

MI COVID RESPONSE DATA AND MODELING UPDATE

November 9, 2021

Executive Summary

Michigan remains at High Transmission

Percent positivity (14.1%) is increasing (up from 11.6% last week)

Case rate (340.4 cases/million) is increasing for about 1 week (283.8 cases/million prior week)

Longer backfill times are impacting trend numbers and weekly comparisons for cases by onset date

In the last 7 days, only one other state reported more cases than Michigan (this week rank: 2nd highest; last week's rank: highest), and Michigan case rate is 8th highest nationally (12th highest last week)

Cases among pediatric populations < 12 years have increased 30% since last week

Percent of inpatient beds occupied by individuals with COVID (11.6%) is increasing for 16 weeks (up from 10.5% last week)

Michigan has 7th highest inpatient bed utilization (14th highest last week) and 11th highest adult ICU bed utilization (14th highest last week)

Number of pediatric hospitalizations is plateaued since last week

Death rate (4.4 deaths/million) is decreasing for one week (4.7 last week). There were 304 COVID deaths between Oct 26-Nov 1

Michigan has the 19th highest number of deaths (10th highest last week), and 42nd highest death rate (T35th highest last week) in the last 7 days
7-day average **state testing rate** is 3,955.5 tests/million/day. **Daily diagnostic tests (PCR)** is 39.4K per day, and the weekly average for PCR and antigen tests conducted in Michigan is 51.8K.

More than 11.7 million **COVID-19 vaccine** doses administered, 53.8% of the population is fully vaccinated (5.37 million people)

14,169 administrations in 5- to 11-year-olds as of 11/9

SCIENCE ROUNDUP

COVID-19 vaccination for 5–11-year-olds is now available and has the potential to reduce infections and severe disease among this population

COVID-19 vaccine does not reduce fertility and risk of myocarditis is higher for those unvaccinated who experience COVID-19 disease

Excess deaths during the COVID-19 Delta variant surge have been higher in the Southern U.S. compared to the Midwest

Global, National and Michigan Trends

Global and National Comparisons

Globally, 250,026,677 cases and 5,052,358 (Data* through 11/8/2021)

- Countries with the highest case count are U.S. (46,488,417), India (34,366,987), and Brazil (21,880,439)

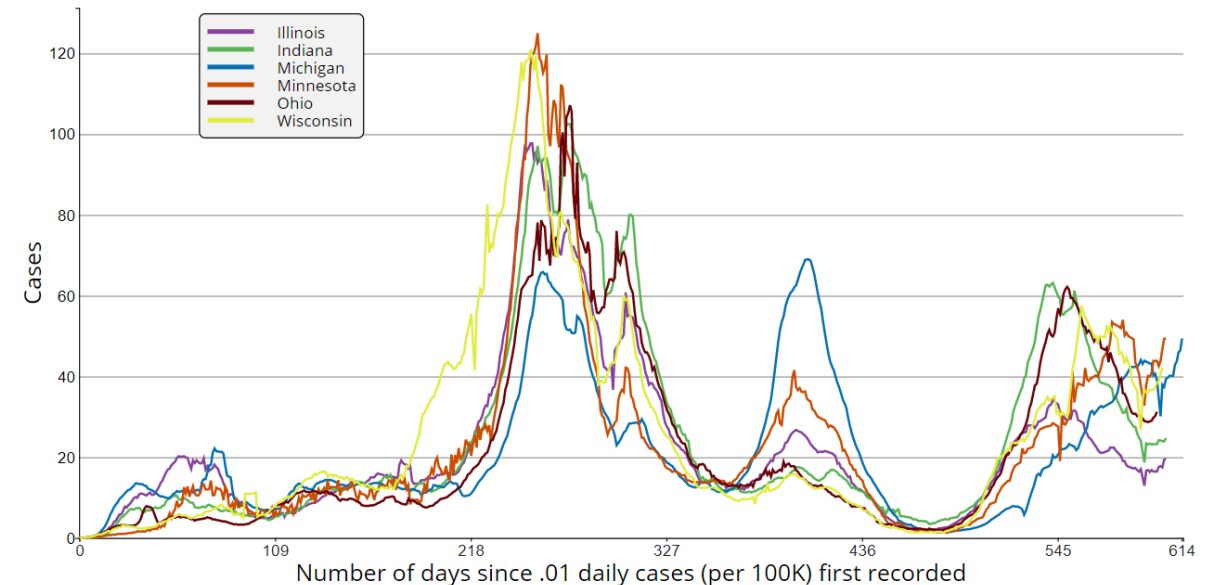
United States: Nearly all US jurisdictions have High or Substantial community transmission[¶]

- The U.S. is at high transmission level (150.8 cases/100,000 in last 7 days) with 54 states/territories in substantial or high transmission
- Nationally, the 7-day moving average of daily new cases decreased 1.4% compared with previous 7-day moving average
- Percent positivity has decreased from the previous week, now at 5.0%. The number of PCR tests performed is plateaued.
- ***Michigan case rates are currently higher than U.S. rate***

Midwest states maintain High transmission levels[†]

- All states within Region 5 showing early signs of increases over last several days
- CDC data tracker shift to only using referral date now

New cases of Covid-19, reported to CDC, in IL, IN, MI, MN, OH, and WI
Seven-day moving average of new cases (per 100K) by number of days since .01 average daily cases (per 100K) first recorded

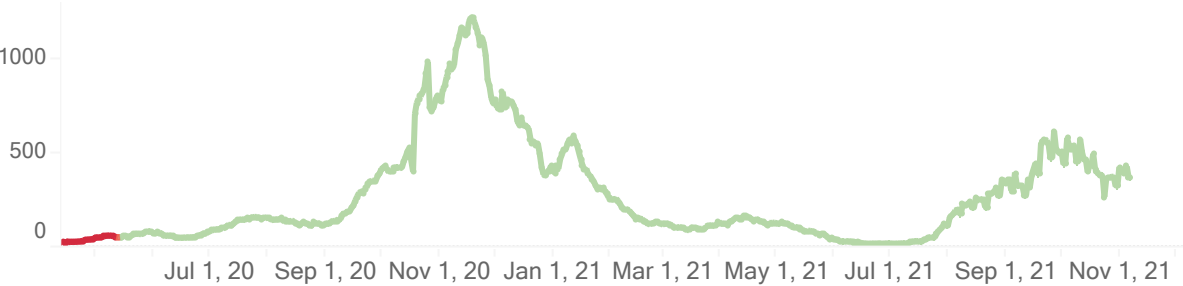


Source: *[Johns Hopkins CoronavirusResource Center](#); [¶] CDC [COVID Data Tracker Weekly Review](#); [†] CDC [COVID Data Tracker](#) – CDC recently updated their methodology for reporting case rates

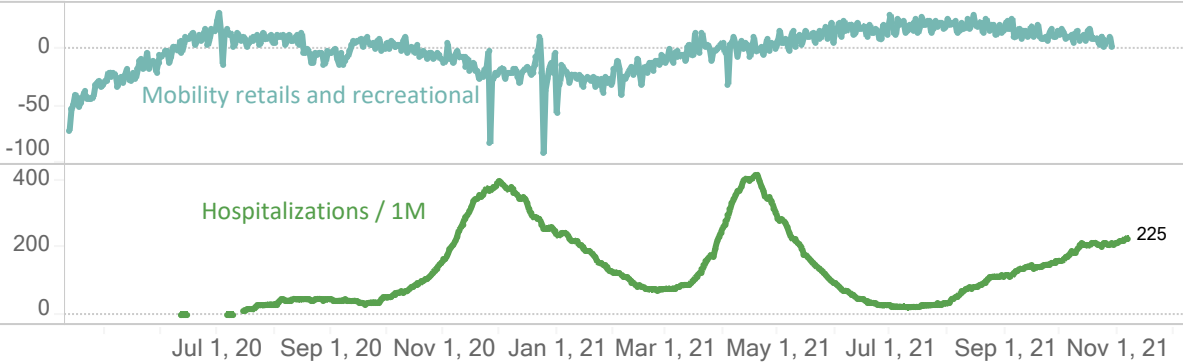
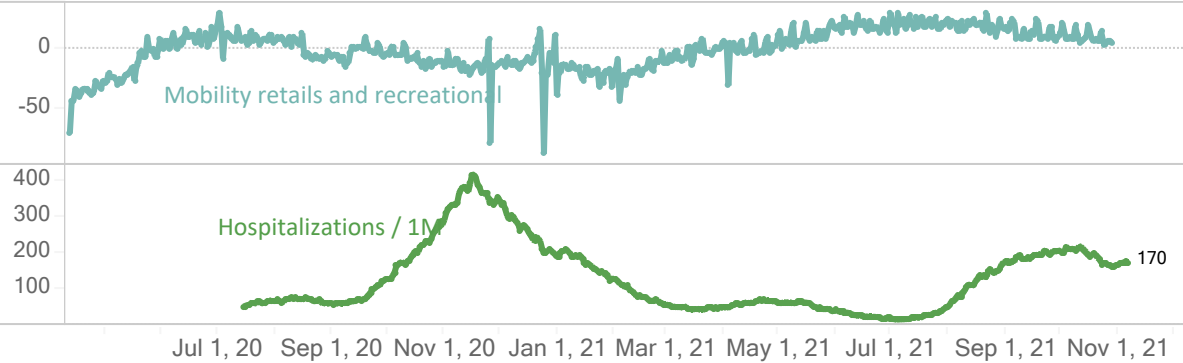
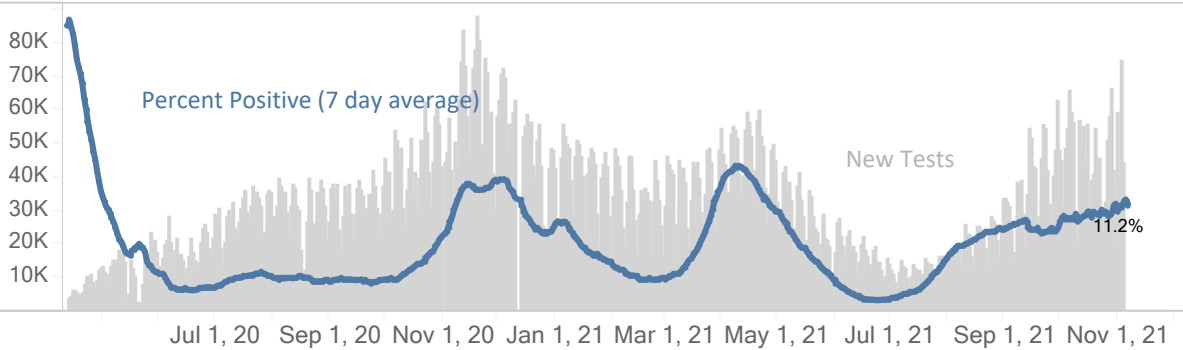
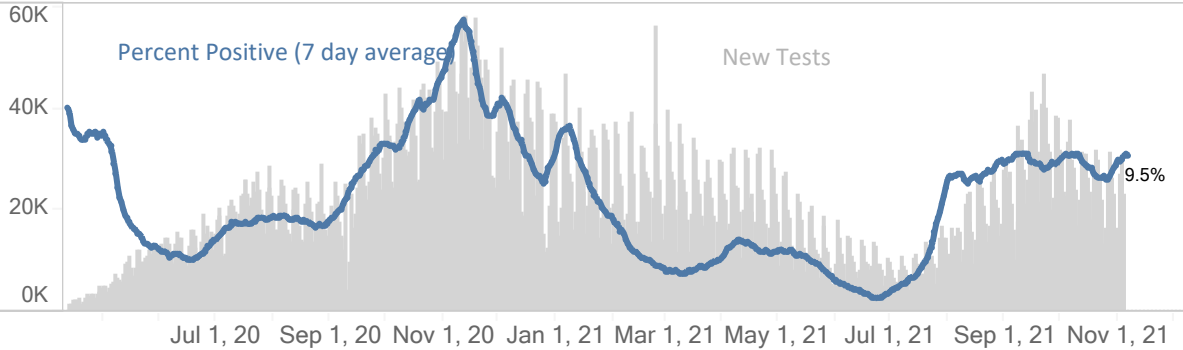
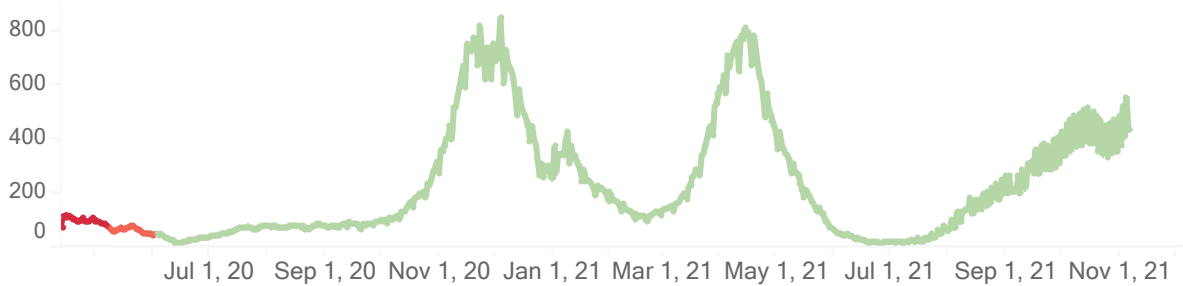


State Comparison: Wisconsin and Michigan

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

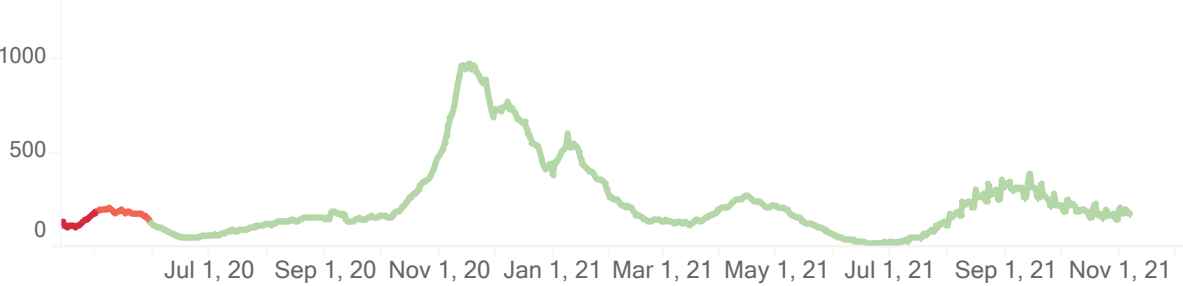


Michigan Confirmed New Cases / 1M (7 days average)

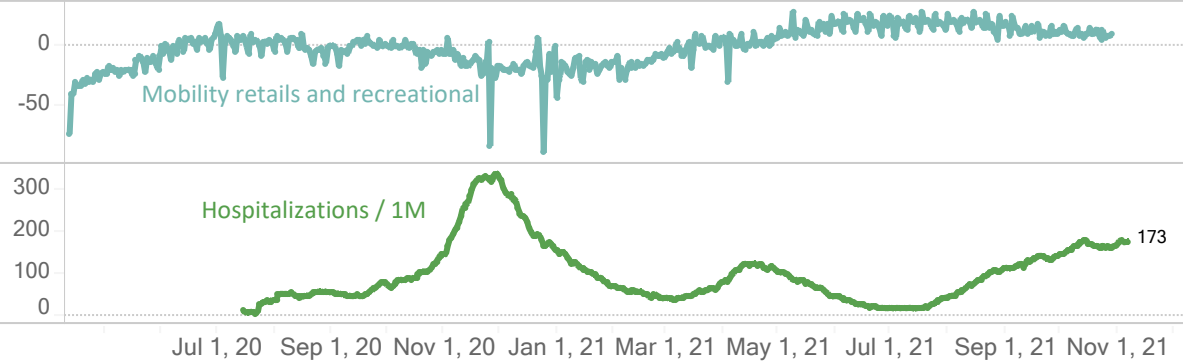
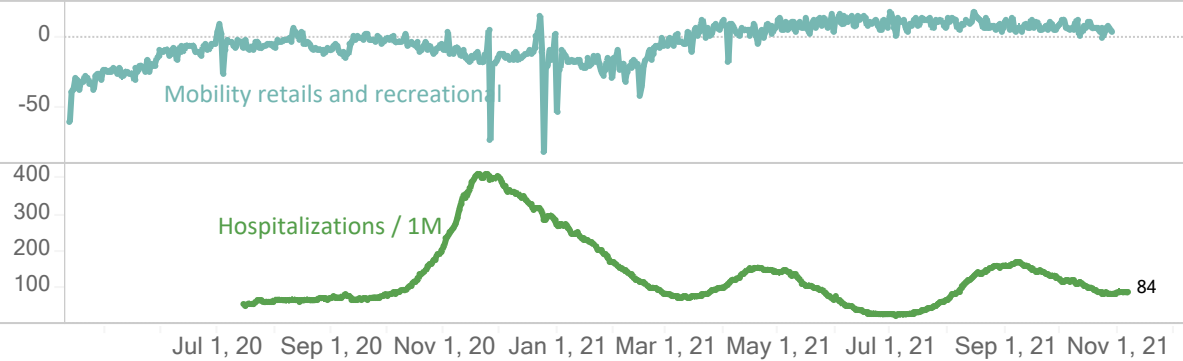
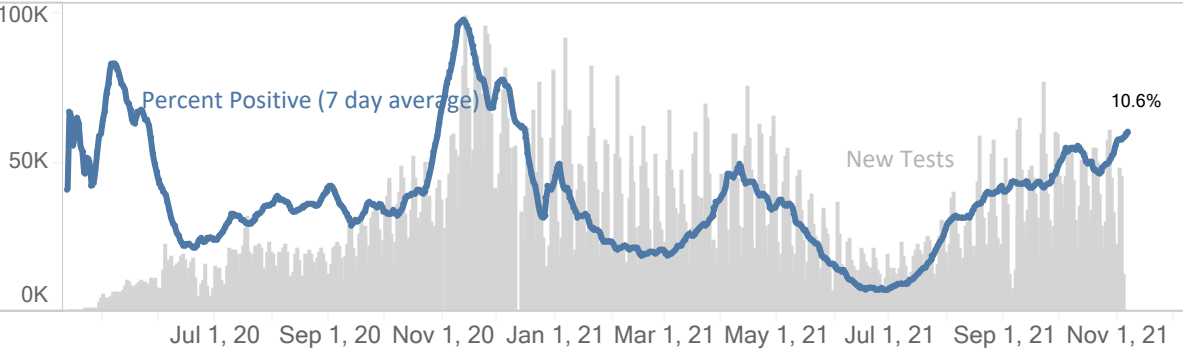
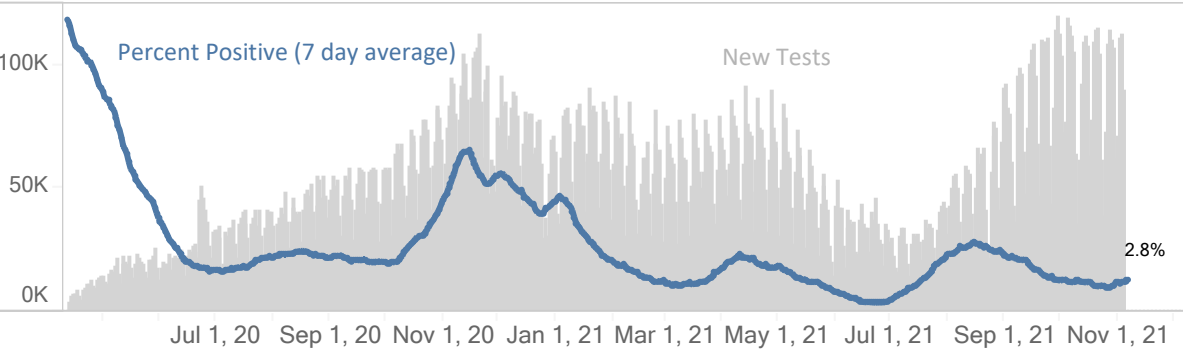
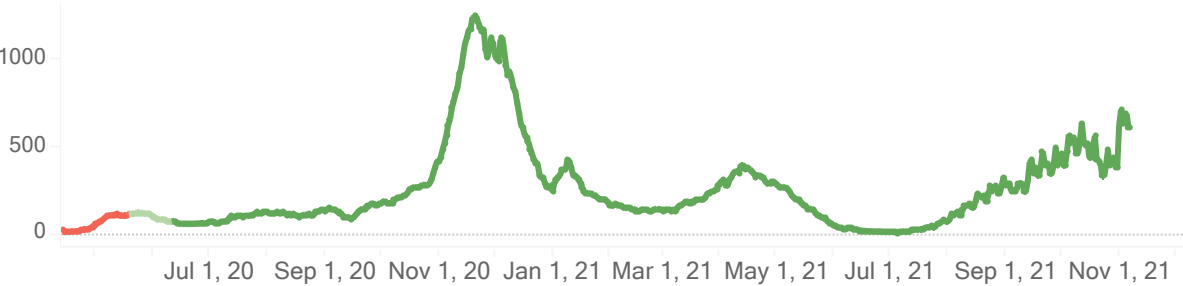


State Comparison: Illinois and Minnesota

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

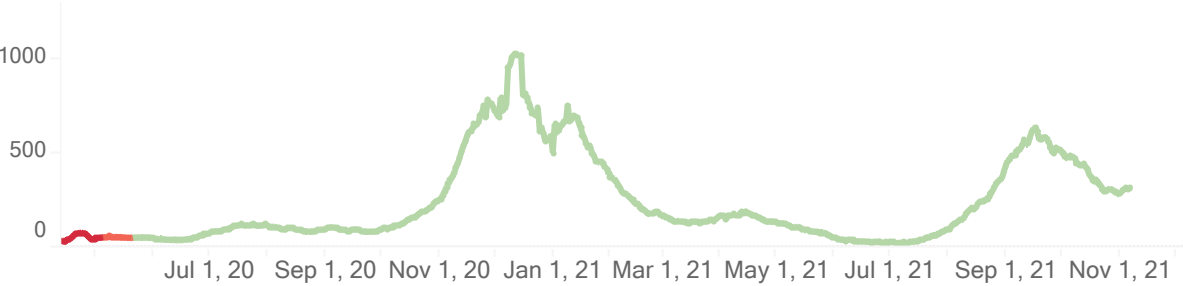


Minnesota Confirmed New Cases / 1M (7 days average)

