MI COVID RESPONSE DATA AND MODELING UPDATE

NOTE: All data as of July 6 unless otherwise noted

July 7, 2021

Executive summary

Percent Positivity is up for the first time in nearly three months to 1.8% (up from 1.3% last week), but **Case Rate** is 12.4 cases/million and continues to decline for twelve weeks (down from 13.1 last week)

Michigan has the **30th lowest number of cases (33rd last week),** and **8th lowest case rate (8th last week)** in the last 7 days (source: CDC COVID Data Tracker)

Percent of inpatient beds occupied by individuals with COVID has decreased 11% since last week and is decreasing for ten weeks. There are 1.4% (↓0.3%) inpatient beds occupied by COVID-19 patients.

Michigan has the **13th lowest inpatient bed utilization (12th last week),** and the **15th lowest adult ICU bed utilization (14th last week)** in the country (source: US HHS Protect)

Deaths have decreased 51% since last week. There were 37 COVID deaths between Jun 23 and June 29, and the **Death Rate** is 0.5 deaths per million residents (↓0.4)

Michigan has the **T21st lowest number of deaths**, and **T7th lowest death rate** in the last 7 days (source: CDC COVID Data Tracker)

The 7-day average **state testing rate** has decreased to 1,069.8 tests/million/day. **Daily diagnostic tests (PCR)** is 10.6K per day, and the **weekly average for PCR and antigen tests** conducted in Michigan is 18.9K.

9.47 million **COVID-19 vaccine** doses reported to CDC, 4.73 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 7/6):

- Globally, 184,285,579 cases and 3,987,062 deaths

- Countries with the highest number of cases are U.S. (33,724,923), India (30,619,932), and Brazil (18,792,511)

- Within the U.S., California (3,713,944), Texas (2,992,614), & Florida (2,337,613) lead the nation in total cases

- CDC Data Tracker currently lists Michigan, along with 9 other states and territories, at low transmission level

- Michigan currently has identified 13,643 variants of concern (VOC)
  - Cumulatively, the vast majority are B.1.1.7 (12,892 which is 94%).
    - Other VOCs include B.1.351 (0.6%), B.1.427 & B.1.429 (2.3%), P.1 (2.3%) and B.1.617.2(0.4%)
  - In the 4 most recent weeks,
    - 93.2% of specimens were Alpha (B.1.1.7)
    - 0.5% were Beta (B.1.351)
    - 0.8% were Epsilon (B.1.427, B.1.429)
    - 3.8% were Gamma (P.1)
    - 1.7% were Delta (B.1.617.2)

Territories

| AS | FSM | GU | MP | PW | RMI | VI |
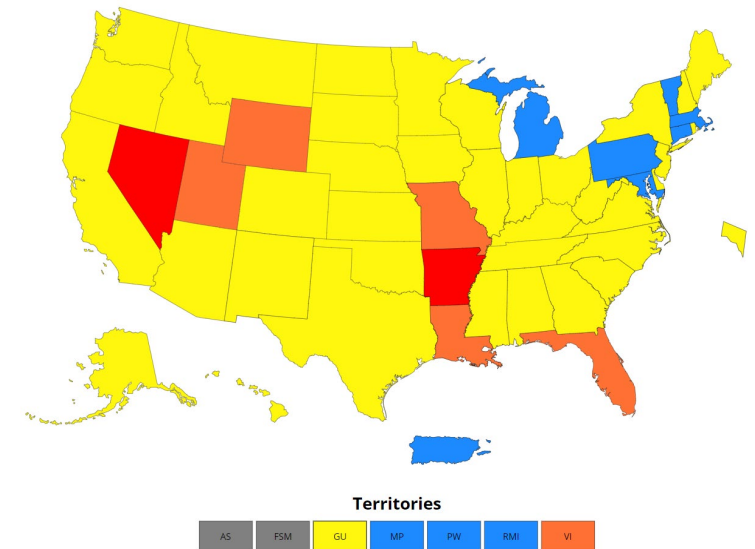
National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up

Key Messages: COVID-19 Spread

Statewide positivity has increased to 1.8% (last week: 1.3%)

- One week percent change is up 36% (vs. steady last week)

- Increasing for one week (remains 91% below April 8 high)

- Positivity is steady or increasing in most MERC regions, but is <3% in all regions

**Case rate (12.4 cases/million) is decreasing across the state (last week: 13.1 cases/million)**
- One week decrease of 12% (vs. 27% decrease last week)
- Decreasing for three months (98% decrease since mid-April high)
- Cases per million are declining in all MERC regions
- Select variants in Michigan: 12,892 confirmed Alpha (B.1.1.7); 77 confirmed Beta (B.1.351); 313 confirmed Epsilon (B.1.427/ B.1.429); 308 confirmed Gamma (P.1); and 53 confirmed Delta (B.1.617.2)

Number of active outbreaks is down 54% from last week
- Only two new outbreaks were identified in the past week
- Most cases seen recently in LTCF/SNF are among staff

Confirmed and probable case indicators
Table Date: 7/6/2021 (7 days from date table was produced: 6/29/2021)

Risk levels

Low | A | B | C | D | E
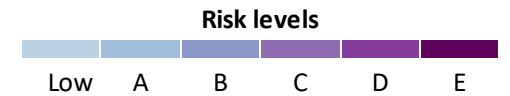
	Overall Risk Level	Absolute Cases (per million)	CDC Case Trend	Average Percent Positivity	Positivity Trend	Tests (per million)	% IP Beds Occupied by COVID-19 Cases	% Occupied IP Beds Trend	Absolute Deaths (per million)	Death Trend
Detroit	A	13.0	decline [85 days]	2.0	Increase - 2wk	1108.9	1.5	Decrease - 10wk	0.4	<20 wkly deaths
Grand Rapids	A	12.9	decline [80 days]	1.8	Increase - 1wk	967.4	1.7	Decrease - 10wk	0.5	<20 wkly deaths
Kalamazoo	A	17.2	decline [81 days]	2.1	Increase - 1wk	956.2	2.1	Decrease - 10wk	0.9	<20 wkly deaths
Saginaw	A	6.3	decline [83 days]	0.7	Increase - 1wk	853.3	0.5	Decrease - 10wk	0.2	<20 wkly deaths
Lansing	A	10.0	decline [87 days]	1.4	Increase - 2wk	927.1	1.2	Decrease - 10wk	1.0	<20 wkly deaths
Traverse City	A	7.4	decline [84 days]	1.1	Increase - 2wk	861.4	0.4	Decrease - 2wk	1.0	<20 wkly deaths
Jackson	A	12.7	decline [83 days]	1.0	Increase - 1wk	1192.9	1.3	Decrease - 10wk	0.5	<20 wkly deaths
Upper Peninsula	A	8.5	decline [81 days]	0.9	Increase - 2wk	1201.4	0.5	Increase - 1wk	0.9	<20 wkly deaths
Michigan	A	12.4	decline [84 days]	1.8	Increase - 1wk	1069.8	1.4	Decrease - 10wk	0.5	Decrease - 9wk

Cases: Low: <7 | A: 7-20 | B: 20-40 | C: 40-70 | D: 70-150 | E: >=150
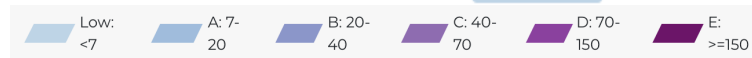
Positivity: Low: <3% | A: 3-7% | B: 7-10% | C: 10-15% | D: 15-20% | E: >=20%

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

PUBLIC HEALTH

Percent Positivity Trend

Daily Positive Test Rate
MICHIGAN STATEWIDE
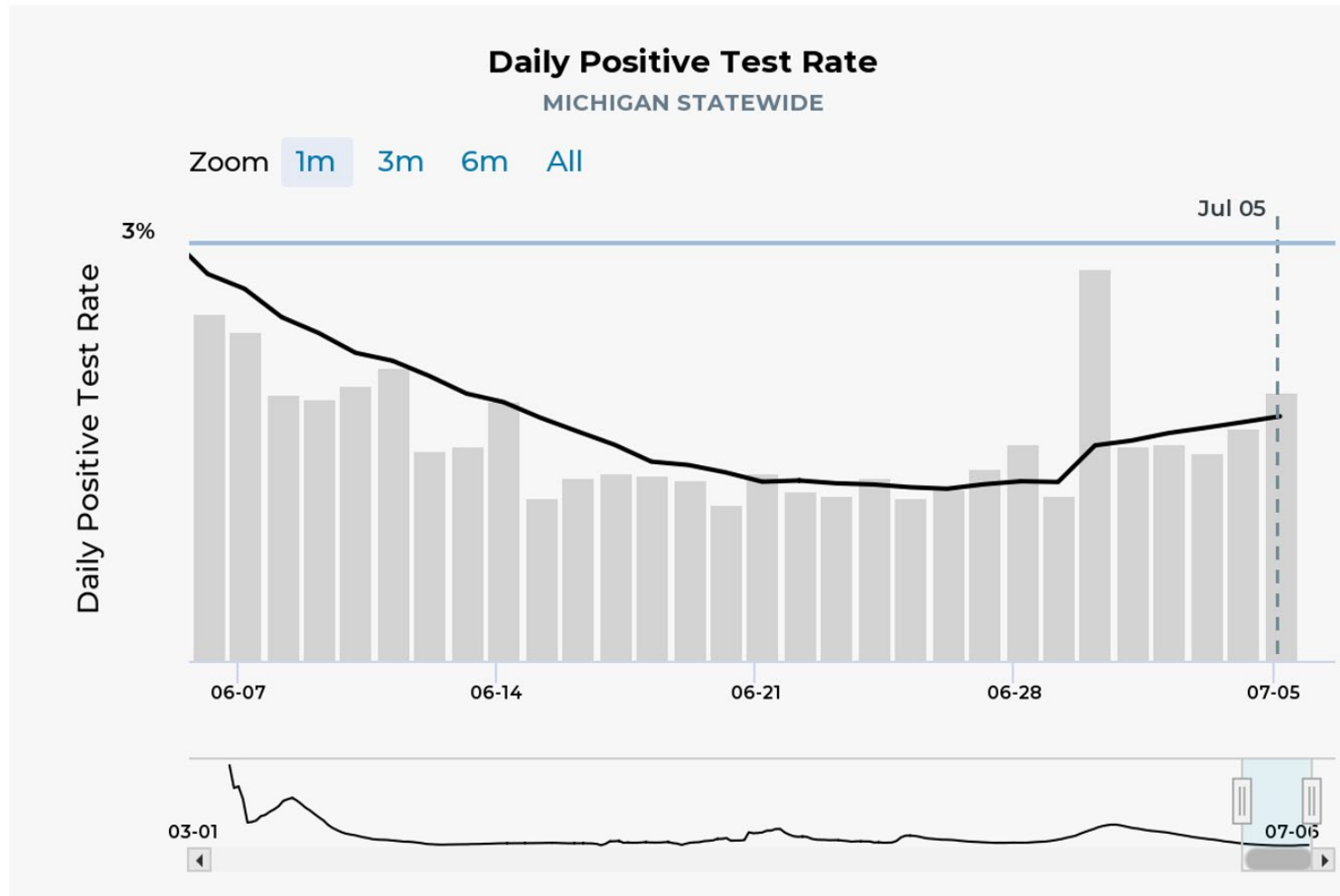
The seven-day rolling average percent positivity has increased over the last 6 days.

