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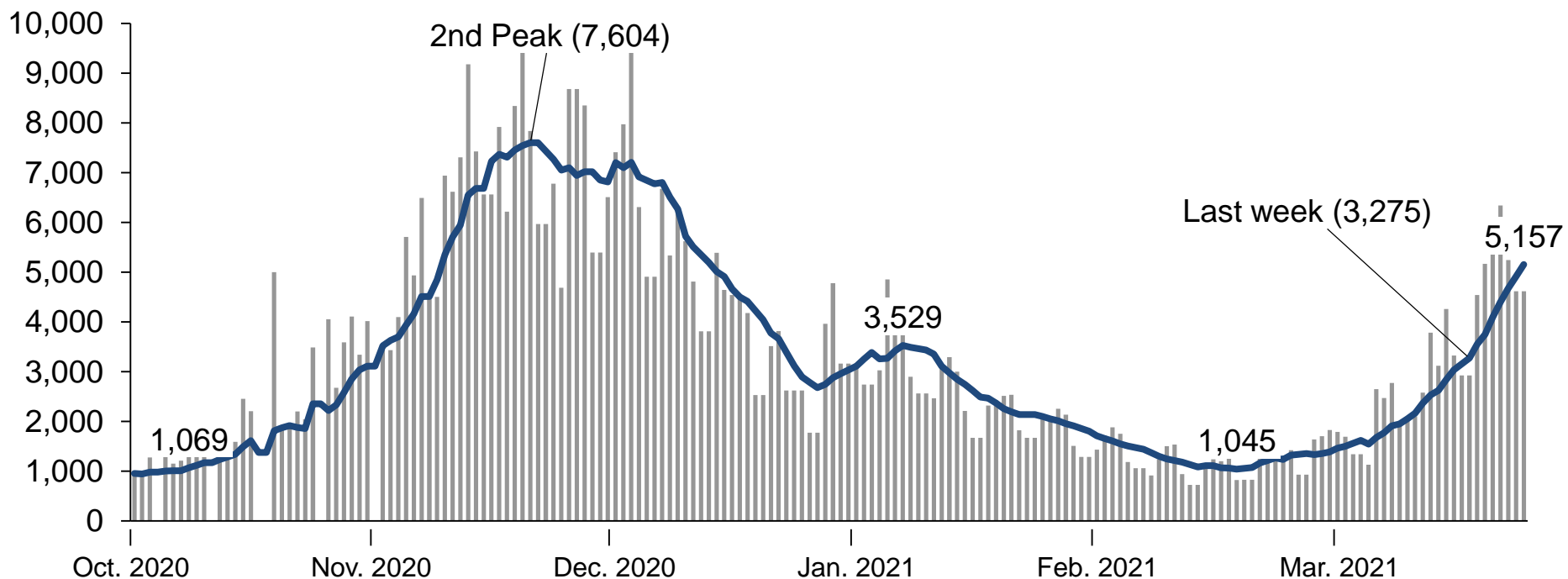
# **COVID-19 Update**

**Business Leaders for Michigan**  
**April 1<sup>st</sup>, 2021**

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# Case levels across Michigan continue to rise sharply

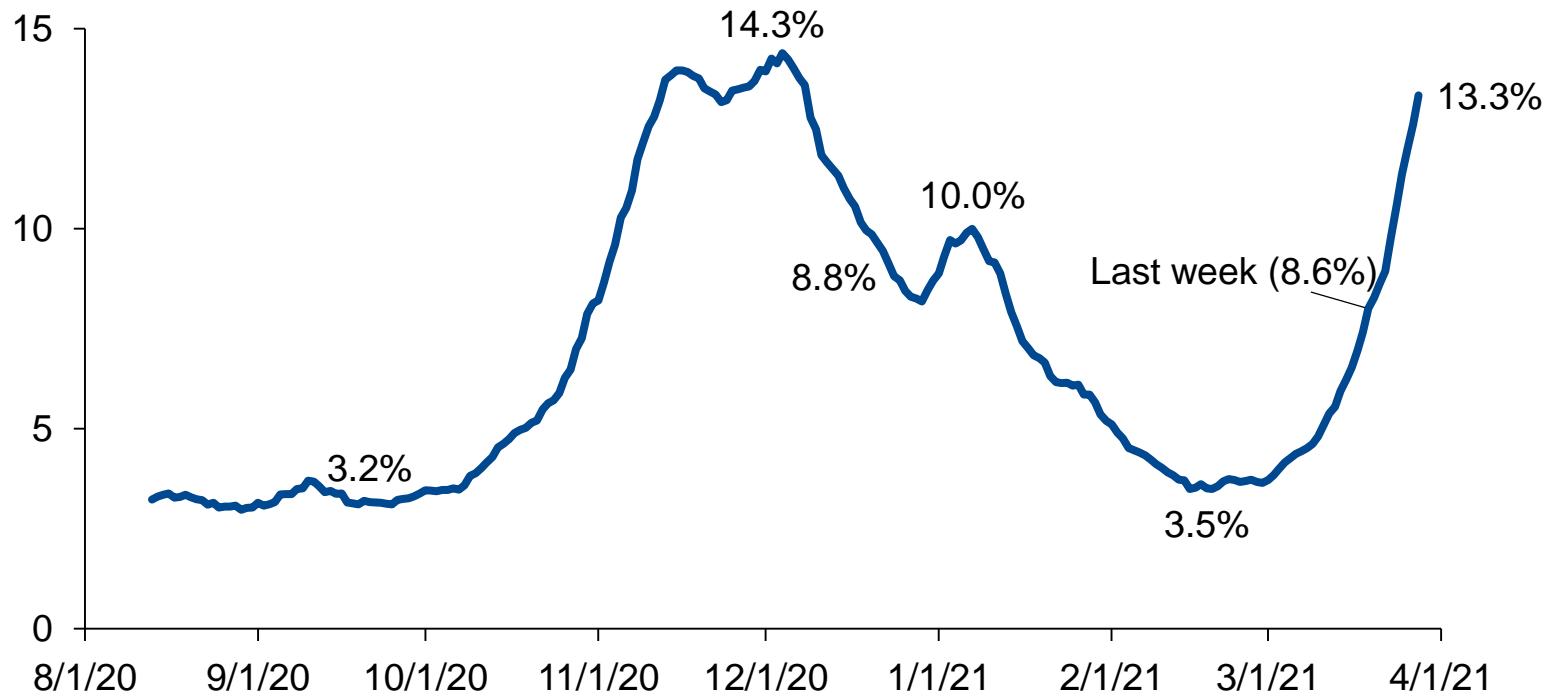
Daily new cases and 7-day average (10/1/20 – 3/29/21)



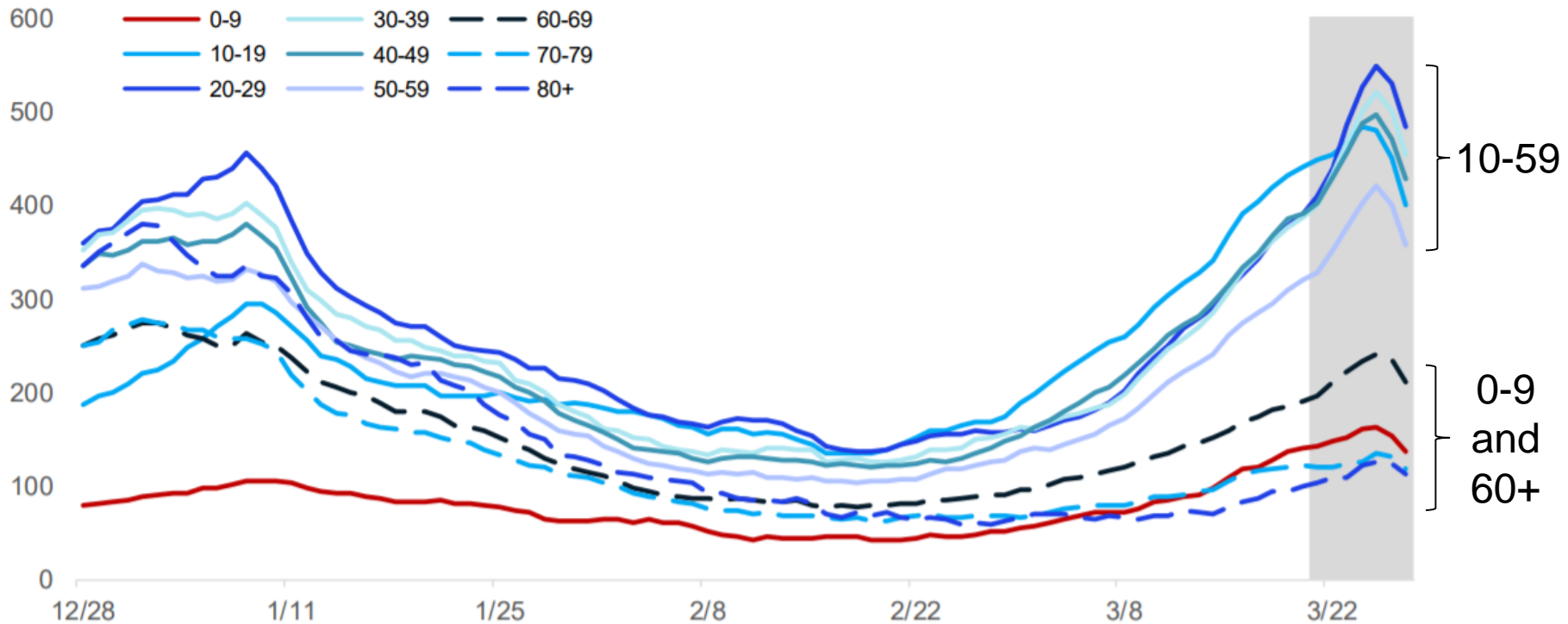
1. Source Johns Hopkins, with smoothed Saturday, Sunday joint reporting

