



MI COVID RESPONSE DATA AND MODELING UPDATE

October 11, 2022

Epidemiologic Surveillance: Key Messages

COVID-19 pandemic is at a plateau in some parts of the globe; decreases are seen in parts of the United States

- However, case rates Europe continue increasing
- Within the U.S., case rates decreased 10.5% over the past week
- Midwestern states (region 5) are showing signs of declines or plateaus

COVID spread in Michigan is plateaued

- COVID spread is assessed from many different markers including CDC community levels and other surveillance systems
- As of October 6, 43% of Michigan counties are at medium or high COVID-19 community levels
 - 2 Michigan counties are classified as High this week according to CDC's Community Levels (2%). This represents less than 2% of the population.
 - 34 Michigan counties are currently at Medium level (41%). This represents 70% of the population.
- The R_t for Michigan is around 1 indicating COVID is plateaued
- The proportion of specimens sequenced and identified as BA.5 in the U.S. and Michigan continues to remain the most dominant
- 35% of SWEEP sites saw a decrease in the most recent week; 40% of SWEEP sites saw increases

COVID-19 hospital metrics in Michigan remain lower than past surges

- COVID-19 hospital admissions, hospital census, ICU census, and pediatric census showed decreases this week

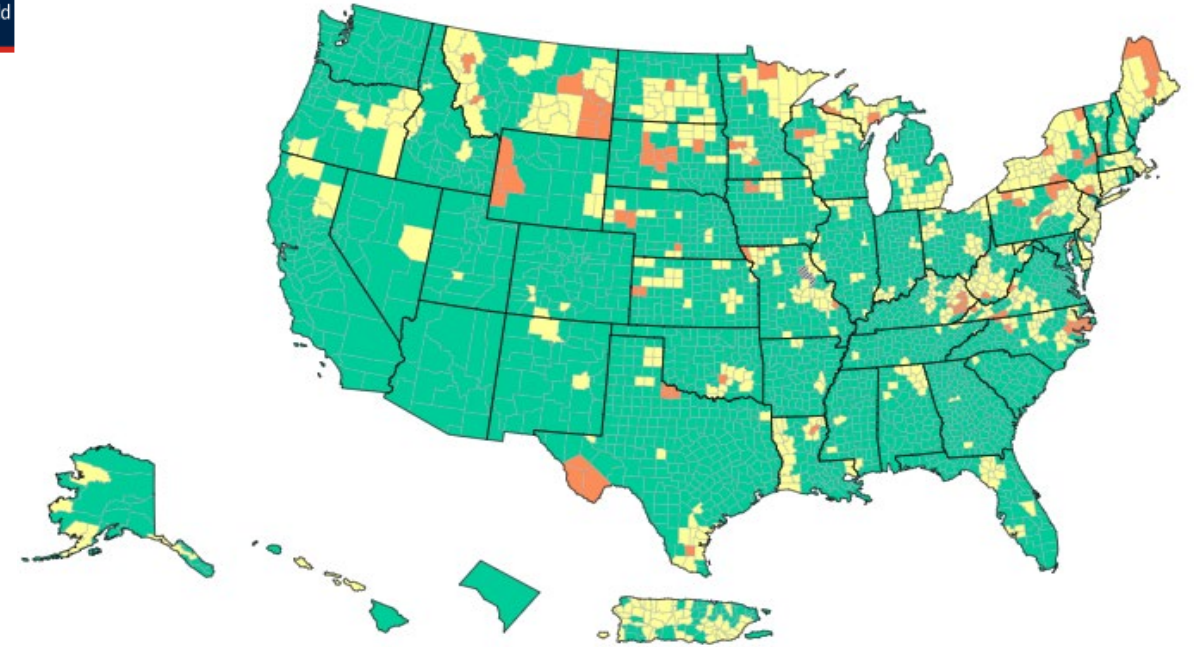
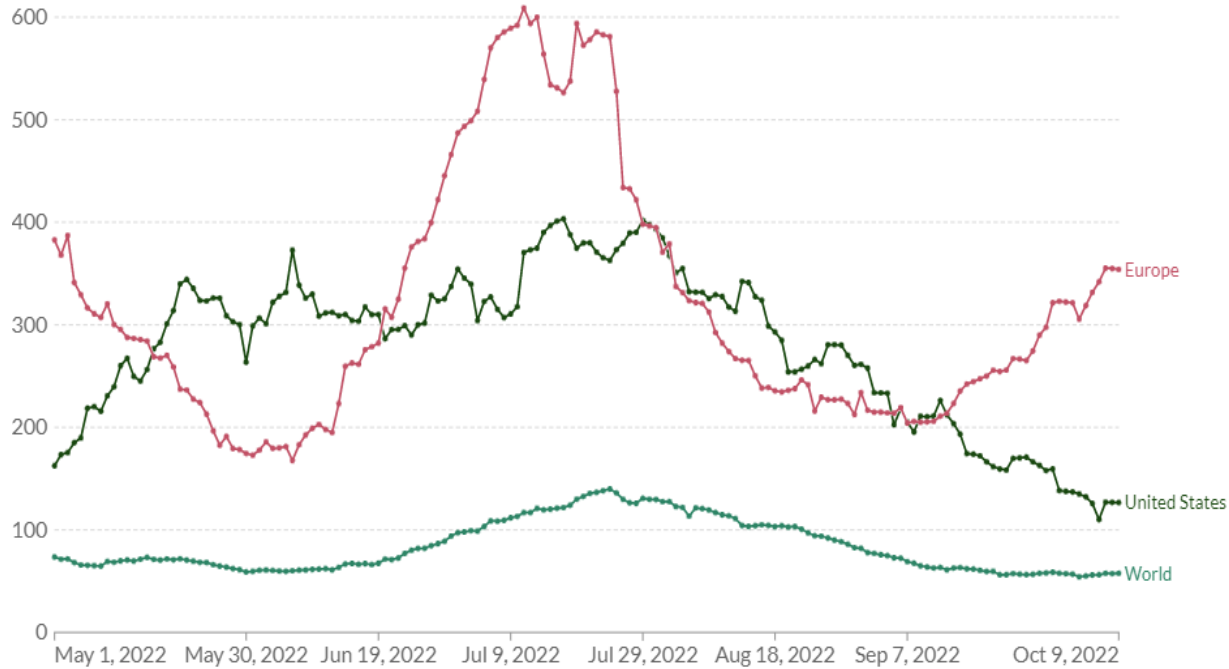
Global and National Trends

Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.

Our World
in Data

LINEAR LOG



Globally, 621,574,524 cases and 6,557,896 deaths (Data* through 10/10/2022)

- Case rates for some countries in Europe continue increasing

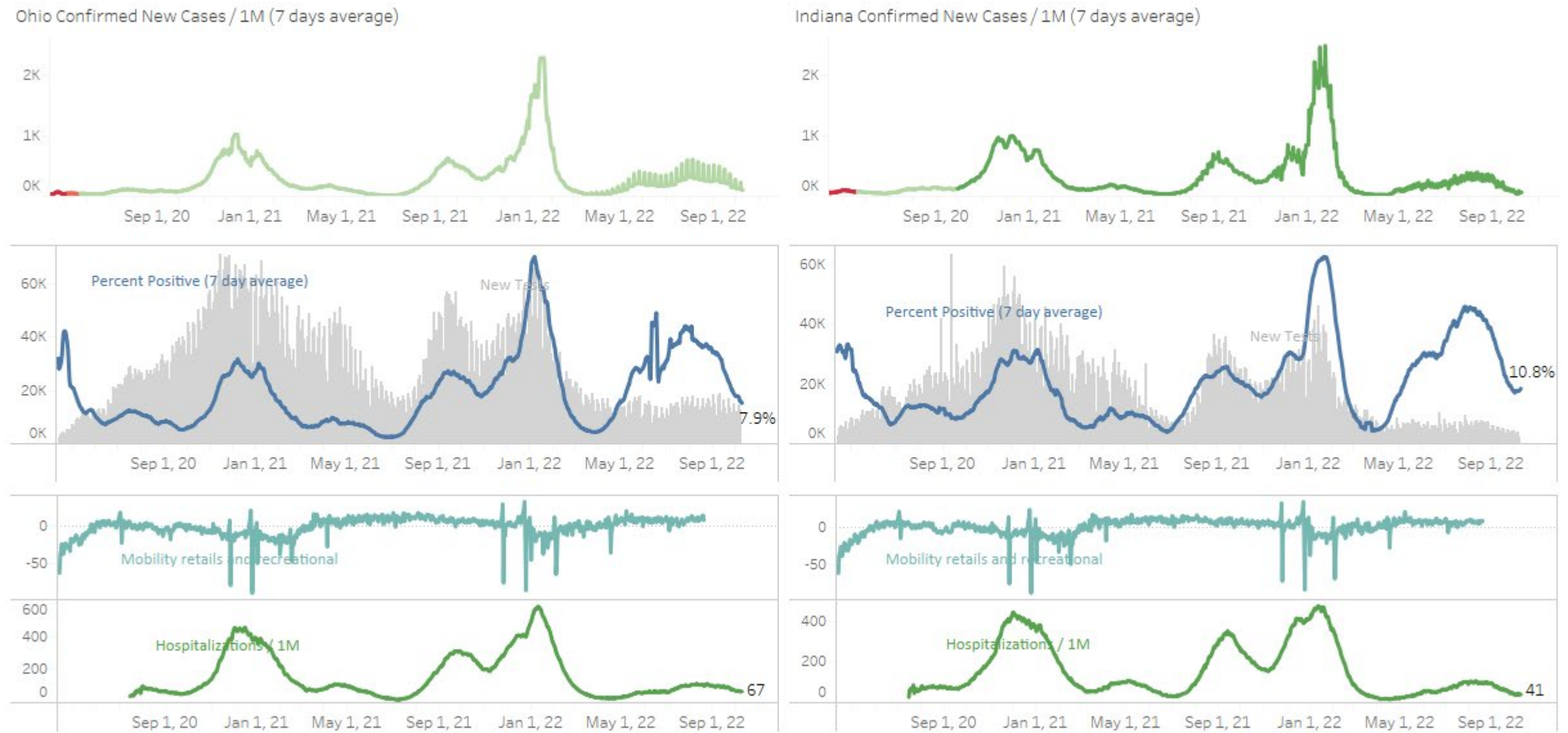
United States: Reported cases (7-day average) have decreased 10.5% since the prior week[†]

- In the U.S., the case rate is 88.3 cases/100,000 in last 7 days (last week: 96.4 cases per/100,000)

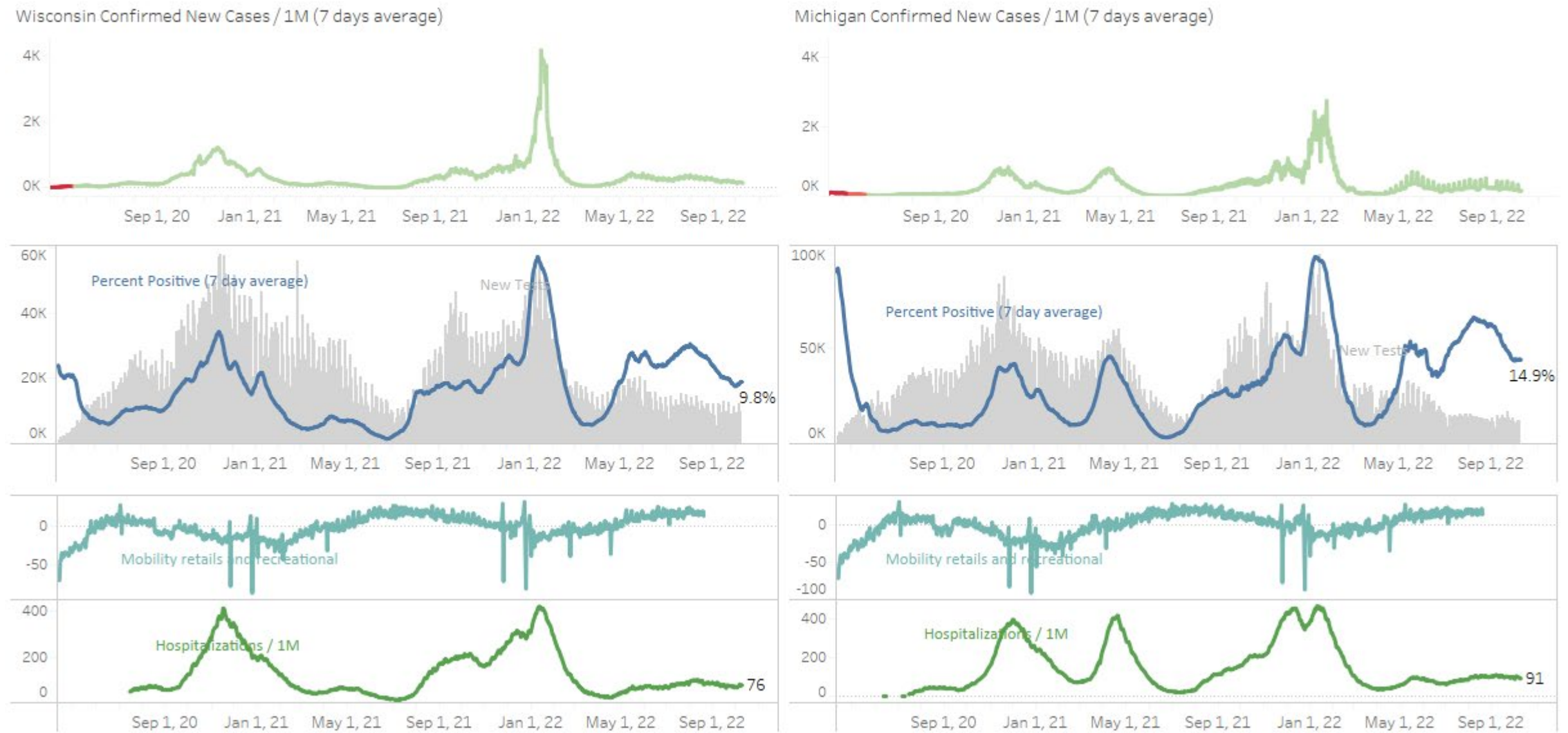
Region 5 (Midwest) states are declining or plateaued

- Michigan has the highest case rates in Region 5 (10/6/2022)

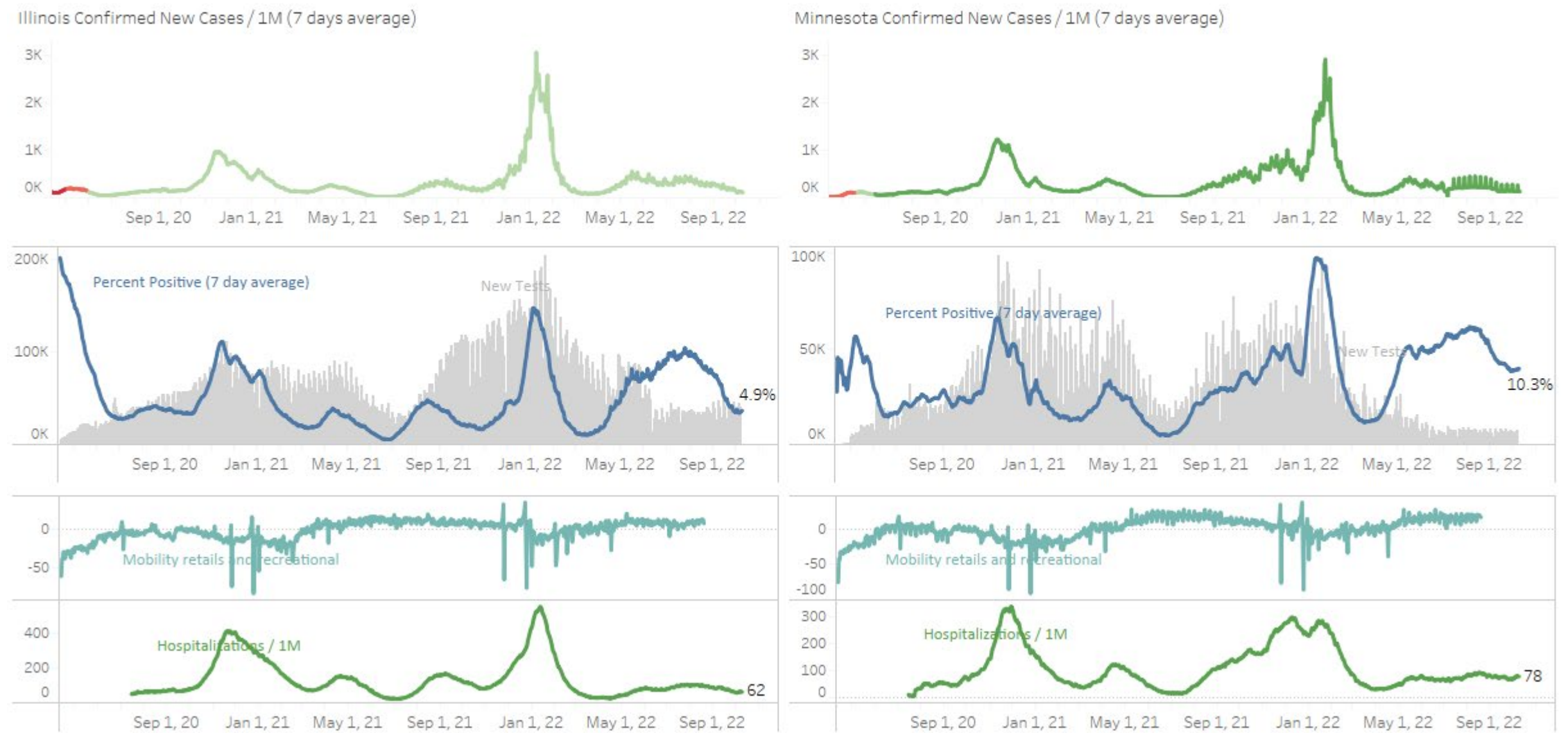
State Comparison: Ohio and Indiana



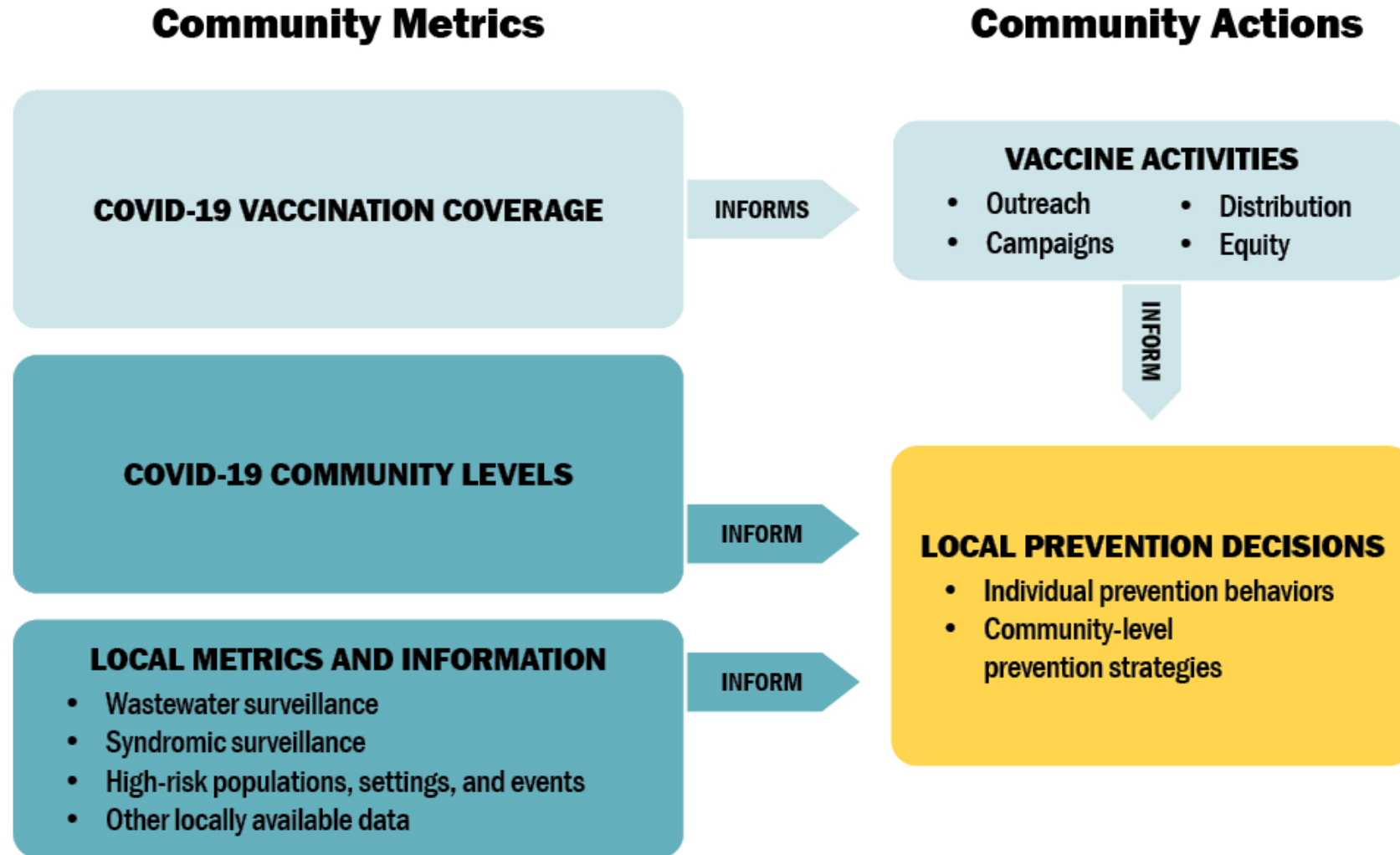
State Comparison: Wisconsin and Michigan



