

# MI COVID RESPONSE DATA AND MODELING UPDATE

**NOTE:** All data as of July 20 unless otherwise noted

July 21, 2021

# Executive summary

**Percent Positivity** (3.1%) is increasing for three weeks (up from 2.0% last week), and **Case Rate** (21.0 cases/million) is up for two weeks (up from 16.8 last week)

Michigan has the **28<sup>th</sup> lowest number of cases (31<sup>st</sup> last week)**, and **6<sup>th</sup> lowest case rate (15<sup>th</sup> last week)** in the last 7 days (source: CDC COVID Data Tracker)

**Percent of inpatient beds occupied by individuals with COVID** has increased 8% since last week and is increasing for one week. There are 1.4% inpatient beds occupied by COVID-19 patients.

Michigan has the **9<sup>th</sup> lowest inpatient bed utilization (13<sup>th</sup> last week)**, and the **9<sup>th</sup> lowest adult ICU bed utilization (15<sup>th</sup> last week)** in the country (source: US HHS Protect)

**Deaths** have decreased 6% since last week. There were 33 COVID deaths between Jul 7 and Jul 13, and the **Death Rate** is 0.5 deaths per million residents.

Michigan has the **T29<sup>th</sup> lowest number of deaths (40<sup>th</sup> last week)**, and **T13<sup>th</sup> lowest death rate (T21<sup>st</sup> last week)** in the last 7 days (source: CDC COVID Data Tracker)

The 7-day average **state testing rate** has decreased to 1,099.2 tests/million/day. **Daily diagnostic tests (PCR)** is 10.9K per day, and the **weekly average for PCR and antigen tests** conducted in Michigan is 19.9K.

9.67 million **COVID-19 vaccine** doses reported to CDC, 4.83 million people have completed their vaccine series

# Agenda

Status of COVID-19 Epidemiological Risk

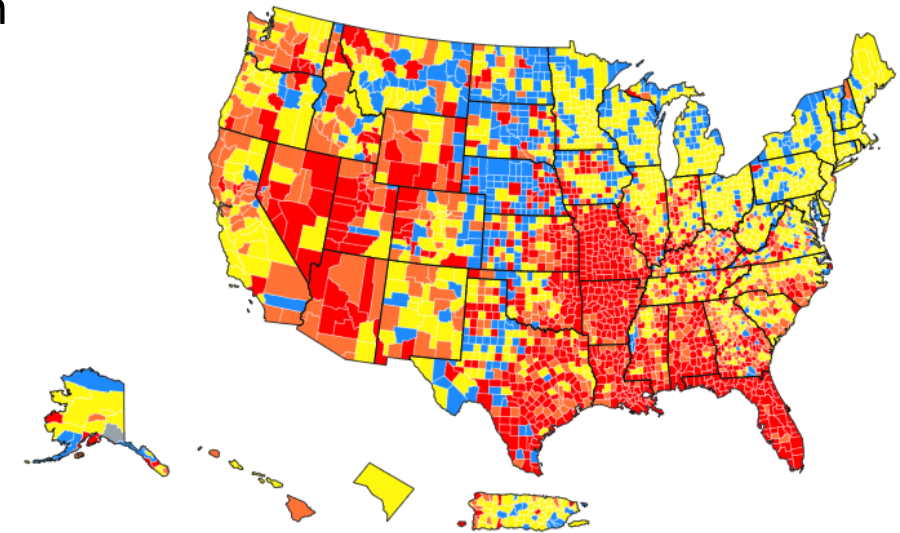
- **State-by-state comparison of epidemic spread**
- Michigan epidemic spread
- Public health response

Science round-up

# Global and National Comparisons

What we see today (data through 7/20):

- Globally, 190,787,754 cases and 4,093,572 deaths
- Countries with the highest number of cases are U.S. (34,126,560), India (31,144,229), and Brazil (19,376,574)
- Within the U.S., North Dakota (14,567 per 100,000), Rhode Island (14,440/100,000), & South Dakota (14,102/100,000) lead the nation in cumulative cases per population
- Michigan currently has identified 13,772 variants of concern (VOC)\*
  - Cumulatively, the vast majority are B.1.1.7 (13,301 which is 96.6%)
    - Other VOCs include B.1.351 (0.6%), P.1 (2.3%) and B.1.617.2(0.5%)
  - In the 4 most recent weeks,
    - 93.7% of specimens were Alpha (B.1.1.7)
    - 0.6% were Beta (B.1.351)
    - 3.3% were Gamma (P.1)
    - 2.4% were Delta (B.1.617.2)



● High ● Substantial ● Moderate ● Low ● No Data

\* CDC removed Epsilon (B.1.427/B.1.429) from the lists of VOCs

National Comparison

Spread

Public Health  
Response

Other  
Indicators

Science  
Round-up

# Key Messages: COVID-19 Spread

## **Statewide positivity has increased to 3.1% (last week: 2.0%)**

- One week percent change is up 51% (vs. up 14% last week)
- Increasing for three weeks (up 147% since Jun 26 low)
- Positivity is increasing in all MERC regions
  - Five regions remain <3%

## **Case rate (21.0 cases/million) is at an incidence plateau (last week: 16.8 cases/million)**

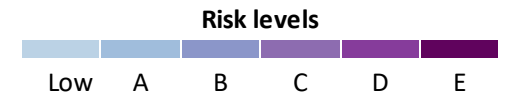
- One week increase of 9% (vs. 15% increase last week)
- Up for two and a half weeks (55% increase since Jun 26 low)
- Cases per million are increasing or plateaued in most MERC regions
- Select variants in Michigan: 13,301 confirmed Alpha (B.1.1.7); 82 confirmed Beta (B.1.351); 318 confirmed Gamma (P.1); and 71 confirmed Delta (B.1.617.2)

## **Number of active outbreaks is down 25% from last week**

- Fourteen new outbreaks were identified in the past week
- Most new outbreaks and most new and ongoing outbreaks within childcare and youth programs

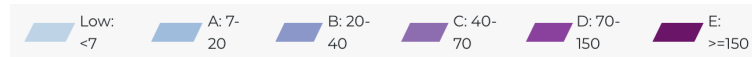
# Confirmed and probable case indicators

Table Date: 7/20/2021 (7 days from date table was produced: 7/13/2021)



	Overall Risk Level	Absolute Cases (per million)	CDC Case Trend	Average Percent Positivity	Positivity Trend	Tests (per million)	% IP Beds Occupied by COVID-19 Cases	% Occupied IP Beds Trend	Absolute Deaths (per million)	Death Trend
Detroit	B	21.4	elevated incidence plateau	2.7	Increase - 1wk	1145.5	1.5	Decrease - 12wk	0.4	<20 wkly deaths
Grand Rapids	A	19.0	decline [6 days]	2.9	Increase - 2wk	1017.9	1.4	Decrease - 12wk	0.8	<20 wkly deaths
Kalamazoo	B	25.8	elevated incidence plateau	3.6	Increase - 2wk	976.3	2.0	Decrease - 12wk	0.4	<20 wkly deaths
Saginaw	B	21.7	elevated incidence plateau	3.5	Increase - 2wk	909.5	0.5	Increase - 1wk	0.9	<20 wkly deaths
Lansing	A	16.6	elevated incidence plateau	2.2	Increase - 3wk	996.8	1.4	Decrease - 12wk	0.5	<20 wkly deaths
Traverse City	A	15.2	elevated incidence plateau	1.4	Increase - 3wk	942.6	0.6	Increase - 2wk	0.3	<20 wkly deaths
Jackson	B	19.3	elevated incidence plateau	3.9	Increase - 2wk	953.6	1.9	Decrease - 1wk	0.0	<20 wkly deaths
Upper Peninsula	B	24.5	elevated incidence plateau	2.3	Increase - 3wk	1012.9	0.4	Decrease - 2wk	0.0	<20 wkly deaths
Michigan	B	21.0	elevated incidence plateau	3.1	Increase - 3wk	1099.2	1.4	Increase - 1wk	0.5	Decrease - 11wk

Cases



Positivity



National Comparison

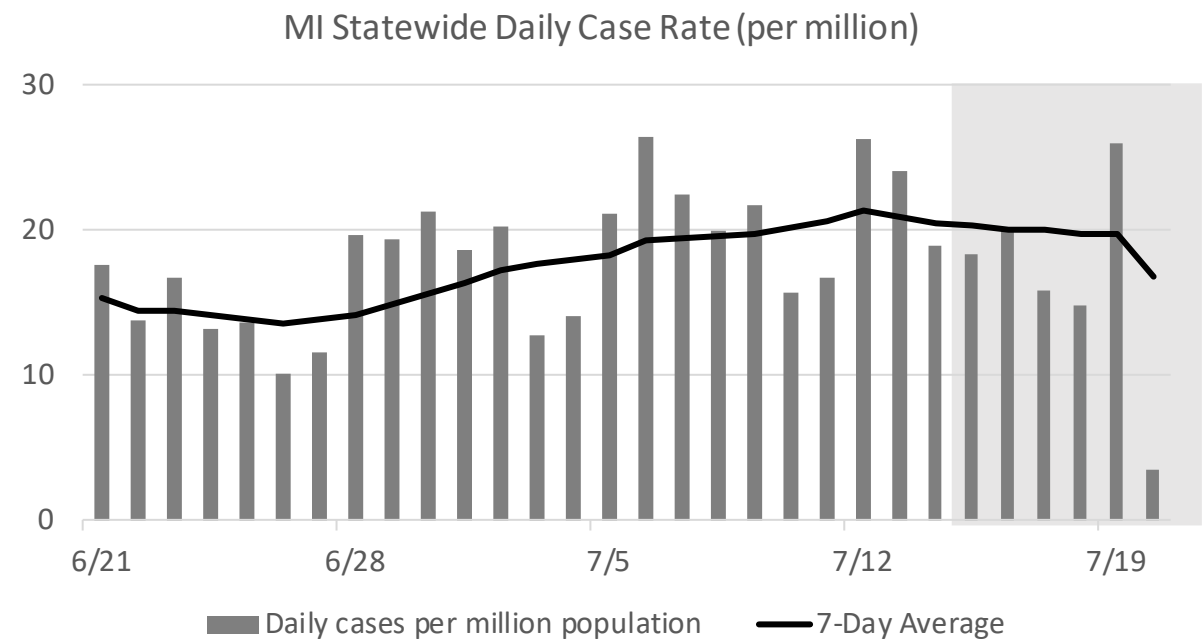
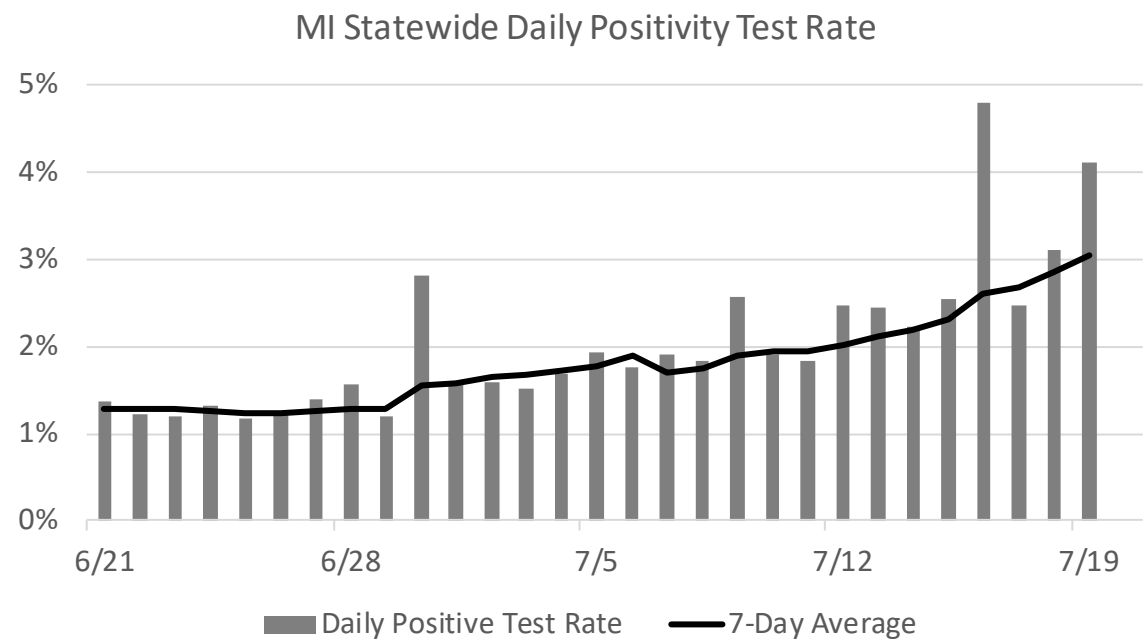
Spread

Public Health Response

Other Indicators

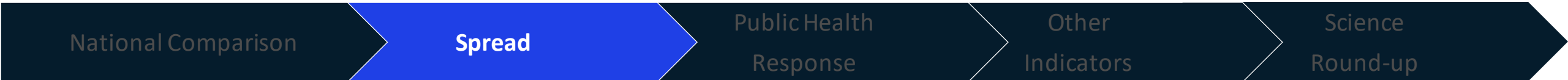
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# Percent Positivity and Case Rate Trends



- Positivity has been gradually increasing for the previous three weeks
- Case rates have been gradually increasing for the past two and a half weeks and backfill is expected in show future increases

\*Source: MDSS and [MiStartMap.info](https://mi.startmap.info)



# 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	28817	12.1	16.5	15.6	13.8	0
2	Grand Rapids	230120	350652	9860	2.9	12.6	0.7	2.0	0
3	Kalamazoo	140422	214801	5336	1.7	12.1	3.9	18.2	0
4	Saginaw	78759	122834	3265	1.1	14.0	0.6	4.9	0
5	Lansing	78140	119915	3163	1.0	12.8	2.9	24.2	0
6	Traverse City	53099	83462	1552	0.1	1.9	0.0	0.0	0
7	Jackson	41274	64091	1499	0.4	9.7	0.3	4.7	0
8	Upper Peninsula	34645	53875	1411	0.9	26.0	0.0	0.0	0
99	Michigan	1391988	2143877	54947	20.3	14.6	23.9	11.1	0

Note: Data as of 7/20; case data 7/13, hospitalization data 7/20. Hospitalization data is for pediatric patients (<18)

