# The COVID Pandemic

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## What is COVID?

COVID is a highly transmissible and potentially deadly virus that spreads through contaminated aerosolized droplets. Currently over 900,000 people in the U.S. have died from this virus. A person who is infected with COVID can infect others close to themselves **for about 48 hours before they are symptomatic and/or aware that they are infected. This means that everyone must be considered as potentially infected.** As a note, the greatest concentration of this virus is found in the nasal membranes and then in the oral cavity. Thus, **a mask must cover both the nose and the mouth.**

**Masks do work**. It has been reported wearing a mask decreases the infection rate by 83% with N95 and KN95 masks, 66% with surgical type masks and 56% with cloth masks. Childcare facilities must close when a staff or child is suspected or confirmed with a COVID infection. It has been reported that required mask usage decreases closures by 14%.

Unfortunately, the virus also has an ability to rapidly mutate. New variants mean that the immunity a person has from a previous infection or vaccination might not prevent an infection by the new variant. We currently deal with this on a yearly basis with influenza, requiring a yearly flu shot to help prevent infection by the current predominate strain. We may find a similar situation is required with the COVID virus. With the high level of international travel, variants developing in one country can be rapidly spread internationally. Within the past month a new variant has been identified in Denmark and already multiple cases have been identified in the US. It is unlikely that COVID will be brought under control in the third-world countries in the near future. Therefore, until COVID is controlled world-wide, everyone will be potentially at risk for a new, possibly more virulent variant.

Unfortunately, a small percentage of people have experienced a new infection even after having recovered from a previous case or having been fully vaccinated and "boosted." These "breakthrough" infections are usually less severe to individuals but **does allow spread of the infection to others.**

**So, what does everyone need to do to help prevent becoming infected or infecting others with COVID or a new variant?**

1. **Get fully vaccinated including a booster dose. Recognize that as new variants arise, additional vaccinations may be required.**
2. **Get your entire family fully vaccinated, including booster doses as needed.**
3. **Continue to use high efficiency (N95 or KN95) face masks when close to others.**
4. **Assume everyone you meet, including those who have been infected and/or fully vaccinated, can still be transmitting the virus.**
5. **Continue social distancing and avoid large groups.**
6. **Continue diligent hand washing**
7. **If you come in contact with a person infected with COVID, you MUST quarantine for 5 days and then test negative before resuming activities involving contact with other people.**
8. **If you come in contact with another person who has come in contact with a known COVID infection case, you need to be kept aware of that person's symptoms and test results, but probably do not need to quarantine until that person's status as infected is actually suspected from symptoms or a positive test.**

9. **If you are spending time in an enclosed space with someone you don't know well and are not masked, make sure you both have had a negative PCR rapid test just before the meeting.**
10. **If you develop any symptoms such as fever, cough or malaise, obtain a rapid PCR test. DO NOT IGNORE mild symptoms!**
11. **If you test positive, then you MUST quarantine for minimum of 5 days or until you are symptom free.**
12. **If you test positive, notify people you had contact with in the preceding two days and advise them to also obtain a rapid test for themselves.**

## COVID Data 1/31/22

| | Population | Fully Vaccinated (% of Population) | Covid Cases (% of Population) | Covid deaths (% of cases) |
|---|---|---|---|---|
| **US** | 332,508,231 | 211,964,555 **(65%)** | 75,400,000 **(22.7%)** | 891,000 **(1.18)** |
| **Washington** | 7,887,965 | 5,334,250 **(70.0%)** | 1,339,743 **(16.9%)** | 10,838 **(0.81%)** |
| **Idaho** | 1,896 652 | 933,891 **(52%)** | 382,466 **(20.1%)** | 4,427 **(1.16%)** |
| **Oregon** | 4,325,290 | 2,862,932 **(67%)** | 638,823 **(14.7%)** | 6,124 **(0.96%)** |

This chart contains online data comparing the U.S. as a whole to the states in the NSP-PNWD. Note that as of this writing, "fully vaccinated" means 2 doses of the Pfizer and Moderna vaccines and 1 dose of the J&J Vaccine. Clearly the above data shows that Idaho with the **lowest rate of vaccination has the highest rate of COVID infections and deaths within our ski patrol division.**

Below is a chart which breaks down the entire population of the US showing how many are fully vaccinated, the percentage fully vaccinated compared to those with only one dose of vaccine and that percentage.

