

Whatcom County COVID-19 Data Report

Whatcom County Health Department

March 2020 – February 2022

Overview

The purpose of the Whatcom County COVID-19 data report is to provide a summary of how the SARS-CoV-2 virus spread throughout Whatcom County in the first two years of the pandemic (March 2020 - February 2022). This report focuses on four major areas: confirmed cases, hospitalizations, deaths, and vaccinations. It highlights significant national or state policies that were implemented to combat the spread of the virus and an overview of how COVID-19 impacted different populations within Whatcom County. This report provides the most complete and reliable local data available for the first two years of the COVID-19 pandemic through February 2022.

Key Findings

- In the first two years of the COVID-19 pandemic, Whatcom County reported 36,651 documented COVID-19 cases, 1,485 COVID-19-associated hospitalizations, 295 COVID-19 deaths.
- Whatcom County experienced better COVID-19 outcomes than most of Washington's counties during this time. Whatcom County reported the 11th lowest case rate (16,107 per 100,000), the 10th lowest hospitalization rate (650.9 per 100,000), and the 7th lowest death rate (129.0 per 100,000) among Washington's 39 counties.
- For the first two years of the COVID-19 pandemic in Whatcom County, reported case rates and hospitalization rates have been characterized by intermittent waves or surges. These surges have been associated with changes in behaviors such as travel, masking, and also with the emergence of more transmissible COVID-19 variants. Particularly prominent examples included the "Delta variant wave" in the late summer and fall of 2021 (average 7-day case rate of 173.5 per 100,000), and the ongoing "Omicron variant wave" which peaked in January of 2022 (average 7-day case rate of 733.1 per 100,000).
- In Whatcom County, COVID-19 infections were reported at higher rates among non-white Hispanic, American Indian Alaskan Native, and Pacific Islander groups as compared to other racial groups in the county population.

Key Findings (Continued)

- The COVID-19 pandemic affected older and younger individuals differently. Reported cases in Whatcom County were greater among younger sections of the population (less than 60 years). COVID-19-associated hospitalizations and deaths, however, were greater among older individuals in the county (60+ years).
- During the first two years of the COVID-19 pandemic in Whatcom County, the greatest number of cases, hospitalizations, and deaths were recorded in the month of January 2022 during the Omicron variant surge. During this month alone, WCHD recorded 12,505 cases, 310 hospitalizations, and 51 deaths due to COVID-19.
- A total of 367,926 doses COVID-19 vaccines were administered through February 2022 in Whatcom County. The month with the greatest number of vaccines administered was in March, 2021 when more than 38,000 doses were administered.
- Since vaccines became widely available, the rates of COVID-19 cases, hospitalization, and deaths have remained lower among those who had been vaccinated, than those who were unvaccinated. The degree of difference has varied with changes in the dominant COVID-19 variant, but has persisted through all variant periods included in this report.

Cases

On January 20, 2020, the Centers for Disease Control and Prevention (CDC) reported the first laboratory-confirmed SARS-CoV-2 infection, the virus that causes COVID-19 disease, in the U.S. During the same week, the Whatcom County Health Department established an internal Incident Command Structure to prepare for a local response. More than a month later, the first confirmed COVID-19 case in Whatcom County was detected on March 10th. Seven days later, on March 17th, Whatcom County Unified Command was established, ensuring additional local resources for the response. During the two-year period that followed, between March 2020 and February 2022, Whatcom County recorded 36,651 COVID-19 cases. The Governor of Washington suspended all in-person learning throughout schools on March 13th, 2020, and this would be extended on April 6th to the end of the school year. The first stay at home order was issued by the Governor on March 24th; this order was extended several times. A data-driven phased approach called the Washington State Safe Start Plan based on population and COVID counts was implemented to help counties re-emerge from the closures. As case levels declined through June of 2020, Whatcom County was permitted to enter Phase 2 of the Washington State Safe Start Plan, allowing local communities to take incremental steps toward re-opening.

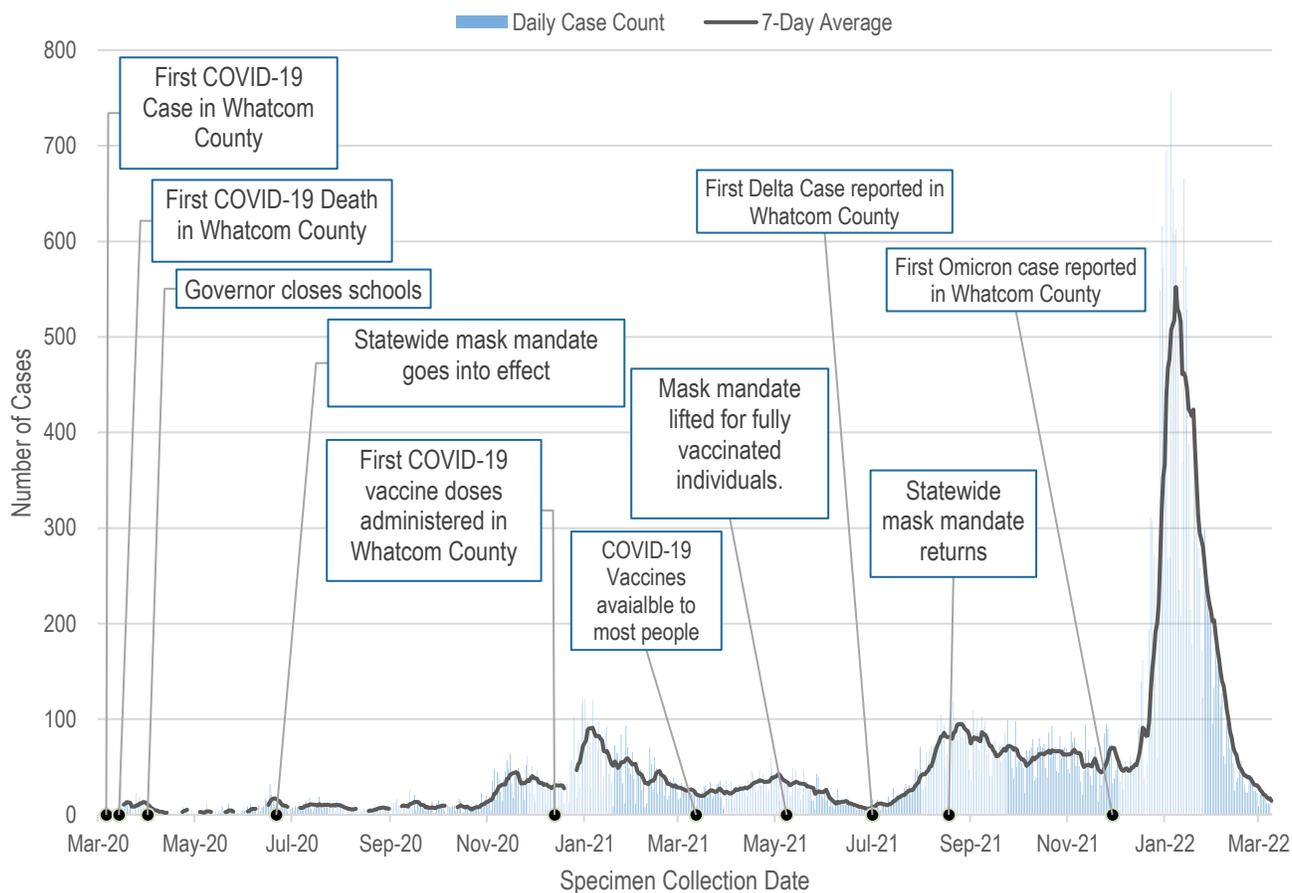
Throughout the first year of the pandemic (2020), Whatcom County experienced multiple waves of infection from COVID-19. The first wave tapered off in early summer, then increased again through the fall, resulting in 1,605 cumulative cases at the end of October, 2020. As the case counts climbed through the late fall of 2020, the number of cases in Whatcom County more than doubled in just two months to reach 3,367 cumulative cases before the end of December.

During the last month of 2020, the first COVID-19 vaccine doses were administered to high risk health workers, first responders, and residents of nursing homes and residential facilities in Whatcom County, providing another prevention measure to communities in addition to masks and physical distancing. Vaccines did not become available to most elderly Washingtonians until January 18, 2021, but by that time an even greater wave of infections had already begun, likely due to increased contact and travel over the winter holidays. This fourth wave peaked on January 11th, but daily counts of COVID-19 infections remained elevated through June with a smaller resurgence that peaked in early May.

On February 15th, 2021, Whatcom County was permitted to move to Phase 2 of the the Healthy Washington Plan (a revised approach to re-opening) allowing small indoor gatherings and some indoor dining. The following month, on March 22nd, Whatcom County along with all counties in Washington State moved to Phase 3. This phase allowed for even larger indoor and outdoor gatherings but left requirements in place for mask use and physical distancing. The move to phase 3 of the Healthy Washington Plan required a COVID-19 case rate below 200 per 100,000 and a 7-day rate of five or fewer COVID-19 hospitalizations. By the end of the third wave an additional 6,585 new cases were added to the overall Whatcom County total.

Over the course of the two-year period, changes to the SAR-CoV-2 virus were detected through genomic sequencing. Sequencing identifies mutations that occur in the genes of the virus. Public health officials used the sequencing results to detect clusters of cases and monitor new lineages of the virus. The mutations may give new lineages the ability to spread more quickly, evade host immunity, or cause more severe disease. Lineages are classified by CDC as variants being monitored, variants of interest, variants of concern, or variants of high consequence. In June of 2021, the Delta Variant was classified by CDC as a variant of concern.

Figure 1. Epidemiologic Curve for Whatcom County showing the level of COVID-19 cases with 7-day average from March 2020 - February 2022.



By April of 2021, confirmed case counts were falling in Whatcom County. Many residents were receiving vaccinations, which had become available to all Washingtonians aged 16 and older in March. Compared to the first year of the pandemic, immunity across the population was greater in this second year, both from previous infection and from vaccinations. In April of 2021, children returned to school with a requirement for at least 30% in-person instruction, and the Governor announced that fully vaccinated¹ individuals were no longer required to wear masks indoors. During the month of June 2021, COVID-19 infections recorded in Whatcom County fell to the lowest mark since the beginning of the pandemic.

