MI COVID RESPONSE DATA AND MODELING UPDATE

March 8, 2022

Executive Summary

New CDC COVID-19 Community Levels

- On February 25th, CDC released new COVID-19 Community Levels to assess and predict severe COVID outcomes
- New COVID-19 Community Levels consist of Low, Medium, and High and released at least once weekly
- These new levels are tools to help individuals and communities decide what prevention steps to take based on the latest data

Public Health Response

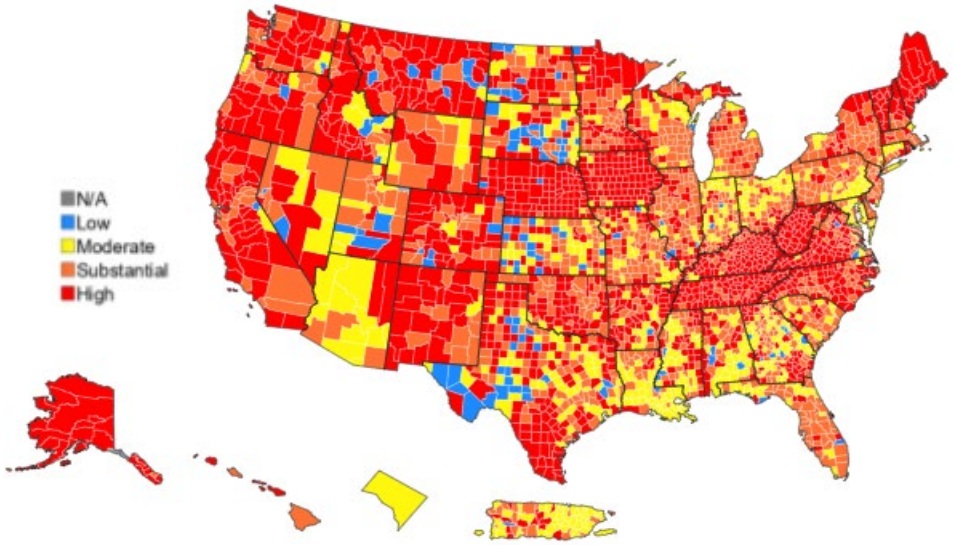
- Vaccination, Masking, Testing and Therapeutics are critical tools in our fight against the impact of COVID-19
- Masking is one of the most considerate things you can do for other vulnerable members of your community
- Over 5.9 million Michiganders have completed a primary series for COVID-19 vaccination (59.5%)

Situational Awareness

- Globally, nationally, and in Michigan, most metrics are continuing to decline; Michigan to levels last seen in July and August of 2021
- The sentinel wastewater dashboard showing declines in majority of sites
- All regions experiencing declines for positivity, cases rates, and hospitalizations
- Cases in school aged children and long-term care facilities are declining
- The reproduction number (R_t) in Michigan is below 1. If R_t stays at the current level, cases will continue to decline
- COVID+ census in hospitals, hospital admission, ICU utilization, and pediatric census is declining in all regions
- Deaths are declining, with greatest declines among the younger age groups

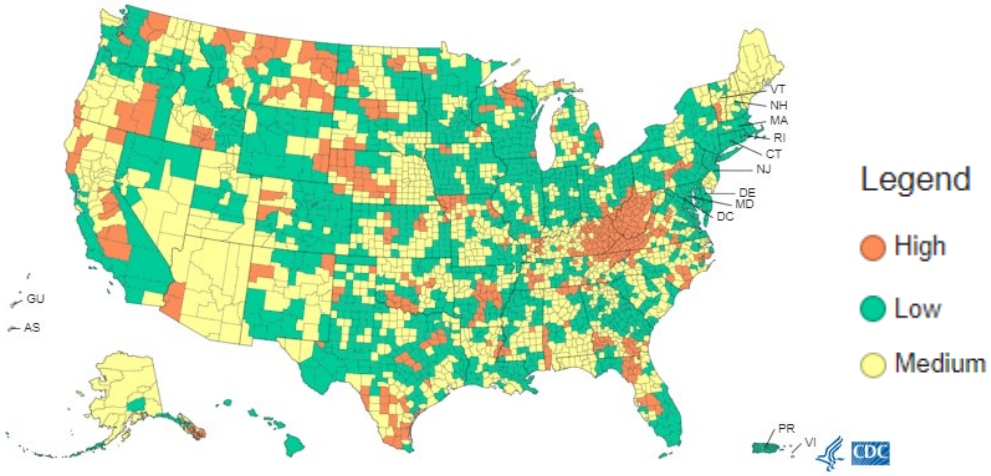
CDC Levels: Comparison between former Levels of Community Transmission and new COVID-19 Community Levels

Former Levels of Community Transmission



Indicator - If the two indicators suggest different transmission levels, the higher level is selected	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days	0-9.99	10-49.99	50-99.99	≥100
Percentage of NAATs[1] that are positive during the past 7 days	0-4.99%	5-7.99%	8-9.99%	≥10.0%

New COVID-19 Community Levels



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%

- On February 25, CDC proposed new COVID-19 Community Levels to assess and predict severe COVID outcomes (i.e., hospitalization capacity, ICU utilization, death)
- New COVID-19 Community Levels consist of Low, Medium, and High as determined by cases per 100K, hospital admissions, and COVID hospital occupancy
- COVID-19 Community Levels do not apply in healthcare settings, such as hospitals and nursing homes. Instead, healthcare settings should continue to use community transmission rates and follow CDC's infection prevention and control recommendations for healthcare workers

Source: CDC COVID-19 Community Levels https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

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				
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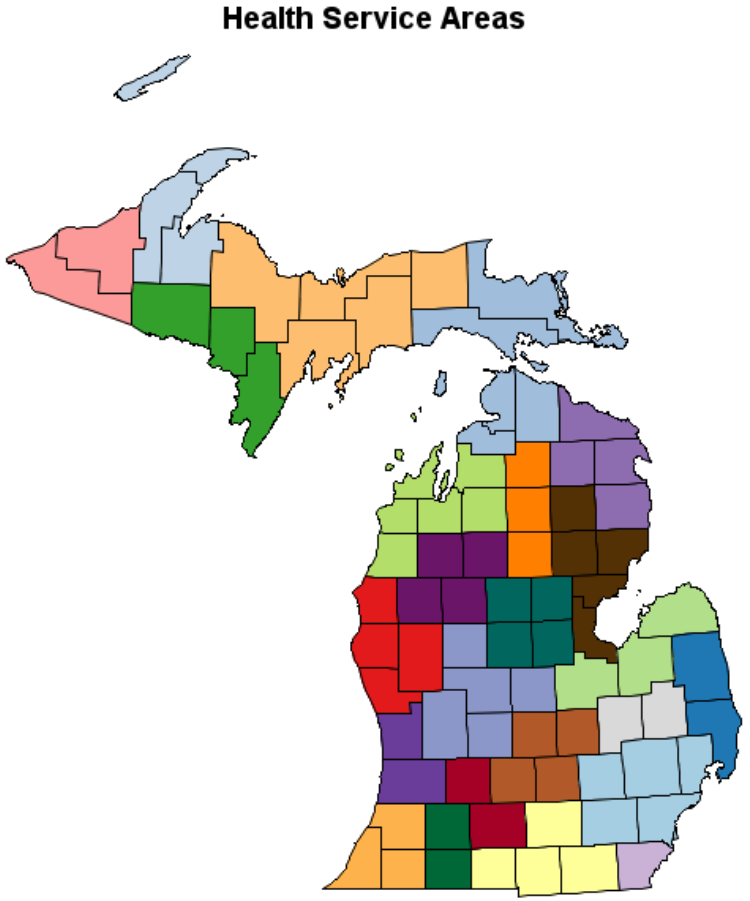
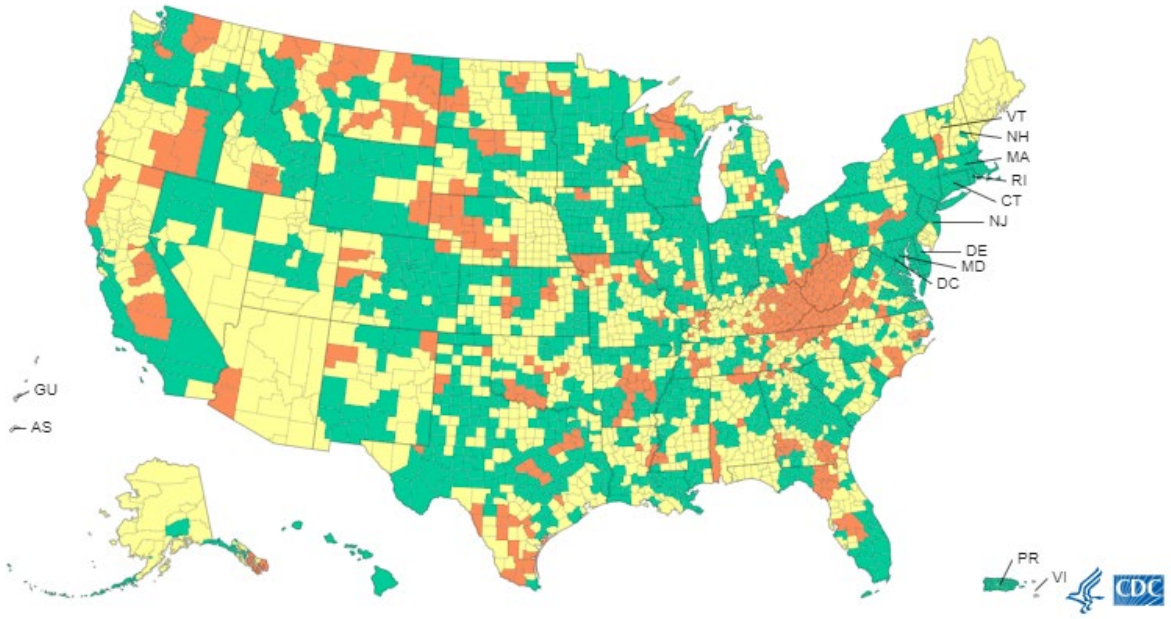
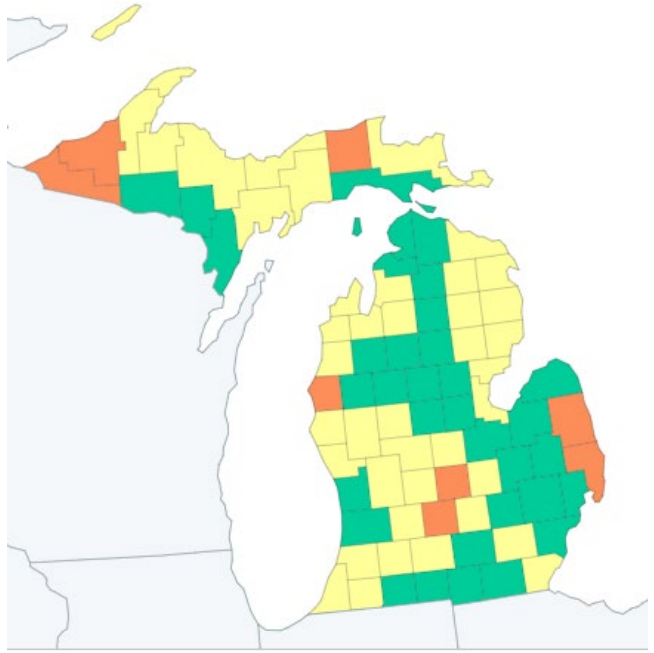


- The new levels use three metrics — new COVID-19 admissions per 100,000 population in the past 7 days, the percent of staffed inpatient beds occupied by COVID-19 patients, and total new COVID-19 cases per 100,000 population in the past 7 days
- Case rates can be calculated for each county, but hospital metrics use Health Service Areas which aggregate several counties together
- The COVID-19 community level is determined by the higher of the new admissions and inpatient beds metrics, based on the current level of new cases per 100,000 population in the past 7 days

Source: CDC COVID-19 Community Levels https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html; https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels-county-map.html

As of March 3rd, 10% of Michigan Counties at High COVID-19 Community Levels





Percent of Counties

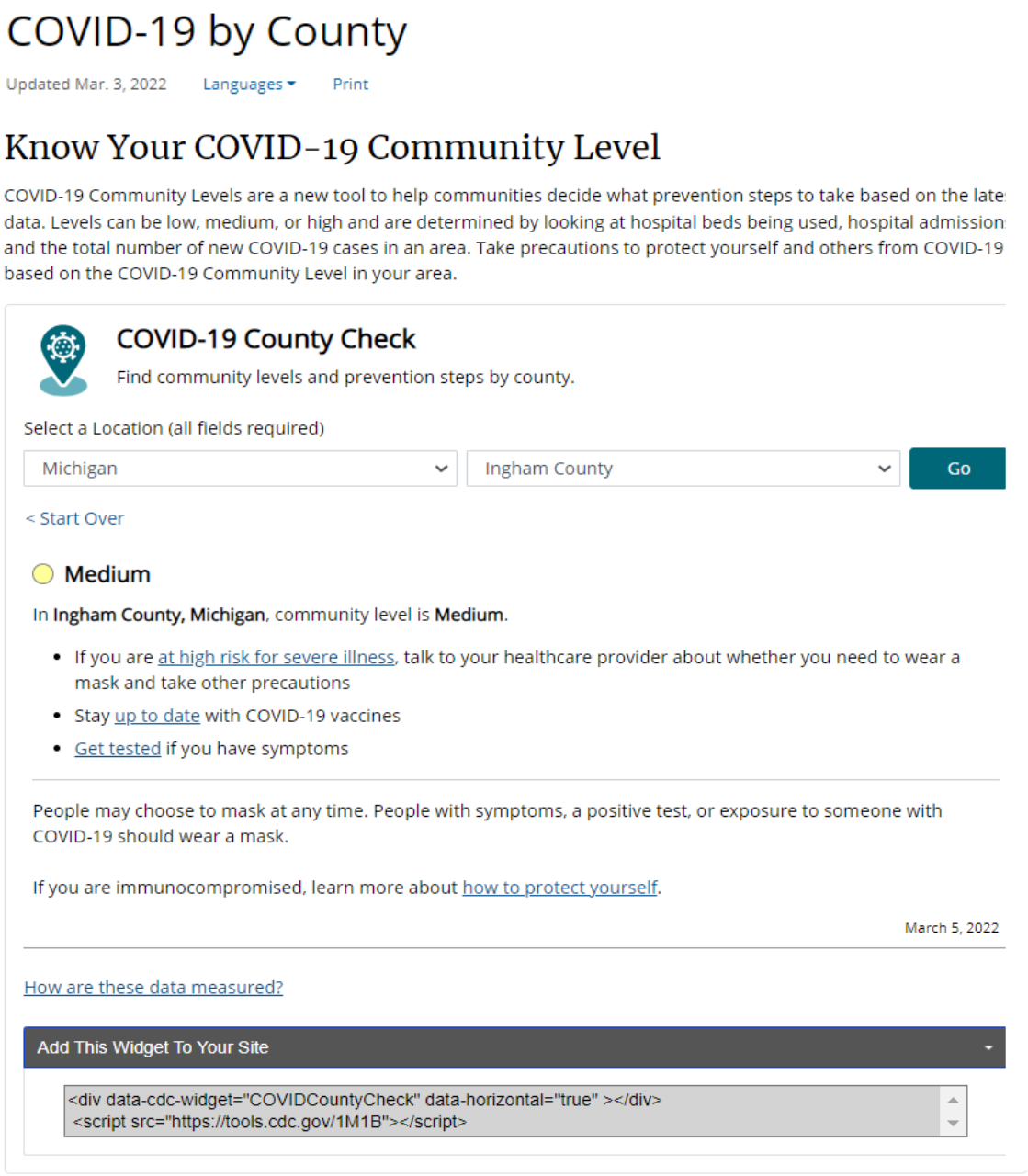
	United States	Michigan
Low	48%	41%
Medium	37%	49%
High	15%	10%

- In the US, 15% of counites has high risk for medically significant disease and healthcare strain; in Michigan, 10% of counties are at high risk.
- CDC will release COVID-19 Community Levels on Thursdays (link: https://www.cdc.gov/coronavirus/2019-ncov/your-health/covid-by-county.html)

CDC new COVID-19 Community Levels are Publicly Available

Link: https://www.cdc.gov/coronavirus/2019-ncov/your-health/covid-by-county.html

- Easy to access dashboard available on the CDC's website
  - Filter by State and County to get level
  - Or download nationwide database to view all U.S. counties
- Updated at least once weekly (Thursday)



CDC has prevention strategies for individuals, households, and communities based on new COVID-19 Community Levels

CDC suggestions at Medium Level

Individual- and household-level preventative behaviors:

- Stay up to date on COVID-19 vaccinations
- Follow CDC recommendations for quarantine and isolation
- Maintain improved indoor ventilation when possible
- Be considerate and respect special precautions for others
- Those at high risk for severe disease should consult with healthcare provider regarding extra precautions

Community-level prevention strategies:

- Protect those at high risk with equitable access to vaccination and other services
- Consider enhanced measures in high-risk settings
- Maintain improved ventilation in public indoor spaces
- Ensure access to testing
- Ensure access and equity in services

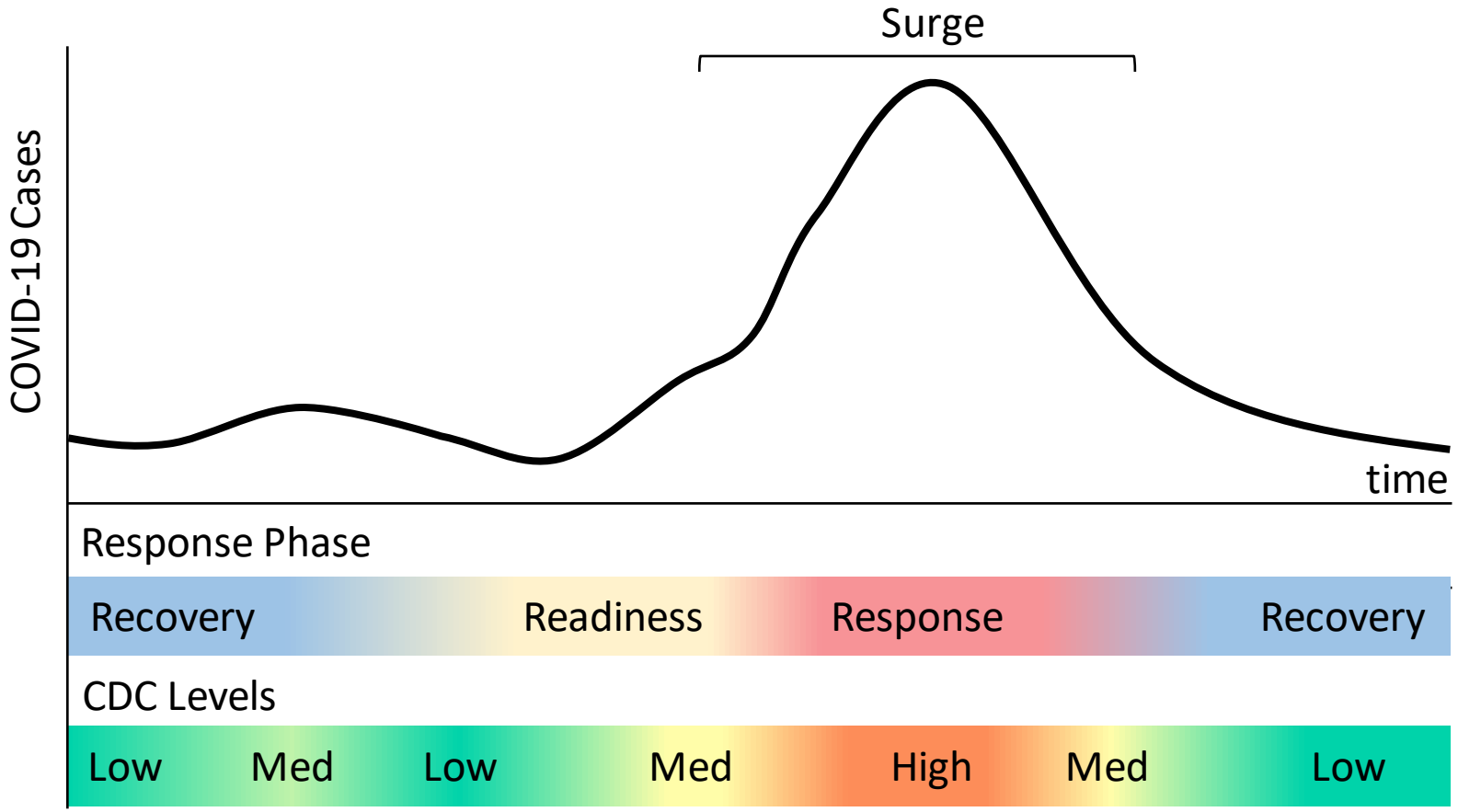
What Prevention Steps Should You Take Based on Your COVID-19 Community Level?

