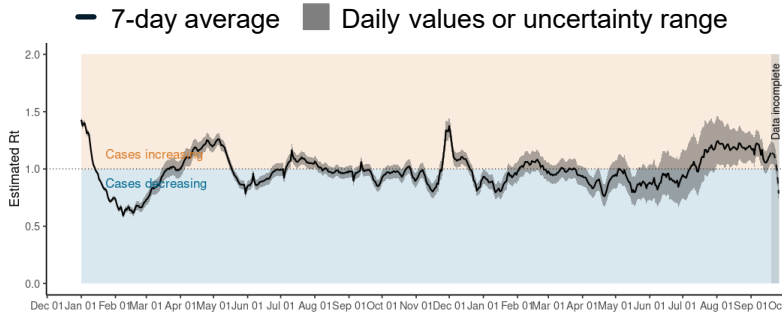


MI COVID RESPONSE DATA AND MODELING UPDATE

October 3, 2023

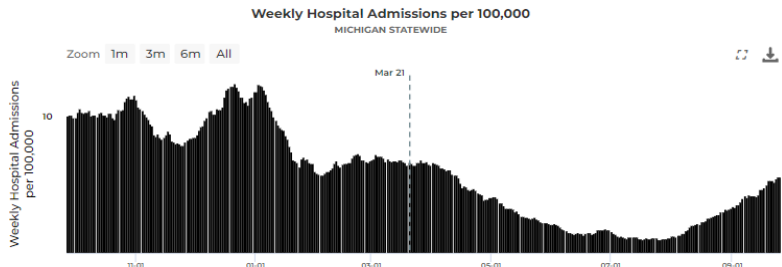
Recent statewide trends show COVID is steadily increasing

Statewide trends



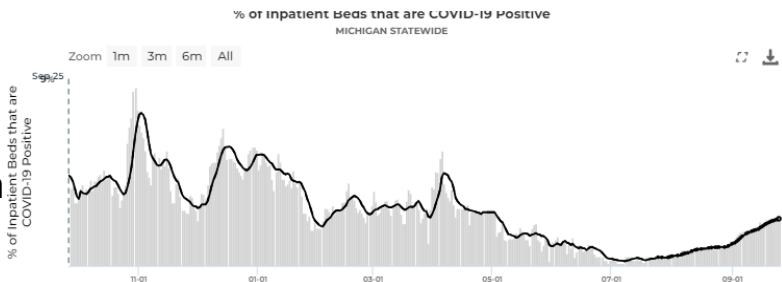
Reproductive Number, R_t

- The reproductive number (R_t) in Michigan is above 1 indicating cases are increasing.



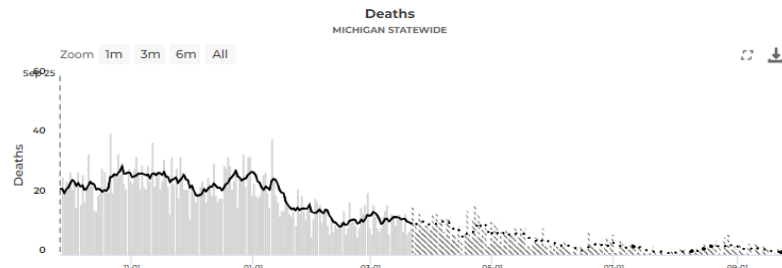
Hospital Admissions

- There has been a daily average of 5.8 hospital admissions per 100,000 Michiganders. This is the ninth consecutive week of increases.



Daily hospitalization rate, %

- The percent of inpatient beds with COVID-19 positive patients (2.3%) are steadily increasing since mid-July.



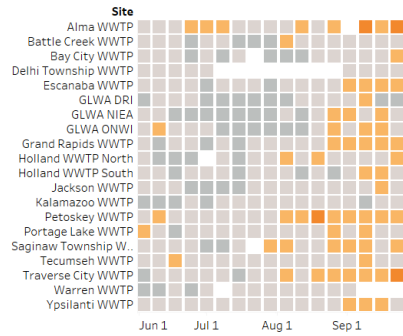
Deaths

- Deaths are a lagging indicator but remain similar to rates from last week.

