MI COVID RESPONSE DATA AND MODELING UPDATE

NOTE: All data as of July 26 unless otherwise noted

July 27, 2021

Executive summary

Percent Positivity (4.1%) is increasing for four weeks (up from 3.1% last week), and **Case Rate** (29.5 cases/million) have increased for three weeks (up from 21.0 last week)

Michigan has the **31st lowest number of cases (28th last week),** and **8th lowest case rate (6th last week)** in the last 7 days (source: CDC COVID Data Tracker)

Percent of inpatient beds occupied by individuals with COVID (1.6%) has increased for two weeks (up from 1.4% last week).

Michigan has the **9th lowest inpatient bed utilization (9th last week),** and the **11th lowest adult ICU bed utilization (15th last week)** in the country (source: US HHS Protect)

Deaths (0.3 deaths/million) are plateaued (0.5 deaths/million last week). There were 24 COVID deaths between Jul 13 and Jul 19.

Michigan has the **T38th lowest number of deaths (T29th last week),** and **T18th lowest death rate (T13th last week)** in the last 7 days (source: CDC COVID Data Tracker)

The 7-day average **state testing rate** has increased to 1,232.6 tests/million/day. **Daily diagnostic tests (PCR)** is 12.2K per day, and the **weekly average for PCR and antigen tests** conducted in Michigan is 23.9K.

9.75 million **COVID-19 vaccine** doses reported to CDC, 4.86 million people have completed their vaccine series

# Agenda

Status of COVID-19 Epidemiological Risk

- **State-by-state comparison of epidemic spread**

- Michigan epidemic spread

- Public health response

Science round-up

Global and National Comparisons

What we see today (data through 7/26):

- Globally, 194,534,068 cases and 4,163,967 deaths

- Countries with the highest number of cases are U.S. (34,496,961), India (31,411,262), and Brazil (19,688,663)

- Within the U.S., North Dakota (14,594 per 100,000), Rhode Island (14,485/100,000), & South Dakota (14,124/100,000) lead the nation in cumulative case rates

- Michigan currently has identified 13,923 variants of concern (VOC)*
  - Cumulatively, the vast majority are B.1.1.7 (13,433 which is 96.6%)
    - Other VOCs include B.1.351 (0.6%), P.1 (2.3%) and B.1.617.2(0.6%)
  - The low number of specimens recently submitted for sequencing limits the ability to estimate the prevalence of variants in Michigan

● High ● Substantial ● Moderate ● Low ● No Data
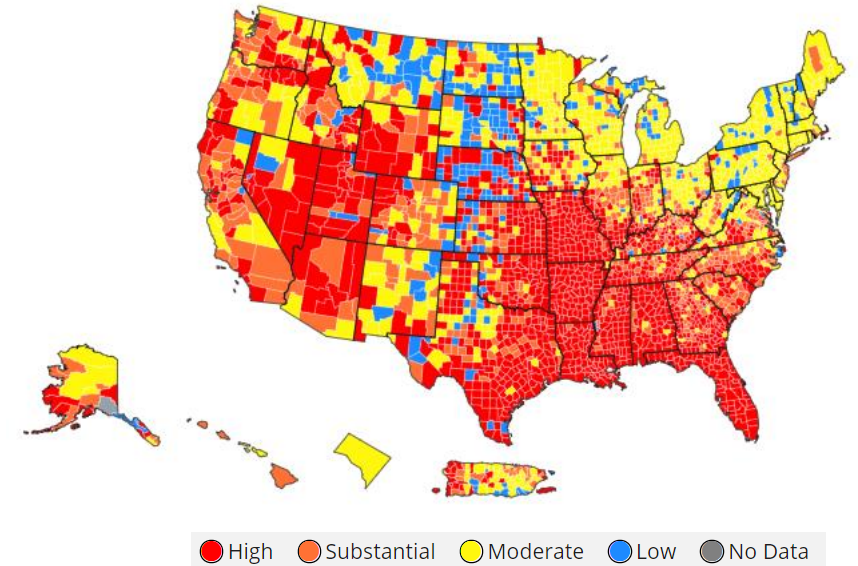
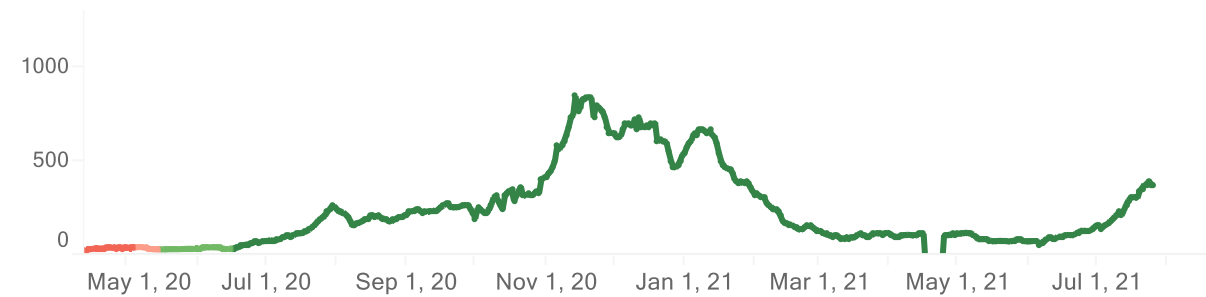* CDC removed Episilon (B.1.427/B.1.429) from the lists of VOCs

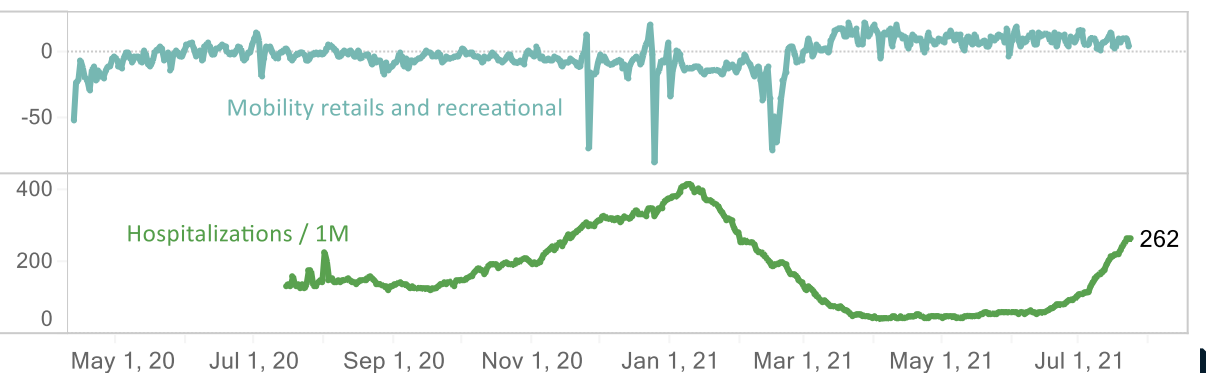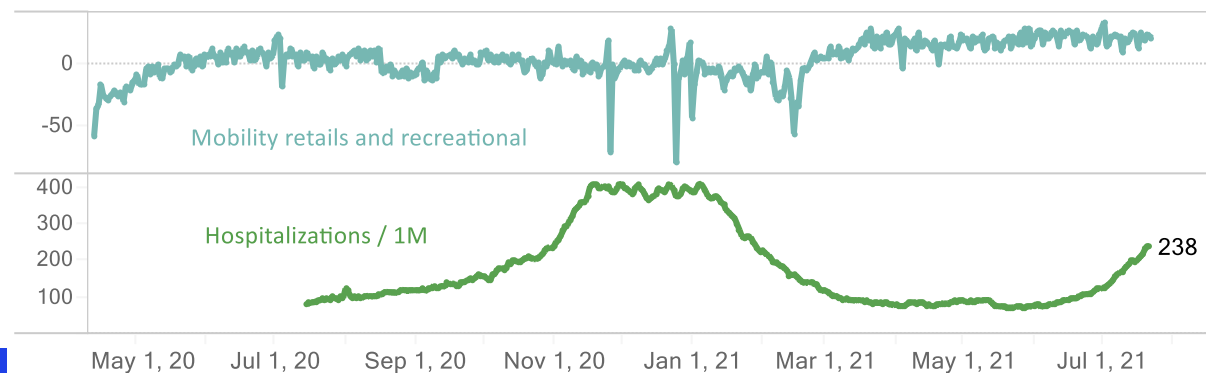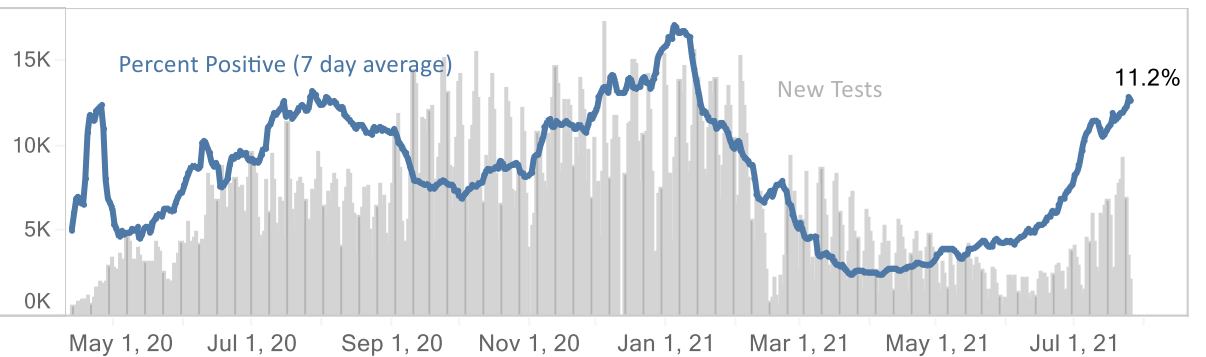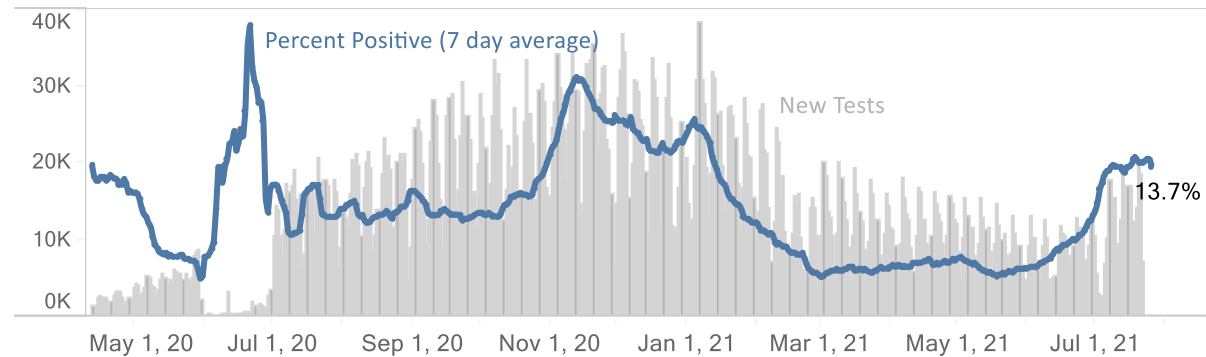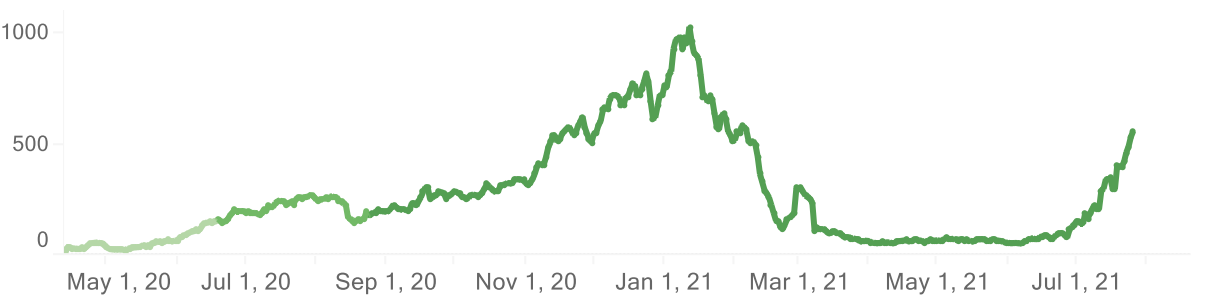| National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up |

State Comparisons: Missouri and Arkansas
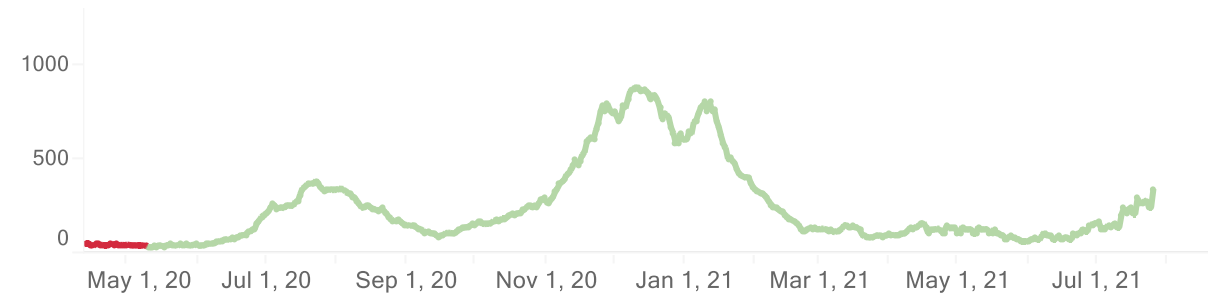

Missouri Confirmed New Cases / 1M (7 days average)

Arkansas Confirmed New Cases / 1M (7 days average)

Percent Positive (7 day average) — 13.7%

Percent Positive (7 day average) — 11.2%

New Tests

Mobility retails and recreational

Hospitalizations / 1M — 238

Hospitalizations / 1M — 262

State Comparisons: Nevada and Louisiana

Nevada Confirmed New Cases / 1M (7 days average)

Louisiana Confirmed New Cases / 1M (7 days average)

Percent Positive (7 day average)

New Tests

16.7%

Percent Positive (7 day average)

New Tests

14.9%

Mobility retails and recreational

Mobility retails and recreational

Hospitalizations / 1M

323

Hospitalizations / 1M

234
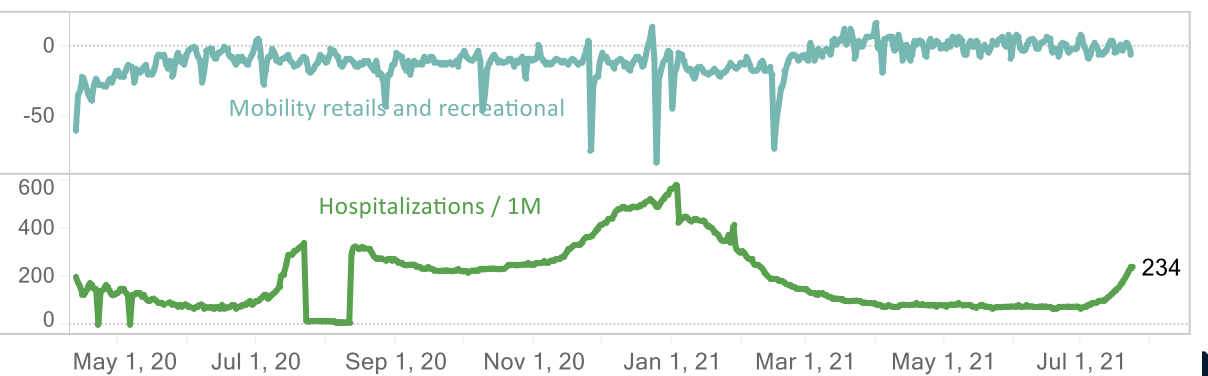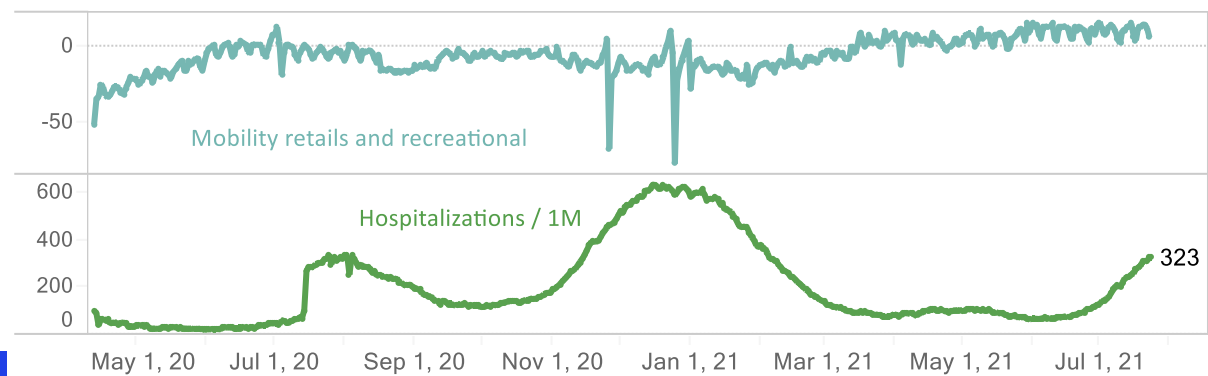
State Comparisons: Florida and Michigan

