



## 2022 Kalamazoo County COVID-19 Summary

### Background:

The World Health Organization characterized the outbreak of COVID-19 as a pandemic on March 11, 2020. Since that time health department resources have been dedicated to disease surveillance and investigation, vaccination efforts, and providing information to the public regarding disease transmission and prevention. This report contains a brief summary of COVID-19 case counts and vaccination coverage for 2022 in Kalamazoo County. A time-line describing major events during the pandemic can be found [here](#)

### Data Sources:

The Michigan Disease Surveillance System (MDSS); accessed 2/3/23 and the MI COVID Dashboard; accessed 3/8/23. Data from 2022 is considered provisional and subject to change. CDC Community Levels by County ([www.cdc.gov](http://www.cdc.gov))

MI COVID Vaccine Dashboard; accessed 3/8/23. This dashboard was created by the Michigan Department of Health and Human Services Immunization Division using data reported to the Michigan Care Improvement Registry (MCIR). Vaccination coverage is the estimated percentage of people aged six months and older who have received the COVID-19 vaccine. MCIR data are used for the numerator (number of COVID-19 vaccine doses reported) and US Census estimates are used for the population denominator (the total number of persons in each group). An individual is considered to be up-to-date on COVID-19 vaccination if they meet their age specific recommendation from the CDC.

### COVID-19 CTSE Case Definitions:

#### Probable

Meets clinical criteria AND epidemiologic linkage with no confirmatory or presumptive laboratory evidence for SARS-CoV-2, OR  
Meets presumptive laboratory evidence, OR  
Meets vital records criteria with no confirmatory laboratory evidence for SARS-CoV-2.

**Confirmed**

Meets confirmatory laboratory evidence.

**MI Definition Confirmed and Probable Deaths:**

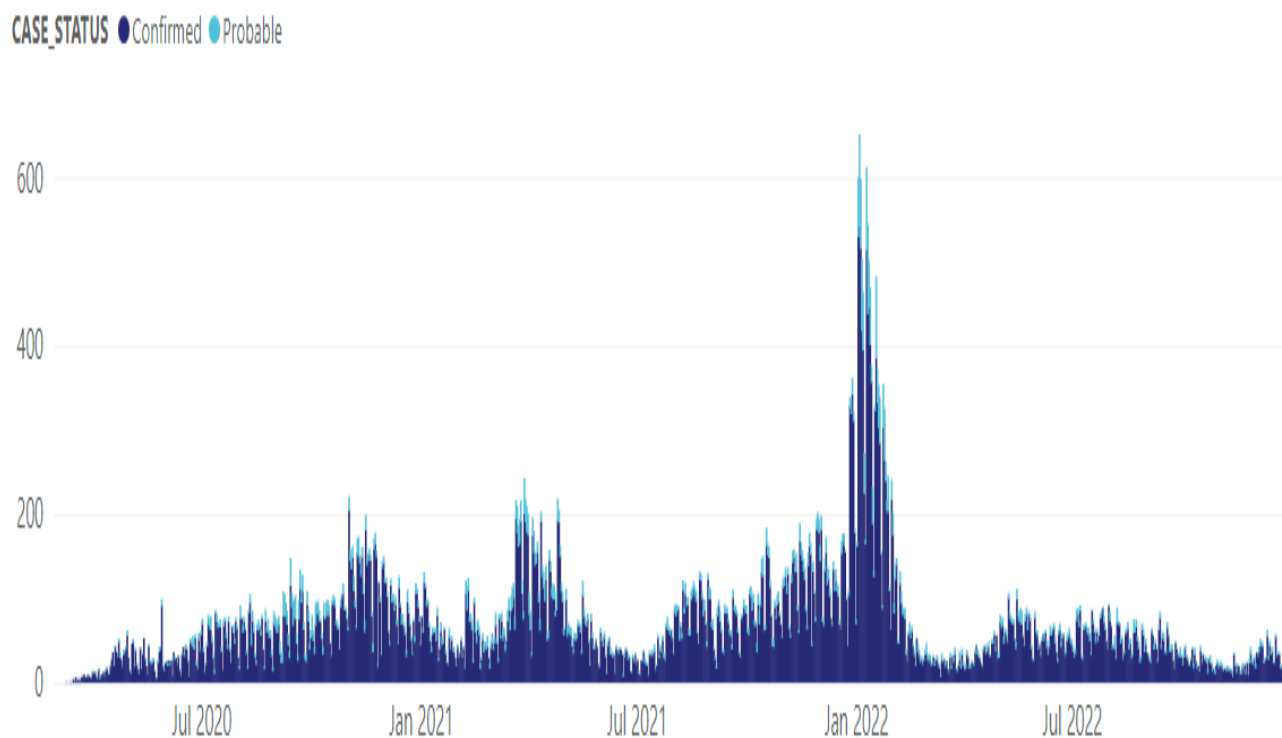
Confirmed deaths include individuals who meet one or more of the following conditions: 1-have been identified as a confirmed case and classified as deceased as a result of a case investigation in the Michigan Disease Surveillance System (MDSS). MDSS is the database used by state and local health departments to monitor reportable diseases. 2-have been identified as a confirmed case in MDSS and have a death certificate with COVID-19 listed as a cause of death; 3-have been identified as a confirmed case in MDSS and died within 30 day of onset of COVID-19 infection and have a death certificate which classifies their manner of death as 'natural'.

