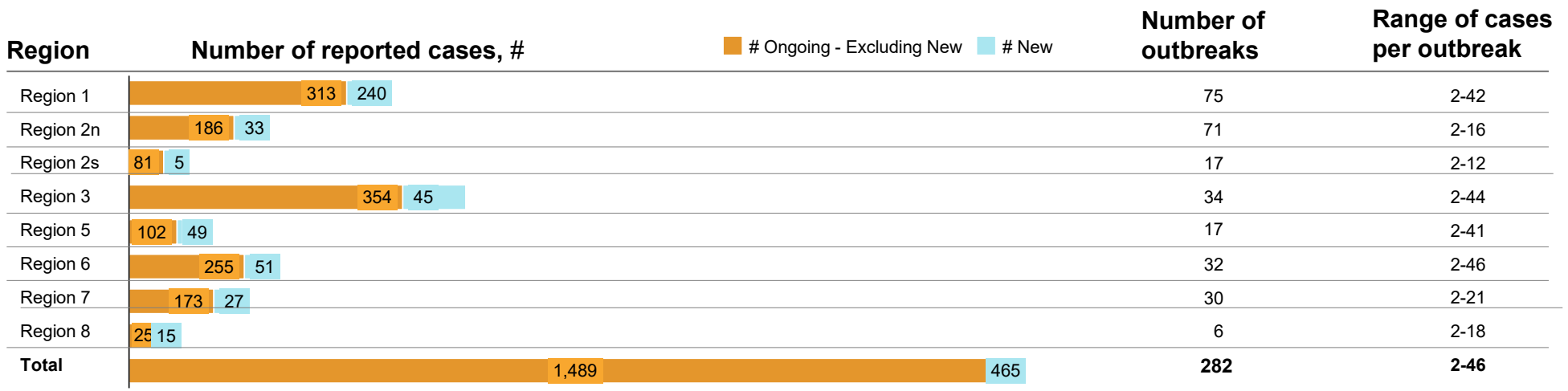
1. Based on a setting's level of control and the extent of time patrons/residents spend in the particular setting, different settings have differing levels of ability to ascertain whether a case derived from that setting

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 Apr 24

Number of reported outbreaks has decreased since last week (312 to 282) with decreases in Middle/Jr High (70 to 69), Pre-K – Elementary (86 to 75), High School (from 151 to 135) and Administrative (from 5 to 3) settings.



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 Apr 2021



424 cases
122 clusters



286 cases
59 clusters



257 cases
64 clusters



70 cases
23 clusters



34 cases
11 clusters



36 cases
4 clusters



32 cases
20 clusters

14 cases
3 clusters



13 cases
6 clusters



14 cases
5 clusters



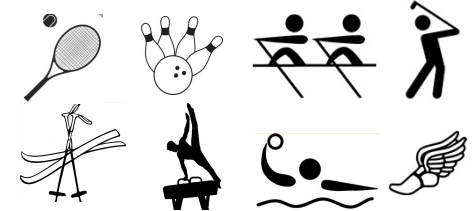
10 cases
7 clusters



5 cases
3 clusters



22 cases
15 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
- Cases and clusters have occurred in 23 different sport settings

COVID-19 and Healthcare Capacity and COVID Severity

Hospitalization metrics are declining

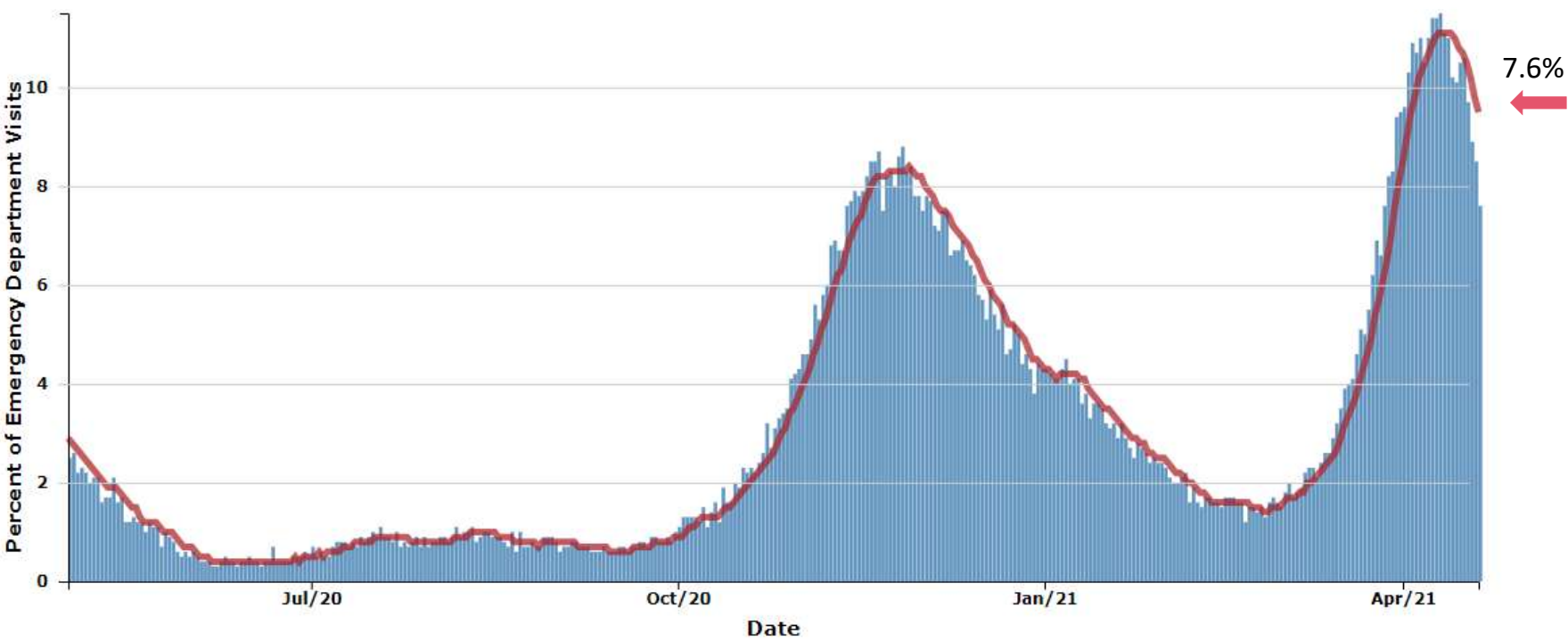
- COVID-like illness (CLI) has decreased to 7.6% (10.4% previously)
- Hospital admissions are decreasing but trends vary by age groups
- Confirmed census is 3,520 patients, down 16% from previous week, rapid decline
- All preparedness regions are showing decrease, but three regions have >400/M population hospitalized
- Volume of COVID-19 patients in intensive care (ICU) has decreased 5% since last week to 850 patients

Deaths trends have increased to 5.5 deaths per million

- Deaths are a lagging indicator of cases and hospitalization
- Proportion of deaths among those 60+ is slowly declining

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

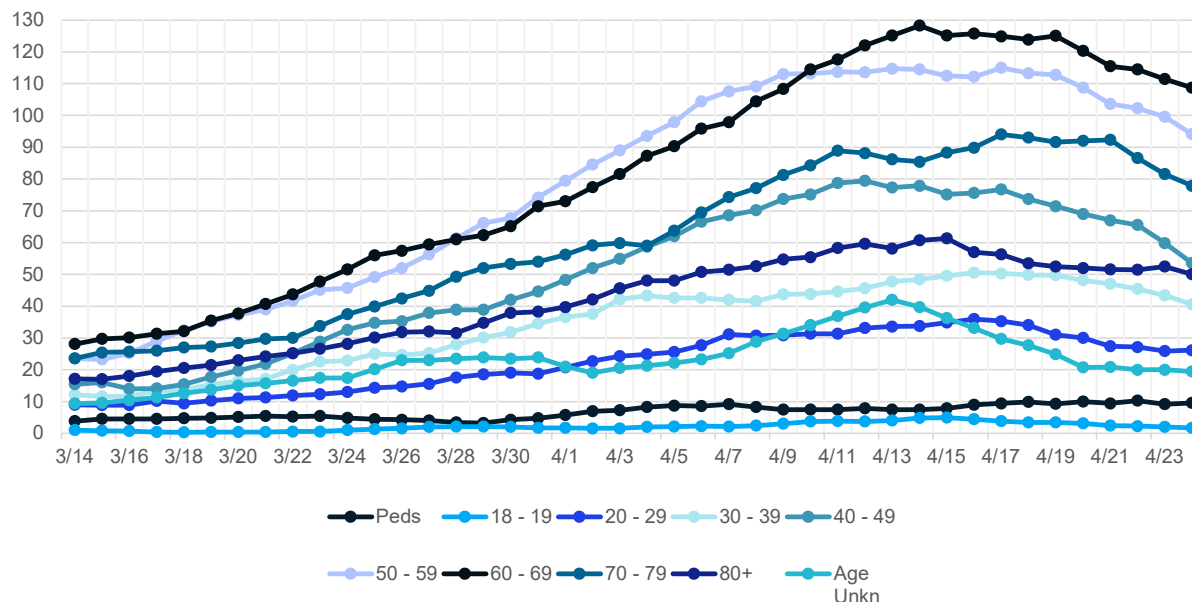
Percentage of ED visits with Diagnosed COVID-19 in Michigan



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 through April 23



| Age Group | Daily Avg Adm. | One Week % Change (#) | % Change since 2/28* (#) |
|--------------------|----------------|-----------------------|--------------------------|
| Peds | 9.6 | 3.2% (0.3) | 190.9% (6.3) |
| 18-19 | 1.7 | -50% (1.7) | 325% (1.3) |
| 20-29 | 26.1 | -15.8% (4.9) | 411.8% (21) |
| 30-39 | 40.6 | -18.3% (9.1) | 70.6% (16.8) |
| 40-49 | 53.6 | -24.9% (17.8) | 420.4% (43.3) |
| 50-59 | 94.1 | -16.5% (18.6) | 623.8% (81.1) |
| 60-69 | 108.7 | -13% (16.3) | 463.2% (89.4) |
| 70-79 | 77.9 | -14.9% (13.7) | 321.1% (59.4) |
| 80+ | 50 | -4.6% (2.4) | 231.1% (34.9) |
| Total [¶] | 462.3 | -19.1% (109.1) | 360% (361.8) |

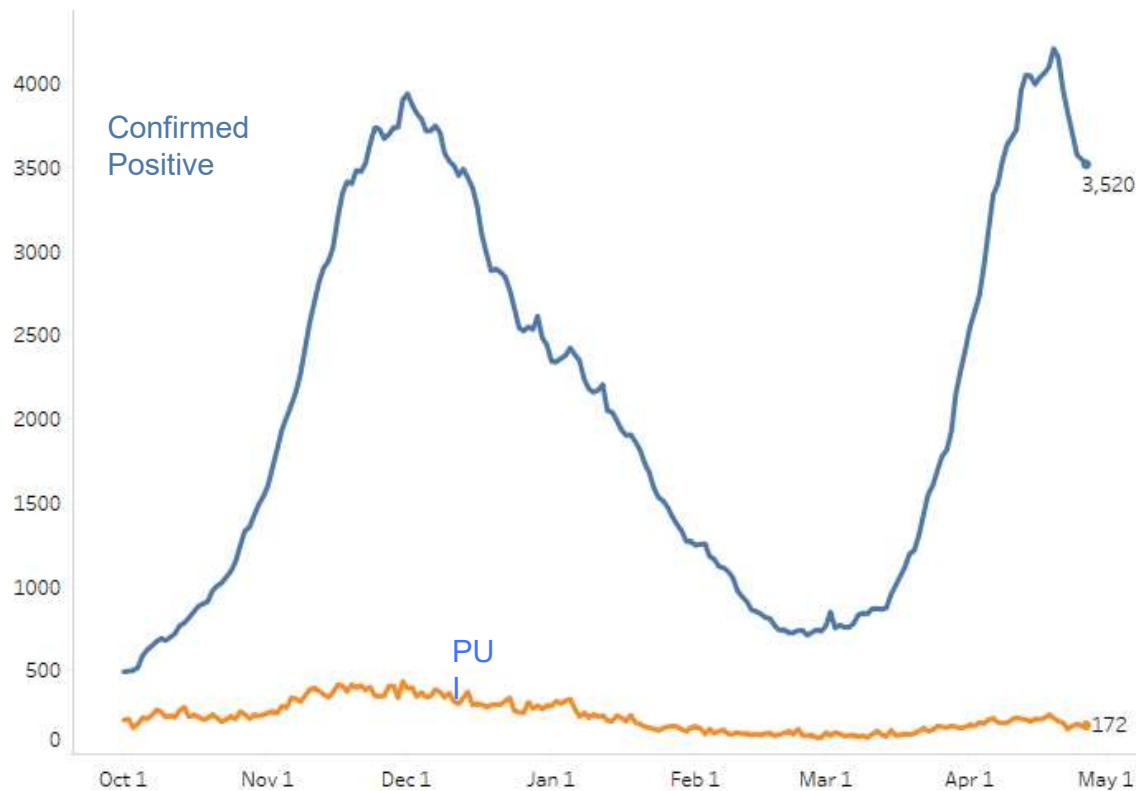
* Lowest 7-day avg. hospital admissions following winter surge

[¶] Total may not reflect state due to missing age data

- Currently, there are approximately 462 daily hospital admissions for COVID-19.
- Over the past week, avg. daily hospital admissions has decreased although the pediatric group slightly increased.
- Since Feb 28 low, all age groups remain relatively higher with the highest burden among those 50-59 and 60-69

Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 10/1/2020 – 4/26/2021
Confirmed Positive & Persons Under Investigation (PUI)



COVID+ census in hospitals has peaked and begun to decline.