Recent statewide trends show COVID is steadily increasing

Statewide trends

— 7-day average ■ Daily values



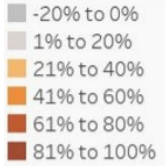
Current: 42% of sites are above 20% baseline threshold

Last Week: 52% of sites are above 20% baseline threshold

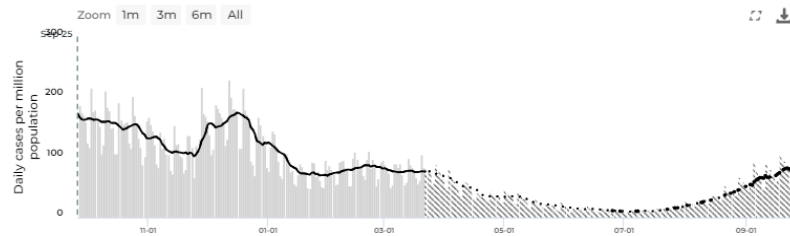
- 42% (8/19) of wastewater sentinel sites have reported levels that are 20% or higher than baseline threshold levels this week.

Wastewater

Percent Change



Daily cases per million

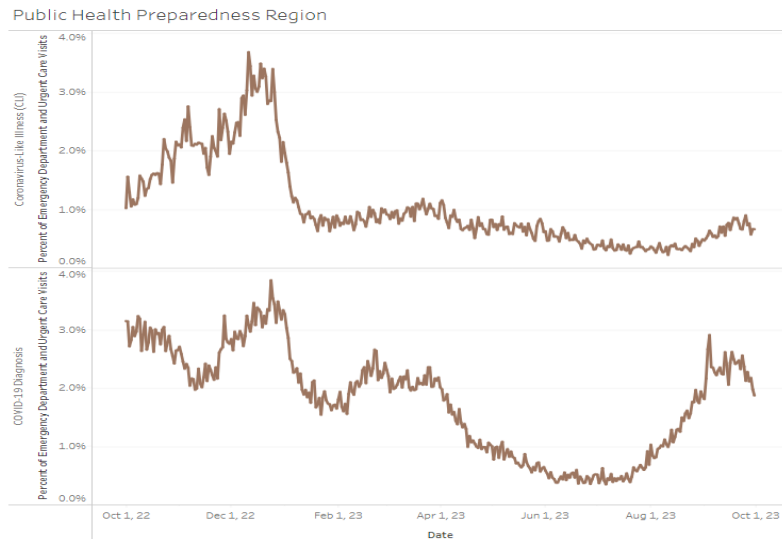


Current: 74.4

Last Week: 69.6

- Reported case rates have increased compared to last week. Case rates have gradually increased since early July.

Syndromic Surveillance



Coronavirus-Like-Illness (CLI)

