MI COVID RESPONSE DATA AND MODELING UPDATE

June 21, 2022

Epidemiologic Surveillance: Key Messages

COVID-19 pandemic is surging in some parts of the globe and within the United States

- While some countries have plateaus and decreases, several countries in Europe showing signs of resurgence
- Within the U.S., case rates decreased 13% over past week
- Most midwestern states (region 5) are also at a decline but parts of the U.S. (Southeast and West) are seeing increases

COVID spread in Michigan has plateaued

- COVID spread is assessed from many different markers including CDC community levels and other surveillance systems
- As of June 17, 39% of Michigan Counties at Medium or High COVID-19 Community Levels, an improvement from last week
 - 3% of Michigan residents reside in a county (12 counties) classified as High according to CDC's Community Levels.
 - 21 Michigan counties are currently at Medium level (25%). This represents 12% of the population.
- The R_t for Michigan is near 1 indicating COVID spread has plateaued
- The proportion of specimens sequenced and identified as BA.2.12.1, BA.4, and BA.5 in the U.S. and Michigan continues to rise
- 20% of SWEEP sites saw an increase in the most recent week and another 15% of sites saw a plateau in trends

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

- COVID-19 hospital admissions, hospital census, and ICU census are decreasing; COVID-19 pediatric hospitalizations increased
 - Trends vary by age and region but remain relatively lower compared to past surges

Global and National Trends



Globally, 540,228,884 cases and 6,321,238 deaths (Data* through 6/21/2022)

Case rates for several European countries are increasing

United States: Reported cases (7-day average) have decreased over 13% since the prior week[¶]

• In the U.S., the case rate is 212 cases/100,000 in last 7 days (last week: 229 cases per/100,000)

Continued signs of plateaus/declines in some parts of Region 5 (Midwest) states, including Michigan

• Illinois and Wisconsin have the highest case rates *in Region 5* (6/21)

As of June 17, 12 Michigan Counties at High COVID-19 Community Level



Percent of Counties

	United		Percent of MI
	States	Michigan	Population
Low	60%	60%	85%
Medium	29%	25%	12%
High	10%	14%	3%

- In the US, 10% of counties have high risk for medically significant disease and healthcare strain; in Michigan, 14% of counties are at high risk
- 3% of Michigan residents reside in a county with a High COVID-19 Community Level
- All counties that are categorized as High have either the HSA COVID inpatient bed utilization above 15% or the HSA COVID hospital admissions per 100k is above 10
- 21 Michigan counties are currently at Medium level (25%). This represents 12% of the population.

Low	Medium	High
 Stay <u>up to date</u> with COVID-19 vaccines <u>Get tested</u> if you have symptoms 	 If you are <u>at high risk for severe</u> <u>illness</u>, talk to your healthcare provider about whether you need to wear a mask and take other precautions Stay <u>up to date</u> with COVID-19 vaccines <u>Get tested</u> if you have symptoms 	 Wear a <u>mask</u> indoors in public Stay <u>up to date</u> with COVID-19 vaccines <u>Get tested</u> if you have symptoms Additional precautions may be needed for people <u>at high risk for severe illness</u>

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

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

Health Service Areas



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

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



Case rates are declining slowly in Michigan, with signs of plateauing



Sources: MDSS cases plotted by onset date as of 6/10/22.

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

SARS-CoV-2 Variants Circulating in the United States, May 8 – Jun 18 (NOWCAST)

					2				ISA		
		5	BA.2	BA.2	BA	WHO label	Lineage #	US Class	%Total	95%PI	
01	BA.2	BA.				Omicron	BA.2.12.1	VOC	56.0%	51.4-60.5%	
BA.2							BA.5	VOC	23.5%	20.3-27.0%	
					2.12.1		BA.4	VOC	11.4%	8.8-14.5%	
				.12.1	BA.2		BA.2	VOC	9.1%	7.9-10.5%	
			2.12.1	BA.2			BA.1.1	VOC	0.0%	0.0-0.0%	
	, -	2.12.1	BA.2				B.1.1.529	VOC	0.0%	0.0-0.0%	
2.1	A.2.12.	BA.			4	Delta	B.1.617.2	VBM	0.0%	0.0-0.0%	
BA.2.1					BA	Other	Other*		0.0%	0.0-0.0%	
				4.							

* 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, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. For regional data, BA.1.1 and its sublineages are also aggregated with B.1.1.529, as they currently cannot be reliably called in each region. Except BA.2.12.1, BA.2 sublineages are aggregated with BA.2. BA.5.1 is aggregated with BA.5.