# Michigan's positivity rate has increased by ~5 points over the last week – it now stands at over 13%

Positivity rate (7-day average) 8/13/2020 – 3/29/2021



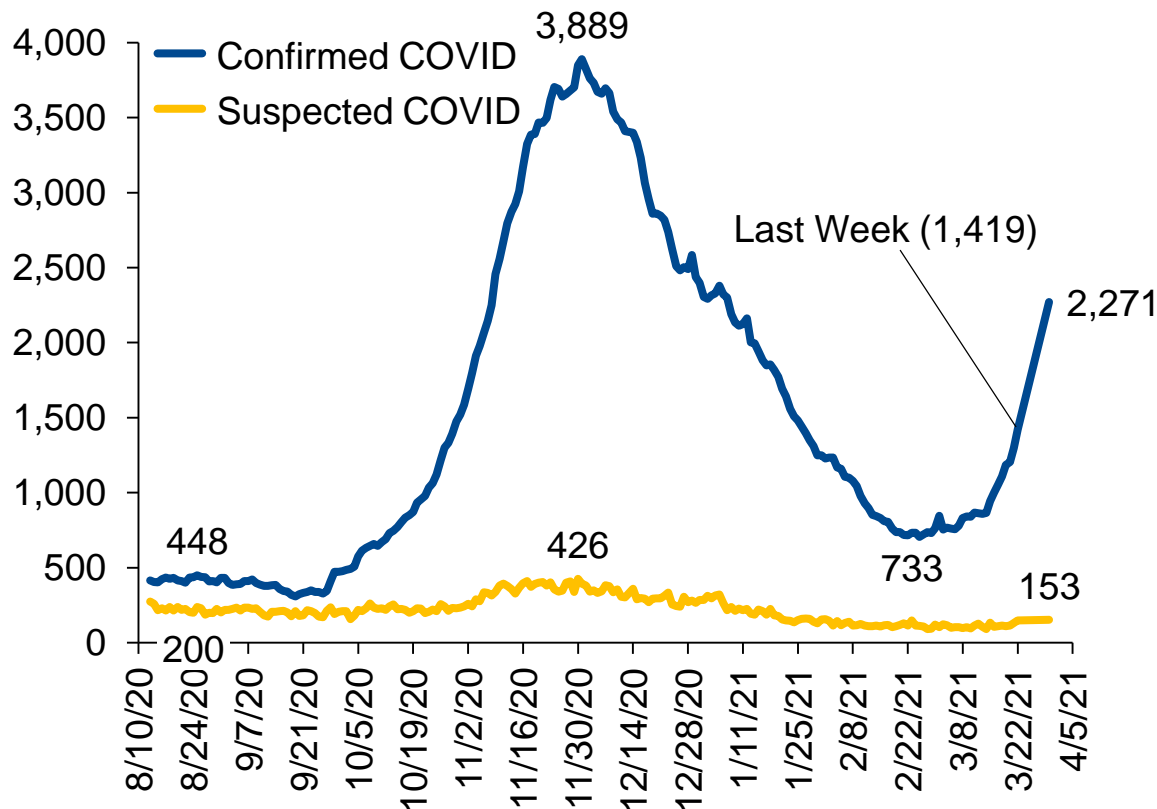
# The case increases have largely been seen in those aged 10-59



1. Note: data is lagged a week due to MDHHS source

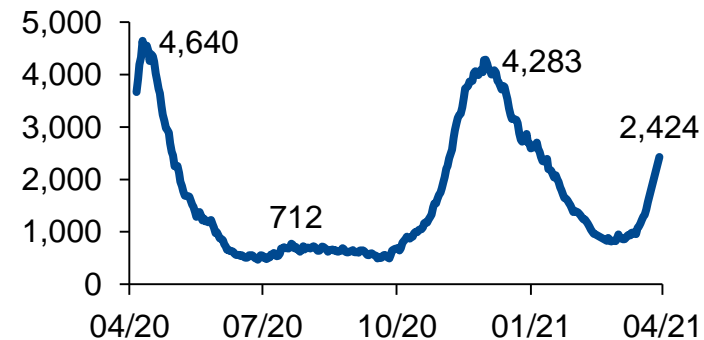
# Hospitalizations have also begun to increase rapidly – up 60% or ~800 hospitalizations week-over-week

Hospitalization Trends 8/13/2020 – 3/30/2021



- Hospitals have seen younger patients requiring hospitalization
- 30-39, 40-49 year olds are being admitted into our hospitals at a higher rate than at the peak of the fall surge

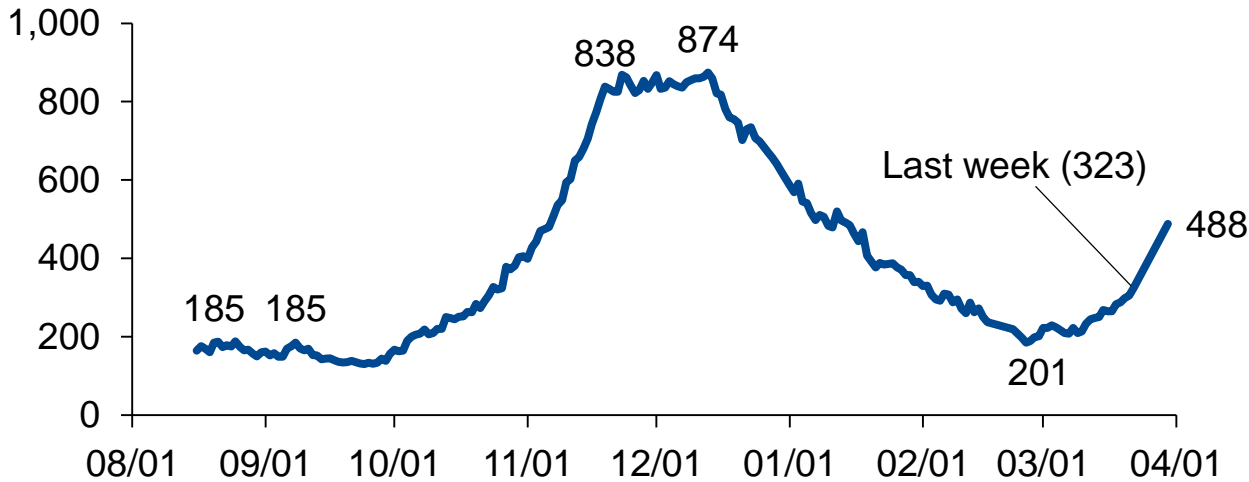
Hospitalized COVID<sup>1</sup> Historical Trend (beginning March)



1. This graph includes both confirmed and suspected cases  
 2. Source MHA

# The number of COVID-19 patients in the ICU has risen by 50% or ~160 patients week-over-week

Hospitalization Trends 8/16/2020 – 3/30/2020  
COVID patients in ICUs

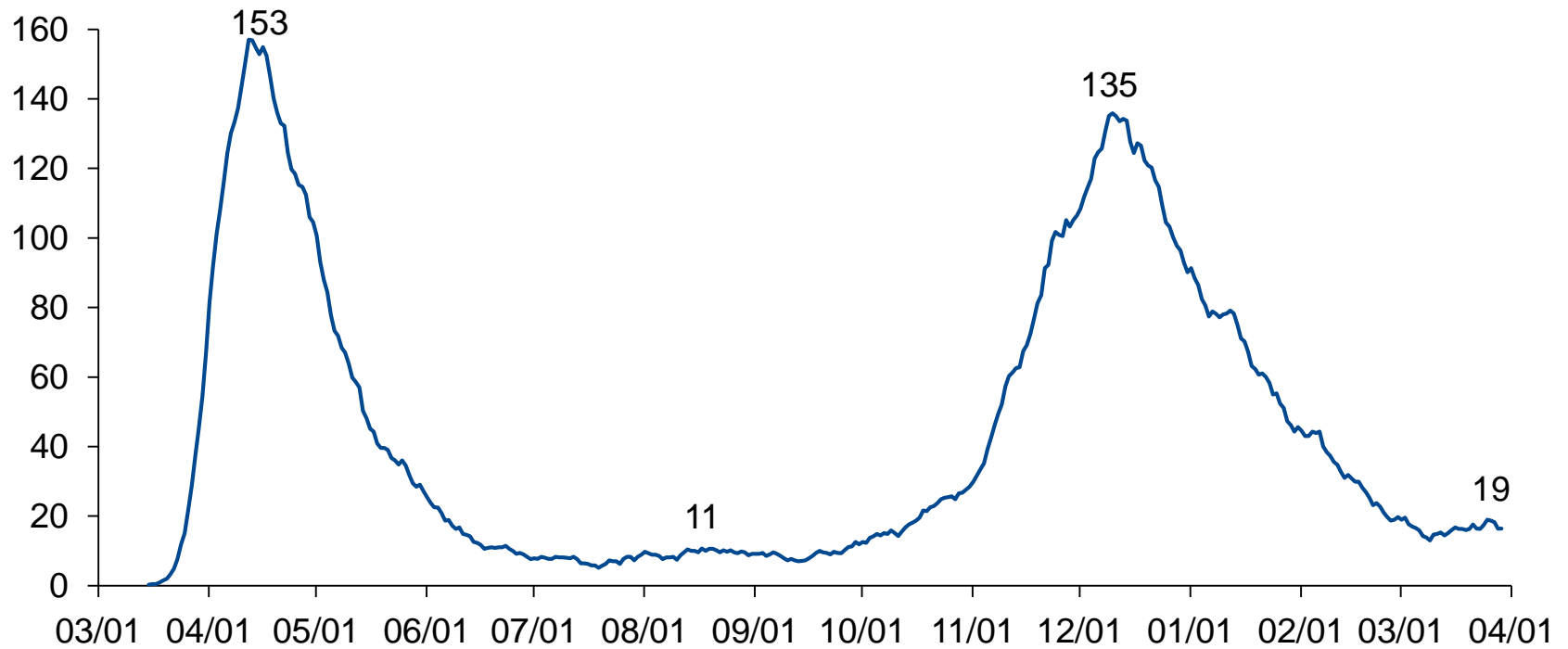


- Statewide, ~13% of ICU beds are occupied by COVID patients
- The rate of patient in our ICUs is similar to what we experienced during the same time period this past fall.