Positivity has increased in the Detroit, Lansing, Grand Rapids and Traverse City regions

Source: Dashboard | MI Start Map

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)
1	Detroit	735529	1134247	28639	5.1	6.9	9.6	8.5
2	Grand Rapids	230120	350652	9812	3.0	13.0	3.1	8.8
3	Kalamazoo	140422	214801	5310	0.6	4.3	2.9	13.5
4	Saginaw	78759	122834	3254	0.0	0.0	0.0	0.0
5	Lansing	78140	119915	3143	1.0	12.8	2.4	20.0
6	Traverse City	53099	83462	1547	0.0	0.0	0.0	0.0
7	Jackson	41274	64091	1496	0.6	14.5	0.1	1.6
8	Upper Peninsula	34645	53875	1403	0.1	2.9	0.0	0.0
99	Michigan	1391988	2143877	54647	10.7	7.7	18.1	8.4

Note: Data as of 7/6; case data 6/31, hospitalization data 7/6. Hospitalization data is for pediatric patients (<18)
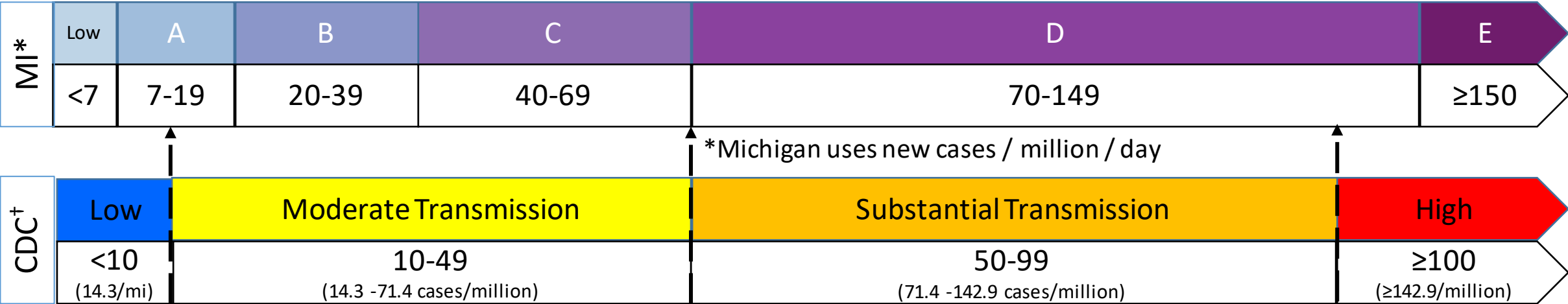
Comparing CDC community transmission thresholds to MI levels

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%

sources: https://mistartmap.info/

https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/indicators.html

National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up
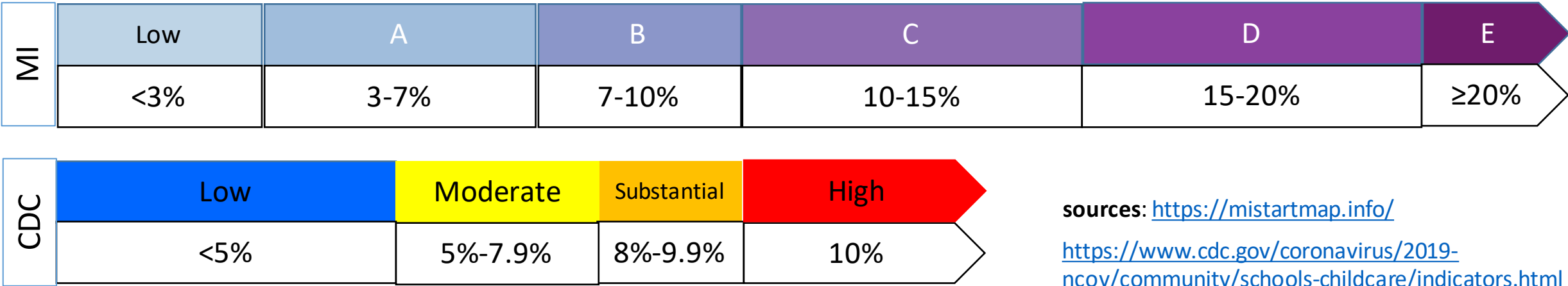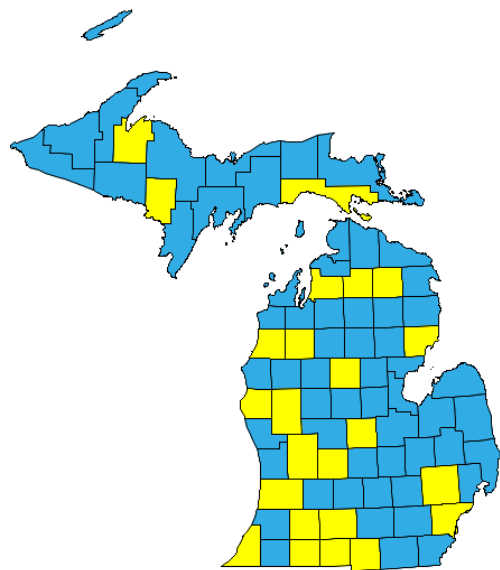
Adjusted* CDC Transmission Levels, 6/29-7/5

This Week, 6/29-7/5
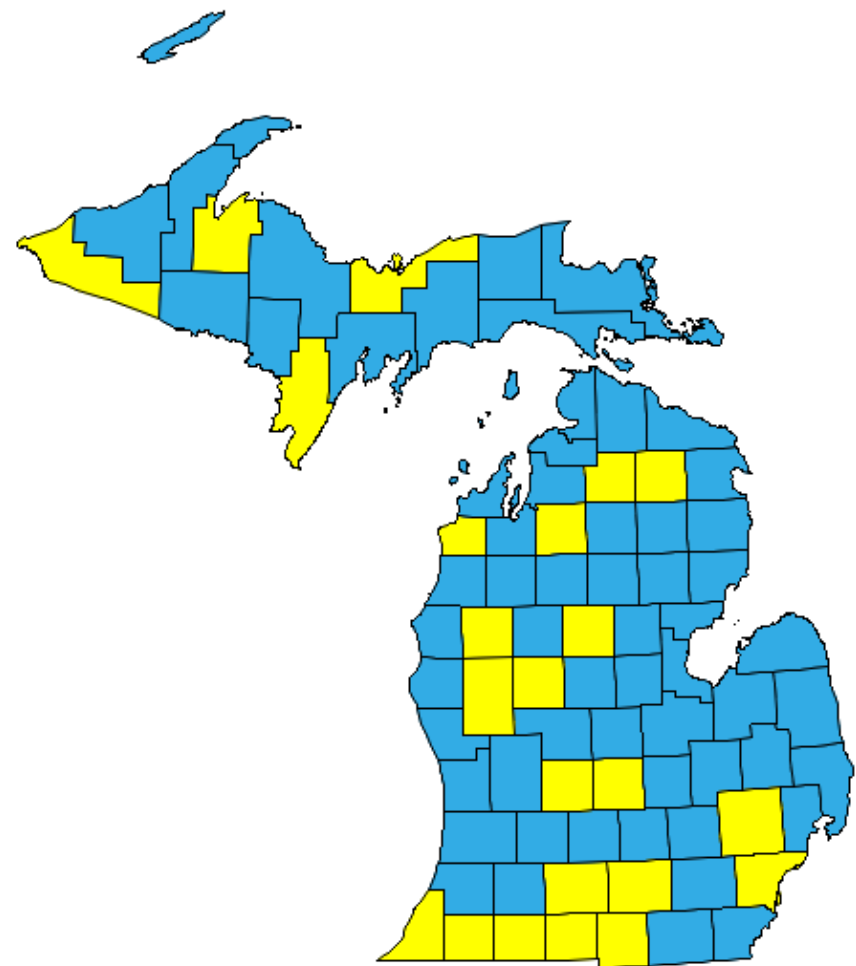
Last week, 6/22-6/29

| Transmission Levels	# of counties	This week / Last week
Low		60 / 59
Moderate		23 / 24
Substantial		0 / 0
High		0 / 0

Updates since last week:

- 60 of 83 counties met low transmission level this week, a 1 county increase

- 23 of 83 counties met moderate transmission classification, a 1 county decrease 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
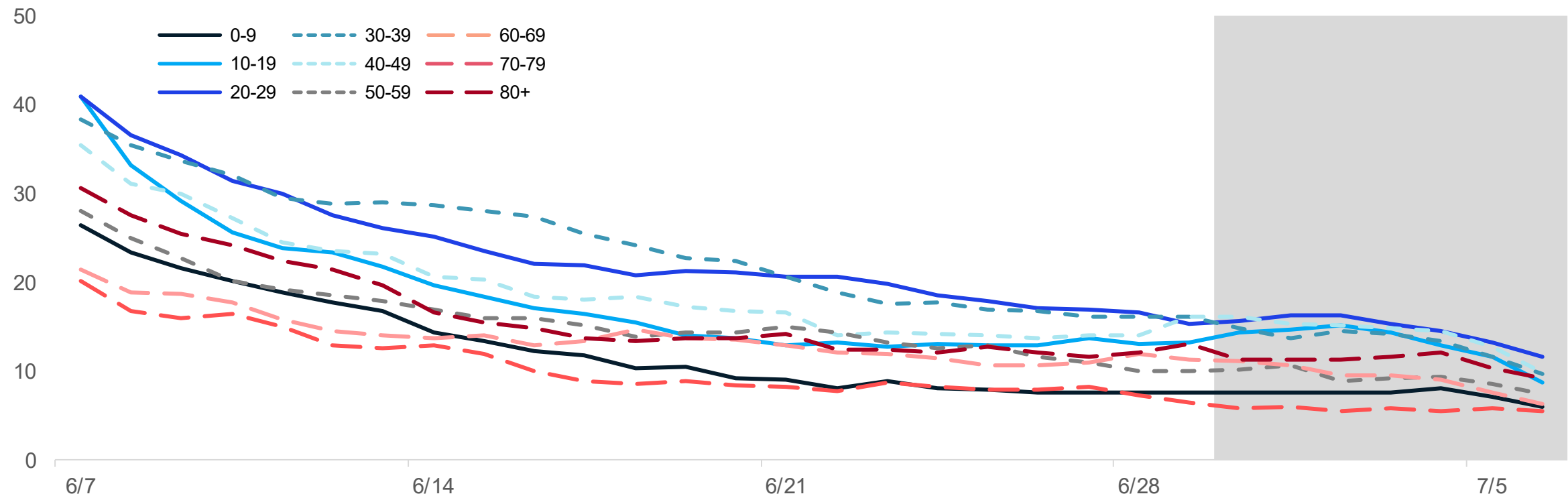
National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

Age group: average new daily cases

Daily new confirmed and probable cases per million by age group (7-day rolling average)
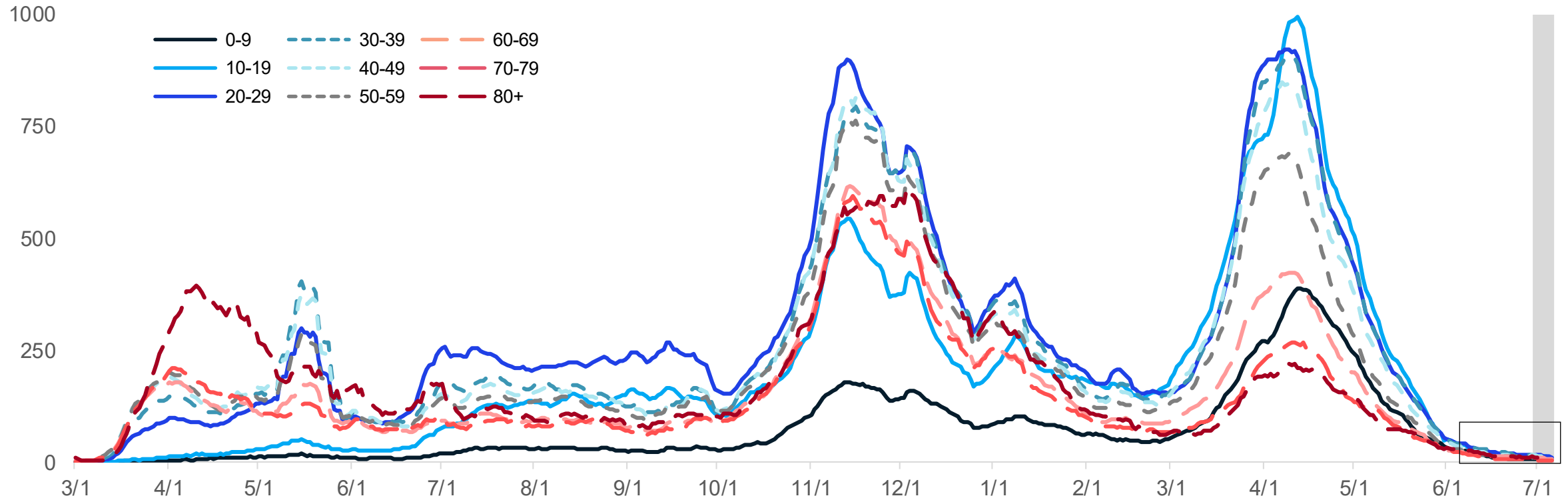
- Case rate trends for all age groups by decade are decreasing or plateaued
- Case rates for all age groups are between 6 and 16 cases per million (through 6/29)

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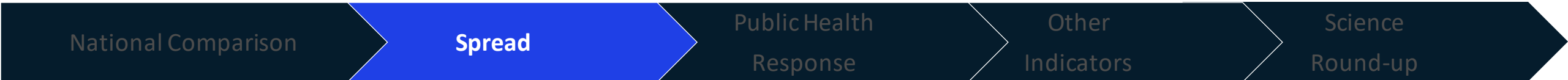Source: MDHHS – Michigan Disease Surveillance System