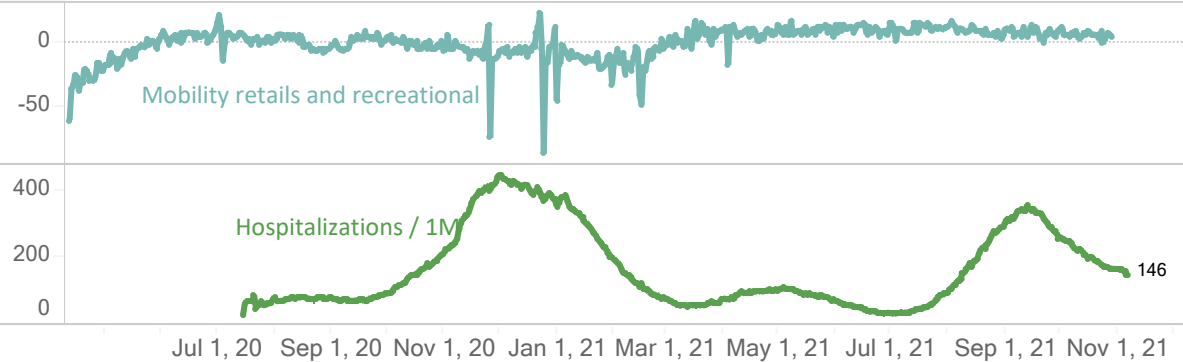
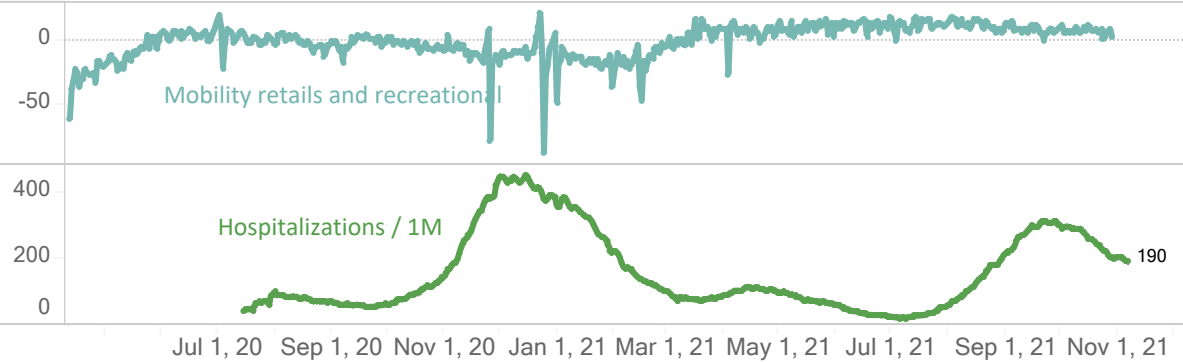
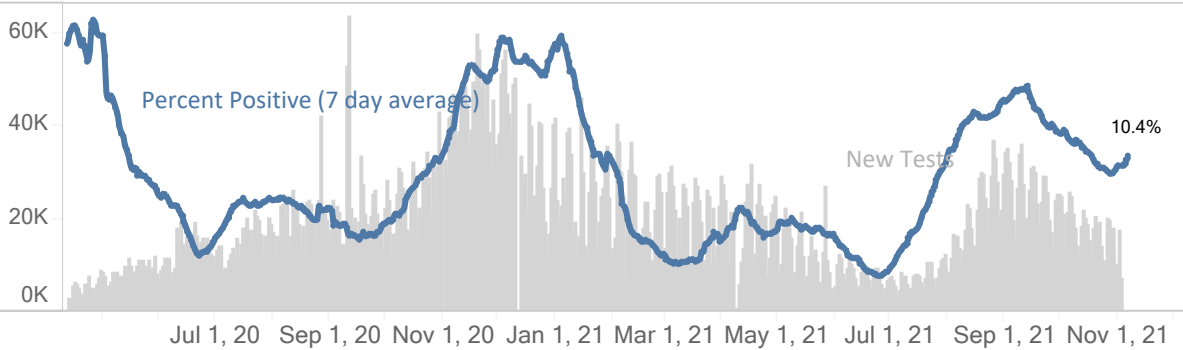
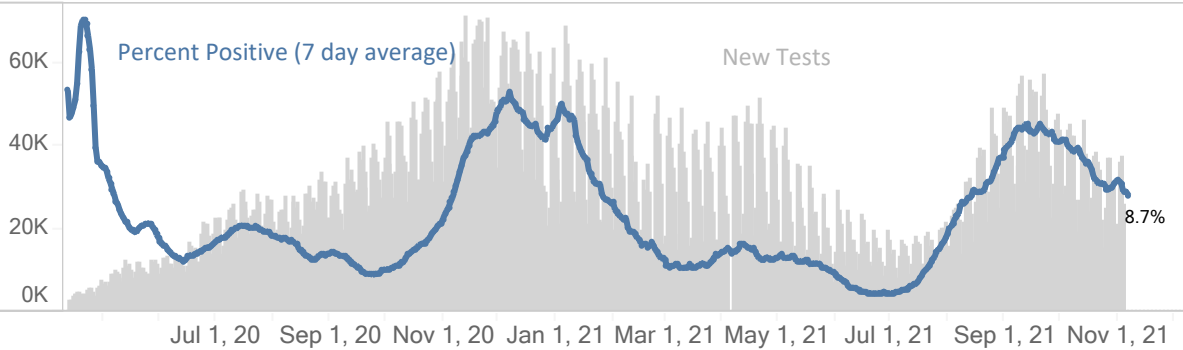
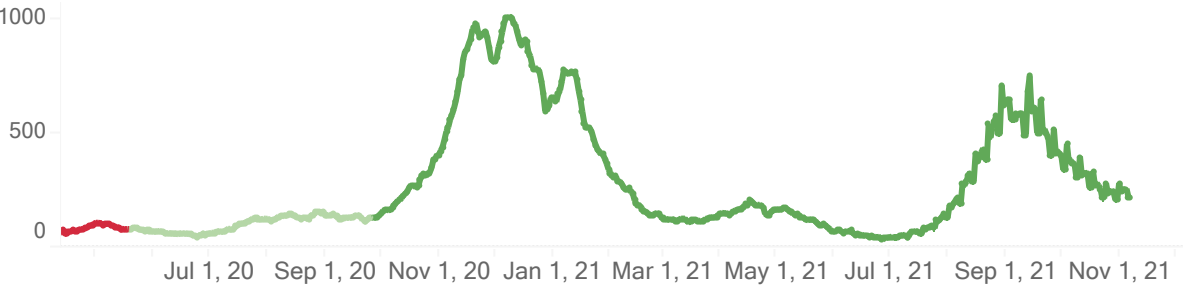


State Comparison: Ohio and Indiana

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



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



Key Messages: COVID-19 Transmission Metrics Increasing

Statewide positivity is 14.1% (last week: 11.6%)

- The trend is now increasing
- Positivity is increasing in all MERC regions
- Positivity in seven regions is above 15% and two regions are at or above 20%

Case rate has increased to 340.4 cases/million (last week: 283.8 cases/million)

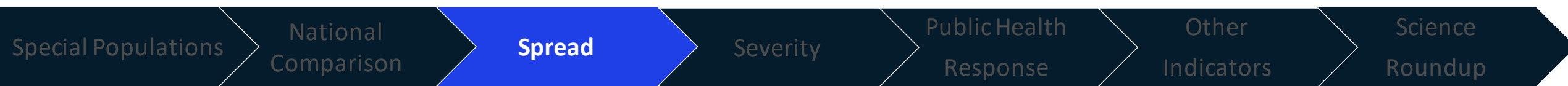
- Longer backfill times are impacting trend numbers and weekly comparisons for cases by onset date
- Cases per million are increasing in most MERC regions
- Cases per million are increasing among all age groups
- 10-19-years-olds are experiencing the greatest case burden (625 daily cases; 489 cases/mil)
- **Data on breakthrough cases are not available this week, will return next week**

Michigan is at High Transmission level

- All counties in Michigan are at high transmission level
- CDC recommends all individuals, regardless of vaccination status, should mask indoors

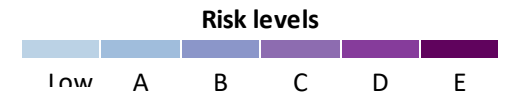
Number of active outbreaks is up 9% from last week

- 181 new outbreaks were identified in the past week, which is down from 195 new outbreaks reported last week
- K-12 reported the most total outbreaks and clusters (428) and new outbreaks (104) this week



Confirmed and probable case indicators

Table Date: 11/8/2021 (7 days from date table was produced: 11/1/2021)



	CDC Transmission 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	High	278.3	elevated incidence plateau	10.6	Increase - 2wk	4209.0	9.9	Increase - 16wk	3.4	Increase - 1wk
Grand Rapids	High	396.7	elevated incidence plateau	20.0	Increase - 2wk	3916.5	15.0	Increase - 2wk	4.4	Decrease - 1wk
Kalamazoo	High	364.1	elevated incidence growth	16.5	Increase - 2wk	3357.8	13.5	Increase - 1wk	4.2	Decrease - 1wk
Saginaw	High	427.1	decline [22 days]	18.5	Increase - 2wk	3302.5	12.1	Increase - 1wk	9.1	Decrease - 1wk
Lansing	High	434.0	elevated incidence growth	16.3	Increase - 2wk	3300.1	14.9	Increase - 1wk	3.4	<20 wkly deaths
Traverse City	High	424.7	elevated incidence plateau	19.1	Increase - 1wk	2888.6	14.0	Decrease - 1wk	7.8	Increase - 2wk
Jackson	High	478.7	elevated incidence growth	20.9	Increase - 19wk	3825.6	21.2	Decrease - 1wk	6.6	<20 wkly deaths
Upper Peninsula	High	441.5	decline [30 days]	16.3	Increase - 1wk	3064.0	10.2	Increase - 1wk	5.6	<20 wkly deaths
Michigan	High	340.4	elevated incidence plateau	14.1	Increase - 2wk	3955.5	11.6	Increase - 16wk	4.4	Decrease - 1wk

Cases



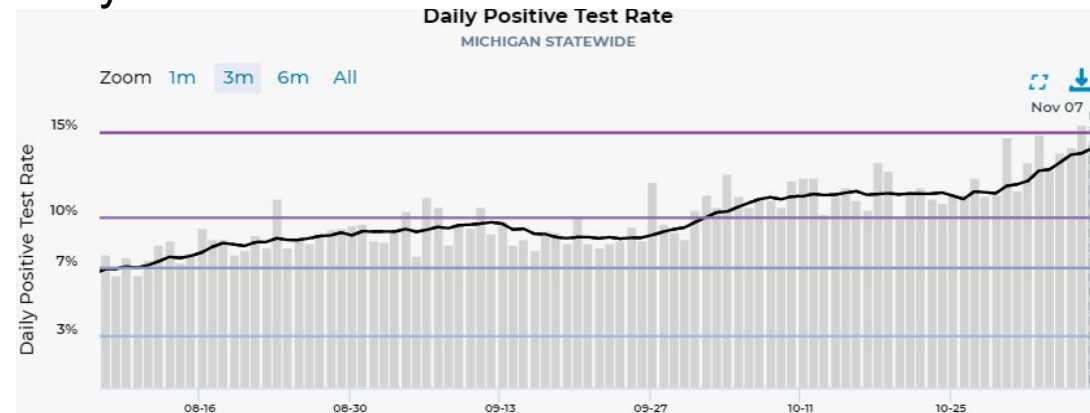
Positivity



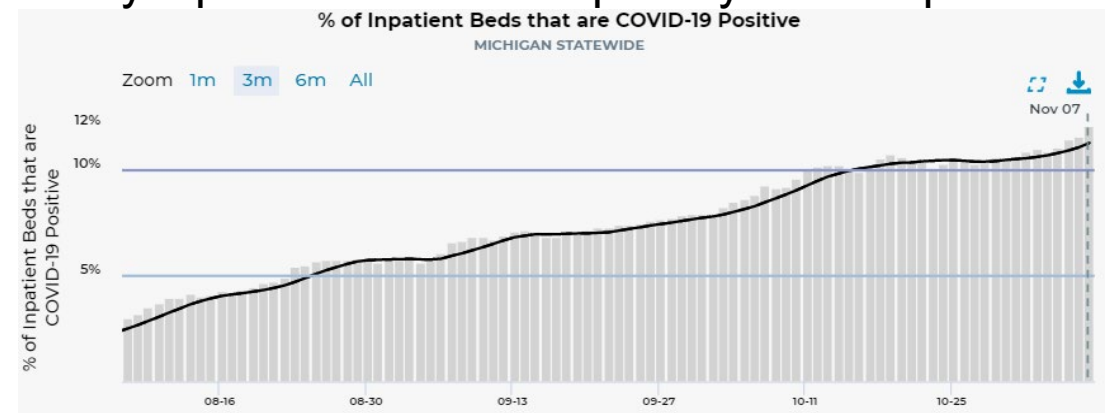
Time Trends – Positivity, Case Rates, Hospitalizations, Deaths

➤ Core COVID-19 indicators show that transmission is increasing, and burden remains high in Michigan

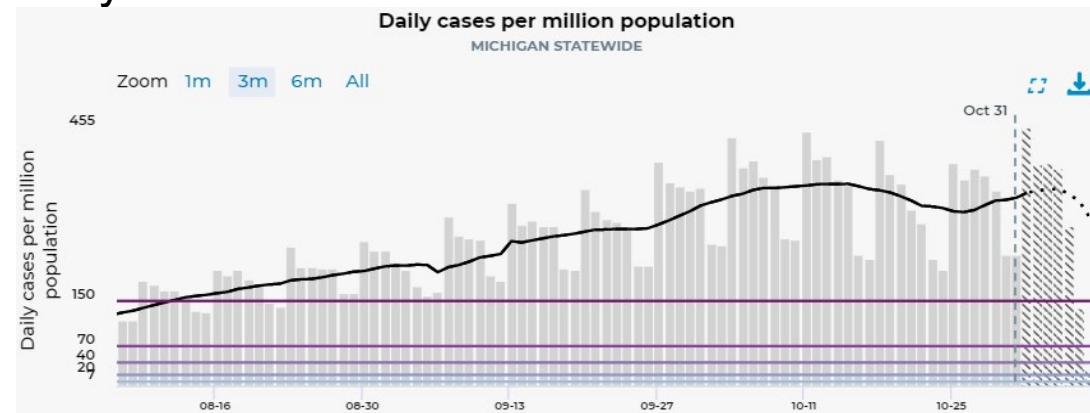
Daily Positive Test Rate



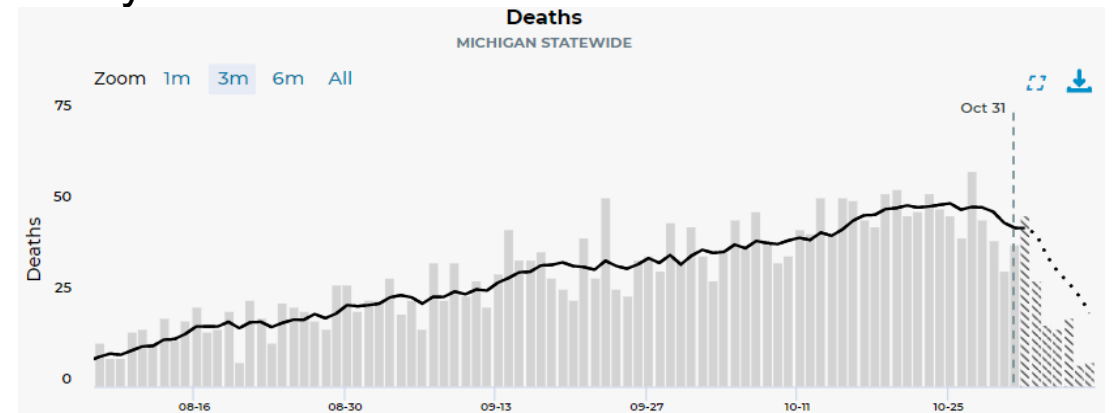
Daily Inpatient Beds Occupied by COVID patients



Daily Case Rate

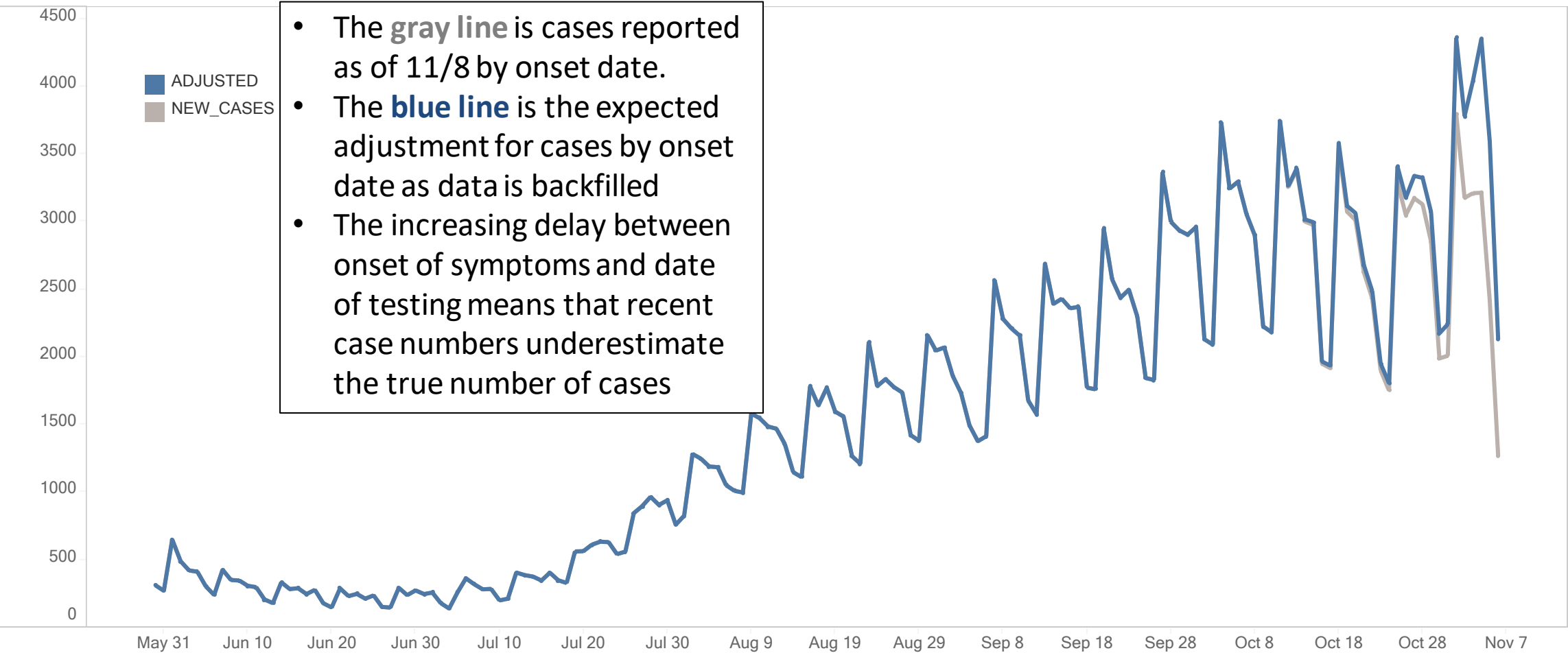


Daily Deaths



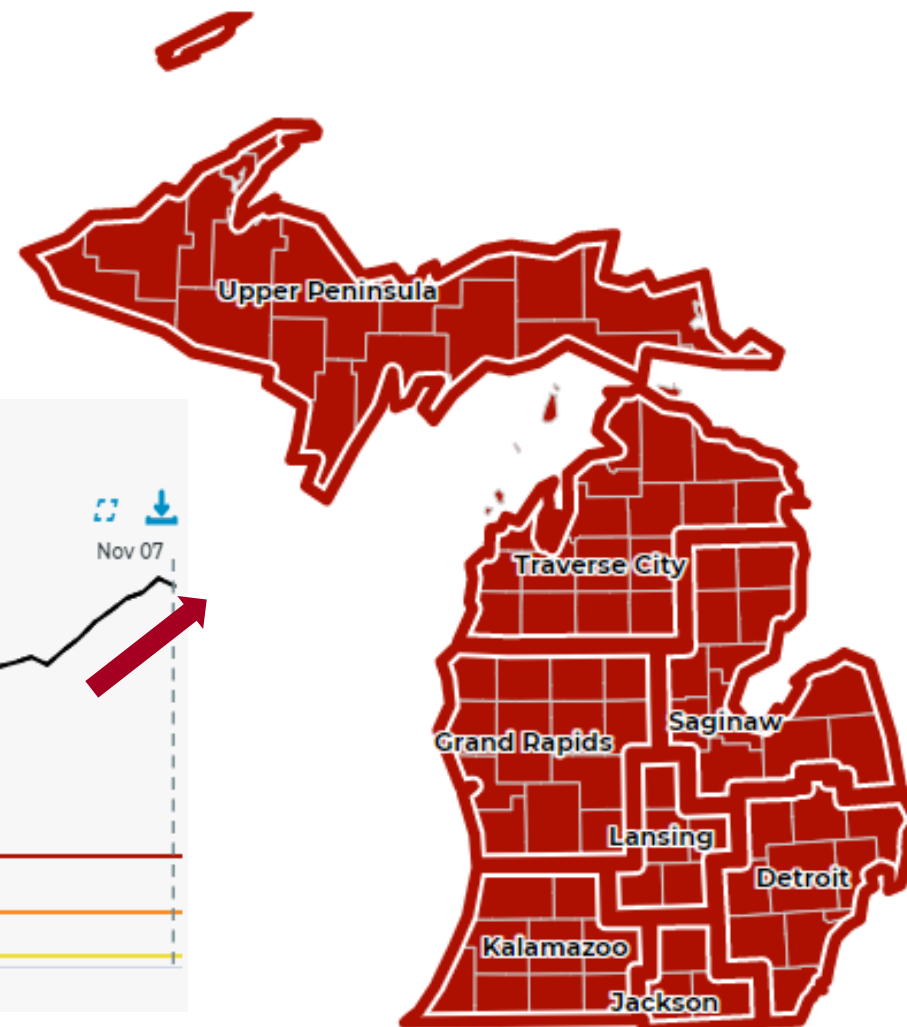
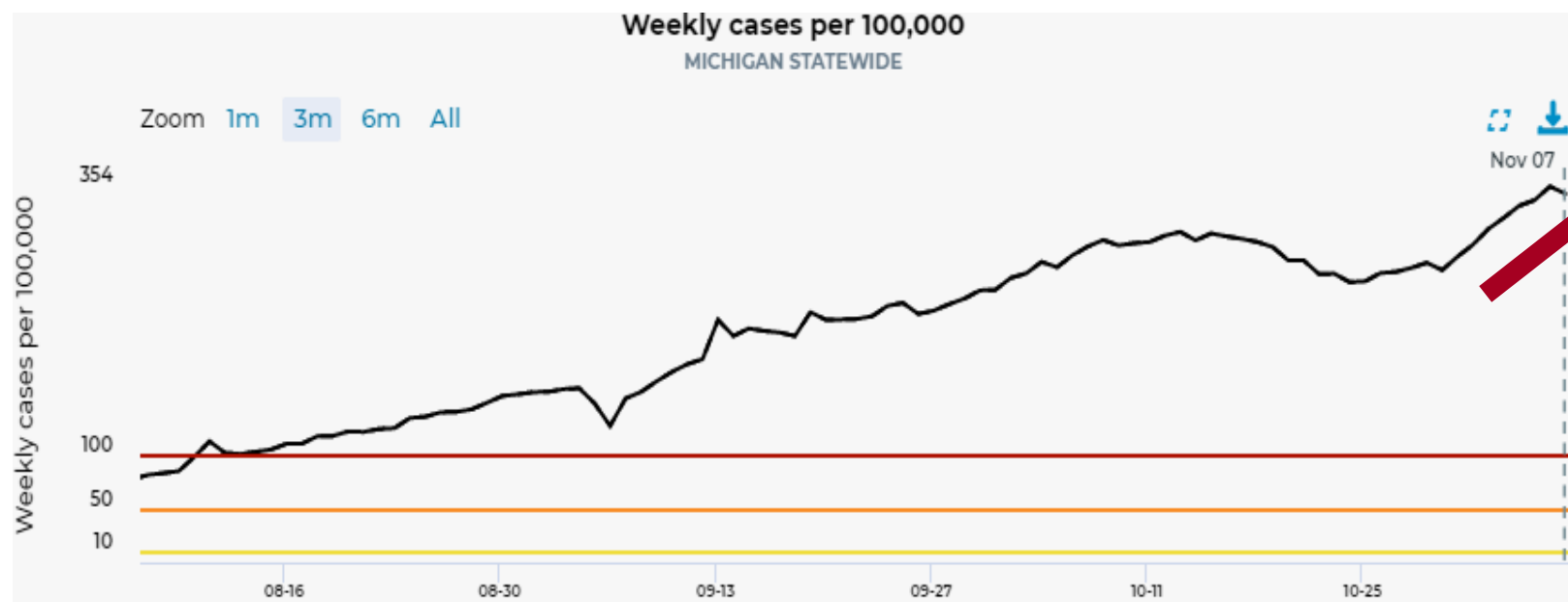
Michigan Lag adjusted new COVID cases by onset date