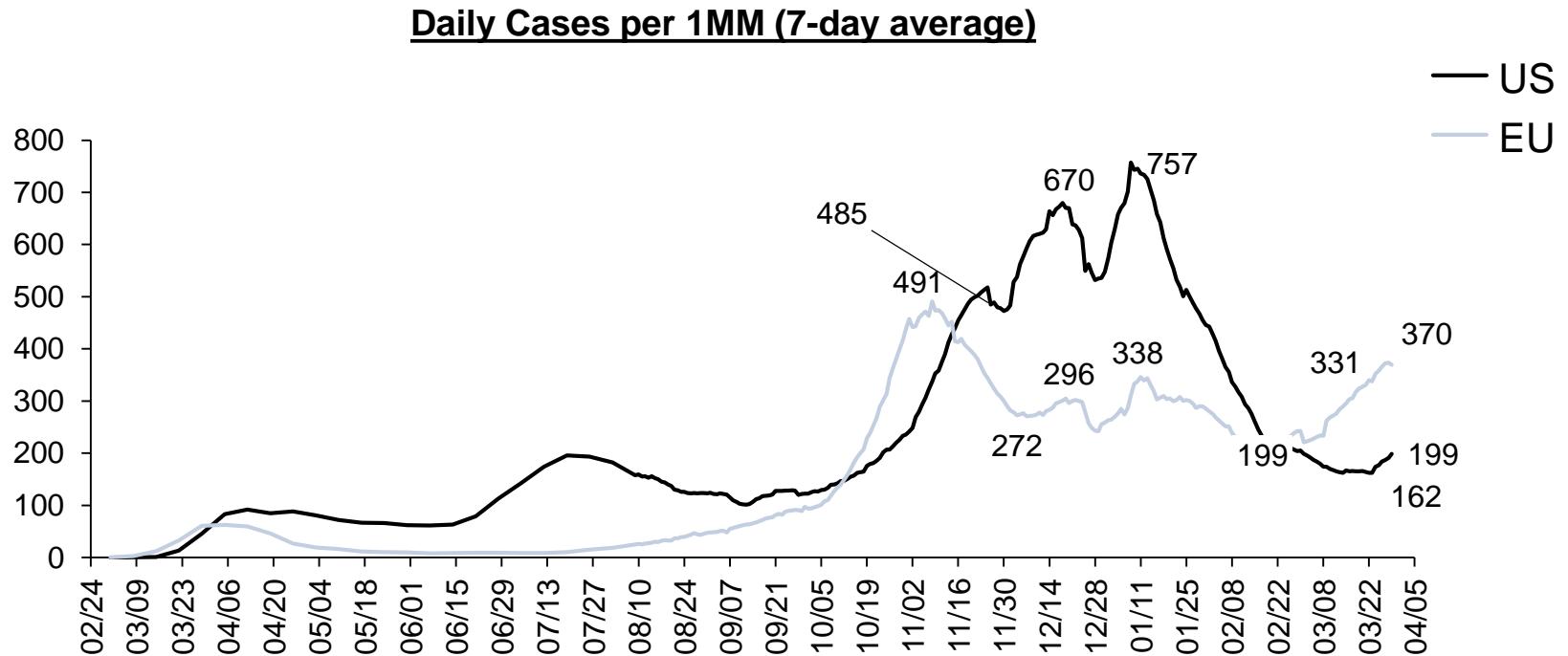
	North Detroit	South Detroit	Grand Rapids	Kalamazoo	Saginaw	Lansing & Jackson	Traverse	UP
ICU Occupancy	75%	81%	65%	81%	87%	87%	66%	64%
% of ICU beds COVID	16%	10%	10%	16%	16%	11%	9%	7%

# Deaths – a lagging indicator – has plateaued, despite the rising caseloads and hospitalizations

Deaths 7-day average 3/15/2020 – 3/28/2021



# Both the U.S. and EU daily cases have increased by ~40 per million over the last week

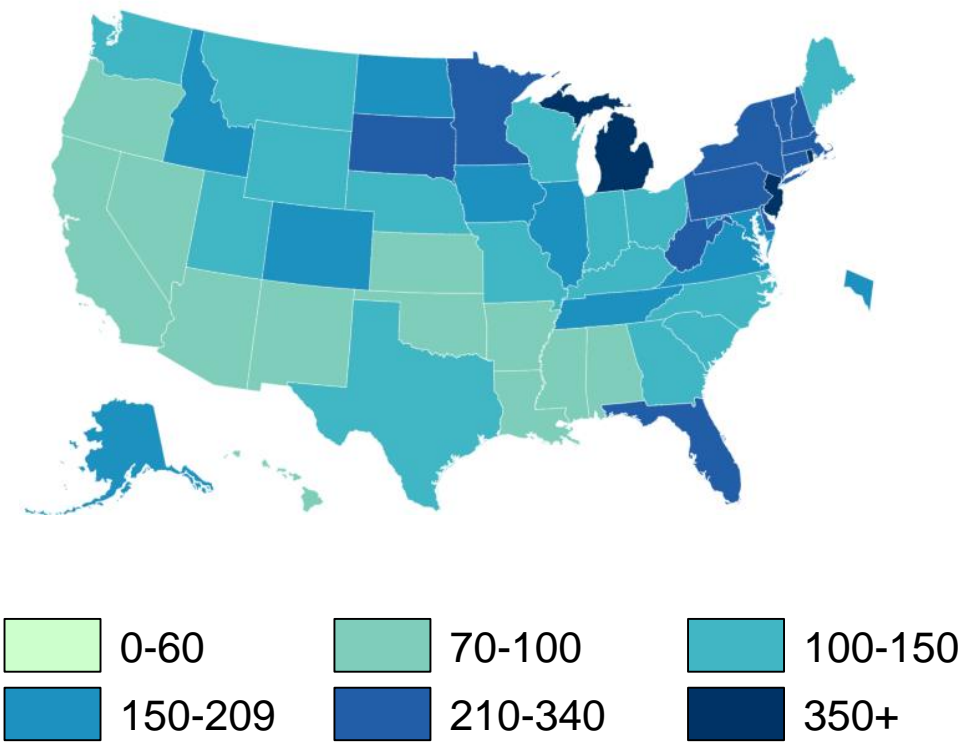


- This is the first increase in the US since the new year

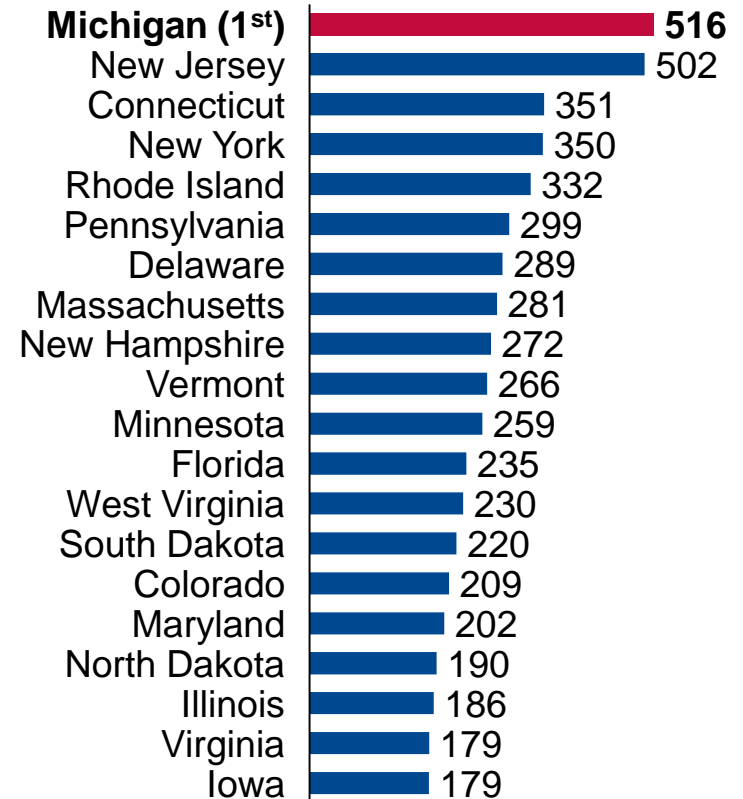


# While US caseload remains relatively low, Michigan now has the highest cases per million of any state

US 7-day average daily COVID cases per million (map)

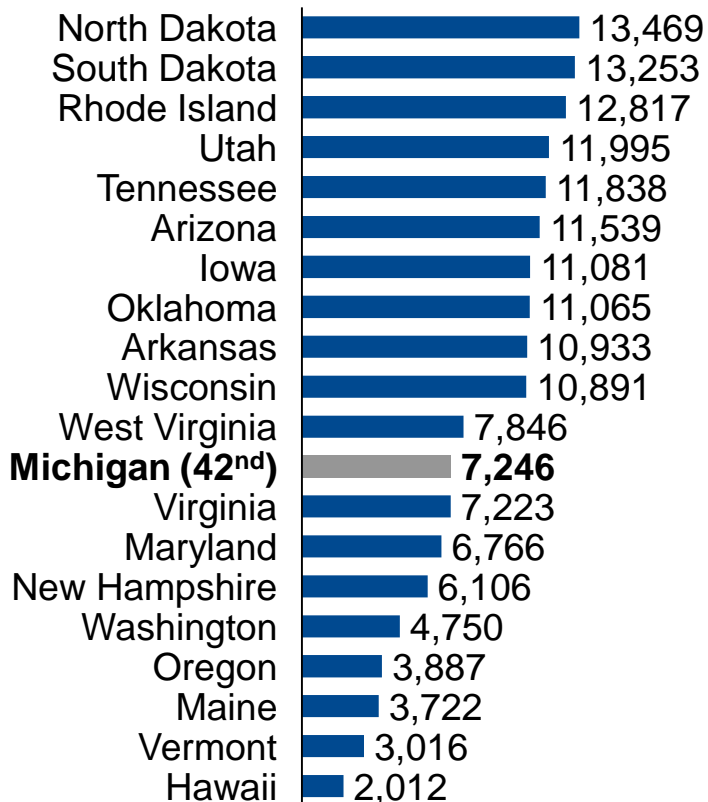


7-day average daily COVID cases per million (top 20 states)