Age group: average new daily cases, last 30 days

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

Legend:
- 0-9
- 10-19
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80+

- Case rate trends for all age groups by decade are decreasing or plateaued
- Case rates for all age groups are between 6 and 16 cases per million (through 6/29)

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

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

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	8.9	7.7	-5% (-1-5)
10-19	16.7	13.3	1% (+1-5)
20-29	21.1	15.3	-26% (-7)
30-39	19.6	16.1	-15% (-1-5)
40-49	19.0	16.1	15% (+1-5)
50-59	13.6	10.1	-30% (-6)
60-69	14.4	11.3	-6% (-1-5)
70-79	1-5	6.5	-17% (-1-5)
80+	5.4	13.1	6% (+1-5)
Total¶	124.4	12.4	-12% (-16)

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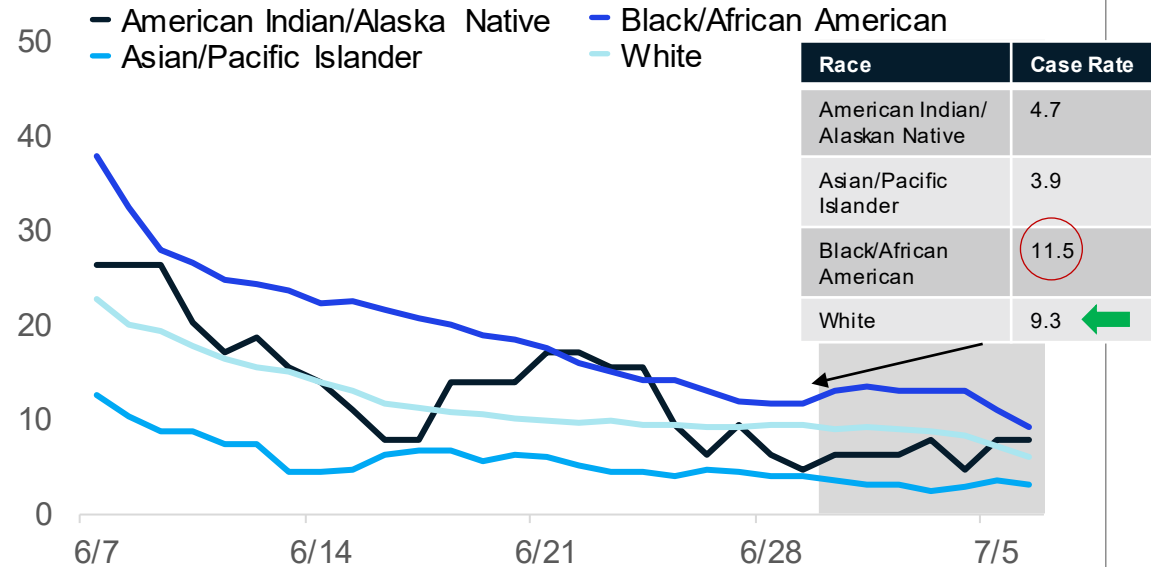Source: MDHHS – Michigan Disease Surveillance System

- Average daily number of cases (21) is highest for those aged 20-29
- Avg. daily case rate (16.1 cases/mil) are currently highest for 30-39 and 40-49
- Case rates for all age groups are between 6 and 16 cases per million
- Case rate decline are no longer decreasing exponentially and entering a low incidence plateau
- Since April 11, case rates have decreased more than 94% for all age groups, with state overall down 98%

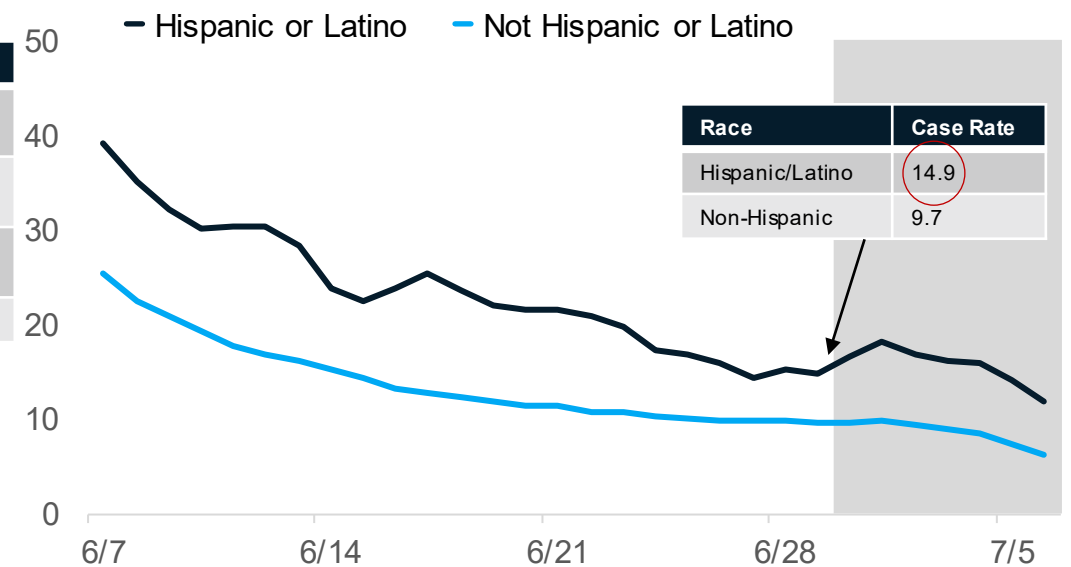* Highest 7-day avg. following spring 2021 surge
¶ Total may not reflect state due to missing age data

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

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 — Black/African American — Asian/Pacific Islander — White

Race	Case Rate
American Indian/Alaskan Native	4.7
Asian/Pacific Islander	3.9
Black/African American	11.5
White	9.3

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	14.9
Non-Hispanic	9.7

Updates since last week:

- Cases per million are decreasing or plateaued for all races and ethnicities
- **Blacks/African Americans, and Hispanic/Latinos have the highest case rates**
- In the past 30 days, 16% (↑1%) of race data and 21% (↑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

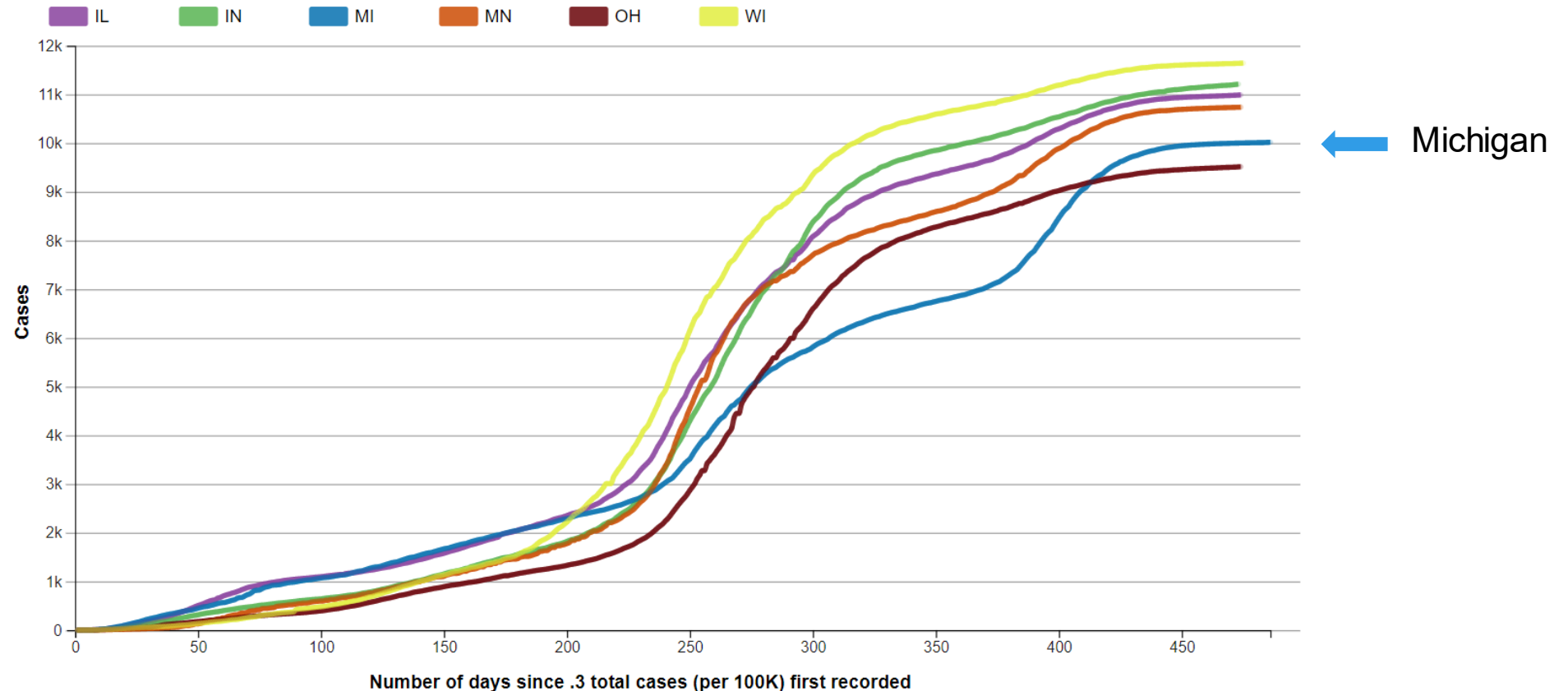National Comparison | **Spread** | Public Health Response | Other Indicators | Science Round-up

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

- 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

# CDC Transmission Levels, U.S. state (data through 7/6/2020)

- The number of states classified as having low COVID-19 transmission has declined (blue colored states)
- The number of states classified with having high transmission has increased (red colored states)

Level of Community Transmission of COVID-19, by State/Territory
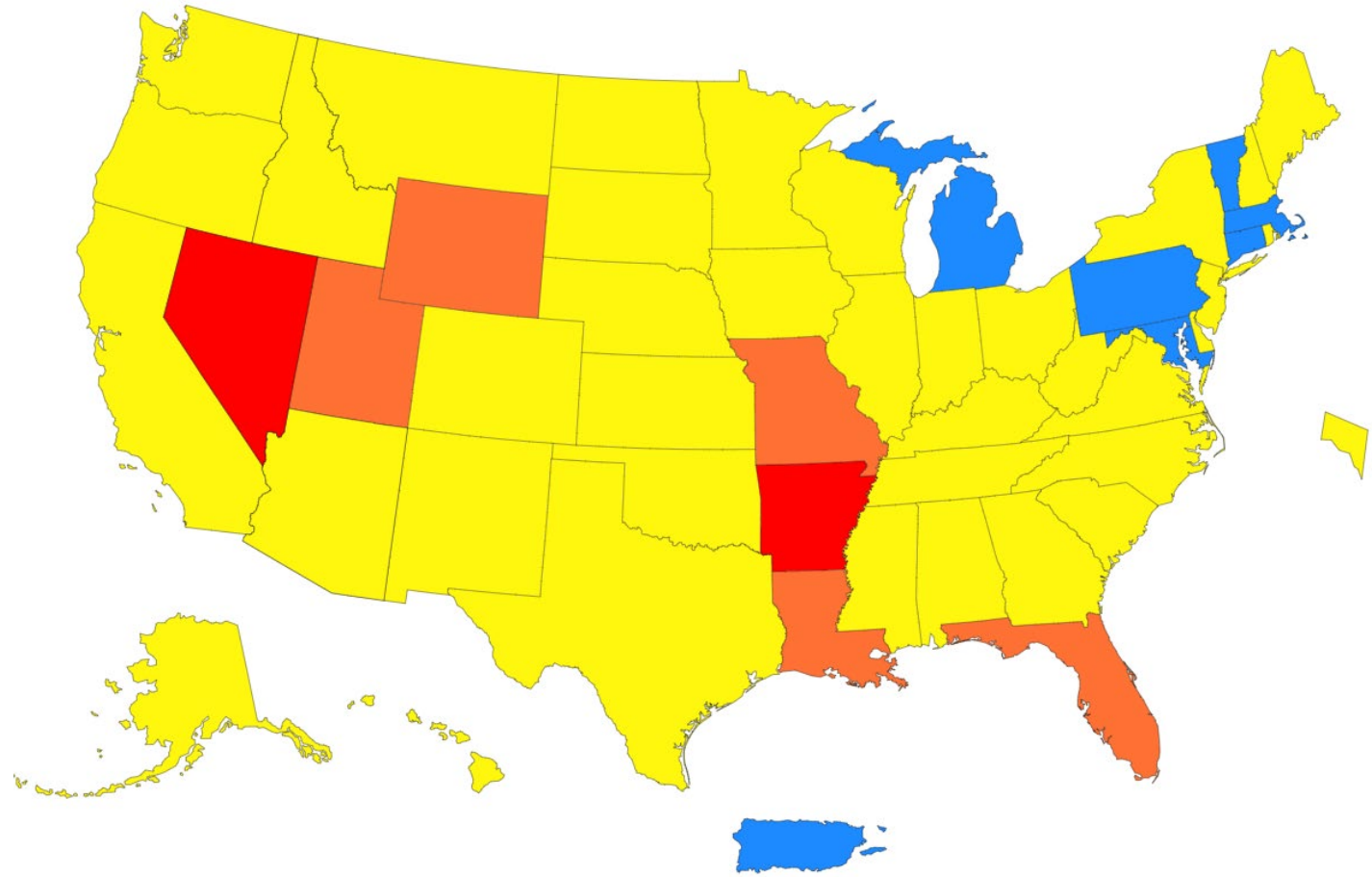
Cumulative COVID-19 Case Rates: States with high Delta Comparison

