

# COVID-19 Update

- Greg Stern MD  
Whatcom County Health Officer

July 13, 2021

Whatcom County Council, Committee of the Whole meeting



Whatcom County  
**HEALTH**  
Department



# Overview

- Case rates and vaccination progress
- Variants, with focus on Delta
- What we know about immunity, both through natural infection and vaccination

# Good News and Concerns

- Case rates are very low (near lowest in past year)
- Vaccination rates are relatively high in county overall, especially among 65+
- Vaccines provide strong protection from severe disease for all VOC
  
- Sub-area and age differences in vaccination rates
- Vaccination rates have plateaued and no vaccine yet for those under 12y

# Case and Hospitalization Rates



## COVID-19 DISEASE ACTIVITY

Data as of July 11, 2021 11:59PM PT

Select a key metric

Rate per 100K newly diagnosed cases

New hospitalizations per 100K people

Effective reproductive number (R)

Select a County

All

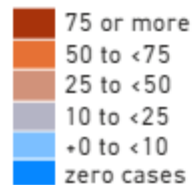
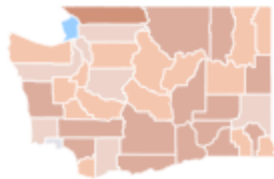


Chart View

Tabular View

## COVID-19 disease activity

## Rate of newly diagnosed confirmed and probable COVID-19 cases

This graph shows the trend of the rate of newly diagnosed confirmed and probable COVID-19 cases per 100,000 people during a two week period. The most recent period is from Jun 21 through Jul 04. The Department of Health defines low disease activity as having fewer than 25 cases per 100,000 people during the prior two weeks.

Learn More



## Whatcom County

7 Day  14 Day

Rate per 100K of newly diagnosed confirmed and probable cases during the prior two weeks	45.2
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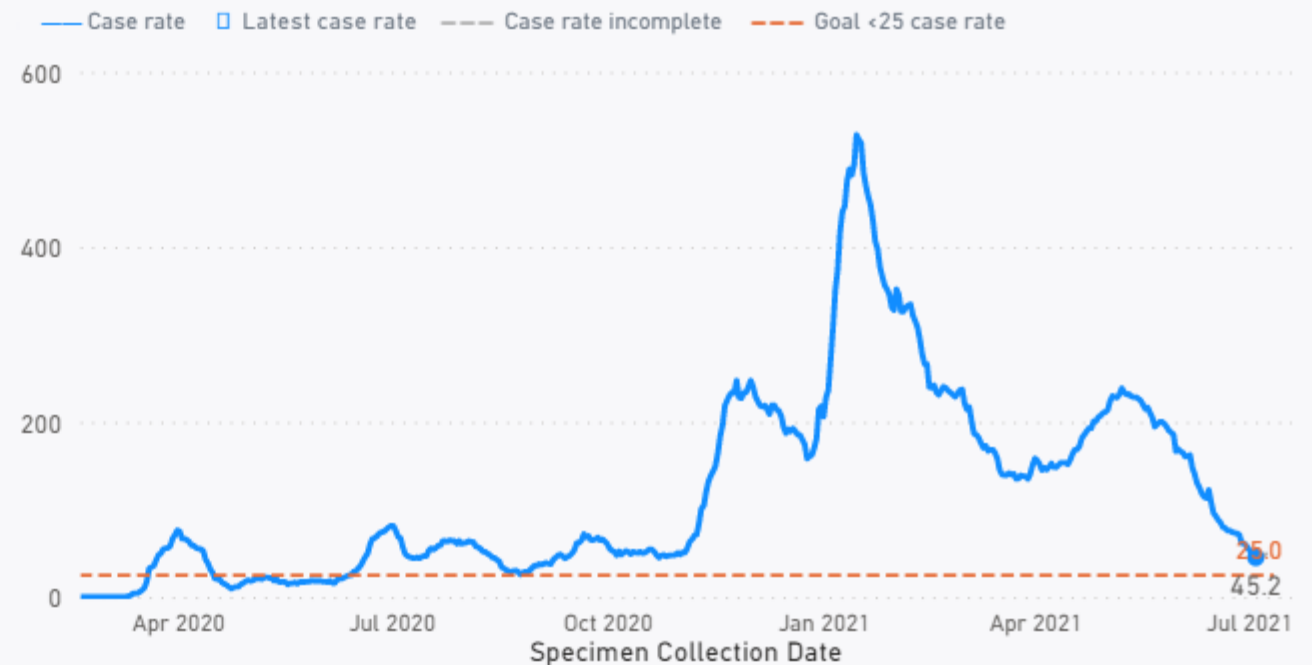
Meeting goal of fewer than 25 cases (confirmed and probable) per 100,000 people	No
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## Supporting detail

Population	228,000
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Confirmed and probable cases in the prior two weeks	103
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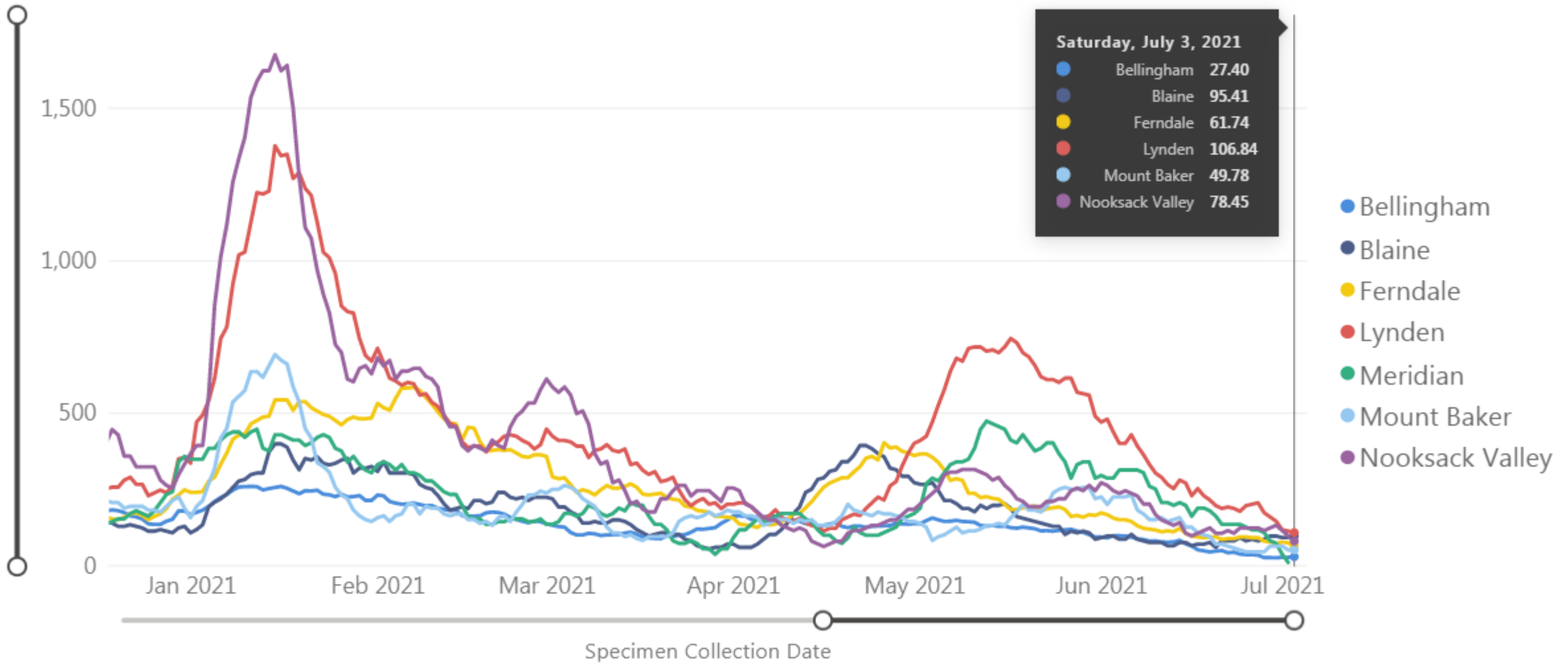
## Rate per 100K of newly diagnosed confirmed and probable cases during the prior two weeks