Current: 0.7%

Last Week: 0.6%

COVID-19 Diagnosis

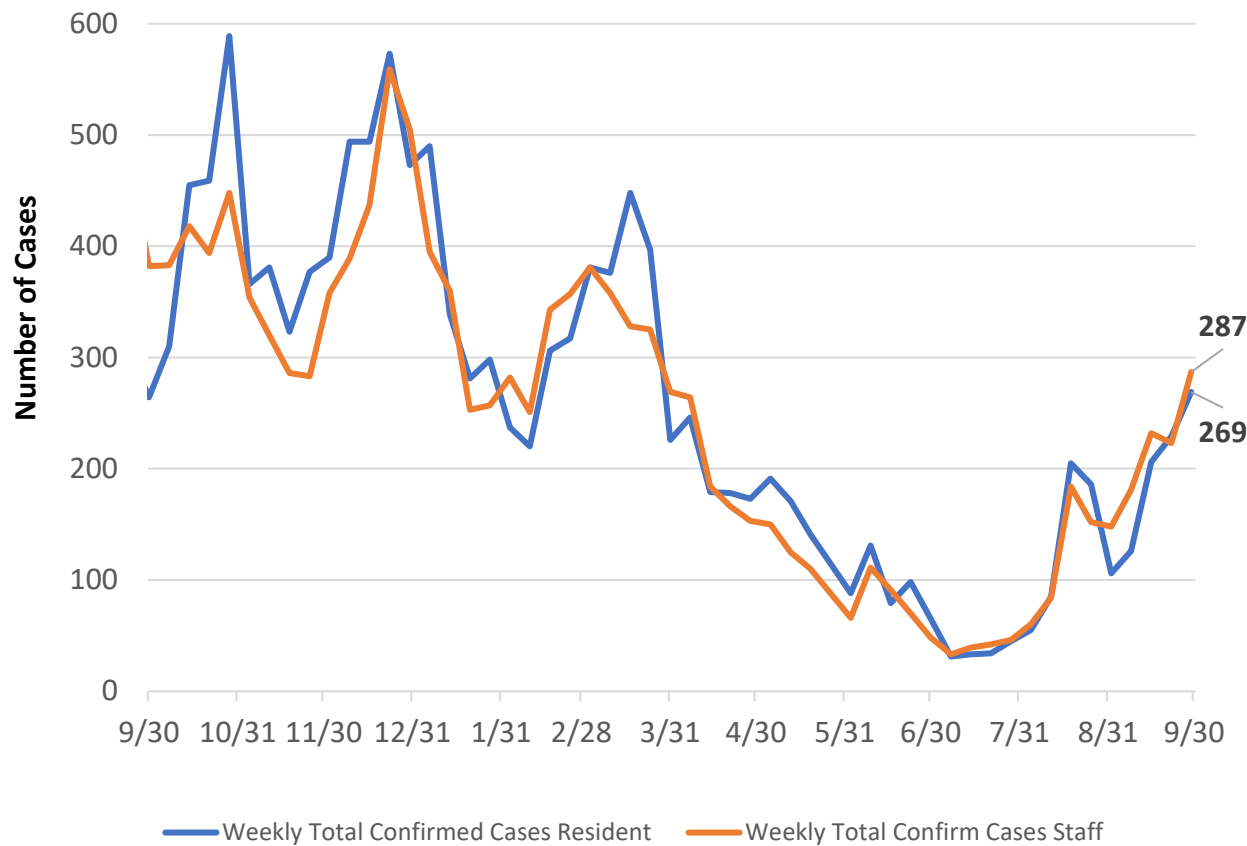
Current: 1.9%

Last Week: 2.4%

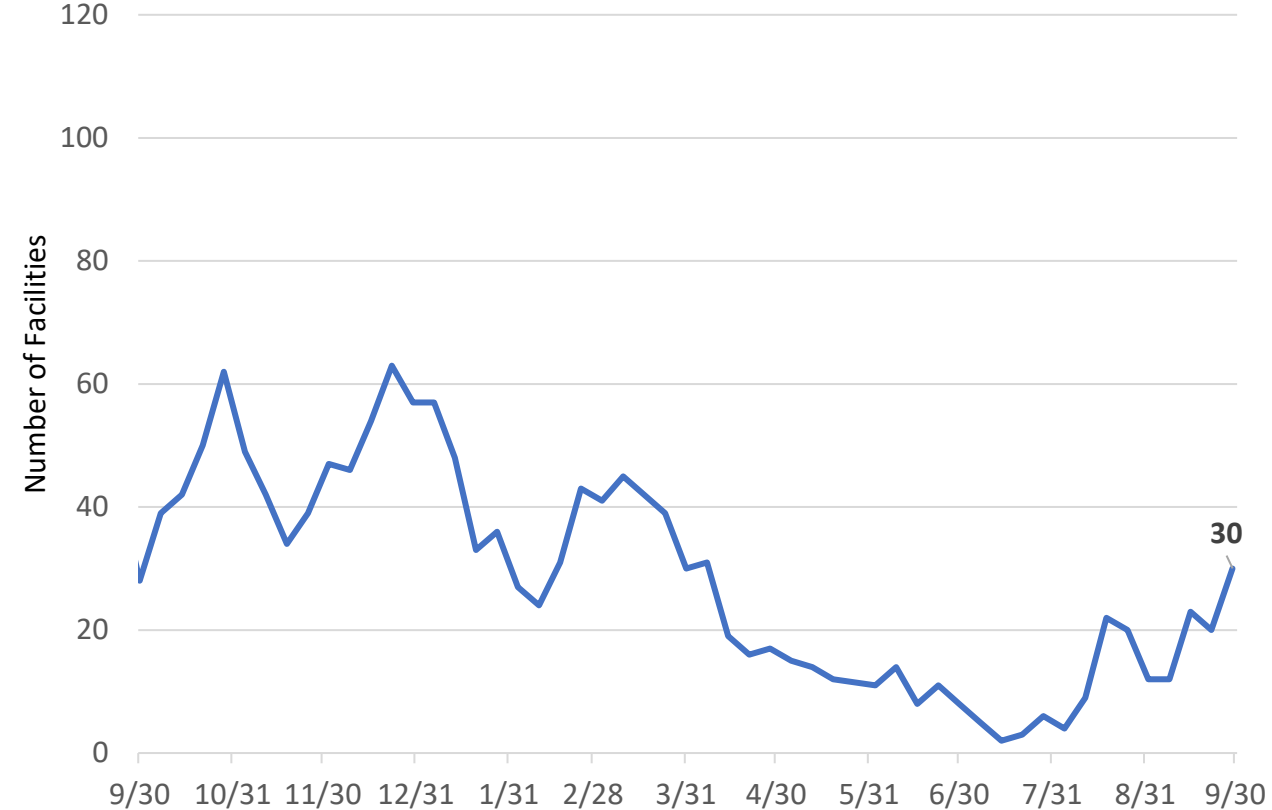
- COVID-19 diagnoses in emergency departments and urgent cares are lower compared to last week. Current COVID-19 syndromic indicators remain below what was reported at this time last year.

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 9/30/2022 to 9/29/2023



Number of SNFs with 3 or more Confirmed Cases
9/30/2022 to 9/29/2023