New confirmed cases by onset actual and adjusted as of November 8, 2021 (-2 days)

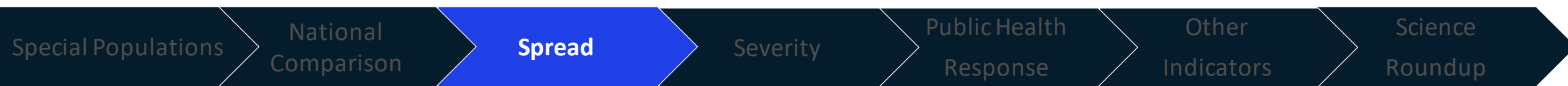


Michigan at High Transmission Level

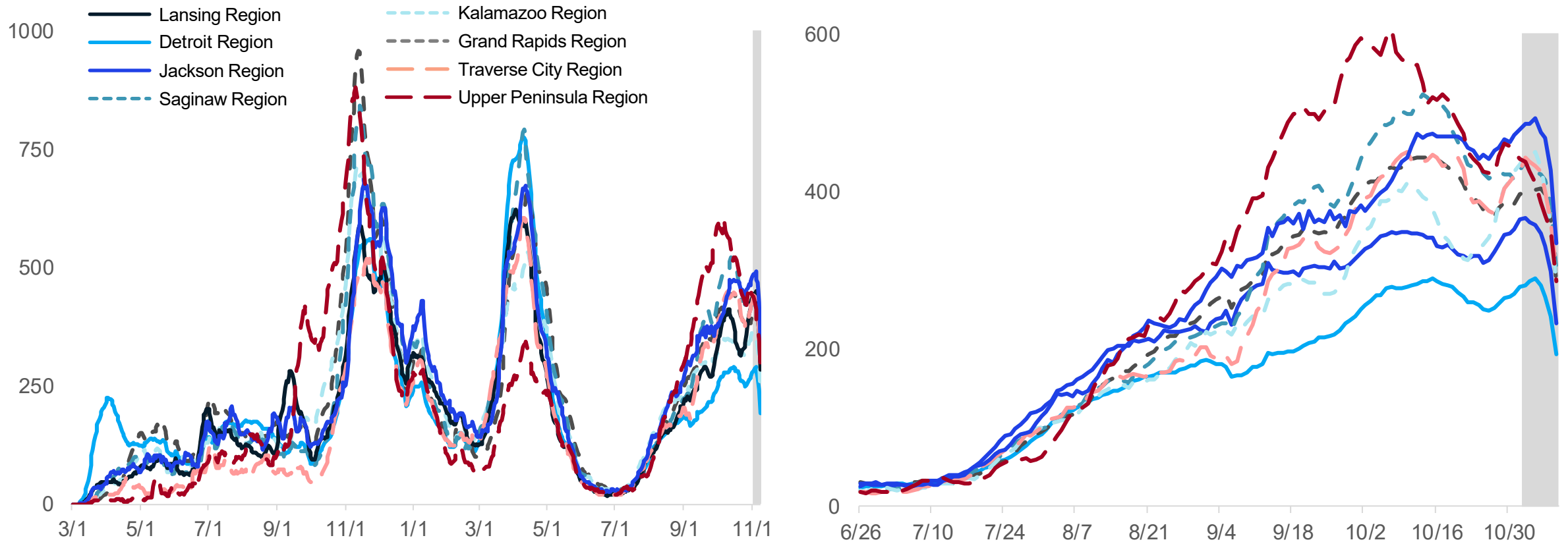
[Dashboard](#) | [CDC](#) | [MI Start Map](#) for most recent data by reporting date



- Most recent data using referral date show increases in case trends (red arrow)



Michigan Regional Trends – MERC Regions



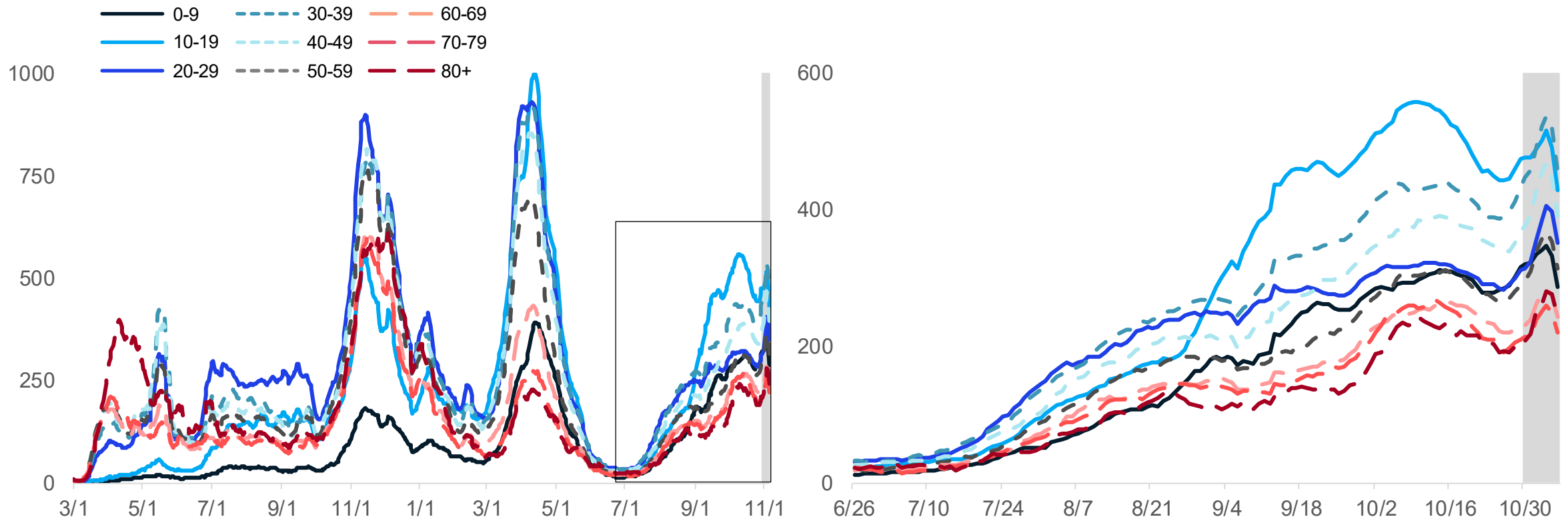
- Nearly all MERC regions are increasing
- Case rate is highest in Jackson Region, followed by Upper Peninsula, Lansing, Saginaw, and Traverse City

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



Case Rate Trends by Age Group

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



- Case rate trends for most age groups are increasing
- Case rates for all age groups are between 210 and 490 cases per million (through 11/1)
- Case rates remain highest for **10-19-year-olds**, cases for 30-39 are showing increase as well

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



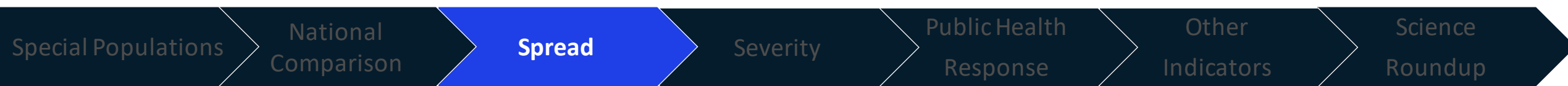
Number of Cases and CaseRates by Age Group, data as of Nov 8

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	388.4	337.0	+17% (+57)
10-19	625.3	489.3	+10% (+59)
20-29	450.1	326.3	+13% (+51)
30-39	521.1	429.6	+10% (+48)
40-49	455.0	385.8	+11% (+46)
50-59	407.9	302.0	+13% (+46)
60-69	289.7	227.1	+1% (+2)
70-79	159.7	208.3	+4% (+7)
80+	88.9	214.5	+10% (+8)
Total¶	3405.9	340.4	+11% (+328)

† Rolling 7-day average; ¶ Total may not reflect state due to missing age data
Note: Case information sourced from MDHHS and reflects date of onset of symptoms
Source: MDHHS – Michigan Disease Surveillance System

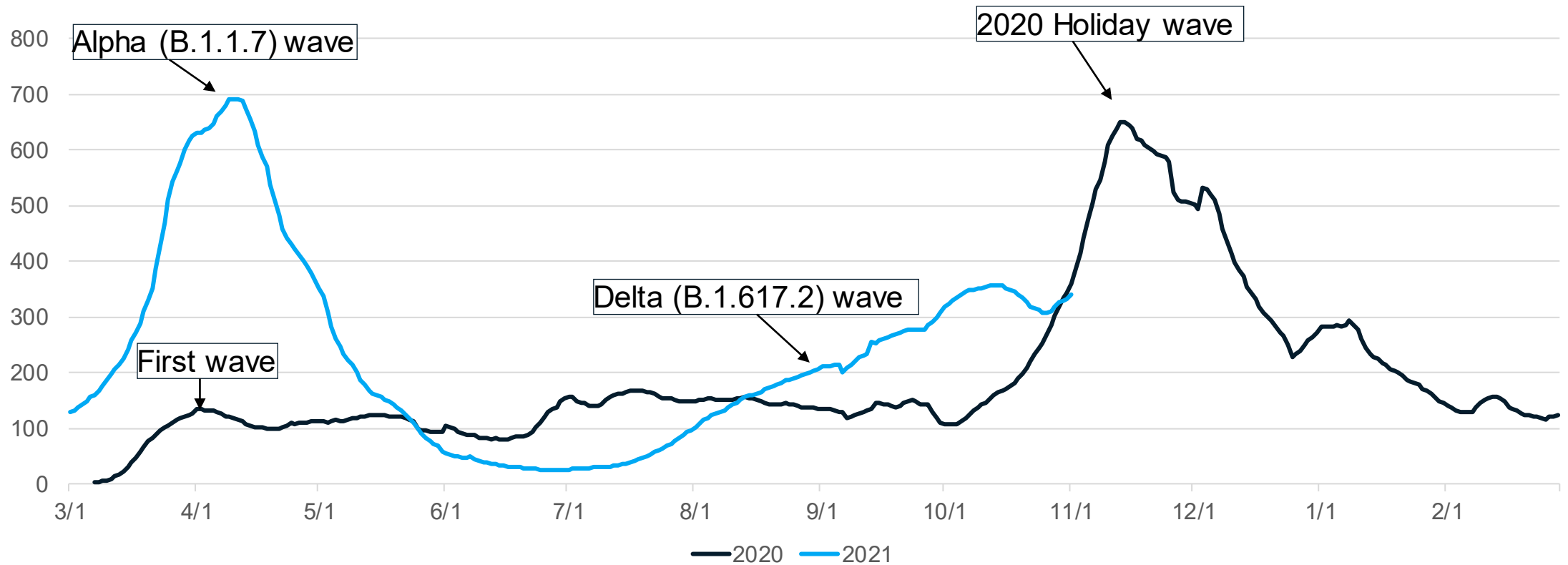
- Trend numbers and comparisons are being impacted by longer backfill times – the data in this table are comparing the two time points from the most recent data file
- Average daily number of cases (625.3) and avg. daily case rate (489.3 case/mil) are highest for those aged 10-19
- One week change is highest for younger age groups
- Case rates for age groups 10-19, 30-39, and 40-49 are higher than the state
- 52-week low case rates were on June 26, 2021



Time Trends – Annual Comparison

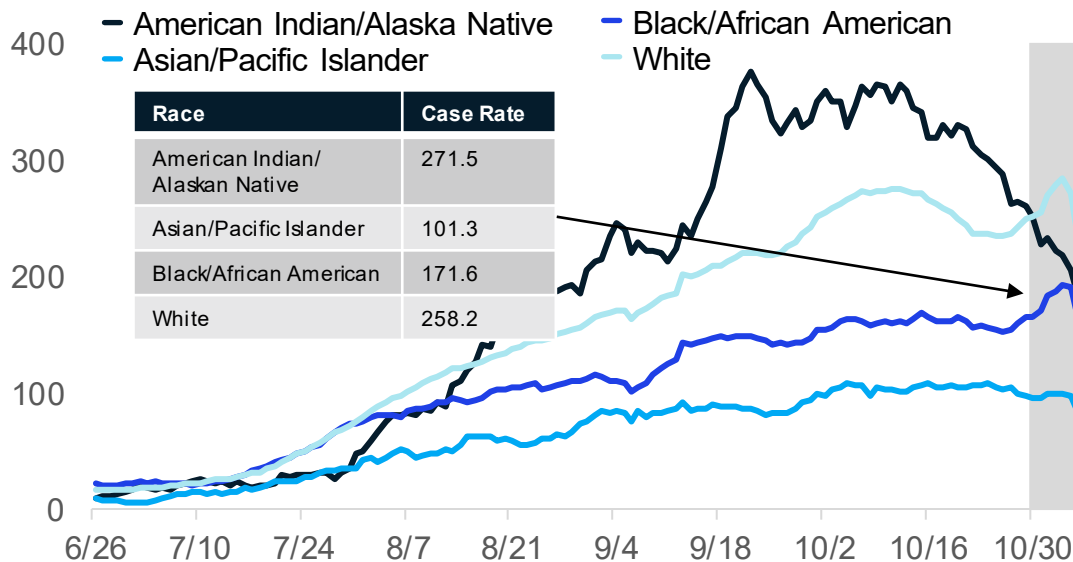
- Case rates are now at the same level as this time last year. Rate is at the same rate as the exponential curve we experienced as last fall

7- day rolling average of Rates 2020 vs 2021

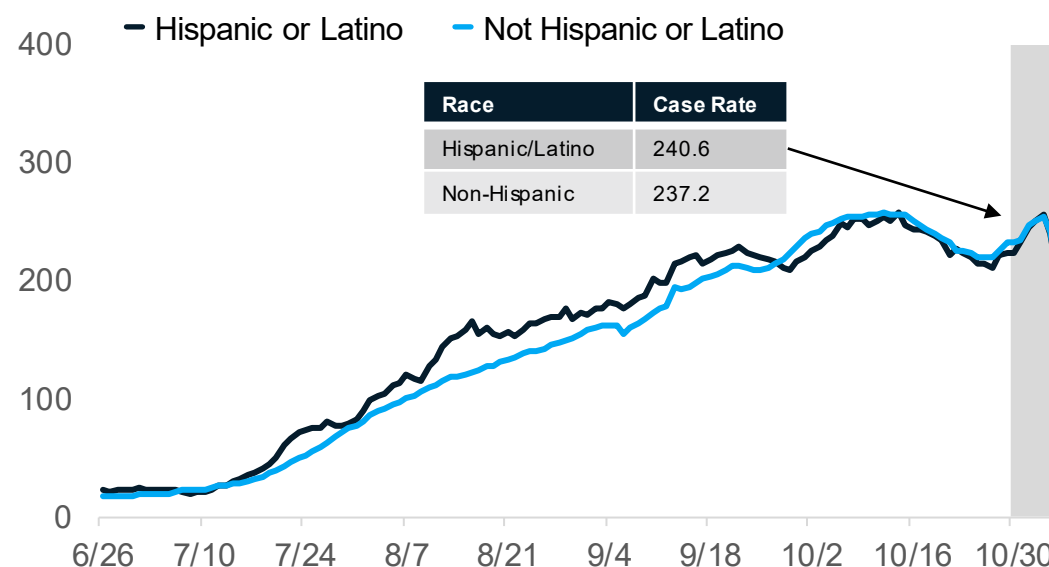


Case Rates by Reported Racial and Ethnic Group

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:

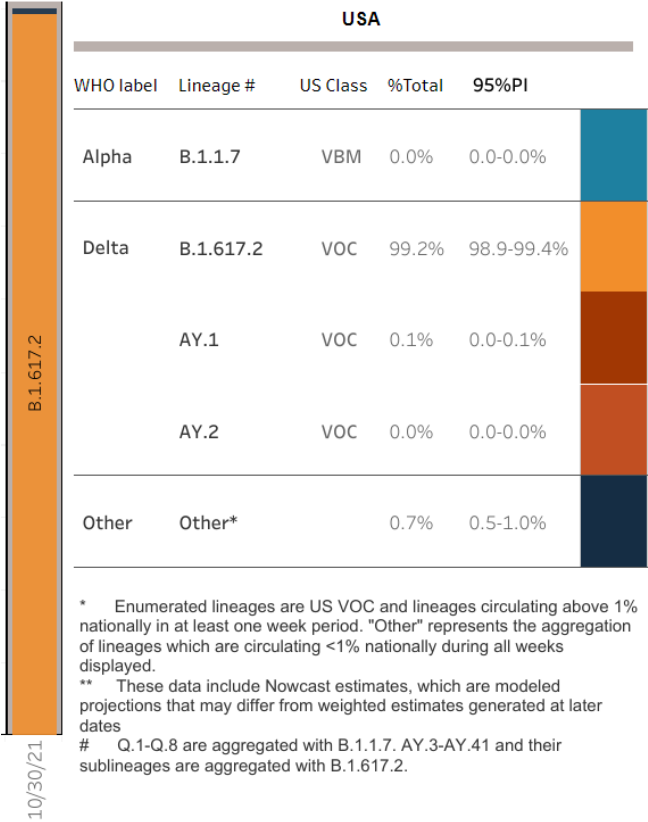
- Cases per million are increasing for majority of racial and ethnic groups, but the delay in reporting is impacting trend analysis
- The high number of cases with missing race/ethnicity data, and those multiracial or other are also impacting the case rates shown here
- American Indian/Alaskan Native have the highest case rates but are declining
- In the past 30 days, 24% (↓1%) of race data and 30% (↔) 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



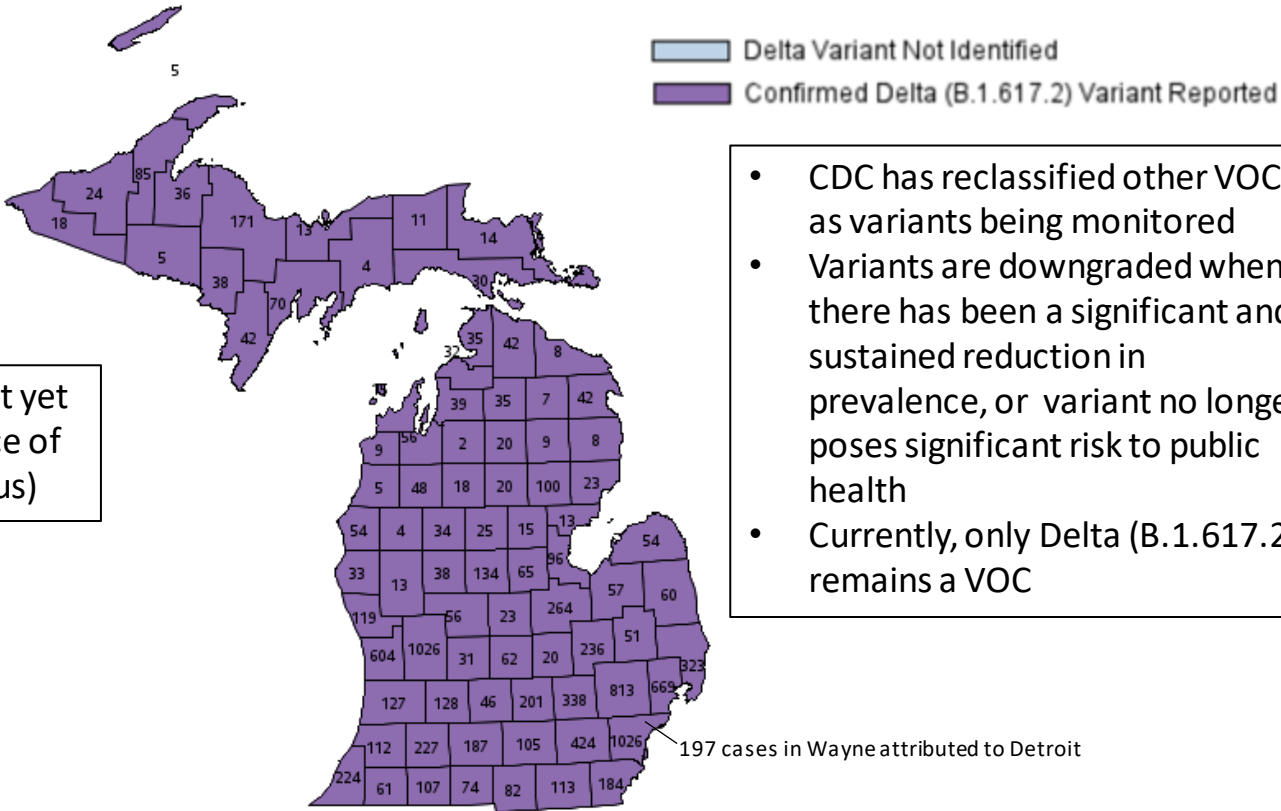
Identified COVID-19 Cases Caused by Variants of Concern (VOC) in US and Michigan

SARS-CoV-2 Variants Circulating in the United States, Oct 24 – Oct 30 (NOWCAST)



Currently, CDC is not yet reporting prevalence of AY.4.2 (i.e., Delta plus)

Variants of Concern in Michigan, Nov 8



- CDC has reclassified other VOCs as variants being monitored
- Variants are downgraded when there has been a significant and sustained reduction in prevalence, or variant no longer poses significant risk to public health
- Currently, only Delta (B.1.617.2) remains a VOC

Variant	MI Reported Cases ¹¹	# of Counties	MDHHS VOC Sequenced Prev.
B.1.617.2 (delta)	10,019	83	100%

Data last updated Nov 8, 2021
Source: MDSS



Number of Weekly Reported Outbreaks

Number of outbreak investigations by site type, week ending Nov 4

Site type	Outbreaks by ongoing/new classification, #			Visibility ¹
	Ongoing	New	Total	
K-12 SCHOOL	428	104	532	●
SNF/LTC/OTHER ASSISTED LIVING	139	38	177	●
MANUFACTURING, CONSTRUCTION	38	8	46	●
CHILDCARE/YOUTH PROGRAM	30	10	40	●
HEALTHCARE	17	7	24	●
OTHER	17	2	19	●
CORRECTIONS	16	3	19	●
*SOCIAL GATHERING	14	0	14	●
*RETAIL	7	4	11	●
*SHELTERS	8	2	10	●
OFFICE SETTING	8	1	9	●
COLLEGE/UNIVERSITY	7	0	7	●
*RESTAURANTS AND BARS	6	0	6	●
*RELIGIOUS SERVICES	3	2	5	●
*PERSONAL SERVICES	3	0	3	●
AGRICULTURAL/FOOD PROCESSING	2	0	2	●
*COMMUNITY EXPOSURE - OUTDOOR	1	0	1	●
*COMMUNITY EXPOSURE - INDOOR	0	0	0	●
TOTAL	744	181	925	

- Easier to identify outbreak
- Harder to identify outbreak

Total number of active outbreaks is **up 9%** from previous week, with 181 new outbreaks identified

K-12 schools reported the greatest number of new outbreaks and clusters (104) this week, and the number of reported new outbreaks and clusters has increased since last week (↑4, ↑4%)

The next greatest number of new outbreaks was among SNF/LTC (38), followed by childcare/youth programs (10) manufacturing/construction (8), healthcare (7), and 6 other settings with at least 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.

