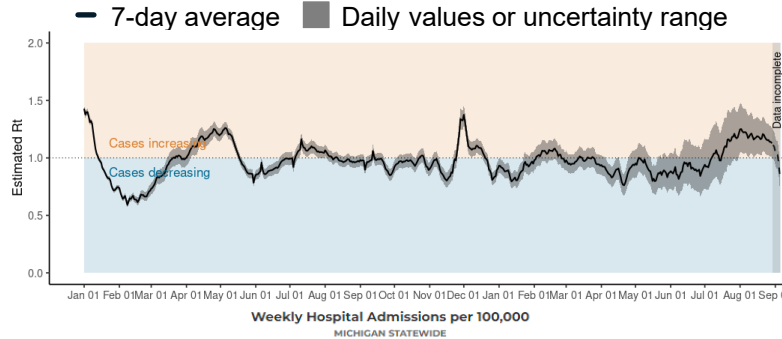# MI COVID RESPONSE DATA AND MODELING UPDATE

September 12, 2023
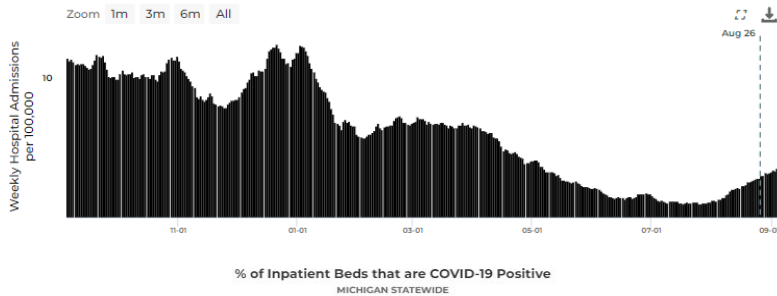
Recent statewide trends show COVID is steadily increasing

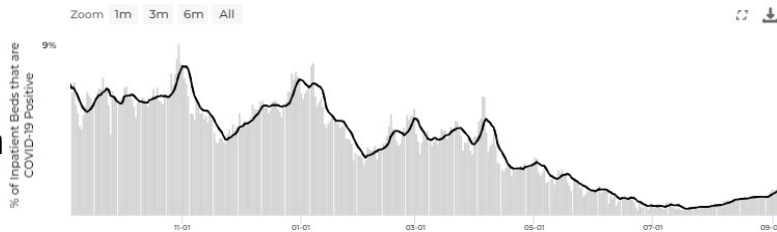**Statewide trends**

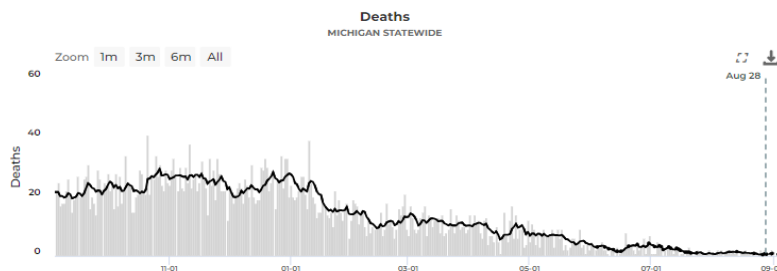**Reproductive Number, R_t**

Current: 1.13

Last Week: 1.17

Hospital Admissions*

Weekly Hospital Admissions per 100,000
MICHIGAN STATEWIDE

Current: 3.7

Last Week: 3.3

Daily hospitalization rate, %

% of Inpatient Beds that are COVID-19 Positive
MICHIGAN STATEWIDE

Current: 1.4%

Last Week: 1.2%

Deaths

Deaths
MICHIGAN STATEWIDE

Current: 0.06

Last Week: 0.10

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

- There has been a daily average of 3.7 hospital admissions per 100,000 Michiganders. This is the sixth consecutive week of increases.

- The percent of inpatient beds with COVID-19 positive patients (1.4%) are steadily increasing since mid-July.

- Deaths are a lagging indicator but remain similar rates from last week.
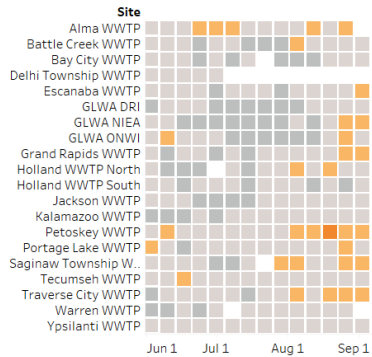
2

Recent statewide trends show COVID is steadily increasing

Statewide trends

Wastewater

- 35% (6/17) of wastewater sentinel sites have reported levels that are 20% or higher than baseline threshold levels this week.