- Case counts increased in SNF residents (229 to 269) and in SNF staff (223 to 287) since last week [left graphic]
- The number of SNF facilities reporting 3 or more cases increased compared to last week (20 to 30) [right graphic]

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

Update through October 3, 2023

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

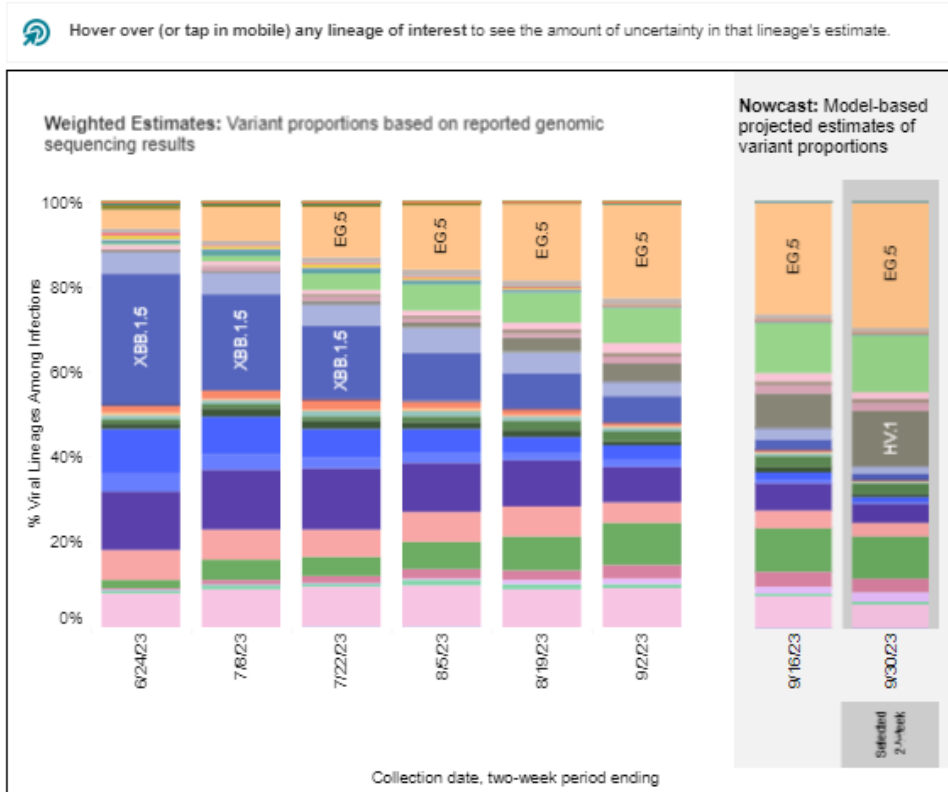
Source: Data is now provided through NHSN, data prior to May 19 was from Michigan EM Resource