Florida Confirmed New Cases / 1M (7 days average)
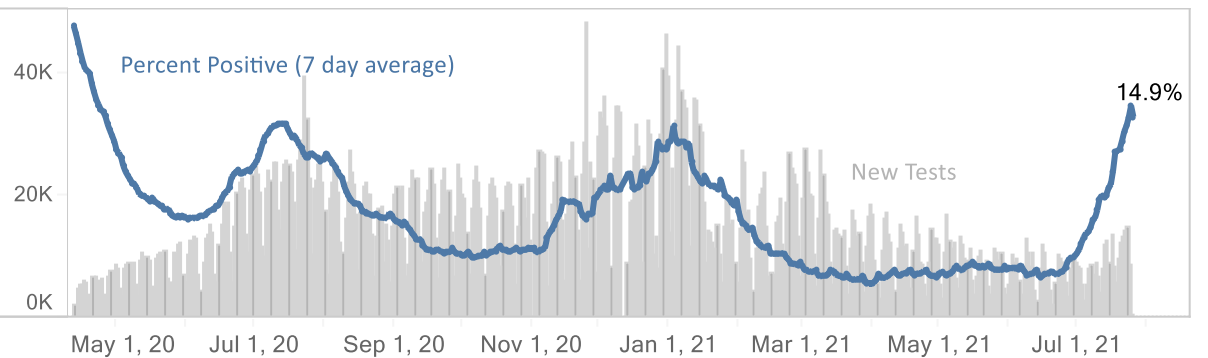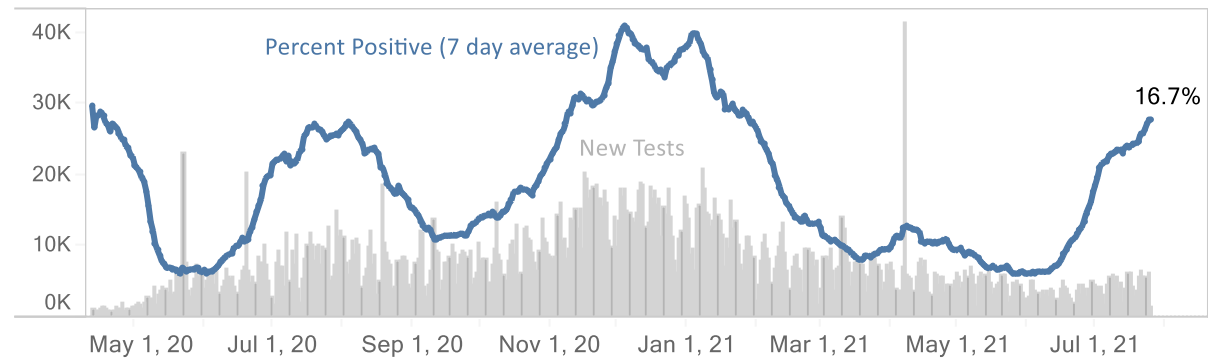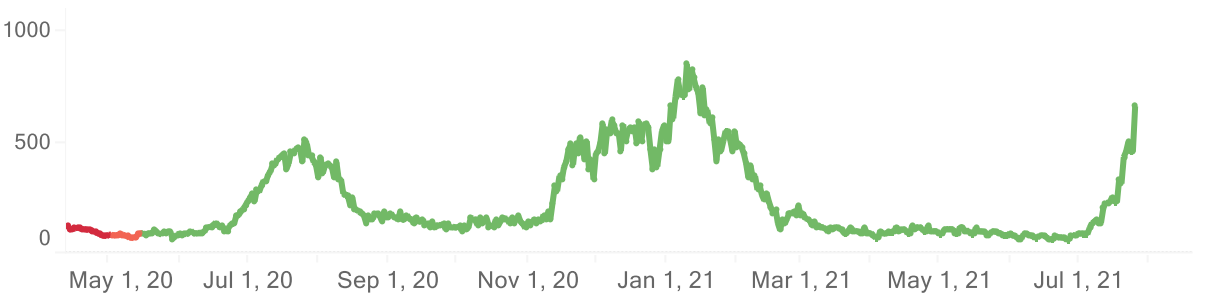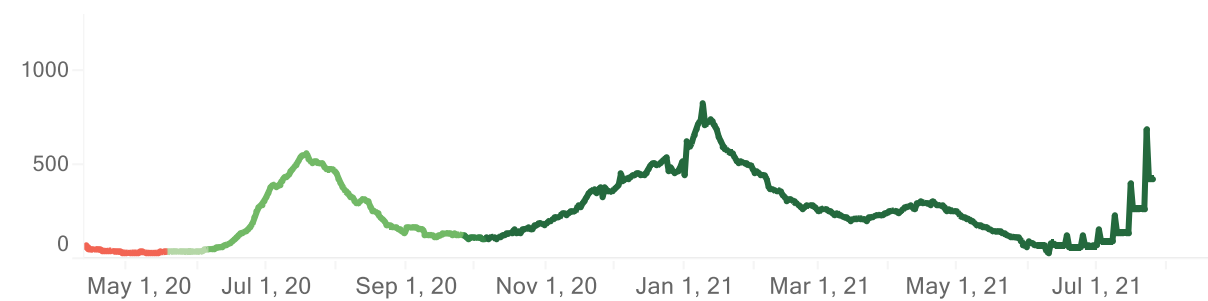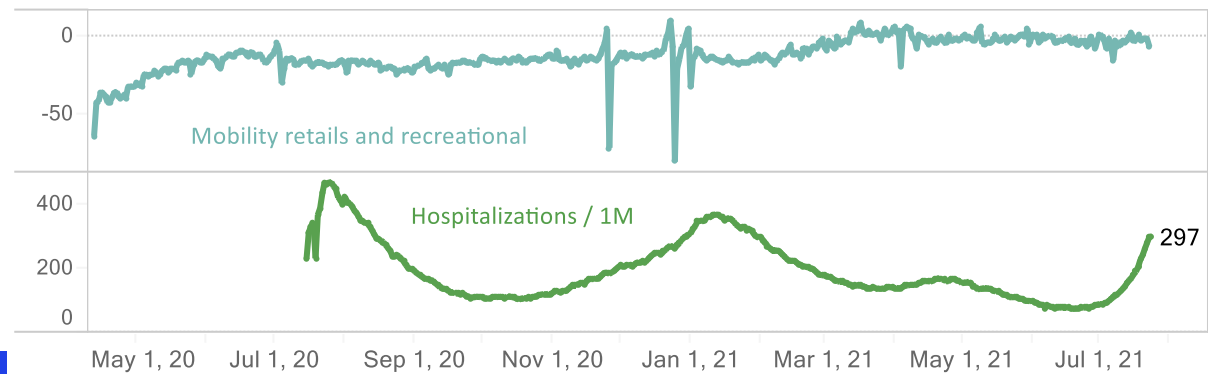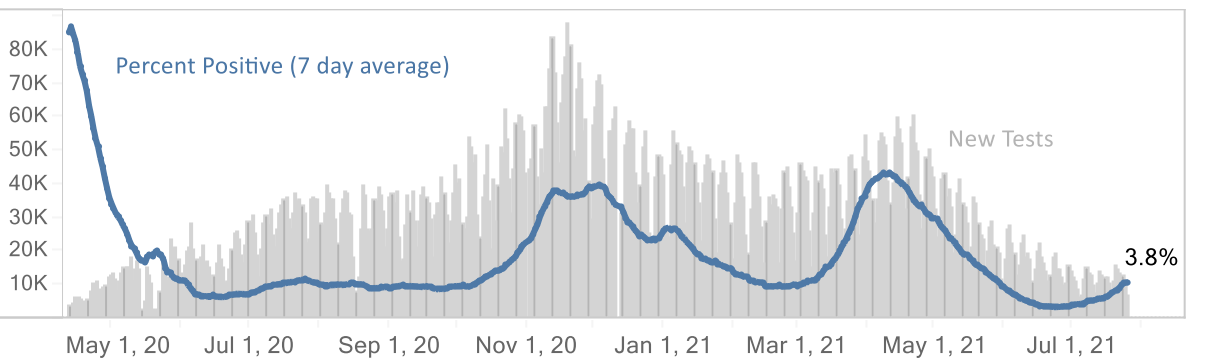
Michigan Confirmed New Cases / 1M (7 days average)
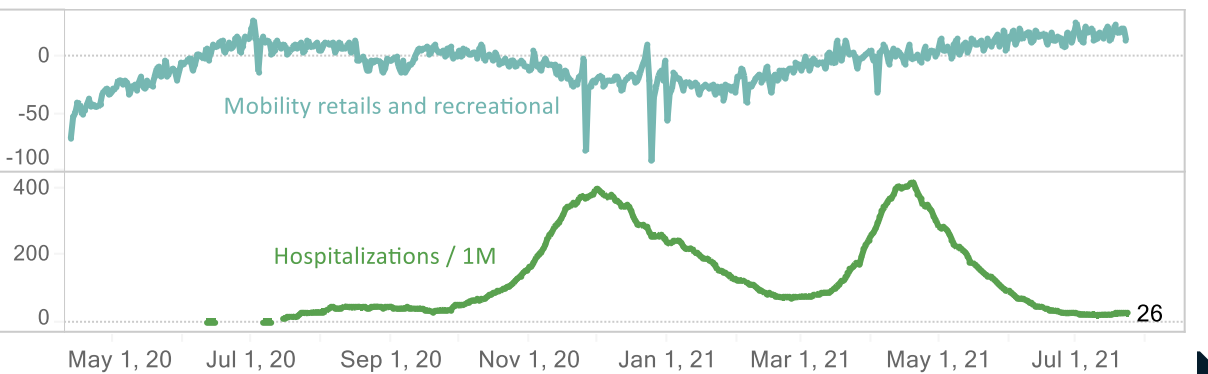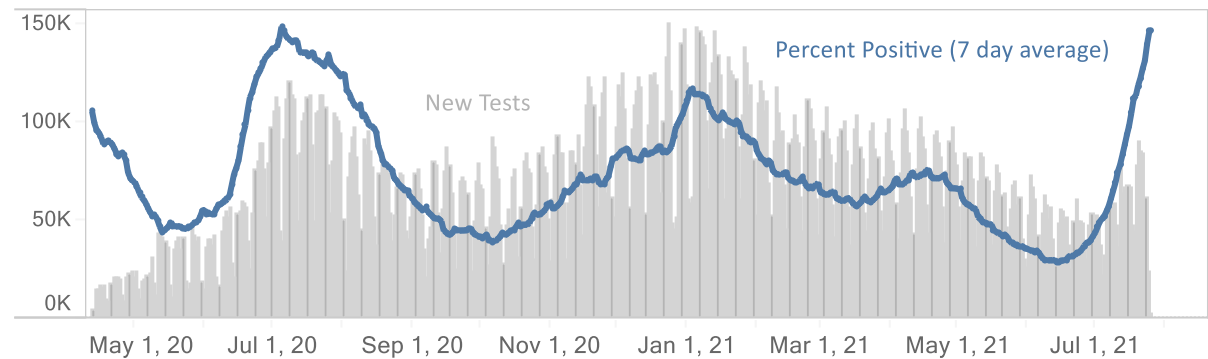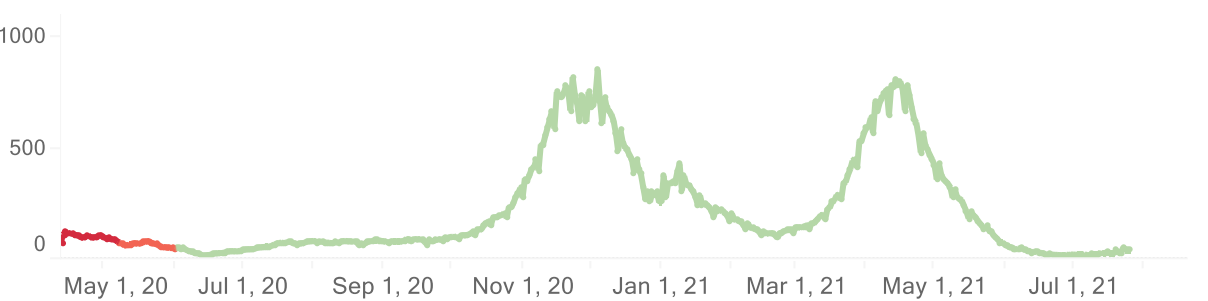
Key Messages: COVID-19 Spread

Statewide positivity has increased to 4.1% (last week: 3.1%)

- One week percent change is up 46% (vs. up 51% last week)

- Increasing for four weeks (up 236% since Jun 26 low)

- Positivity is increasing in all MERC regions but with only one region remaining <3%

Case rate (29.5 cases/million) is at an incidence plateau (last week: 21.0 cases/million)

- One week increase of 26% (vs. 9% increase last week)
- Increasing for three weeks (116% increase since Jun 26 low)
- Cases per million are increasing or plateaued in all MERC regions
- Select variants in Michigan: 13,433 confirmed Alpha (B.1.1.7); 82 confirmed Beta (B.1.351); 320 confirmed Gamma (P.1); and 88 confirmed Delta (B.1.617.2)

Michigan is in Moderate Transmission level

- 5 counties met substantial transmission and 1 county met high transmission level and CDC would recommend all individuals, regardless of vaccination status, should mask indoors

- The United States is a high transmission level (119.8 cases/100,000 in last 7 days) with 39 states in substantial or high transmission

Number of active outbreaks is up 19% from last week

- Twenty-one new outbreaks were identified in the past week
- Most new outbreaks and most new and ongoing outbreaks within Skilled Nursing Facilities and Long-Term Care

Confirmed and probable case indicators
Table Date: 7/26/2021 (7 days from date table was produced: 7/19/2021)

Risk levels
Low   A   B   C   D   E

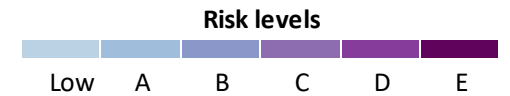|	Overall Risk Level	Absolute Cases (per million)	CDC Case Trend	Average Percent Positivity	Positivity Trend	Tests (per million)	% IP Beds Occupied by COVID-19 Cases	% Occupied IP Beds Trend	Absolute Deaths (per million)	Death Trend
Detroit	B	30.7	elevated incidence plateau	3.6	Increase - 2wk	1298.8	1.6	Increase - 1wk	0.3	<20 wkly deaths
Grand Rapids	B	24.1	elevated incidence plateau	3.9	Increase - 3wk	1161.8	1.4	Increase - 1wk	0.5	<20 wkly deaths
Kalamazoo	C	37.2	elevated incidence growth	5.5	Increase - 3wk	1099.1	2.2	Increase - 1wk	0.4	<20 wkly deaths
Saginaw	B	31.7	elevated incidence plateau	4.4	Increase - 3wk	945.2	0.8	Decrease - 1wk	0.2	<20 wkly deaths
Lansing	B	23.4	elevated incidence plateau	3.4	Increase - 4wk	1096.0	1.8	Increase - 1wk	0.0	<20 wkly deaths
Traverse City	B	29.1	elevated incidence plateau	3.2	Increase - 1wk	1096.3	0.9	Decrease - 1wk	0.3	<20 wkly deaths
Jackson	B	30.2	elevated incidence growth	5.5	Increase - 3wk	1065.7	2.3	Increase - 1wk	0.0	<20 wkly deaths
Upper Peninsula	B	19.3	elevated incidence plateau	2.9	Increase - 1wk	908.5	1.0	Increase - 1wk	1.4	<20 wkly deaths
Michigan	B	29.5	elevated incidence plateau	4.1	Increase - 4wk	1232.6	1.6	Increase - 2wk	0.3	Plateau – 2wk

Cases   Low: <7   A: 7-20   B: 20-40   C: 40-70   D: 70-150   E: >=150
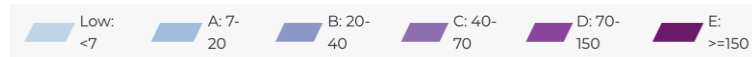
Positivity   Low: <3%   A: 3-7%   B: 7-10%   C: 10-15%   D: 15-20%   E: >=20%
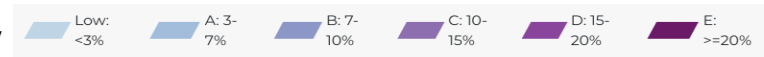
National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

PUBLIC HEALTH

Percent Positivity and Case Rate Trends

MI Statewide Daily Positivity Test Rate
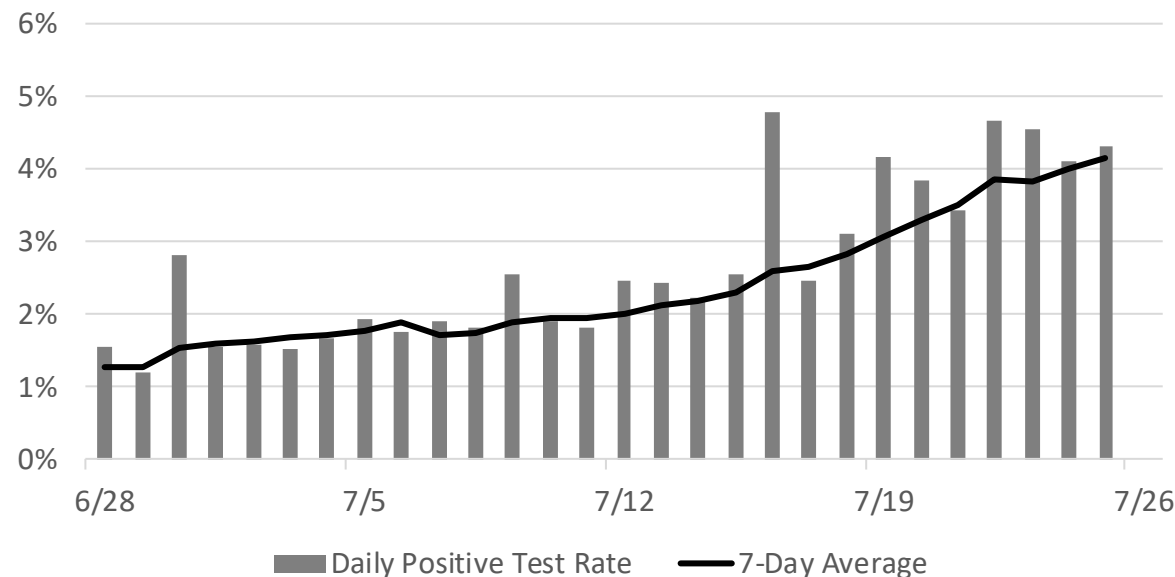
MI Statewide Daily Case Rate (per million)

Daily Positive Test Rate — 7-Day Average

Daily cases per million population — 7-Day Average
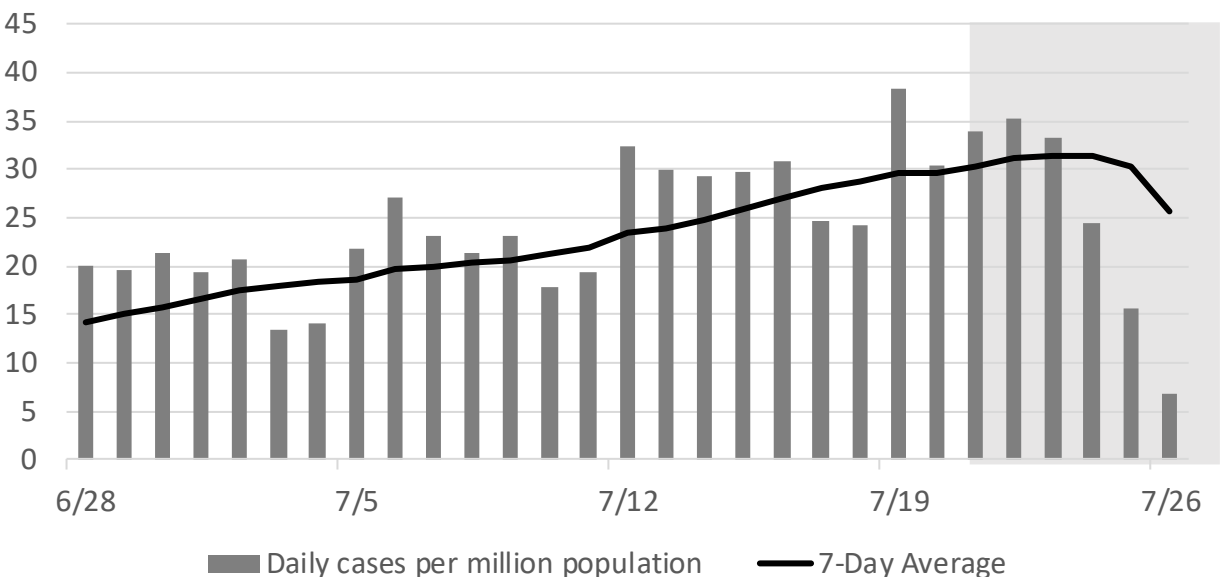
- Positivity has been gradually increasing for the previous four weeks
- Case rates have been gradually increasing for the past three weeks and backfill is expected in show future increases

*Source: MDSS and MiStartMap.info, cases displayed by onset date

National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up
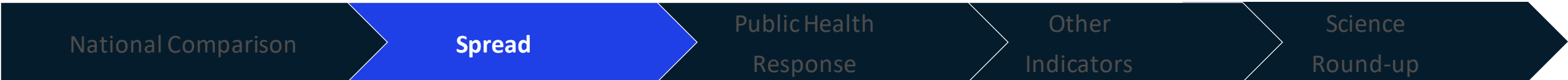
Michigan lag adjusted new COVID cases by onset date

New confirmed cases by onset actual and adjusted as of July 27, 2021 (-2 days)
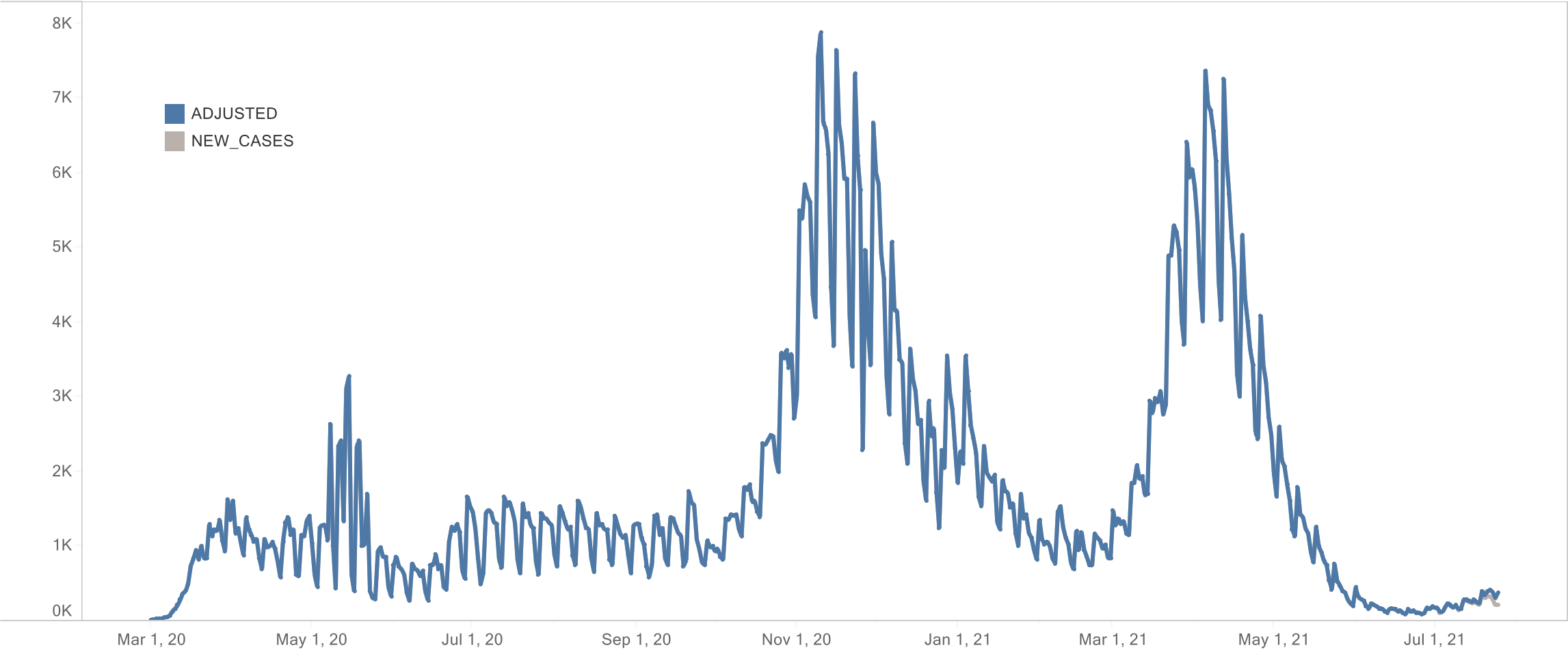
Overview of metrics for individuals <12 years