VOC Distribution in Michigan



- During the week of May 29, there have 339 VOC specimens sequenced
- 100% of specimens sequenced are Omicron
 - A majority of those are BA.2 (93.5%)
 - The fraction of specimens identified as BA.4 (n=33), BA.5 (n=15), and recombinant is increasing (6.5%)

6/18/22

BA.4

6/4/22

6/11/22

5/14/22

5/21/22

5/28/22

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	Â	Sewershed Population	Consecutive Weeks of Virus Detection	Trend As Of	15-Day Trend
Alma WWTP		8976	8	6/6/2022	1
Battle Creek WWTP		51093	8	6/8/2022	+
Bay City WWTP		34000	8	6/8/2022	+
Delhi Township WWTP		22500	10	6/2/2022	+
Escanaba WWTP		12600	6	6/6/2022	+
GLWA Detroit River In	terce	492000	86	6/8/2022	1
GLWA North Intercept	or-	1482000	63	6/8/2022	
GLWA Oakwood-		840600	86	6/8/2022	+
Grand Rapids WWTP		265000	44	6/9/2022	+
Holland WWTP North		45606	8	6/8/2022	1
Holland WWTP South		36912	10	6/8/2022	+
Jackson WWTP		90000	47	6/9/2022	
Kalamazoo WWTP		150000	11	6/9/2022	+
Petoskey WWTP		7900	8	6/9/2022	+
Portage Lake WWTP		14000	39	6/6/2022	1
Saginaw Township WV	VTP	40000	9	6/8/2022	+
Tecumseh WWTP		8680	22	6/10/2022	+
Traverse City WWTP		45000	13	6/9/2022	
Warren WWTP		135000	7	6/2/2022	
Ypsilanti WWTP		330000	47	6/6/2022	1

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 6/15/2022. Labs are required to report test results to local partners within 24 hours. Data is subject to change as additional wastewater data and case data are received.



SWEEP Summary

- 20% (4/20) of • sentinel sites are showing increasing trends over last 15days
- 15% (3/20) of sites have plateaued over the last 15 days
- 65% (13/20) of • sentinel sites are showing declines in the previous 15-days

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Interpreting Wastewater Should Be In Context with Other Indicators

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

Ypsilanti WWTP

The most recent sample concentration is higher than 84% of samples collected at this site, which puts it in the 81-100 percentile category. As of 5/10/2022, the change in viral concentration over the past 15 days is increasing.



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

Case rate are decreasing or plateaued for all stratified 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 96.3 and 216.9 cases per million (through 6/10)
- Case counts and case rates are highest for 30-39-year-olds this week, followed by 20–29-yearolds and the 40-49-year age groups

6/7

- Case rates are highest for Asian/Pacific Islander populations (154.2 cases/million)
- Between 22-28% 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

Cases Among Staff and Residents in Long Term Care Facilities



- Case counts in residents decreased in AFC/HFA (173 to 95) but increased in SNFs (215 to 275) since last week
- Case counts in staff decreased in AFC/HFA (193 to 129) but increased in SNFs (315 to 341) since last week
- **31%** of SNFs are reporting **nursing shortages** and **34%** of SNFs are reporting **aide shortages**, which are slightly down from last week Abbreviations: AFC: Adult Foster Care; HFAs: Homes for the Aged; and SNF: Skilled Nursing Facilities

Reported Number of Outbreaks in Long Term Care Facilities



 The number of Long-Term Care Facilities reporting 3 or more cases within a single reporting period decreased in AFC/HFA from 20 to 14; but increased in SNF from 20 to 31 in most recent data.

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

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



- Trends for daily average hospital admissions slightly decreased (-8%) since last week (vs. -4% prior week)
- Most reported age groups saw decreases this week
- Those 60-69, 70-79, and 80+ are seeing between 20-30 daily hospital admissions

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 (∆ #)
0-11	3.6	2.6	+9% (+<1)
12-17	0.9	1.1	-54% (-1)
18-19	0.6	2.2	+33% (+<1)
20-29	5.7	4.1	-7% (-<1)
30-39	8.9	7.3	-13% (-1)
40-49	6.0	5.1	-19% (-1)
50-59	10.1	7.5	-28% (-4)
60-69	23.6	18.5	-1% (-<1)
70-79	27.6	36.0	+13% (+3)
80+	25.9	62.4	-16% (-5)
Total [¶]	113.0	9.9	-8% (-10)

* 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 June 20, there were an average of 113.0 hospital admissions per day due to COVID-19; a decrease from last week (-8%, -10)
- Most age groups saw a decrease this week
- Of the three age groups with increases, none were more than an average of 3 additional hospital admissions per day
- Average daily hospital admission count (30.9 hospital admissions per day) was highest among 70–79-yearolds
- Average daily hospital admission rate (62.4 hospital admissions/million) was highest among those aged 80+
- Those 60-69, 70-79, and 80+ are seeing between 20-30 daily hospital admissions

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

Statewide Hospitalization Trends: Total COVID+ Census





Statewide Hospitalization Trends: Regional COVID+ Census



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This week the COVID+ census has decreased in Regions 1, 2N, 2S, 3, and 7. The COVID+ census has increased in Regions 5, 6 and 8.