NOTE (10/4): MDHHS adopted the new [CSTE school cluster and outbreak definition](#) which impacts how transmissions within school-sponsored settings are reported to the health department

Source: LHD Weekly Sitreps

K-12 school clusters and outbreaks, recent and ongoing, week ending Nov 4

Number of reported outbreaks/clusters increased since last week (493 to 532), with increases in Pre K-Elementary (225 to 252) and Middle/Jr High (98 to 118). High Schools decreased (166 to 160), and Administration was steady (2).

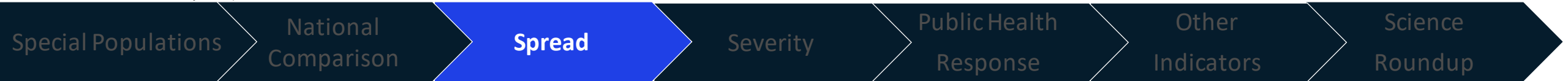
Region	Number of reported cases, #	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Region 1	1,006	139		107	2-64
Region 2n	442	20		57	3-54
Region 2s	288	130		50	2-34
Region 3	1,883	110		125	3-75
Region 5	202	72		34	3-52
Region 6	614	125		88	2-68
Region 7	175	43		29	2-20
Region 8	514	27		42	3-48
Total	5,124	666		532	2-75

Grade level	Number of reported cases, #	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Pre-school - elem.	1,667	301		252	2-48
Jr. high/middle school	1,052	213		118	2-64
High school	2,398	152		160	2-75
Administrative	7	0		2	3-4
Total	5,124	666		532	2-75

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Source: LHD Weekly Sitreps



Key Messages: Healthcare Capacity and COVID Severity

Emergency Department visits, Hospital Admissions, and Hospital Census area all increasing

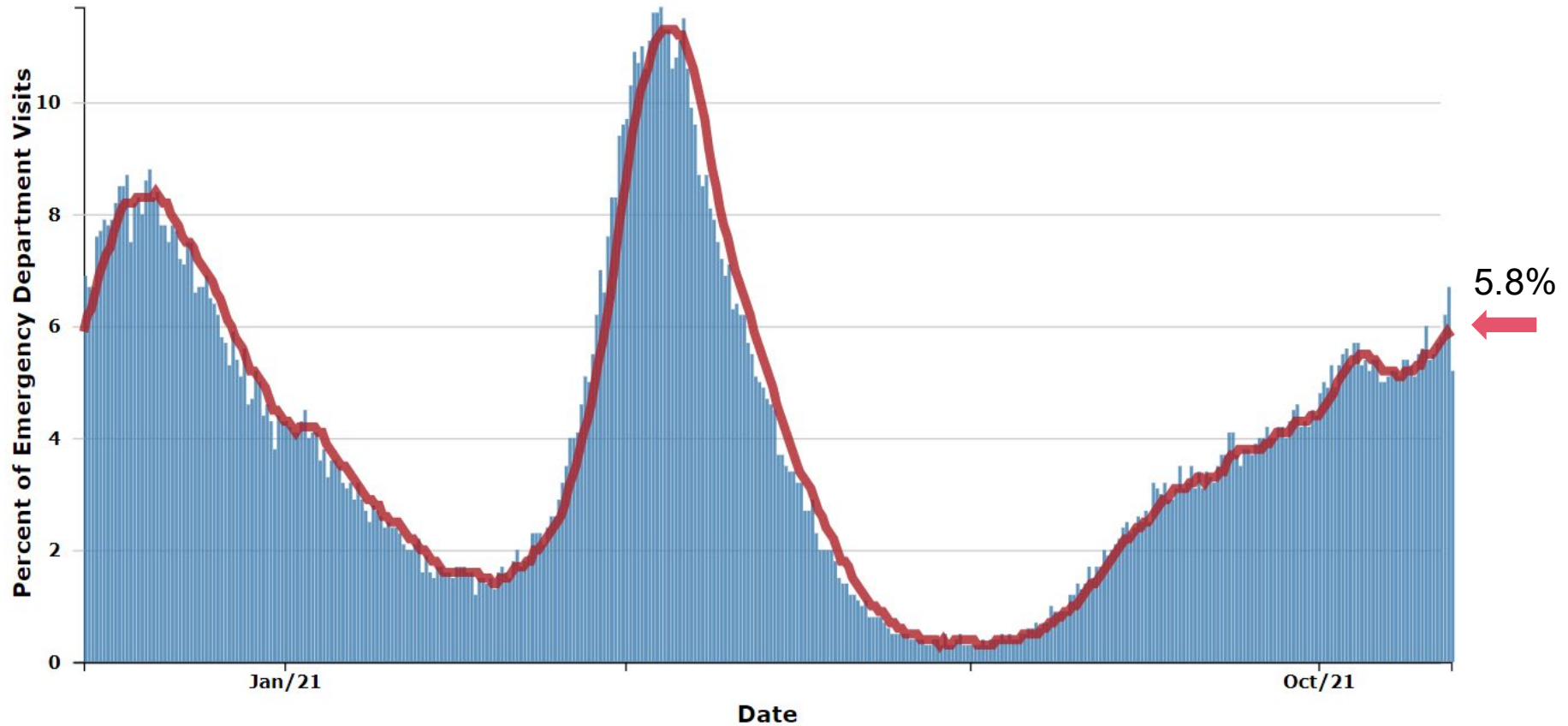
- 5.8% of ED visits are for COVID diagnosis (up from 5.1% last week)
- Hospital admissions for most age groups have increased from last week
- Hospital census has increased 20% since last week following a 2-week plateau
- All regions experienced increasing trends in hospital census this week
 - All regions except Region 8 have greater than 200/M population hospitalized
 - Region 3 now has greater than 300/M population hospitalized
- Overall, volume of COVID-19 patients in intensive care has increased 4% (vs. plateau last week)

Death rate has decreased to 4.4 daily deaths/million residents (down from 4.7 deaths/million last week)

- Trends for daily average deaths are increasing for majority of racial and ethnic groups
- Currently, American Indian/Alaskan Natives have the highest death rate (5.4 deaths/million)
- In the past 30 days, there have been no deaths among confirmed and probable COVID-19 cases under the age of 20



Michigan Trends in Emergency Department (ED) Visits for Diagnosed COVID-19

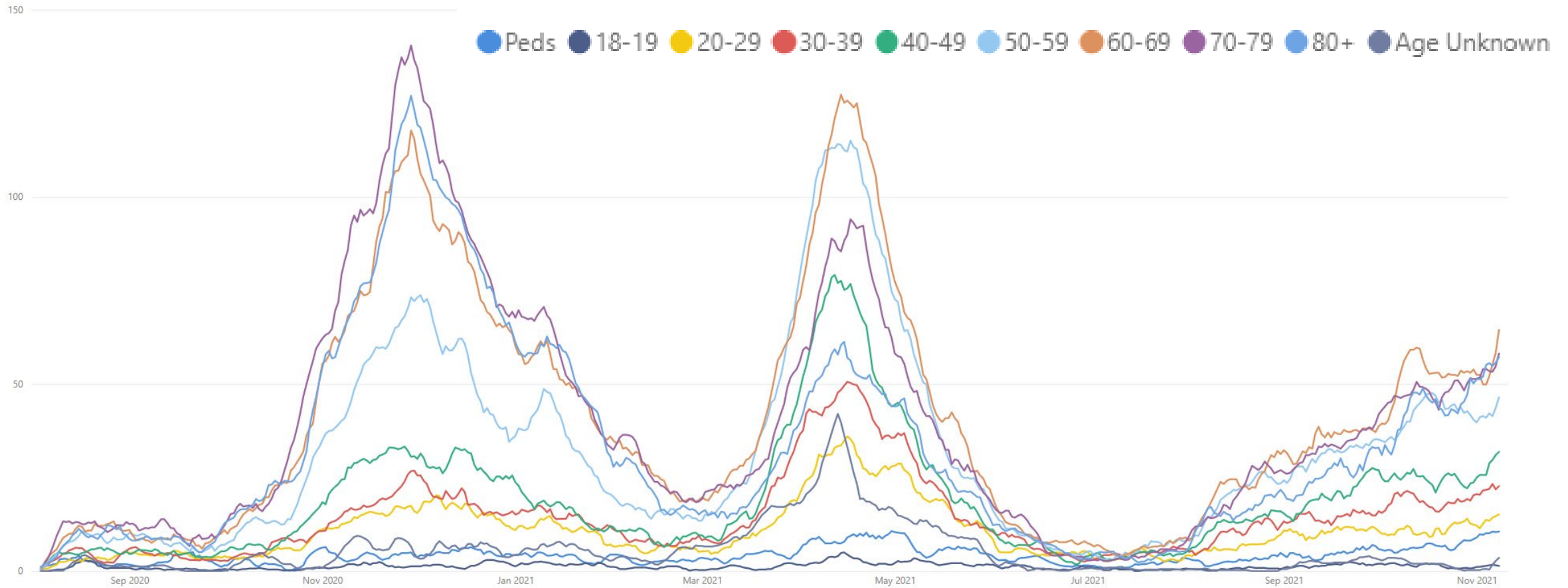


- Trends for ED visits are plateaued around 5.8% since last week (5.1% week prior)
- Trends for nearly all age groups are increasing
- Over past week, those 50-64 years saw highest number of avg. daily ED CLI visits (8.0%), but those between 25+ all above state average

Source: <https://covid.cdc.gov/covid-data-tracker/#ed-visits>; data extracted on 10/18/2021



Average Hospital Admissions Are Increasing for all Age Groups

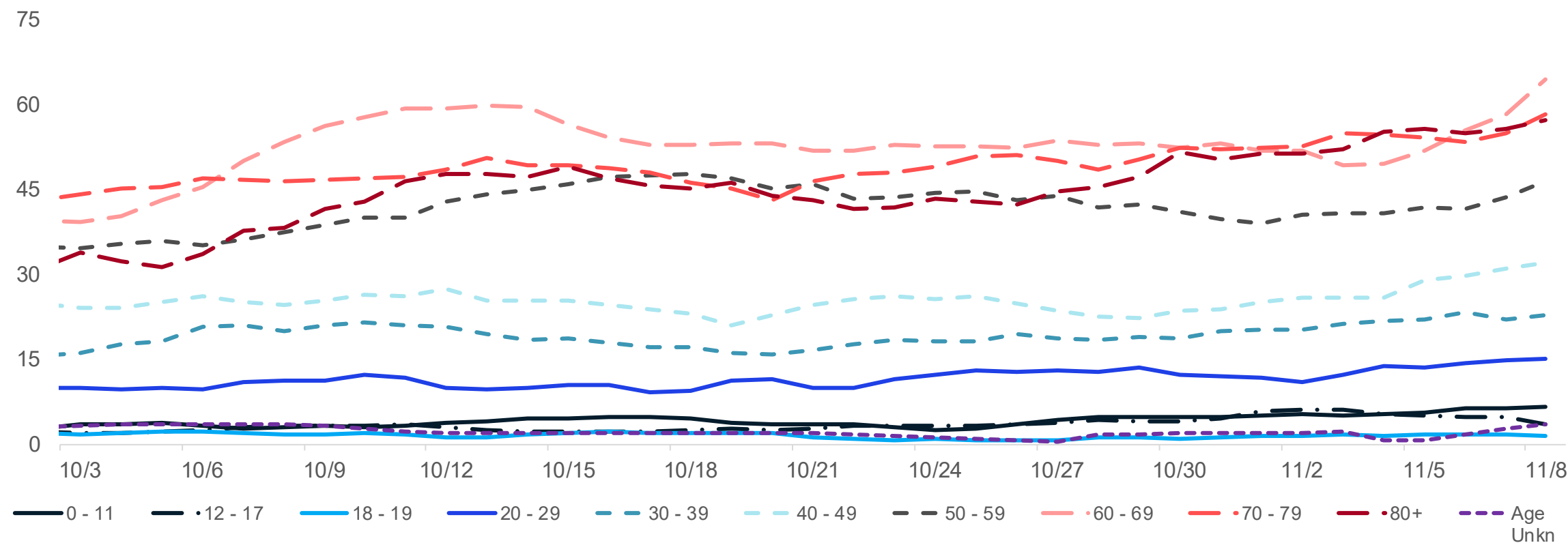


- Trends for daily average hospital admissions have increased 17% since last week (vs. 4% increase prior week)
- Most age groups saw increases this week with largest increases in those between 40 and 69 years
- More than 50 daily hospital admissions was seen for each of the age groups of 60-69, 70-79, and 80+

Source: CHECC & EM Resource



Average Hospital Admissions by Age Groups



- Trends for daily average hospital admissions have increased 17% since last week (vs. 4% increase prior week)
- Most age groups saw increases this week with largest increases in those between 40 and 69 years
- More than 50 daily hospital admissions was seen for each of the age groups of 60-69, 70-79, and 80+

Source: CHECC & EM Resource

Hospital Admissions and Admission Rates by Age Group

Daily new hospital admission per million by age group (7 -day rolling average)

Age Group	Average† daily number of hospital admissions	Average† Daily Hospital Admission Rate*	One Week % Change (Δ #)
0-11	6.4	4.6	+29% (+1)
12-17	3.4	4.6	-40% (-2)
18-19	1.4	5.4	0% (+0)
20-29	15.1	11.0	+31% (+4)
30-39	22.7	18.7	+12% (+2)
40-49	31.9	27.0	+27% (+7)
50-59	46.4	34.4	+19% (+7)
60-69	64.4	50.5	+25% (+13)
70-79	58.1	75.8	+12% (+6)
80+	57.1	138.0	+11% (+6)
Total¶	310.7	31.1	+17% (+46)

- Through November 8, there were an average of 311 hospital admissions per day due to COVID-19, which is an increase from last week (↑17%, +46)
- Most age groups saw increases this week, with largest increases in age groups older than 40
- The largest one-week increase in number of admissions were among those 60-69 (+13, +25%)
- More than 50 daily hospital admissions was seen for those aged 60-69, 70-79, and 80+
- Average daily hospital admission rate (138.0 hospital admissions/million) are highest for those aged 80+

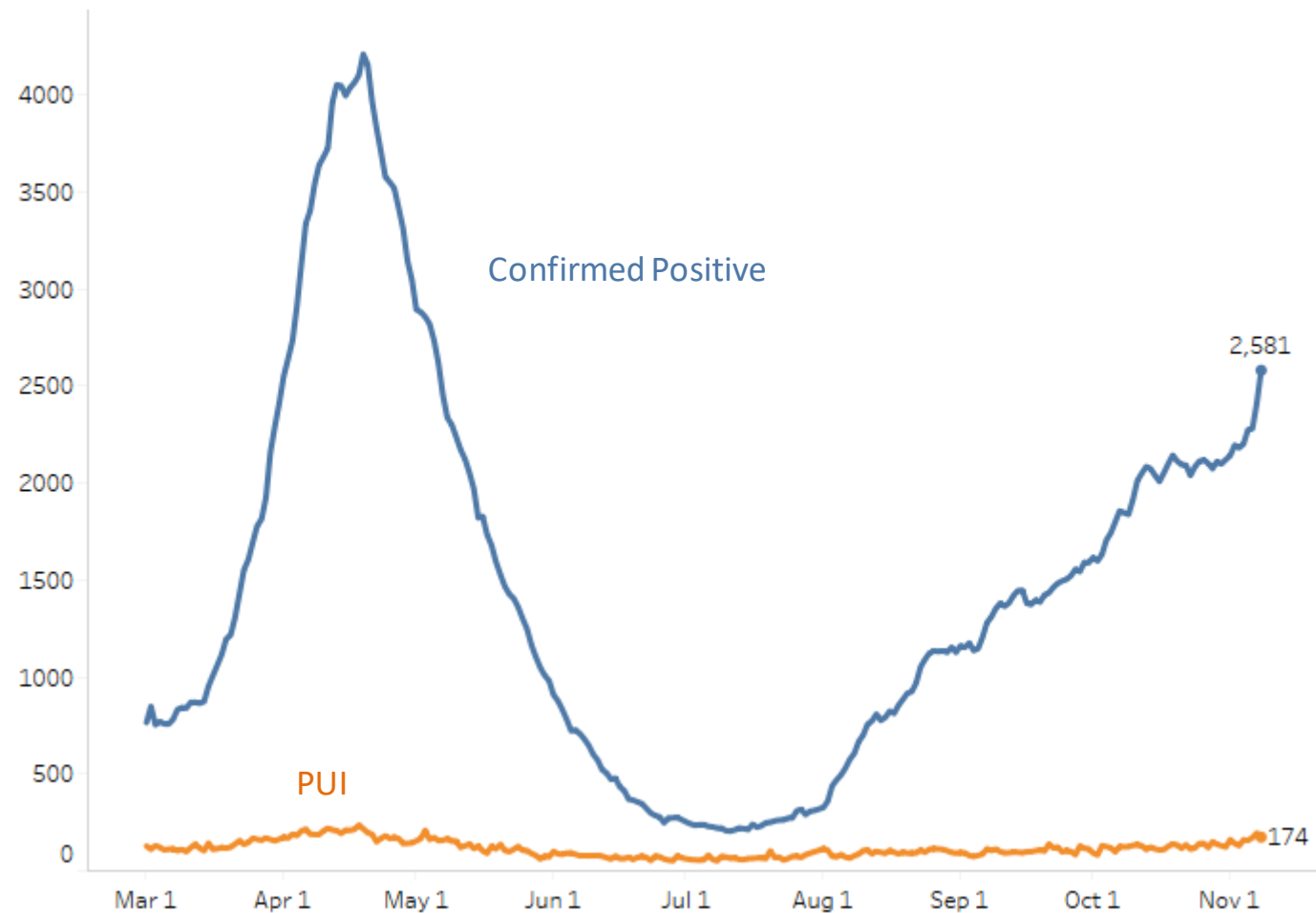
Note: for some age groups, small changes in number of hospitalization admissions can cause large change in One Week Percent Change

* Rate per 1 million residents; † Rolling 7-day average; ¶ Total may not reflect state due to missing age data
Note: Hospital Admission data reflects date data was submitted
Source: CHECC and EM Resource



Statewide Hospitalization Trends: Total COVID+ Census

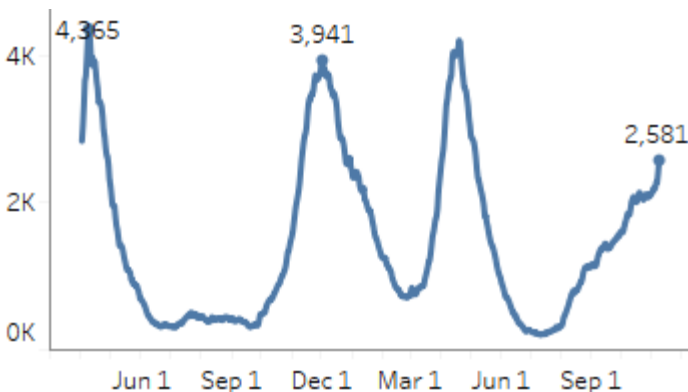
Hospitalization Trends 3/1/2021 – 11/8/2021
Confirmed Positive & Persons Under Investigation (PUI)



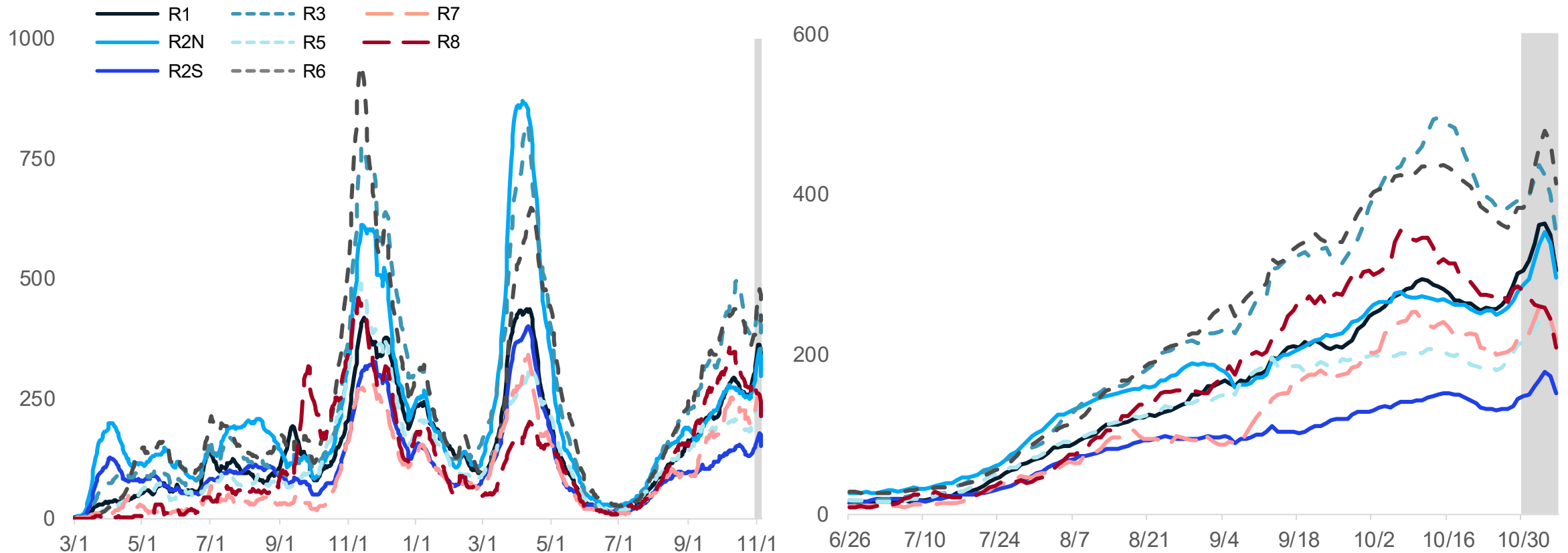
The COVID+ census in hospitals has increased by 20% in the past week after being flat for the 2 weeks prior.