Low	Medium	High
• Stay up to date with COVID-19 vaccines • Get tested if you have symptoms	• 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	• 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

People may choose to mask at any time. People with symptoms, a positive test, or exposure to someone with COVID-19 should wear a mask.

Source: CDC COVID-19 Community Levels https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

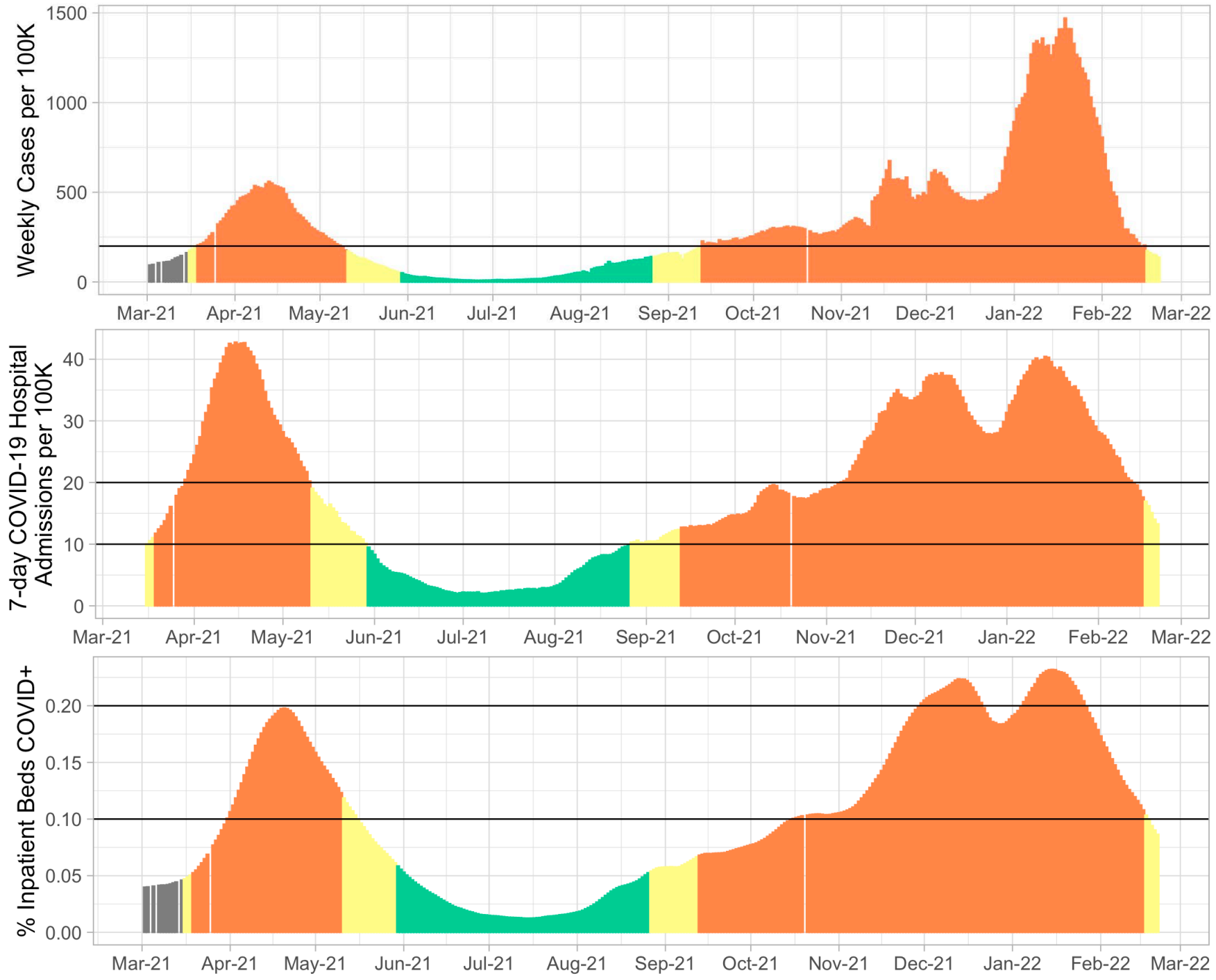
CDC level changes may not align exactly with transitions in the Readiness-Response-Recovery cycle



- Readiness phase may occur while still Low but aware of coming surge
  - Considerations for Recovery-to-Readiness transition include a new variant with changes in transmissibility, severity, or vaccine effectiveness
- Response phase may begin before hospital strain metrics reach CDC level High

How would the new CDC levels look for Michigan at the state level?

- To visualize how the levels may change over time, we calculated the equivalent CDC COVID-19 Community Levels for Michigan statewide



Understanding Personal and Household Risk

Protect yourself from COVID-19 by understanding levels of risk, practicing good hygiene and hand washing, staying home when sick, and staying up to date with vaccinations. Masking is a personal and local community choice. Know your risk; know that others may have a risk different from yours. Respect the choice.

Masking is a proven way to reduce your risk of COVID-19.

When making decisions about risk, consider the setting, your vaccination status and current level of community transmission in addition to the personal and family risk factors* noted below.

	Lower Risk Settings → Higher Risk Settings			
	Outdoor Distanced Spaces (Parks, Trails, Large patios)	Outdoor Crowded Spaces (Concerts, Theme parks, etc...)	Indoor Distanced Spaces (Social distancing ability self-controlled)	Indoor Crowded Spaces (Poorly ventilated and/or social distancing not in personal control)
Lower Risk	Up to date on vaccine, without risk factors			
	Up to date on vaccine, with risk factors			
	Unvaccinated, without risk factors			
Higher Risk	Unvaccinated, with risk factors			

Up to Date on vaccine includes any booster doses as defined by the CDC. Additionally, individuals who have tested positive for COVID-19 in the past 90 days would fall into similar risk categories as those who are up to date on vaccination.

*__Risk factors__ include older adults (60+) and those who have serious chronic medical conditions like heart disease, diabetes or lung disease (at any age), and those who live in high-risk congregate settings (like nursing homes, corrections facilities and shelters). If you live with others who have risk factors, consider their health in addition to your personal health.

MDHHS
Michigan Department of Health & Human Services

Visit Michigan.gov/Coronavirus for current COVID-19 information.

Considerate Mask Use

- Masking is one of the most considerate things you can do for other vulnerable members of your community
  - Extra precautions are needed to protect our friends, neighbors, and loved ones who are at increased risk of severe illness.
  - People who are at increased risk of severe illness—and family, friends, and coworkers who spend time with them—should consider taking extra precautions even when the COVID-19 Community Level is low.
  - These precautions can include wearing masks and getting tested before gathering together
  - If you think you are at increased risk of severe COVID-19, talk to your healthcare provider about the precautions you should take
- Be respectful of others decision to wear a mask, regardless of the reason

Source: CDC COVID-19 Information for Specific Groups of People https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/index.html

REGARDLESS OF YOUR COVID-19 COMMUNITY LEVEL, YOU SHOULD MASK IF YOU HAVE

Symptoms of COVID-19

Positive COVID-19 Test

Exposure to someone with COVID-19

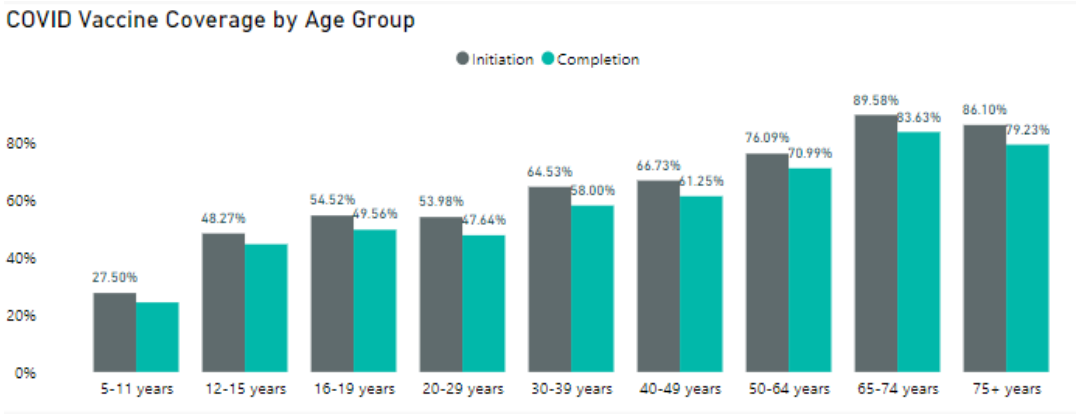
cdc.gov/coronavirus

CS329821-B 02/25/2022

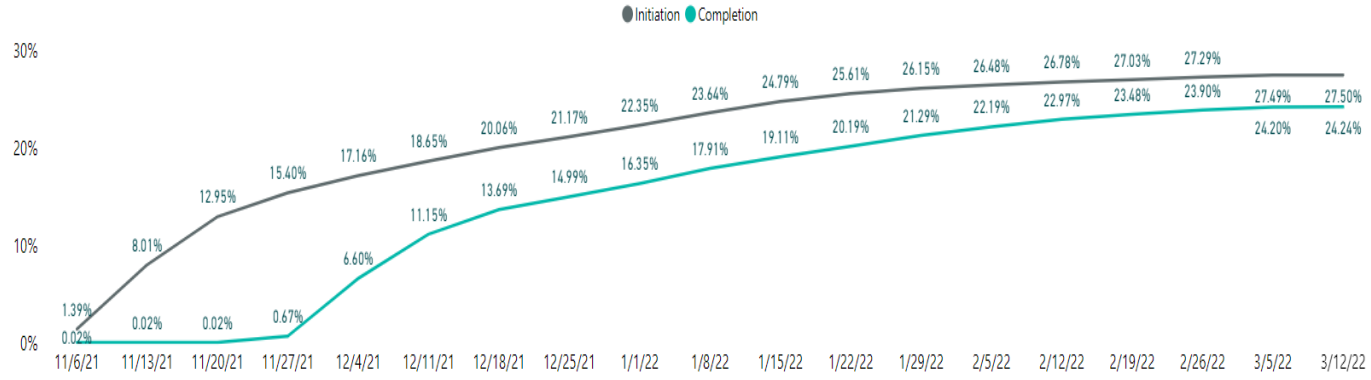
Source: CDC COVID-19 Community Levels https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

Vaccinations and Boosters

- Over 15.3 million COVID-19 vaccine doses have been administered in Michigan
  - Over 6.6 million Michiganders have received at least one dose (66.4%)
  - Over 5.9 million Michiganders have completed a primary series (59.5%)
  - Over 3.1 million additional/booster doses have been administered in Michigan
    - 52.6% of the fully vaccinated population has received a booster
    - 75.2% of the fully vaccinated population 65 years of age or older has received a booster



Initiation and Completion Trends in 5–11-year-olds

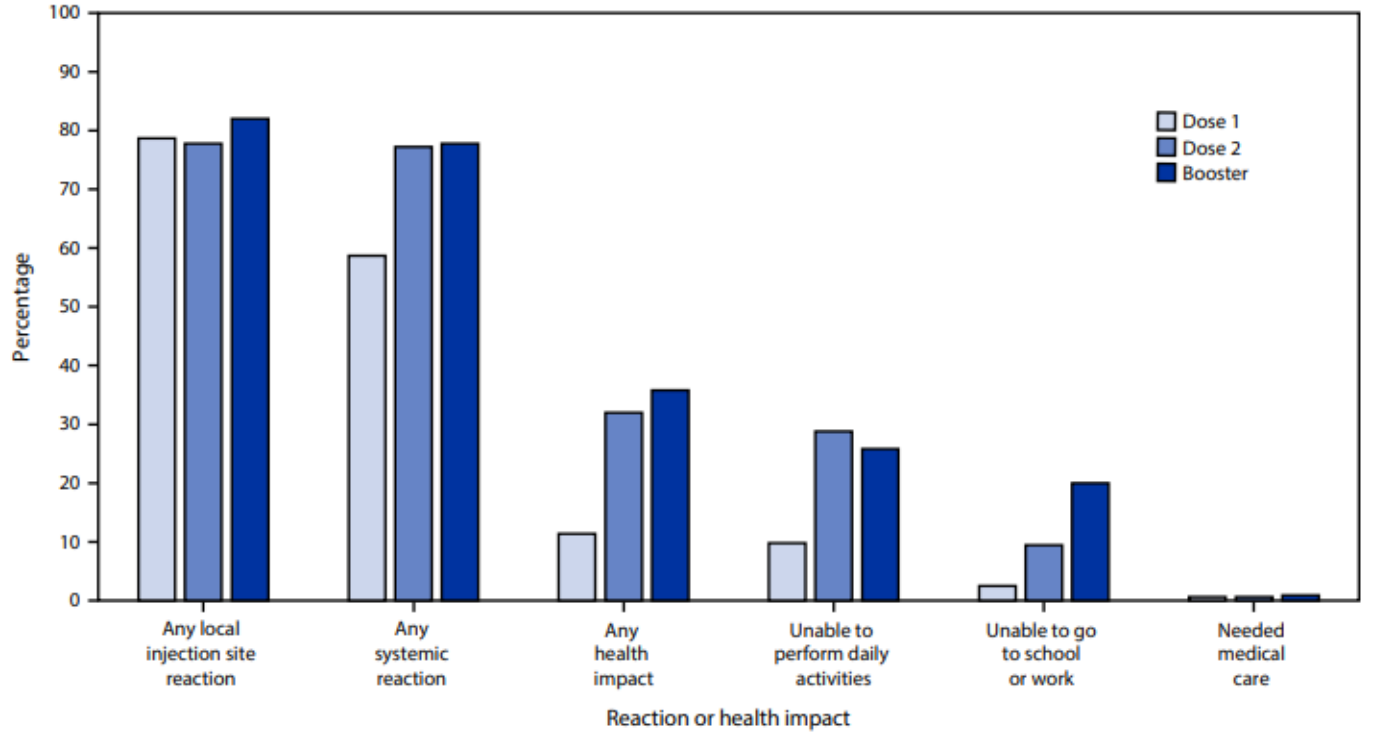


https://covid.cdc.gov/covid-data-tracker/#vaccinations
https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

Safety Monitoring of COVID-19 Vaccine Booster Doses Among Persons Aged 12–17 Years — United States, December 9, 2021–February 20, 2022

- Adults aged ≥18 years reported adverse reactions less frequently after receipt of a homologous Pfizer-BioNTech COVID-19 booster dose than after the second primary dose
- Among persons aged 12–17 years, **reactions after Pfizer-BioNTech booster vaccination were generally mild to moderate and transient**
  - Frequency of local and systemic reactions reported to v-safe after a booster dose were equal to or slightly higher than after the second primary dose
- **Myocarditis was less frequently reported after a booster dose than a second primary dose**
- Health care providers, parents, and adolescents should be advised that local and systemic reactions are expected among adolescents after a homologous Pfizer-BioNTech booster vaccination and that serious adverse events are rare

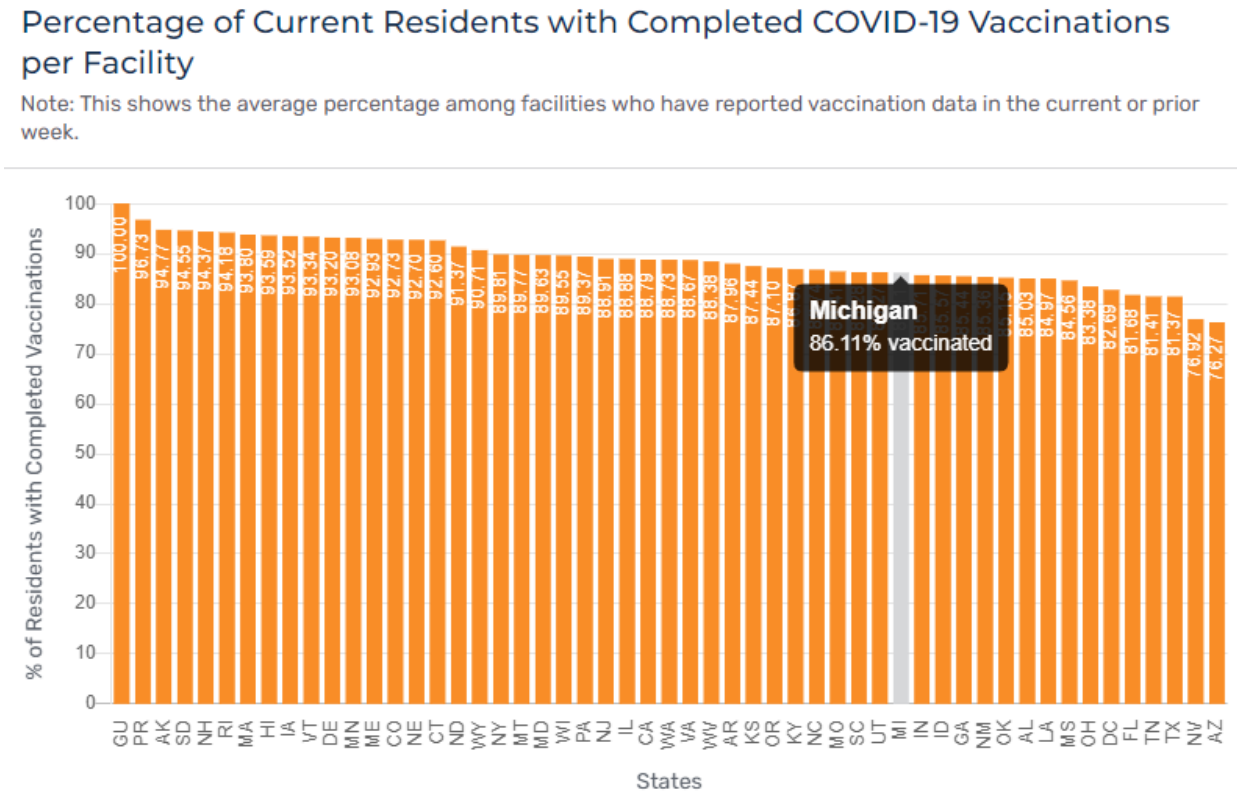
FIGURE. Adverse reactions and health impacts reported* among persons aged 12–17 years (N = 3,274) who received a homologous Pfizer-BioNTech COVID-19 vaccine booster, by vaccine dose — United States, December 9, 2021–February 20, 2022



Source: Hause AM, Baggs J, Marquez P, et al. Safety Monitoring of COVID-19 Vaccine Booster Doses Among Persons Aged 12–17 Years — United States, December 9, 2021–February 20, 2022. MMWR Morb Mortal Wkly Rep 2022;71:347–351. DOI: http://dx.doi.org/10.15585/mmwr.mm7109e2

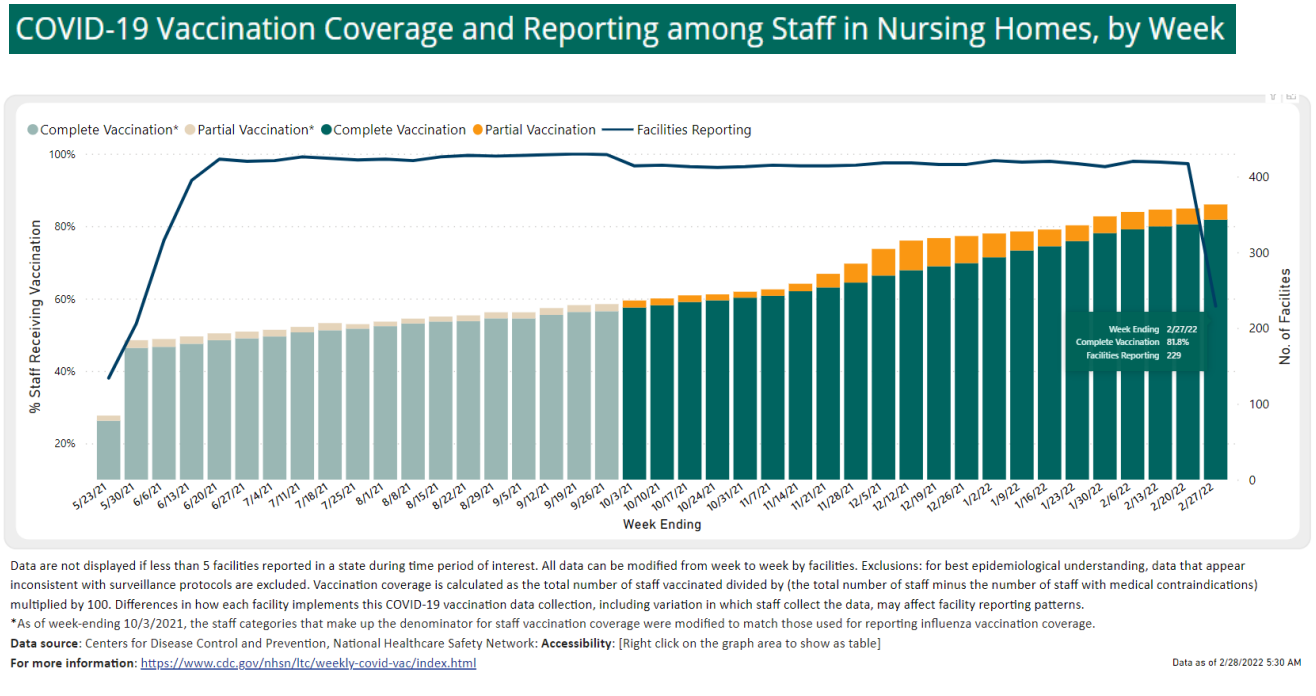
Completed vaccination among Skilled Nursing Cases for Residents and Staff