	Region	Population (<12 yrs)	Population (<18 yrs)	Cumulative Case Count (<12 yrs)	7-day Average Daily Case Count (<12 yrs)	7-day Average Daily Case Rate per Million (<12 yrs)	7-day Average Daily Pediatric Hospitalization Count (<18 yrs)	7-day Average Daily Pediatric Hospitalization Rate per Million (<18 yrs)	7-day Average Daily Death Count (<12 yrs)
1	Detroit	735529	1134247	28949	14.3	19.4	18.0	15.9	0
2	Grand Rapids	230120	350652	9898	5.0	21.7	1.6	4.6	0
3	Kalamazoo	140422	214801	5366	4.0	28.5	3.7	17.2	0
4	Saginaw	78759	122834	3275	1.3	16.5	0.0	0.0	0
5	Lansing	78140	119915	3183	2.6	33.3	2.3	19.2	0
6	Traverse City	53099	83462	1561	1.1	20.7	0.0	0.0	0
7	Jackson	41274	64091	1500	0.1	2.4	0.9	14.0	0
8	Upper Peninsula	34645	53875	1414	0.4	11.5	0.0	0.0	0
99	Michigan	1391988	2143877	55189	29.0	20.8	26.4	12.3	0

Note: Data as of 7/27; case data 7/20, hospitalization data 7/27. Hospitalization data is for pediatric patients (<18)

Comparing CDC community transmission thresholds to MI levels

Case Rate*†

MI*	Low	A	B	C	D	E
	<7	7-19	20-39	40-69	70-149	≥150

*Michigan uses new cases / million / day

CDC†	Low	Moderate Transmission		Substantial Transmission	High
	<10 (14.3/mi)	10-49 (14.3 -71.4 cases/million)		50-99 (71.4 -142.9 cases/million)	≥100 (≥142.9/million)
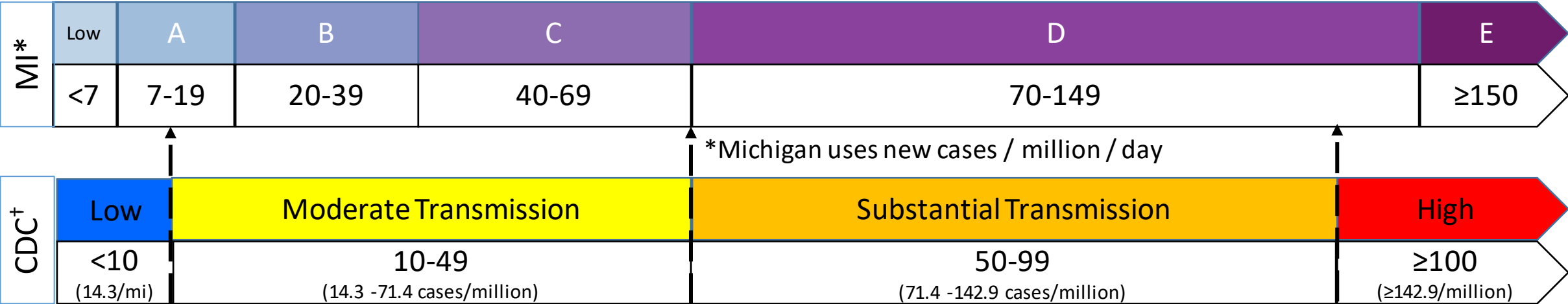
† CDC uses cases / 100,000 / week (conversion to MI metrics in paratheses)

Percent Positivity

MI	Low	A	B	C	D	E
	<3%	3-7%	7-10%	10-15%	15-20%	≥20%

CDC	Low	Moderate	Substantial	High
	<5%	5%-7.9%	8%-9.9%	10%

National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up
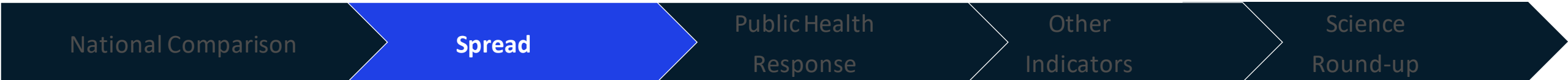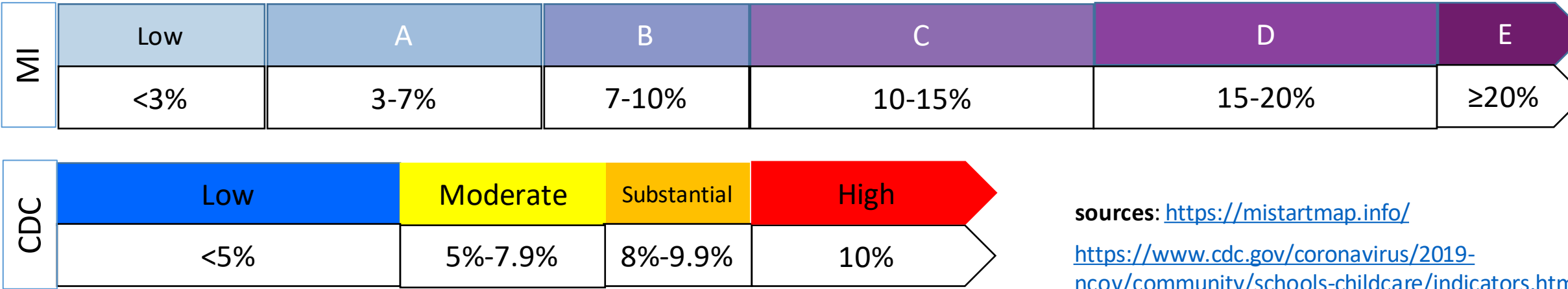
CDC Transmission Levels, U.S. state (data through 7/26/2020)

- Michigan is now at moderate transmission level
  - 29.5 Cases/1,000,000 population
  - 4.1% positivity
- The number of jurisdictions at low is the same from 7 days ago (3 blue colored jurisdictions)
- 13 jurisdictions have substantial transmission (orange states); down 1 from 7 days ago
- 18 jurisdictions have high transmission (red states); up 5 from 7 days ago

Last Week

Level of Community Transmission of COVID-19, by State/Territory

Territories

| AS | FSM | GU | MP | PW | RMI | VI |
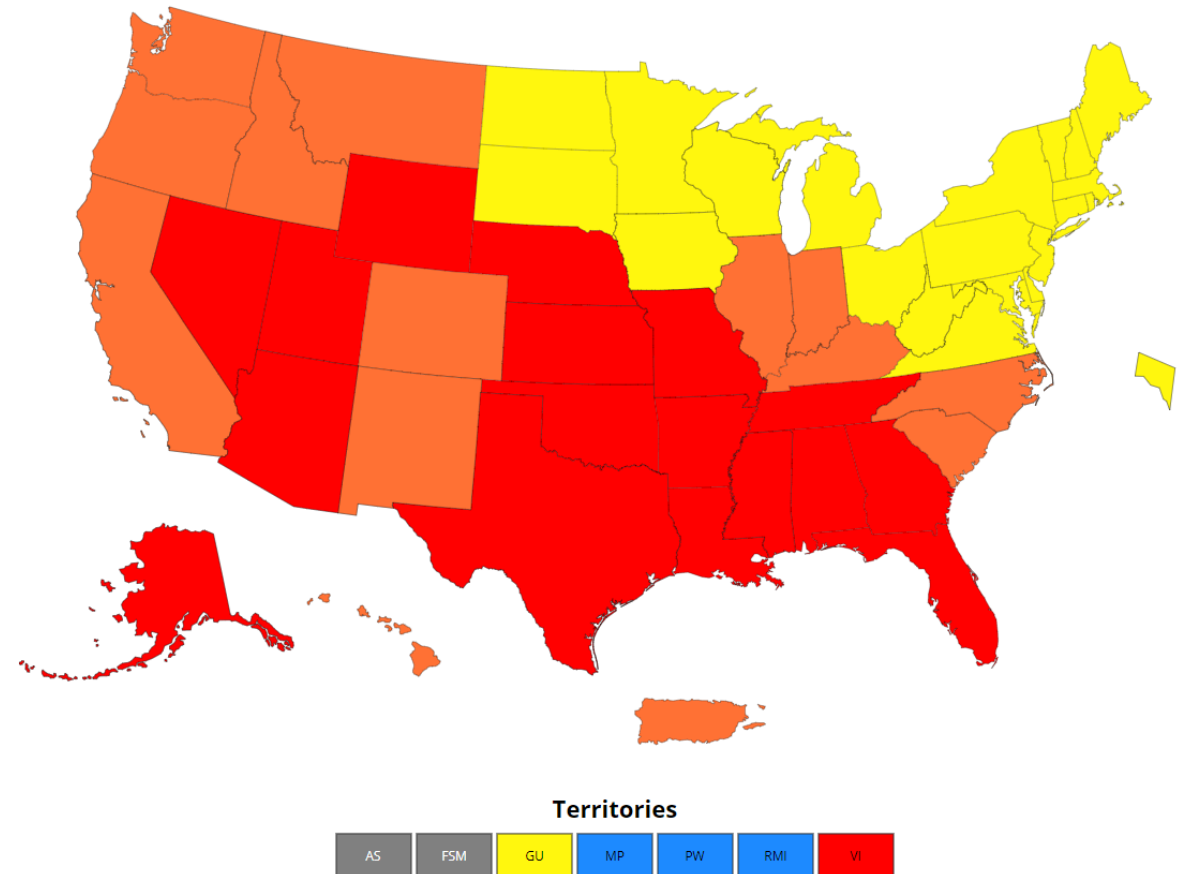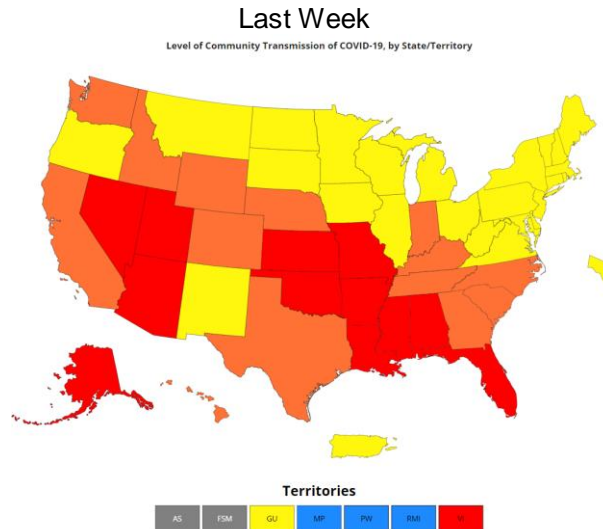
*Source: https://covid.cdc.gov/covid-data-tracker/#cases_community

Territories

| AS | FSM | GU | MP | PW | RMI | VI |

Adjusted* CDC Transmission Levels, 7/20-7/26

This Week, 7/20-7/26
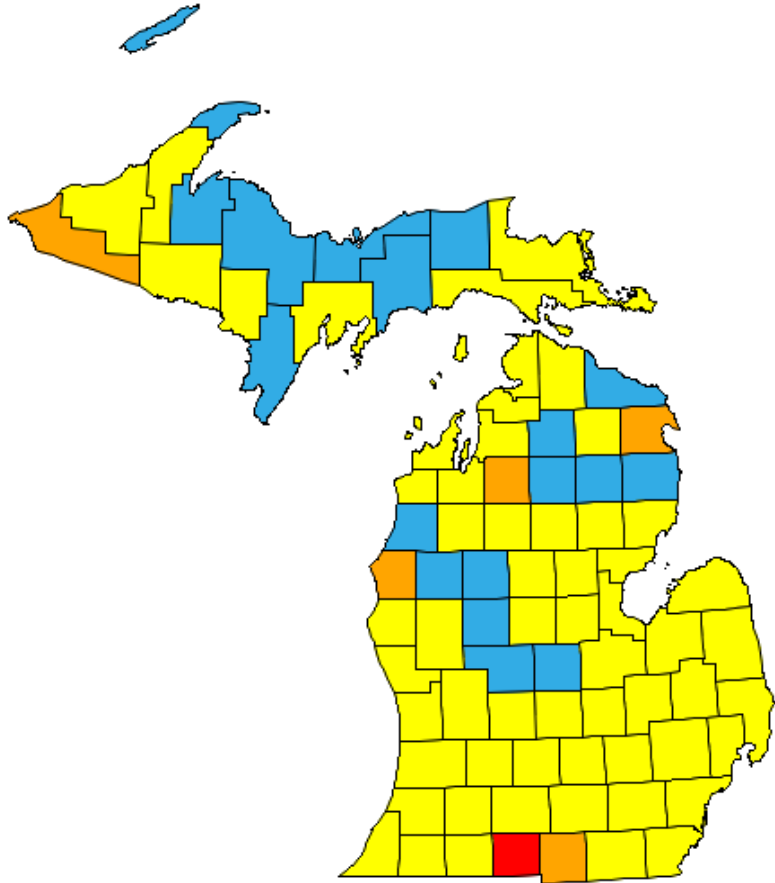
Last week, 7/13-7/19
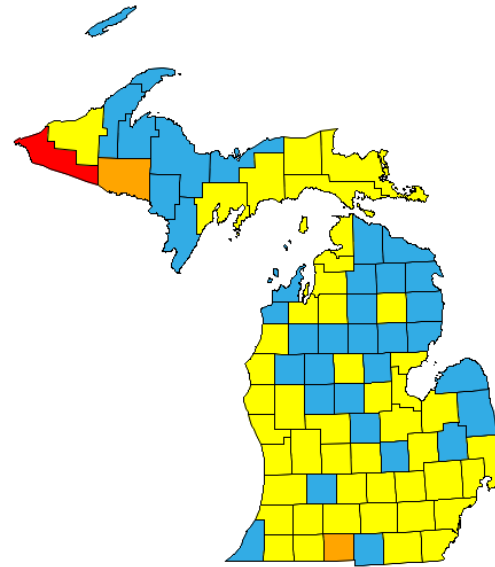
Transmission Levels	# of counties	This week	Last week
Low	18		
	34		
Moderate	59		
	46		
Substantial	5		
	2		
High	1		
	1		

Updates since last week:

- 18 of 83 counties met low transmission level this week, a 16 county decrease

- 59 of 83 counties met moderate transmission classification, a 13 county increase from last week

- 5 of 83 counties met substantial transmission classification, a 3 county increase from last week

- 1 of 83 counties met high transmission classification, a 1 county increase from last week

*Source: SEOC Testing Results – Excluding MDOC; MDSS – Cases by onset date incorporating 7-day reporting lag; CDC Levels of Community Transmission are described at https://covid.cdc.gov/covid-data-tracker/#county-view

Adjusted* CDC Transmission Levels, 7/20-7/26

Positivity

Case Rates

*Source: SEOC Testing Results – Excluding MDOC; MDSS – Cases by onset date incorporating 7-day reporting lag; CDC Levels of Community Transmission are described at https://covid.cdc.gov/covid-data-tracker/#county-view

Age group: average new daily cases

Daily new confirmed and probable cases per million by age group (7-day rolling average)
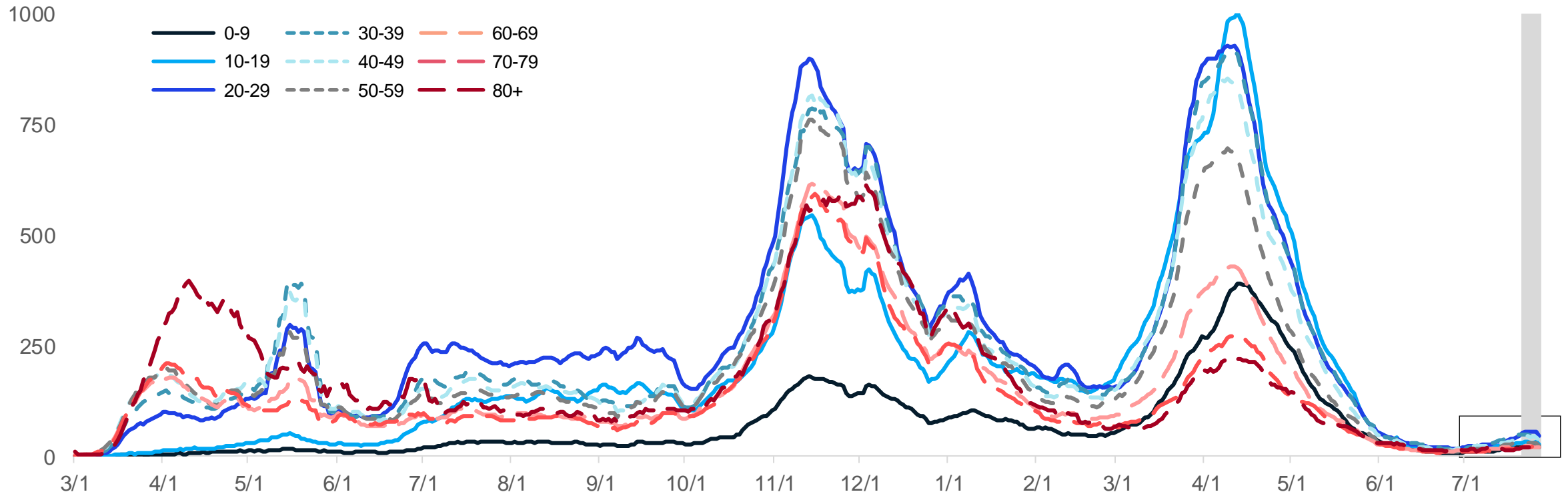
- Case rate trends for most age groups by decade are plateaued or increasing

- Case rates for all age groups are between 18 and 48 cases per million (through 7/20)