This week, census is down 16% from the previous week.

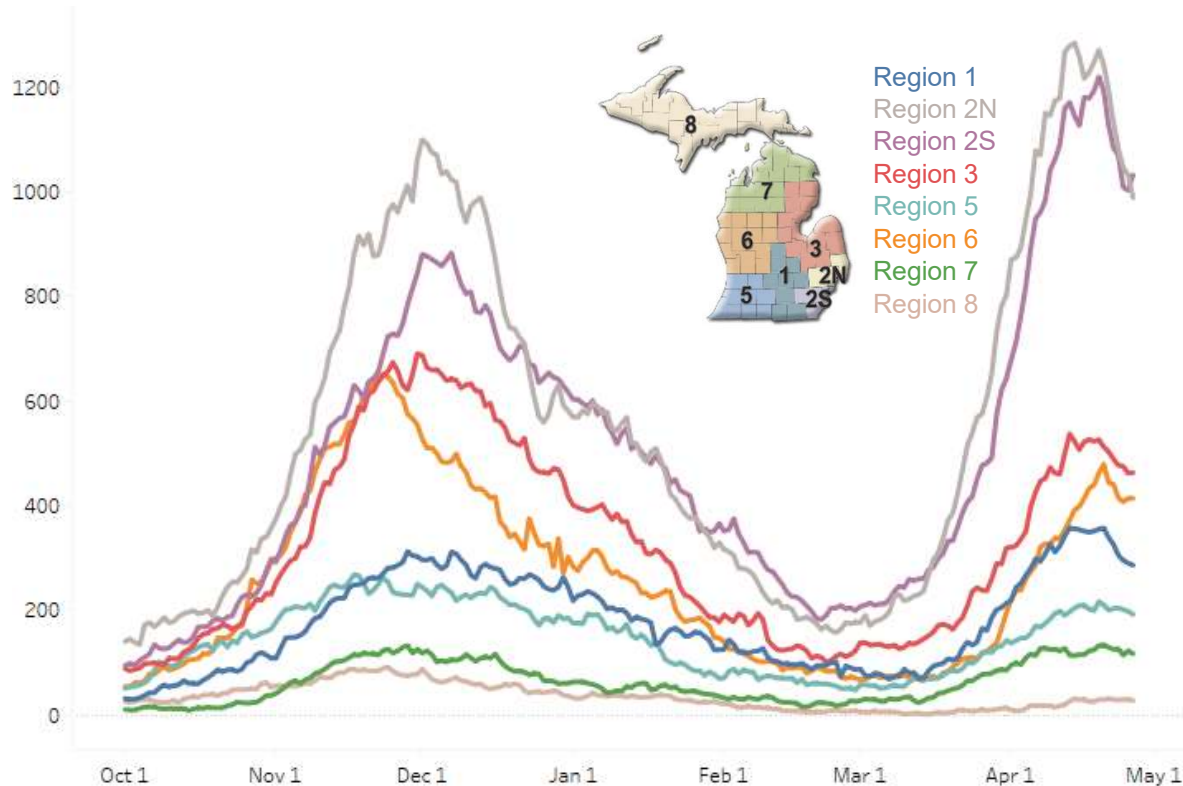
The rate of decline in this wave is more rapid than what we saw in the winter and driven by more rapid declines in the SE.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 10/1/2020 – 4/26/2021
Confirmed Positive by Region



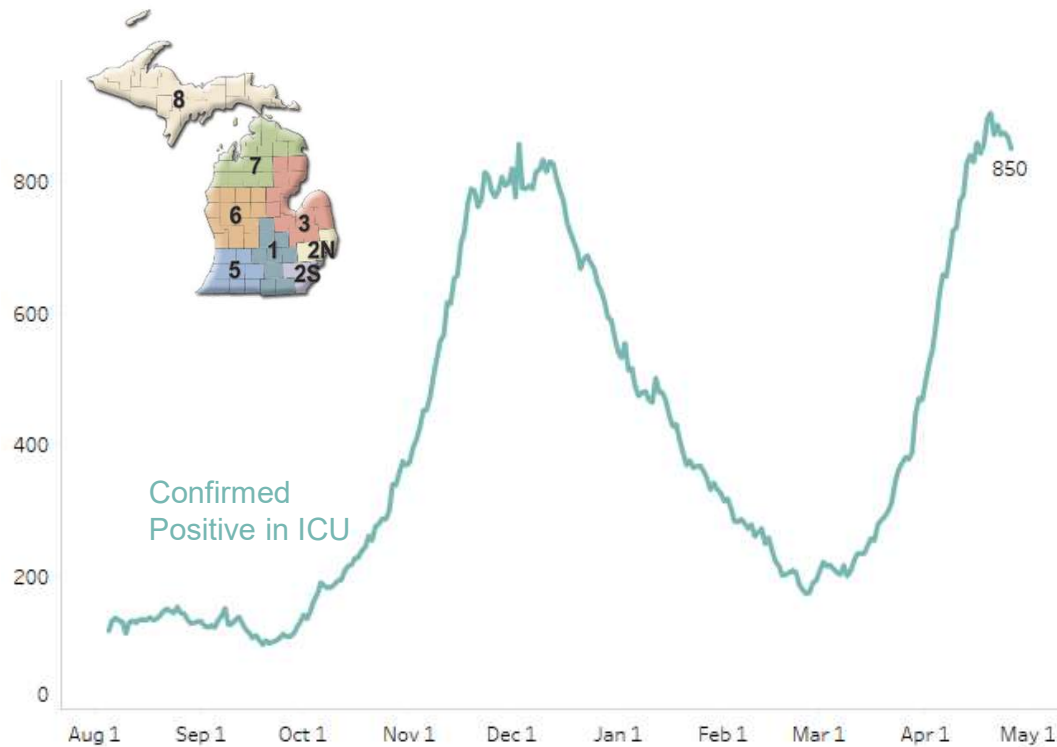
All regions are showing decreasing hospital COVID census trends this week, with largest decreases in Regions 1, 2N, and 2S which were some of the first regions to surge this wave.

Region 2N, 2S, and 3 remain > 400/M population hospitalized.

| Region | COVID+ Hospitalizations (% Δ from last week) | COVID+ Hospitalizations / MM |
|-----------|---|------------------------------|
| Region 1 | 286 (-19%) | 264/M |
| Region 2N | 989 (-22%) | 447/M |
| Region 2S | 1032 (-15%) | 463/M |
| Region 3 | 463 (-12%) | 408/M |
| Region 5 | 192 (-11%) | 201/M |
| Region 6 | 414 (-10%) | 282/M |
| Region 7 | 117 (-11%) | 234/M |
| Region 8 | 27 (-7%) | 87/M |

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 8/1/2020 – 4/26/2021
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased 5% from last week.

Regions 2S and 5 showed some growth week over week in COVID+ patients in ICU, all other regions are decreasing.

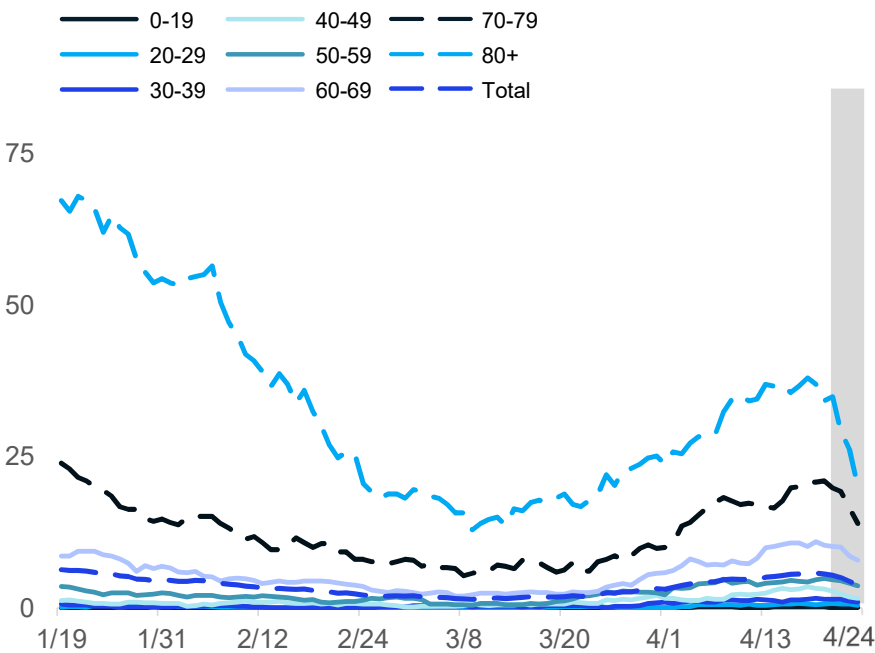
4 Regions continue to have 30% or more of ICU beds occupied by COVID patients.

| Region | Adult COVID+ in ICU (% Δ from last week) | Adult ICU Occupancy | % of Adult ICU beds COVID+ |
|-----------|--|---------------------|----------------------------|
| Region 1 | 59 (-16%) | 88% | 28% |
| Region 2N | 194 (-6%) | 87% | 32% |
| Region 2S | 268 (+2%) | 86% | 34% |
| Region 3 | 111 (-7%) | 92% | 30% |
| Region 5 | 45 (+15%) | 80% | 26% |
| Region 6 | 117 (-11%) | 83% | 35% |
| Region 7 | 46 (-13%) | 75% | 25% |
| Region 8 | 10 (-23%) | 68% | 17% |

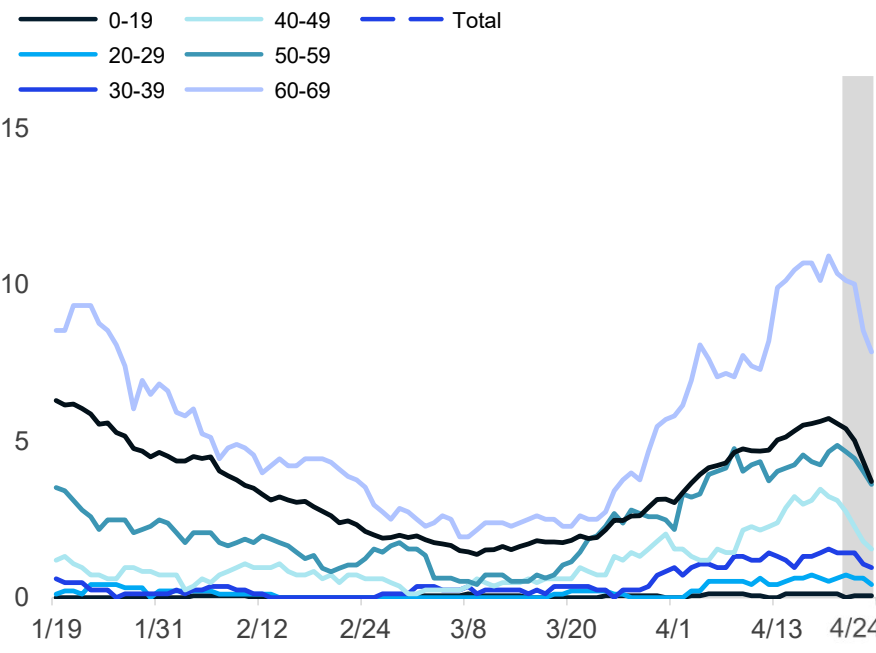
Hospital bed capacity updated as of 4/23