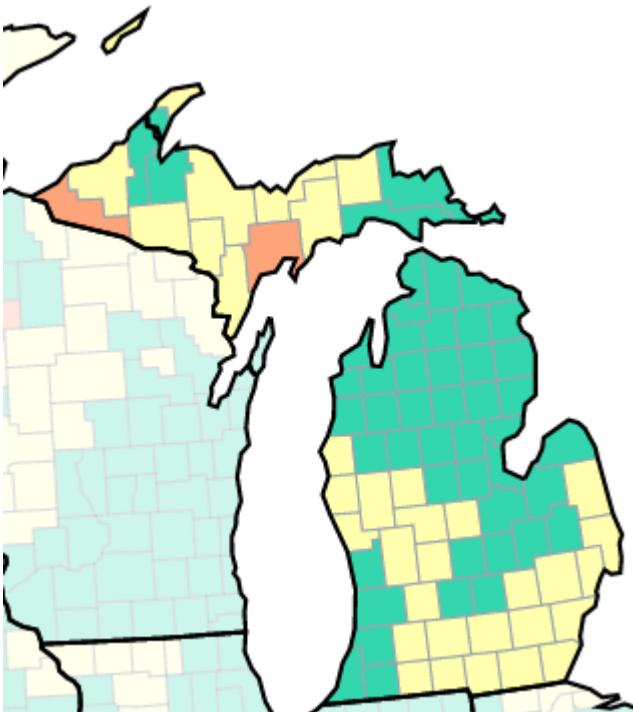
State Comparison: Illinois and Minnesota



Local Prevention Decisions Should Use Community Levels in Concert with Other Pandemic Indicators



As of Oct 6, 2 Michigan Counties are at High COVID-19 Community Level



- In the US, 3% of counties have high risk for medically significant disease and healthcare strain
- In Michigan, 2% (2/83) of counties are at high risk. This represents less than 1% of the population
- 34 Michigan counties are currently at Medium level (41%). This represents 70% of the population
- 47 Michigan counties are currently at Low level (57%). This represents 30% of the population

Percent of Counties

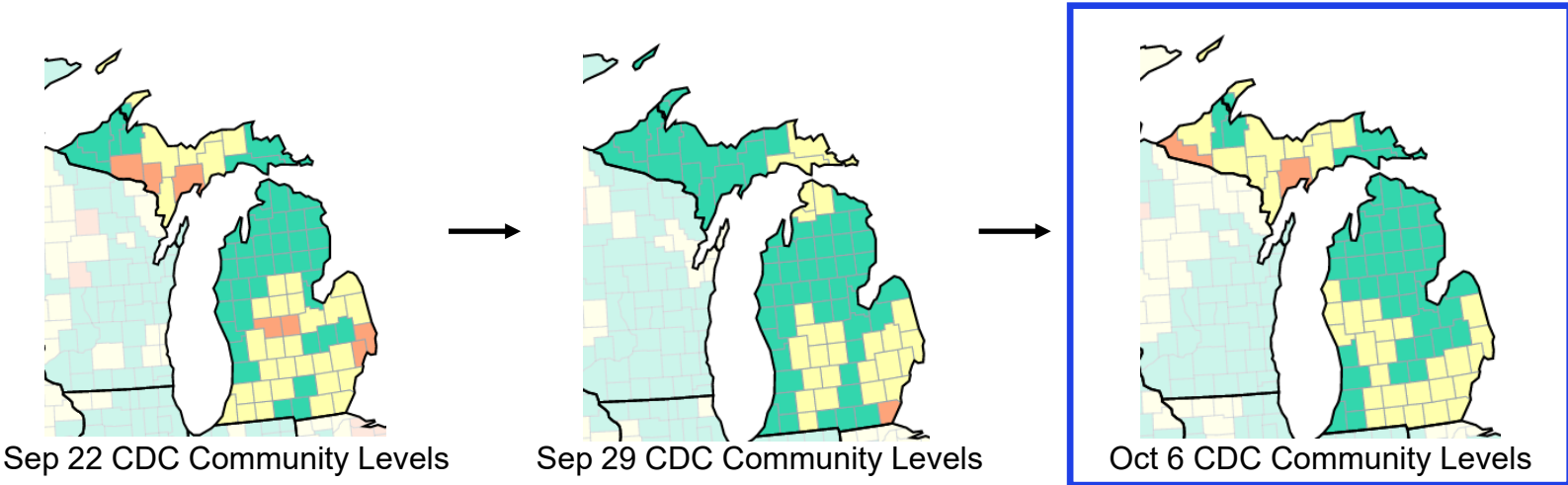
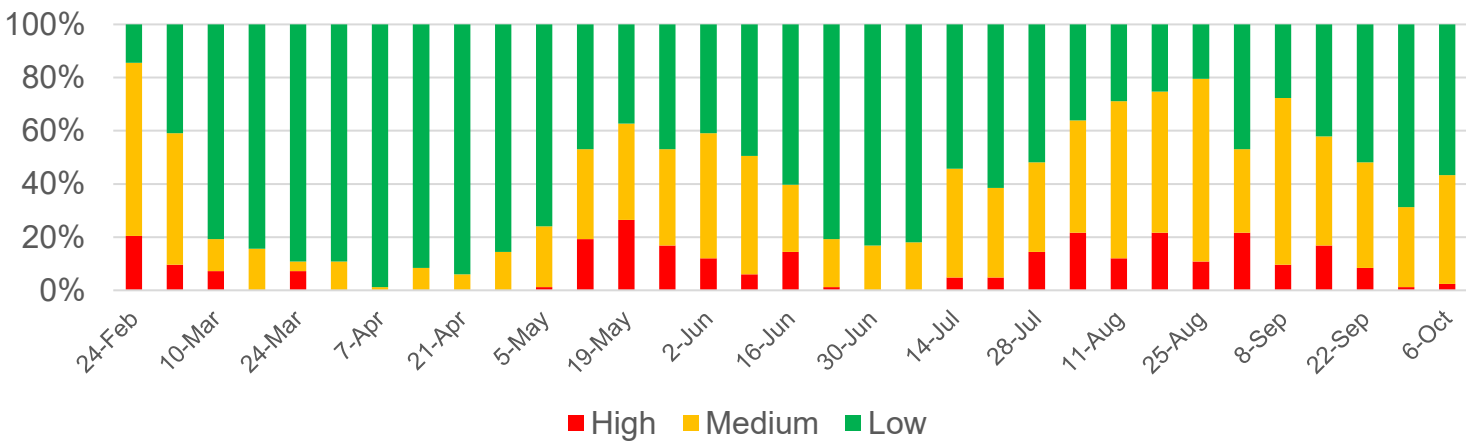
	United States	Michigan	Percent of MI Population
Low	77%	57%	30%
Medium	20%	41%	70%
High	3%	2%	<1%

Low	Medium	High
<ul style="list-style-type: none">• Stay up to date with COVID-19 vaccines• Get tested if you have symptoms	<ul style="list-style-type: none">• If you are at high risk for severe illness, talk to your healthcare provider about whether you need to wear a mask and take other precautions• Stay up to date with COVID-19 vaccines• Get tested if you have symptoms	<ul style="list-style-type: none">• Wear a mask indoors in public• Stay up to date with COVID-19 vaccines• Get tested if you have symptoms• Additional precautions may be needed for people at high risk for severe illness

Michigan Trends of COVID-19 Community Levels

- As of October 6, 2 (2%) Michigan counties are at high COVID-19 community level and another 34 Michigan counties are currently at Medium level (41%)
- The proportion of Michigan counties at medium and high is slightly higher than last week but lower than 2 weeks ago
- Current number of counties at high and medium are the lowest since July 14

Weekly Percent of MI Counties by CDC COVID-19 Community Level

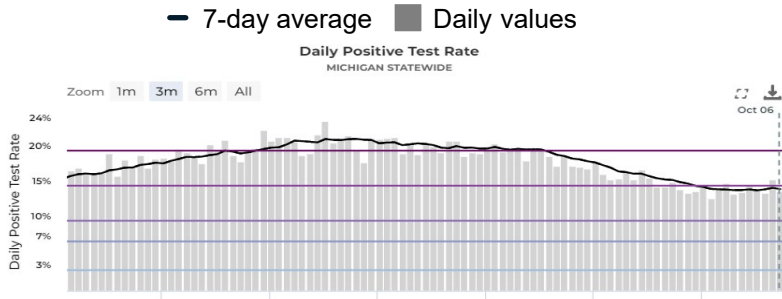


This metric uses three indicators for categorization: (1) new COVID-19 cases per 100,000 population in the last 7 days lagged 1 day behind the date the COVID-19 Community Level is calculated; (2) new COVID-19 hospital admissions per 100,000 population in the last 7 days; and (3) percent of staffed inpatient beds occupied by patients with confirmed COVID-19 (7-day average) lagged 1 day behind the 7-day case rate .

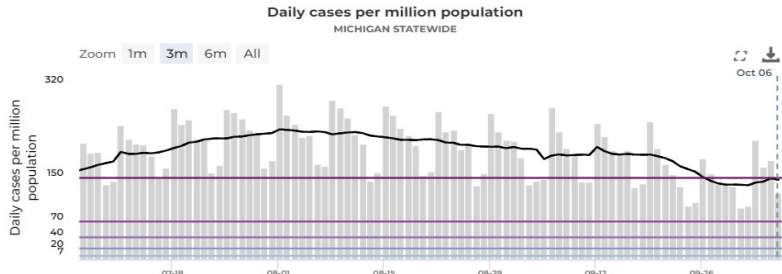
Recent statewide trends are plateaued

Statewide trends

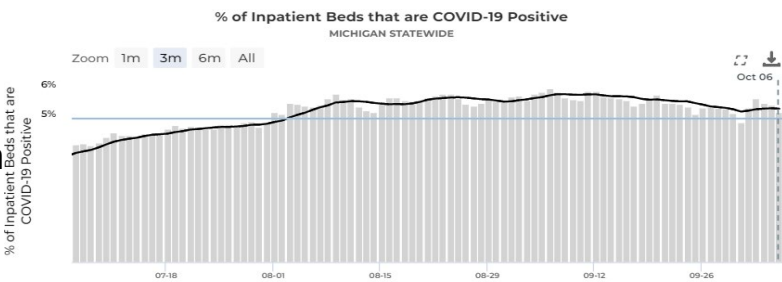
Positivity, %



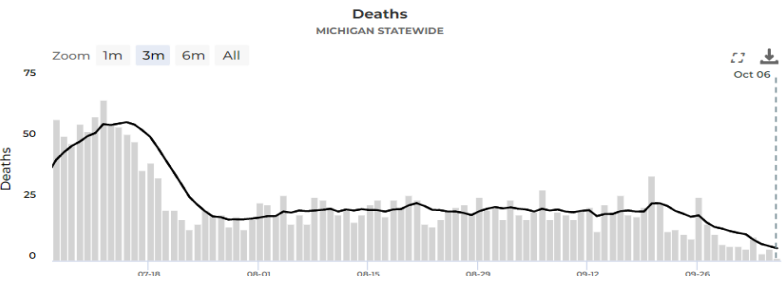
Daily cases per million



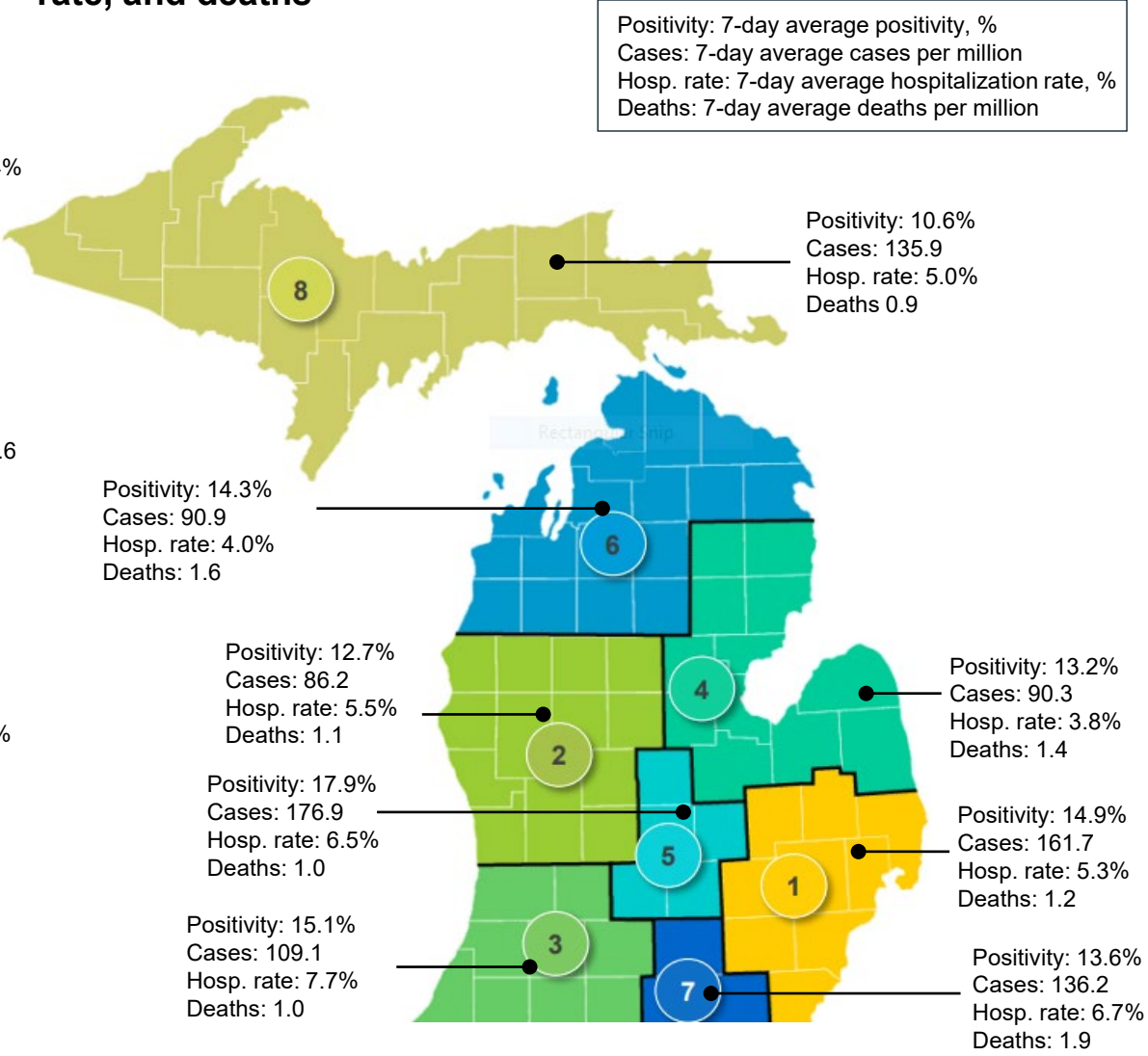
Daily hospitalization rate, %



Deaths



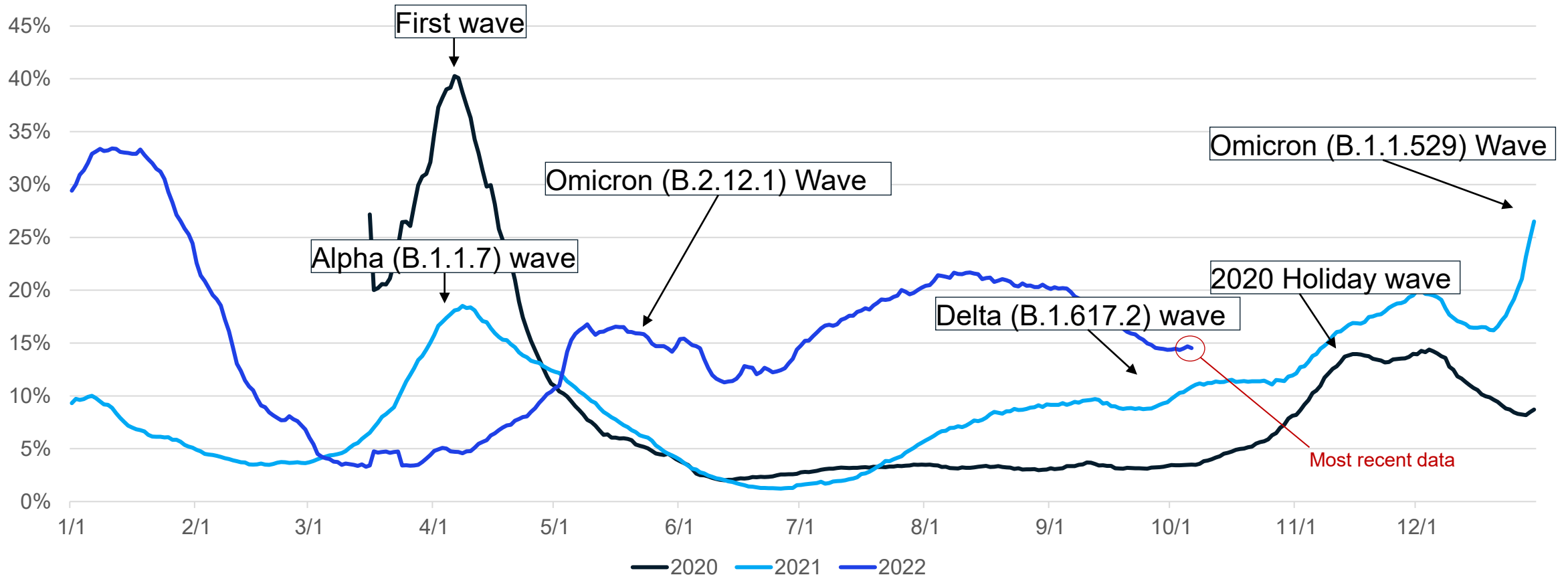
MERC Regional breakdown: Positivity, cases, hospitalization rate, and deaths