National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up

Age group: average new daily cases, last 30 days

Daily new confirmed and probable cases per million by age group (7-day rolling average)
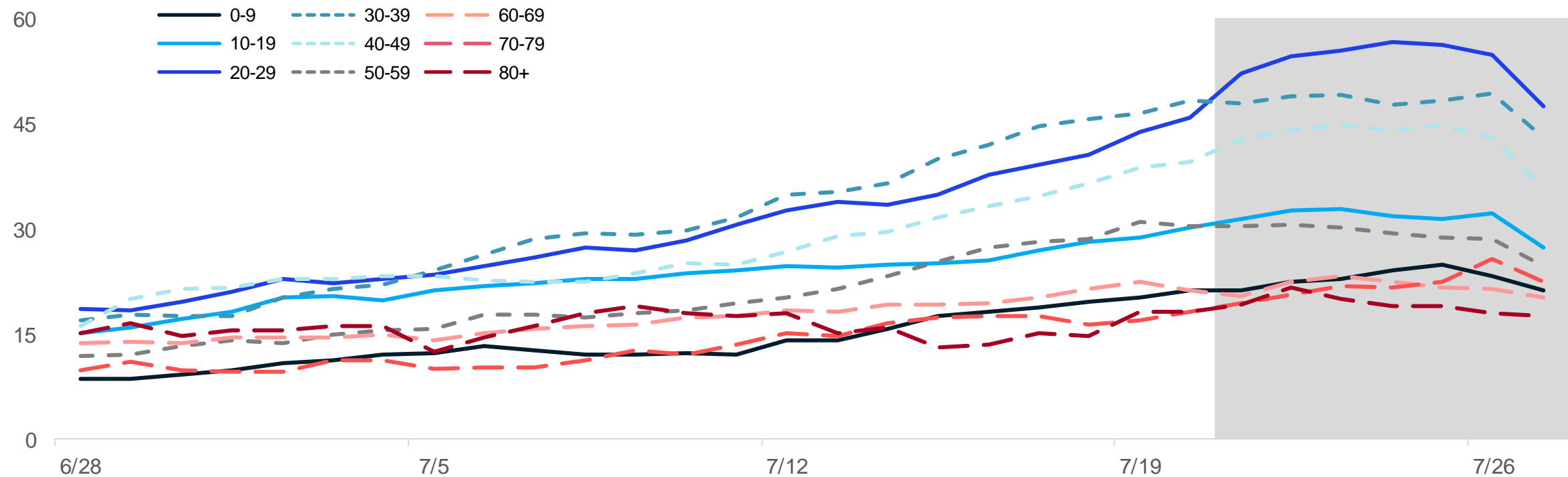
- Case rate trends for most age groups by decade are plateaued or increasing
- Case rates for all age groups are between 18 and 48 cases per million (through 7/20)

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	24.4	21.2	50% (+8)
10-19	37.9	30.2	23% (+7)
20-29	63.4	46.0	36% (+17)
30-39	58.6	48.3	37% (+16)
40-49	46.6	39.5	36% (+12)
50-59	41.1	30.5	42% (+12)
60-69	27.0	21.2	16% (+1-5)
70-79	14.0	18.3	24% (+1-5)
80+	7.6	18.3	20% (+1-5)
Total¶	321.7	29.5	26% (+77.8)

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

- Average daily number of cases (63) is highest for those aged 20-29
- Avg. daily case rate (48.3 cases/mil) is currently highest for 30-39
- Case rates for all age groups are between 18 and 48 cases per million
- Case rate trends are increasing
- Case rates bottomed out on June 26, 2021

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

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

Legend:
- American Indian/Alaska Native
- Asian/Pacific Islander
- Black/
- White

Race	Case Rate
American Indian/ Alaskan Native	20.2
Asian/Pacific Islander	18.1
Black/African American	27.4
White	25.9
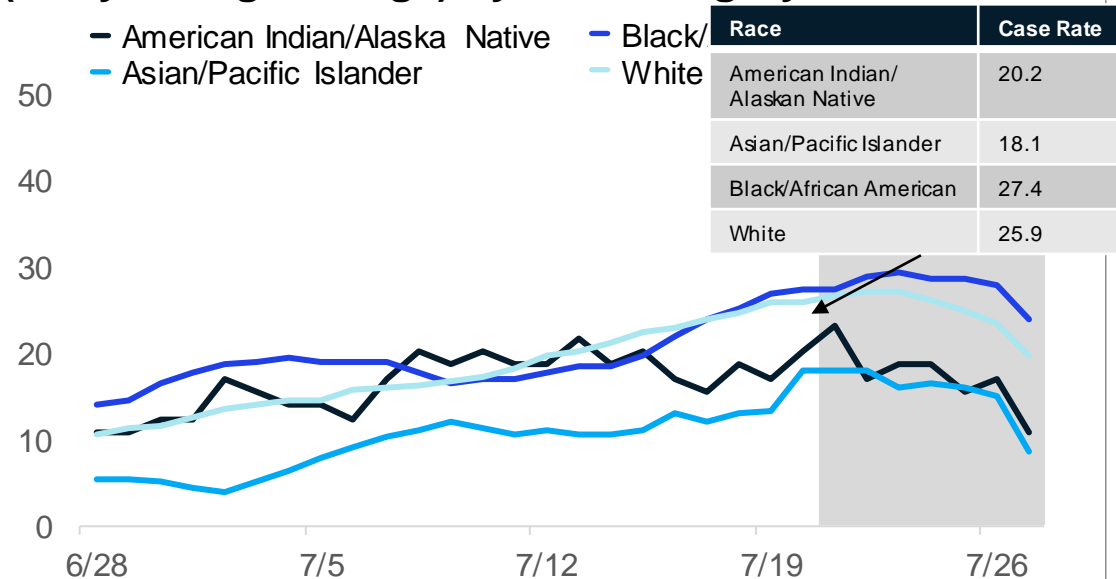
Daily new confirmed and probable cases per million (7 day rolling average) by ethnicity category

Legend:
- Hispanic or Latino
- Not Hispanic or Latino

Race	Case Rate
Hispanic/Latino	36.9
Non-Hispanic	27.1
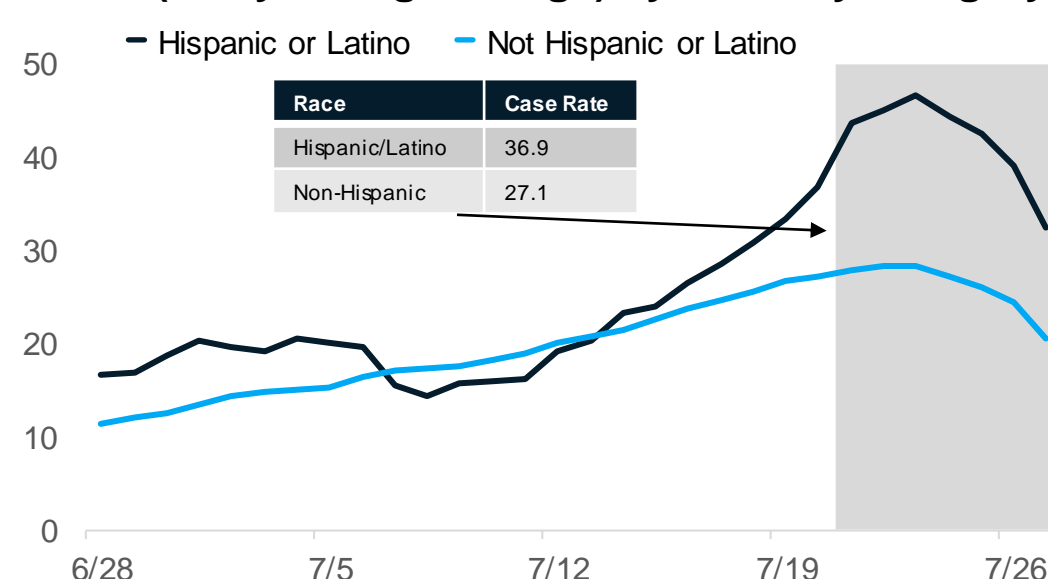
Updates since last week:

- Cases per million are increasing for all races and ethnicities
- **Hispanics, Blacks/African Americans, and Whites have the highest case rates**
- In the past 30 days, 16% (↔) of race data and 19% (↓1%) ethnicity data was either missing or reported as unknown

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

National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up

Cumulative COVID-19 Case Rates: Midwest Comparison

Cumulative cases of Covid-19, reported to CDC, in IL, IN, MI, MN, OH, and WI
Cumulative cases (per 100K), by number of days since .3 total cases (per 100K) first recorded.

Legend: IL, IN, MI, MN, OH, WI

Michigan ←

(Y-axis: Cases, 0 to 12k; X-axis: Number of days since .3 total cases (per 100K) first recorded, 0 to 500)
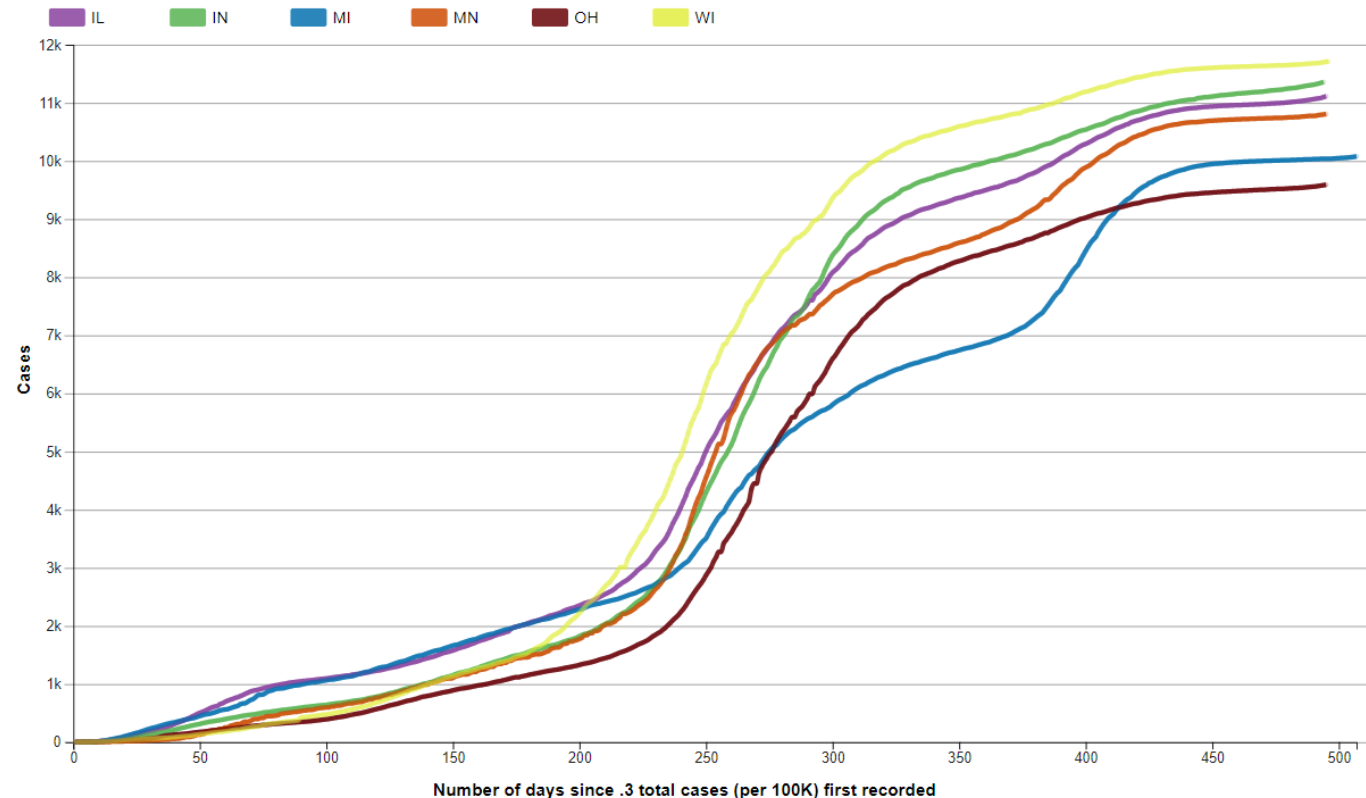
- Cumulative incidence per 100,000 cases in Michigan has been lower than other states in the Midwest following spring 2020 surge
- Michigan's mitigation policies helped control the spread of SARS-CoV-2 relative to other states in the Midwest, particular during surge in November and December
- The current trajectory in Michigan continues to be in the range of cumulative case rates of our Midwest neighbors

Source: CDC – COVID Data Tracker

National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

Cumulative COVID-19 Case Rates: States with high Delta Comparison

New cases of Covid-19, reported to CDC, in AR, FL, MI, MO, NV, and LA

Seven-day moving average of new cases (per 100K), by number of days since .01 average daily cases (per 100K) first recorded.
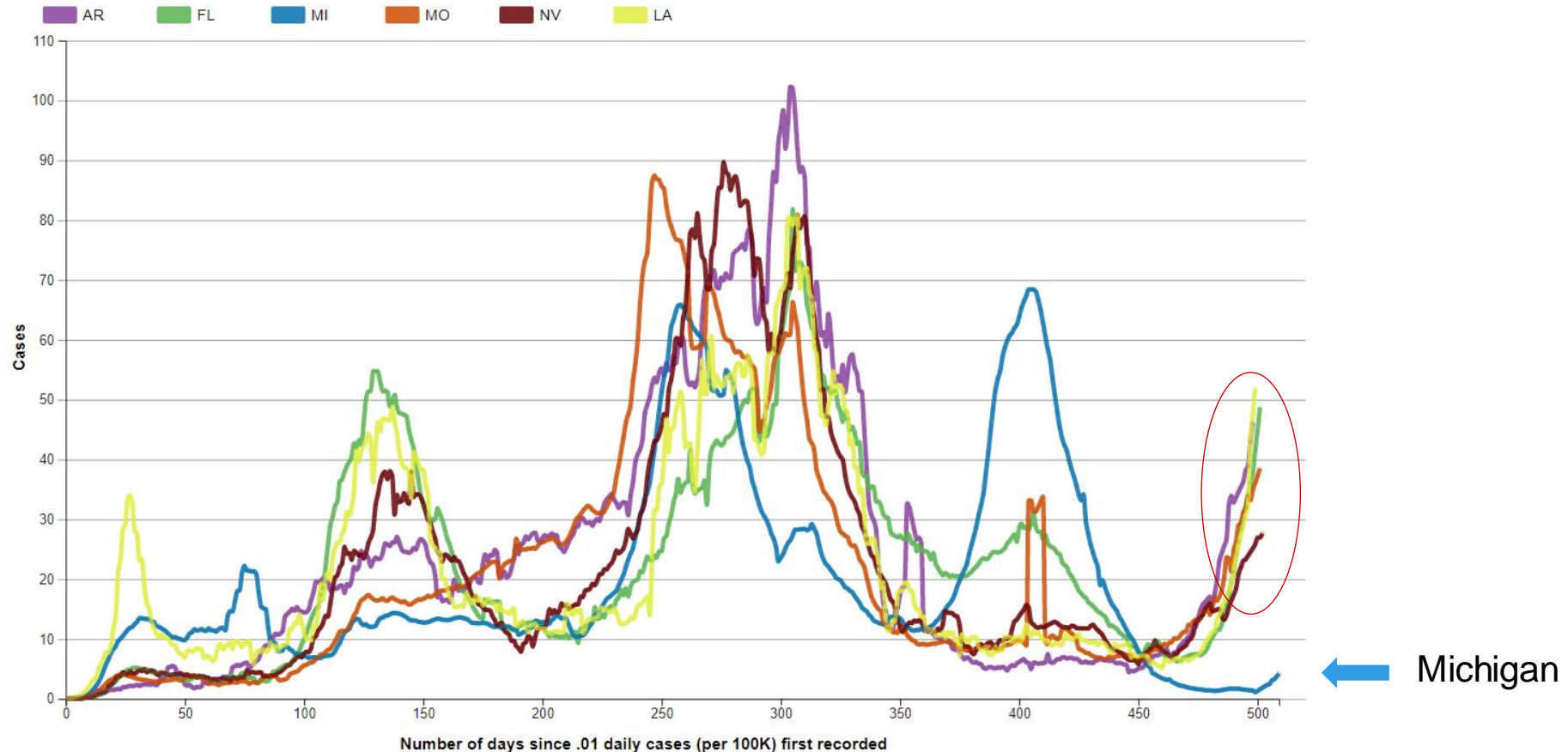
- Average daily incidence per 100,000 cases in Michigan is currently lower than other states experiencing a surge in delta cases

Variants, transmissibility, severity, and vaccine effectiveness

Strain	New WHO nomenclature	Transmissibility	Immune Invasiveness	Increased Severity	Vaccine effective at disease reduction?
Wild Type		-	-	-	✓
B.1.1.7	Alpha	~50% increased transmission	-	Increased hospitalizations and death	✓
B.1.351	Beta	~50% increased transmission	Reduced susceptibility to antibody treatment	-	✓
P.1	Gamma	-	Reduced susceptibility to antibody treatment	-	✓
B.1.427/B.1.429	Epsilon	~20% increased transmissibility	Modest decrease in susceptibility to monoclonal antibody treatment	-	✓
B.1.617.2	Delta	> 50% increased transmission	Reduced susceptibility to antibody treatment	Increased hospitalizations and death	✓

Source: CDC https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-info.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-updates%2Fvariant-surveillance%2Fvariant-info.html World Health Organization, accessed June 8, 2021. https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/
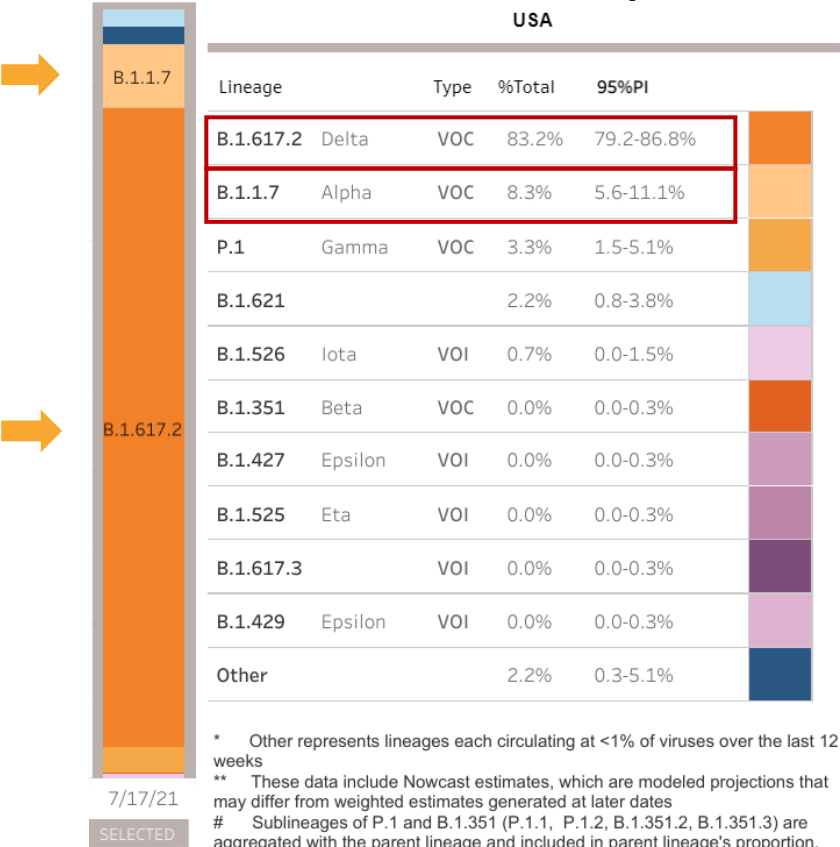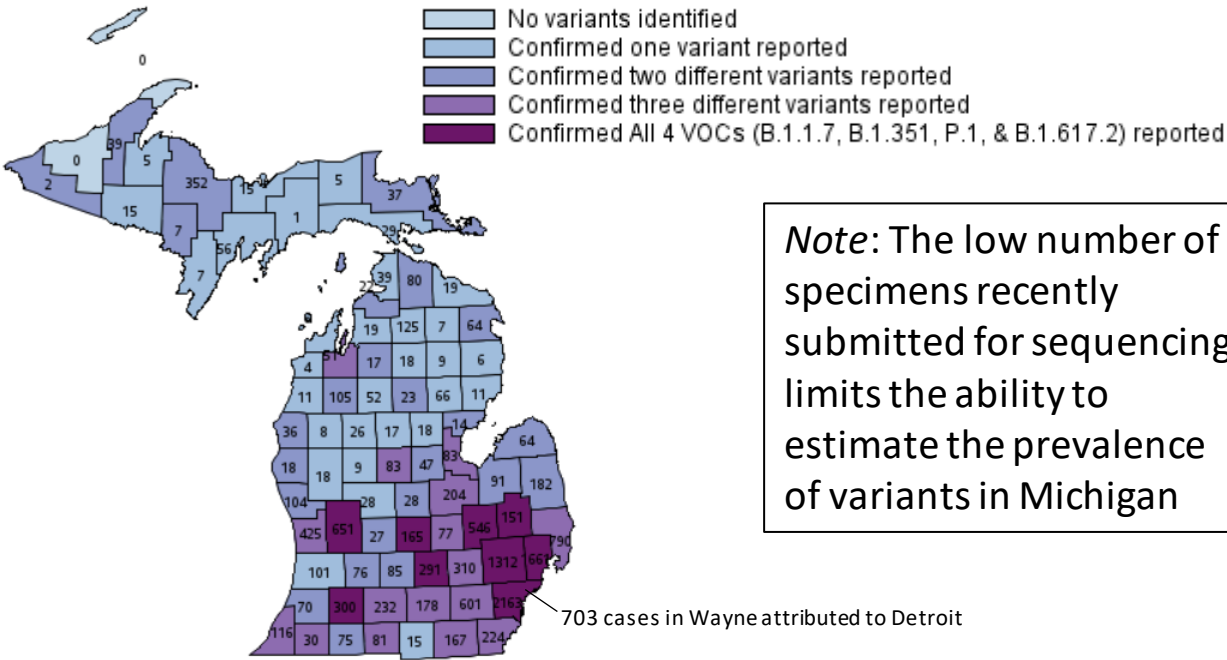
Identified COVID-19 Cases Caused by All Variants of Concern (VOC) in US and Michigan

SARS-CoV-2 Variants Circulating in the United States, Jul 4 – Jul 17 (NOWCAST)

USA

Lineage	Type	%Total	95%PI
B.1.617.2	Delta	VOC	83.2%	79.2-86.8%
B.1.1.7	Alpha	VOC	8.3%	5.6-11.1%
P.1	Gamma	VOC	3.3%	1.5-5.1%
B.1.621			2.2%	0.8-3.8%
B.1.526	Iota	VOI	0.7%	0.0-1.5%
B.1.351	Beta	VOC	0.0%	0.0-0.3%
B.1.427	Epsilon	VOI	0.0%	0.0-0.3%
B.1.525	Eta	VOI	0.0%	0.0-0.3%
B.1.617.3		VOI	0.0%	0.0-0.3%
B.1.429	Epsilon	VOI	0.0%	0.0-0.3%
Other			2.2%	0.3-5.1%

* Other represents lineages each circulating at <1% of viruses over the last 12 weeks
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
\# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion.

