

MI COVID RESPONSE DATA AND MODELING UPDATE

NOTE: All data as of Feb. 13 unless otherwise noted

February 16, 2021

Executive summary

Michigan has the **23rd highest number of cases (↔)** , **20th highest number of deaths (↔)**, **47th highest case rate (↑2)**, and **T36th highest death rate (↓1)** in the last 7 days (source: CDC COVID Data Tracker)

Michigan has the **37th highest hospitalization rate as a percent of total beds (↔)**, and **14th highest number of COVID patients in the ICU (↑2)** (source: Becker's Hospital Review)

Case rates (112.9, ↓31.4) and **percent positivity** (3.9%, ↓0.6%) are declining for 5 weeks

5.2% of available inpatient beds are filled with COVID patients (↓1.1%) and state trends for COVID hospitalizations are decreasing

There were **282 deaths** (↓4) between Jan 31 and Feb 6, and **death rate** is 4.0 deaths per million residents (↓0.1)

The 7-day average **state testing rate** is 3,121.0 tests/million/day (↓206.3). **Daily diagnostic tests (PCR)** decreased to 31K per day (↓2.1K), and the **weekly average for PCR and antigen tests** conducted in Michigan is 38.4K (↓2.6K).

1.6 million **COVID-19 vaccine** doses reported to MDHHS, 13.7% of population has at least one dose

Other public health indicators presented today include suicides, homicides, and childhood lead testing

Science roundup: testing in schools and sports, double masking recommendation, vaccination and herd immunity update, and comparison to other states

Comparison across states: Summary 2/15/21

What we see today:

- Two states (SD, NE) are seeing increasing 1 week case trends (up vs. 0 last week)
- 32 states (down vs. 38) with significant outbreaks (high/increasing cases, increasing/high positivity increasing/high hospitalizations over 2 weeks (>100 per M))
- New York (340/M), Georgia, Arizona, New Jersey, Nevada have highest per capita hospitalized patient numbers
- Midwest:
 - Wisconsin showing drop in hospitalizations (71/M) and drop in cases (163/M)
 - Indiana with decline in hospitalizations (158/M), and sharp drop in cases (205/M)
 - Illinois showing decline in hospitalizations (141/M), cases dropping (183/M)
 - Ohio with declining hospitalizations (140/M) and stable cases (238/M)
 - Michigan showing continued decline in hospitalizations (85/M) and slight decline in cases (118/M)

COVID-19 Spread

Statewide positivity has decreased to 3.9%, and is decreasing in all MERC regions

- All eight MERC regions below 7% (Risk Level A)
- One region, Upper Peninsula, is below 3% (Risk Level Low)
- Most counties (79) have positivity below 10%

Case rates have steadily declined to 112.9 cases per million (Risk Level D)

- 85% decrease from the mid-November peak and we are only 14% higher than Oct 1 rate
- Declines are seen among all age groups, races, and ethnicities
- In the past 30 days, less than one of five cases have unknown race and ethnicity
- Variant is in Michigan: increased vigilance in use of masks and social distancing and increase testing
 - 1173 cases with the B 1.1.7 variant have been identified in the US (↑483), 157 in Michigan

Number of active outbreaks is down 7% from previous week

- Reported school outbreaks have decreased since last week (113 to 107) with reported outbreaks decreasing in all K-12 school settings except Middle School/Junior High.

Confirmed and probable case indicators

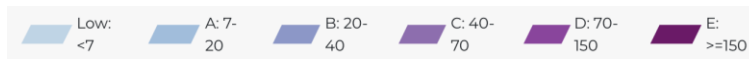
Table Date: 2/13/2021 (7 days from date table was produced: 2/6/2021)

Risk levels

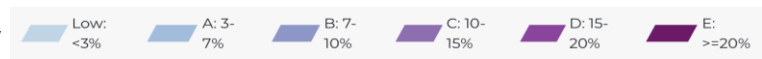


| | MERC Region Number | Public Health Region | Overall Risk Level | Absolute cases (per million) | CDC Case Trend | Average percent positivity | Positivity trend | Tests per million | Weekly % CLI cases | Weekly % CLI cases trend | % inpatient beds occupied by COVID-19 cases | Absolute deaths (per million) | Death trend |
|-----------------|--------------------|----------------------|--------------------|------------------------------|-------------------|----------------------------|------------------|-------------------|--------------------|--------------------------|---|-------------------------------|----------------|
| Detroit | 1 | 2N + 2S | D | 106.8 | decline [34 days] | 3.6 | Decrease - 5wk | 2997.8 | 0.4 | Decrease - 2wk | 5.2 | 3.8 | Decrease - 1wk |
| Grand Rapids | 2 | 6 | D | 114.0 | decline [35 days] | 4.4 | Decrease - 5wk | 3037.3 | 0.6 | Decrease - 5wk | 4.2 | 2.9 | Decrease - 3wk |
| Kalamazoo | 3 | 5 | D | 124.9 | decline [33 days] | 4.6 | Decrease - 5wk | 3052.8 | 0.6 | Decrease - 2wk | 5.6 | 3.7 | Decrease - 2wk |
| Saginaw | 4 | 3 | D | 106.8 | decline [86 days] | 4.4 | Decrease - 5wk | 2906.2 | 0.4 | Increase - 2wk | 5.8 | 7.9 | Decrease - 3wk |
| Lansing | 5 | 1 | E | 157.7 | decline [35 days] | 5.1 | Decrease - 5wk | 2611.8 | 0.1 | Increase - 1wk | 9.0 | 4.6 | <20 wky deaths |
| Traverse City | 6 | 7 | D | 97.4 | decline [33 days] | 3.9 | Decrease - 4wk | 2286.0 | 1.0 | Increase - 2wk | 3.2 | 3.2 | <20 wky deaths |
| Jackson | 7 | 1 | E | 157.4 | decline [33 days] | 5.5 | Decrease - 5wk | 3315.4 | 0.4 | Increase - 2wk | 7.5 | 6.6 | <20 wky deaths |
| Upper Peninsula | 8 | 8 | D | 77.1 | decline [34 days] | 1.8 | Decrease - 5wk | 3514.0 | 0.4 | Decrease - 1wk | 2.4 | 4.2 | <20 wky deaths |
| Michigan | | | D | 112.9 | decline [34 days] | 3.9 | Decrease - 5wk | 3121.0 | 0.5 | Decrease - 11wk | 5.2 | 4.0 | Decrease - 8wk |