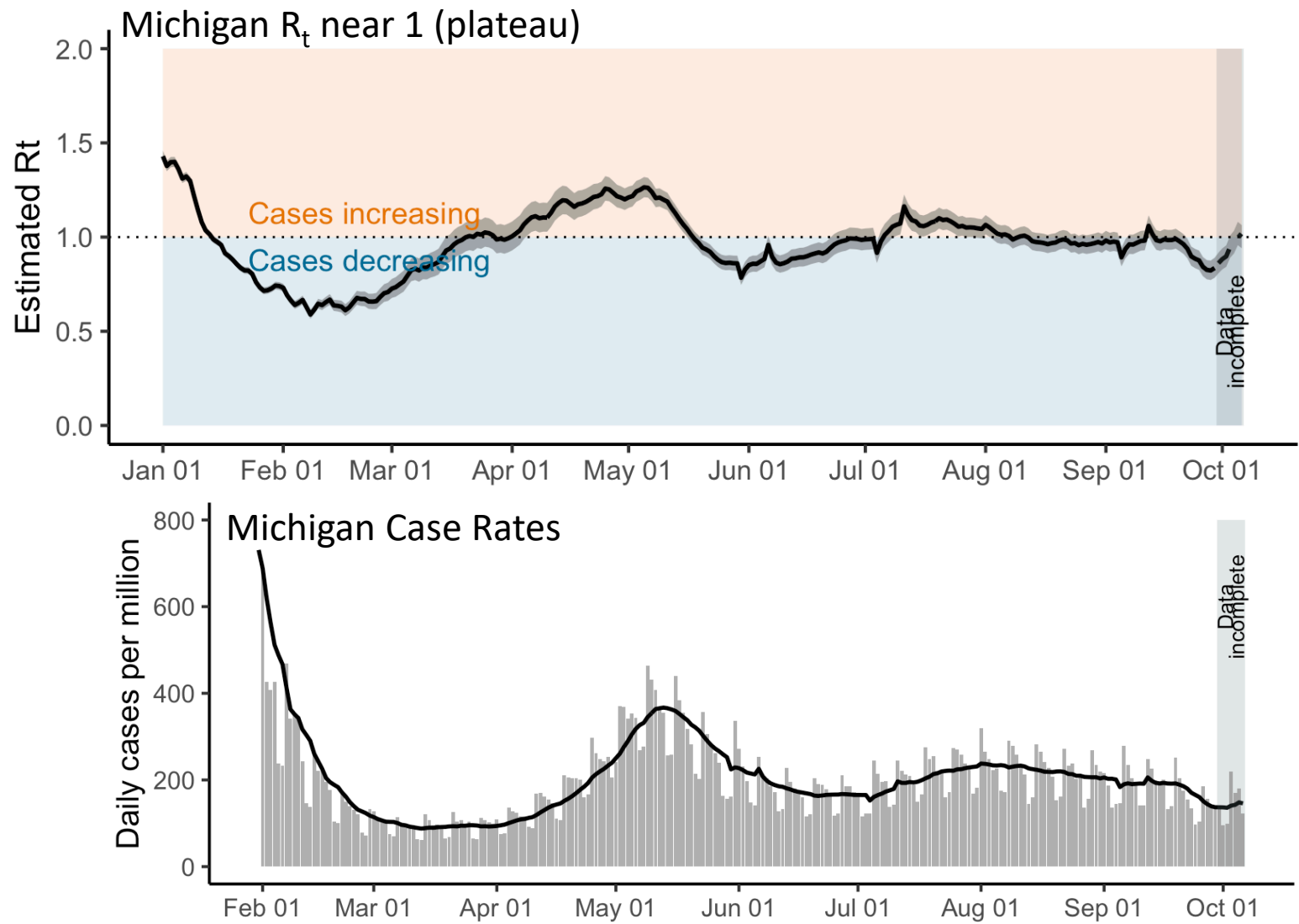
Time Trends – Annual Comparison: Percent Positivity

- Positivity is just under half as high as all-time pandemic highs
- However, testing behaviors have shifted, as such comparison year over year should be done so with caution

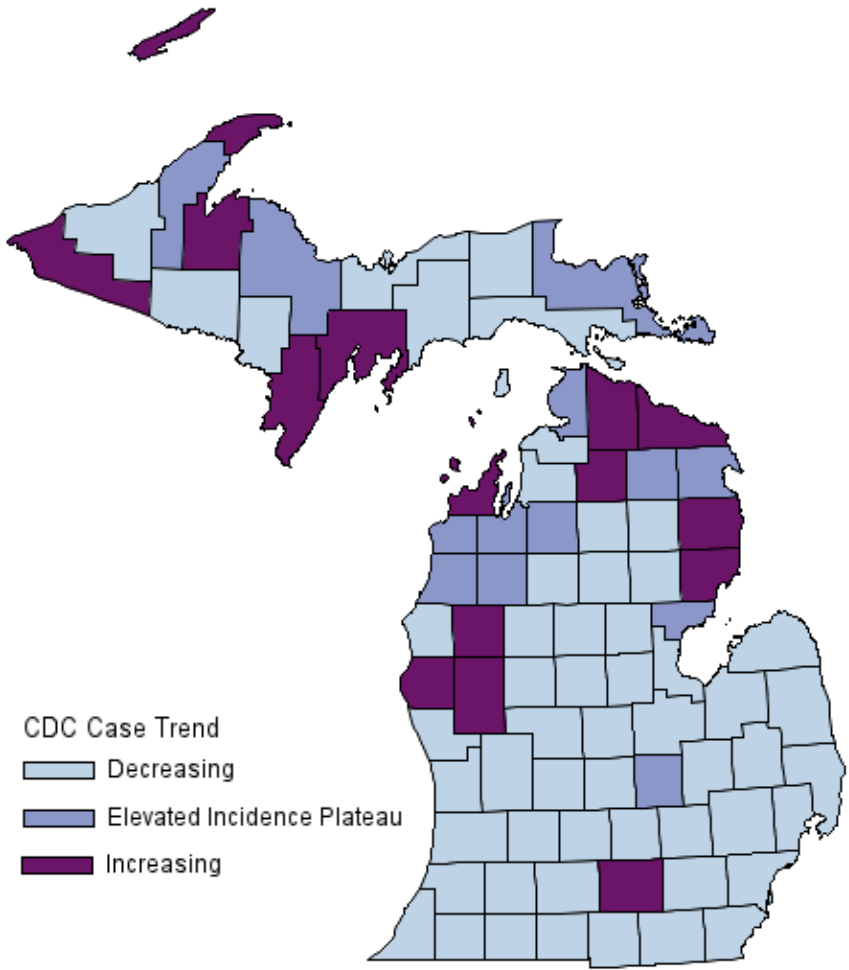
7-day Rolling Average of Positivity



Cases are plateaued in Michigan



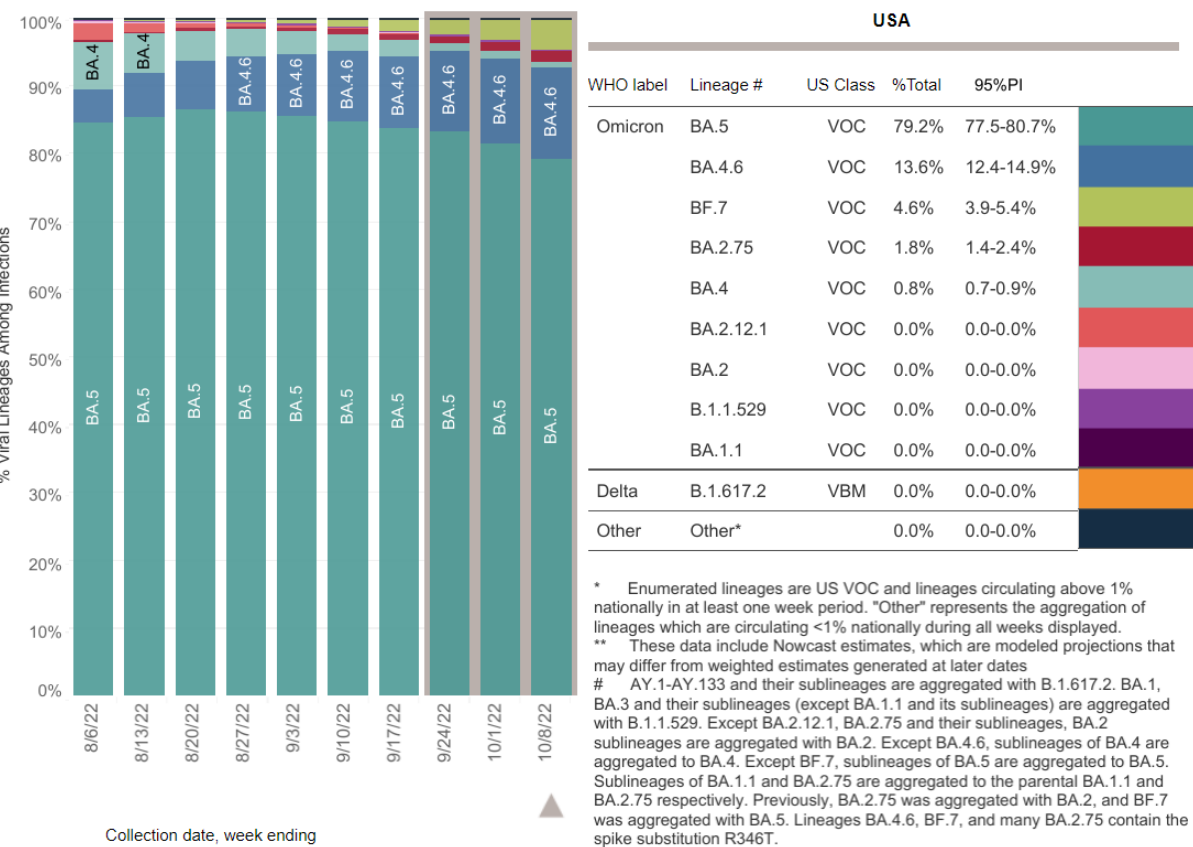
15 counties currently showing increases and 13 in elevated incidence plateaus (via mstartmap.info as of 10/7/22, data through 9/29/22).



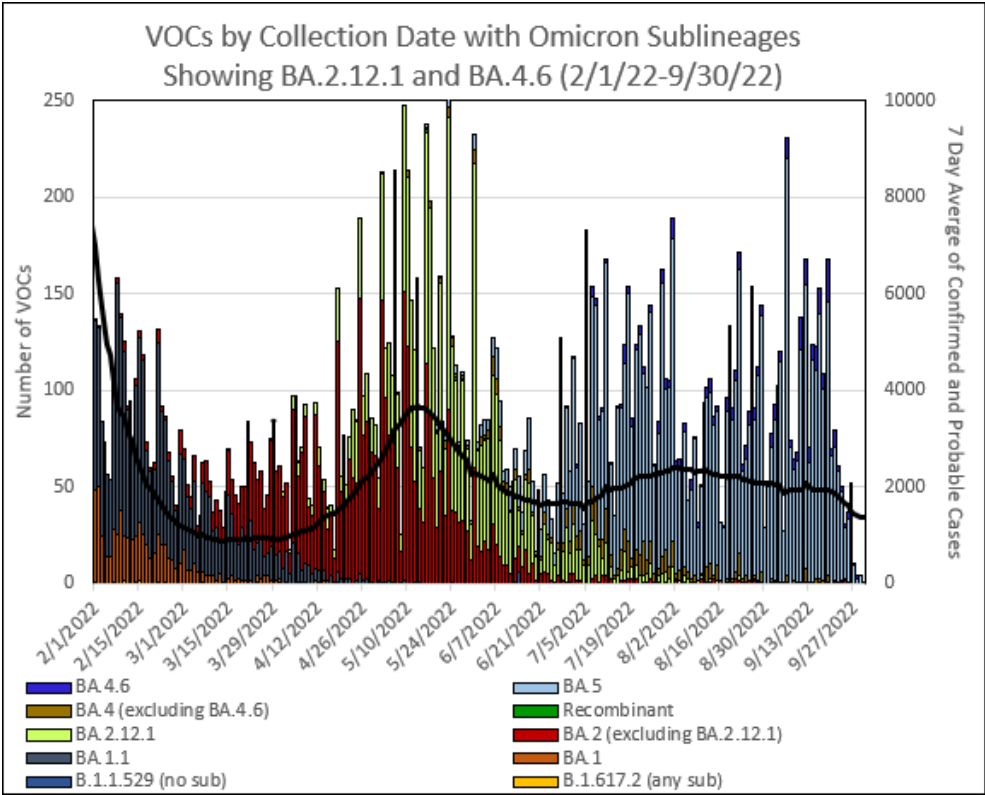
Sources: MDSS cases plotted by onset date as of 9/30/22.

Identified COVID-19 Cases Caused by Variants of Concern (VOC) in US and Michigan: Predominately BA.5 and BA.4 lineages

SARS-CoV-2 Variants Circulating in the United States, Jul 31 – Oct 8 (NOWCAST)



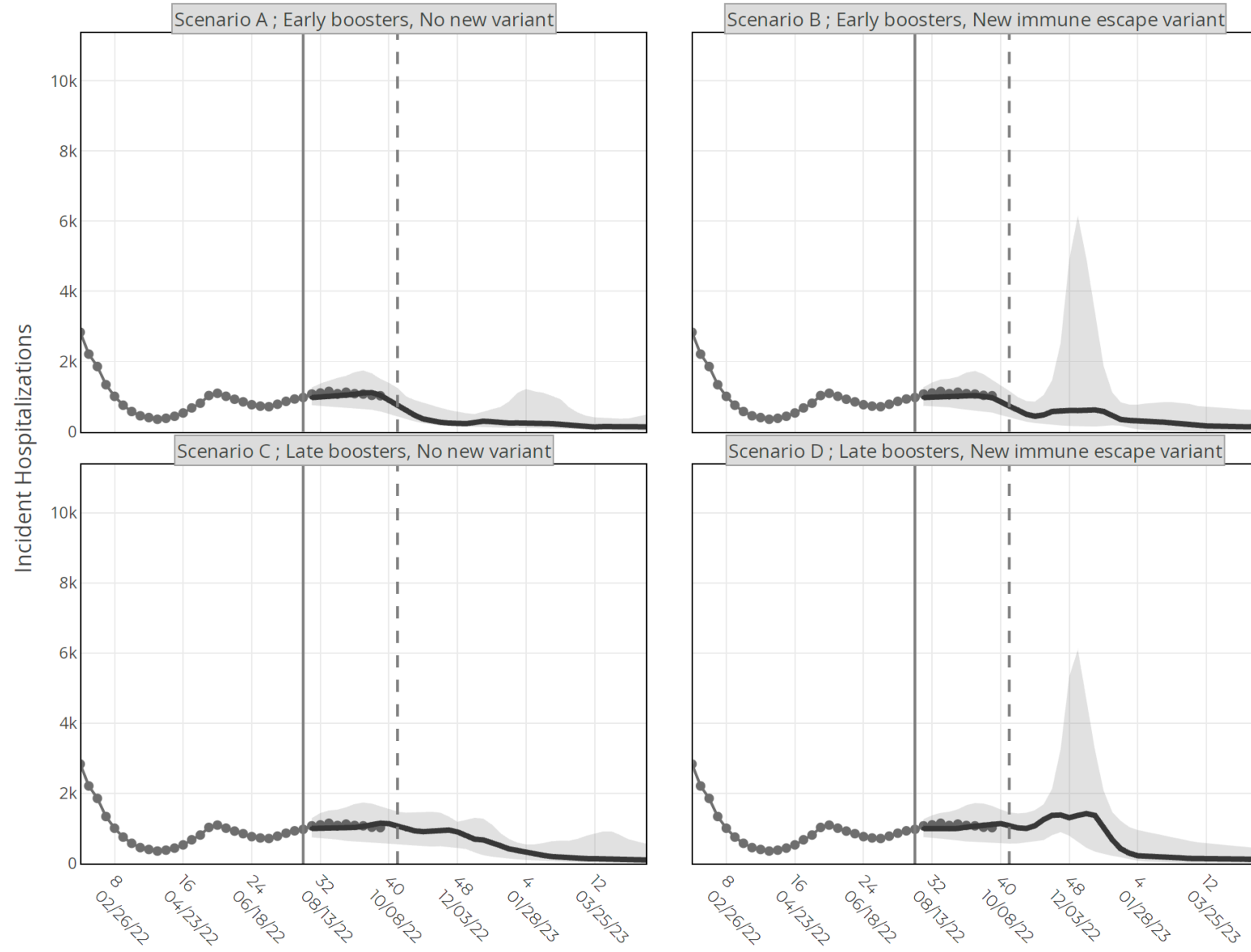
VOC Distribution in Michigan



- Since September 1, there have 2,527 VOC specimens sequenced
- 100% of specimens sequenced are Omicron, 90% of those are BA.5 lineage
 - Since September 1, only 10% of specimens sequenced and reported (n=244) have been identified as BA.4; however, 85% of those specimens are BA.4.6 (n=207)

Scenario Hub projections suggest plateau/smaller fall surge + potential winter surge

- Explored scenarios with early/late boosters and potential new variant
- Fall: smaller surge or plateau
- Winter
 - If no new immune escape variant, suggests plateau through winter (left two plots)
 - If new variant, potential for larger winter surge (right two plots)
- Similar patterns for cases and deaths (see link below)



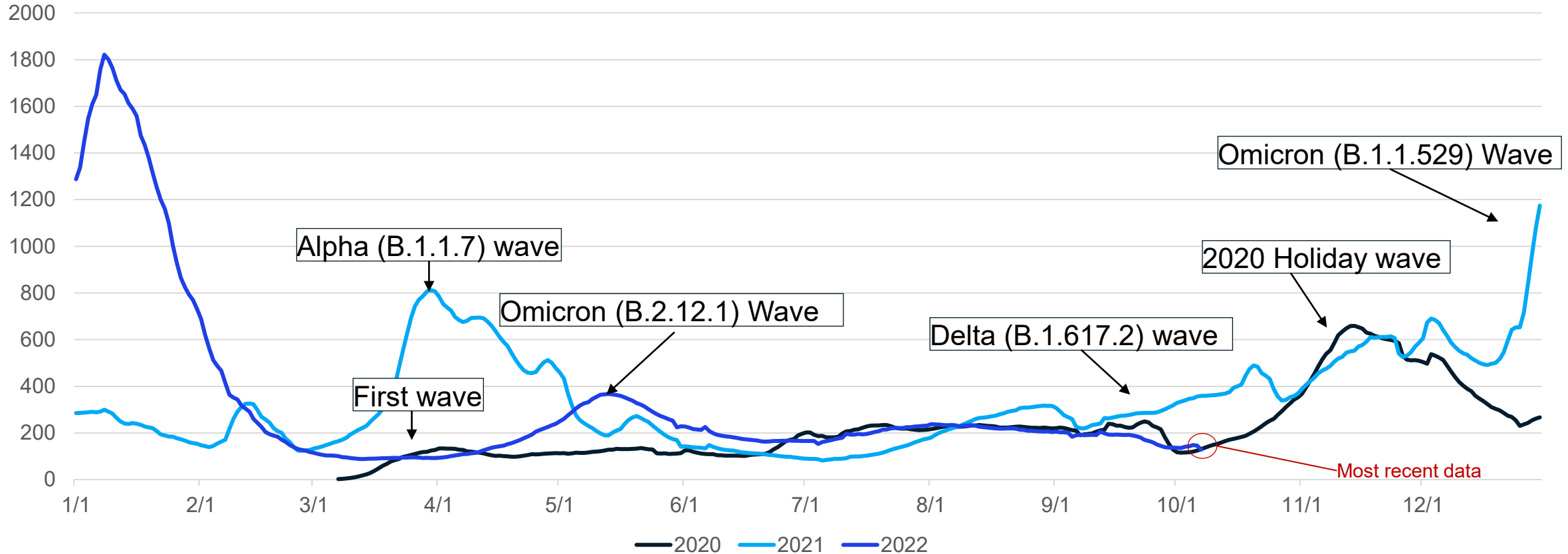
Plotted with 50% uncertainty interval

Source: [Round 15 Scenario Modeling Hub Projections](#)

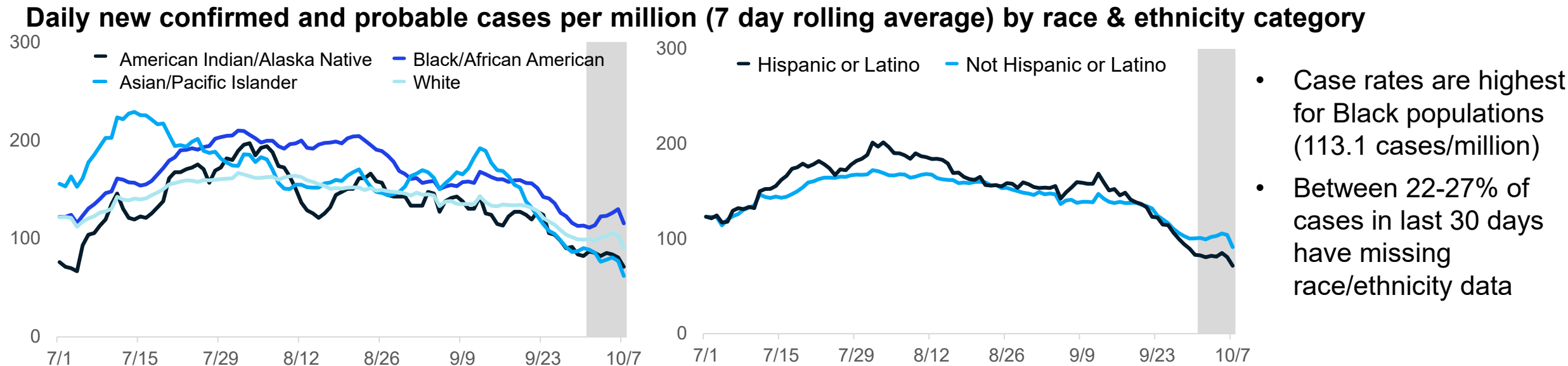
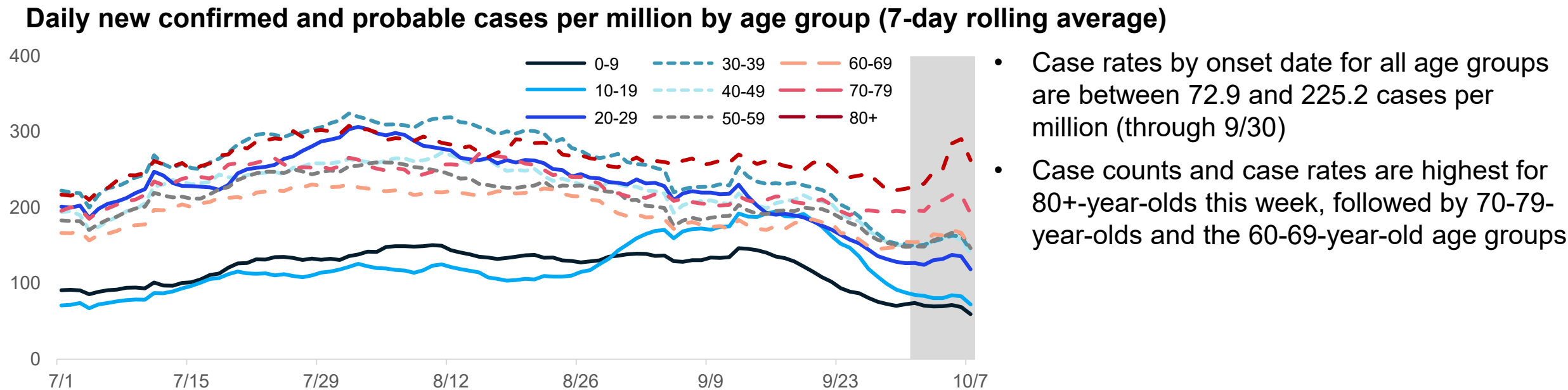
Time Trends – Annual Comparison: Case Rates