Identified COVID-19 Cases Caused by Variants of Concern (VOC) in US and Michigan: Omicron lineages continue to evolve; all competing for predominance

SARS-CoV-2 Variants Circulating in the United States, Jun 11 – Sep 30 (NOWCAST)

Weighted and Nowcast Estimates in United States for 2-Week Periods in 6/11/2023 – 9/30/2023

Nowcast Estimates in United States for 9/17/2023 – 9/30/2023



USA		WHO label	Lineage #	%Total	95%PI
Omicron	EG.5			29.4%	26.4-32.6%
	FL.1.5.1			13.7%	10.8-17.1%
	HV.1			12.9%	10.5-15.6%
	XBB.1.16.6			10.1%	8.6-11.7%
	XBB.2.3			5.6%	4.7-6.5%
	XBB.1.16			4.3%	3.8-4.9%
	XBB.1.16.11			3.2%	2.6-3.9%
	XBB.1.16.1			3.0%	2.4-3.8%
	XBB.1.5.70			2.5%	1.9-3.4%
	XBB.1.16.15			2.0%	1.4-3.0%
	HF.1			1.8%	1.1-2.9%
	XBB			1.8%	1.5-2.1%
	GE.1			1.7%	1.3-2.2%
	XBB.1.5			1.1%	1.0-1.3%
	XBB.1.9.1			1.1%	0.9-1.3%
	EG.6.1			1.0%	0.7-1.4%
	GK.2			0.9%	0.7-1.3%
	XBB.1.5.72			0.8%	0.6-1.0%
	XBB.1.42.2			0.7%	0.4-1.1%
	XBB.1.9.2			0.5%	0.4-0.7%
XBB.1.5.68			0.5%	0.3-0.8%	
XBB.1.5.10			0.4%	0.3-0.6%	
XBB.2.3.8			0.3%	0.2-0.4%	
CH.1.1			0.2%	0.1-0.3%	
XBB.1.5.59			0.2%	0.1-0.3%	
FD.1.1			0.2%	0.1-0.2%	
FE.1.1			0.1%	0.1-0.2%	
BA.2			0.1%	0.0-0.2%	
EU.1.1			0.0%	0.0-0.1%	
XBB.1.5.1			0.0%	0.0-0.0%	
BQ.1			0.0%	0.0-0.0%	
FD.2			0.0%	0.0-0.0%	
BA.5			0.0%	0.0-0.0%	
Other	Other*			0.1%	0.0-0.1%

National Distribution

- 100% of the VOCs currently circulating in the U.S. are Omicron
- Nowcast estimates project that EG.5 (29.4%, 95% P.I. 26.4-32.6%) is the most prevalent, while FL.1.5.1 comprise of approximately 13.7% of infections (95% P.I. 10.8-17.1%), HV.1 comprise of approximately 12.9% of infections (95% P.I. 10.5-15.6%), and XBB.1.16.6 comprise of 10.1% of infections (95% P.I. 8.6-11.7%) while all other lineages are estimated to comprise of less than 10% during the week ending on September 30.