Cases

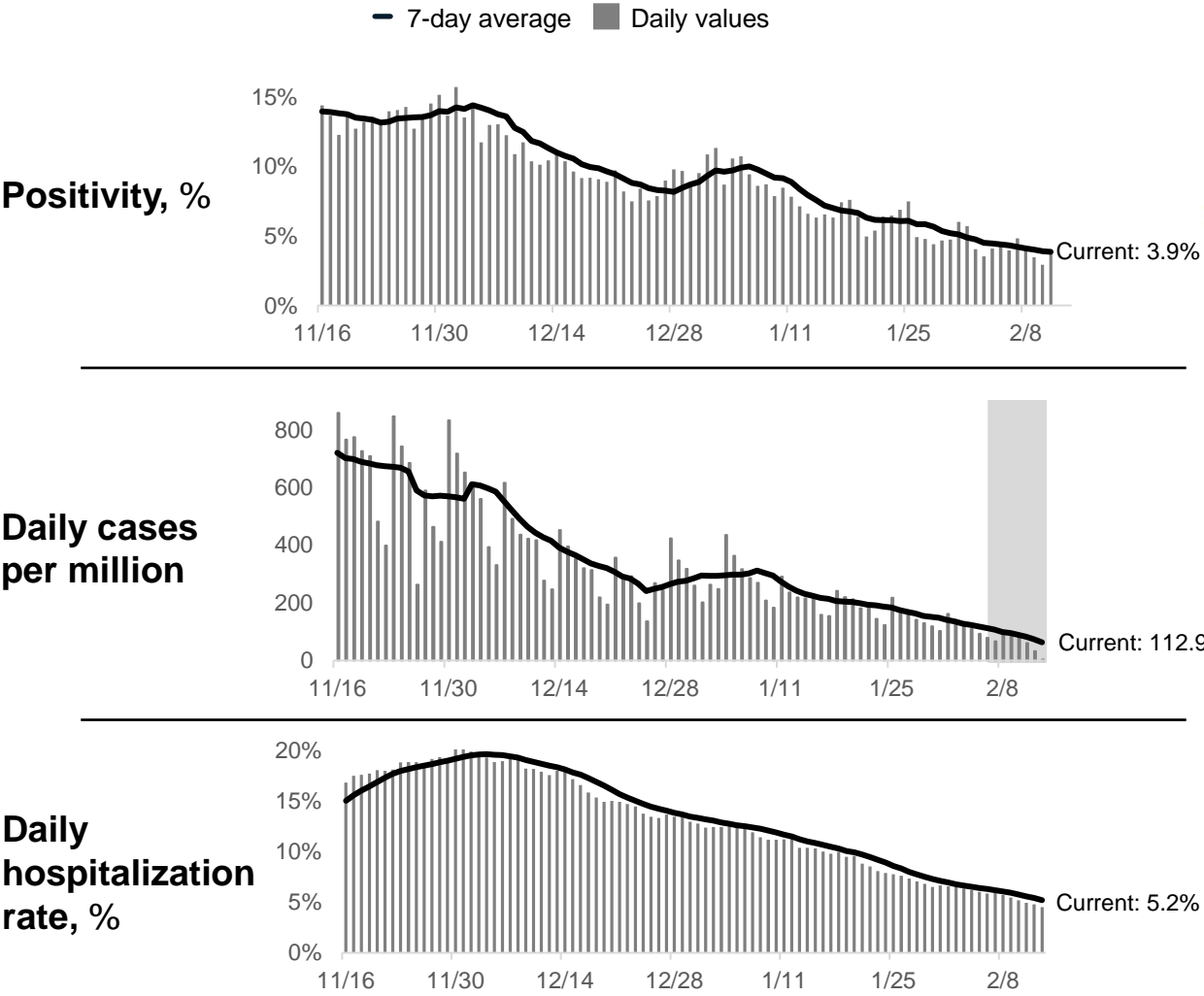


Positivity



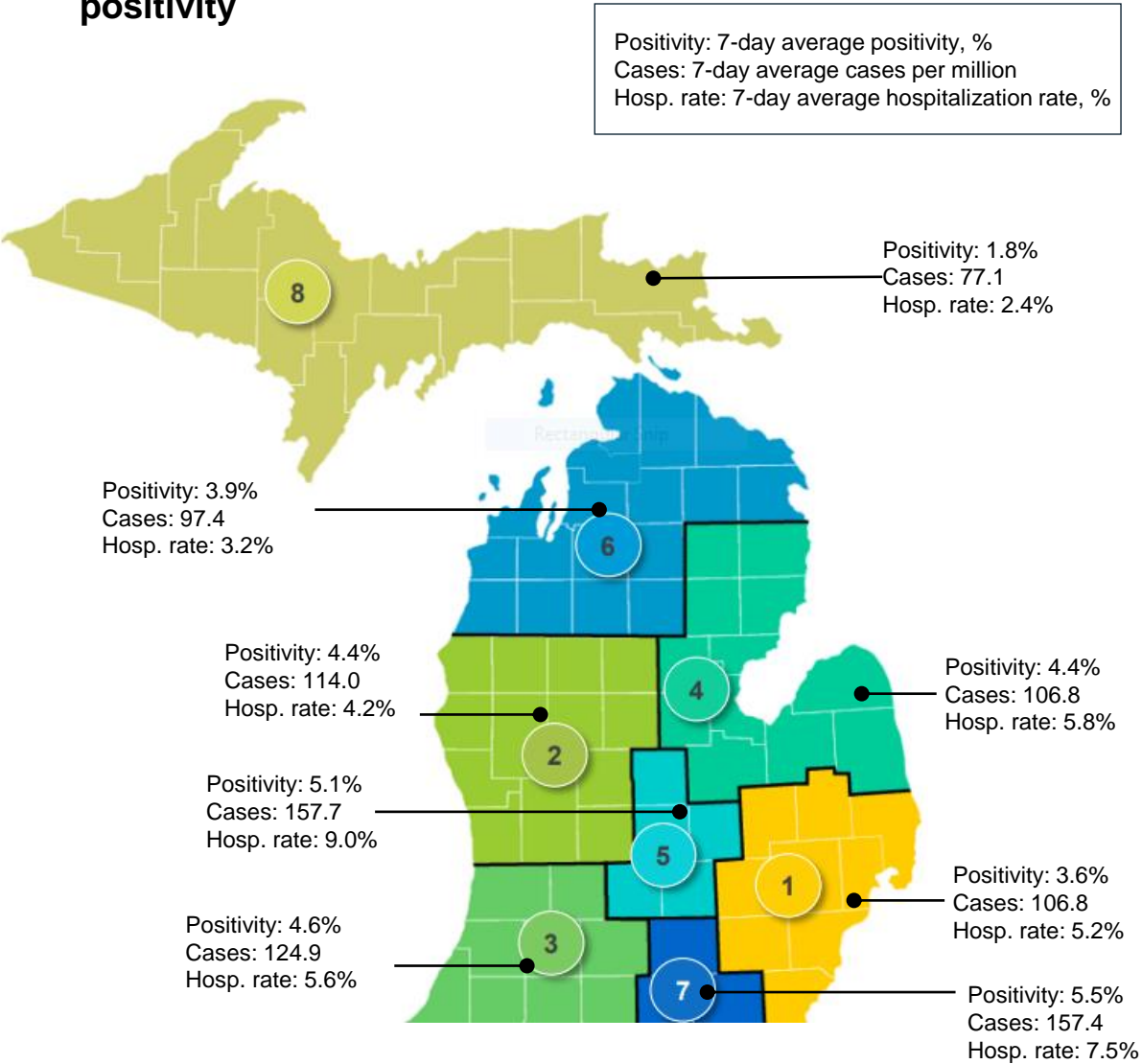
Recent statewide trends

Statewide trends

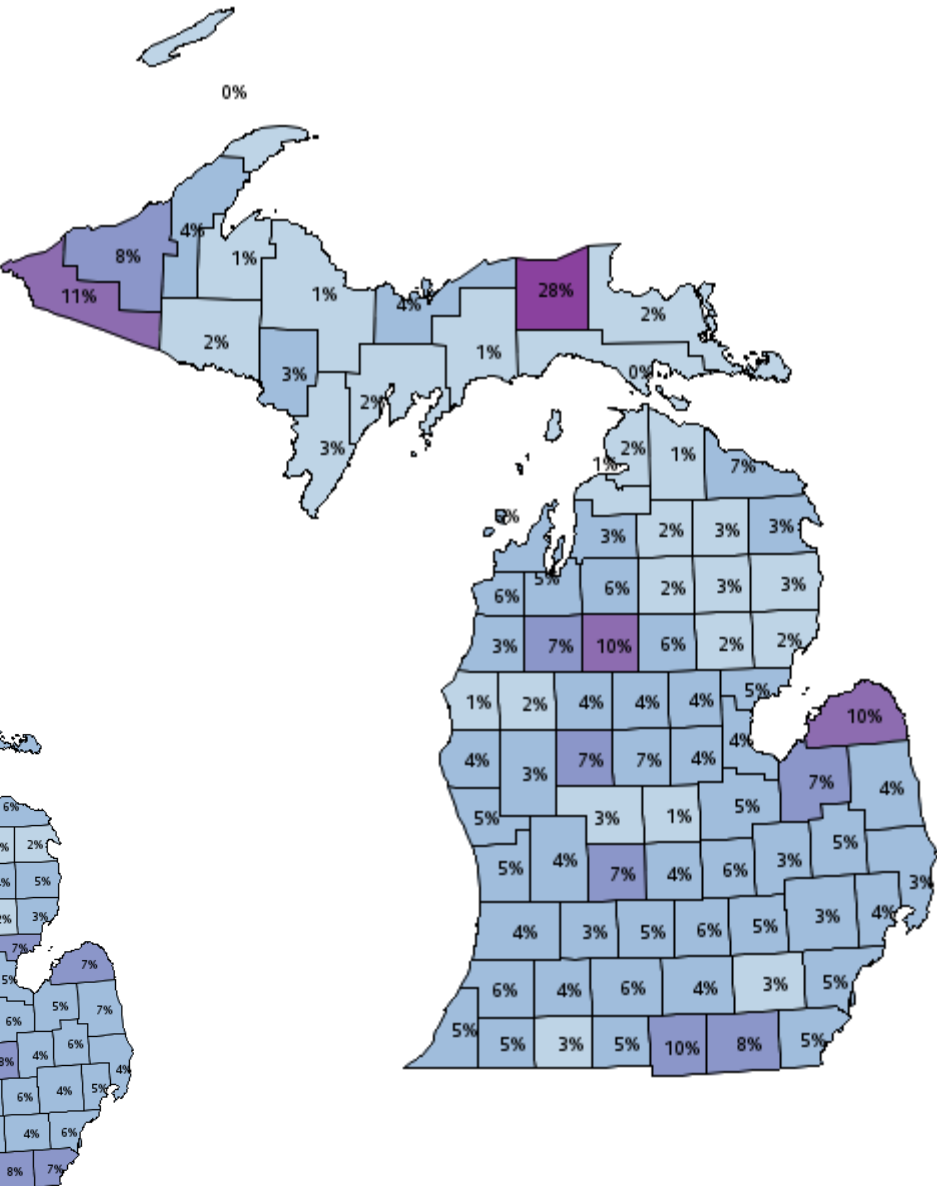


Source: <https://mistartmap.info/>

Regional breakdown: Cases, hospitalization rate, and positivity



Positivity by county, 2/5-2/11



Last week, 1/29-2/4

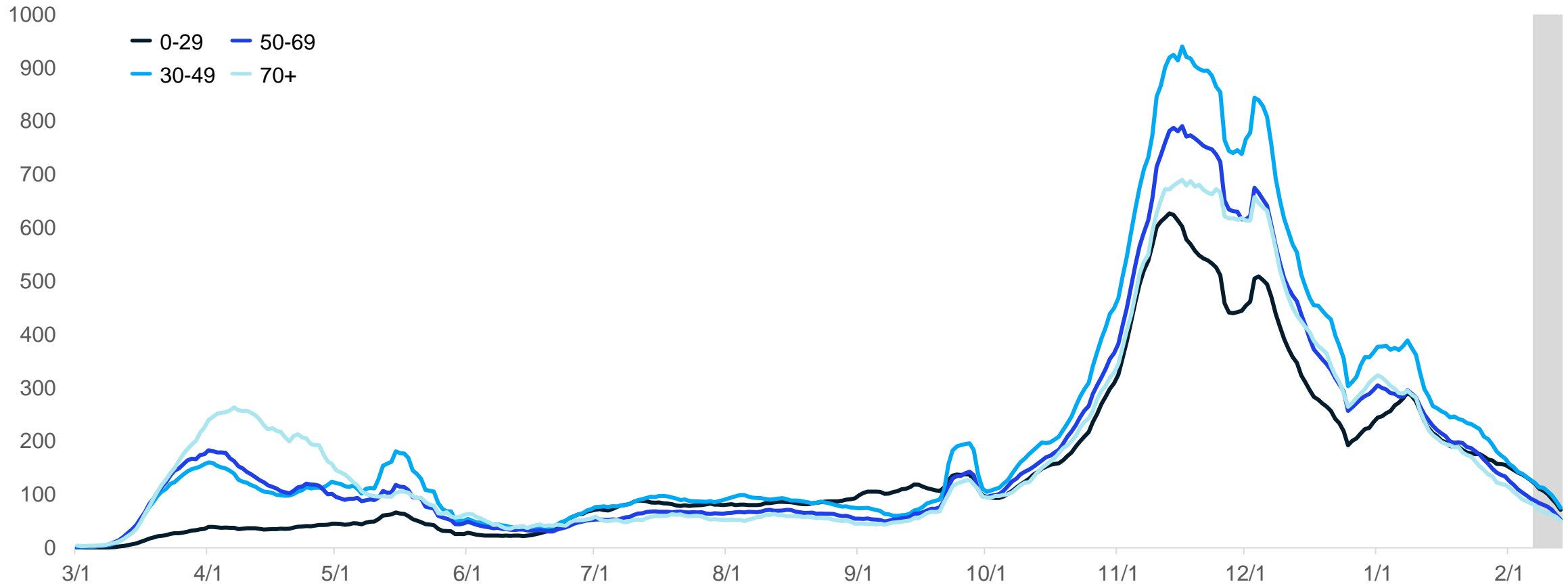
| Average positivity per day | | # of counties | This week | Last week |
|----------------------------|--|---------------|-----------|-----------|
| <3% | | 25 | 19 | |
| 3-7% | | 47 | 50 | |
| 7-10% | | 7 | 13 | |
| 10-15% | | 3 | 1 | |
| 15-20% | | 0 | 0 | |
| >=20% | | 1 | 0 | |

Updates since last week:

- 4 of 83 counties saw double digit positivity in the last week (3 county increase)
- 11 of 83 counties saw positivity > 7% in the last week (3 county decrease)
- 58 of 83 counties saw positivity > 3% in the last week (6 county decrease)

Age group: average new daily cases

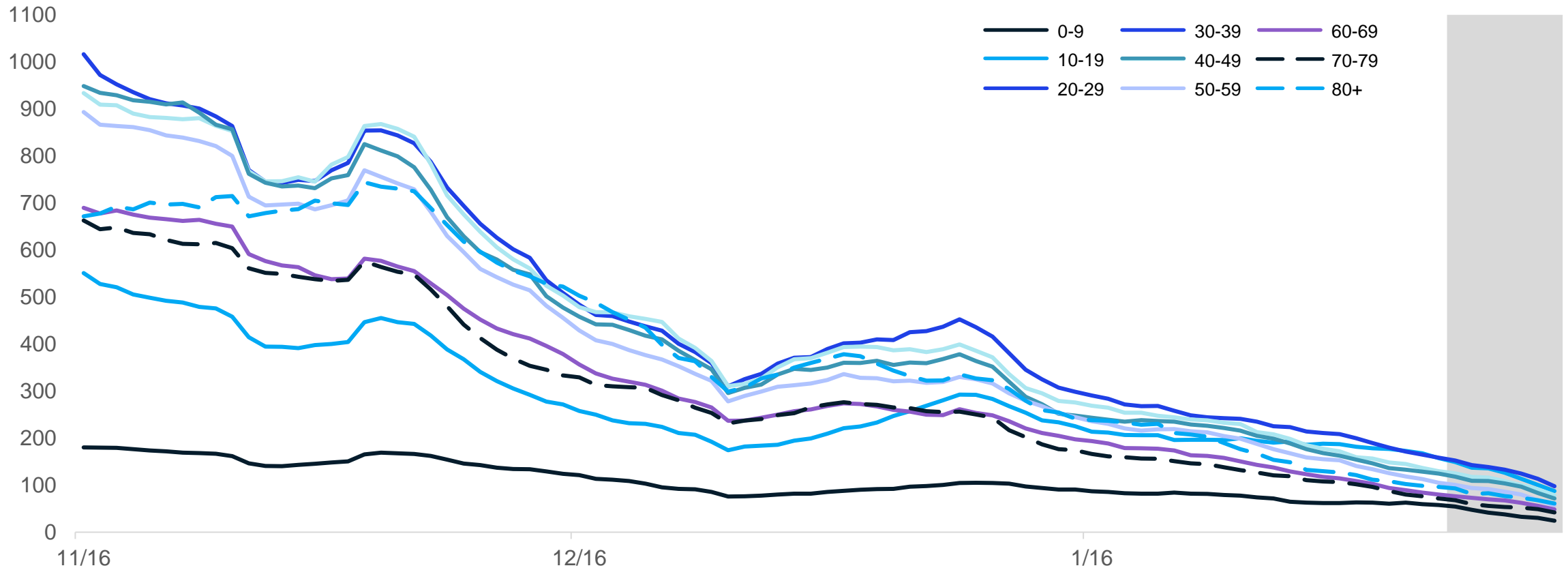
Daily new confirmed and probable cases per million by age group (7-day rolling average)



- 0-29 and 30-49 age groups have higher cases per million than 50+
- All four age groups are decreasing

Age group: average new daily cases

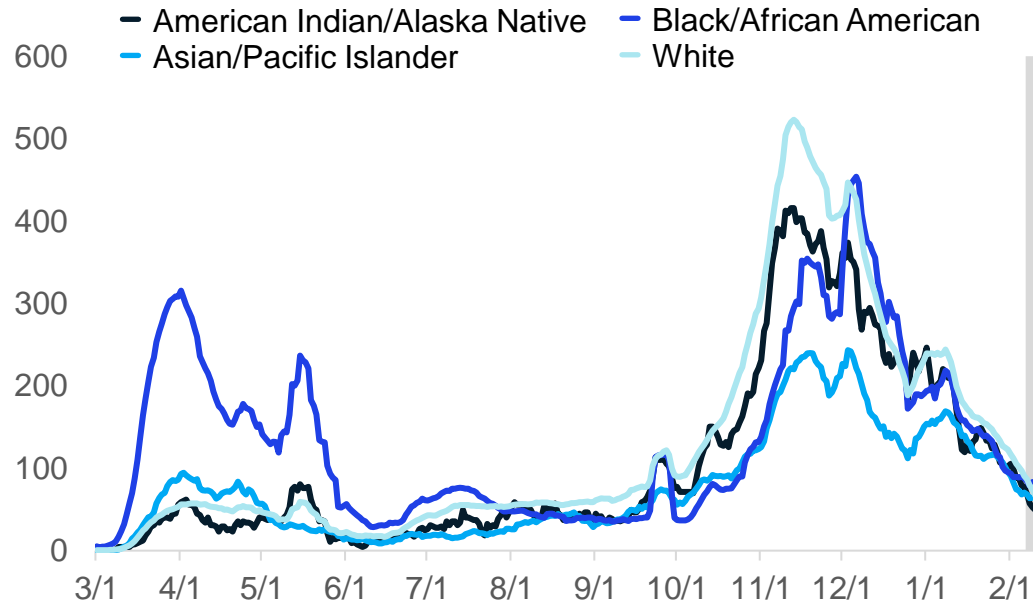
Daily new confirmed and probable cases per million by age group (7-day rolling average)



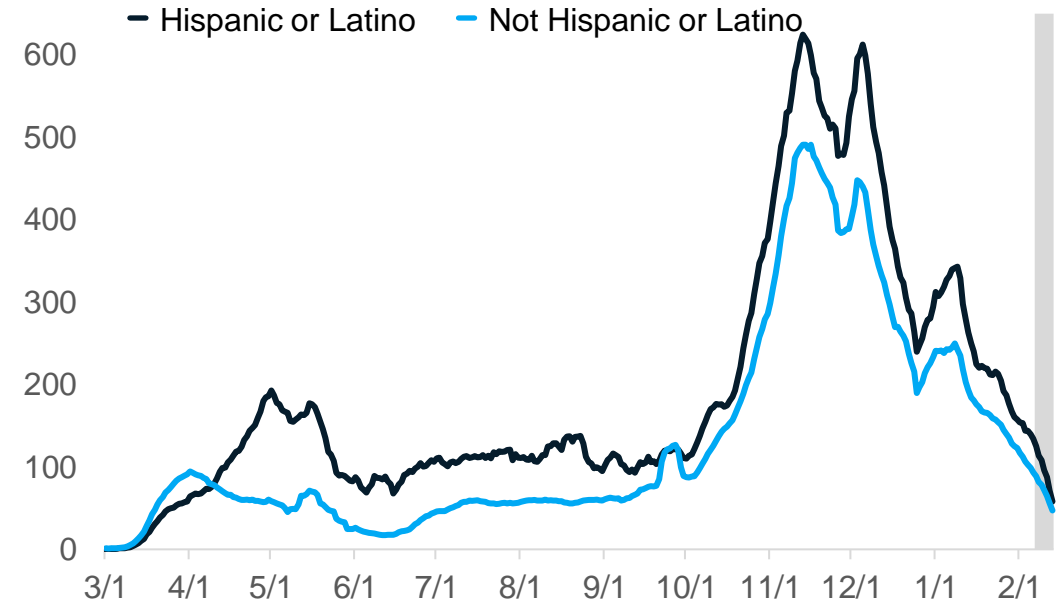
- Those aged 20-29 have the highest case rate during the second surge, followed by ages 30-39, 40-49, and 50-59
- Ages by decade are all decreasing

Average daily new cases per million people by race and ethnicity

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



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



Updates since last week:

- Cases per million are now decreasing for all racial groups, as well as both Hispanic/Latinos and non-Hispanic/Latinos
- In the past 30 days, 23% of all cases represent unknown, multiple, or other races (14% of race is unknown, ↓2%)
- In the past 30 days, 18% of all cases have an unknown ethnicity reported (↓1%)

Identified US COVID-19 Cases Caused by All Variants of Concern

Emerging Variant Cases in the United States*†



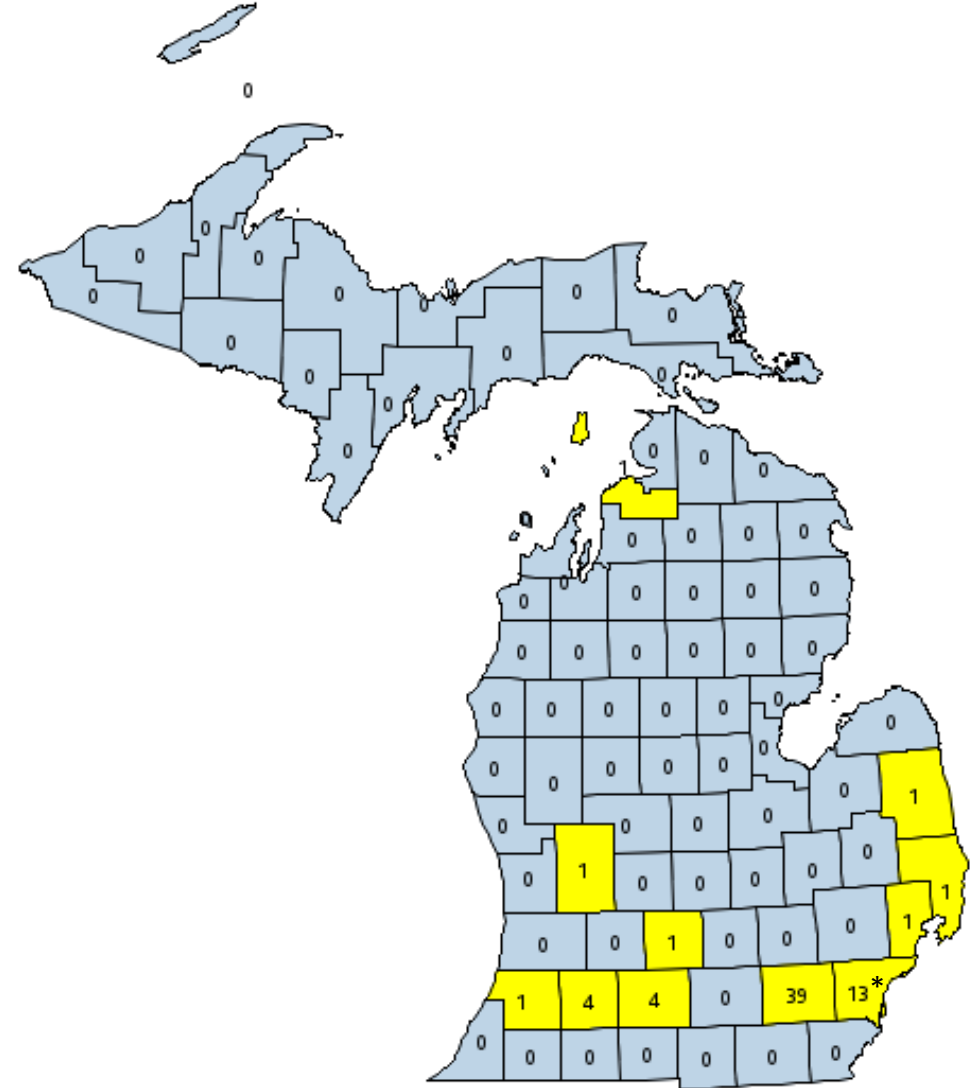
| Variant | Reported Cases in US | Number of States Reporting |
|---------|----------------------|----------------------------|
| B.1.1.7 | 1173 | 40 |
| B.1.351 | 17 | 8 |
| P.1 | 3 | 2 |

| State | Cases Count |
|-----------------|-------------|
| FL | 379 |
| CA | 186 |
| MI* | 157 |
| CO | 67 |
| NY | 59 |
| TX | 49 |
| GA | 45 |
| NJ | 38 |
| MA | 29 |
| PA | 26 |
| 30 other states | ≤ 25 |

*Additional cases identified within MDSS that do not yet appear on the CDC dashboard

Michigan COVID-19 Variant and Response

- 157 B.1.1.7 cases and counting
- 12 counties (Clinton)
- Goal: Slow spread of B.1.1.7 to allow for vaccination of vulnerable individuals
- Public Action:
 - Masks
 - Social Distancing
 - Hand washing
 - Get tested if traveled out of MI in last 14 days



* Three cases within Detroit City

Number of outbreak investigations by site type, week ending Feb 4

Pre-decisional, for discussion only Draft

- Easier to identify outbreak
- Harder to identify outbreak

| Site type | Outbreaks by ongoing/new classification, # | | | Visibility ¹ |
|-------------------------------|--|-----|-------|-------------------------|
| | Ongoing | New | Total | |
| SNF/LTC/OTHER ASSISTED LIVING | 275 | 26 | 301 | ● |
| K-12 SCHOOL | 90 | 17 | 107 | ● |
| MANUFACTURING, CONSTRUCTION | 68 | 18 | 86 | ● |
| HEALTHCARE | 33 | 8 | 41 | ● |
| *RETAIL | 31 | 4 | 35 | ● |
| OFFICE SETTING | 17 | 8 | 25 | ● |
| COLLEGE/UNIVERSITY | 20 | 5 | 25 | ● |
| AGRICULTURAL/FOOD PROCESSING | 22 | 1 | 23 | ● |
| CHILDCARE/YOUTH PROGRAM | 19 | 3 | 22 | ● |
| CORRECTIONS | 17 | 1 | 18 | ● |
| OTHER | 10 | 6 | 16 | ● |
| *SOCIAL GATHERING | 6 | 4 | 10 | ● |
| *RELIGIOUS SERVICES | 5 | 5 | 10 | ● |
| *SHELTERS | 6 | 2 | 8 | ● |
| *RESTAURANTS AND BARS | 1 | 3 | 4 | ● |
| *PERSONAL SERVICES | 2 | 0 | 2 | ● |
| *COMMUNITY EXPOSURE - INDOOR | 1 | 0 | 1 | ● |
| *COMMUNITY EXPOSURE - OUTDOOR | 0 | 0 | 0 | ● |
| TOTAL | 623 | 111 | 734 | |

Total number of active outbreaks is down 7% from previous week

Following SNF/LTC, the greatest number of new outbreaks were reported in manufacturing/construction (18), K-12 (17), healthcare (8), and office settings (8).