Sources: Washington State Department of Health and the Washington State Office of Financial Management

# Case Rates: Whatcom County Sub-County Areas

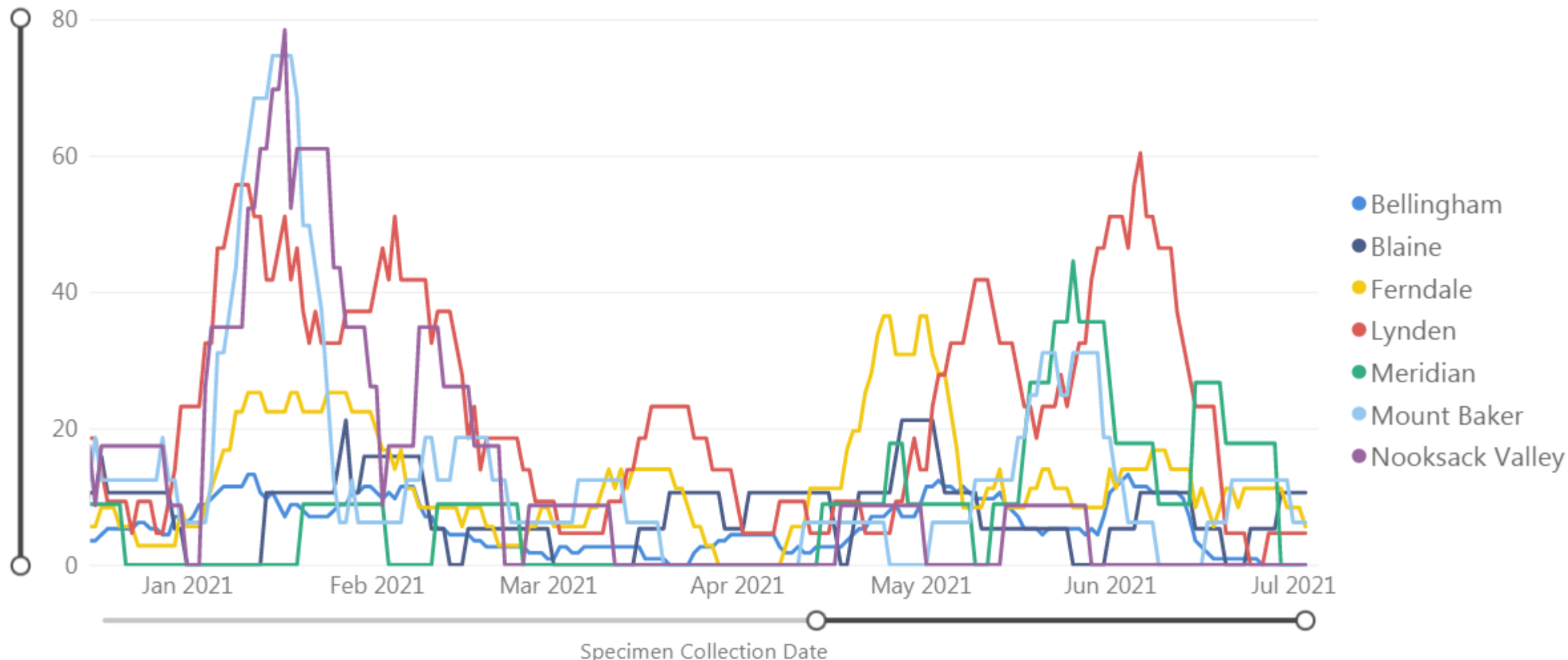
New confirmed COVID-19 cases per 100,000 people during the prior two weeks



Data for the past 14 days is considered preliminary and may change due to data reconciliation.  
Sub-county areas are defined by school district boundaries.

# Hospitalization Rates: Whatcom County Sub-County Areas

Confirmed COVID-19 hospitalizations per 100,000 people during the prior two weeks



Data for the past 14 days is considered preliminary and may change due to data reconciliation.

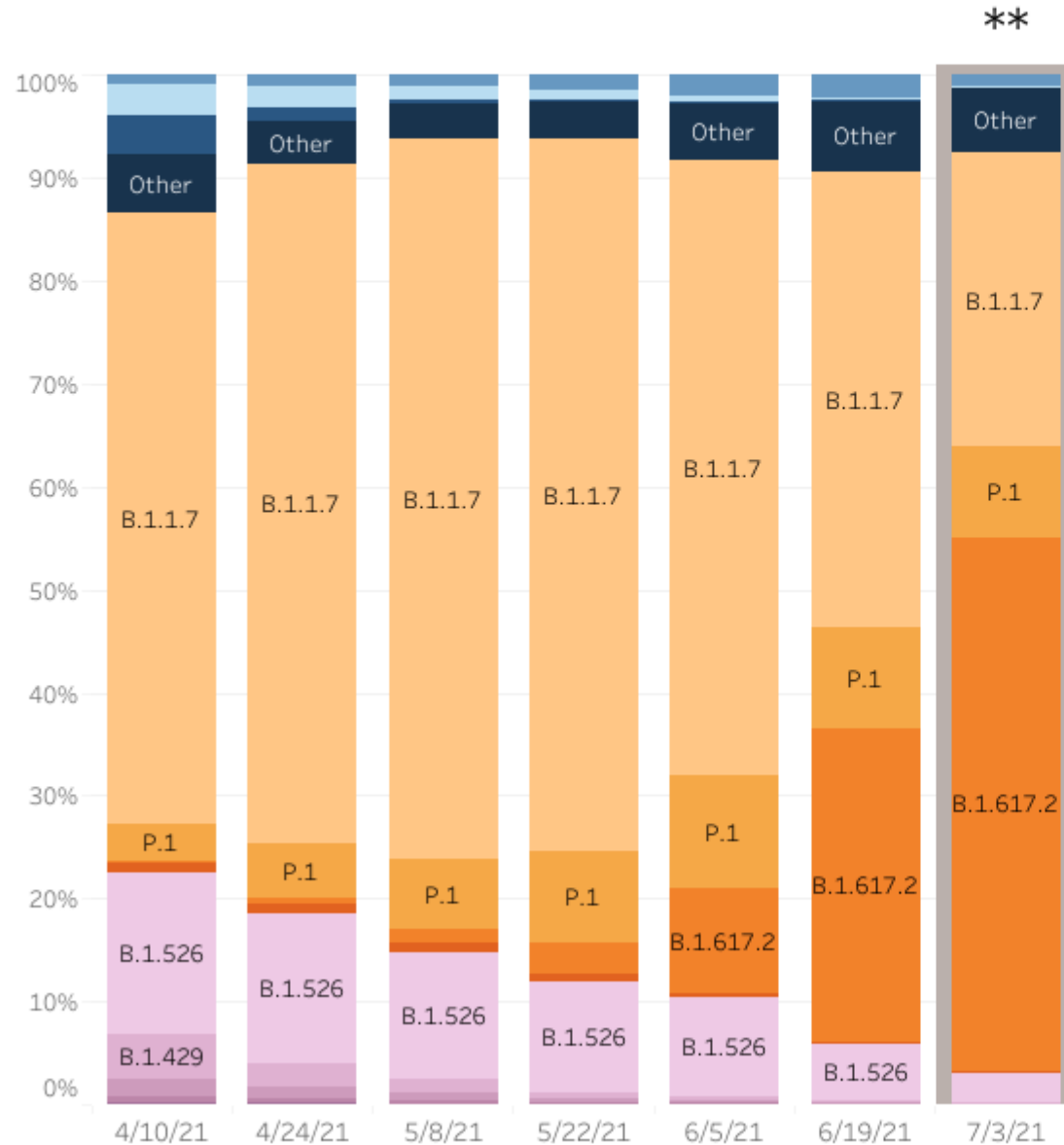
Sub-county areas are defined by school district boundaries.