Distribution in Michigan

- Since August 1, there have been 155 VOC specimens sequenced and reported to MDHHS
- 100% of specimens sequenced are Omicron
 - Since August 1, a majority of specimens sequenced and reported have been identified as XBB or one of the child lineages; currently 32.3% of specimens have been identified as XBB.1.16, the highest of any of the XBB lineages in Michigan

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one 2-week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all 2-week periods displayed.
 # 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, XBB and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.2.75.2, CH.1.1 and BN.1, BA.2.75 sublineages are aggregated with BA.2.75. 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 the lineages shown and their sublineages, sublineages of XBB are aggregated to XBB. Except XBB.1.5.1, XBB.1.5.10, FD.2, EU.1.1, XBB.1.5.68 and XBB.1.5.70 sublineages of XBB.1.5 are aggregated to XBB.1.5. Except FL.1.5.1, sublineages of XBB.1.9.1 are aggregated to XBB.1.9.1. Except XBB.1.16.1, XBB.1.16.11, XBB.1.16.15 sublineages of XBB.1.16 are aggregated to XBB.1.16. Sublineages of XBB.1.42.2 are aggregated to XBB. For all the other lineages listed, their sublineage are aggregated to the listed parental lineages respectively. Previously, FL.1.5.1, GE.1, EG.6.1 and HV.1, FD.1.1, XBB.2.3.8, HF.1, GK.2 was aggregated to XBB.1.9.1, XBB.2.3.10, XBB.1.9.2, XBB.1.5.15, XBB.2.3, XBB.1.16.13 and XBB.1.5.70 respectively. Lineages BA.2.75.2, XBB, XBB.1.5, XBB.1.5.1, XBB.1.5.10, FD.2, XBB.1.9.1, XBB.1.9.2, XBB.1.16, XBB.1.16.1, XBB.2.3, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6, BQ.1.1, EU.1.1, XBB.1.5.68, FE.1.1, EG.5, XBB.1.5.72, FL.1.5.1, GE.1, EG.6.1, XBB.1.16.11, FD.1.1, XBB.1.5.70, XBB.2.3.8, HV.1, XBB.1.42.2, GK.2, HF.1 and XBB.1.16.15 contain the spike substitution R346T.

National Surveillance for Respiratory Diseases: Important to Remain Vigilant

National Emergency Department Visits for COVID-19, Influenza and RSV* (top graphic)

The most recent number of national ED visits for all three respiratory illnesses combined are lower than the previous week

The current number of ED visits for all three respiratory illness combined is higher than what we saw during the summer but similar to this time last year (September 2022)

For most of 2023, COVID-19 has contributed to the majority of ED visits compared to influenza and RSV; the past month has seen COVID consisting of over 85% of ED visits for these three respiratory illnesses

Respiratory Disease Season Outlook† (bottom graphic)

This season is likely to bring a moderate COVID-19 wave, causing around as many hospitalizations at the peak as occurred at last winter's peak

However, the number of hospitalizations this year is expected to be higher than experienced prior to the pandemic with only influenza and RSV (example shown in the lowest dashed line)