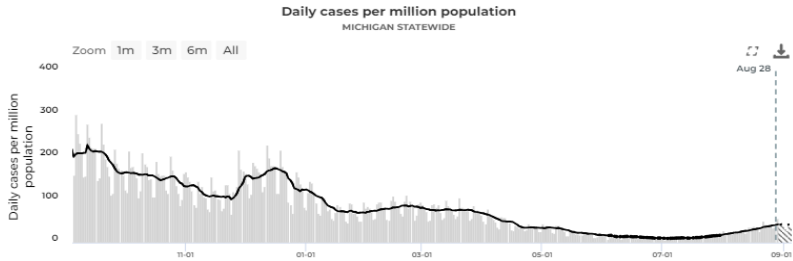Current: 35% of sites are above 20% baseline threshold

Last Week: 42% of sites are above 20% baseline threshold
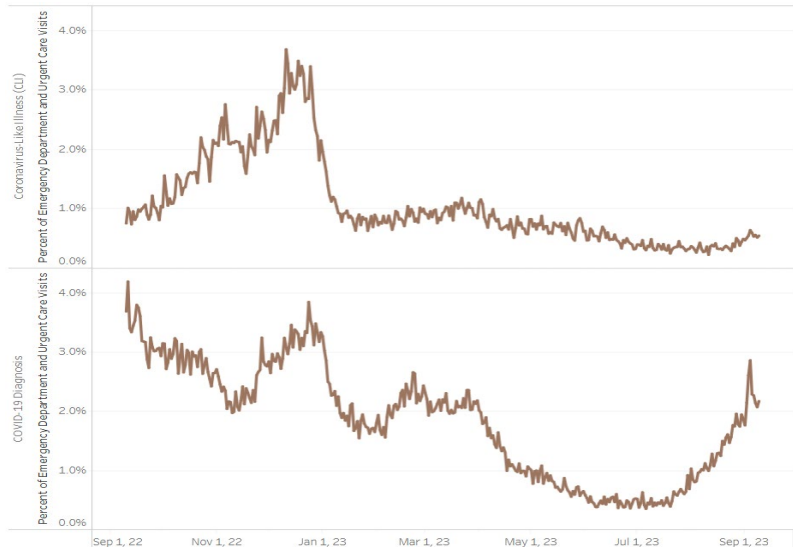
Daily cases per million

Current: 41.8

Last Week: 34.6

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

Syndromic Surveillance

Coronavirus-Like-Illness (CLI)