Probable deaths include those who have COVID indicated as a cause of death on their death certificate, but have not had a positive diagnostic laboratory test. Data for 2022 should be considered preliminary and subject to change.

**Report Date: 3/8/23**

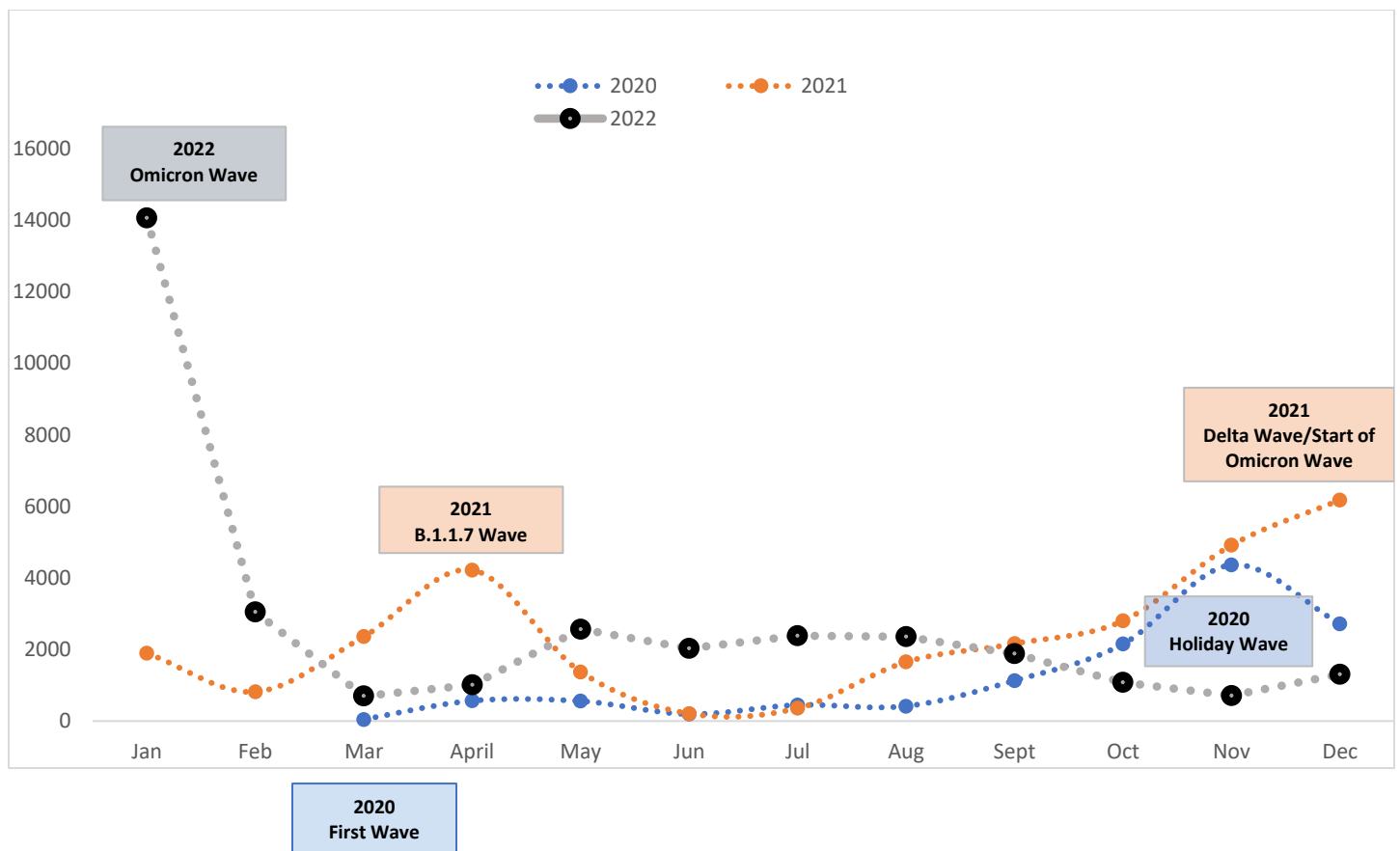
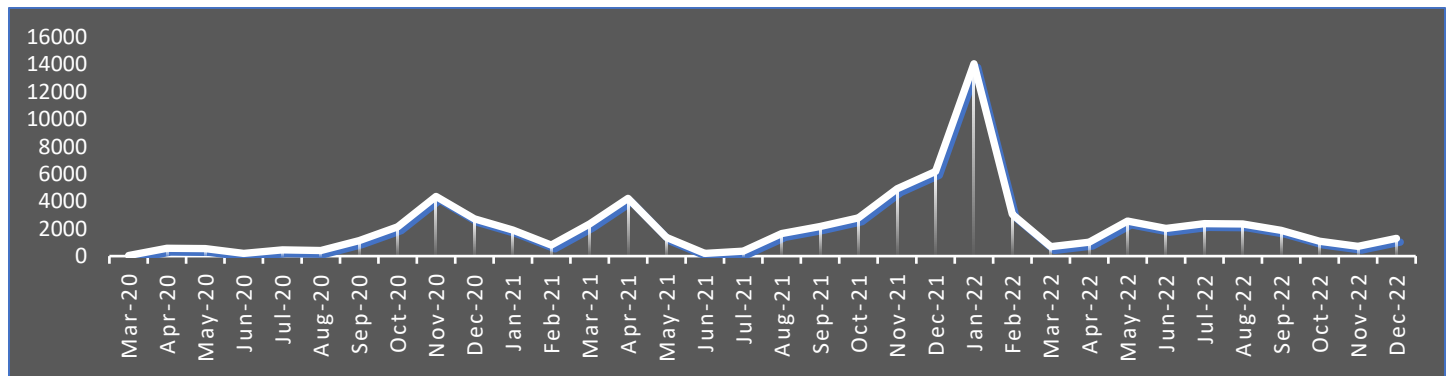
## Cumulative Number of Cases Reported 3/1/2020-12/31/22