86% of SNF residents are fully vaccinated; 36 of 53 states/territories



81.8% of SNF staff are fully vaccinated, 43 of 53 states/territories

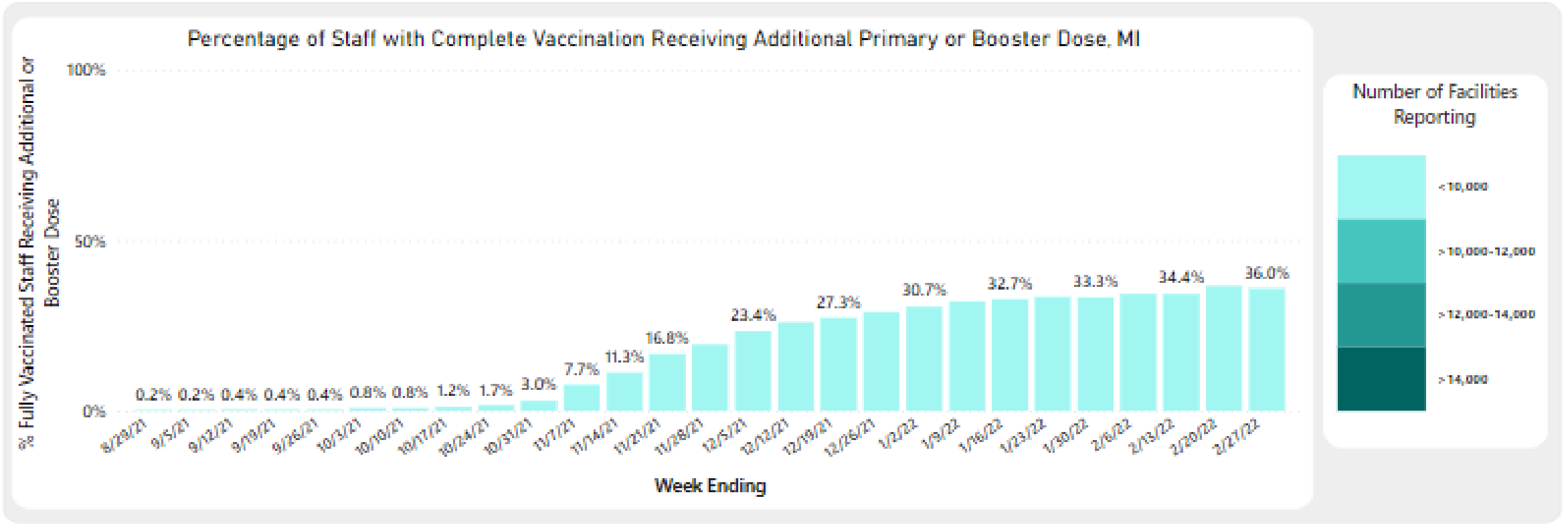
4.2% of SNF staff are partially vaccinated



https://data.cms.gov/covid-19/covid-19-nursing-home-data

https://www.cdc.gov/nhsn/covid19/ltc-vaccination-dashboard.html

Percentage of Staff in Nursing Homes with Completed COVID-19 Vaccination and Receiving Additional Primary or Booster Dose by Week in Michigan



For weeks ending 8/29-9/26, facilities reporting 100% of fully vaccinated individuals received an additional primary or booster dose were excluded. Data for the most recent week are still accruing.

Data source: Centers for Disease Control and Prevention, National Healthcare Safety Network; **Accessibility:** [Right click on the graph area to show as table]

For more information: https://www.cdc.gov/nhsn/ltc/weekly_covid_vac/index.html

Data as of 2/28/2022 5:30 AM

Source: https://www.cdc.gov/nhsn/covid19/ltc-vaccination-dashboard.html

Ongoing response to COVID-19 cycle

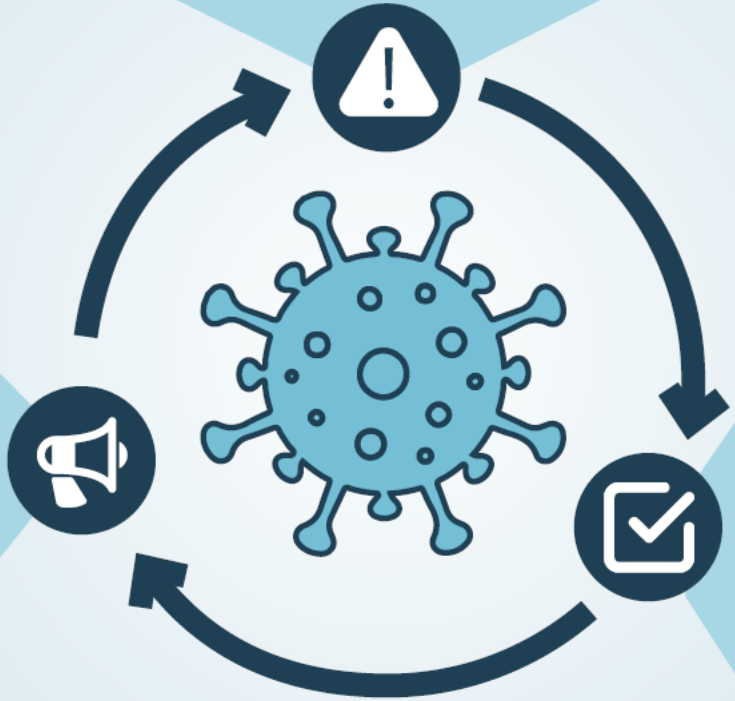
MDHHS
Michigan Department of Health & Human Services

Visit Michigan.gov/Coronavirus for current COVID-19 information.

Response (Surge)

A surge means rapid response by local and state public health.

- Increased supplies for testing, masking and medications.
- Increased masking, testing and social distancing efforts.



Readiness (Pre-Surge)

A surge is expected due to a new variant, local outbreak, seasonal changes.

Expect increased illness severity and overwhelmed hospital capacity.

- Educate public regarding new risks.
- Ensure enough supplies of tests, masks and medications.

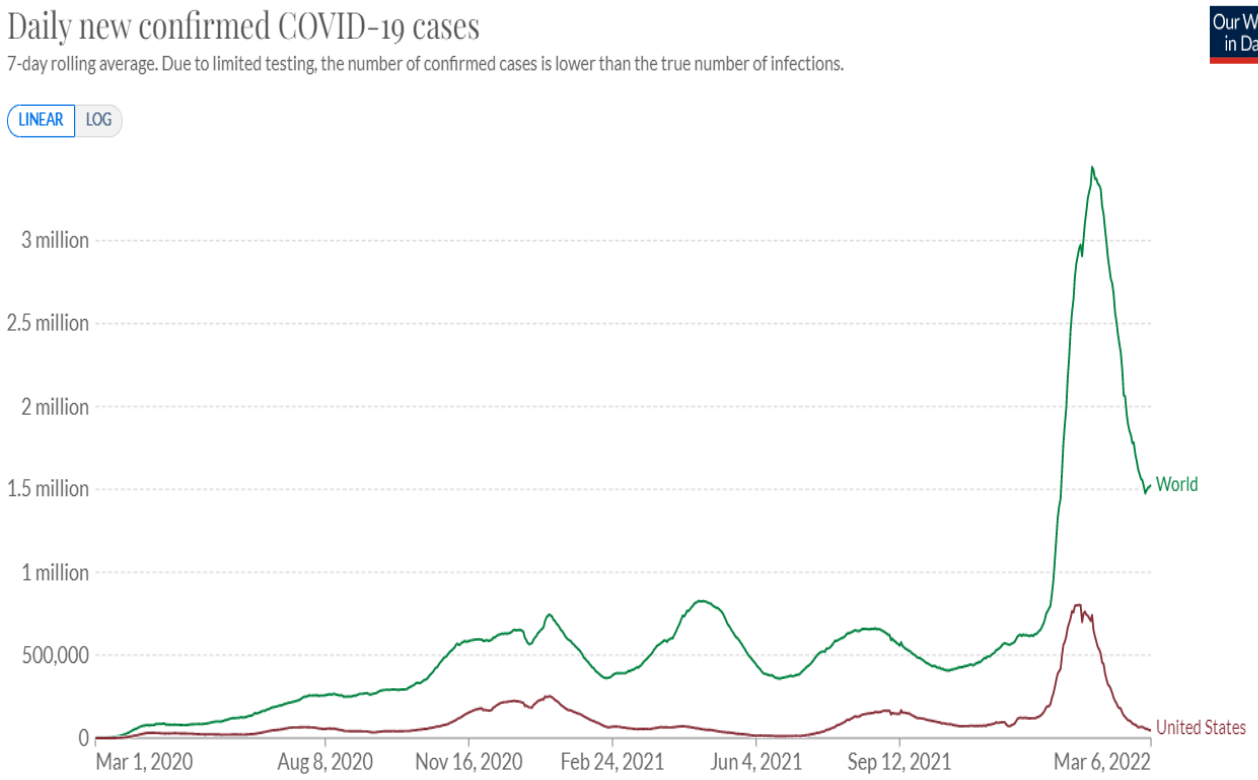
Recovery (Post-Surge)

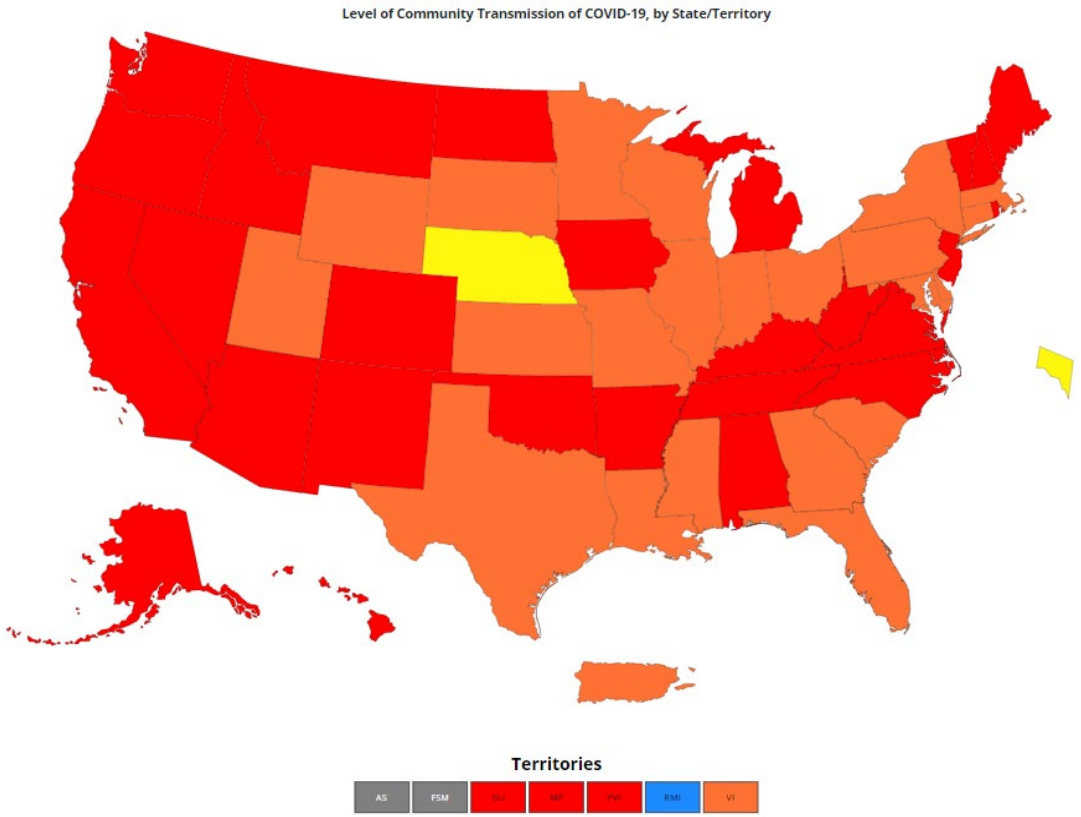
Expect to remain in this phase for longer periods as COVID-19 evolves.

Monitor conditions that may lead to surges, such as a new variant.

- Encourage vaccines to decrease COVID-19 risks.
- Strengthen community support with local stakeholders.
- Empower community members to make best choices for individual situations.

Global and National Trends





Globally, 447,250,840 cases and 6,003,925 deaths (Data* through 3/7/2022)

- Globally, cases are declining

United States: Reported cases (7-day average) have decreased over 36.8% since the prior week¶

- In the U.S., the case rate is 88.9 cases/100,000 in last 7 days (last week: 141 cases per/100,000)

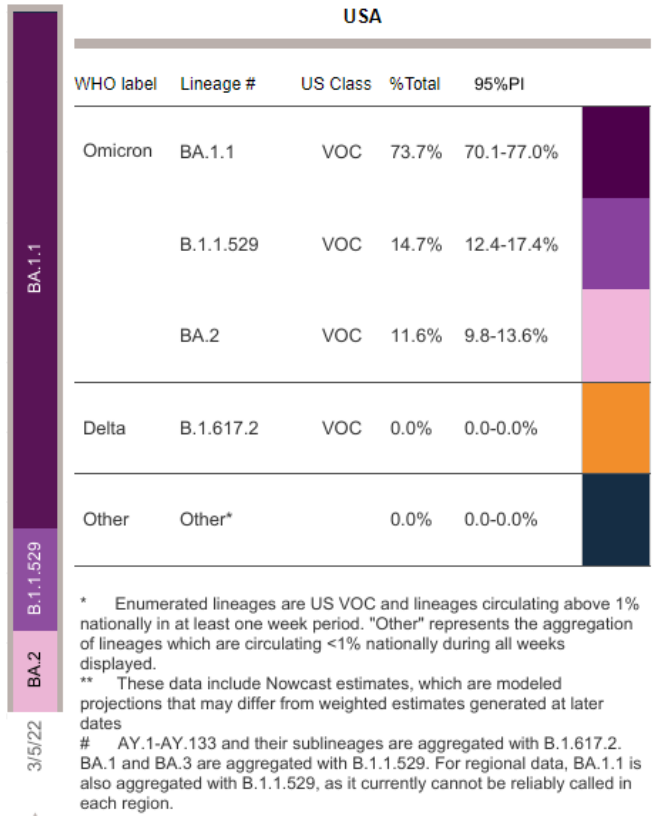
Most Midwestern states are declining

- Minnesota and Michigan have the highest case rates ***in Midwest*** ; Michigan has returned to July case rates and mid-August hospitalization occupancy

Source: *Johns Hopkins Coronavirus Resource Center; ¶ CDC COVID Data Tracker Weekly Review; † CDC COVID Data Tracker – CDC recently updated their methodology for reporting case rates

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

SARS-CoV-2 Variants Circulating in the United States, Feb 27 – Mar 5 (NOWCAST)

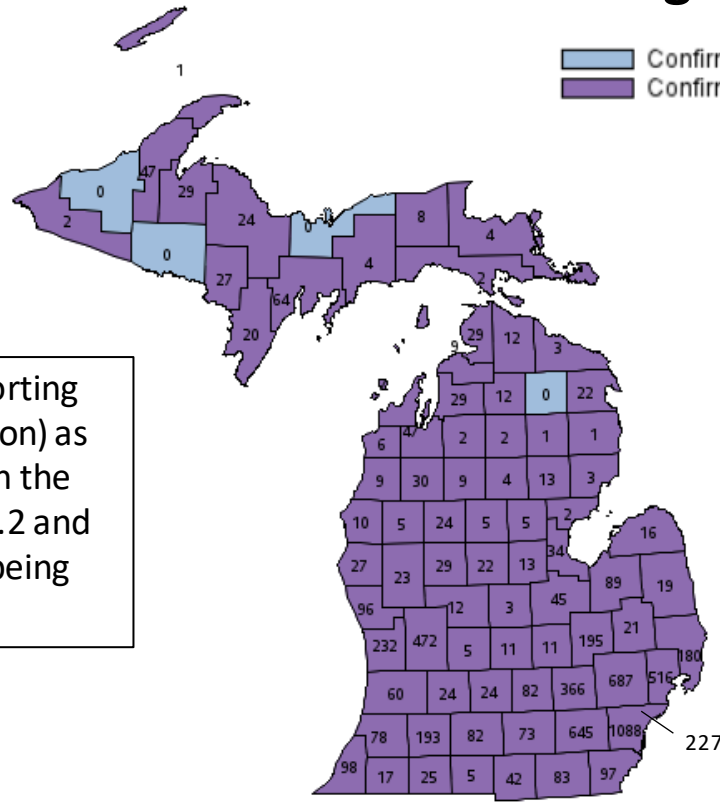


WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.1.1	VOC	73.7%	70.1-77.0%
	B.1.1.529	VOC	14.7%	12.4-17.4%
	BA.2	VOC	11.6%	9.8-13.6%
Delta	B.1.617.2	VOC	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.0%

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
# AY.1-AY.133 and their sublineages are aggregated with B.1.617.2. BA.1 and BA.3 are aggregated with B.1.1.529. For regional data, BA.1.1 is also aggregated with B.1.1.529, as it currently cannot be reliably called in each region.

Currently, CDC is reporting B.1.1.529 (i.e., Omicron) as the dominant strain in the U.S.; sub-lineages BA.2 and BA.1.1 are now also being reported

Variants of Concern in Michigan, Mar 7



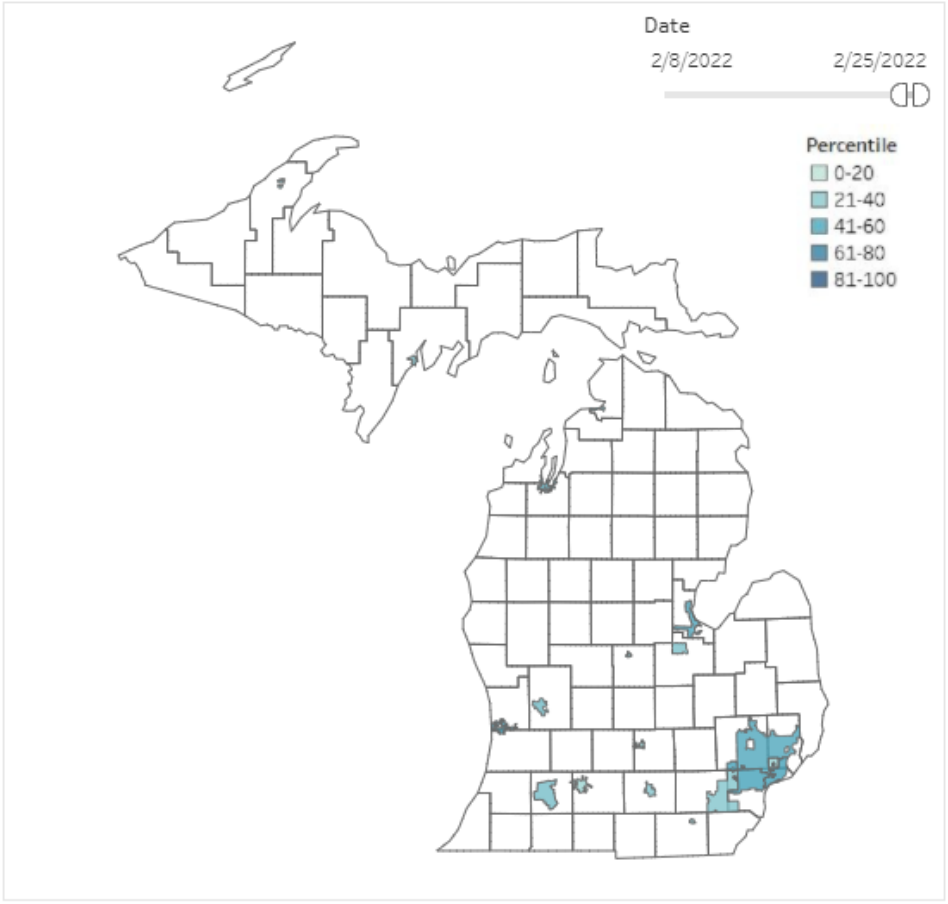
- CDC reclassifies variants as epidemiology shifts
- Variants are downgraded when there has been a significant and sustained reduction in prevalence, or variant no longer poses significant risk to public health
- Cumulative numbers of Delta are no longer included in county counts; solely counts of Omicron cases are listed here

Variant	MI Reported Cases	# of Counties	MDHHS VOC Sequenced Prev. ¶
B.1.617.2 (delta)	30,988	83	<1%
B.1.1.529 (omicron)	6,434	79	>99%

Data last updated Mar 7, 2022
Source: MDSS
¶ Sequence specimens are from the most recent week by onset date which may change as more specimens are sent in

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. In the top right corner of the map, slide the white buttons to select the time period for which the site-specific percentile is calculated.



Site	Sewershed Population	Consecutive Weeks of Virus Detection	Trend As Of	15-Day Trend
Alma WWTP	8976	29	2/21/2022	
Battle Creek WWTP	51093	0	2/23/2022	
Bay City WWTP	34000	0	2/21/2022	
Delhi Township WWTP	22500	20	2/17/2022	
Escanaba WWTP	12600	26	2/21/2022	
GLWA Detroit River Interce..	492000	70	2/16/2022	
GLWA North Interceptor-	1482000	47	2/16/2022	
GLWA Oakwood-	840600	71	2/16/2022	
Grand Rapids WWTP	265000	29	2/24/2022	
Holland WWTP North	45606	0	2/23/2022	
Holland WWTP South	36912	0	2/23/2022	
Jackson WWTP	90000	31	2/24/2022	
Kalamazoo WWTP	150000	0	2/24/2022	
Petoskey WWTP	7900	0	2/24/2022	
Portage Lake WWTP	14000	24	2/21/2022	
Saginaw Township WWTP	40000	28	2/21/2022	
Tecumseh WWTP	8680	7	2/25/2022	
Traverse City WWTP	45000	29	2/24/2022	
Warren WWTP	135000	24	2/17/2022	
Ypsilanti WWTP	330000	31	2/24/2022	

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 3/2/2022. 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.

15-Day Trends
- 1000% or more
- 100% to 999%
- 10% to 99%
- 1% to 9%
- -9% to 0%
- -99% to -10%
- -100% to -999%
- -1000% or less

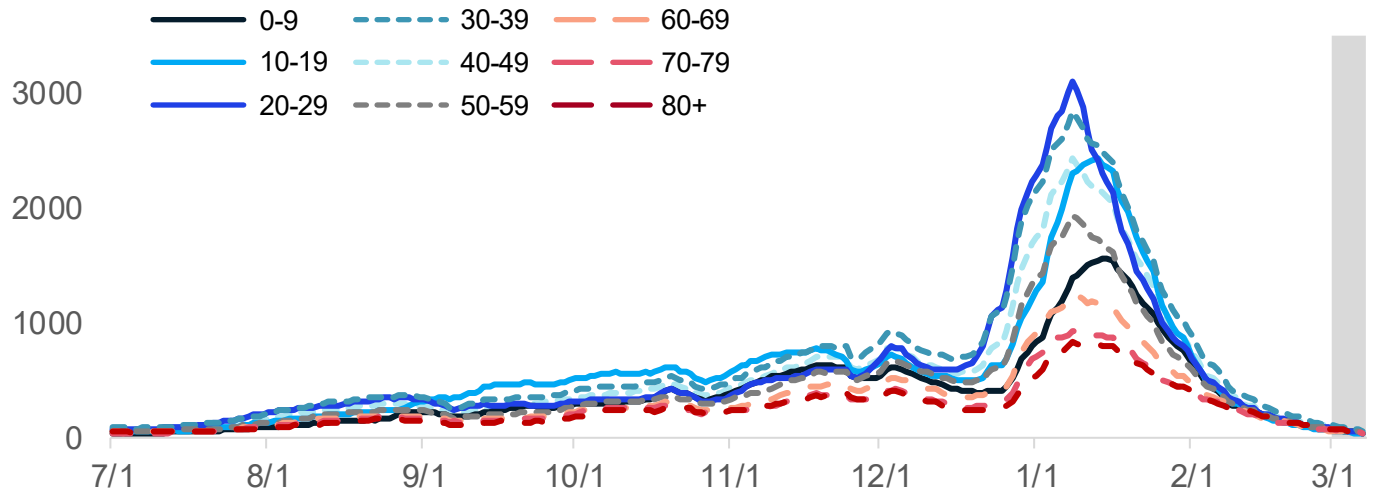
Sentinel Summary

- 75% (15/20) of sentinel sites are showing declines in the previous 15-days

Source: MDHHS – Sentinel Wastewater Epidemiology Evaluation Project - https://www.michigan.gov/coronavirus/0,9753,7-406-98163_98173-573480--,00.html

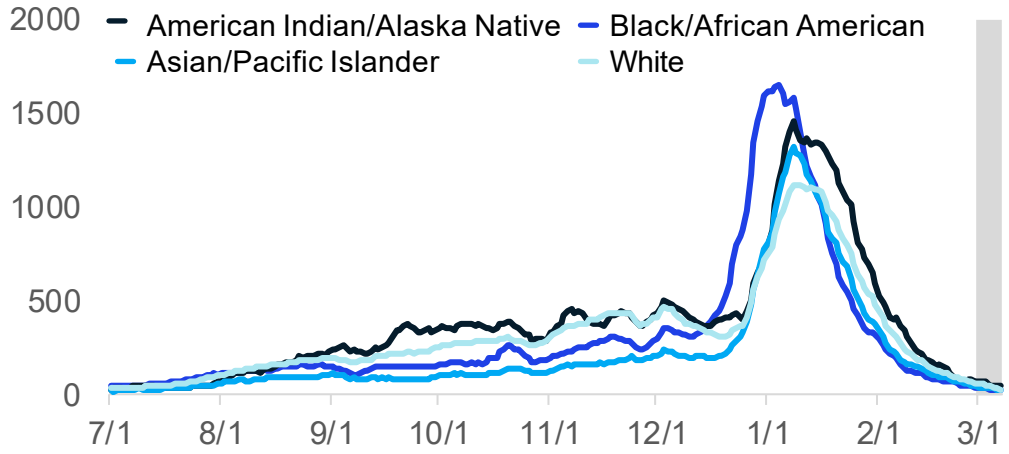
Case rate continue to decline for all age groups & race and ethnic groups

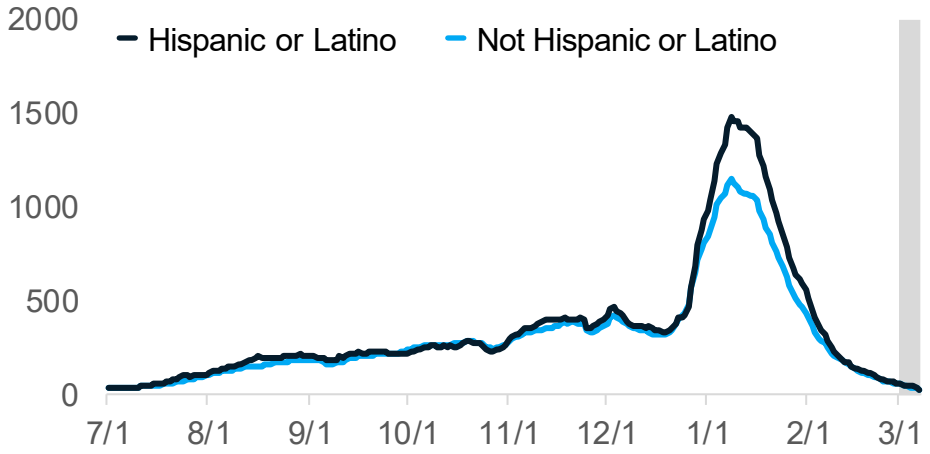
Daily new confirmed and probable cases per million by age group (7-day rolling average)



- Case rates by onset date for all age groups are between 66.3 and 110.9 cases per million (through 2/28)
- Case counts and case rates are highest for 30-39-year-olds this week, followed by 40-49, and 20-29

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



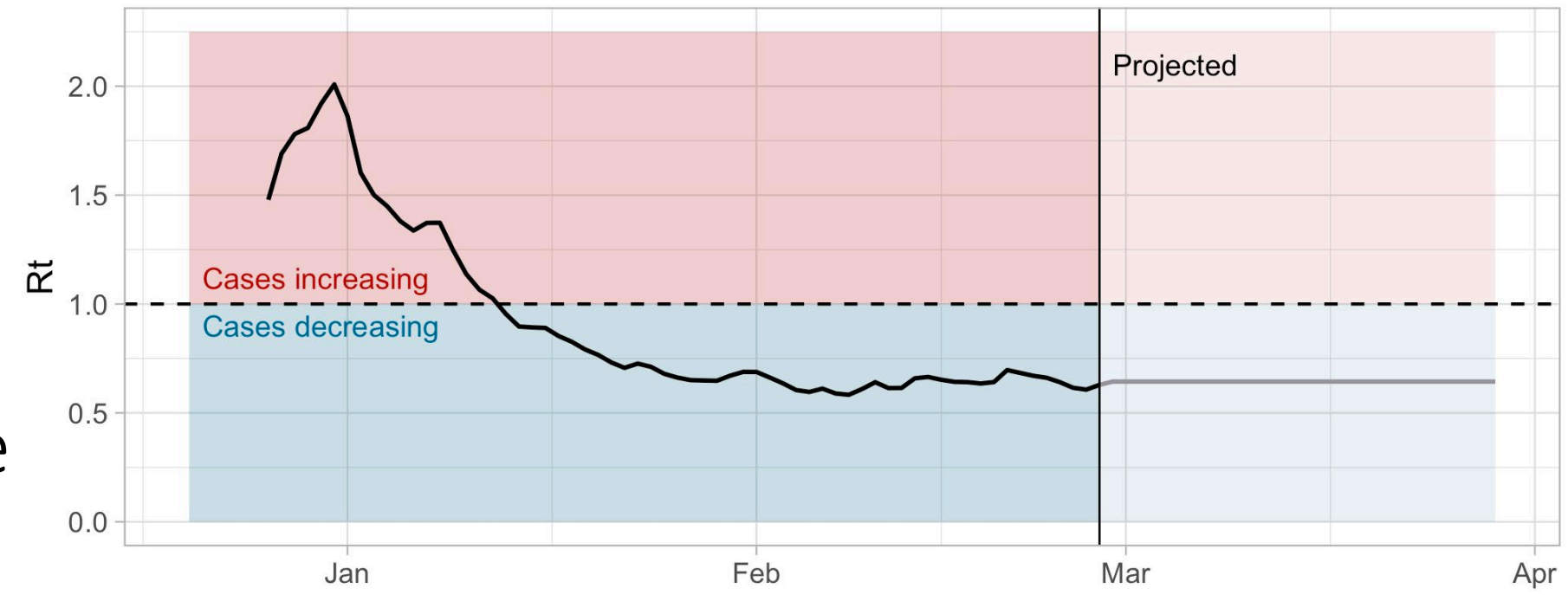


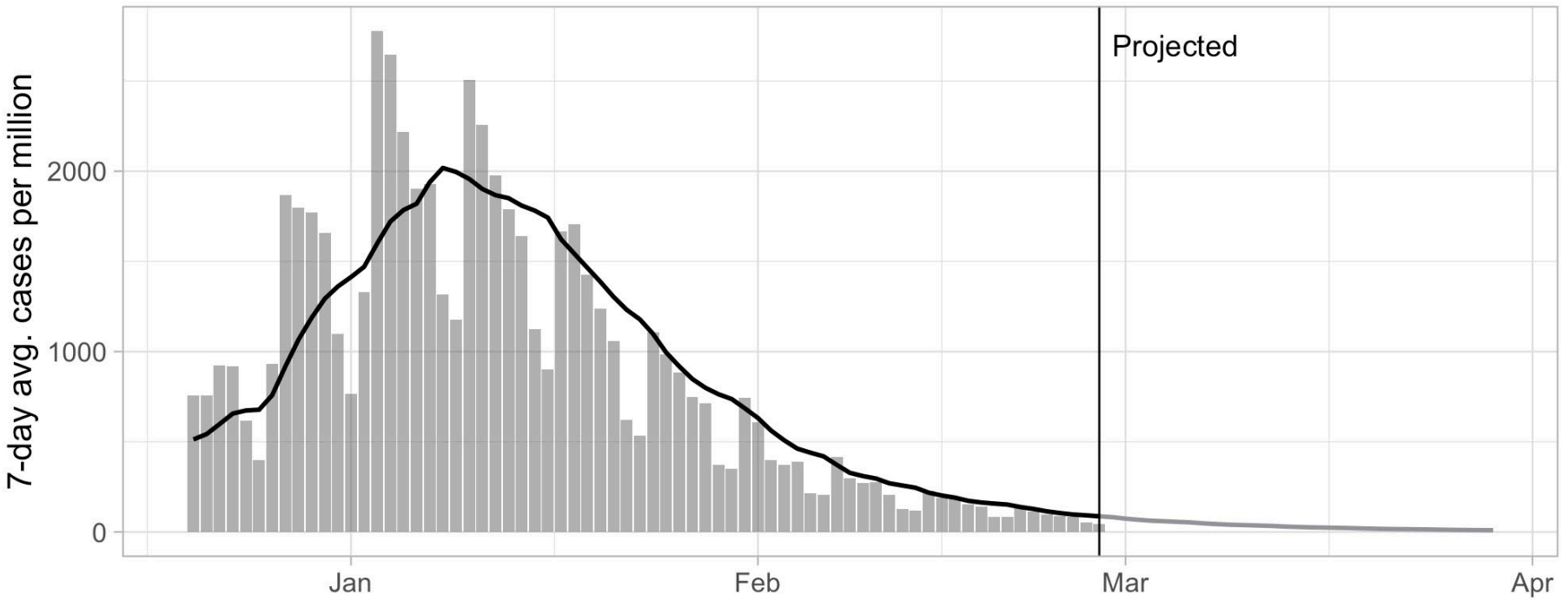
- Case rates are highest for American Indian/Alaska Native populations (76 cases/million)

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

R_t in Michigan is below 1—if R_t stays at the current level, cases will continue to decline

- R_t is at its lowest since May 2021
- Case rates are now similar to late July 2021 levels
- Projection shows cases if R_t remains at most recent 7-day avg. level
- Note that projections don't account for how changes in masking/distancing may alter R_t

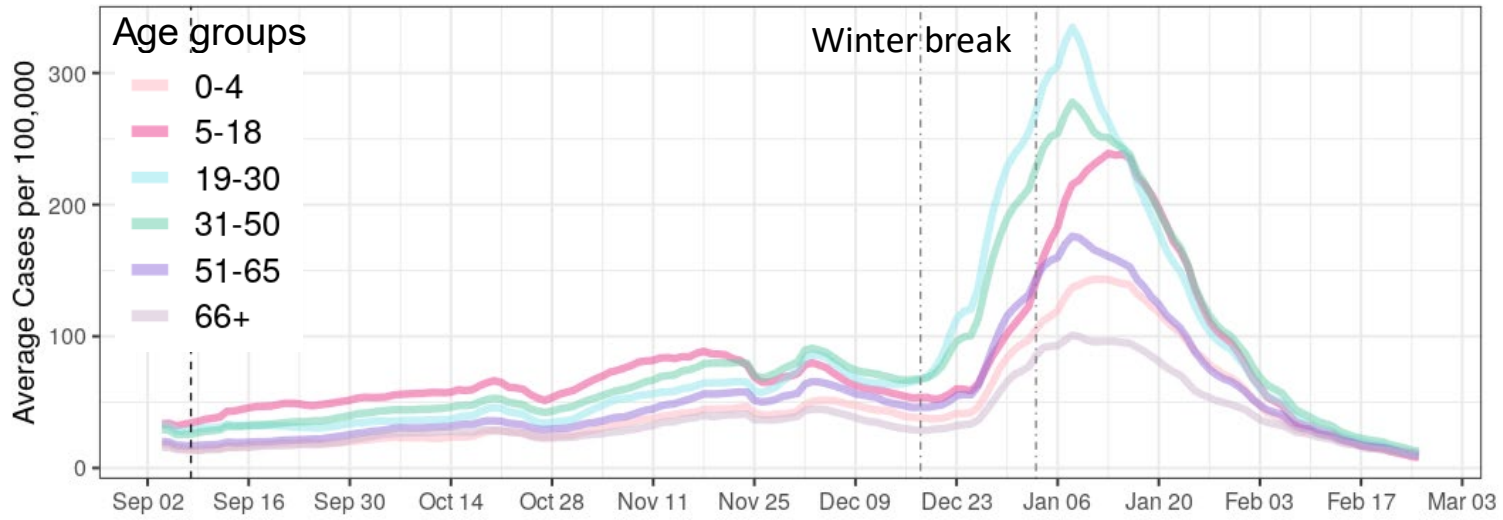


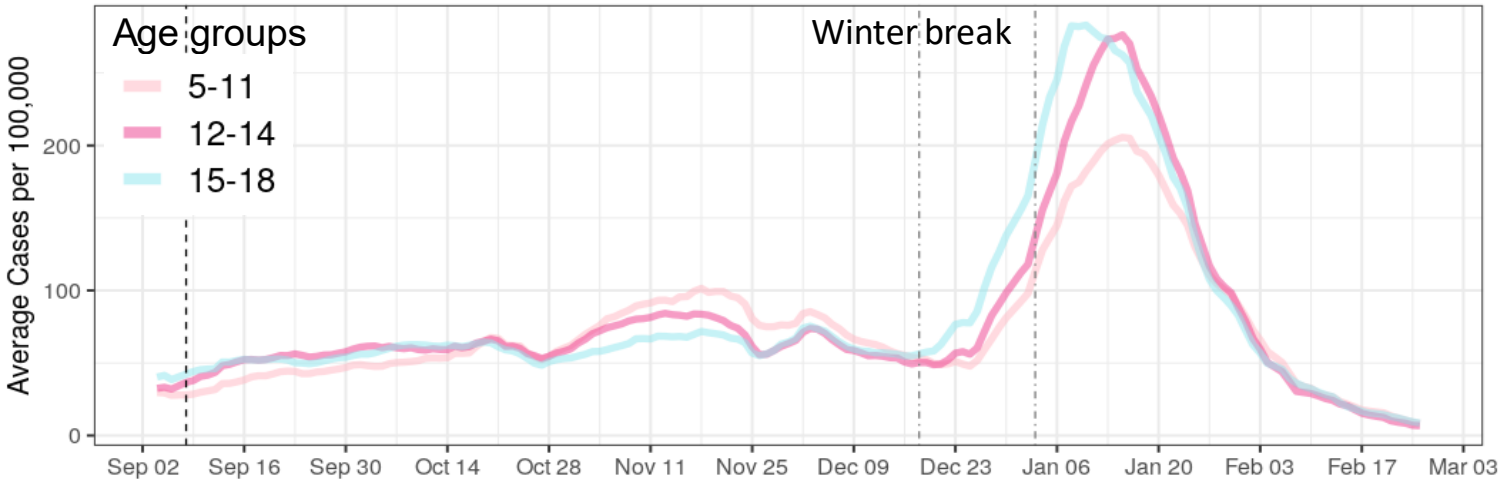


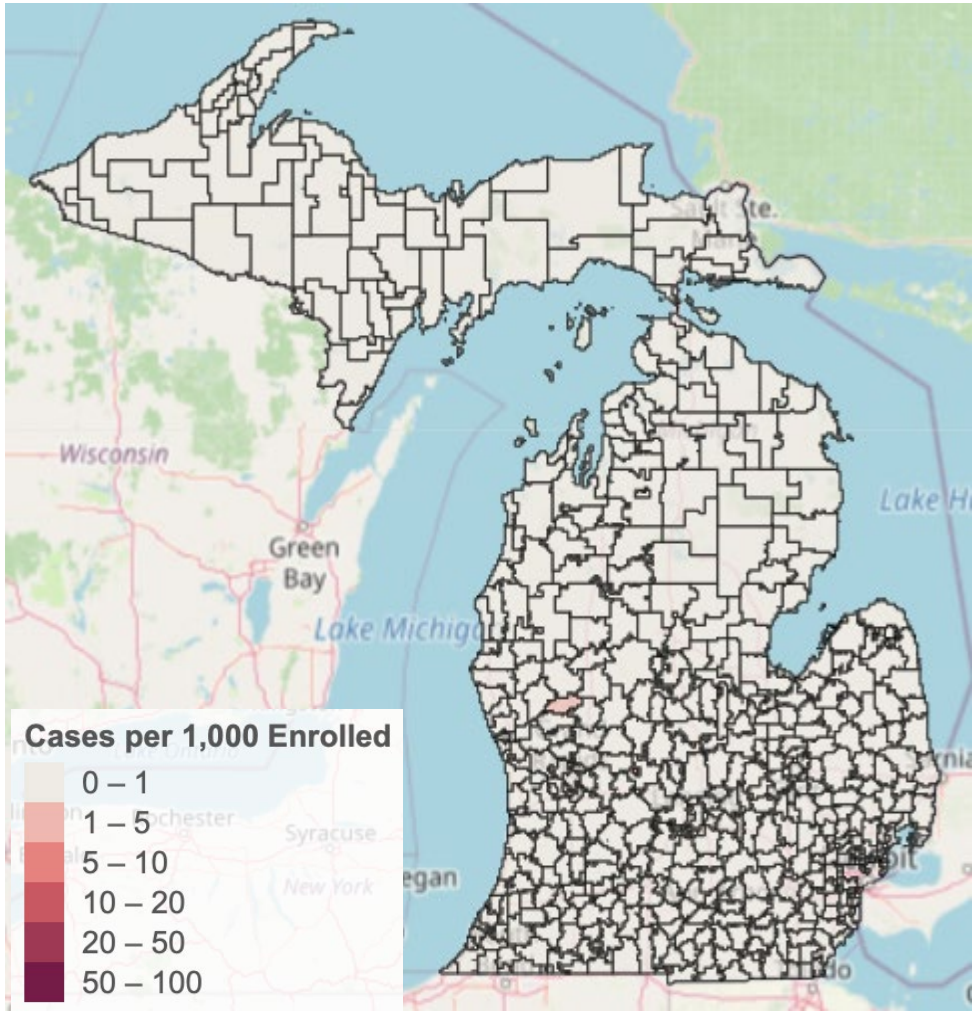
Data sources: MDSS case data, serial interval for Rt estimation based on (Reed et al., 2021)

Case rates continue to decline in the school-aged population statewide

- Case rates in 5–18-year-olds have recently become more similar to 19–50-year-olds
- Case rates among all populations (school-aged and non) are currently declining

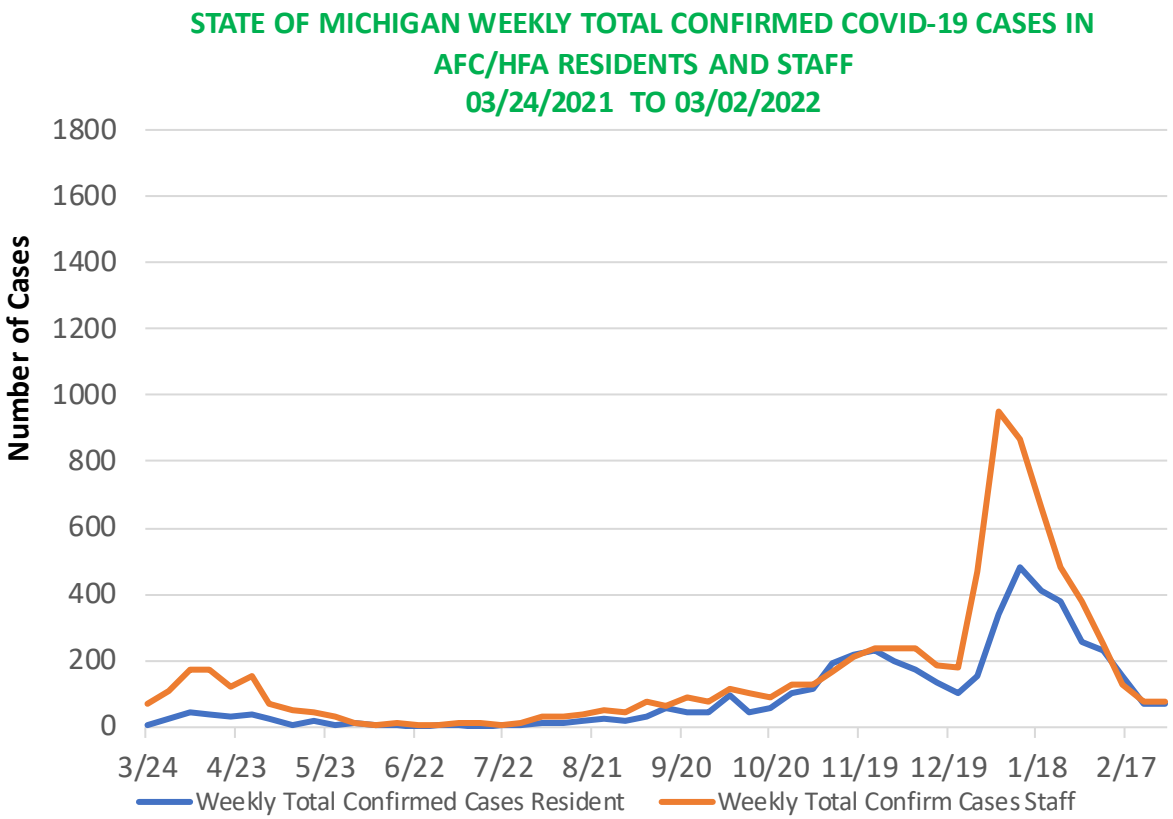


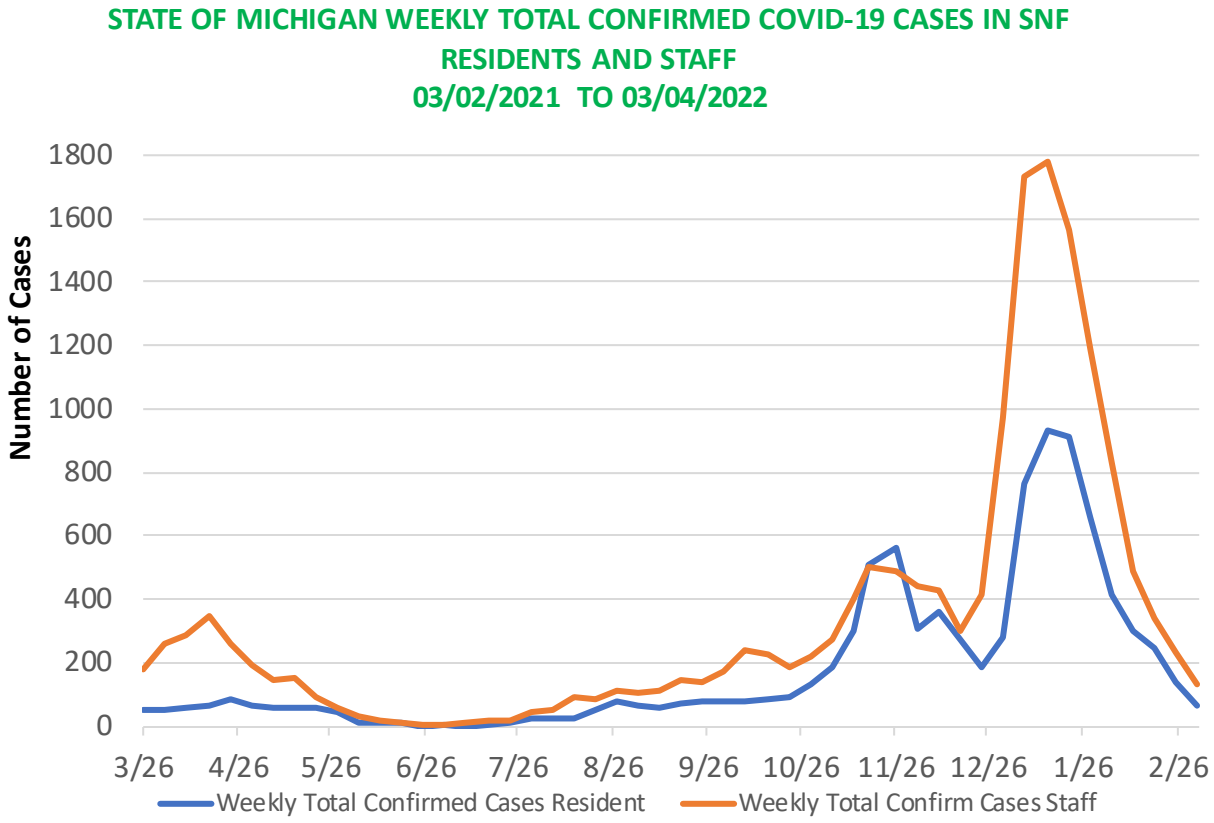




Sources: MDSS case data as of 2/28/2022 (data through 2/25/22), line charts use statewide age group population, map uses ISD enrolled populations from EOG mask tracker data.

Case Rates Continue to Decline in staff and residents in Long Term Care Facilities



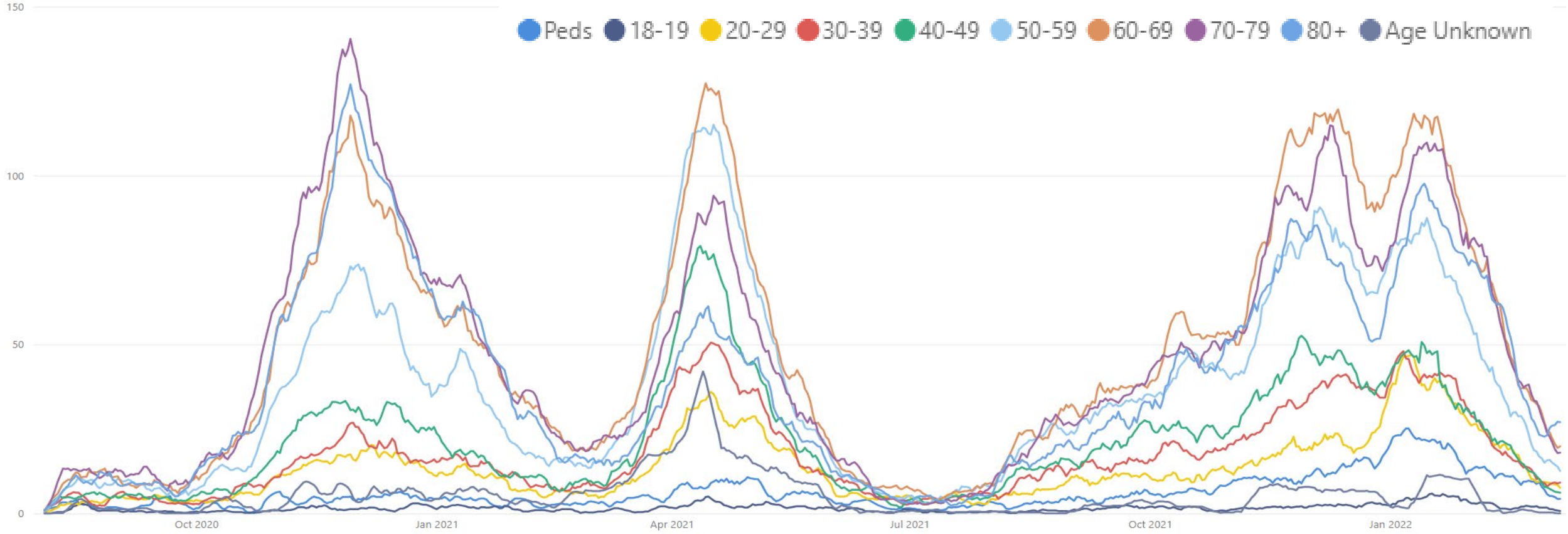


- Case counts in residents is trending downwards for SNF (55) but has plateaued for AFC/HFAs (64)
- Case counts in staff trending downwards in both AFC/HFA (73) and SNF (134)
- Cases within LTCF continue to be higher among staff than residents

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

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

Hospital Admissions Due to COVID -19 Continue to Decline

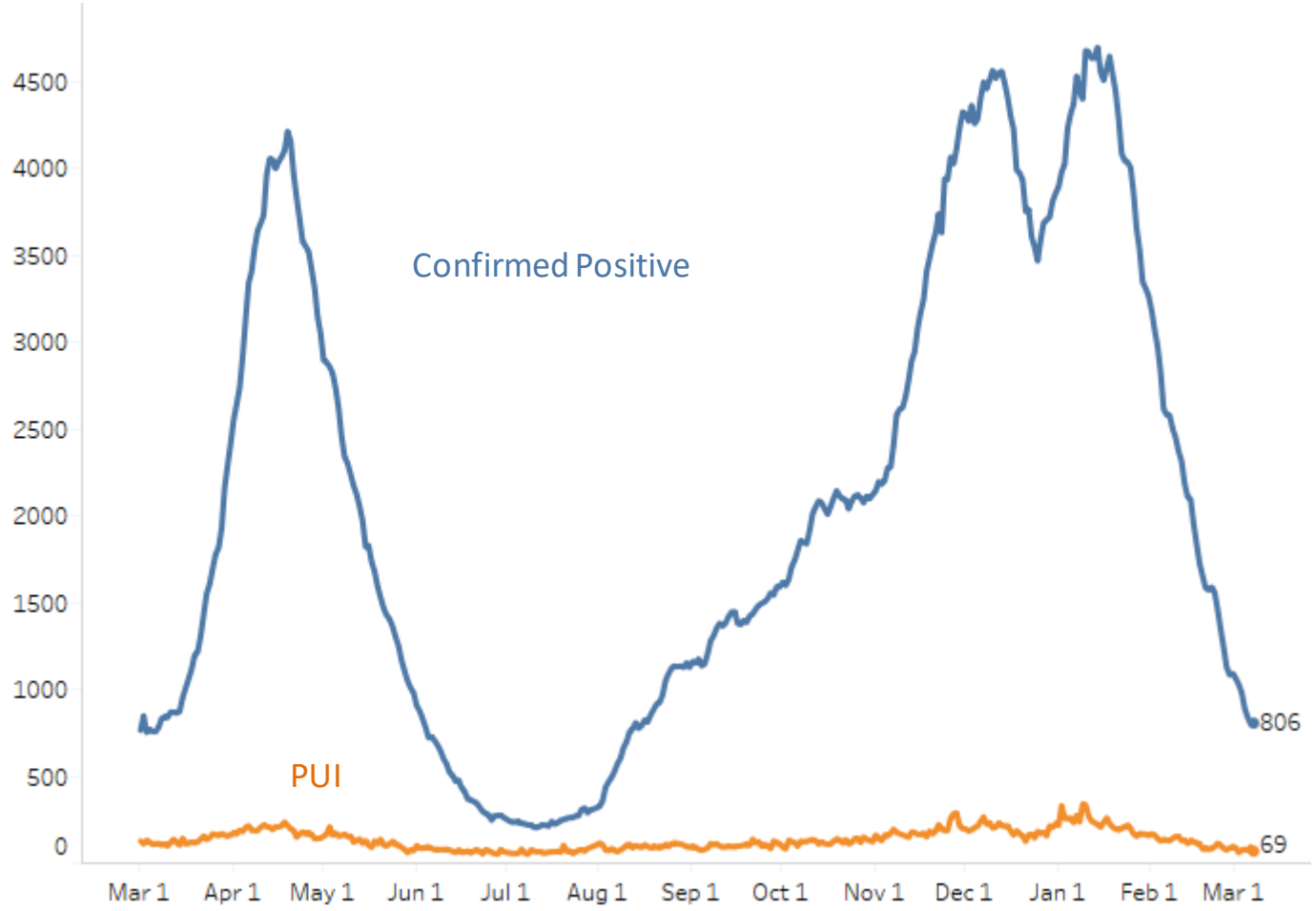


- Trends for daily average hospital admissions declined (-14%) since last week (vs. -29% prior week)
- Overall, most age groups saw declines this week
- Between 15 and 30 daily hospital admissions was seen for each of the age groups of 60-69, 70-79, and 80+

Source: CHECC & EM Resource

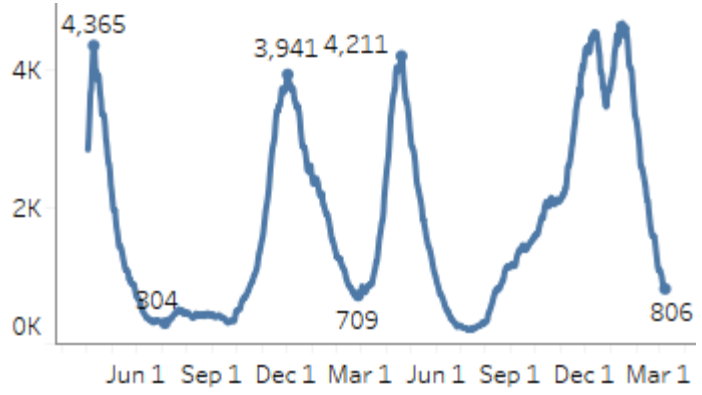
Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 3/1/2021 – 3/7/2022
Confirmed Positive & Persons Under Investigation (PUI)



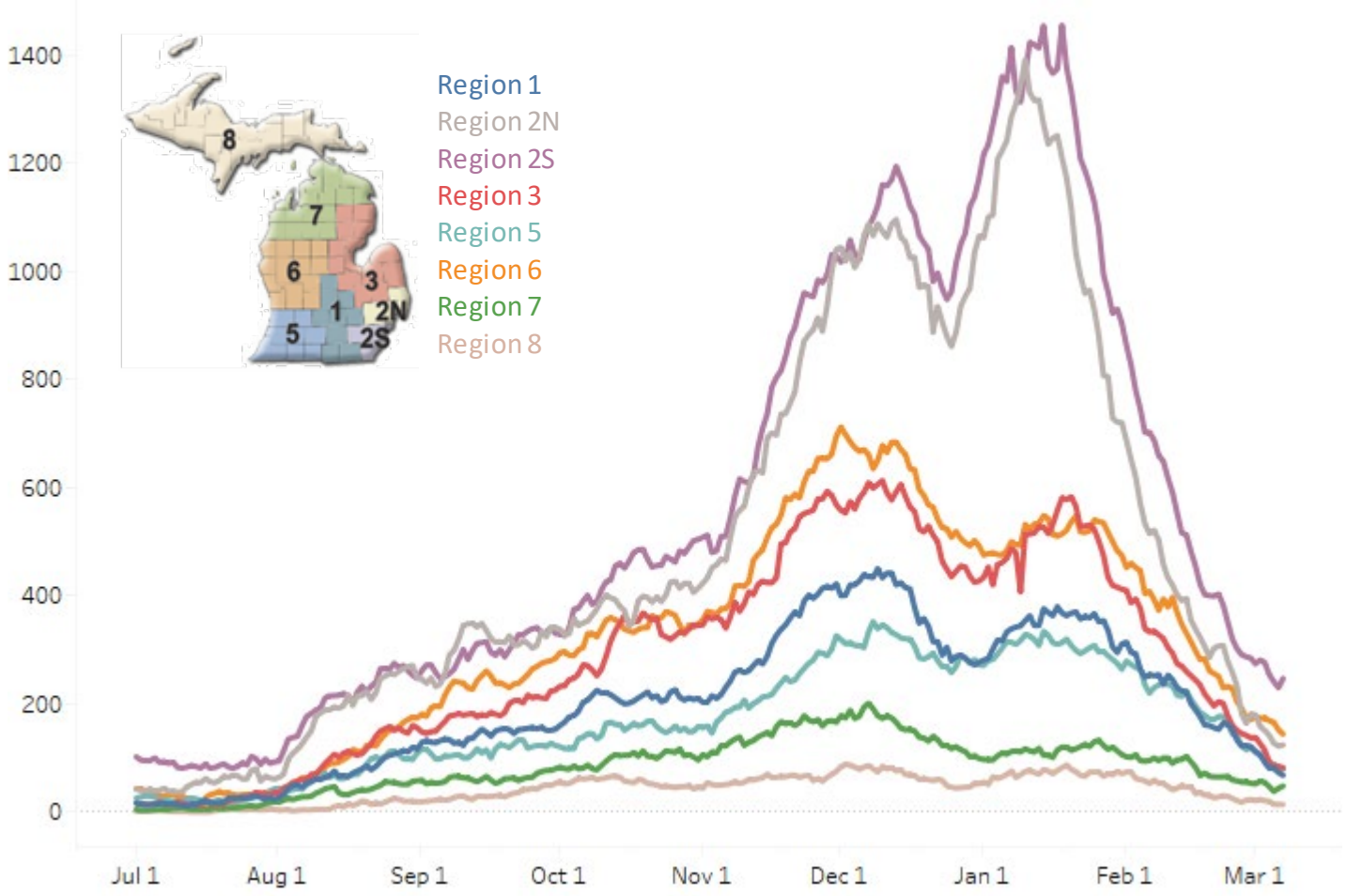
The COVID+ census in hospitals continues to decrease and is down 26% from last week (previous week was down 31%), The total COVID+ census in hospitals is below 1,000 patients for the first time since August 2021.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 3/7/2022
Confirmed Positive by Region



This week the COVID+ census has decreased in all regions.

All regions but region 2S are below 100/Million population hospitalized.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	68 (-44%)	63/M
Region 2N	124 (-31%)	56/M
Region 2S	247 (-13%)	111/M
Region 3	82 (-40%)	72/M
Region 5	79 (-34%)	83/M
Region 6	144 (-16%)	98/M
Region 7	48 (-9%)	96/M
Region 8	14 (-39%)	45/M

Vaccines

Protect against severe outcomes

Masks, Distancing & Ventilation

Prevent spread

Tests

Prevent spread

Treatment

Protect against severe outcomes

APPENDIX

Guiding Principles

To prioritize **equity** in each of the following objectives

01

Prevent death and severe outcomes

Prioritize uptake of vaccinations and booster doses.

Protect the most vulnerable

- Mitigate risks in congregate settings using all available tools.

Maximize early access to testing and therapeutics.

02

Protect health care capacity (from hospitals to first responders to LTFS)

Reduce community spread during a surge through all available tools.

Reduce severity of cases, need for ICU/ventilators through vaccines and therapeutics.

03

Keep vital infrastructure (schools, corrections) functioning safely, while planning for recovery

Establish a new normal at every phase of the pandemic.

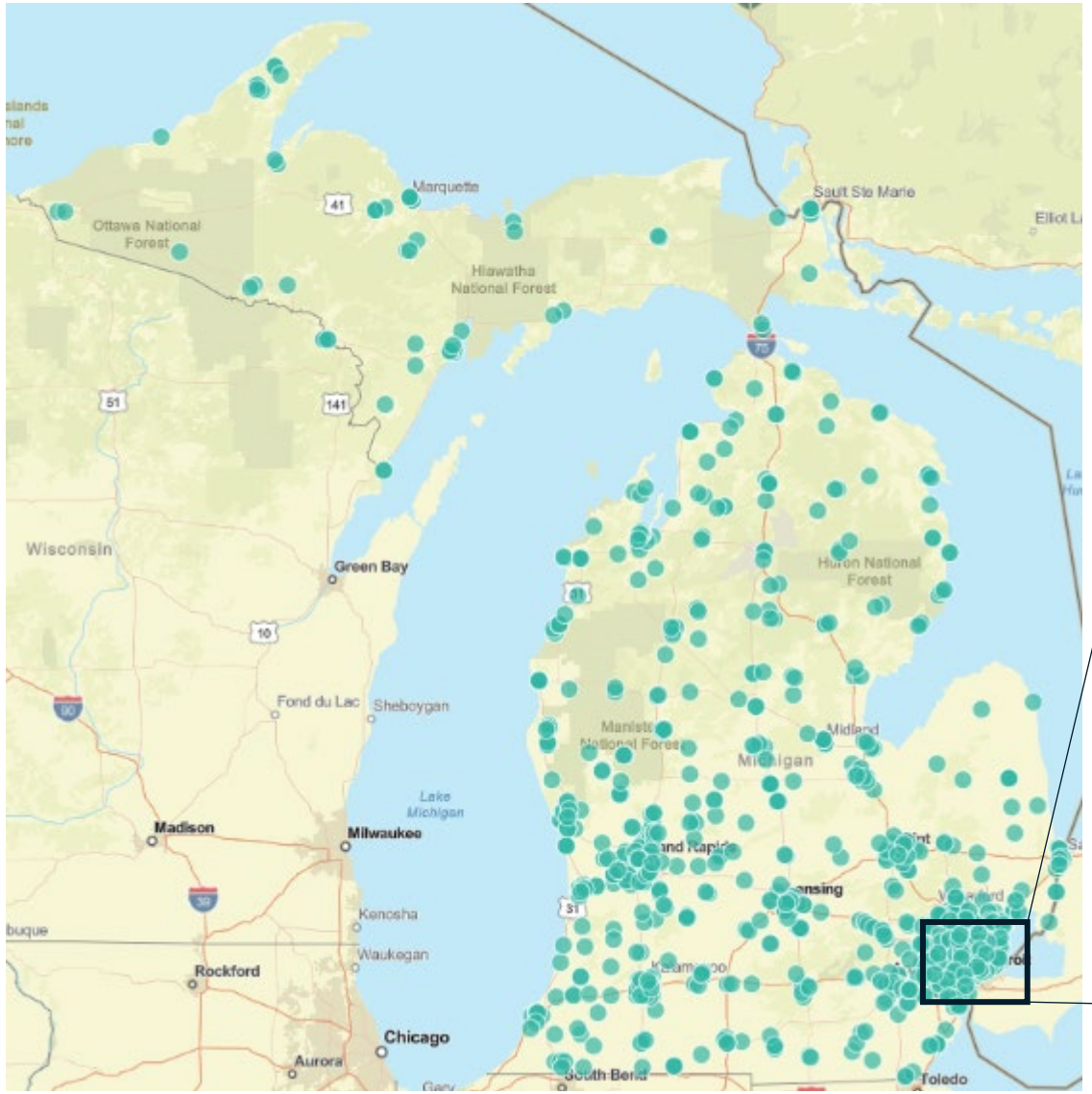
- Utilizing all available tools and the concept of "risk budget".

Provide tools to the public to protect themselves.

- Including OTC testing and instructions for isolation and contact tracing.

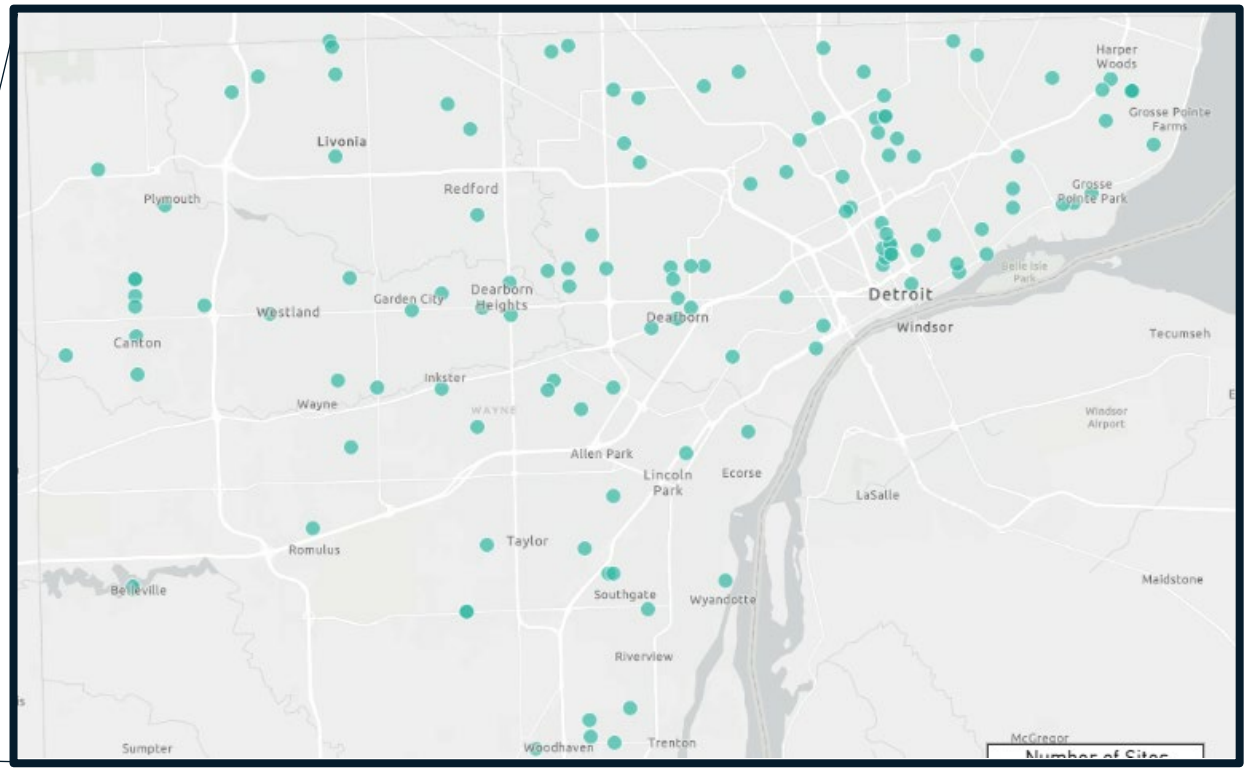
MDHHS
Michigan Department of Health & Human Services

Vaccines for Children (VFC) Program Providers Enrolled for COVID-19 Vaccine

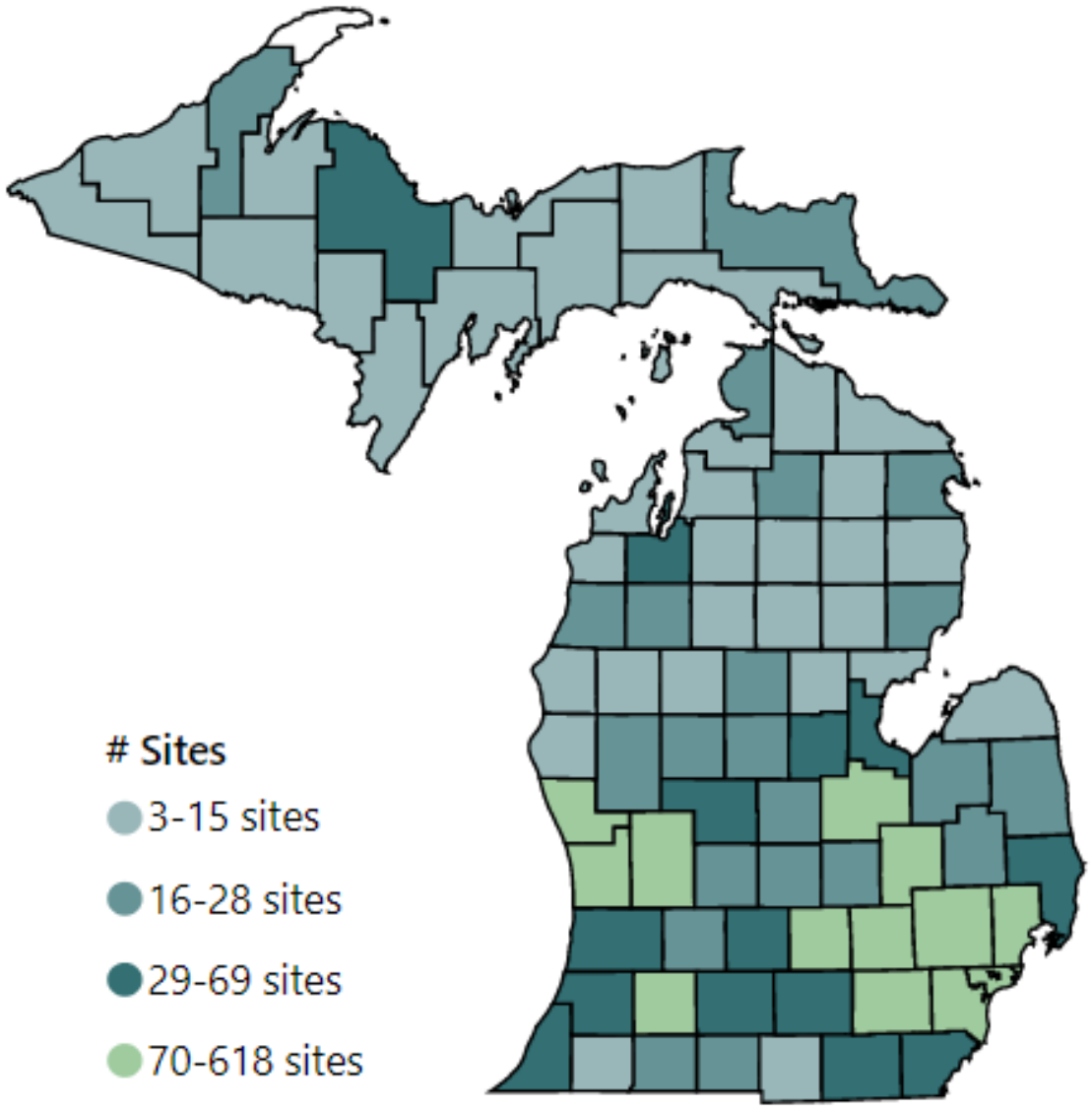


916 VFC Providers Enrolled to provide COVID-19 vaccine

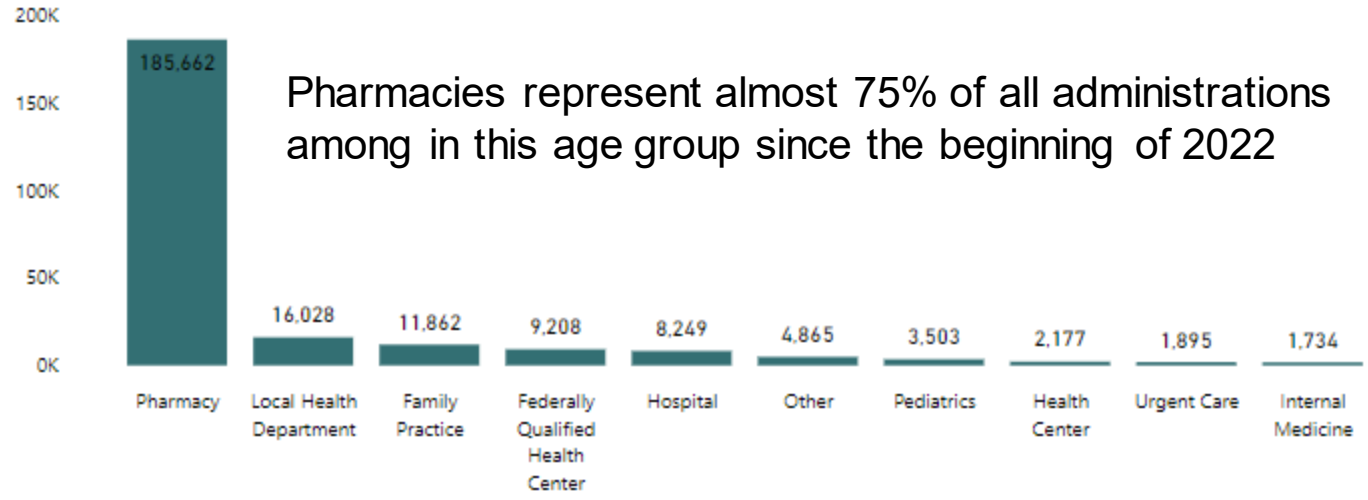
131 in the City of Detroit and Wayne County



Michigan Vaccine Provider Sites by County

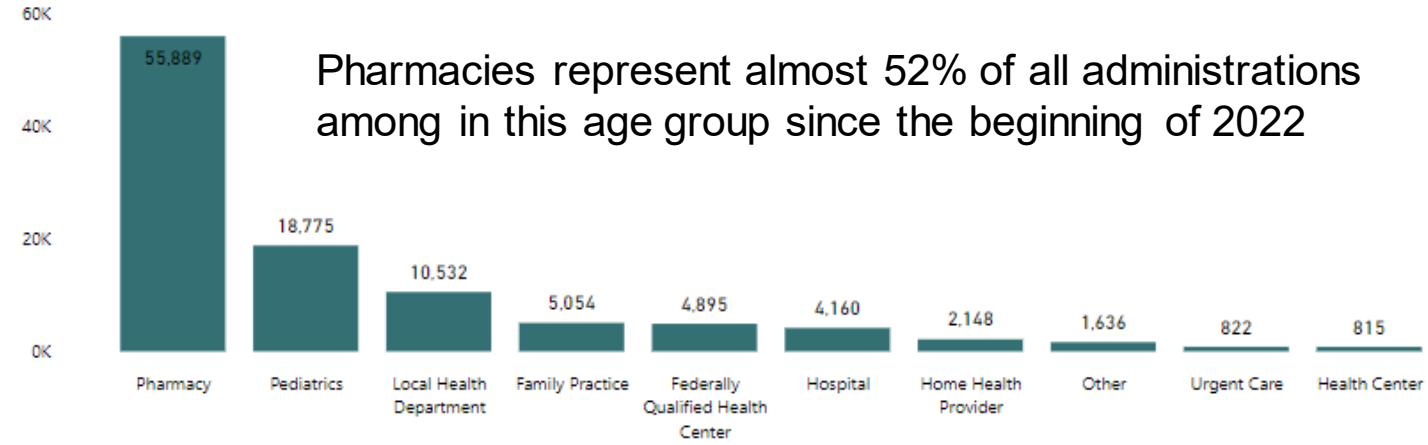


Doses Administered by Provider Type, Patients 12 and up, since 1/1/2022



Pharmacies represent almost 75% of all administrations among in this age group since the beginning of 2022

Doses Administered by Provider Type, Patients 5 to 11, since 1/1/2022



Pharmacies represent almost 52% of all administrations among in this age group since the beginning of 2022

Outpatient therapy now available for those with COVID-19. Supplies may be limited.

Eligibility guidelines ensure those with the highest risks have priority access to treatments.

Those at highest risk

Treatment window after symptoms appear:	Paxlovid PO 5 days	Sotrovimab IV 10 days	Remdesivir IV 7 days	Molnupiravir PO 5 days
• 75+ years old and not up to date* • Moderately or severely immunocompromised regardless of vaccine status	✓	✓	✓	✓ *If other therapies not available or appropriate*
• 65–74 years old and not up to date* with MI priority risk factor** • Pregnant and not up to date*	✓	✓	✓	✓ *If other therapies not available or appropriate*
• 65–74 years and not up to date* • Under 65 years old and not up to date* with MI priority risk factor**	✓	✓	✓	✓ *If other therapies not available or appropriate*
• 75+ years old and up to date* • 65–74 years old and up to date* with MI priority risk factor**	✓	*Not currently eligible*	*Not currently eligible*	✓ *If other therapies not available or appropriate*
• 65–74 years old and up to date* with CDC risk factors	*Not currently eligible*	*Not currently eligible*	*Not currently eligible*	✓
• 65–74 years old and up to date* • Younger than 65 years old and up to date* with CDC risk factors	*Not currently eligible*	*Not currently eligible*	*Not currently eligible*	✓

**Up to date means a person has received all recommended COVID-19 vaccines, including booster dose(s) when eligible (bit.ly/CDCStayUptoDate).*

***MI priority risk factors include:*
Obesity (Body Mass Index >35), chronic respiratory disease, pregnancy (note: in pregnancy, molnupiravir should not be used and Paxlovid and remdesivir should be used with caution when sotrovimab is unavailable), chronic kidney disease (special considerations with Paxlovid), cardiovascular disease, and diabetes.

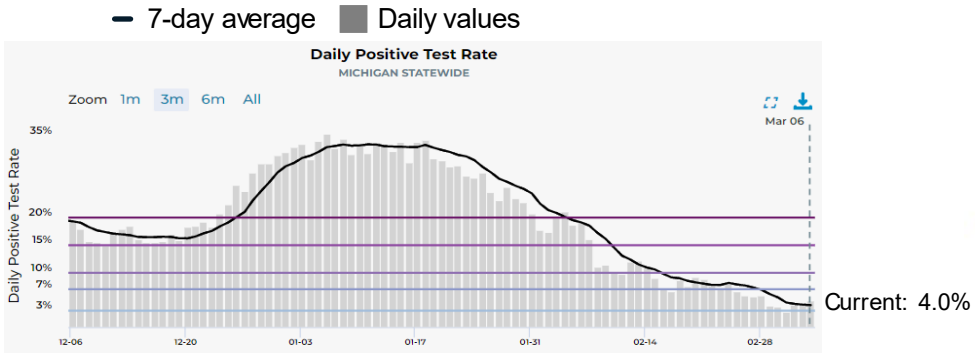
MDHHS
Michigan Department of Health & Human Services

Talk to your health care provider or visit Michigan.gov/COVIDtherapy to learn more.

Recent statewide trends

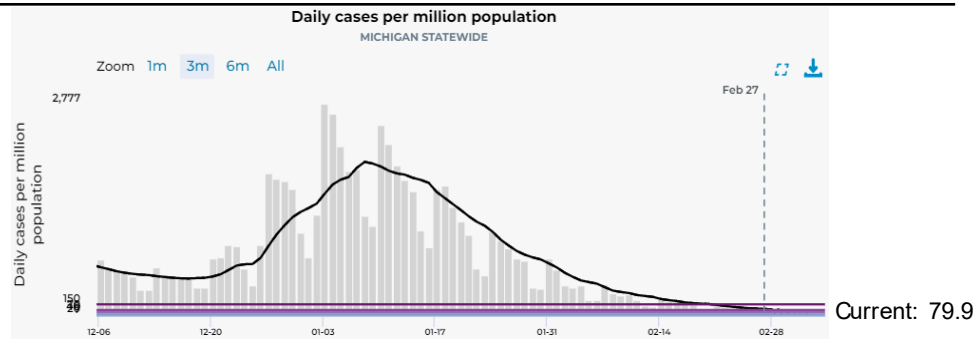
Statewide trends

Positivity, %



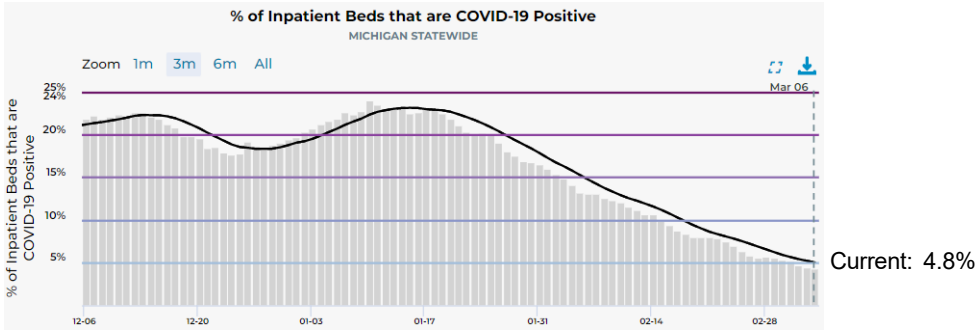
Current: 4.0%

Daily cases per million



Current: 79.9

Daily hospitalization rate, %

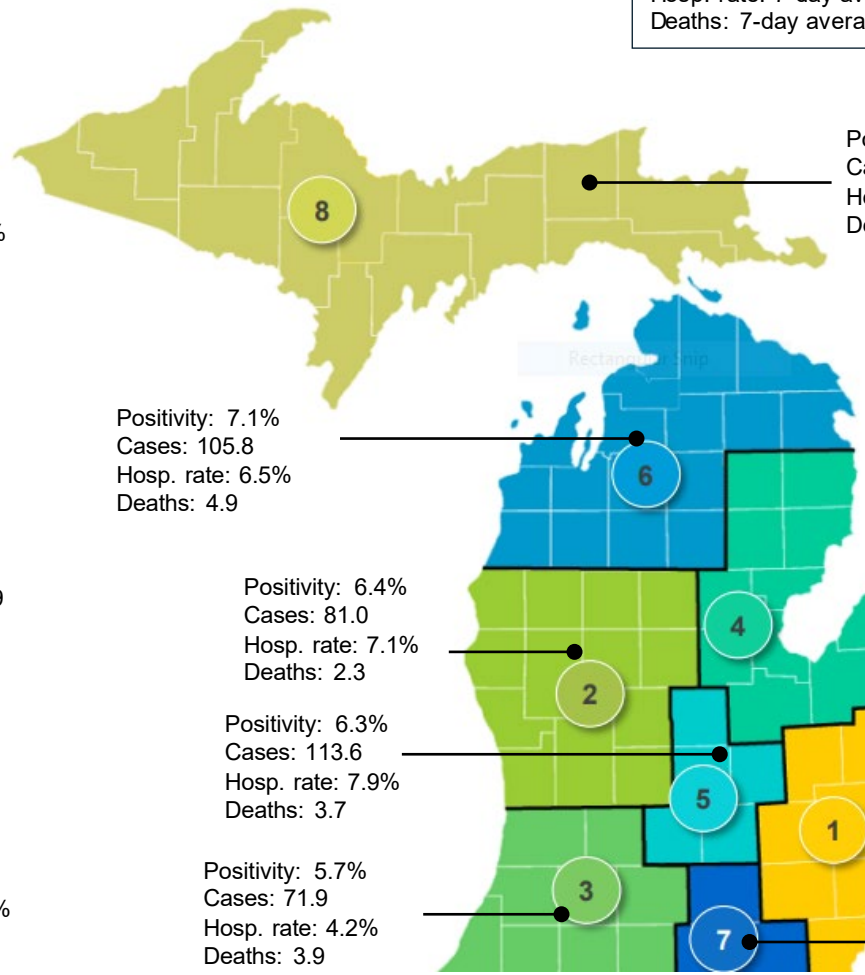


Current: 4.8%

Source: https://mistartmap.info/

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

Positivity: 7-day average positivity, %
Cases: 7-day average cases per million
Hosp. rate: 7-day average hospitalization rate, %
Deaths: 7-day average deaths per million



Positivity: 6.2%
Cases: 116.1
Hosp. rate: 3.8%
Deaths: 3.3

Positivity: 7.1%
Cases: 105.8
Hosp. rate: 6.5%
Deaths: 4.9

Positivity: 6.4%
Cases: 81.0
Hosp. rate: 7.1%
Deaths: 2.3

Positivity: 5.7%
Cases: 78.8
Hosp. rate: 4.2%
Deaths: 3.0

Positivity: 6.3%
Cases: 113.6
Hosp. rate: 7.9%
Deaths: 3.7

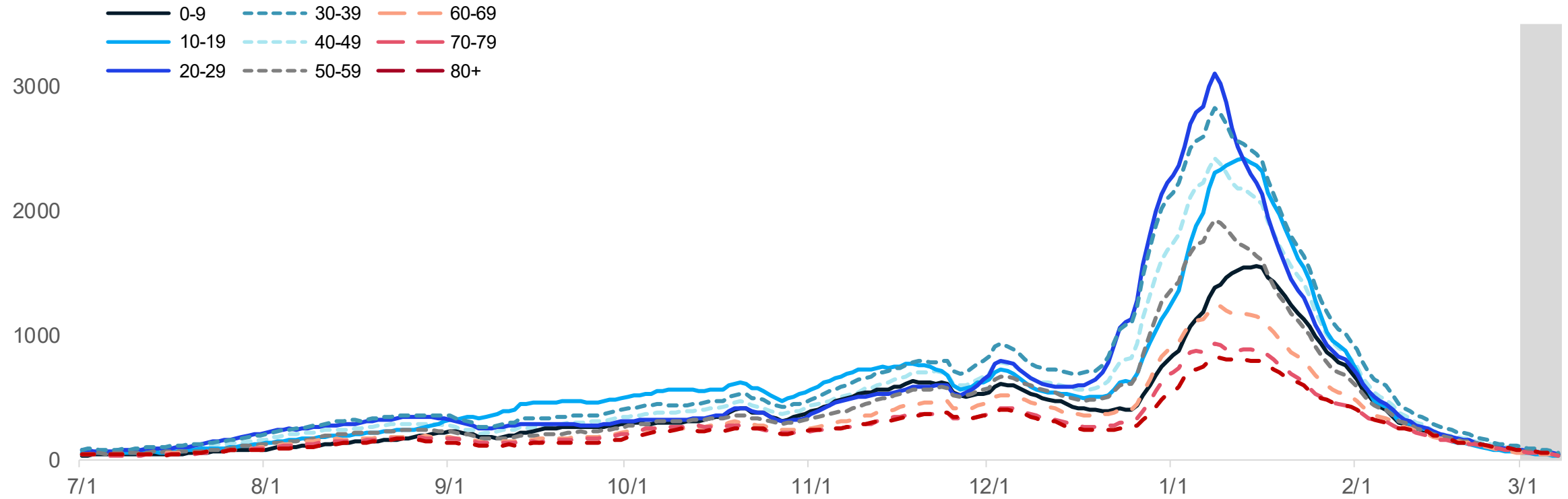
Positivity: 3.1%
Cases: 74.1
Hosp. rate: 3.9%
Deaths: 2.3

Positivity: 5.7%
Cases: 71.9
Hosp. rate: 4.2%
Deaths: 3.9

Positivity: 4.3%
Cases: 60.8
Hosp. rate: 4.8%
Deaths: 4.2

Case Rate Trends by Age Group

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

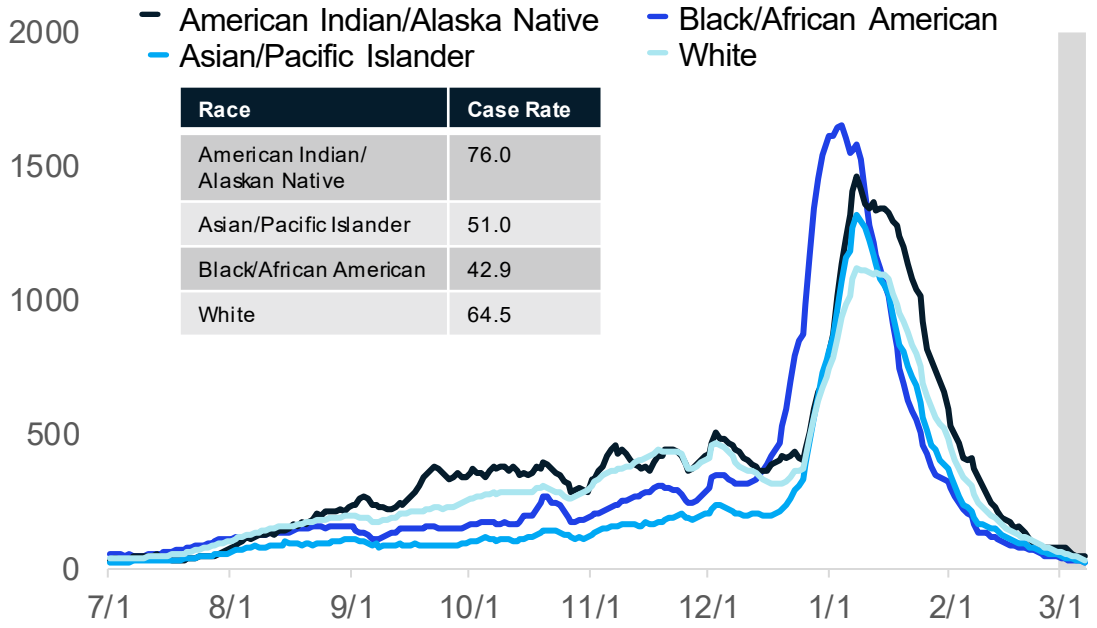


- Case rate trends for all age groups saw decreases over the past week
- Case rates by onset date for all age groups are between 66.3 and 110.9 cases per million (through 2/28)
- Case counts and case rates are highest for 30-39-year-olds this week, followed by 40-49, and 20-29

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

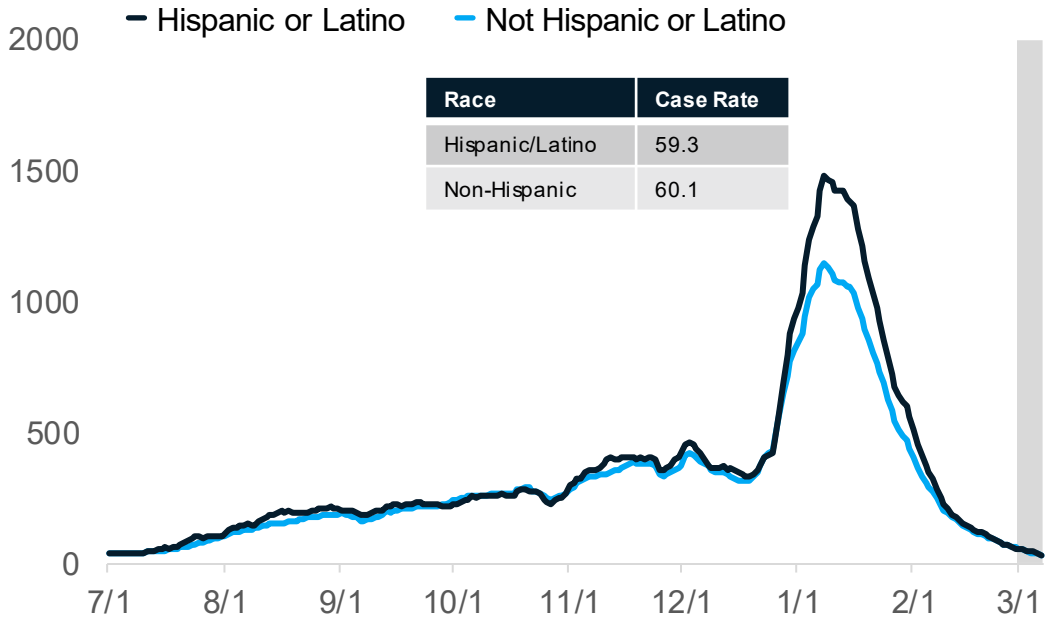
Case Rates by Reported Racial and Ethnic Group

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



Race	Case Rate
American Indian/ Alaskan Native	76.0
Asian/Pacific Islander	51.0
Black/African American	42.9
White	64.5

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



Race	Case Rate
Hispanic/Latino	59.3
Non-Hispanic	60.1

Updates since last week:

- Cases per million are decreasing for all reported racial and ethnic groups
- In the past 30 days, 23% (↓3%) of race data and 30% (↓4%) 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

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	3.9	2.8	-39% (-2)
12-17	0.4	0.6	-67% (-1)
18-19	0.7	2.7	-58% (-1)
20-29	7.7	5.6	-18% (-2)
30-39	9.1	7.5	+0% (+0)
40-49	6.3	5.3	-31% (-3)
50-59	**12.6**	9.3	-23% (-4)
60-69	**20.0**	**15.7**	-32% (-10)
70-79	**18.3**	**23.8**	-36% (-10)
80+	**27.3**	**65.9**	+19% (+4)
Total¶	**106.3**	**9.3**	**-21% (-28)**

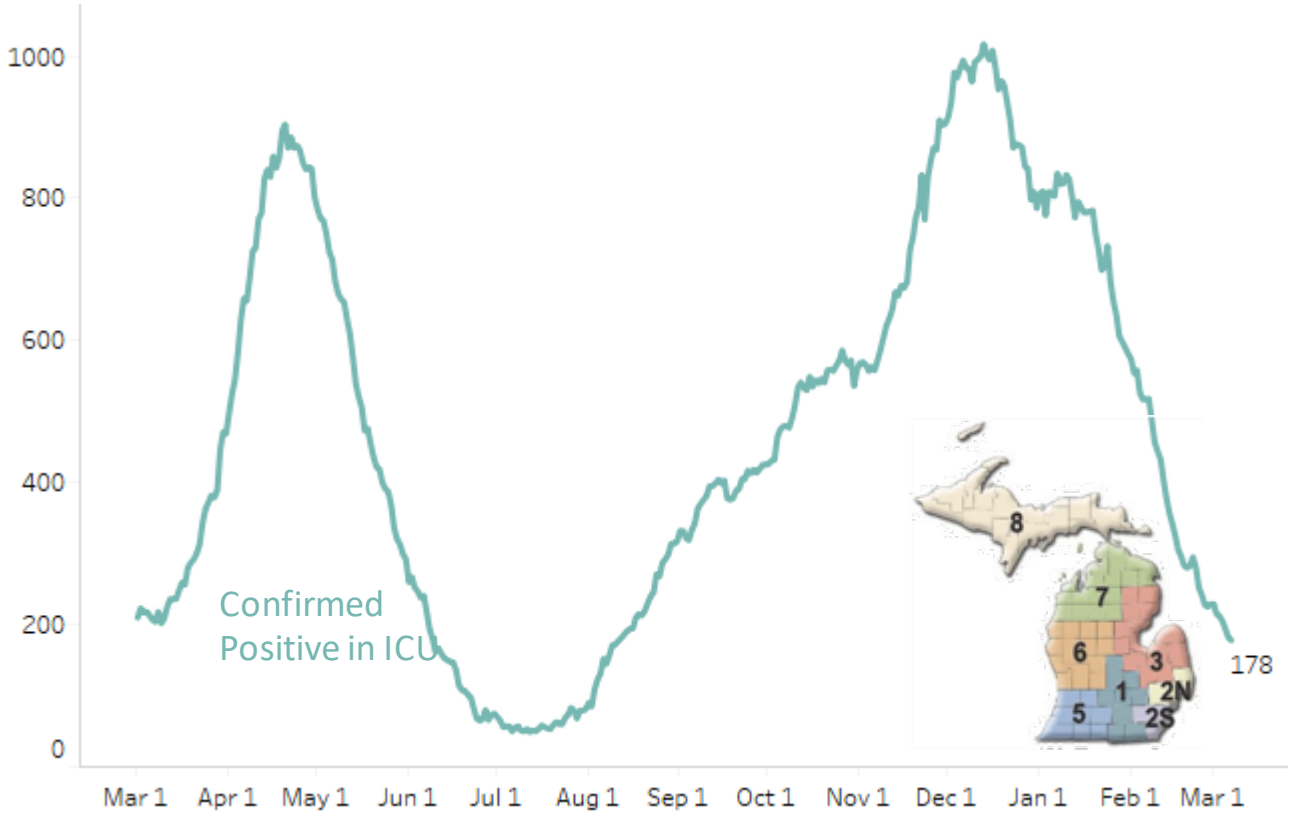
* Rate per 1 million residents; † Rolling 7-day average; ¶ Total may not reflect state due to missing age data
Note: Hospital Admission data reflects date data was submitted
Source: CHECC and EM Resource

- Through Mar 7, there were an average of 106 hospital admissions per day due to COVID-19; a decrease from last week (-21%, -28)
- Most age groups saw decreases this week
- The largest one-week count decrease was among those 60-69, and 70-79 years (-10 each)
- Average daily hospital admission count (27.3 hospital admissions per day) were highest among those 80+
- Average daily hospital admission rate (65.9 hospital admissions/million) were highest for those aged 80+
- Between 15 and 30 daily hospital admissions were seen for each of the age groups of 60-69, 70-79, and 80+

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

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 3/1/2021 – 3/7/2022
Confirmed Positive in ICUs



Overall, the census of COVID+ patients in ICUs has decreased by 22% from last week (previous week was down by 19%). All regions show decreasing trends in ICU census except Region 7, which has increased by 2 patients overall.

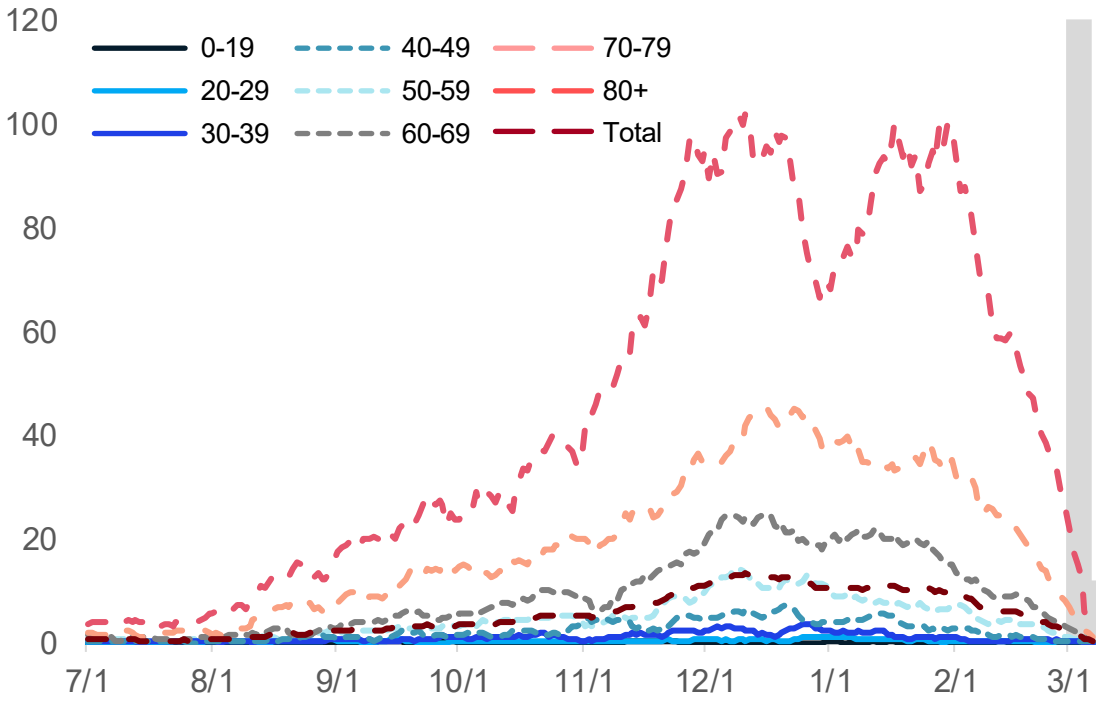
All regions have ICU occupancy below 85%. All regions have 15% or fewer of ICU beds filled with COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	14 (-22%)	71%	7%
Region 2N	21 (-25%)	69%	4%
Region 2S	64 (-9%)	76%	9%
Region 3	20 (-46%)	81%	7%
Region 5	11 (-39%)	55%	6%
Region 6	30 (-19%)	71%	12%
Region 7	17 (13%)	70%	13%
Region 8	1 (-83%)	47%	2%

Statewide Hospitalization Trends: Pediatric COVID+ Census

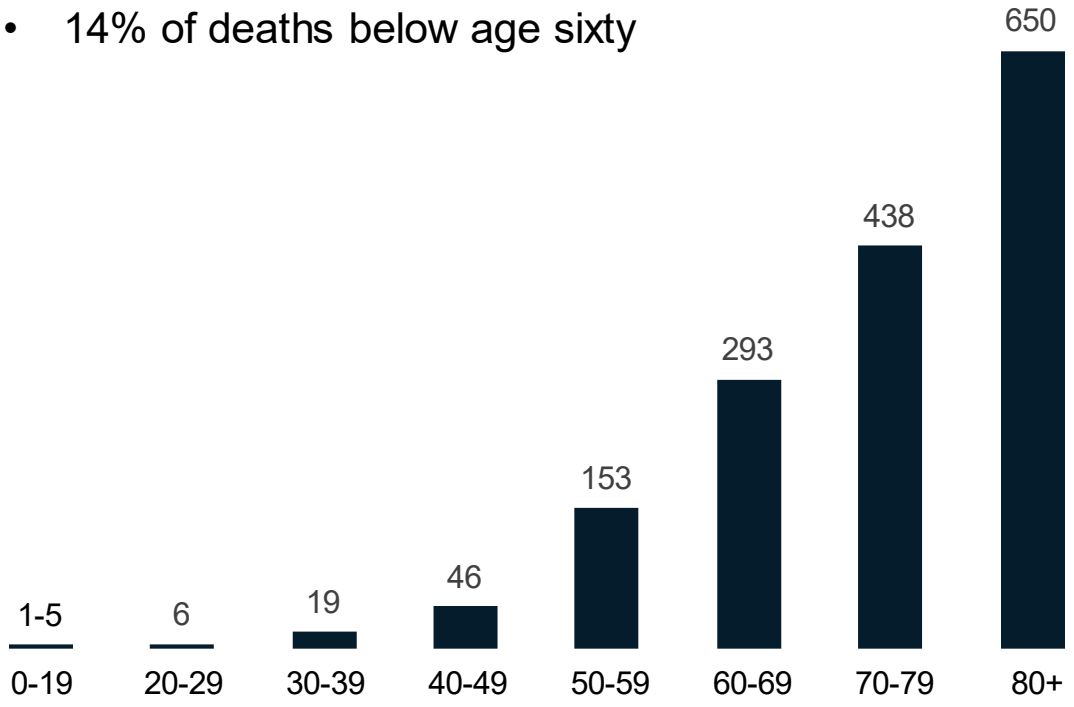
Average and total new deaths, by age group

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 2/28/2022)

- 14% of deaths below age sixty

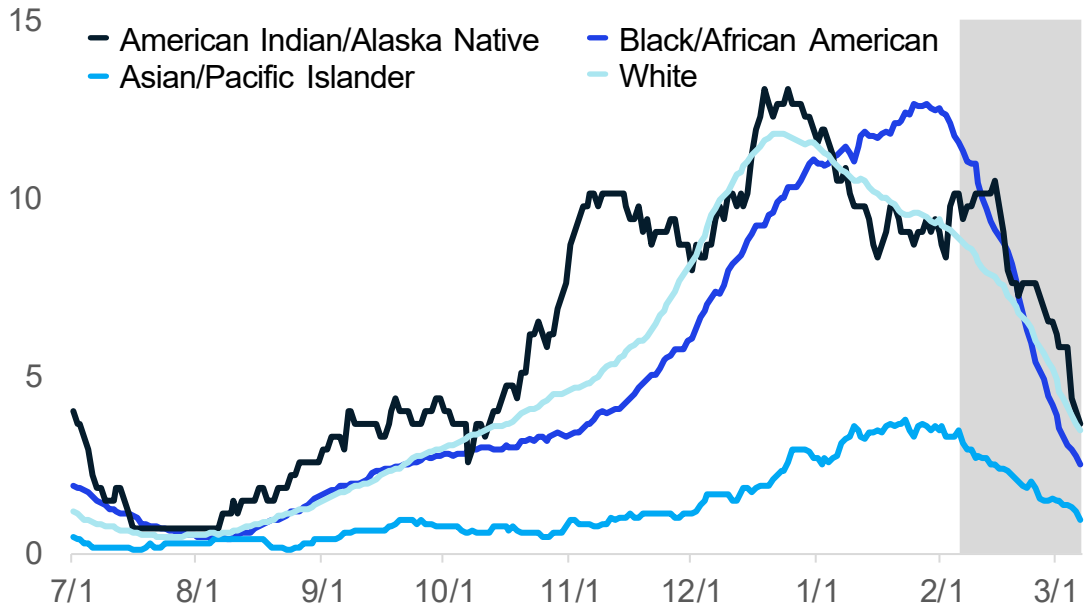


- Through 2/28, the 7-day avg. death rate is more than 26 daily deaths per million people for those over the age of 80
- In the past 30 days, there were between 1 and 5 deaths among confirmed and probable COVID-19 cases under the age of 20
- 30-day proportion of deaths among those under 60 years of age is 14%

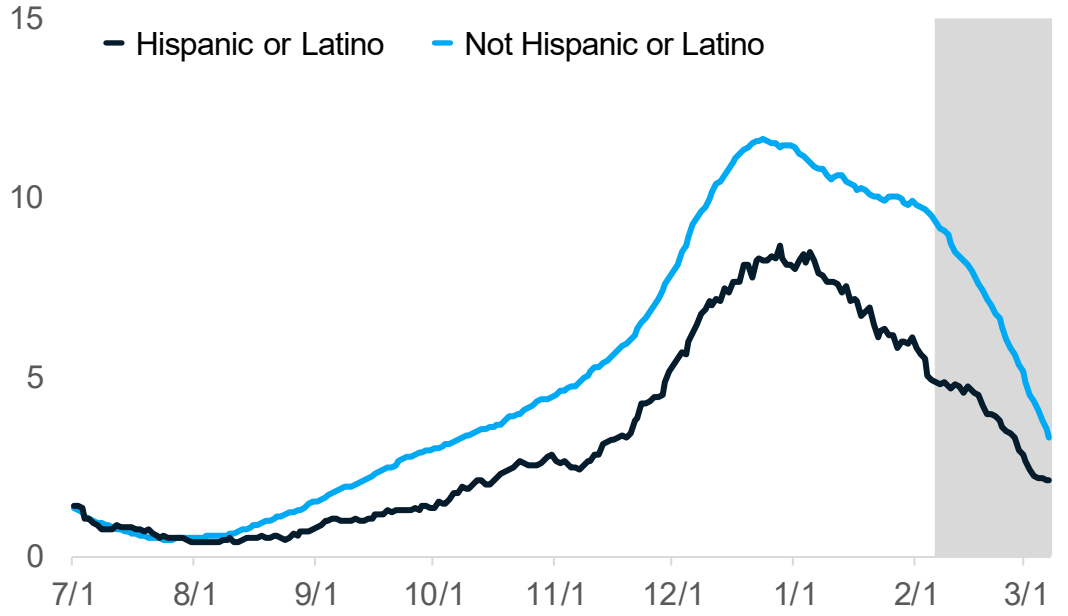
Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.
Source: MDHHS – Michigan Disease Surveillance System (MDSS)

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

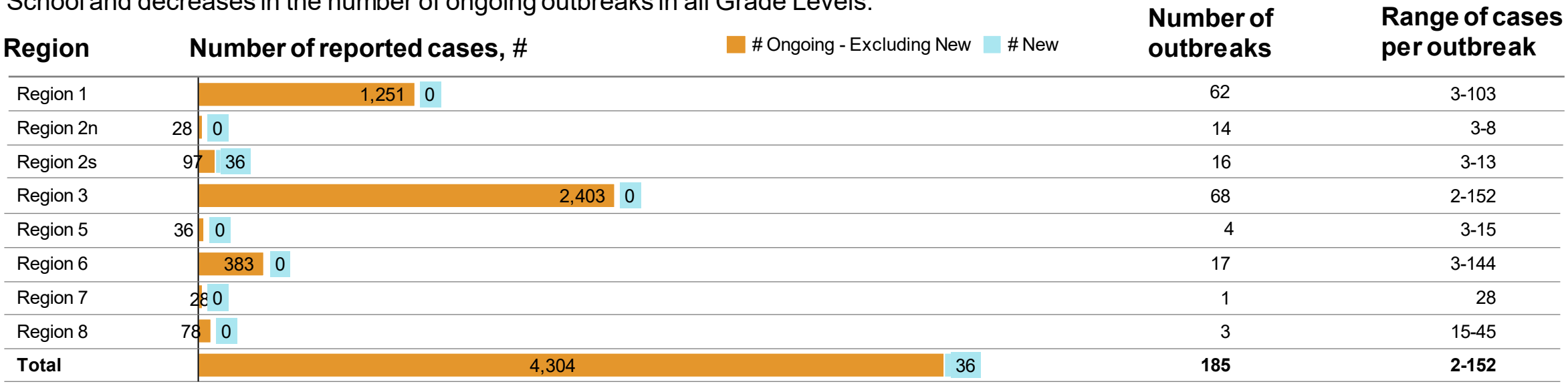


- Deaths are lagging indicator of other metrics
- Currently, American Indian/Alaska Natives have the highest death rate (6.5 deaths/million)

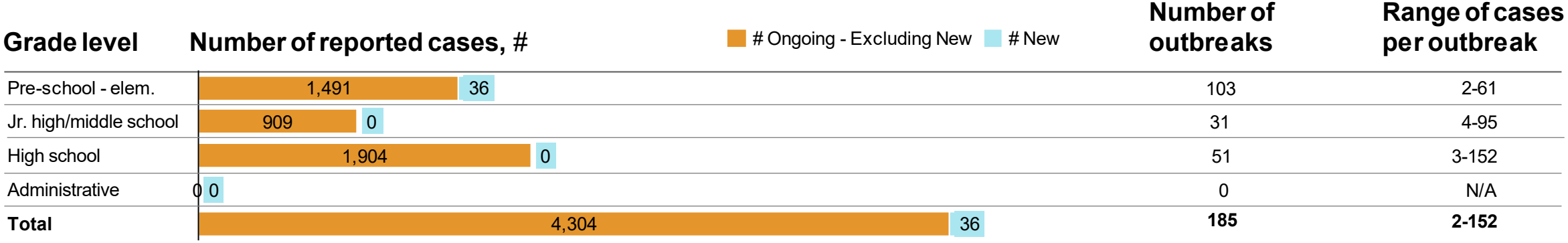
Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.
Source: MDHHS – Michigan Disease Surveillance System

Vital Infrastructure: K-12 school clusters and outbreaks, week ending March 3

Number of reported outbreaks/clusters decreased since last week (321 to 185), with the only new reported outbreaks in Pre-K-Elementary School and decreases in the number of ongoing outbreaks in all Grade Levels.



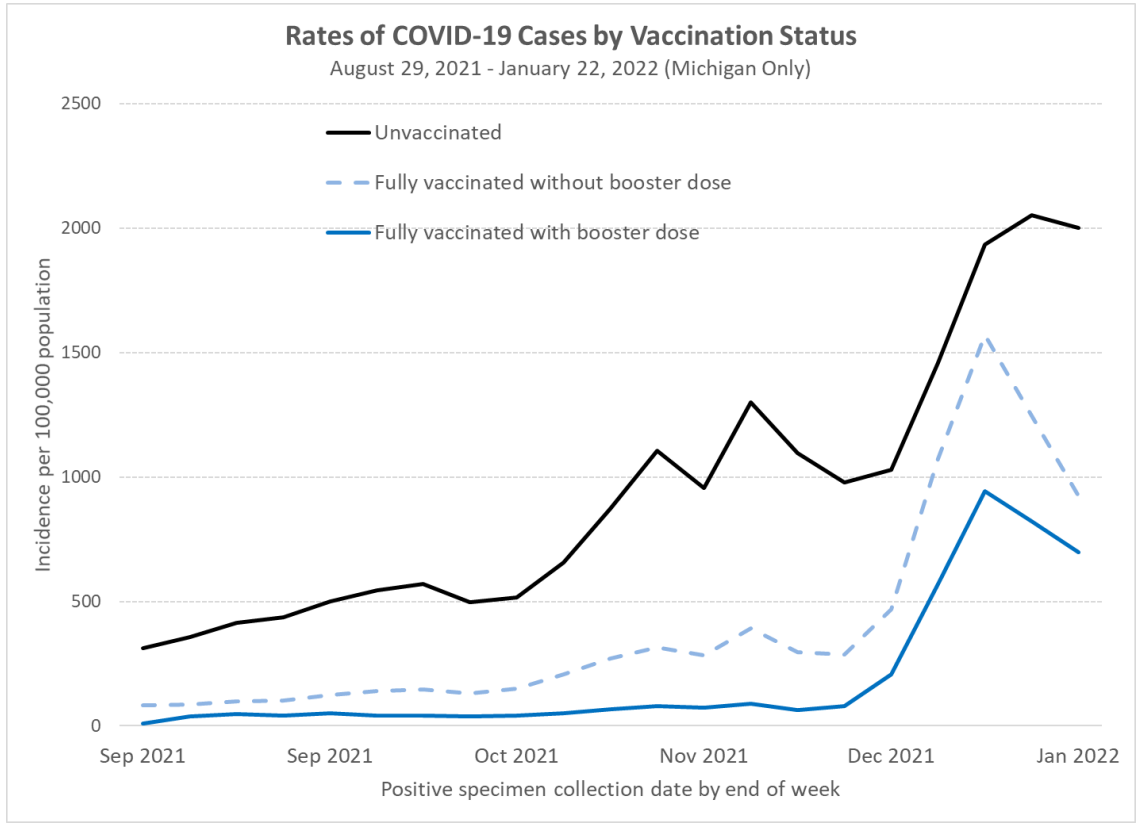
Region	Number of reported cases, #		Number of outbreaks	Range of cases per outbreak
Region 1	1,251	0	62	3-103
Region 2n	28	0	14	3-8
Region 2s	97	36	16	3-13
Region 3	2,403	0	68	2-152
Region 5	36	0	4	3-15
Region 6	383	0	17	3-144
Region 7	28	0	1	28
Region 8	78	0	3	15-45
Total	4,304	36	**185**	**2-152**

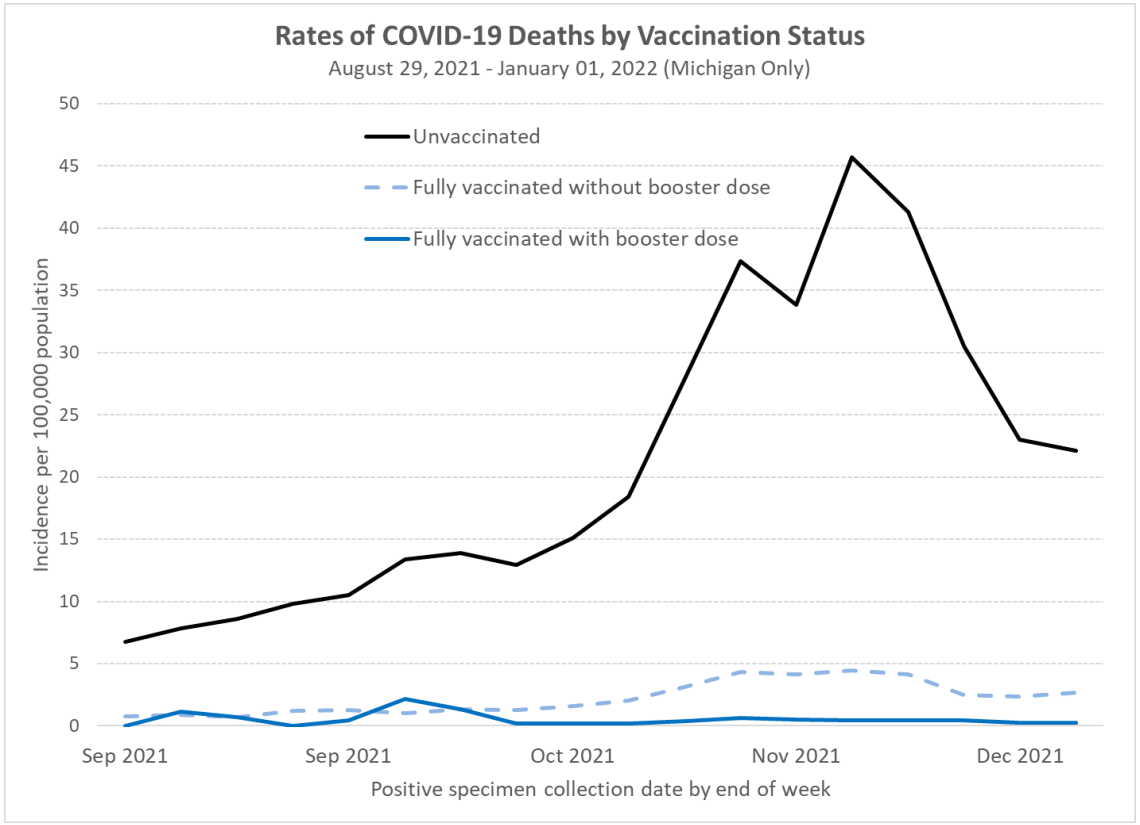


Grade level	Number of reported cases, #		Number of outbreaks	Range of cases per outbreak
Pre-school - elem.	1,491	36	103	2-61
Jr. high/middle school	909	0	31	4-95
High school	1,904	0	51	3-152
Administrative	0	0	0	N/A
Total	4,304	36	**185**	**2-152**

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

Michigan Age-Standardized Rates of COVID-19 Cases and Deaths by Vaccination + Booster Status





In December, unvaccinated adults aged 18 years and older had:

4.9 X
Risk of Testing Positive for COVID-19

AND

88.5 X
Risk of Dying from COVID-19

compared to fully vaccinated adults with booster doses

Footnotes: Incidence rates were age-standardized using the 2000 U.S. Census standard population; and rates are not adjusted for time since vaccination, underlying conditions, or other demographic factors besides age. Incidence rate ratios for the past one month were calculated by dividing the average weekly incidence rates among unvaccinated people by that among fully vaccinated people.

Cumulative COVID-19 Cases by Vaccination Status, Michigan, 1/15/21–2/11/22

Fully Vaccinated People (5,529,781)		
Cases	**Hospitalization**	**Deaths**
Percent of Cases In People Not Fully Vaccinated (1,202,306 / 1,628,439) **73.8%**	Percent of Hospitalizations In People Not Fully Vaccinated (26,924 / 32,323) **83.3%**	Percent of Deaths In People Not Fully Vaccinated (14,133 / 17,573) **80.4%**
1,202,306 Total Cases Not Fully Vaccinated	**26,924** Total Hospitalized Not Fully Vaccinated	**14,133** Total Deaths Not Fully Vaccinated
Total Breakthrough Cases **426,133**	Total Breakthrough Hospitalizations **5,399**	Total Breakthrough Deaths **3,440**
7.71% Percent of Fully Vaccinated People who Developed COVID-19 (389,840 / 5,529,781)	**0.098%** Percent of Fully Vaccinated People Who Were Hospitalized for COVID-19 (5,399 / 5,529,781)	**0.062%** Percent of Fully Vaccinated People Who Died of COVID-19 (3,440 / 5,529,781)
26.2% Percent of Cases Who Were Fully Vaccinated (426,133 / 1,628,439)	**16.7%** Percent of Hospitalizations Who Were Fully Vaccinated (5,399 / 32,323)	**19.6%** Percent of Deaths Who Were Fully Vaccinated (3,440 / 17,573)
Total Cases: **1,628,439**	Total Hospitalizations: **32,323**	Total Deaths: **17,573**

Michigan Disease Surveillance System may underestimate the frequency of COVID-19 hospitalizations:
- Case investigation and follow-up is more difficult for individuals who get hospitalized (e.g., they are too ill to speak to investigators, don't answer their phone, or otherwise).
- These hospitalizations include individuals who are hospitalized for issues other than COVID19 (the same as breakthrough COVID-19).
- Individuals who get hospitalization will lag after infection and may occur after case investigation.