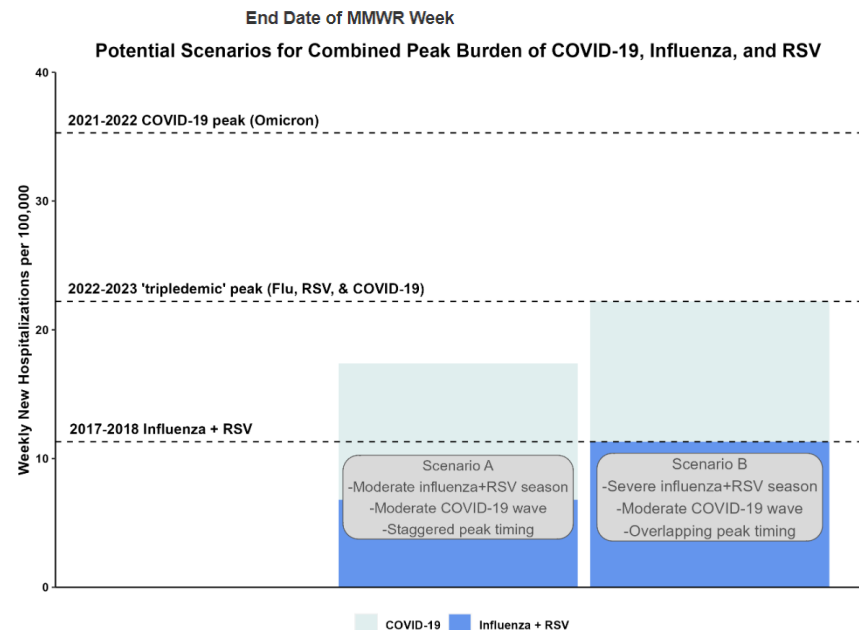
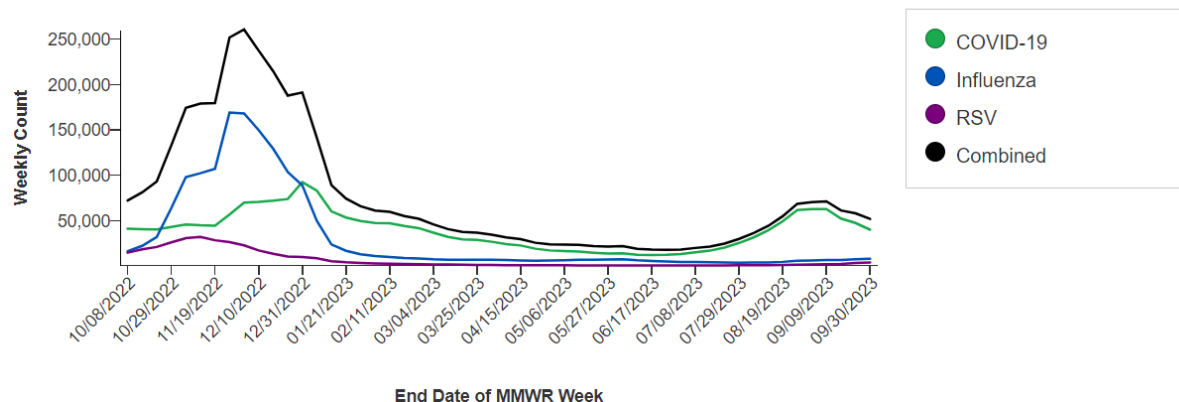
Two hypothetical scenarios for peak hospital burden from these three respiratory illnesses illustrate how the additional burden of a moderate COVID-19 wave during a moderate respiratory disease season (left bar) or a severe influenza/RSV season (right bar) may strain hospital capacity

Weekly Emergency Department Visits by Age Group

Make a selection from the filters to change the visualization information.

Age Group

All Ages



Nearly 20% of Michiganders are Up to Date with COVID-19 Vaccines

Vaccination continues to remain the best way to protect yourself and your loved ones against serious outcomes from COVID-19

Vaccination Up-to-Date Coverage

The percentage of all Michiganders who are up to date with their COVID-19 vaccines is 18.6%