**US Population by age: Fully Vaccinated/ One Dose Vaccine**

| Age | # Fully Vaccinated | % Fully Vaccinated | # with One Dose | % with One Dose |
|---|---|---|---|---|
| 5-11 | 6,253,019 | 21.75% | 8,761,722 | 30.48% |
| 12-17 | 14,166,772 | 55.00% | 16,754,973 | 66.21% |
| 18-24 | 18,581,326 | 60.75% | 22,947,530 | 75.03% |
| 25-39 | 44,235,481 | 64.68% | 53,029,584 | 77.54% |
| 40-49 | 29,675,552 | 72.75% | 34,552,591 | 84.71% |
| 50-64 | 50,616,105 | 79.51% | 58,299,990 | 91.42% |
| 65-74 | 28,926,993 | 90.72% | 33,308,346 | 100.00% |
| 75 + | 19,487,921 | 85.08% | 22,572,592 | 98.55% |

In order to end this pandemic, a national immunity rate of 85% is required for all people in the U.S. regardless of age. While this has been essentially achieved in the over 50 age group, there is a major need to get people under the age of 50 vaccinated – especially our children under the age of 12.

# Individual State Data

The following are data from each of the states in our ski patrol division. Unfortunately, each state authority has presented its data in different formats. I will then tie all this data together in the discussion at the end of this section.

## Washington State Data

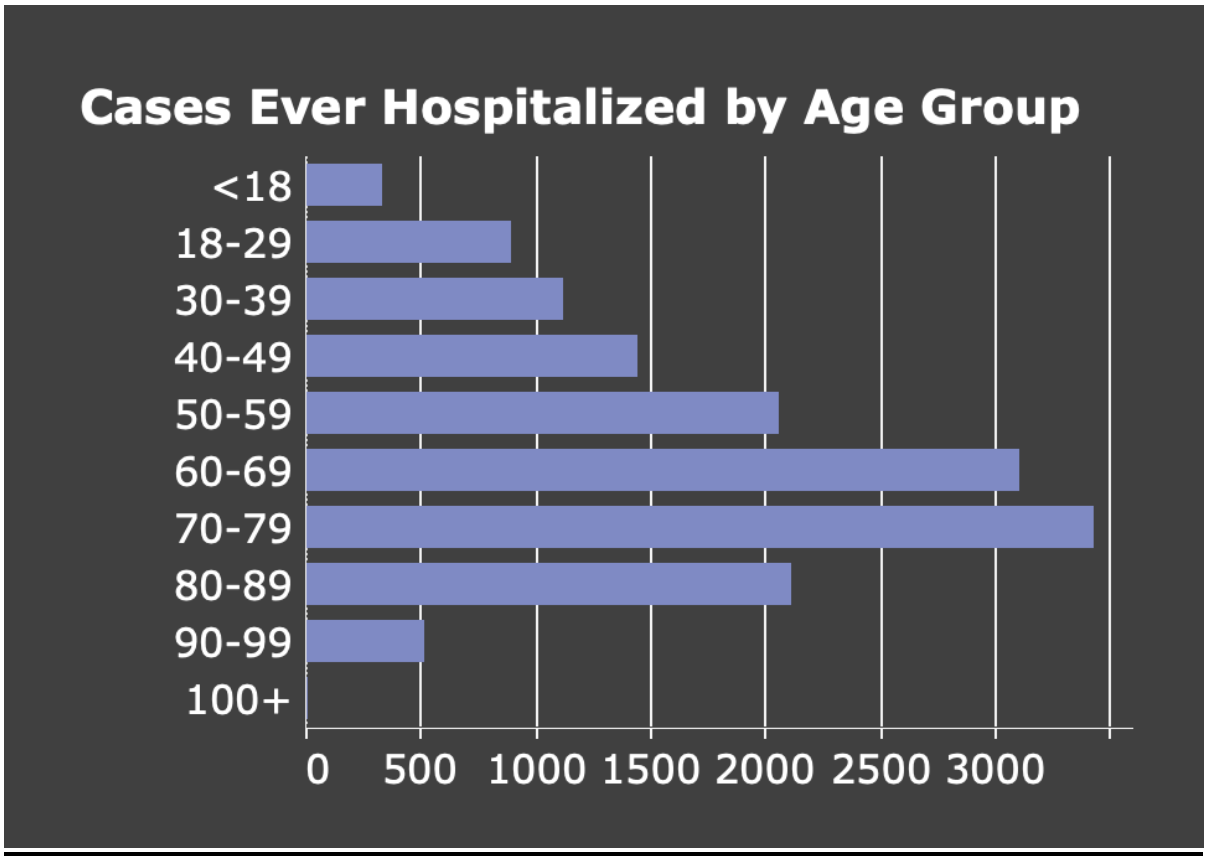
**The COVID rate of infection** among unvaccinated **12-34 year-olds is 3 times higher** than those vaccinated of the same age. The rate increases to **4 times higher among 35-64 year-olds** and is **5 times higher among 65+ year-olds.**