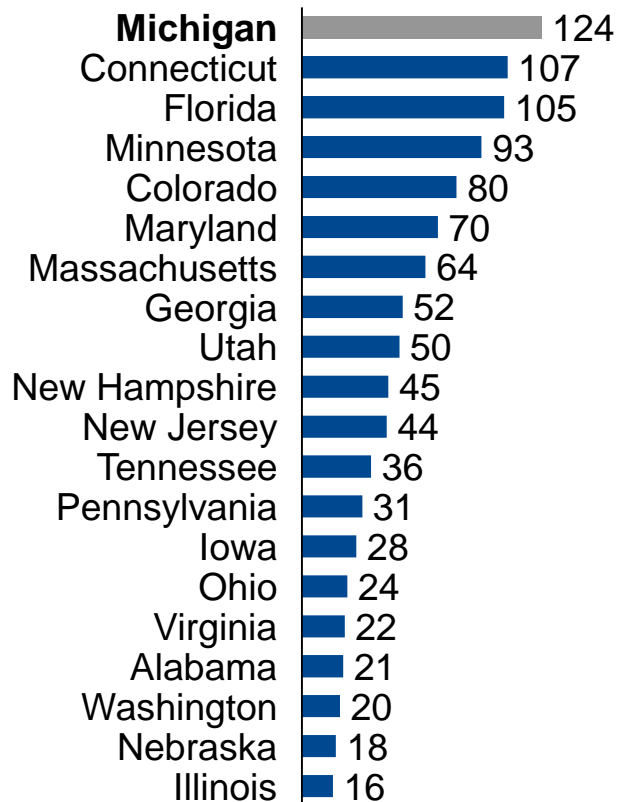


# Experts believe there are three main reasons for this surge in Michigan 1) fewer Michiganders have had COVID-19, 2) we have the most cases/resident of the B.1.1.7 variant, 3) contact has increased

## Cumulative COVID cases per 100K (top 10 states + bottom 10 states)



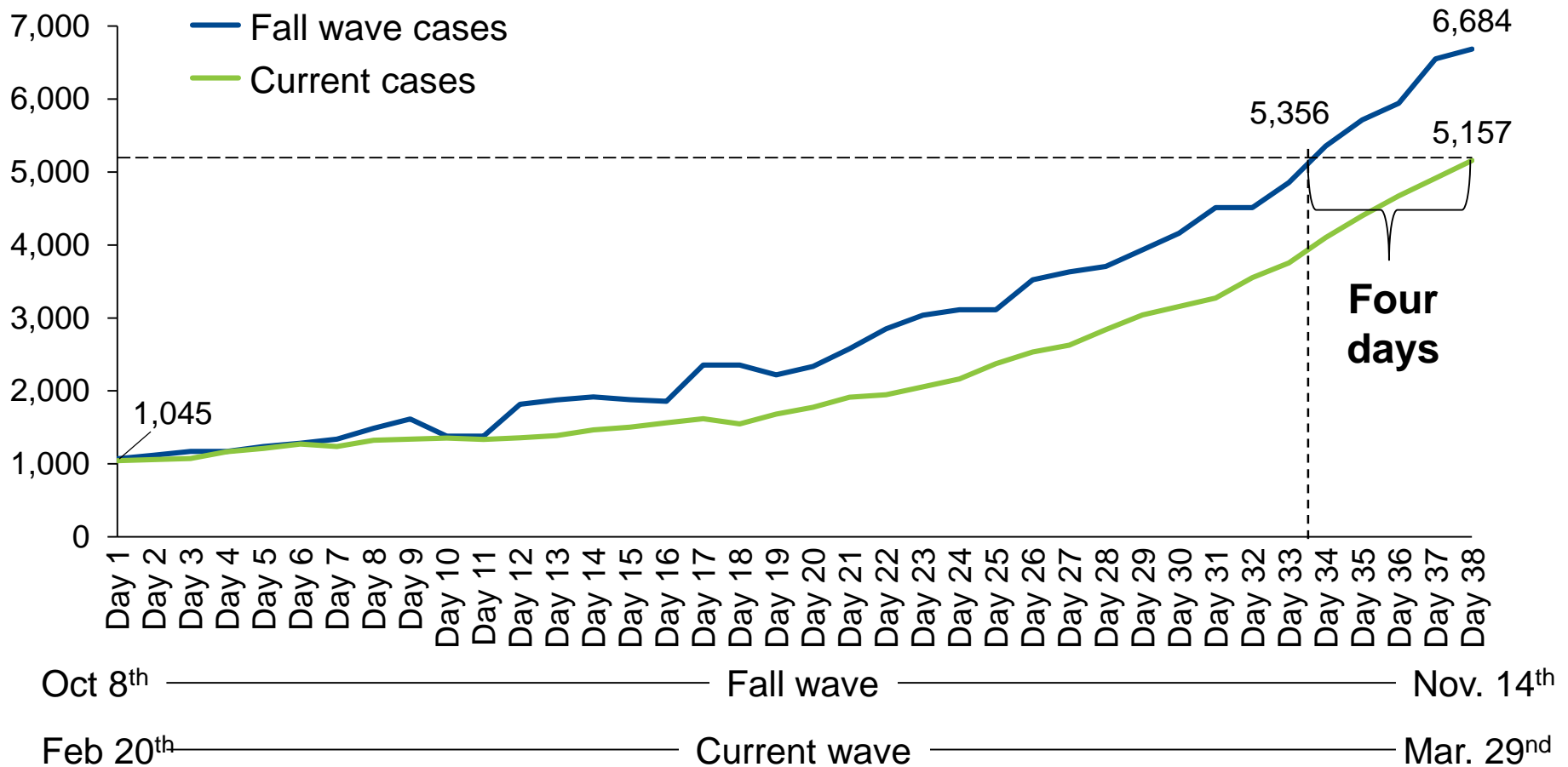
## B.1.1.7 variant cases per million (top 20 states)



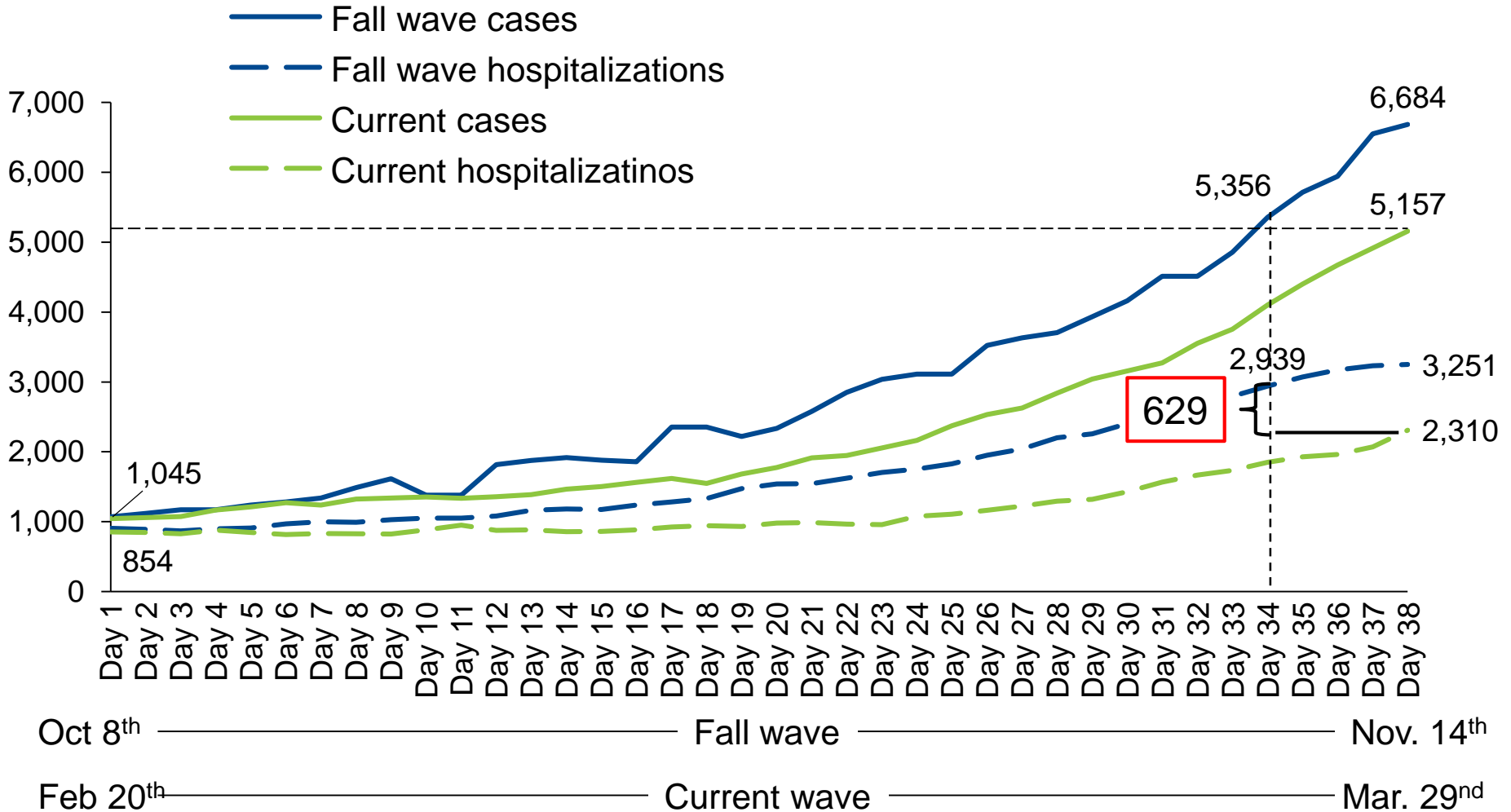
## Contact has increased to pre-pandemic levels