There has been rapid growth over the past 4 days.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Michigan Regional Case Rate Trends – Preparedness Regions



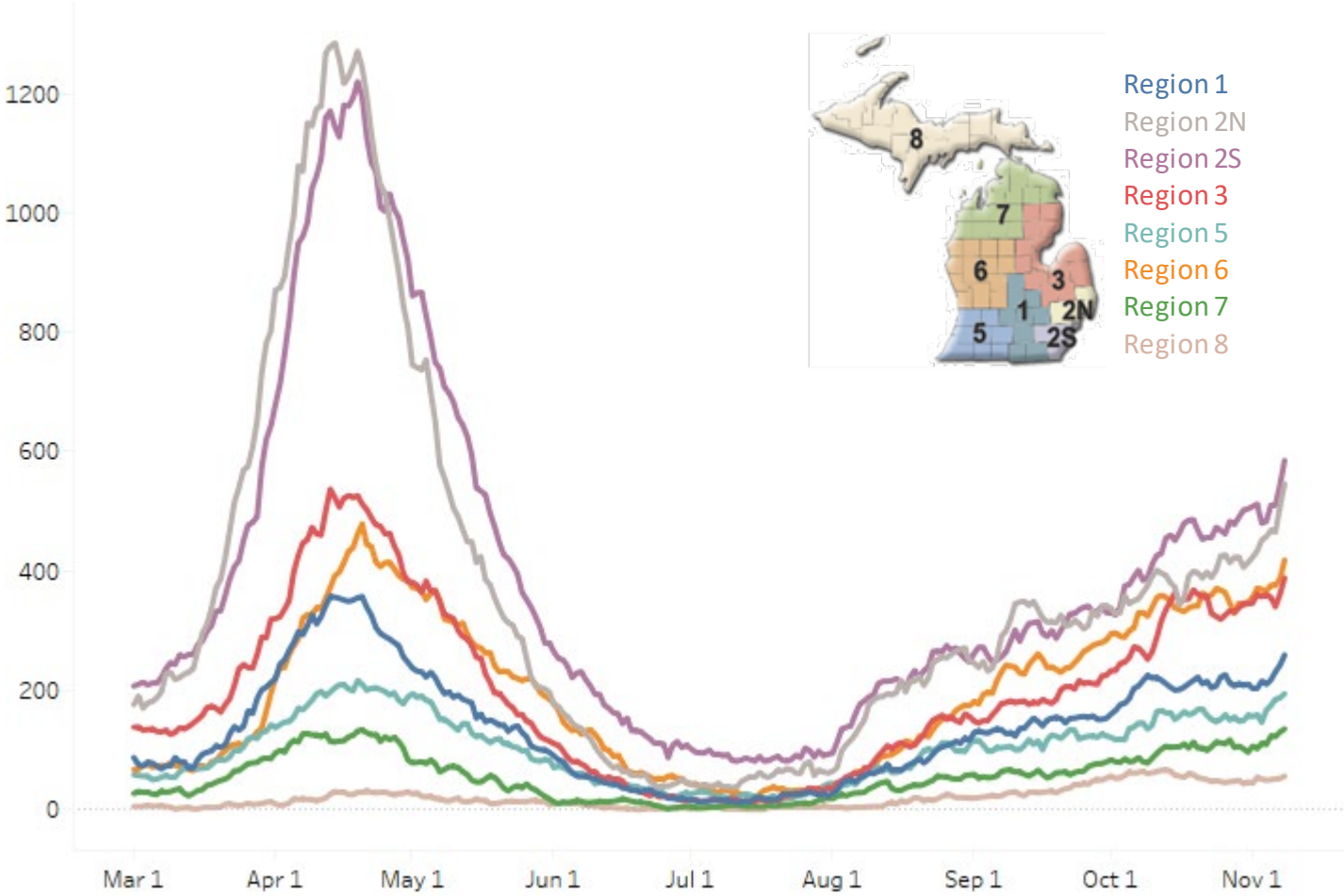
- Case rates in most preparedness regions are increasing
- Case rate is highest in Region 3 and Region 6; these regions are seeing highest hospitalizations per million residents (shown on next slide)

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



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 3/1/2021 – 11/8/2021
Confirmed Positive by Region



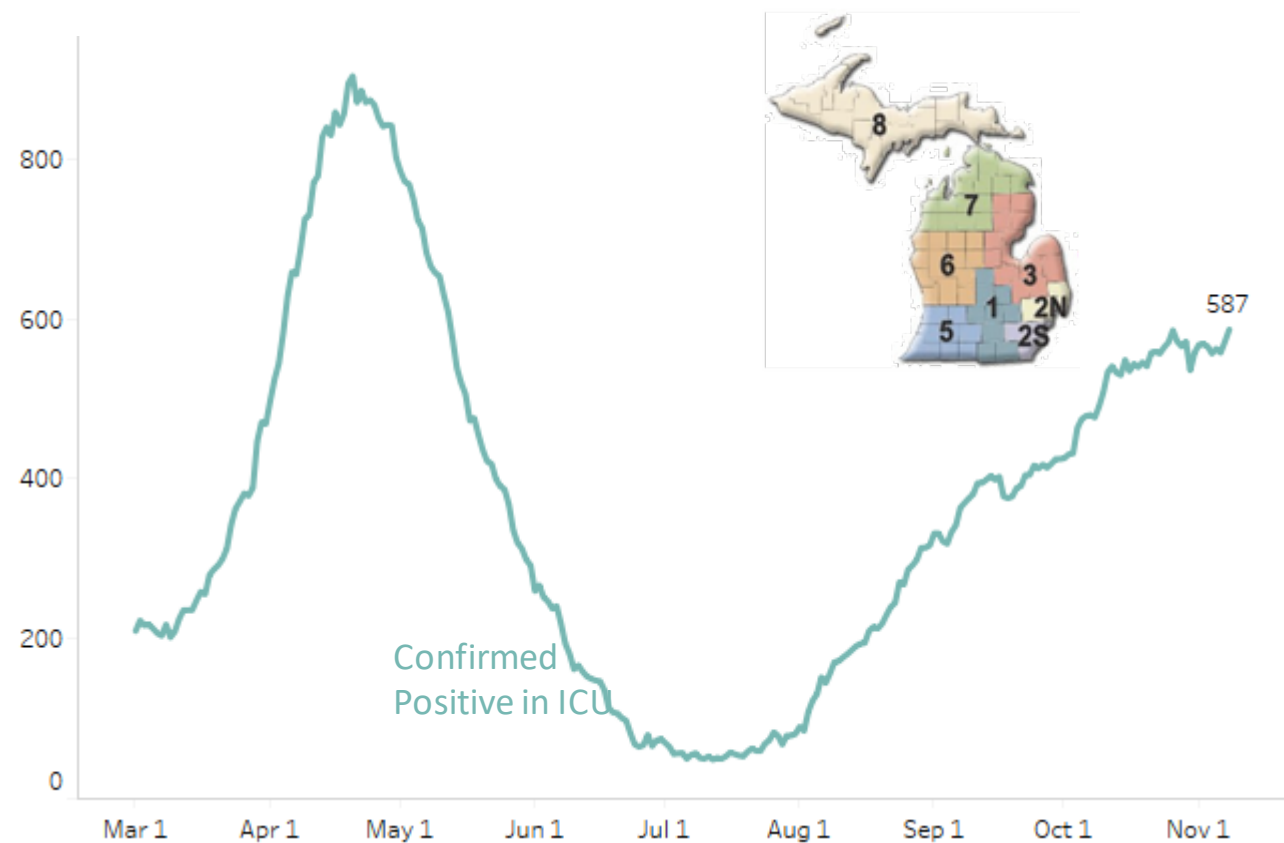
The census of COVID+ patients has increased across all regions. Regions 1, 2N, 7 and 8 had the fastest growth this week.

All regions except Region 8 have greater than 200/M population hospitalized. Region 3 now has greater than 300/M population hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	259 (28%)	239/M
Region 2N	546 (28%)	247/M
Region 2S	585 (15%)	263/M
Region 3	388 (12%)	342/M
Region 5	194 (24%)	204/M
Region 6	418 (18%)	285/M
Region 7	135 (27%)	270/M
Region 8	56 (27%)	180/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 11/8/2021
Confirmed Positive in ICUs



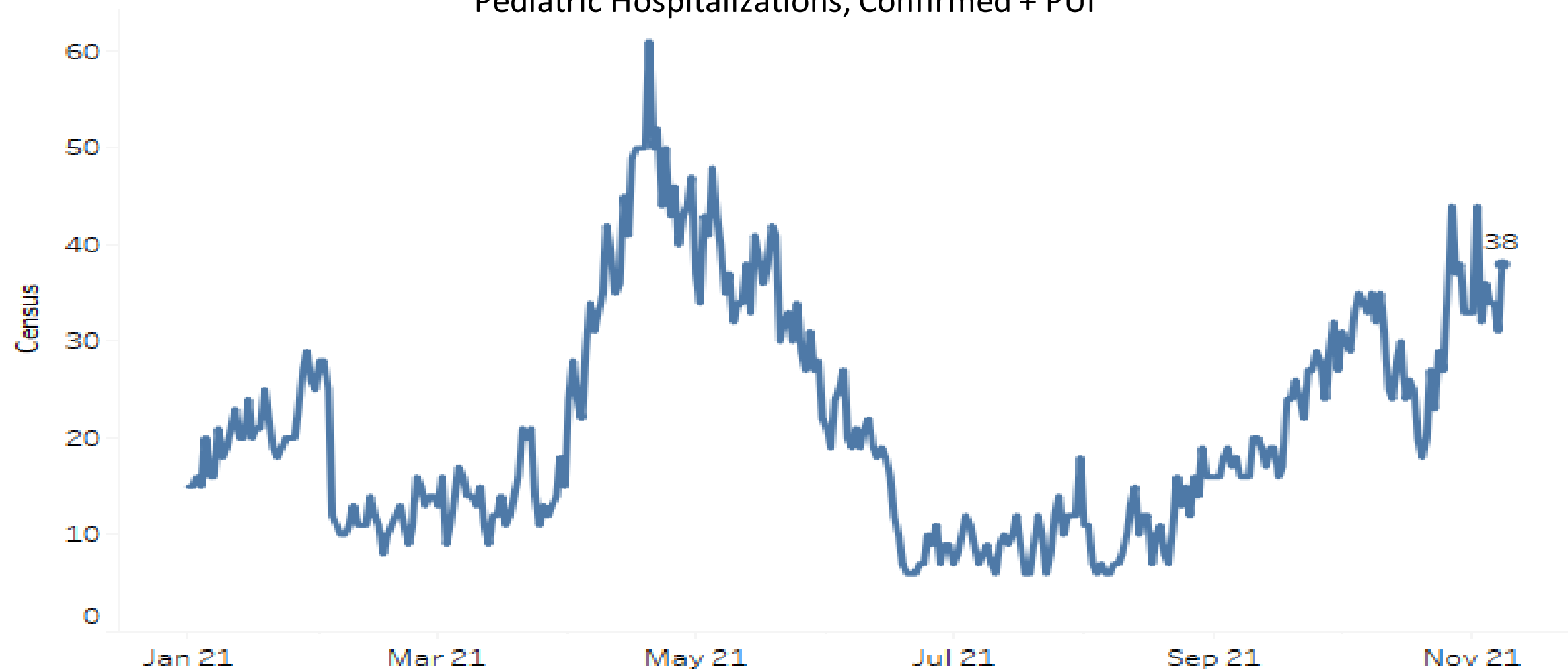
The census of COVID+ patients in ICUs has increased 4% from last week. Regions 2N, 5 and 8 show the largest percent increases. Region 1, 2S and 3 showed small decreases this week.

Regions 1, 3, and 7 have overall adult ICU occupancy greater than 85%. Regions 6 and 7 have more than 1/3rd of ICU beds filled with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	Adult ICU Occupancy	% of Adult ICU beds COVID+
Region 1	49 (-11%)	93%	25%
Region 2N	112 (13%)	83%	20%
Region 2S	131 (-2%)	84%	19%
Region 3	85 (-4%)	91%	24%
Region 5	45 (22%)	77%	24%
Region 6	100 (4%)	83%	37%
Region 7	48 (4%)	88%	34%
Region 8	17 (55%)	70%	27%

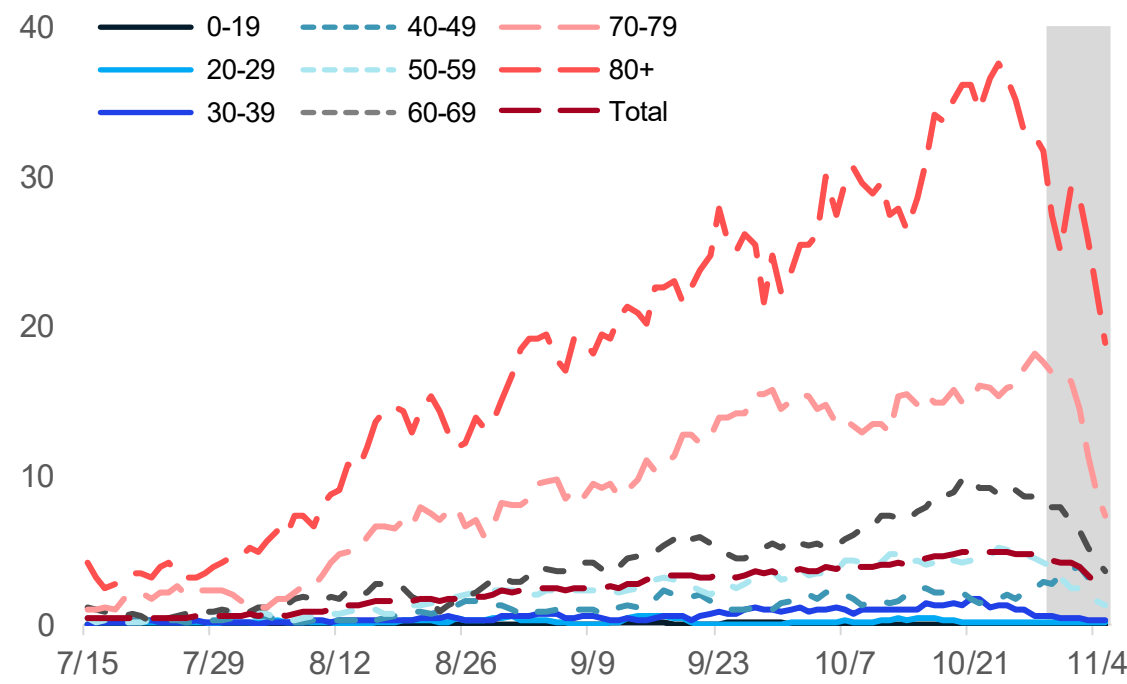
Statewide Hospitalization Trends: Pediatric COVID+ Census

Hospitalization Trends 1/1/2021 – 11/8/2021
Pediatric Hospitalizations, Confirmed + PUI



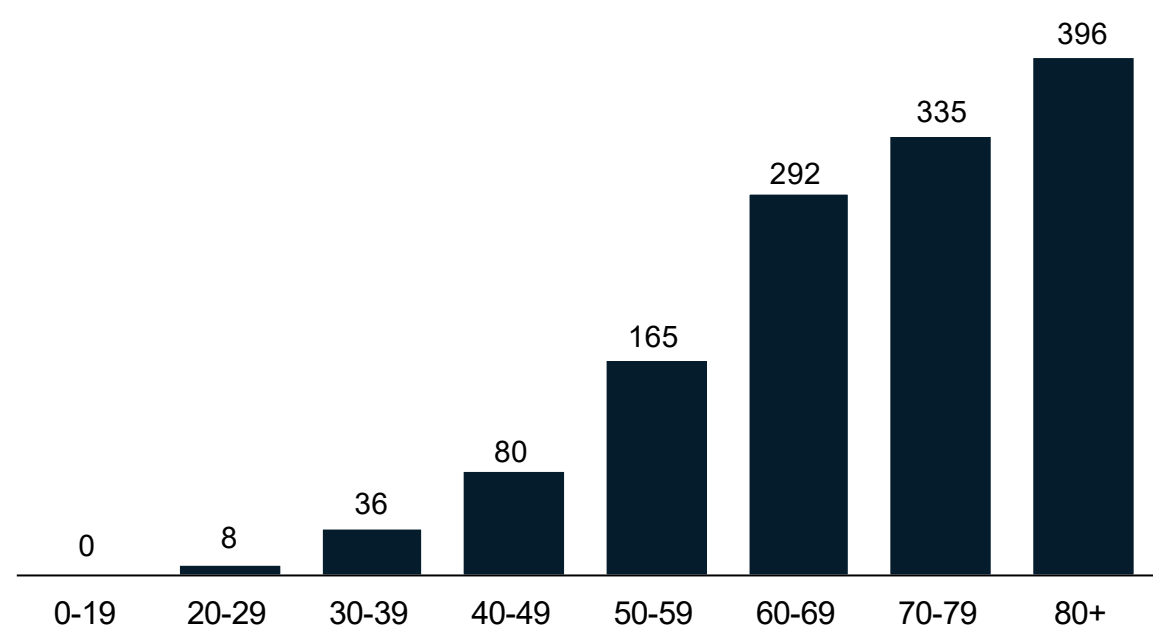
Average and total new deaths, by age group

Daily COVID-19 deaths in confirmed and probable cases per million by age group (7 day rolling average)



Total COVID-19 deaths in confirmed and probable cases by age group (past 30 days, ending 11/1/2021)

- 22% of deaths below age sixty

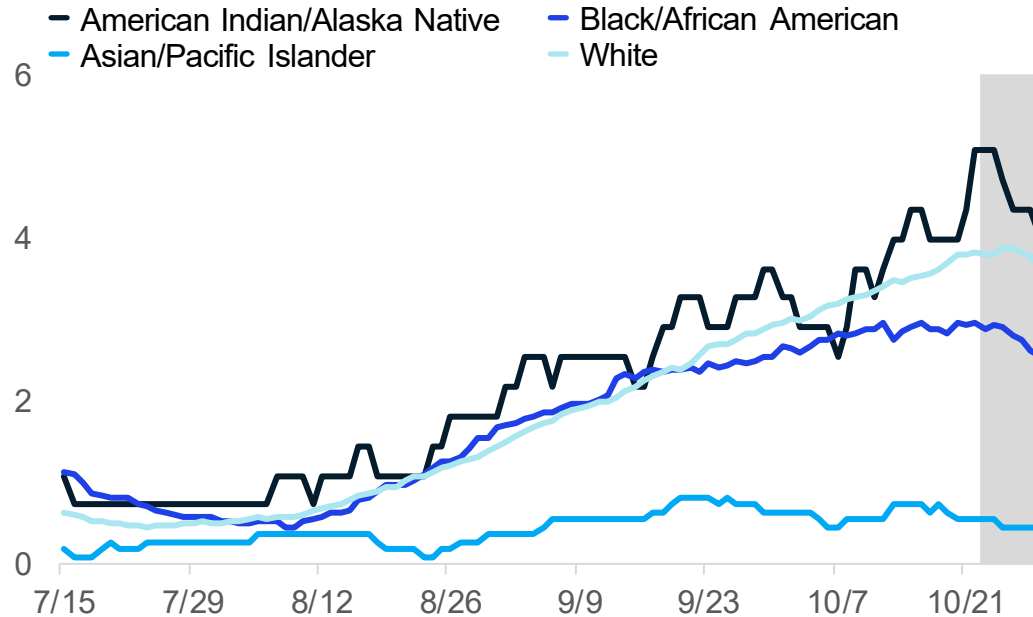


- Through 11/1, the 7-day avg. death rate is more than 15 daily deaths per million people for those over the age of 70
- In the past 30 days, there were no deaths among confirmed and probable COVID-19 cases under the age of 20
- 30-day proportion of deaths among those under 60 years of age is steady from the prior week