National Comparison

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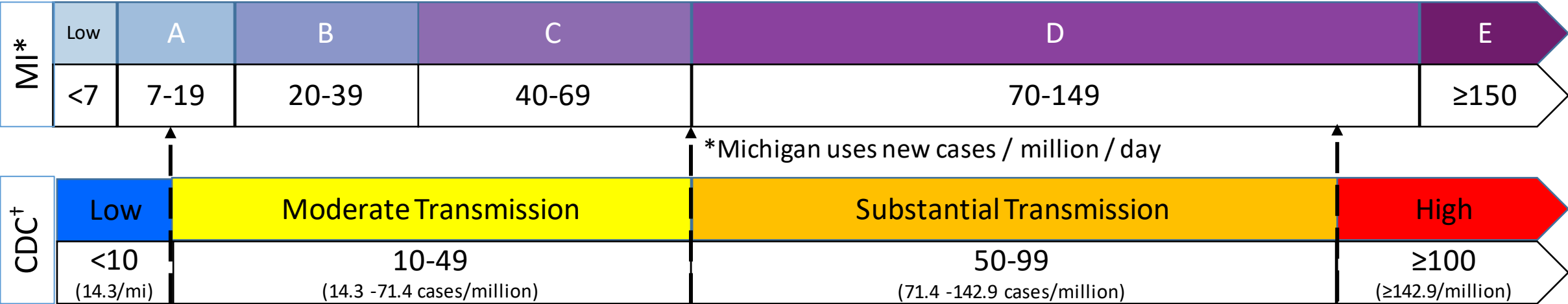
Other  
Indicators

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Round-up



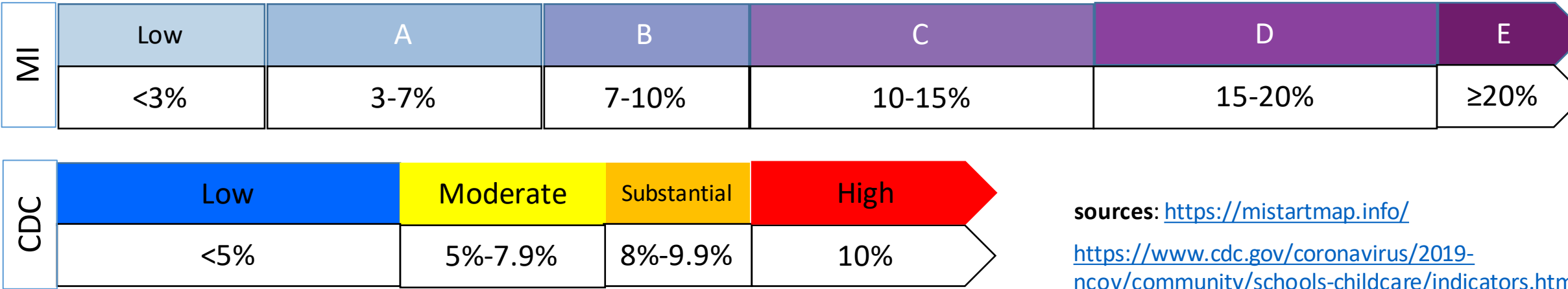
# Comparing CDC community transmission thresholds to MI levels

## Case Rate\*†



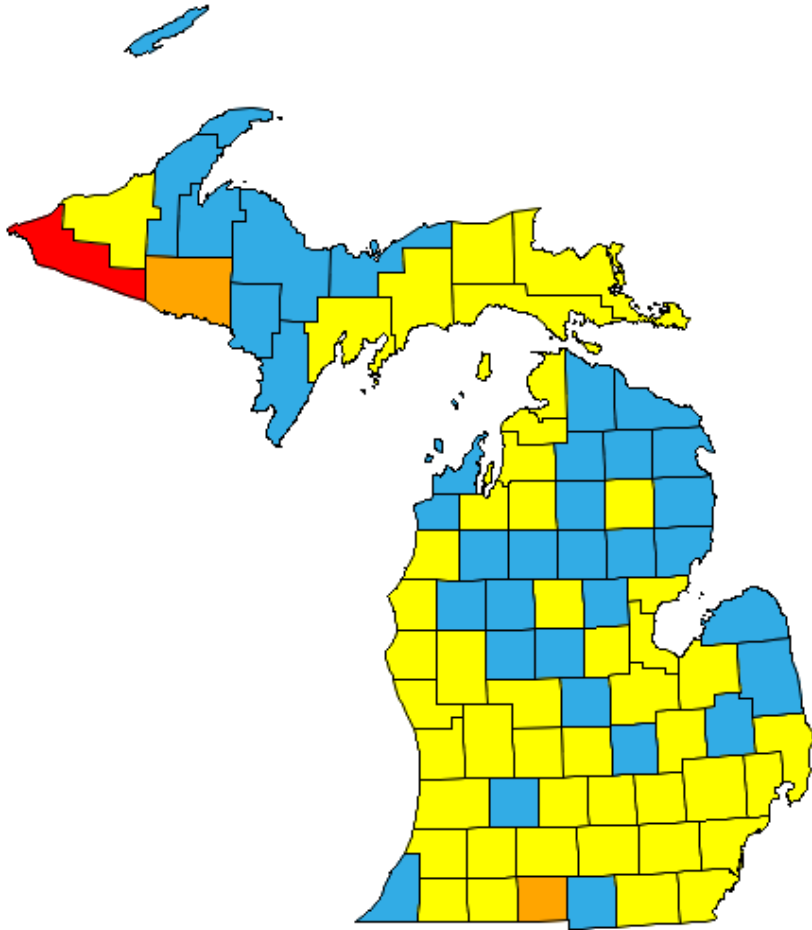
† CDC uses cases / 100,000 / week (conversion to MI metrics in paratheses)

## Percent Positivity

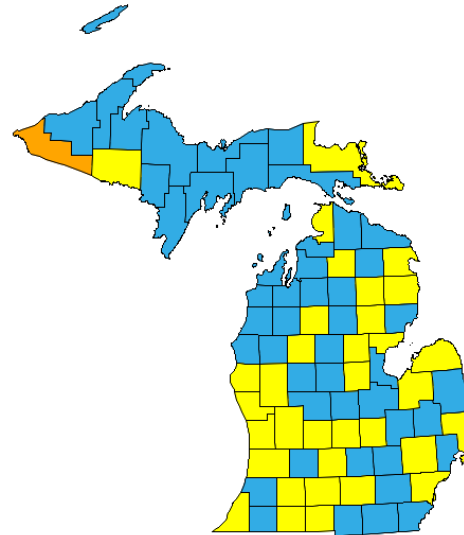


# Adjusted\* CDC Transmission Levels, 7/13-7/19

This Week, 7/13-7/19



Last week, 7/6-7/12



Transmission Levels	# of counties	This week	Last week
Low	34	48	
Moderate	46	34	
Substantial	2	1	
High	1	0	

## Updates since last week:

- 34 of 83 counties met low transmission level this week, a 14 county decrease
- 46 of 83 counties met moderate transmission classification, a 12 county increase from last week
- 2 of 83 counties met substantial transmission classification, a 1 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>

National Comparison

Spread

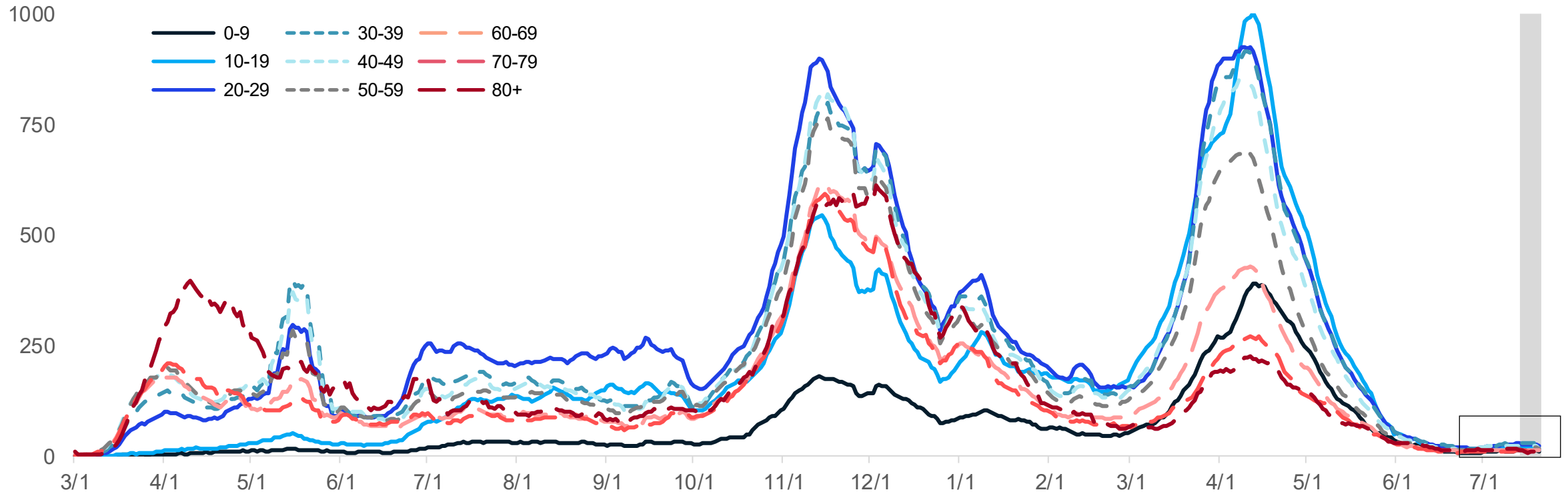
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# Age group: average new daily cases

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 12 and 31 cases per million (through 7/13)

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

National Comparison

Spread

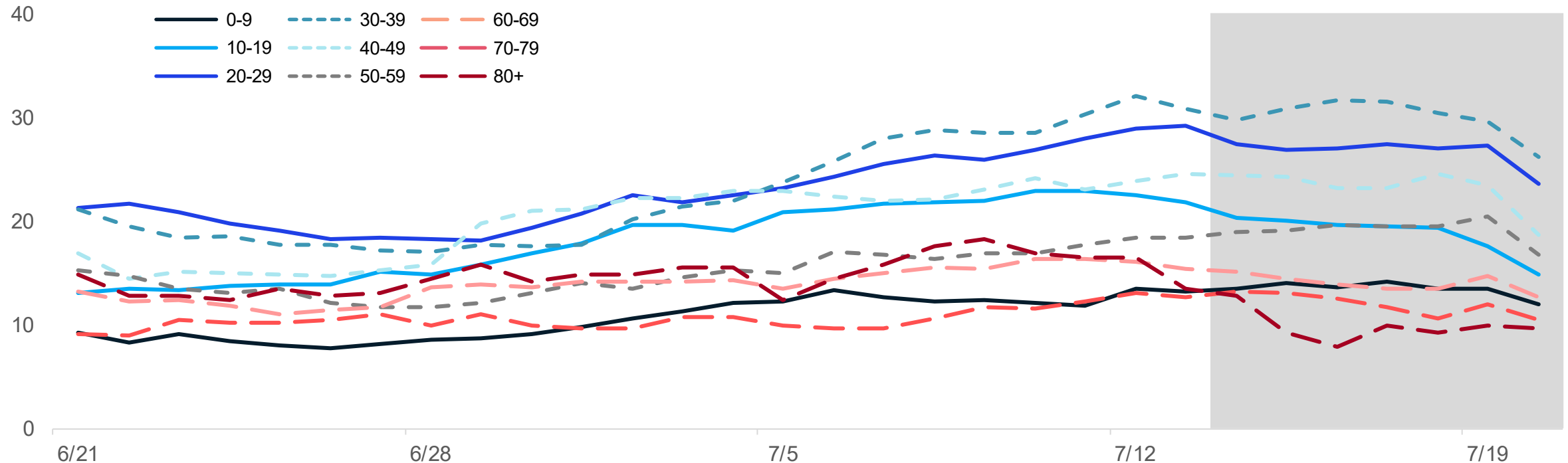
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# Age group: average new daily cases, last 30 days

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 12 and 31 cases per million (through 7/13)

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

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# 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	15.3	13.3	-1% (-1-5)
10-19	27.4	21.9	3% (+1-5)
20-29	40.3	29.2	20% (+7)
30-39	37.4	30.9	20% (+6)
40-49	29.0	24.6	10% (+1-5)
50-59	24.9	18.4	8% (+1-5)
60-69	19.7	15.5	7% (+1-5)
70-79	9.7	12.7	31% (+1-5)
80+	5.6	13.5	-7% (-1-5)
Total <sup>¶</sup>	210.3	21.0	9% (17.4)

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

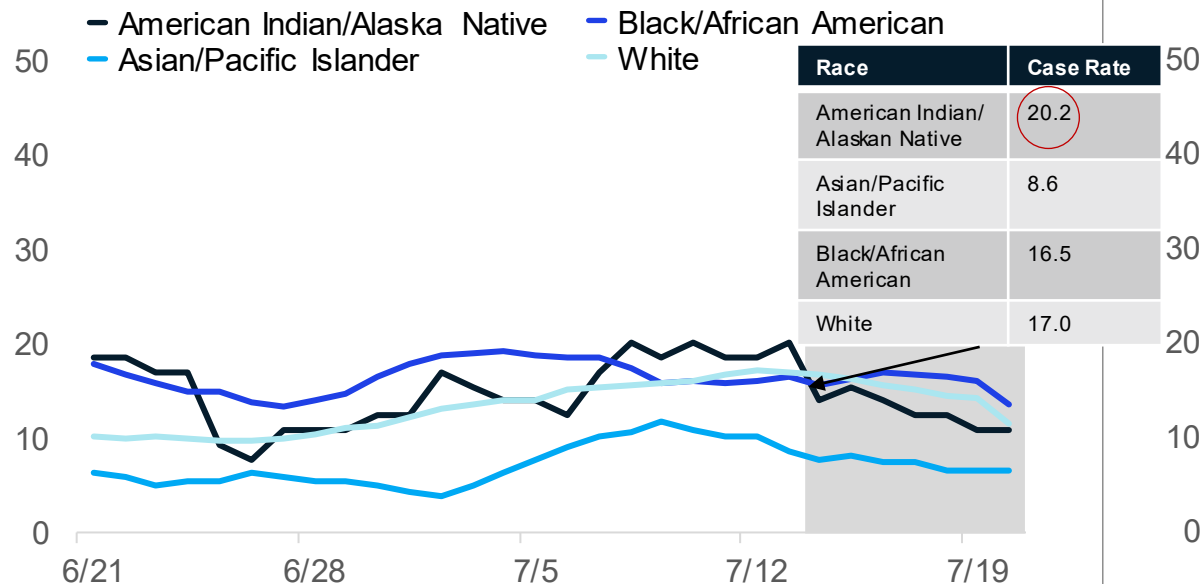
- Average daily number of cases (40) is highest for those aged 20-29
- Avg. daily case rate (30.9 cases/mil) is currently highest for 30-39
- Case rates for all age groups are between 12 and 31 cases per million
- Case rate trends are no longer decreasing and have entered an incidence plateau
- Case rates bottomed out on June 26, 2021

