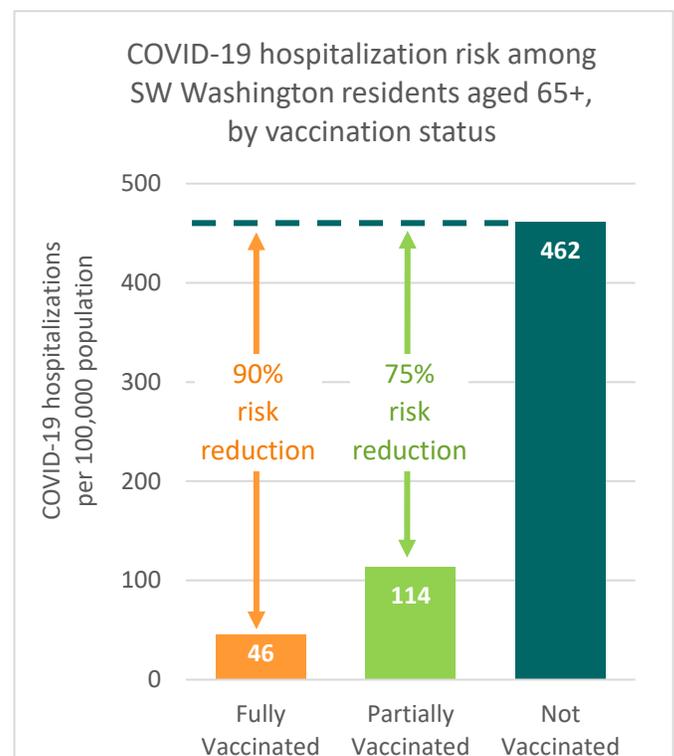
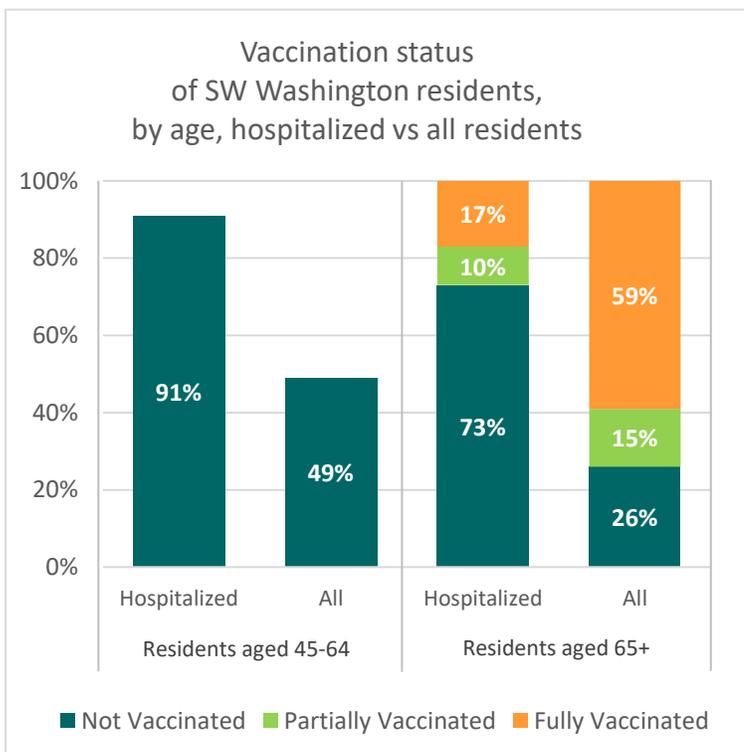


# COVID-19 Hospitalization Rates in SW Washington by Age and Vaccination Status

## Key findings

- SW Washington residents age **65+** get **some protection** when partially vaccinated and **maximum protection** when fully vaccinated:
  - Being partially vaccinated reduces the risk of hospitalization by: **75%**
  - Being fully vaccinated reduces the risk of hospitalization by: **90%**
- Data show vaccinated residents between the ages of **45-64** are **well protected**:
  - Out of the 61,620 residents age 45-64 who were fully vaccinated between March 22-June 27, 2021, **fewer than 10** were hospitalized for COVID-19. The number is too small to calculate a statistically stable risk estimate.
  - The hospitalization data did show that 91% of hospitalized residents ages 45 to 64 years old were unvaccinated. For comparison, 49% of the population in that age group in our region were unvaccinated.



*See next page for answers to FAQ's*

If the vaccine works, why are vaccinated people still hospitalized for COVID-19?

There are more hospitalizations among residents aged 65+ who are fully vaccinated than partially vaccinated. Does that mean that having one dose is better than two?