From the start of the COVID-19 pandemic through 12/31/22, 67,063 confirmed cases and 7,629 probable cases were identified in Kalamazoo County residents. The increased use and availability of COVID-19 home test kits starting in 2021 have likely reduced the number of cases reported, resulting in a lower number of cases compared to the number likely occurring in the community. Trends over time should be interpreted with caution; case counts are impacted by home testing, disease mitigation strategies, transmissibility of the circulating COVID variants, and the introduction and efficacy of the COVID vaccine. The graph below shows daily case counts over time since the start of the pandemic.



**Figure Source: MDHHS COVID-19 Dashboard; Cases are shown by onset date or by lab specimen collection date was unavailable.**

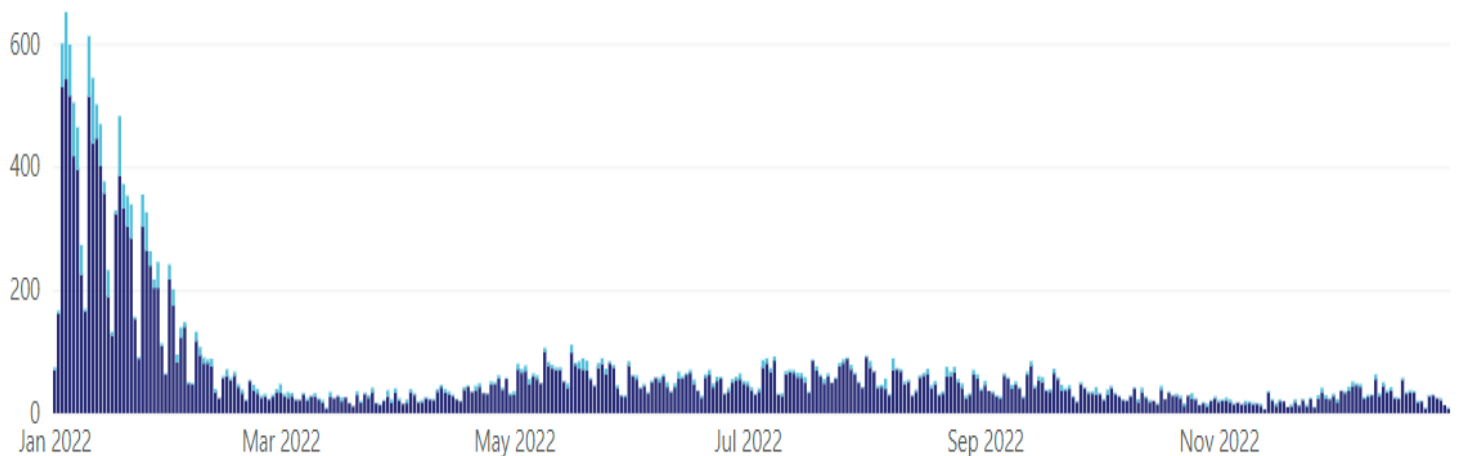
Since the start of the pandemic several waves with increased case counts have occurred. The largest wave was in January 2022 following the introduction of the Omicron subvariant into the community in December 2021. The timing of these 'waves' differed by year due in part to: home testing, disease mitigation strategies, transmissibility of the circulating COVID variants, and the introduction of the COVID vaccine. The graphs below show the number of confirmed and probable COVID-19 cases reported each month in Kalamazoo County. Although the absolute number of cases differ over time, increases were typically seen starting in the fall into the winter months and in the spring.