The low case levels soon climbed again, however, as infections from the more contagious Delta variant began to dominate. The Delta variant was first reported in Whatcom County by the WA DOH on July 6, and caused some of the highest and most sustained daily case counts observed in the county during the COVID-19 pandemic. By August 23rd, cases had climbed to a point that prompted the Governor to bring back the statewide mask requirement – including for vaccinated individuals. The peak of COVID-19 cases during this

¹ Fully-vaccinated includes 1 dose of the Janssen Vaccine or 2 doses of either the Pfizer or Moderna Vaccines.

wave climbed to a 7-day average (94) that was similar to the rate measured at the height of the previous winter surge. Despite the high case rates recorded in Whatcom County and throughout the state, the U.S./Canadian border re-opened in August of 2021, allowing vaccinated individuals to travel into Canada. The U.S. did not re-open its border to vaccinated travelers until November. The total number of cases attributed to the Delta wave reached 9,300 in Whatcom County by the second week of December 2021. At this point, another variant of concern referred to as Omicron began to spread throughout Washington and Whatcom County. The wave of COVID-19 infections dominated by the Omicron variant spread more rapidly than any of the prior waves and daily case counts reached more extreme levels. At the peak of infections associated with the Omicron variant, daily case counts in Whatcom County reached 757, an increase of more than 5 times the highest daily case count recorded during the earlier wave dominated by the Delta variant (Figure 1).

The two-years reviewed in this report are divided into three periods that correspond with the predominant variants at those times. The period beginning March 2020 through July 3, 2021 (490 days) is designated as the pre-Delta period; from July 4 – Dec 18, 2021 (168 days) is designated as the Delta period; and from Dec 19, 2021 – Feb 28, 2022 (72 days) is designated as the Omicron period. The relative case rates for the pre-Delta and the Delta periods are similar at 4,361 and 4,164 per 100,000, respectively. It is important to note that the Delta period was much shorter and this is reflected in the higher average 7-day rate (Table 1). The relative rate for the Omicron period was the highest of the three periods at 7,540 per 100,000.

In the sections that follow, COVID-19 confirmed case counts, hospitalizations, and deaths are examined by age, race, and gender where numbers are sufficient to allow for comparison. Absolute counts are presented along with population rates to help with comparison across groups in the county population. In some instances, counts may not be shown to protect individual privacy when case counts fall below 10. Population rates may also be used in place of absolute counts to provide more accurate comparison between sub-groups in the county.

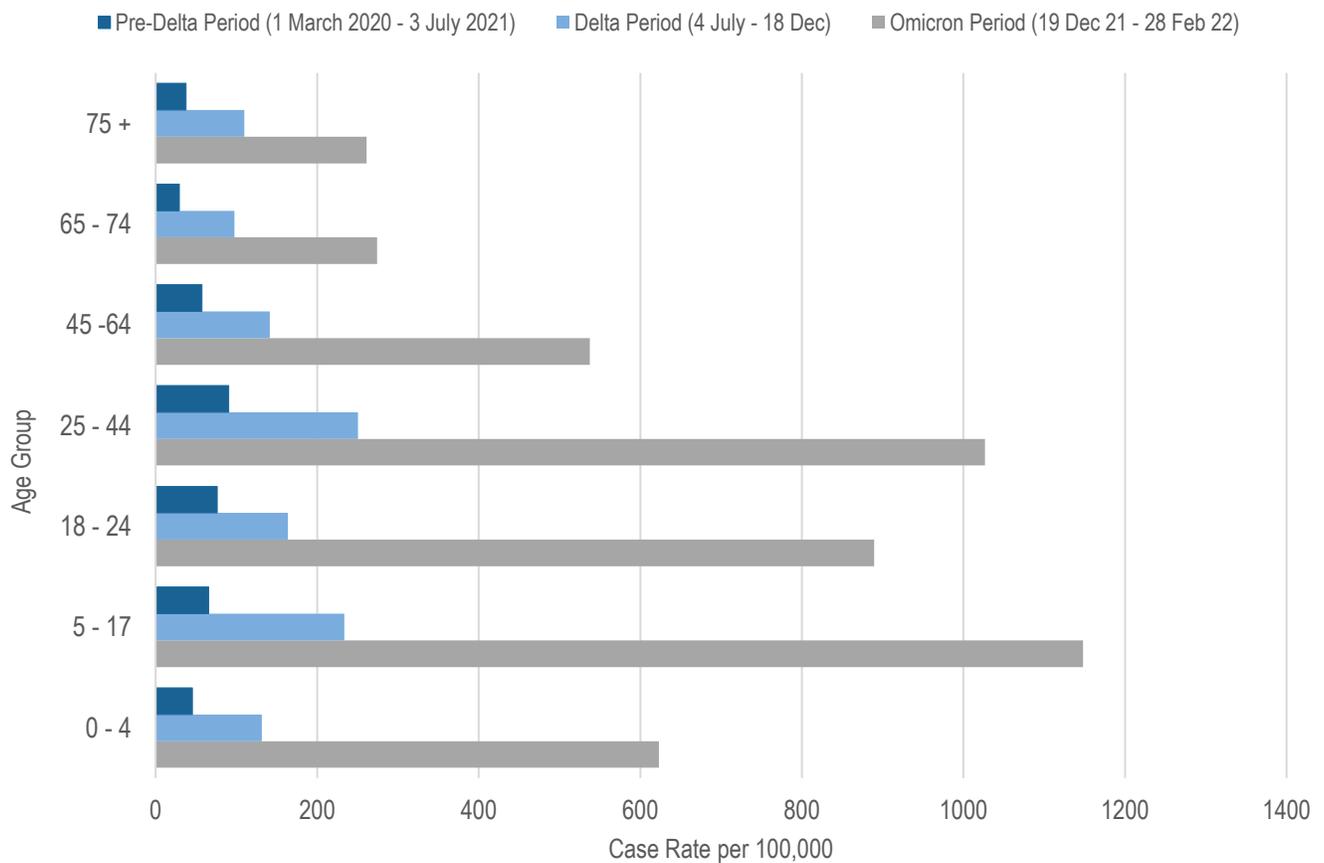
Age

Confirmed COVID-19 case rates in Whatcom County increased for all age groups measured over the two-year period. This is reflected in the case rates in Table 1. Within the age groups, confirmed cases initially followed a pattern similar to the overall age breakdown in the county population. During the pre-Delta period, a majority of cases were detected among 25-44 year olds, the same age group that makes up a majority of the county population. During the subsequent periods, however, an increasing proportion of cases was detected among even younger county residents, particularly school-age children. The average 7-day rates for 5-17 year old children in the Delta and Omicron periods were among the highest rates observed across the county (Figure 2). The number of cases among infants and young children 0 – 4 years old may appear similar across the pre-Delta and Delta periods, but the number of days in each period varies. Therefore the relative rate more accurately represents the burden of disease because it takes into account the number of days and the population size of the group. The relative rate for 0 – 4 year olds (and the rates for all age groups) more than doubled between the pre-Delta period and the Delta period. Across all three variant periods, individuals 65 years and older were disproportionately impacted by the virus. Overall, fewer people in this age group were infected, but those that did become infected were much more likely to be hospitalized or die.

Table 1. COVID-19 case counts and 7-day rates per 100,000 by age group in Whatcom County, March 2020 – February 2022.

Age Group	Pre-Delta Period (490 days)		Delta Period (168 days)		Omicron Period (72 days)	
	Count	Average 7-day Rate Per 100,000	Count	Average 7-day Rate Per 100,000	Count	Average 7-day Rate Per 100,000
0-4	354	44.9	356	131.8	723	624.6
5-17	1,535	64.8	1,893	232.9	3,991	1,147.2
18-24	1,612	75.5	1,194	163.2	2,787	888.7
25-44	3,141	89.4	3,014	250.0	5,293	1,025.2
45-64	2,254	56.7	1,927	141.1	3,136	536.6
65-74	557	29.2	637	97.5	763	272.6
75+	470	37.2	474	109.3	488	262.0
Total	9,923	62.3	9,488	173.5	17,181	733.1

Figure 2. 7-day COVID-19 Case Rates by Age Group and Variant Period, March 2020 – February 2022.



Race & Ethnicity

The COVID-19 pandemic highlighted the social and racial inequity that continues to exist across the nation, Washington State, and also in Whatcom County. Racial injustice and inequity is one example of a social determinant that impacts the health, well-being, and quality of life of community members. Other social determinants that impact health include safe housing, education, access to nutritious foods, and clean environment. Inequalities in these social determinants put racial and ethnic minorities at increased risk of getting sick and dying from COVID-19.²³ Influential factors associated with greater COVID-19 cases, hospitalizations, and deaths include discrimination, access and use of healthcare, occupation, gaps in education, income and wealth, as well as housing. There is also evidence that community strategies to slow the spread of COVID-19 may have disproportionately caused unintended harm to racial and ethnic minorities such as lost wages, reduced access to services, and increased stress.⁴

Confirmed COVID-19 cases, hospitalizations, and deaths were detected among all racial and ethnic groups in Whatcom County. During the first two years of the pandemic, racial and ethnic group is only reported for 44.6% of cases. From the information available, two racial groups stand out for being impacted disproportionately by confirmed COVID-19 infections. The percent of cases among the Hispanic racial group and the Non-Hispanic American Indian/Alaska Native racial group was greater relative to their representation in the county population (Table 2).

Table 2. COVID-19 Case Counts, Rates, and Population Percentages for Racial and Ethnic Groups in Whatcom County, March 2020 – February 2022.

Race	Count	Whatcom Population Estimate	COVID-19 Rate per 100K	Average 7-day Rate per 100K	% of Reported Cases*	% of Whatcom Population
White Only-NH	11,390	178,291	6,388.4	62.0	70.3	78.3
Hispanic as Race	2,835	22,173	12,785.8	123.9	17.5	9.7
Asian Only-NH	428	10,320	4,147.3	40.4	2.6	4.5
Multi-Race-NH	556	8,406	6,614.3	64.0	3.4	3.7
American Indian/Alaskan Native Only-NH	714	5,702	12,521.9	120.9	4.4	2.5
Black Only-NH	184	2,321	7,927.6	77.4	1.1	1.0
Pacific Islander Only-NH	93	638	14,576.8	142.3	0.6	0.3