Current: 0.5%
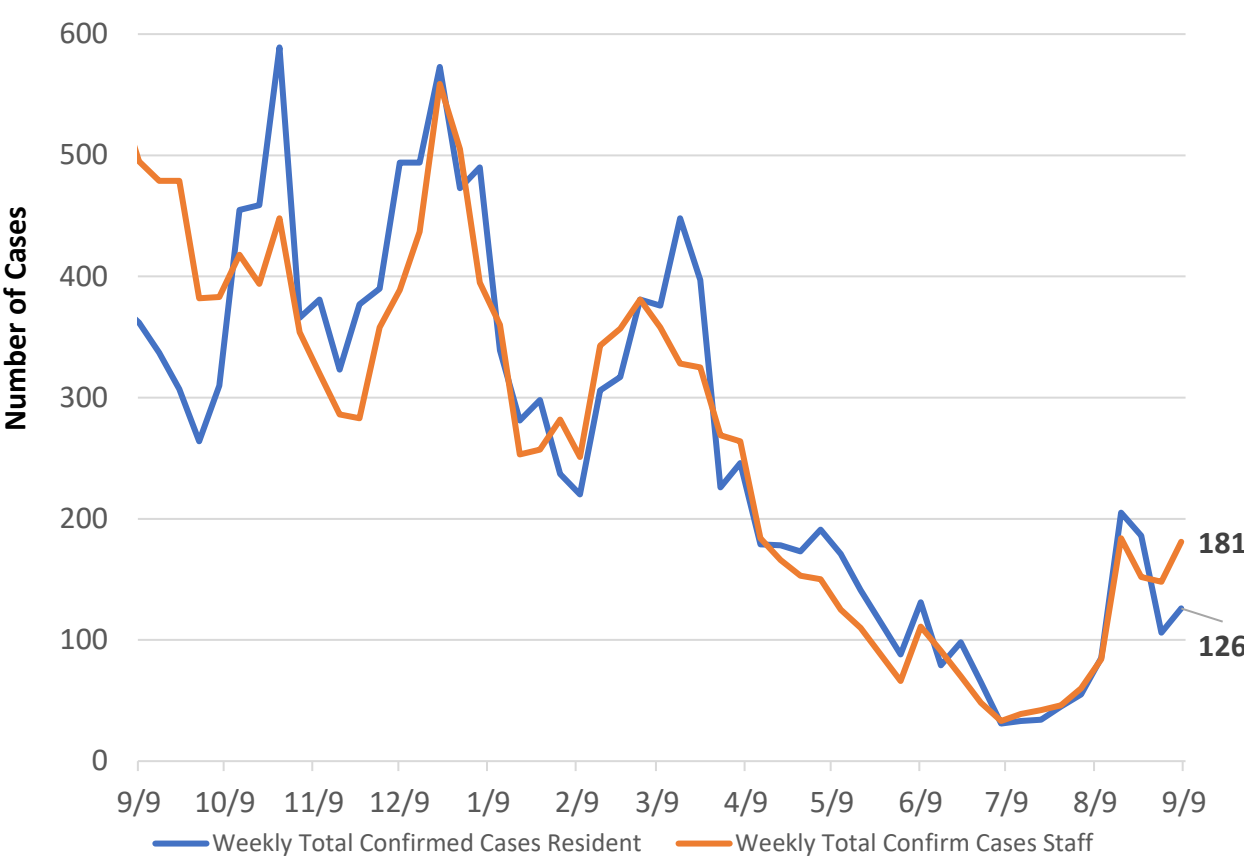
Last Week: 0.5%

COVID-19 Diagnosis

Current: 2.2%

Last Week: 2.1%

- COVID-19 diagnoses in emergency departments and urgent cares saw increases last week. Current COVID-19 diagnosis levels remain below that 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 9/9/2022 to 9/8/2023

Number of SNFs with 3 or more Confirmed Cases 9/9/2022 to 9/8/2023
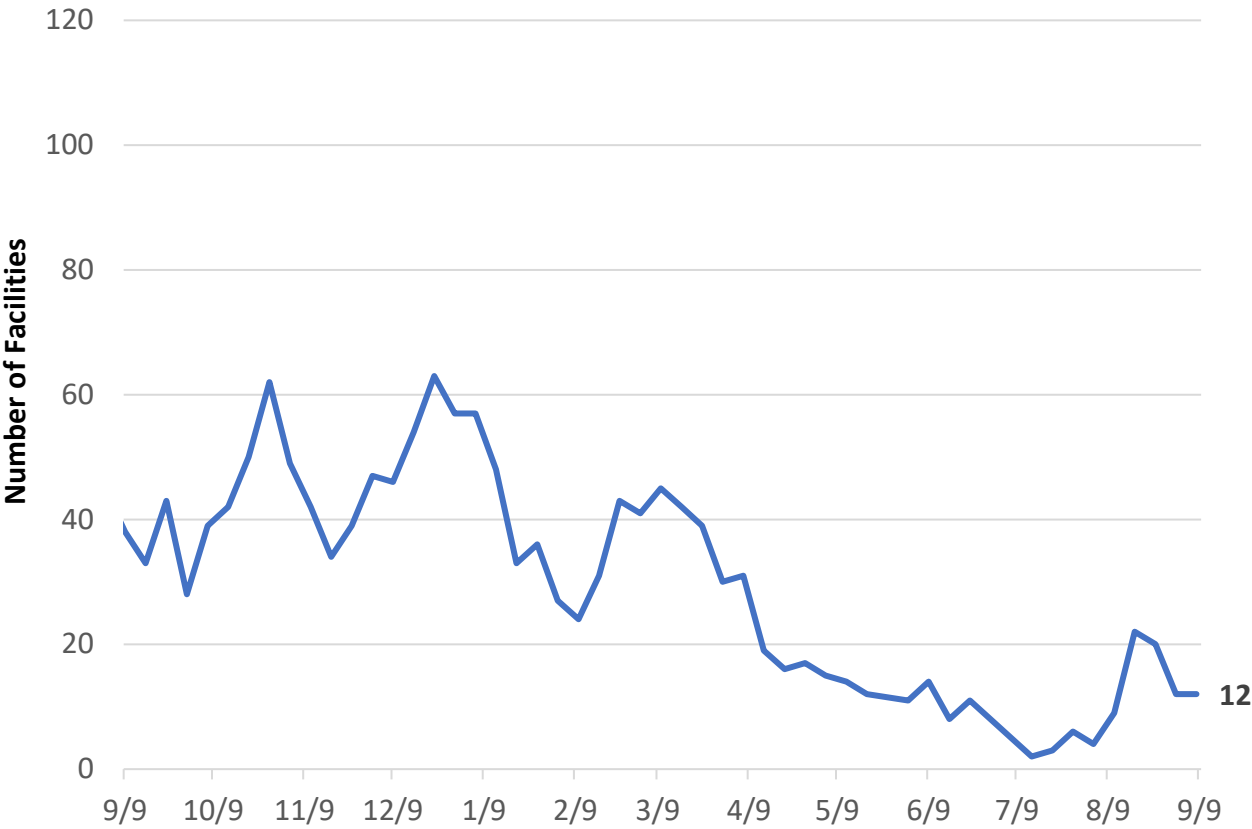
- Case counts increased in SNF residents (106 to 126) and in SNF staff (148 to 181) since last week [left graphic]