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

Seven-day moving average of new cases (per 100K), by number of days since .01 average daily cases (per 100K) first recorded.
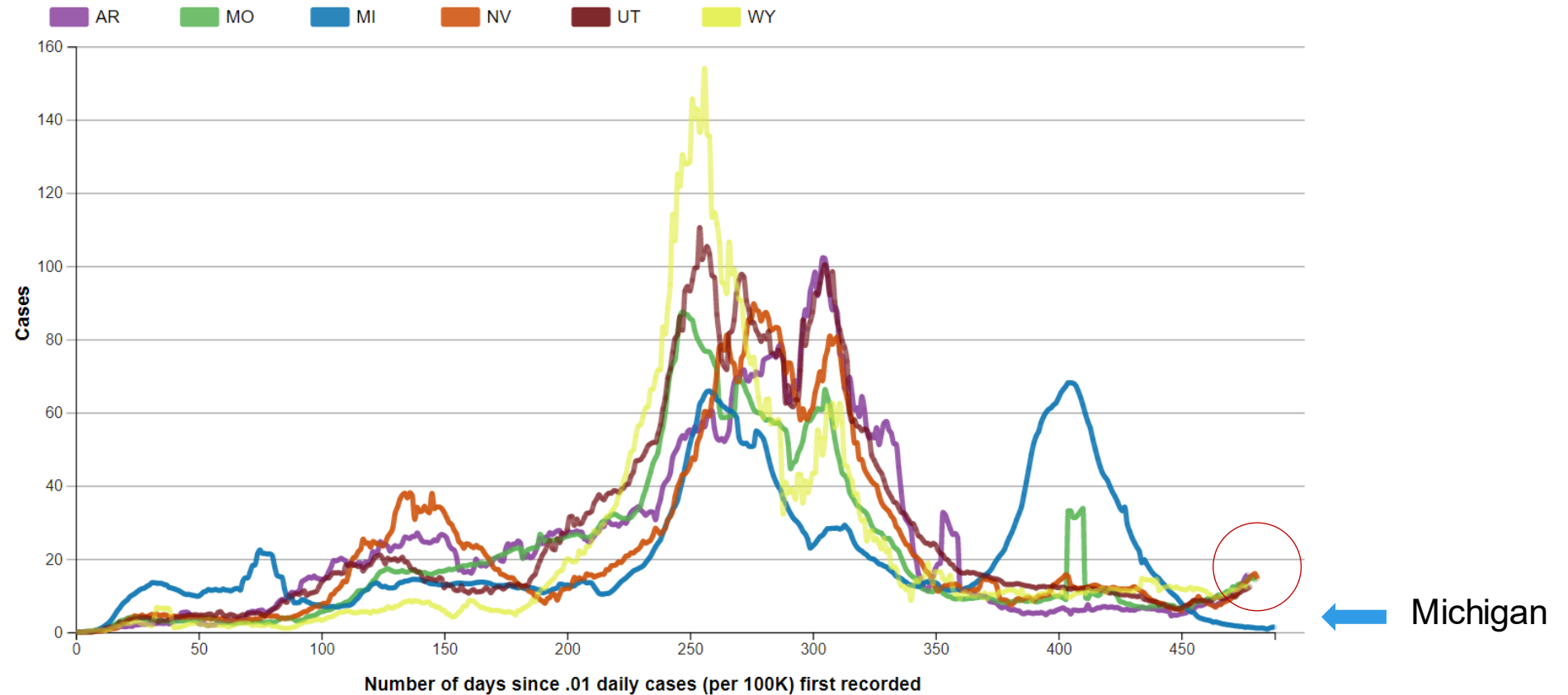
- Average daily incidence per 100,000 cases in Michigan is currently lower than other states experiencing a surge in delta cases
- Currently, states with delta surges (see next slide) may have lower daily incidence than winter surge but their trajectory indicates positive trends (circle in red)

Source: CDC COVID Data Tracker – State Trend Comparison

COVID-19 Indicators for States with High Case Rates + Michigan (data through 7/6/2020)

STATE	Case Rate/100,000, last 7 days*	Hospitalization, July 6†	Death Rate, last 7 days*	% Delta, last 21 days‡	Fully Vaccinated Coverage, Tot Pop.*	Cumulative Case Rate, per 100,000*
Arkansas	110.2	5.1%	0.7	83%	42.4%	11,617
Missouri	98.2	6.8%	1.3	97%	45.4%	10,126
Nevada	102.2	5.6%	1.0	N/A	50.2%	10,868
Utah	87.1	4.2%	0.8	> 68%	48.9%	12,979
Wyoming	85.4	3.4%	1.2	64%	39.9%	10,790
Michigan	9.6	1.4%	0.1	N/A	51.6%	10,017

- States with the highest case rates in the 7 most recent days are Arkansas, Missouri, Nevada, Utah, and Wyoming*

- According to national data in the past 21 days, these states also have more than 50% of specimens sequenced identified as the delta variant‡

- Current hospitalization utilization† and deaths* per capital in these states not as high as earlier waves but are some of the highest in the country right now

- Most of these states also have vaccination coverage of total population lower than the national average (47.5%)*

Variants, transmissibility, severity, and vaccine effectiveness

Strain	New WHO nomenclature	Transmissibility	Immune Invasiveness	Increased Severity	Vaccine effective at disease reduction?
Ancestral		-	-	-	✓
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/

Certain mono-clonal antibody therapies are less effective in presence of some variants. Due to national increase in P.1 and B.1.315 variant infections, HHS has paused distribution of bamlanivimab and etesevimab together and etesevimab alone until further notice. FDA recommends health care providers use REGEN-COV.
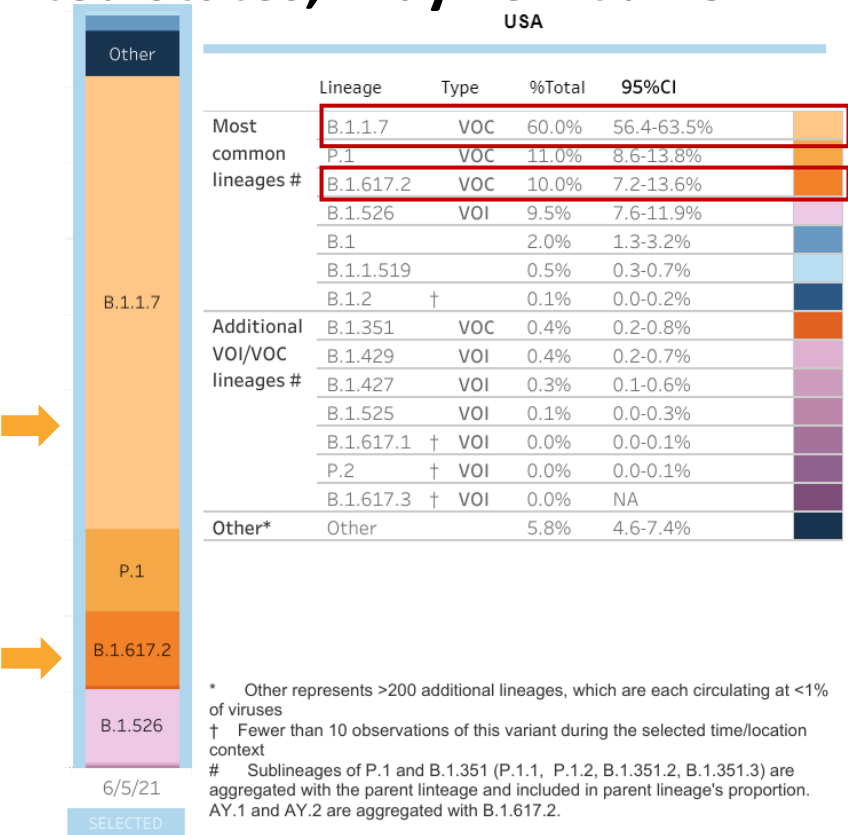
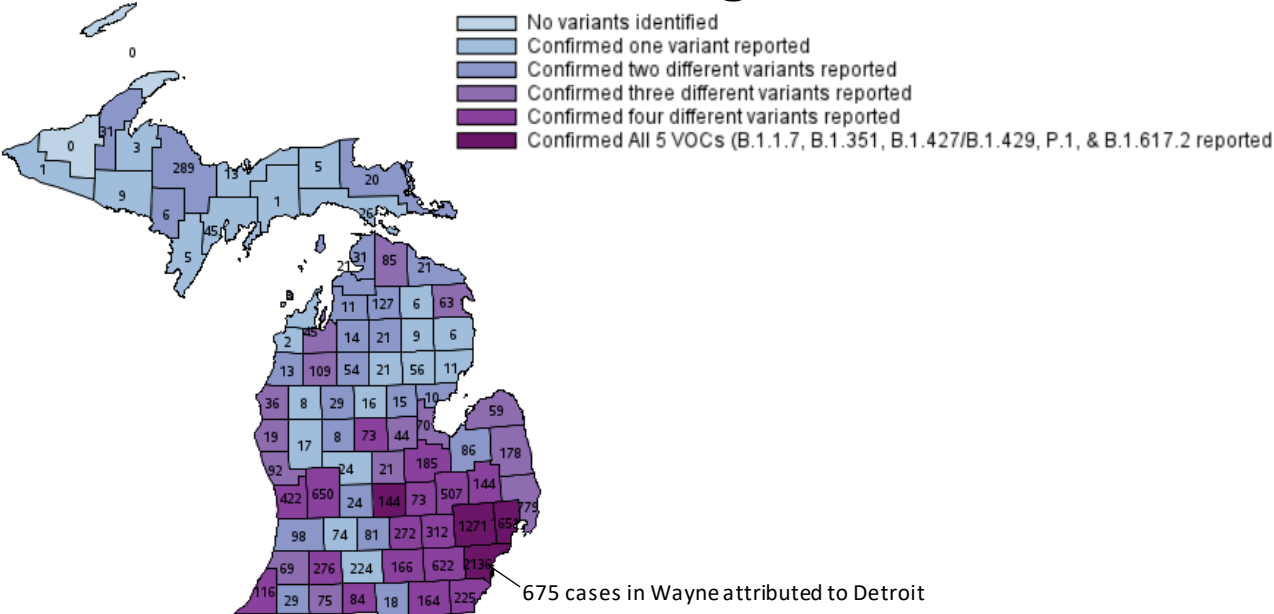National Comparison | Spread | Public Health Response | Other Indicators | Science Round-up

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

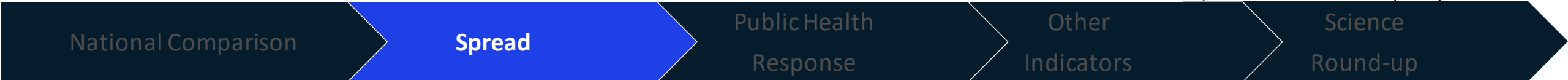## SARS-CoV-2 Variants Circulating in the United States, May 23 – Jun 5

USA

	Lineage	Type	%Total	95%CI	
Most common lineages #	B.1.1.7	VOC	60.0%	56.4-63.5%	
	P.1	VOC	11.0%	8.6-13.8%	
	B.1.617.2	VOC	10.0%	7.2-13.6%	
	B.1.526	VOI	9.5%	7.6-11.9%	
	B.1		2.0%	1.3-3.2%	
	B.1.1.519		0.5%	0.3-0.7%	
	B.1.2	†	0.1%	0.0-0.2%	
Additional VOI/VOC lineages #	B.1.351	VOC	0.4%	0.2-0.8%	
	B.1.429	VOI	0.4%	0.2-0.7%	
	B.1.427	VOI	0.3%	0.1-0.6%	
	B.1.525	VOI	0.1%	0.0-0.3%	
	B.1.617.1 †	VOI	0.0%	0.0-0.1%	
	P.2 †	VOI	0.0%	0.0-0.1%	
	B.1.617.3 †	VOI	0.0%	NA	
Other*	Other		5.8%	4.6-7.4%	

* Other represents >200 additional lineages, which are each circulating at <1% of viruses
† Fewer than 10 observations of this variant during the selected time/location context
# 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 linteage and included in parent lineage's proportion. AY.1 and AY.2 are aggregated with B.1.617.2.