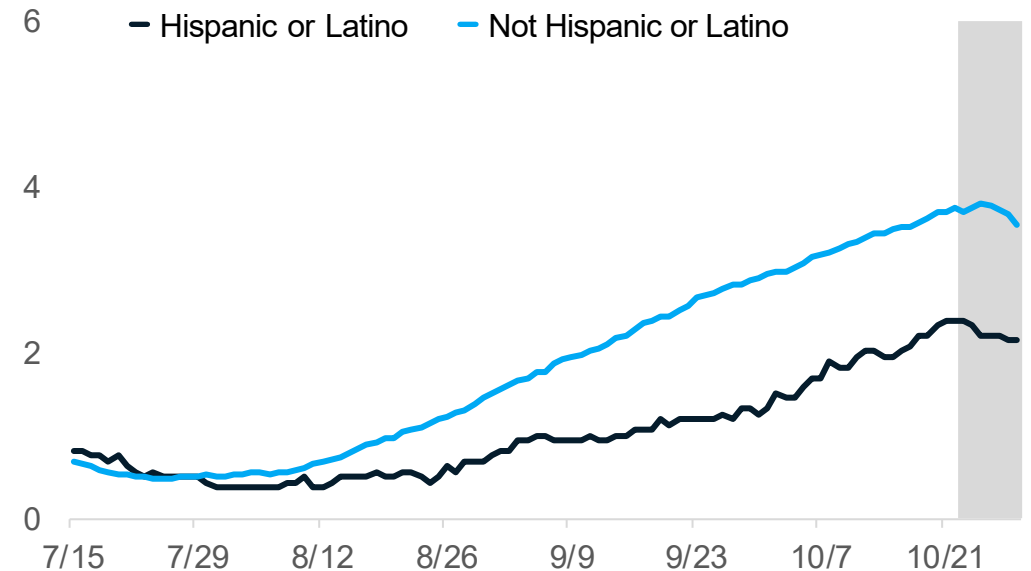
Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.
Source: MDHHS – Michigan Disease Surveillance System (MDSS)

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



- Deaths are lagging indicator of other metrics
- Overall trends for daily average deaths are increasing for American Indian/Alaskan Natives, Asian/Pacific Islanders, Whites, and Non-Hispanics since last week
- Currently, American Indian/Alaskan Natives have the highest death rate (5.4 deaths/million)

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



Key Messages: Public Health Response

COVID-19 Vaccination

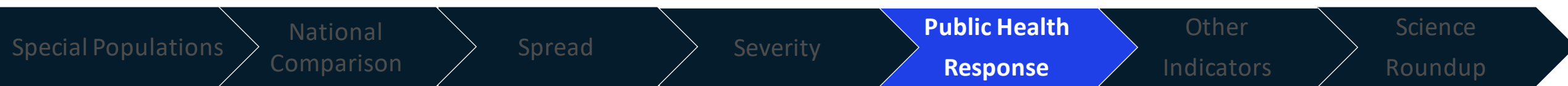
- 4,787 first doses administered each day (7-day rolling average); total administrations increasing
- More than 811,522 third doses administered as of 11/9, may include additional dose or booster dose
- More than 5.3 million people (53.8% of the population) in the state are fully vaccinated

Pediatric Vaccination

- Interactive dashboard now includes pediatrics vaccination doses (live updates effective 11/5)
- 14,169 administrations in 5- to 11-year-olds as of 11/9
- Expansion in COVID-19 vaccine eligible population has impacted (decreased) statewide coverage rates

Masking

- 42% (222/533) of school districts in Michigan have a school mask policy
- School districts without mask requirements are experiencing higher case rates
- The start of the school year saw case rates for school-aged children deviate from general population, but increases were highest among children in counties with no school mask policies



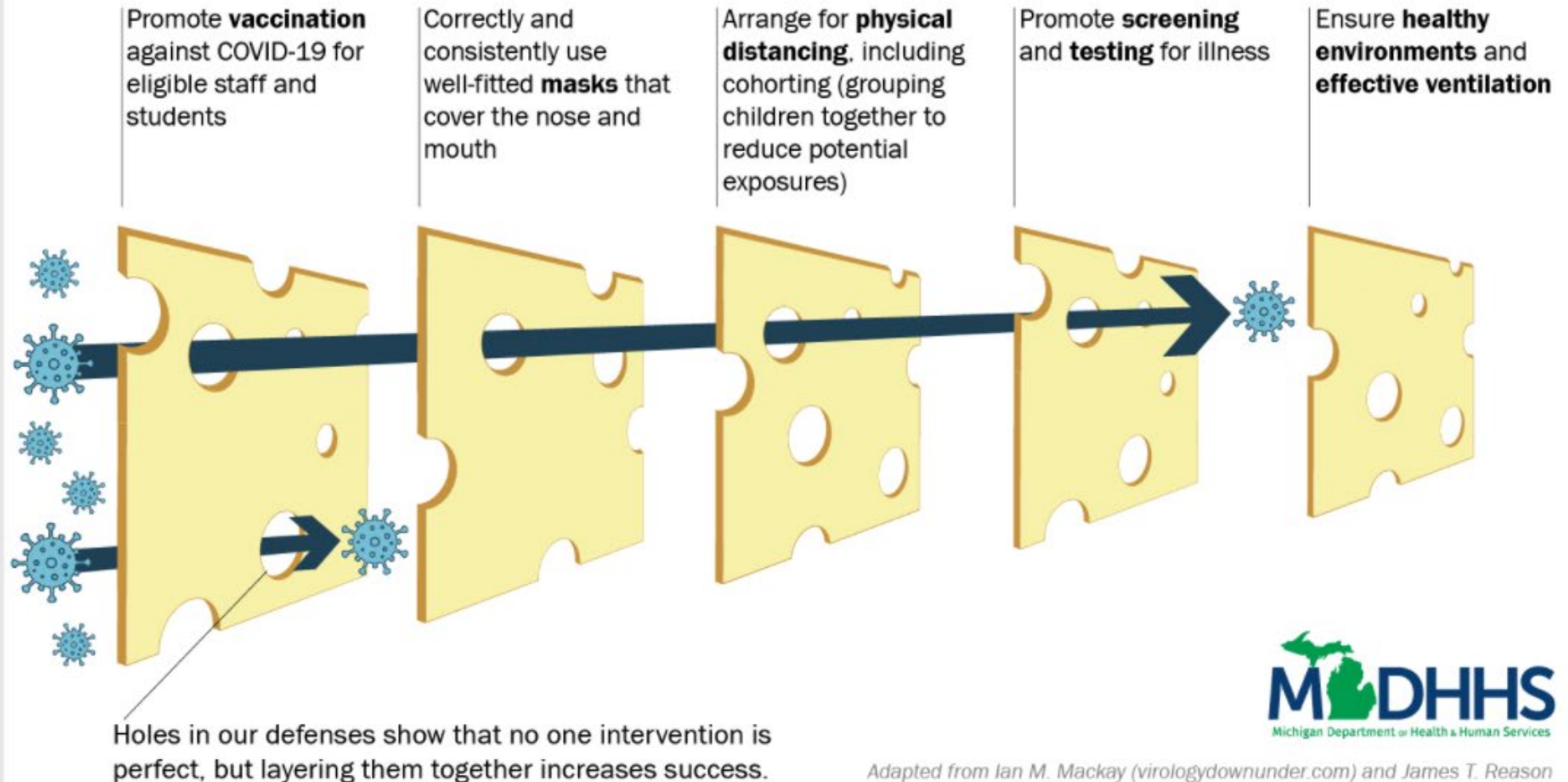
Layers of Defense Against COVID-19 in Schools

CDC recommended prevention strategies can be layered in different ways – the number and intensity of the layers can increase if community transmission increases

As community transmission increases, more holes appear in the defenses, meaning more layers of protection may be needed.



As the vaccination rate within a building or facility increases, fewer holes will appear in the defenses.



Average daily doses administered increasing (data through 11/09/2021)

15,428,290 doses delivered to providers and
11,836,874 doses administered*

MI 7-day rolling average ending November 3rd

- 35,833 total doses/day on average[†] (33,450 on 10/27)
- 4,787 first doses/day on average[†] (4,861 on 10/27)

Total primary series doses in month of October were
most frequently administered[¶] by:

Pharmacies (172,783)

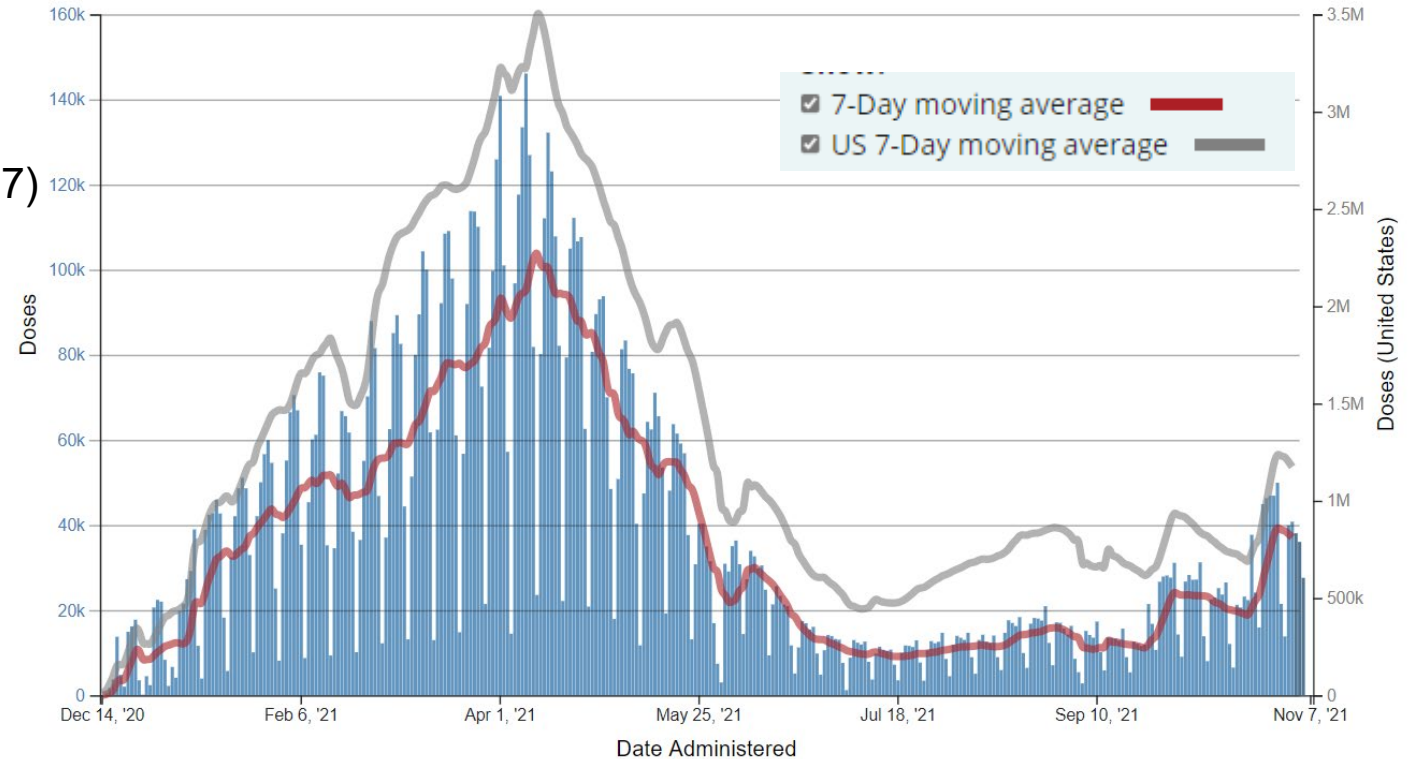
LHDs (12,943) and hospitals (11,186)

Family practice (8,873) and FQHCs (6,737)

Third Doses

- 914,612 third doses administered as of 11/09

Daily Count of Total Doses Administered and Reported to CDC by Date Administered, Michigan



Source: *[CDC COVID Data Tracker > Vaccinations in the US](#), [†] [CDC COVID Data Tracker > Vaccination Trends](#), [¶] [MCIR COVID-19 Vaccine Dashboard](#)



Over 5.37 Million Michiganders fully vaccinated and 53.8% of total population fully vaccinated

Vaccination Coverage in Michigan as of 11/09/21

5.37 million people in the state are fully vaccinated*

85% of people aged 65 and older have completed the series (↑0.3%)*

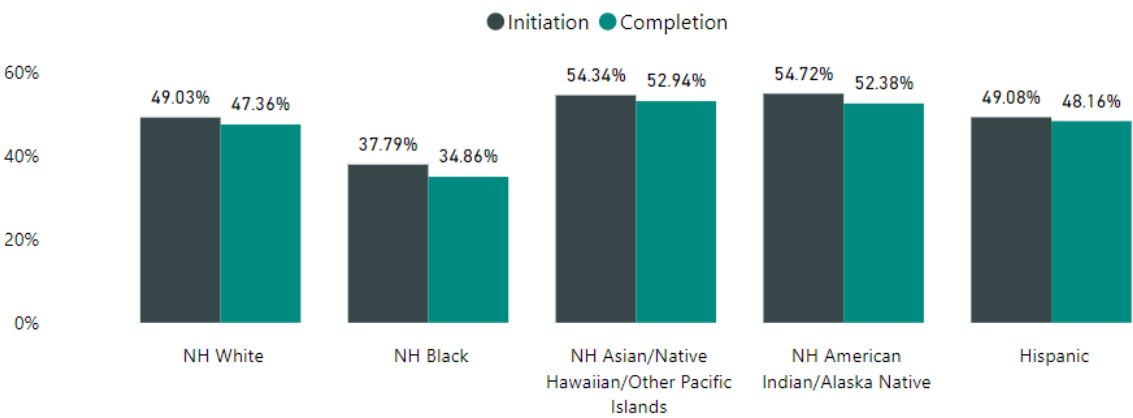
58.8% of total population initiated (↑0.5%)*

Race/Ethnicity[†] for those 12 years and older:

- Initiation coverage highest among those of Non-Hispanic (NH) Asian, Native Hawaiian or Pacific Islander Race (54.3%), then NH American Indian (56.7%), NH White (49.0%), NH Black or African American Races (37.8%)
- Initiation is at 49.0% for those of Hispanic ethnicity
- Completion follows the same pattern
- 13.9% data missing or unknown

Age Group	% At Least One Dose	% Fully Vaccinated	Number Fully Vaccinated
Total Population	58.8%	53.8%	5,377,840
≥ 12 years	68.2%	62.5%	5,377,703
≥ 18 years	70.4%	64.6%	5,070,061
≥ 65 years	91.5%	85.0%	1,500,836

Coverage by Race*




*Data suppressed for Race/Ethnicity-by-Age populations smaller than 50 and/or where the number of vaccinated persons is 10 or less.

Source: [*CDC COVID Data Tracker > Vaccinations in the US](#), [†] [MCIR COVID-19 Vaccine Dashboard](#)



Booster Administration Update

More than 1 in 3 fully vaccinated persons in Michigan aged 65+ have received a booster dose

Download Data 

CDC | Data as of: November 9, 2021 6:00am ET. Posted: Tuesday, November 9, 2021 2:33 PM ET

State/Territory/Federal Entity ↕	People with a Booster Dose by State of Residence ↕	Percent of Fully Vaccinated People with a Booster Dose by State of Residence ↕	People 65+ with a Booster Dose by State of Residence ↕	Percent of Fully Vaccinated Population 65+ with a Booster Dose ↕
California	3,009,275	12.3	1,610,475	32.9
Texas	1,915,128	12.3	970,942	31.7
Florida	1,674,675	13	1,162,668	29.8
Illinois	1,133,315	14.7	635,833	35.9
New York State	1,034,671	7.9	603,853	21.3
Ohio	957,851	15.7	610,575	35.2
Michigan	934,601	17.4	557,517	37.1
Virginia	800,930	14.7	447,186	37.4
Washington	733,754	15	428,288	39.3
New Jersey	731,212	12.3	403,776	31
Pennsylvania	701,188	8.9	418,433	19.1
Massachusetts	649,431	13.4	366,625	34.5
Minnesota	647,448	18.6	384,837	44.7
Wisconsin	618,022	18.1	366,382	39.1
Georgia	615,130	11.9	361,578	29.8
Colorado	604,979	16.9	323,494	44.2
Maryland	601,690	15	334,355	38.3
Tennessee	528,641	16.1	320,174	34.8
North Carolina	500,788	9	280,557	19.4

Michigan is the 10th biggest state in population, but ranks 7th in terms of total COVID booster administrations
Michigan also ranks high in terms of booster administration rate, especially compared to other populous states

**The COVID vaccine
is now authorized
for kids 5-11.**



5 to 11 Vaccine
Administration
Update

COVID Vaccine Distribution by Date and Facility Type

Dashboard updated: November 9, 2021. This page includes doses delivered directly to Federal Programs, in addition to doses



Data as of :
11/8/21

Michigan

Preparedness Region

All

Local Health Department Jurisdiction

All

Provider County

All

Provider Type

All

Distribution Date Range

12/14/2020

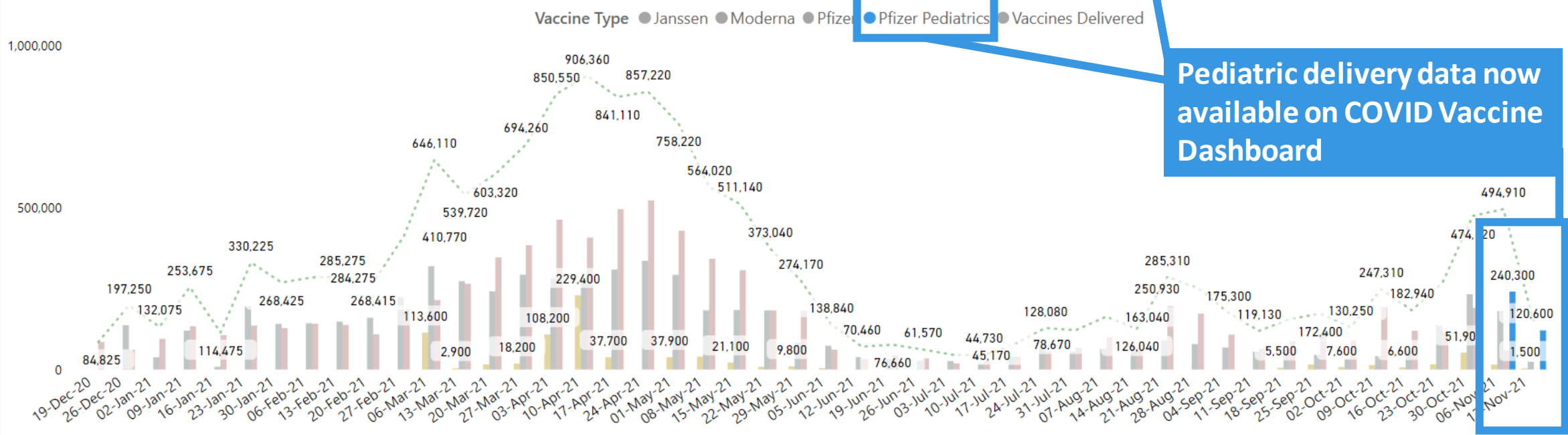
11/8/2021

Program

All

Facility Type	Pfizer Pediatrics	Total
Family Practice	5,100	5,100
Federally Qualified Health Center	9,000	9,000
Health Center	600	600
Hospital	35,100	35,100
Indian Health service	3,000	3,000
Total Doses	360,900	360,900

Vaccines Distributed by Date / Week Ending Date (K = Thousand, M = Million)



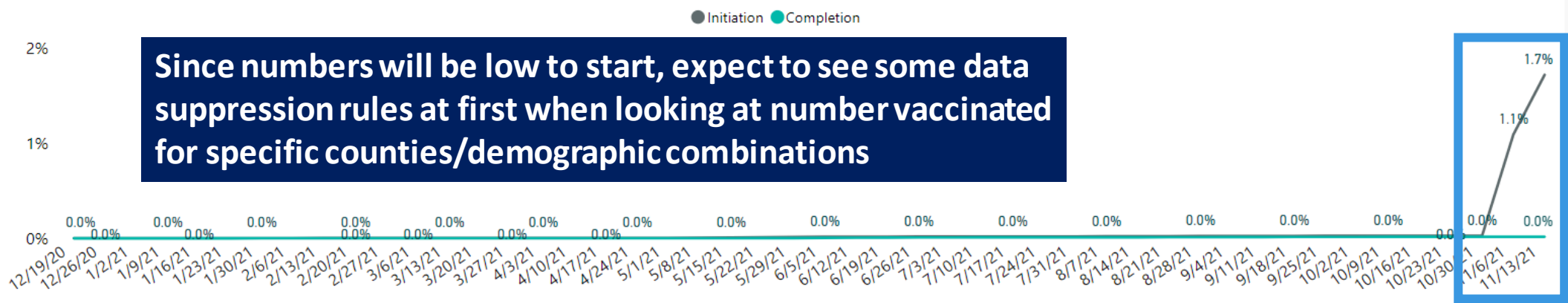
Pediatric delivery data now available on COVID Vaccine Dashboard

Vaccine Delivered	Delivery Trend	Primary Series Doses Administered	Primary Series Doses by Vaccine	Primary Series Doses Metrics	Additional / Booster	Coverage	Age/Sex	Race/Ethnicity	Enrolled Providers	Learn More
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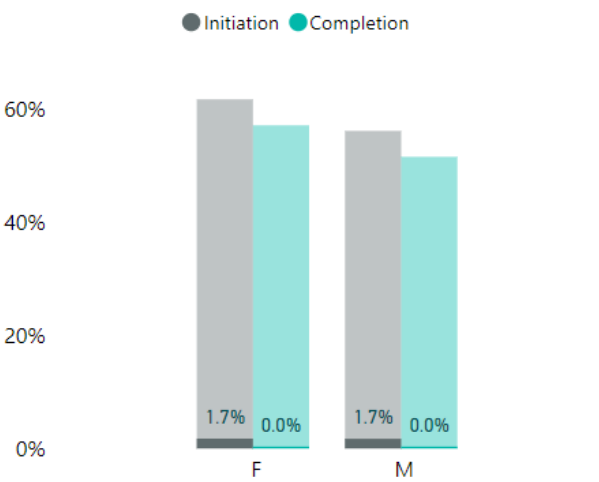
COVID Vaccine Coverage

Dashboard Updated: November 9, 2021. "Completion" is the percentage of Michigan residents receiving 2 doses of Pfizer or Moderna or 1 dose of J&J. "Initiation" is the percentage who have received either 1 or more doses of ANY vaccine. See the "Learn More" page to learn how percentages

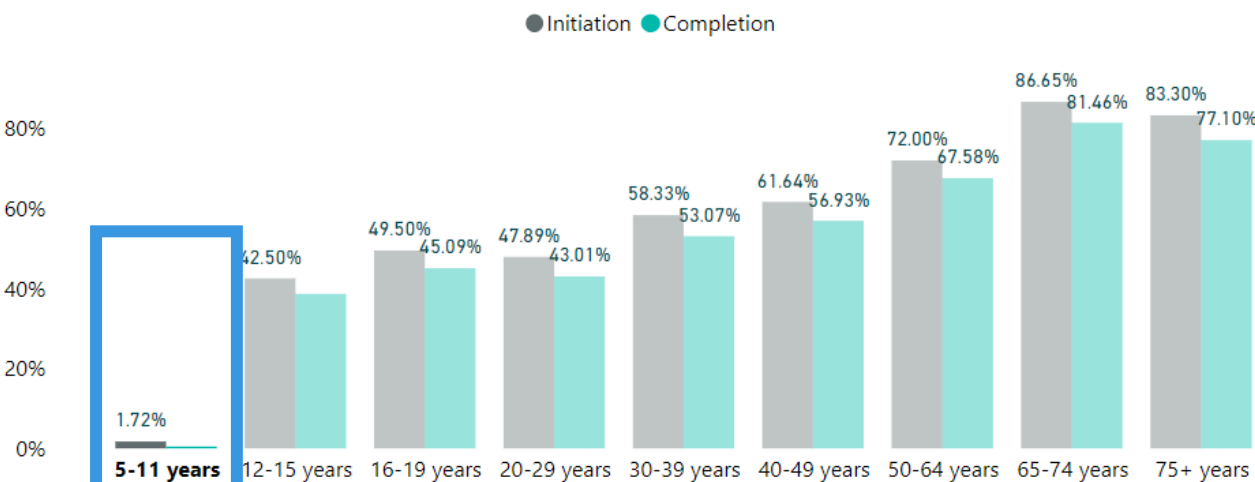
Cumulative Coverage by Week Ending Date



COVID Vaccine Coverage by Sex



COVID Vaccine Coverage by Age Group



5- to 11-year-old initiation and completion trends now available

Data are refreshed Tuesdays and Friday afternoons

14,169 administrations in 5- to 11-year-olds as of 11/9

COVID Vaccination Coverage - Initiation

Dashboard Updated: November 9, 2021. "Completion" is the percentage of Michigan residents receiving 2 doses of Pfizer or Moderna or 1 dose of J&J. "Initiation" is the percentage who have received either 1 or more doses of ANY vaccine. See the "Learn More" page to learn how percentages are calculated.