## *If the vaccine works, why are vaccinated people still hospitalized for COVID-19?*

This is a very common question! Some people will be hospitalized for COVID-19 even after they are vaccinated. This is true for most things people do to protect their health. For example, if someone wears a seat belt while driving a car and gets into a crash, their risk of dying is much lower than if they weren't wearing a seat belt. And, their risk isn't zero.

Vaccines work the same way. When measuring whether or not vaccines help to reduce the risk of hospitalization for COVID-19, we count how many people who are hospitalized for COVID-19 are fully, partially, and not vaccinated.

We then calculate a risk level by dividing the number of hospitalizations in each group by the total number of people who are fully, partially, and not vaccinated.

Finally, we compare the risk levels for these three groups. In this report, we found that the risk of hospitalization was reduced by 75% when residents aged 65+ were partially vaccinated, and 90% when fully vaccinated.

If someone wears a seat belt while driving a car and gets into a crash, their risk of dying is much lower than if they weren't wearing a seat belt.

And, their risk isn't zero.

## *There are more hospitalizations among residents aged 65+ who are fully vaccinated than partially vaccinated.*

### *Does that mean that having one dose is better than two?*

A lot of people are asking whether a second dose of the two-dose vaccine types (Pfizer BioNTech and Moderna) are necessary. Readers may notice that there are more hospitalizations among residents aged 65+ who are fully vaccinated than partially vaccinated, and think that means that having one dose of the vaccine is better than two. However, this is not an accurate conclusion to make because there are so many more fully vaccinated residents aged 65+ than partially vaccinated ones.

When we look at the hospitalization data for residents aged 65+ on page 3, we see that there are **62% more hospitalized residents** who are fully vaccinated than partially vaccinated (39 vs 24), but there are **300% more total residents** who are fully vaccinated than partially vaccinated (84,174 vs 21,040).

The "COVID-19 hospitalization risk" graph on page 1 shows that fully vaccinated residents do in fact have better protection (90% risk reduction) than partially vaccinated ones (75% risk reduction).

Among SW Washington residents aged 65+, there are:

**62% more hospitalized residents** who are fully vaccinated than partially vaccinated (39 vs 24),

but there are

**300% more total residents** who are fully vaccinated than partially vaccinated (84,174 vs 21,040).

## Background

This report includes data for residents of SW Washington, which includes Clark, Cowlitz, Lewis, Pacific, Skamania, and Wahkiakum counties.

We looked at the vaccination status of residents who were hospitalized for COVID-19 as well as how many total residents were fully, partially, or not vaccinated. This report includes hospitalization and vaccination data from March 22-June 27, 2021.

We used these terms to define vaccination status:

- Someone is considered **fully vaccinated** two weeks after receiving the one-dose Johnson & Johnson vaccine or two weeks after receiving a second dose of the Pfizer or Moderna vaccine.
- Someone is considered **partially vaccinated** after getting their first dose but before they are fully vaccinated.

COVID-19 hospitalization data were obtained from the Washington State Disease Reporting System (WDRS) and vaccination data were obtained from the Washington State Immunization Information System (WAIS).

The figures in this report have been adjusted to correct for known and estimated gaps in our vaccination data. These adjustments account for the estimated 7% of people who have received a COVID-19 vaccine but are not WAIS, and the estimated 10% of COVID-19 hospitalizations that are not matched correctly with their vaccination record due to data entry errors. Adjustment figures are based on recommendations from the Washington State Department of Health.

Vaccine coverage increased substantially over the time period covered in this report. Our analysis took this increase into account, and vaccine status/coverage figures represent the average number of residents with each vaccination status over the study period.

All differences identified in this report are statistically significant.

## Data

	COVID-19 hospitalizations	Residents' vaccination status	Hospitalization risk per 100,000 population	Hospitalization risk reduction compared to not vaccinated
<b>Ages 45-64</b>				
Not Vaccinated	91% (204)	49% (94,248)	216	-
Partially Vaccinated	n/a <sup>+</sup>	19% (37,285)	-	-
Fully Vaccinated	n/a <sup>*</sup>	32% (61,620)	-	-
Total	100% (224)	100% (193,154)		
<b>Ages 65+</b>				
Not Vaccinated	73% (173)	26% (37,353)	462	
Partially Vaccinated	10% (24)	15% (21,040)	114	75%
Fully Vaccinated	17% (39)	59% (84,174)	46	90%
Total	100% (236)	100% (142,567)		

\*Numbers are too small to calculate a statistically stable rate estimate.

<sup>+</sup>Suppressed to preserve confidentiality

## Acknowledgements

We would like to thank the local health jurisdictions that partnered with us on this project:

- Clark County Public Health
- Lewis County Public Health and Social Services
- Pacific County Health and Human Services
- Skamania County Community Health
- Wahkiakum County Health and Human Services

We would also like to thank the Washington State Department of Health for their assistance in obtaining these data and technical assistance with analysis.