Data last updated July 6, 2021
Source: https://covid.cdc.gov/covid-data-tracker/#variant-proportions and MDSS

Variants of Concern in Michigan, Jul 6

Legend:
- No variants identified
- Confirmed one variant reported
- Confirmed two different variants reported
- Confirmed three different variants reported
- Confirmed four different variants reported
- Confirmed All 5 VOCs (B.1.1.7, B.1.351, B.1.427/B.1.429, P.1, & B.1.617.2 reported

675 cases in Wayne attributed to Detroit

Variant	MI Reported Cases¶	# of Counties	CDC est. prevalence for MI
B.1.1.7 (alpha)	12,892*	81	77.1%
B.1.351 (beta)	77	23	0.7%
B.1.427/B.1.429 (epsilon)	313	45	N/A
P.1 (gamma)	308	34	6.2%
B.1.617.2 (delta)	53	15	1.3%

* 533 cases within MDOC; ¶ 210 cases with county not yet determined

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

Number of outbreak investigations by site type, week ending Jul 1

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
SNF/LTC/OTHER ASSISTED LIVING	18	1	19
MANUFACTURING, CONSTRUCTION	15	0	15
AGRICULTURAL/FOOD PROCESSING	3	0	3
COLLEGE/UNIVERSITY	3	0	3
*RETAIL	3	0	3
HEALTHCARE	2	0	2
*SOCIAL GATHERING	1	1	2
CHILDCARE/YOUTH PROGRAM	2	0	2
K-12 SCHOOL	2	0	2
*SHELTERS	1	0	1
*RELIGIOUS SERVICES	1	0	1
*RESTAURANTS AND BARS	1	0	1
OFFICE SETTING	1	0	1
CORRECTIONS	1	0	1
*COMMUNITY EXPOSURE - OUTDOOR	0	0	0
*COMMUNITY EXPOSURE - INDOOR	0	0	0
*PERSONAL SERVICES	0	0	0
OTHER	0	0	0
TOTAL	54	2	56

Total number of active outbreaks is **down 54%** from previous week

One new outbreak were reported in each of the following settings: LTCF/SNF, and social gatherings.

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

Long Term Care, Acute Care, Homes for Ages, and Nursing Home COVID spread

Confirmed COVID-19 Cases

Total COVID-19 Deaths
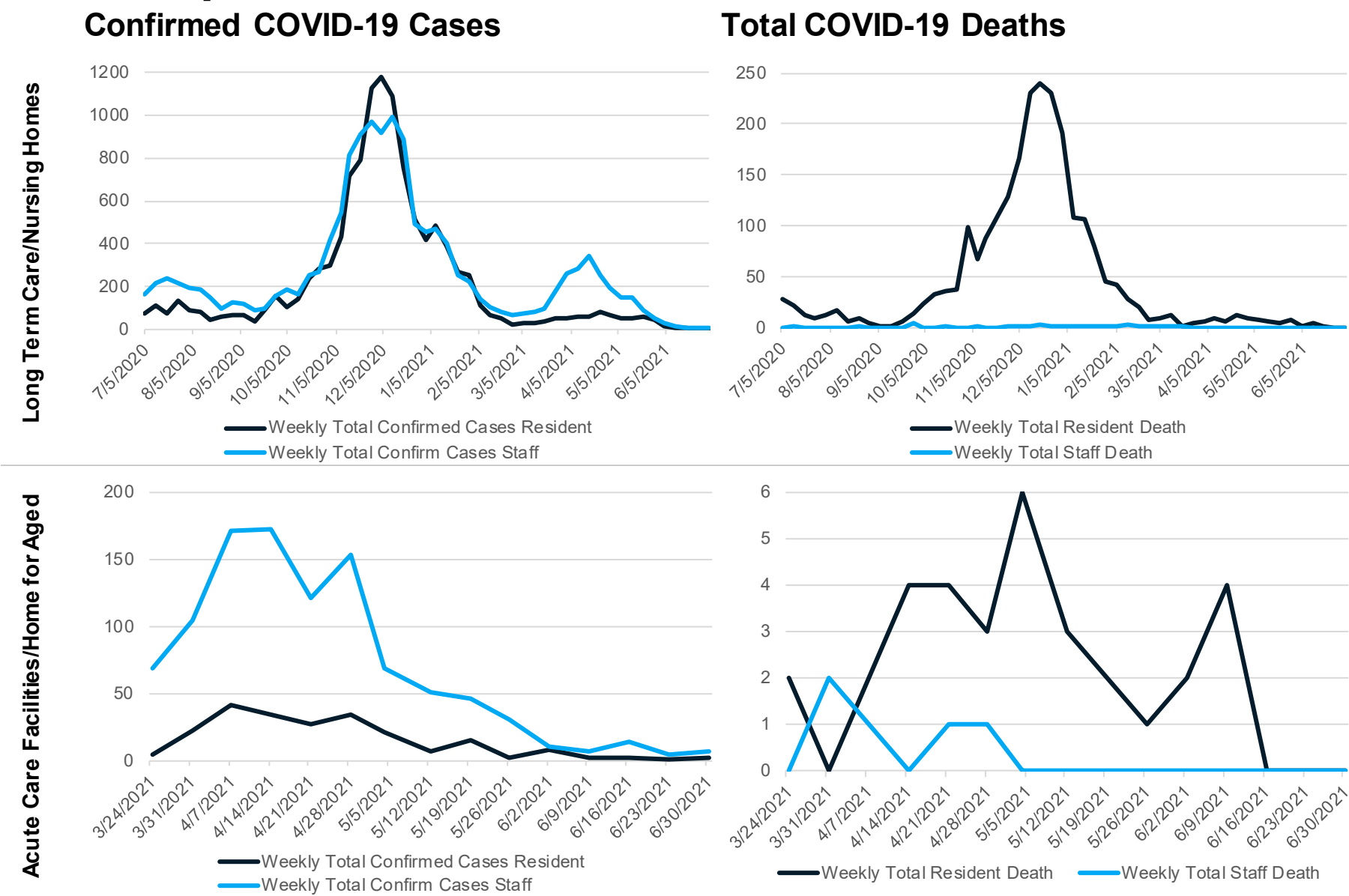
- LTCF/SNF have some of the most heavily impacted settings for the COVID-19 pandemic

- Both staff and residents have been infected with SARS-CoV-2

- The number of cases and deaths is low compared to prior in pandemic

- More recently, *staff* have composed of more COVID-19 *cases* whereas residents made up more COVID-19 deaths

- While residents have high vaccination rates (>80%), staff at these facilities are not as high (~50%) (self report)

- Vaccination and other efforts to reduce levels of transmission in these settings should be intensified to prevent potential outbreaks in the fall or introduction of the delta variant

Source: CMS COVID-19 Nursing Home Data and Michigan LTCF weekly reports; Note: y-axis differs for LTC/NH and ACF/HFA

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

Hospitalizations and ICU utilization are decreasing

- COVID-like illness (CLI) is steady 0.3% (vs. 0.3% last week)
- Hospital admissions are decreasing statewide and for most age groups
- Hospitalizations down 17% since last week (vs. 15% decline week prior)
- Six regions are showing decreases or stable trends in hospitalization trends this week
- Volume of COVID-19 patients in intensive care has decreased 32% since last week (vs. 26% decline week prior)

Death rate has decreased to 0.5 daily deaths per million people

- 51% decrease since last week (vs. 40% decrease last week)
- 93% decrease since April 24 peak
- Proportion of deaths among those under 60 years of age increased from the prior week

Michigan Trends in Emergency Department Visits for COVID-19-Like Illness (CLI)
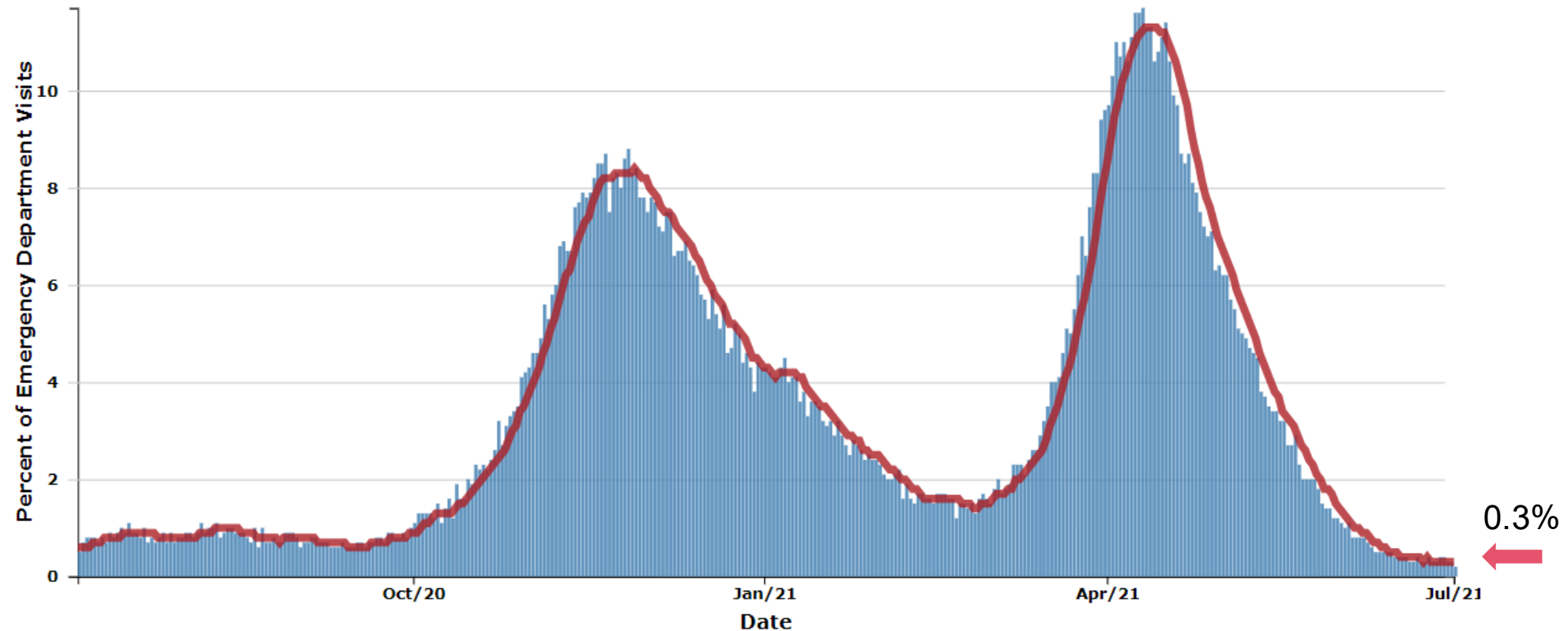
Source: https://covid.cdc.gov/covid-data-tracker/#ed-visits

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

Non-COVID Respiratory Illnesses increasing among those aged 0-4

Proportion of ED Visits with Coronavirus Like Illness (CLI) Symptoms or COVID-19 Diagnosis by Age Group - Michigan

0-4 year old COVID-19 CCDD Syndrome ED Visits by Discharge Diagnosis

5-17 year old COVID19 CCDD Syndrome ED Visits by Discharge Diagnosis

18-34 year old COVID19 CCDD Syndrome ED Visits by Discharge Diagnosis

35+ year old COVID19 CCDD Syndrome ED Visits by Discharge Diagnosis

Diagnosis Code by Month for 0-4 year old ED visits with CLI but No COVID-19 Diagnosis

- Upon presentation to emergency departments or urgent care, there is an increasing trend in the CLI/COVID-19 diagnosis syndromic indicator for the 0-4 year old age group (blue arrow in Figure 1)