# Variants



United States: 3/28/2021 – 7/3/2021

United States: 6/20/2021 – 7/3/2021 NOWCAST



USA

	Lineage	Type	%Total	95%PI	
<b>Most common lineages #</b>	B.1.617.2	Delta	VOC	51.7%	46.3-57.0%
	B.1.1.7	Alpha	VOC	28.7%	24.1-33.4%
	P.1	Gamma	VOC	8.9%	6.1-11.9%
	B.1.526	Iota	VOI	3.0%	1.5-4.8%
	B.1			1.1%	0.3-2.3%
	B.1.1.519			0.1%	0.0-0.5%
<b>Additional VOI/VOC lineages #</b>	B.1.2			0.0%	0.0-0.3%
	B.1.351	Beta	VOC	0.2%	0.0-0.8%
	B.1.525	Eta	VOI	0.0%	0.0-0.3%
	B.1.429	Epsilon	VOI	0.0%	0.0-0.3%
	B.1.617.1	Kappa	VOI	0.0%	0.0-0.3%
	B.1.427	Epsilon	VOI	0.0%	0.0-0.3%
<b>Other*</b>	P.2	Zeta	VOI	0.0%	0.0-0.3%
	Other			6.4%	3.5-9.6%

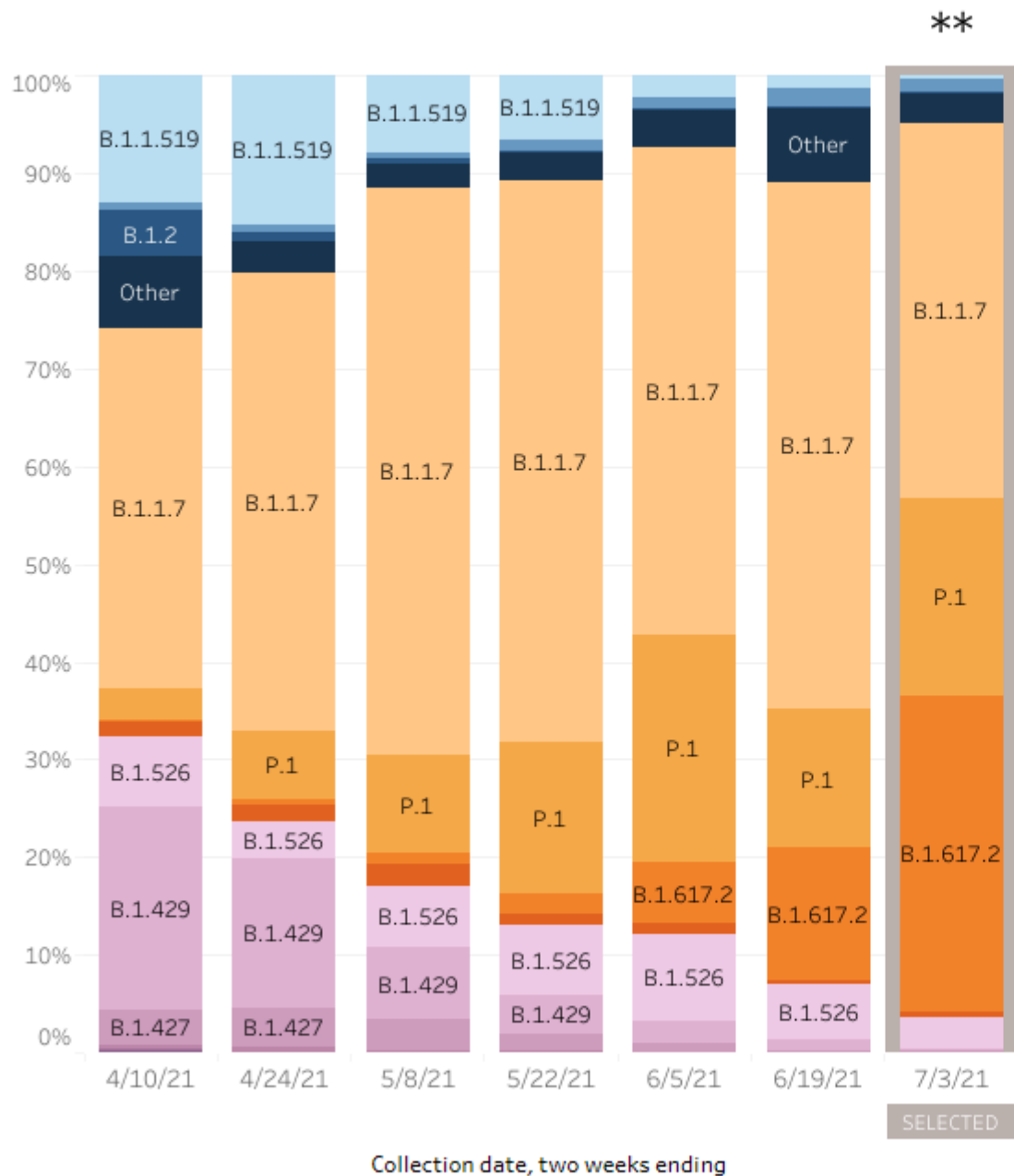
\* Other represents >200 additional lineages, which are each circulating at <1% of viruses

\*\* These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion.