- Case rates (by onset date) are plateaued and remain lower than surges from past peaks
- Case rates are, however, similar to October levels in 2020

7-day Rolling Average of Case Rates



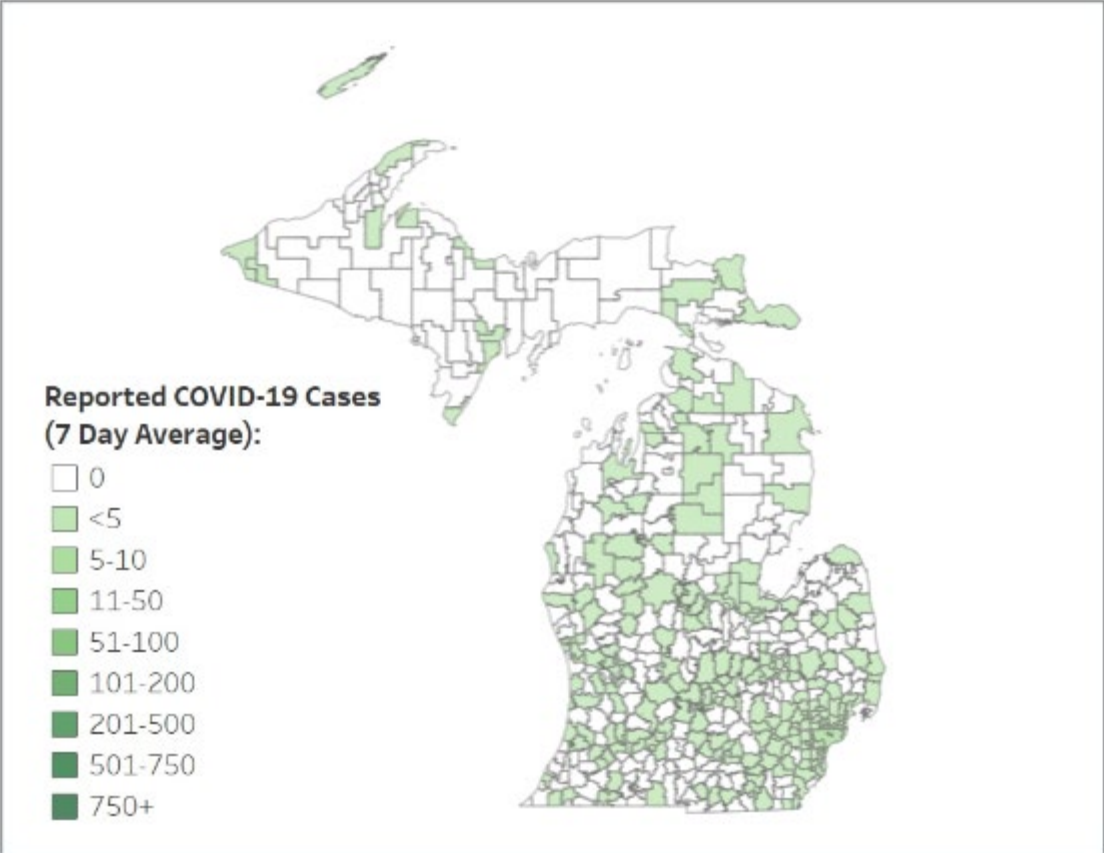
Case rates by age, race, and ethnicity are beginning to converge



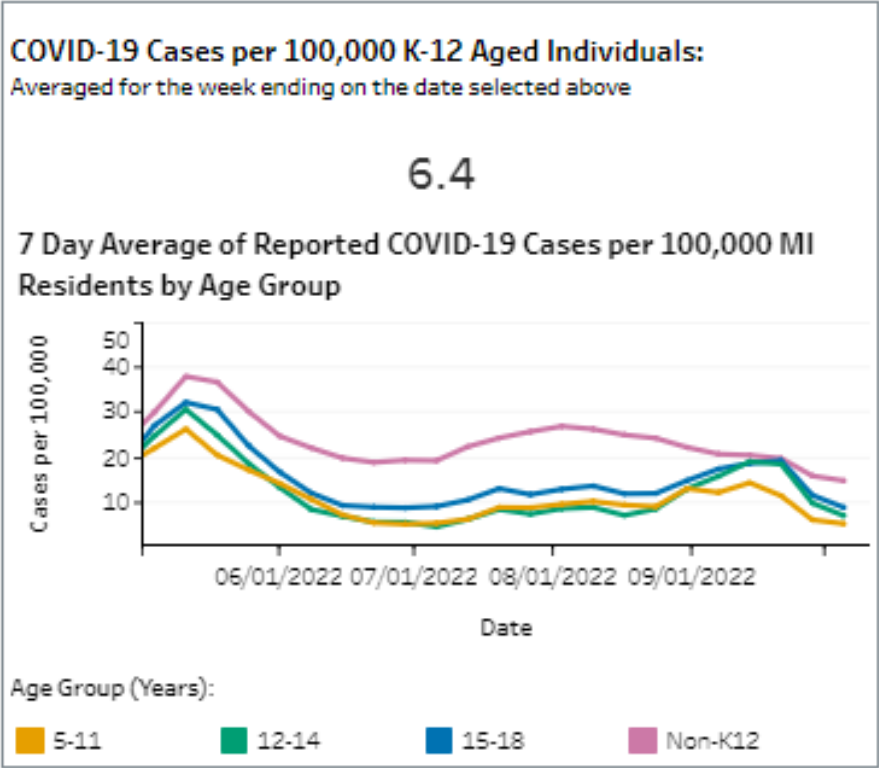
COVID case rates among K-12 age individuals are decreasing

K-12 age population summary:

- Overall case rates among school-aged populations are decreasing (7-day average 6.4)
- 47% (↓1%) of school district areas have between 1-10 cases.
- 4 ISD areas have greater than 5 cases.



Data Source: Michigan Disease Surveillance System (MDSS)
Last Updated: 10/11/2022



Interpreting Wastewater Should Be In Context with Other Indicators

- When levels of virus in wastewater are low, a modest increase overall in virus level can appear much larger as numbers are translated into percentages
- This does not necessarily mean we will see major increases in transmission in the community
- When increases are seen within one wastewater site, public health officials compare with neighboring communities and other data sources to understand potential of surges
- For example, the Ypsilanti WWTP saw increases in SARS-CoV-2 levels which correlated with increasing presence of Omicron BA.2 lineage and then followed by an increase in cases

Ypsilanti WWTP

The most recent sample concentration is higher than 86% of samples collected at this site, which puts it in the 81-100 percentile category. As of 7/27/2022, the change in viral concentration over the past 15 days is increasing.

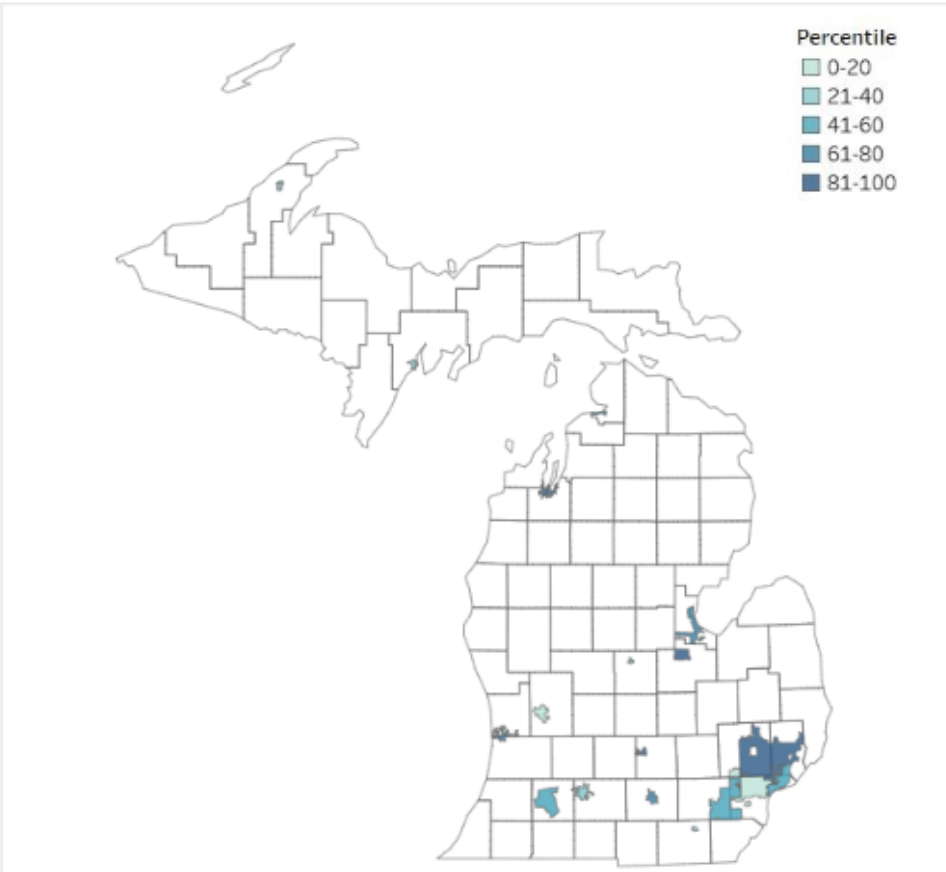
Wastewater SARS-CoV-2 Levels and COVID-19 Cases



The blue line on the graph shows the levels of SARS-CoV-2, the virus that causes COVID-19, in the wastewater samples collected from Ypsilanti WWTP. Each data point is calculated by averaging the number of viral gene copies detected per 100mL of wastewater in the 3 most recent samples. The orange bars on the graph show the COVID-19 cases reported to MDHHS from the zip codes that the wastewater treatment plant serves (7-day average). Both the virus levels and COVID-19 cases are calculated per 100,000 people. Case data will not be shown on the graph when the average number of cases is fewer than 10 per 100,000 people to protect the confidentiality of individuals with infections. This will be represented by an orange dashed line with gray shading below.

Michigan COVID-19 SWEEP Sentinel Wastewater Dashboard

The map below shows 20 sewershed sites in Michigan where wastewater is being monitored for the presence of SARS-CoV-2, the virus that causes COVID-19. These sentinel sites serve as a subset of wastewater surveillance in Michigan distributed across the Michigan Economic Recovery Council (MERC) Regions. Click on each site on the map to see wastewater and clinical case data over time. To view wastewater data from previous weeks, please use the "Map - All Data" and "Trends - All Data" tabs.

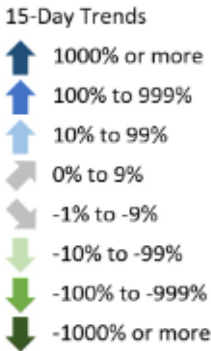


Site	Sewershed Population	Consecutive Weeks of Virus Detection	Trend As Of	15-Day Trend
Alma WWTP	8976	24	9/26/2022	↑
Battle Creek WWTP	51093	24	9/28/2022	↓
Bay City WWTP	34000	15	9/29/2022	→
Delhi Township WWTP	22500	26	9/22/2022	↓
Escanaba WWTP	12600	22	9/28/2022	↑
GLWA Detroit River Interce..	492000	11	9/21/2022	→
GLWA North Interceptor-Ea..	1482000	78	9/21/2022	→
GLWA Oakwood-Northwest..	840600	101	9/21/2022	→
Grand Rapids WWTP	265000	61	10/3/2022	↓
Holland WWTP North	45606	24	9/28/2022	↓
Holland WWTP South	36912	26	9/28/2022	↑
Jackson WWTP	90000	63	9/29/2022	↑
Kalamazoo WWTP	150000	27	9/29/2022	↓
Petoskey WWTP	7900	24	9/28/2022	↓
Portage Lake WWTP	14000	55	9/28/2022	↑
Saginaw Township WWTP	40000	25	9/29/2022	↑
Tecumseh WWTP	8680	38	9/30/2022	↓
Traverse City WWTP	45000	29	9/29/2022	↑
Warren WWTP	135000	23	9/22/2022	↑
Ypsilanti WWTP	330000	63	9/29/2022	→

Abbreviations: GLWA - Great Lakes Water Authority; WWTP - Waste Water Treatment Plant

Definitions and descriptions of data calculations can be found in the "About" tab.

Current results reflect data that were uploaded to MDHHS as of 10/5/2022. Labs are required to report test results to local partners within 24 hours. Data is subject to change as additional wastewater data and case data are received.

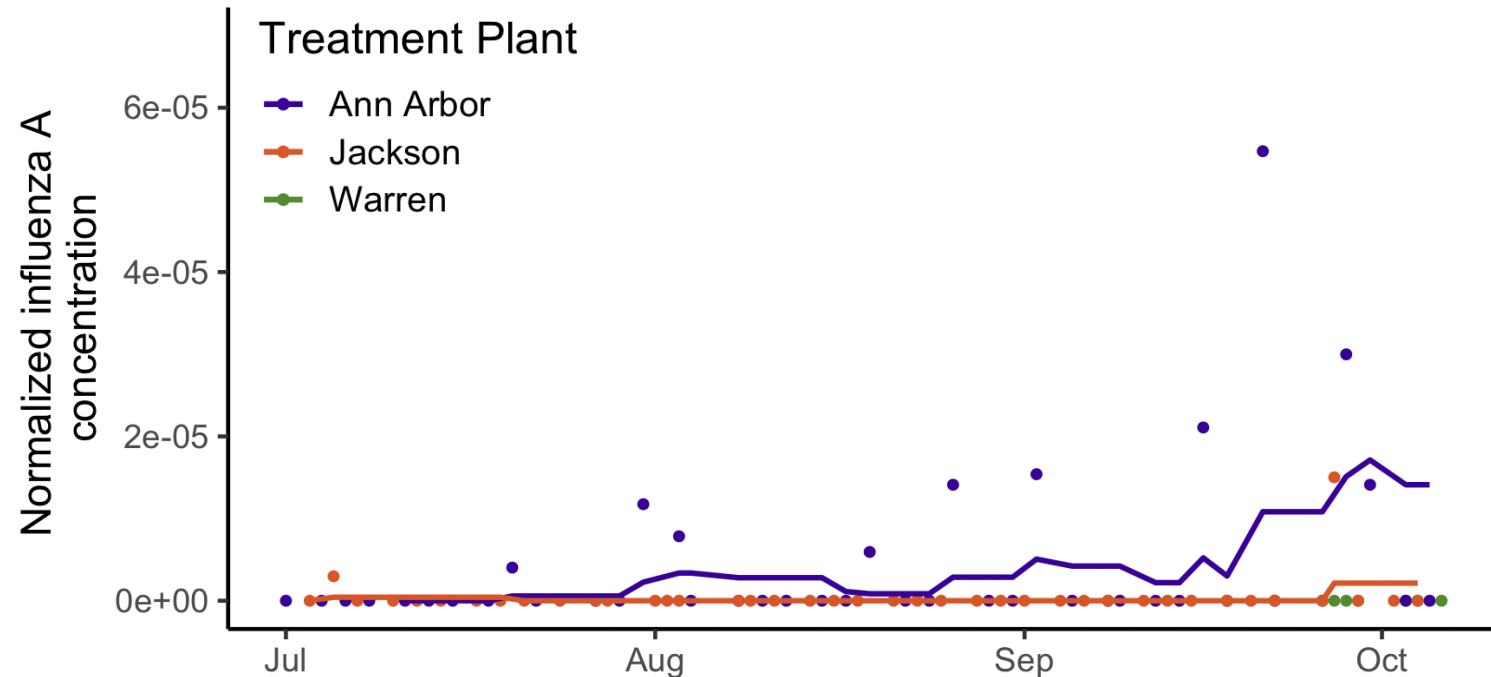
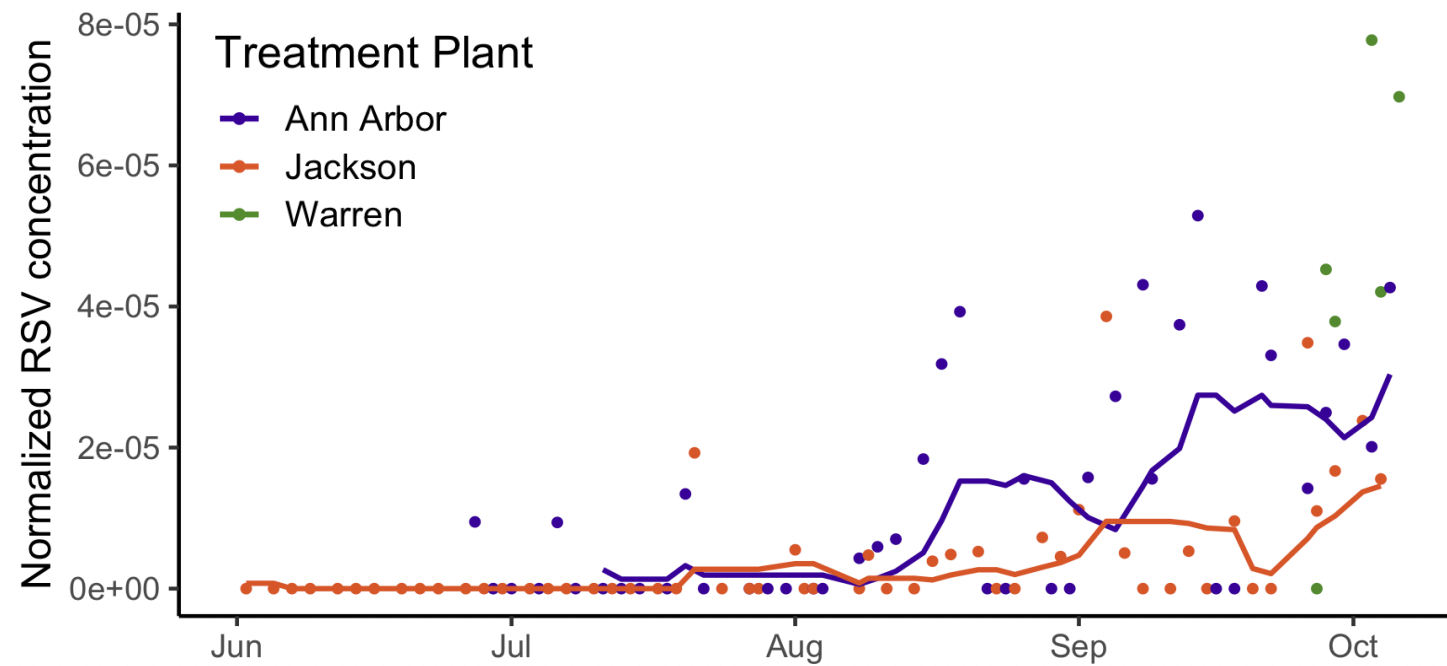