LHDs reported new outbreaks in all settings except outdoor community exposures, indoor community exposures, and personal services

1. Based on a setting's level of control and the extent of time patrons/residents spend in the particular setting, different settings have differing levels of ability to ascertain whether a case derived from that setting

NOTE: 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.
Source: LHD Weekly Sitreps

K-12 school outbreaks, recent and ongoing, week ending Feb 4

Number of reported outbreaks decreased since last week (113 to 107) including decreases in High Schools (49 to 44), Pre K-Elementary (42 to 38), and Administrative (5 to 4). Only Middle/Jr High had an increase in reported outbreaks (17 to 21).

| Region | Number of reported cases, # | # Ongoing - Excluding New | # New | Number of outbreaks | Range of cases per outbreak |
|-----------|-----------------------------|---------------------------|-------|---------------------|-----------------------------|
| Region 1 | 9311 | | | 22 | 2-24 |
| Region 2n | 614 | | | 7 | 2-5 |
| Region 2s | 347 | | | 8 | 2-16 |
| Region 3 | 18232 | | | 18 | 2-47 |
| Region 5 | 444 | | | 12 | 2-13 |
| Region 6 | 7035 | | | 19 | 2-24 |
| Region 7 | 549 | | | 17 | 2-8 |
| Region 8 | 274 | | | 4 | 2-20 |
| Total | 510116 | | | 107 | 2-47 |

| Grade level | Number of reported cases, # | # Ongoing - Excluding New | # New | Number of outbreaks | Range of cases per outbreak |
|------------------------|-----------------------------|---------------------------|-------|---------------------|-----------------------------|
| Pre-school - elem. | 14824 | | | 38 | 2-20 |
| Jr. high/middle school | 13025 | | | 21 | 2-23 |
| High school | 21767 | | | 44 | 2-47 |
| Administrative | 50 | | | 4 | 2-5 |
| Total | 510116 | | | 107 | 2-47 |

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Source: LHD Weekly Sitreps

COVID-19 and Healthcare Capacity and COVID Severity

Hospitalizations and ICU utilization are decreasing

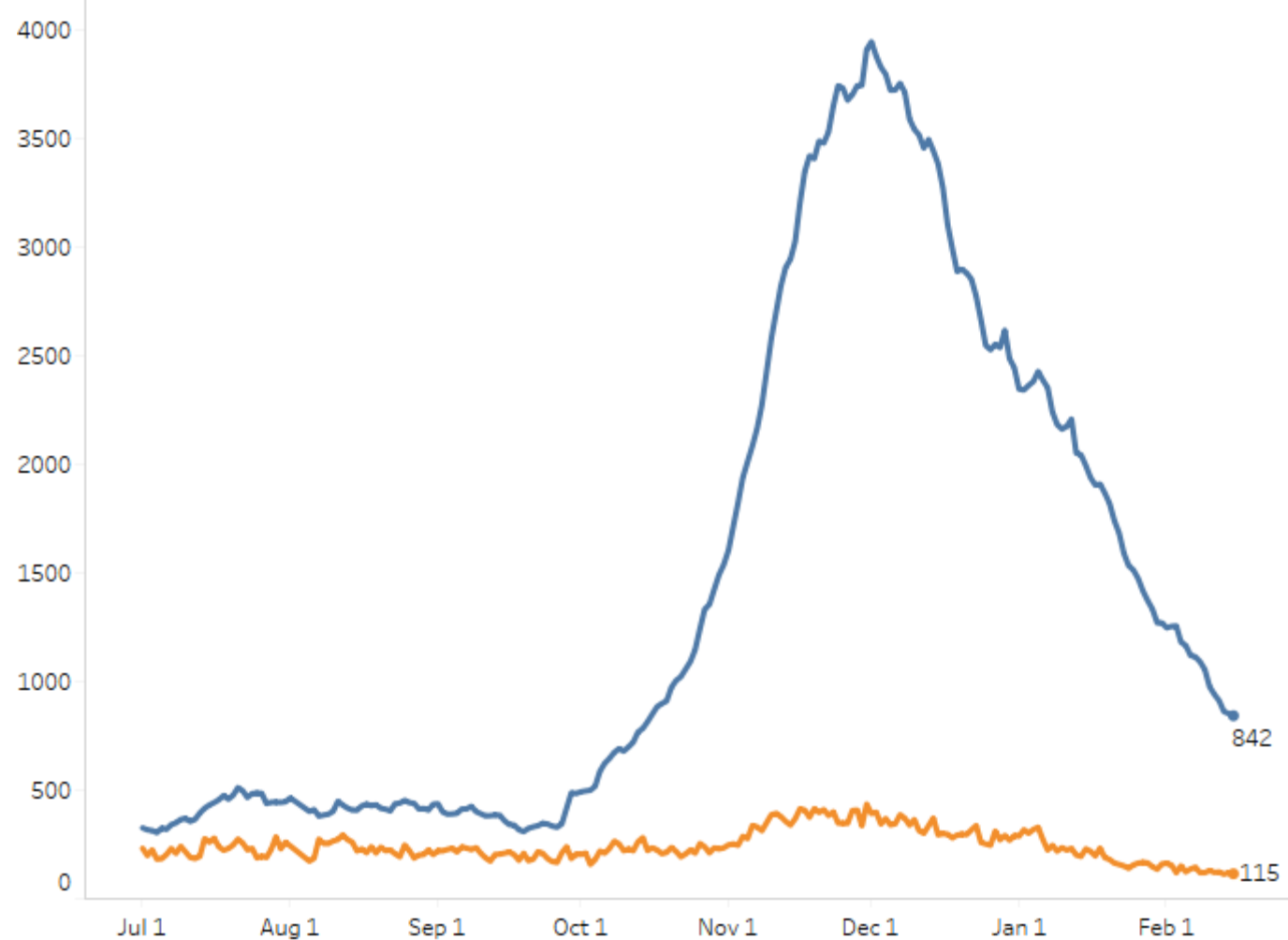
- COVID-like illness (CLI) continues with downward trend and is below 2% (data not shown)
- Hospitalizations down 79% since December 1st peak
- ICU occupancy declined 13% over last week
- Seven regions at or below 15% of Adult ICU beds with patients positive for COVID

Current deaths are a lagging indicator of cases, but the number of deaths have declined for seven weeks

- 70% decrease from the peak on December 10
- Decreases in deaths seen among most ages, races, and ethnicities

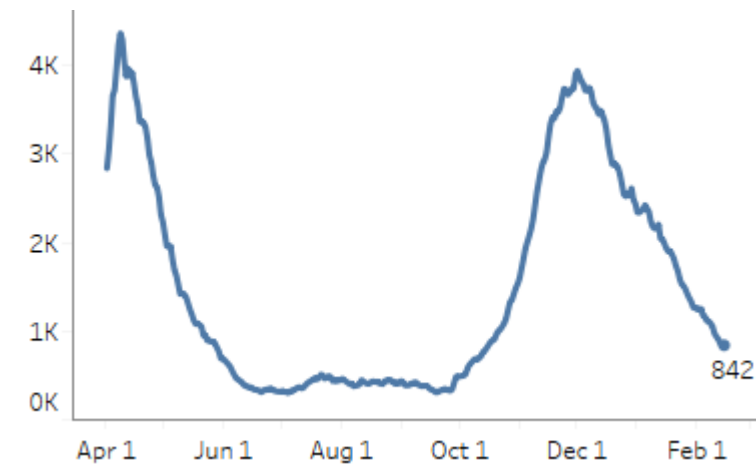
Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 7/1/2020 – 2/15/2021
Confirmed Positive & Persons Under Investigation (PUI)



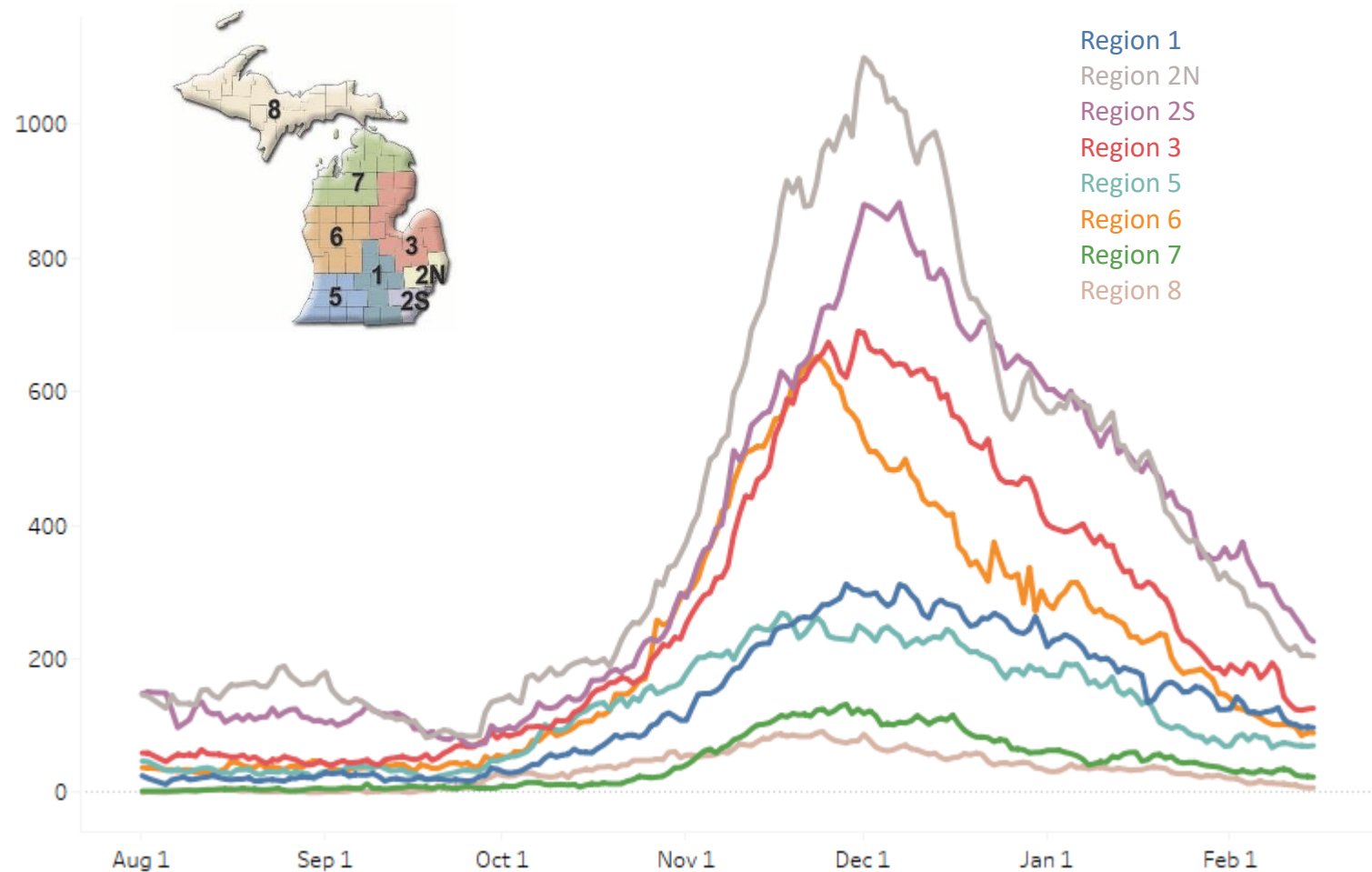
This week, COVID+ census in hospitals is down 23% from the previous week and down 79% from the December 1 peak.

Hospitalized COVID Positive Long Term
Trend (beginning March 2020)



Statewide Hospitalization Trends: Regional COVID+ Census

Hospitalization Trends 8/1/2020 – 2/15/2021
Confirmed Positive by Region



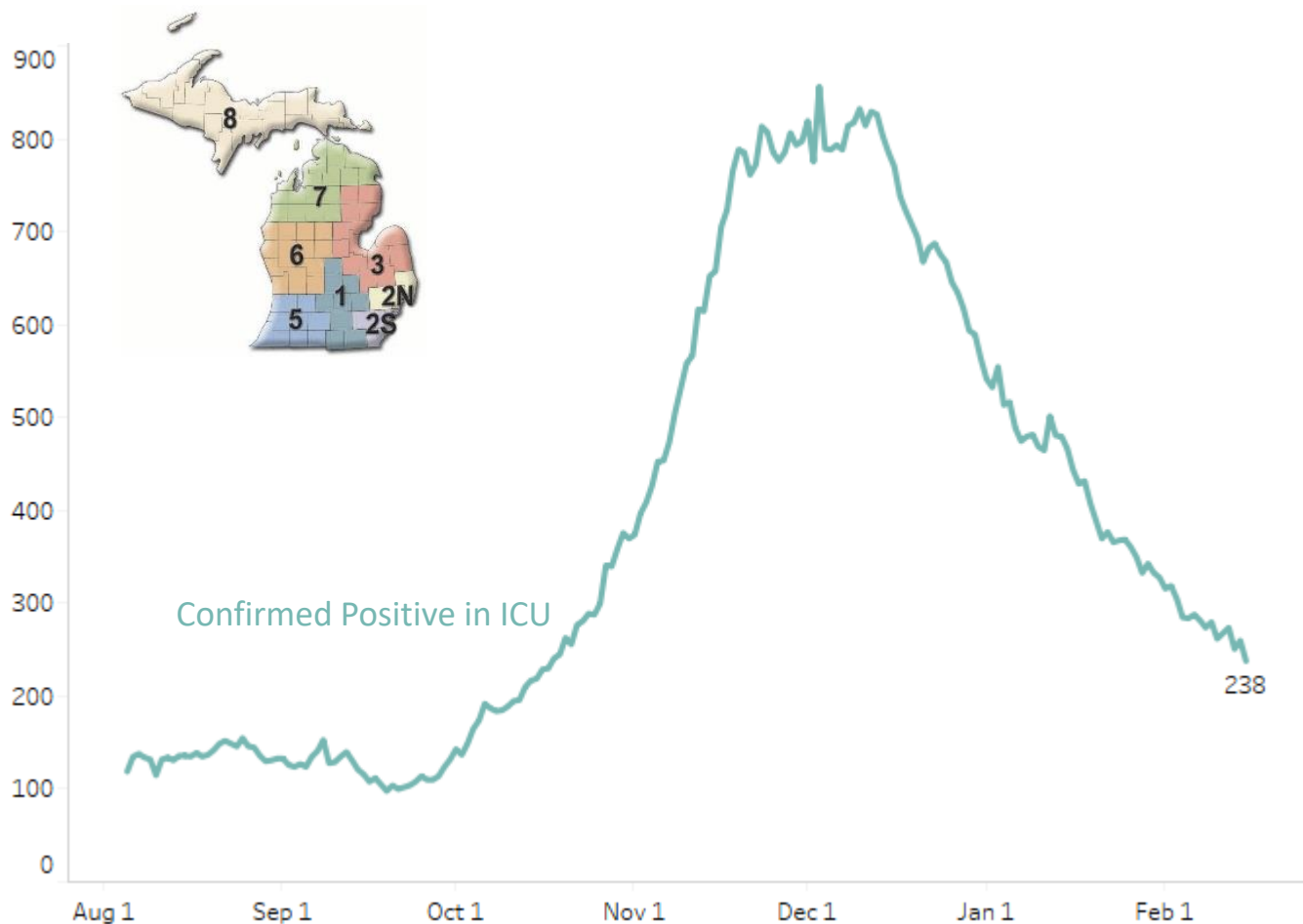
All regions are showing decreasing or flat trends in COVID+ hospitalizations.