- # of trips per day has increased to March 2019 levels
- 20% of population is staying at home vs. 30% in both peaks and 25% last summer
- Individuals have pandemic fatigue and have begun additional gatherings

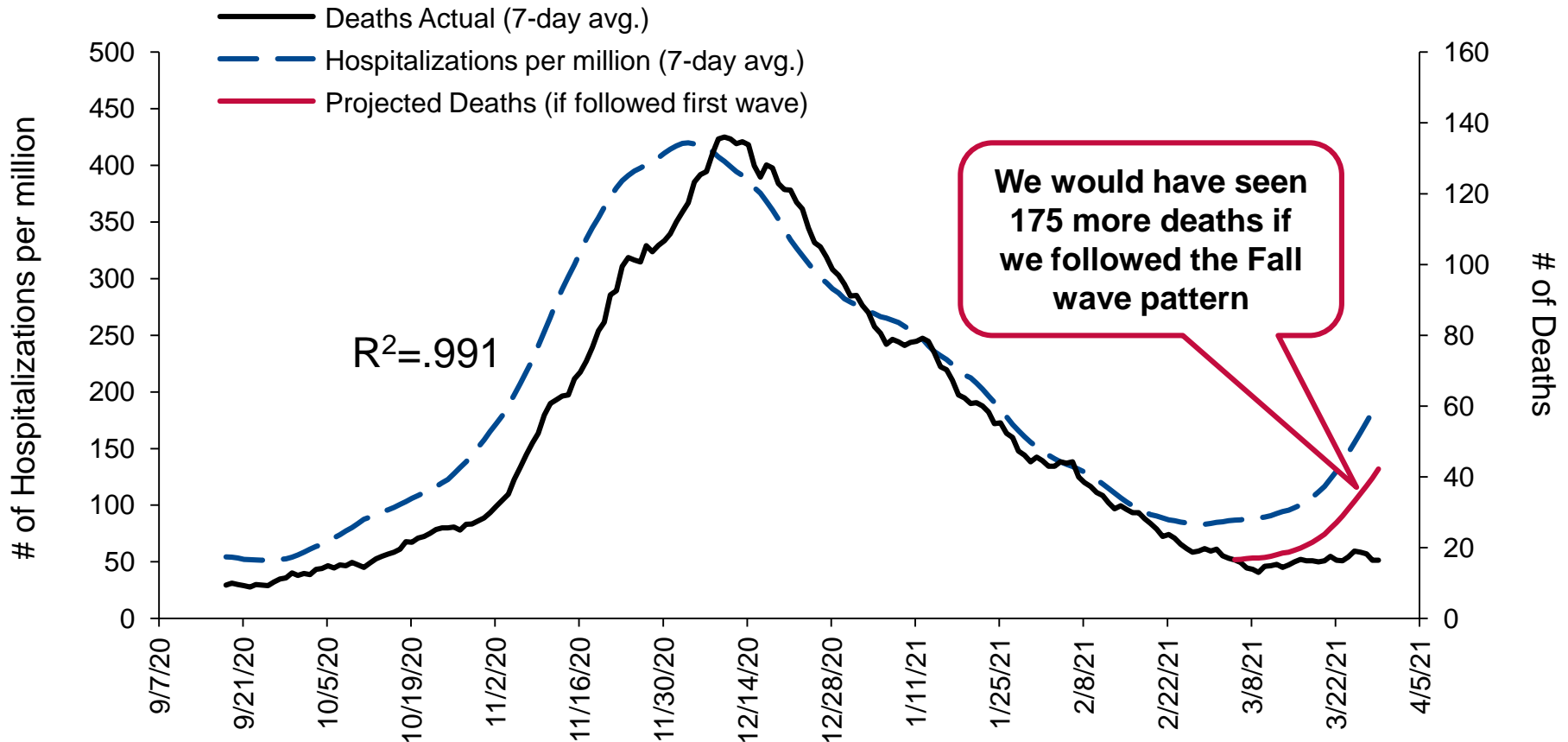
# This Feb/March wave has been ~4 days slower than the fall (October/November wave) despite the same starting point ...



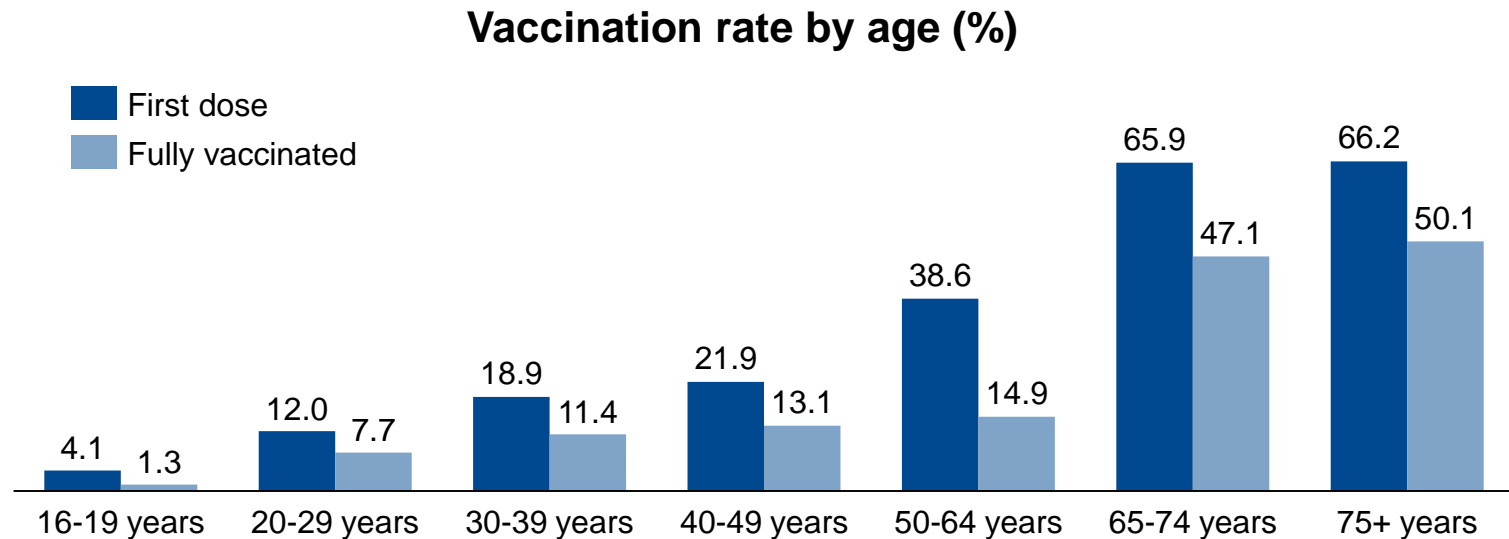
# ... and has come with ~600 fewer hospitalizations at the same case rate



# In the fall wave, deaths lagged hospitalizations by ~7 days and were highly correlated ( $R^2 > .99$ ). We have not seen this correlation in the recent wave



# This breakdown of hospitalizations and death correlation is likely due to the vaccination strategy



**Our vaccination strategy has protected >65% of those over 65 – this group accounted for ~80% of deaths in the Fall wave**

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# **Michigan Vaccination Update**

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## After a sharp increase in pace of vaccination last week, Michigan has fallen to middle of the pack, causing other metrics to decrease slightly

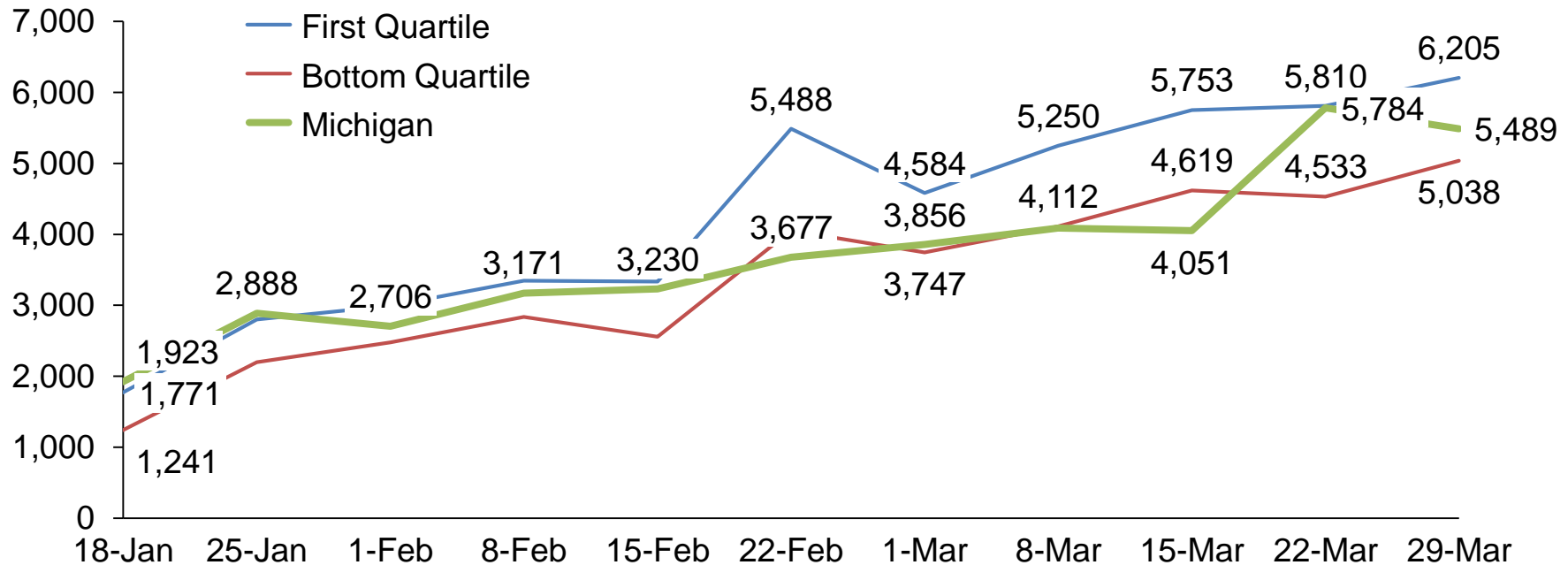
Metric	Current week	Rank – 50 states (prior week)	Rank – 20 most populous (prior week)	Metric Trend	
				All states	20 largest
Current pace (Doses/100K/wk)	5,489	26 (14)	13 (6)	↓	↓
Cumulative doses / 100K	43,016	37 (36)	15 (14)	↓	↓
Population given first dose %	27.8%	34 (33)	14 (13)	↓	↓
Inventory %	82%	23 (21)	10 (8)	↓	↓
Inventory burn rate (days/doses)	12	25 (18)	12 (7)	↓	↓

