



Getting Back to Normal:

COVID-19 in the Age of Variants

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**MIDWEST
HEALTH
INITIATIVE**

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COVID-19: Health Trends in Missouri's Commercially Insured Population, in the age of the Delta and Omicron Variants

The COVID-19 pandemic has changed aspects of daily life and health care in many ways. In some areas of health care there has been a return to pre-pandemic trends. However, COVID-19 continues to effect the health care landscape.

TABLE OF CONTENTS

Vaccination, Testing, & Diagnoses

COVID-19 Inpatient Care and Hospital-Based Therapeutics

A Return to Pre-Pandemic Trends in Care & Utilization

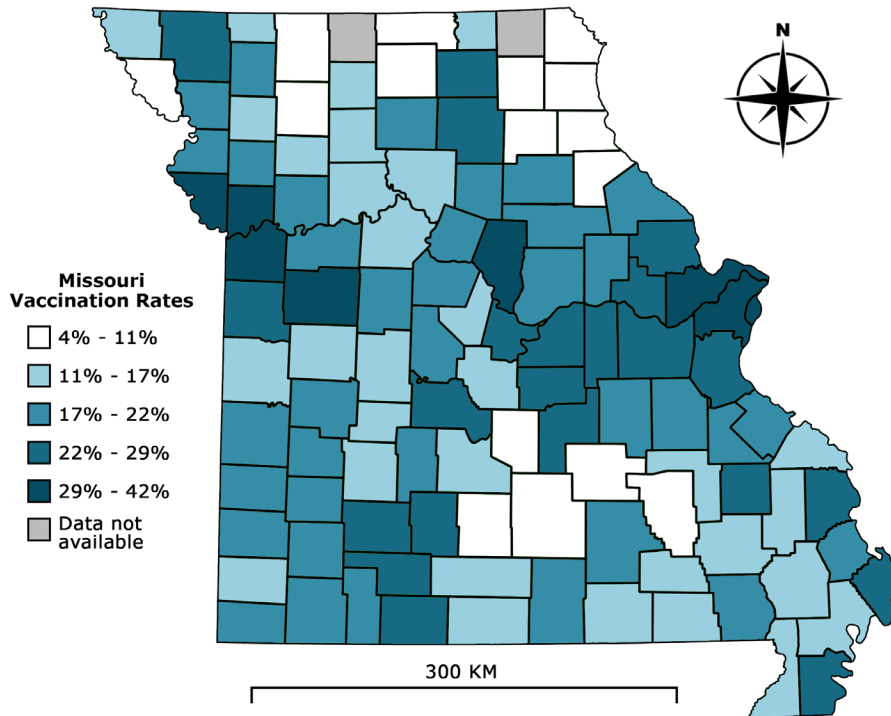
A New Normal in Health Care Services

The Mental Health Impact of COVID-19

Midwest Health Initiative (MHI) shares this report to assist providers, purchasers, and our community in understanding COVID's impact and the potential for future change. The report examines care received by commercially insured people in Missouri, ages 0-64, during the age of the Delta and Omicron variants.

COVID-19 Vaccinations

Missouri Vaccination Rates, by County, Through January 2022



Total population vaccinated:

41.4%

Vaccinations by Age:

6-17 years:
23.0%

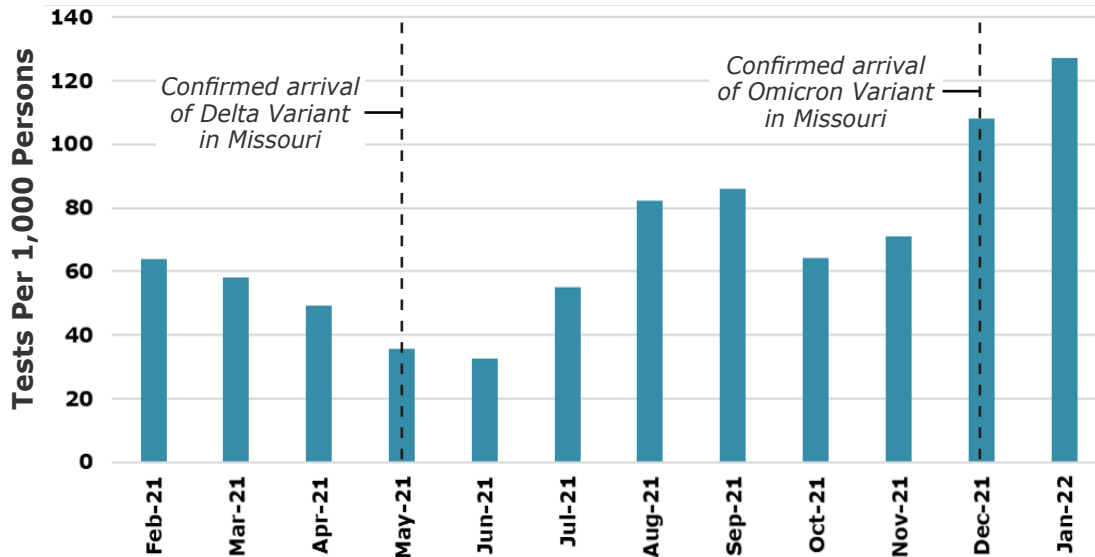
18-39 years:
41.9%

40-64 years:
51.1%

- The commercially insured population ages 40-64 years received COVID-19 vaccines at a higher rate.
- Vaccination rates were lower in the population ages 6-17 years, due to the recently approved provision of the COVID-19 vaccine for this age group.

COVID-19 Testing in a Provider Setting

COVID-19 Testing* February 2021 - January 2022



Source: Midwest Health Initiative (2022)

**Average Cost Per Test,
Standardized Price:**

\$72

Tests Per Person:

1.4

COVID-19 testing spiked in the summer and winter of 2021, most likely due to the arrival of new variants in Missouri. Delta was first confirmed to be present in Missouri's population on May 10th, and Omicron on December 4th.

Total population vaccinated:

41.4%

Testing by Age:

0-17 years:

23.0%

18-39 years:

41.9%

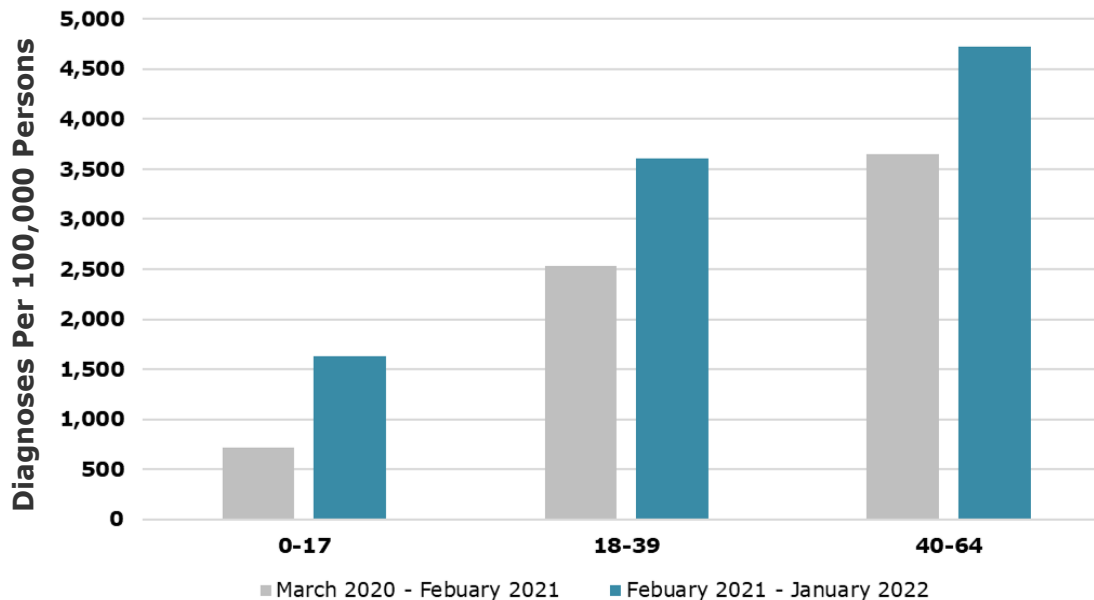
40-64 years:

51.1%

*This is a measure of those who have received at least one COVID-19 test in a health care setting and does not include at-home testing.