7/17/21 SELECTED

Data last updated July 27, 2021
Source: https://covid.cdc.gov/covid-data-tracker/#variant-proportions and MDSS

Variants of Concern in Michigan, Jul 27

Legend:
- No variants identified
- Confirmed one variant reported
- Confirmed two different variants reported
- Confirmed three different variants reported
- Confirmed All 4 VOCs (B.1.1.7, B.1.351, P.1, & B.1.617.2) reported

Note: The low number of specimens recently submitted for sequencing limits the ability to estimate the prevalence of variants in Michigan

703 cases in Wayne attributed to Detroit

Variant	MI Reported Cases¶	# of Counties	CDC est. prevalence for MI
B.1.1.7 (alpha)	13,433*	81	NA
B.1.351 (beta)	82	23	NA
P.1 (gamma)	320	35	NA
B.1.617.2 (delta)	88	26 (↑5)	NA

* 534 cases within MDOC; ¶ 41 cases with county not yet determined

Identified COVID-19 Delta Variants by County

Last week (Jul 20, 2021)
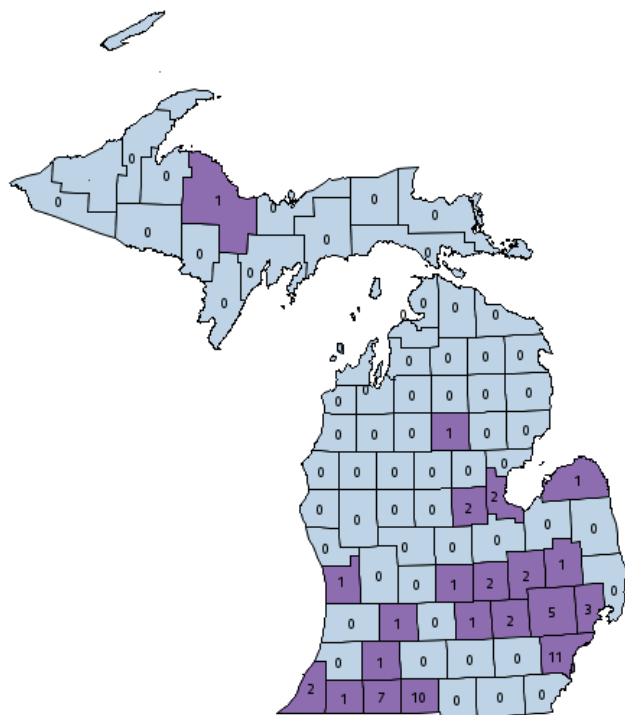
This week (Jul 27, 2021)

Note: The low number of specimens recently submitted for sequencing limits the ability to estimate the prevalence of variants in Michigan

Delta (B.1.617.2) Variant by County
Jul 20

B.1.617.2 — Delta Variant Not Identified — Confirmed Delta (B.1.617.2) Variant Reported

Note: 2 cases in Wayne County attributed to Detroit City
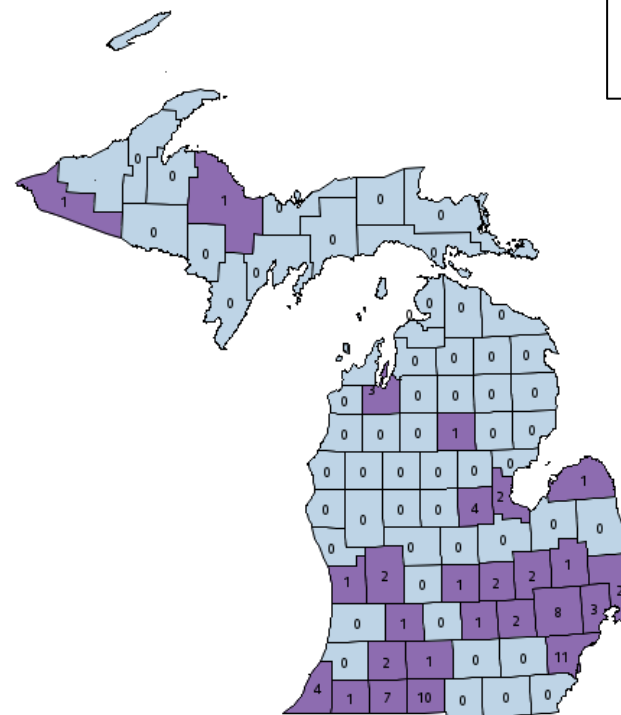

Delta (B.1.617.2) Variant by County
Jul 27

B.1.617.2 — Delta Variant Not Identified — Confirmed Delta (B.1.617.2) Variant Reported

Note: 2 cases in Wayne County attributed to Detroit City

Data last updated July 27, 2021
Source: MDSS

National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

Number of outbreak investigations by site type, week ending Jul 22

Site type **Outbreaks by ongoing/new classification, #** **Visibility[1]** ● Easier to identify outbreak ● Harder to identify outbreak

■ Ongoing ■ New Total

Site type	Ongoing	New	Total	Visibility
SNF/LTC/OTHER ASSISTED LIVING	4	5	9	●
CHILDCARE/YOUTH PROGRAM	5	2	7	●
*SOCIAL GATHERING	2	3	5	●
OFFICE SETTING	2	2	4	●
*RESTAURANTS AND BARS	1	3	4	●
MANUFACTURING, CONSTRUCTION	3	0	3	●
*SHELTERS	1	1	2	●
*RETAIL	2	0	2	●
OTHER	0	1	1	●
HEALTHCARE	0	1	1	●
CORRECTIONS	1	0	1	●
COLLEGE/UNIVERSITY	1	0	1	●
*RELIGIOUS SERVICES	0	1	1	●
*PERSONAL SERVICES	0	1	1	●
*COMMUNITY EXPOSURE - INDOOR	0	1	1	● ●
K-12 SCHOOL	0	0	0	●
AGRICULTURAL/FOOD PROCESSING	0	0	0	●
*COMMUNITY EXPOSURE - OUTDOOR	0	0	0	●
TOTAL	22	21	43	

Total number of active outbreaks is **up 19%** from previous week, with 21 new outbreaks identified (seven more than last week)

SNF/LTC reported the most number of new outbreaks (5), followed by social gatherings and bars/restaurants (3 each), and eight other settings with at leas 1 new outbreak in the last week.

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

National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

Key Messages: COVID-19 and Healthcare Capacity and COVID Severity

Hospitalizations and ICU utilization are plateaued or increasing
- COVID-like illness (CLI) is 0.7% (up from 0.5% last week)
- Hospital admissions are plateaued or increasing for most age groups
- Hospitalizations up 27% since last week (vs. 13% increase week prior)
- Six regions are showing increasing trends in hospitalization trends this week
    - Largest growth is in Regions 1,3 and 7
- Volume of COVID-19 patients in intensive care has increased 34% since last week (vs. 15% increase last week)

Death rate is 0.3 daily deaths per million people
- Death rate has decreased 44% in the past week (vs. plateaued from last week)
- 95% decrease since April 24 peak
- Proportion of deaths among those under 60 years of age is stable from the prior week

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

Percentage of Emergency Department visits with Diagnosed COVID-19 in Michigan, All Ages

0.7%
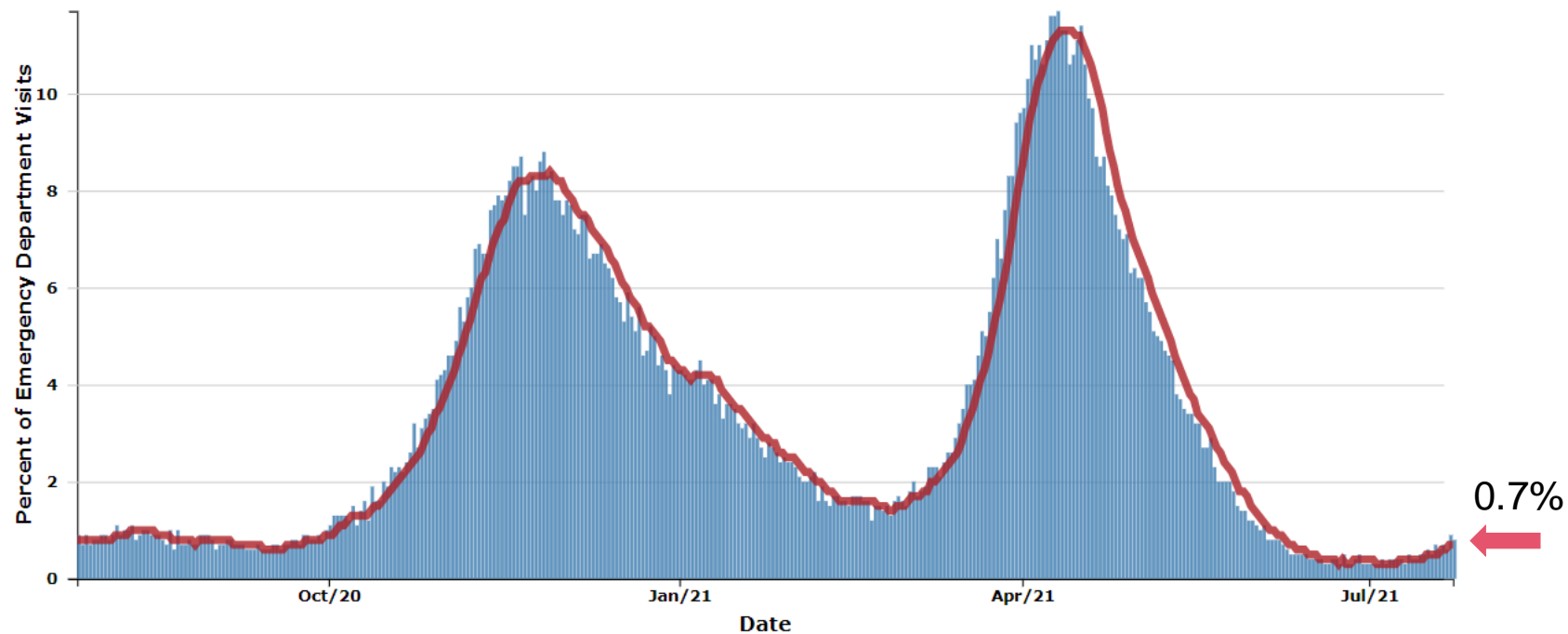
- Trends for ED visits have increased to 0.7% since last week (up from 0.5% week prior)
- Trends vary by age groups with all age groups seeing an increase
- Over the past week, those 40-49 years have seen the highest number of avg. daily ED CLI visits, but those between 25 and 64 are all above the state average
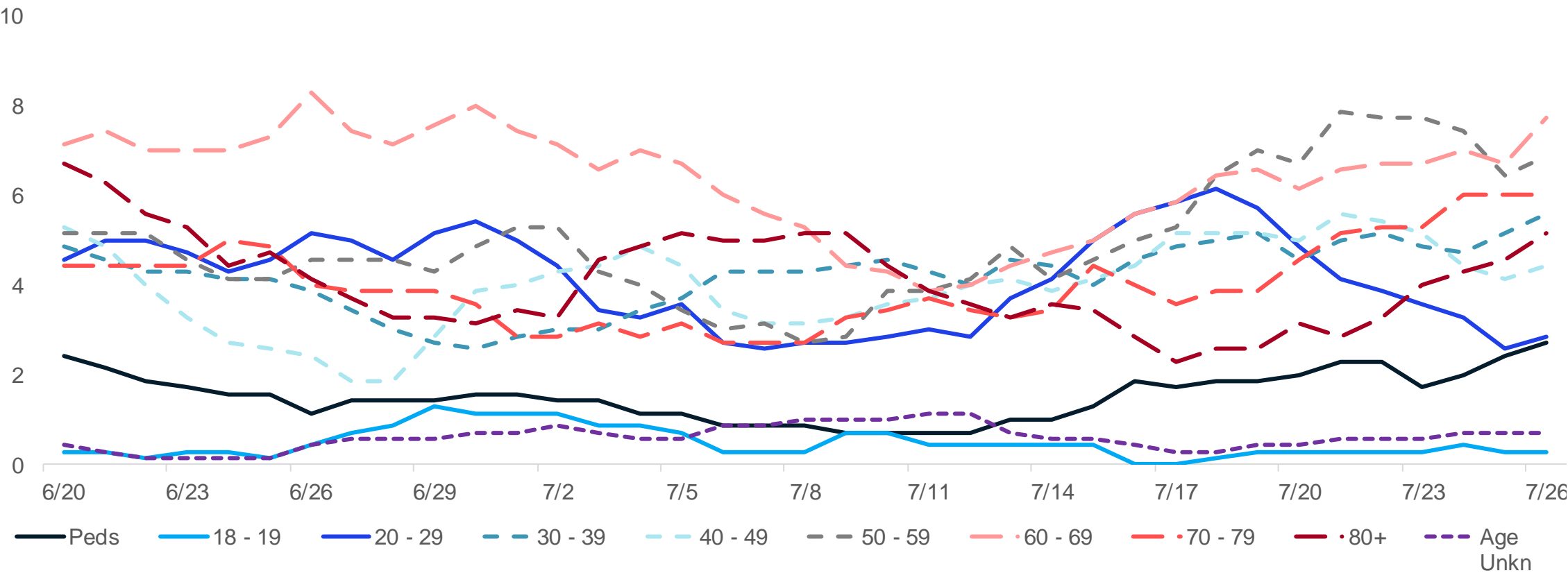
Average Hospital Admissions by Age

Source: CHECC & EM Resource

- Trends for daily average hospital admissions have increased 10% since last week (vs. 36% increase prior week)
- Trends within all age groups are plateaued or are increasing
- Over the past week, those 60-69 years have seen the highest number of avg. daily hospital admissions (8 admissions)
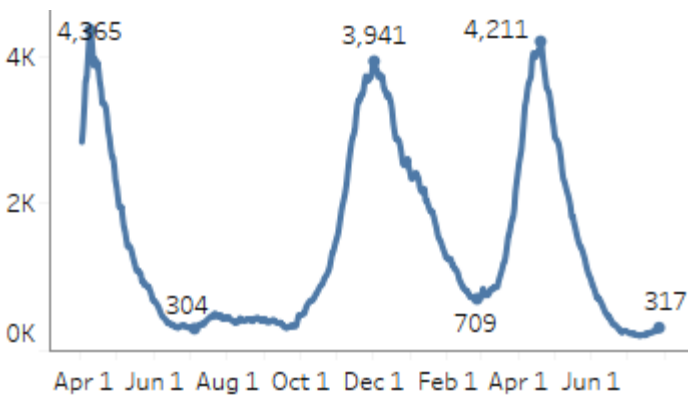
Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 3/1/2021 – 7/27/2021
### Confirmed Positive & Persons Under Investigation (PUI)
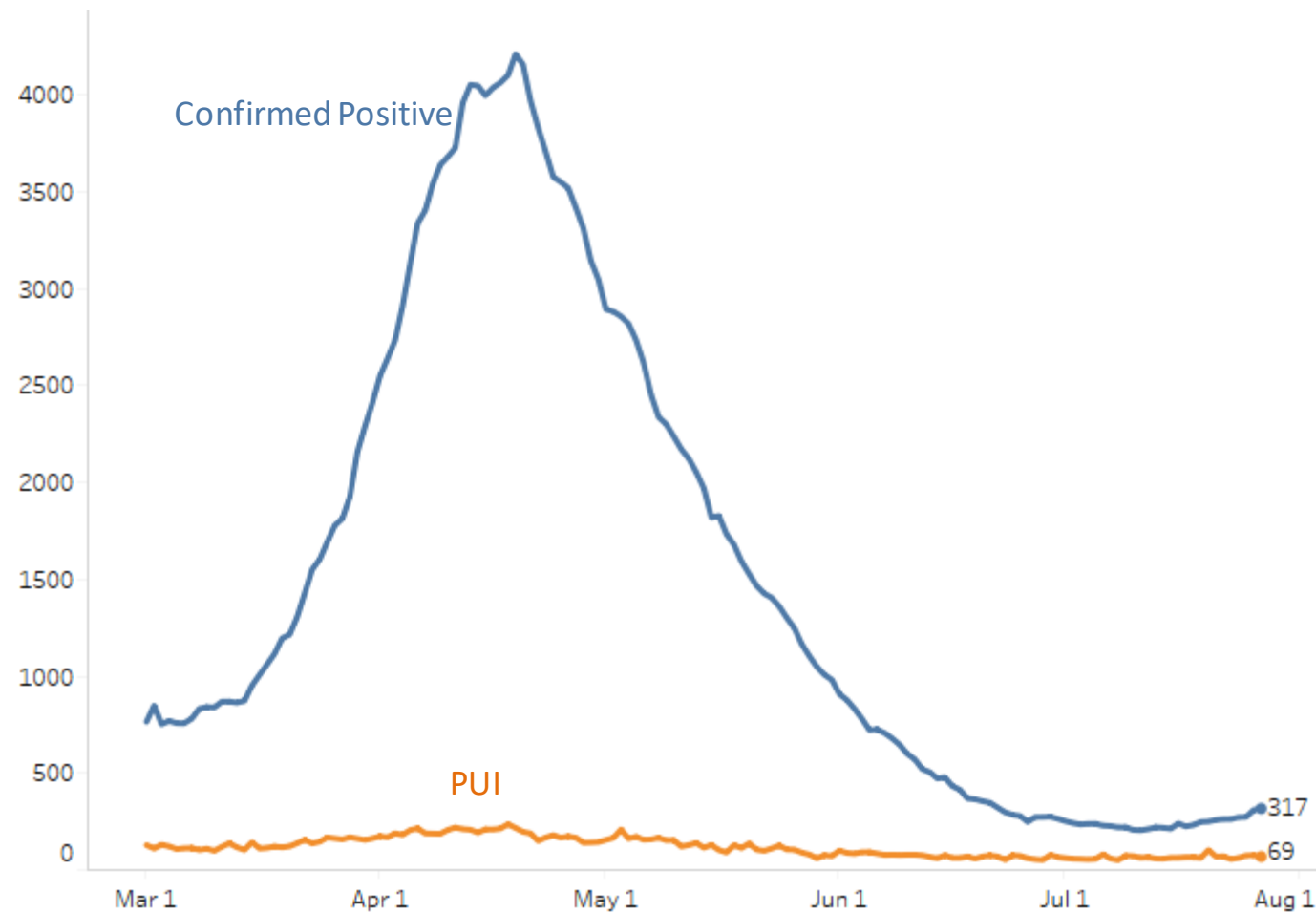
COVID+ census in hospitals has increased 27% from last week (previous week was up 13%).