Michigan

Preparedness Region

Local Health Dept. Jurisdiction

County

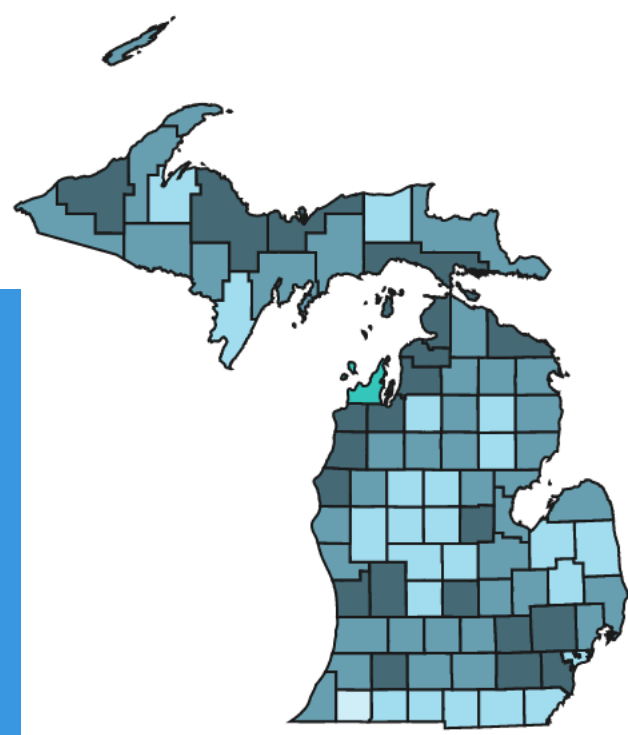
Initiation

Completion

Coverage Slicers



COVID Vaccine Coverage by County



- Coverage
- 70%-79.99%
 - 60%-69.99%
 - 50%-59.99%
 - 40%-49.99%
 - 30%-39.99%
 - 20%-29.99%
 - 10%-19.99%
 - <10%

Week Ending Date

Residents Vaccinated

5,553,002

Coverage (% of Residents Vaccinated)

58.9%

MI Population*

9,420,414

*2019 US Census estimates for persons 5 years of age and older

On the coverage tab, about 825,000 5- to 11-year-olds were added to the State denominator for number of persons eligible for vaccine.

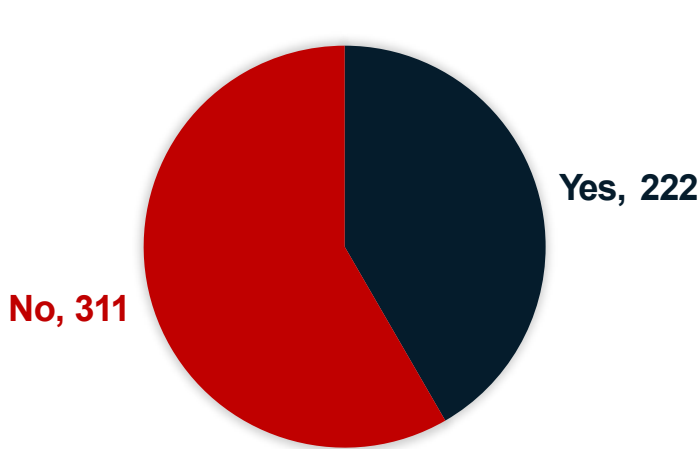
Coverage, therefore dropped about 5-6%

MI School Districts and Mask Policy as of Nov 8, 2021

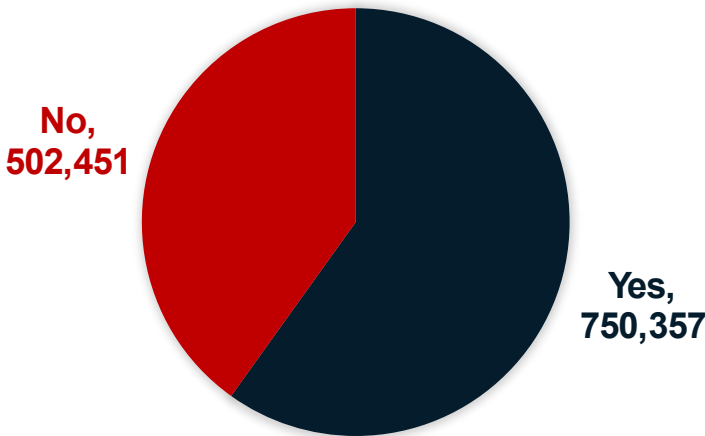
Yes – Any masking policy in some subset of school grades

No – No mask policies (includes unknown)

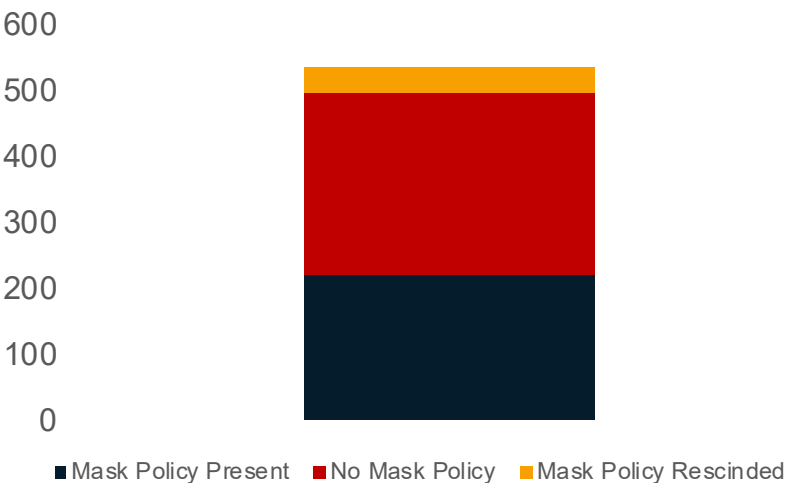
NUMBER OF SCHOOL DISTRICTS
WITH MASK POLICIES IN K-12
SETTINGS



NUMBER OF STUDENTS* IN SCHOOL
DISTRICTS WITH MASK POLICIES



NUMBER OF SCHOOL
DISTRICTS WITH MASK POLICY
REVERSAL



- 42% (222/533) of K-12 school districts have mandatory mask policies
- School districts with mandatory mask policies cover 60% (750,357/1,252,808) of K-12 students*
- Not all K-12 grades or students may be covered by masks polices; examples include policies for those through K-6, or only during higher levels of community transmission
- 7% of K-12 school districts have rescinded their mask policies

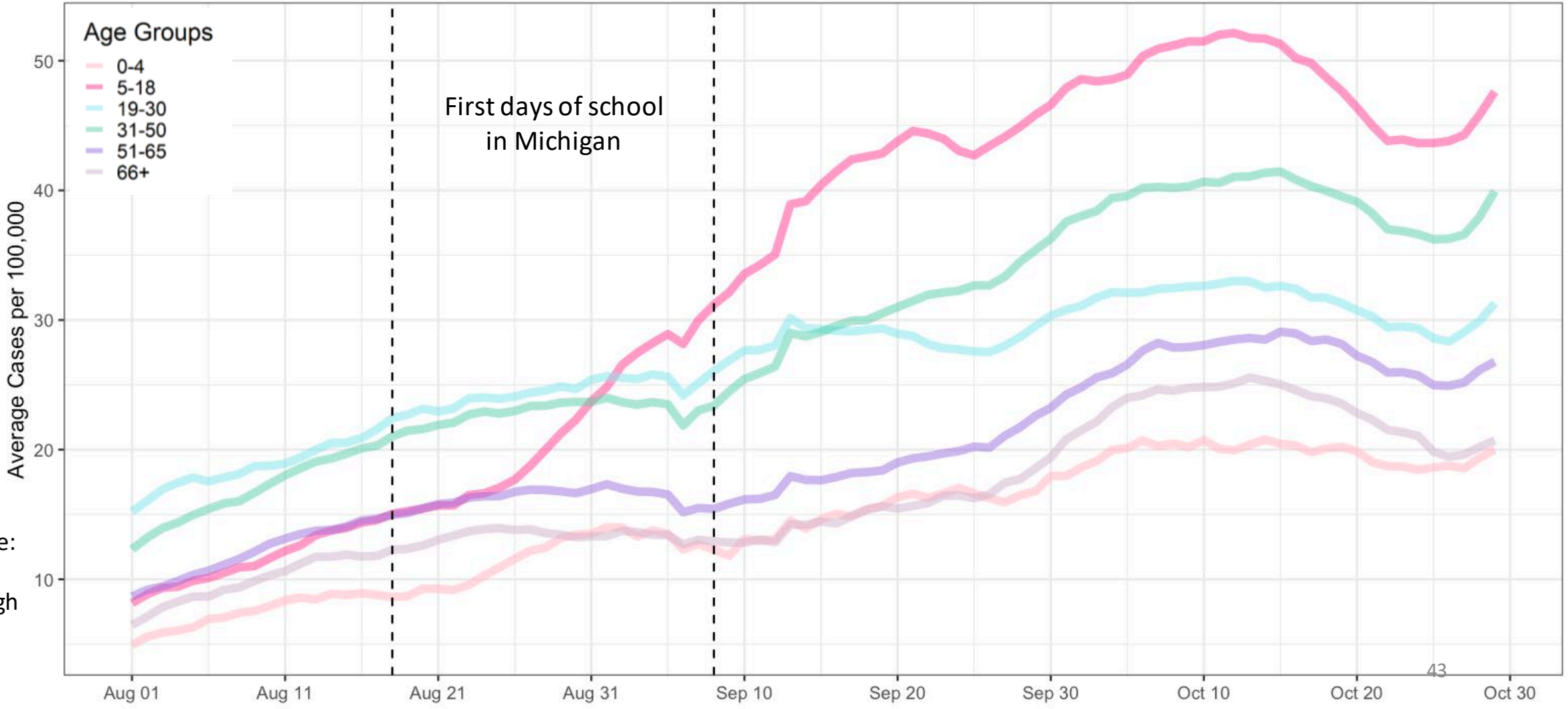
* Student size based on school enrollment numbers; Buses and public transportation are federally required to enforce mask mandates

Source: Executive Office of Governor School District Mask Policy Database



Case increases largest in school aged children (5-18 years), followed by 31-50 year-olds; most groups seeing recent increase

Seven Day Average COVID-19 Cases per 100,000 Population

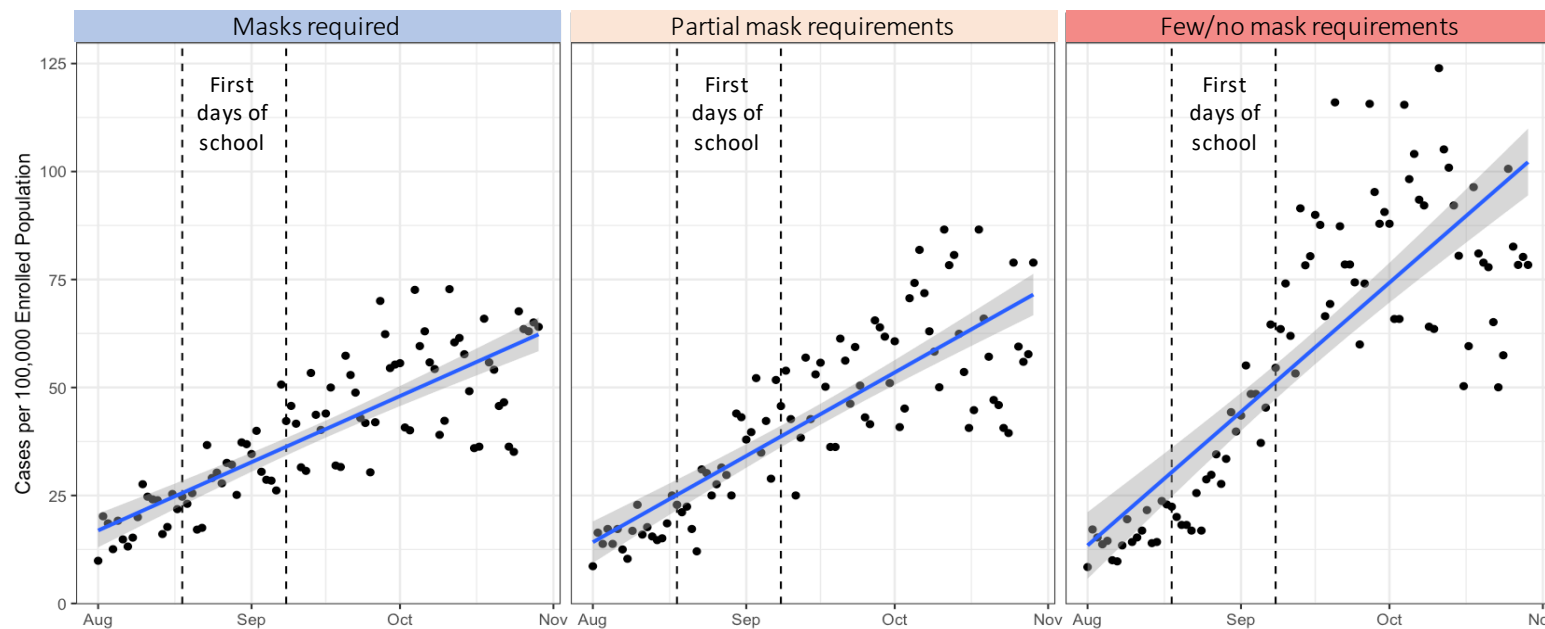
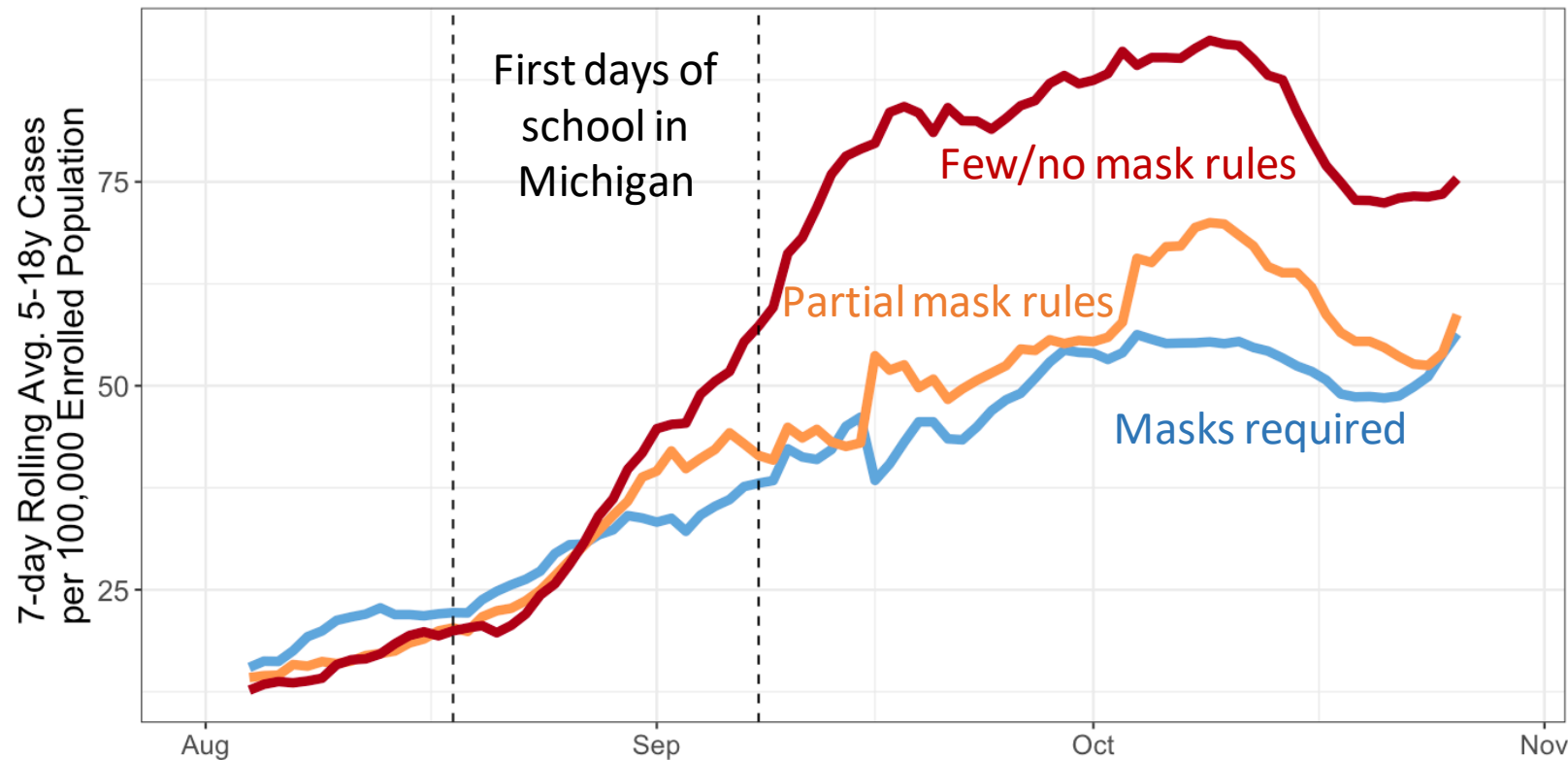


Data source:
MDSS case
data through
10/29/21,
data as of
11/5/2021

Districts without mask requirements are experiencing higher case rates

- 5–18-year-old school population case rates are higher and rose faster in districts without mask requirements
- Districts with complete or partial mask requirements have seen lower case rates with slower increases
- Note districts may change categories as mask rules change
- Note that districts with mask rules may also have other prevention measures (vaccination, testing, etc.) that reduce transmission levels

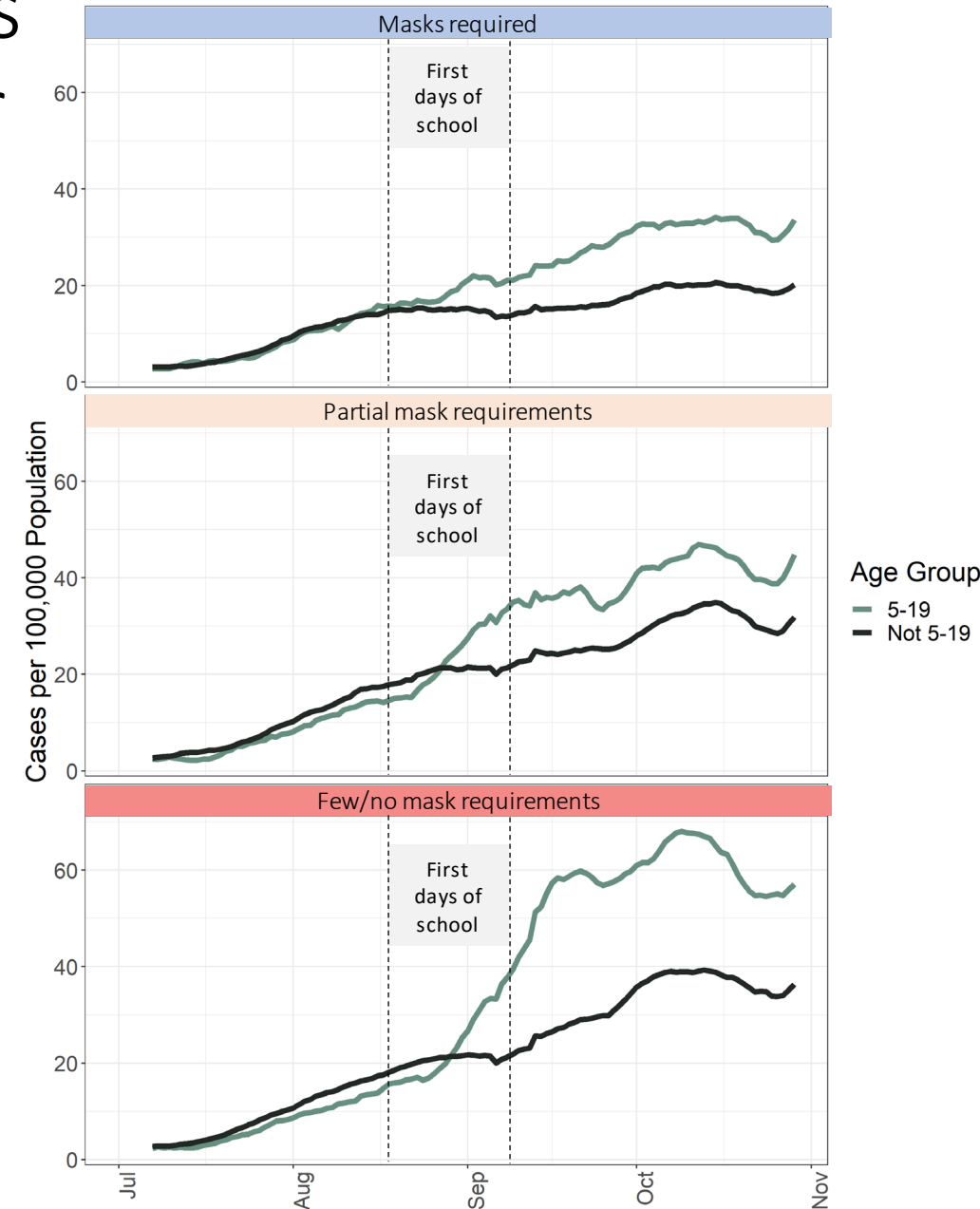
Masks required = mask required for all grades; Partial mask req. = tiered, some grades, based on vax status, staff only; Few/no req. = no req. or buses only. Blue line & shaded region is a linear trend fit. Data Sources: MDSS/MDHHS case data as of 10/29/21 geocoded to school district, EOG School District Mask Policy Tracker data. Note: Cases are among all 5-18 year olds, population is the school-enrolled population.