## 2022 COVID-19 Case Counts

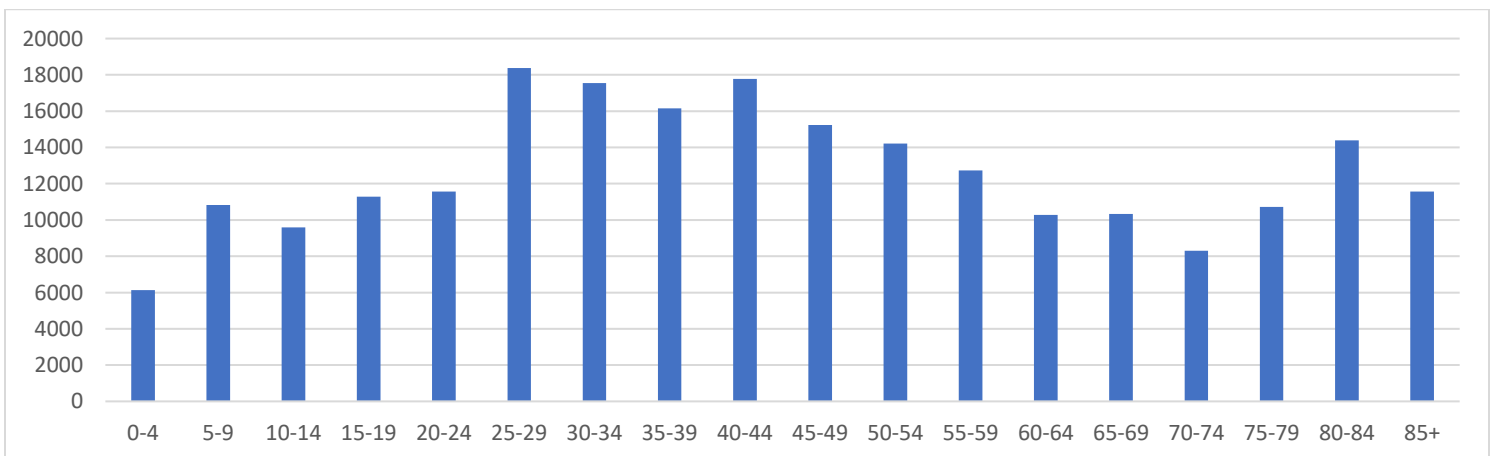
A total of 33,132 COVID-19 cases were reported in 2022, 42% of these cases were reported during the month of January. Cases gradually declined during February and into March followed by lower levels of activity during the spring. Cases remained fairly steady throughout the summer, decreasing again in the fall, with a slight increase at the end of the year.

CASE\_STATUS ● Confirmed ● Probable



**Figure Source: MDHHS COVID-19 Dashboard; Cases are shown by onset date or by lab specimen collection date was unavailable.**

Cases were identified across all age groups during 2022. The graph below shows the case rates per 100,000 by age group. The highest case rates for the year were in those age 25-44 years. Rates showed a decline by age group in those age 45+. The highest case rate in those age 65+ was in the 80-84 year old group. Overall, the lowest case rate was in those age four years or younger.



## CDC COVID-19 Community Levels 2022

In February 2022, the CDC developed a COVID-19 community level classification system (low, medium, and high) to help convey the level of impact on hospitalizations and case rates on communities (See figure below).

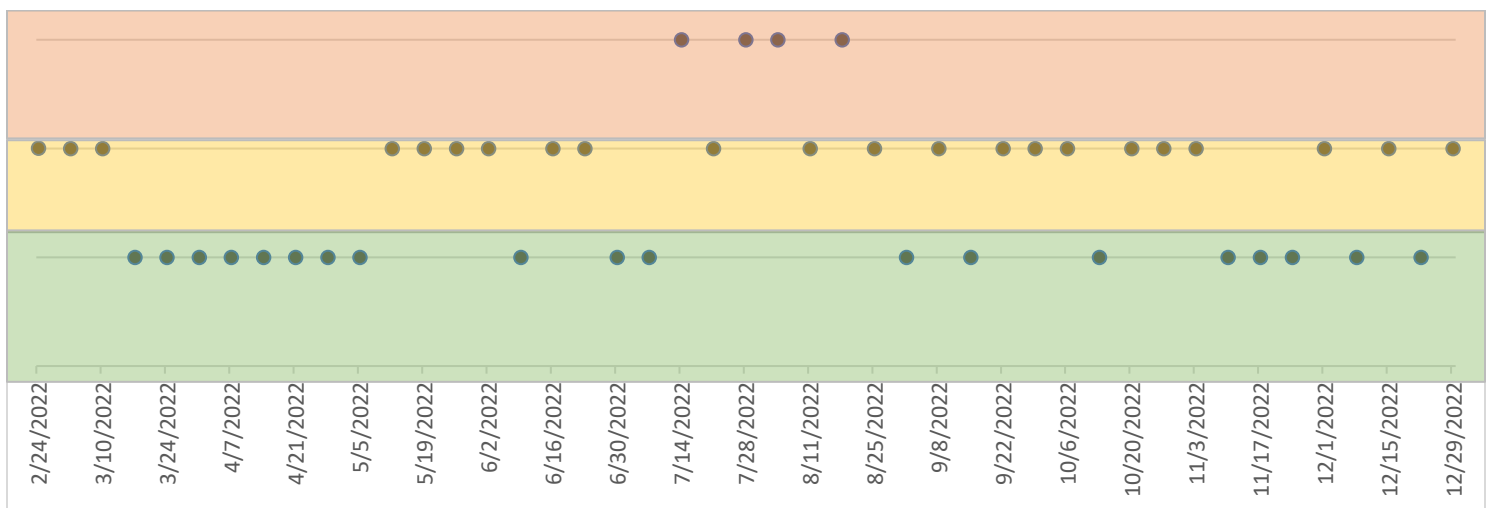
**CDC's COVID-19 Community Levels and Indicators**

New 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
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%

The COVID-19 community level is determined by the higher of the new admissions and inpatient beds metrics, based on the current level of new cases per 100,000 population in the past 7 days

Figure Source: [cdc.gov](https://www.cdc.gov)

In 2022, during the 45 weeks the CDC assigned a level to Kalamazoo County, 19 weeks were a 'low level', 22 'medium' and 4 'high'. As shown in the figure below, the community level frequently changed from low to medium week to week. This was due to change in the number of new COVID-19 admissions per 100,000 population versus a change in the total number of new cases identified. The 'high' designations occurred during the months of July and August.