Hospitalized COVID Positive Long Term Trend (beginning March 2020)

Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 3/1/2021 – 7/27/2021
Confirmed Positive by Region

Region 1
Region 2N
Region 2S
Region 3
Region 5
Region 6
Region 7
Region 8
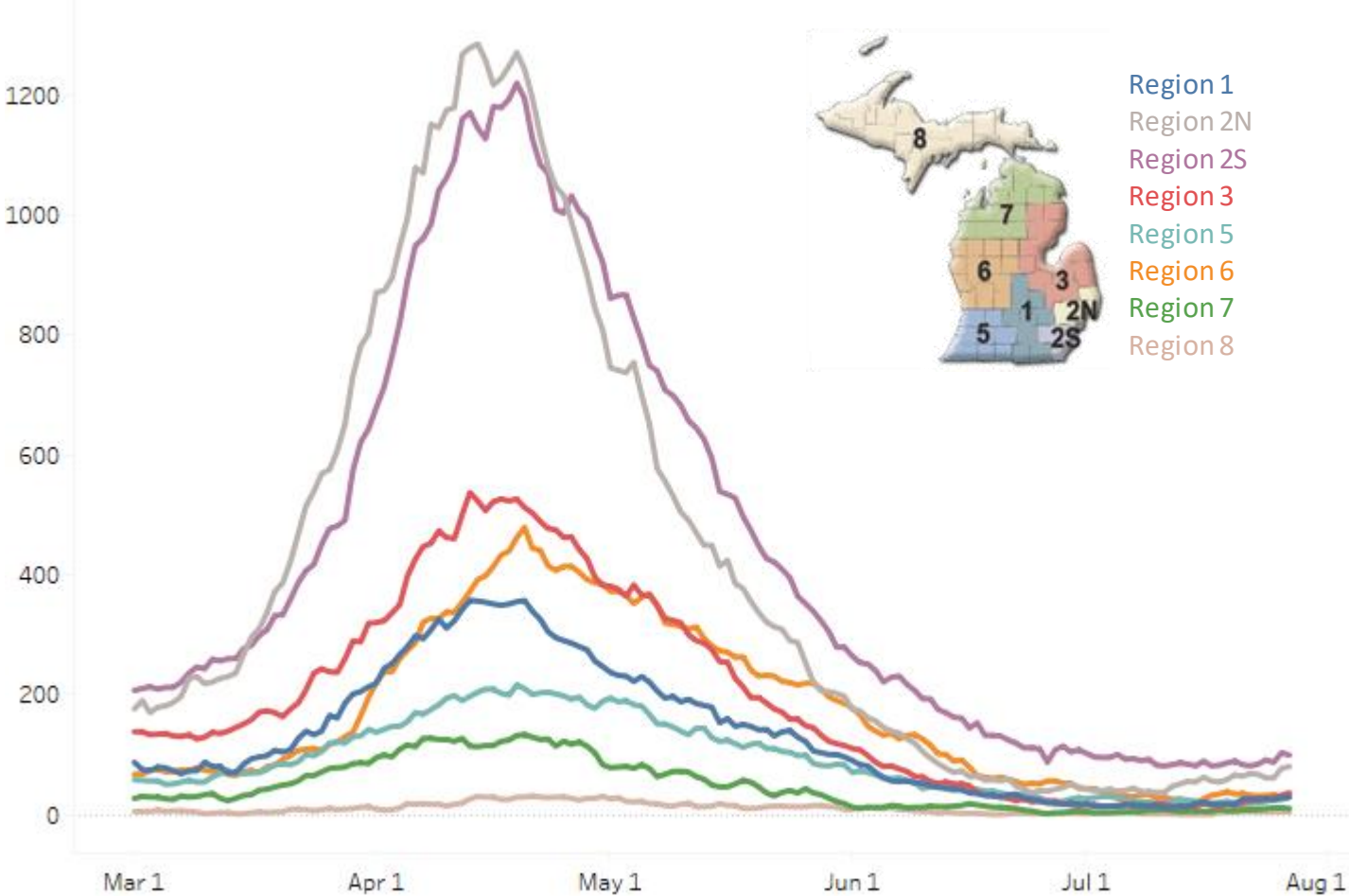
6 of 8 regions are show increasing hospitalization trends this week.

The largest growth is in Regions 1,3 and 7.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	29 (+71%)	27/M
Region 2N	80 (+21%)	36/M
Region 2S	99 (+11%)	44/M
Region 3	36 (+157%)	32/M
Region 5	29 (+45%)	30/M
Region 6	30 (-12%)	20/M
Region 7	10 (+67%)	20/M
Region 8	4 (0%)	13/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 7/27/2021
Confirmed Positive in ICUs

Confirmed Positive in ICU
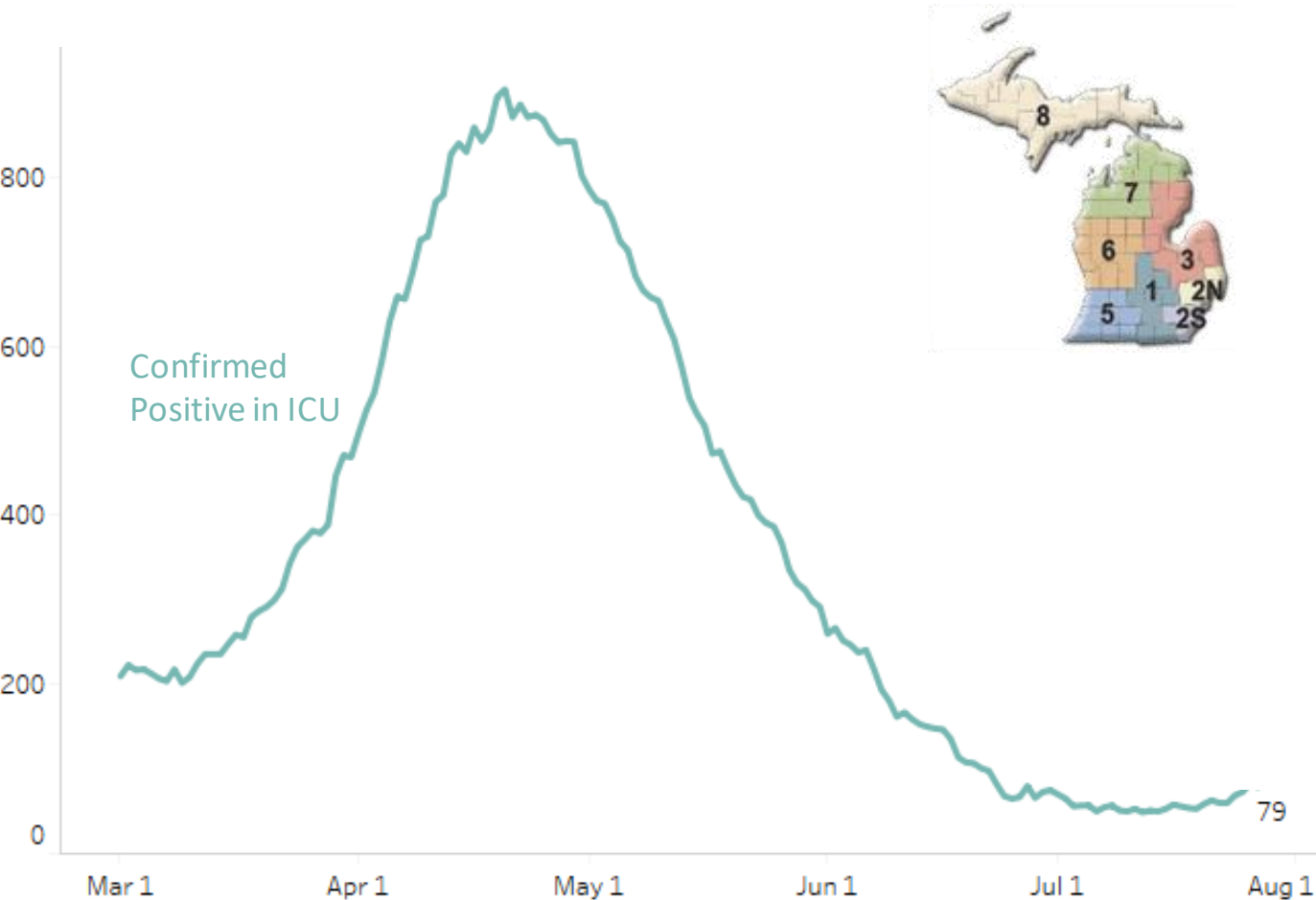
79

Overall, the census of COVID+ patients in ICUs has increased by 34% from last week (previous week was up 15%), to 79 total patients in ICU.

All regions have <=4% of ICU beds occupied with COVID patients.

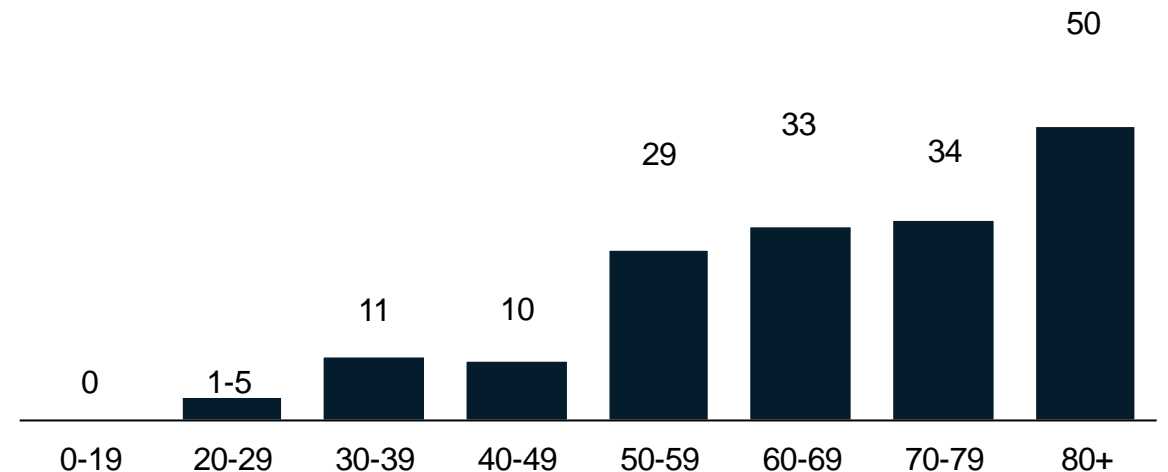| Region	Adult COVID+ in ICU (% Δ from last week)	Adult ICU Occupancy	% of Adult ICU beds COVID+
Region 1	5 (+67%)	76%	3%
Region 2N	18 (+80%)	72%	3%
Region 2S	25 (-4%)	85%	4%
Region 3	8 (+100%)	80%	3%
Region 5	8 (+167%)	65%	4%
Region 6	8 (+14%)	79%	3%
Region 7	5 (+25%)	67%	3%
Region 8	2 (0%)	56%	3%

Average and total new deaths, by age group

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

Legend:
- 0-19
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80+
- Total
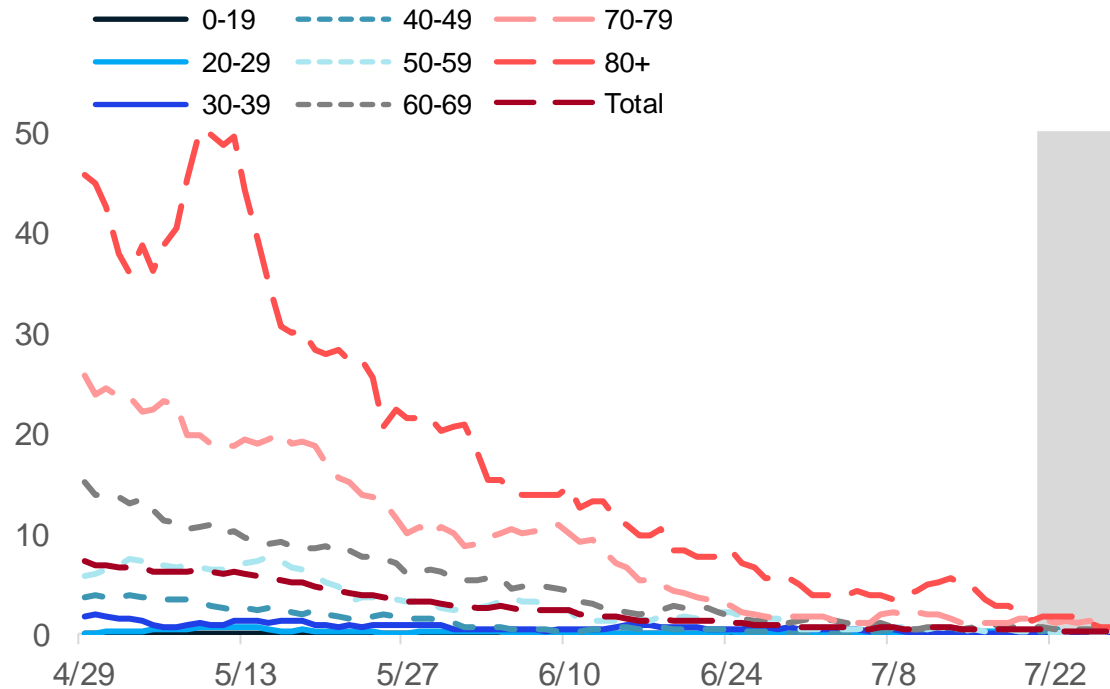
Total confirmed and probable deaths by age group (past 30 days, ending 7/20/2021)

- 31% of deaths below age sixty

Bar chart values:
- 0-19: 0
- 20-29: 1-5
- 30-39: 11
- 40-49: 10
- 50-59: 29
- 60-69: 33
- 70-79: 34
- 80+: 50

- Overall trends for daily average deaths are steady since last week

- Through 7/20, the 7-day avg. death rate is below 1.0 daily deaths per million people for those under the age of 70

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

Legend:
- American Indian/Alaska Native
- Black/African American
- Asian/Pacific Islander
- White

Average daily deaths per million people by ethnicity

Legend:
- Hispanic or Latino
- Not Hispanic or Latino

- An additional review of vital records death data was performed the week of 6/30-7/6 to search for race and ethnicity
- This review has resulted in an adjustment of deaths for American Indian and Alaskan Natives from previous weeks
- **Currently, Blacks/African American have the highest death rate**

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

COVID-19 Vaccination

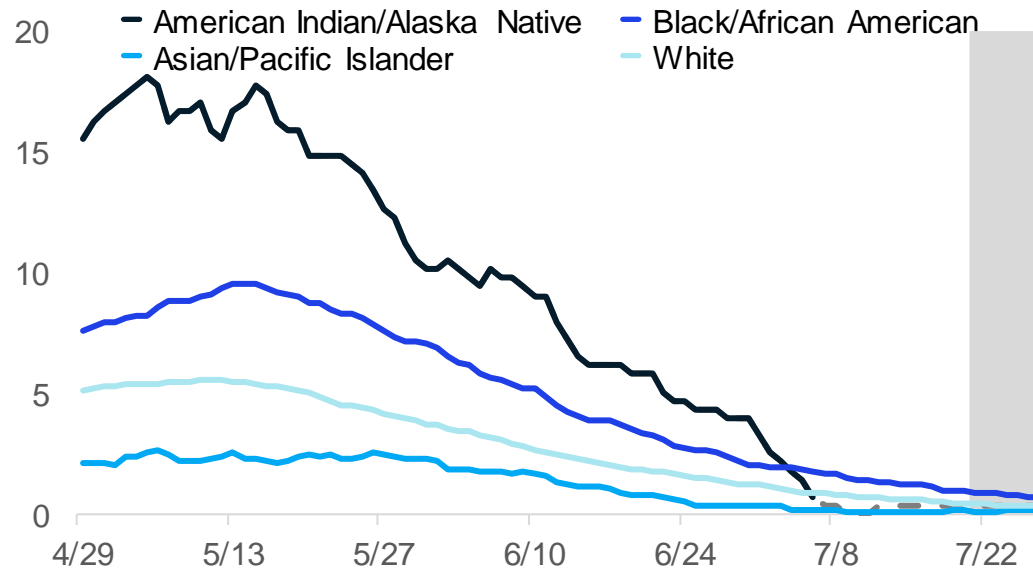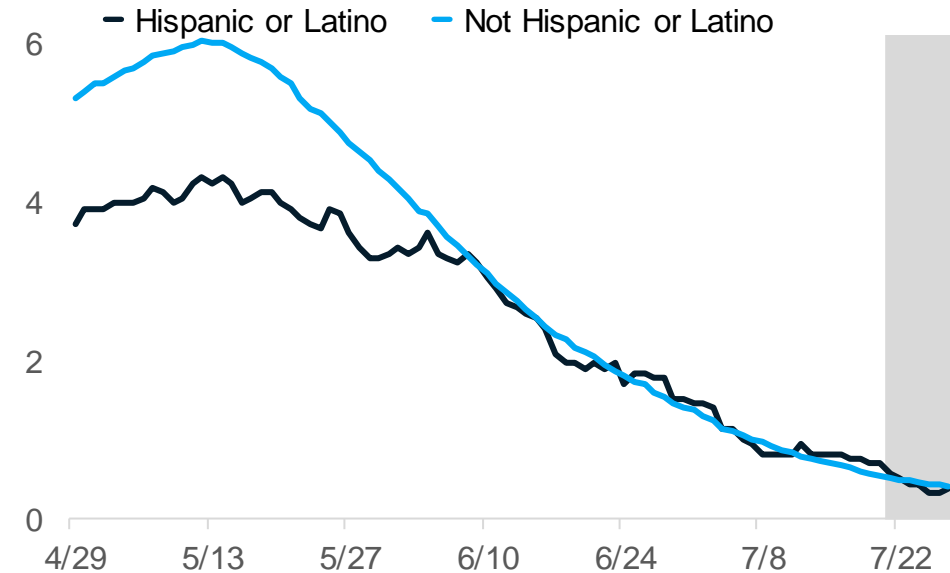**Administration (doses administered)**

8th state in doses delivered; 12th in first doses provided and number of completed individuals (7/26/21)

82.2% adjusted administration ratio (excluding federal entities, CDC channel portfolio 7/23/2021

35,015 first doses were administered week ending 7/24/21 (58,550 total): most administered frequently by pharmacies, local health departments, and hospitals (MCIR data only, will be undercount of all doses administered)

Coverage (people vaccinated)

63.9% of those 18+ have received first dose of vaccine; 85.7% of people aged 65 or older have had first dose

4,858,654 people in Michigan have completed vaccination series (4,813,230 last week)

Initiation highest among Asian, Native Hawaiian or Pacific Islander and American Indian/Alaskan Native individuals (MI COVID Vaccine Dashboard 7/27/21)

Less than 1% of Vaccinated Individuals Later Tested Positive for COVID-19 (Number of cases who are fully vaccinated (n= 8,259)

Doses Administered as of 7/27/2021

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

● First Dose ● Second Dose ● Total
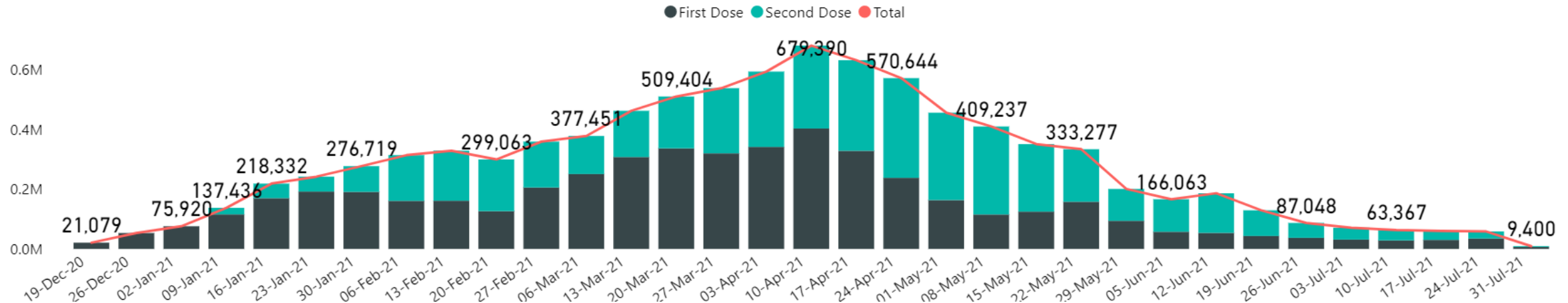
11,928,460 doses delivered to providers and 9,753,706 doses administered (CDC tracker)

82.2% adjusted administration ratio (excluding federal entities, CDC channel portfolio 7/23/2021)
- 58,550 doses administered last week; on average 8.4K/day (3,352-10,870)
- 35,015 first doses administered last week; on average 5,002/day (1,741-6,433)

July 18-July 24 (inclusive), doses were most frequently administered by
- Pharmacies (42.0K) (MCIR data may undercount)
- LHD (5.5K) and hospitals (2.9K)
- Pediatricians (979), family practice (2.3K), and FQHCs (2.3K)

Over 4.8 Million Michiganders fully vaccinated

4.86 million people in the state are fully vaccinated

81.5% of people aged 65 and older have completed the series
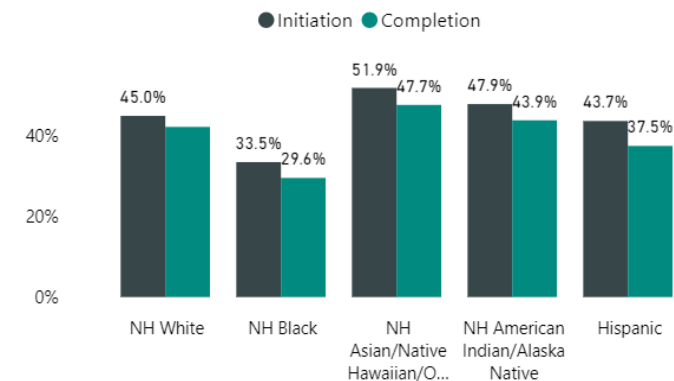
Race/Ethnicity for those 12 years and older:

- Initiation coverage highest among those of Non-Hispanic (NH) Asian, Native Hawaiian or Pacific Islander Race (51.9%), then NH American Indian (47.9%), NH White (45.0%), NH Black or African American Races (33.5%).