COVID-19 Diagnoses Since the Onset of the Pandemic

COVID-19 Diagnoses by Age Group March 2020 - January 2022



 Source: Midwest Health Initiative (2022)

**Diagnoses Since
the Onset of the
Pandemic:**
41.4%

Diagnoses by Age:

0-17 years:
9.4%

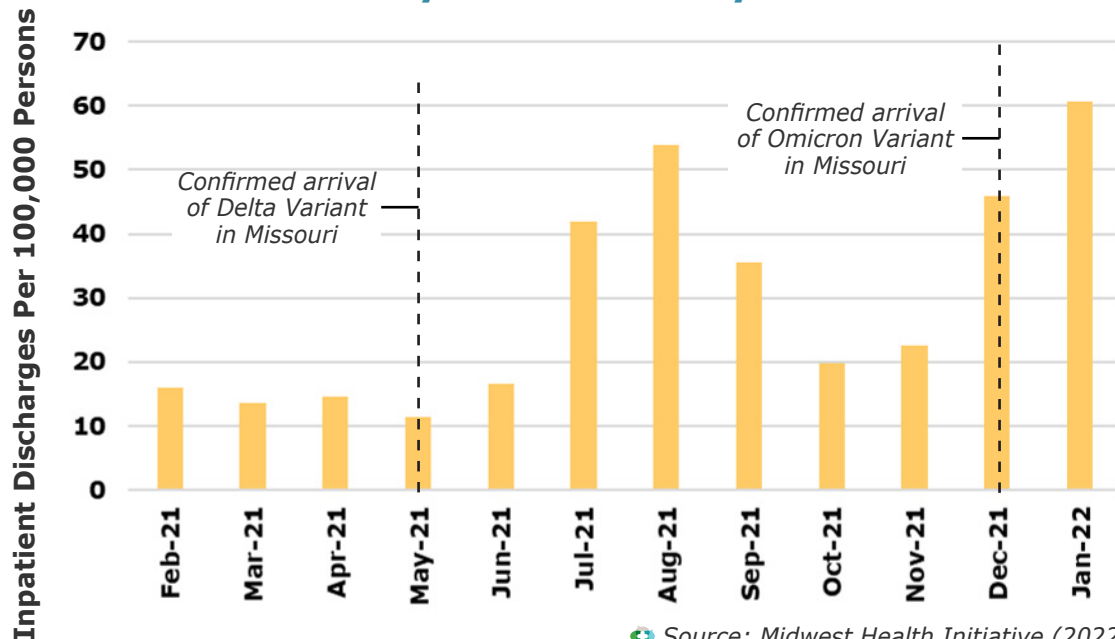
18-39 years:
15.7%

40-64 years:
17.7%

- COVID-19 diagnoses across all age groups increased during the second year of the pandemic.

COVID-19 Hospitalizations

COVID-19 Hospital Discharges February 2021 - January 2022



A rise in the number of cases during the Omicron surge lead to Missouri's highest rate of inpatient hospitalizations for COVID-19. The Delta variant was much slower to spread than Omicron, but typically was a more severe strain.¹

Source: Midwest Health Initiative (2022)

Average Length of Stay:

7.1 Days

Average Cost of:

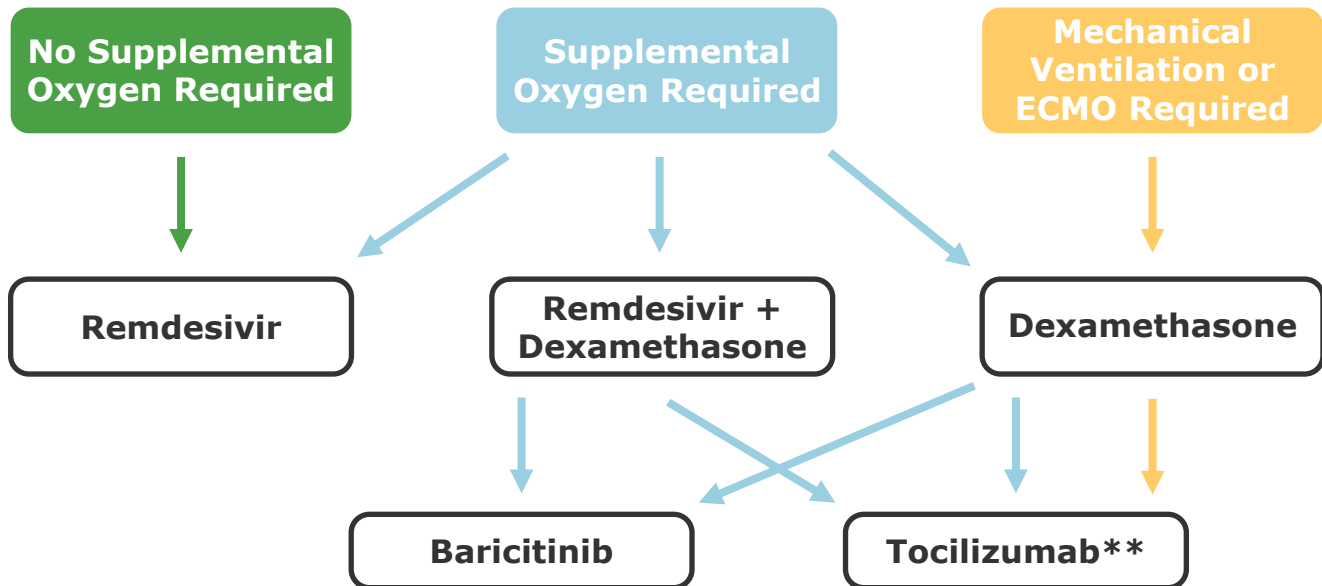
\$32,826

¹ Katella K. Omicron, Delta, Alpha, and More: What to Know About the Coronavirus Variants. Yale Medicine. Published July 5, 2022. Accessed August 24, 2022. <https://www.yalemedicine.org/news/covid-19-variants-of-concern-omicron>

Treatment Pathways

Hospital-Based COVID-19 Therapeutics

*Adapted from National Institutes of Health (NIH), this figure provides a useful framework for evaluating the costs of COVID treatment in an inpatient setting.**