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

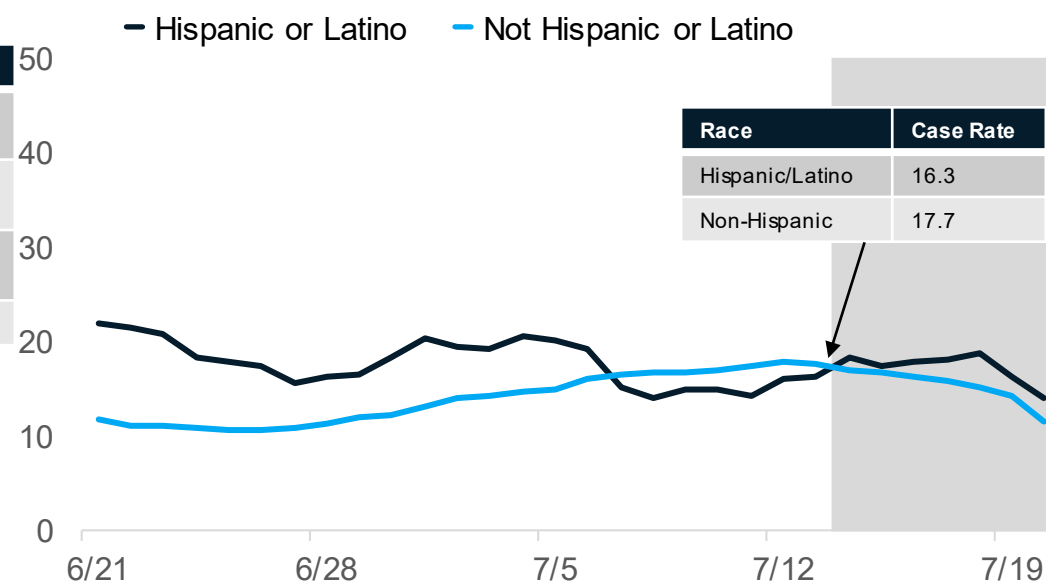
¶ Total may not reflect state due to missing age data

# 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



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



## Updates since last week:

- Cases per million are plateaued for all races and ethnicities
- **American Indian/Alaskan Natives have the highest case rates**
- In the past 30 days, 16% (↔) of race data and 20% (↓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

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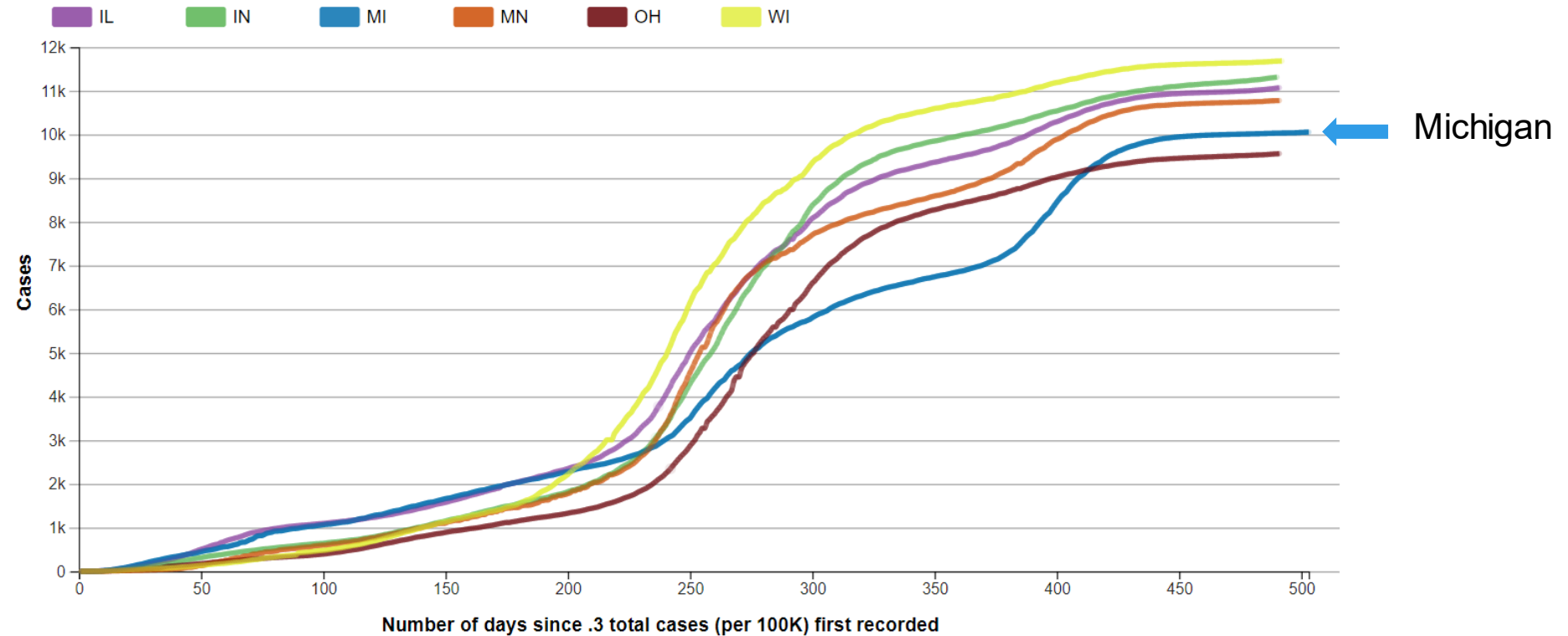
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# Cumulative COVID-19 Case Rates: Midwest Comparison

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.



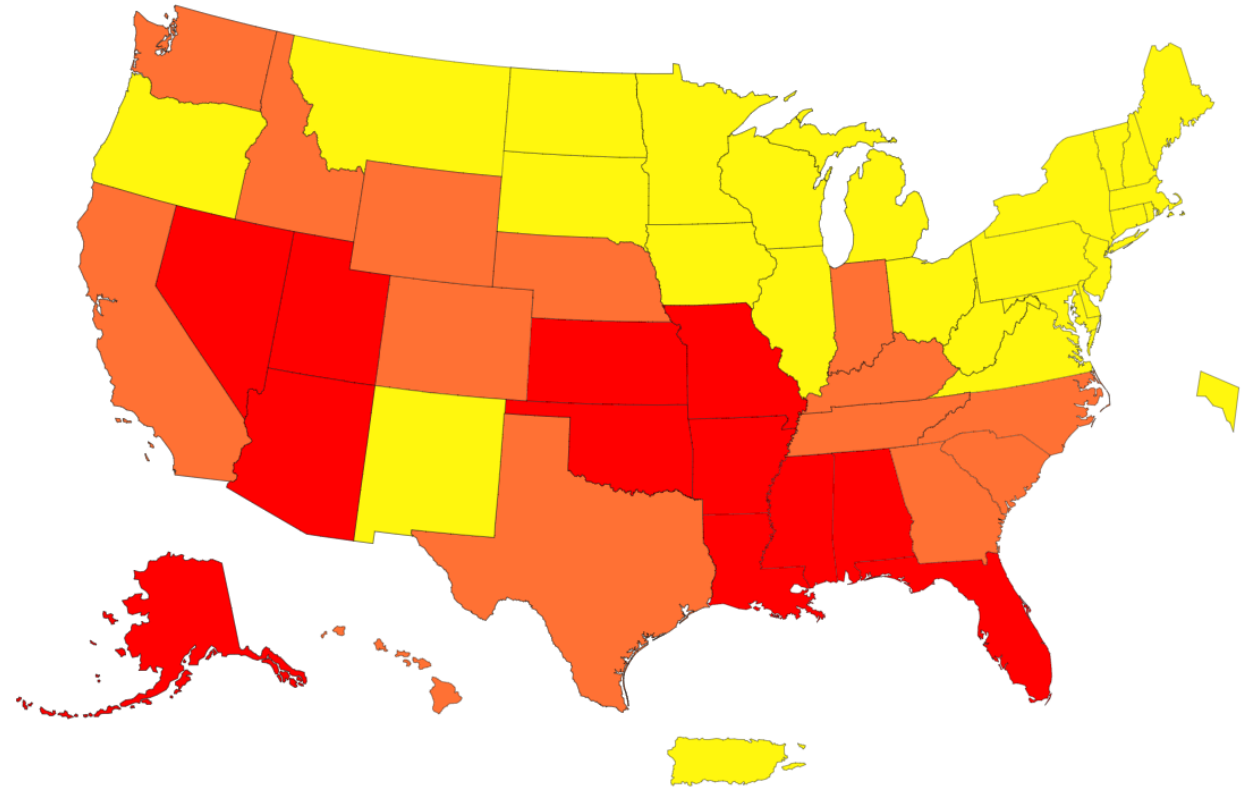
- Cumulative incidence per 100,000 cases in Michigan has been lower than other states in the Midwest following spring 2020 surge
- Michigan's mitigation policies helped control the spread of SARS-CoV-2 relative to other states in the Midwest, particular during surge in November and December
- The current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

Source: CDC – [COVID Data Tracker](#)

# CDC Transmission Levels, U.S. state (data through 7/20/2020)

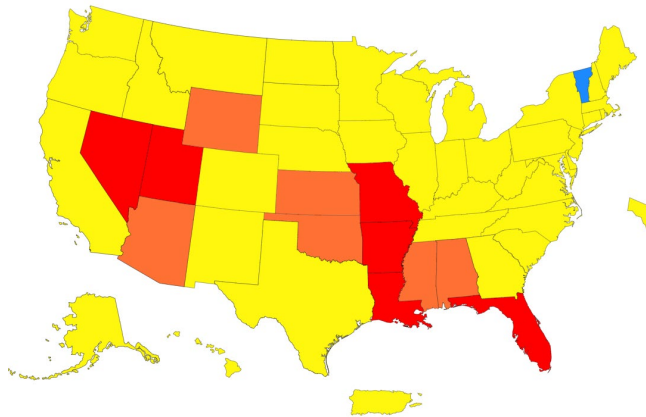
- Michigan is now at moderate transmission level
  - 21.0 Case/100,000 population
  - 3.1% positivity
- The number of jurisdictions at low is the down 1 from 7 days ago (3 blue colored jurisdictions)
- 14 jurisdictions have substantial transmission (orange states); up 8 from 7 days ago
- 13 jurisdictions have high transmission (red states); up 8 from 7 days ago

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



Last Week

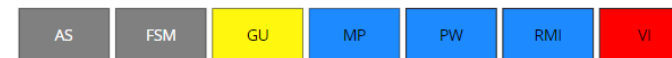
Level of Community Transmission of COVID-19, by State/Territory



Territories



Territories



National Comparison

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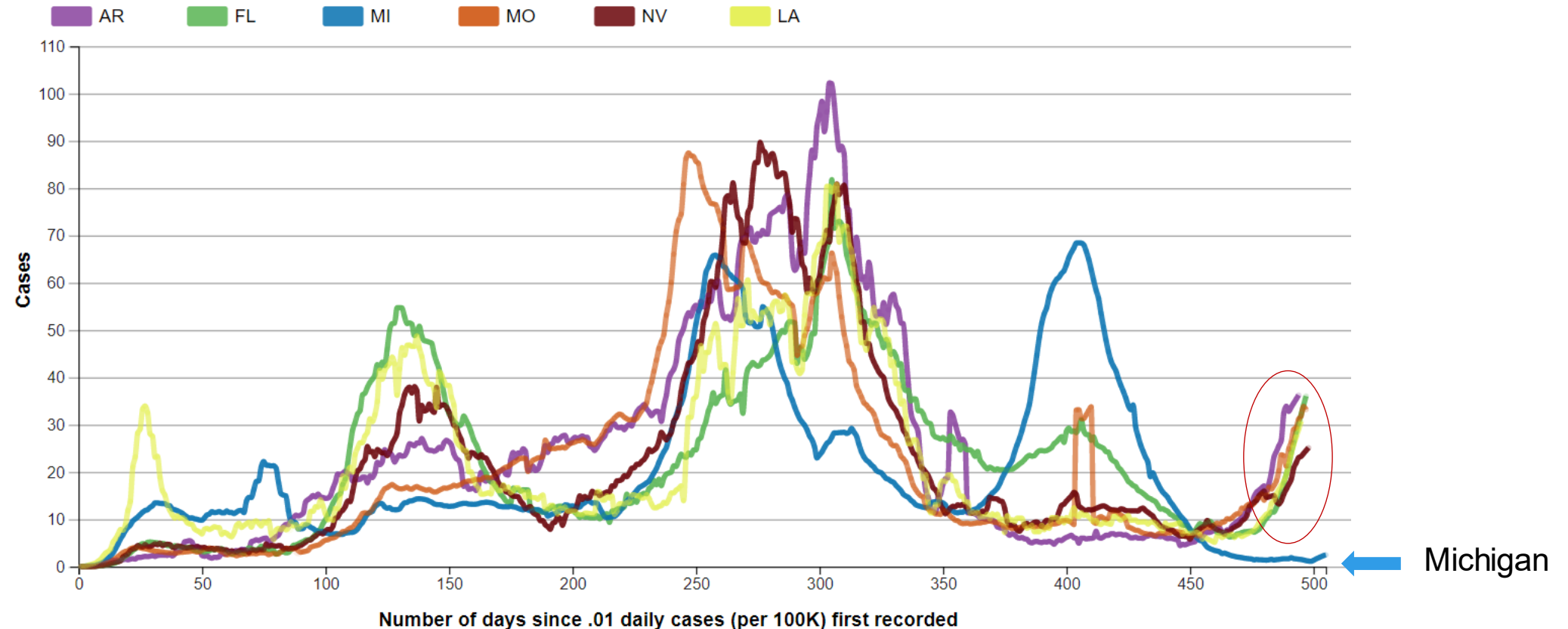
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# Cumulative COVID-19 Case Rates: States with high Delta Comparison

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

Source: [CDC COVID Data Tracker – State Trend Comparison](#)

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# 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](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