Average and total new deaths, by age group

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



Under 70 daily confirmed and probable deaths per million by age group (7 day rolling average)

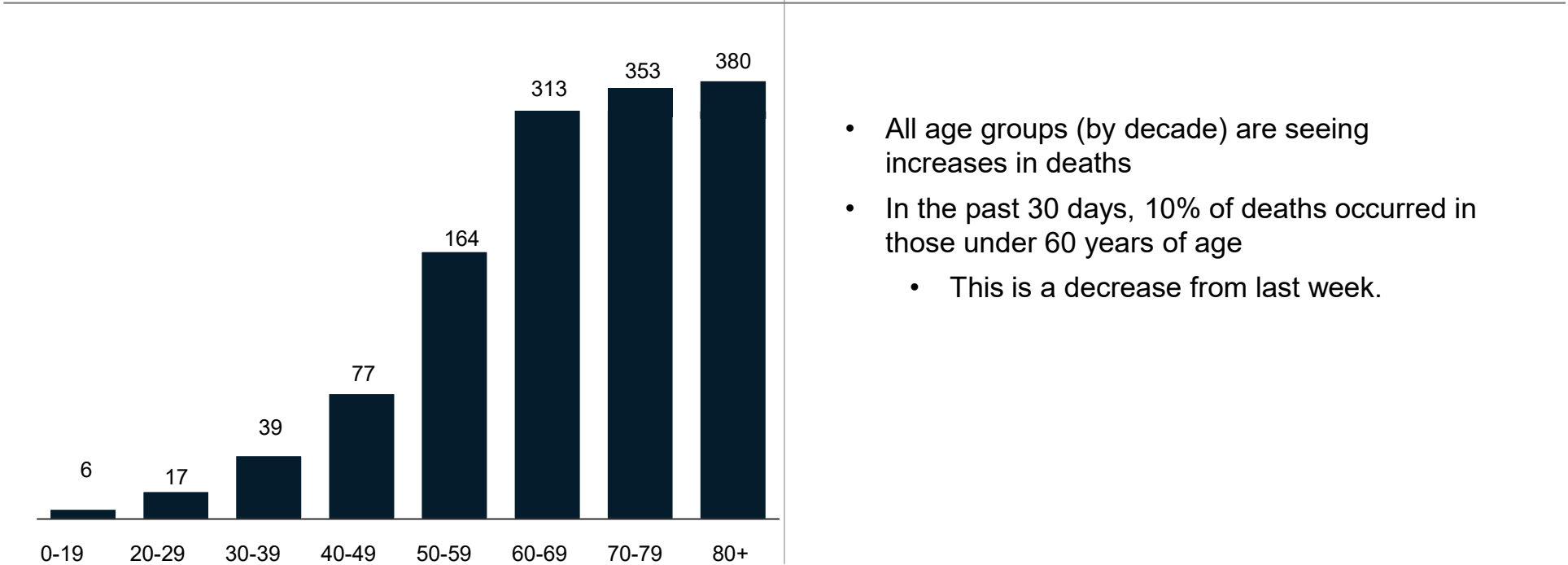


Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.

Source: MDHHS – Michigan Disease Surveillance System

Average and total new deaths, by age group

Total confirmed and probable deaths by age group
(past 30 days, ending 4/24/2021)



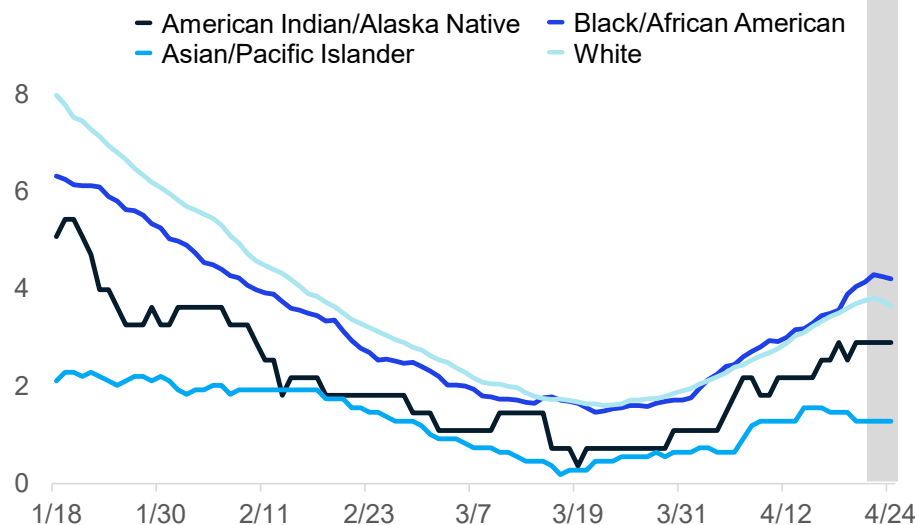
- All age groups (by decade) are seeing increases in deaths
- In the past 30 days, 10% of deaths occurred in those under 60 years of age
 - This is a decrease from last week.

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

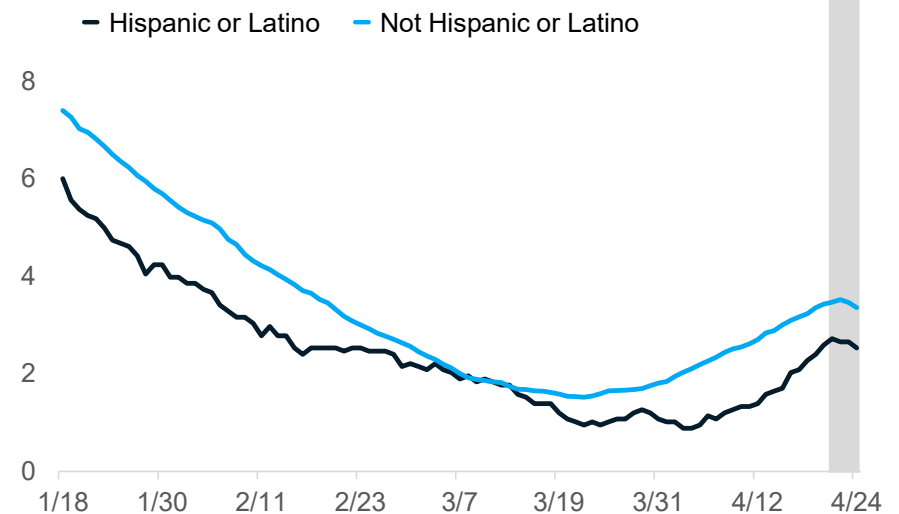
Source: MDHHS – Michigan Disease Surveillance System

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, and death rates are increasing among racial and ethnic groups
- All racial and ethnic groups are seeing an increase in COVID deaths
- Whites and Blacks have the most reported deaths per capita while Non-Hispanic Latino have experienced a larger increase
- 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

Status of COVID-19 Epidemiological Risk

- State-by-state comparison of epidemic spread
- Michigan epidemic spread
- **Public health response**
- Other public health indicators

Science round-up

Appendix

How is public health capacity?

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

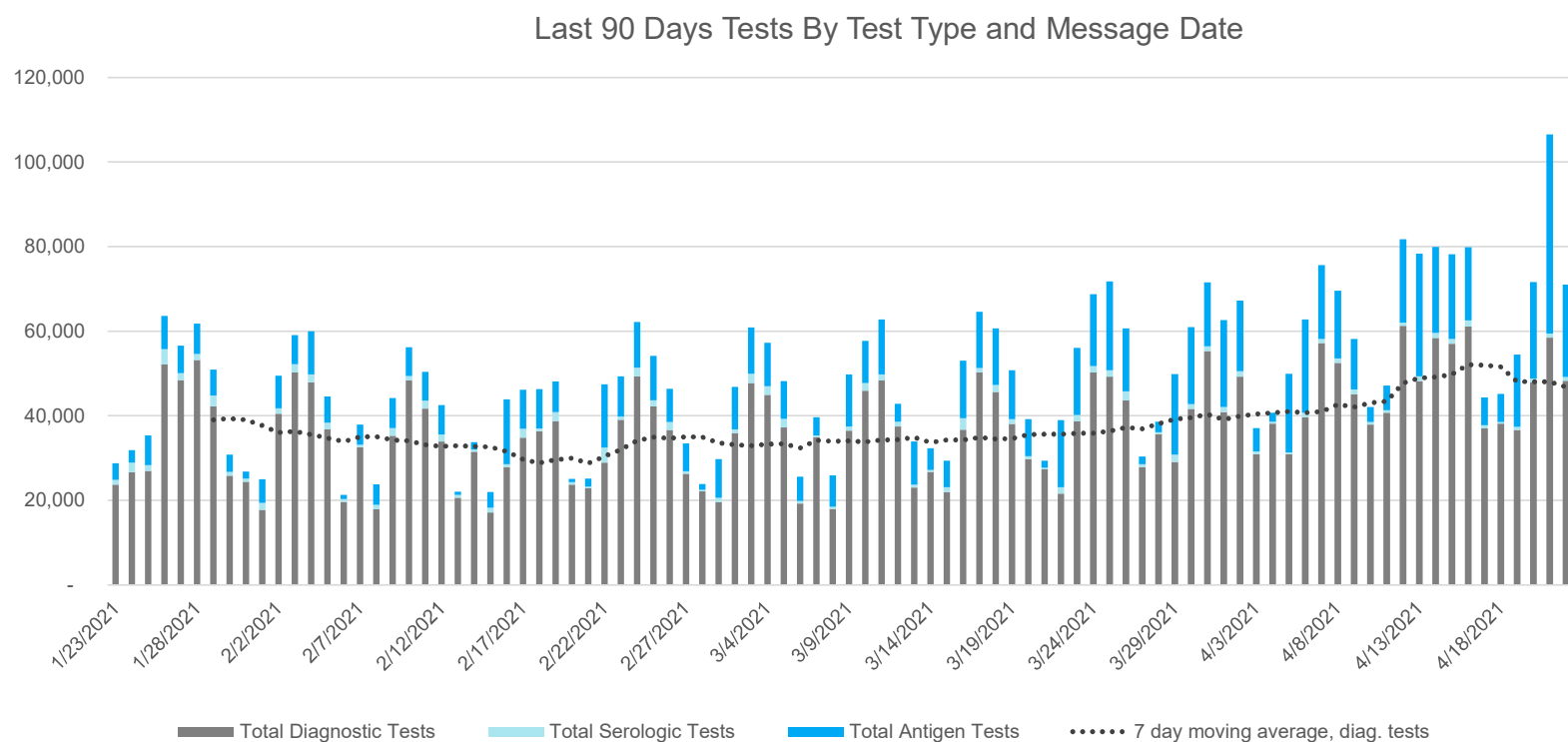
Continuing to boost testing capacity

- K-12
- College and University
- Pop-up testing for spring break travelers

Cases identified for investigations has declined but still higher than public health capacity to respond

- 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)