HHS Region 10: 3/28/2021 – 7/3/2021

HHS Region 10: 6/20/2021 – 7/3/2021 NOWCAST



Region 10 - Alaska, Idaho, Oregon, and Washington

	Lineage	Type	%Total	95%PI	
<b>Most common lineages #</b>	B.1.1.7	Alpha	VOC	38.3%	23.5-55.9%
	B.1.617.2	Delta	VOC	32.4%	17.6-47.1%
	P.1	Gamma	VOC	20.3%	8.8-35.3%
	B.1.526	Iota	VOI	3.2%	0.0-8.8%
	B.1			1.2%	0.0-5.9%
	B.1.1.519			0.4%	0.0-2.9%
<b>Additional VOI/VOC lineages #</b>	B.1.2			0.0%	0.0-2.9%
	B.1.351	Beta	VOC	0.5%	0.0-2.9%
	B.1.429	Epsilon	VOI	0.2%	0.0-2.9%
	B.1.427	Epsilon	VOI	0.1%	0.0-2.9%
	B.1.525	Eta	VOI	0.1%	0.0-2.9%
	B.1.617.1	Kappa	VOI	0.0%	0.0-2.9%
	P.2	Zeta	VOI	0.0%	0.0-2.9%
<b>Other*</b>	Other			3.3%	0.0-11.8%

\* Other represents >200 additional lineages, which are each circulating at <1% of viruses

\*\* These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

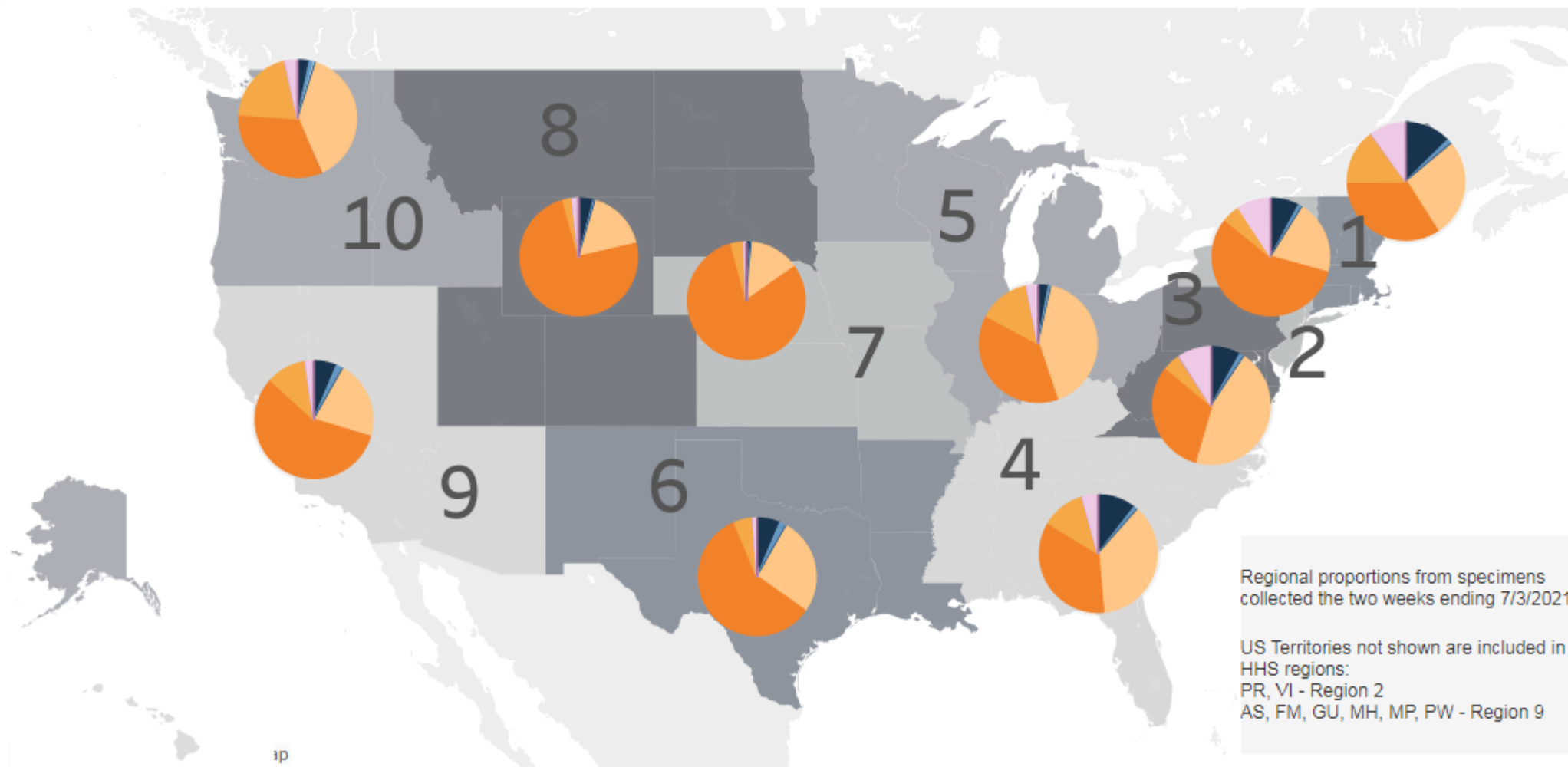
# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion. AY.1 and AY.2 are aggregated with B.1.617.2.

SELECTED

AY.1 and AY.2 are aggregated with B.1.617.2.