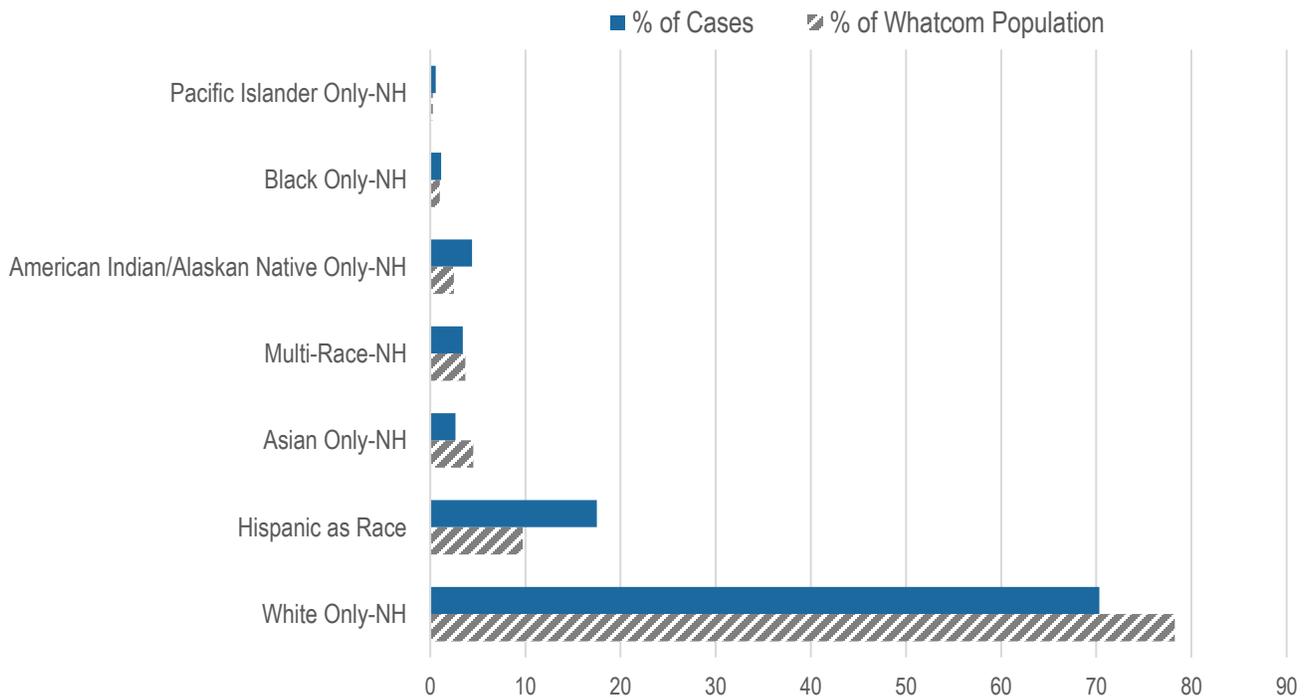
*Includes all 16,271 reported cases with racial and ethnic information.

² Stokes EK, Zambrano LD, Anderson KN, et al. Coronavirus Disease 2019 Case Surveillance — United States, January 22–May 30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:759–765.

³ Killerby ME, Link-Gelles R, Haight SC, et al. Characteristics Associated with Hospitalization Among Patients with COVID-19 — Metropolitan Atlanta, Georgia, March–April 2020. MMWR Morb Mortal Wkly Rep. ePub: 17 June 2020.

⁴ Webb Hooper M, Nápoles AM, Pérez-Stable EJ. COVID-19 and Racial/Ethnic Disparities. JAMA. 2020;323(24):2466–2467.

Figure 3. Distribution of COVID-19 Cases among Racial and Ethnic Groups in Whatcom County compared to Population Percentages, March 2020 – February 2022.



Outbreaks

COVID-19 Outbreaks in Whatcom County were detected and monitored by WCHD and reported to the WA Department of Health (DOH). Whatcom County had 453 reported outbreaks in the first two years of the pandemic. These outbreak events are shown aggregated by week in figure 4. The number of outbreaks shown include both those that occurred in non-healthcare settings such as schools or restaurants and healthcare settings such as outpatient clinics and long-term care facilities (LTCFs). An outbreak in a non-healthcare setting is defined by the following criteria:

1. Two or more laboratory positive (PCR or antigen) COVID-19 cases, AND
2. At least two of the cases have symptom onset dates within 14 days of each other, AND
3. Plausible epidemiological evidence of transmission in a shared location other than a household is observed.

Figure 4. Number of COVID-19 Outbreaks reported in Whatcom County from March 2020 – February 2022.

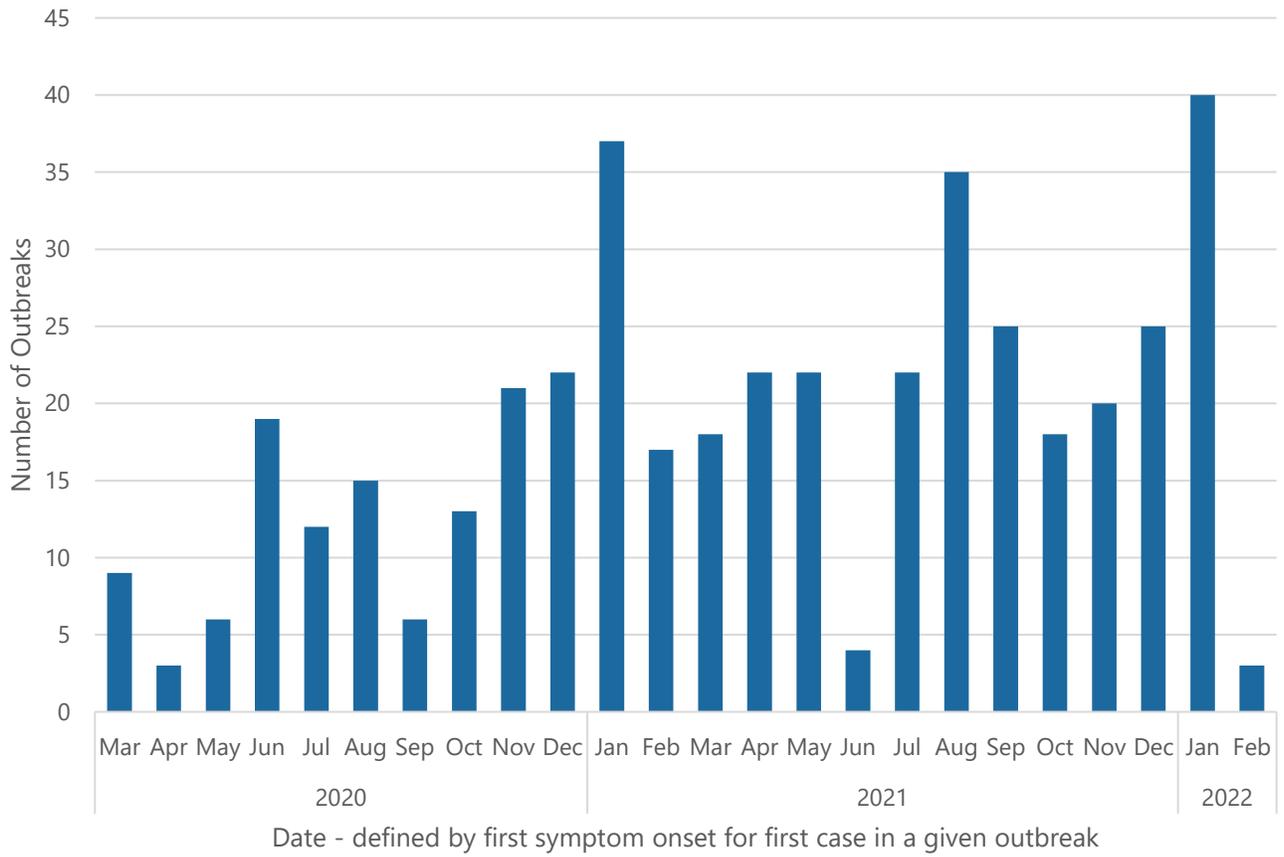
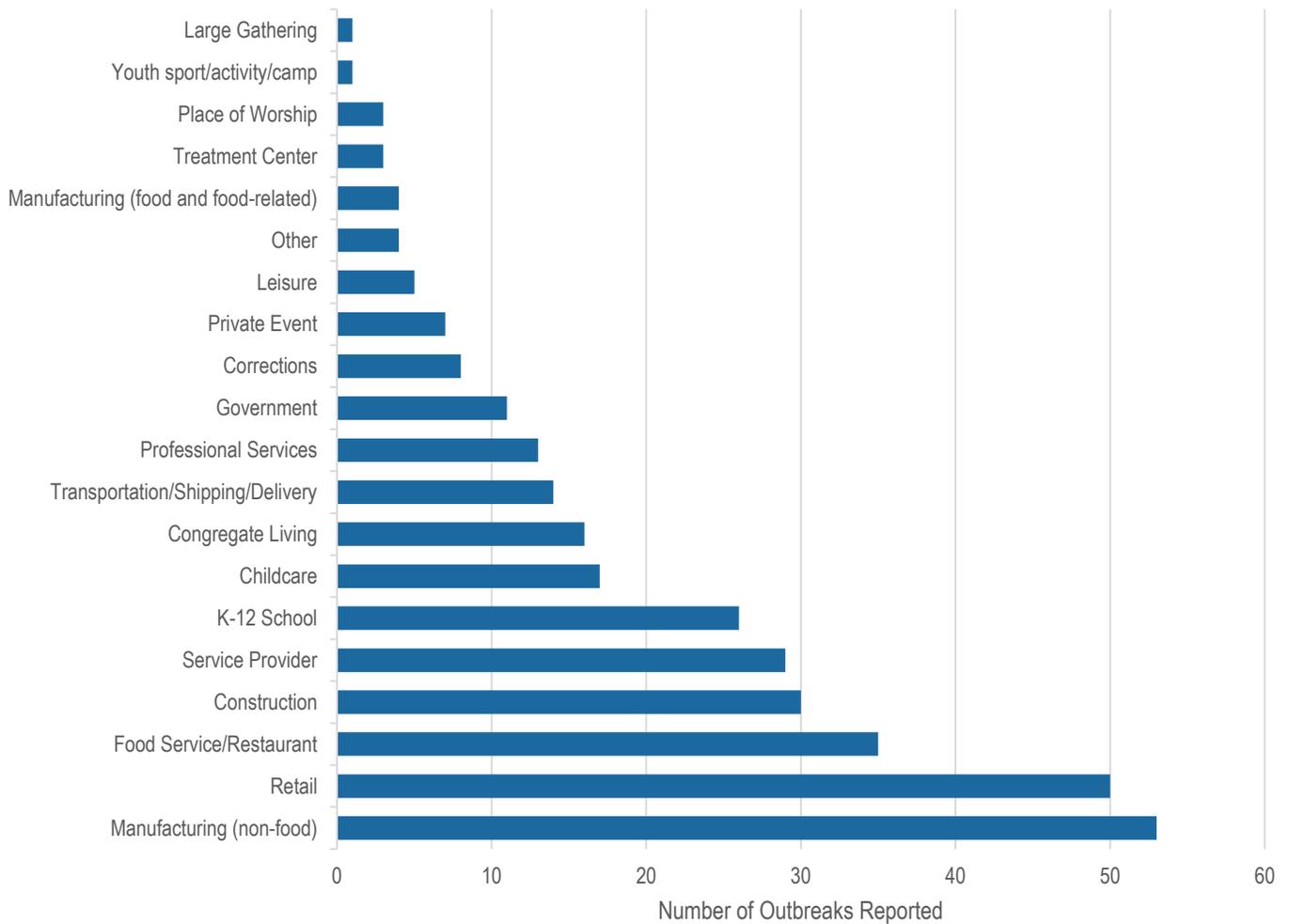


Figure 5 displays the non-healthcare COVID-19 outbreaks by industry category that were reported by the WCHD. The categories differ from those in WA DOH Outbreak reports. WCHD identified and categorized outbreaks at a local level to inform mitigation strategies and resource availability for COVID-19 response.