## Cumulative Number of Deaths Reported 3/1/20-12/31/22

As of 12/31/22, 794 confirmed and probable deaths in Kalamazoo County residents have occurred since the start of the pandemic. Increased mortality typically correlated with 'waves' throughout the pandemic.

CASE\_STATUS ● Confirmed ● Probable

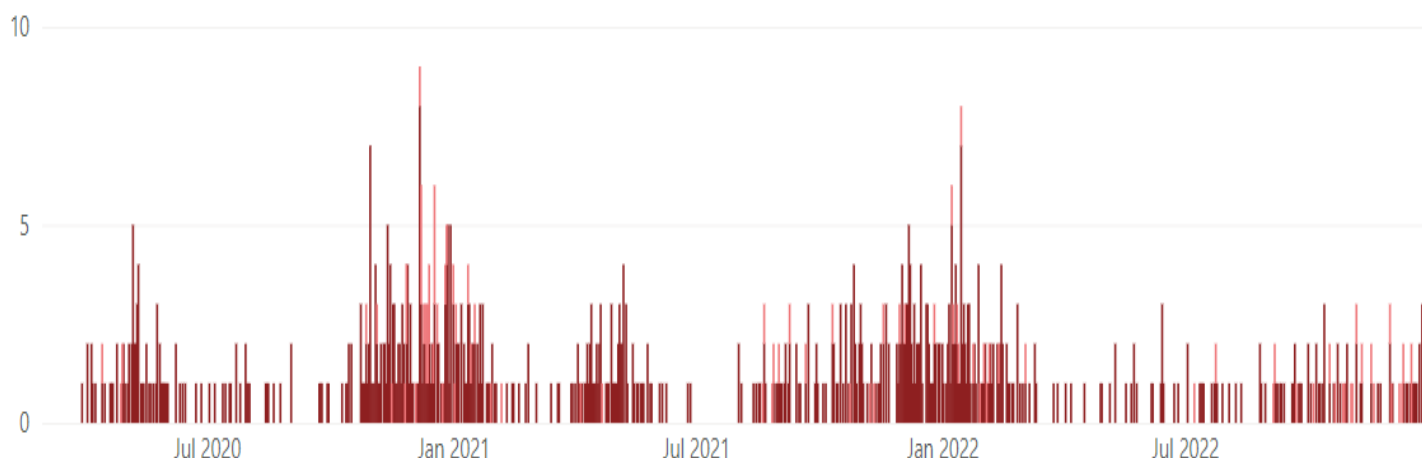
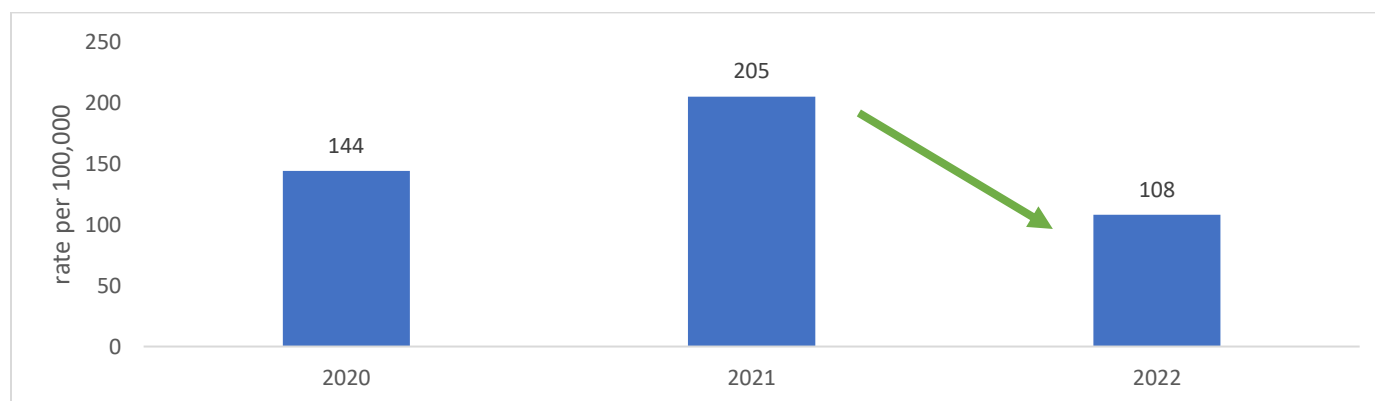


Figure Source: MDHHS COVID-19 Dashboard; deaths shown by date of death or last status update if date of death is unavailable.

Using data from Michigan Vital Records-Death Certificates, the crude COVID-19 mortality rate per 100,000 was calculated by year (see figure below). The crude mortality rate decreased by 47% in 2022 compared to the previous year.