- The number of SNF facilities reporting 3 or more cases is similar to last week (12) [right graphic]

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

Update through September 11, 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

4

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, May 14 – Sep 2 (NOWCAST)

Weighted and Nowcast Estimates in United States for 2-Week Periods in 5/14/2023 – 9/2/2023

Nowcast Estimates in United States for 8/20/2023 – 9/2/2023
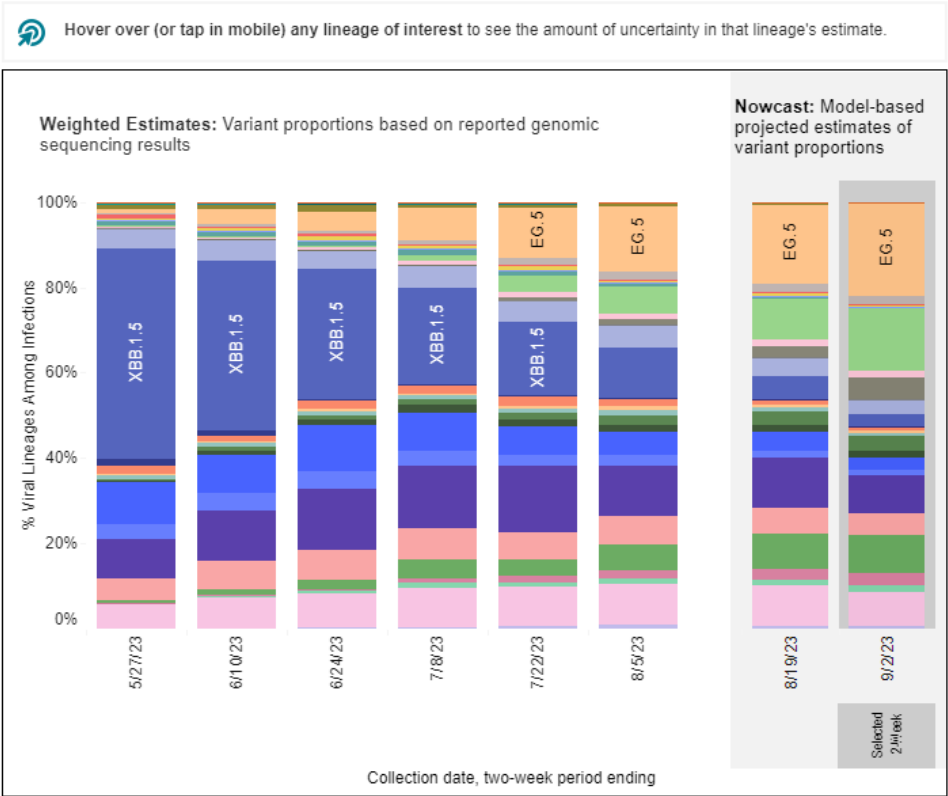
USA