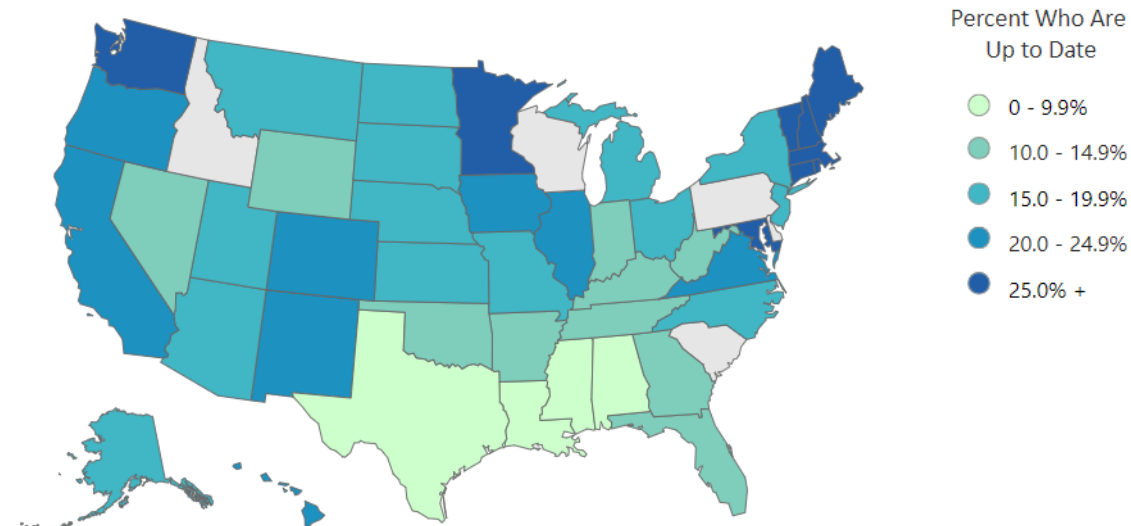
47.5% of the population 65 years of age or older are up to date with their COVID-19 vaccines

Race/Ethnicity[¶] for those 6 months and older:

- Up-to-date coverage is highest among Non-Hispanic (NH) White (17.4%), followed by NH Asian, Native Hawaiian or Pacific Islander Race (16.9%), NH American Indian (15.9%), and NH Black or African American races (10.3%).
- Up-to-date coverage is at 11.7% for Hispanics

Percent of the Total Population Who Are Up to Date with COVID-19 Vaccines

Administrations through August 31, 2023

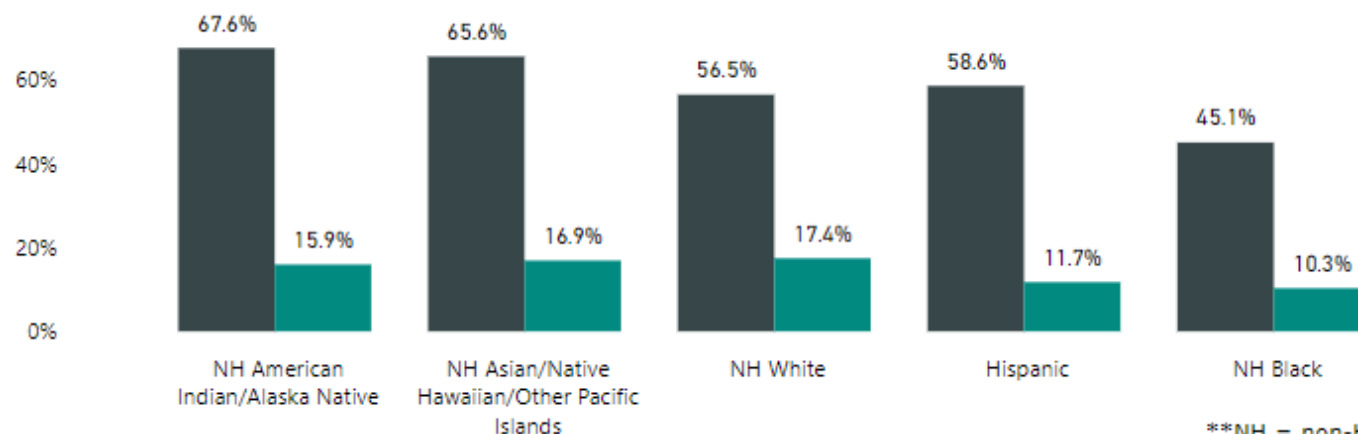


*This shows the percentage of all residents of all ages

Coverage by Race/Ethnicity**

Update through September 16, 2023

● At Least One Dose ● Up-To-Date



**NH = non-Hispanic

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