SWEEP Summary

- 40% (8/20) of sentinel sites are showing increasing trends over last 15-days
- 25% (5/20) of sites have plateaued over the last 15 days
- 35% (7/20) of sentinel sites are showing declines in the previous 15-days

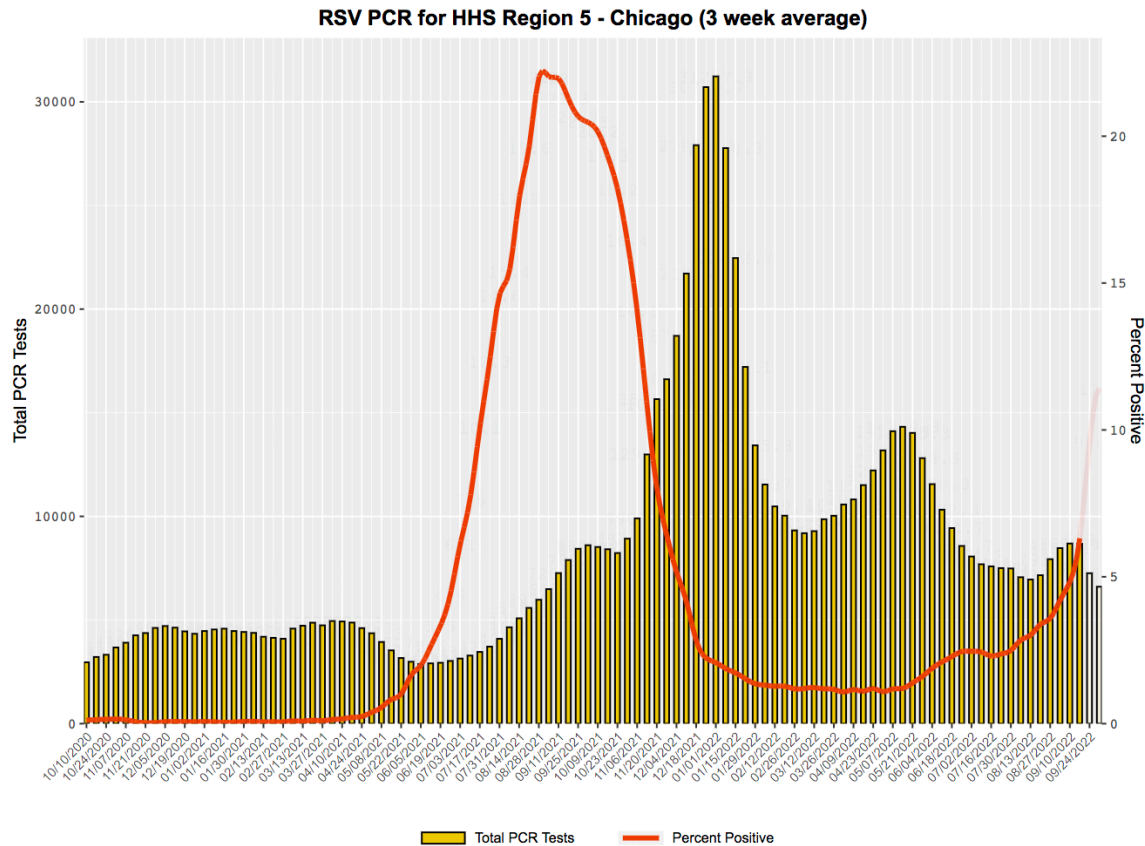
Measuring other respiratory illnesses in wastewater: increases in RSV and influenza A

- Monitoring for RSV (Respiratory syncytial virus) and influenza A at two wastewater treatment plants in MI (Ann Arbor, Jackson, and currently adding Warren, MI)
- All sites are showing increasing RSV levels
- Ann Arbor is showing increases in influenza A



Region 5 trends in testing and syndromic data show an increase for RSV and potential increase in influenza A

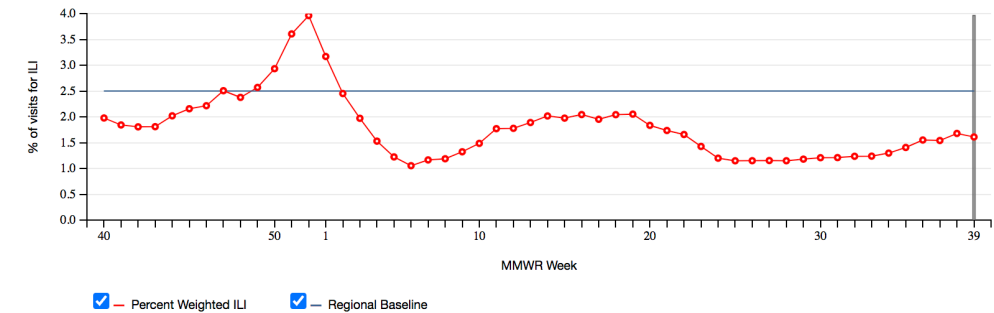
Region 5 RSV % positivity trends show an increase (red)



Region 5 influenza-like illness (ILI) visits (top) and influenza positive tests (bottom) plateaued or slight increase

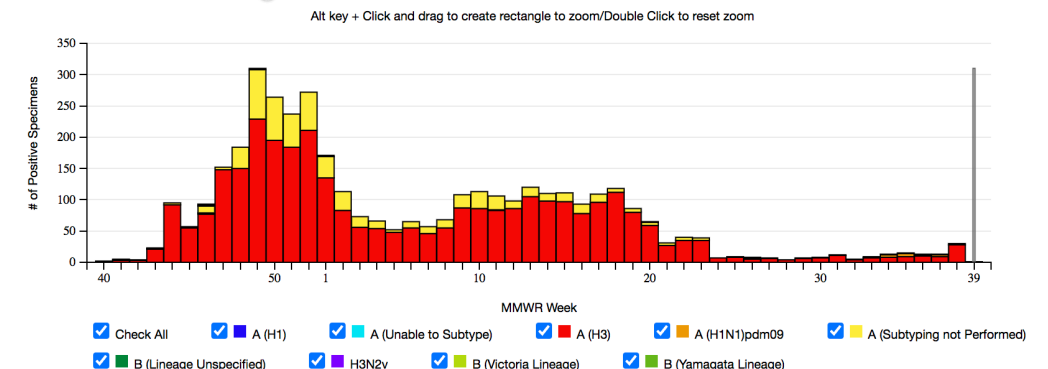
LINE CHART ILINet

Percentage of visits for ILI, HHS Region 5,
2021-22 Season, week ending Oct 01, 2022
Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet
[Download Image](#) [Download Data](#)



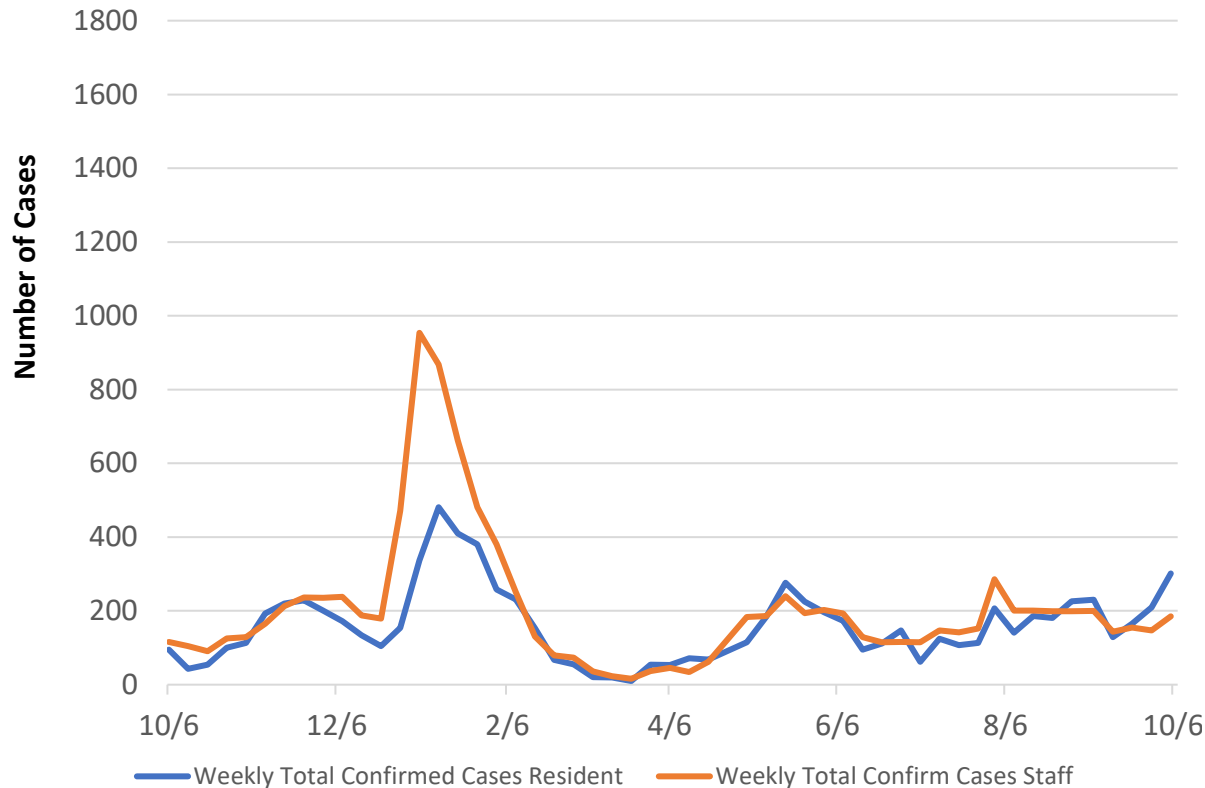
STACKED COLUMN CHART WHO/NREVSS

Influenza Positive Tests Reported to CDC by Public Health Laboratories, HHS Region 5,
2021-22 Season, week ending Oct 01, 2022
Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet
[Download Image](#) [Download Data](#)

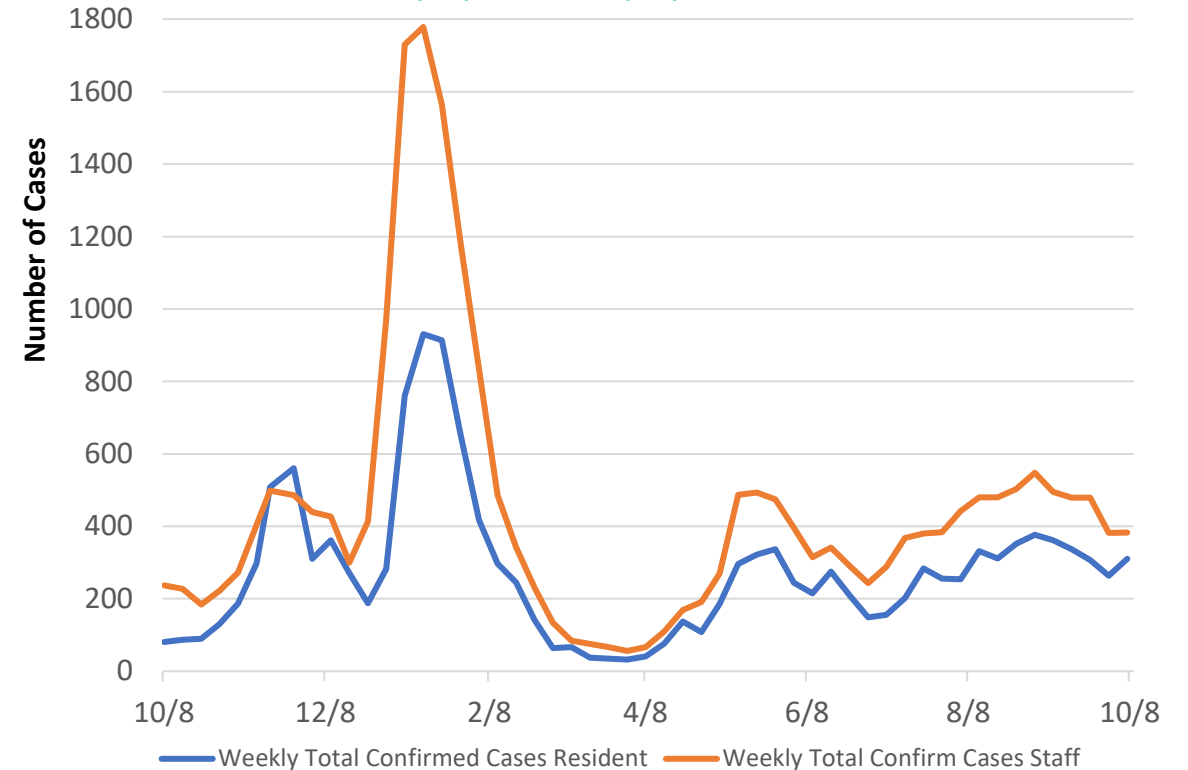


Cases Among Staff and Residents in Long Term Care Facilities

STATE OF MICHIGAN WEEKLY TOTAL CONFIRMED COVID-19 CASES IN
AFC/HFA RESIDENTS AND STAFF
10/06/2021 TO 10/05/2022



STATE OF MICHIGAN WEEKLY TOTAL CONFIRMED COVID-19 CASES IN
SNF
RESIDENTS AND STAFF
10/08/2021 TO 10/07/2022



- Case counts in residents increased in AFC/HFA (209 to 301) and in SNFs (264 to 310) since last week
- Case counts in staff increased in AFC/HFA (147 to 185), but is plateaued in SNFs (382 to 383) since last week
- **29%** of SNFs are reporting **nursing shortages** and **31%** of SNFs are reporting **aide shortages**, which is stable from last week

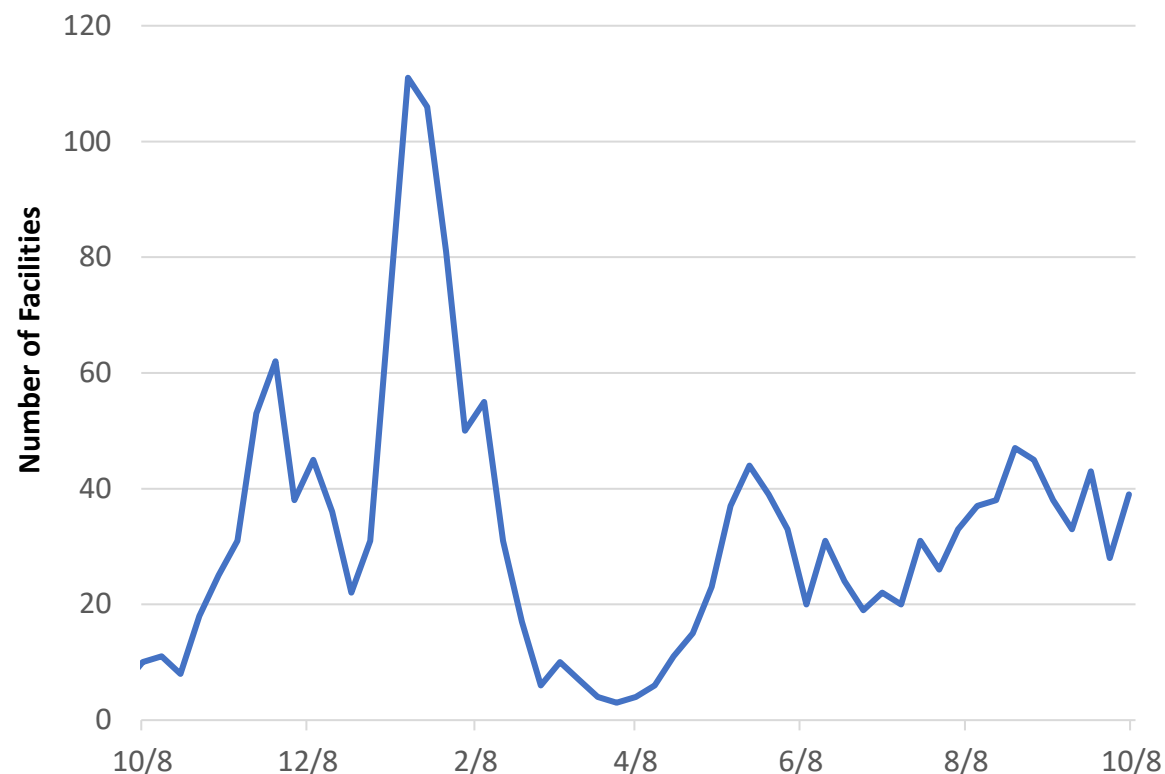
Abbreviations: AFC: Adult Foster Care; HFAs: Homes for the Aged; and SNF: Skilled Nursing Facilities

Reported Number of Clusters in Long Term Care Facilities

Number of AFC/HFAs with 3 or more Confirmed Cases



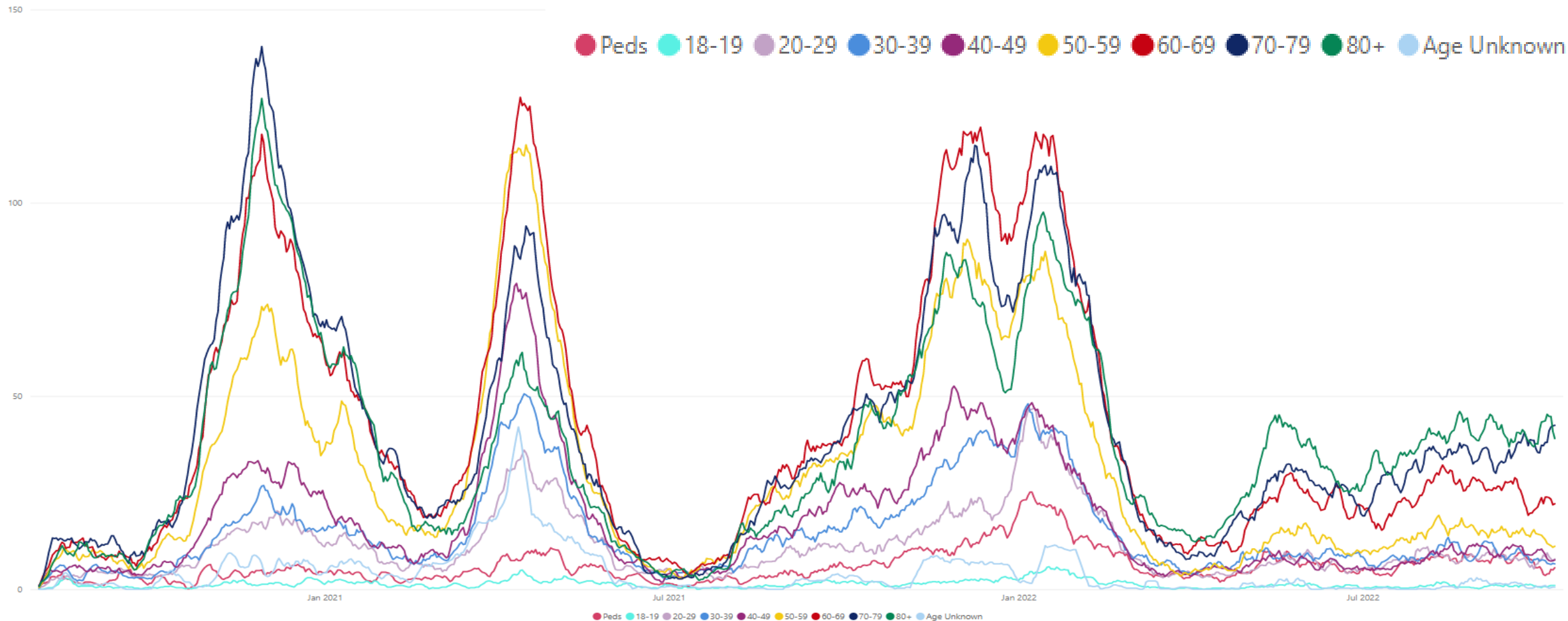
Number of SNFs with 3 or more Confirmed Cases



- The number of Long-Term Care Facilities reporting 3 or more cases within a single reporting period increased over the past week
- This week, the number has increased in **AFC/HFAs** (31 to 38) but decreased in **SNFs** (28 to 39) since the previous week

The data is from weekly reporting by facilities with bed occupancy of at least 13 beds.