Figure 5. Number of non-healthcare COVID-19 outbreaks reported by Industry Category in Whatcom County through February 2022.



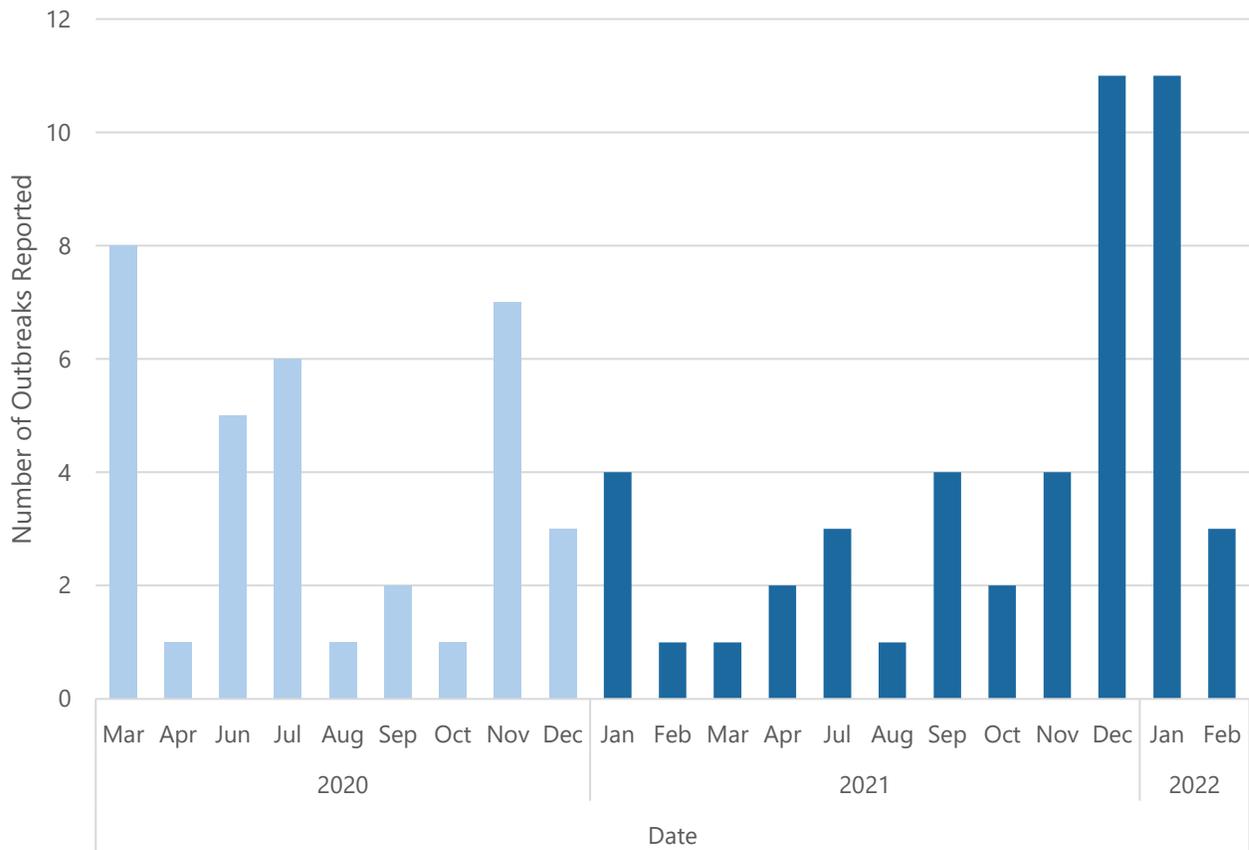
COVID-19 outbreaks that occurred in LTCFs within Whatcom County are shown aggregated by month in figure 6. Prior to January 1, 2021, an outbreak in a LTCF was defined by the following criteria:

1. One resident or healthcare worker with laboratory positive COVID-19 (PCR or antigen test), OR
2. Two or more residents or healthcare workers with new-onset respiratory symptoms consistent with COVID-19 within 72 hours of each other.

After January 1, 2021, the definition used to identify an outbreak in a LTCF changed to better capture transmission in facilities⁵. The new LTCF outbreak definition included the following criteria:

1. One or more long-term care facilities and agencies-acquired COVID-19 infection in a resident, OR
2. Two or more COVID-19 infection in healthcare workers who were on-site in the long-term care facility or agency at any time during their infectious period OR during their exposure period and has no other known or more likely exposure source.

Figure 6. Number of COVID-19 Outbreaks reported by first symptom onset date from Long-Term Care Facilities in Whatcom County through February 2022.

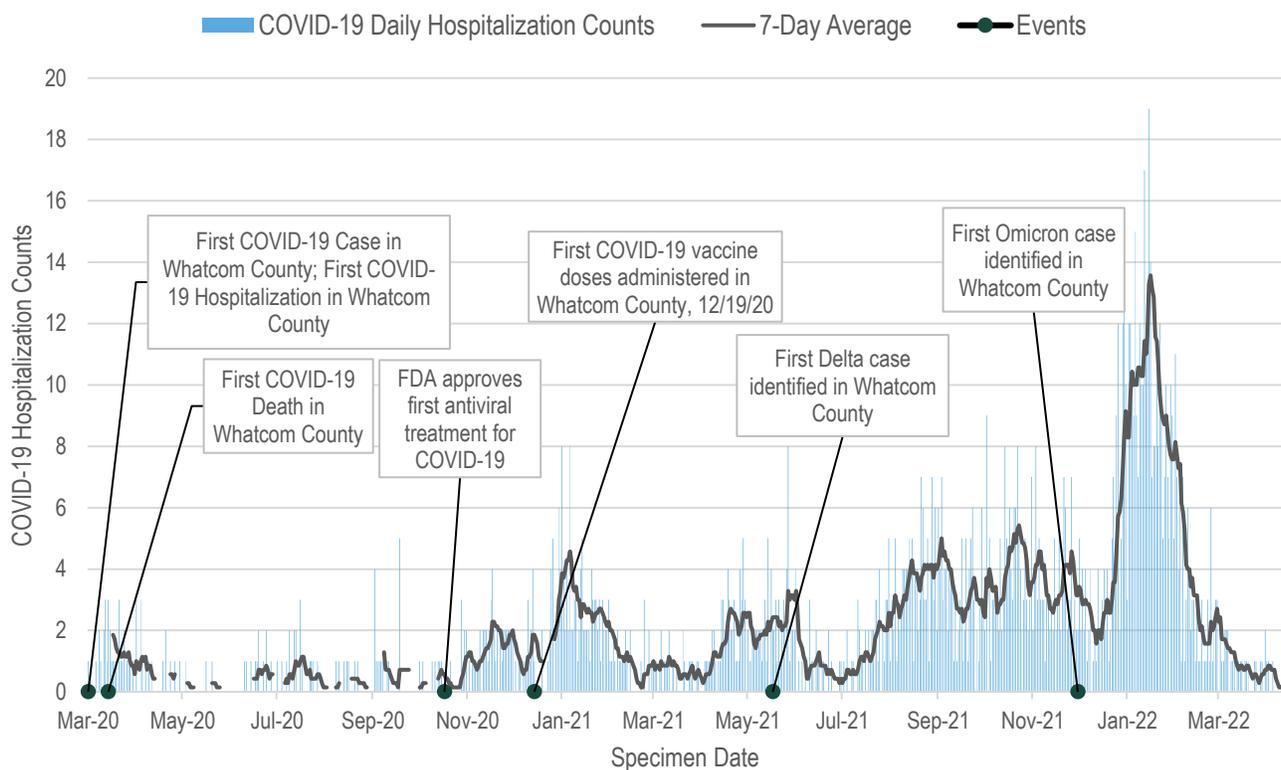


⁵ See DOH Interim COVID-19 Outbreak Definition for Healthcare Settings

Hospitalizations

From March 2020 through February 2022, 1,485 Whatcom County residents were hospitalized with COVID-19. The first COVID-19-associated hospitalization among Whatcom County residents occurred on March 6, 2020. Approximately one-third of all COVID-19 hospitalizations occurred during each of the variant periods - pre-Delta period (488), Delta period (511), and Omicron period (486). Since the Omicron period was much shorter, however, those hospitalizations were concentrated closer together, leading to nearly twice the

Figure 7. Number of COVID-19-associated hospitalizations among Whatcom County residents recorded between March 2020 – February 2022.



hospitalization rate, as compared to the Delta period. This resulted in a particularly profound strain on the healthcare system, including the only hospital in Whatcom County.

Across the country, state, and county, COVID-19-associated hospitalizations are not distributed evenly among the population. Individuals with common underlying medical conditions, such as type 2 diabetes, obesity, high blood pressure (hypertension), and heart failure are known to be at higher risk of severe COVID-19 disease and hospitalization.⁶ We do not have data on all underlying medical conditions for COVID-19 cases in Whatcom County, so we have not categorized our hospitalization rates by underlying medical conditions.

⁶ [Coronavirus Disease 2019 Hospitalizations Attributable to Cardiometabolic Conditions in the United States: A Comparative Risk Assessment Analysis](#). O'Hearn M, Liu J, Cudhea F, Micha R, Mozaffarian D. *J Am Heart Assoc*. 2021 Feb;10(5):e019259. doi: 10.1161/JAHA.120.019259. Epub 2021 Feb 25. PMID: 33629868.