- However, the majority of the discharge diagnoses for these ED visits are not attributed to COVID-19 (yellow arrow in Figure 2)

- A majority of these symptoms are unspecified fever, unspecified respiratory illness, cough, and unspecified viral infection (orange arrow in Figure 3)

- The 0-4 and 5-17 age group are experiencing respiratory illnesses that they would have otherwise experienced during the 2020-2021 year had there been no COVID-19 pandemic

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Average Hospital Admissions by Age

Source: CHECC & EM Resource
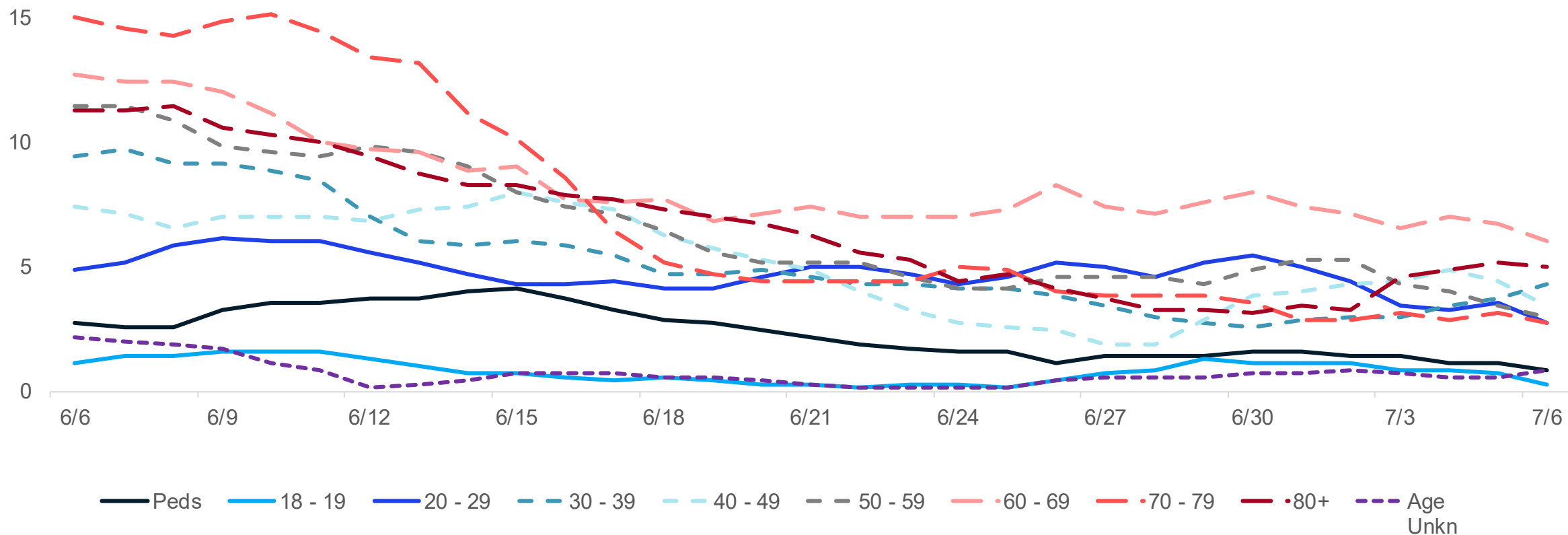
- Trends for daily average hospital admissions have decreased 12% since last week
- Trends within all age groups are decreasing or plateaued
- Over the past week, those 60-69 years have seen the highest number of avg. daily hospital admissions (6 admissions)

Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 3/1/2021 – 7/6/2021
Confirmed Positive & Persons Under Investigation (PUI)
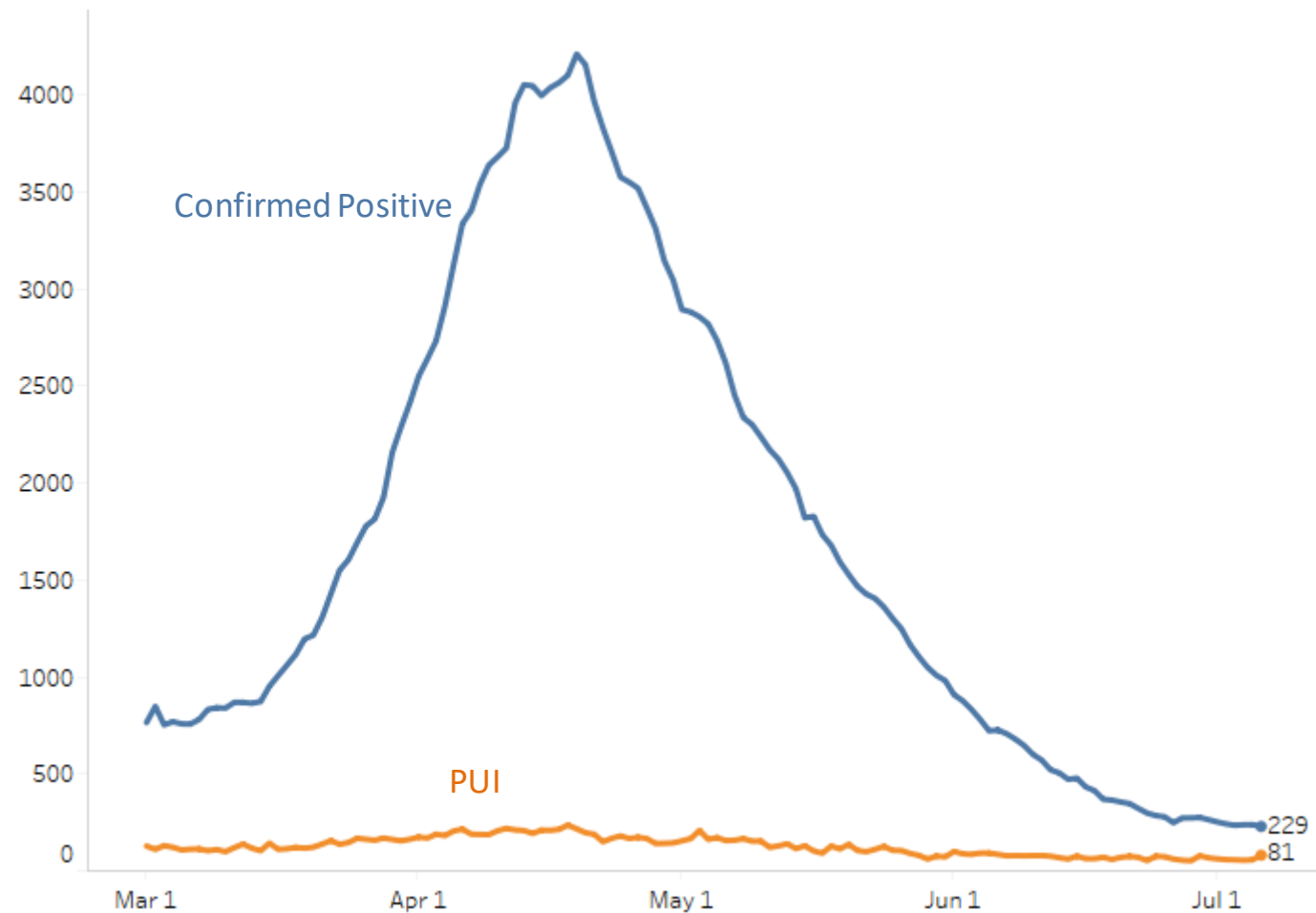
COVID+ census in hospitals continues to decline from the April 19th peak. This week is down 17% from the previous week (previous week was down 15%).

Hospitalizations are now near the minimum point of summer 2020.

Confirmed Positive

PUI

229
81

Hospitalized COVID Positive Long Term Trend (beginning March 2020)

4,365   3,941   4,211

304   709   229
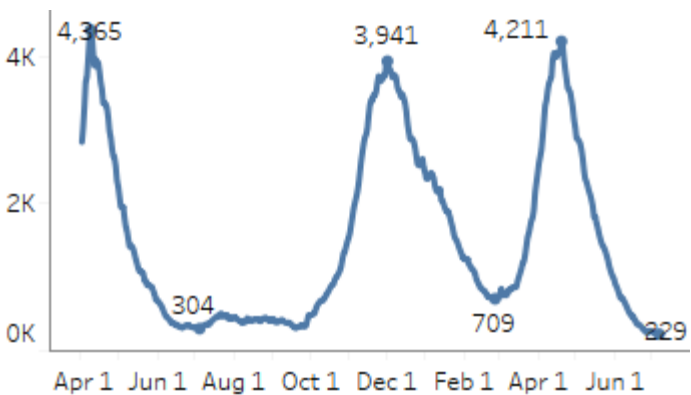
Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 3/1/2021 – 7/6/2021
Confirmed Positive by Region

Region 1
Region 2N
Region 2S
Region 3
Region 5
Region 6
Region 7
Region 8
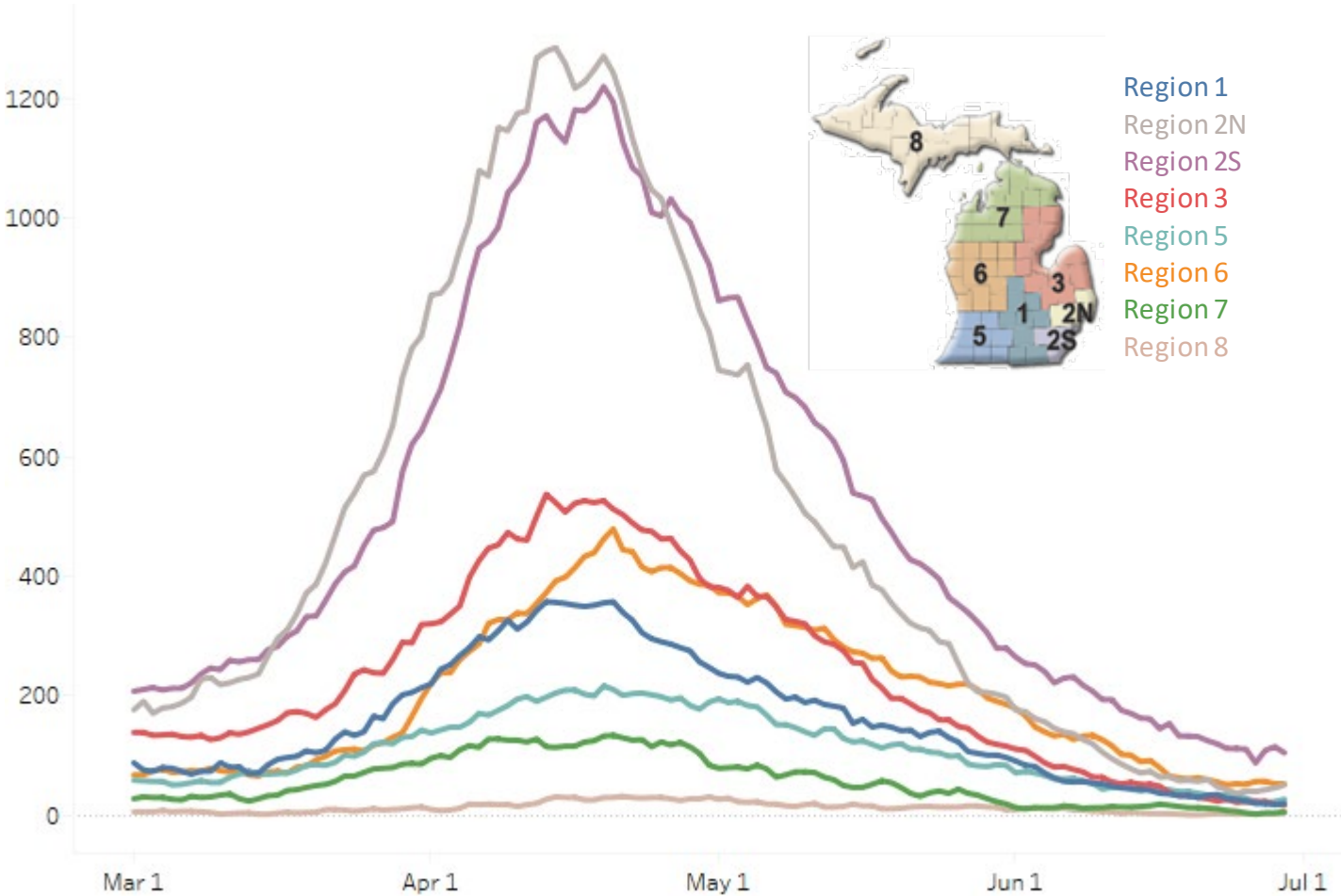
6 regions show decreasing or flat hospitalization trends this week. 2 regions have increased from last week (Region 3, Region 8).