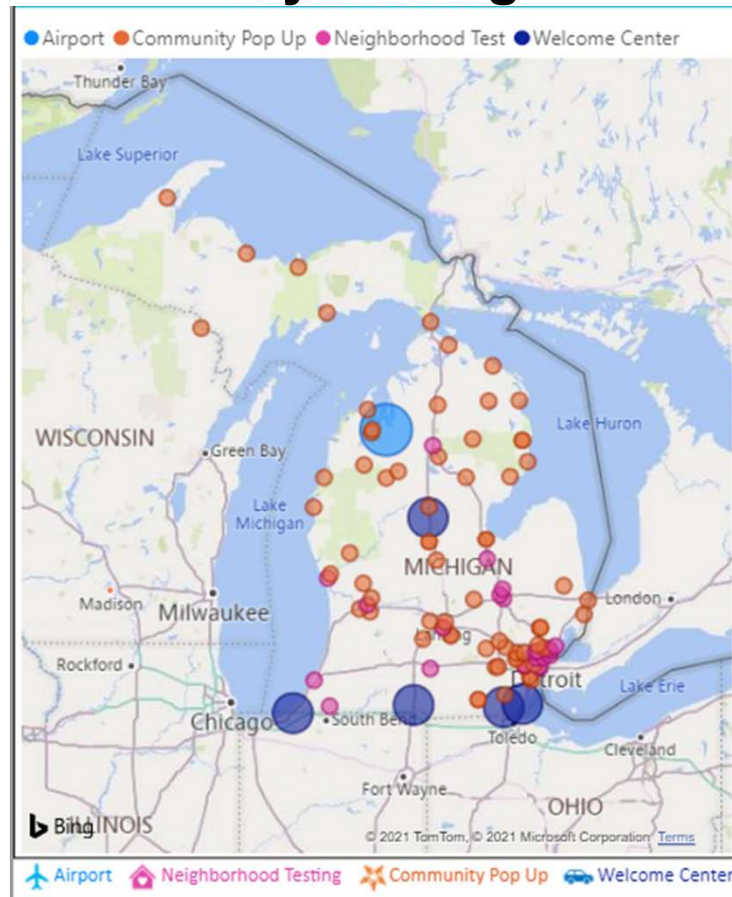
Daily diagnostic tests, by message date





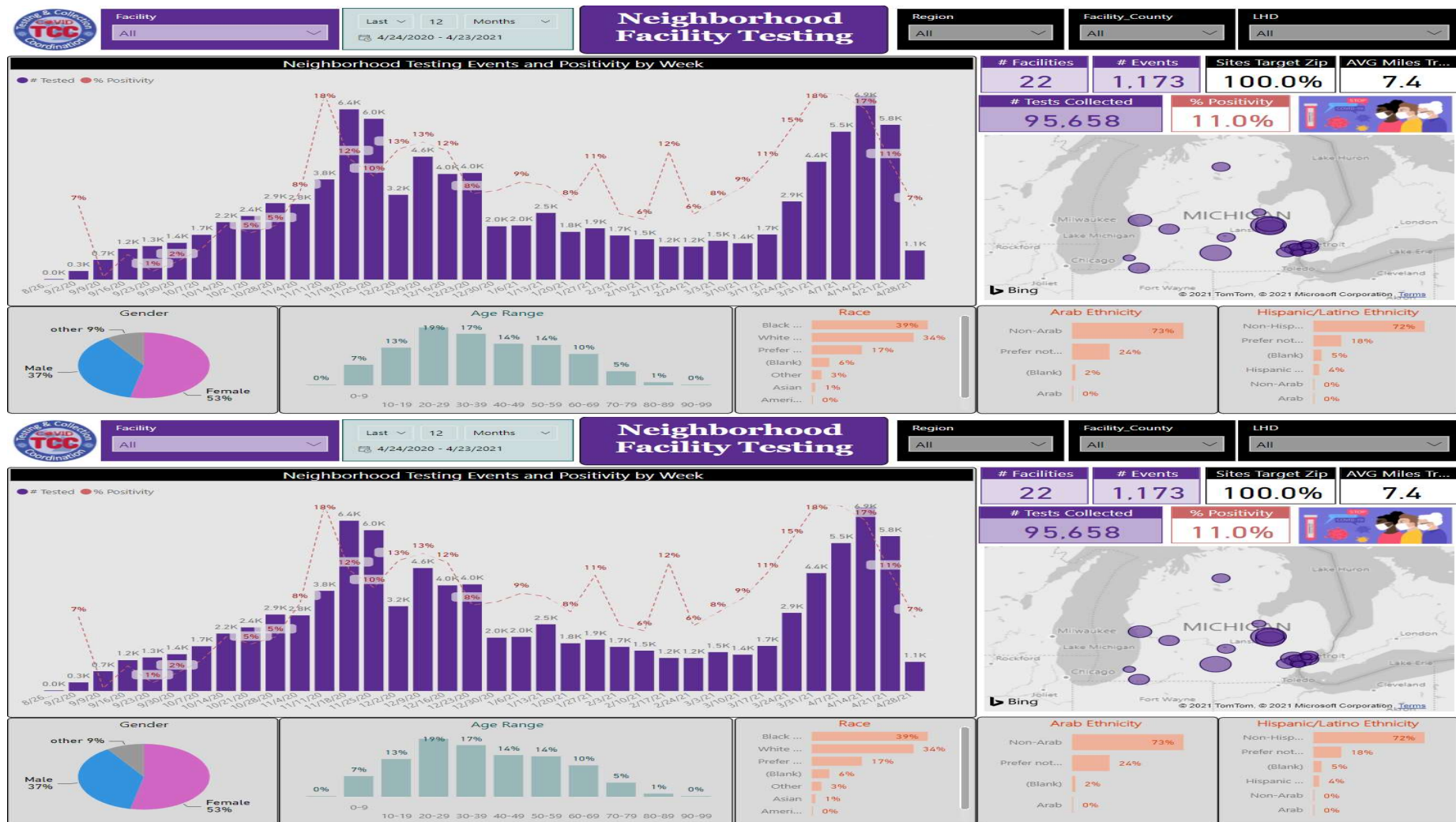
Weekly Update

- 67,575 rolling 7-day average daily diagnostic tests reported to MDHHS (PCR + Ag)
- 48,241 average daily PCR tests
- 46,802 average daily antigen tests
- 14.1% positivity in PCR tests

Community Testing



| County | City | Region |   | |
|---|--|----------------------|---|---------|
| All | All | All | | |
| Can click on Pre-Registration link in table | | | Can Select County/City/Region preferred Can Sort Tables | |
| Community Pop Up | Event Date | Event Times | link | City |
| E Free Church | 4/27/21 | 12pm-5pm | link | Gaylor |
| Hazel Park High School | 4/28/21 | 12pm-6pm | link | Hazel I |
| Wexford-Missaukee ISD | 5/1/21 | 10am-4pm | link | Cadilla |
| Cherryland Center Mall | 5/3/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/4/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/10/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/11/21 | 9am-5pm | link | Travers |
| Hazel Park High School | 5/12/21 | 12pm-6pm | link | Hazel I |
| Cherryland Center Mall | 5/17/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/18/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/24/21 | 9am-5pm | link | Travers |
| Cherryland Center Mall | 5/25/21 | 9am-5pm | link | Travers |
| Neighborhood Site | Event Times | City | | |
| Triumph Church | Mon 10am-6pm Wed 12pm-8pm Fri 10am-6pm | Detroit | | |
| The Open Door Church of God in Christ | Tue 10am-6pm Wed 10am-6pm Thu 10am-6pm | Detroit | | |
| Southwestern Church of God | Mon 10am-6pm Wed 12pm-8pm Sat 9am-2pm | Detroit | | |
| Pilgrim Rest Baptist Church | Tue 10am-5pm Thu 10am-5pm Sat 10am-2pm | Benton H | | |
| New Hope Missionary Baptist Church | Mon 10am-6pm Wed 12pm-8pm Fri 10am-6pm | Wayne | | |
| New Beginnings Deliverance Ministry | Mon 10am-5pm Tue 10am-5pm Thu 12pm-7pm | Saginaw | | |
| Mt. Calvary Lutheran Church | Wed 12pm-7pm Thu 9:30am-4:30pm Fri 9:30am-4:30pm | Warren | | |
| Macedonia Baptist Church | Mon 10am-3pm Fri 10am-3pm Sat 10am-3pm | Flint | | |
| Kirtland Community College Site | Wed 10am-4pm Thu 10am-4pm | Grayling | | |
| Airport | Event Times | link | City | |
| Cherry Capital Airport (TVC) | Wed 2pm-10pm Fri 12pm-8pm Sun 3pm-11pm | link | Traverse City | |
| Welcome Center | Event Times | link | City | |
| New Buffalo: I-94 East @ Mile #0 | Daily 10am-5pm | link | New | |
| Monroe: I-75 North @ Mile #10 | Daily 10am-5pm | link | Mon | |
| Dundee: US-23 North @ Mile #8 | Daily 10am-5pm | link | Pete | |
| Coldwater: I-69 North @ Mile #6 | *Starting 5/12 Daily 10am-5pm | link | Colc | |
| Clare: US-127/US-10 @ Mile #160 | *Starting 4/27 Daily 10am-5pm | link | Clar | |



Facility

All

Last

12

Months

4/24/2020 - 4/23/2021

Neighborhood Facility Testing

Region

All

Facility_County

All

LHD

All

Neighborhood Testing Events and Positivity by Week

| # Facilities | # Events | Sites Target Zip | AVG Miles Tr... |
|--------------|----------|------------------|-----------------|
| 22 | 1,173 | 100.0% | 7.4 |

| # Tests Collected | % Positivity |
|-------------------|--------------|
| 95,658 | 11.0% |