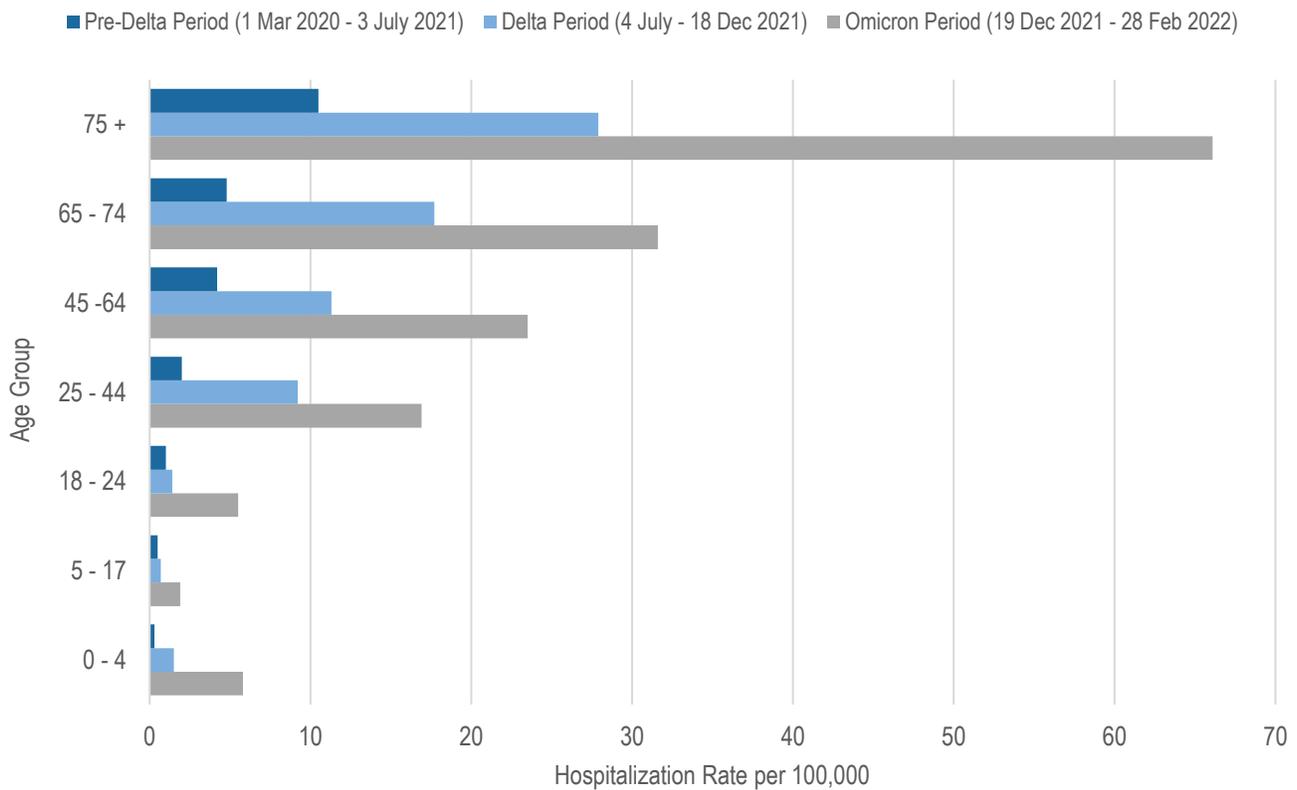
Older age is also a risk factor for severe COVID-19 disease. During each of the three variant periods in Whatcom County, the rate of COVID-19 hospitalizations increased with age. Whatcom County residents 75 years and older experienced the highest rates of COVID-19 hospitalization across all three periods, sometimes more than 2-fold higher than the next age group. COVID-19-associated hospitalization rates increased for every age group over the course of the two years measured, with each variant period experiencing higher hospitalization rates than the period that preceded it. This culminated with the highest rates occurring during the most recent Omicron period (Table 3). Case-hospitalization rates (or the proportion of cases that become hospitalized) were not significantly higher during the Omicron period. This suggests that the greater number of hospitalizations was caused by more total infections in the community, not by more severe disease due to omicron infection. COVID-19 hospitalizations among the youngest age groups were less than 10 and therefore these values are not shown to protect confidentiality of individuals.

Table 3. COVID-19 Hospitalization Counts and Rates per 100,000 for Whatcom County residents by age group and variant period, March 2020 – February 2022.

Age Group	Pre-Delta Period		Delta Period		Omicron Period	
	Count	Average 7-day Rate Per 100,000	Count	Average 7-day Rate Per 100,000	Count	Average 7-day Rate Per 100,000
0-4	<10*	Sup.	<10	Sup.	<10	Sup.
5-17	Sup*	Sup.	<10	Sup.	<10	Sup.
18-24	20	1.0	10	1.4	18	5.5
25-44	70	2.0	108	9.2	91	16.9
45-64	165	4.2	151	11.3	143	23.5
65-74	90	4.8	113	17.7	92	31.6
75+	130	10.5	118	27.9	128	66.1

* Cells with less than 10 counts are suppressed to protect confidentiality. Adjacent cells are also suppressed to prevent calculation of single cell totals or because rates were derived from count <10 (Sup).

Figure 8. COVID-19 Hospitalization Rates (7-Day) for Whatcom County residents by age group from March 2020 – February 2022.



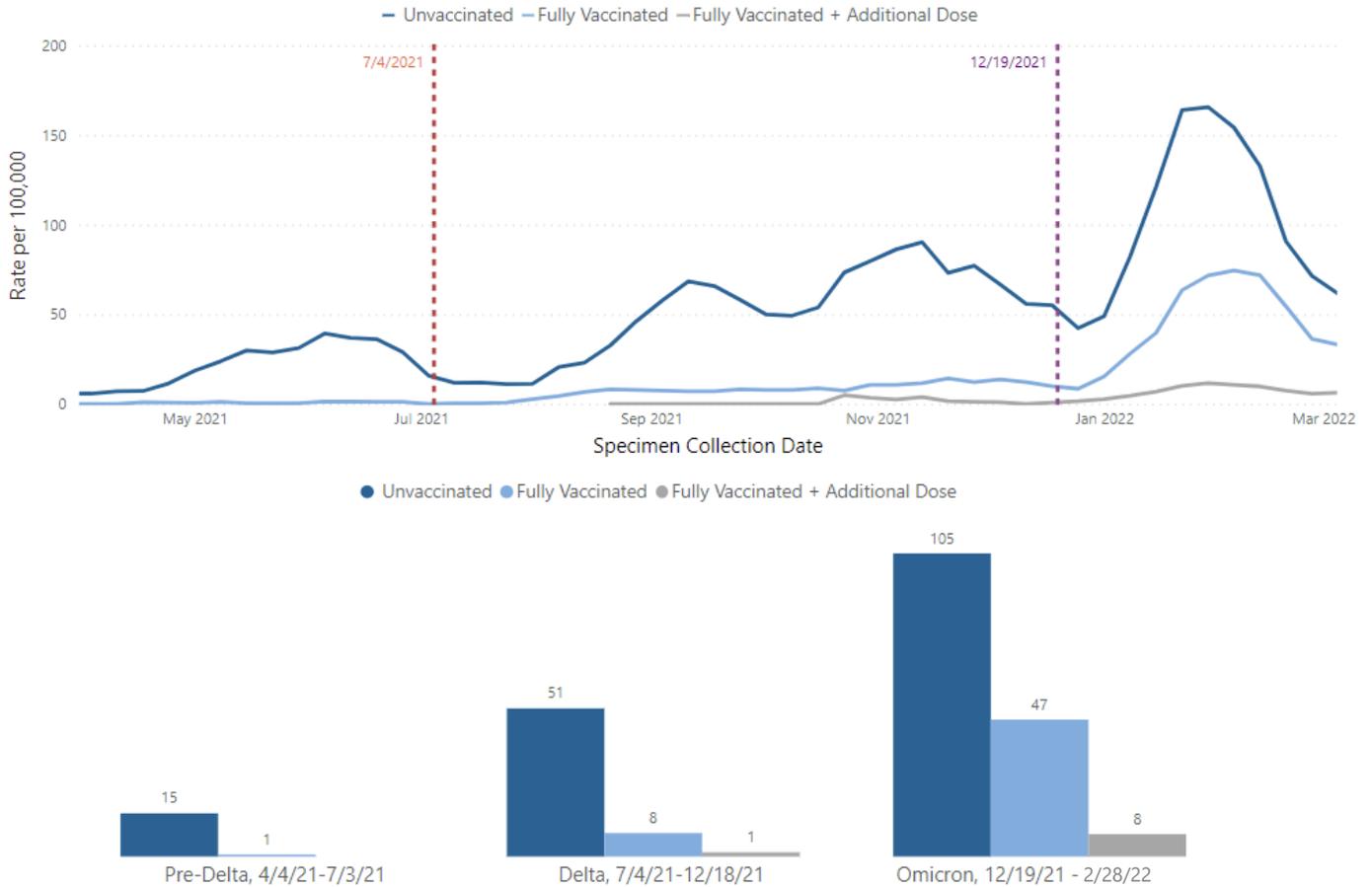
Hospitalizations by Vaccination Status

Fully-vaccinated individuals acquire immunity through vaccination approximately 14 days after their second dose, which occurred for the first individuals of Whatcom County in early January 2021. The COVID-19-associated hospitalizations among Whatcom County residents over 50 years are shown below by vaccination status (Figure 9). In addition to the line chart, the bar graph below displays the average 7-day rate for the population by vaccination status. The impact of age on the risk of hospitalization is important to consider when comparing vaccination status. Among the population above 50 years, there is a lower rate of hospitalization among the fully-vaccinated population and those who received a boosted dose compared to the unvaccinated population in all three periods. Among the county population under 50 years, the rate of hospitalization from COVID-19 was 12 times less for fully-vaccinated individuals compared to unvaccinated individuals during the Delta period. The hospitalizations include those reported beginning in April (2021) because vaccinations were available to all adults at that time.

As SARS-CoV-2 infections came to be dominated by the Delta and Omicron variants, increasing numbers of COVID-19 hospitalizations were reported among fully-vaccinated individuals. While hospitalization rates never outpaced those among unvaccinated individuals, the difference between these groups was reduced during the Omicron-dominated period. The population of fully-vaccinated individuals had grown significantly so that by December of 2021, more than 150,000 Whatcom County residents were fully-vaccinated. In addition, there is evidence of waning vaccination effectiveness against COVID-19-associated hospitalization during the Delta

and Omicron periods for fully-vaccinated individuals.⁷ An additional dose increased protection against hospitalizations compared to the initial two-dose series. This supports recommendations for eligible individuals to remain up to date with COVID-19 vaccinations to best protect against COVID-19-associated hospitalizations.