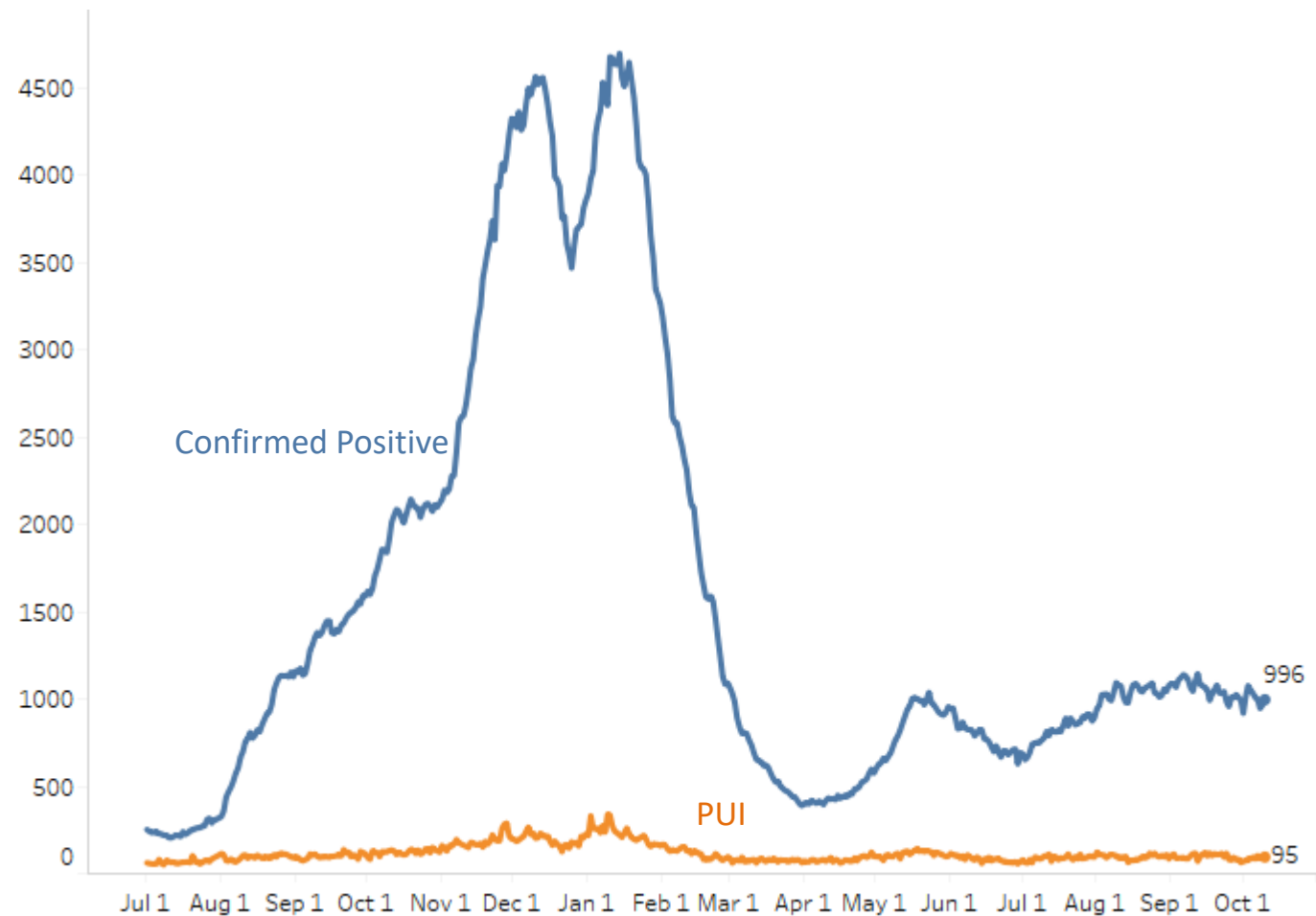
Hospital admissions due to COVID-19 remain lower than past surges



- Trends for daily average hospital admissions decreased (-10%) compared to last week (vs. +8% prior week)
- For the first time in 8 months, there were more daily average hospital admissions seen among those aged 70-79 than any other age group
- Those 60-69, 70-79, and 80+ are seeing between 20 and 45 daily hospital admissions

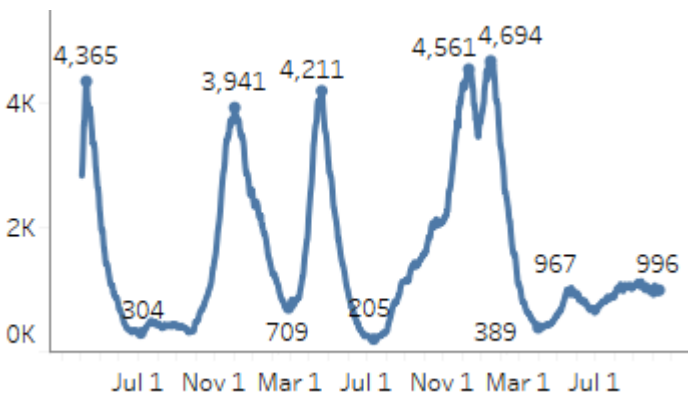
Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 7/1/2021 – 10/10/2022
Confirmed Positive & Persons Under Investigation (PUI)



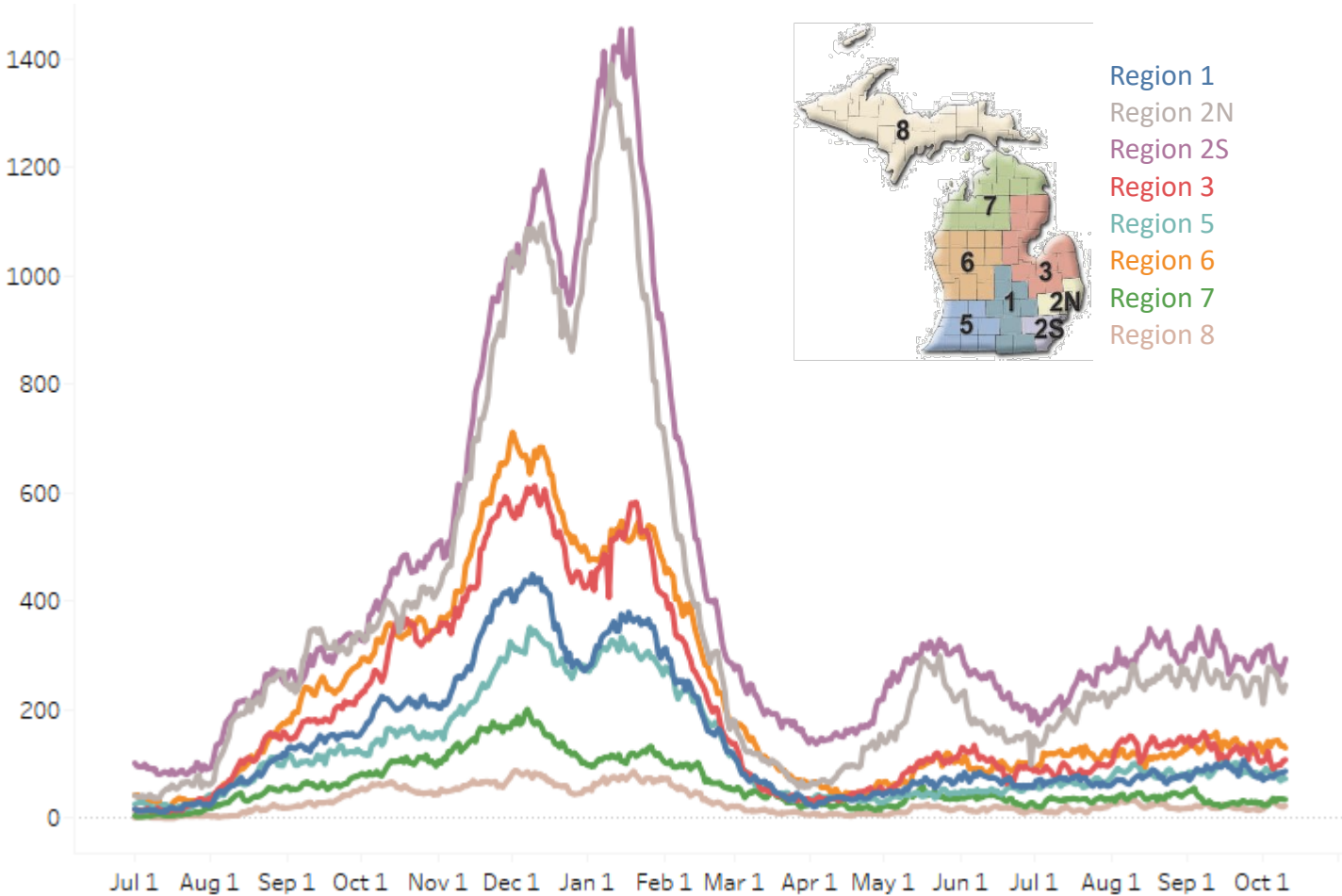
COVID+ census in hospitals has decreased by 7% from last week. Overall census is currently 996 patients.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 10/10/2022
Confirmed Positive by Region

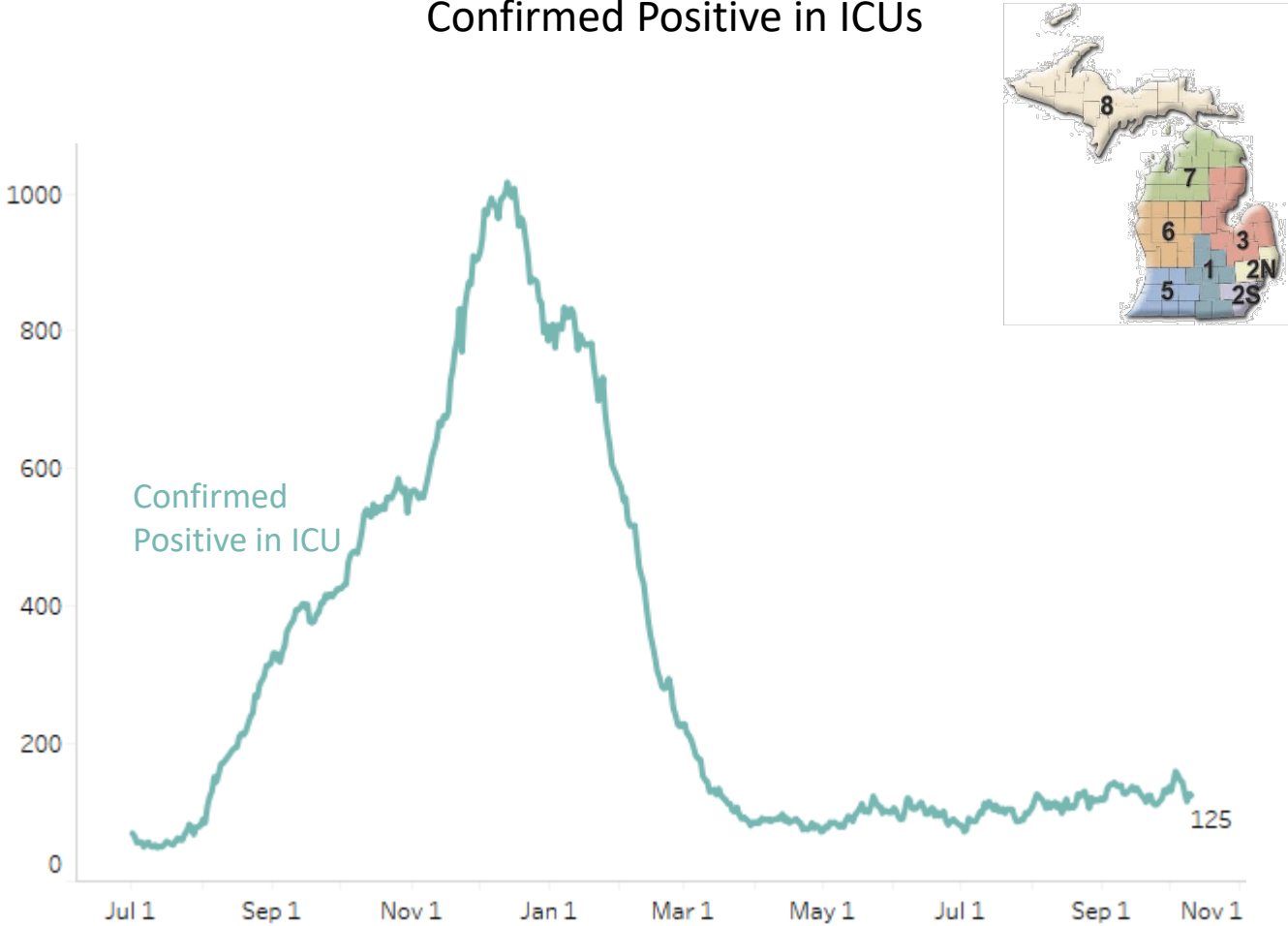


This week hospitalizations have decreased or remained flat in Regions 2N, 2S, 3, 5, 6, and 8. Hospitalizations have increased in Regions 1 and 7.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	87 (16%)	80/M
Region 2N	246 (-12%)	111/M
Region 2S	294 (-6%)	132/M
Region 3	108 (-13%)	95/M
Region 5	73 (-17%)	77/M
Region 6	130 (-8%)	89/M
Region 7	35 (46%)	70/M
Region 8	23 (-23%)	74/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 7/1/2021 – 10/10/2022
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased by 22% from last week. There are 125 COVID+ patients in ICU beds across the state.

ICU occupancy is less than 85% in all regions except Region 1. All regions have fewer than 10% of ICU beds occupied by COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	12 (33%)	91%	7%
Region 2N	29 (-31%)	68%	5%
Region 2S	34 (-21%)	75%	5%
Region 3	16 (-16%)	82%	5%
Region 5	11 (-21%)	64%	6%
Region 6	13 (-32%)	74%	6%
Region 7	5 (-29%)	82%	4%
Region 8	5 (-29%)	57%	8%

Statewide Hospitalization Trends: Pediatric COVID+ Census

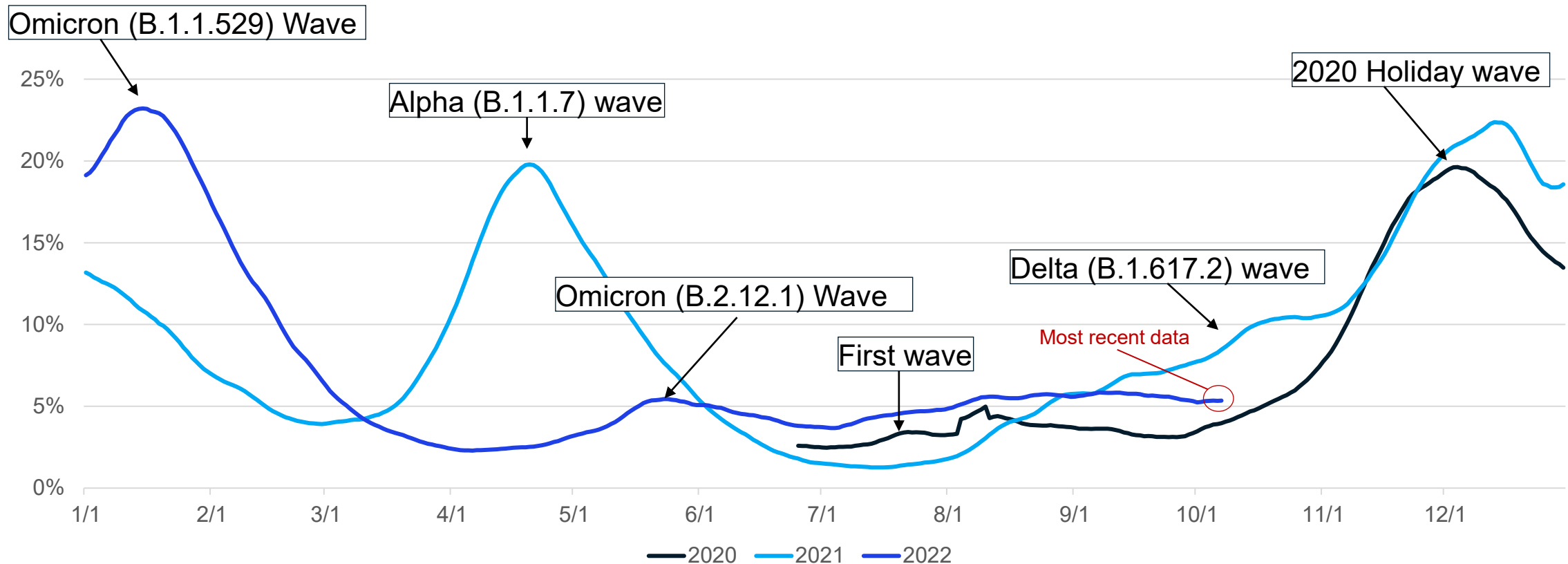
Hospitalization Trends 1/1/2021 – 10/10/2022
Pediatric Hospitalizations, Confirmed



Percent of Inpatients with COVID is Similar to One Year Ago During the Delta Wave

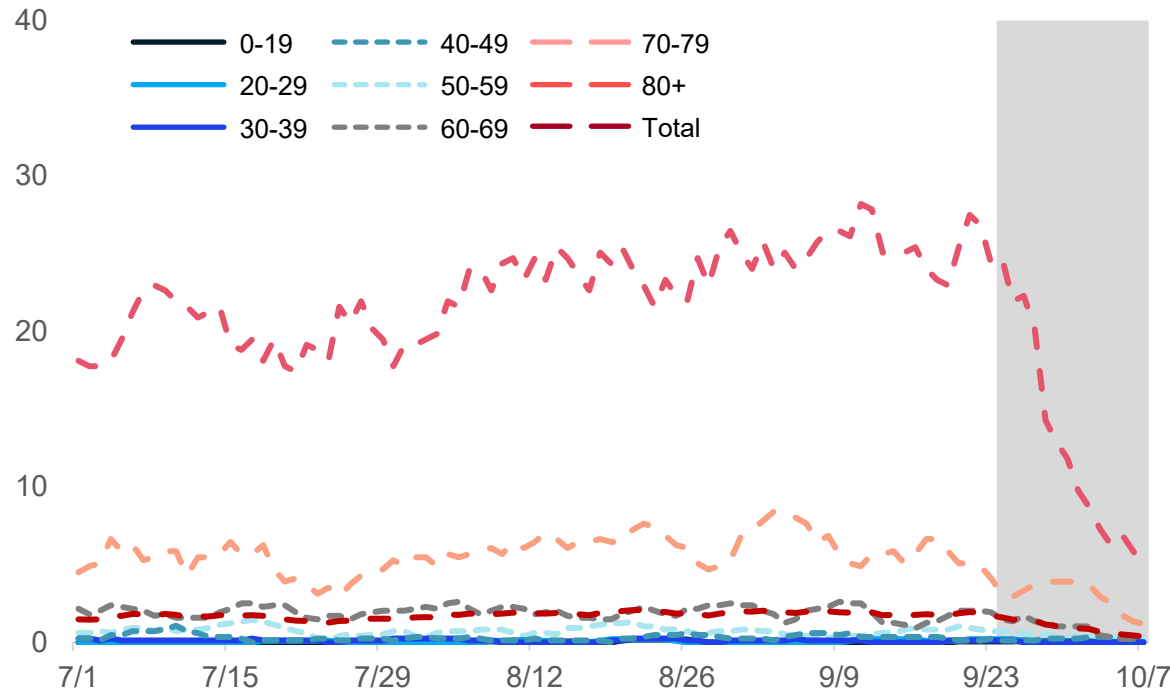
- The percent of inpatients who are COVID+ remains lower than Alpha, Omicron, and holiday wave peaks
- Current hospital levels are fairly plateaued, and between levels in fall 2020 and fall 2021

7-day rolling average of percent of inpatients who are COVID positive



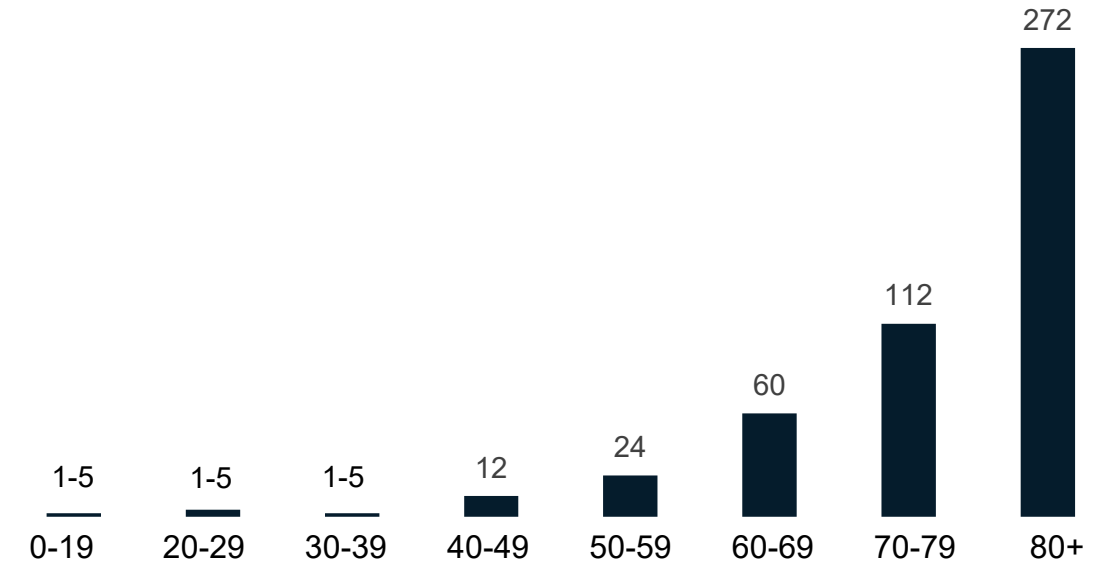
Average new deaths have plateaued for those over the age of 80