Gender

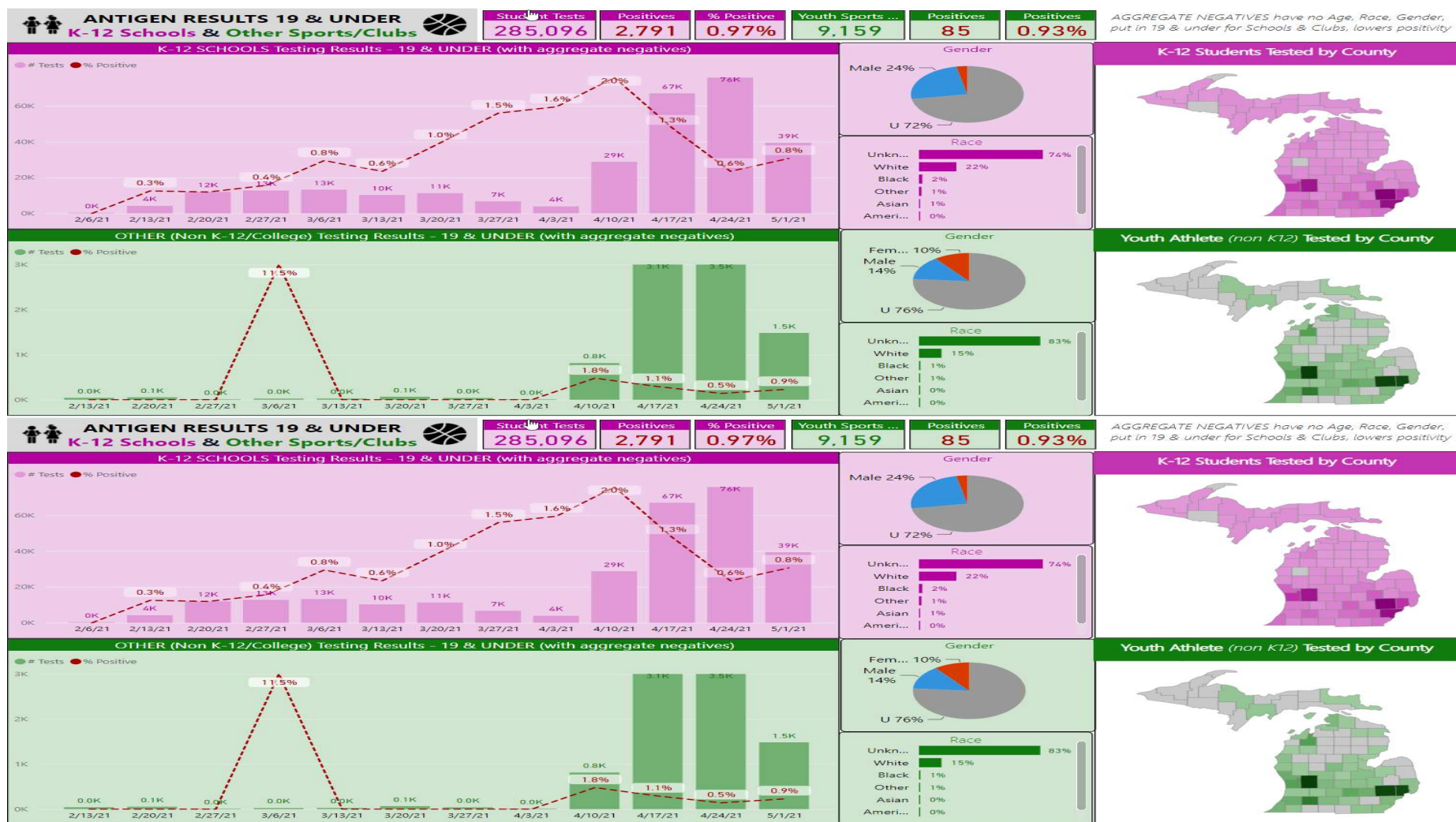
Age Range

Race

Arab Ethnicity

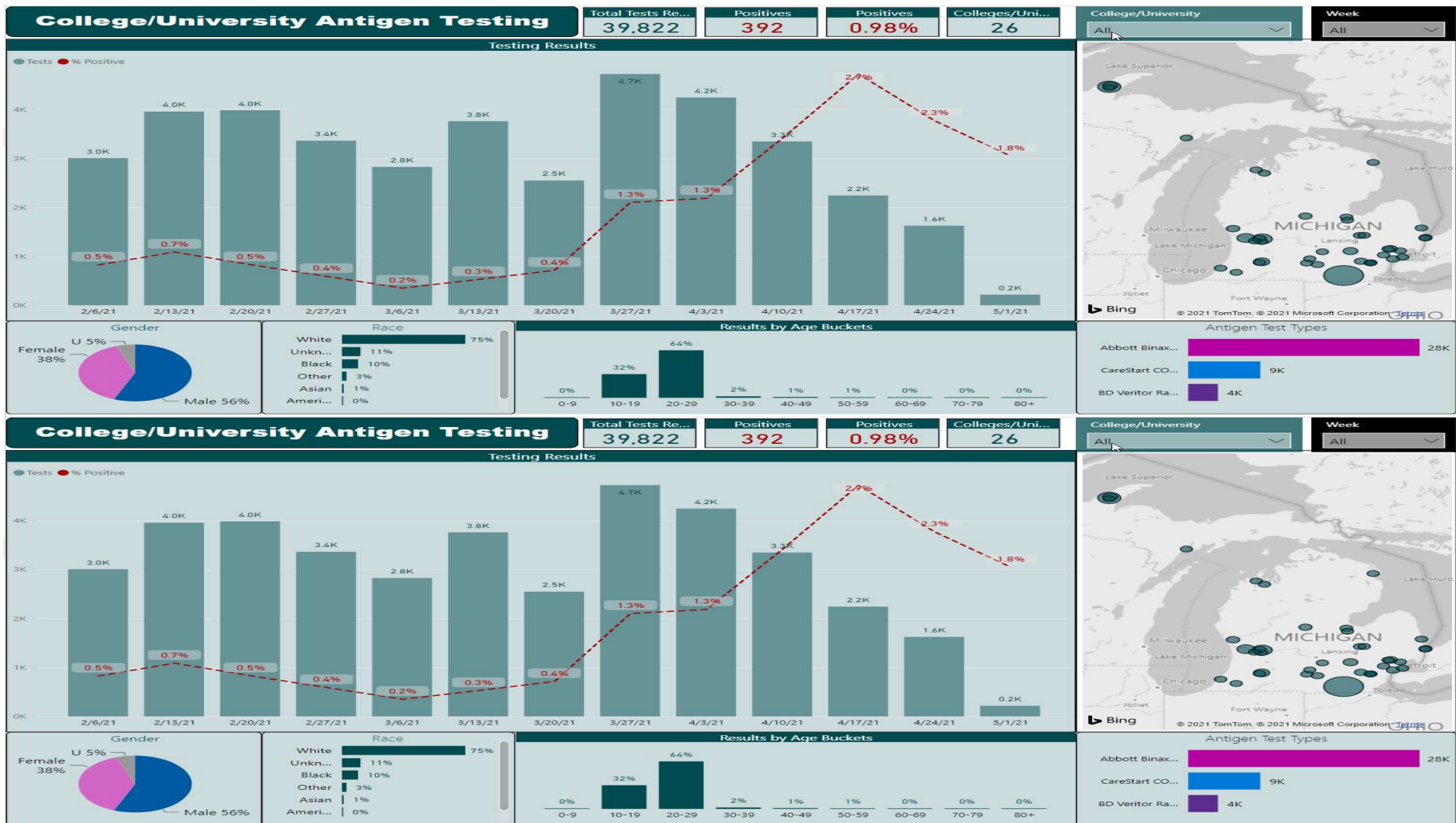
Hispanic/Latino Ethnicity

*We continue to support community testing sites in socially vulnerable areas since end of August



- Antigen testing in K-12 students at an all time high
- Testing available for educators as well

- Youth Athletes Antigen Testing per order for 13-19 years (*i.e.* AAU, clubs, community leagues, YMCA)



College/University Antigen Testing

Total Tests Re...
39,822

Positives
392

Positives
0.98%

Colleges/Uni...
26

College/University
All

Week
All

Testing Results

Tests % Positive

3.0K

0.5%

2/6/21

4.0K

0.7%

2/13/21

4.0K

0.5%

2/20/21

3.4K

0.4%

2/27/21

2.8K

0.2%

3/6/21

3.8K

0.3%

3/13/21

2.5K

0.4%

3/20/21

4.7K

1.3%

3/27/21

4.2K

1.3%

4/3/21

3.3K

2.9%

4/10/21

2.2K

2.3%

4/17/21

1.6K

1.8%

4/24/21

0.2K

5/1/21

Gender

Female 38%

Male 56%

U 5%

Race

White 75%

Unkn... 11%

Black 10%

Other 3%

Asian 1%

Ameri... 0%

Results by Age Buckets

0%

32%

64%

2%

1%

1%

0%

0%

0%

0-9

10-19

20-29

30-39

40-49

50-59

60-69

70-79

80+

Antigen Test Types

Abbott Binax... 28K

CareStart CO... 9K

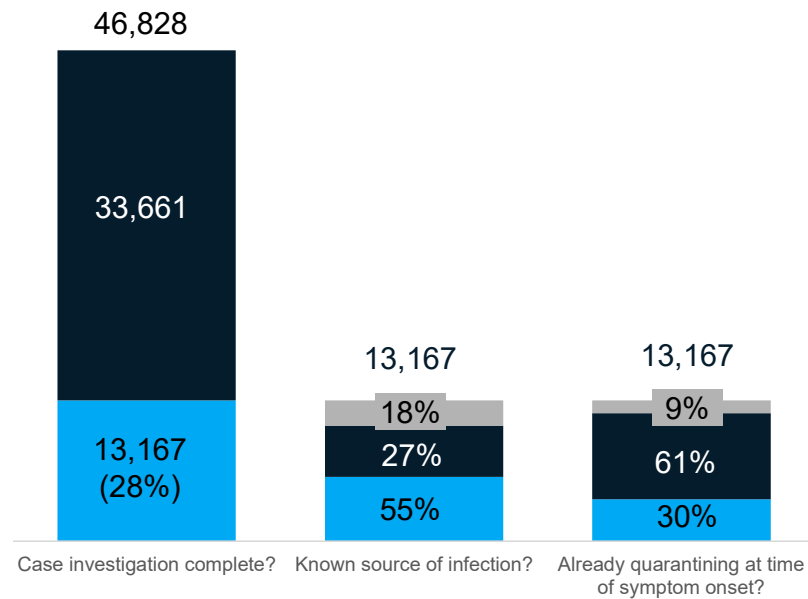
BD Veritor Ra... 4K

New Case Investigation Metrics (Statewide)

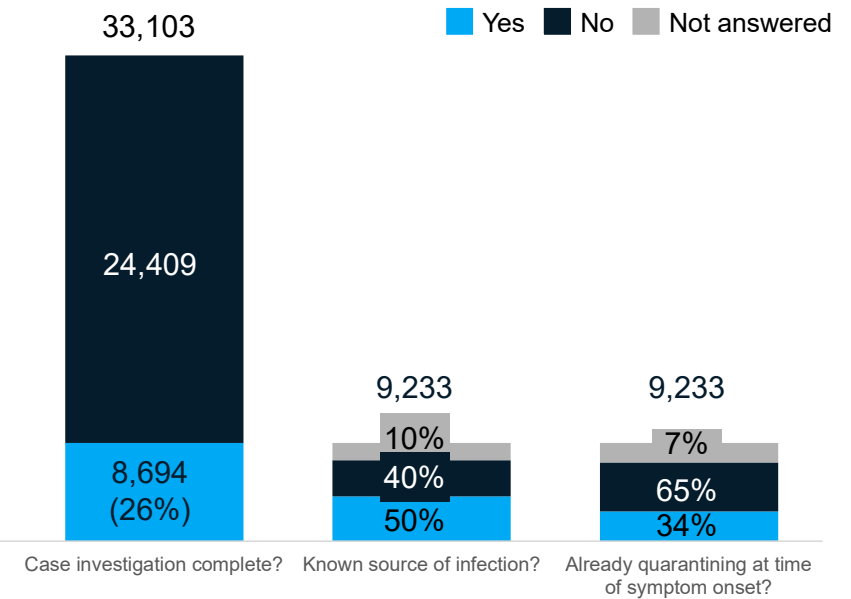
New Communicable Disease metrics this week:

- Number of case investigations completed, and percent of interviews completed decreased.
- 50% of investigated cases having a known source (55% last week, 46% week prior)
- 34% of investigated cases noted that they were quarantining before symptoms (30% last week)

04/10-4/16 Case report form information



04/17-4/23 Case report form information



COVID-19 Vaccination

Administration

- 9th among all states for doses administered; 9th for number fully vaccinated ([CDC data tracker](#) 4/19/2021)
- 79.1% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 4/27/2021)

Coverage

- 48.8% of MI residents age 16+ have initiated COVID vaccination and 35.9% have completed their series
- Coverage is highest among 65-75 and 75+ age groups
- Initiation coverage was highest among Asian, Native Hawaiian or Pacific Islander Race individuals

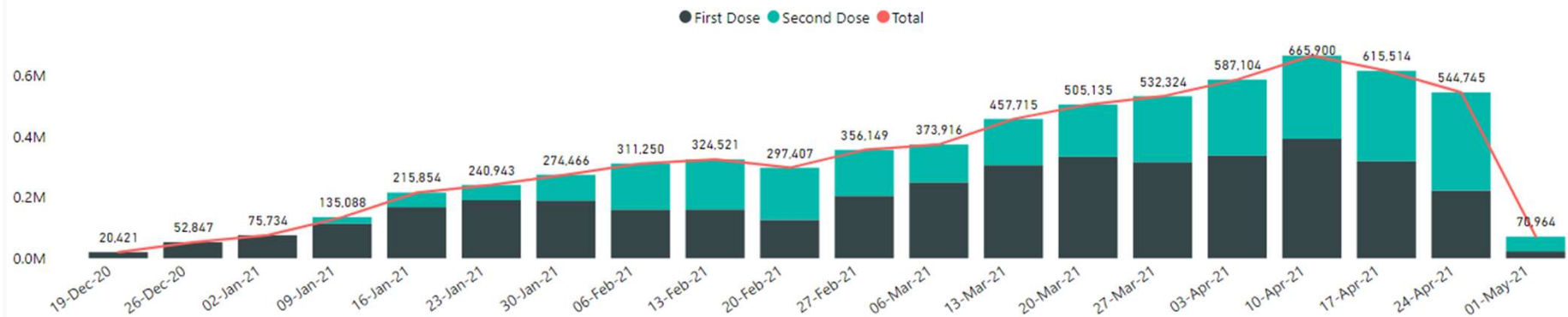
Vaccinated Individuals Who Test Positive

- Number of cases who are fully vaccinated (n=2,108) is not in excess of what might be expected with vaccines with 95% efficacy.
- Possibility of infection and further transmission is why recommend precautions in public (e.g., wearing masks, washing hands and social distancing) even after receiving the vaccine until more Michiganders have been able to be vaccinated

Doses Delivered and Administered, and Coverage as of 4/27

9,024,875 doses delivered to Michigan providers*

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



6,657,997 doses Administered

- 79.1% Federal-Jurisdiction adjusted administration ratio (excluding federal entities, per [CDC channel portfolio](#) as of 4/25/2021)
- 6 weeks with more than 500,000 doses administered in a week; 15 days over 100,000 in a day
- 544,745 doses administered last week (down ~70,700).