All regions are now below 45/M hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	15 (-21%)	14/M
Region 2N	40 (-20%)	18/M
Region 2S	92 (-12%)	41/M
Region 3	18 (13%)	16/M
Region 5	25 (-4%)	26/M
Region 6	31 (-40%)	21/M
Region 7	4 (-20%)	8/M
Region 8	4 (33%)	13/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 7/6/2021
Confirmed Positive in ICUs
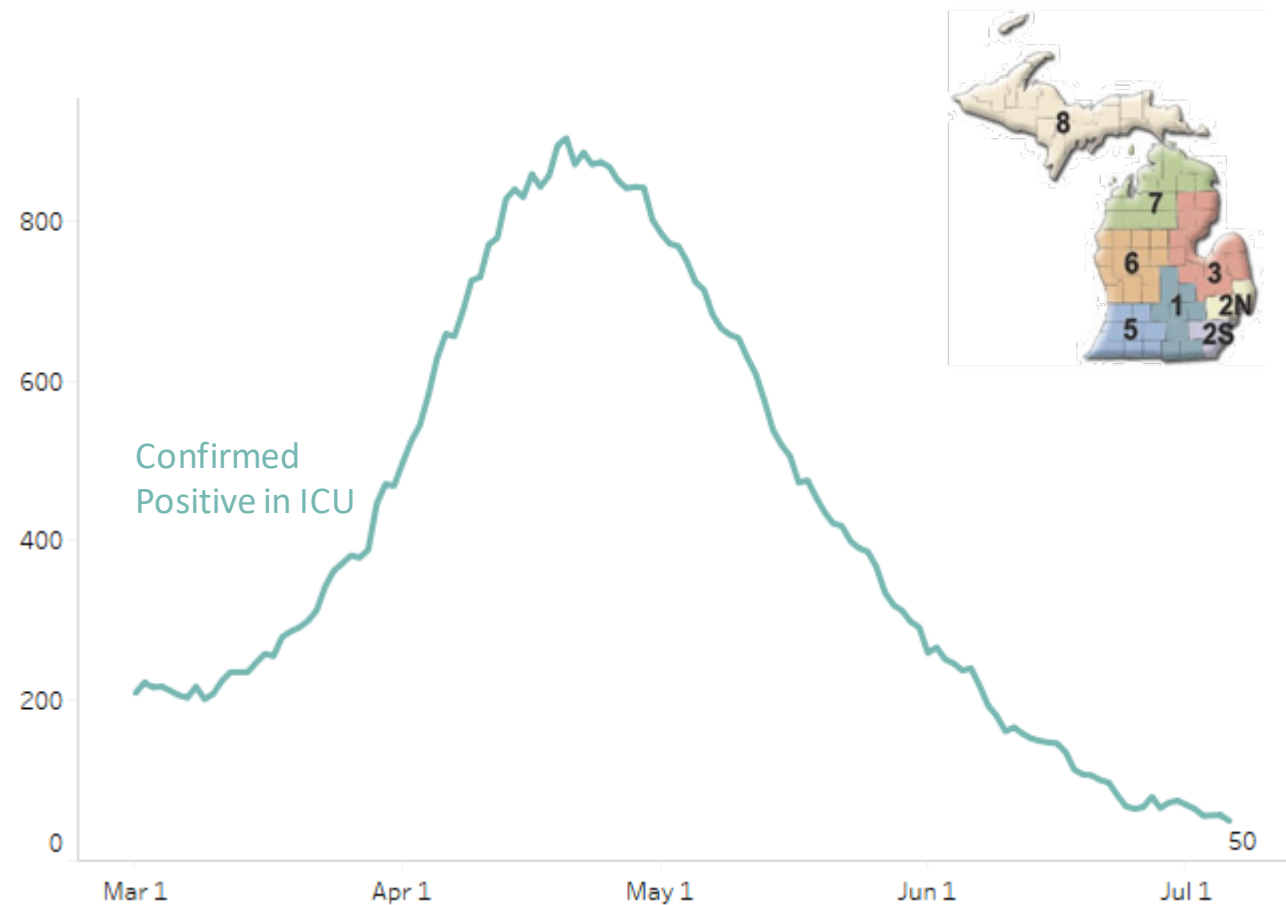
Overall, volume of COVID+ patients in ICUs has decreased 32% from last week, with all regions showing decreasing ICU census.

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	2 (0%)	73%	1%
Region 2N	6 (-33%)	70%	1%
Region 2S	26 (-19%)	77%	4%
Region 3	3 (-63%)	80%	1%
Region 5	5 (-38%)	69%	3%
Region 6	7 (-36%)	77%	3%
Region 7	1 (-50%)	60%	1%
Region 8	0 (-100%)	58%	0%

Average and total new deaths, by age group

Daily confirmed and probable deaths per million by age group (7 day rolling average)
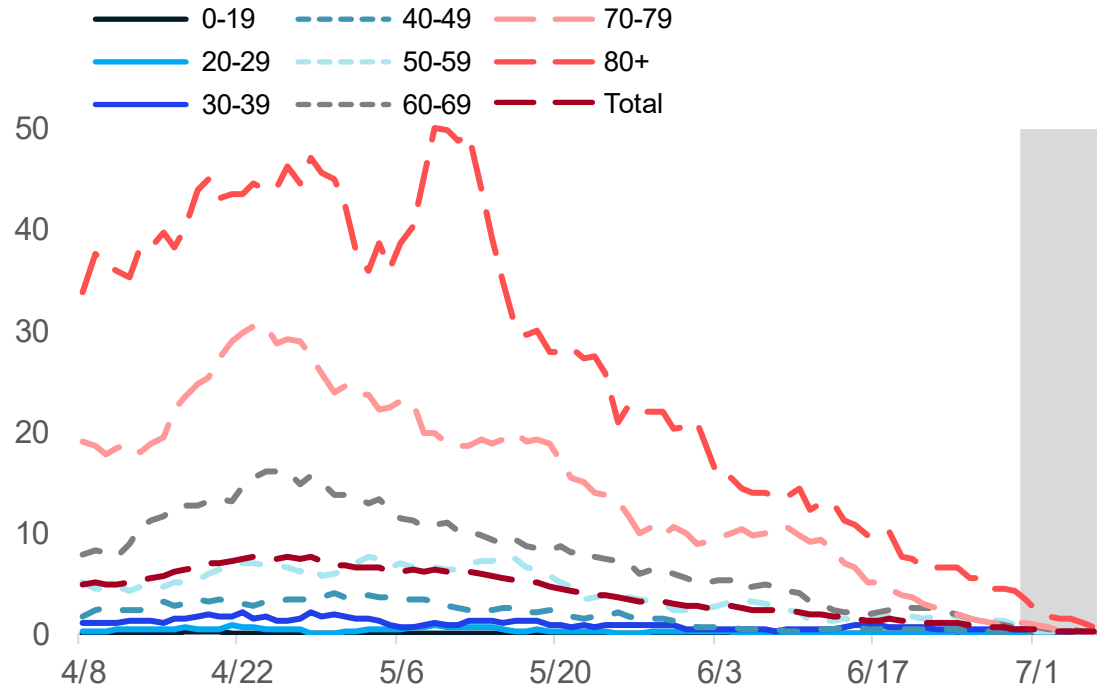
Total confirmed and probable deaths by age group (past 30 days, ending 6/29/2021)

Legend:
- 0-19
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80+
- Total

- 25% of deaths below age sixty

Bar chart values by age group:
- 0-19: 1-5
- 20-29: 1-5
- 30-39: 17
- 40-49: 12
- 50-59: 74
- 60-69: 95
- 70-79: 116
- 80+: 113
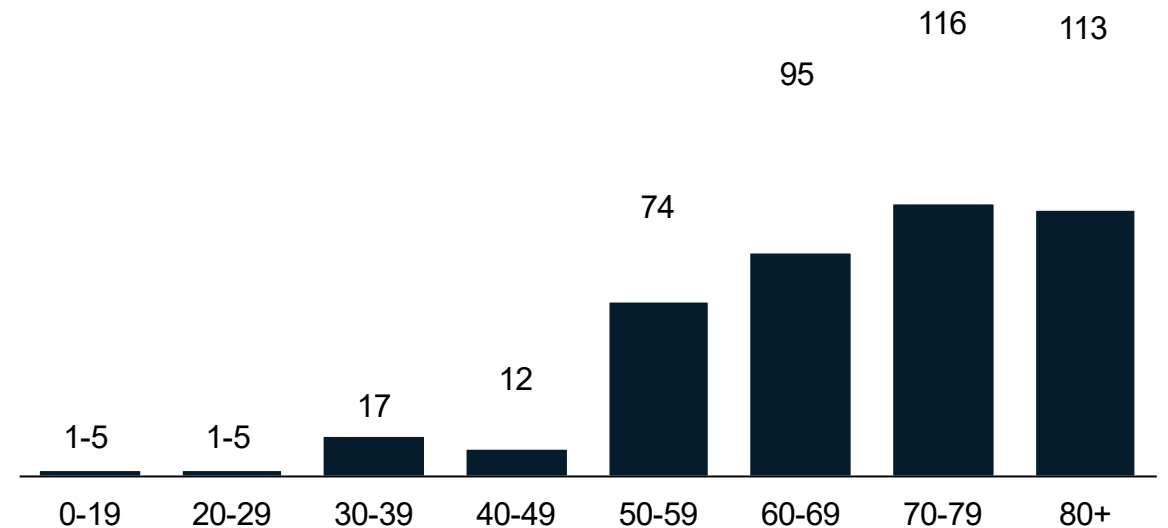
- Overall trends for daily average deaths have decreased 51% since last week

- Through 6/29, the 7-day avg. death rate is below 1.0 daily deaths per million people for those under the age of 80

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
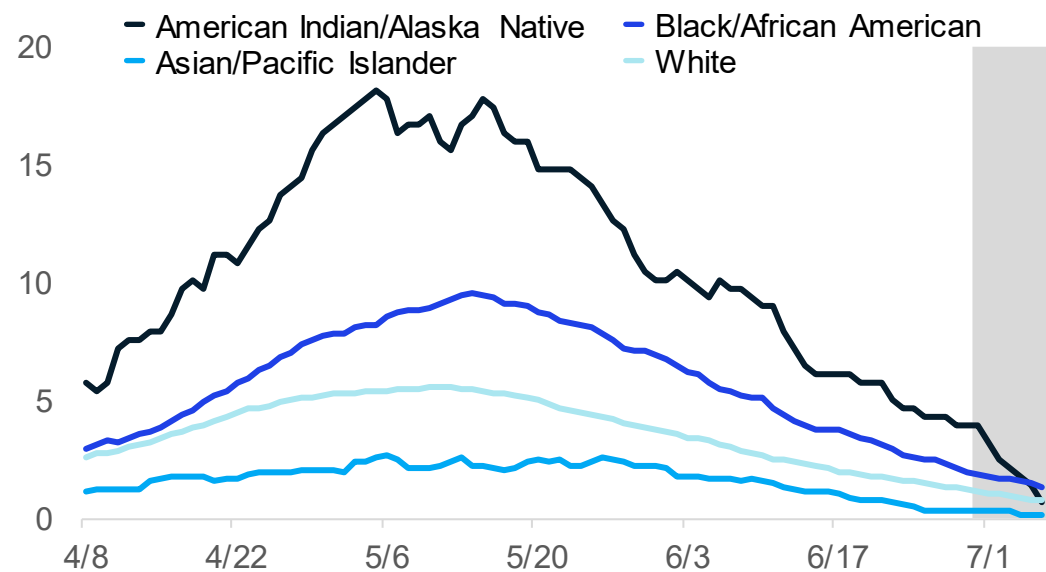
Average daily deaths per million people by ethnicity