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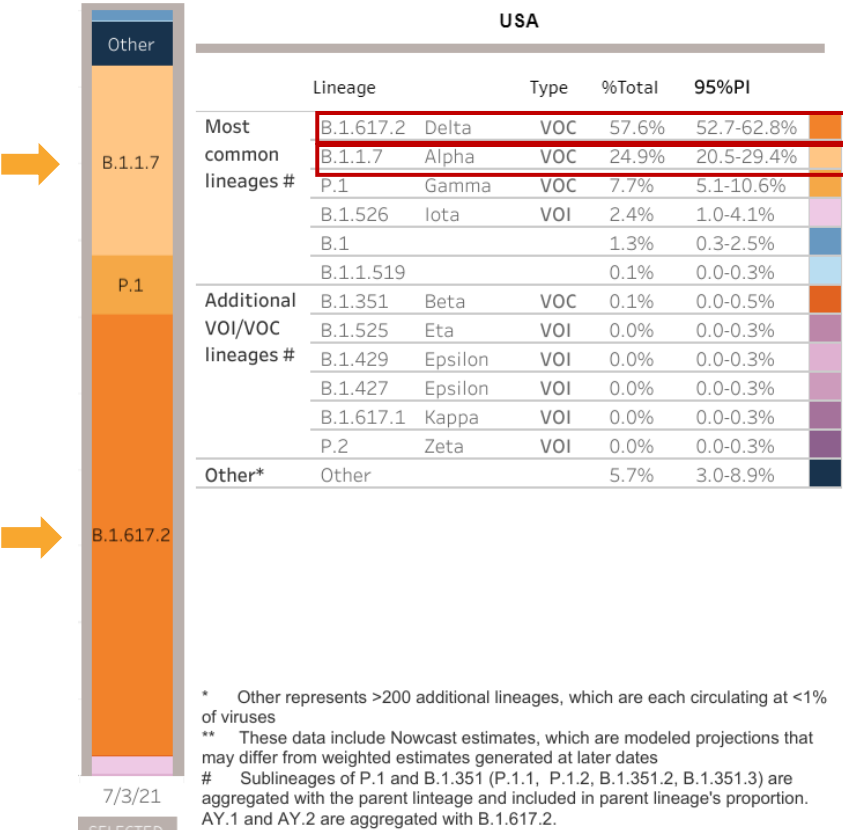
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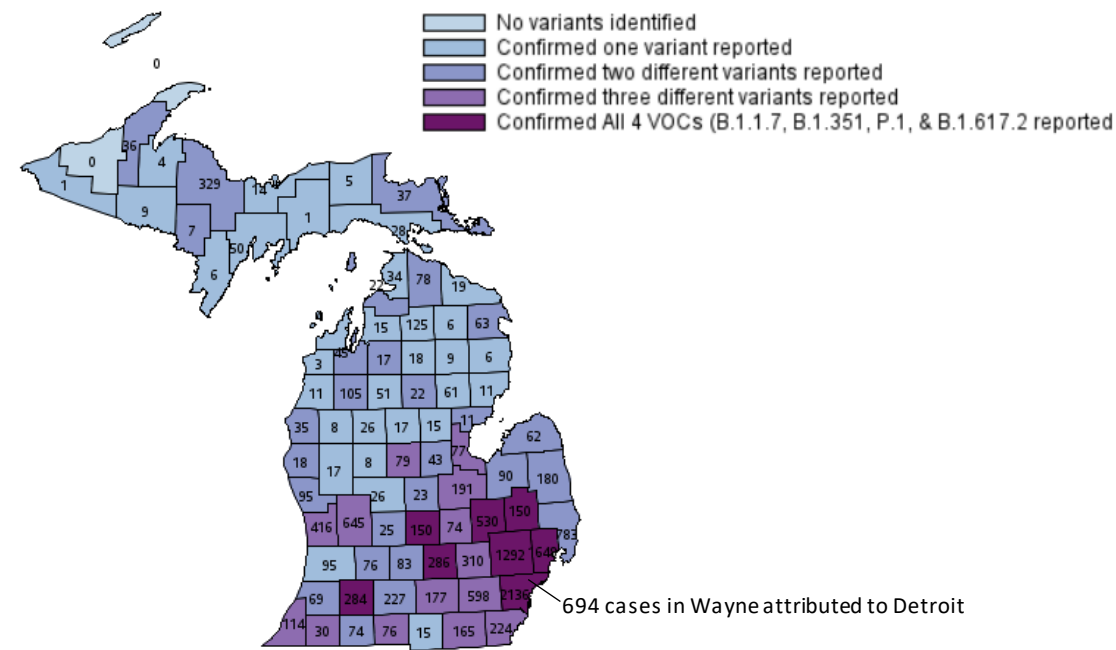
# Identified COVID-19 Cases Caused by All Variants of Concern (VOC) in US and Michigan

SARS-CoV-2 Variants Circulating in the United States, Jun 20 – Jul 3 (NOWCAST)



Data last updated July 20, 2021  
Source: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions> and MDSS

Variants of Concern in Michigan, Jul 20



Variant	MI Reported Cases <sup>¶</sup>	# of Counties	CDC est. prevalence for MI
B.1.1.7 (alpha)	13,301*	81	NA
B.1.351 (beta)	82	23	NA
P.1 (gamma)	318	35	NA
B.1.617.2 (delta)	71	21 (↑5)	NA

\* 533 cases within MDOC; <sup>¶</sup> 189 cases with county not yet determined

# Number of outbreak investigations by site type, week ending Jul 15

Site type	Outbreaks by ongoing/new classification, #			Visibility <sup>1</sup>
	Ongoing	New	Total	
CHILDCARE/YOUTH PROGRAM	5	4	9	●
*COMMUNITY EXPOSURE - OUTDOOR	2	4	6	●
MANUFACTURING, CONSTRUCTION	3	1	4	●
SNF/LTC/OTHER ASSISTED LIVING	4	0	4	●
HEALTHCARE	1	2	3	●
*SOCIAL GATHERING	0	2	2	●
OFFICE SETTING	2	0	2	●
*RETAIL	2	0	2	●
CORRECTIONS	1	0	1	●
COLLEGE/UNIVERSITY	1	0	1	●
AGRICULTURAL/FOOD PROCESSING	0	1	1	●
*RESTAURANTS AND BARS	1	0	1	●
*COMMUNITY EXPOSURE - INDOOR	0	0	0	●
*PERSONAL SERVICES	0	0	0	●
OTHER	0	0	0	●
*SHELTERS	0	0	0	●
*RELIGIOUS SERVICES	0	0	0	●
K-12 SCHOOL	0	0	0	●
TOTAL	22	14	36	●

● Easier to identify outbreak  
● Harder to identify outbreak

Total number of active outbreaks is **down 25%** from previous week, with 14 new outbreaks identified (two more than last week)

Childcare/Youth Programs and Outdoor Community Exposures both reported the most number of new outbreaks (4 each), followed by healthcare, and social gatherings (2 each), and manufacturing/construction, and agriculture/food processing setting (1 each).

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

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

Hospitalizations and ICU utilization are plateaued or increasing

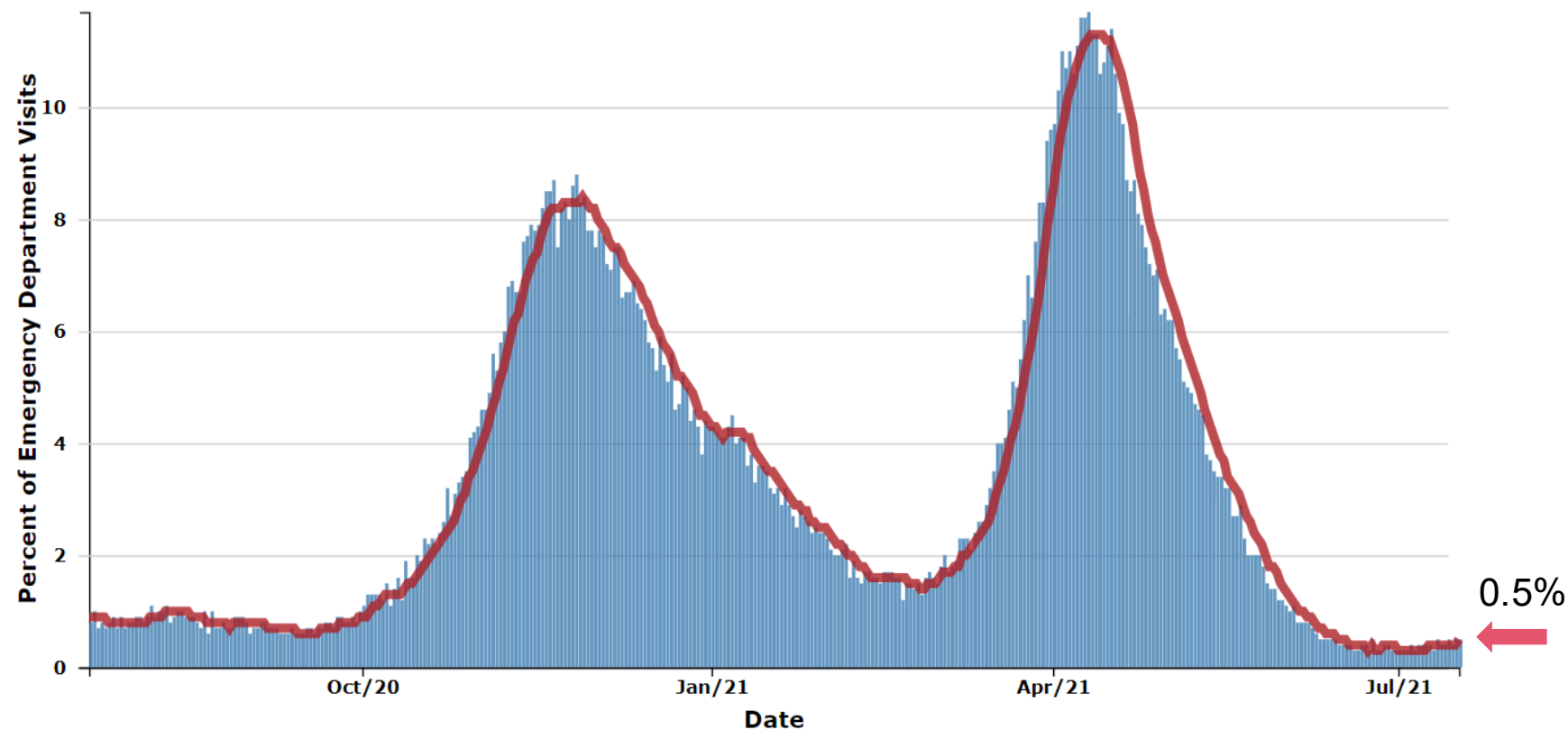
- COVID-like illness (CLI) is up to 0.5% (vs. 0.3% last week)
- MIS-C is highest among school age children and Blacks/African Americans
- Hospital admissions are plateaued or increasing for most age groups
- Hospitalizations up 13% since last week (vs. 17% decline week prior)
- Six regions are showing increasing trends in hospitalization trends this week
  - All regions remain at or below 40/M hospitalized
- Volume of COVID-19 patients in intensive care has increased 16% since last week (vs. plateau week prior)

Death rate has increased to 0.5 daily deaths per million people

- Steady plateau since last week (vs. 40% decrease last week)
- 94% 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 Visits for COVID-19-Like Illness (CLI)

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



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

# Multisystem Inflammatory Syndrome in Children (MIS-C)

Multisystem Inflammatory Syndrome in Children (MIS-C) Michigan Data Summary 7/15/2021

# Cases Confirmed and Reported to CDC*	158
MIS-C associated Deaths	5 or fewer
Cases admitted to ICU	112 (70.9%)
Onset Date Range	4/14/20 to 7/2/2021
Age Range	0-20 years

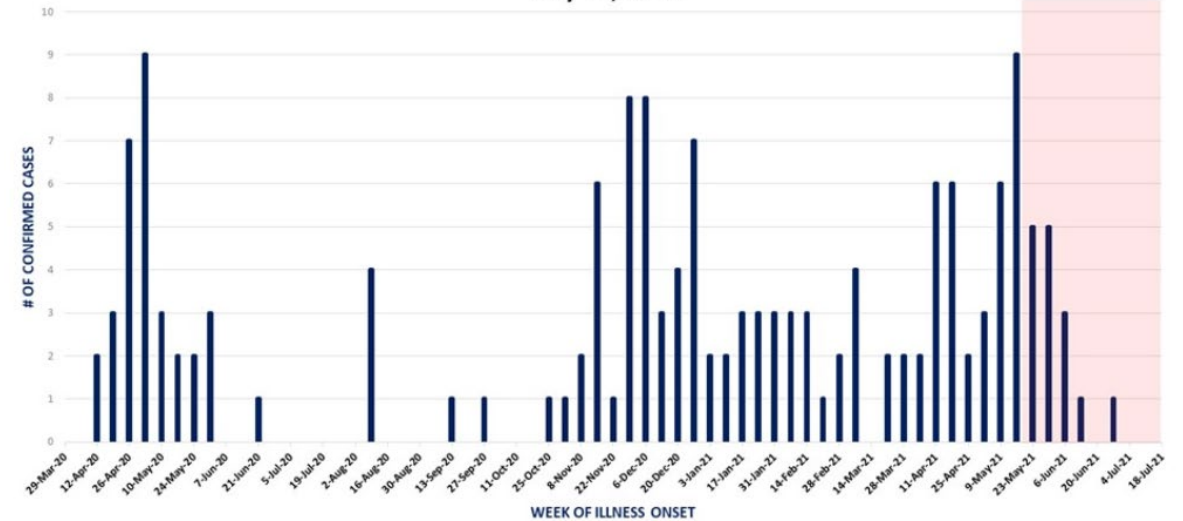
\*Meets CDC Case definition

<https://emergency.cdc.gov/han/2020/han00432.asp>

DEMOGRAPHIC INFORMATION (N=158)

Age Group	Count	%	Race	Count	%
0-4 yrs	41	25.9%	Black/African American	70	44.3%
5-10 yrs	64	40.5%	Caucasian	64	40.5%
>10 yrs	53	33.6%	All Others / Unknown	24	15.2%
Gender	Counts	%	Ethnicity	Count	%
Male	92	58.2%	Not Hispanic or Latino	113	71.5%
Female	66	41.8%	Hispanic or Latino	12	7.6%
Unknown	0	0.0%	Unknown	33	20.9%

Confirmed Cases of MIS-C by Week of Onset in Michigan from April, 2020 through July 15, 2021



\*The shaded red area represents the most recent eight weeks of data, in which reporting of cases is still incomplete. The actual number of MIS-C cases during this period is likely larger and these numbers will increase as additional case reports are incorporated.