Data Source: MDHHS Vital Records, COVID Mortality

## 2022 Deaths in Kalamazoo County Residents

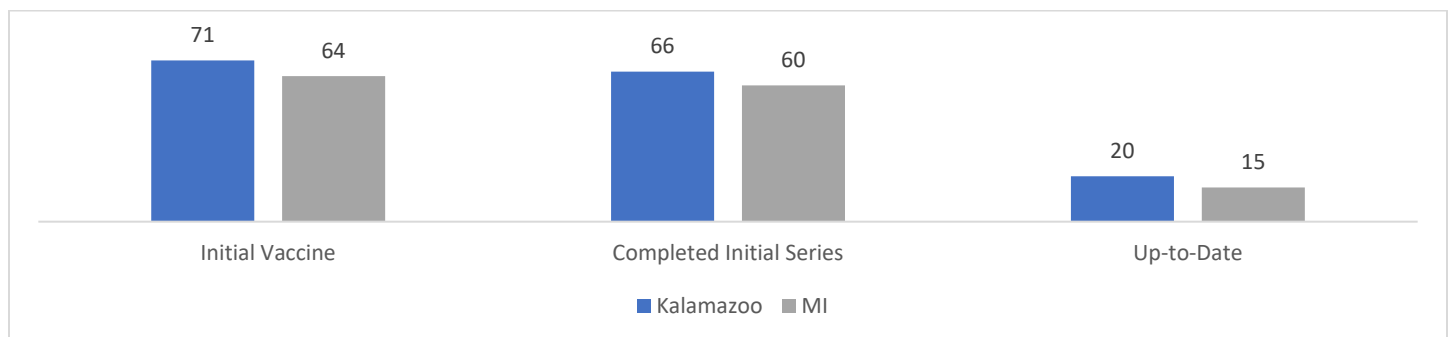
At the time of the report publication, 231 COVID deaths occurred in 2022 in Kalamazoo County residents. This data is considered provisional and subject to change. The graph below shows the number of deaths by day during 2022. Although deaths peaked during the winter months, deaths did occur throughout the calendar year.



Figure Source: MDHHS COVID-19 Dashboard; Cases are shown by date of death or date of last status update if date of death is unavailable.

## 2022 COVID-19 Vaccination Status

As of 12/31/2022, 71% of Kalamazoo County residents aged six months or older received their initial COVID-19 vaccine, this uptake rate was higher compared to MI (64%). Sixty-six percent of residents completed their initial vaccine series, higher than the state rate of 60%. By the end of the year, 20% of county residents aged 6 months or older were considered to be 'up-to-date' with their COVID-19 vaccine according to CDC criteria; this uptake rate was also higher than the state (15%).



Data Source: MDHHS COVID-19 Vaccine Dashboard; accessed 3/8/23



The rate of vaccine uptake for the initial series and current 'up-to-date' status, in general increased with increasing age. The figure below shows vaccine uptake by age group as of 12/31/22 in Kalamazoo County residents. The highest vaccine initial uptake and 'up-to-date' status was in those age 65+.