*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 04/27/2021

48.8% of MI residents age 16+ have initiated COVID vaccination

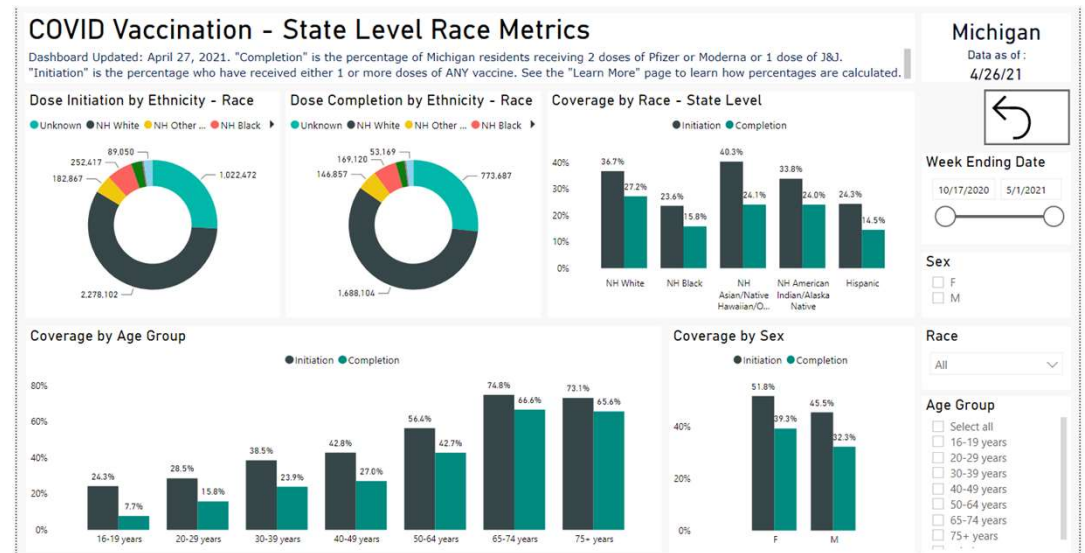
35.9% or **2,907,511 people** have completed series

Age Group

- 72.2% people aged 65 or older (1.27M) have received one or more doses of vaccine
- 66.2% people aged 65 or older have completed their vaccine series

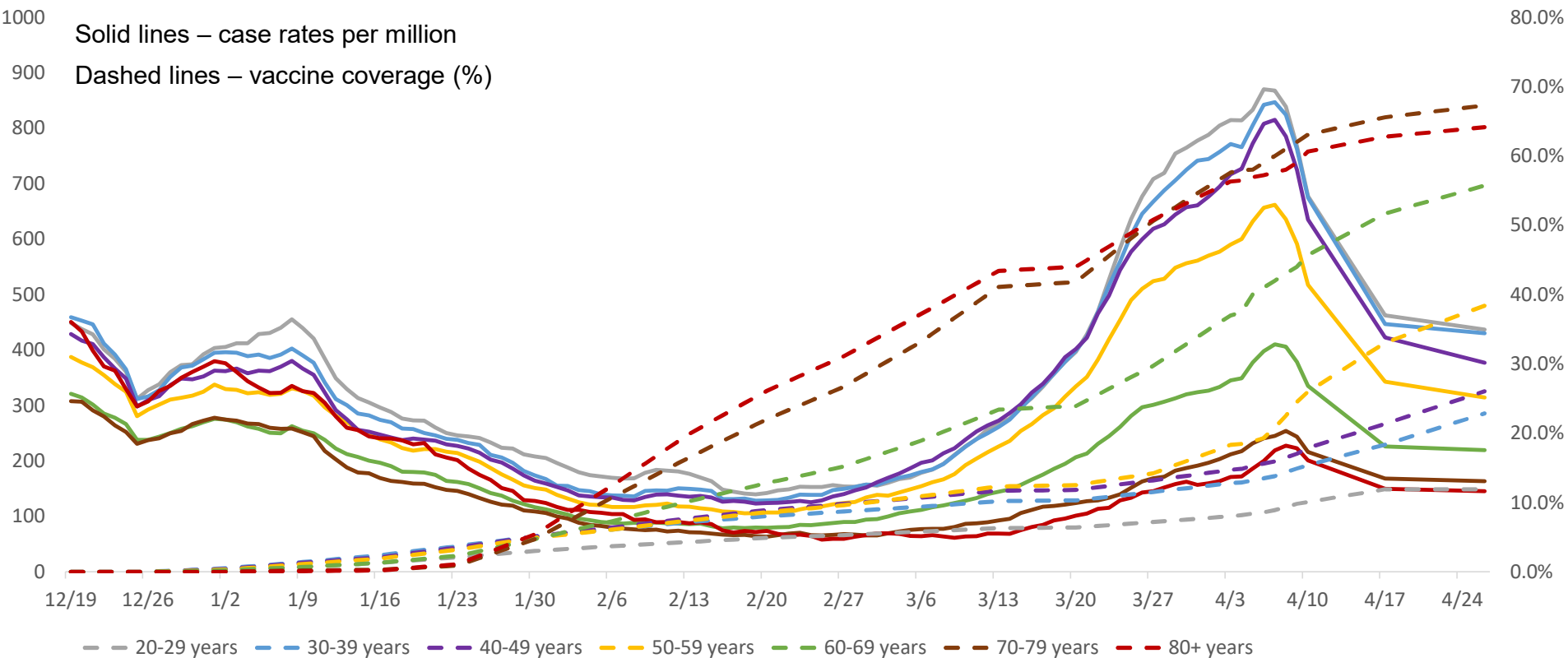
Race/Ethnicity

- Initiation coverage highest among those of Asian, Native Hawaiian or Pacific Islander Race (40.3%) then NH (Non-Hispanic) White (36.7%), NH American Indian (33.8%), NH Black or African American (23.6%) Races, and Hispanic (24.3%) ethnicity
- 25.9% data missing or unknown



Comparing Vaccine Coverage and Case Rate Trends

(Dec 19 – Apr 26)



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

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 4/20/21):

- 2,108 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 22 deaths, 21 persons 65 years or older, one had prior PCR positive greater than 45 days prior
 - 41 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.

Pause on use of Johnson and Johnson vaccine lifted

The Michigan Department of Health and Human Services is recommending vaccine providers across the state resume the use of Johnson & Johnson vaccine to vaccinate Michiganders age 18 and older. This recommendation is based on the U.S. Food and Drug Administration (FDA) and the U.S. Centers for Disease Control and Prevention (CDC) recommending to move forward with administering the vaccine. The agencies previously recommended a pause on April 13th while experts conducted a thorough safety review after reports of a rare blood clotting syndrome in some people.

CDC and FDA have determined the following:

- Use of the Johnson & Johnson COVID-19 vaccine should be resumed in the United States.
- The FDA and CDC have confidence that this vaccine is safe and effective in preventing COVID-19.
- The FDA has determined that the available data show that the vaccine's known and potential benefits outweigh its known and potential risks in individuals 18 years of age and older.
- At this time, the available data suggest that the chance of TTS occurring is very low, but the FDA and CDC will remain vigilant in continuing to investigate this risk.

Find a vaccine near you



VaccineFinder

Home

Find Vaccines

VaccineFinder helps you find clinics, pharmacies, and other locations that offer COVID-19 vaccines in the United States.

In some states, information is limited while more providers and pharmacies update locations in the coming weeks. COVID-19 vaccine availability is limited, and appointments are required at most locations.

FIND COVID-19 VACCINES



Science Round Up



















- New guidance on masks from CDC
- Data from Michigan and 12 other states suggest that there are racial and ethnic disparities among emergency department visits
- Vaccine efficacy in field high among those over 65 years
- Review of Vsafe and other data on use in pregnancy
- Models
 - R_t estimates suggest slowing growth over coming weeks with potential for plateau
 - Previous increases have resolved in different ways
 - Ridge regression projections vary by region—some projected to plateau, others project slowed growth
 - COVID-19-Sim Model projects slowing growth through April/May followed by decline

CDC Guidance for Fully Vaccinated Persons

Choosing Safer Activities

| | | Unvaccinated People | Your Activity | Fully Vaccinated People |
|------------|--|---|---|---|
| | | | Outdoor | |
| Safest | |  | Walk, run, or bike outdoors with members of your household |  |
| | |  | Attend a small, outdoor gathering with fully vaccinated family and friends |  |
| | |  | Attend a small, outdoor gathering with fully vaccinated and unvaccinated people |  |
| Less Safe | |  | Dine at an outdoor restaurant with friends from multiple households |  |
| Least Safe | |  | Attend a crowded, outdoor event, like a live performance, parade, or sports event |  |

CDC Guidance for Fully Vaccinated Persons

| | | Indoor | | |
|------------|---|---|---|--|
| Less Safe |  | Visit a barber or hair salon |  | |
| |  | Go to an uncrowded, indoor shopping center or museum |  | |
| |  | Ride public transport with limited occupancy |  | |
| |  | Attend a small, indoor gathering of fully vaccinated and unvaccinated people from multiple households |  | |
| Least Safe |  | Go to an indoor movie theater |  | |
| |  | Attend a full-capacity worship service |  | |
| |  | Sing in an indoor chorus |  | |
| |  | Eat at an indoor restaurant or bar |  | |
| |  | Participate in an indoor, high intensity exercise class |  | |

Trends in Racial and Ethnic Disparities in COVID-19: Emergency Departments and Hospitalizations

Emergency Department Visits in 13 States from Oct – Dec 2020

- Can be an early indicator of changing patterns in disparities
- 4.9% of ED visits were for COVID-19
- Racial disparities existed for all ages
 - Hispanic, AI/AN, and Black persons sought ED care for COVID-19 at higher rates than did White persons
- Across all ages, Hispanic persons were more likely to seek ED care for COVID-19 than any other age group

National Trends in Hospitalization by U.S. Census Region

- Racial and ethnic disparities were largest during April–July 2020
- Within each region, the proportion of hospitalized patients with COVID-19 was highest for Hispanic or Latino patients
- The disparities became less pronounced over time
 - The declining disparities do not necessarily reflect reduced risk for infection or improved outcomes for certain minority groups, but rather an increased risk for infection and subsequent hospitalization among Whites

Sources: Romano SD, Blackstock AJ, Taylor EV, et al. Trends in Racial and Ethnic Disparities in COVID-19 Hospitalizations, by Region — United States, March–December 2020. MMWR 2021;70:560–565. DOI: <http://dx.doi.org/10.15585/mmwr.mm7015e2>

Smith AR, DeVies J, Caruso E, et al. Emergency Department Visits for COVID-19 by Race and Ethnicity — 13 States, October–December 2020. MMWR 2021;70:566–569. DOI: <http://dx.doi.org/10.15585/mmwr.mm7015e3>

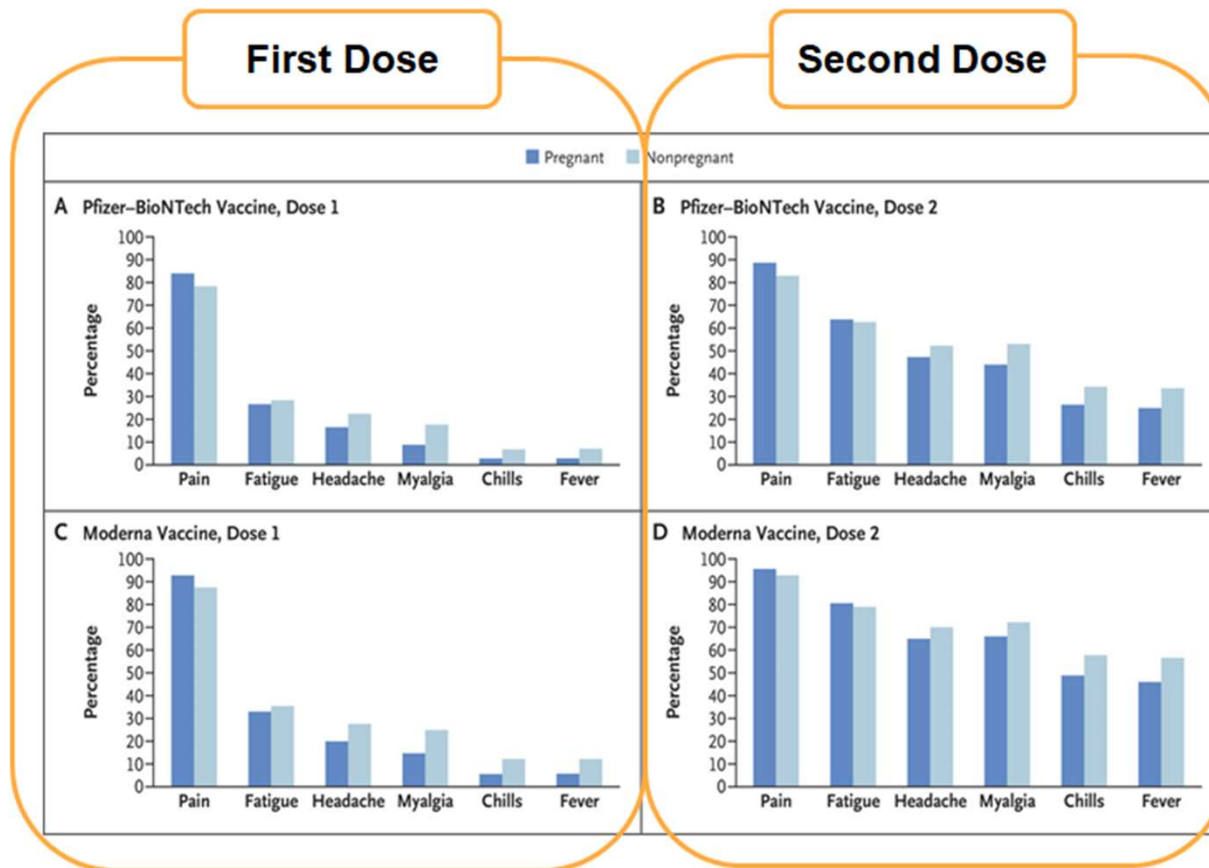
CDC Report: Post-vaccination SARS-CoV-2 Infections Among Skilled Nursing Facility Residents and Staff - Chicago

- 75 facilities reviewed for infection (December – March)
- 627 infections total
- 22 infections in ~15,000 fully vaccinated people
 - 64% of breakthrough infections had no symptoms
 - 2 hospitalizations, 1 death

“Maintaining high vaccination coverage among residents and staff members is also important to reduce opportunities for transmission within facilities and exposure among persons who might not have achieved protective immunity after vaccination.”