- Initiation is at 43.7% for those of Hispanic ethnicity

- Completion follows the same pattern

- 21.2% data missing or unknown

Vaccination Coverage in Michigan as of 7/27/21

Age Group	% At Least One Dose	% Fully Vaccinated	Number Fully Vaccinated
Total Population	52.8	48.7	4,858,654
≥ 12 years	61.4	56.5	4,858,567
≥ 18 years	63.9	59.1	4,634,798
≥ 65 years	85.7	81.5	1,438,406

Coverage by Race - State Level

● Initiation ● Completion

NH White: 45.0% / 37.5%
NH Black: 33.5% / 29.6%
NH Asian/Native Hawaiian/O...: 51.9% / 47.7%
NH American Indian/Alaska Native: 47.9% / 43.9%
Hispanic: 43.7% / 37.5%

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 7/20/21):

- 8,259 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 223 deaths (198 persons age 65 years or older)
  - 569 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.

- More than 161 million people in the United States have been fully vaccinated as of July 19, 2021. Like with other vaccines, vaccine breakthrough cases will occur, even though the vaccines are working as expected. Asymptomatic infections among vaccinated people will also occur.

- There is some evidence that vaccination may make illness less severe for those who are vaccinated and still get sick.

- Current data suggest that COVID-19 vaccines authorized for use in the United States offer protection against most SARS-CoV-2 variants currently circulating in the United States. However, variants will cause some vaccine breakthrough cases.

Science Round Up

CDC updated masking guidance

- Those who live in [areas of substantial or high transmission](#) should wear masks indoors regardless of vaccination status
- Universal masking is recommended for all teachers, staff, students, and visitors in K-12 setting
- Masks remain an effective tool to prevent transmission of SARS-CoV-2
  - Universal masking for both vaccinated and unvaccinated greatly reduces risk of SARS-CoV-2 spread during widespread community transmission
- American Academy of Pediatrics: COVID-19 Guidance for Safe Schools
  - Strong support of safe and in-person learning with implementation of several coordinated interventions including vaccination and universal masking
- Vaccination of school staff members continues to be highlighted as an important strategy to maximize the safety of in-person education of K–12 students for the 2021-2022 academic year

Long COVID is a condition where persistent symptoms can manifest weeks to months later in those who were infected with SARS-CoV-2

- At least 1 in 7 individuals who become infected may later experience long COVID, and can occur in any age group
- Persistent symptoms include shortness of breath, "brain fog", and fatigue that can inhibit daily routine
- Individuals can protect themselves from experiencing long COVID by getting vaccinated

Multi-society Statement on COVID-19 Vaccination as a Condition of Employment for Healthcare Personnel

- Consensus from seven of the leading healthcare, infectious diseases, and epidemiology societies promote COVID-19 vaccination as are requirement for all healthcare workers with exceptions for medical contraindications and state and federal legal exemptions

COVID-19 Forecasting: Cases and Deaths

- National and Michigan forecasting show mixed projections for the coming months

Mobility Update

- Most metrics are back to 2019 levels or above

CDC Updated Guidance on Masks for Vaccinated People

- If you are fully vaccinated, you can participate in many of the activities that you did before the pandemic.

- To maximize protection from the Delta variant and prevent possibly spreading it to others, wear a mask indoors in public if you are in an area of substantial or high transmission.

- Wearing a mask is most important if you have a weakened immune system or if, because of your age or an underlying medical condition, you are at increased risk for severe disease, or if someone in your household has a weakened immune system, is at increased risk for severe disease, or is unvaccinated. If this applies to you or your household, you might choose to wear a mask regardless of the level of transmission in your area.

- You should continue to wear a mask where required by laws, rules, regulations, or local guidance.

- CDC recommends universal indoor masking for all teachers, staff, students, and visitors to schools, regardless of vaccination status

Masks are an effective to prevent transmission of SARS-CoV-2

- Universal masking (infected and exposed) greatly reduces risk of SARS-CoV-2 transmission

- With the advent of the delta variant, several jurisdictions are reimposing universal masking (Las Angeles, Las Vegas)

- Children older than 2 and without contraindications, can be safely masked (recent paper stating otherwise was retracted)
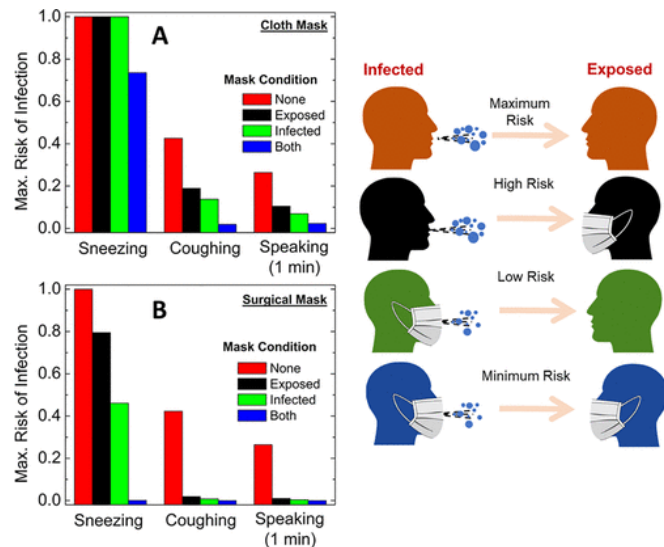
Southern Nevada Health District Statement

Health District recommends both unvaccinated and vaccinated people wear masks in public settings

FOR IMMEDIATE RELEASE:
July 16, 2021

VACCINATE LA COUNTY

Due to increased transmission from the Delta variant and the intermingling of unmasked individuals where vaccination status is unknown, masks will be required indoors regardless of vaccination status

Starting TONIGHT at 11:59pm

For more information visit ph.lacounty.gov/coronavirus — County of Los Angeles Public Health

St. Louis City and County to Require Masks to Limit Spread of COVID–19 Delta Variant

As the Delta variant spreads, the City and County will require masks to be worn in indoor public places and on public transportation beginning Monday.

Sources: Aerosol Dynamics Model for Estimating the Risk from Short-Range Airborne Transmission and Inhalation of Expiratory Droplets of SARS-CoV-2; Southern Nevada Health District; LA County; Retraction Notice.

National Comparison | Spread | Public Health Response | Other Indicators | **Science Round-up**

American Academy of Pediatrics: COVID-19 Guidance for Safe Schools

- **Strongly advocates that all policy considerations for school plans should start with the goal of keeping students safe and physically present in school**

- Not all students will have the opportunity or be eligible to be vaccinated before the start of the next school year

- Recommends that school districts promote racial/ethnic and social justice by promoting the well-being of all children

- COVID-19 policies are intended to mitigate, not eliminate, risk

- The implementation of several coordinated interventions can greatly reduce risk:

  - All eligible individuals should receive the COVID-19 vaccine (students and staff)

  - All students older than 2 years and all school staff should wear face masks at school (unless medical or developmental conditions prohibit use)

  - Adequate and timely COVID-19 testing resources must be available and accessible

  - Develop strategies and policies that can be revised and adapted

  - Schools must continue to take a multi-pronged, layered approach to protect students, teachers, and staff (i.e., vaccination, universal mask use, ventilation, testing, quarantining, and cleaning and disinfecting)

  - Schools should monitor the attendance of all students daily inclusive of in-person and virtual settings and use multi-tiered strategies to proactively support attendance for all students

  - School districts must be in close communication and coordinate with state and/or local public health authorities, school nurses, local pediatric practitioners, and other medical experts

  - School COVID-19 policies should be practical, feasible, and appropriate for child and adolescent's developmental stage and address teacher and staff safety

Report on COVID-19 Vaccination of School Staff

- Teachers in District of Philadelphia were screened weekly for SARS-CoV-2 with antigen tests

- People who reported receipt of 2 doses of COVID-19 mRNA vaccine (0.09%) were much less likely to get infected with SARS-CoV-2 than among those who were unvaccinated (1.77%)

- **Vaccination of school staff members continues to be highlighted as an important strategy to maximize the safety of in-person education of K–12 students for the 2021-2022 academic year**

TABLE 2. SARS-CoV-2 BinaxNow antigen tests performed during weekly testing and results received from School District of Philadelphia staff members following reopening of schools for in-person instruction, by self-reported vaccination status — Philadelphia County, Pennsylvania, March 21–April 23, 2021

Group	No. of tests performed	No. of positive results (%)	Risk ratio (95% CI)
All persons*			
Received 2 vaccine doses	21,083	19 (0.09)	0.04 (0.02–0.07)
Received 1 vaccine dose	1,737	21 (1.21)	0.69 (0.44–1.07)
Unvaccinated	11,228	198 (1.76)	Ref
Total	**34,048**	**238 (0.70)**	**NA**
Asymptomatic, nonexposed persons			
Received 2 vaccine doses	21,019	18 (0.09)	0.07 (0.04–0.11)
Received 1 vaccine dose	1,717	14 (0.82)	0.67 (0.39–1.16)
Unvaccinated	11,007	134 (1.22)	Ref
Total	**33,743**	**166 (0.49)**	**NA**

Abbreviations: CI = confidence interval; NA = not applicable; Ref = referent group.
* Includes persons who did and did not report symptoms before testing.

Source: SARS-CoV-2 Infection in Public School District Employees Following a District-Wide Vaccination Program — Philadelphia County, Pennsylvania, March 21–April 23, 2021

Long COVID

**What is Long COVID?** *Most people with COVID-19 get better within weeks of illness, but some people experience post-COVID conditions. Post-COVID conditions are a wide range of new, returning, or ongoing health problems people can experience four or more weeks after first being infected with the virus that causes COVID-19. Even people who did not have COVID-19 symptoms in the days or weeks after they were infected can have post-COVID conditions.*
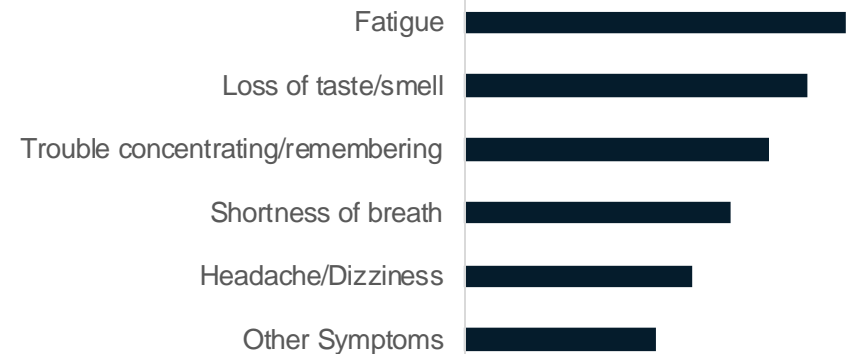
15%

85%
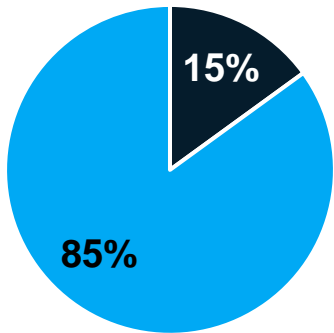
At least 1 in 7 individuals who become infected may experience long COVID

Long COVID can be experienced by both children and adults

Some of the most common symptoms reported 3-9 months following initial diagnosis include fatigue, continued loss of taste or smell, "brain fog", and shortness of breath

Fatigue
Loss of taste/smell
Trouble concentrating/remembering
Shortness of breath
Headache/Dizziness
Other Symptoms

What can be done?

- Specific healthcare services and resources will be required to support the needs of individuals suffering from post-COVID-19 syndrome

- **Individuals can protect themselves from experiencing long COVID by getting vaccinated**

Sources: CDC, Post-COVID conditions, Menges et al. Burden of post-COVID syndrome. PLOS ONE (2021), Blomberg et al. Long COVID in a prospective cohort. Nature Medicine (2021)

National Comparison Spread Public Health Response Other Indicators **Science Round-up**

Multi-society Statement on COVID-19 Vaccination as a Condition of Employment for Healthcare Personnel

- **Recommends that COVID-19 vaccination should be a condition of employment for all healthcare personnel**

- Exemptions from this policy apply to those with medical contraindications to all COVID-19 vaccines available in the United States and other exemptions as specified by federal or state law.

- Consensus statement from
    - Society for Healthcare Epidemiology of America (SHEA)
    - The Society for Post-Acute and Long-Term Care Medicine (AMDA)
    - The Association for Professionals in Epidemiology and Infection Control (APIC)
    - HIV Medicine Association (HIVMA)
    - Infectious Diseases Society of America (IDSA)
    - Pediatric Infectious Diseases Society (PIDS)
    - Society of Infectious Diseases Pharmacists (SIDP)

Infection Control & Hospital Epidemiology

Multisociety Statement on COVID-19 Vaccination as a Condition of Employment for Healthcare Personnel

Published online by Cambridge University Press: **13 July 2021**

David J. Weber, Jaffar Al-Tawfiq, Hilary Babcock, Kristina Bryant, Marci Drees, Ramy Elshaboury, Katharine Essick, Mohamad Fakih, David Henderson, Waleed Javaid ...Show all authors ⌄   Show author details ⌄

Article   Metrics

[Save PDF]   [Share]   [Cite]   [Rights & Permissions]

# CDC model projections: increasing cases and deaths nationally

- Ensemble model suggests increasing trend but uncertainty ranges from flat to rapid increase

- The best performing models (blue arrows) project increases

- Individual models shown as grey lines, ensemble shown in red

- Arrows indicate the top 2 best performing national models over the last 12 weeks (these two models outperformed the ensemble)
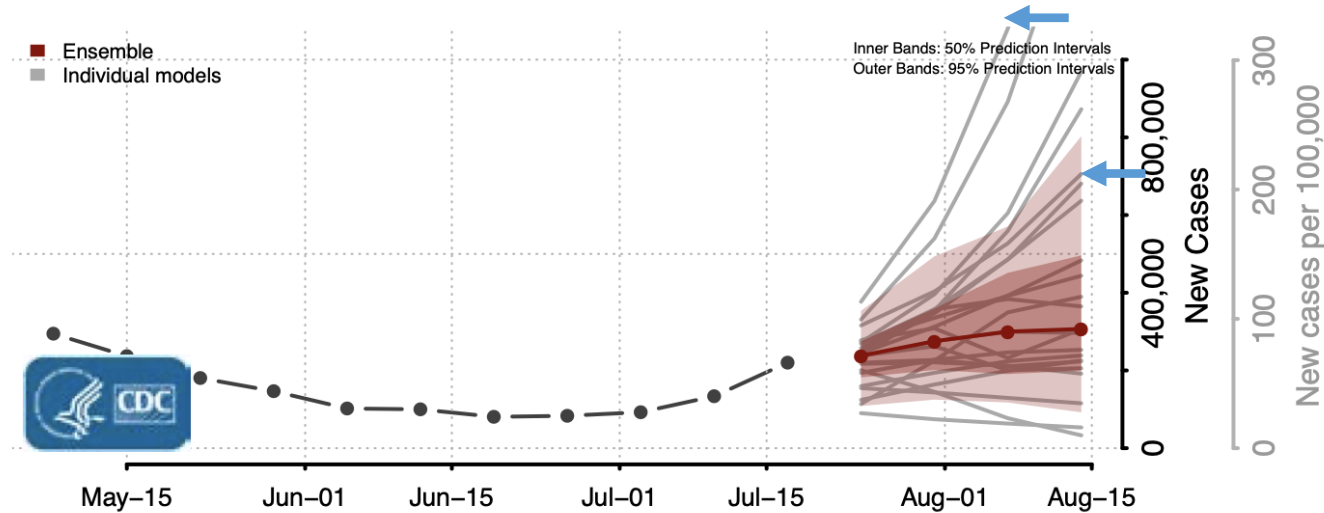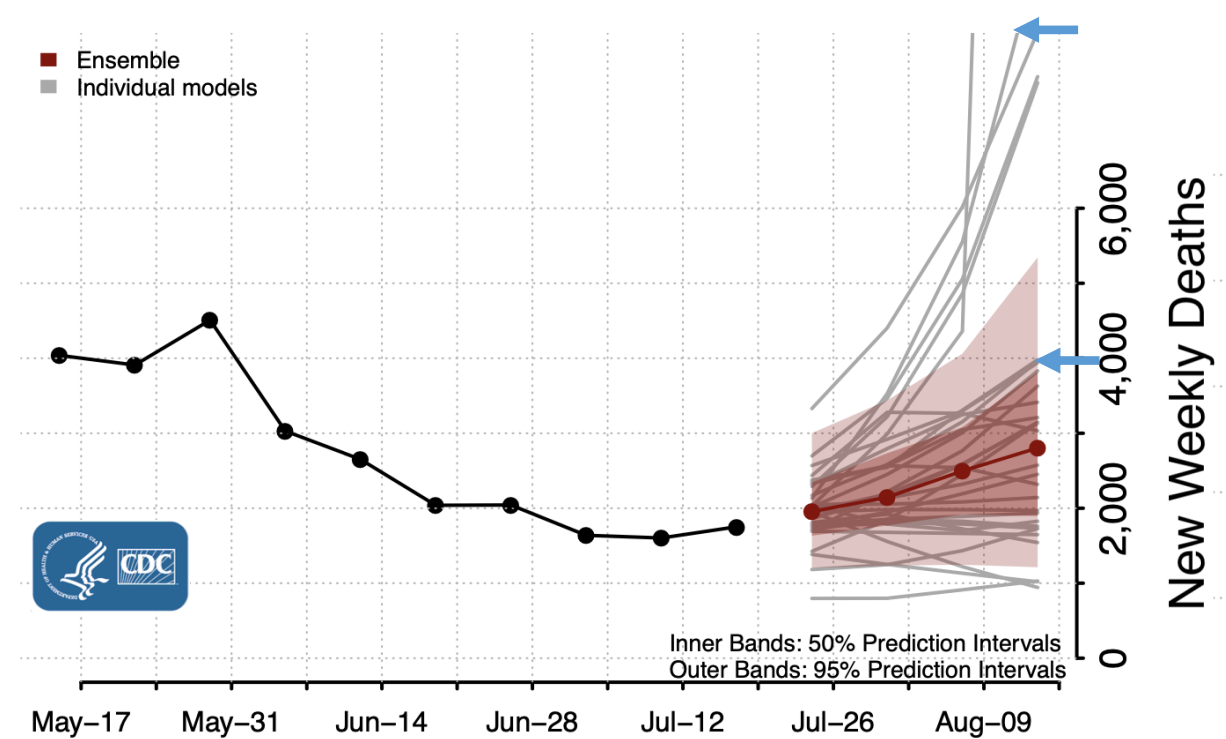
Data Sources: CDC mathematical model forecasting, CovidComplete Data Center model forecast evaluations