Figure 9. COVID-19-associated Hospitalizations: 7-Day Rate per 100,000 for Age 50+ by Vaccination Status, April 2021 – February 2022

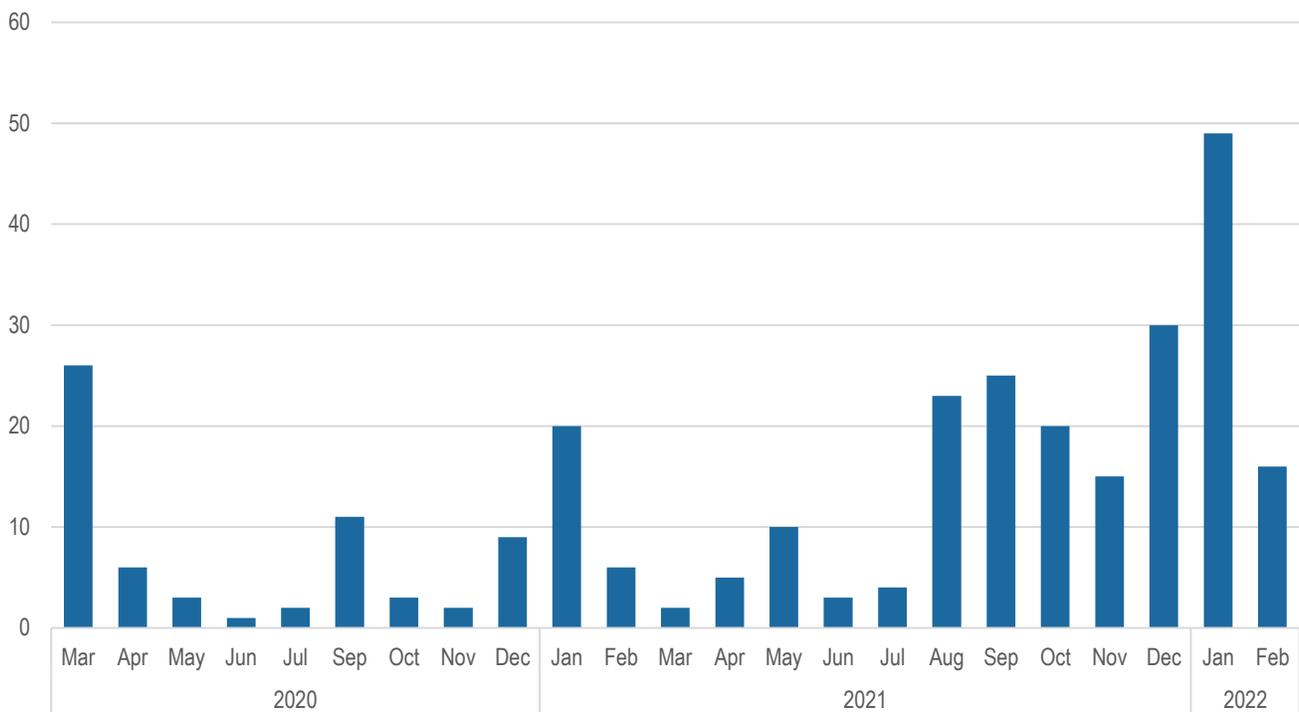


⁷ Ferdinands JM, Rao S, Dixon BE, et al. Waning 2-Dose and 3-Dose Effectiveness of mRNA Vaccines Against COVID-19–Associated Emergency Department and Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network, 10 States, August 2021–January 2022. MMWR Morb Mortal Wkly Rep 2022;71:255–263. DOI: http://dx.doi.org/10.15585/mmwr.mm7107e2external_icon.

Deaths

The first death due to COVID-19 in Whatcom County was recorded on March 19, 2020, and a total of 295 COVID-19 deaths were reported among county residents during the two-year period. During the first 16 months of the pandemic leading up to the period dominated by the Delta variant, 110 COVID-19 deaths were reported among Whatcom County residents translating to a rate of 48.3 per 100,000 population. In the five and a half months that followed between July and December, infections due to the Delta variant caused another 105 deaths, or a rate of 46.1 per 100,000. The Omicron period spanning from December 2021 through February of 2022 led to 80 COVID-19 deaths among Whatcom County residents, or a rate of 35.1 per 100,000. Across the entire two-year period measured, deaths associated with COVID-19 occurred more often among older age groups regardless of variant period.

Figure 10. Number of COVID-19 Deaths among Whatcom County residents, March 2020 – February 2022.



The distribution of COVID-19 deaths among Whatcom County residents is described by gender and age below. Sixty percent of the COVID-19 deaths during the first two years of the pandemic were reported among males (Figure 10), and more than 85% of COVID-19 deaths were reported among individuals 60 years and older (Figure 11). Fewer than 10 total deaths occurred among individuals under the age of 40 years in Whatcom County during the two years measured through February 2022.

Figure 11. Distribution of COVID-19 deaths among Whatcom County residents by gender, March 2020 – February 2022.

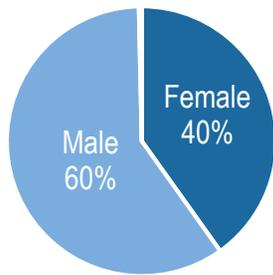
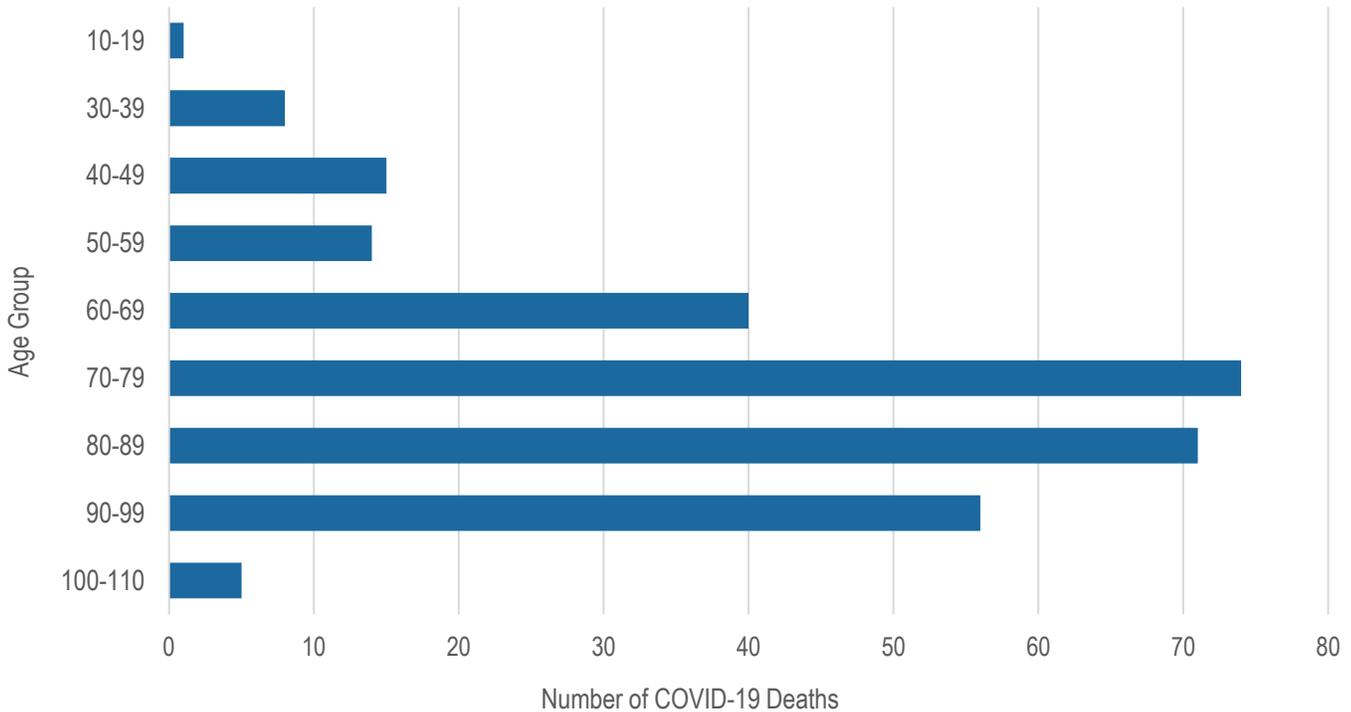


Figure 12. Number of COVID-19 deaths among Whatcom County residents by age group from March 2020 – February 2022.

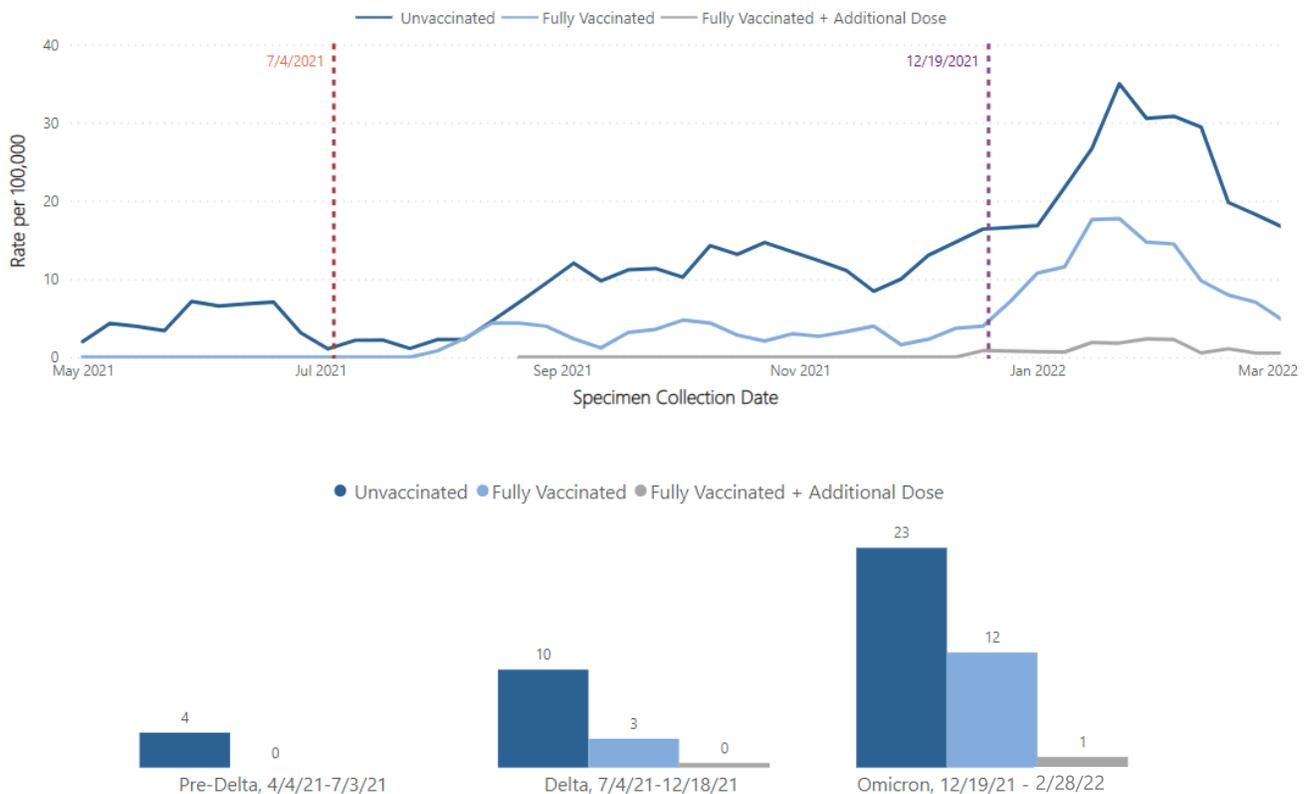


Deaths by Vaccination Status

Similarly to the relationship between vaccination status and COVID-19-associated hospitalizations in Whatcom County, death rates from COVID-19 were much lower among fully-vaccinated individuals throughout the entire two year period. COVID-19-associated deaths are shown per 100,000 population by vaccination status for those 50 years and older below (Figure 13). The bar graph in the lower part of the figure displays the average 7-day rates by vaccination status for each period measured. The association of vaccination with lower rate of