Teran RA, Walblay KA, Shane EL, et al. Postvaccination SARS-CoV-2 Infections Among Skilled Nursing Facility Residents and Staff Members — Chicago, Illinois, December 2020–March 2021. MMWR Morb Mortal Wkly Rep. ePub: 21 April 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7017e1>

CDC Report: COVID-19 Vaccine Safety in Pregnant Persons – New England Journal of Medicine



Review of reports from v-safe, v-safe pregnancy registry and Vaccine Adverse Event Reporting System.

Data from 39,870 pregnant people.

Pregnant people slightly more likely to experience site injection pain.

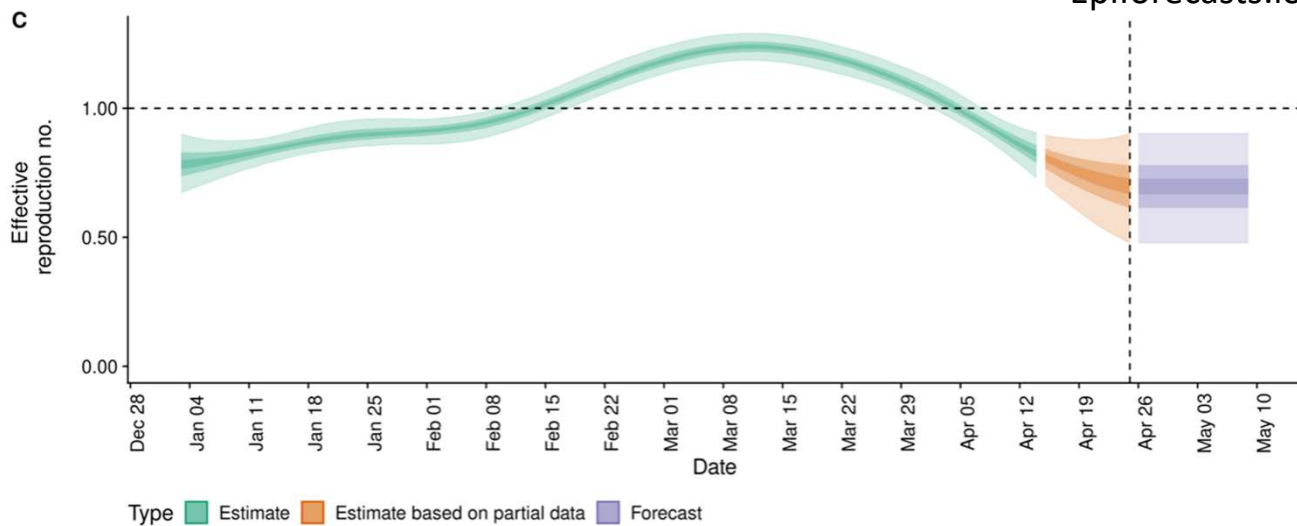
Pregnant people slightly less likely to experience fatigue, headache, myalgia, chills, fever.

Rt estimates suggest declining case rates for Michigan

- Rt estimates are now below 1, which suggests a decline for the next couple of weeks

Effective Reproduction Number • R_t

Covidestim.org



Epiforecasts.io



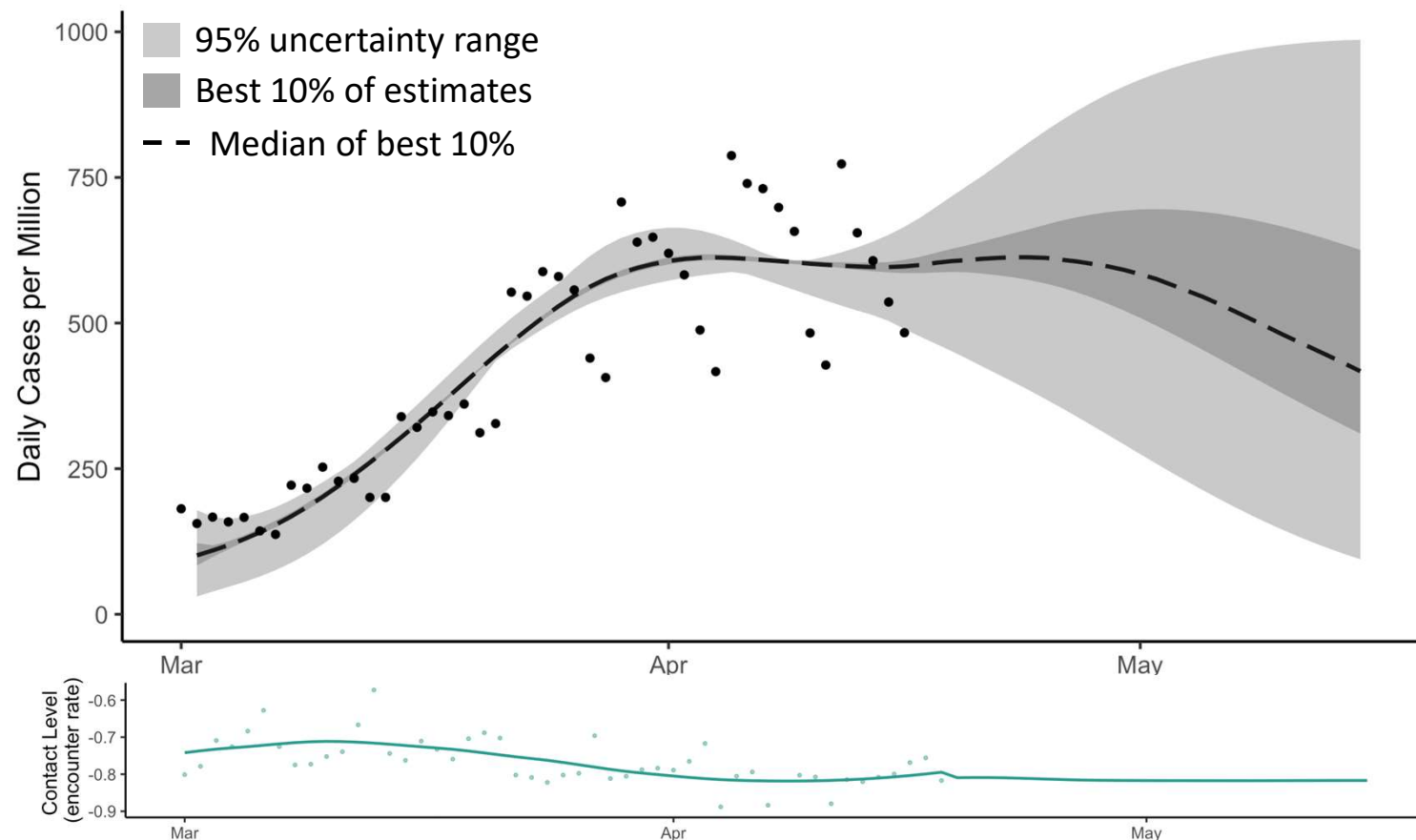
Sources:
covidestim.org,
epiforecasts.io

Transmission model projects plateau or decline assuming social distancing levels remain constant and vaccine coverage continues to increase

- Projections range from decline to potential increases after plateau
- 10% best fits suggest plateau or decline

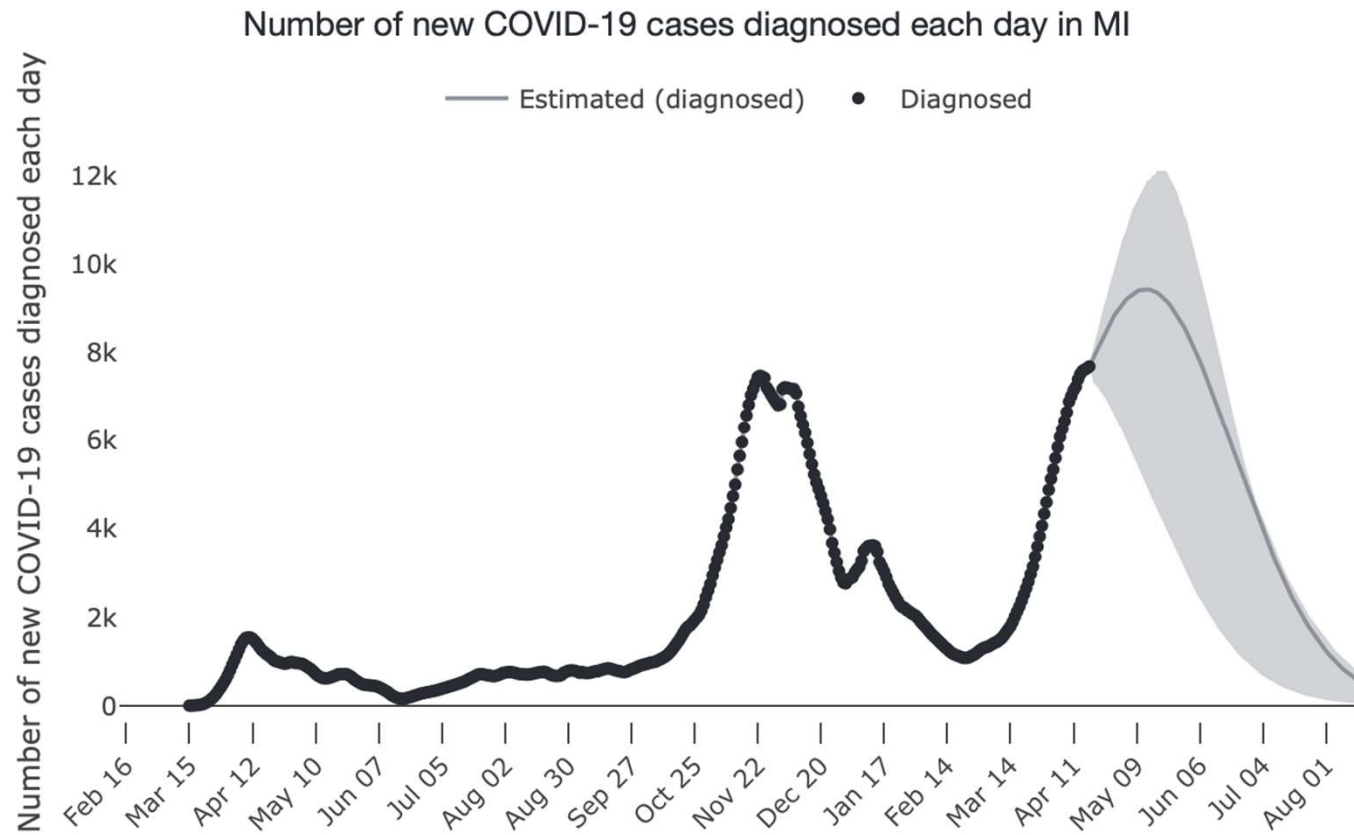
Model assumes:

- Vaccine coverage continues increasing (sampling different rates)
- Variant spread constant (sampling different levels)
- Up to 10% of population immune due to previous infection
- Assumes constant testing levels



COVID-19-Sim Model projects continued but slowing growth in May followed by decline

- Assumes continued current interventions
- Confidence ranges range from a plateau and decline in the next couple of weeks to continued growth through May/June followed by decline
- Data as of 4/26/21