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 9/30/2022)

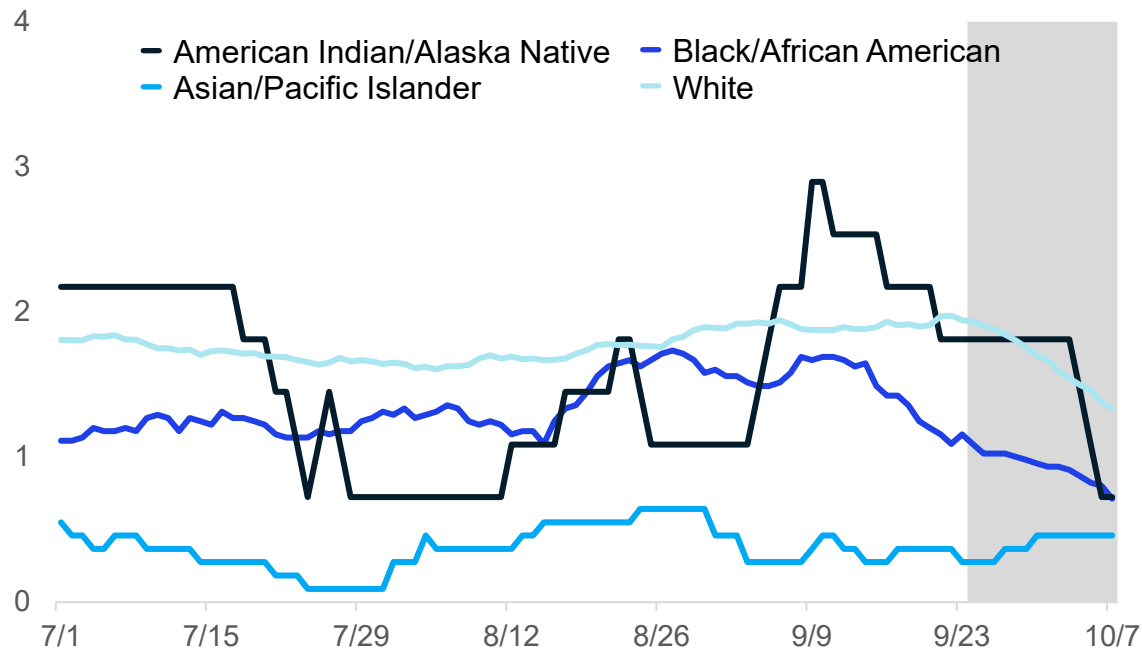
- 9.0% of deaths below age sixty



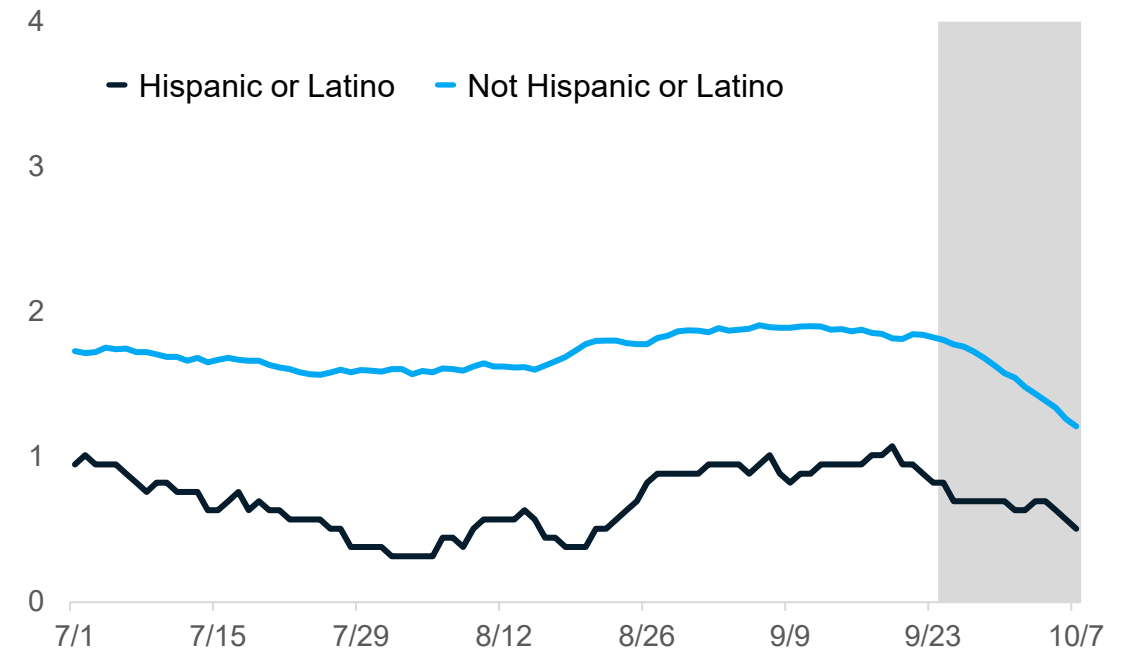
- Through 9/23, the 7-day avg. death rate has plateaued (24.4 deaths per million people) for those over the age of 80
- In the past 30 days, there are fewer than 25 confirmed and probable COVID-19 deaths under the age of 50
- 30-day proportion of deaths among those under 60 years of age is 9.0%.

Daily average deaths per million people by race and ethnicity have plateaued

Average daily deaths per million people by race



Average daily deaths per million people by ethnicity



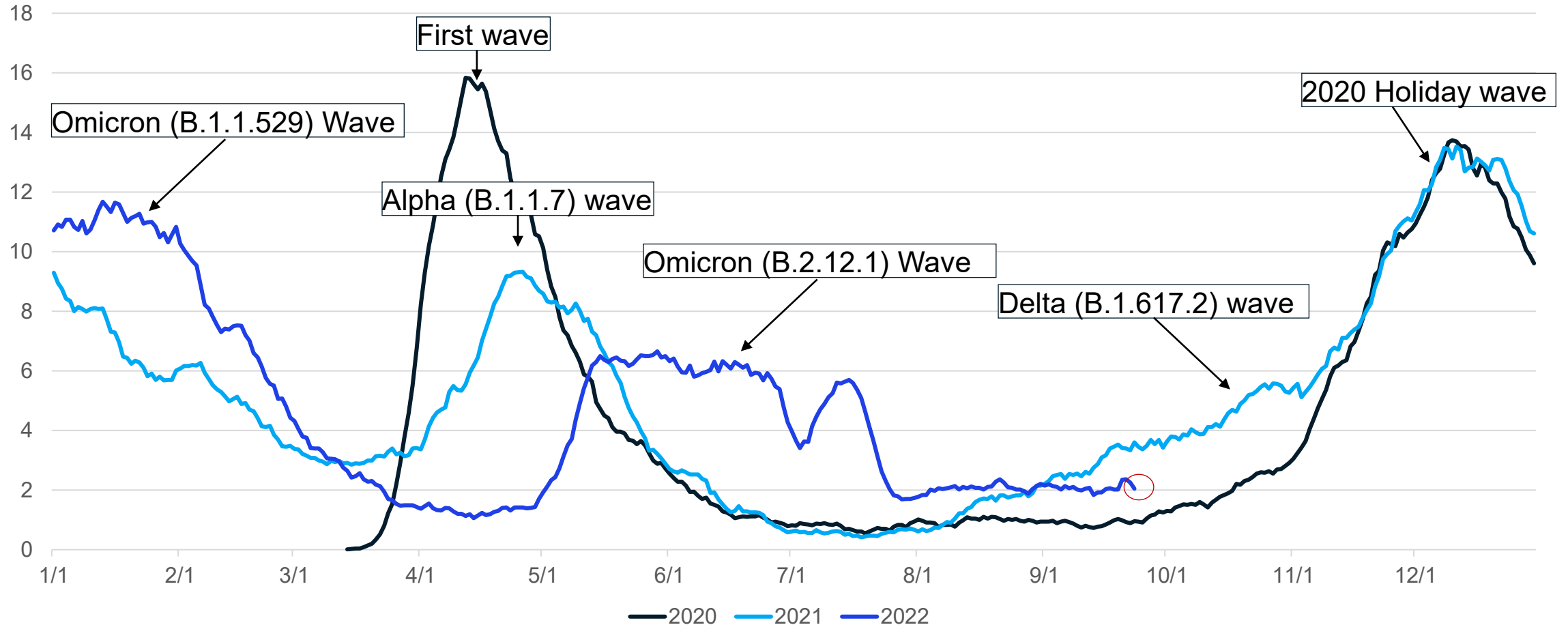
- Deaths are lagging indicator of other metrics
- Currently, the White population has the highest death rate (1.94 deaths/million)

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

Time Trends – Annual Comparison: Death Rates

- Death rates (by date of death) are near pandemic all-time lows
- Deaths are lagging indicator, typically trailing case trends by 4 or 6 weeks

7-day Rolling Average of Death Rates (per million residents)



Harm Reduction: Key Messages

Empowering community members to make best choices for their individual circumstances and to be prepared by making a COVID plan

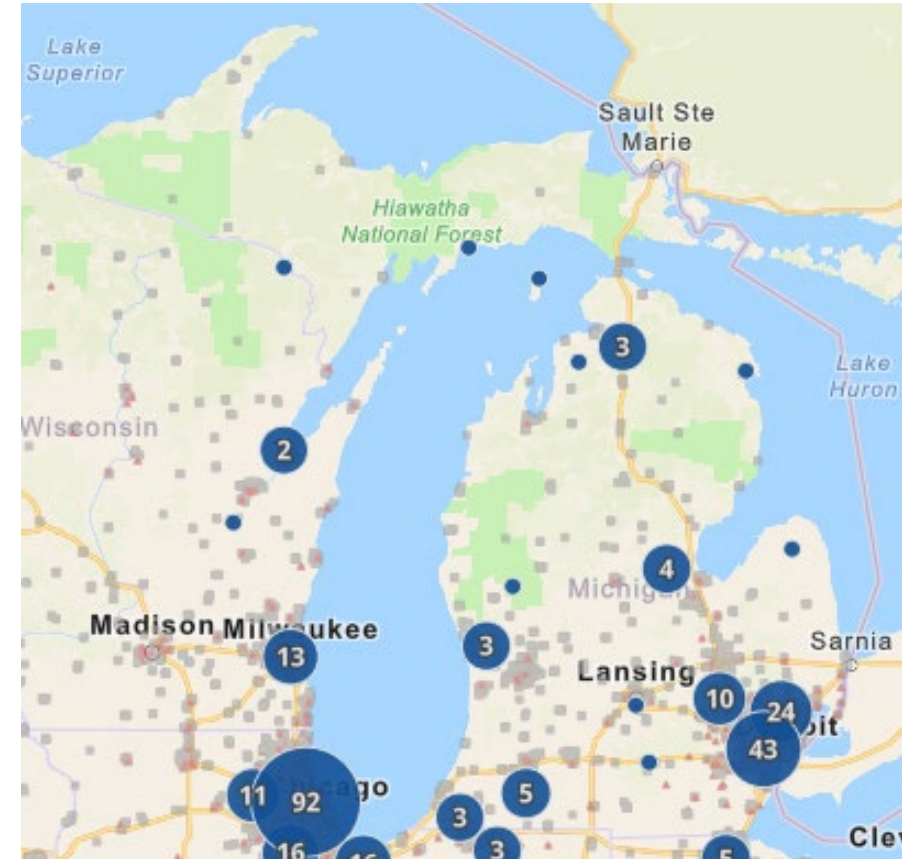
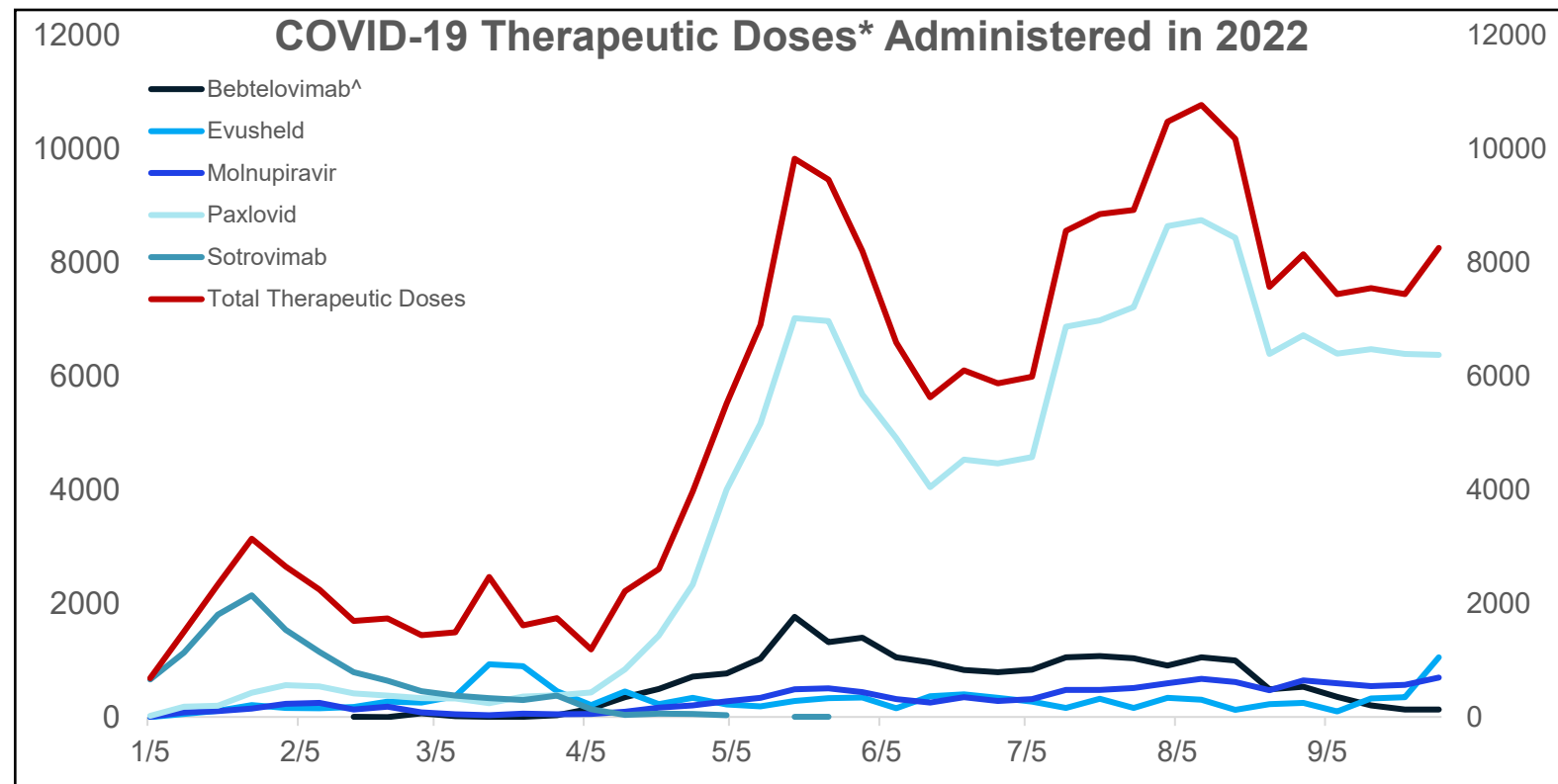
- Michiganders can take advantage of local, state, and national COVID-19 resources
- Get tested, and if positive, seek care with therapeutics (e.g., antibodies or antiviral medications)
 - Cumulative therapeutic availability and administration is lower than all-time highs but increasing since mid-September
 - Talk to your doctor or pharmacist about whether you should get antibody or antiviral treatment, and where you can find treatment
 - Therapeutics are authorized for people who meet select criteria
 - Additional public health, regulatory, and policy efforts might help decrease barriers to oral antiviral access, particularly in communities with high social vulnerability
- Vaccinations remain the best way to protect from COVID-19, especially from severe disease
 - COVID-19 vaccines are now available for ages 6 months and up
 - Everyone 6 months and older should also get an age-appropriate COVID-19 booster, when eligible
 - CDC has published new recommendations for the being up to date with COVID-19 vaccination
 - Over 6.8 million Michiganders have received at least one dose (68.5%)
 - 56.8% of fully vaccinated Michiganders have received at least one booster
 - 39.3% of people in Michigan (864K+) with a first booster dose have received a second booster dose
 - Over 441,000 bivalent booster doses had been administered as of 10/4

Federal & Michigan websites assist COVID positive residents find treatment

COVID-19 resources available on federal website: [COVID.gov](https://www.covid.gov)

Test-to-Treat program simplifies access to COVID treatment: [Find a Test-to-Treat location near you](#)

- If you have COVID-19 symptoms, do not wait to get treated
- You must take oral COVID-19 medication within 5 days of your first COVID-19 symptoms
- Use the tool to find a location that is right for you



Source: Screen capture of Michigan Test-to-Treat sites from linked website

Therapeutic administration increased during Michigan's Spring Omicron surge. Supply limitations in January 2022 required strategic distribution and should not be compared directly.

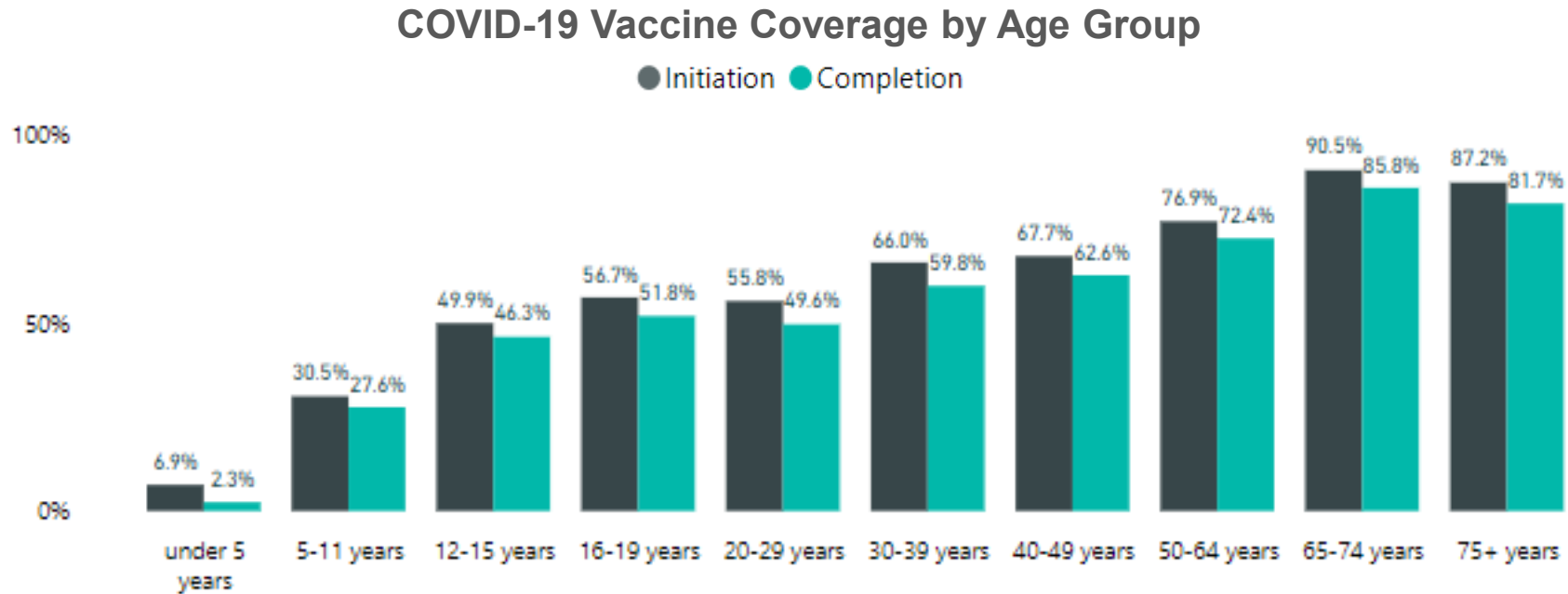
Source: HHS – Tiberius. Data Updated September 30

*Data is reported as a single patient course, except for Evusheld, which is reported as the number of 300mg doses administered.

^Federally supplied Bebtelovimab has concluded, and product has transitioned to the commercial marketplace

Vaccinations and Boosters

- Over 17 million COVID-19 vaccine doses have been administered in Michigan
 - Over 6.8 million Michiganders have received at least one dose (68.5%)
 - Over 6.1 million Michiganders have completed a primary series (61.4%)
 - Over 3.4 million additional/booster doses have been administered in Michigan
 - 56.8% of the fully vaccinated population has received a booster
 - 78.4% of the fully vaccinated population 65 years of age or older has received a booster
- Nearly 864,983 Michiganders 50 years of age or older who have received a first booster dose have received second booster (39.3%)



Note: Cumulative data and population percentages now include those ages 6 months and older

Sources: Michigan Coronavirus Vaccine Dashboard; CDC COVID-19 Data Tracker: Vaccine Coverage Dashboard

Bivalent (Omicron) Pfizer and Moderna COVID-19 vaccines available for booster shots in Michigan

- The Moderna and Pfizer bivalent boosters target two strains of COVID-19: the original strain of the virus and the widely spread Omicron variants (BA.4 and BA.5, including BF.7)
- **Who is eligible to receive a single bivalent booster dose and when:**
 - Individuals 18 years of age and older are eligible for a single booster dose of the bivalent **Moderna** COVID-19 vaccine if it has been at least two months since they completed primary vaccination or received the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine
 - Individuals 12 years of age and older are eligible for a single booster dose of the bivalent **Pfizer-BioNTech** COVID-19 vaccine if it has been at least two months since they completed primary vaccination or received the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine
- Individuals may choose to receive either the Pfizer or Moderna bivalent booster, regardless of which primary series vaccine or original booster dose they had previously.
- Influenza vaccines, which are now available in Michigan, can also be co-administered with the COVID-19 bivalent booster doses

The Update on being “Up to Date” on COVID-19 Vaccination

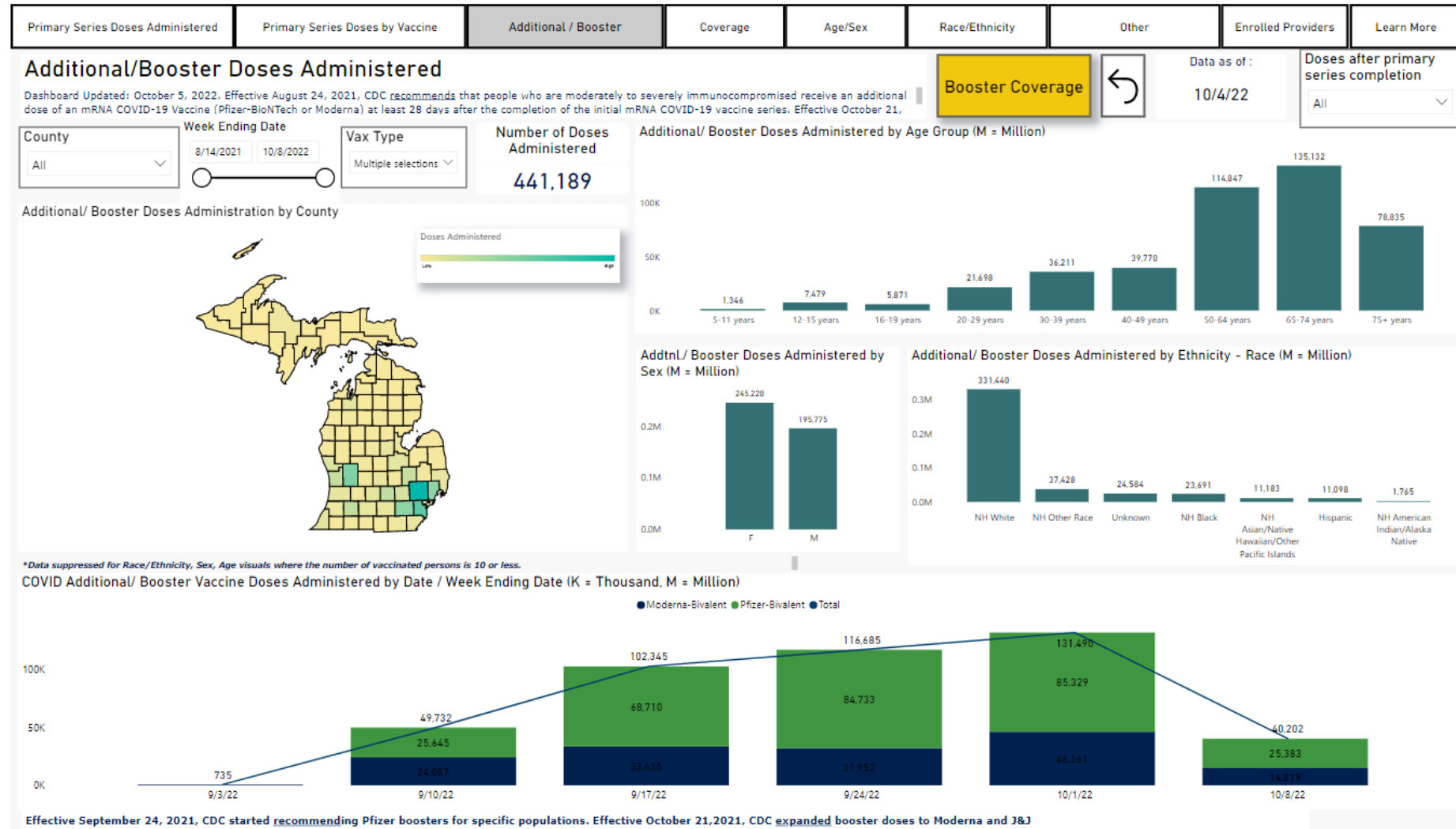
- The introduction of the new boosters has caused some changes in vaccine recommendations
- These new recommendations are based on
 - Age
 - First vaccine received
 - Time from last vaccine dose received
- Being up to date on COVID-19 vaccination now indicates **having completed a COVID-19 vaccine primary series *and* having received the most recent booster dose as recommended by the CDC**
 - **Age 6 month to 4 years** : receive all the primary series COVID-19 doses
 - **Ages 5 years to 11 years** : receive COVID-19 primary series *and* the currently recommended monovalent booster
 - **Ages 12* years and older** : receive COVID-19 primary series *and* the updated Pfizer or Moderna bivalent booster
 - **Moderate or severely immunocompromised** : consult physician or [CDC](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html) for additional vaccination recommendations

* At this time, only the Pfizer bivalent booster is authorized and available for people ages 12 to 17 years

Sources: CDC Vaccination Recommendations. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html>

Bivalent Administration

- As of 10/4, 441,189 Michiganders had received their bivalent booster
- These data are updated every Wednesday on our COVID-19 vaccination Dashboard under Additional/Booster Administration Trends and then restricting the view to just Moderna and Pfizer bivalent doses
- Note: the data for the week ending 10/8 would have been incomplete on the date the dashboard was last refreshed (10/4) and underreport the true administration for the week



● Moderna Bivalent

● Pfizer Bivalent

Commonwealth Fund: Fall COVID-19 Boosters Could Save Thousands of Lives

Baseline scenario: vaccinations continue at current daily rate through March 31, 2023

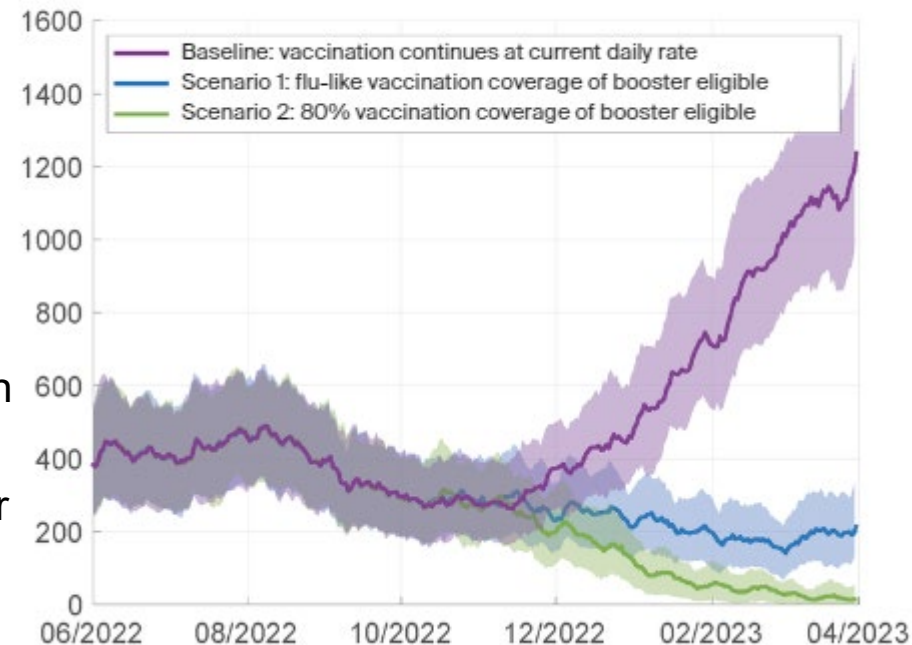


Outcome	Scenario 1: COVID booster coverage equal to 2020–2021 Influenza vaccination levels by December 31, 2022	Scenario 2: 80 percent of eligible people receive their COVID booster by December 31, 2022
	Mean (95% credible interval)*	
Lives saved	75,347 (69,690 to 81,332)	89,465 (83,416 to 96,501)
Averted hospitalizations	745,409 (697,729 to 796,871)	936,706 (873,329 to 1,002,405)
Averted infections	19,798,112 (18,412,169 to 21,113,325)	25,893,278 (24,330,323 to 27,640,233)

- A simulation study from the Commonwealth Fund found that bivalent booster uptake similar to influenza vaccine could:
 - save 75,000 lives
 - avert nearly 750,000 hospitalizations
 - Prevent almost 20 million infections
- **Baseline scenario:** assumed vaccination will continue at the same rate as in August (~28 doses per 100,000 population per day) until March 2023
- **Scenario 1:** estimated COVID booster based on age-specific influenza vaccination coverage in 2020–2021 by the end of 2022
- **Scenario 2:** assume 80 percent of eligible individuals age 5 and older receive their booster dose by the end of 2022

*Bivalent booster effectiveness was modeled after monovalent booster coverage against BA.1

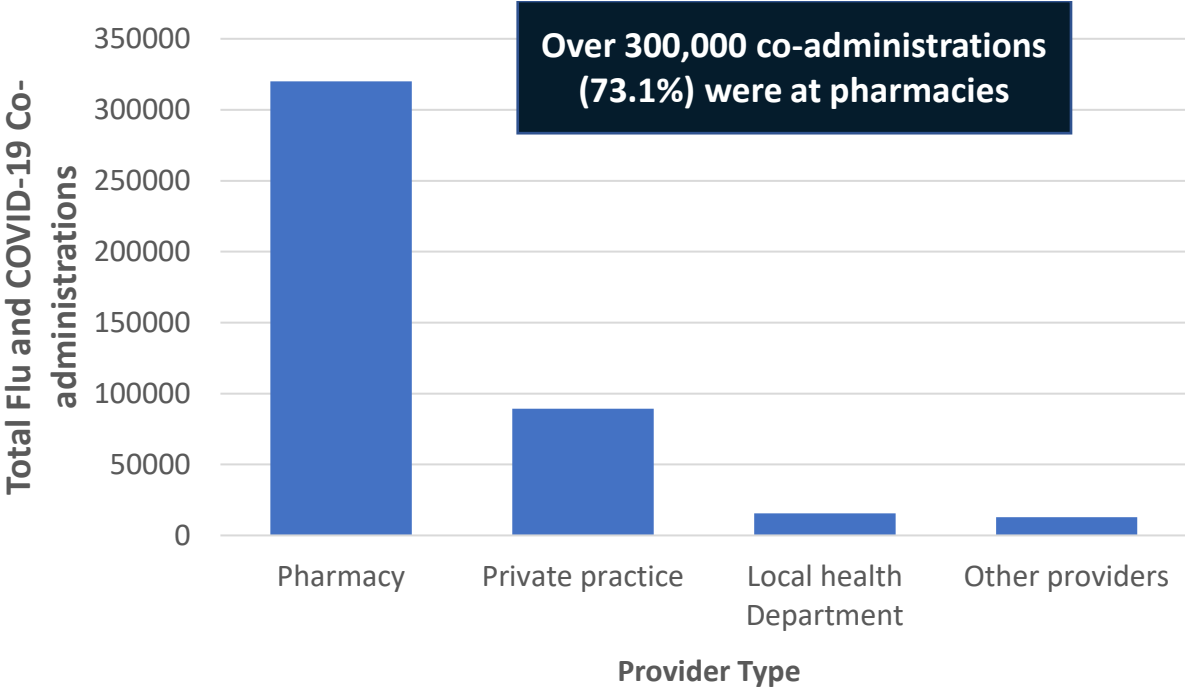
Projected deaths



Co-administration of Flu and COVID-19 Vaccines

- Coadministration of influenza and COVID-19 vaccines has proven to be safe and effective*¹, is recommended by the CDC², and provides an efficient way to immunize the population against two potentially serious illnesses
- During the 2021-2022 season (Sep 1, 2021 – Feb 12, 2022), 13.4% (413,101/3,075,658) of all flu vaccines administered in Michigan were co-administered with COVID-19 vaccines and highest among 18–49-year-olds
 - Pharmacies reported the most coadministrations of flu and COVID vaccines during this season

Age group	Flu-COVID Coadministrations
5 – 11 years	283
12 – 17 years	11,144
18 – 49 years	161,949
50 – 64 years	114,210
65 years and above	150,025



* Routine vaccinations for all persons aged ≥ 6 months who do not have contraindications

Sources: Michigan Department of Health and Human Services: Division of Immunization; **1.** Toback S, et al. Safety, immunogenicity, and efficacy of a COVID-19 vaccine (NVX-CoV2373) co-administered with seasonal influenza vaccines: an exploratory substudy of a randomised, observer-blinded, placebo-controlled, phase 3 trial. *Lancet Respir Med.* 2022 Feb;10(2):167-179. doi: 10.1016/S2213-2600(21)00409-4. Epub 2021 Nov 17. **2** Grohskopf LA et al. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2021–22 Influenza Season. *MMWR Recomm Rep* 2021;70(No. RR-5):1–28. DOI: <http://dx.doi.org/10.15585/mmwr.rr7005a1>

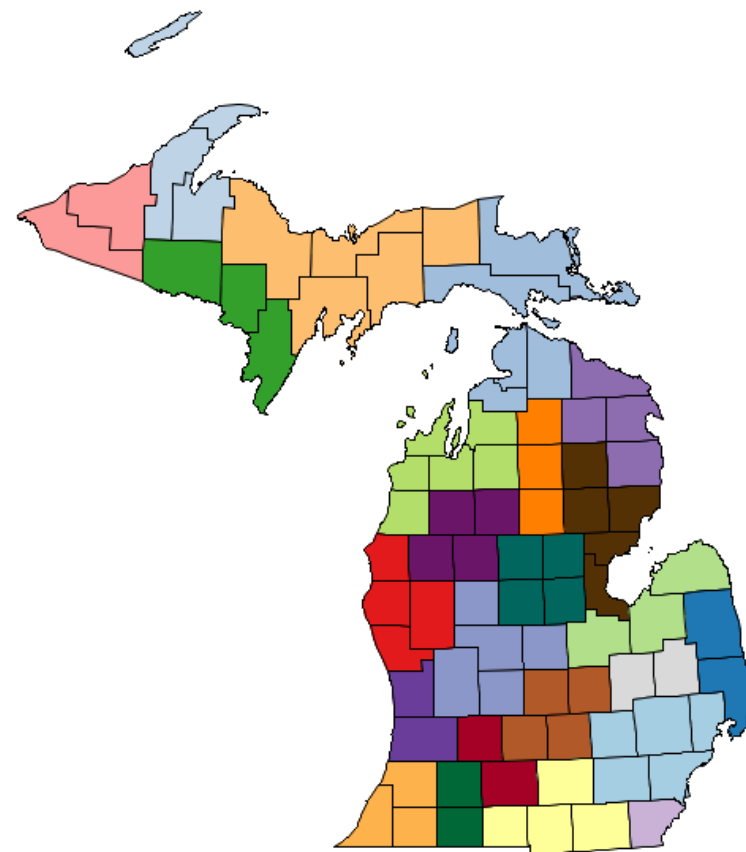
APPENDIX

CDC COVID-19 Community Levels are defined by County Case Rates and Health Service Area (HSA) Hospitalizations

COVID-19 Community Levels – Use the Highest Level that Applies to Your Community

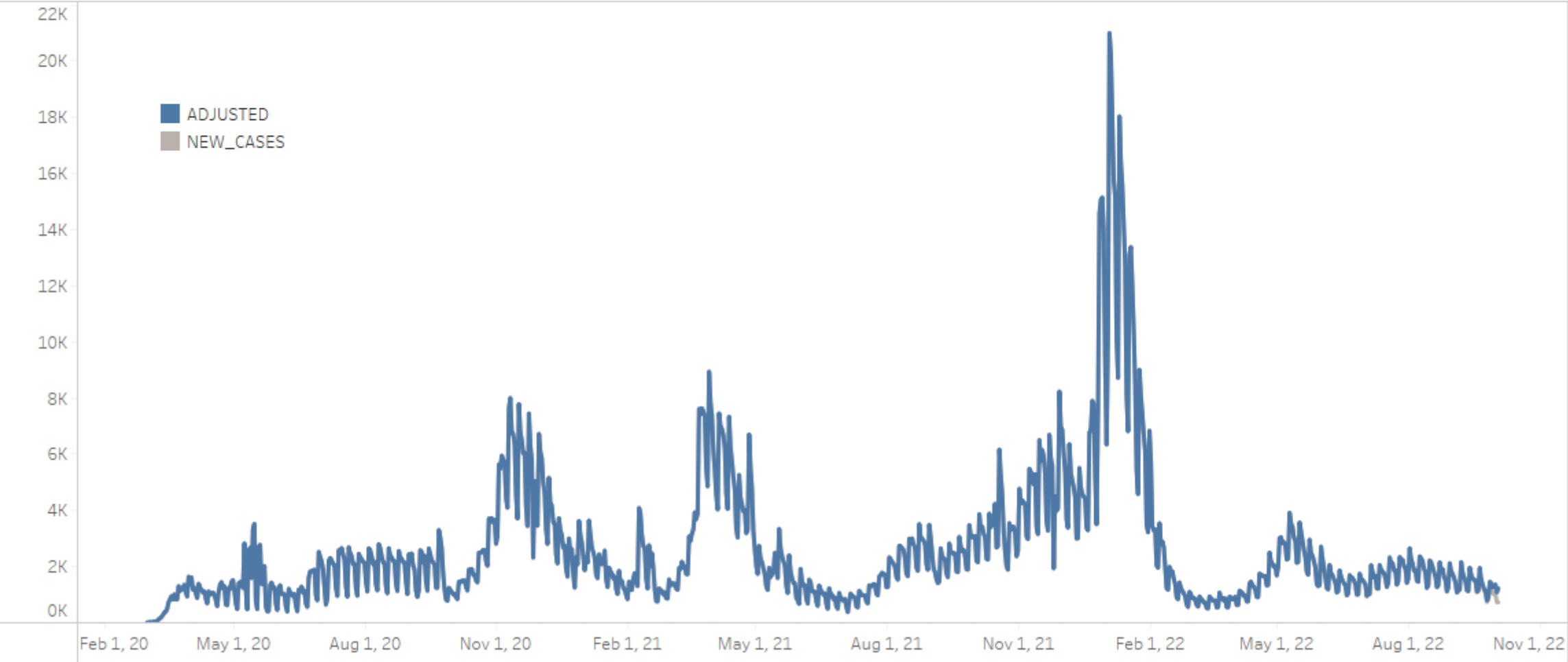
New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	≥15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	≥10.0
	Proportion of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%

Health Service Areas



Michigan Lag-adjusted new COVID cases by onset date

New confirmed cases by onset actual and adjusted as of October 4, 2022 (-2 days)



Michigan Lag-adjusted new cases by onset date, recent trends

New confirmed cases by onset actual and adjusted as of October 4, 2022 (-2 days)