- While this decline is seen across all metrics, it is not large in relative terms; we remain ~2.5% of population given the first dose from being first quartile or ~4 days of vaccines



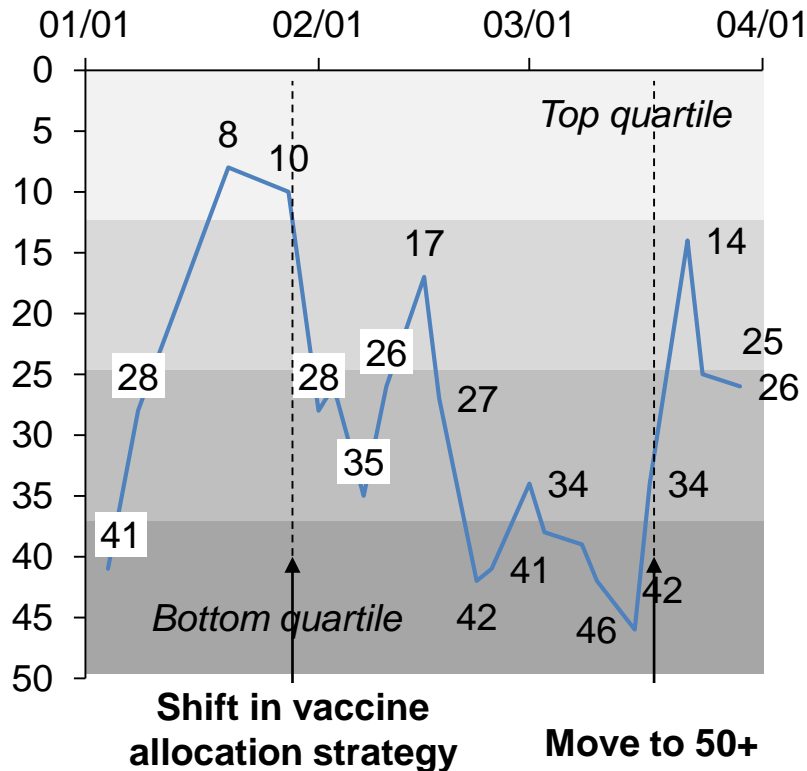
# Michigan's vaccination pace – as reported by the CDC – fell slightly week over week

Number of new doses given per 100K population each week (# Rank)

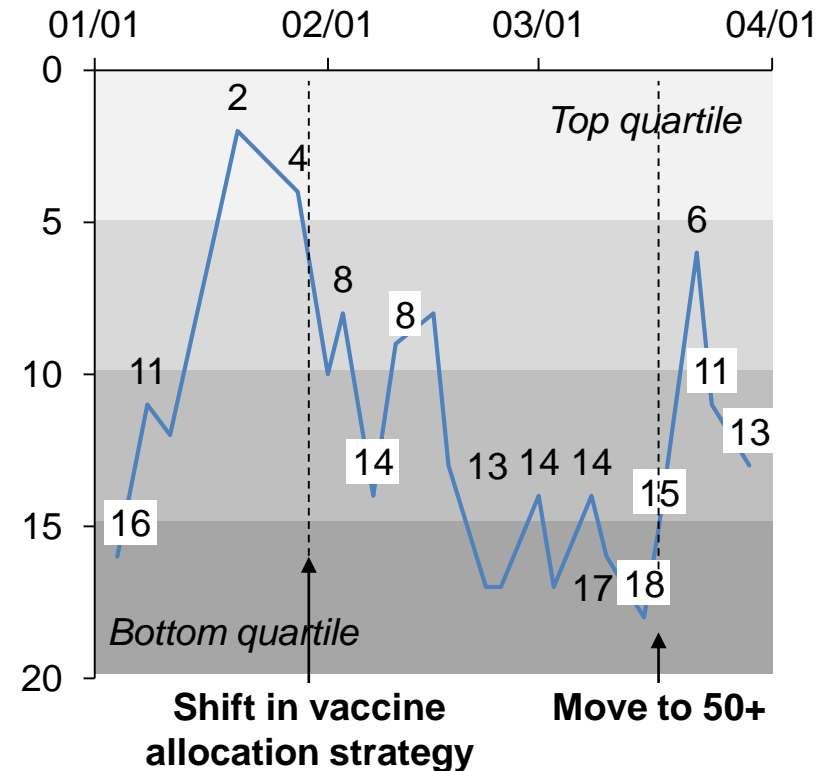


# Michigan's vaccination pace relative ranking rose in the wake of the move to open vaccines for those 50+

Ranking over time vs. all 50 states  
(# of doses/100K given per week)

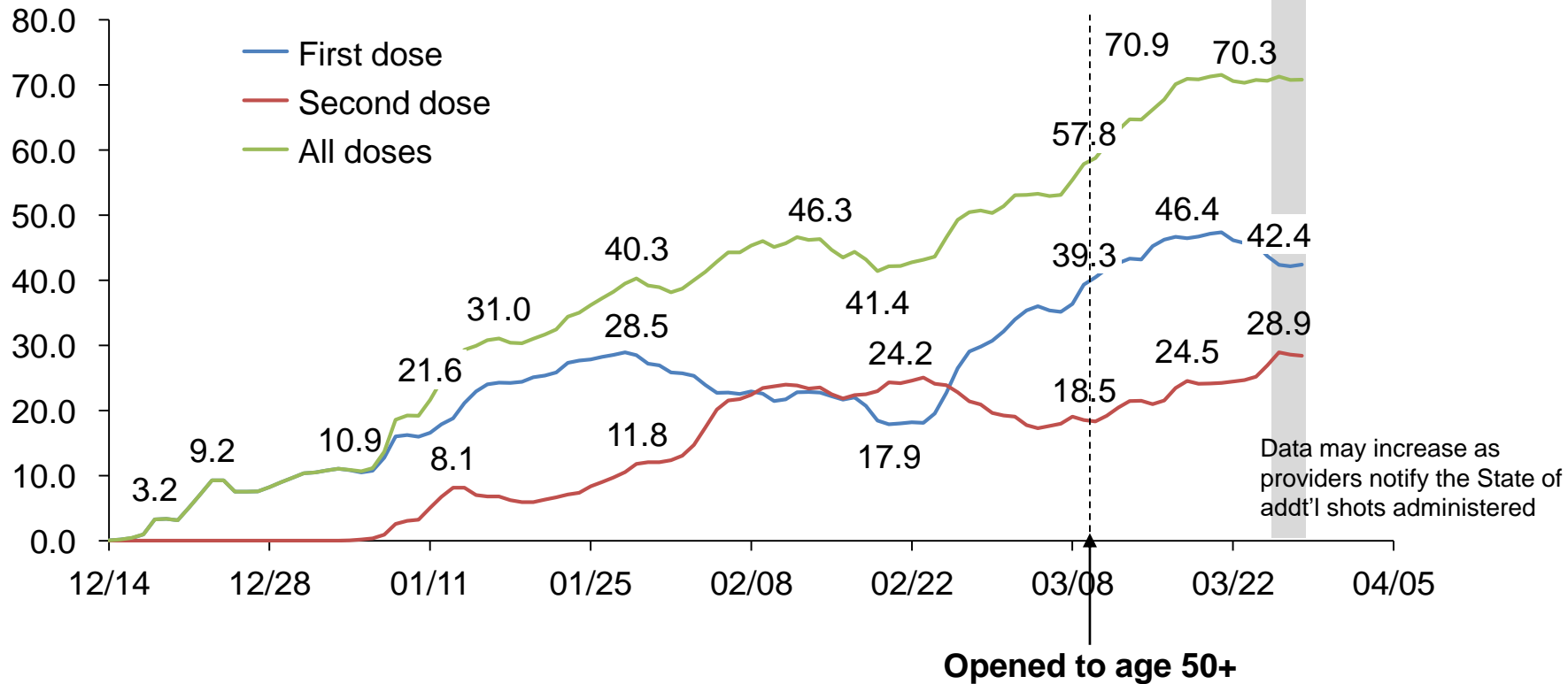


Ranking over time vs. 20 most populous states  
(# of doses/100K given per week)