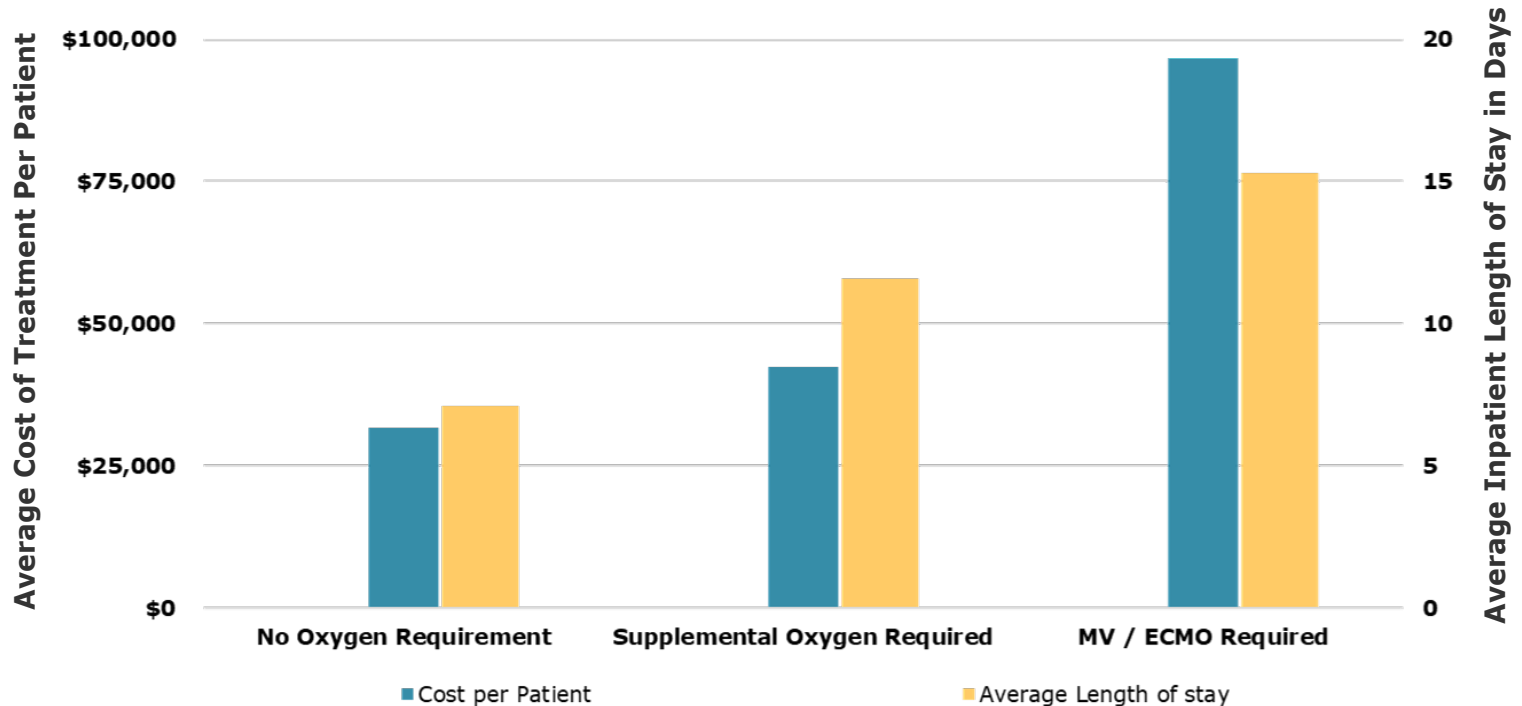
*Treatment guidelines are subject to change.**

* National Institute of Health. (2022). Clinical Management of Adults Summary | COVID-19 Treatment Guidelines. <https://www.covid19treatmentguidelines.nih.gov/tables/management-of-hospitalized-adults-summary/> Accessed 07/15/2022.

** For those requiring mechanical ventilation (MV) or extracorporeal membrane oxygenation (ECMO), Sarilumab may be substituted for Tocilizumab. However, utilization of Sarilumab was not found in MHI's commercial claims data for this analysis.

COVID-19 Hospitalizations

Cost of Treatment and Length of Hospital Stay Based on Disease Severity

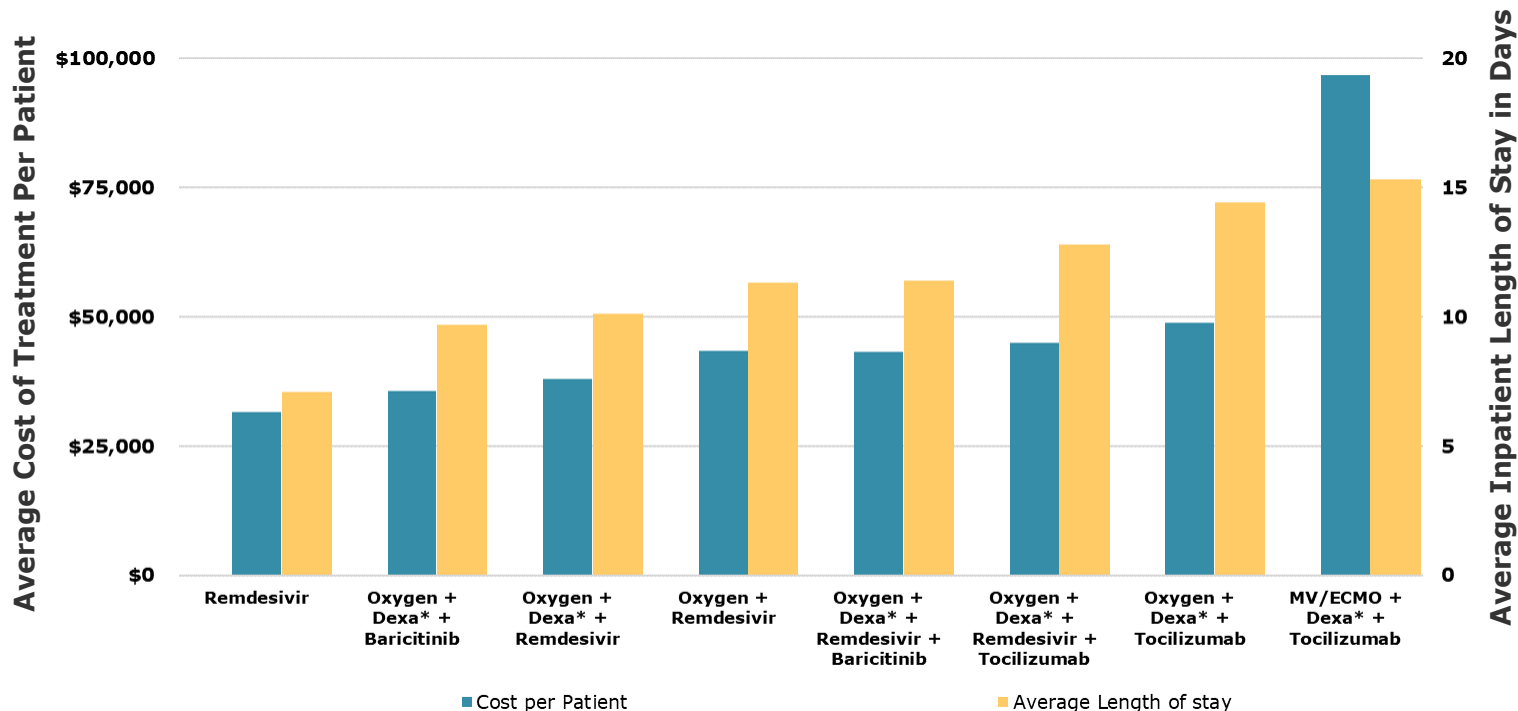


Source: Midwest Health Initiative (2022)

- Sicker patients requiring mechanical ventilation or Extracorporeal Membrane Oxygenation (ECMO) had a longer inpatient stay and accrued greater costs.