WHO label	Lineage #	%Total	95%PI	
Omicron	EG.5	21.5%	19.0-24.3%	
	FL.1.5.1	14.5%	10.5-19.6%	
	XBB.1.16.6	9.2%	7.6-11.0%	
	XBB.1.16	8.9%	7.8-10.3%	
	XBB.2.3	8.1%	7.0-9.2%	
	HV.1	5.1%	3.3-7.9%	
	XBB.1.16.1	5.0%	4.2-6.0%	
	XBB.1.5.70	3.5%	2.6-4.7%	
	XBB	3.3%	2.7-4.1%	
	XBB.1.5	3.1%	2.6-3.7%	
	XBB.1.9.1	3.0%	2.5-3.5%	
	XBB.1.16.11	2.8%	1.8-4.5%	
	EG.6.1	1.8%	1.2-2.7%	
	GE.1	1.6%	1.1-2.4%	
	XBB.1.5.72	1.6%	1.2-2.1%	
	XBB.1.42.2	1.3%	0.7-2.3%	
	XBB.1.9.2	1.1%	0.9-1.3%	
	XBB.1.5.10	0.9%	0.7-1.2%	
	XBB.1.5.68	0.8%	0.5-1.1%	
	XBB.2.3.8	0.7%	0.4-1.2%	
	FD.1.1	0.6%	0.4-0.8%	
	FE.1.1	0.5%	0.3-0.8%	
	XBB.1.5.59	0.4%	0.3-0.6%	
	CH.1.1	0.4%	0.3-0.6%	
	EU.1.1	0.1%	0.1-0.2%	
	XBB.1.5.1	0.0%	0.0-0.1%	
	BA.2.12.1	0.0%	0.0-0.1%	
	BA.5	0.0%	0.0-0.0%	
	BQ.1	0.0%	0.0-0.0%	
	FD.2	0.0%	0.0-0.0%	
	B.1.1.529	0.0%	0.0-0.1%	
Other	Other*	0.0%	0.0-0.1%	

National Distribution
- 100% of the VOCs currently circulating in the U.S. are Omicron
- Nowcast estimates project that EG.5 (21.5%, 95% P.I. 19.0-24.3%) is the most prevalent, while FL.1.5.1 comprise of approximately 14.5% of infections (95% P.I. 10.5-19.6%), while all other lineages are estimated to comprise of less than 10% during the week ending on September 2.
- The BA.2.86 lineage, identified in Israel and Denmark, was recently identified in Michigan. This is likely a branch lineage of BA.2 and contains a number of new mutations

Distribution in Michigan
- Since July 1, there have been 188 VOC specimens sequenced and reported to MDHHS
- 100% of specimens sequenced are Omicron
  - Since July 1, a majority of specimens sequenced and reported have been identified as XBB or one of the child lineages; currently 16.5% of specimens have been identified as XBB.1.16, the highest of any of the XBB lineages in Michigan

95% P.I. = 95% prediction interval
Data last updated Sep 4, 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

Model projections: fall/winter increase in Michigan hospitalizations expected

- Most simulations suggest similar hospitalizations as last fall/winter (dark shaded region)

- However, the range of model simulations includes larger surges (similar to 2021-22 fall/winter surge)

- Increased booster uptake reduces the potential for higher surges

Source: COVID-19 Scenario Modeling Hub. Scenarios shown range from no booster (top row) to moderate uptake (similar to first booster; bottom row), and low and high immune escape of new variants (left and right columns).