Source: <http://covid19sim.org>

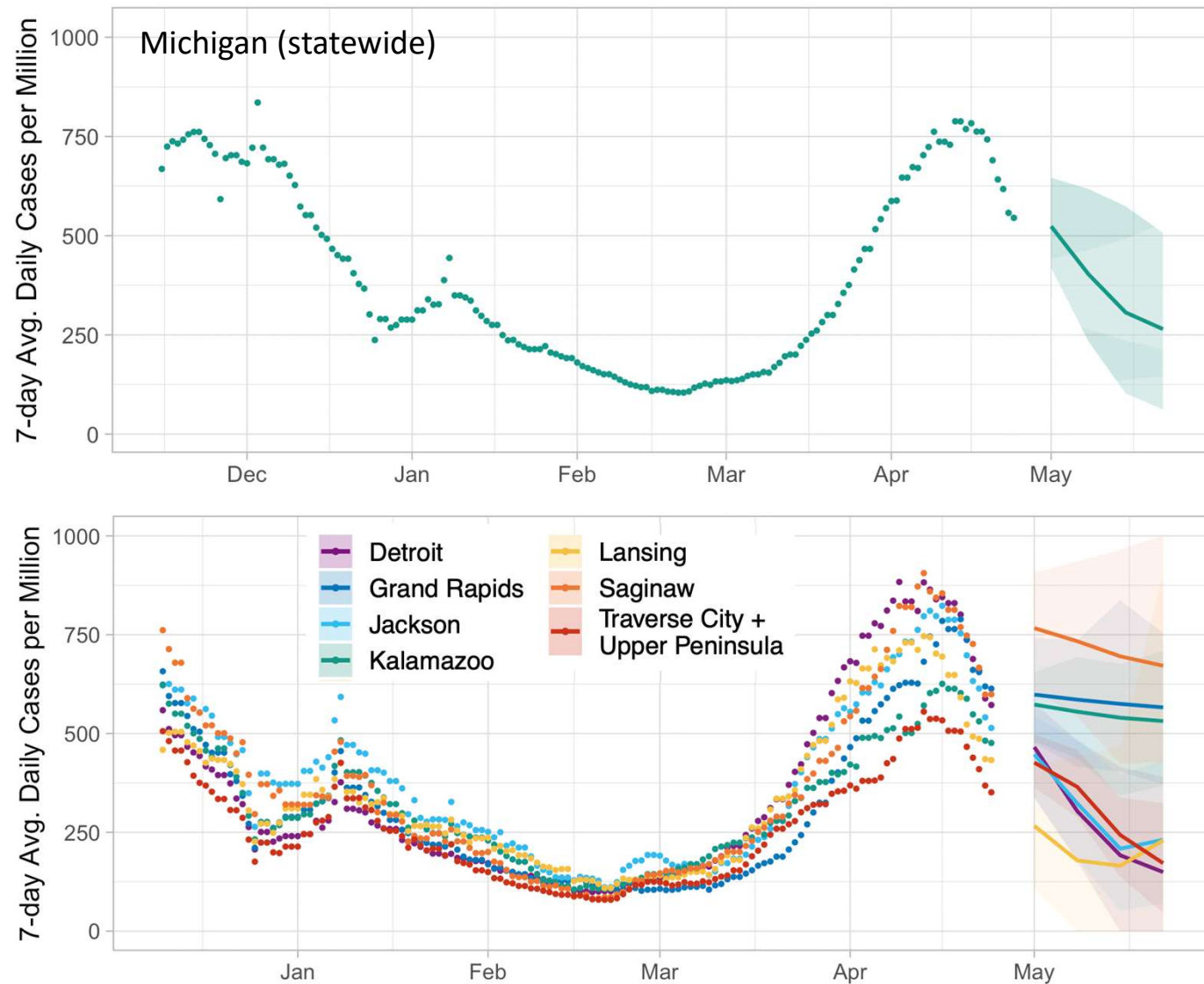
Regional and statewide ridge regression models project plateaus and declines for the coming weeks

Regional confidence intervals range from slow growth to declines



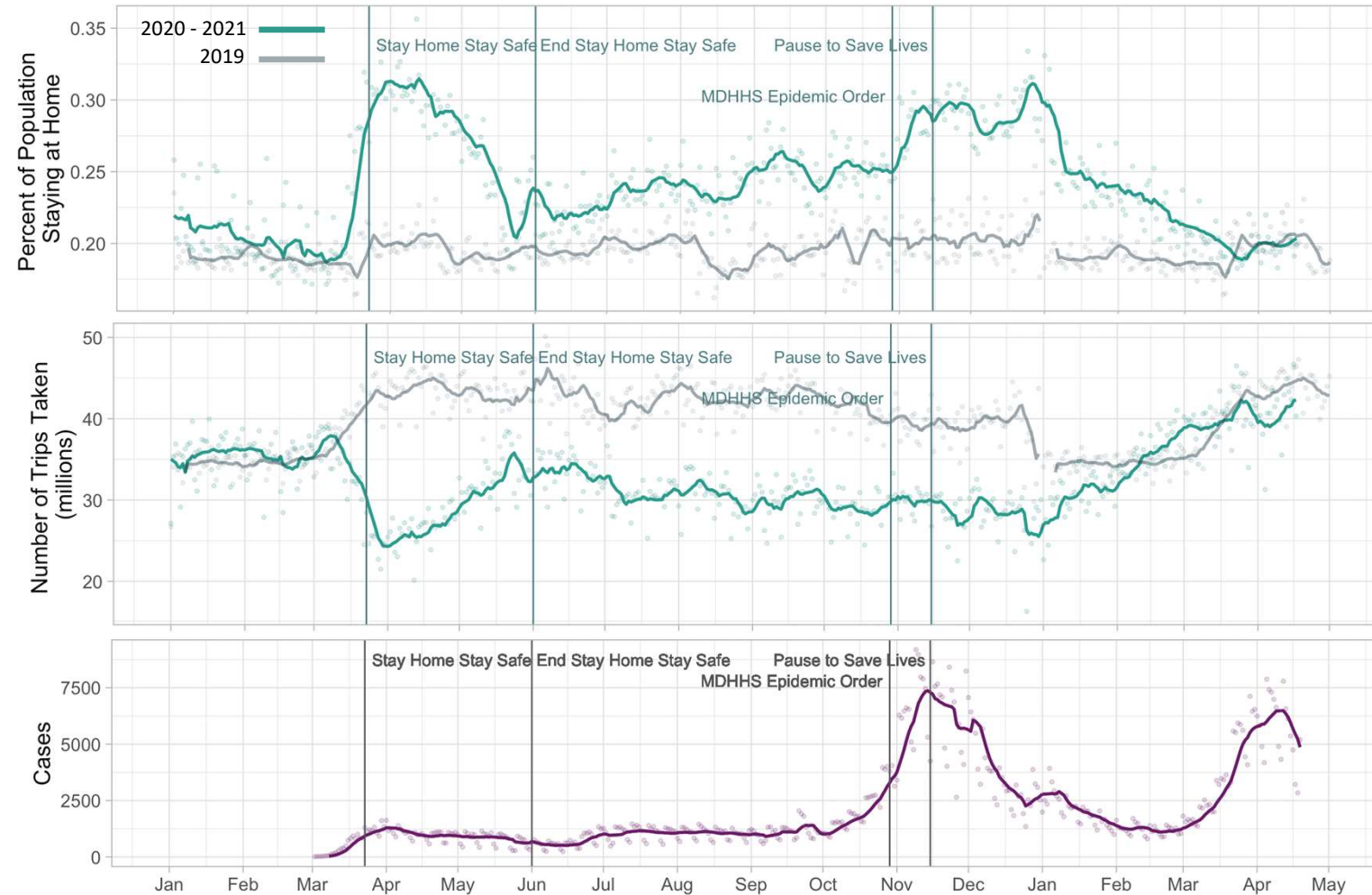
Sources: Data from MDHHS/JHU, [UM Ridge Regression Model](#)

Line is the ridge regression model projection, and the shaded region represents the 95% confidence region (2.5% and 97.5% quantiles). Cases are plotted by report date.



Mobility Update

How many people are staying at home in Michigan?



- % Stay-at-home levels have declined to 2019 levels
- Number of trips taken/day has increased to 2019 levels
- Most recent data is 4/17/21 (data as of 4/26/21)

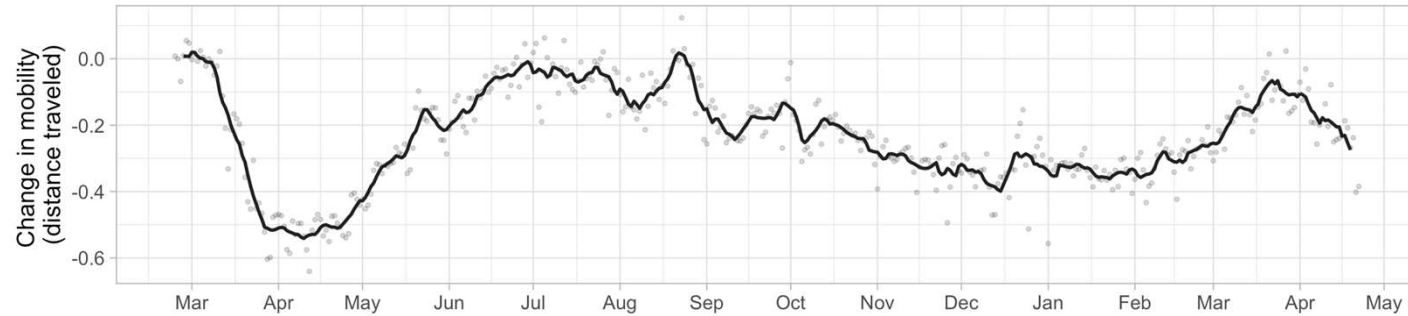
Data Source: [Bureau of Transportation Statistics](#)



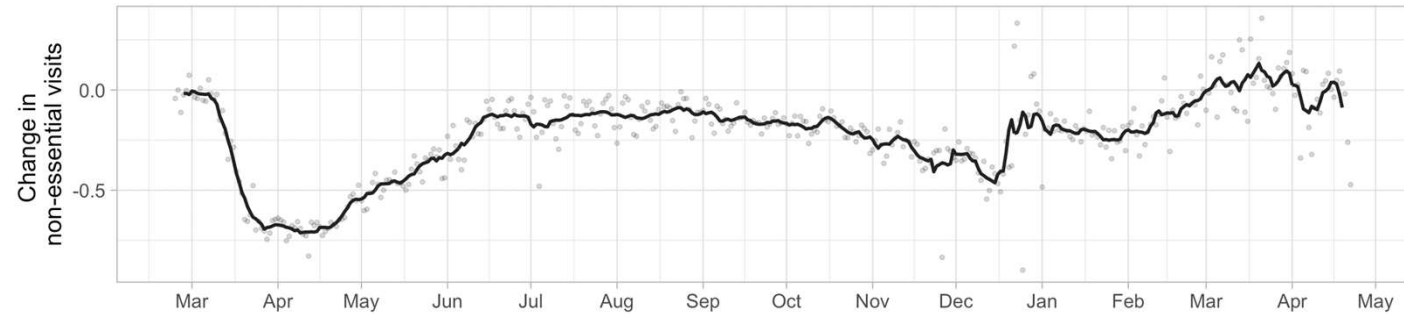
Unacast mobility patterns in Michigan

- Average mobility decreasing from near-baseline levels
- Non-essential visits have returned to baseline levels
- Encounter density remains relatively low
- Data through 4/22/21 (data as of 4/26/21)

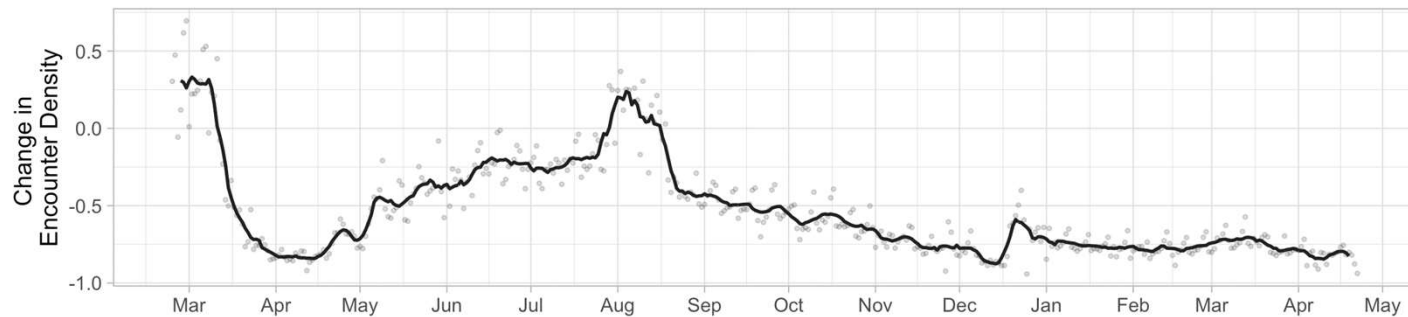
Change in average mobility



Change in non-essential visits



Difference in encounter density



Unacast social distancing scoreboard

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