All regions except Region 2S have less than 100/Million population hospitalized with COVID.

Region	COVID+ Hospitalizations (% Δ from last week)	COVID+ Hospitalizations / MM
Region 1	75 (-1%)	69/M
Region 2N	141 (-15%)	64/M
Region 2S	231 (-14%)	104/M
Region 3	78 (-30%)	69/M
Region 5	59 <mark>(7%)</mark>	62/M
Region 6	91 <mark>(3%)</mark>	62/M
Region 7	36 (-14%)	72/M
Region 8	20 (5%)	64/M

Statewide Hospitalization Trends: ICU COVID+ Census



Overall, the census of COVID+ patients in ICUs has decreased by 11% from last week. There are 102 COVID+ patients in ICU beds across the state.

COVID+ ICU census has decreased in Regions 1, 2S, 6, and 7. ICU COVID census has increased in Regions 2N, 3, 5, and 8. ICU occupancy is below 85% in all regions.

Region	Adult COVID+ in ICU (% ∆ from last week)	ICU Occupancy	% of ICU beds COVID+
Region 1	9 (-47%)	79%	5%
Region 2N	21 <mark>(17%)</mark>	67%	4%
Region 2S	34 (-11%)	79%	5%
Region 3	15 <mark>(25%)</mark>	83%	5%
Region 5	12 <mark>(33%)</mark>	67%	7%
Region 6	3 (-57%)	73%	1%
Region 7	5 (-55%)	83%	4%
Region 8	3 (200%)	59%	5%



Statewide Hospitalization Trends: Pediatric COVID+ Census





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



- Through 6/10, the 7-day avg. death rate has decreased (12.9 deaths per million people) for those over the age of 80
- In the past 30 days, there are fewer than 15 among confirmed and probable COVID-19 cases under the age of 40
- 30-day proportion of deaths among those under 60 years of age is 10.3%. This proportion has decreased incrementally over the last 5 weeks (last week 10.5%)

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



- Deaths are lagging indicator of other metrics
- Currently, the White population has the highest death rate (1.4 deaths/million)

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

Harm Reduction: Key Messages

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

- Michiganders can take advantage of local, state, and national COVID-19 resources
- Get tested, and if positive, seek care with therapeutics (e.g., antibodies or antiviral medications)
 - Cumulative therapeutic availability and administration has increased dramatically since April but has seen a steady decline as cases in Michigan have declined
 - Talk to your doctor 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 5 years and older should also get an age-appropriate COVID-19 booster, when eligible
 - Over 6.7 million Michiganders have received at least one dose (67.4%)
 - 55.1% of fully vaccinated Michiganders have received at least one booster
 - 26% of people in Michigan (558K+) with a first booster dose have received a second booster dose
- Improving ventilation in schools can help reduce spread of COVID-19
 - School-based strategies to improve ventilation are associated with reduced incidence of COVID-19 in schools.
 - Substantial federal resources are available to improve ventilation in schools

Federal & Michigan websites assist COVID positive residents find treatment





Sault Ste

Marie

Lake Superior

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

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



Vaccinations and Boosters

- Over 16.2 million COVID-19 vaccine doses have been administered in Michigan
 - Over 6.7 million Michiganders have received at least one dose (67.4%)
 - Over 6 million Michiganders have completed a primary series (60.6%)
 - Over 3.3 million additional/booster doses have been administered in Michigan
 - 55.1% of the fully vaccinated population has received a booster
 - 77.3% of the fully vaccinated population 65 years of age or older has received a booster
 - Nearly 558,904 Michiganders 50 years of age or older who have received a first booster dose have received second booster (26.1%)



COVID-19 Vaccine Coverage by Age Group

https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214_103272-547150--,00.html

https://covid.cdc.gov/covid-data-tracker/#vaccinations

COVID-19 vaccines are now available for ages 6 months and up!

Both the Pfizer and Moderna COVID-19 vaccines are now authorized and recommended for children 6 months and older. Everyone 5 years and older should also get an age-appropriate COVID-19 booster, when eligible.

More than **4,000** providers across Michigan can administer the COVID-19 kids vaccine, including:

Family physicians and pediatricians

Some pharmacies (ages 3+)

Local health departments and federally qualified health centers

Urgent cares (ages 5+)



For more information, visit <u>Michigan.gov/KidsCOVIDvaccine</u> or talk to a health care provider.