Projected Incident Hospitalization by Epidemiological Week and by Scenario for Round 17
(- Start Projection Epiweek; -- Current Date)
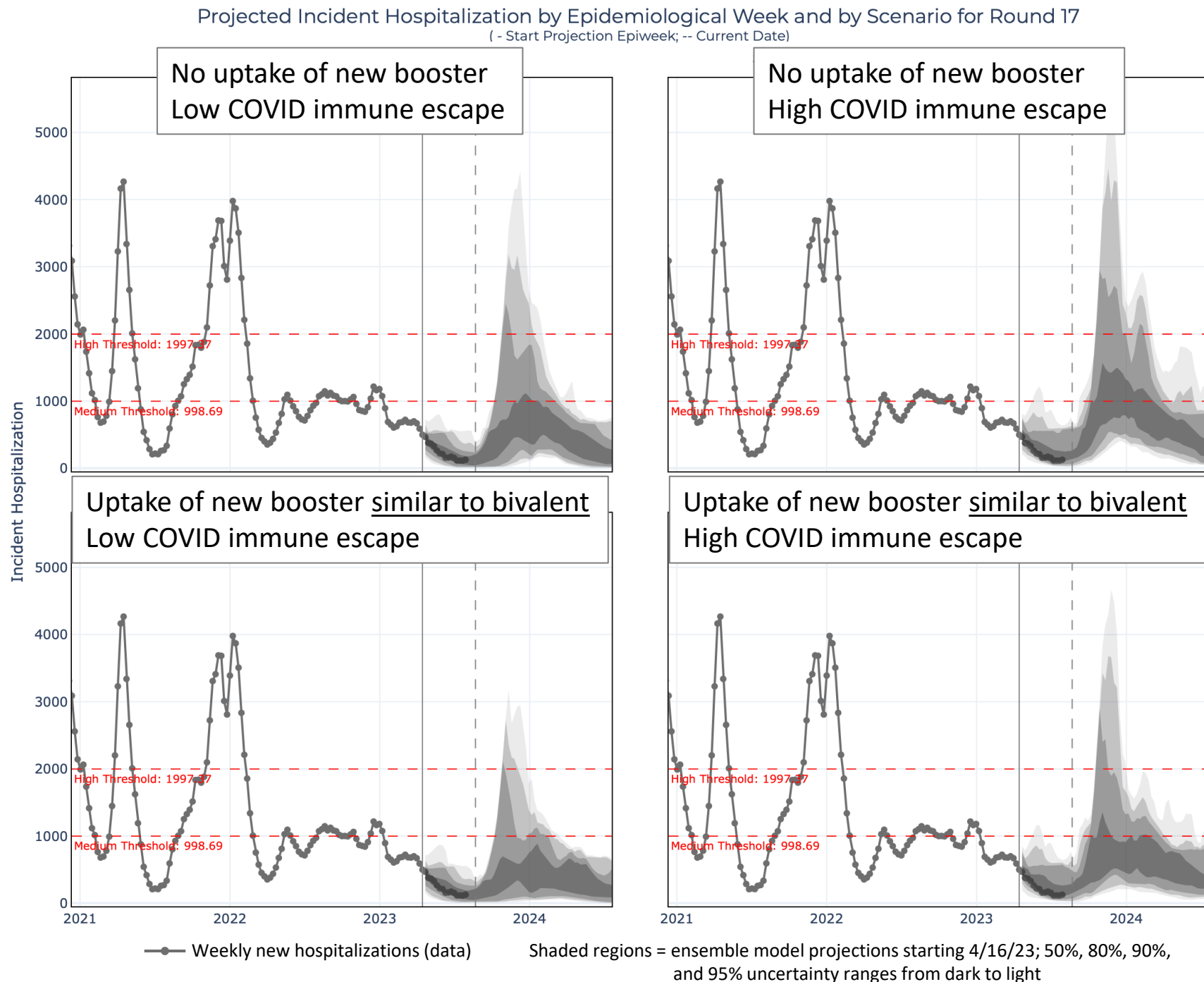
Models project that deaths will also increase over fall/winter, similar levels to last year

- Across all scenarios, deaths were projected to be lower than the 2021-22 fall/winter peak