death from COVID-19 is greatest during the Delta period when the average 7-day rate was more than 3-fold greater for the unvaccinated population compared to fully-vaccinated individuals. As the population of vaccinated individuals grew in Whatcom County in 2021, as new variants emerged, and as vaccine immunity began to wane with time, deaths among fully-vaccinated individuals increased. However the rate of COVID-19 death in fully-vaccinated individuals remained much lower than that of unvaccinated individuals. The rate was even lower for those who received boosters. For Whatcom residents over 50 years old, during the Omicron period for example, there were 23 deaths per week per 100,000 unvaccinated individuals, compared to 12 deaths per 100,000 fully-vaccinated individuals. The difference was even larger among those with booster doses, in whom the death rate per 100,000 per week was only 1. Evidence of waning vaccination effectiveness over 2021 has been cited across the nation in relation to SARS-CoV-2 infections, however individuals still saw protection against hospitalization and death, especially among fully-vaccinated individuals with an additional or booster dose.⁸ This is further evidence that eligible individuals should stay up to date with primary, additional, and booster doses of COVID-19 vaccine.

Figure 13. COVID-19 Death: 7-Day Rate per 100,000 for Age 50+ by Vaccination Status, May 2021 – February 2022).



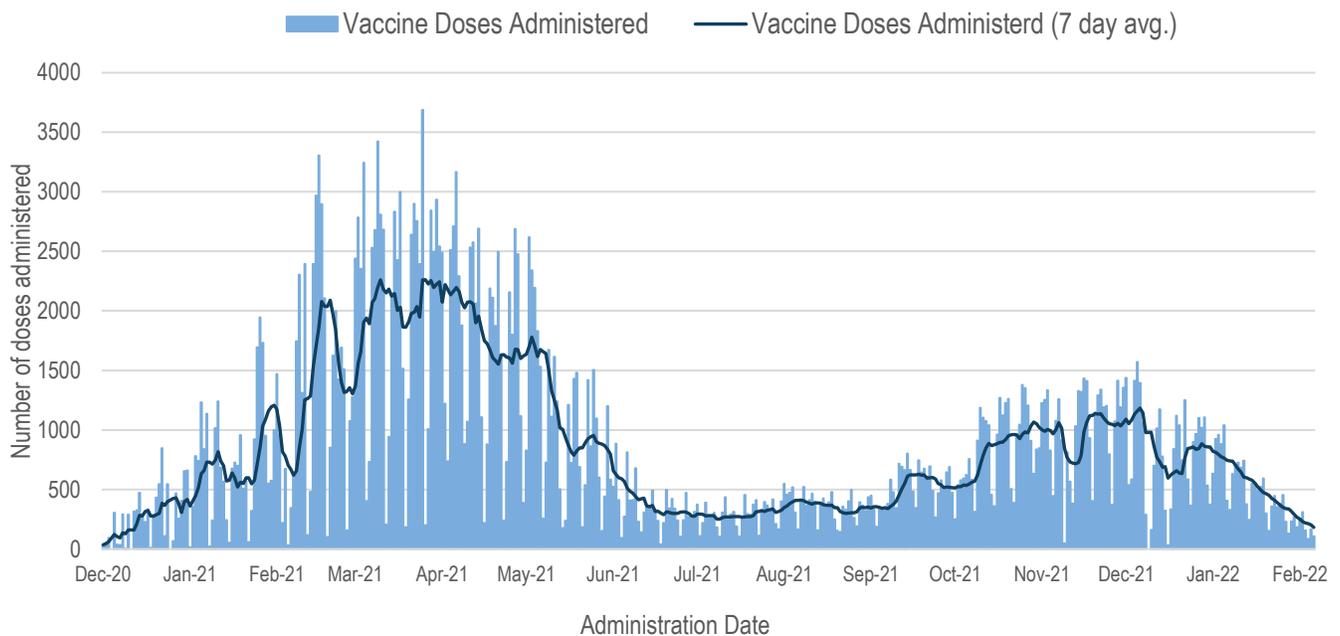
⁸ Johnson AG, Amin AB, Ali AR, et al. COVID-19 Incidence and Death Rates Among Unvaccinated and Fully Vaccinated Adults with and Without Booster Doses During Periods of Delta and Omicron Variant Emergence — 25 U.S. Jurisdictions, April 4–December 25, 2021. MMWR Morb Mortal Wkly Rep 2022;71:132–138. DOI: <http://dx.doi.org/10.15585/mmwr.mm7104e2>

Vaccinations

The first COVID-19 vaccine administered in Whatcom County was on December 18, 2020. Fourteen months later, by February 28, 2022, a total of 367,926 doses had been administered by Whatcom County vaccine providers, with local pharmacies playing an important role in dispensing many of these doses. The most doses administered in a single day was 3,686 on April 10, 2021, and the highest 7-day average was 2,261 during the same week. Between December 2020 and February 2021, there were 58 Whatcom County vaccine providers enrolled in the WA State COVID-19 Vaccination Program.

At the start of 2021, two large vaccination clinics were established and operated for several months. A community partners and healthcare providers, including Bellingham Technical College, Family Care Network, PeaceHealth, SeaMar Community Health Centers, Unity Care NW, and the Whatcom County Health Department, operated the Community Vaccination Clinic from March 13 to June 17, administering over 8,800 doses. PeaceHealth St. Joseph Medical Center operated another large clinic at the Health Education Center from January 20 to June 25, 2021. Whatcom County's two tribal clinics – administered by the Lummi Nation and Nooksack tribe, also provided vaccine for both their tribal members and for the Whatcom community at large.

Figure 14. Number of COVID-19 vaccine doses administered by day and the 7-day average.



When COVID-19 vaccines were first approved for Emergency Use Authorization by US Food and Drug Administration, they were only available for adults 16 and older. Pfizer was the first vaccine to be approved in the US on August 23, 2020, followed by Moderna on December 18, 2020, and Janssen on February 27, 2021. The Pfizer vaccine became the first vaccine available for people ages 12-15 in May of 2021, and to all children over age 5 in November, 2021

COVID-19 vaccines were in limited supply when they first became available. To address this, the Washington State Department of Health established eligibility criteria to ensure people who were most at risk could receive the vaccine first. The list below provides the key dates when different groups of people became eligible. A third vaccine shot or booster dose was first recommended for immunocompromised individuals, then adults 65 and older, and eventually recommended for anyone 12 and older. By February 28, 2022, 74% of Whatcom County residents had initiated vaccination, 67.5% were fully vaccinated (received two doses), and 85,464 residents had received a booster dose. At that time statewide for Washington, 73.7% residents had initiated vaccination, and 67% were fully vaccinated.

Vaccine eligibility began in December 2020. Figure 13 shows the cumulative percentage of residents who initiated vaccination by age group. The vertical lines correspond with the following eligibility dates and groups:

- A. **December 14:** High-risk health care workers, first responders, long-term facility residents, and all other workers at risk in health care settings
- B. **January 18:** All people 65 and older, people 50 and older living in multigenerational households, educators and staff for pre-K – 12th grades, and child care providers
- C. **March 14:** High-risk critical workers who work in certain congregate settings: Agriculture, fishing vessel crews; food processing; grocery stores; corrections; prisons, jails or detention centers; public transit; remaining first responders. People 16 years or older who were pregnant or had a disability that put them at high risk for severe COVID-19 illness.
- D. **March 22:** People 16 years or older with 2 or more co-morbidities or underlying conditions. All people 60 years and older. People, staff, and volunteers in certain congregate living settings: Correctional facilities; groups homes for people with disabilities; settings where people were experiencing homelessness live or access services. High-risk critical workers in certain congregate settings: restaurants, food services, construction, and manufacturing.
- E. **May 1:** All 16 and 17-year-olds
- F. **May 12:** 12-15-year-olds
- G. **November 4:** 5-11-year-olds

Figure 14 shows the cumulative percentage of residents who were fully vaccinated (two doses) by age group. By the end of February 2021, 25-24 year olds and those 65+ had the highest rate of two dose series completion.

Figure 15. Covid-19 Vaccine Initiation for Whatcom County residents by age and date.