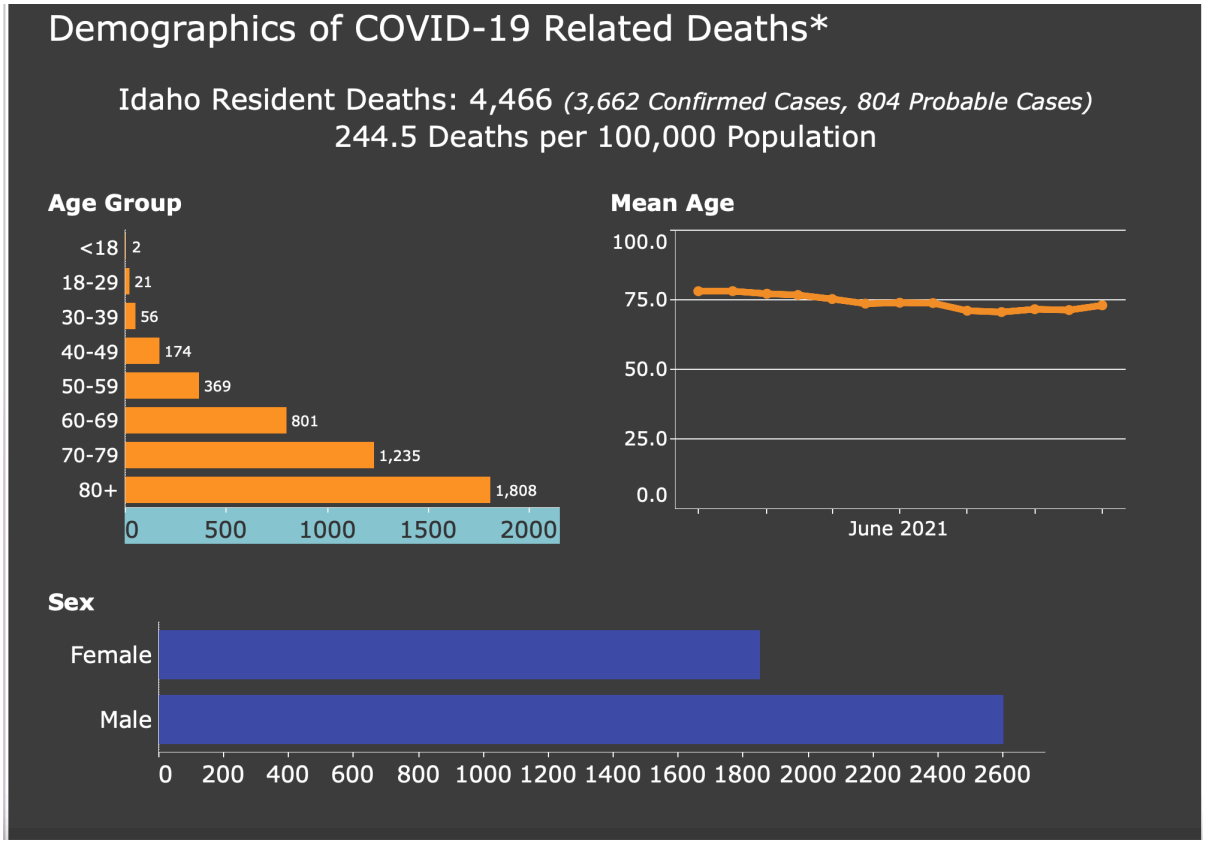
**Hospitalization for a COVID infection** with Omicron from Dec 22nd, 2021 to Jan 18th, 2022 for unvaccinated **12-34 year-olds was 5 times higher** than vaccinated individuals of the same age. That increases to **7 times higher among 35-64 year-olds** and **8 times higher among 65+ year-olds.**

**Death from an Omicron infection** for unvaccinated **65+ year-olds was 9 times higher** compared to vaccinated individuals of the same age.

***In Washington state, while the unvaccinated represent only 18.3% of the population, they presented with 64.6% of all COVID cases, 75.3% of all COVID hospitalizations and 74.5% of all COVID deaths!***

## Idaho Data






This data from Idaho clearly demonstrate that increasing age results in increased risk of hospitalization and death.

| | |
|---|---|
| **143,288** Estimated Recovered | |
| **15,050** Ever Hospitalized | |
| **2,537** Ever Admitted to ICU | |
| **14,216** Asymptomatic | |
| **14,768** Health Care Workers | |
| **42,191** Vaccine Breakthrough Cases | |
| **38** Multisystem Inflammatory Syndrome in Children (MIS-C) Cases | |

**Cases and Case Rates per 100,000 by Vaccination Status Since May 15, 2021**

| | Fully Vaccinated** | | NOT Fully Vaccinated | |
|---|---|---|---|---|
| | Cases | Rate | Cases | Rate |
| Cases | 41,894 | 5,418.7 | 146,038 | 13,700.0 |
| Hospitalizations | 928 | 120.0 | 5,403 | 506.9 |
| Deaths | 333 | 43.1 | 1,940 | 182.0 |

**The above chart shows there is a significant number of cases among health care workers (14,768). Breakthrough cases in the Idaho data was seen in 29.5% of all cases. It also shows those people who are not fully vaccinated have an infection rate 2.52 times higher, a hospitalization rate 4.25 times higher and a death rate 4.22 times higher than those people who are fully vaccinated**.