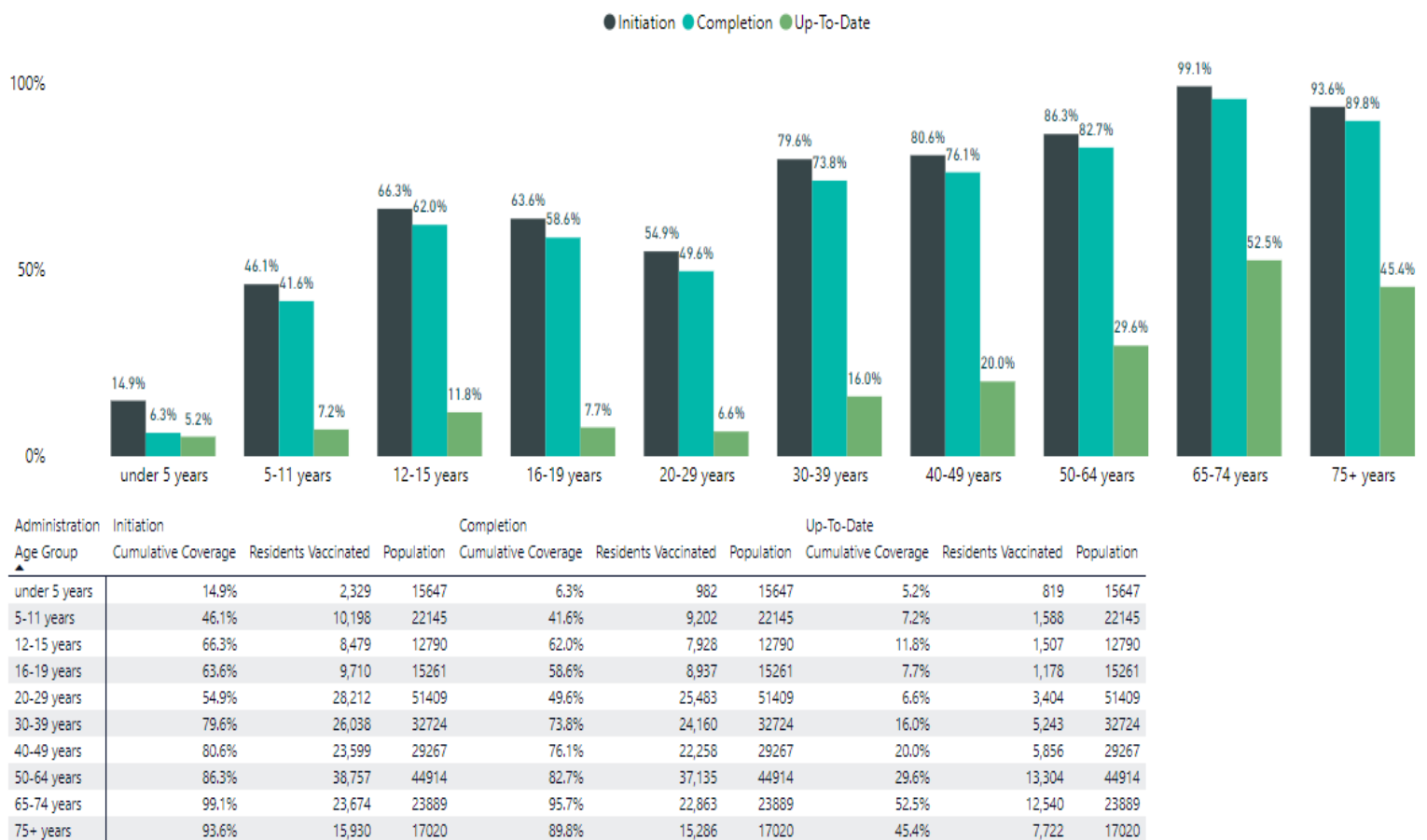


Figure Source: MDHHS COVID-19 Dashboard; accessed 3/8/23.

The table below shows the number of booster doses given in 2022 by age group. The majority of the booster doses were given to those in the 50+ year age groups.

	5-11 years	12-15 years	16-19 years	20-29 years	30-39 years	40-49 years	50-64 years	65-74 years	75+ years
Booster 1	3313	3677	2934	5863	4626	4101	6675	3002	1940
Booster 2	564	1138	976	2705	4565	5503	14804	13652	8524
Booster 3			15	46	160	520	5786	7589	4665

Data Source: MDHHS COVID-19 Dashboard; accessed 3/8/23. Data was removed for cells with counts <10.

## 2022 Vaccines Administered by Date

During 2022, 12,438 first doses of COVID-19 vaccine and 12,358 second doses were administered to county residents by all healthcare providers. 107,488 additional/booster doses were also administered. HCS Clinical Services administered 3,533 doses of COVID vaccine throughout the year. Changes in vaccine eligibility and the introduction of the COVID-19 bivalent booster took place during 2022 according to the timeline below:

- 1/6/22 boosters available for all 12+
- 5/19/22 boosters available for 5-11 yrs
- 6/18/22 primary series approved for 6mths through to 5 yrs
- 9/1/22 **bivalent boosters** approved for 12+
- 12/12/22 **bivalent boosters** approved for ages 5+
- 12/9/22 **bivalent boosters** approved for ages 6 mths and older

Source: <https://doh.wa.gov/sites/default/files/2022-02/348-862-VaccineTimeline.pdf>

The graph below shows the number of doses of COVID-19 vaccine administered to Kalamazoo County residents by vaccine type throughout 2022. Vaccine administration increased as new eligibility criteria was approved by the FDA/CDC.