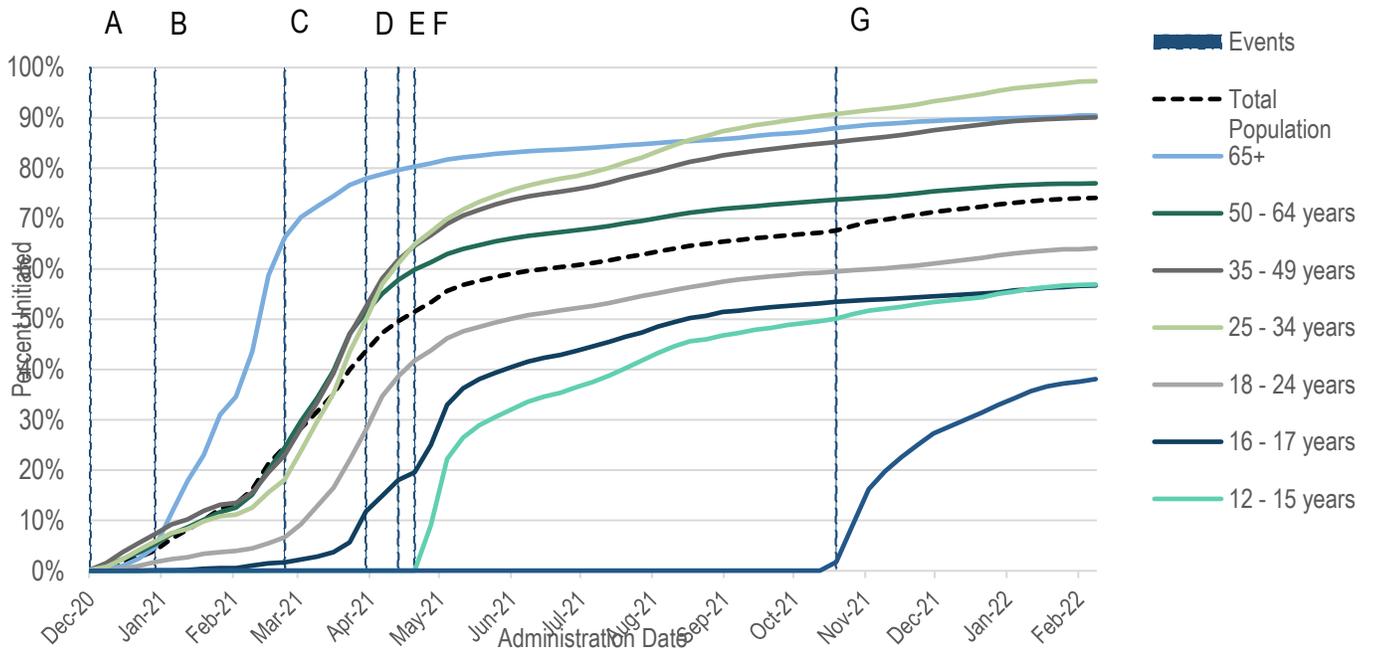
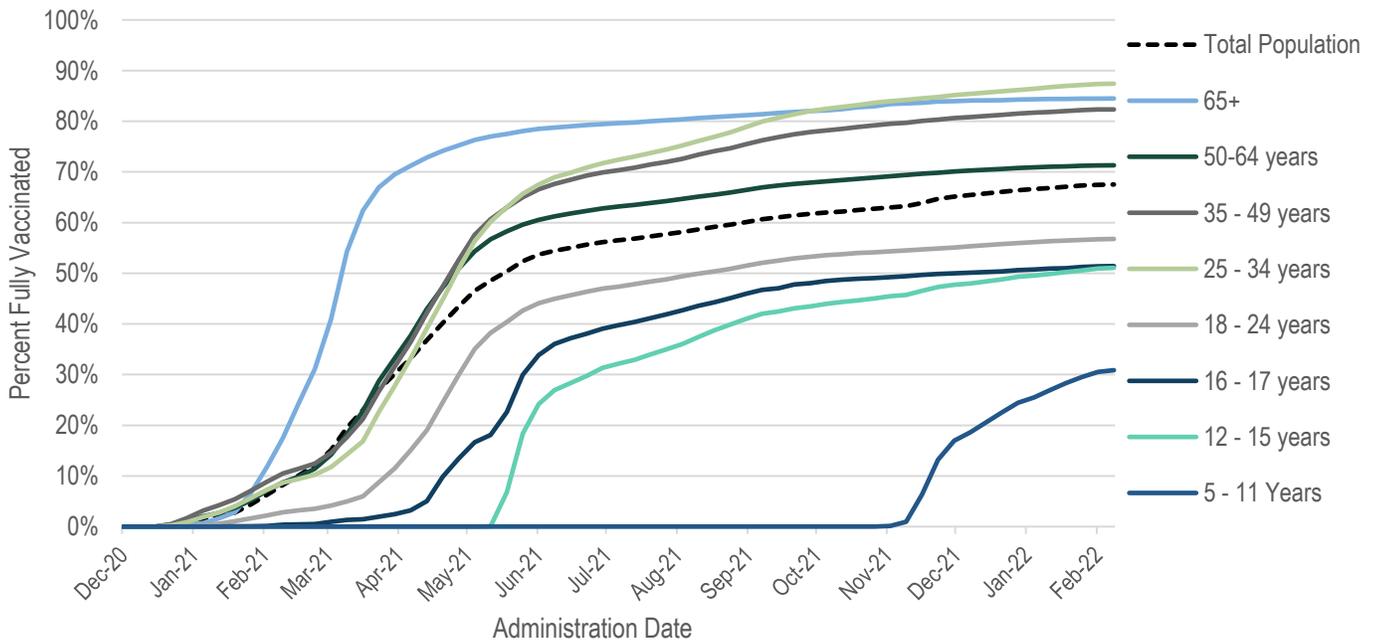


Figure 16. COVID-19 Vaccine coverage for fully vaccinated residents by age and date.



Data Limitations

The findings reported here for this two-year period are subject to the following limitations. First, the confirmed cases reported here are based on surveillance of SARS-CoV-2 infections recorded in the Washington Disease Reporting System (WDRS). During the two year period included in this report, testing was mainly conducted through lab-based or point-of-care rapid antigen tests and molecular tests (both lab-based and point-of-care) that were recorded in the reporting system. However, many results from over-the-counter test kits may not be included because they were not reported to WDRS.

In this report, differentiating between predominance of variants (Delta & Omicron) is based on surveillance data. Genomic sequencing of individual infections is not available for confirmed COVID-19 cases, hospitalizations, or deaths. Findings related to variant predominance in this report (i.e. “Delta period”) relied on dates from surveillance data indicating the most prevalent local variant.

COVID-19-associated hospitalizations in this report are based on the WA DOH definition where a Washington resident is recorded in the Washington Disease Reporting System (WDRS) or the Rapid Health Information Network (RHINO) as hospitalized with confirmed COVID-19. Cases marked hospitalized for COVID-19 may be reviewed for relevance, however, it should not be assumed that this process will determine the cause of hospitalization for every COVID-19-associated hospitalization. In other words, COVID-19-associated hospitalizations may include individuals in whom COVID-19 infection was not the cause of their hospitalization.

Differences in hospitalization and death rates among vaccinated and unvaccinated populations in this report cannot be used to determine vaccine efficacy. These rate comparisons do not control for differences in other risk behaviors or underlying health status, which may also affect outcomes.

Finally, findings from the two year experience of Whatcom County residents during the COVID-19 pandemic are representative of county populations with respect to the demographic factors presented. Population and demographic factors may be different from other local health jurisdictions in Washington State and therefore the findings in this report may not be generalizable to other areas.

COVID-19 Timeline in Whatcom County

Year: 2020

Month	Day	Major Events, Policy Changes
Jan	20	CDC confirms the first US case of COVID-19 in Everett, a Snohomish County resident (sample taken on Jan 18 th)
	23	Whatcom County Health Department initiates Incident Command Structure
Feb	29	First COVID-19 related death in the US, a King County resident
March	10	First COVID-19 case reported in Whatcom County
		Whatcom County Executive announces Public Health Emergency
	13	Governor orders all K-12 schools in the state to close for six weeks, effective March 17, and banned gatherings of more than 250 people in the state
	17	Whatcom County stands up Unified Command Structure for county response
		Governor orders all K-12 public and private schools in the state to close for six weeks
	19	First COVID-19 death in Whatcom County
24	Governor signs statewide proclamation that all Washington residents to stay home for two weeks, effective March 26. Order is extended several times.	
April	6	Governor closes schools for the remainder of the academic year
June	5	<u>Whatcom County moves to Phase 2 of the WA State Safe Start Plan</u>
	26	Statewide mask mandate goes into effect
July	17	Whatcom County implements a low-barrier drive-through testing site at the Civic Field Stadium. Mobile testing unit starts to make rounds throughout the County
October	13	Five counties are allowed to move into Phase 2 of reopening
	22	FDA approves antiviral treatment (remdesivir) for adult and pediatric (12+) against COVID-19 in hospital setting.
December	1	Whatcom County low-barrier testing site relocates to the Lynden Fair Grounds
	14	Phase 1A Tier A1 & A2 for vaccine eligibility starts: high-risk healthcare workers, first responders, long-term care facility residents
	18	First COVID-19 vaccine doses are administered in Whatcom County
	31	COVID-19 vaccine is recommended for all workers at risk in healthcare settings

Year: 2021

Month	Day	Major Events, Policy Changes
Jan	18	Phase 1B Tier 1 becomes eligible for vaccination (65 and older, 50 and older in multigenerational households)

	20	PeaceHealth St. Joseph Medical Center opens a mass vaccination center at the Health Education Center
Feb	15	<u>Whatcom County Moves to Phase 2 of Healthy Washington Plan</u>
March	2	Governor announces that K-12 teachers and child care workers could receive the COVID-19 vaccine
	13	Whatcom County Community Vaccination Clinic opens at the Bellingham Technical College
	17	Washington residents in Phase 1B Tier 2 of the state's vaccination plan become eligible to receive the COVID-19 vaccine. Phase 1B2 included high-risk critical workers in industries such as agriculture, grocery stores, and public transit, as well as people 16 and older who were pregnant or at high risk of serious illness from COVID-19 because of a disability
	22	<u>Whatcom County Moves to Phase 3 of Healthy Washington Plan</u>
	31	Washington residents in Phase 1B Tiers 3 and 4 of the state's vaccination plan become eligible to receive a coronavirus vaccine. This includes people over 16 with two or more co-morbidities, everyone ages 60 and up, and staff and volunteers in congregate settings like group homes, homeless shelters, restaurants, food service, construction, and manufacturing.
April	3	The Delta variant is first detected in Washington State
	15	Washington residents 16 and older become eligible to receive a coronavirus vaccine
	19	Washington public schools had to offer all K-12 students at least 30% in-person instruction every week
	27	Governor announces that fully vaccinated individuals would no longer need to wear a mask while gathering or dining outdoors in small groups
May	12	12-15-year olds became eligible for vaccines
	13	Governor announces that fully vaccinated individuals would no longer be required to wear masks while indoors.
June	17	Whatcom County Community Vaccination Center closes
	25	PeaceHealth St. Joseph Medical Center's mass vaccination center closes
	30	Governor lifts COVID restrictions on businesses and gatherings
July	6	The Delta Variant is first reported in Whatcom County
August	14	A third dose (in the primary series) of Pfizer-BioNTech and Moderna COVID-19 vaccine is recommended for certain immunocompromised individuals.
	23	Statewide mask mandate goes back into effect. The requirement did not apply to small gatherings or office environments where everyone was vaccinated and interaction with the public was rare, or while working alone
September	24	Pfizer boosters is approved for certain high-risk individuals
October	22	Moderna and J&J boosters is approved for certain high-risk individuals
November	3	5-11-year-olds become eligible
	20	Everyone 18 and over become eligible for boosters

	15	Proof of vaccination or negative test is required to attend large indoor and outdoor gatherings
	30	Canadians are allowed to cross border for short trips (72 hours or less) without re-entry tests
December	4	First Omicron case is identified in Washington
	9	Boosters are approved for ages 16-17
	10	First Omicron case is identified in Whatcom County
	21	Canada reinstates test requirement for short trips (exemption for visits under 24 hours for groceries and supplies)
	22	FDA issues emergency use authorization for first oral antiviral treatment for COVID-19 (Pfizer's Paxlovid)

Year: 2022

Month	Day	Major Events, Policy Changes
January	22	"Say Yes! to COVID Home Test" program launch. Website launched to distribute at-home tests to residents of WA State via mail.