## Oregon Data

**Severity and rates of COVID-19 by age**

| Age group | Cases | % of total cases | Cases per 100,000 | Hospitalized | % Hospitalized | Deaths | % Fatal Cases |
|---|---|---|---|---|---|---|---|
| 0-9 | 55,804 | 8.8 | 11,901.1 | 361 | 0.6 | 2 | 0.0 |
| 10-19 | 77,288 | 12.2 | 15,315.8 | 434 | 0.6 | 3 | 0.0 |
| **20-29** | **122,821** | **19.4** | **22,303.0** | **1,470** | **1.2** | **31** | **0.0** |
| 30-39 | 112,146 | 17.7 | 18,919.0 | 1,986 | 1.8 | 94 | 0.1 |
| 40-49 | 92,700 | 14.6 | 17,180.7 | 2,621 | 2.8 | 250 | 0.3 |
| 50-59 | 74,132 | 11.7 | 13,887.0 | 3,801 | 5.1 | 569 | 0.8 |
| 60-69 | 51,725 | 8.2 | 9,444.1 | 5,077 | 9.8 | 1,143 | 2.2 |
| 70-79 | 29,059 | 4.6 | 8,258.8 | 4,853 | 16.7 | 1,494 | 5.1 |
| **80+** | **16,833** | **2.7** | **9,449.6** | **4,116** | **24.5** | **2,514** | **14.9** |
| Not Available | 1,368 | 0.2 | | 8 | 0.6 | 0 | 0.0 |
| **Total** | **633,876** | **100.0** | **14,851.6** | **24,727** | **3.9** | **6,100** | **1.0** |

This data demonstrates an average infection rate of 14.9% with the 20-29 year-old group having the highest infection rate of 22.3% and the 80+ year-old group an infection rate of 9.5%. Note that when comparing the 80+ age group to the 20-29 age group, the 80+ age group has only **13.7 % of the cases**, only **42.4% of the infection rate** and yet a **hospitalization rate that is 20.4 times higher** and a **death rate that is 14.9 times higher than the 20-29 year old group.**

**Ratio of rates for cases, hospitalizations, and deaths by race in contrast to the White race**

| Race | Cases | Hospitalizations | Deaths |
|---|---|---|---|
| > 1 race | 0.4 | 0.7 | 1.0 |
| American Indian/Alaska Native | 2.1 | 2.7 | 2.8 |
| Asian | 0.9 | 0.9 | 0.8 |
| Black | 1.8 | 3.0 | 2.2 |
| Pacific Islander | 1.6 | 4.7 | 4.6 |
| White | 1.0 | 1.0 | 1.0 |

The data show a very dramatic difference in the hospitalization and death rates comparing different ethnicities to the Whites. The specific cause is not explained. Further investigation would be needed, but one very possible explanation would be a difference in vaccination status between ethnic groups.

# Data Summary

The data show lower rates of vaccination among younger age groups. Currently, none of our 0-4 years-old are vaccinated and children 0-11 make up about 30% of currently hospitalized COVID patients. Our children receive multiple vaccinations as they grow up for polio, mumps, rubella, small-pox, etc. Those vaccines have been very successful in decreasing the incidence of these diseases. The data indicate the

COVID vaccine is just as safe as other childhood vaccines. It is anticipated the vaccine will be approved for 0-4 year-olds next month. It will then be critical that we get all 0-11 year-olds vaccinated.

**Although the data from the three states were collected and presented differently, collectively they do show:**

1. **The importance of being vaccinated.**
2. **Increased rates of vaccination result in the dramatic decrease of the number of cases and COVID deaths.**
3. **The older population is at much higher risk of hospitalization and death if they get infected.**
4. **Healthcare workers have a significant chance of being infected.**
5. **There currently is a racial disparity in infection rates.**
6. **Getting everyone vaccinated is a critical aspect to ending this pandemic.**
7. **A booster vaccine dose reduces the risk of symptomatic infections by 60 to 70%.**
8. **Special attention needs to be paid getting our children under 12 vaccinated.**