COVID-19 Hospitalizations

Therapeutic Management of Adults Hospitalized for COVID-19 Based on Severity



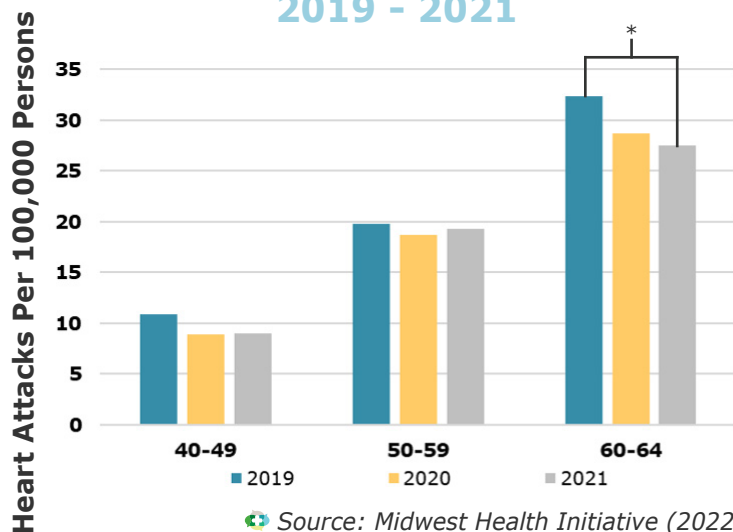
Source: Midwest Health Initiative (2022)

- Patients who received Tocilizumab had longer inpatient stays and accrued greater costs. However, these patients also tended to be sicker.

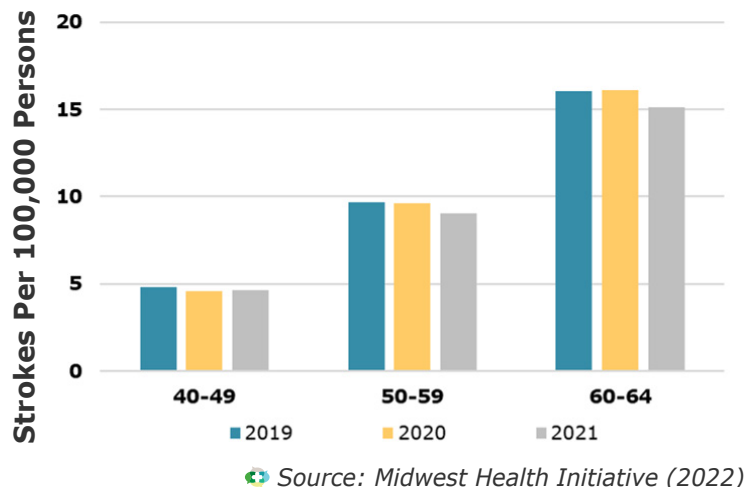
*Dexa = Dexamethasone

Strokes and Heart Attacks

Heart Attacks By Age Group
2019 - 2021



Strokes By Age Group
2019 - 2021

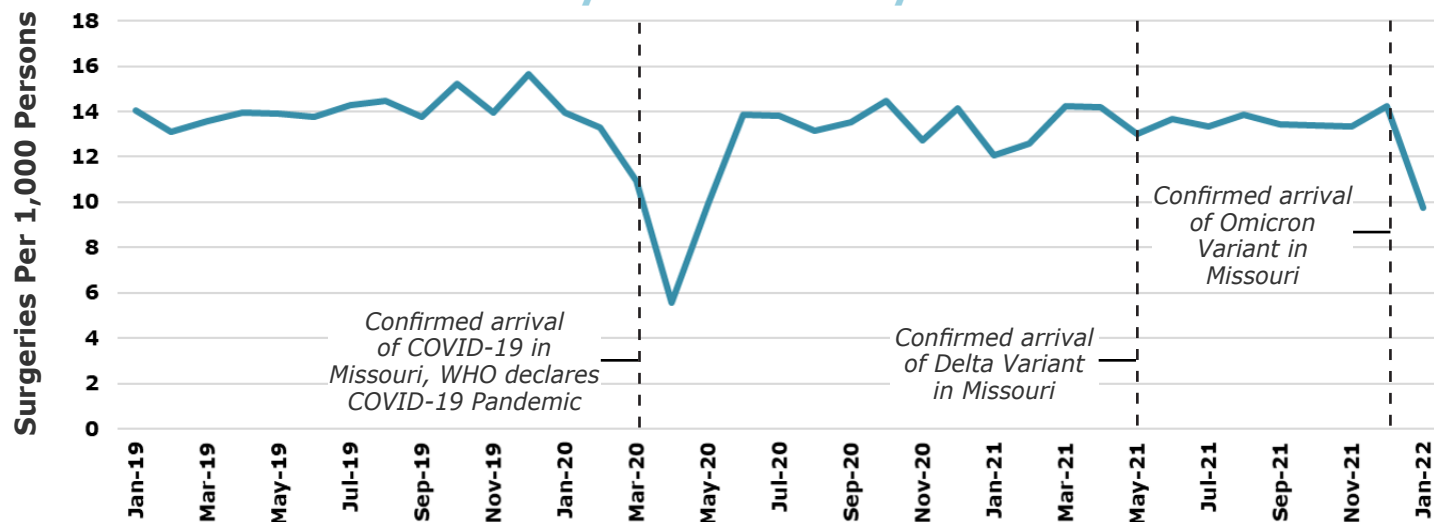


* Statistically significant ($p < 0.05$)

- There was a 15.1% decrease in heart attacks for those aged 60-64 years from 2019 to 2021; this decrease is statistically significant.
- Rates of stroke have remained fairly constant for each age group since 2019.

Surgical Trends

Total Surgeries,
January 2019 - January 2022



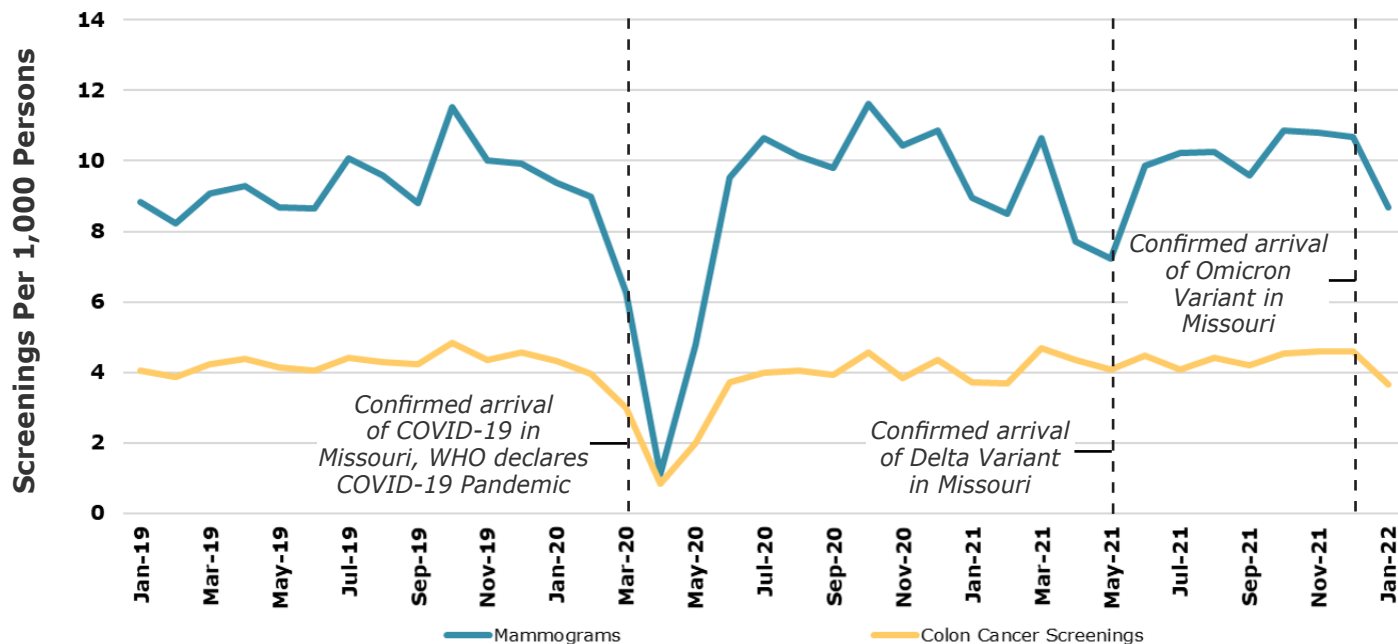
Source: Midwest Health Initiative (2022)

- The average number of surgeries decreased by about 5% between 2019 and 2021; this decrease is statistically significant.
- After the initial 40% decline at the onset of the pandemic, the rates of total surgeries largely returned to pre-pandemic levels between July 2020 and December 2021.
- Following the arrival of the Omicron variant in Missouri, there was a 33.6% decline in total surgeries between December 2021 and January 2022. The Red Cross reported a first-ever blood crisis resulting in a 10% decline in blood donations during the Omicron surge, citing blood drive cancellations and being short staffed, which resulted in delayed medical procedures across the nation.*

* <https://www.redcross.org/about-us/news-and-events/press-release/2022/blood-donors-needed-now-as-omicron-intensifies.html>

Preventative Screenings

Preventative Screenings,
January 2019 - January 2022

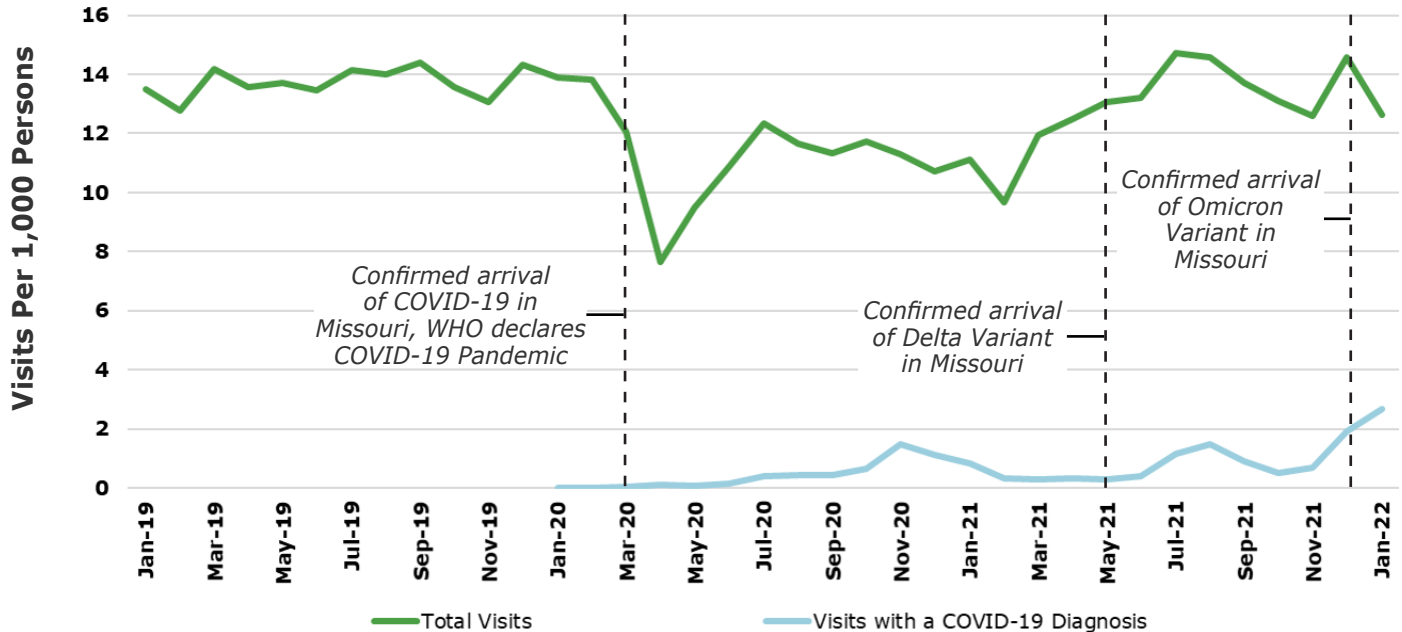


Source: Midwest Health Initiative (2022)

- Mammography screenings fell by approximately 96% in April 2020 at the onset of the pandemic. There were two other dips of approximately 32% and 22% with the Delta and Omicron variants respectively.
- Colon cancer screenings were not greatly affected by the arrival of COVID-19 variants after an initial 80% drop in April 2020. Rates of colon cancer screenings remained at a monthly average of 4.2 per 1,000 persons, similar to pre-pandemic levels.

Emergency Department Visits

Emergency Department Utilization,
January 2019 - January 2022

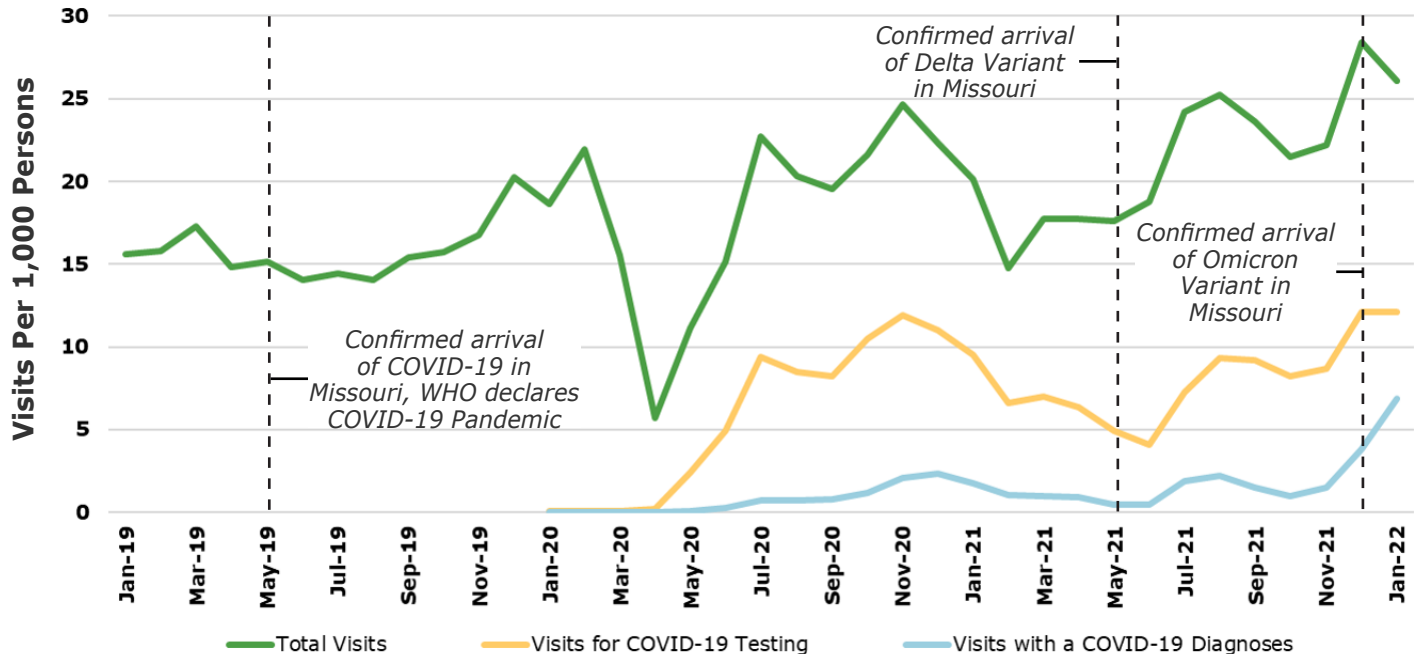


Source: Midwest Health Initiative (2022)

- The number of Emergency Department (ED) visits for patients with a positive COVID-19 diagnosis were highest upon the arrival of Omicron, making up 21.2% of all ED visits.
- Since the onset of the pandemic, ED utilization for patients with a diagnosis of COVID-19 was highest in January of 2022. The overall increase in ED utilization between 2020 and 2021 is statistically significant.

Urgent Care Visits

Urgent Care Utilization,
January 2019 - January 2022

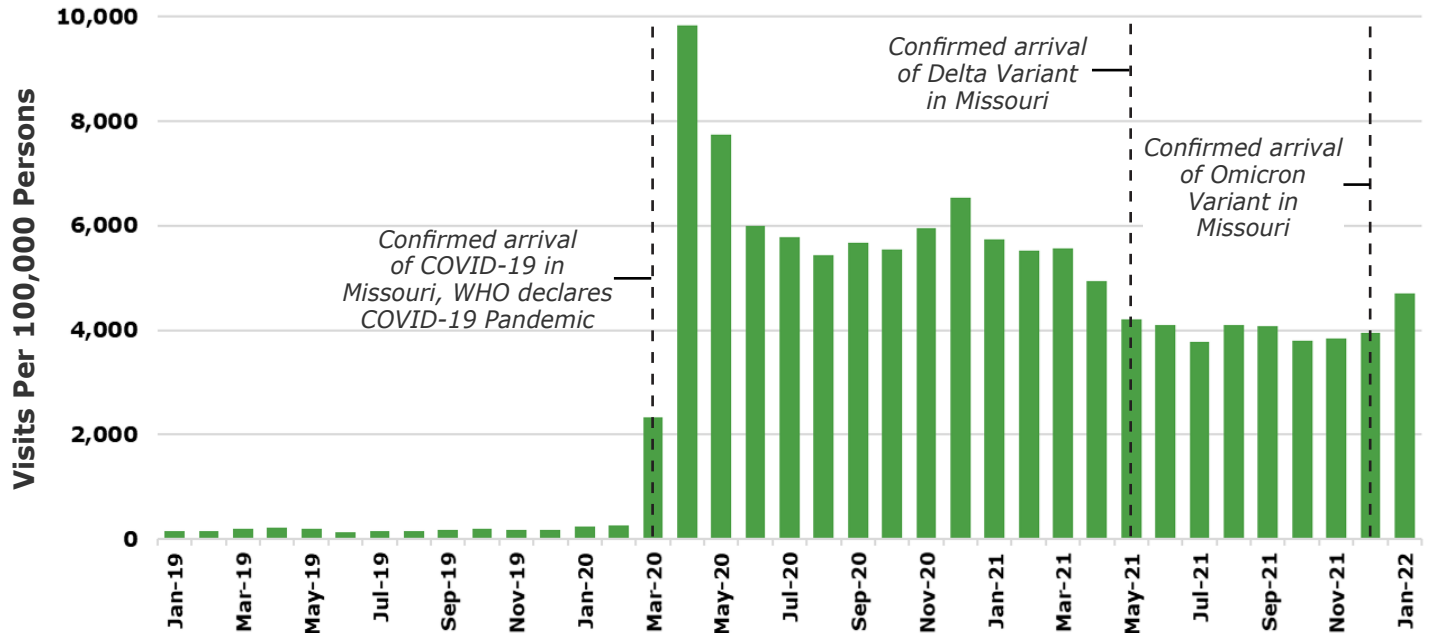


Source: Midwest Health Initiative (2022)

- The demand for COVID-19 testing has led to statistically significant increases in urgent care visits since the onset of the pandemic. Urgent care utilization was at its peak at the arrival of Omicron, with a 25.5% increase in total visits from pre-pandemic levels.
- Testing for COVID-19 was associated with 44.5% of urgent care visits, while a positive COVID-19 diagnosis was documented in 19.5% of urgent care visits.

All-Cause Telehealth Visits

All-Cause Telehealth Utilization,
January 2019 - January 2022

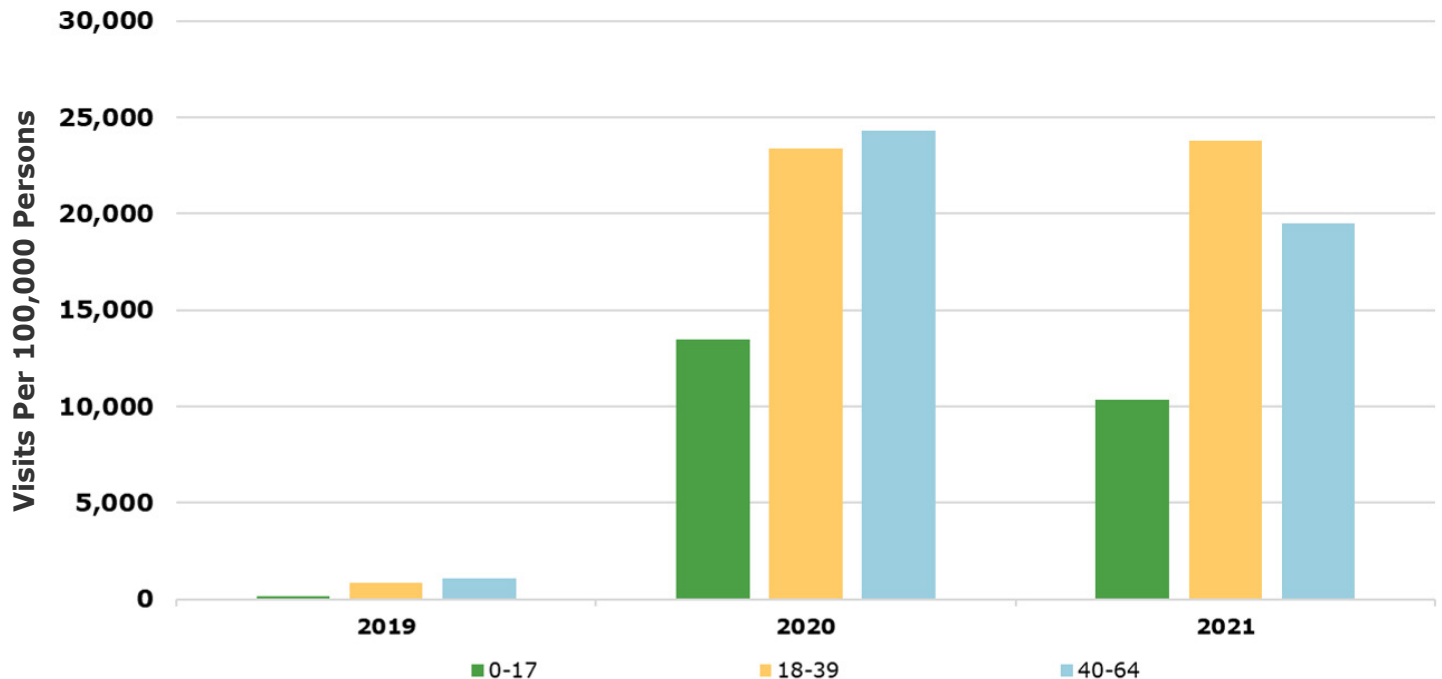


Source: Midwest Health Initiative (2022)

- Telemedicine utilization was at its highest between April and May of 2020. Although telemedicine utilization has declined following the end of Missouri's stay-at-home order, rates have remained higher than pre-pandemic levels, signaling a new normal in health care utilization.

All-Cause Telehealth Visits

All-Cause Telehealth,
January 2019 - January 2022

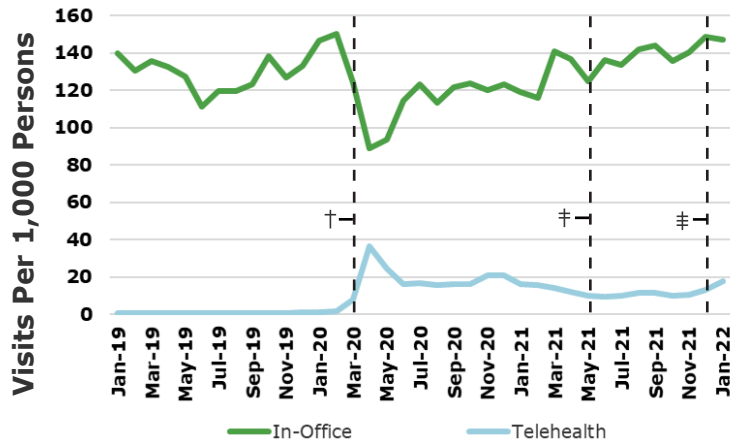


Source: Midwest Health Initiative (2022)

- Those aged 18-39 most often used a telehealth service in 2021. There were fewer users of telemedicine within the 40-64 age group in 2021 than in 2020.

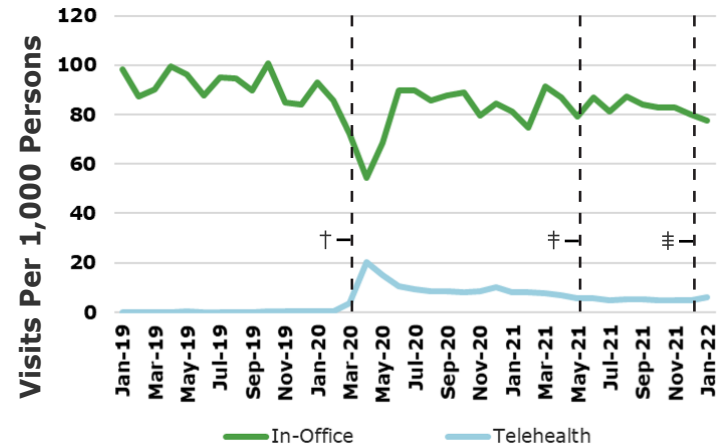
In-Office vs. Telehealth Visits

Primary Care Vists,
January 2019 - January 2022



Source: Midwest Health Initiative (2022)

Specialty Care Vists,
January 2019 - January 2022



Source: Midwest Health Initiative (2022)

† Confirmed arrival of COVID-19 in Missouri, WHO declares COVID-19 Pandemic

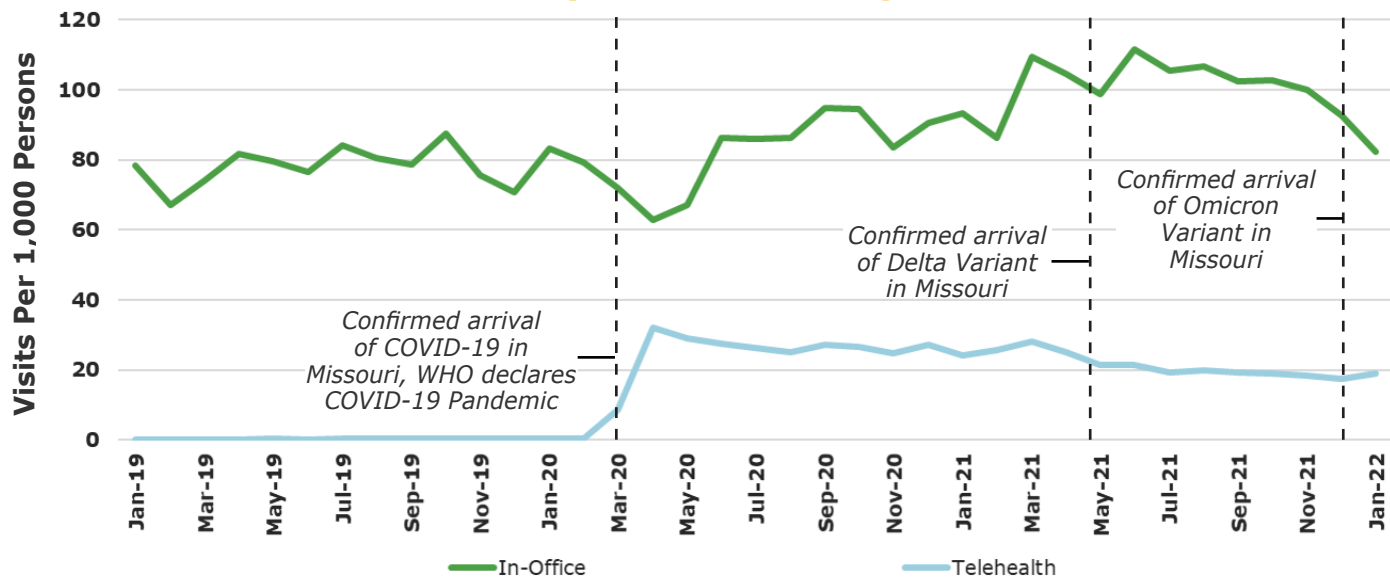
‡ Confirmed arrival of Delta Variant in Missouri

⌘ Confirmed arrival of Omicron Variant in Missouri

- In-person primary care visits per 1,000 persons dipped at the onset of the pandemic and although they eventually returned to pre-pandemic trends, in-person primary care took longer than in-person specialty care visits to reach pre-pandemic levels.