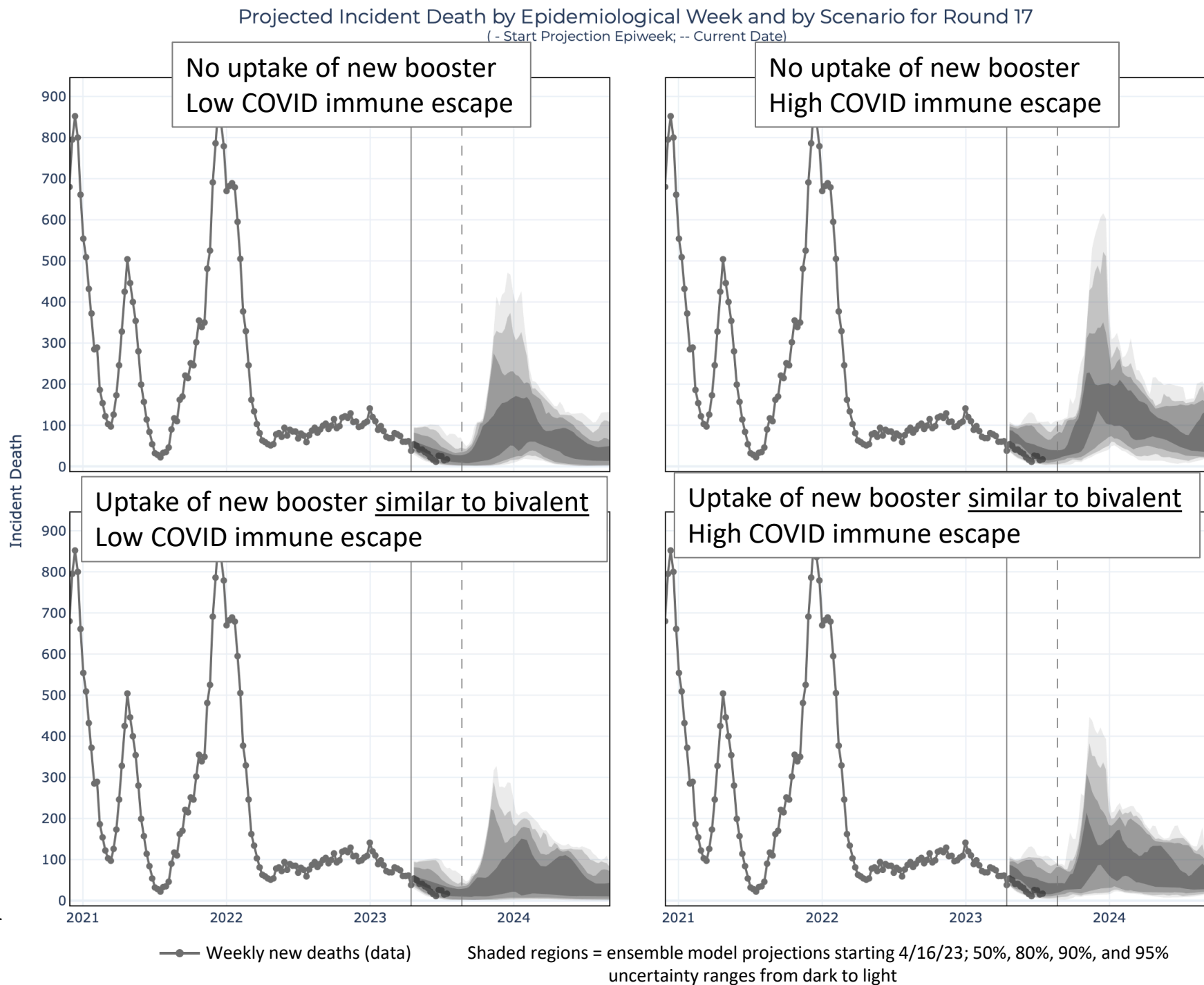- Increased booster uptake reduces the potential for larger surges in weekly deaths

Source: COVID-19 Scenario Modeling Hub. Scenarios shown range from no booster (top row) to moderate uptake (similar to first booster; bottom row), and low and high immune escape of new variants (left and right columns).

Projected Incident Death by Epidemiological Week and by Scenario for Round 17
(- Start Projection Epiweek; -- Current Date)

No uptake of new booster
Low COVID immune escape

No uptake of new booster
High COVID immune escape

Uptake of new booster similar to bivalent
Low COVID immune escape

Uptake of new booster similar to bivalent
High COVID immune escape

—•— Weekly new deaths (data)

Shaded regions = ensemble model projections starting 4/16/23; 50%, 80%, 90%, and 95% uncertainty ranges from dark to light

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

Vaccination Up-to-Date Coverage

The percentage of all Michiganders who are up to date with their COVID-19 vaccines is 19.3%