All regions are below 120 hospitalized per million of the population and 6/8 are below 100 per million.

| Region | COVID+ Hospitalizations (% Δ from last week) | COVID+ Hospitalizations / MM |
|-----------|--|------------------------------|
| Region 1 | 97 (-20%) | 90/M |
| Region 2N | 204 (-19%) | 92/M |
| Region 2S | 226 (-27%) | 101/M |
| Region 3 | 126 (-35%) | 111/M |
| Region 5 | 70 (+4%) | 73/M |
| Region 6 | 89 (-14%) | 61/M |
| Region 7 | 23 (-21%) | 46/M |
| Region 8 | 7 (-50%) | 22/M |

Statewide Hospitalization Trends: ICU COVID+ Census

Hospitalization Trends 8/1/2020 – 2/15/2021
Confirmed Positive in ICUs



The census of COVID+ patients in ICUs continue to decline with nearly all regions showing declining trend. Overall, this week is down 13% from the previous.

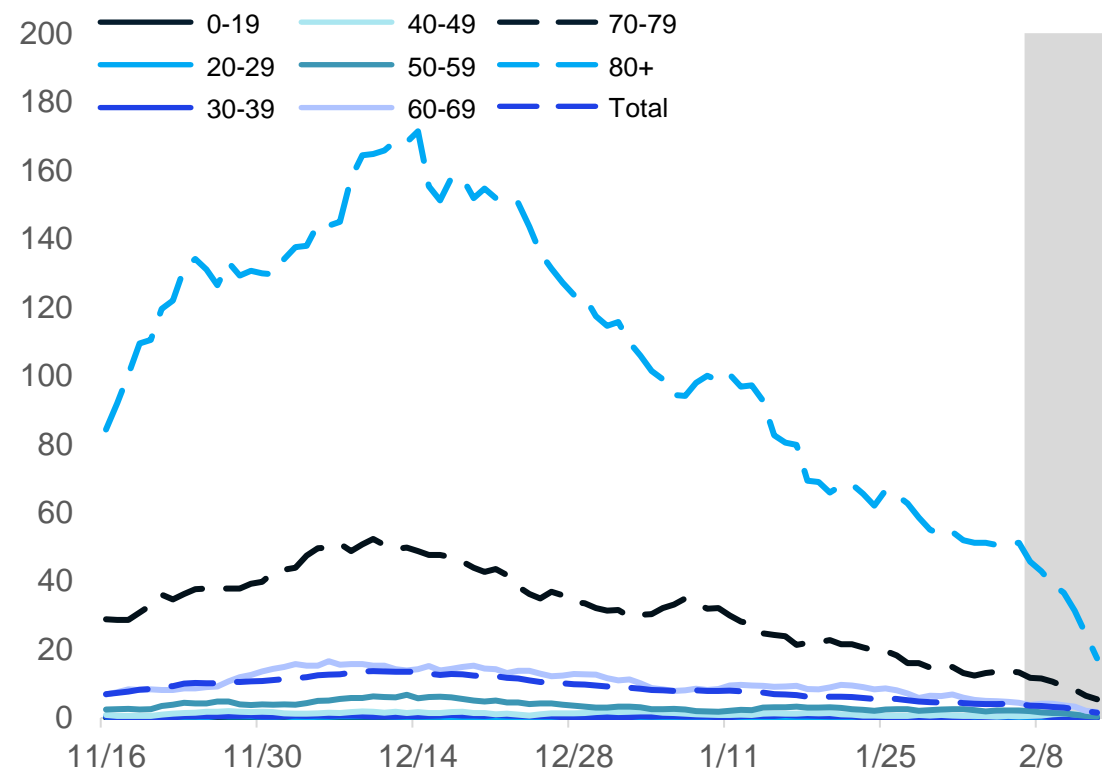
Only Region 5 showed growth (+12 patients) which should be monitored. 6/8 regions are at or below 10% of beds occupied by COVID patients.

| Region | Adult COVID+ in ICU (% Δ from last week) | Adult ICU Occupancy | % of Adult ICU beds COVID+ |
|-----------|--|---------------------|----------------------------|
| Region 1 | 19 (0%) | 81% | 10% |
| Region 2N | 52 (+18%) | 74% | 9% |
| Region 2S | 59 (-22%) | 75% | 8% |
| Region 3 | 39 (-32%) | 85% | 11% |
| Region 5 | 26 (+86%) | 78% | 17% |
| Region 6 | 29 (-19%) | 65% | 8% |
| Region 7 | 10 (-44%) | 60% | 5% |
| Region 8 | 4 (-56%) | 67% | 7% |

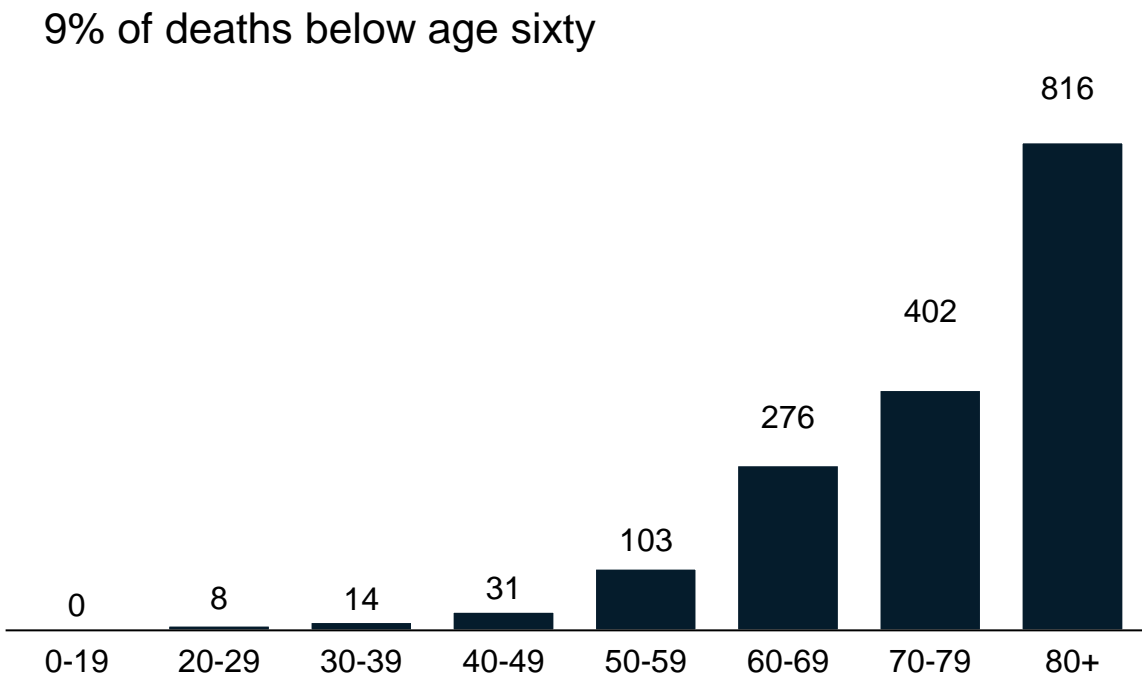
Hospital bed capacity updated as of 2/12

Average and total new deaths, by age group

Daily confirmed and probable deaths per million by age group (7 day rolling average)



Total confirmed and probable deaths by age group (past 30 days, ending 2/6/2021)

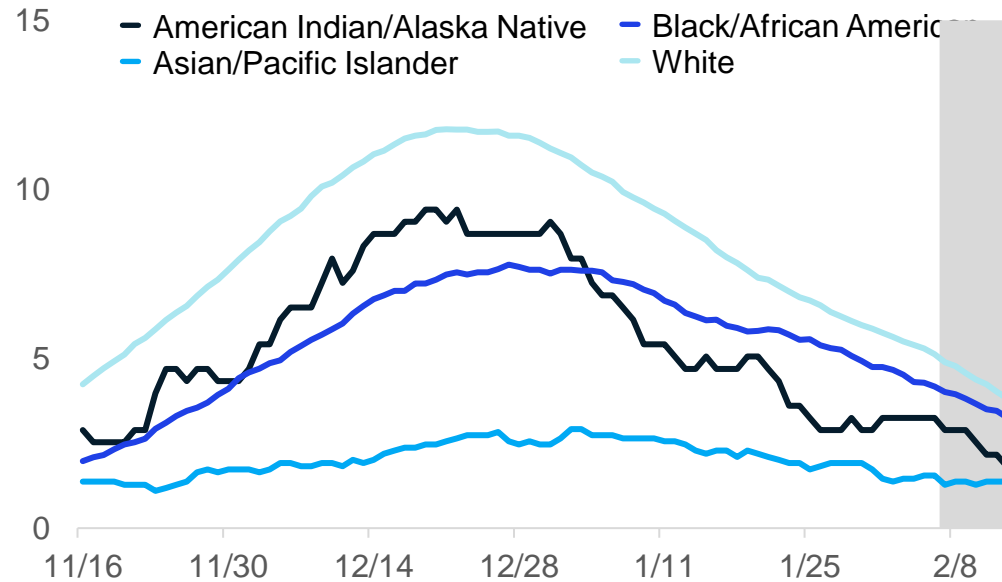


Note: Death information sourced from MDHHS and reflects date of death of confirmed and probable cases.

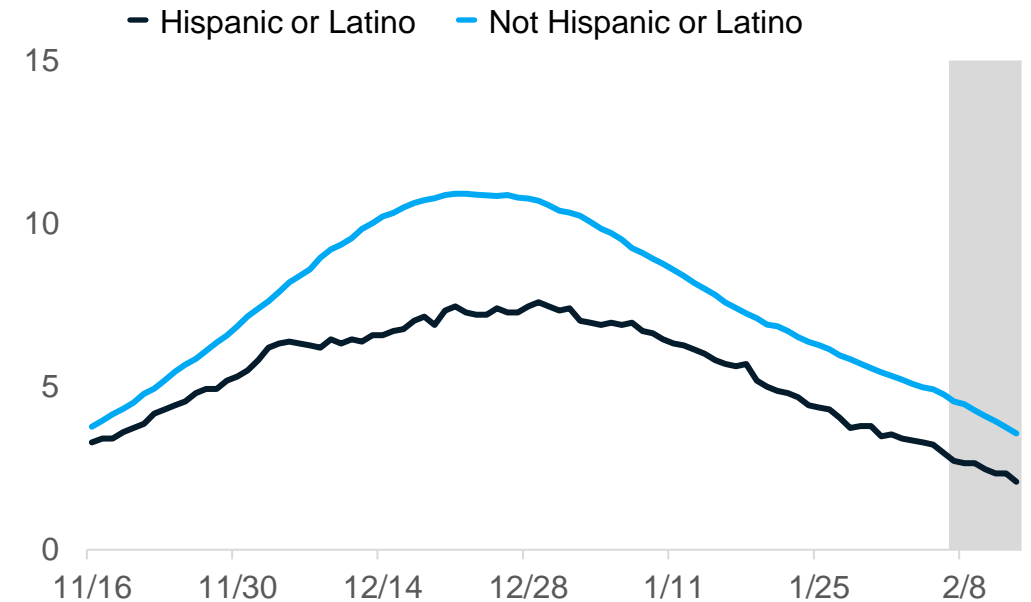
Source: MDHHS – Michigan Disease Surveillance System

30-day rolling average daily deaths per million people by race and ethnicity

Average daily deaths per million people by race



Average daily deaths per million people by ethnicity



Updates since last week:

- Deaths are a lagging indicator of cases, and death rates are decreasing among racial and ethnic groups
- Whites and Non-Hispanic/Latino have the most reported deaths per capita
- Deaths are not adjusted for confounders (e.g., age, sex, comorbidities)

How is public health capacity?

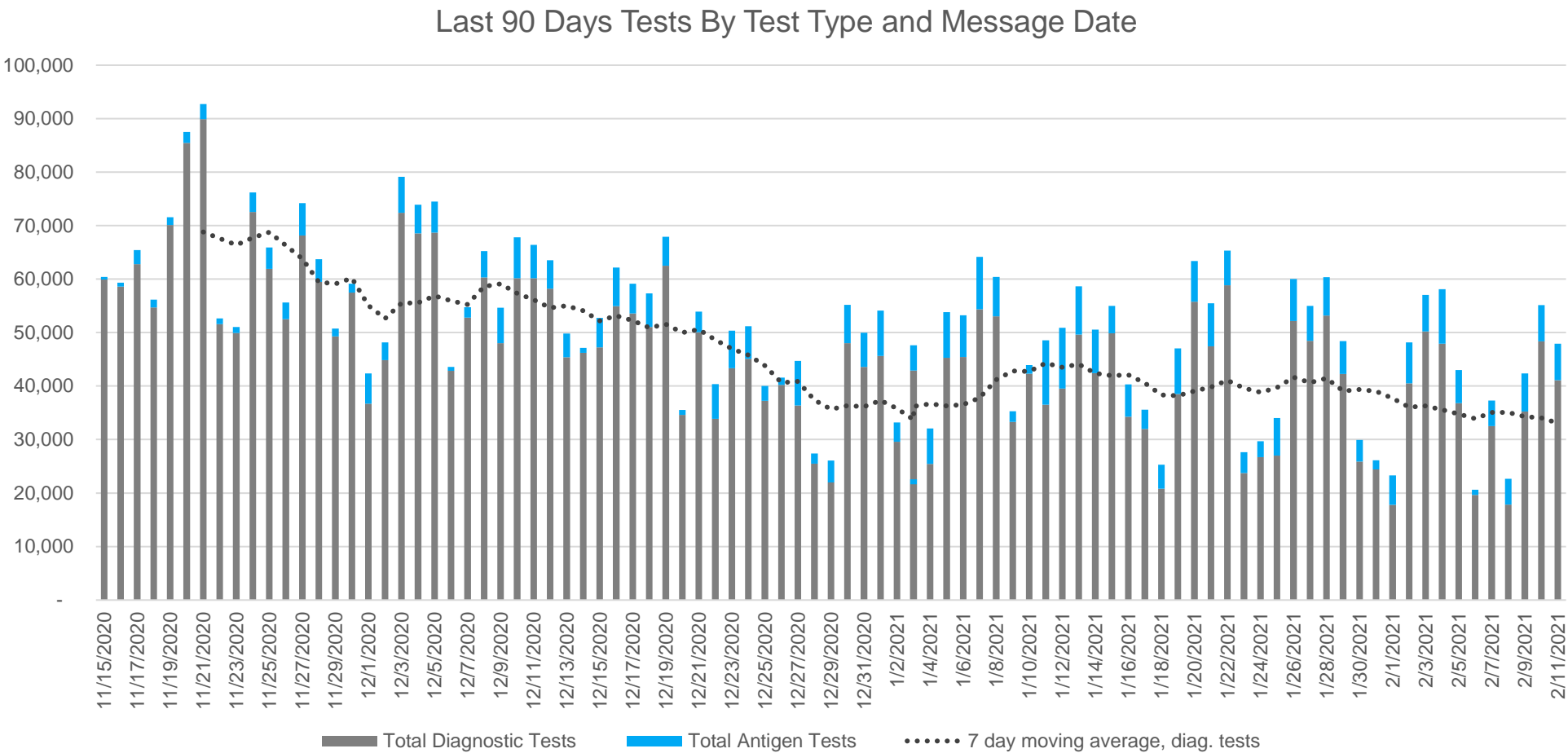
Diagnostic testing volume (PCR and antigen) has decreased from last week to 38,417

- PCR testing has also decreased (33,073)
- 13.9% are antigen tests (5,344)

Cases identified for investigations has plateaued

- Proportion of completed interviews is stable
- Low proportion of cases interviewed with a source of known infection (indicating community acquisition)
- Low proportion of those quarantining when their symptoms begin (indicating no effective halt in community transmission)