● J&J ● Moderna ● Moderna-Bivalent ● Pfizer ● Pfizer-Bivalent ● Total

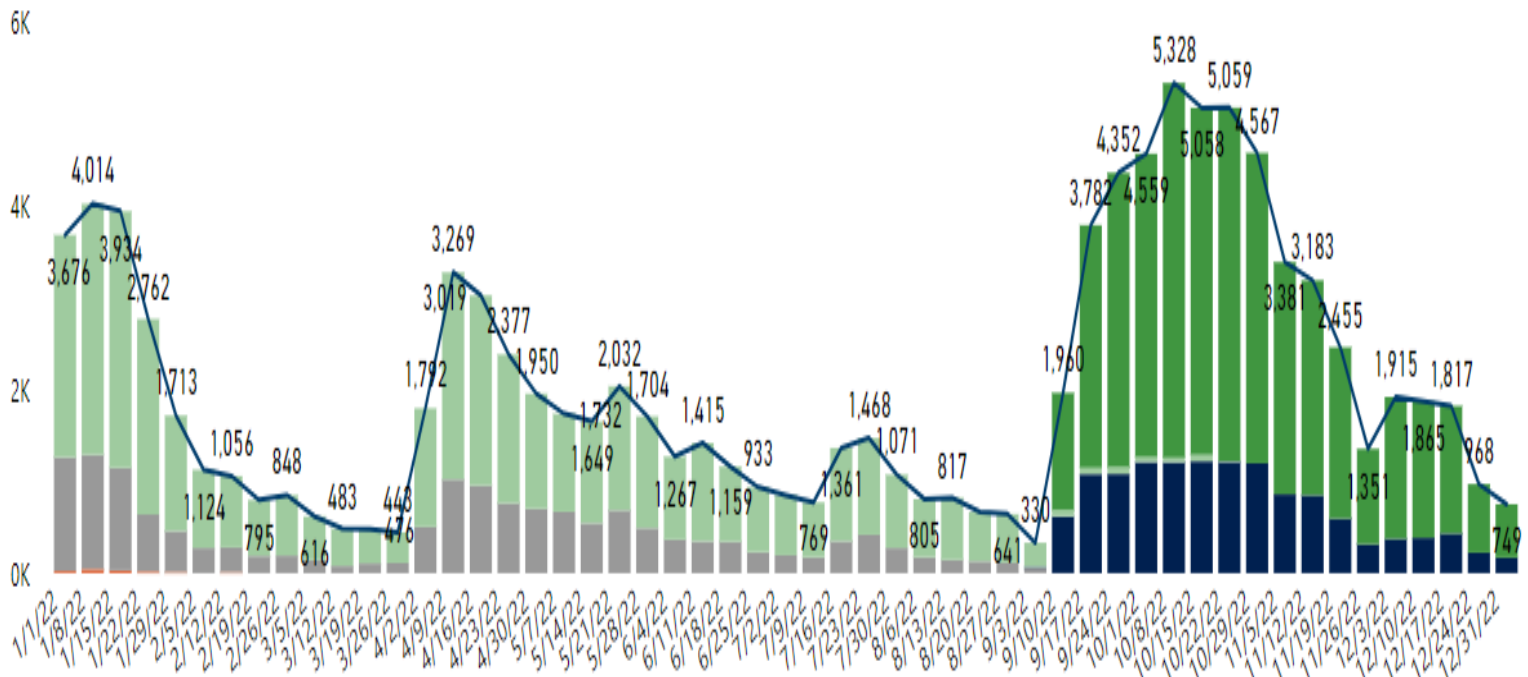


Figure Source: MDHHS COVID-19 Dashboard; accessed 3/8/23.

## Initial Vaccine Series by Provider Type in 2022

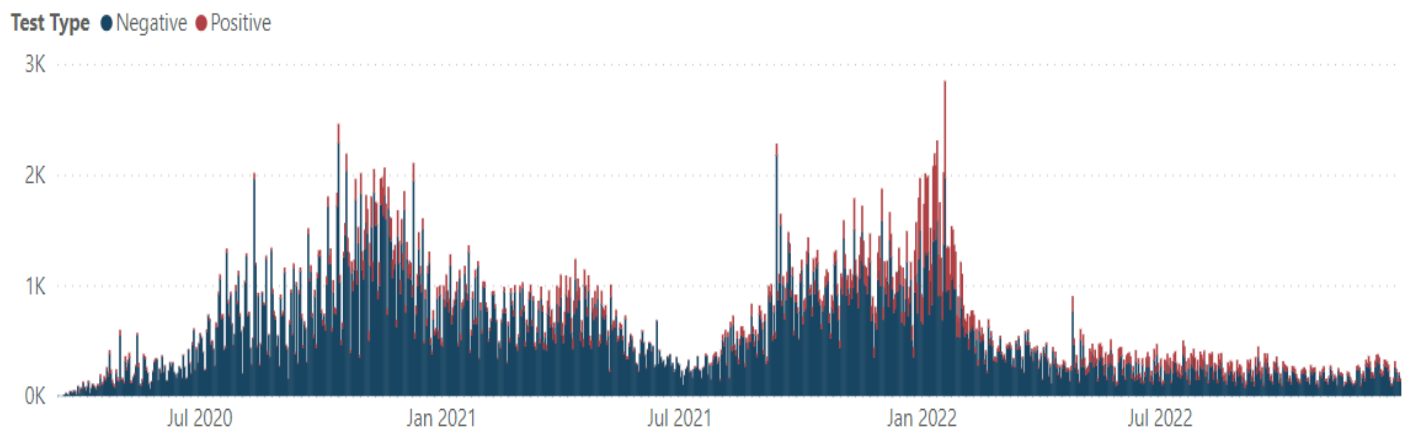
For those receiving their **initial series** of COVID vaccine, pharmacies were the most frequently utilized location followed by hospitals and Federally Qualified Health Centers.

	First Dose	Second Dose	Third Dose	Grand Total
Corrections	33	36		69
Family Practice	396	422	<10	825
Federally Qualified Health Center	1635	1170	<10	2812
Health Center	74	56		130
Hospital	1306	2072	553	3931
Internal Medicine	37	56		93
Local Health Department	514	447	32	993
Other	642	394	27	1063
Pediatrics	1199	651	84	1934
Pharmacy	6585	7033	80	13698

**Data Source:** MDHHS COVID-19 Dashboard; accessed 3/8/23. Only selected locations are shown, values < 10 were removed from the table

## COVID-19 Confirmatory Laboratory Testing

The figure below shows the number of confirmatory laboratory tests given to Kalamazoo County residents by day since the start of the pandemic. Increased availability of at-home testing has decreased the volume of tests given in the clinical setting since 2021. After the Omicron surge in January 2022, the daily amount of laboratory testing has remained fairly stable.



**Figure Source:** MDHHS COVID-19 Dashboard; accessed 3/8/23.