Collection date, two weeks ending

### United States: 6/20/2021 – 7/3/2021 NOWCAST



Updated July 6, 2021

# **SARS-CoV-2 Sequencing and Variants in Washington State**

**Washington State Department of Health**

**July 07, 2021**

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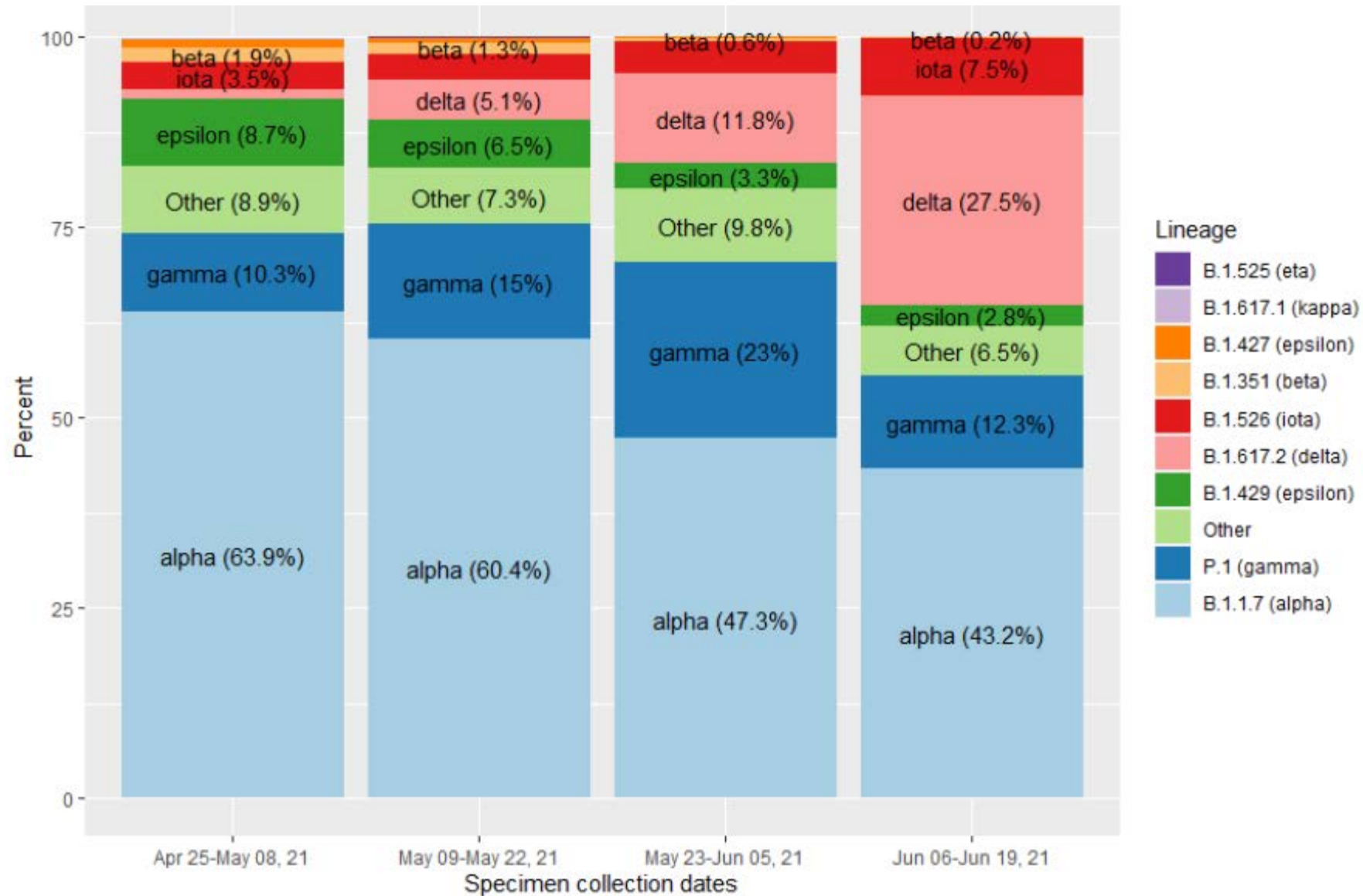
Name	Area of emergence	CDC designation	Cumulative Washington cases detected	Earliest specimen collection date	Most recent specimen collection date
B.1.1.7 (alpha)	United Kingdom	Variant of concern	8,192	2021-01-07	2021-06-28
B.1.351 (beta)	South Africa	Variant of concern	224	2020-01-29	2021-06-28
P.1 (gamma)	Brazil	Variant of concern	1,749	2021-02-06	2021-06-26
B.1.617.2 (delta)	India	Variant of concern	656	2021-04-03	2021-06-28
B.1.427 (epsilon)	California	Variant of interest	386	2020-12-11	2021-05-28
B.1.429 (epsilon)	California	Variant of interest	3,089	2021-11-20	2021-06-24
B.1.526 (iota)	New York	Variant of interest	576	2021-01-21	2021-06-27
B.1.525 (eta)	New York	Variant of interest	71	2021-02-02	2021-05-13
P.2 (zeta)	Brazil	Variant of interest	37	2021-01-28	2021-04-20
B.1.617.1 (kappa)	India	Variant of interest	42	2021-03-22	2021-05-04
B.1.617.3	India	Variant of interest	0		

- Sequencing can be performed on stored specimens at any time, so the earliest collection date may change as additional specimens are sequenced.
- B.1.617 has been broken down to multiple sublineages: B.1.617.1, B.1.617.2, B.1.617.3. Although the original designation of B.1.617 is still listed on the CDC website as a variant of interest, it will not be tracked on this report because no sequences get assigned as this variant.

### Variants of Concern – Detections by County

County	B.1.1.7 (alpha) count	B.1.351 (beta) count	P.1 (gamma) count	B.1.617.2 (delta) count
Skamania	2	0	0	0
Snohomish	994	17	164	52
Spokane	142	1	94	1
Stevens	8	0	1	0
Thurston	105	4	6	1
Wahkiakum	4	0	2	0
Walla Walla	7	0	4	1
Whatcom	379	3	176	1
Whitman	62	0	5	0
Yakima	190	11	87	62

# SARS-CoV-2 Lineages Circulating in Washington State



# Variants

- Delta is rapidly overtaking Alpha as the dominant variant in the United States
- Delta is more transmissible than other highly transmissible variants (Alpha and Beta)
- Delta and some other variants have less response to post-infection sera, post-vaccination sera, and to some immunotherapy agents so vaccine breakthrough cases and reinfections are more likely to occur



# COVID-19 Seroprevalence (Infection-Acquired Immunity)

Last Updated:  
05/26/2021

# United States COVID-19 Seroprevalence



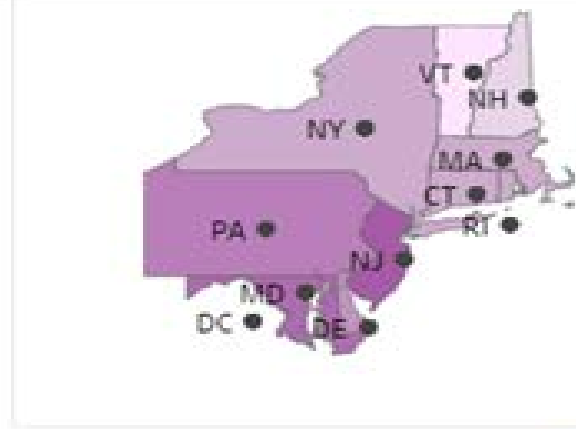
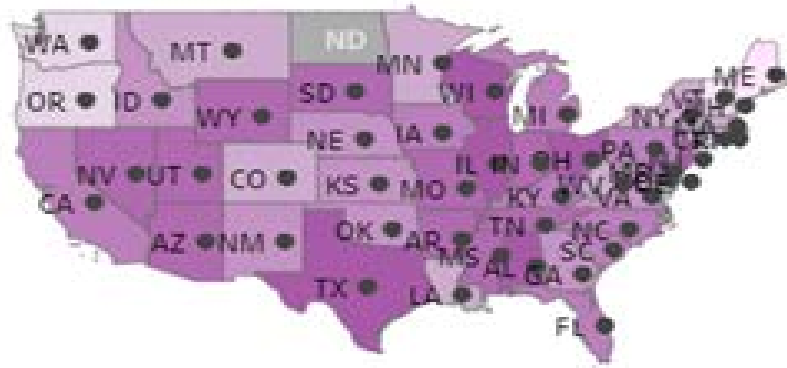
About the Study



Select a Two Week Period to View

2020

2021



Viral antigen target  
(seroprevalence interpretation) ?