Legend:
- Hispanic or Latino
- Not Hispanic or Latino
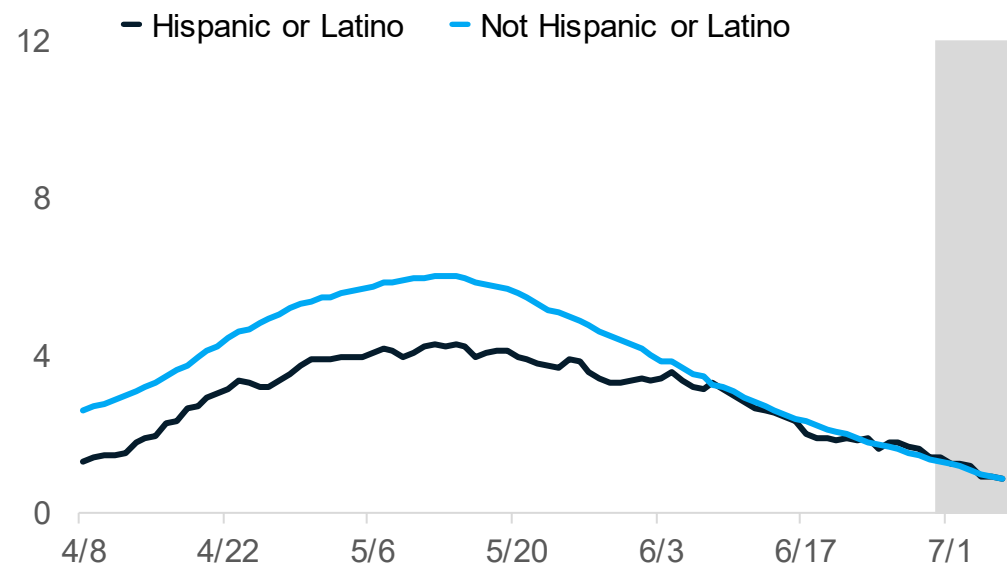
Updates since last week:

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

Note: Death 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

COVID-19 Vaccination

Administration (doses administered)

9th state in doses delivered, first doses provided and number of completed individuals (7/5/21)

81.2% adjusted administration ratio (excluding federal entities, CDC channel portfolio 7/6/2021)

18,730 first doses were administered last week (43,618 total): most administered frequently by pharmacies, local health departments, and hospitals (MCIR data only, will be undercount of all doses administered)

Coverage (people vaccinated)

62.6% of those 18+ have received first dose of vaccine

4,728, 832 people in Michigan have completed vaccination series (4,693,169 last week)

84.9% of people aged 65 or older have had first dose; 62.6% of people over age 18

Initiation highest among Asian, Native Hawaiian or Pacific Islander and American Indian/Alaskan Native individuals (MI COVID Vaccine Dashboard 7/6/21)

Less than 1% of Vaccinated Individuals Later Tested Positive for COVID-19 (Number of cases who are fully vaccinated (n= 7,447)

Doses Administered as of 7/6/2021

COVID Vaccine Doses Administered by Date / Week Ending Date (K = Thousand, M = Million)
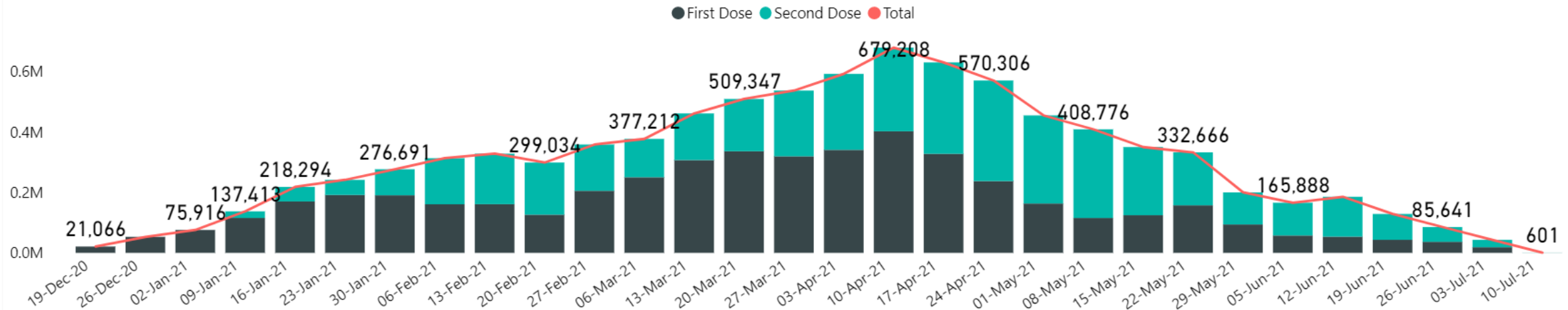
11,618,810 doses delivered to providers in Michigan
9,468,601 doses Administered (CDC tracker)

81.2% adjusted administration ratio (excluding federal entities, CDC channel portfolio 7/6/2021)
- 43,168 doses administered last week; on average 6K/day (446-12,319)

June 27- July 3 (inclusive), doses were most frequently administered by
- Pharmacies (25K) (MCIR data may undercount)
- LHD (6K) and hospitals (3.8K)
- Pediatricians (989), family practice (2.5K), and FQHCs (2.3K)

Nearly 4.7 Million Michiganders fully vaccinated

4.73 million people in the state are fully vaccinated

More than 80% 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 (50.6%), then NH American Indian (46.3%), NH White (44.0%), NH Black or African American Races (31.9%).

- Initiation is at 41.0% for those of Hispanic ethnicity

- Completion follows the same pattern

- 21.9% data missing or unknown

Vaccination Coverage in Michigan as of 7/6/21

Age Group	% At Least One Dose	% Fully Vaccinated	Number Fully Vaccinated
Total Population	51.6	47.4	4,728,832
≥ 12 years	60.0	55.0	4,728,748
≥ 18 years	62.6	57.8	4,530,849
≥ 65 years	84.9	80.6	1,423,280

Coverage by Race - State Level

● Initiation ● Completion

NH White 44.0% 40%
NH Black 31.9% 28.0%
NH Asian/Native Hawaiian/O... 50.6% 46.0%
NH American Indian/Alaska Native 46.3% 42.1%
Hispanic 41.0% 34.7%
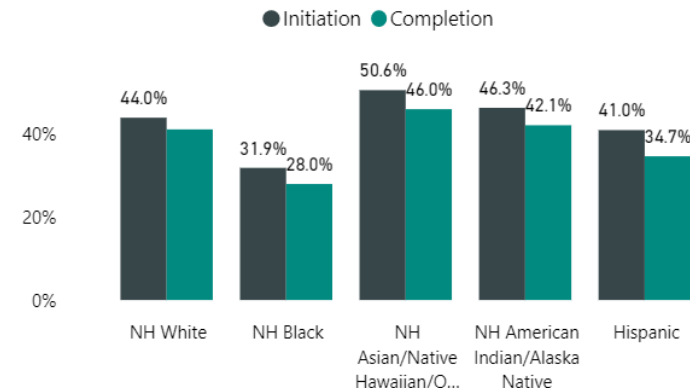
Potential COVID-19 Vaccination Breakthrough Cases

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

Michigan Data (1/1/21 through 6/29/21):

- 7,447 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 198 deaths (178 persons age 65 years or older)
  - 506 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 150 million people in the United States have been fully vaccinated as of June 21, 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.
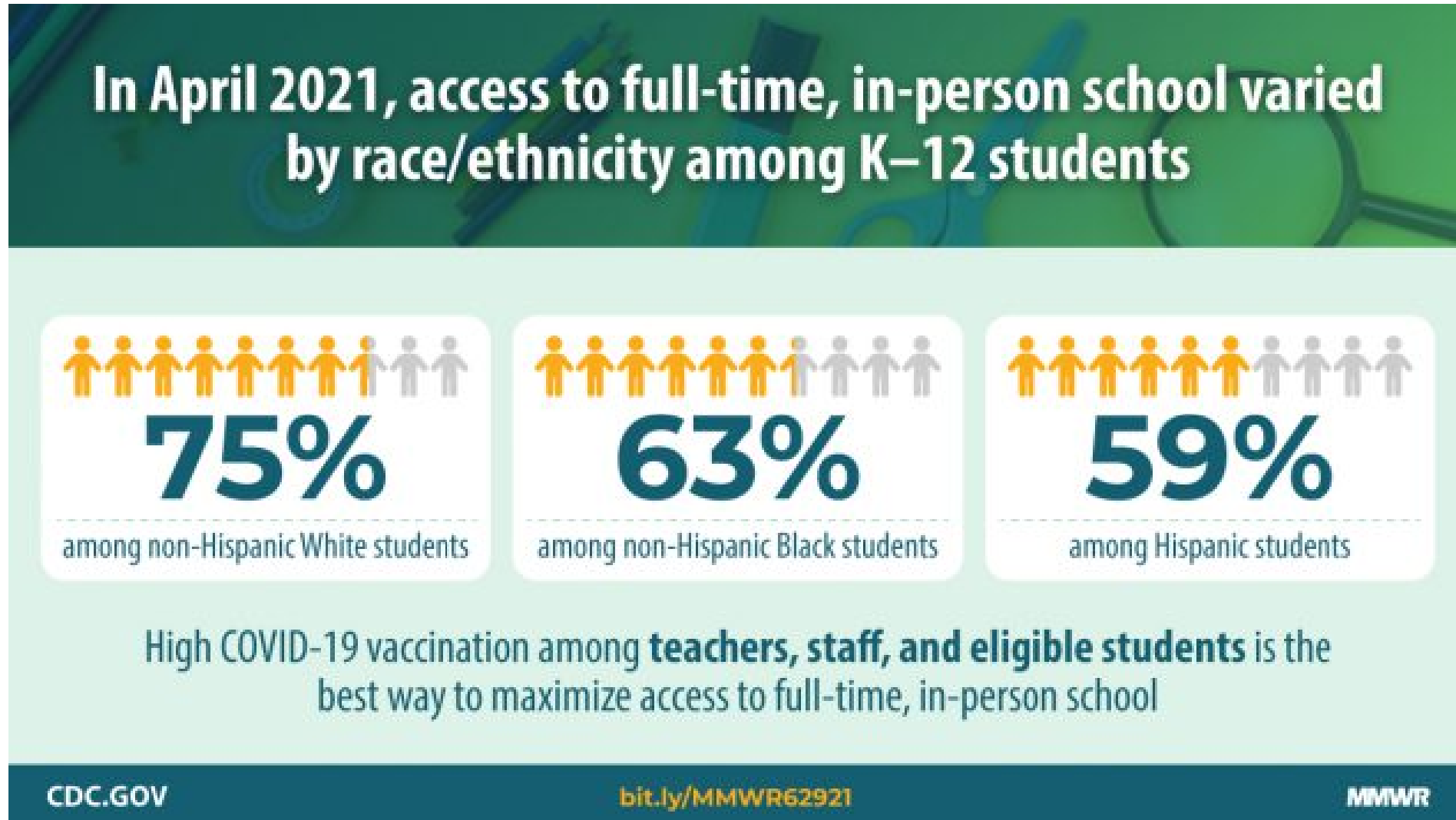
Science Round Up

Disparities in Learning Mode Access Among K–12 Students
- Reduced access to in-person learning is associated with poorer learning outcomes and adverse mental health in children
- School leaders should focus on providing safety-optimized in-person learning options across grade levels
- Vaccination and other efforts to reduce levels of community transmission should be intensified

Scientific flaws in JAMA Pediatrics article on masking for children
- Millions of children have been successfully wearing masks every day for months with no ill effects
- Extensive real-world evidence shows the effectiveness of mask to slow and prevent spread of SARS-CoV-2
- A great deal of concerns with this article including inconsistent methods, results, and conclusion
- Lead author is a known opponent of COVID mitigations and vaccinations and has had one article already retracted
- Findings from this study should not be used to remove mitigations measure for children in prevention of COVID-19

Disparities in Learning Mode Access Among K–12 Students During the COVID-19 Pandemic

Methodological and scientific flaws in the JAMA Pediatric paper examining masks for children

Extensive research shows the effectiveness of mask to slow and prevent spread of SARS-CoV-2

Walach, Weikl and Prentice state that masks increase CO2 exposure in children, particularly younger children. Many from the research community have commented on the letter, including:

- Concern with authors
  - Publicly declared bias against non-pharmaceutical interventions (e.g., masking) and COVID vaccinations
  - Lead author is not trained in pulmonology, infectious diseases, or epidemiology
  - Lead author has already had one paper on COVID-19 retracted
- Concern with methods
  - Equipment used is not intended for this type of experimentation and does not reflect the natural breath cycle
  - Authors did not use standard methods for measuring carbon dioxide
- Concern with results and conclusions
  - Results are not consistent with other studies measuring masking filtration
  - Baseline measure of CO_2 are not reflective of ambient air
  - No health metrics reported (e.g., pO_2 or pCO_2)

Source: Sabina Vohra-Miller and comments in Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy Children: A Randomized Clinical Trial | Pediatrics | JAMA Pediatrics | JAMA Network