Unvaccinated people in Michigan had 33 times the risk of dying from COVID-19 in April compared to people up to date on their vaccination



*These data reflect cases among persons with a positive specimen collection date through March 19, 2022, and deaths among persons with a positive specimen collection date through February 26, 2022. Please note that these provisional data are subject to change. **Data on immune status are unavailable, thus an additional dose in an immunocompromised person cannot be distinguished from a booster dose.

Nationally, unvaccinated adults had 3.6 times the risk of hospitalizations from COVID-19 in April compared to people up to date on their vaccination



Note: "Primary series" refers to hospitalized patients who have completed their primary COVID-19 vaccination series regardless of whether or not they received a booster or additional dose. "Primary series & ≥1 booster" refers to hospitalized patients who have completed their primary COVID-19 vaccination series and received one or more additional or booster dose. "Unvaccinated" refers to hospitalized patients with no record of receiving any COVID-19 vaccination. "Up-to-date" refers to persons who have received all doses in the primary COVID-19 vaccination series, in addition to one additional dose or booster dose, when eligible.

CDC

Download Data

CDC Study: Improving ventilation can help reduce spread of COVID-19. Summertime is an opportunity for schools to improve ventilation before the coming school year.

Ventilation Improvement Strategies Among K–12 Public Schools — The National School COVID-19 Prevention Study, United States, February 14–March 27, 2022

What is already known about this topic?

School-based strategies to improve ventilation are associated with reduced incidence of COVID-19 in schools. Substantial federal resources are available to improve ventilation in schools.

What is added by this report?

Among a nationally representative sample of U.S. K–12 public schools, higher-cost and resource-intensive ventilation improvement strategies, such as using portable high-efficiency particular air (HEPA) filtration systems in classrooms were less frequently reported. Overall, rural and mid-poverty schools were the least likely to report implementing several resource-intensive ventilation strategies.

What are the implications for public health practice?

Ensuring use of ventilation improvement resources might reduce transmission of SARS-CoV-2 and other infectious diseases in schools. Focusing support on schools least likely to have implemented resource-intensive ventilation strategies might facilitate equitable implementation. Improving ventilation in schools can help reduce spread of COVID-19 and preserve in-school time for students and staff

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Citation: Pampati S, Rasberry CN, McConnell L, et al. Ventilation Improvement Strategies Among K–12 Public Schools — The National School COVID-19 Prevention Study, United States, February 14–March 27, 2022. MMWR Morb Mortal Wkly Rep 2022;71:770–775. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7123e2</u>

Vaccines

Protect against severe outcomes

Vaccines and boosters are available for ages 5 and up.

Masks, Distancing & Ventilation

Prevent spread

People with symptoms, a positive test, or exposure to someone with COVID-19 should wear a mask. Masking may also be based on personal preference and informed by personal level of risk.



Tests

Prevent spread

Over-the-counter tests allow for testing at home; an important addition to on-site antigen and PCR testing.

Treatment

Protect against severe outcomes

Oral antivirals and monoclonal antibodies can reduce the risk of hospitalization and death from COVID-19.

APPENDIX

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 experienced a decrease over the last week
- Case rates by onset date for all age groups are between 96.3 and 216.9 cases per million (through 6/10/22)
- Case counts and case rates are highest for 30-39-year-olds this week, followed by 20–29-year-olds and 40-49-year-olds age groups

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



Updates since last week:

- Cases per million are decreasing at similar rate for all reported racial and ethnic groups
- In the past 30 days, 22.4% (\downarrow 0.1%) of race data and 28.1 27.7% (\downarrow 0.4%) 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

Vital Infrastructure: K-12 school clusters and outbreaks, week ending June 16th

School reporting will be retired after this week in alignment with the summer break.

Number of reported outbreaks/clusters decreased since last week (141 to 102).

Region	Number of reported case	es, #	v outbreaks	per outbreak
Region 1	70 11		12	3-11
Region 2n	0 0		0	N/A
Region 2s	257 15		36	2-52
Region 3	738 0		30	2-112
Region 5	10 0		1	10
Region 6	71 0		12	3-20
Region 7	266 0		11	7-69
Region 8	0 0		0	N/A
Total	1,412 26		102	2-112
Grade level	Number of reported case	S, # •••••••••••••••••••••••••••••••••••	Number of outbreaks	Range of cases per outbreak
Pre-school - elem.	705 19		64	2-66
Jr. high/middle schoo	l <mark>166</mark> 0		11	3-94
High school	541 5		26	2-112
Administrative	0 2		1	2
Total	1,412 26		102	2-112

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 <u>CSTE school cluster and outbreak definition</u> which impacts how transmissions within school-sponsored settings are reported to the health department Source: LHD Weekly Sitreps Range of cases

Number of