Spike (% infected or vaccinated) ■

Nucleocapsid (% infected) ●

Mix (Mix of % infected and % infected or vaccinated) ▲



## WA Seroprevalence Data

April 2021 (Second Half)

Seroprevalence Estimate

**6.6%**

95% Confidence Interval: 4.9%-8.2%

Number of Estimated Infections

**481,000**

95% Confidence Interval: 359,000-597,000

Total Number of Cases Reported by End of  
4/30/2021

**401,549**

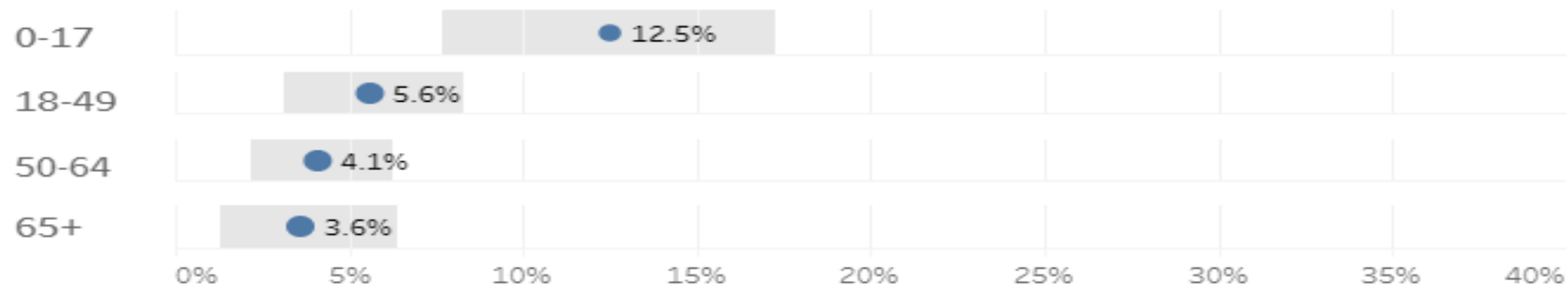
Antigen target:  
Nucleocapsid (% infected)



Catchment Area: Statewide

Number of Samples Tested: 1,301

### Age Specific Seroprevalence Estimate



Samples

0-17	215
18-49	333
50-64	427
65+	326

### Sex-Specific Seroprevalence Estimate



550

751

# Vaccination Rates

Where and when are  
vaccinations being given?**How many people are getting  
vaccinated?**

Who is getting vaccinated?

**People Initiating Vaccination**

People Fully Vaccinated

**COVID-19 IN WASHINGTON STATE** **People Initiating Vaccination (Receiving at least 1 dose)**

DATA AS OF 7/10/2021 PT

This chart shows the number of people in Washington initiating vaccination (receiving at least 1 dose). People initiating vaccination represent the total number of people who have received at least one dose of any type of COVID-19 vaccine. Individuals who are fully vaccinated are included in the count of both People Initiating Vaccination and People Fully Vaccinated. Please note, the measures "vaccines given" and "people vaccinated" are not comparable. Vaccines given counts number of doses given in a location. People vaccinated counts number of Washington residents initiating vaccination and

## SELECT COUNTY

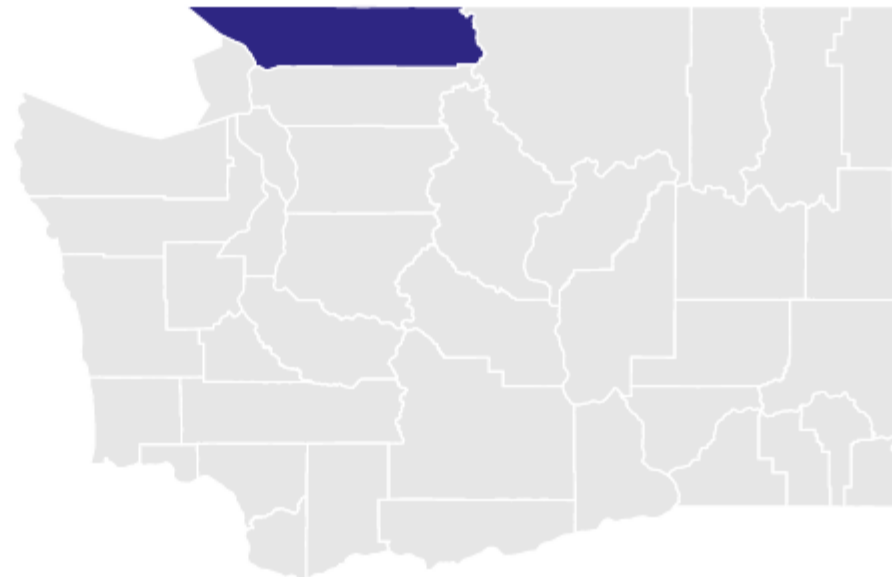
- 
- Pend Oreille County
  - Pierce County
  - San Juan County
  - Skagit County
  - Skamania County
  - Snohomish County
  - Spokane County
  - Stevens County
  - Thurston County
  - Wahkiakum County
  - Walla Walla County
  - Whatcom County
  - Whitman County
  - Yakima County

Map View

Tabular View

Percent of Total Population Initiating Vaccination	<b>59.8%</b>
Percent of Total Population Fully Vaccinated	<b>54.5%</b>
Percent of Population Initiating Vaccination (16+)	<b>70.1%</b>
Percent of Population Fully Vaccinated (16+)	<b>64.1%</b>
Percent of Population Initiating Vaccination (12+)	<b>68.6%</b>
Percent of Population Fully Vaccinated (12+)	<b>62.5%</b>

## TOTAL POPULATION INITIATING VACCINATION (RECEIVING AT LEAST 1 DOSE)



## Legend

- 60%+
- >45% to 60%
- >30% to 45%
- >15% to 30%
- >0% to 15%
- Zero

County data for people initiating vaccination are based on the vaccine recipient's county of residence. 118,076 people initiating vaccination do not have a county reported. For 362 people who initiated vaccination, we are unable to determine whether all

County-level information can be found on Local Health Jurisdiction (LHJ) [websites](#)



**COVID-19 IN WASHINGTON STATE** [Age](#)

DATA AS OF 7/7/2021 23:59

This chart shows the percentage of individuals who have been vaccinated within each age group. [Learn More](#)