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

Source: [MDHHS and MIS-C Data and Reporting](#)

National Comparison

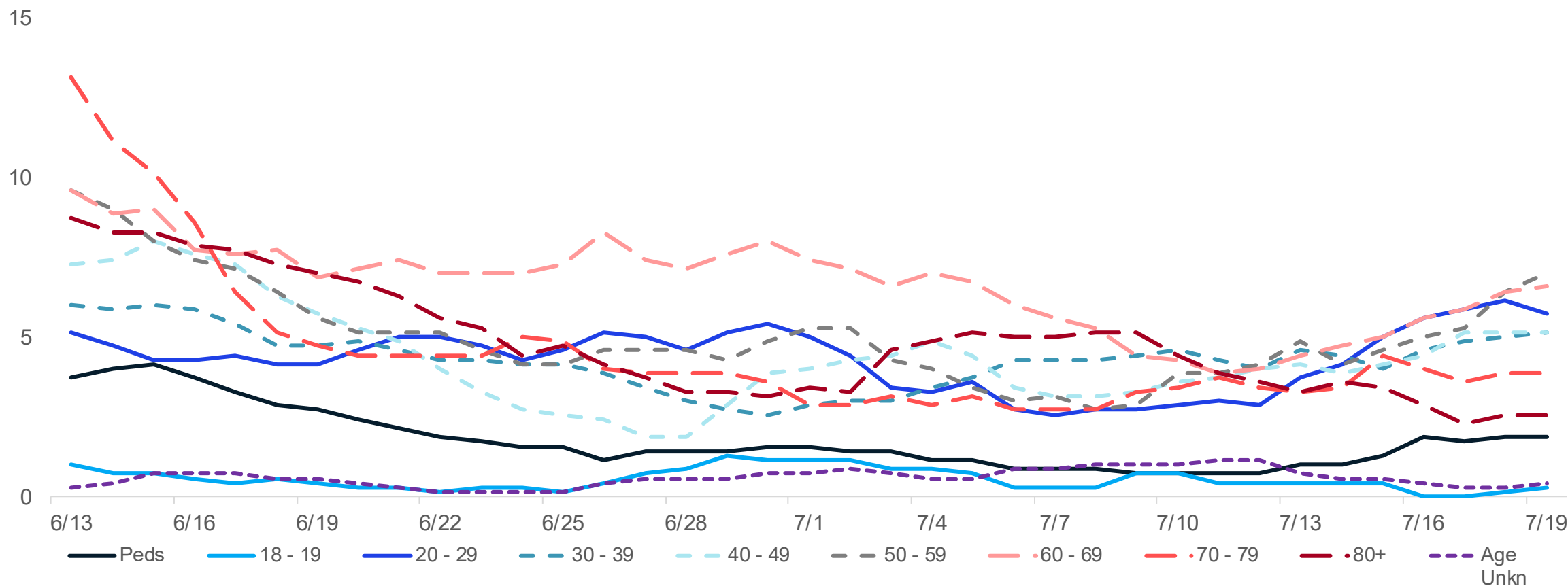
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Other  
Indicators

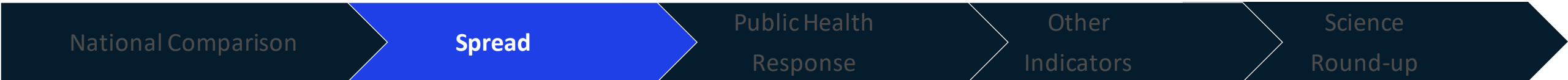
Science  
Round-up

# Average Hospital Admissions by Age



Source: CHECC & EM Resource

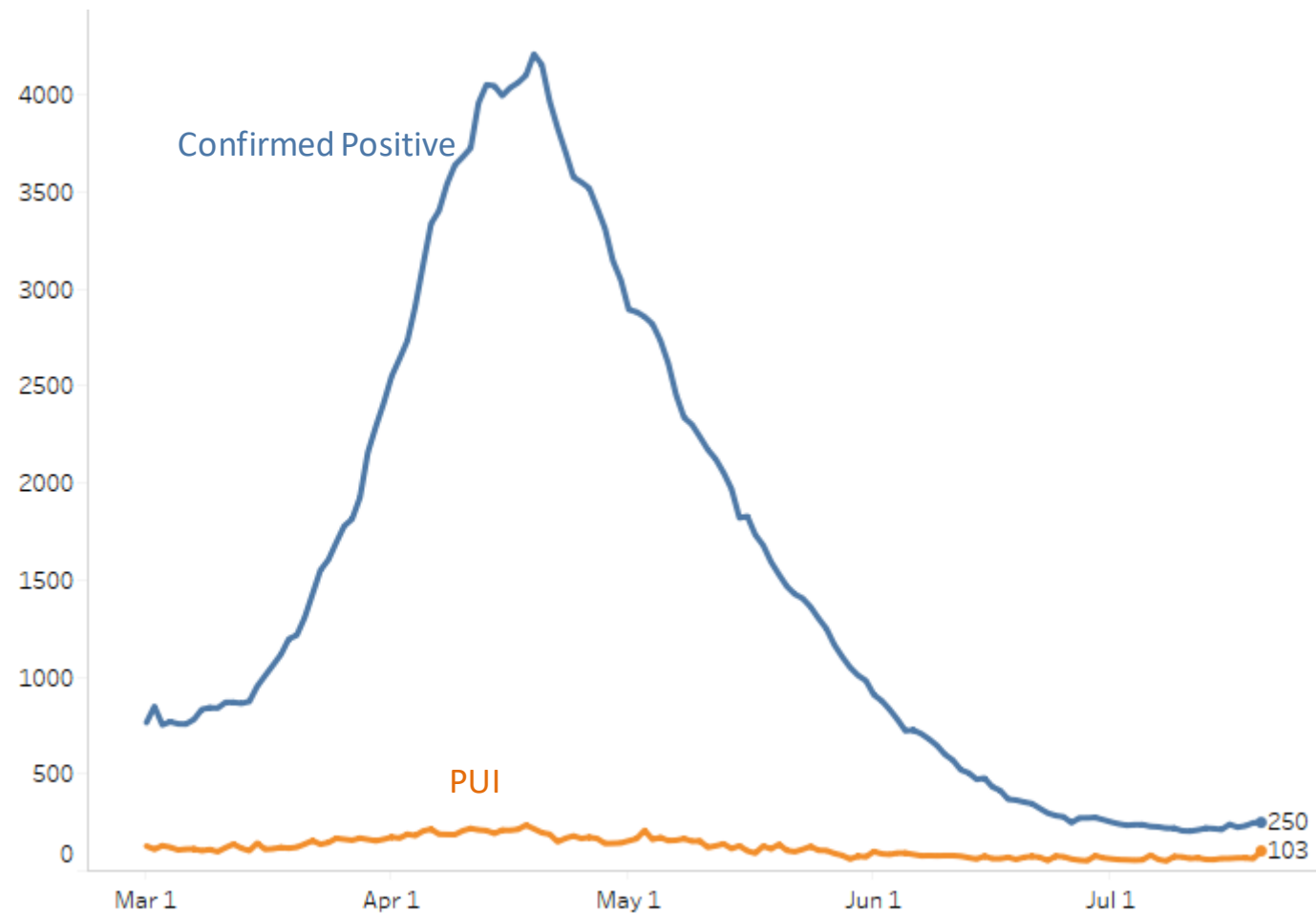
- Trends for daily average hospital admissions have increased 36% since last week (vs. 4% increase prior week)
- Trends within all age groups < 80 are plateaued or are increasing
- Over the past week, those 50-59 years have seen the highest number of avg. daily hospital admissions (7 admissions)





# Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 3/1/2021 – 7/20/2021  
Confirmed Positive & Persons Under Investigation (PUI)

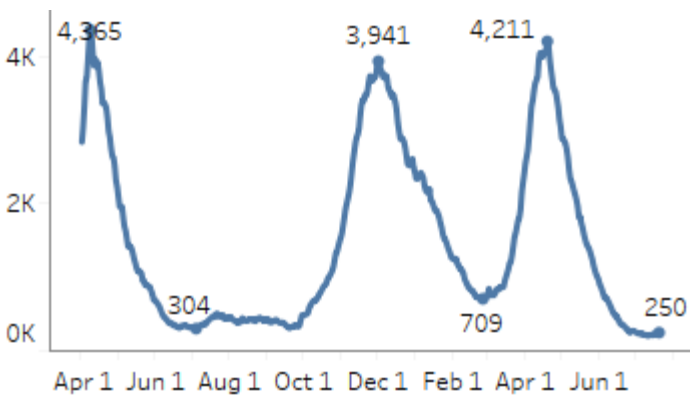


COVID+ census in hospitals has increased week-over-week for the first time since the April 19<sup>th</sup> peak. This week is up 13% from the previous week (previous week was down 17%).

Hospitalizations remain below the minimum point of summer 2020.

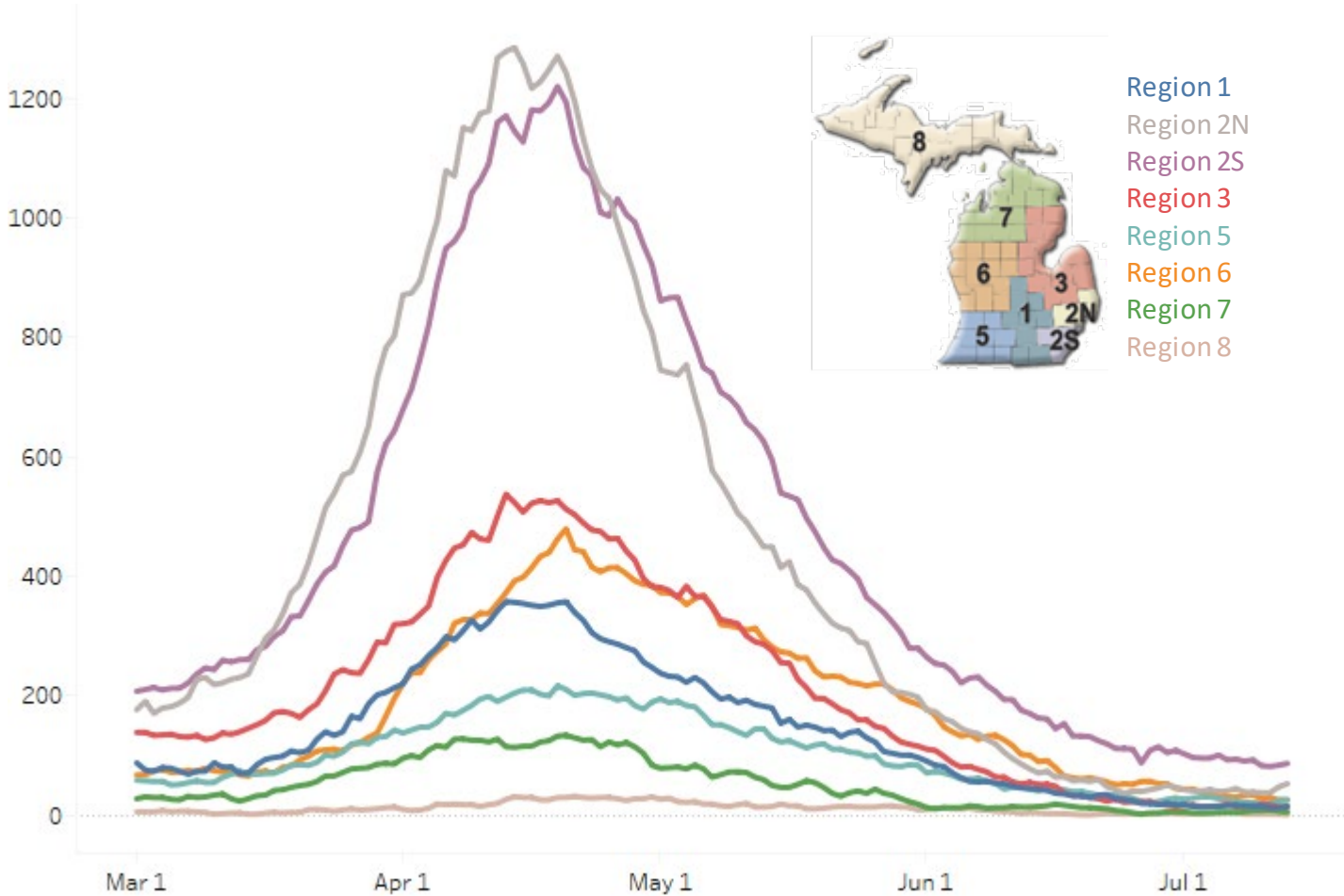
52-week low was 213 hospitalizations on July 15

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



# Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 3/1/2021 – 7/20/2021  
Confirmed Positive by Region



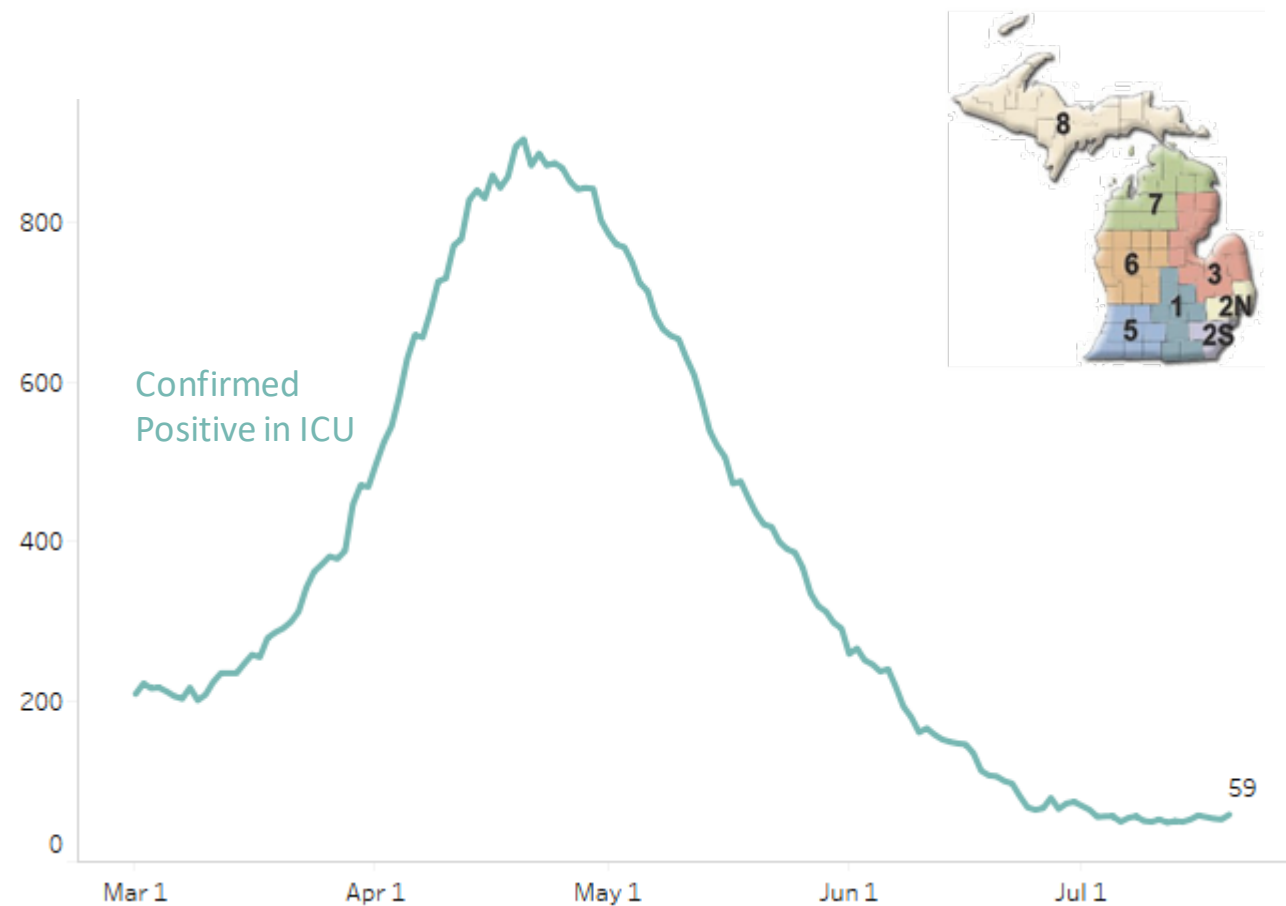
6 of 8 regions show increasing hospitalization trends this week with largest absolute increases in Regions 2N and 6.