Daily diagnostic tests, by message date



Weekly Update

- 38,417 rolling 7-day average daily diagnostic tests reported to MDHHS (PCR + Ag)
- 33,073 average daily PCR tests
- 7.1% of counties meeting testing capacity threshold (goal 100%)
- 13.9% are antigen tests over the past week
- 3.5% positivity in antigen tests

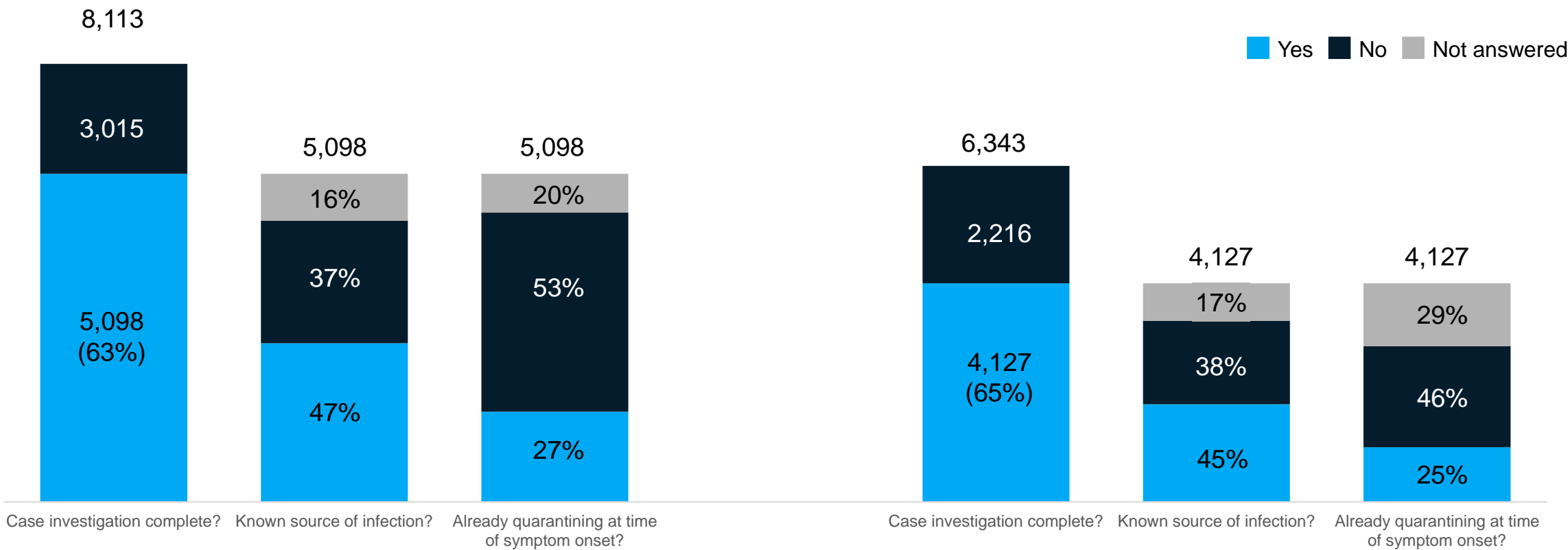
New Case Investigation Metrics (Statewide)

New Communicable Disease metrics slightly increased since last week:

- 45% of investigated cases having a known source (47% last week, 46% week prior)
- 25% of investigated cases noting that they were quarantining before symptoms (27% last week)

01/30-02/05 Case report form information

02/06-02/12 Case report form information



COVID-19 Vaccination

15th in nation for doses administered per 100,000 people

More than 1.6 million doses reported to MDHHS

13.7% of aged 16+ years have first dose of vaccine (up from 11.7% last week)

- **514,000 people fully vaccinated**
- 29.3% of people 65-74 years and 35.4% of people over 75 have had at least one dose

Of all doses reported in the last week, 34% are first doses administered to people aged 65 and older

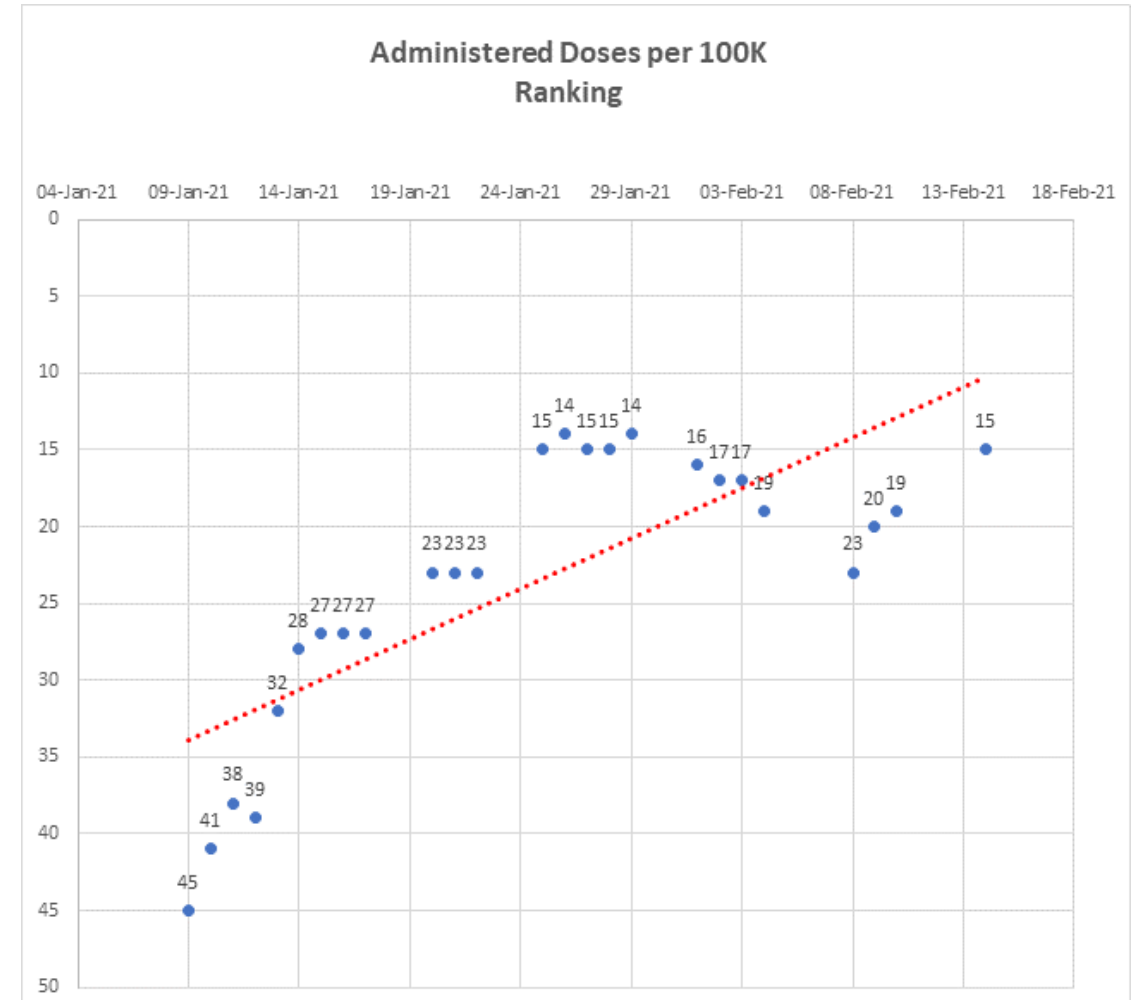
LTC Federal Pharmacy Partnership:

- Percent of LTC with first clinic completed at 76% (up from 51% last week)
- 166,717 doses provided to residents and staff (up from 146,376 week prior)
- 560 clinics scheduled this week

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Michigan COVID Vaccine Distribution & Administration as of 02/14/2021

| | State Rank |
|---------------------------------|------------|
| Total Distributed (Number) | 10 |
| Distributed per 100K | 37 |
| Total Administered (Number) | 9 |
| Administered per 100K* | 15 |
| People with One+ Doses (Number) | 9 |
| People with One+ Doses per 100k | 28 |
| People with Two Doses (Number) | 5 |
| People with Two Doses per 100k | 12 |



Doses Shipped and Administered

13.7% of Michigan residents have initiated their COVID vaccination series and 6.3% have completed their series.

| | Enrolled Providers | Doses Shipped | Total Doses Administered | | | 1 st Dose Coverage, 16+ | 2 nd Dose Coverage, 16+ |
|----------------------|--------------------|---------------|--------------------------|----------------------|----------------------|------------------------------------|------------------------------------|
| Data as of | 2/14/21 | 2/15/21 | 2/14/21 | 1 st Dose | 2 nd Dose | 2/14/21 | 2/14/21 |
| Michigan Distributed | 2,280 | 1,795,575 | 1,634,609 | 1,120,404 | 514,205 | 13.7% | 6.3% |
| Federal Programs | | 499,200 | | | | | |
| Total Distribution | | 2,294,775 | | | | | |

Vaccination by Age Group (2/14/21 data)

More than 561,553 people aged 65 years or older have received one or more doses of vaccine (up 25% from 450,024 last week).

Persons 75 years of age and older have the highest initiation coverage (35.4% up from 28.9% last week)

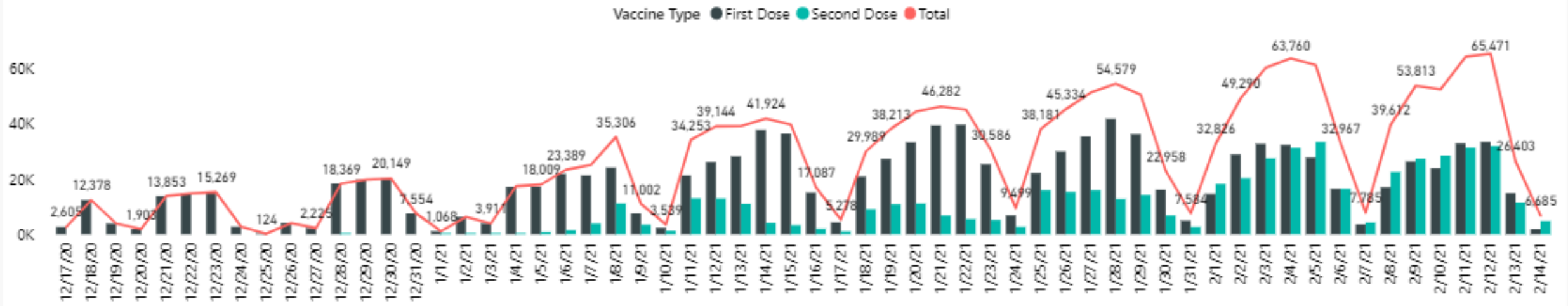
34% of all doses have been administered in the last week have been to people aged 65 and older

| Age Category | People with One or More Doses | People with Two Doses | % of Age Group with first dose "Initiation" |
|--------------|-------------------------------|-----------------------|---|
| 16-19 years | 5,092 | 2,454 | 1.0% |
| 20-29 years | 82,605 | 50,886 | 6.0% |
| 30-39 years | 117,063 | 73,835 | 9.6% |
| 40-49 years | 129,074 | 75,186 | 10.9% |
| 50-64 years | 217,624 | 120,066 | 10.7% |
| 65-74 years | 303,732 | 102,891 | 29.3% |
| 75+ years | 257,830 | 84,900 | 35.4% |

Doses Administered Per Day (2/13/21)

10 days administering more than 50,000 doses/day administered
Over 65,000 doses administered in a single day.

COVID Vaccine Doses Administered by Date / Week (units in K = Thousand, units in M = Million)



Federal Long-Term Care Facility (LTCF) Pharmacy Partnership Program

Data as of 2/10/21 (most recent available)

| Pharmacy and Phase | Facilities | 1st Clinic Complete | % | 2 nd Clinic Complete | Residents & Staff Vaccinated | Clinics Next 7 Days |
|--|--------------|---------------------|------------|---------------------------------|------------------------------|---------------------|
| CVS Part A (SNF) | 269 | 269 | 100% | 89% | 53,519 | 0 |
| CVS Part B (Other LTCF) | 717 | 699 | 97% | 35% | 38,436 | 4 |
| Walgreens Part A (SNF) | 145 | 145 | 100% | 76% | 26,495 | 23 |
| Walgreens Part B (Other LTCF) | 2,061 | 1,977 | 96% | 6% | 45,902 | 551 |
| Managed Health Care Assoc (Other LTCF) | 1,192 | 253 | 21% | 1% | 2,365 | 22 |
| Totals | 4,384 | 3,343 | 76% | | 166,717 | 560 |

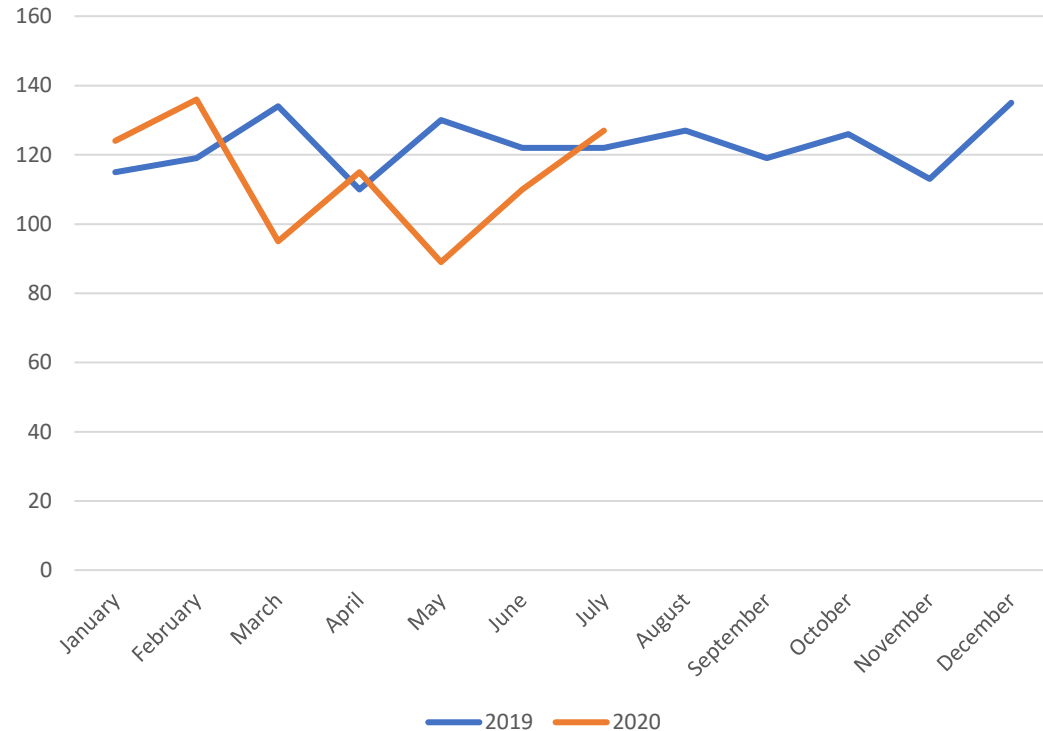
Percent of LTC with first clinic completed at 76% (up from 51% last week)
 166,717 doses provided to residents and staff (up from 146,376 week prior)
 560 clinics scheduled this week

Other Public Health Indicators

- Michigan homicide and suicide deaths
 - Data are from National Violent Death Reporting System
 - Suicides in 2020 are trending relatively similar to 2019
 - Homicides in 2020 are slightly higher than 2019
- 37% reduction in numbers of children under age 6 tested for lead in the blood, similar to other states' reporting

Michigan Homicide and Suicide Deaths

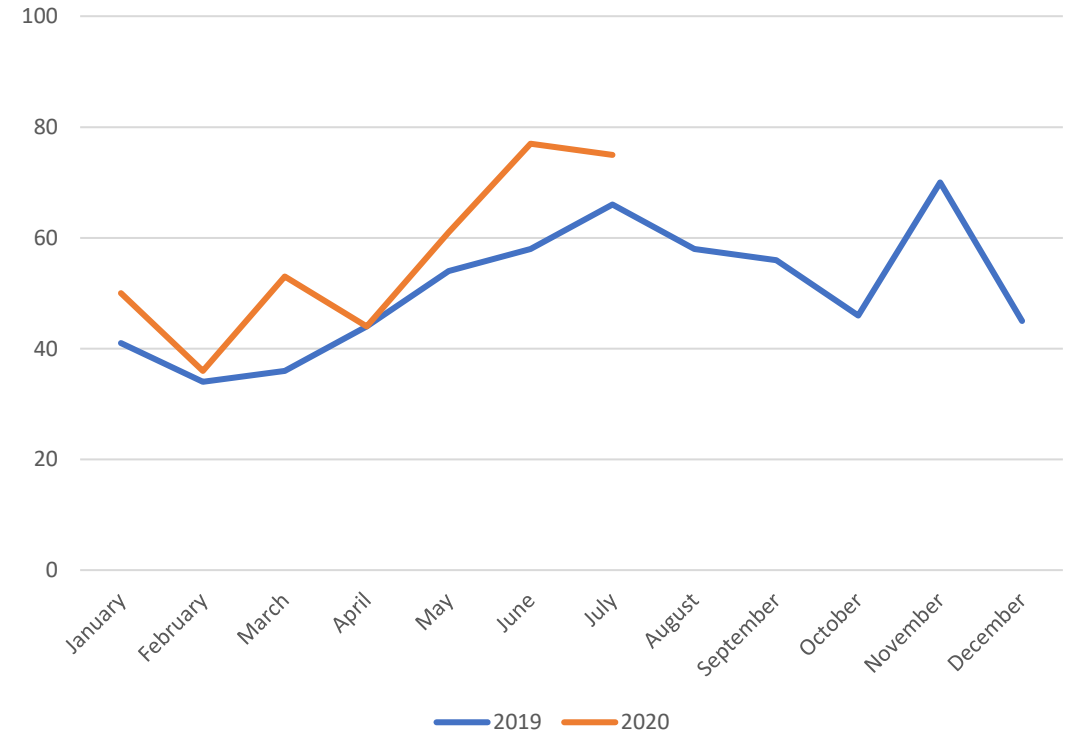
Michigan Suicide Deaths by Month, 2019-2020



Note: Abstractor manner of death = Suicide OR abstractor manner of death was blank AND death certificate manner of death was Suicide. Historically 90% of homicide death certificates received within 4 months of the death.