Mental Health Visits, In-Office and Telehealth

Mental Health Visits,
January 2019 - January 2022

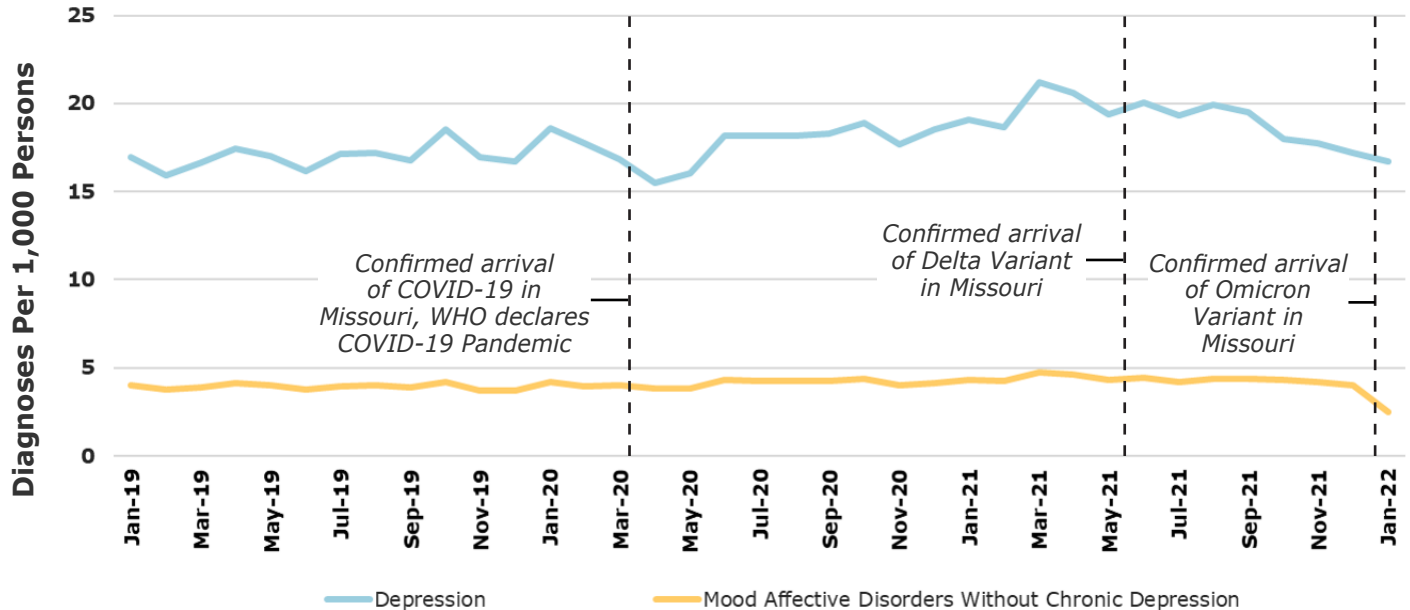


Source: Midwest Health Initiative (2022)

- The use of telemedicine for mental health services increased dramatically at the onset of the pandemic and remained steady long after COVID-19 prompted social distancing. Mental health in-person visits also increased; those increases are statistically significant.
- Mental health telemedicine was used on average, approximately 51% more than primary care and 195% more than specialty care between March 2020 and January 2022.

Mood Disorders

Depression and Other Mood Diagnoses, January 2019 - January 2022

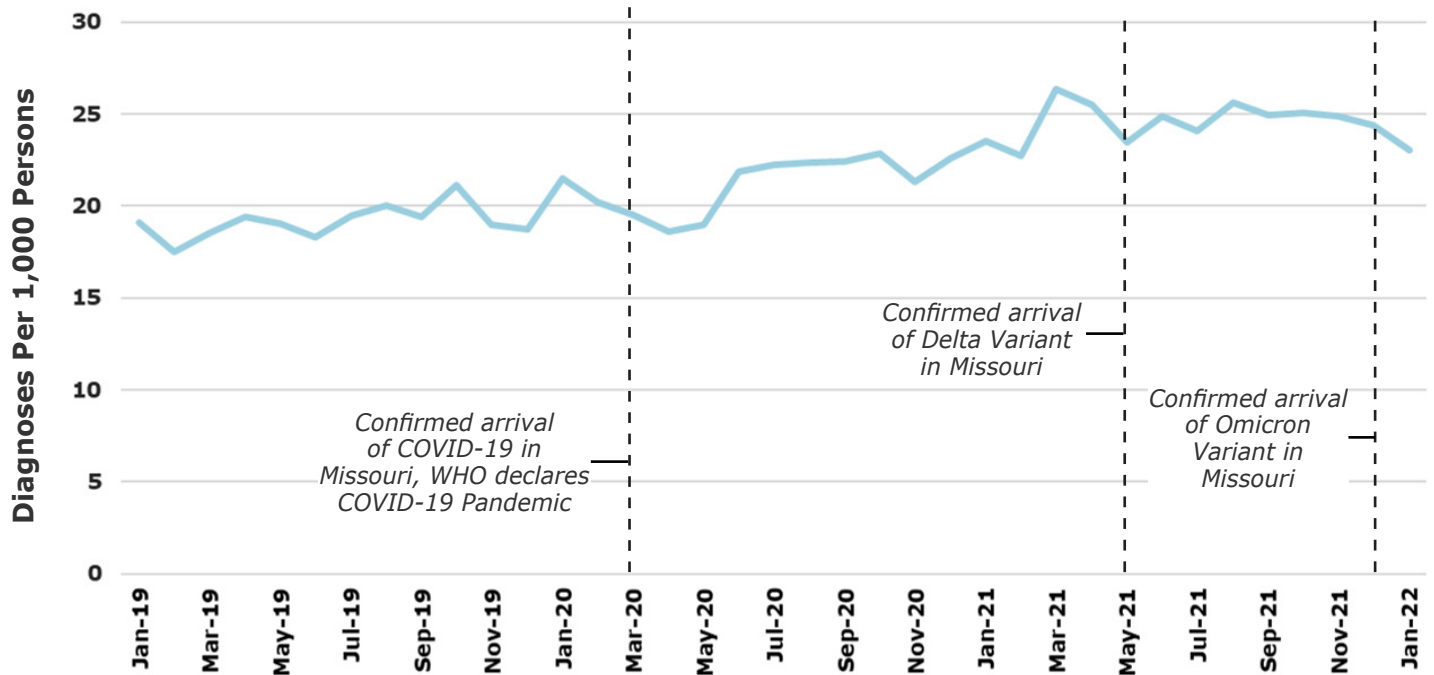


Source: Midwest Health Initiative (2022)

- There was a consistent year over year increase in depression diagnoses between 2019 and 2021. On average, depression diagnoses were 8.4% higher in 2021 than in 2020; this increase is statistically significant.
- The diagnoses of mood affective disorders without chronic depression increased on average by 10.8% between 2019 and 2021; this increase is also statistically significant.

Anxiety

Anxiety Diagnoses, January 2019 - January 2022



Source: Midwest Health Initiative (2022)

- Anxiety diagnoses have grown at a steady rate and surpassed those of other mood disorders including depression throughout the pandemic.
- Diagnoses increased by 28.6% between 2019 and 2021; this increase is statistically significant.

ACKNOWLEDGEMENTS



The strength of MHI sits with the collective power of its partners, when each works within their own spheres of influence to achieve change. MHI is grateful for the support of its vision and work, made possible by its Champions for Health Care Value and Friends.

Champions of Health Care Value

- AbbVie
- Anthem Blue Cross and Blue Shield of Missouri
- Bayer
- BJC HealthCare
- Blue Cross and Blue Shield of Kansas City
- The Boeing Company
- Cigna
- Genentech
- Graybar Electric Company, Inc.
- Missouri Consolidated Health Plan
- Novo Nordisk
- St. Louis Area Business Health Coalition
- UnitedHealthcare

About the Midwest Health Initiative

MHI is a regional health improvement collaborative that brings together those that provide, pay for, and use health care to solve some of our region's most pressing health care challenges. Created as a nonprofit organization to advance transparency and multi-stakeholder collaboration toward better health care value, MHI stewards the largest multi-payer commercial claims dataset for Missouri and its bordering communities.

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