PUBLIC HEALTH

CDC model projections for Michigan: flat or increasing

- Ensemble model suggests flat trends for cases and deaths

- However, uncertainty ranges from decrease to increase and recent case data has shown signs of case increases

- The best performing national model projections (blue arrows) suggest increases

- Individual models shown as grey lines, ensemble shown in red

- Arrows indicate the top 2 best performing national models over the last 12 weeks (these two models outperformed the national ensemble model)
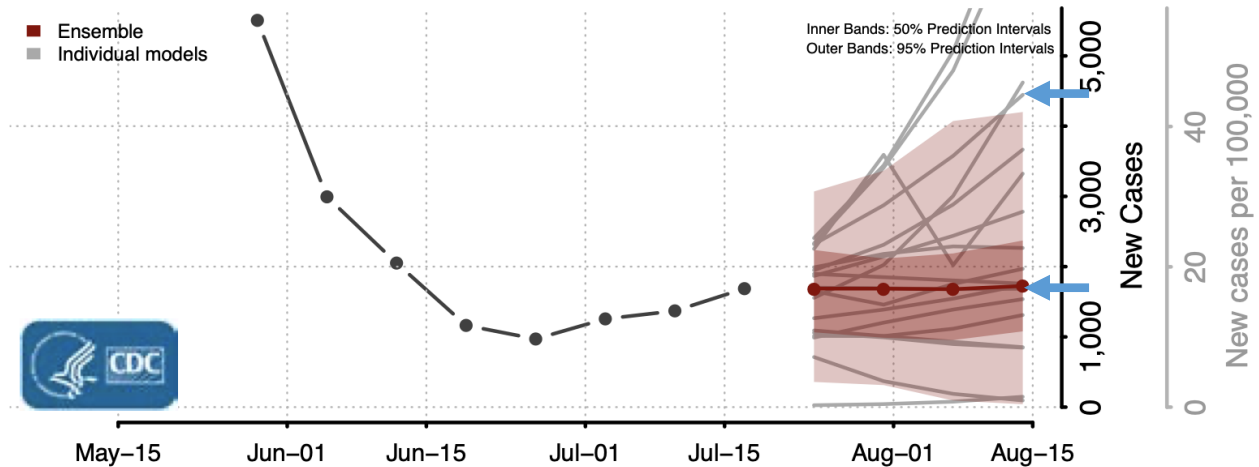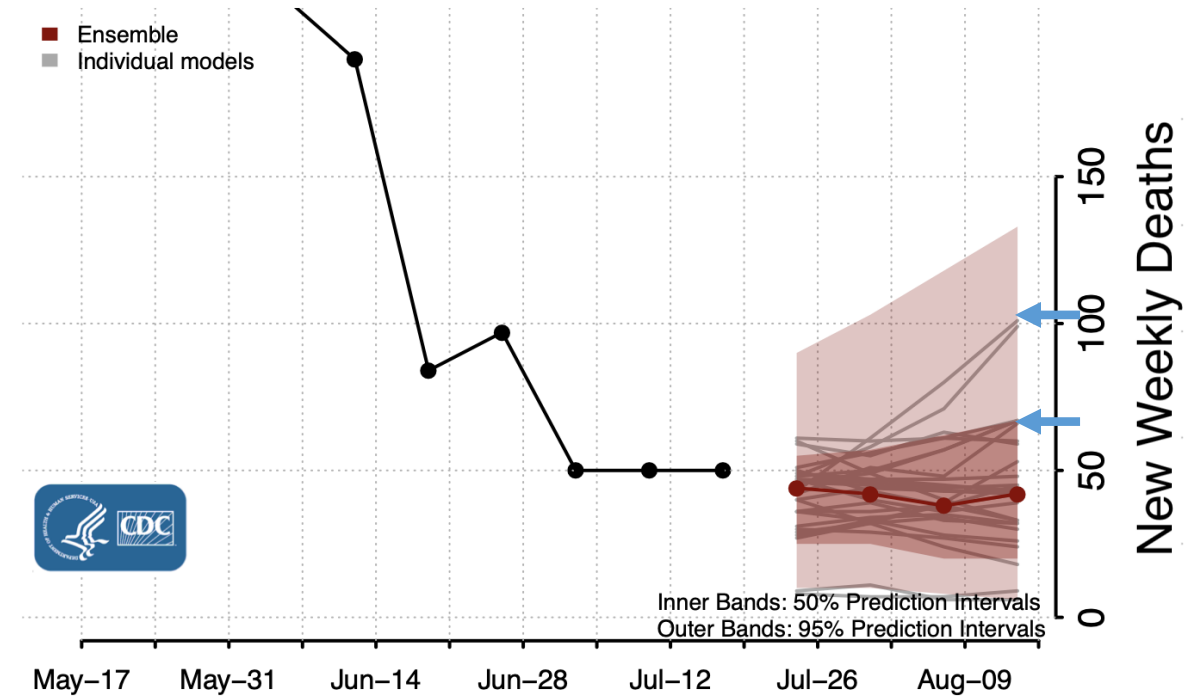
Data Sources: CDC mathematical model forecasting, CovidComplete Data Center model forecast evaluations

PUBLIC HEALTH

Mobility Update

Unacast mobility patterns in MI

- Average mobility sharply increased
- Possible increase in encounter density and non-essential visits or may remain plateaued
- Cases shown as bars at top of each chart
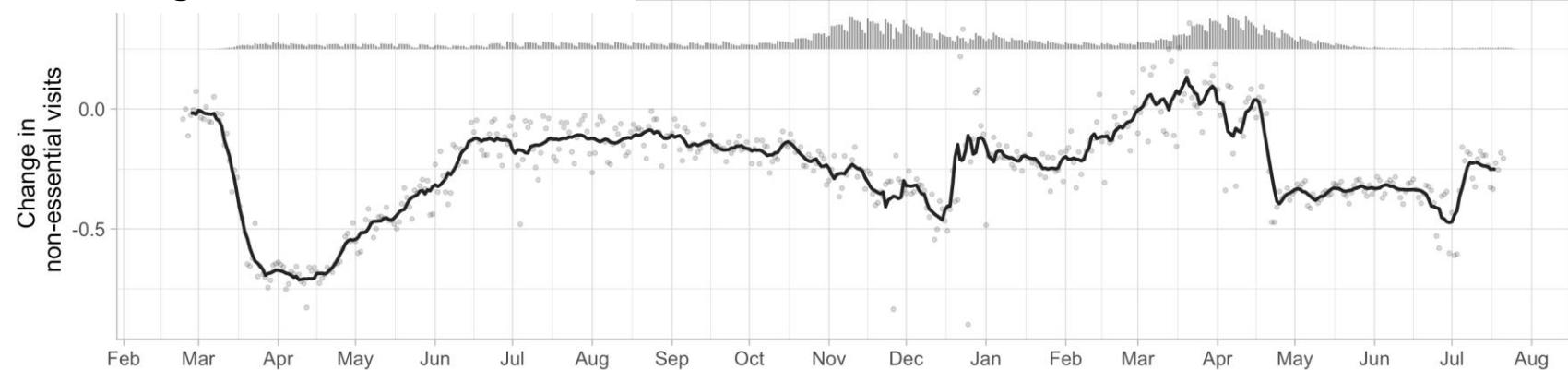- Data through 7/21/21 (data as of 7/26/21)
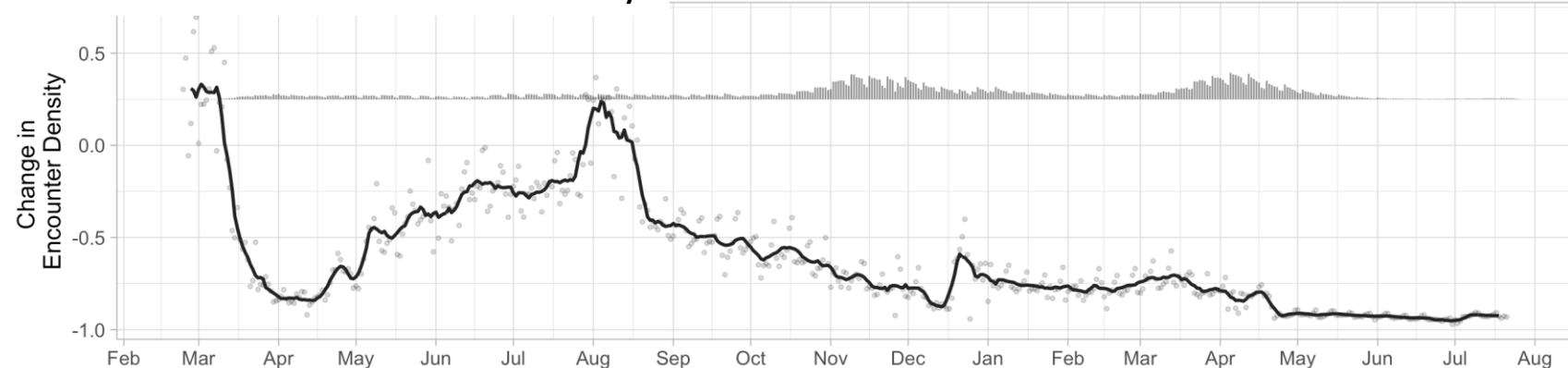
Unacast social distancing scoreboard
https://www.unacast.com/covid19/social-distancing-scoreboard

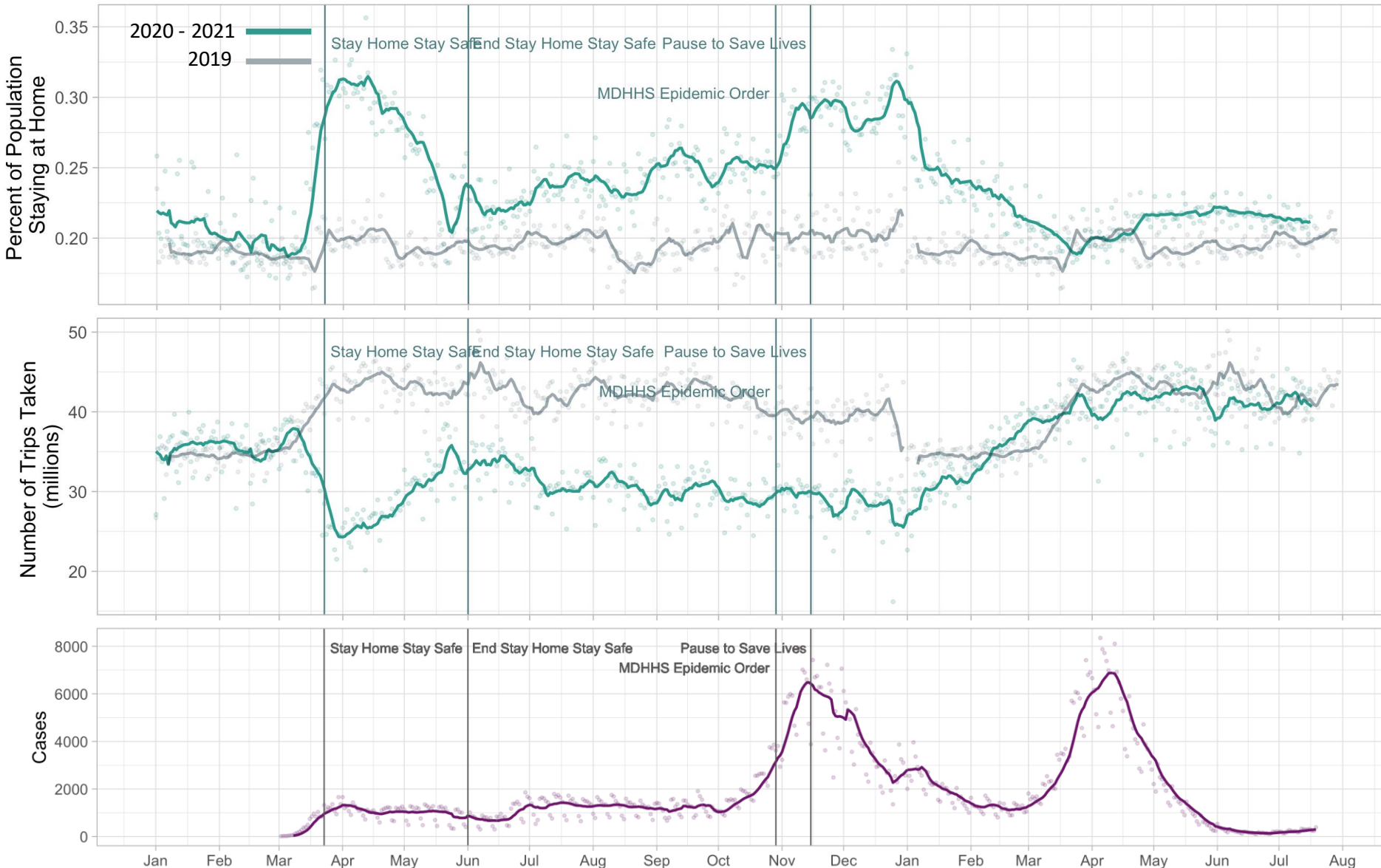Change in average mobility
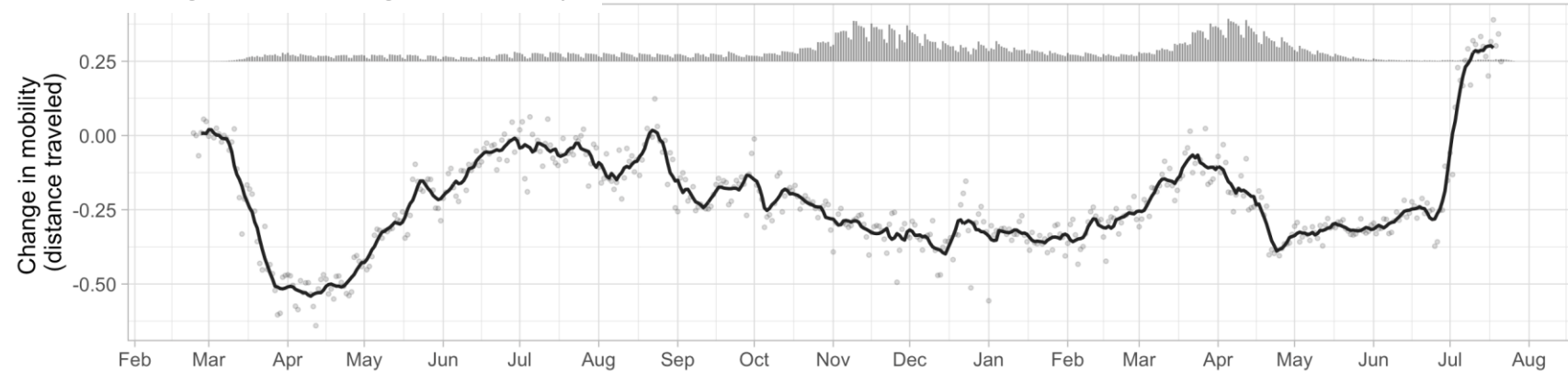
Change in non-essential visits

Difference in encounter density

How many people are staying at home in Michigan?


- % Stay-at-home levels and number of trips taken/day are at or near 2019 levels

- Most recent data is 7/17/21 (data as of 7/26/21)

Data Source: Bureau of Transportation Statistics

PUBLIC HEALTH

Google mobility trends: most metrics have returned to baseline or above

- Most metrics are back to baseline or above

- Workplace mobility is still below baseline

- Data through 7/23/21 (data as of 7/26/21)
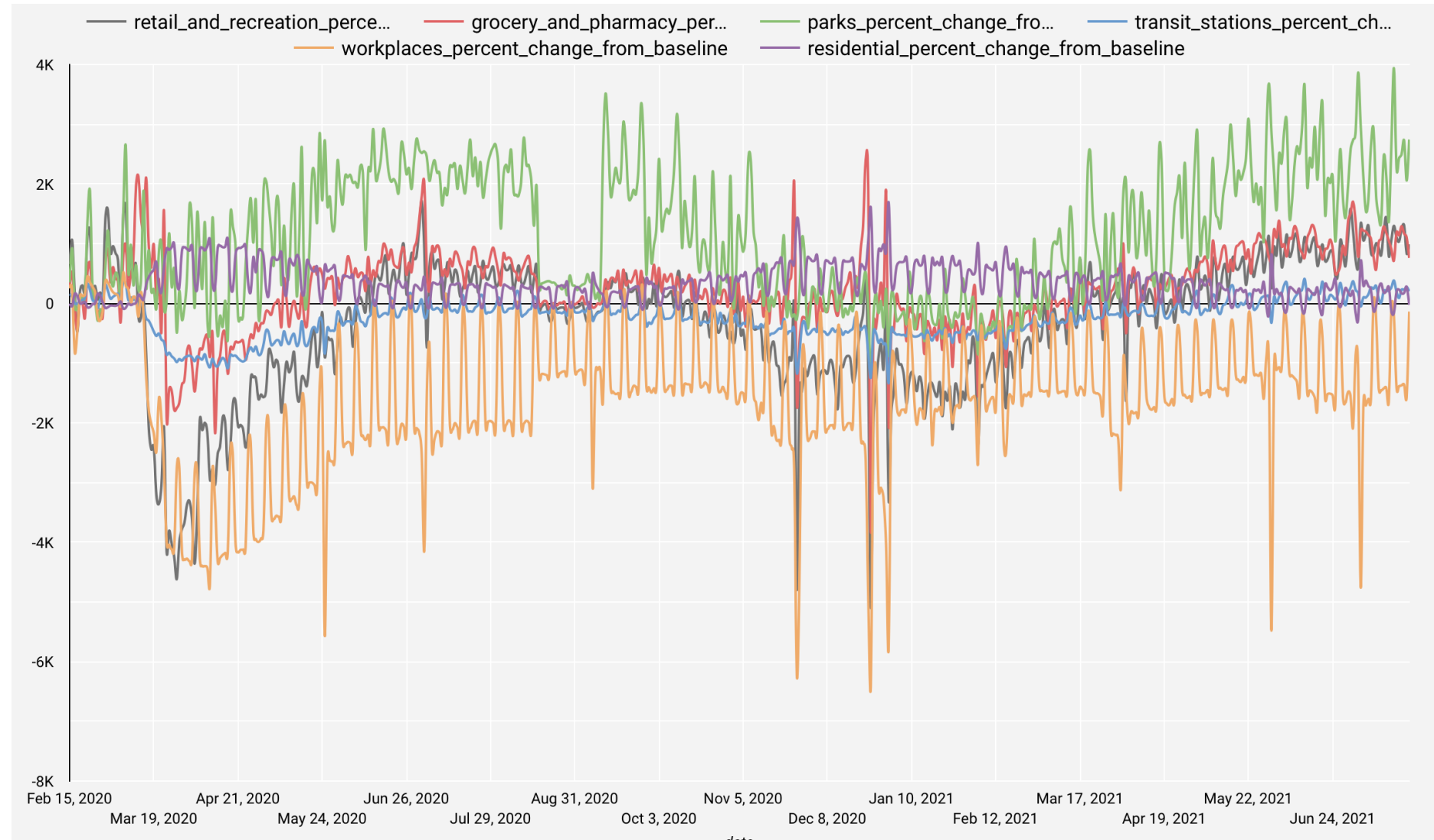
Google Mobility Reports
Google Mobility Dashboard

Michigan mobility levels are similar to other states, including those with high Delta levels

- Michigan mobility and percent staying home levels over the last month are similar to states currently experiencing a surge in Delta cases

- Suggests potential for a similar increase in Delta cases in MI

Data Sources: Bureau of Transportation Statistics (data as of 7/19/21), Unacast social distancing scoreboard https://www.unacast.com/covid19/social-distancing-scoreboard