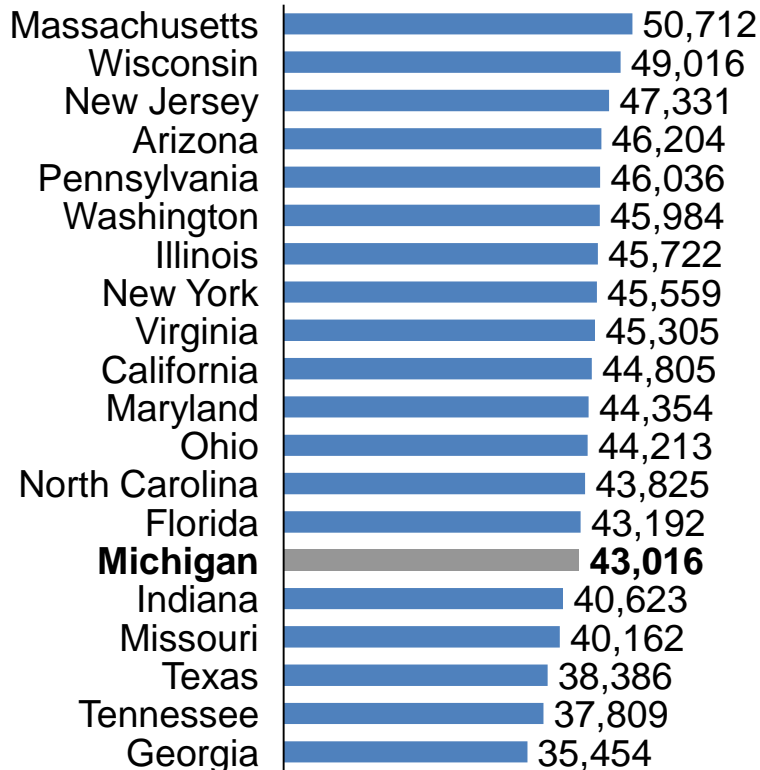
The total number of doses per day – as reported by the State – remained at ~70K week-over-week; although first doses have begun to fall as 2<sup>nd</sup> doses have risen

Thousand doses per day (7-day average)

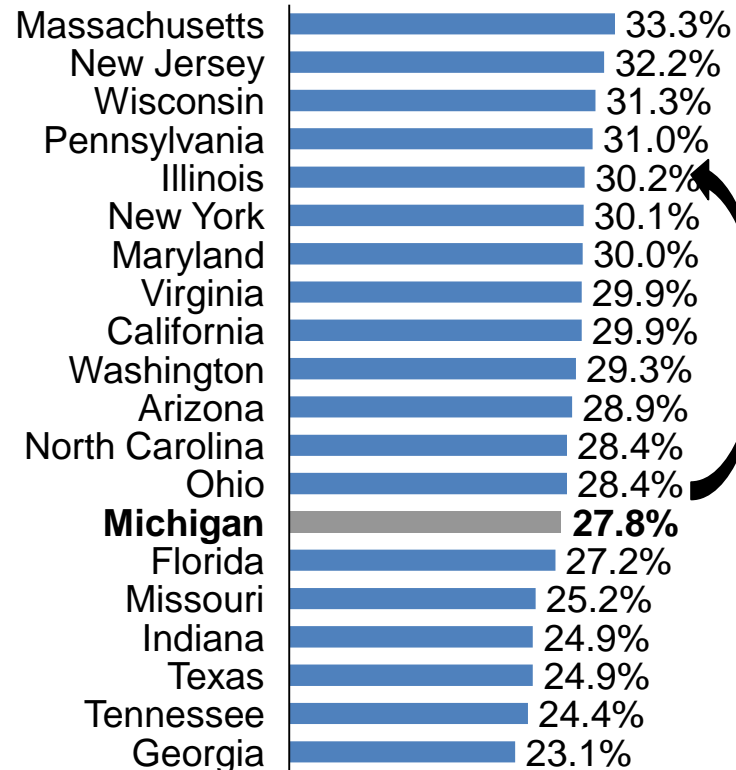


# When looking at the 20 most populous states, Michigan is either the 14<sup>th</sup> or 15<sup>th</sup> best performer; we were 13<sup>th</sup> or 14<sup>th</sup> respectively last week

Number of doses given per 100K population (top 20 most populous states)



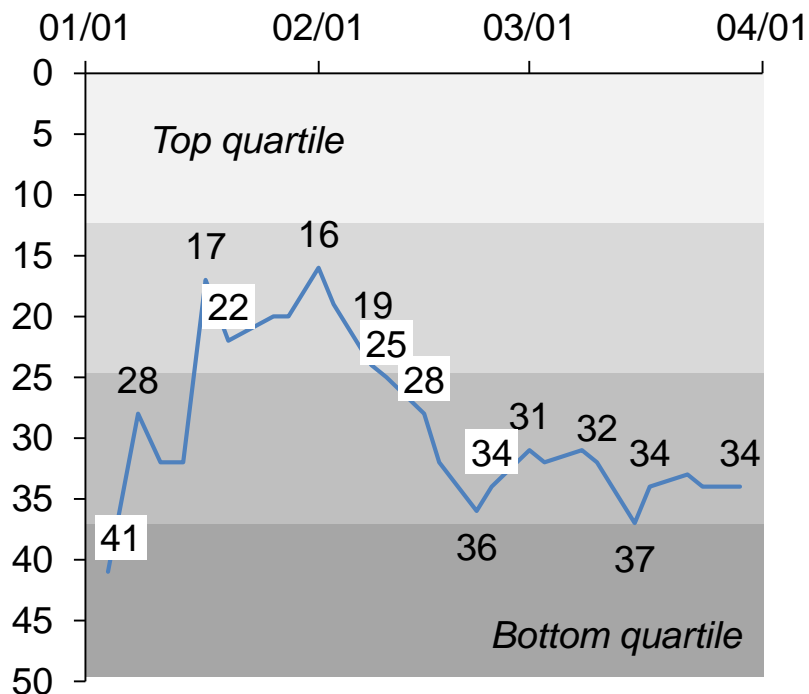
% of population given first dose (top 20 most populous states)



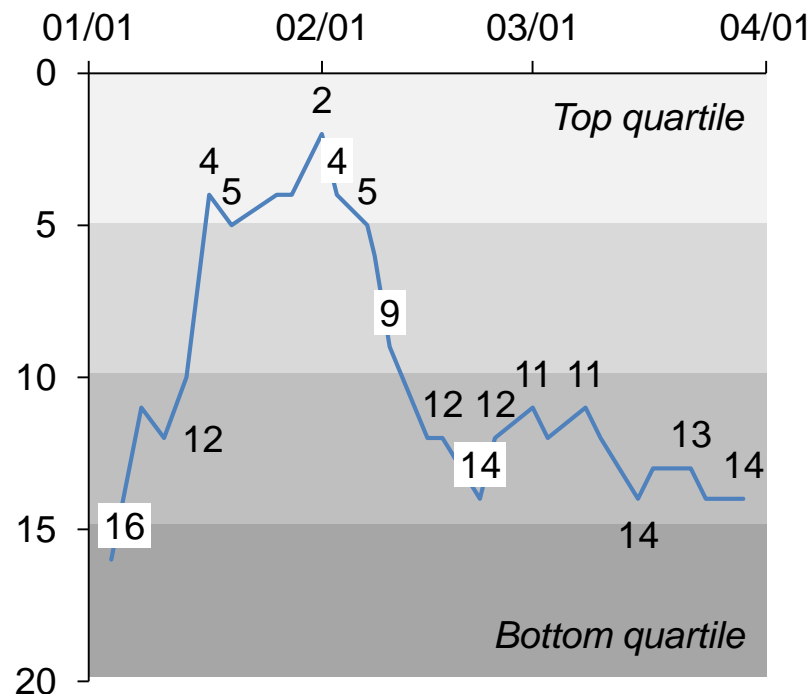
Difference between 14<sup>th</sup> and 1<sup>st</sup> quartile continues to be 2.5% or ~4 days of vaccines

# Michigan's first dose relative ranking appears to be stabilized in the third quartile

Ranking over time vs. all 50 states  
(% of population with first dose)

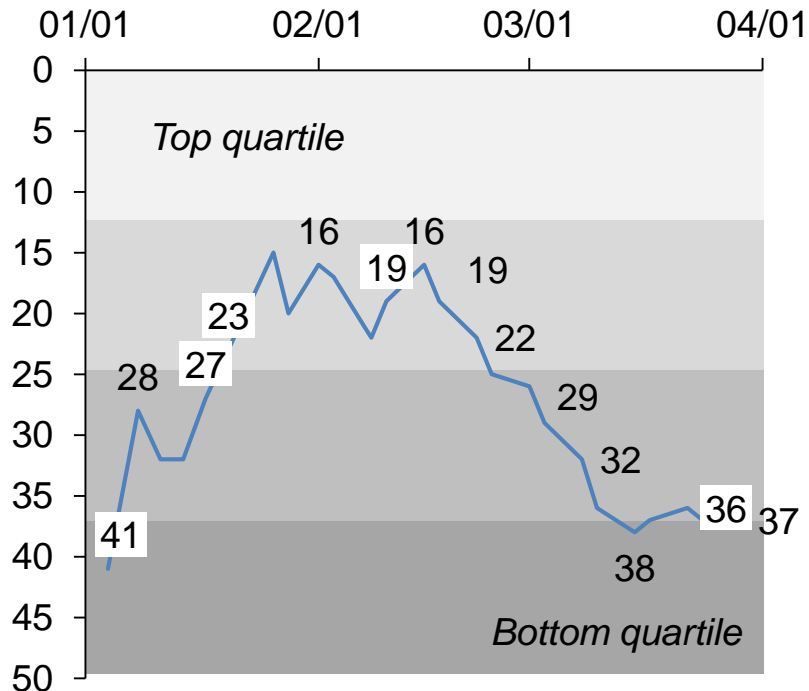


Ranking over time vs. 20 most populous states  
(% of population with first dose)