All regions remain at or below 40/M hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	17 (21%)	16/M
Region 2N	66 (27%)	30/M
Region 2S	89 (3%)	40/M
Region 3	14 (0%)	12/M
Region 5	20 (-20%)	21/M
Region 6	34 (36%)	23/M
Region 7	6 (20%)	12/M
Region 8	4 (400%)	13/M

# Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 7/20/2021  
Confirmed Positive in ICUs



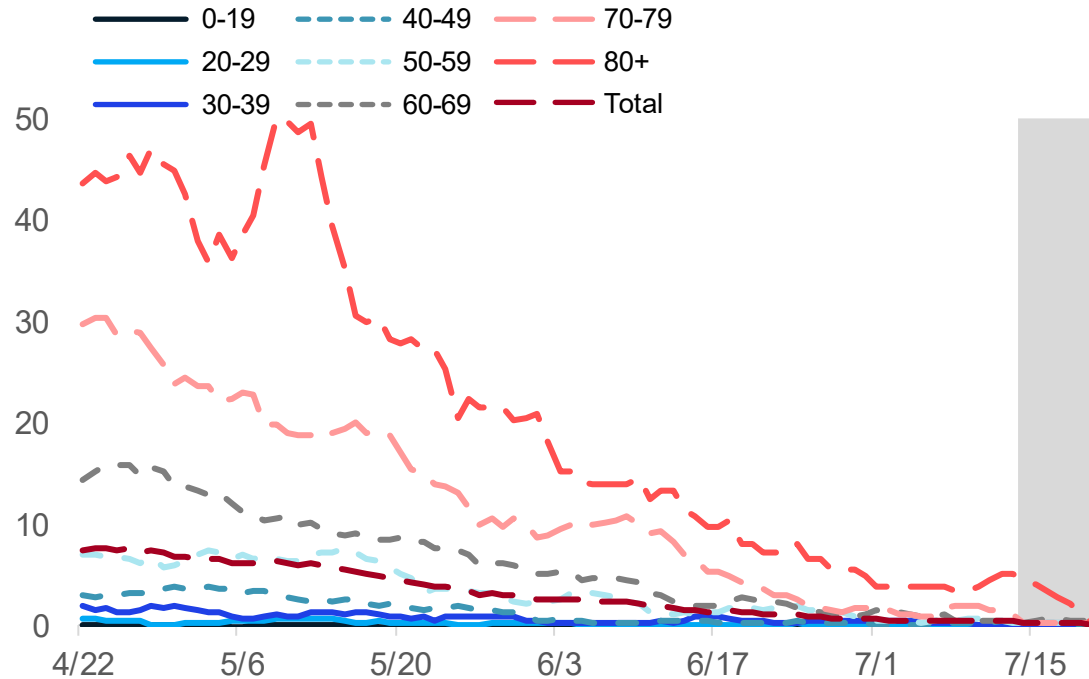
Overall, the census of COVID+ patients in ICUs has increased by 16% from last week, to 59 total patients in ICU.

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	3 (50%)	81%	2%
Region 2N	10 (43%)	68%	2%
Region 2S	26 (13%)	78%	4%
Region 3	4 (-20%)	83%	1%
Region 5	3 (-25%)	58%	2%
Region 6	7 (0%)	73%	3%
Region 7	4 (33%)	65%	2%
Region 8	2 (200%)	63%	3%

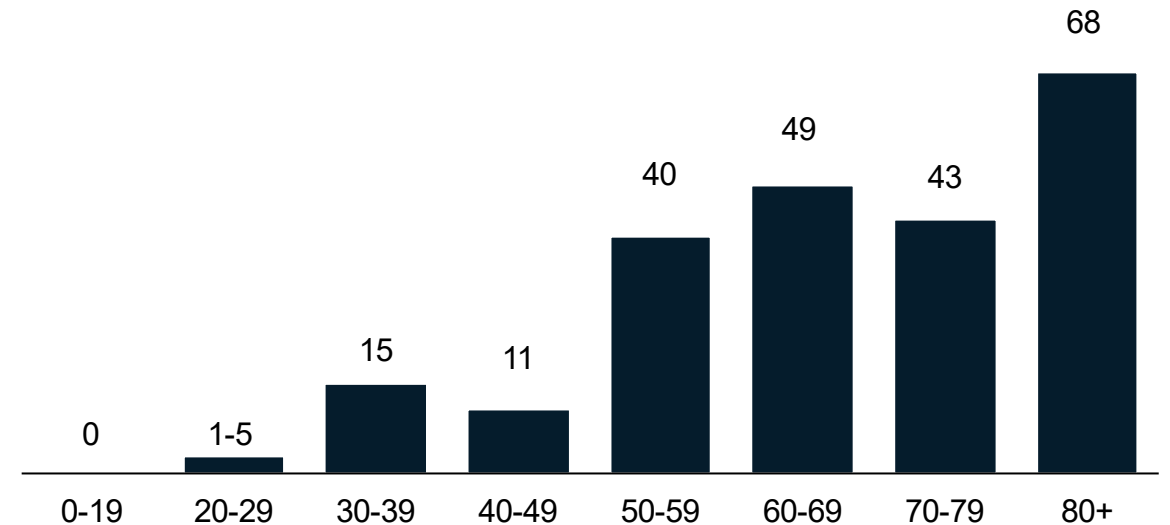
# Average and total new deaths, by age group

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 7/13/2021)

- 30% of deaths below age sixty



- Overall trends for daily average deaths are steady since last week
- Through 7/13, 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

National Comparison

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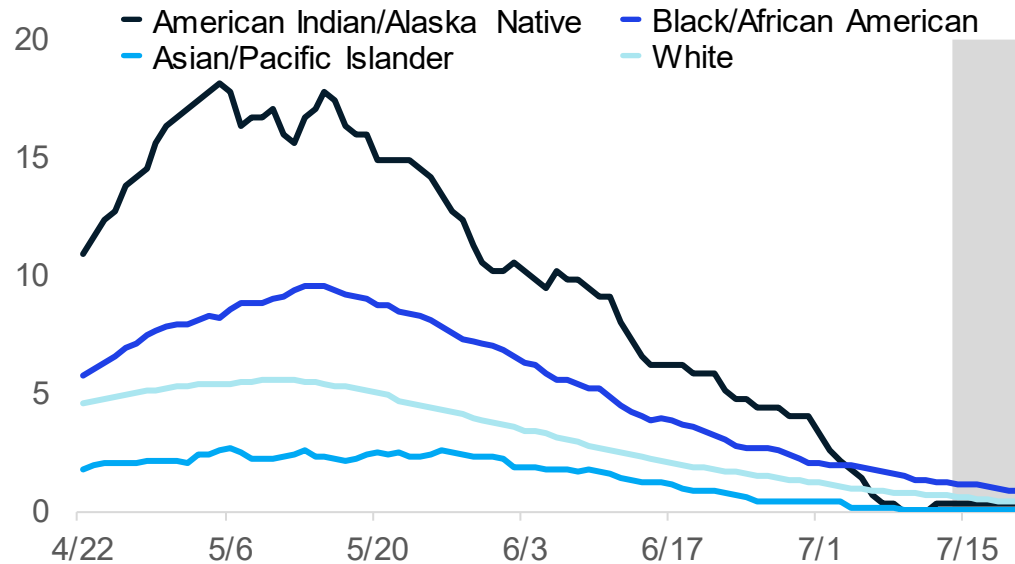
Public Health  
Response

Other  
Indicators

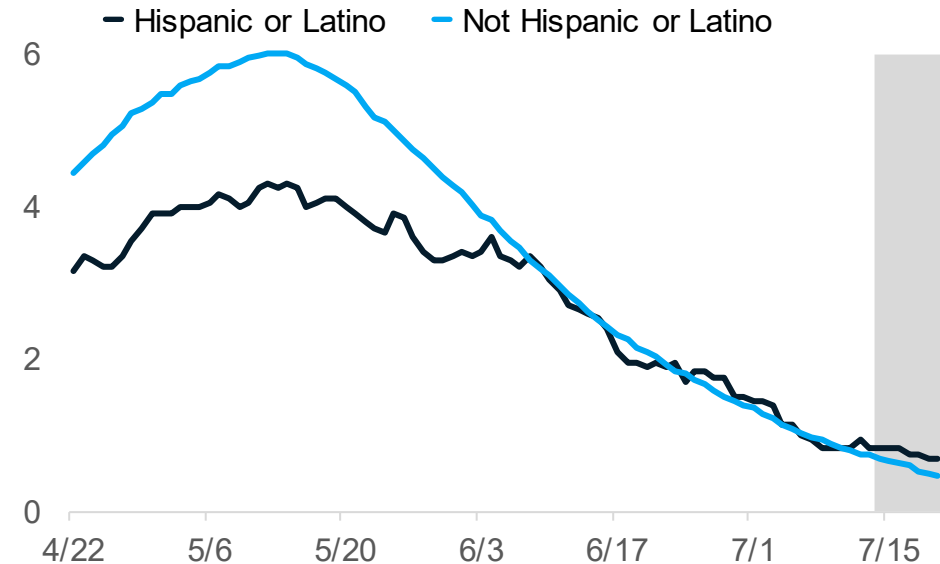
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Round-up

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

## Average daily deaths per million people by race



## Average daily deaths per million people by ethnicity



### Updates since last week:

- 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

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# COVID-19 Vaccination

## **Administration (doses administered)**

10th state in doses delivered; 9<sup>th</sup> in first doses provided and number of completed individuals (7/19/21)

82.1% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 7/8/2021 – no federal update yet)

30,018 first doses were administered week ending 7/19/21 (59,206 total): most administered frequently by pharmacies, local health departments, and hospitals (MCIR data only, will be undercount of all doses administered)

## **Coverage (people vaccinated)**

63.4% of those 18+ have received first dose of vaccine; 85.3% of people aged 65 or older have had first dose

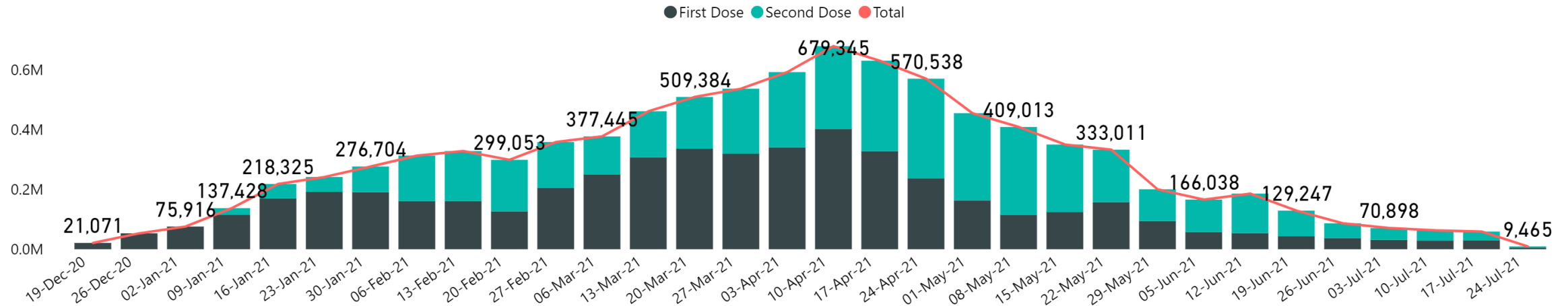
4,813,230 people in Michigan have completed vaccination series (4,788,482 last week)

Initiation highest among Asian, Native Hawaiian or Pacific Islander and American Indian/Alaskan Native individuals (MI COVID Vaccine Dashboard 7/20/21)

Less than 1% of Vaccinated Individuals Later Tested Positive for COVID-19 (Number of cases who are fully vaccinated (n= 7,696 )

# Doses Administered as of 7/20/2021

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



11,791,880 doses delivered to providers and 9,672,048 doses administered (CDC tracker)

82.1% adjusted administration ratio (excluding federal entities, [CDC channel portfolio](#) 7/8/2021)

- 59,206 doses administered last week; on average 8.5K/day (3,329-10,600)
- 30,018 first doses administered last week; on average 4,288/day (1,740-5,045)

July 10-July 17 (inclusive), doses were most frequently administered by

- Pharmacies (43.1K) (MCIR data may undercount)
- LHD (5K) and hospitals (3.2K)
- Pediatricians (888), family practice (2.1K), and FQHCs (2.2K)

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# Over 4.8 Million Michiganders fully vaccinated

4.81 million people in the state are fully vaccinated

81.2% of people aged 65 and older have completed the series

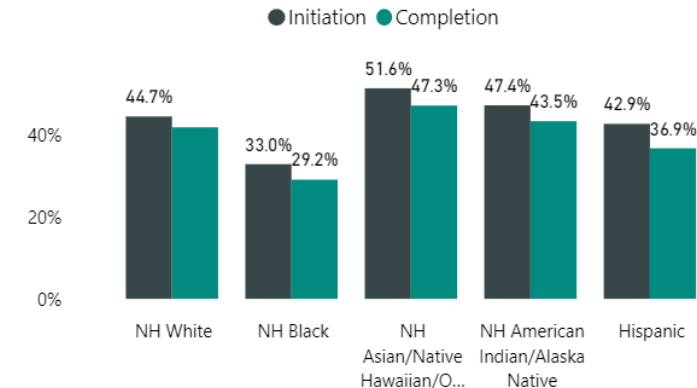
Race/Ethnicity for those 12 years and older:

- Initiation coverage highest among those of Non-Hispanic (NH) Asian, Native Hawaiian or Pacific Islander Race (51.6%), then NH American Indian (47.4%), NH White (44.7%), NH Black or African American Races (33%).
- Initiation is at 42.9% for those of Hispanic ethnicity
- Completion follows the same pattern
- 21.4% data missing or unknown

## Vaccination Coverage in Michigan as of 7/20/21

Age Group	% At Least One Dose	% Fully Vaccinated	Number Fully Vaccinated
Total Population	52.3	48.2	4,813,230
≥ 12 years	60.8	56.0	4,813,143
≥ 18 years	63.4	58.6	4,597,890
≥ 65 years	85.3	81.2	1,432,953

Coverage by Race - State Level





# 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 7/15/21):

- 7,696 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 217 deaths (194 persons age 65 years or older)
  - 529 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.