Source: MDHHS – National Violent Death Reporting System (NVDRS)

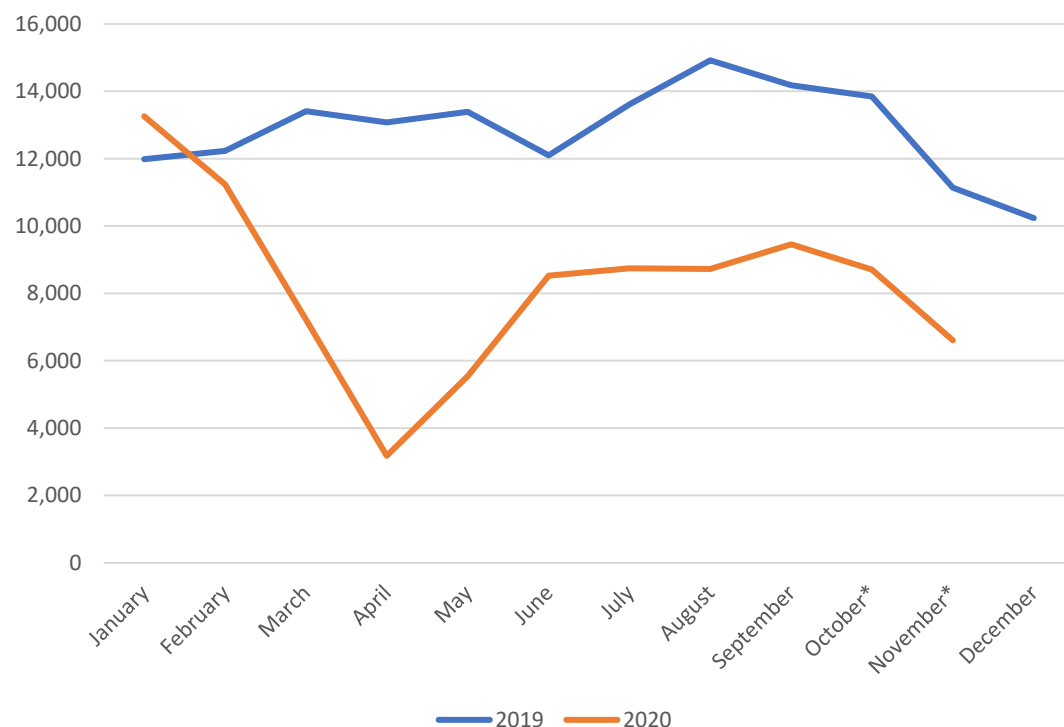
Michigan Homicide Deaths by Month, 2019-2020



Note: Abstractor manner of death = "Homicide" OR abstractor manner of death was blank AND death certificate manner of death was Homicide. Cases coded Y35.0 and Y35.6 were removed (legal intervention). Historically 90% of homicide death certificates received within 5-6 months of the death.

Decreased Childhood Blood Lead Testing During COVID-19

Monthly Numbers of Children^A Under age 6 tested for blood lead



^A Each child was counted only once per month.

* Data for October 2020 and November 2020 may be incomplete and are considered provisional.

Source: MDHHS Data Warehouse, Data current as of 01/05/2021

- 35% reduction in number of children under age 6 tested for blood lead Jan-Nov 2020 compared to Jan-Nov 2019.
 - Similar reduction seen in other states (34% decrease Jan-May 2020 compared to Jan-May 2019).
 - In-person primary care and preventive health services have declined during the pandemic, affecting both childhood lead testing and immunizations.
- Build awareness among key partners to both identify children who missed screening, including:
 - Sharing data with Medicaid and Local Public Health to identify children due for lead testing.
 - Partnering with provider organizations, like the Michigan Chapter of the American Academy of Pediatrics, to increase pediatric provider awareness of the drop in lead testing.
 - Targeted outreach to provider practices.
- Statewide media campaign to raise awareness about childhood lead exposure, including blood lead testing, health effects, exposure sources and available lead services.

Science Round Up

- Pilot testing in schools and sports and early detection of infected individuals
- Update on masking and potential benefits of double masking
- Projections of increased vaccine supply and to impact state vaccination goal and reaching herd immunity
- Comparisons of rates among Midwestern states
 - Case rates mimic one another, and Michigan has fared better than IL, IN, OH, WI
- Michigan cases and deaths are projected to continue to decline
- Most recent mobility data shows some return toward baseline mobility patterns, particularly for non-essential visits (data not shown)



Fall Sports Testing Pilot

3 x weekly testing of **asymptomatic** high school athletes

- Football
- Volleyball
- Swimming and diving

Testing administered by coaches and volunteers, NOT medical staff

| | First Test | Total Positive | Total Participants |
|------------------|------------|----------------|--------------------|
| Student Athletes | 30 | 62 | 6,264 |
| Support Staff | 8 | 11 | 1,994 |
| Unknown | 2 | 2 | 124 |
| Total | 40 | 75* | 8,332 |
| Percent | 53% | - | - |



*69 confirmed by PCR



Fall Sports Testing Pilot

What did we learn?

- 1) It was feasible to administer tests in school
- 2) Testing picked up **asymptomatic** cases*
- 3) Most were picked upon the first test

*69 confirmed cases of COVID-19 in **asymptomatic** participants (~1%)

Symptomatic and close contact removed from the program and not tested

Testing of asymptomatic individuals likely **prevented** outbreaks

Winter Schools Testing Program



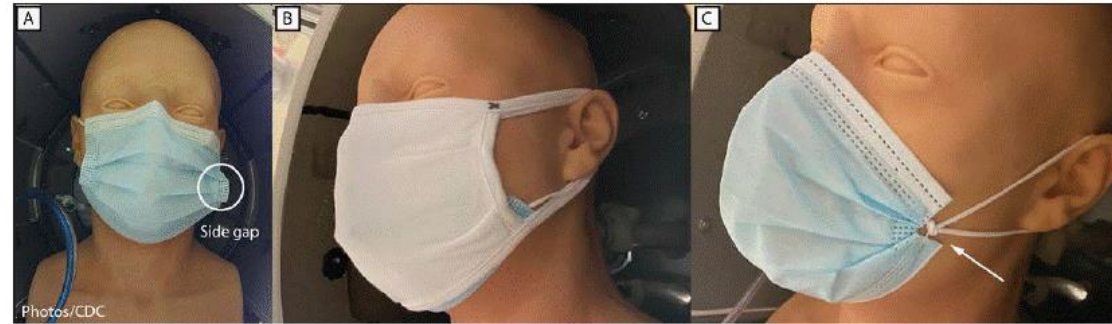
- Educator testing → 12,079 from 460 schools
 - *1x week testing for educators* (voluntary)*
*face to face interaction with students



- Sports testing → 23,109 from 518 schools
 - *Up to 3 x week testing for sports without masks*
 - *1 x week testing for sports with masks (voluntary) → 4,365*

Updated Data on Masks

FIGURE 1. Masks tested, including A, unknotted medical procedure mask; B, double mask (cloth mask covering medical procedure mask); and C, knotted/tucked medical procedure mask



Experiment 1: Source Control for a Simulated Cough

| | Particles blocked |
|---------------------------------|-------------------|
| Cloth mask | 51% |
| Medical mask | 56% |
| Knotted and tucked medical mask | 77% |
| Double masks | 85% |



Experiment 2: Quiet Breathing

| | Percent improvement |
|--|---------------------|
| Source Unmasked Receiver wearing knotted and tucked medical mask | 65% |
| Source Unmasked Receiver wearing double mask | 83% |
| Both wearing "double masks" or medical masks knotted and tucked properly | 96% |



Wearing a mask that fits tightly to your face can help limit spread of the virus that causes COVID-19

In lab tests with dummies, exposure to potentially infectious aerosols decreased by **about 95%** when they both wore tightly fitted masks



Cloth mask over medical procedure mask



Medical procedure mask with knotted ear loops and tucked-in sides

Other effective options to improve fit include:



Mask fitter



Nylon covering over mask

CDC.GOV

bit.ly/MMWR21021

MMWR

Medical procedure masks are intended to provide source control and to block splashes.

The extent to which they reduce exhalation and inhalation of particles in the aerosol size range varies substantially, in part because air can leak around their edges, especially through the side gaps

Vaccine supply is expected to ramp up substantially over coming months

- Pfizer & Moderna have pledged 300 million doses each by the end of July in regular increments [[NYT](#)] – enough to vaccinate all adults in US
- Projected doses based on MI's percent of US population if Pfizer & Moderna doses are spread evenly across March – July. **Illustration only**
 - Dashed vertical line indicates when it would be possible to have given 2 doses to half of Michiganders based on projected supply
- Johnson & Johnson, AstraZeneca to follow soon
- Expectation is that supply may increase by April for all age groups [[Fauci - NYT](#)]

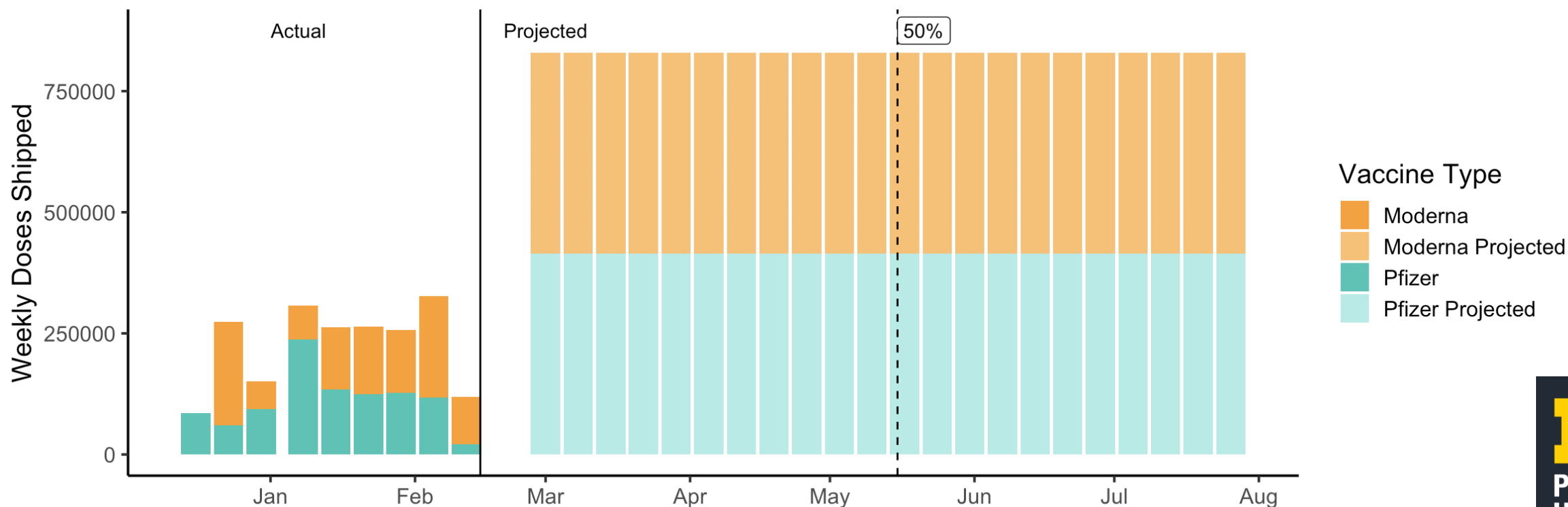
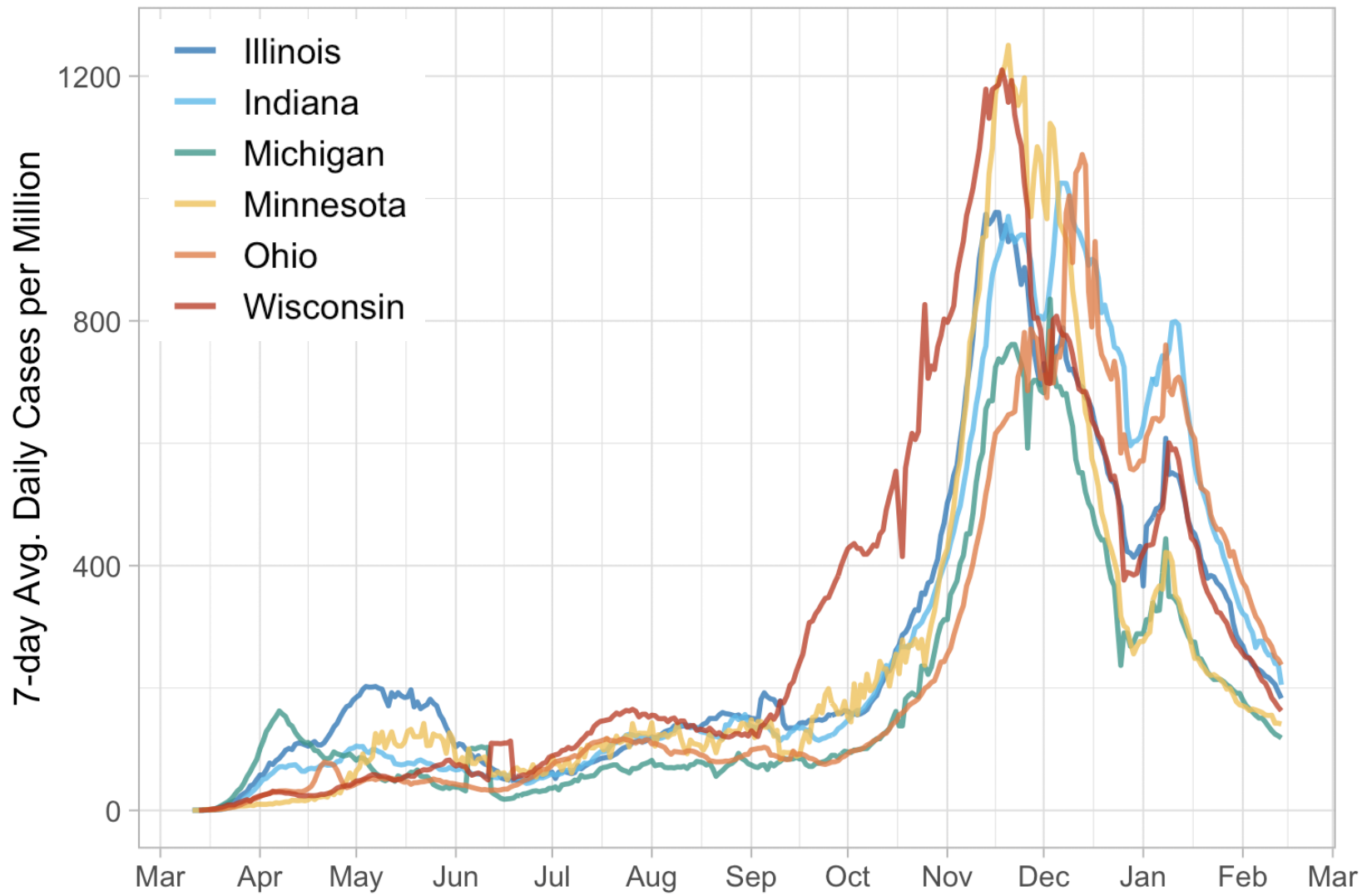