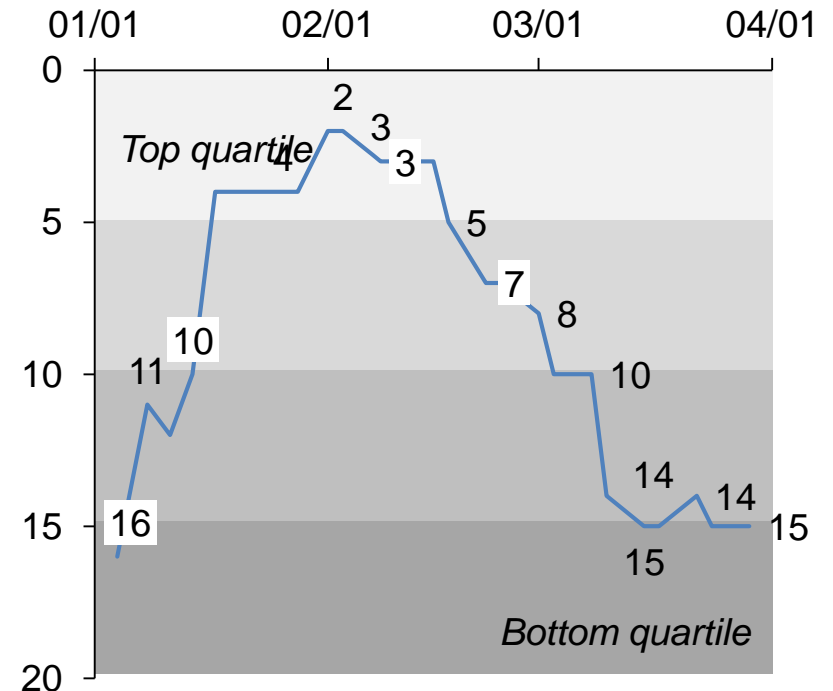


# Michigan's total dose has also stabilized at low 3<sup>rd</sup> quartile

Ranking over time vs. all 50 states  
(number of doses per 100K)

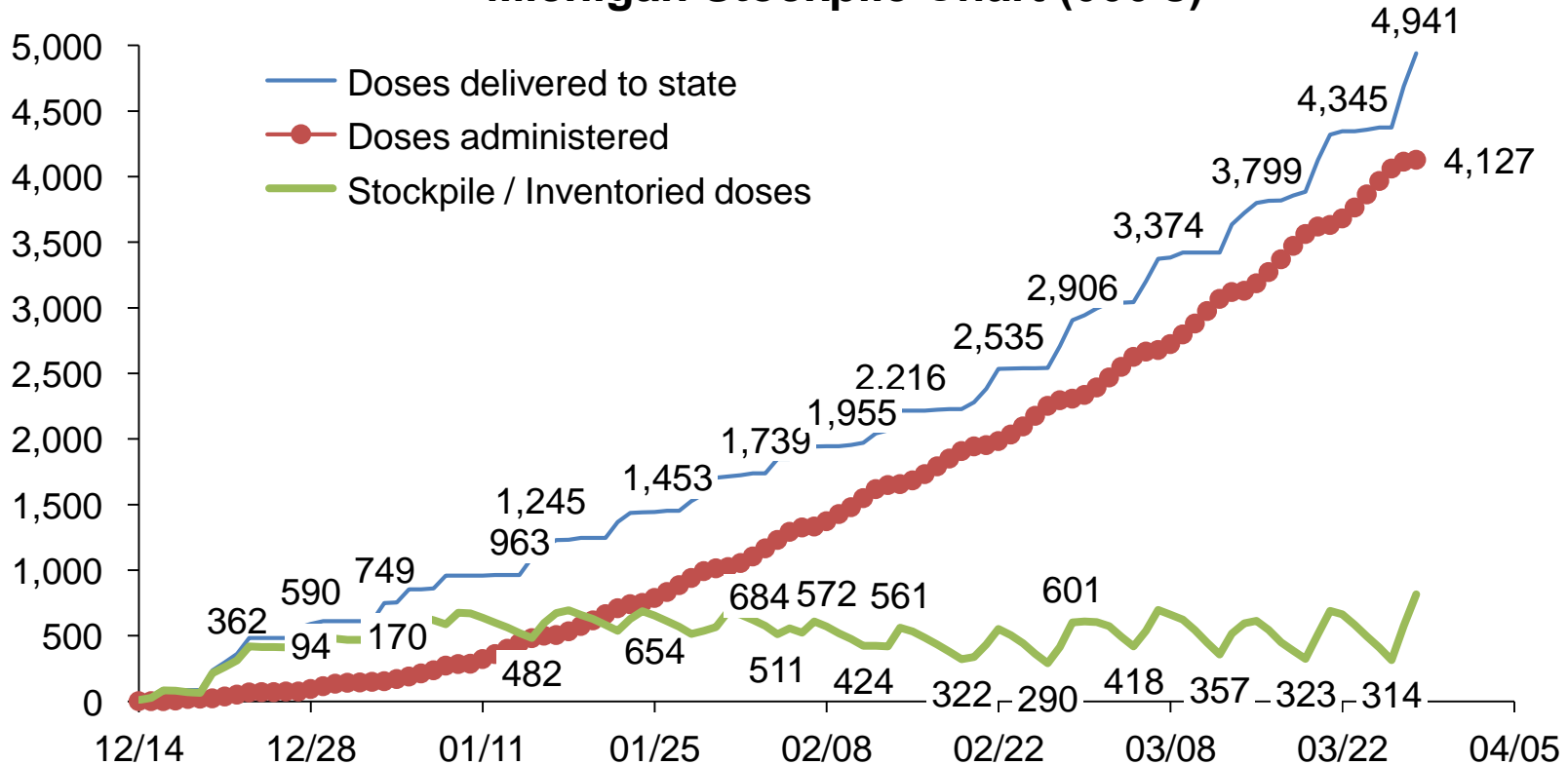


Ranking over time vs. 20 most populous states  
(number of doses per 100K)



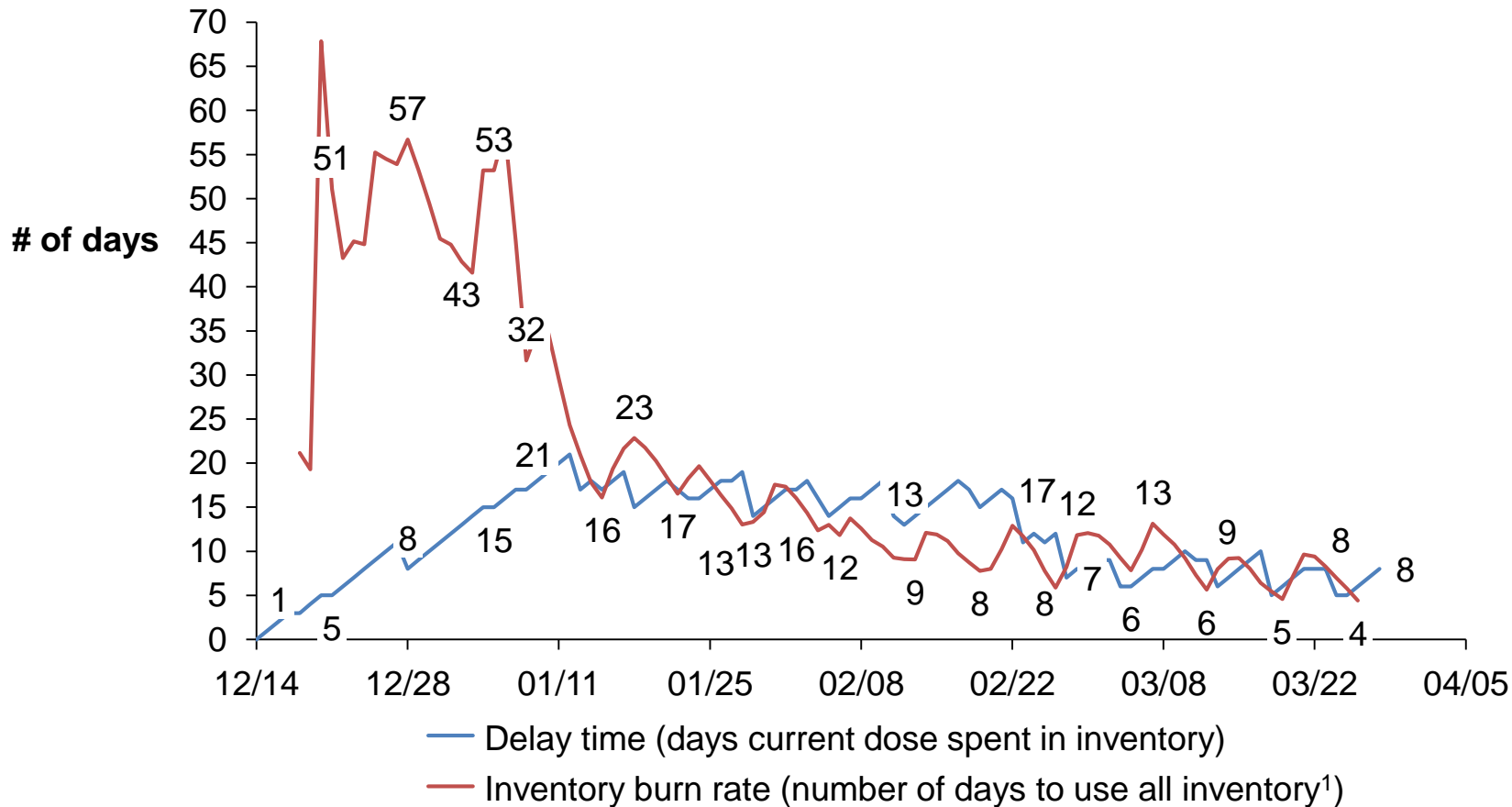
# Our “safety stock” – lowest weekly inventory levels – dropped from ~420K to ~320K in the last month, despite larger shipments from the federal government

## Michigan Stockpile Chart (000's)



# Michigan's inventory burn rate and delay time have fallen to a range of 4-8 days

## Michigan Dose Inventory Chart



1. Based on last 7-day average dose administration rate

Source MDHHS: