MI COVID RESPONSE DATA AND MODELING UPDATE

January 24, 2023

Epidemiologic Surveillance: Key Messages

The number of reported cases are decreasing in many parts globally and in the United States

- Case rates globally and in Europe are decreasing
- Within the U.S., case rates decreased 23.9% over the past week
- Most Midwestern states (Region 5) are showing signs of decreases

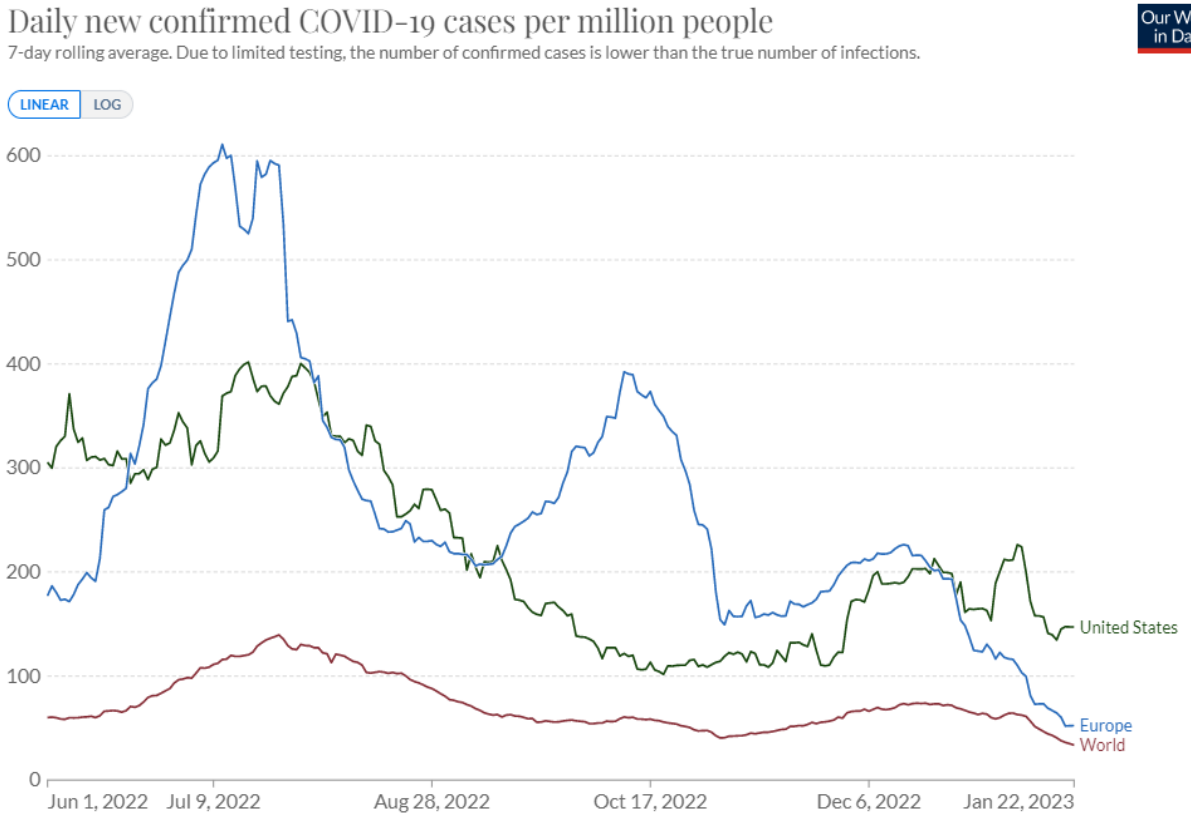
COVID spread in Michigan is slowly declining

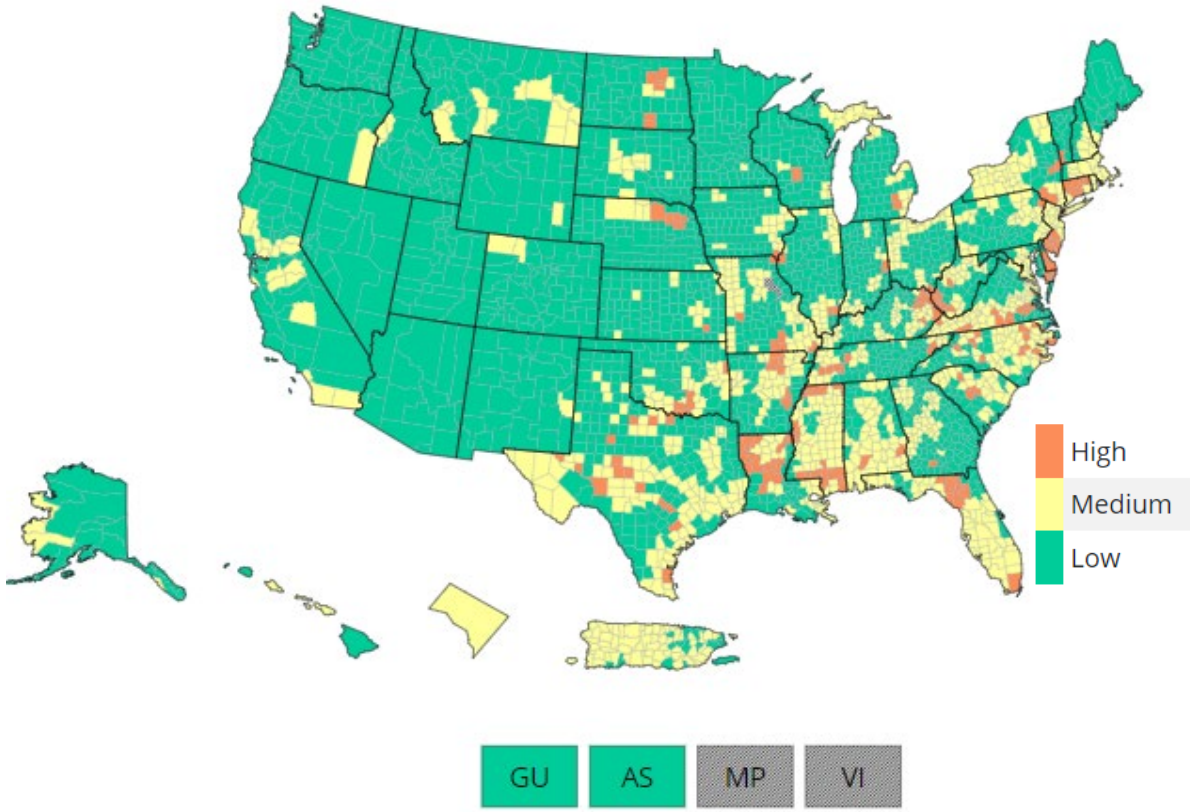
- As of January 19, 22% of Michigan counties are at medium or high COVID-19 community levels
  - Two Michigan counties are classified as High this week according to CDC's Community Levels (2%). However, these 2 counties were elevated due to a backlog of cases reported to the CDC and do not reflect the current burden or reported cases with these 2 counties.
  - Another 17 Michigan counties are currently at Medium level (20%).
  - Together, this represents 52% of the population.
- The R_t for Michigan is just below 1, indicating reported COVID cases are slowly decreasing
- In the U.S. and Michigan, the proportion of specimens sequenced and identified as XBB.1.5 or one of the BA.5 sublineages are the most prevalent this past week
- 65% of wastewater SWEEP sites have reported levels that are 20% are higher than baseline threshold levels this week which is roughly plateaued from 61% reported last week

COVID-19 hospital metrics in Michigan are improving

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

Global and National Trends





Globally, 668,917,699 cases and 6,739,923 deaths (Data* through 1/23/2023)

- Reported case rates are generally declining globally and within the United States following the holiday wave

United States: Reported cases (7-day average) have decreased 23.9% since the prior week¶

- U.S. case rate is 100.1 cases/100,000 in last 7 days (last week: 131.6 cases per/100,000)

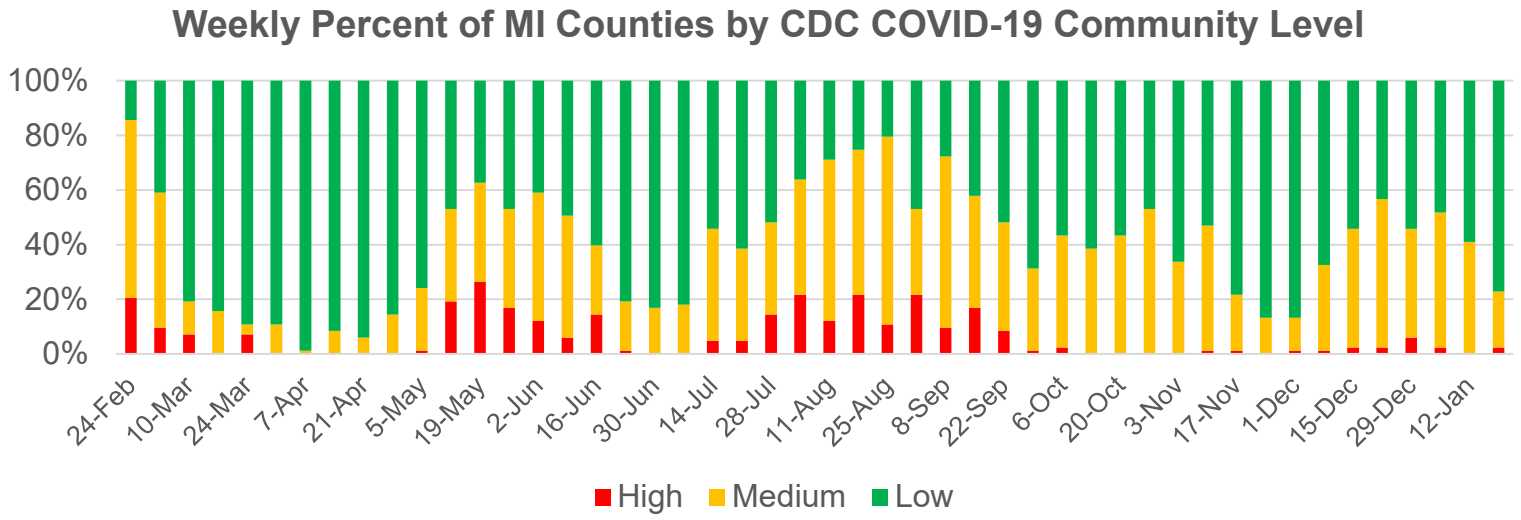
Region 5 (Midwest) states are decreasing

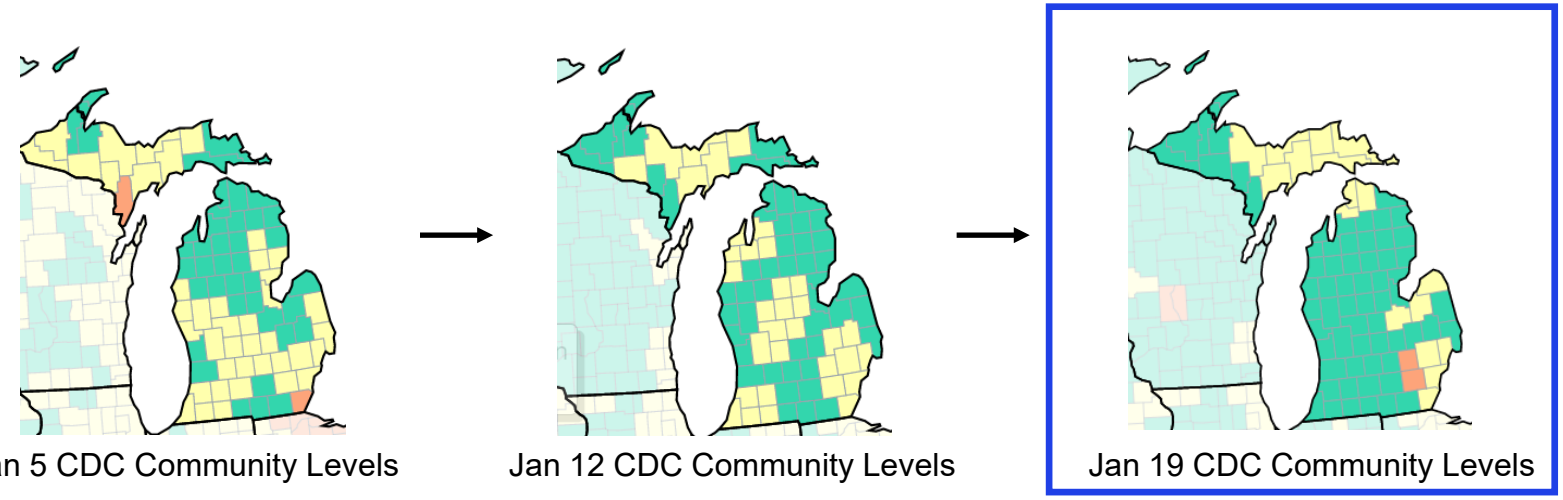
- Michigan and Ohio have the highest case rates of states *in Region 5* (1/18/2023)

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

Michigan Trends of COVID-19 Community Levels

- As of Jan 19, 2 (2%) Michigan counties are at high COVID-19 community level and another 17 Michigan counties are currently at Medium level (20%)
- The proportion of Michigan counties at medium and high is lower than last week; the weekly number of counties at high has been consistently low since the end of September
- Current number of counties at high and medium are declining since end of December





Jan 5 CDC Community Levels

Jan 12 CDC Community Levels

Jan 19 CDC Community Levels

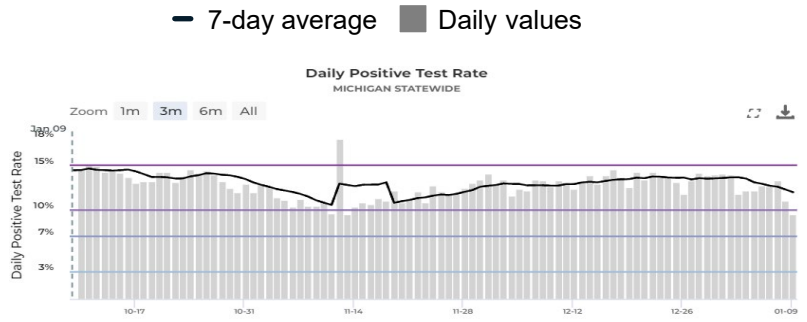
This metric uses three indicators for categorization: (1) new COVID-19 cases per 100,000 population in the last 7 days lagged 1 day behind the date the COVID-19 Community Level is calculated; (2) new COVID-19 hospital admissions per 100,000 population in the last 7 days; and (3) percent of staffed inpatient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

Source: CDC COVID-19 Community Levels https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels

Recent statewide COVID trends are slightly decreasing

Statewide trends

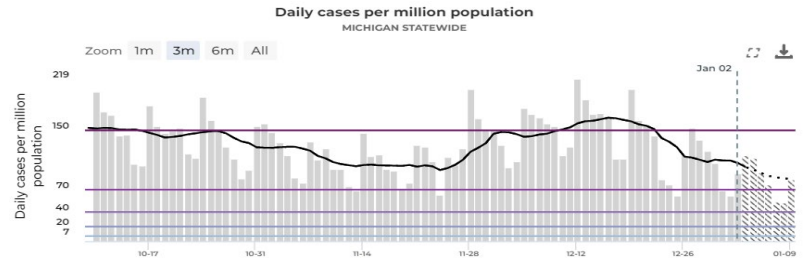
Positivity, %



Current: 10.3%

Last Week: 12.0%

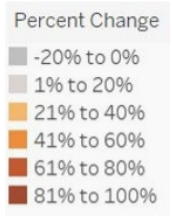
Daily cases per million

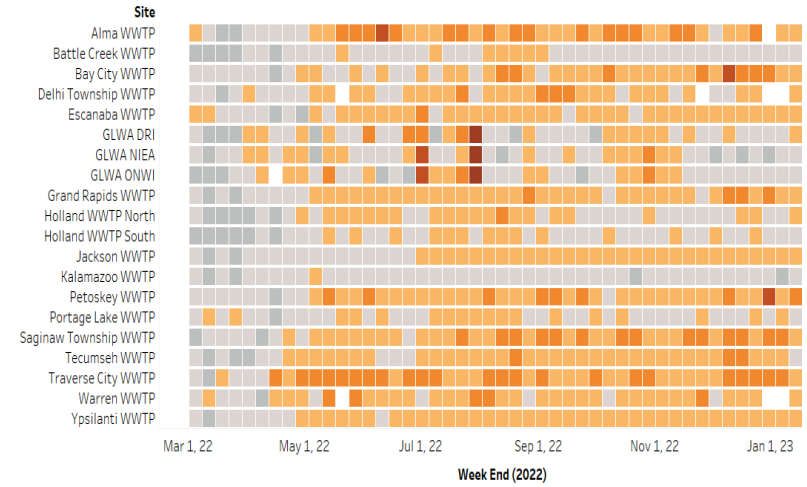


Current: 81.9

Last Week: 100.3

Wastewater





Current: 65% of sites are above 20% baseline threshold

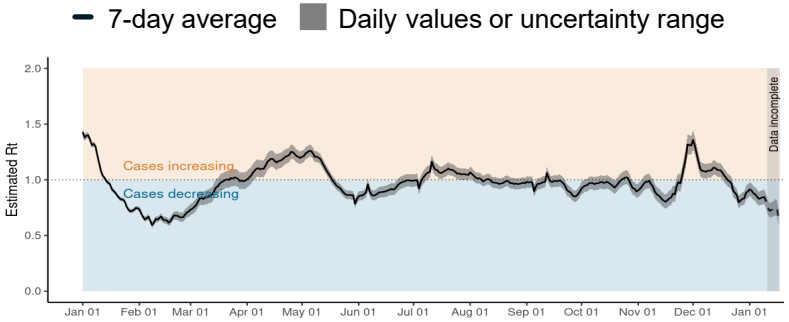
Last Week: 61% of sites are above 20% baseline threshold

- Test percent positivity is slightly down compared to last week
- Case rates have decreased since last week, and general trends the past several weeks is a slight decline
- 5 counties are currently showing increases in cases and an additional 8 reported an elevated incidence plateau in case rates (via mistartmap.info as of 1/12/23, data through 1/2/23)
- 65% (13/20) of wastewater sentinel sites have reported levels that are 20% or higher than baseline threshold levels this week

Recent statewide COVID trends are slightly declining

Statewide trends

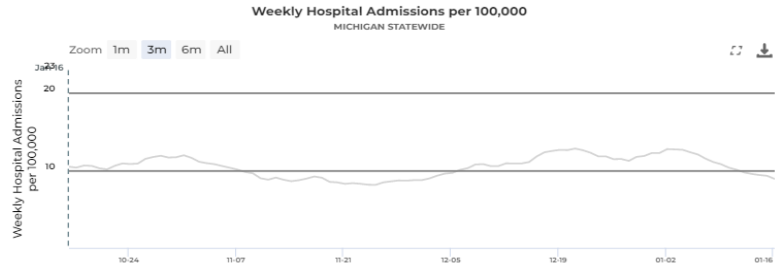
Reproductive Number, R_t



Current: 0.80

Last Week: 0.86

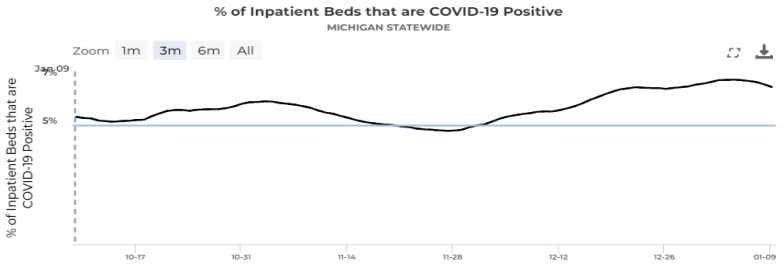
Hospital Admissions



Current: 8.9

Last Week: 10.8

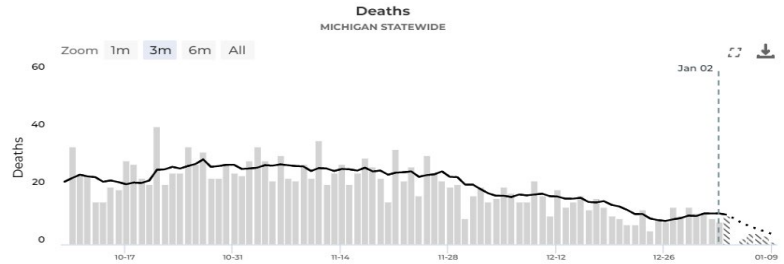
Daily hospitalization rate, %



Current: 5.4%

Last Week: 6.5%

Deaths



Current: 0.7

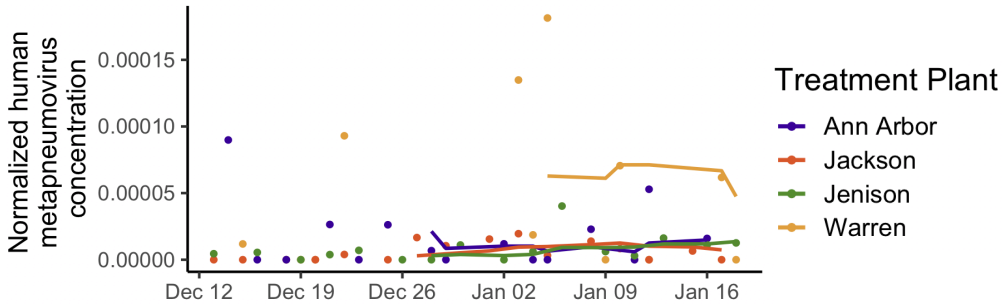
Last Week: 1.0

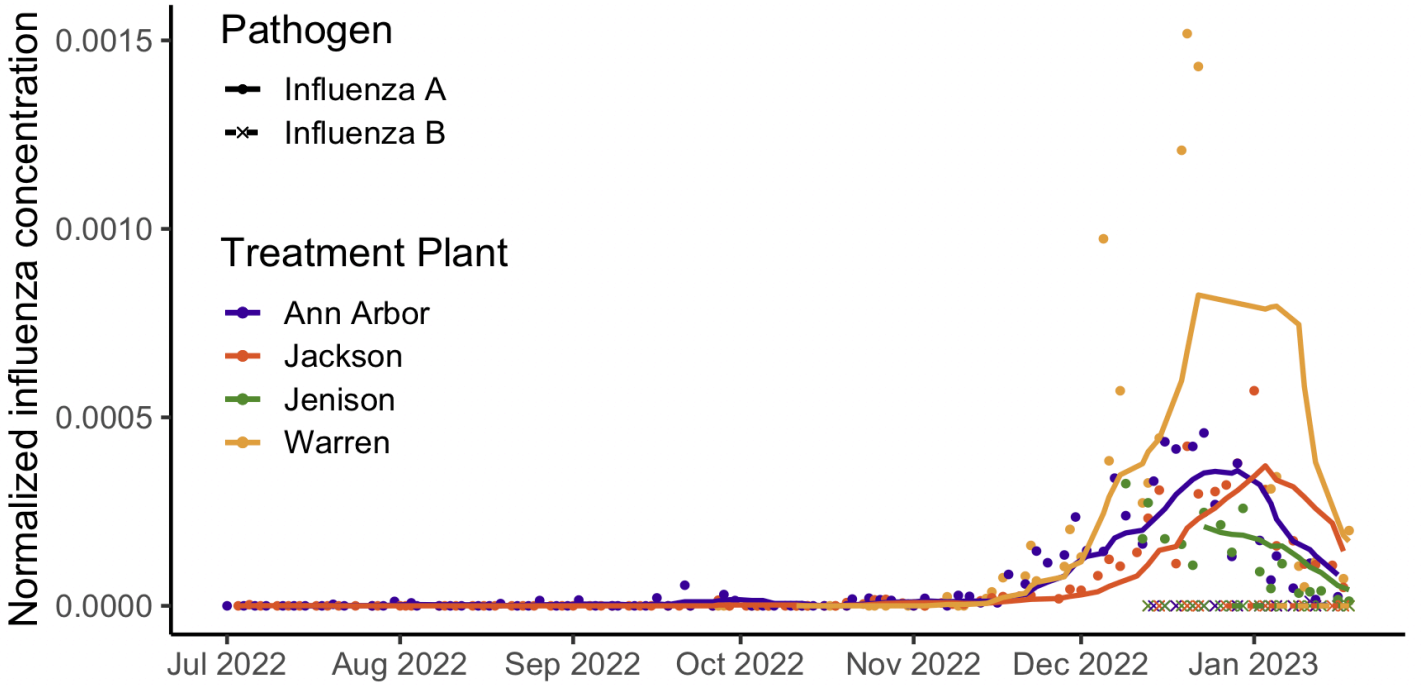
- The reproductive number (R_t) in Michigan is just below 1 indicating slight decline
- There are an average of 8.9 hospital admissions per 100,000 Michiganders day which is a decrease from last week
- The percent of inpatient beds that have patients diagnosed with COVID-19 have seen a slight decrease from the past week
- Deaths are a lagging indicator but are plateaued some over the past week

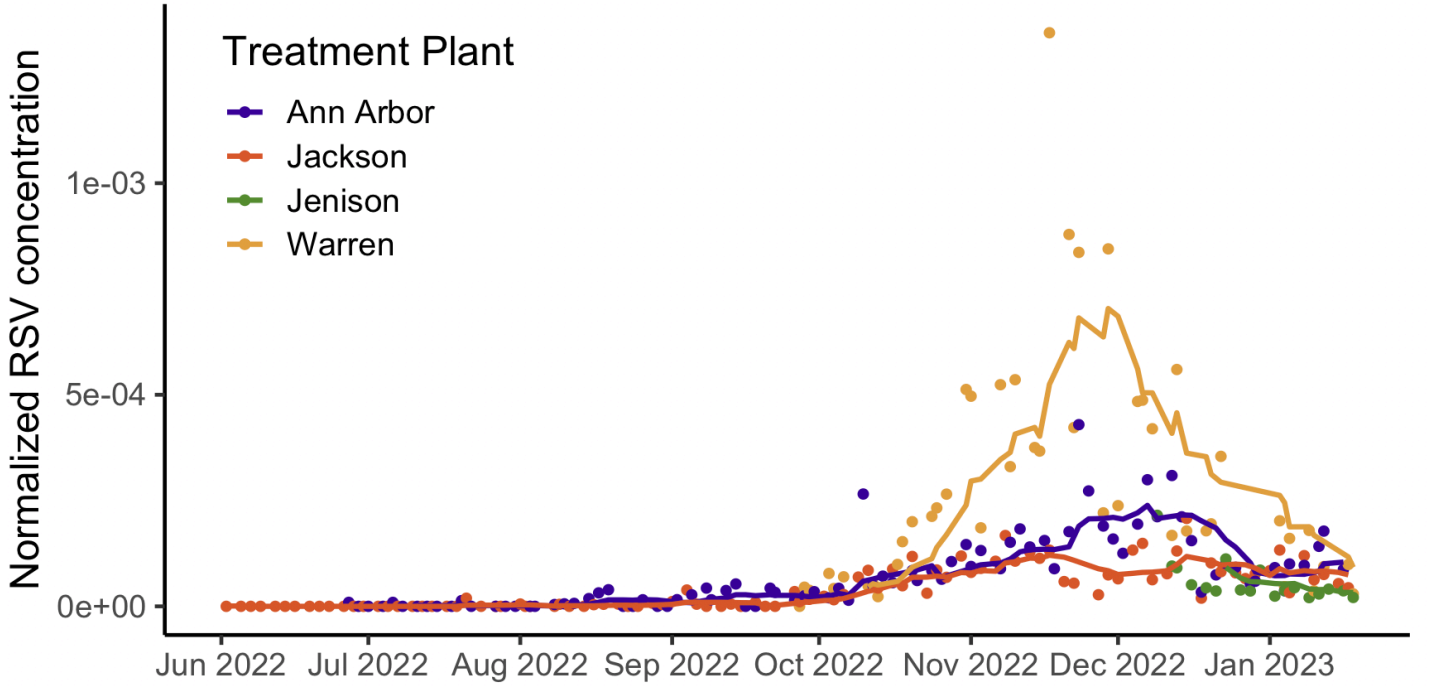
Source: https://mistartmap.info/

Wastewater monitoring: seeing decreases & low levels for flu and RSV

- Influenza A declining at all sites, influenza B at very low levels
- RSV declining at all sites
- Human metapneumovirus (HMPV) too early to determine trends—data collection started recently







Source: SCAN/Verily Project: http://publichealth.verily.com
All data normalized to PMMoV. Line represents 7-day rolling average.

Identified COVID-19 Cases Caused by Variants of Concern (VOC) in US and Michigan: XBB.1.5 sublineage increasing the fastest

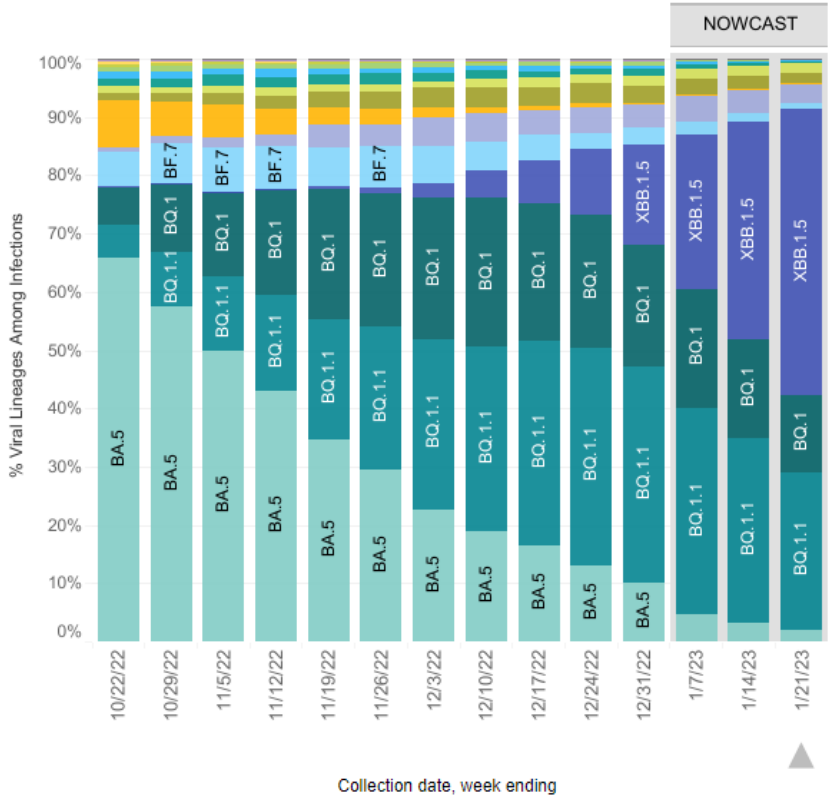
SARS-CoV-2 Variants Circulating in the United States, Oct 16 – Jan 21 (NOWCAST)

United States: 1/15/2023 – 1/21/2023 NOWCAST

USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	XBB.1.5	VOC	49.1%	37.5-60.8%
	BQ.1.1	VOC	26.9%	20.9-33.9%
	BQ.1	VOC	13.3%	10.1-17.4%
	XBB	VOC	3.3%	2.7-4.1%
	BA.5	VOC	2.0%	1.5-2.8%
	BN.1	VOC	1.8%	1.4-2.5%
	BA.2.75	VOC	1.6%	1.2-2.2%
	BF.7	VOC	1.0%	0.8-1.4%
	BA.5.2.6	VOC	0.4%	0.3-0.5%
	BA.2	VOC	0.2%	0.1-0.3%
	BF.11	VOC	0.2%	0.1-0.2%
	BA.4.6	VOC	0.1%	0.0-0.1%
	BA.2.75.2	VOC	0.0%	0.0-0.1%
	B.1.1.529	VOC	0.0%	0.0-0.0%
	BA.4	VOC	0.0%	0.0-0.0%
	BA.1.1	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.0%

United States: 10/16/2022 – 1/21/2023



* 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

\# BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. Except BA.2.12.1, BA.2.75, BA.2.75.2, BN.1,XBB and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, BF.11, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. Except XBB.1.5, sublineages of XBB are aggregated to XBB. For all the lineages listed in the above table, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB.1.5 was aggregated to XBB. Lineages BA.2.75.2, XBB, XBB.1.5, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

National Distribution

- 100% of the VOCs currently circulating in the U.S. are Omicron
- Nowcast estimates project that BA.2 recombinant sublineage XBB.1.5 (49.1%, 95% P.I. 37.5-60.8%), as well as the BA.5 sublineages of BQ.1.1 (26.9%, 95% P.I. 20.9-33.9%), and BQ.1 (13.3%, 95% P.I. 10.1-17.4%) are most prevalent during the week ending on January 21

Distribution in Michigan

- Since December 1, there have 2,239 VOC specimens sequenced and reported to MDHHS
- 100% of specimens sequenced are Omicron
  - Since December 1, 89.6% of specimens sequenced and reported (n=2,007) have been identified as BA.5; of which 11.0% of those specimens are BF.7 (n=220), 19.7% have been identified as BQ.1 (n=395), and 43.2% as BQ.1.1 (n=867);
  - Thirty-four cases of XBB.1.5 have been identified in Michigan and has been detected in 6 of the 8 preparedness regions

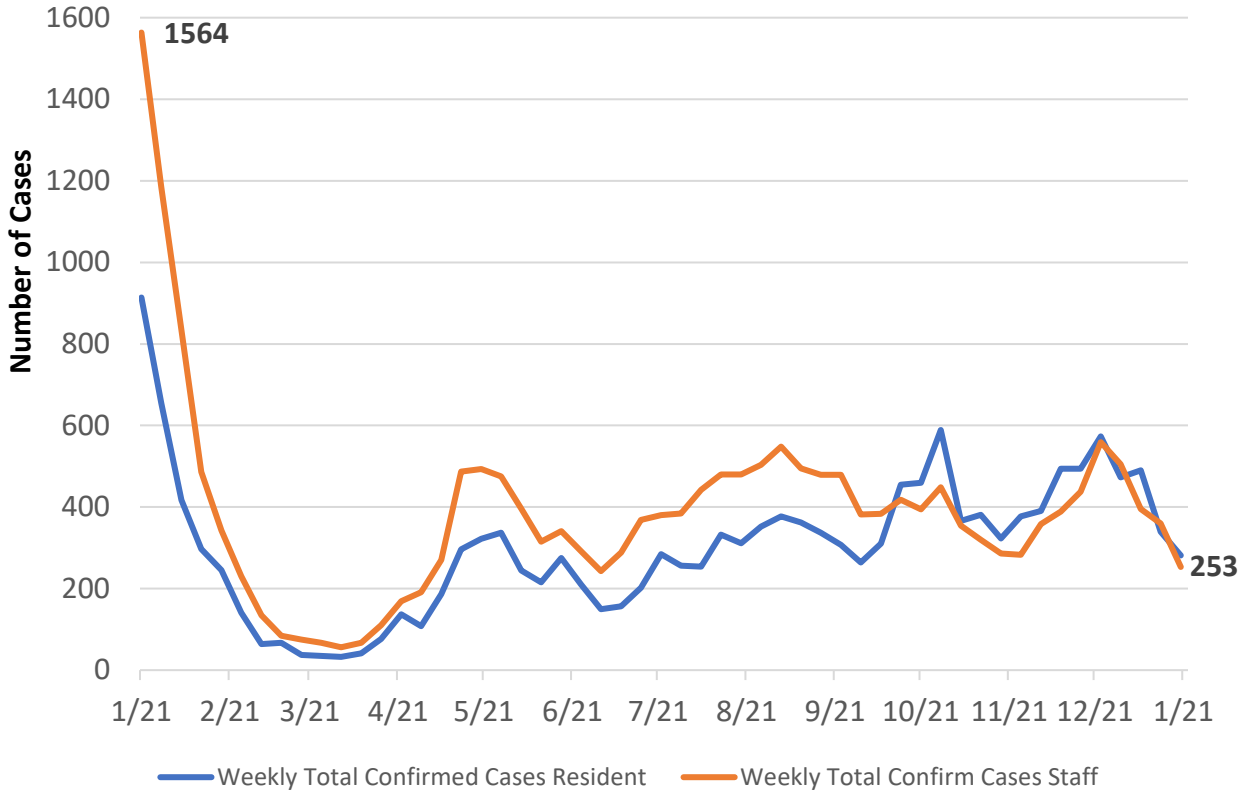
95% P.I. = 95% prediction interval

Data last updated January 24, 2023

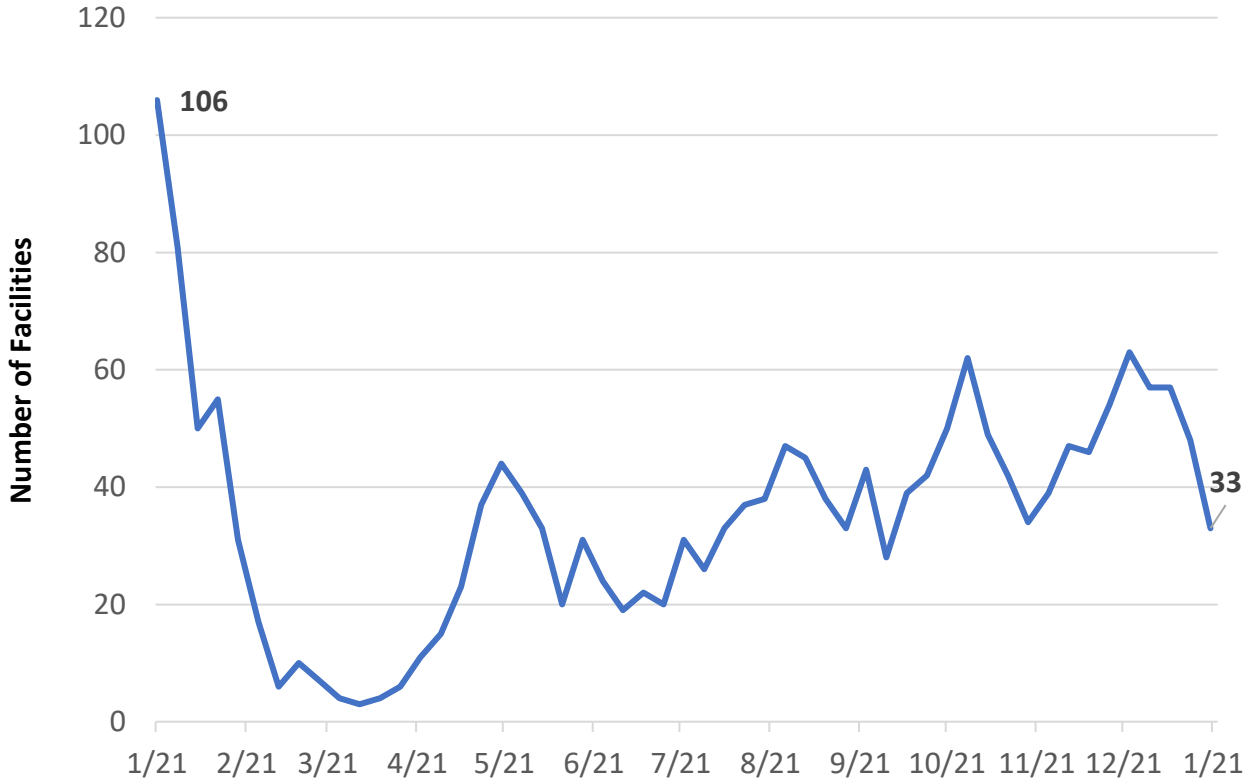
Source: CDC COVID Data Tracker: Genomic Surveillance and Michigan's MDSS; sequence data may take up to four weeks to process and get reported back to health departments

COVID-19 Cases Among Staff and Residents in Long Term Care Facilities

STATE OF MICHIGAN WEEKLY TOTAL CONFIRMED COVID-19 CASES IN SNF RESIDENTS AND STAFF
01/21/2022 TO 01/20/2023



Number of SNFs with 3 or more Confirmed Cases
01/21/2022 TO 01/20/2023



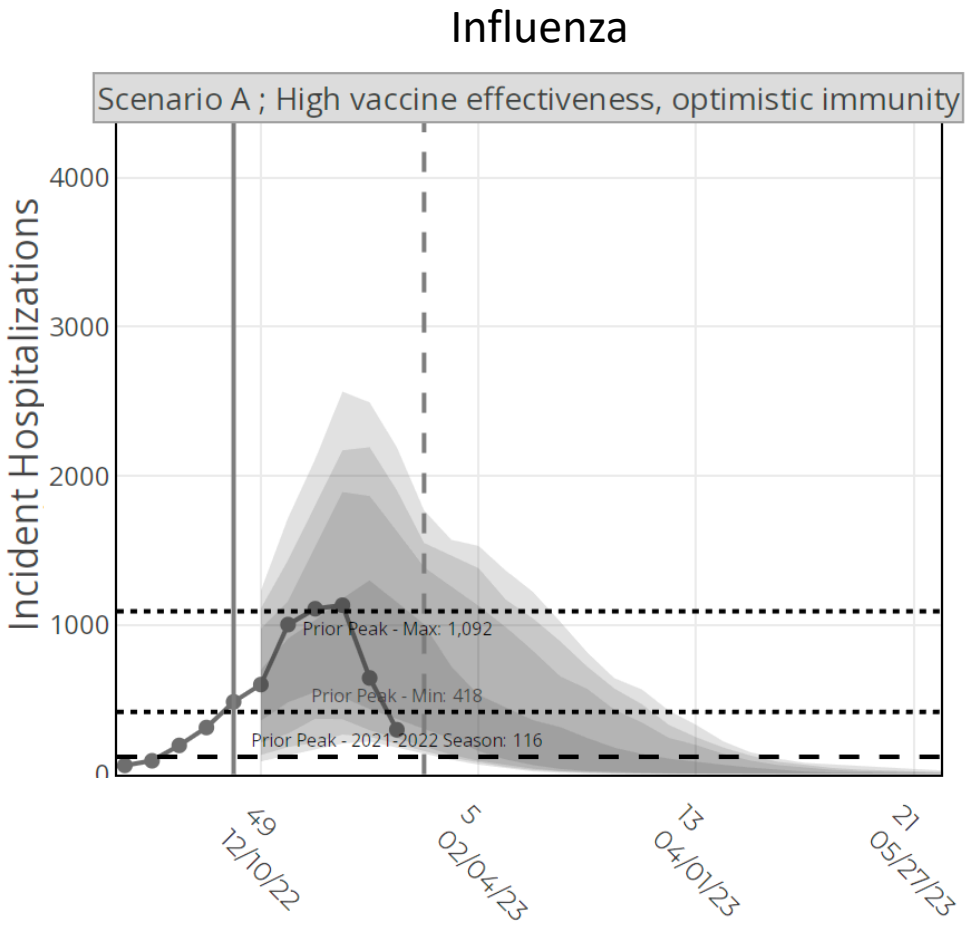
- Case counts decreased in SNF residents (339 to 281) in SNF staff (360 to 253) since last week [left graph]
- The number of SNF facilities reporting 3 or more cases has declined since last week (48 to 33) [right graph]
- Currently, **27%** of SNFs are reporting **nursing shortages** and **29%** of SNFs are reporting **aide shortages**, which is plateaued since end of July

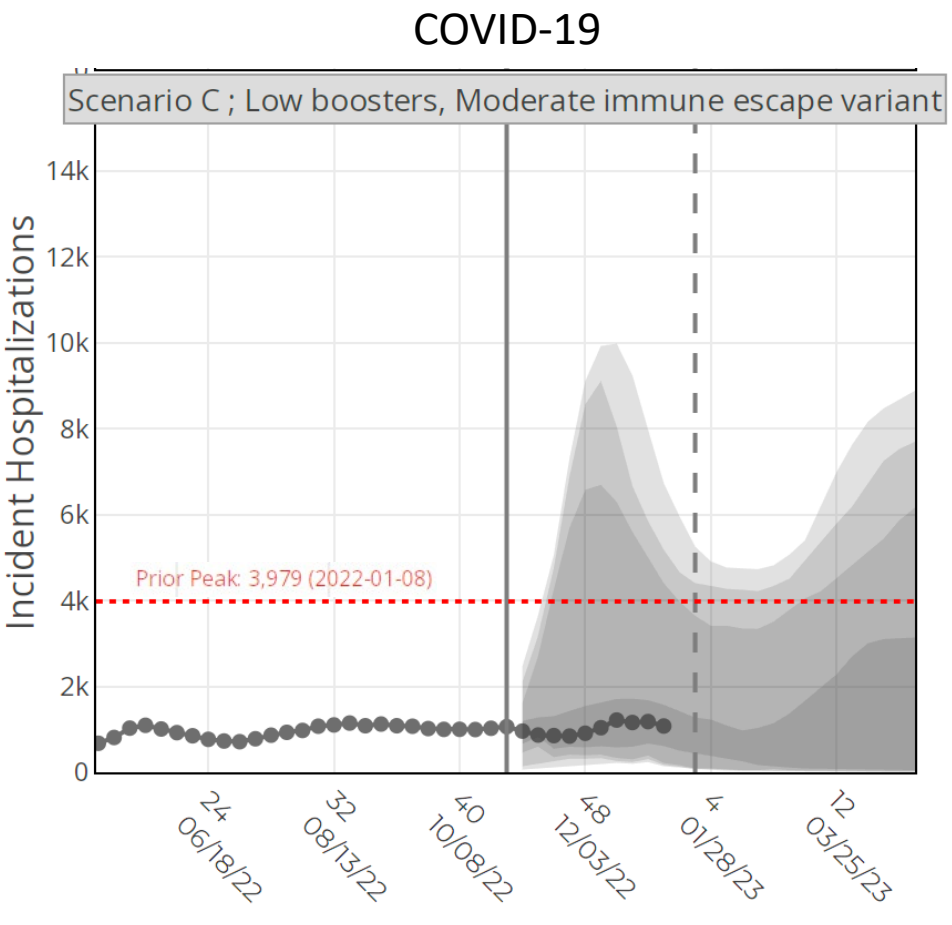
Abbreviations: AFC: Adult Foster Care; HFAs: Homes for the Aged; and SNF: Skilled Nursing Facilities

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

Scenario Hub projections suggest decline for flu, continued plateau for COVID with potential spring surge

- Multiple scenarios simulated for Michigan, all show continued decline for flu
- COVID projections suggest fairly flat trend continuing through winter but potential for a spring surge
- Did not simulate other respiratory illnesses (e.g. RSV)

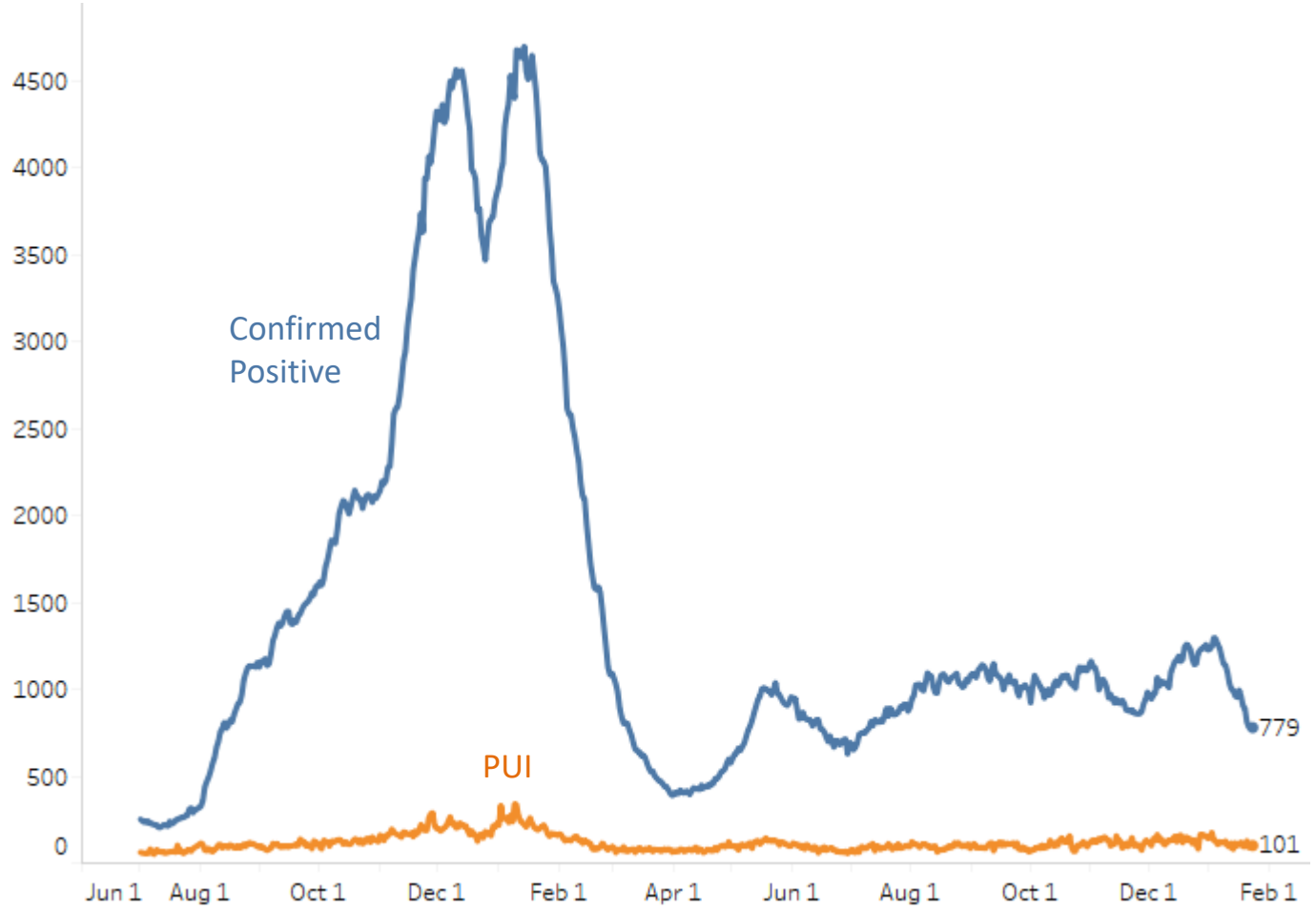




Flu scenario shown: Scenario A – high vaccine effectiveness, optimistic immunity (this scenario showed closest fit of median model projection to current data, although all were similar), COVID-19 scenario shown: Scenario C – low boosters, moderate immune escape variant (closest match to current booster uptake and fit of median model projection to current data). Model simulations of weekly incident hospitalizations in Michigan. Uncertainty range: 50% (darkest), 80%, 90%, 95% (lightest). Source: Round 16 Scenario Modeling Hub Projections, Round 3 Flu Scenario Modeling Hub Projections

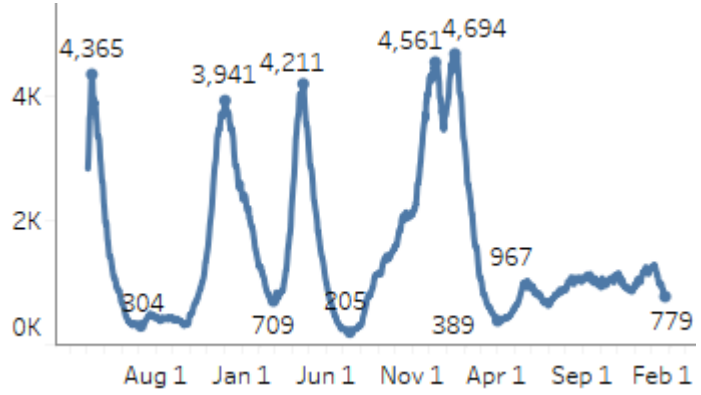
Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 7/1/2021 – 1/23/2023
Confirmed Positive & Persons Under Investigation (PUI)



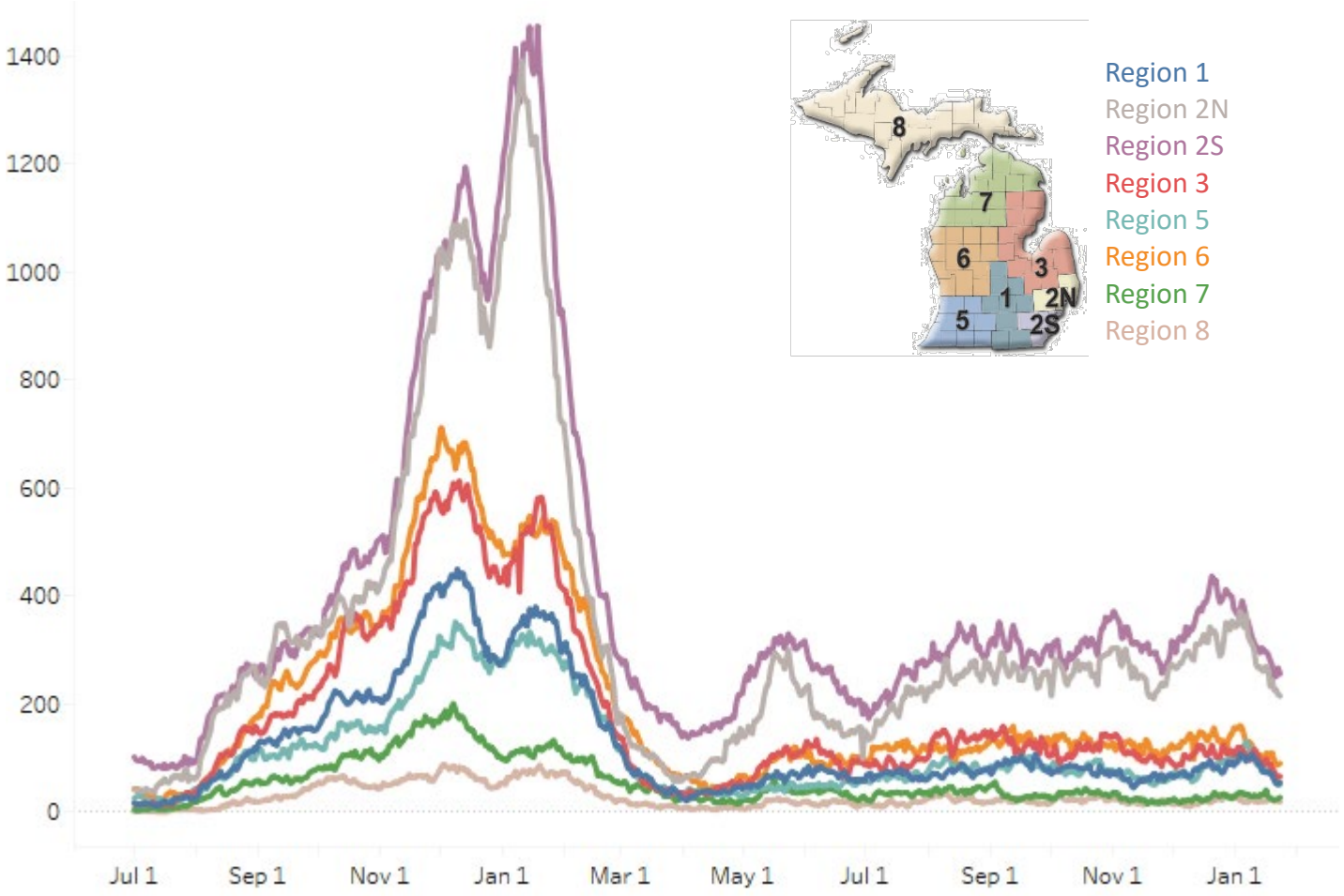
The COVID+ census in hospitals has decreased by 22% from last week. Overall census is currently 779 patients.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 7/1/2021 – 1/23/2023
Confirmed Positive by Region



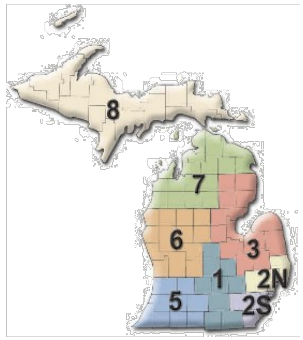
Hospitalizations have decreased in all regions.

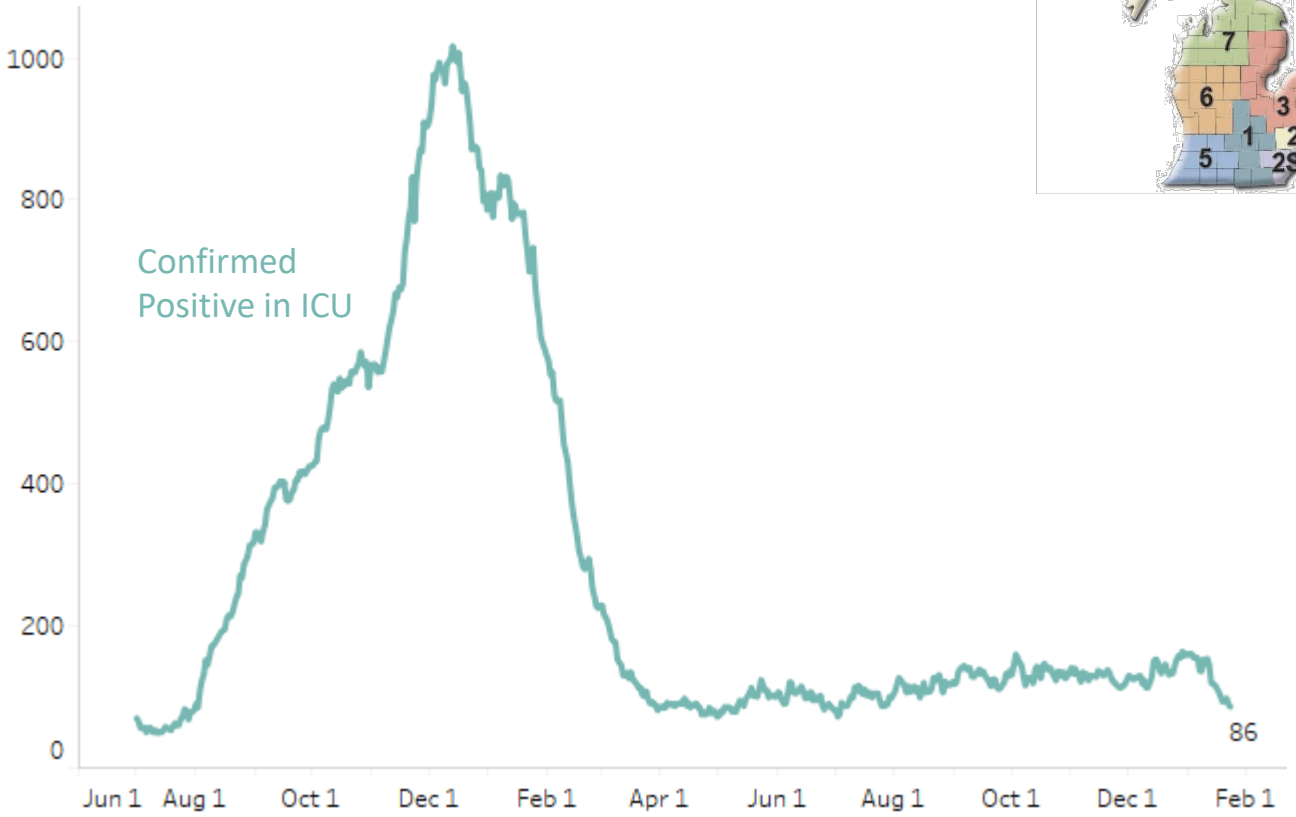
Region 2S has hospitalizations greater than 100 / M population.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	55 (-25%)	51/M
Region 2N	215 (-20%)	97/M
Region 2S	256 (-14%)	115/M
Region 3	66 (-33%)	58/M
Region 5	51 (-41%)	54/M
Region 6	90 (-17%)	61/M
Region 7	27 (-34%)	54/M
Region 8	19 (-5%)	61/M

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 7/1/2021 – 1/23/2023
Confirmed Positive in ICUs





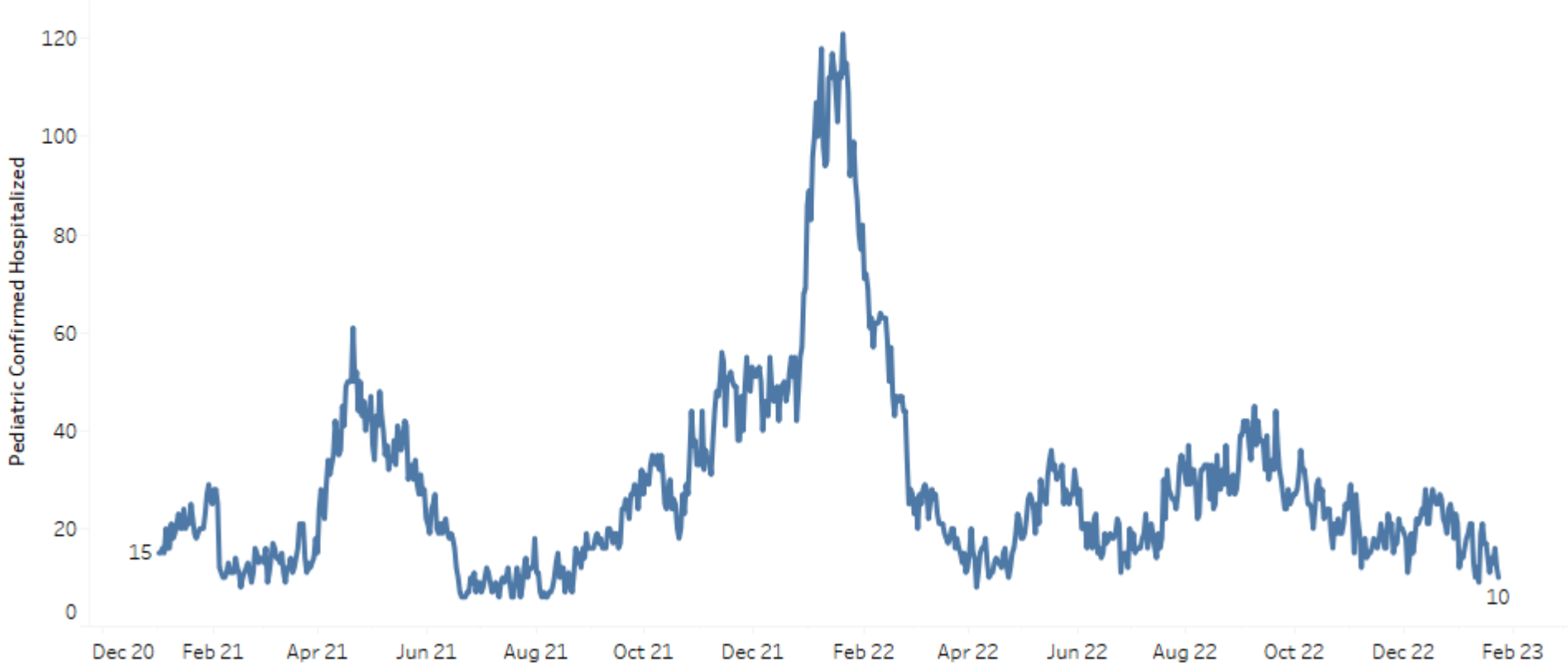
Overall, the volume of COVID+ patients in ICUs has decreased by 23% from last week. There are 86 COVID+ patients in ICU beds across the state.

ICU occupancy is less than 85% in all regions. All regions have 5% or fewer ICU beds occupied by COVID+ patients.

Region	Adult COVID+ in ICU (% Δ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	5 (-58%)	81%	3%
Region 2N	21 (-25%)	64%	4%
Region 2S	36 (-23%)	82%	5%
Region 3	7 (-30%)	79%	2%
Region 5	4 (-20%)	65%	2%
Region 6	4 (0%)	71%	2%
Region 7	6 (20%)	83%	5%
Region 8	3 (200%)	66%	5%

Statewide Hospitalization Trends: Pediatric COVID+ Census

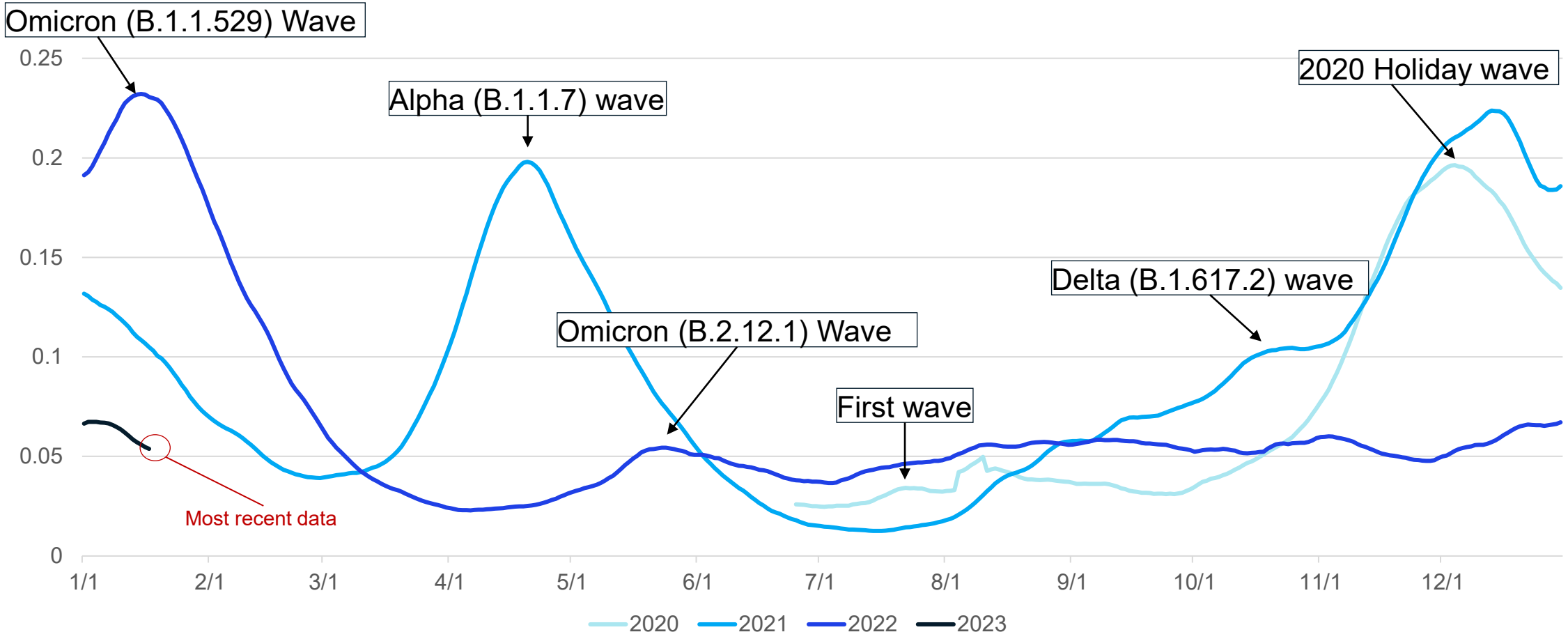
Hospitalization Trends 1/1/2021 – 1/23/2023
Pediatric Hospitalizations, Confirmed



Percent of Inpatients with COVID is Currently Lower than Previous Two Years

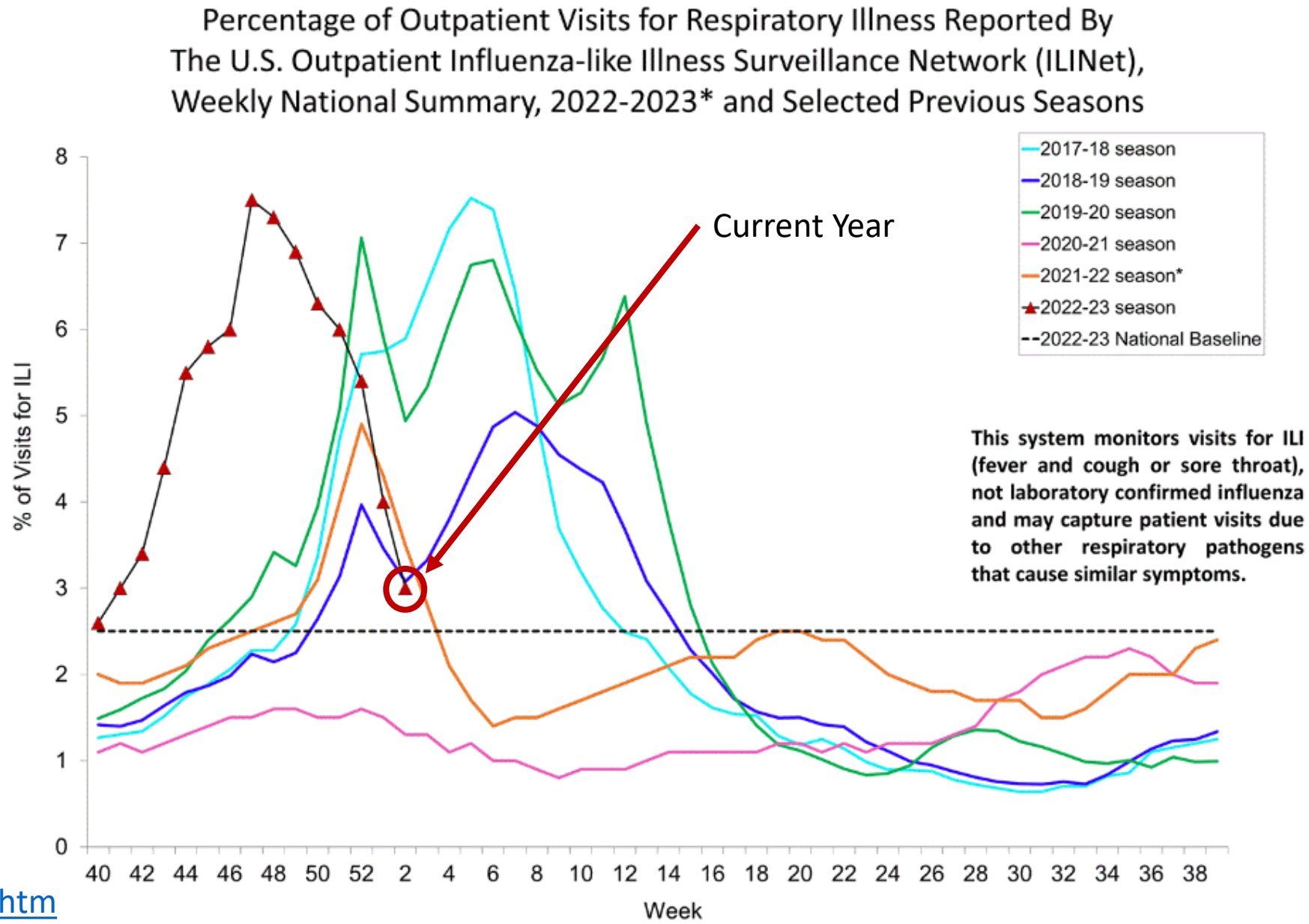
- The percent of inpatients who are COVID+ remains lower than previous waves
- Current hospital levels are declining, and below levels in winter 2020 and winter 2021

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



National Seasonal Influenza Surveillance

- Flu season has started earlier than normal in the U.S.
- ILI activity was high throughout most of the country
- ILI levels have been decreasing for several weeks in a row
- Michigan is at minimal ILI activity
- The best time to get a seasonal flu vaccine is before there is widespread flu activity



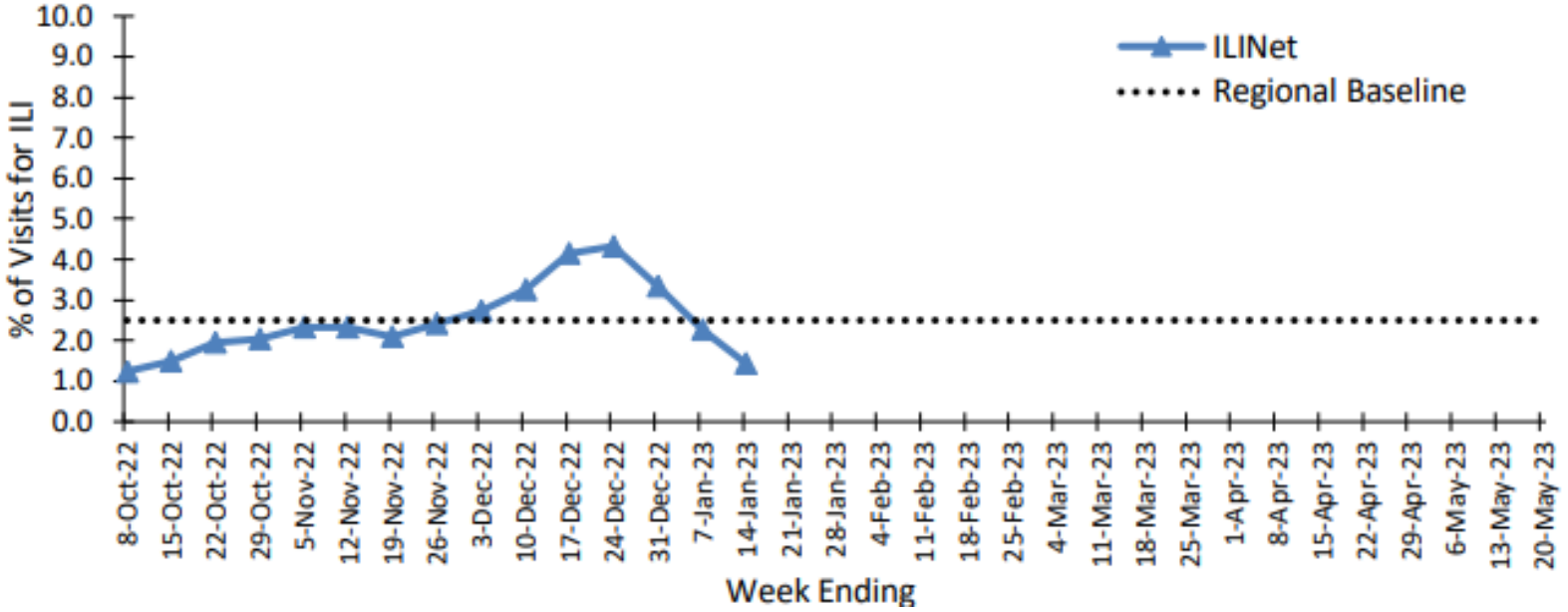
https://www.cdc.gov/flu/weekly/index.htm

Michigan Seasonal Influenza Surveillance

Number of Reports and ILI % by Region during this time period:

Region	C	N	SE	SW
No. of Reporters **(149)**	51	18	52	28
ILI %	1.5	2.6	1.3	1.1

Percentage of Visits for ILI in Michigan Reported by ILINet, 2022-2023



Michigan ILI Activity: 1.4%

(Last week: 2.3%)

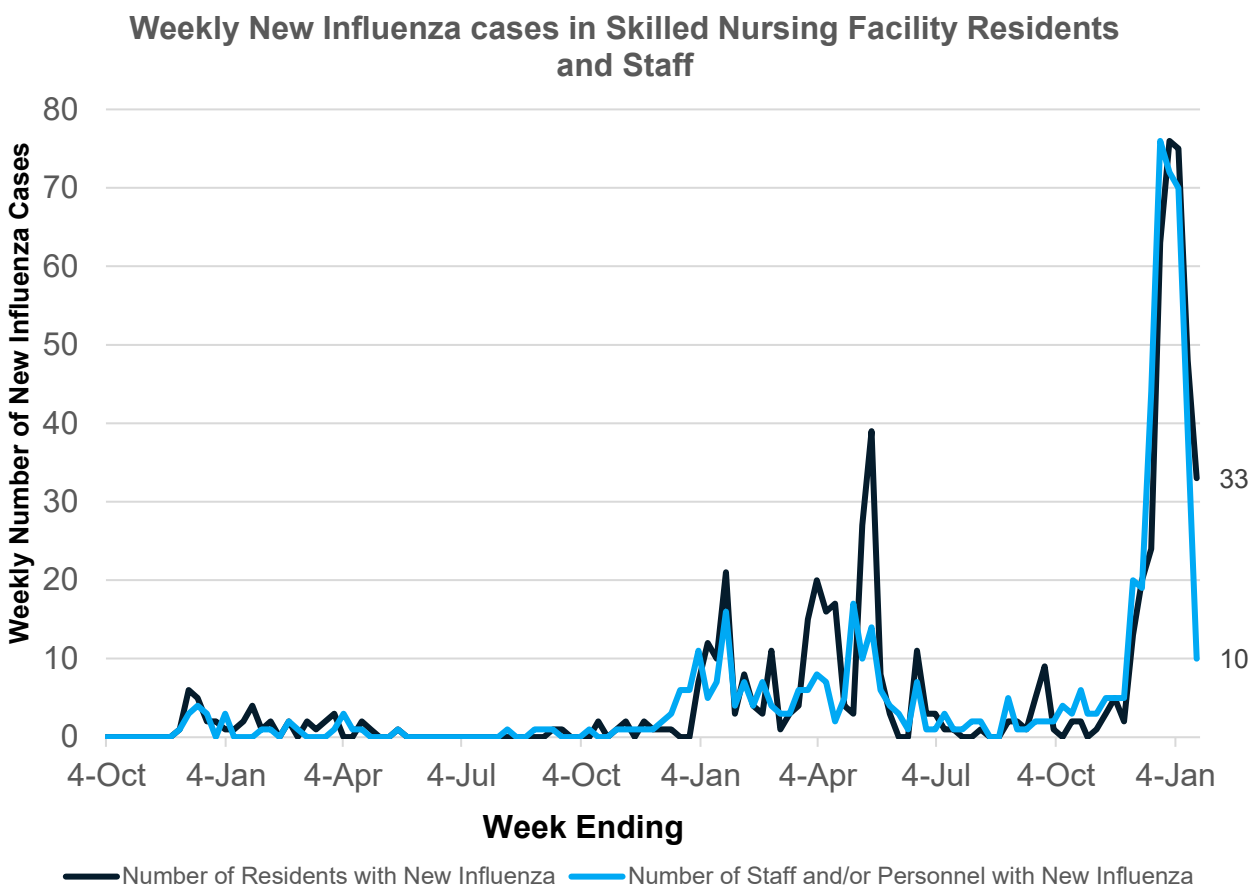
Regional Baseline*: 2.5%

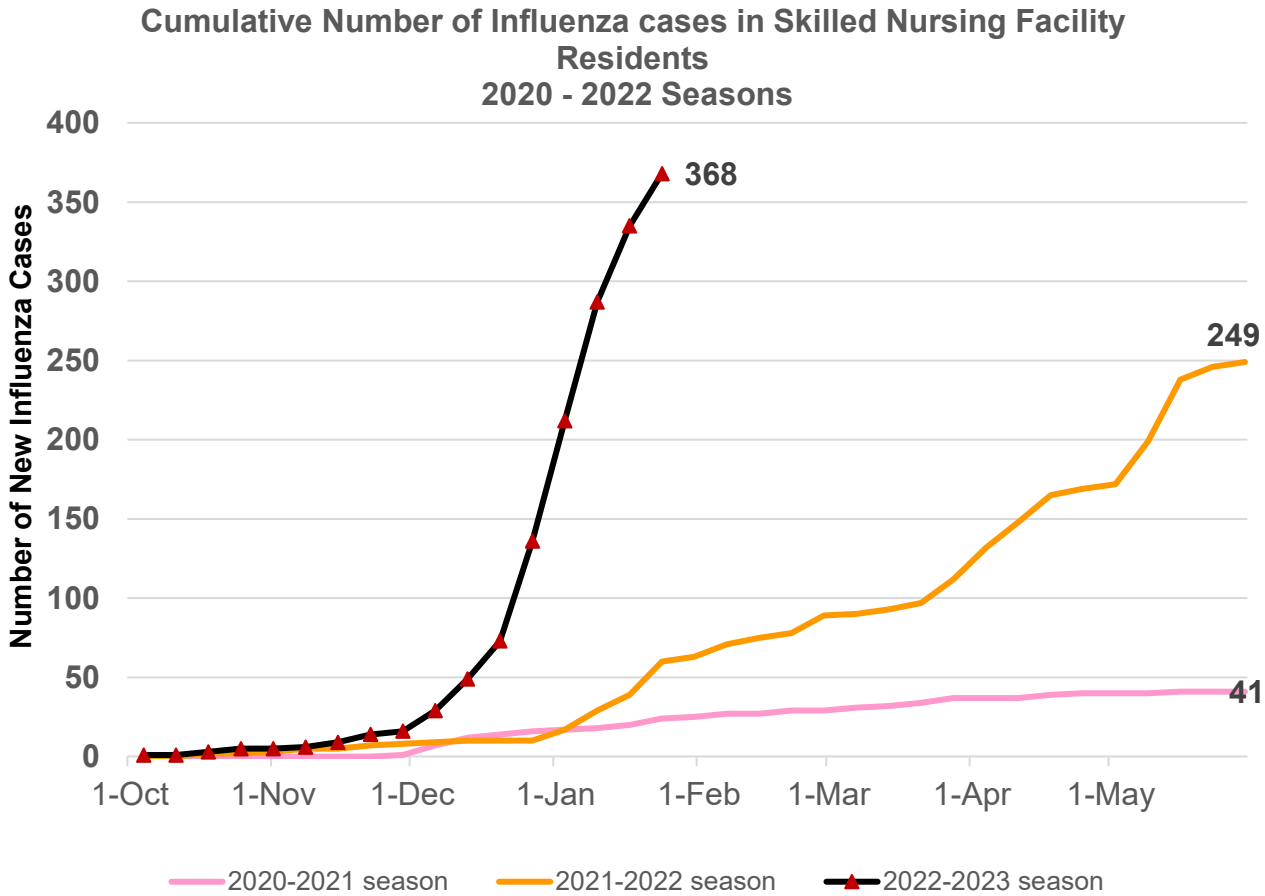
A total of **1,048** patient visits due to ILI were reported out of **73,672** outpatient visits.

*Regional baseline is determined by calculating the mean percentage of patient visits due to ILI during non-influenza weeks for the previous three seasons and adding two standard deviations.

https://www.michigan.gov/flu/surveillance

Influenza Cases Among Staff and Residents in Long Term Care Facilities





- Influenza testing may not be as routine as COVID-19 testing in LTC settings
- The number of reported influenza cases among residents and staff this season is decreasing after a recent 3-year peak
- The number of influenza cases among residents reported in 2022-2023 season through January 24 is higher than the 2020-2021 and 2021-2022 seasons
- Cumulative counts reported in LTCF are higher this season through January 24 than it has been the past two complete influenza seasons (through May)

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

Harm Reduction: Key Messages

Empowering community members to make best choices for their individual circumstances and to be prepared by making a COVID, cold, and flu plan this season

- Everyone ages 6 months and older should be up to date on COVID-19 vaccines (e.g., bivalent boosters)
- It's important to protect ourselves and others from COVID-19 and other respiratory illnesses through the use of masks, testing, and other layered prevention measures

- Get tested, and if positive, seek care with therapeutics (e.g., antibodies or antiviral medications)
  - Cumulative therapeutic availability and administration has increased since December
  - 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

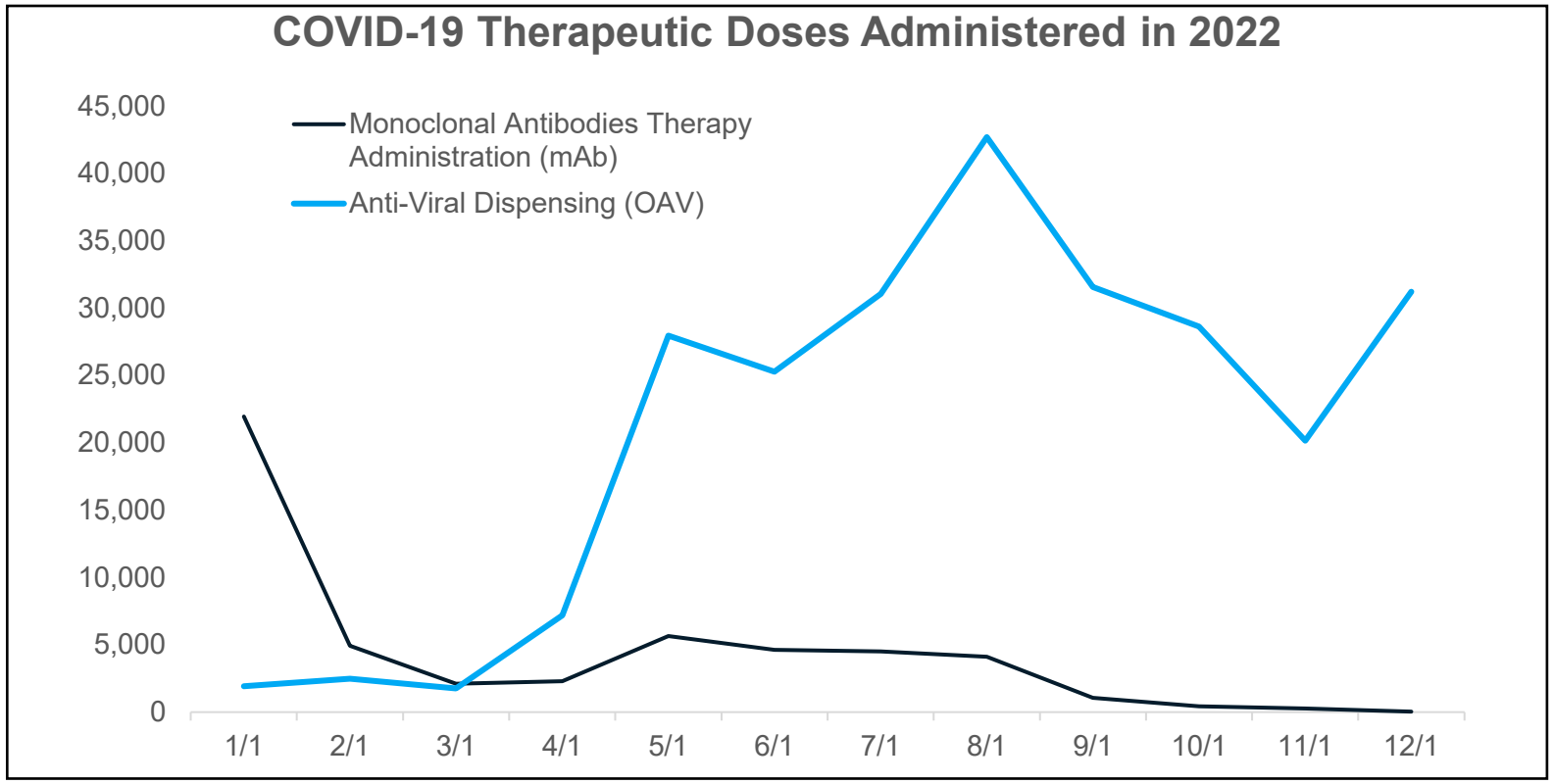
- Vaccinations remain the best way to protect from COVID-19, especially from severe disease
  - COVID-19 vaccines are now available for ages 6 months and up
    - Everyone 6 months and older should also get an age-appropriate COVID-19 booster, when eligible
  - Over 6.9 million Michiganders have received at least one dose (69.3%)
  - The percentage of Michiganders who have received the updated (bivalent) booster is higher than national percentages for all reported age groups, but the overall uptake of the booster remains low
    - 16.4% of all Michiganders, and 43.7% of the population 65 years of age or older, have received their updated (bivalent) booster dose

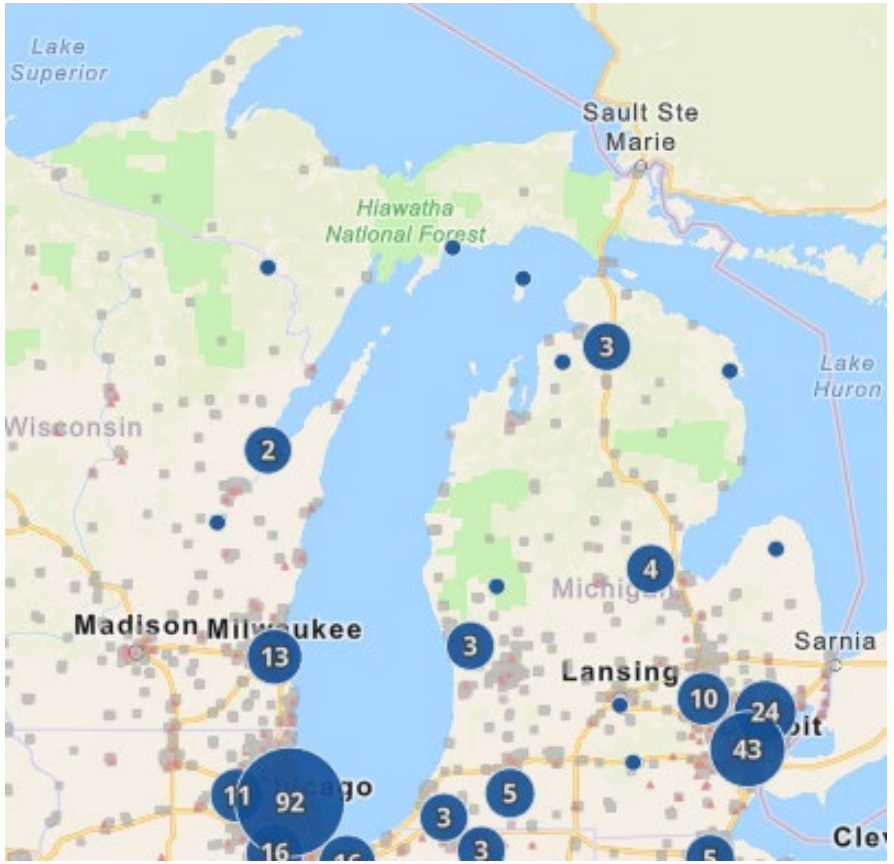
Michigan Therapeutics: 251,926 doses of anti-viral medication dispensed in 2022

COVID-19 resources available on federal website: [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

In 2022, a total of **251,926 doses** of anti-viral medications were dispensed in Michigan.

mAb: Sotrovimab, Bebtelovimab, Bamlanivimab, Etesevimab, REGEN-CON

OAV: Paxlovid, Lagevrio

Source: HHS – Tiberius. Data Updated January 23, 2023
Therapeutic administration increased during Michigan's Spring Omicron surge. Supply limitations in January 2022 required strategic distribution and should not be compared directly.

Over 6.2 Million Michiganders have completed the primary series – 62.2% of the total population

Vaccination Coverage

Over 6.2 million people in MI have completed the primary series*

91.3% of people aged 65 and older in MI have completed the primary series*

69.3% of the total MI population have initiated the primary series*

Race/Ethnicity¶ for those 6 months and older:

- Up-to-date coverage is highest among those of Non-Hispanic (NH) White (15.0%), then NH Asian, Native Hawaiian or Pacific Islander Race (13.7%), then NH American Indian (11.3%), NH Black or African American Races (7.9%).
- Initiation is at 9.2% for those of Hispanic ethnicity

Updated Booster Coverage

The percentage of Michiganders who have received the updated (bivalent) booster is higher than national percentages overall and for all reported age groups

43.7% of the population 65 years of age or older has received an updated (bivalent) booster

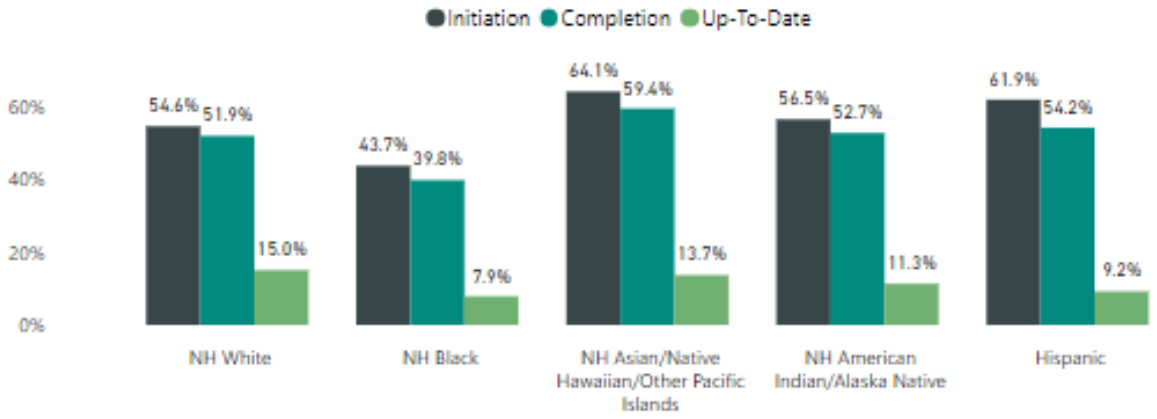
16.4% of all Michiganders have received their updated (bivalent) booster dose

Vaccination Coverage in Michigan as of 1/18/2023

Age Group	% At Least One Dose	% Completed Primary Series	% Updated Booster**	U.S. % Boosted**	Primary Series Total
Total Population	69.3%	62.2%	16.4%	15.3%	6,216,197
≥ 5 years	73.2%	65.8%	17.4%	16.2%	6,202,543
≥ 12 years	77.2%	69.4%	18.7%	17.5%	5,968,130
≥ 18 years	79.4%	71.4%	19.9%	18.5%	5,600,642
≥ 65 years	95.0%	91.3%	43.7%	39.6%	1,612,026

**This shows the percentage of all residents ages 5 years and older in a jurisdiction (state, territory, national) with an updated (bivalent) booster dose. Non-residents who received vaccine are attributed to their jurisdiction of residence.

Coverage by Race*



Source: *CDC COVID Data Tracker > Vaccinations in the US, ¶ MCIR COVID-19 Vaccine Dashboard

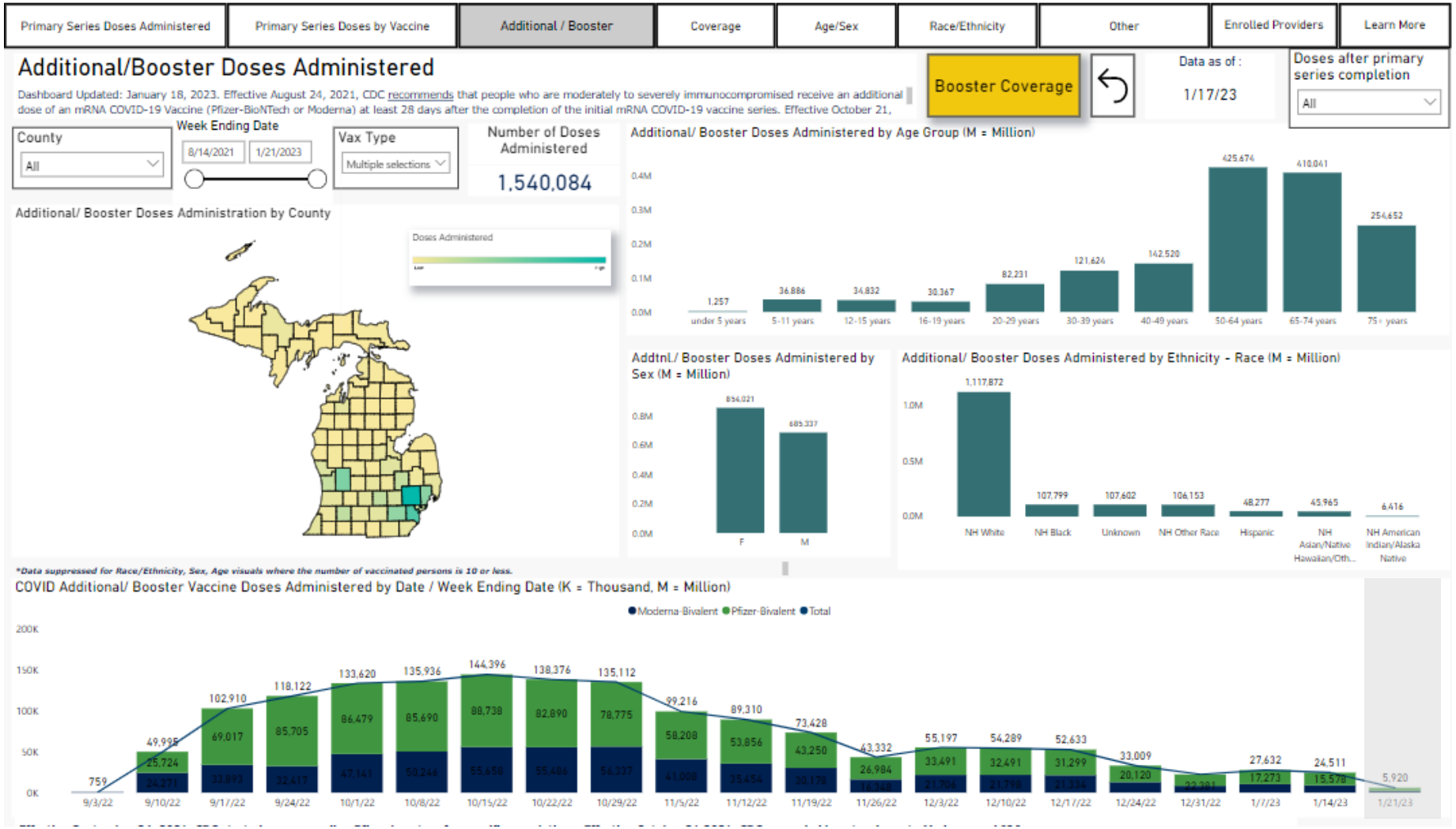
Note: Now include all those 6 months and older in calculations

Bivalent Administration

- **FDA has authorized and CDC now recommends expanding the use of the updated bivalent COVID-19 vaccines to everyone over the age of 6 months.***

- As of 1/17¶, 1,540,084 Michiganders had received their bivalent booster

- Note: the data for the week ending 1/21 would have been incomplete on the date the dashboard was last refreshed (1/17)



Moderna Bivalent

Pfizer Bivalent

* CDC Expands Updated COVID-19 Vaccines to Include Children Ages 6 Months through 5 Years

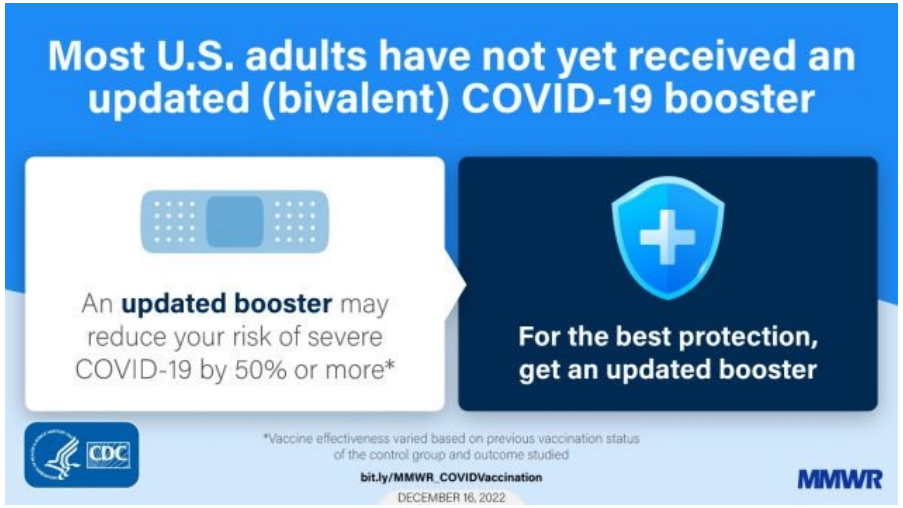
¶ These data are updated every Wednesday on our COVID-19 vaccination Dashboard under Additional/Booster Administration Trends and then restricting the view to just Moderna and Pfizer bivalent doses

Sources: Michigan Coronavirus Vaccine Dashboard

Two Years of U.S. COVID-19 Vaccines Have Prevented Millions of Infections, Hospitalizations, and Deaths; Bivalent Booster Provide Additional Protection Especially for Vulnerable Populations

- COVID-19 vaccines have been available since December 2020 with 660 million doses administer in the U.S. (source: CDC COVID Data Tracker)
- Nearly 81% has received at least 1 dose, 69% has completed the primary series, and 14% have received the updated bivalent booster
- The Commonwealth fund estimates that vaccination has had the cumulative effect of preventing an additional 119 million infections, 18 million hospitalizations and 3 million deaths
- Bivalent booster doses provided additional protection against COVID-19–associated emergency department/urgent care encounters and hospitalizations in persons who previously received 2, 3, or 4 monovalent vaccine doses
- Among immunocompetent adults aged ≥65 years hospitalized in one study, a bivalent booster dose provided 73% additional protection against COVID-19 hospitalization compared with past monovalent mRNA vaccination only

- **Key Message**: All persons should stay up to date with recommended COVID-19 vaccinations, including receiving a bivalent booster dose if eligible
  - To maximize protection against severe COVID-19 this winter season, vulnerable populations should receive a bivalent booster dose
  - Vaccination, along with additional prevention strategies including masking in indoor public settings, can further prevent spread of SARS-CoV-2 and other respiratory illnesses



Sources:

- Surie D, DeCuir J, Zhu Y, et al. Early Estimates of Bivalent mRNA Vaccine Effectiveness in Preventing COVID-19–Associated Hospitalization Among Immunocompetent Adults Aged ≥65 Years — IVY Network, 18 States, September 8–November 30, 2022. MMWR Morb Mortal Wkly Rep. ePub: 16 December 2022. DOI: http://dx.doi.org/10.15585/mmwr.mm715152e2
- Tenforde MW, Weber ZA, Natarajan K, et al. Early Estimates of Bivalent mRNA Vaccine Effectiveness in Preventing COVID-19–Associated Emergency Department or Urgent Care Encounters and Hospitalizations Among Immunocompetent Adults — VISION Network, Nine States, September–November 2022. MMWR Morb Mortal Wkly Rep. ePub: 16 December 2022. DOI: http://dx.doi.org/10.15585/mmwr.mm715152e1
- Fitzpatrick MC, Moghadas SM, Abhishek A, Galvani AP. Two Years of U.S. COVID-19 Vaccines Have Prevented Millions of Hospitalizations and Deaths. The Commonweath Fund. December 13, 2022. https://www.commonwealthfund.org/blog/2022/two-years-covid-vaccines-prevented-millions-deaths-hospitalizations. Accessed December 19, 2022.

Year in Review – Public Health Response in Numbers

Testing

Number of Tests Events Conducted

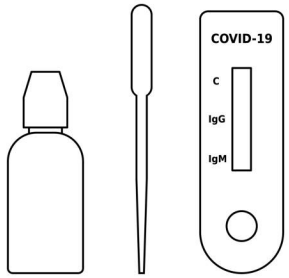
- 329,540 (Neighborhood, community, and non-public testing events)

Project Act (Rockefeller Foundation) OTC

- 1,537,485 tests distributed
- https://www.accesscovidtests.org/

Almost 7 million tests distributed to partners via MDHHS

- 4,128,661 total POC tests
- 2,728,625 total OTC tests

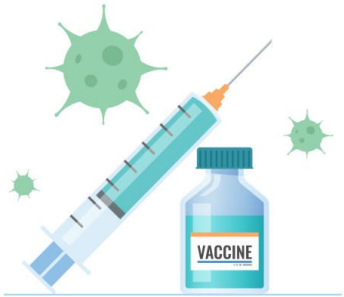


Therapeutics

- A total of **251,926 doses** of anti-viral medications were dispensed in Michigan

Vaccination

- Over 4 million COVID vaccines administrated in 2022
  - 831,046 primary series doses administered
  - 3.2 million additional and booster doses administered
- 6.2 million who have completed the primary series
- 1.6 million who are up-to-date on their COVID vaccine



Ongoing Impact of COVID

Despite these continued progress in COVID response, COVID continues to disrupt our lives even more than all other respiratory illness combined*

* This includes the impact of respiratory illness before the start of the COVID pandemic

Publicly Available Dashboards

State of Michigan Resources/Michigan Department of Health and Human Resources (MDHHS)

- https://www.michigan.gov/coronavirus, https://www.michigan.gov/coronavirus/stats - Cumulative data including schools, hospitals, MIS-C, and Testing
- https://www.michigan.gov/coronavirus/resources/covid-19-vaccine/covid-19-dashboard - Vaccine dashboard

National/Federal Resources

- https://covid.cdc.gov/covid-data-tracker/#datatracker-home - Comprehensive CDC COVID Data Tracker – view data nationally, by state, and race; data also available for download (community levels, cases, hospitalization, mortality, vaccines, variant surveillance, demographics, etc.)
- https://www.cdc.gov/nhsn/covid19/ltc-report-overview.html - CDC aggregate Nursing Home staff and resident COVID case and vaccine data
- https://data.cms.gov/covid-19/covid-19-nursing-home-data - CMS public use and facility-specific Nursing Home COVID data

MDHHS-University of Michigan Resources

- https://www.mistartmap.info - dashboard designed to monitor the status of COVID-19 indicators across the state of Michigan

Michigan and CDC Surveillance for other Respiratory Viruses:

- https://www.cdc.gov/flu/weekly/index.htm - CDC national flu surveillance
- https://www.michigan.gov/flu/surveillance - Michigan local flu surveillance
- https://www.cdc.gov/surveillance/resp-net/dashboard.html - new dashboard from CDC tracking hospitalizations for several respiratory viruses
- https://www.cdc.gov/ncird/surveillance/respiratory-illnesses/index.html - new dashboard from CDC tracking emergency department visits for several respiratory viruses

APPENDIX

Make a Plan for Cold and Flu Season

MDHHS
Michigan Department of Health & Human Services

Get vaccinated and boosted for COVID-19 and the flu.

- COVID-19 and flu vaccines are available for ages 6 months and older.
- Updated COVID-19 boosters are available for ages 5 years and older.
- COVID-19 and flu vaccines can be given at the same visit.

Learn more about vaccines at Michigan.gov/COVIDVaccine or Michigan.gov/Flu.

Keep a supply of over-the-counter COVID-19 tests.

- Tests are useful for early detection of COVID-19, especially if you have symptoms or have been exposed.
- If you are unwell and test negative for COVID-19, it is still important to stay home when you are sick.

Learn more about COVID-19 testing at Michigan.gov/COVIDTest.

Prevent the spread of illness.

- Stay home if you have symptoms.
- Masks are helpful tools to stop the spread of colds, flu and COVID-19. Understand that others may have different risks than yours and respect their mask choice.
- Cover coughs and sneezes, and wash hands.

Learn more about masking at Michigan.gov/MaskUp.

Learn if you are eligible for therapeutics for COVID-19 or flu.

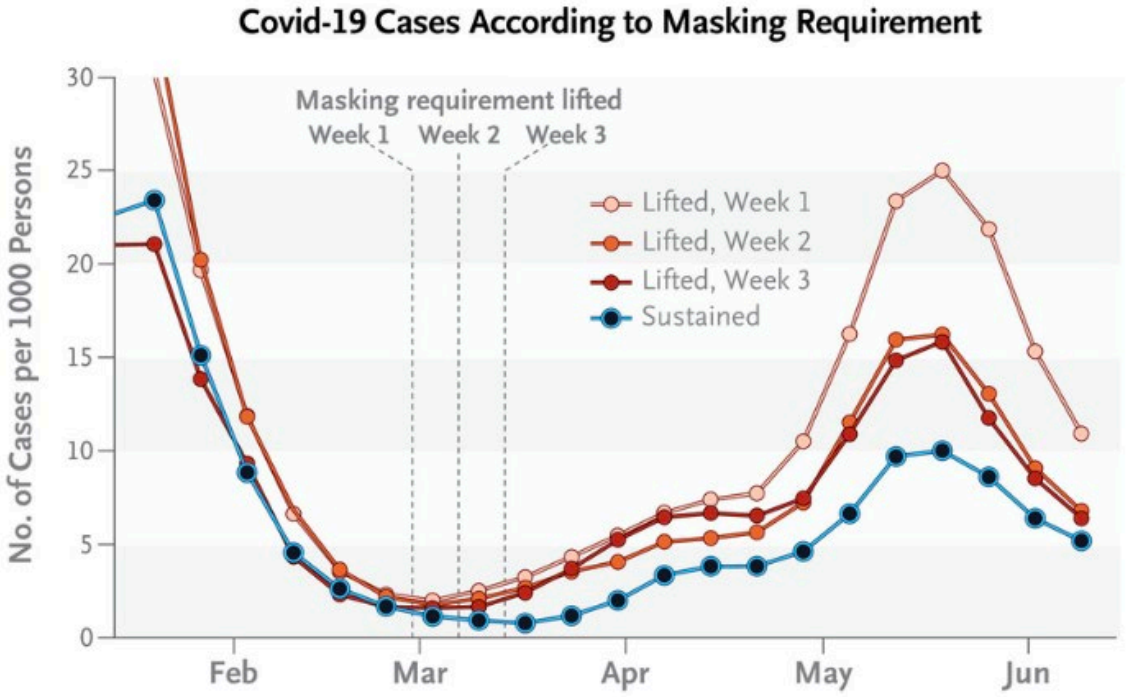
- Talk to a primary care provider about whether you are eligible for antivirals for the flu or COVID-19, if you test positive.

Learn more about COVID-19 therapeutics at Michigan.gov/COVIDTherapy.

Visit Michigan.gov/Coronavirus and Michigan.gov/Flu for current information.

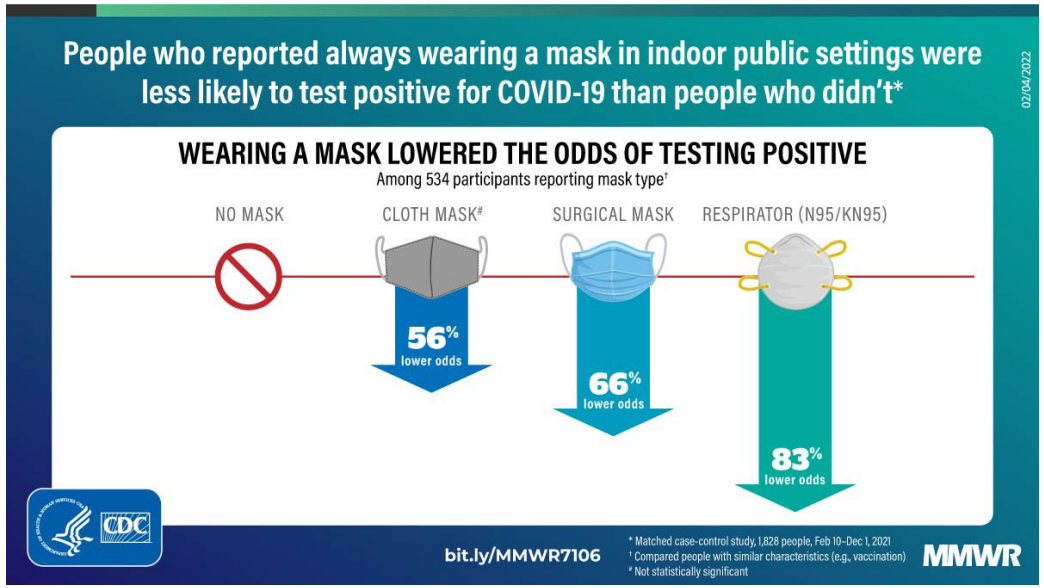
Masks are helpful tools to stop the spread of colds, flu, and COVID-19

A recent study showed universal masking in schools was associated with significantly lower incidence of COVID-19 for both staff and students in schools in the Boston area

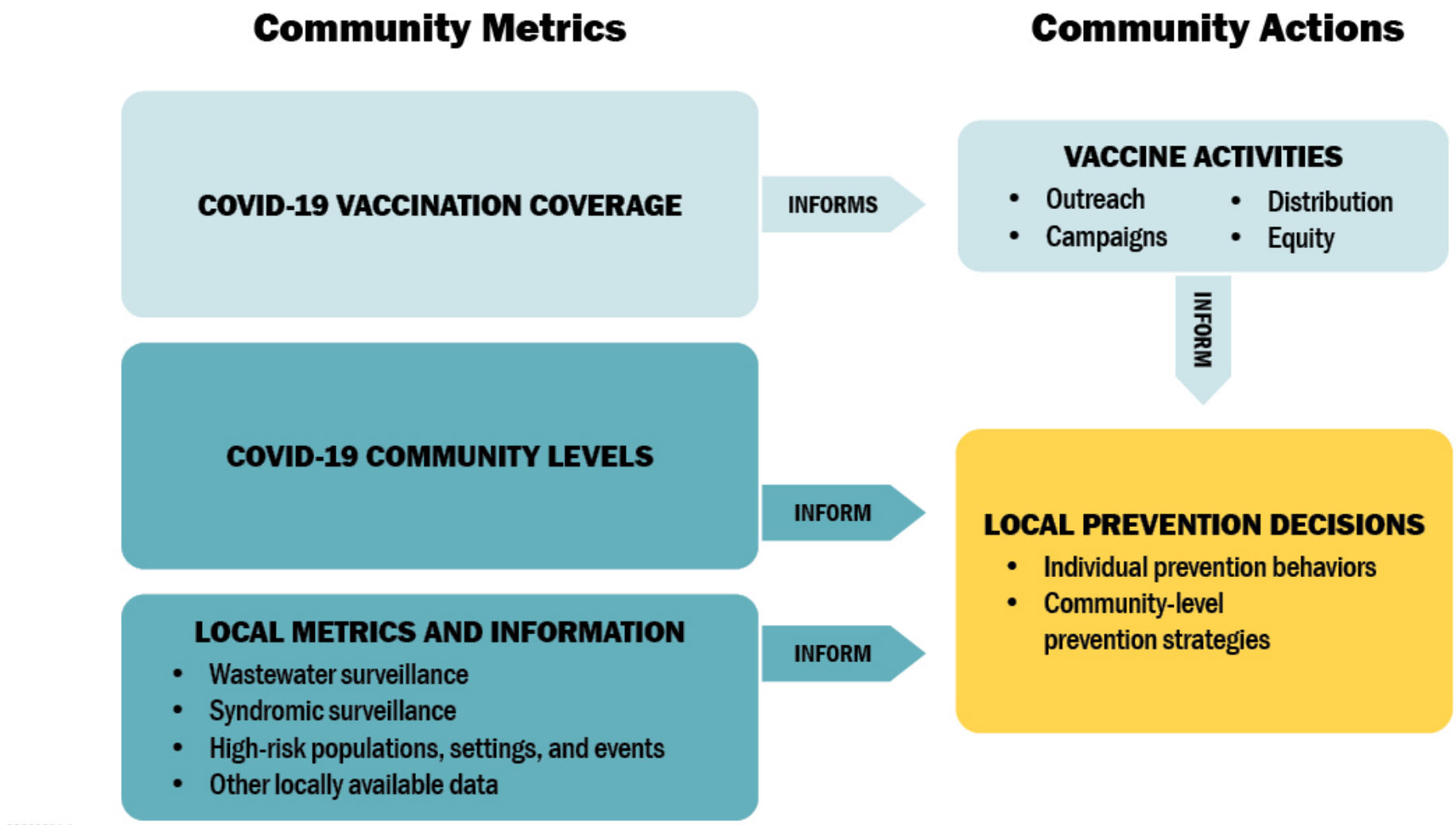


A study based on a Southeast MI cohort (HIVE) found that the rate of respiratory illness in families fell by 50% during 2020 and 2021 (while mask wearing and other mitigation measures were in place), compared to earlier years.

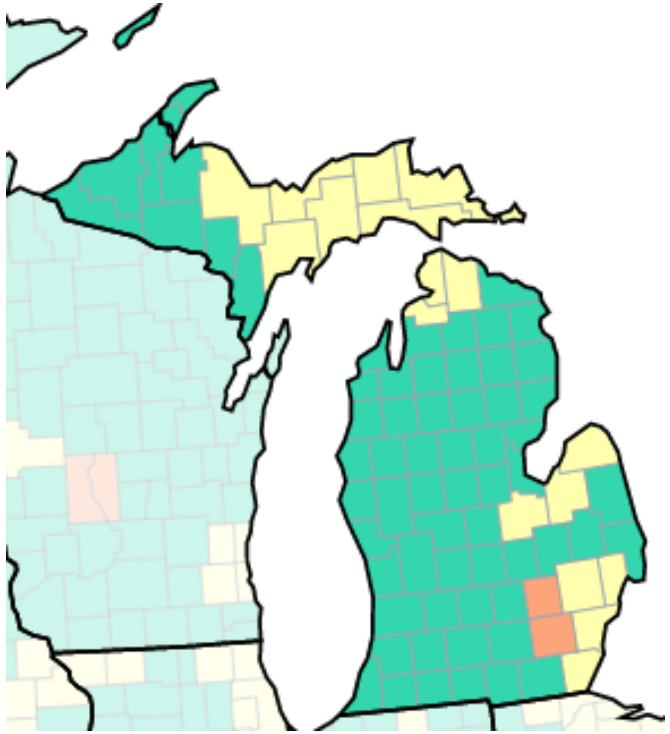
Wearing surgical masks in indoor public settings has been shown to reduce the odds of testing positive for COVID-19 by 66% and wearing N95/KN95 masks reduces the odds by 83%



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



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



- In the US, 6% 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 6% of the population
- 17 Michigan counties are currently at Medium level (20%). This represents 46% of the population
- 64 Michigan counties are currently at Low level (77%). This represents 49% of the population

Percent of Counties This Week

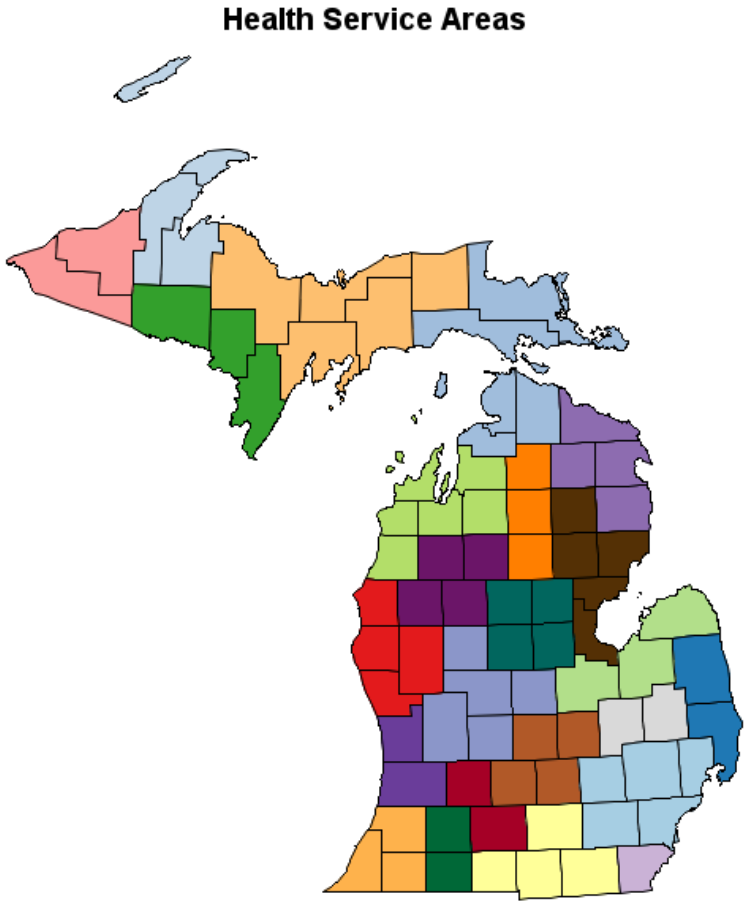
	United States	Michigan	Percent of MI Population
Low	63%	77%	49%
Medium	31%	20%	46%
High	6%	2%	6%

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

Source: CDC COVID-19 Community Levels https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels

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%

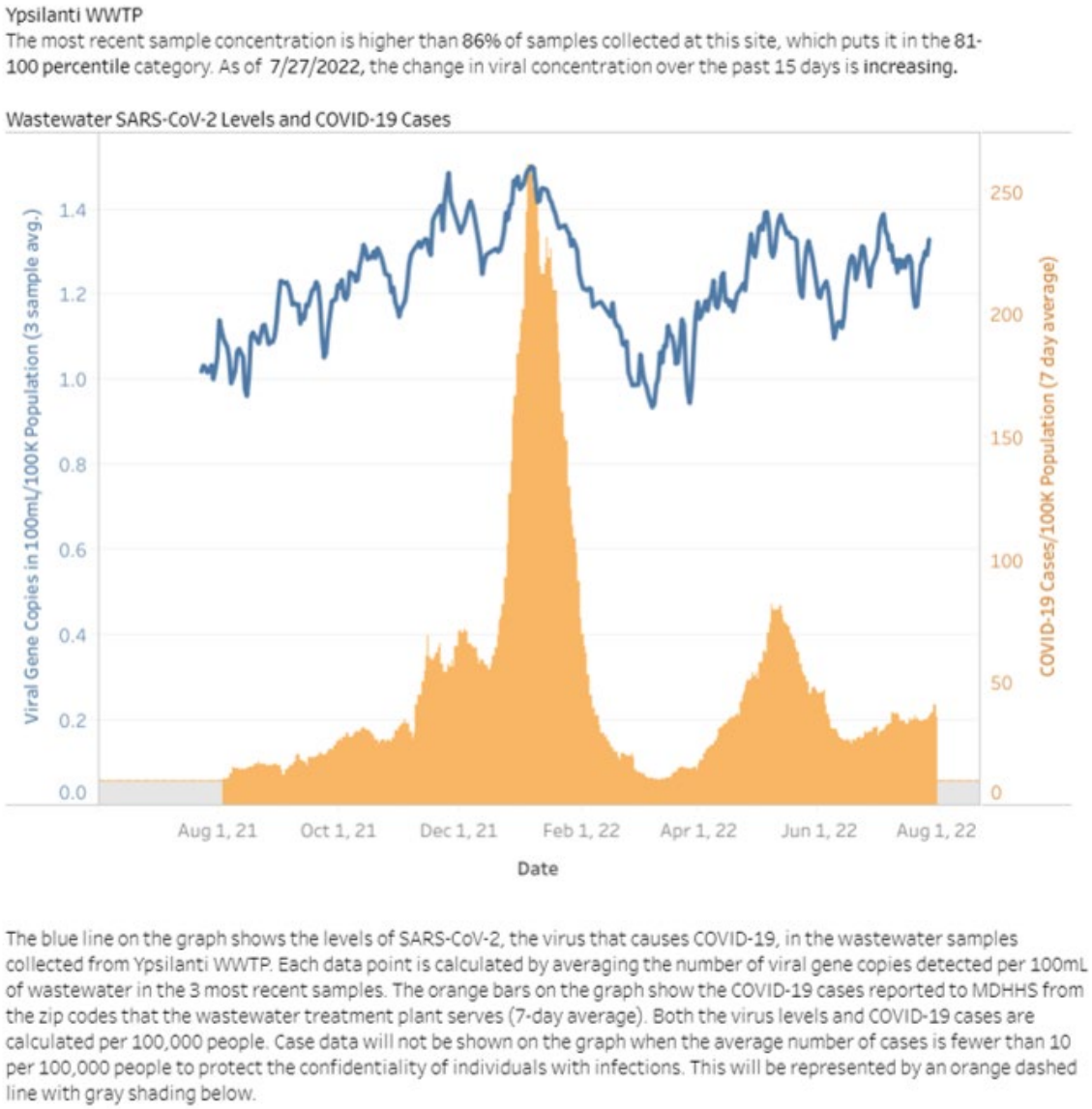


Source: CDC COVID-19 Community Levels https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

Interpreting Wastewater Should Be In Context with Other Indicators

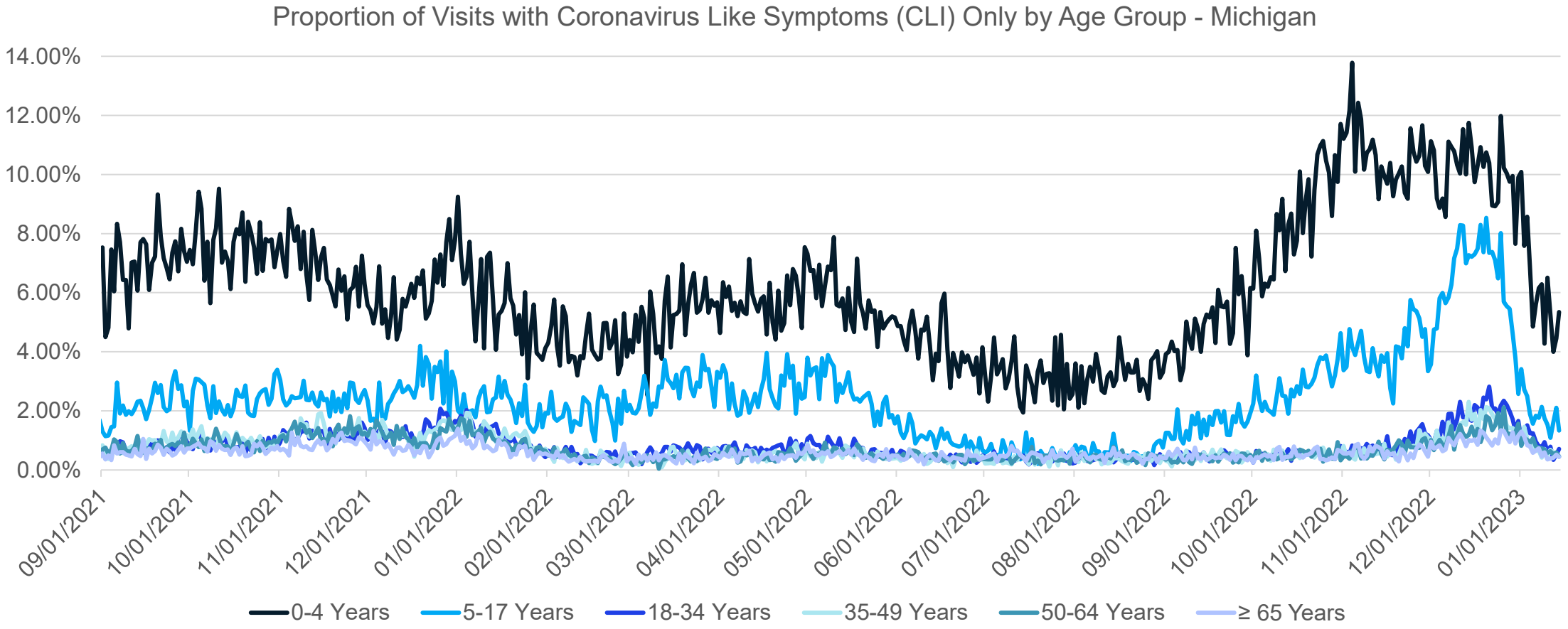
- When levels of virus in wastewater are low, a modest increase overall in virus level can appear much larger as numbers are translated into percentages
  - This does not necessarily mean we will see major increases in transmission in the community

- 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



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

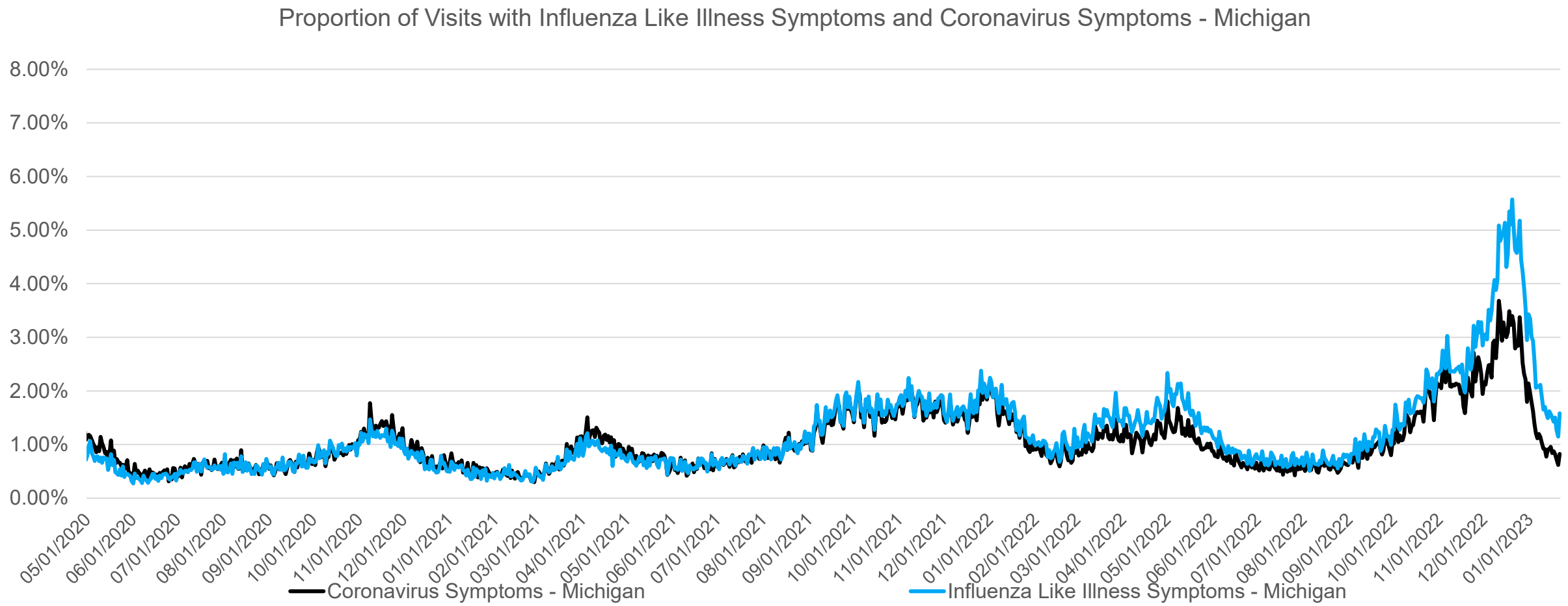
Syndromic Surveillance for CLI in Michigan is increasing, and highest for younger ages



- The proportion of emergency department and urgent care visits with COVID-like illness (CLI) is decreasing since late December for all age groups
- Younger ages have a higher proportion of visits for CLI than older ages

Source: Michigan Syndromic Surveillance System (MSSS) and National Syndromic Surveillance Program – data obtained from 216 participating emergency department and urgent care facilities in Michigan

Syndromic Surveillance for CLI and ILI in Michigan is increasing

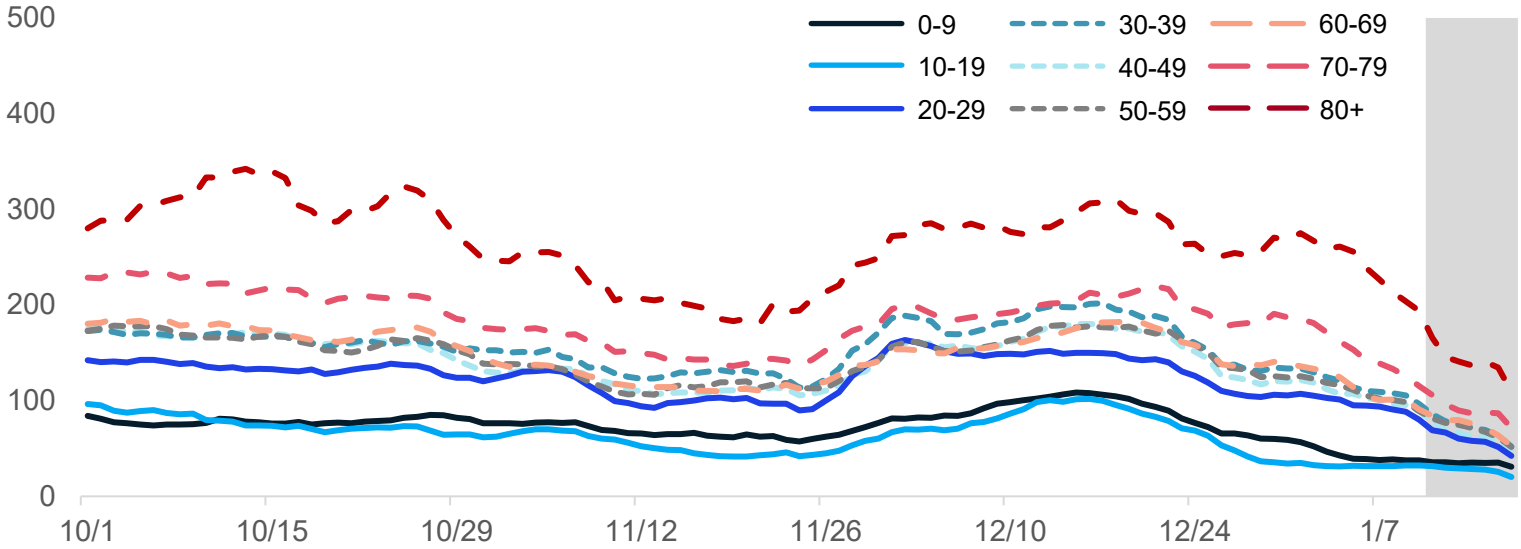


- The proportion of emergency department and urgent care visits with COVID-like illness (CLI) and Influenza-like illness (ILI) is decreasing since mid-December
- Currently, approximately 1.5% of visits report ILI symptoms and 0.8% of visits report CLI
- Recently, ILI and CLI are at the highest levels since mid-2020

Source: Michigan Syndromic Surveillance System (MSSS) and National Syndromic Surveillance Program – data obtained from 216 participating emergency department and urgent care facilities in Michigan

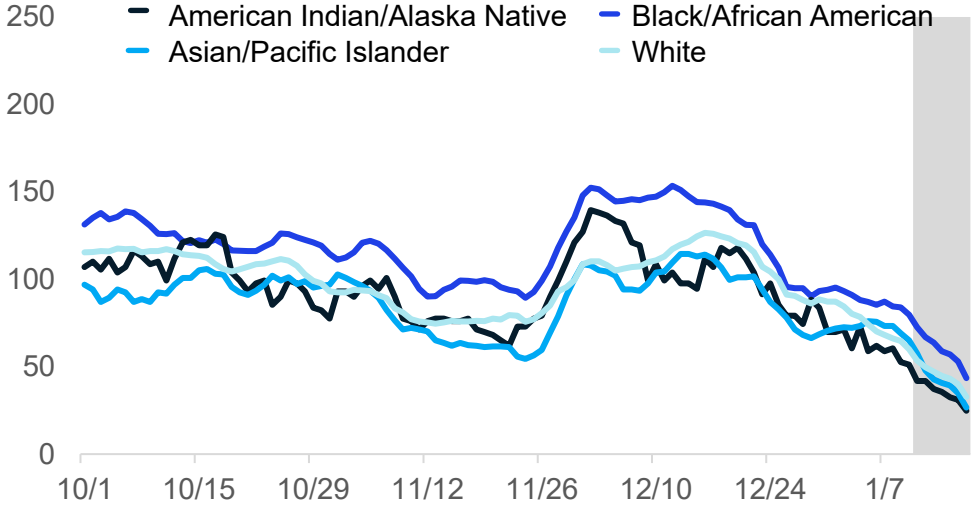
Case rates have declined for most age groups

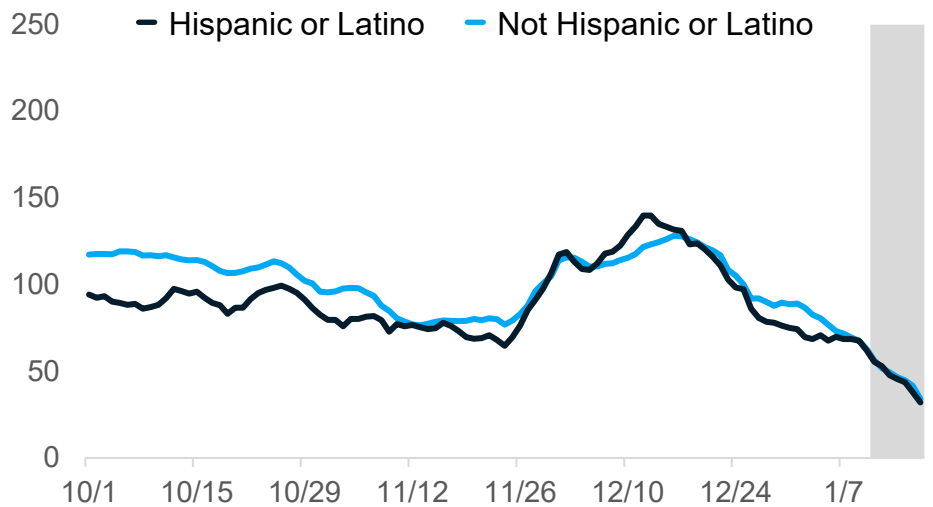
Daily new confirmed and probable cases per million by age group (7-day rolling average)



- Case rates by onset date for all age groups are between 32.4 and 193.8 cases per million (through 1/10)
- Case counts and case rates are highest for 80+-year-olds this week, followed by 70-79-year-olds and the 30-39-year-old age groups

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

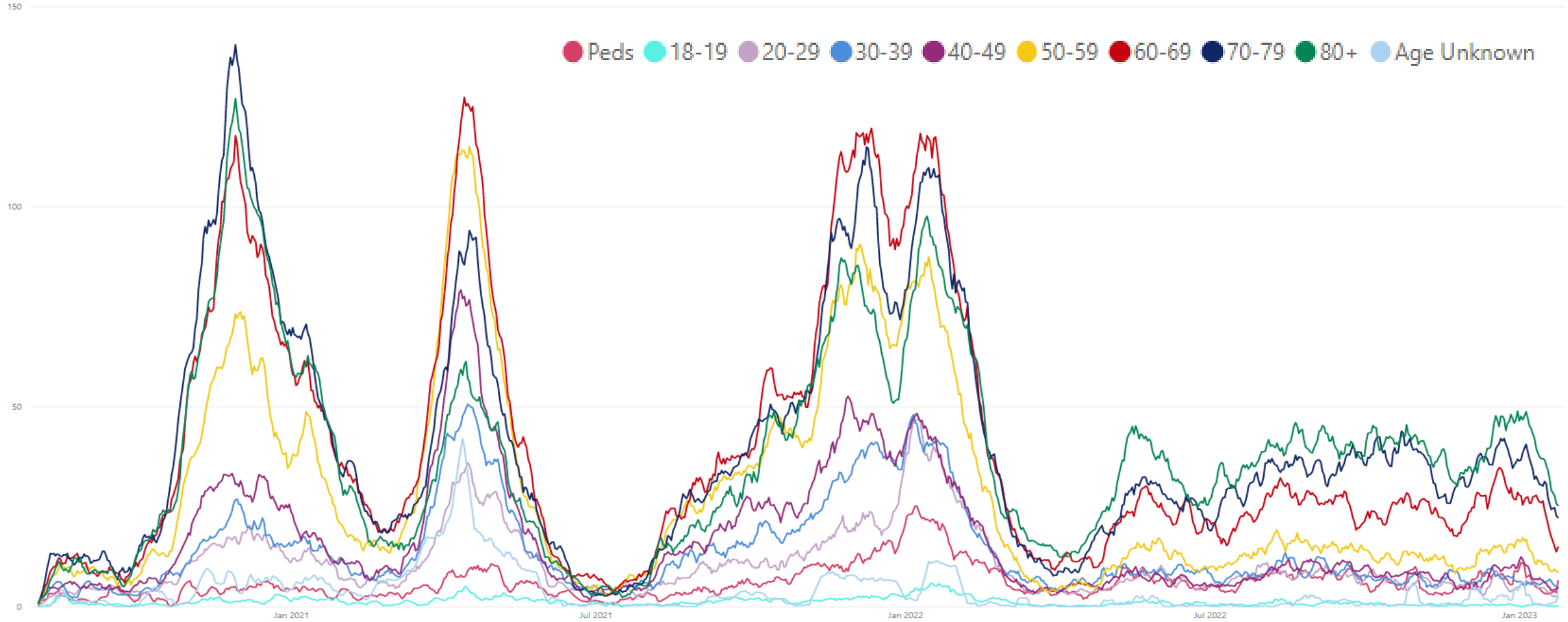




- Case rates are highest for Black populations (79.8 cases/million)
- Between 18-23% of cases in last 30 days have missing race/ethnicity data

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

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

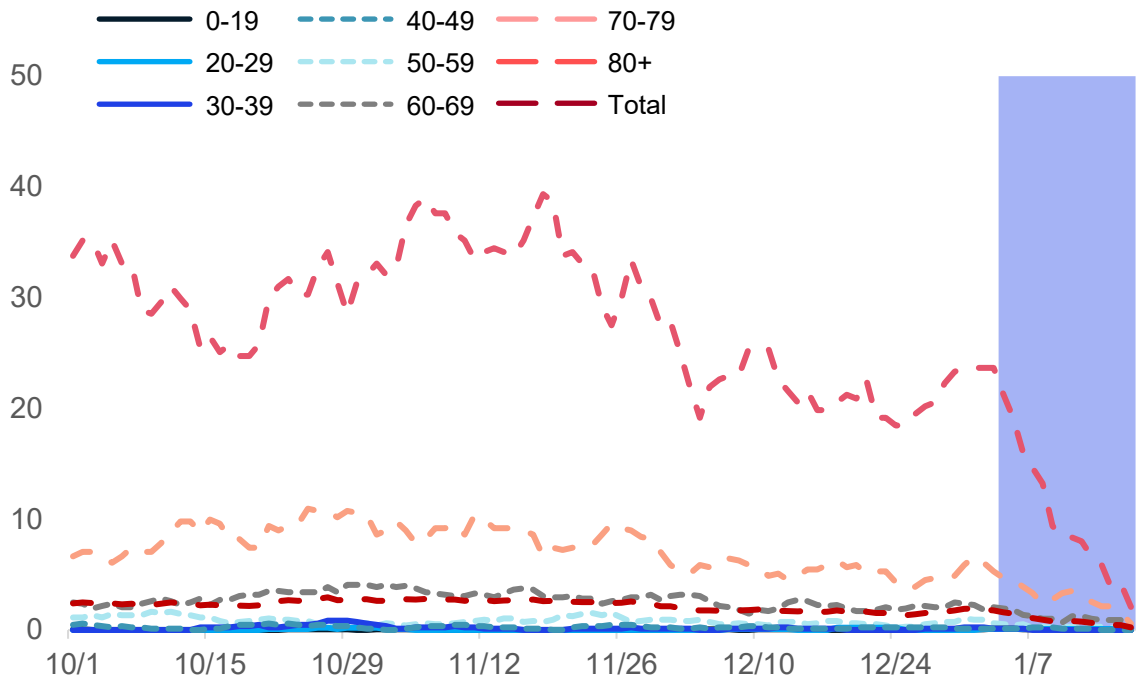


- Trends for daily average hospital admissions decreased 23% (-29 fewer admissions/day) to 95 admissions per day
- This week, those over the age of 80 experienced the highest average daily admission (25.3 admissions/day)
- Those 60-69, 70-79, and 80+ are seeing between 15 and 25 daily hospital admissions

Source: CHECC & EM Resource

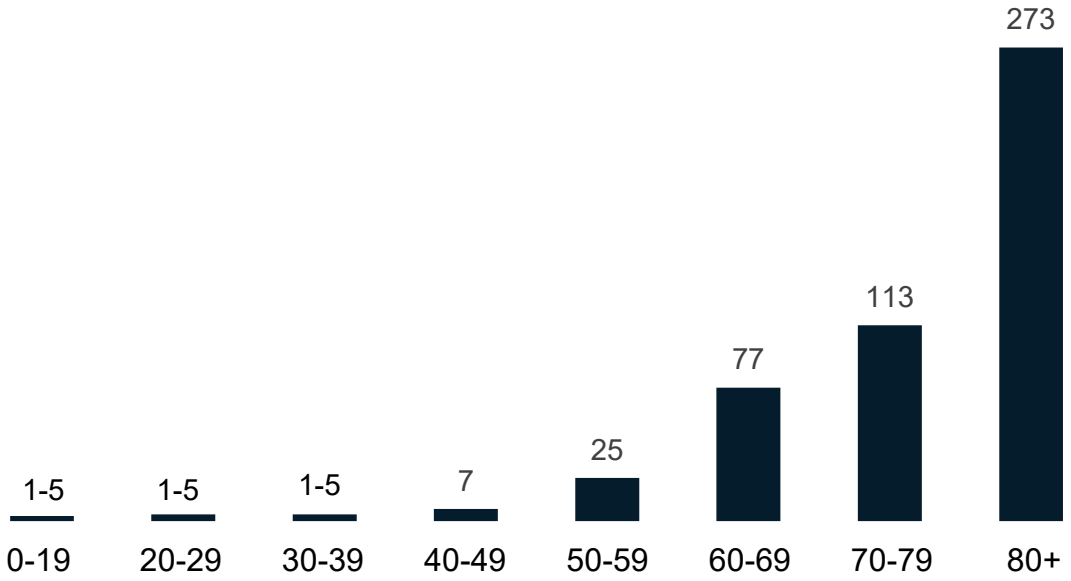
Average new deaths have declined but are highest for those over 80y

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 1/3/2023)

- 8.5% of deaths below age sixty



- Through 1/3/23, the 7-day avg. death rate has declined (23.7 deaths per million people) for those over the age of 80
- In the past 30 days, there are fewer than 18 confirmed and probable COVID-19 deaths under the age of 50
- 30-day proportion of deaths among those under 60 years of age is 8.5%.

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

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

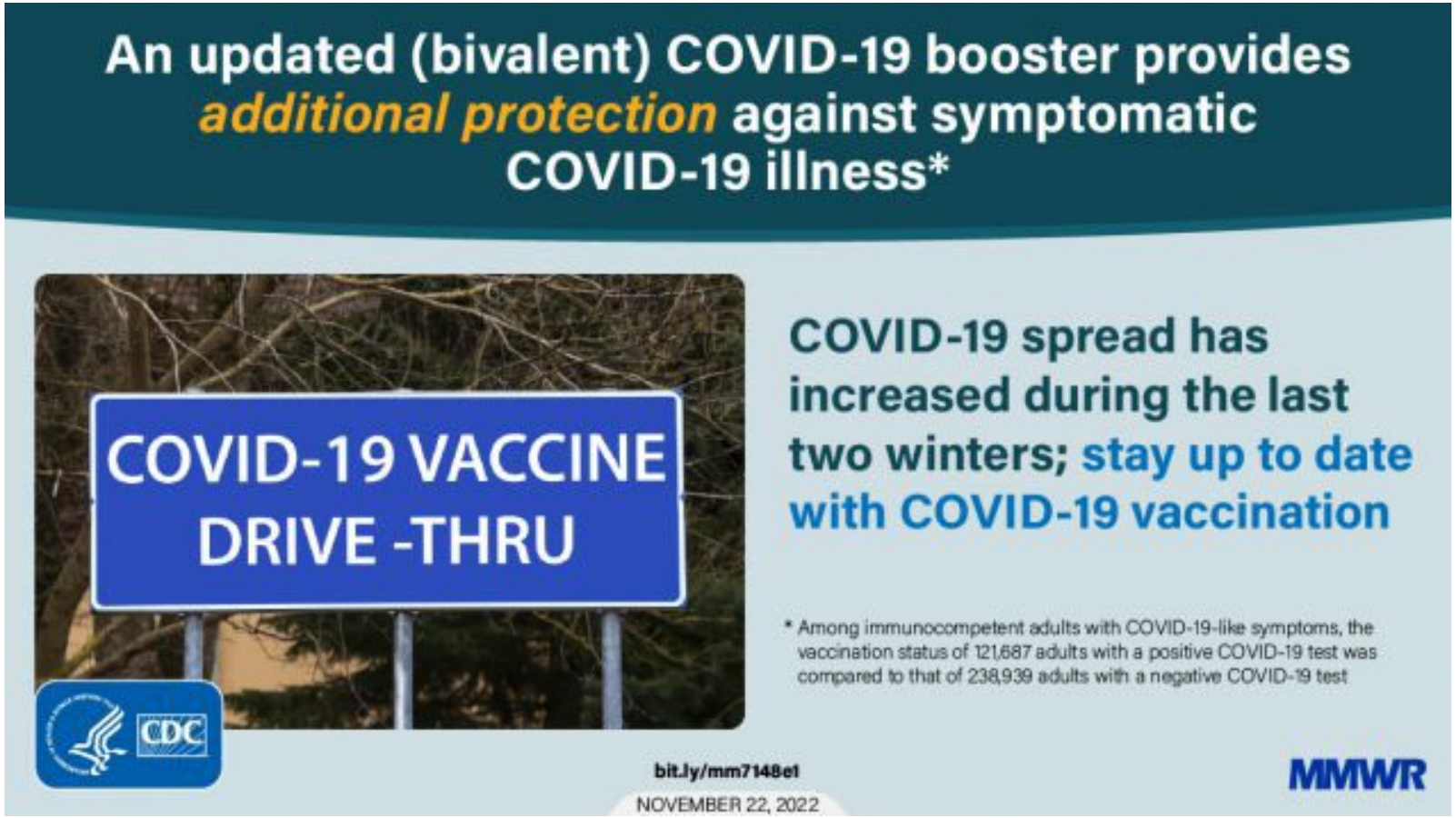
- Being up to date on COVID-19 vaccination now indicates **having completed a COVID-19 vaccine primary series** *and* **having received the most recent booster dose as recommended by the CDC**
  - **Age 6 month to 4 years*** : receive 2 doses of the monovalent COVID-19 primary series *and* the currently recommended bivalent booster OR receive all three of the monovalent Pfizer COVID primary series
  - **Ages 5 years to 11 years** : receive COVID-19 primary series *and* the currently recommended bivalent 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 for additional vaccination recommendations

* At this time, children who have received all shots of the Pfizer 3-dose series are not eligible to receive the updated bivalent vaccine

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

Staying up to date with recommended COVID-19 vaccinations, including the bivalent booster, provides significant protection against SARS-CoV-2 infection

- Monovalent COVID-19 vaccines were less effective against symptomatic infection due to SARS-CoV-2 Omicron variant
- Updated bivalent boosters provided significant additional protection against symptomatic SARS-CoV-2 infection in those who had previously received monovalent vaccine doses
- All persons should stay up to date with recommended COVID-19 vaccinations, including bivalent booster doses for eligible persons
- Currently, 14.8% of those 5 and older have received their bivalent vaccine; and 38.4% of those over 65 years have received their bivalent booster



Source: Link-Gelles R, et al. Effectiveness of Bivalent mRNA Vaccines in Preventing Symptomatic SARS-CoV-2 Infection — Increasing Community Access to Testing Program, United States, September–November 2022. MMWR Morb Mortal Wkly Rep. ePub: 22 November 2022. DOI: http://dx.doi.org/10.15585/mmwr.mm7148e1