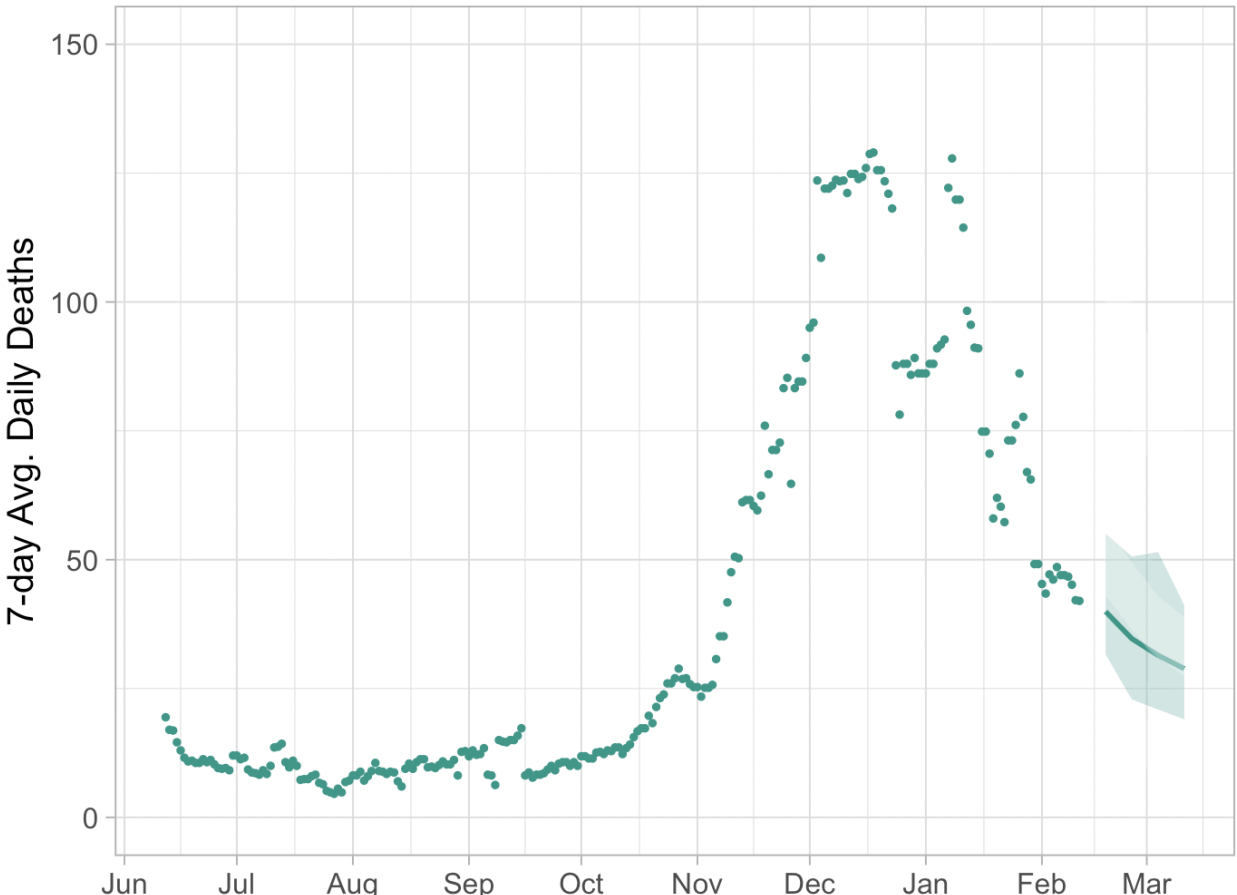
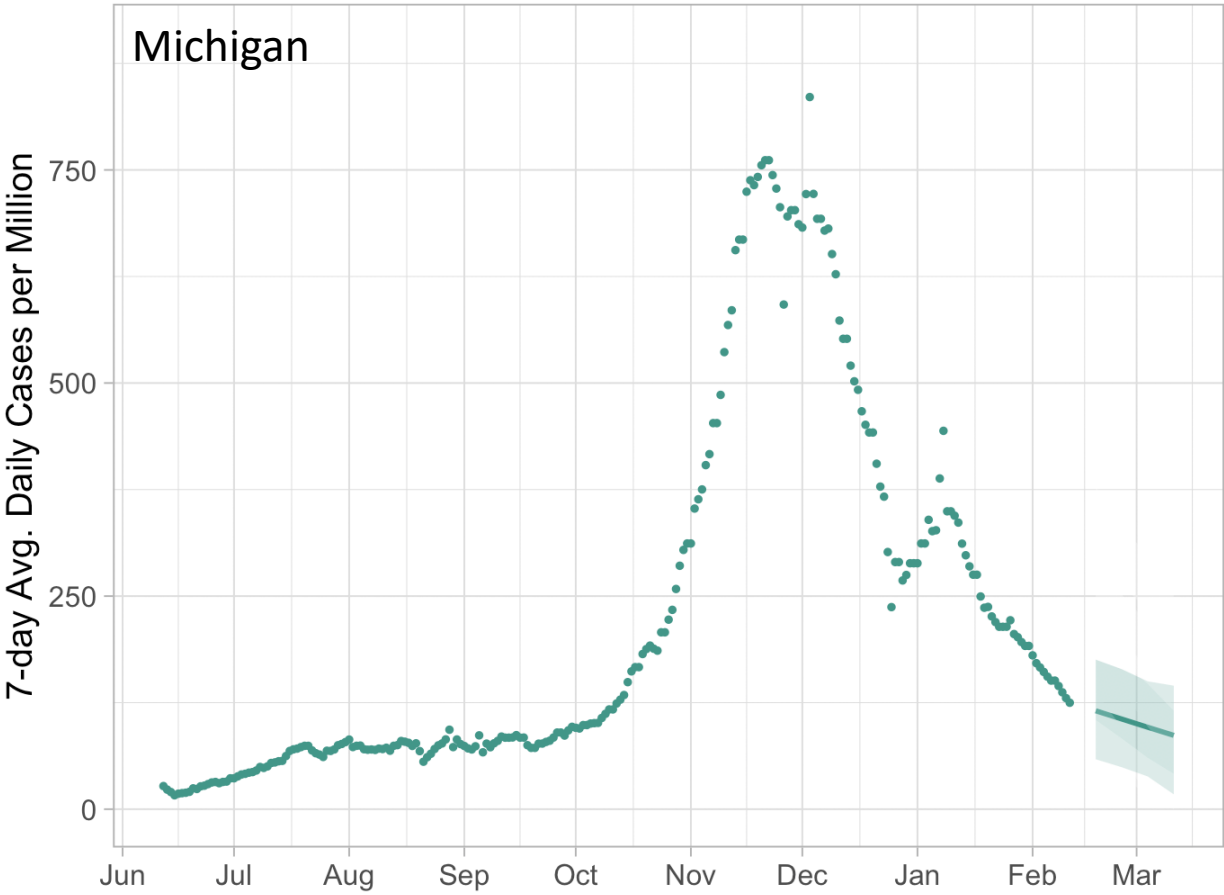
Illustration only, actual timeline may vary



Overall declines in cases across the country

Michigan case rates are the lowest among neighboring states

Michigan cases and deaths are projected to continue to decline



Line is the ridge regression model projection, and the shaded region represents the 95% confidence region (2.5% and 97.5% quantiles). Model assumes 'status quo' in the sense that it is based on previous data and so doesn't account for new conditions or changes in behavior.

Sources:
Data from MDHHS/JHU,
[UM Ridge Regression Model](#)



Status of COVID-19 Epidemiological Risk

Science round-up

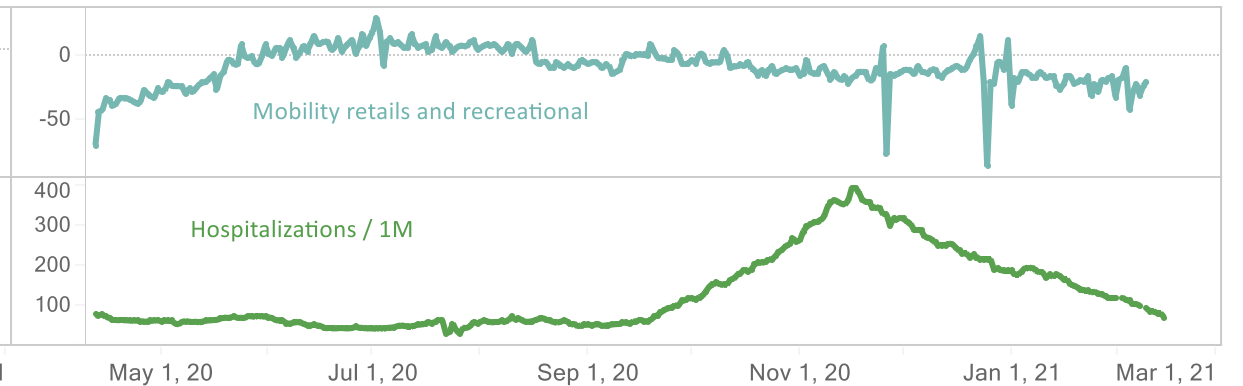
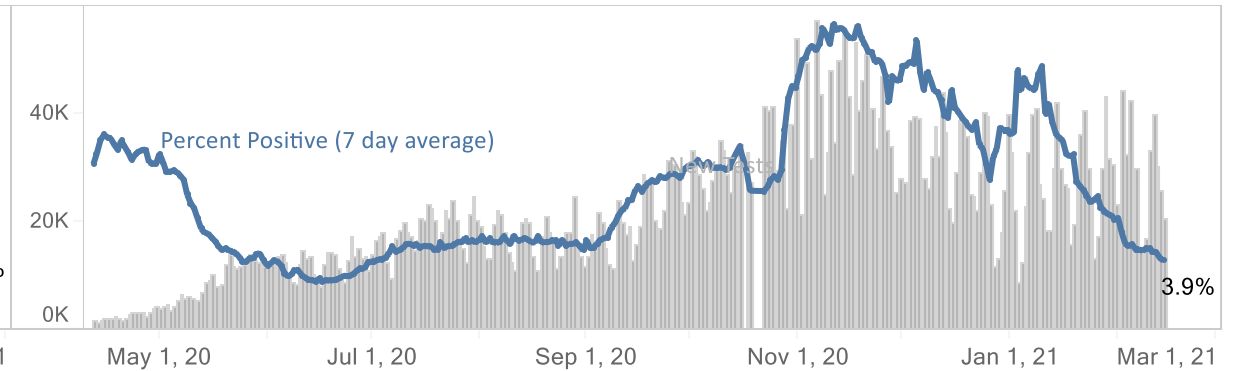
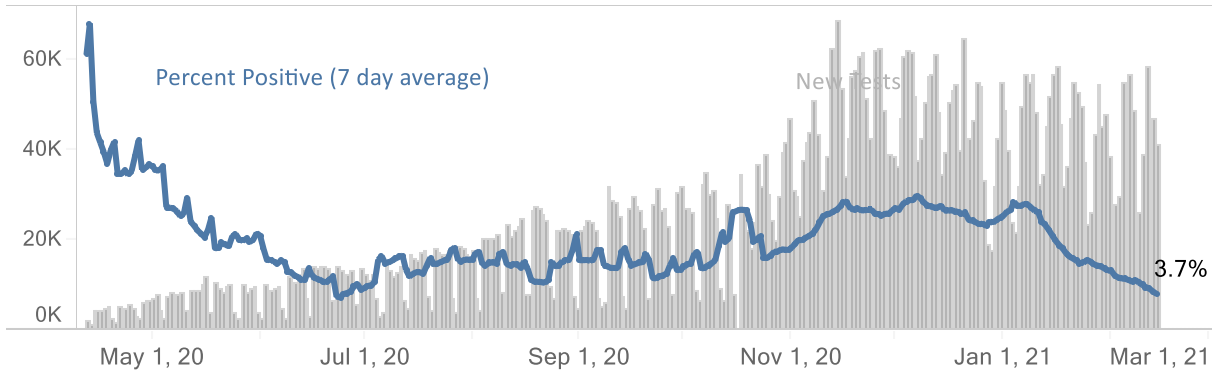
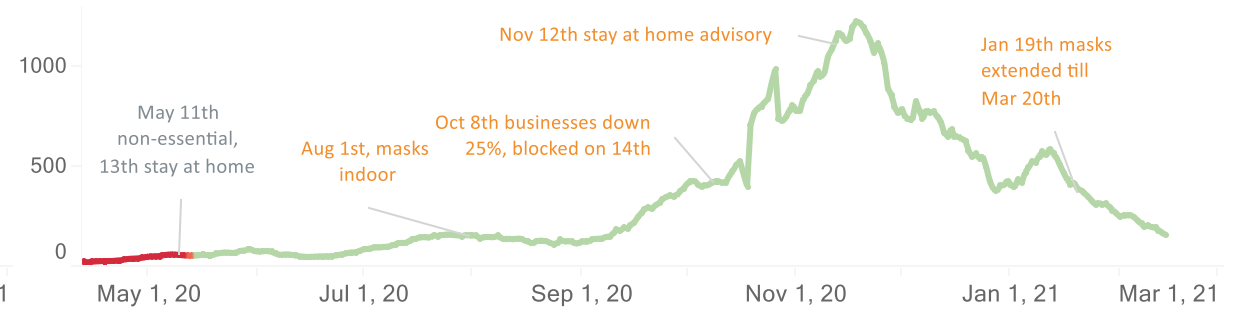
Appendix

Indiana and Wisconsin: Detailed examination

Indiana Confirmed New Cases / 1M (7 days average)

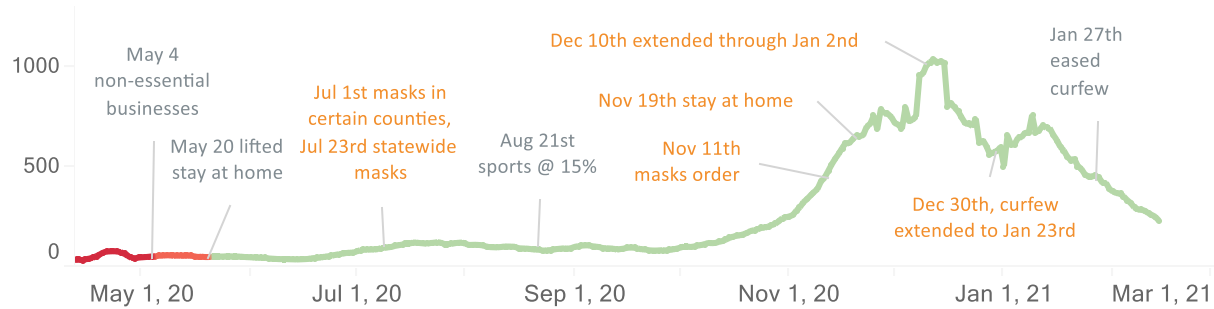


Wisconsin Confirmed New Cases / 1M (7 days average)