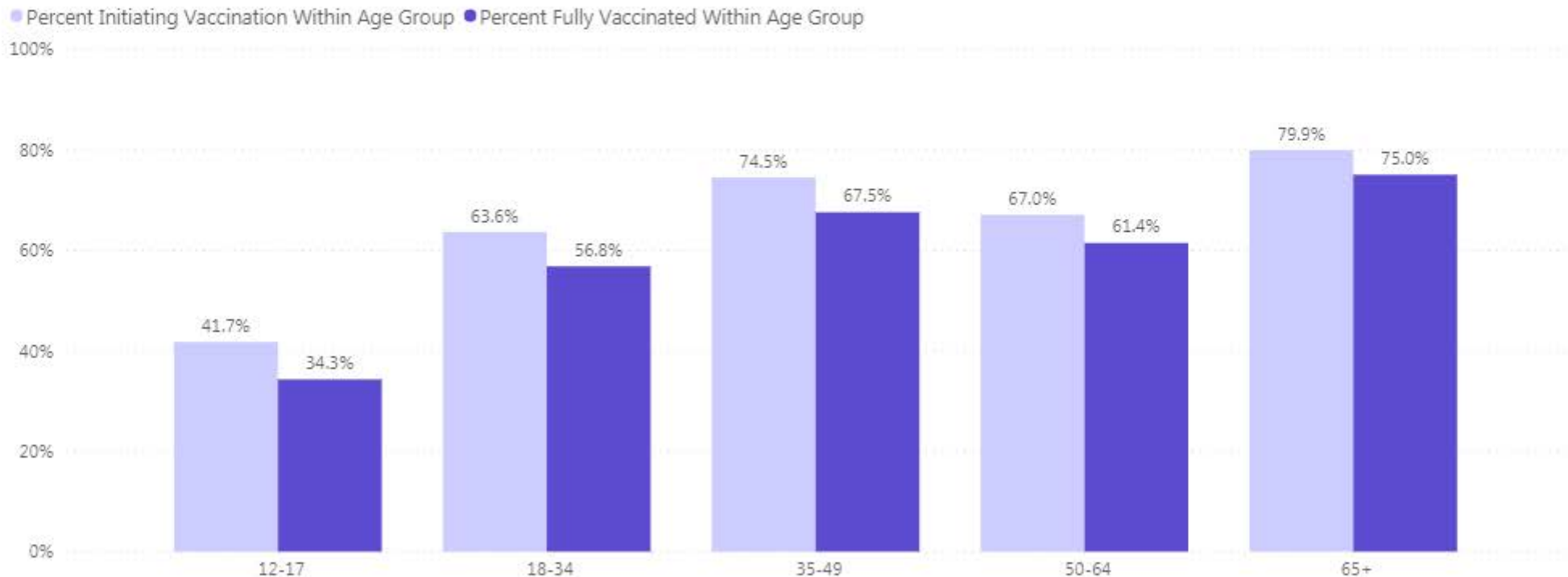
State Level

**County Level**

SELECT COUNTY

- 
- Lewis County
- Lincoln County
- Mason County
- Okanogan County
- Pacific County
- Pend Oreille Cou...
- Pierce County
- San Juan County
- Skagit County
- Skamania County
- Snohomish County
- Spokane County
- Stevens County
- Thurston County
- Unassigned County
- Wahkiakum Coun...
- Walla Walla Coun...
- Whatcom County
- Whitman County
- Yakima County

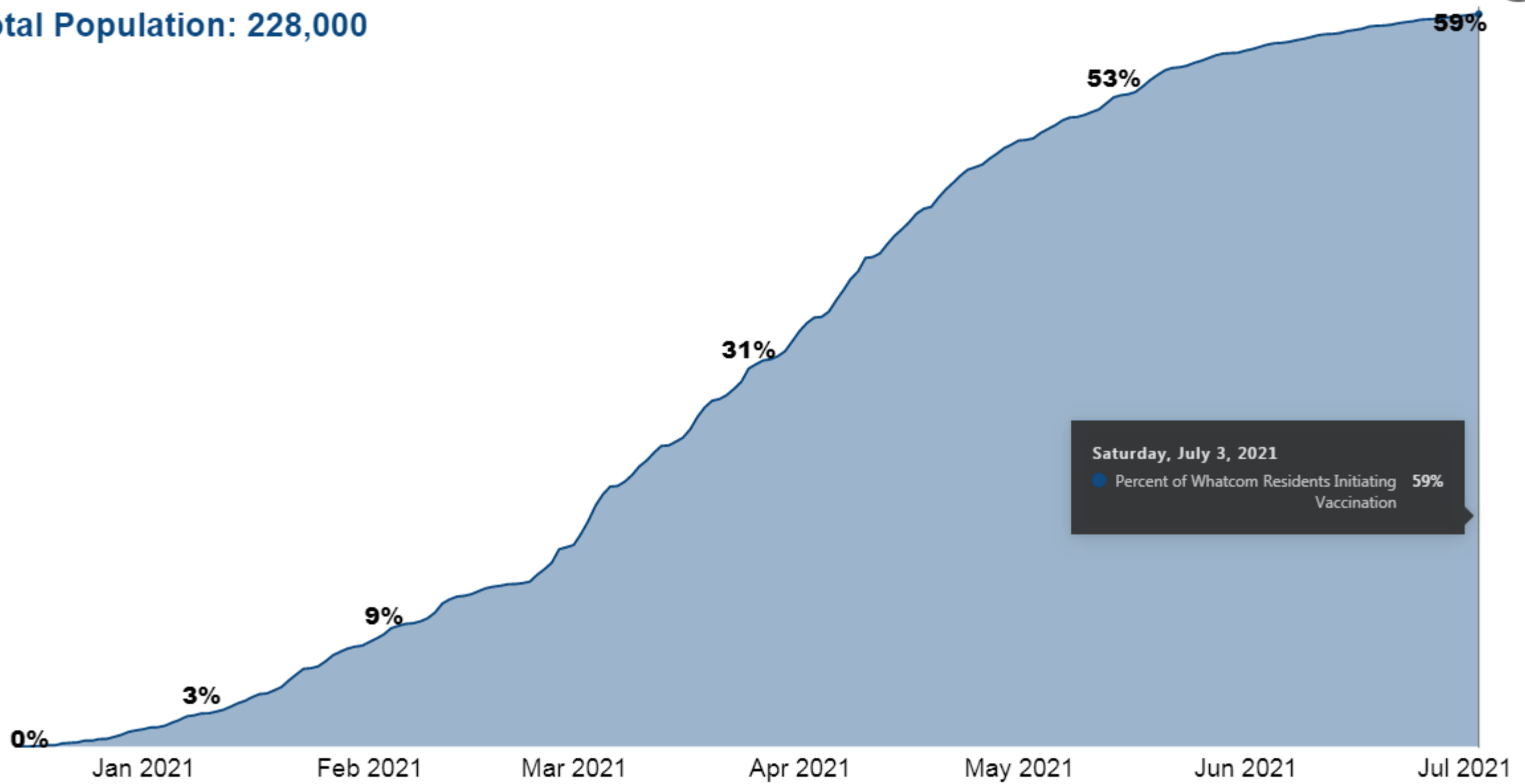
PERCENT VACCINATED, WITHIN AGE GROUP



To protect privacy, counts of less than 10 are not reported. Some additional values that count allow someone to calculate those small numbers are also not reported.

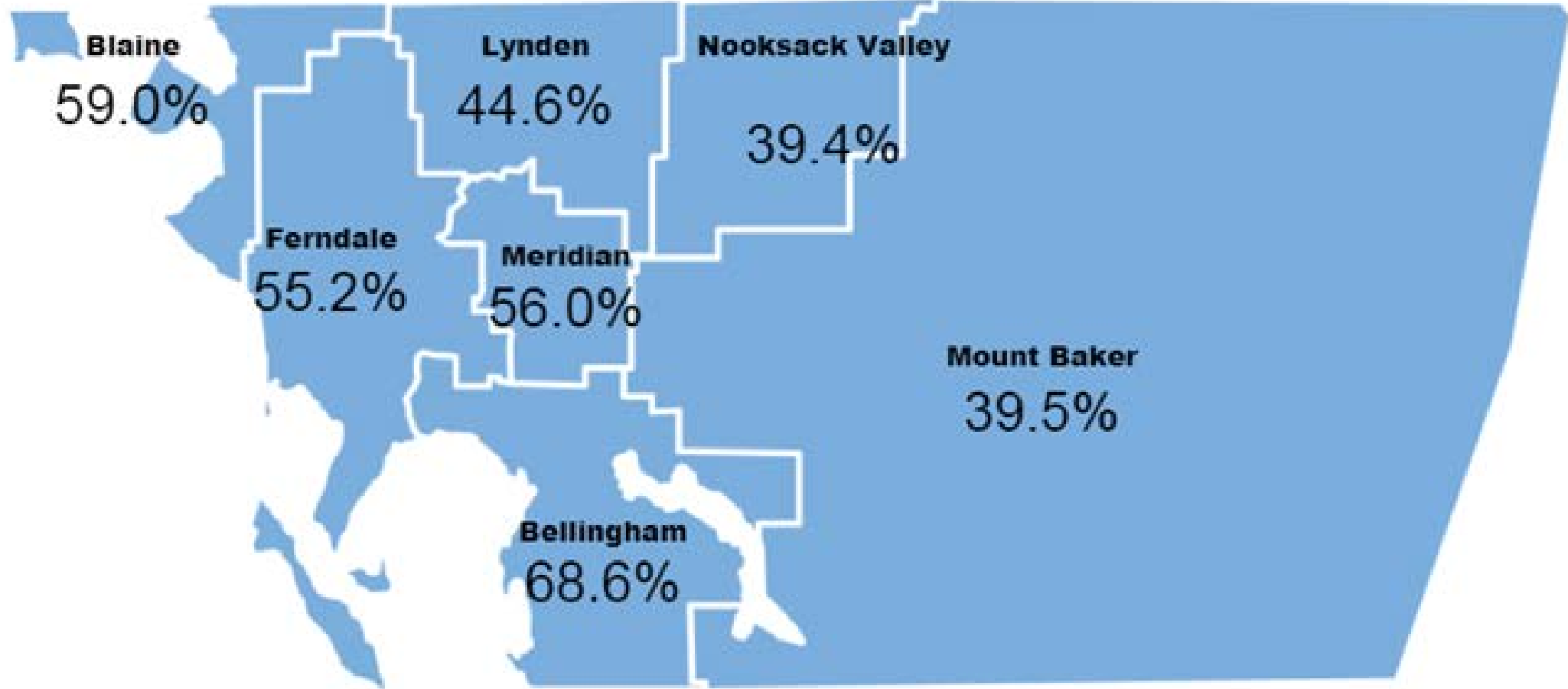
# Percent of Whatcom Residents Initiating COVID-19 Vaccination.

Total Population: 228,000





Whatcom County: Percent of Population who have Initiated COVID-19 Vaccination by Sub-County Area



<https://www.whatcomcounty.us/coviddata>

Display accessed 7/7/21, data from DOH as of 7/3/21

# COVID-19 Seroprevalence

- Current seroprevalence surveys for antibodies to nucleocapsid indicate the extent of previous infection.
- Prior infection reduces risk of reinfection by 80-85% over the seven months following infection.
- WA seroprevalence is relatively low; natural immunity estimated at 6.6% compared to most other states (25-35%).
- Post-infection and post-vaccine sera is less effective at neutralizing Delta and some other variants, indicating increased risk of reinfection and breakthrough cases

# Vaccine Efficacy

- Prevention of infection >64%
- Prevention of symptomatic COVID-19 >85%
- Prevention of hospitalization for COVID-19 >87%

<https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/fully-vaccinated-people.html>

- “In the United States as of April 30, 2021, 10,262 breakthrough infections had been reported to the CDC among 101 million fully vaccinated individuals [**0.01%, or one-hundredth of one percent**]. Of those with breakthrough infection, only 10 percent were hospitalized and 2 percent died, although not all hospitalizations or deaths were related to COVID-19. Twenty-seven percent of infections were asymptomatic.”

COVID-19 Vaccine Breakthrough Infections Reported to CDC — United States, January 1–April 30, 2021 Weekly / May 28, 2021

# Vaccine Safety

FDA – Data monitoring and safety board must approve application for clinical trials

- Phase 1 trial - safety of the vaccine candidate. Escalating doses given to healthy volunteers to determine side effects and tolerability.
- Phase 2 trial - expands recruitment and may include participants with health conditions such as obesity, cancer, and diabetes. Active recruitment for participants of various demographics. Continued testing of the safety of the vaccine and its initial efficacy and how it affects the immune system.
- Phase 3 trial - recruit thousands of participants to measure the efficacy of the vaccine in preventing disease.

- Manufacturers submit their data with applications for EUA or licensing. Reviewed by FDA teams and by independent advisory board (VRBPAC)
- Key to rapid development of COVID-19 vaccines was multiple vaccine platforms, previous development of vaccines for SARS-CoV-1, MERS, and others, and gene sequencing and sharing of genome within weeks of initial isolation of SAR-CoV-2
- Simultaneous Phase 2 and 3 trials, with public funding of trials allowed for compression of timeline with maintenance of safety review.
- VAERS, v-safe, Vaccine Safety Datalink (VSD), Clinical Immunization Safety Assessment (CISA) for post-authorization safety surveillance

# COVID-19 Vaccine Safety and Efficacy

- Although response of variants to vaccines vary, all provide significant protection against current VOC, markedly reduce risk of severe disease/hospitalization/death, and reduce transmission.
- New info on Delta variant response to vaccines show little efficacy from first dose mRNA vaccine, need full series to have significant protection.
- FDA and CDC reviewing rare cardiac inflammation events following mRNA vaccine, clotting events following adenovirus vector vaccines. Vaccine safety system is identifying issues and investigating.
- Risk of cardiac inflammation is higher and more severe with COVID-19 infection than from vaccine. AAP, ACC, CDC strongly recommend vaccination.
- Guillan-Barre syndrome (about 100 cases) have been reported following J&J vaccine, not mRNA vaccines. Rare event. FDA issued a warning.

# Key Takeaways

- Delta variant is poised to become the dominant variant in Washington and in Whatcom County.
- Infection provides immunity but at the cost of risk of hospitalization, long COVID, and transmission to others.
- We may be lucky and the trends continue to be good. We can hope for the best, but must prepare for the worst.
- Vaccines are still effective against variants, and still our safest and most effective tool.