Back-to-school saw case rate increases for all ages. Increases were highest for counties without school masking.

- All mask levels and age groups had similar case rates prior to the back-to-school period
- During back to school, all counties saw some increase in case rates, with higher increases for school aged populations
- However, increases were larger for counties with fewer mask requirements
- In counties without school mask requirements, case rates more than tripled after back-to-school for school-aged individuals, and ~doubled for non-school-aged individuals

COVID-19 Cases per 100,000 (Rolling 7-Day Daily Average)
In Counties by Average Mask Status



Known Masking Status and Unknown Age Groups were removed from consideration.
Risk Level as of 8/30/2021. Case Data as of 11/05/2021.

Key Messages: Science Round Up

COVID-19 Vaccination for 5–11-year-olds

- EUA Vaccine for 5–11-year-olds was recently announced
- COVID-19 continues to burden pediatric populations, including those under the age of 12
- Compared to 2019 mortality data, COVID-19 ranks top 10 among causes of death those aged 5-11
- The COVID-19 vaccine EUA for 5- to 11-year-olds has the potential to substantially reduce infections, and severe outcomes among pediatric populations

Untrue COVID-19 Vaccine Myths Related to Fertility and Myocarditis

- COVID-19 vaccination does not impact or reduce fertility or the reproductive organs
- However, COVID-19 illness can increase risk of premature birth, and cause severe illness in pregnant women
- Risk of myocarditis is 16 times higher after COVID-19 illness

Excess Deaths During the COVID-19 Delta Variant Surge

- There were fewer mitigations implemented to prevent transmission in the Southern U.S. in response to the Delta surge compared to parts of the Midwest
- There were also nearly twice as many excess deaths per capita in Southern U.S. compared the parts of the Midwest

National Comparison

Spread

Severity

Public Health
Response

Other
Indicators

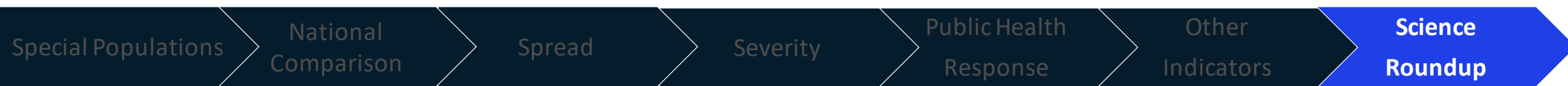
Science
Round-up

Overview of metrics for individuals < 12 and <18

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)	30-day Average Daily Death Count (<12 yrs)
Detroit	735529	1134247	45901	263.0	357.6	22.7	20.0	0	0.00
Grand Rapids	230120	350652	16867	95.1	413.3	8.3	23.7	0	0.00
Kalamazoo	140422	214801	8789	55.4	394.5	2.3	10.7	0	0.00
Saginaw	78759	122834	5790	36.7	466.0	0.3	2.4	0	0.00
Lansing	78140	119915	5453	40.3	515.7	2.3	19.2	0	0.03
Traverse City	53099	83462	2889	22.7	427.5	0.0	0.0	0	0.00
Jackson	41274	64091	2888	23.3	564.5	0.0	0.0	0	0.00
Upper Peninsula	34645	53875	3021	22.4	646.6	0.0	0.0	0	0.00
Michigan	1391988	2143877	91695	559.1	401.7	35.9	16.7	0	0.03

- Each day more than 559 children under age 12 become infected with COVID-19, **126 more** than last week
- Pediatric case rates **increased to 401.7** cases/million (last week: 311.1 cases/million)
- Pediatric (<18) hospital census* is averaging approximately 36 per day (last week: 36 per day)

Note: Data as of 10/25; case data 10/18, hospitalization data 10/25. Hospitalization data is for pediatric patients (<18); * includes only confirmed COVID-19



Leading Causes of Death in Children 5-11 Years of Age, NCHS, 2019

Causes of Death	Death (n)	Crude rate per 100,000
Accidents (unintentional injuries)	969	3.4
Malignant neoplasms	525	1.8
Congenital malformations, deformations and chromosomal abnormalities	274	1.0
Assault (homicide)	207	0.7
Diseases of the heart	115	0.4
Chronic lower respiratory diseases	107	0.4
Influenza and pneumonia	84	0.3
Intentional self-harm (suicide)	66	0.2
Cerebrovascular diseases	56	0.2
Septicemia	48	0.2

66 COVID-19 associated deaths in children 5–11 10/3/20-10/2/2021





Total population 5-17 years, 2019: 52,715,248


CDC NCHS WONDER Online Database. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on May 6, 2021


Estimated benefits for every million Pfizer-BioNTech COVID-19 vaccinations in children 5-11 years of age using recent incidence

Females 5-11 years


 **57,301** COVID-19 cases prevented


 **191** hospitalizations prevented


 **130** MIS-C cases prevented


 **60** ICU admissions prevented

Males 5-11 years

 **56,954** COVID-19 cases prevented

 **226** hospitalizations prevented

 **130** MIS-C cases prevented


 **72** ICU admissions prevented


Assumptions: Benefits accrue over **180 days (6 months)**; VE against symptomatic COVID-19: 90%; VE against hospitalization: 95%


Data Sources: COVID Data Tracker. <https://covid.cdc.gov/covid-data-tracker/#vaccination-demographic>. COVID Data Tracker https://covid.cdc.gov/covid-data-tracker/#trends_dailycases. COVID-Net https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html. All data are from the week ending on **9/11/2021**.


Estimated benefits for every million Pfizer-BioNTech COVID-19 vaccinations in children 5-11 years of age using pandemic-average incidence

Recent Epidemiology 5-11 years


 **58,204** COVID-19 cases prevented

 **226** hospitalizations prevented


 **132** MIS-C cases prevented


 **72** ICU admissions prevented

Pandemic Average 5-11 years

 **18,549** COVID-19 cases prevented

 **80** hospitalizations prevented

 **42** MIS-C cases prevented

 **26** ICU admissions prevented

Assumptions: Benefits accrue over **180 days (6 months)**; VE against symptomatic COVID-19: 90%; VE against hospitalization: 95%

Data Sources: COVID Data Tracker. <https://covid.cdc.gov/covid-data-tracker/#vaccination-demographic>. COVID Data Tracker https://covid.cdc.gov/covid-data-tracker/#trends_dailycases. COVID-Net https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html.

Recent epidemiology data from the week ending on 9/11/2021. Pandemic average data are averaged for the entire pandemic through the week ending on 10/16/2021.

COVID-19 Vaccination

vs

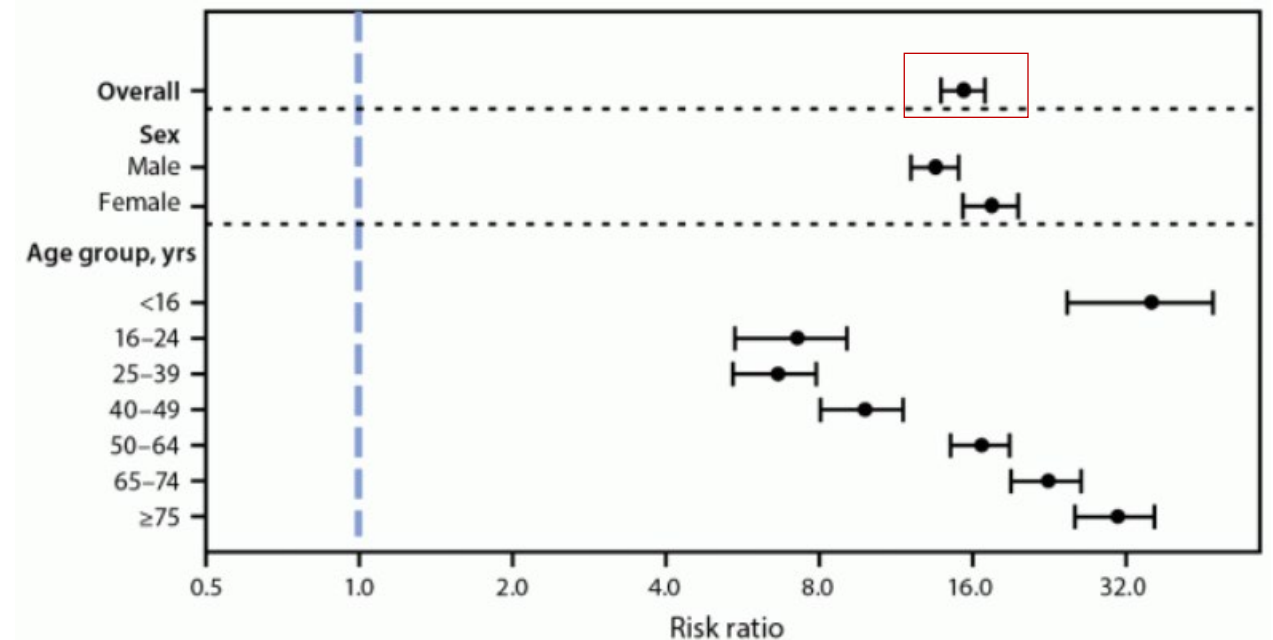
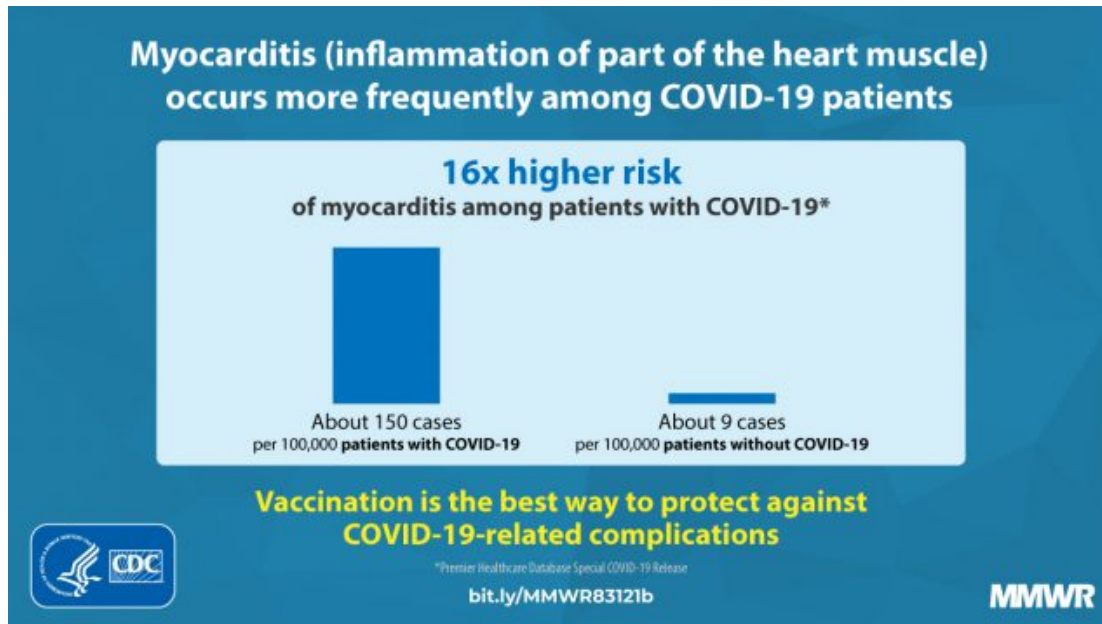
COVID-19 Infection

- Vaccination does not impact ability to become pregnant.
- A study of people undergoing fertility treatment showed no difference in pregnancy rate between vaccinated, unvaccinated and previously infected groups.
- Data has been reviewed from many thousands of people who have become pregnant after receiving the vaccine during the clinical trials and more recently.
- Over 171,000 pregnant people in the US have received the vaccine. Over 5,000 are being actively monitored to collect more data.
- Vaccination does not change sperm count.

- COVID-19 infection increases risk for premature birth.
- COVID-19 infection is more severe for pregnant people.
- COVID-19 infection is more common and more severe in unvaccinated people.

For more information, visit
[CDC COVID-19 Vaccine and Pregnancy](#)

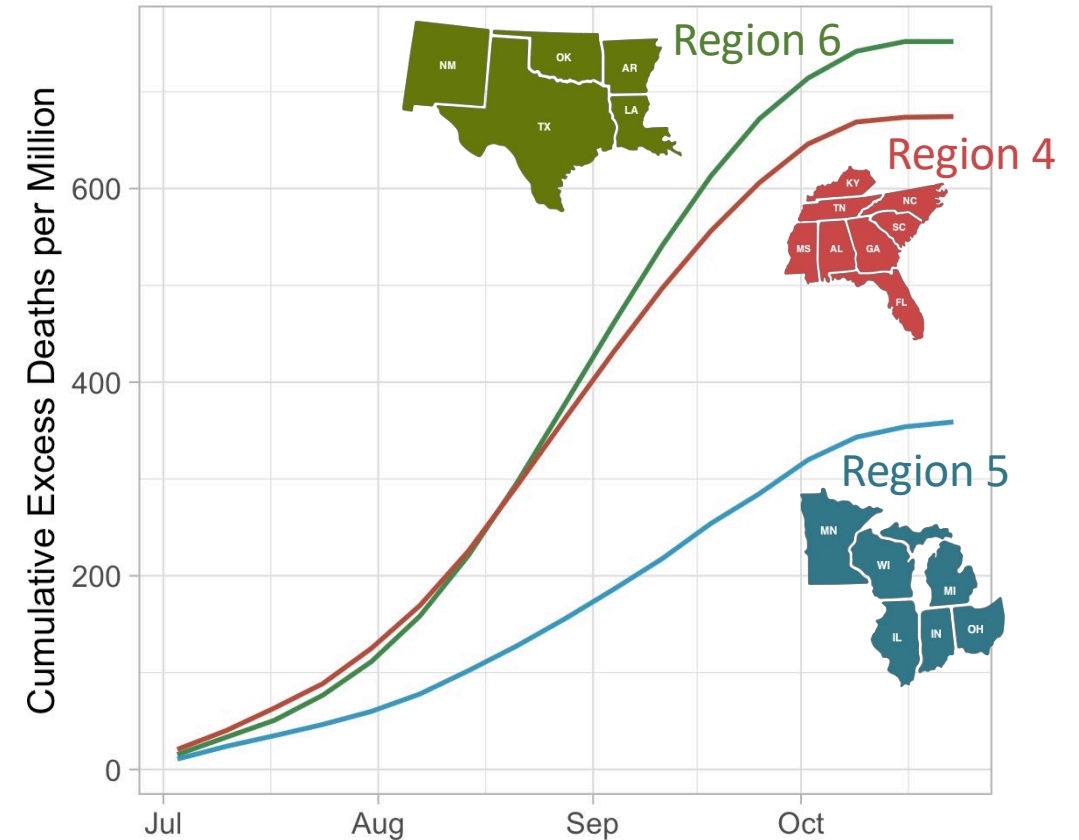
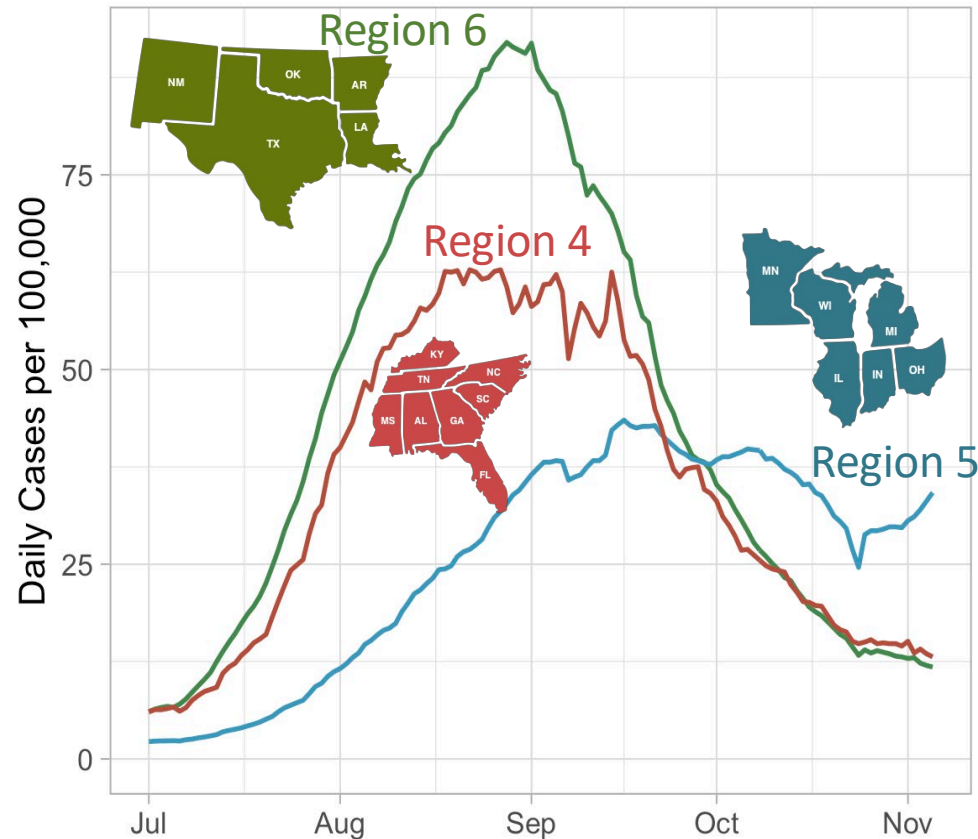
Risk of Myocarditis is 16 Times Higher after COVID-19 Illness



- Viral infections, including infection with SARS-CoV-2, can cause of myocarditis
- Between March 2020 and January 2021, patients with COVID-19 illness had nearly 16 times the risk for myocarditis compared with patients who did not have COVID-19 illness
 - Risk varied by age and sex
- COVID-19 prevention strategies, including vaccination, will reduce the public health impact and associated complications like myocarditis

Regional Differences and Excess Deaths

South vs. the Midwest—areas with earlier Delta surges have seen higher excess deaths since July



- There were fewer mitigations (e.g., masking within schools) implemented to prevent transmission in the Southern U.S. (HHS Regions 4 and 6) in response to the Delta surge compared to parts of the Midwest (HHS Region 5)
- Since July 1, 2021, there was nearly twice as many excess deaths in HHS Regions 4 and 6 compared the Region 5

Sources: [CDC data tracker](#) and [excess deaths](#) data as of 11/7/21

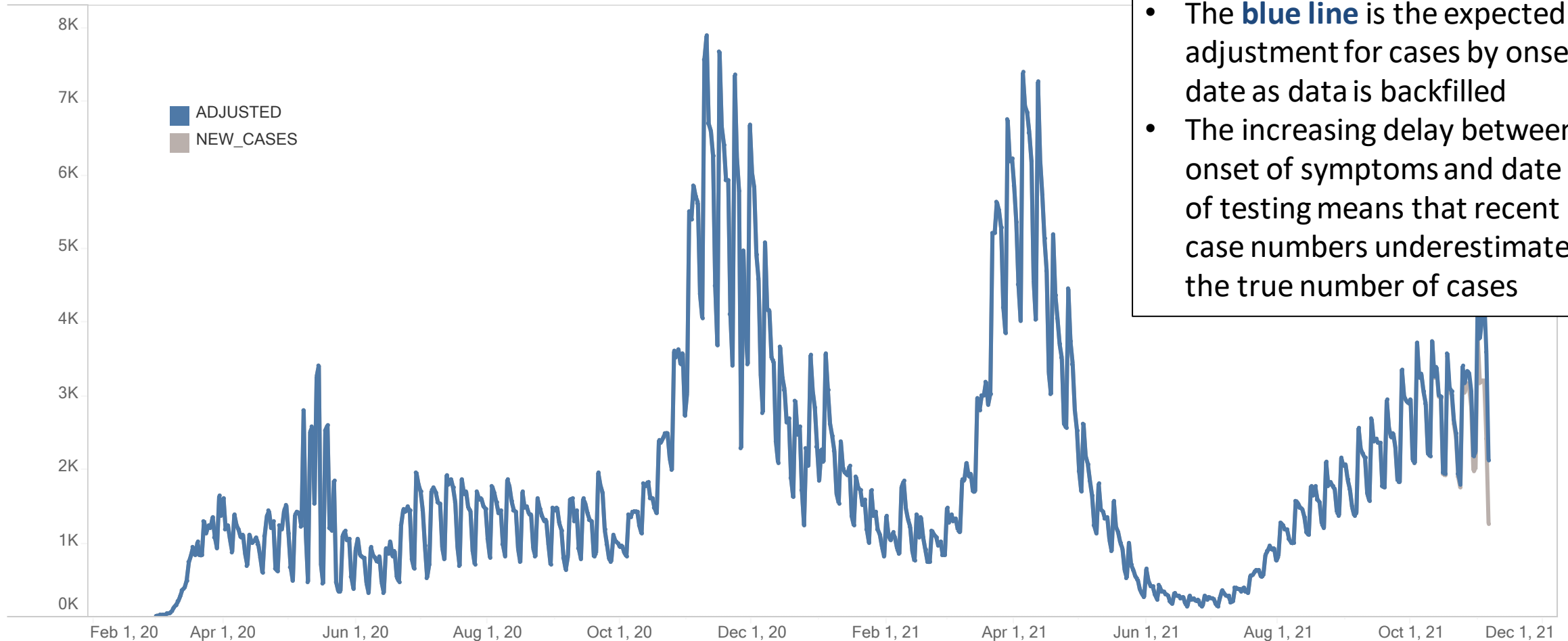


Appendix

DRAFT

Michigan Lag-adjusted new COVID cases by onset date

New confirmed cases by onset actual and adjusted as of November 8, 2021 (-2 days)



Sources for COVID Vaccination vs. COVID Infection Slide

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3. Vaccines and Related Biological Products Advisory Committee Meeting. FDA Briefing Document. Moderna COVID-19 Vaccine. December 17, 2020. Available at: [Vaccines and Related Biological Products Advisory Committee December 17, 2020 Meeting Briefing Document – FDAexternal icon](#). Accessed August 6, 2021.
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