51.4% 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%).
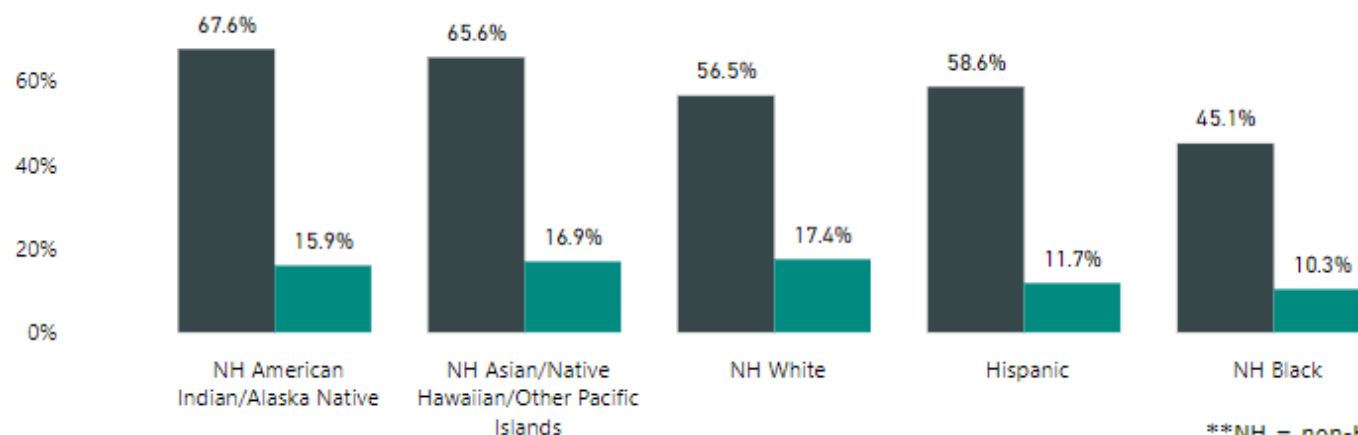
- Up-to-date coverage is at 11.7% for Hispanics

Percent of the Total Population Who Are Up to Date with COVID-19 Vaccines
Administrations through July 31, 2023

Percent Who Are Up to Date
- 0 - 9.9%
- 10.0 - 14.9%
- 15.0 - 19.9%
- 20.0 - 24.9%
- 25.0% +
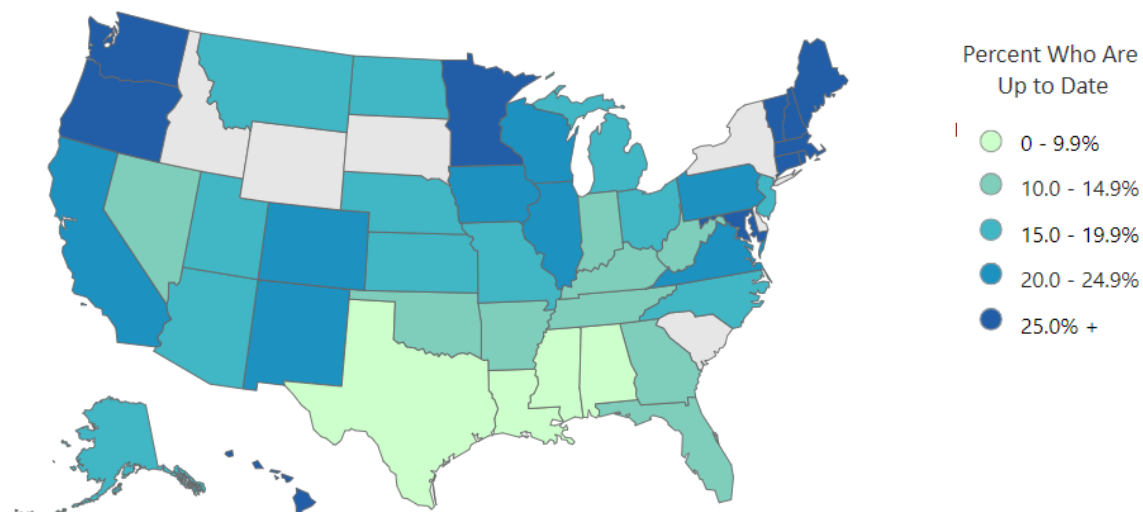
*This shows the percentage of all residents of all ages

Coverage by Race/Ethnicity**

Update through September 16, 2023

● At Least One Dose ● Up-To-Date

	At Least One Dose	Up-To-Date
NH American Indian/Alaska Native	67.6%	15.9%
NH Asian/Native Hawaiian/Other Pacific Islands	65.6%	16.9%
NH White	56.5%	17.4%
Hispanic	58.6%	11.7%
NH Black	45.1%	10.3%

**NH = non-Hispanic

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