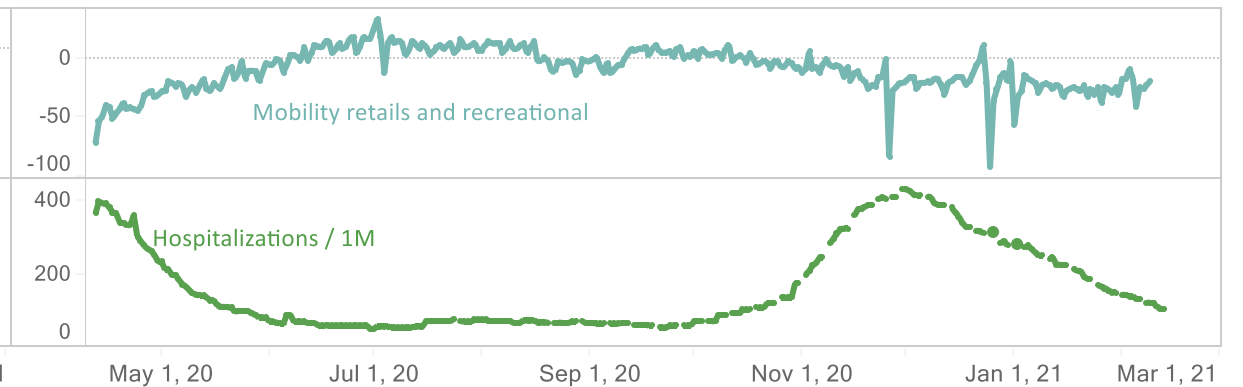
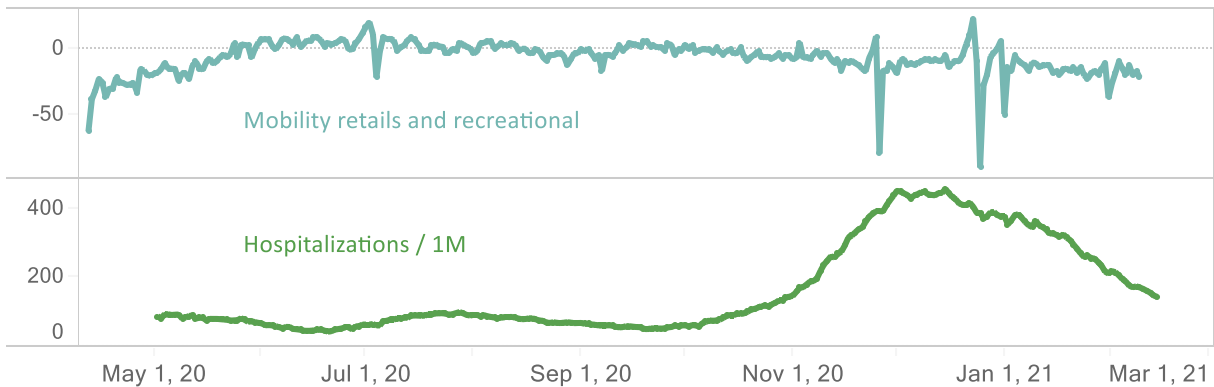
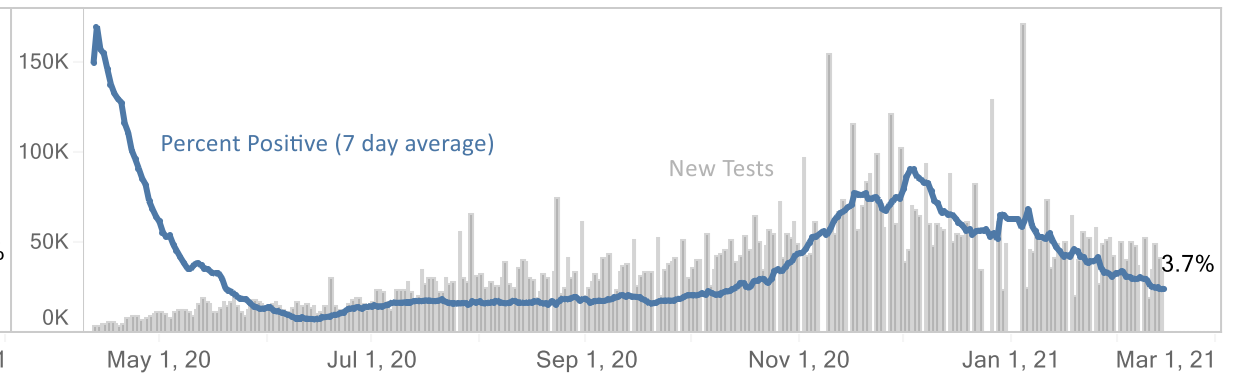
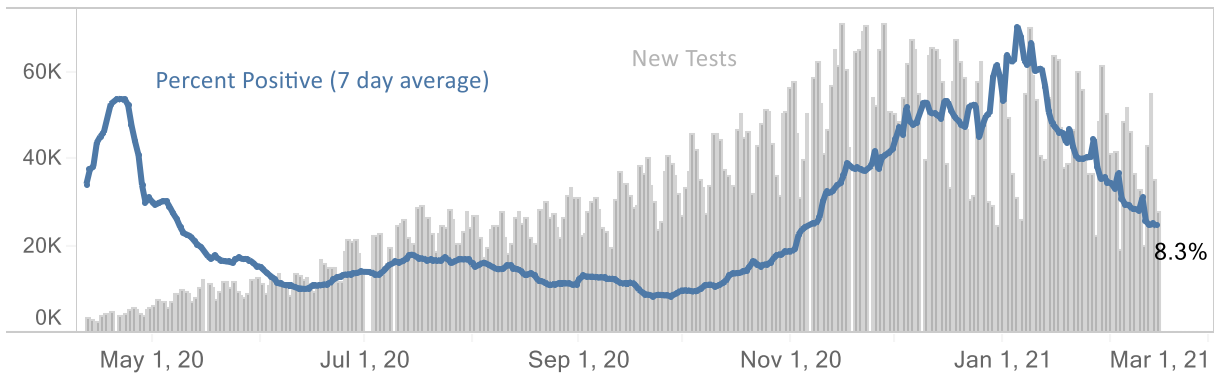
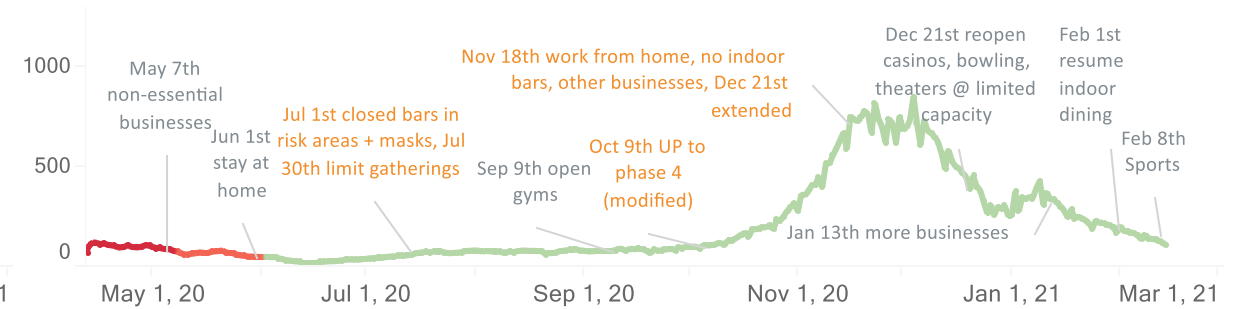


Ohio and Michigan: Detailed Examination

Ohio Confirmed New Cases / 1M (7 days average)

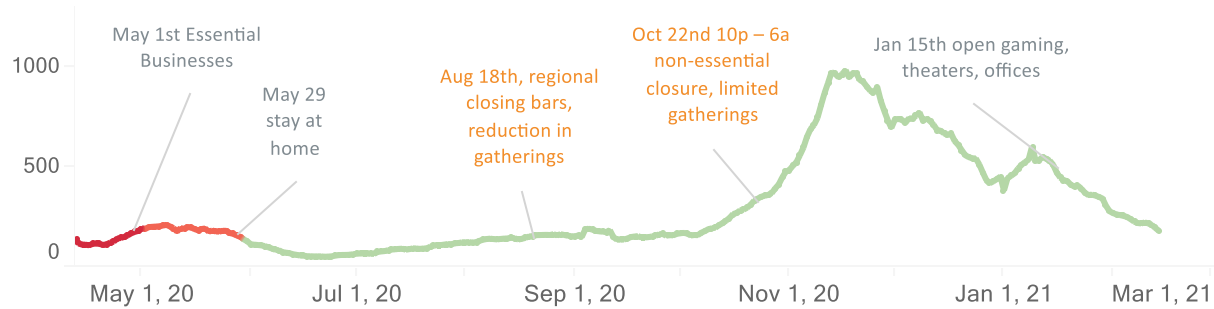


Michigan Confirmed New Cases / 1M (7 days average)

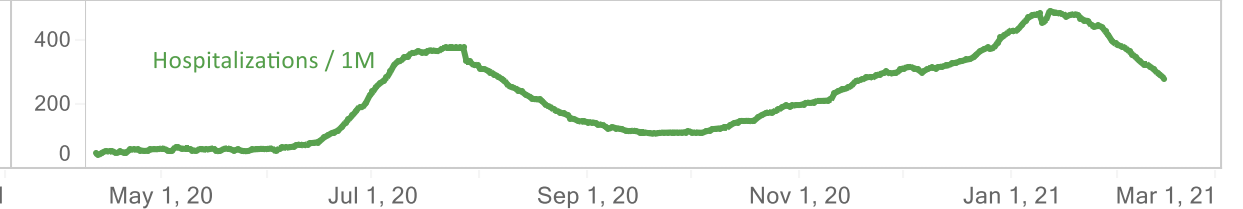
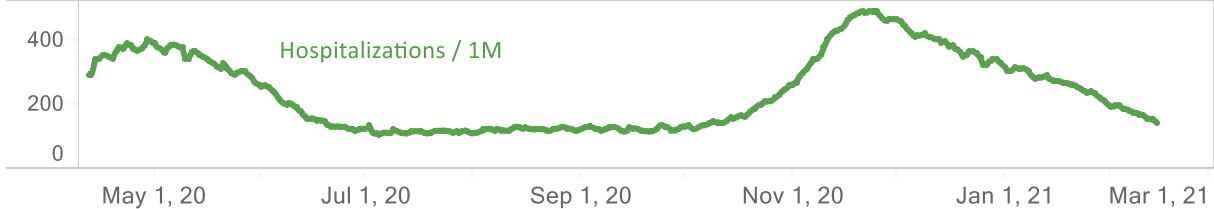
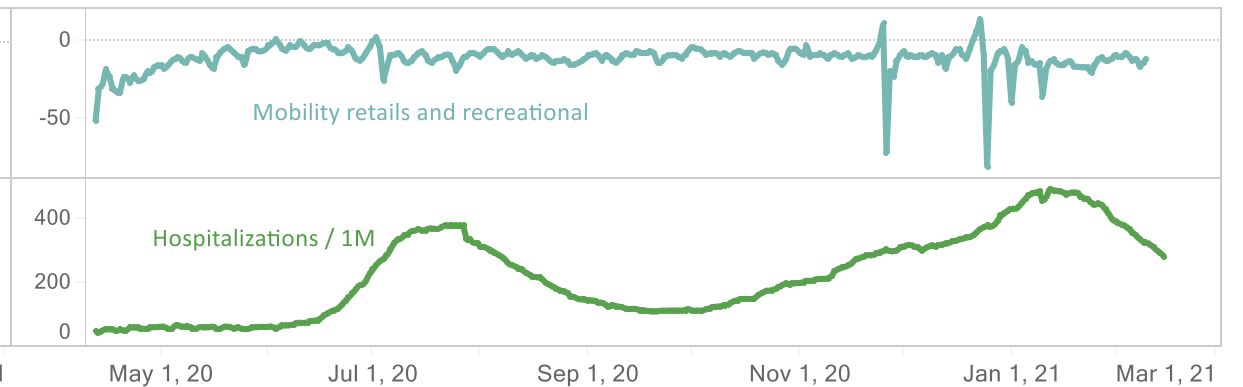
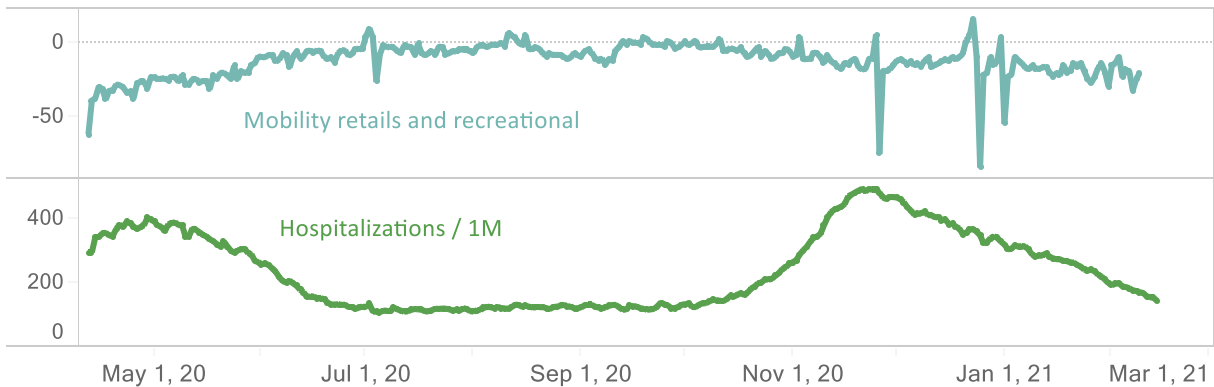
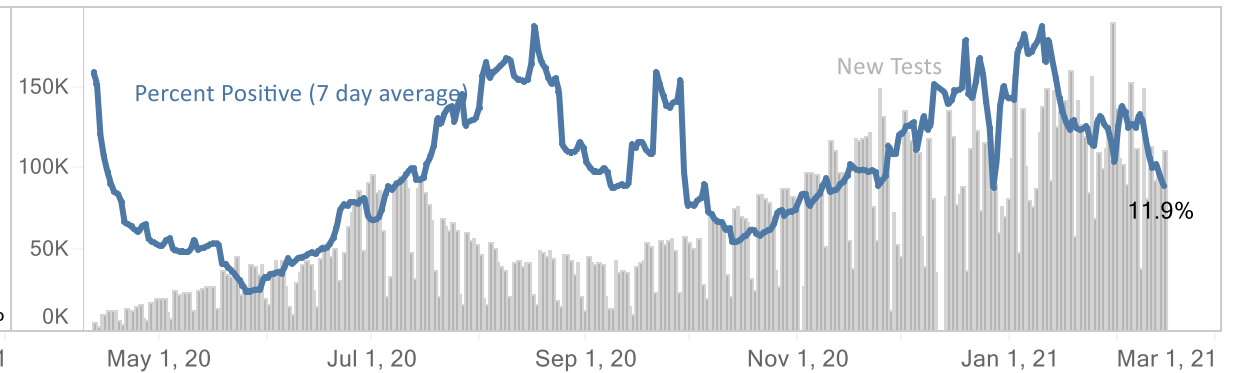
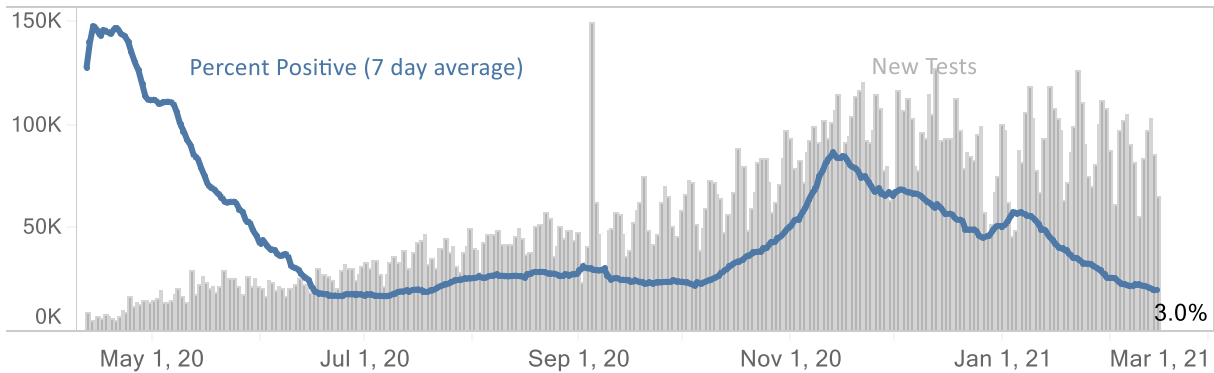
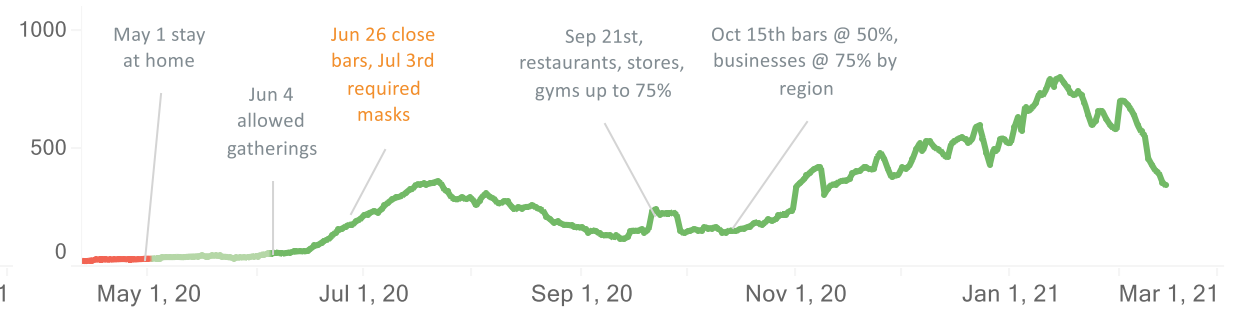


Illinois and Texas: Detailed Examination

Illinois Confirmed New Cases / 1M (7 days average)



Texas Confirmed New Cases / 1M (7 days average)





QUESTIONS?

[Michigan.gov/Coronavirus](https://michigan.gov/Coronavirus)