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# Science Round Up

## 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 a requirement for all healthcare workers with exceptions for medical contraindications and state and federal legal exemptions

## CDC Vaccine Effectiveness Surveillance

- COVID-19 mRNA vaccines are 87% effective in preventing COVID-19 hospitalizations

## 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

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

- This paper previously presented was formally retracted from JAMA Pediatrics

## 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

## COVID-19 Forecasting: Cases and Deaths

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

## Mobility Update

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# 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)



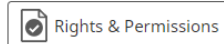
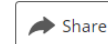
## Multisociety Statement on COVID-19 Vaccination as a Condition of Employment for Healthcare Personnel

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



Source: Weber et al. ICHE. [Multisociety Statement on COVID-19 Vaccination as a Condition of Employment for Healthcare Personnel](#). e-Published July 13, 2021.

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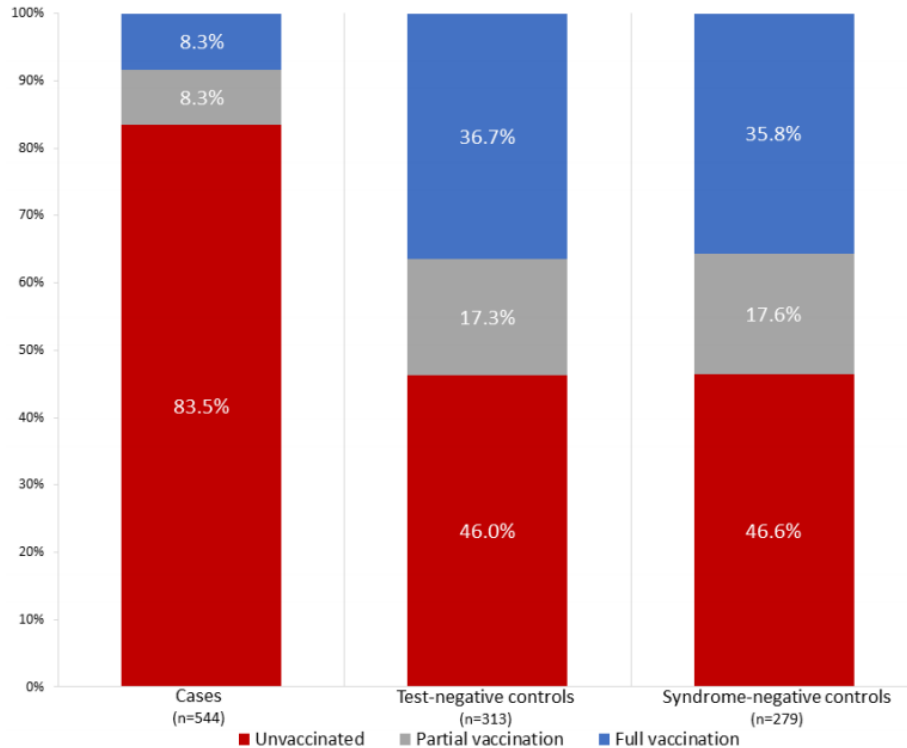
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# UPDATE: CDC Vaccine Effectiveness Surveillance

## COVID-19 mRNA vaccines are 87% effective in preventing COVID-19 hospitalizations.

- National CDC-led study of 1210 adults during March 11 through May 5, 2021

**Figure 2.** Vaccination status of case patients (N=544), test-negative controls (N=313), and syndrome-negative controls (N=279) — IVY Network, United States, March–May 2021.\*



**83.5%** of hospitalized COVID-19 cases from March 11 – May 15th were **unvaccinated**.

*Preliminary Results:* Tenforde MW et al.

<https://www.medrxiv.org/content/10.1101/2021.07.08.21259776v1>



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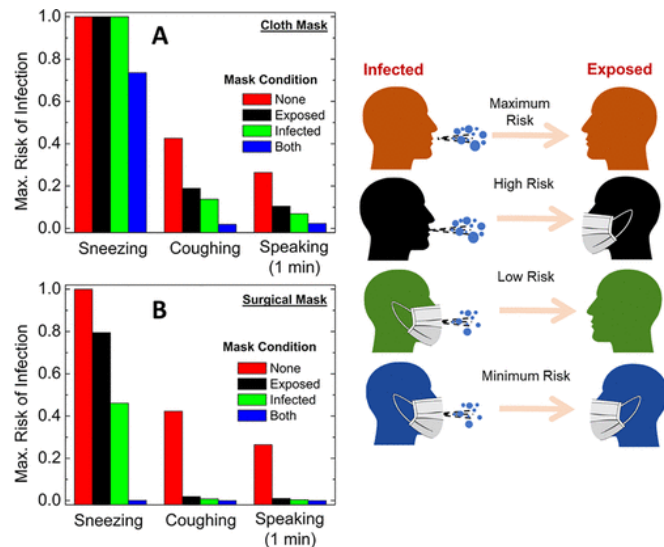
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# Masks are an effective to prevent transmission of SARS-CoV-2

- 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](https://ph.lacounty.gov/coronavirus)

COUNTY OF LOS ANGELES Public Health

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](#).

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# 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 CO<sub>2</sub> 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 d
  - Authors did not use standard methods for measuring carbon dioxide
- Concern with results and conclusions
  - Results are not consistent with other studies measuring masking filtra
  - Baseline measure of CO<sub>2</sub> are not reflective of ambient air
  - No health metrics reported (e.g., pO<sub>2</sub> or pCO<sub>2</sub>)

Research Letter

June 30, 2021

ONLINE FIRST FREE

## Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy Children A Randomized Clinical Trial

Harald Walach, MD<sup>1</sup>; Harald Weikl, MD<sup>2</sup>; Juliane Prentice, BA<sup>3</sup>; et al

» Author Affiliations | Article Information

JAMA Pediatr. Published online June 30, 2021. doi:10.1001/jamapediatrics.2021.2659

**RETRACTED**



July 16, 2021

**Notice of Retraction. Walach H, et al. Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy Children: A Randomized Clinical Trial. JAMA Pediatr. Published online June 30, 2021.**

Dimitri Christakis, MD, MPH<sup>1</sup>; Phil B. Fontanarosa, MD, MBA<sup>2</sup>

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](#)  
[Notice of Retraction. Walach H, et al. Experimental Assessment of Carbon Dioxide Content in Inhaled Air With or Without Face Masks in Healthy Children: A Randomized Clinical Trial. JAMA Pediatr. Published online June 30, 2021.](#)

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# 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

Sources: [AAP COVID-19 Guidance for Safe Schools](#)

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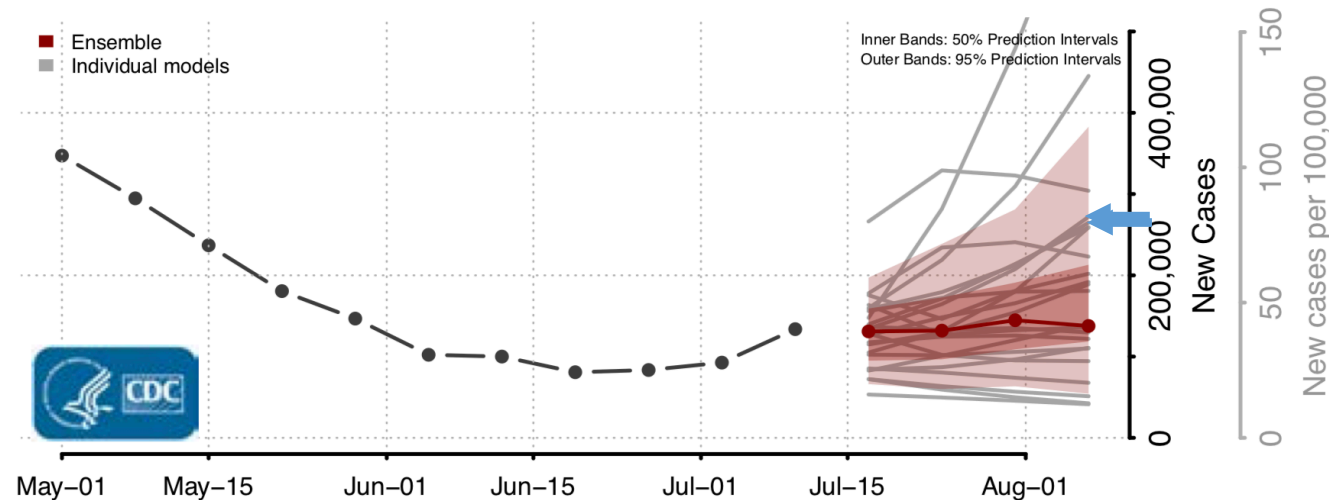
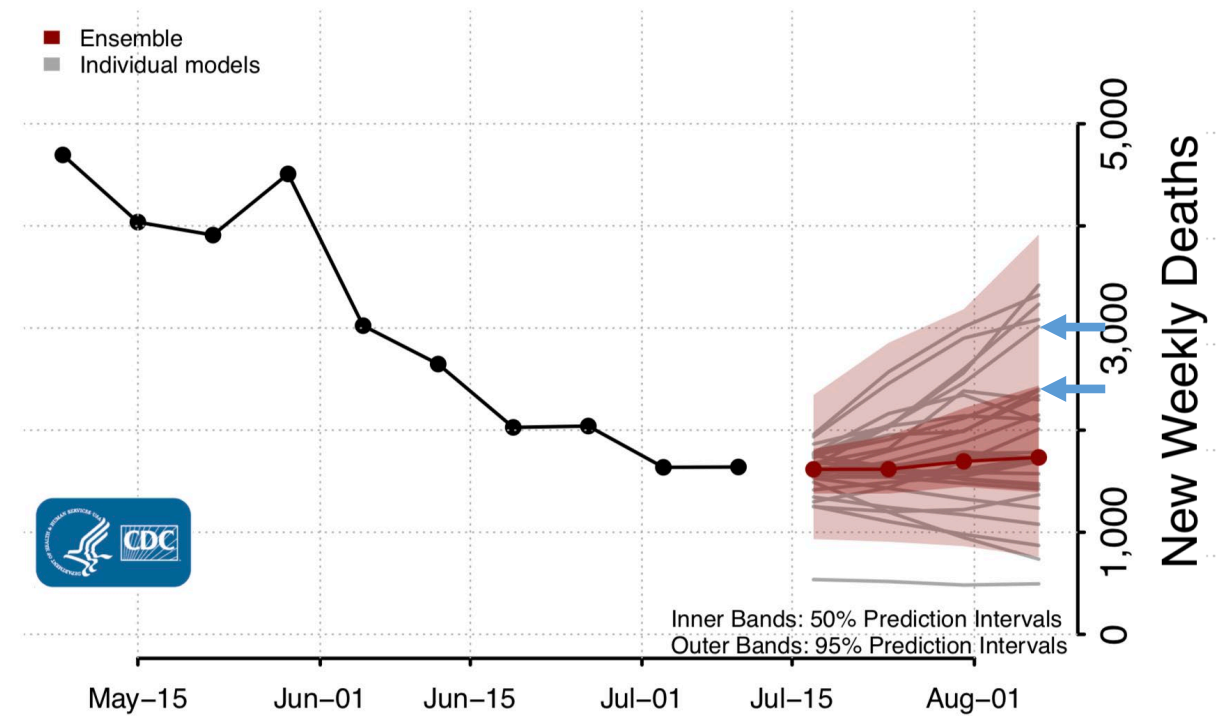
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# CDC model projections: potential for increasing cases and deaths nationally

- Ensemble model suggests flat or slightly increasing trend but uncertainty ranges from slow decrease 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)

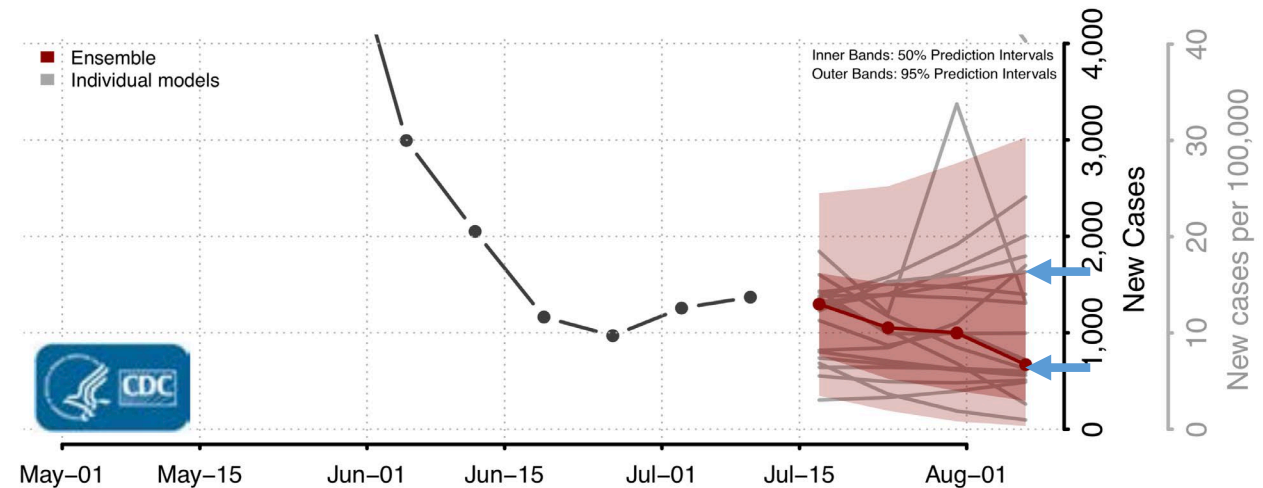
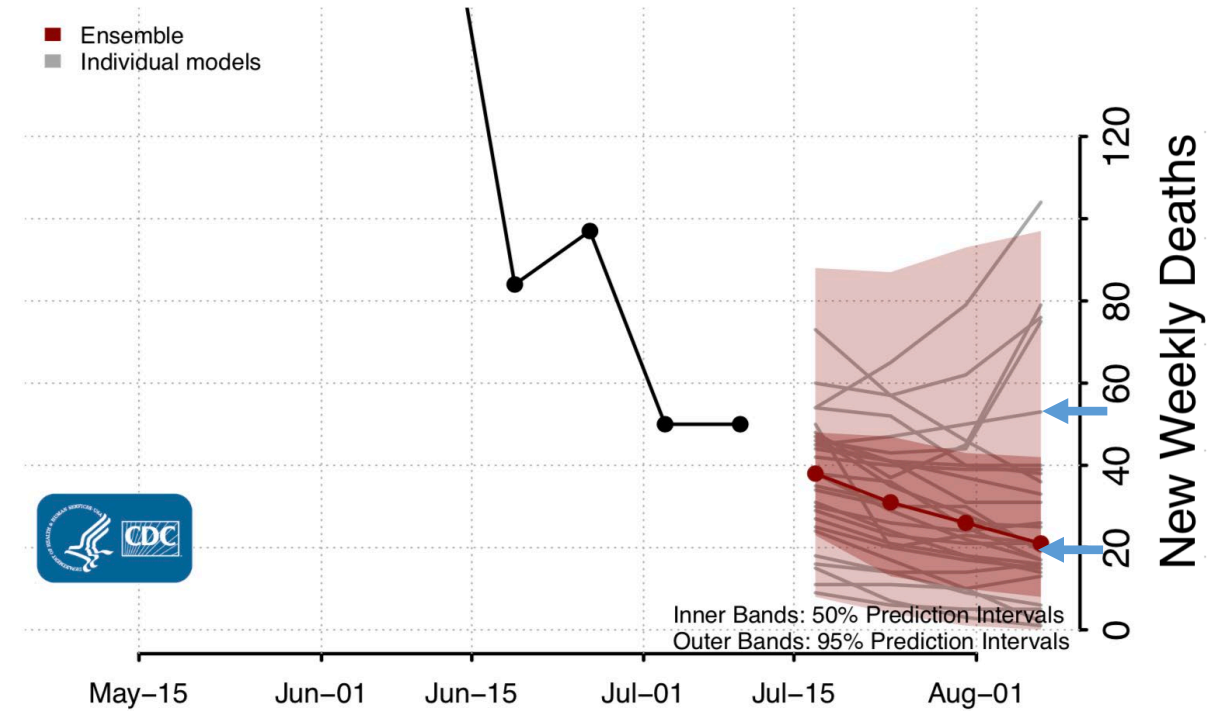


Data Sources: [CDC mathematical model forecasting](#), [CovidComplete Data Center](#) model forecast evaluations



# CDC model projections: Michigan projections mixed

- Ensemble model suggests flat or decreasing trend
- 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) are mixed
- 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

# Mobility Update

# Unacast mobility patterns in MI

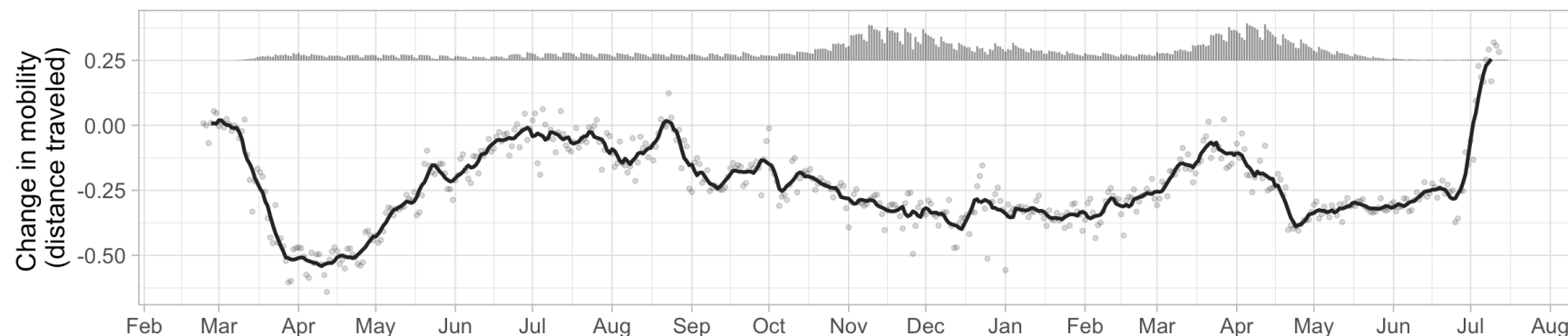
- Average mobility sharply increased
- Non-essential visits beginning to increase
- Possible increase in encounter density or may remain plateaued
- Cases shown as bars at top of each chart
- Data through 7/8/21 (data as of 7/16/21)



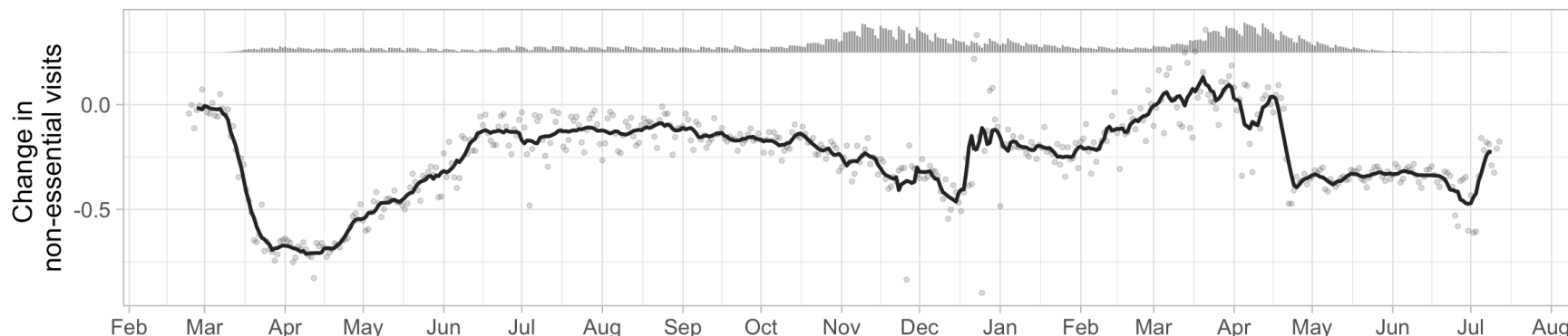
Unacast social distancing scoreboard

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

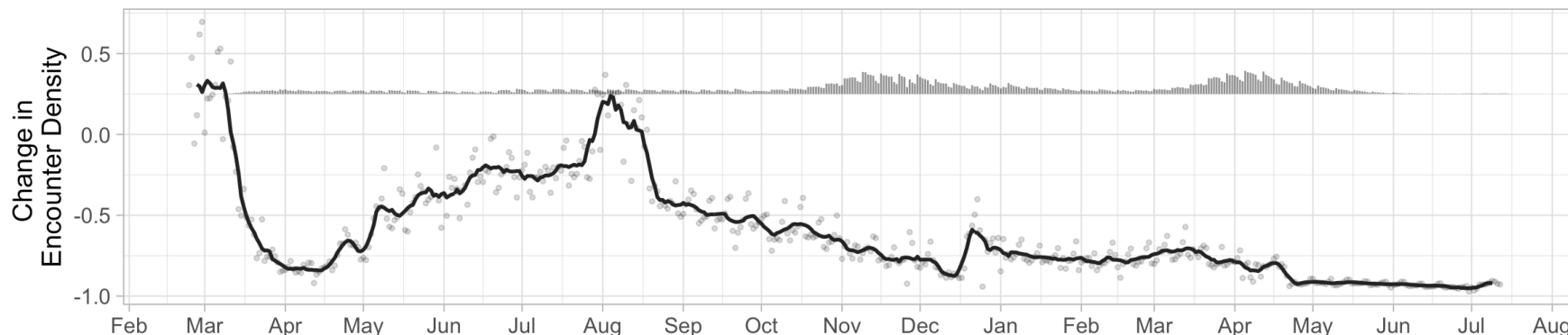
## Change in average mobility



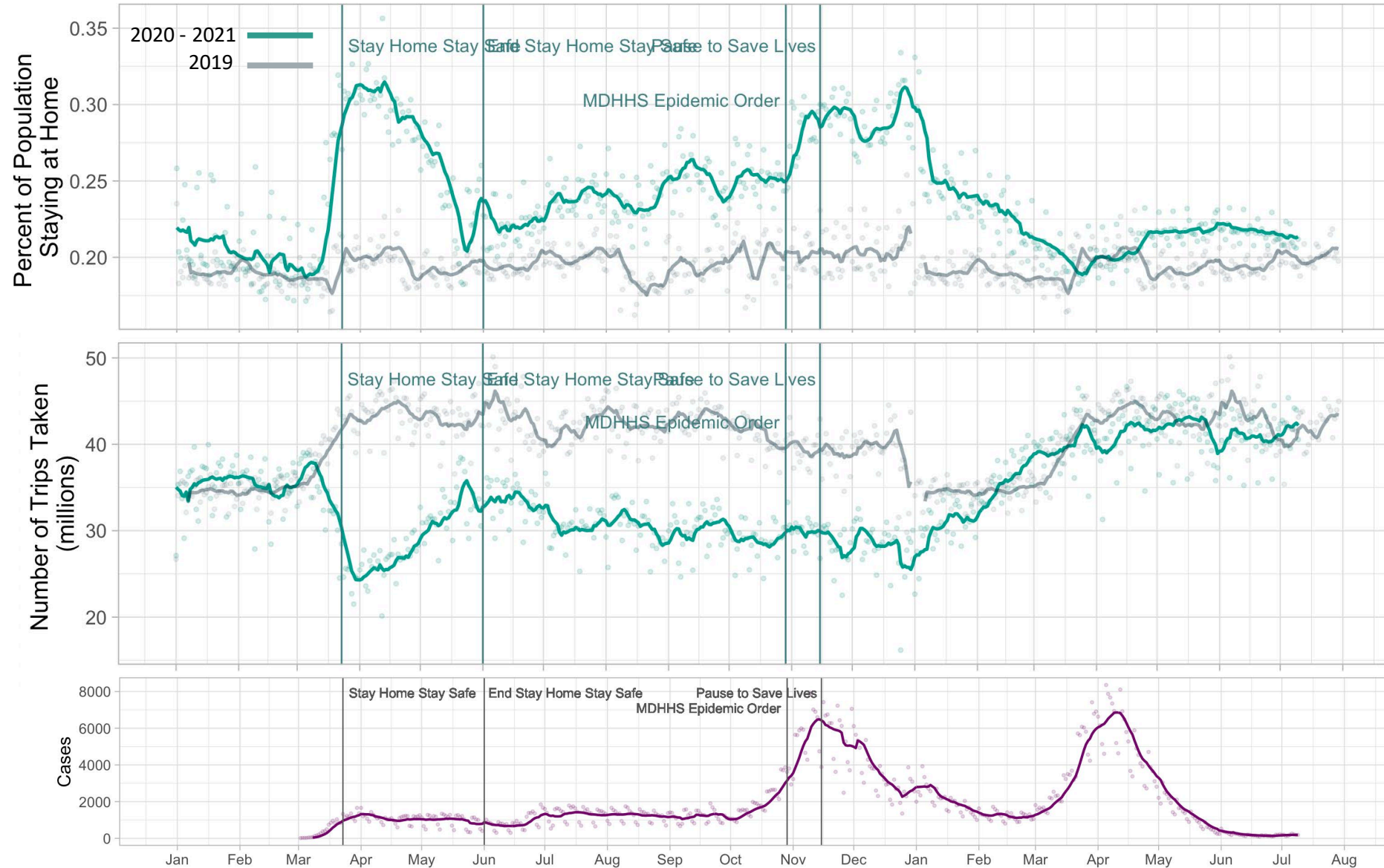
## Change in non-essential visits



## Difference in encounter density



# How many people are staying at home in Michigan?

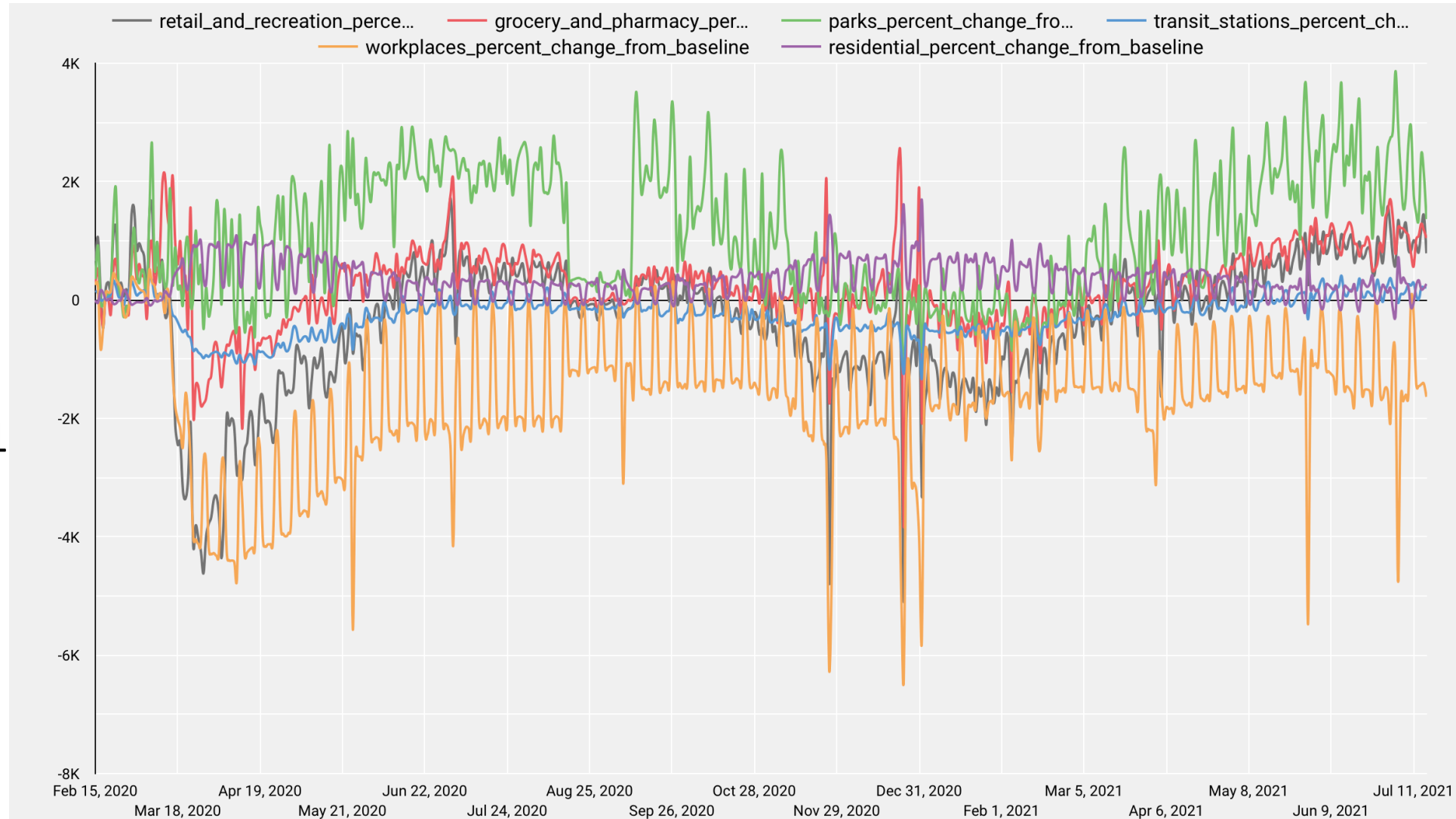


- % Stay-at-home levels and number of trips taken/day are at or near 2019 levels
- Most recent data is 7/10/21 (data as of 7/19/21)

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

# 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 7/16/21 (data as of 7/19/21)



[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

