

Descriptive Epidemiology of COVID-19 in Northwest Tribes

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Overview: COVID-19 in NW Tribes

- Background of COVID-19
- Methods
- Results
- Summary



Background

- The impact of the COVID-19 pandemic on American Indian/Alaska Native (AI/AN) persons has been particularly severe.
- Aggregated data collected by States and the Centers for Disease Control and Prevention (CDC) have demonstrated higher incidence of infection, hospitalization and death for AI/AN people
- COVID-19 vaccination coverage among AI/AN people has been variable depending on data sources used.
- This study provides the first descriptive epidemiology of COVID-19 infection and vaccination among AI/AN persons served at six Indian Health Service (IHS) ambulatory clinics in the Northwest.



Methods

- Data were obtained through a systematic query of electronic medical records (EMR) from each of six IHS-operated ambulatory clinics – 1 clinic in Idaho, 2 clinics in Oregon, and 3 clinics in Washington
- Data for all laboratory tests to detect SARS CoV-2, the virus that causes COVID-19, from March, 2020 through March, 2022 were obtained.
- Age, sex, vaccination history and underlying comorbidities were also included.
- Outcomes included primary, repeat and breakthrough infections. For five of the clinics, information on COVID-deaths was also obtained.



Results



- Tests – Primary Infections and Re-infections



- Vaccines



- Deaths



Testing Results



70,556 tests
(Excludes 273 with
missing information)



19,167 individuals*
Mean Age = 35 years
53.5% Female



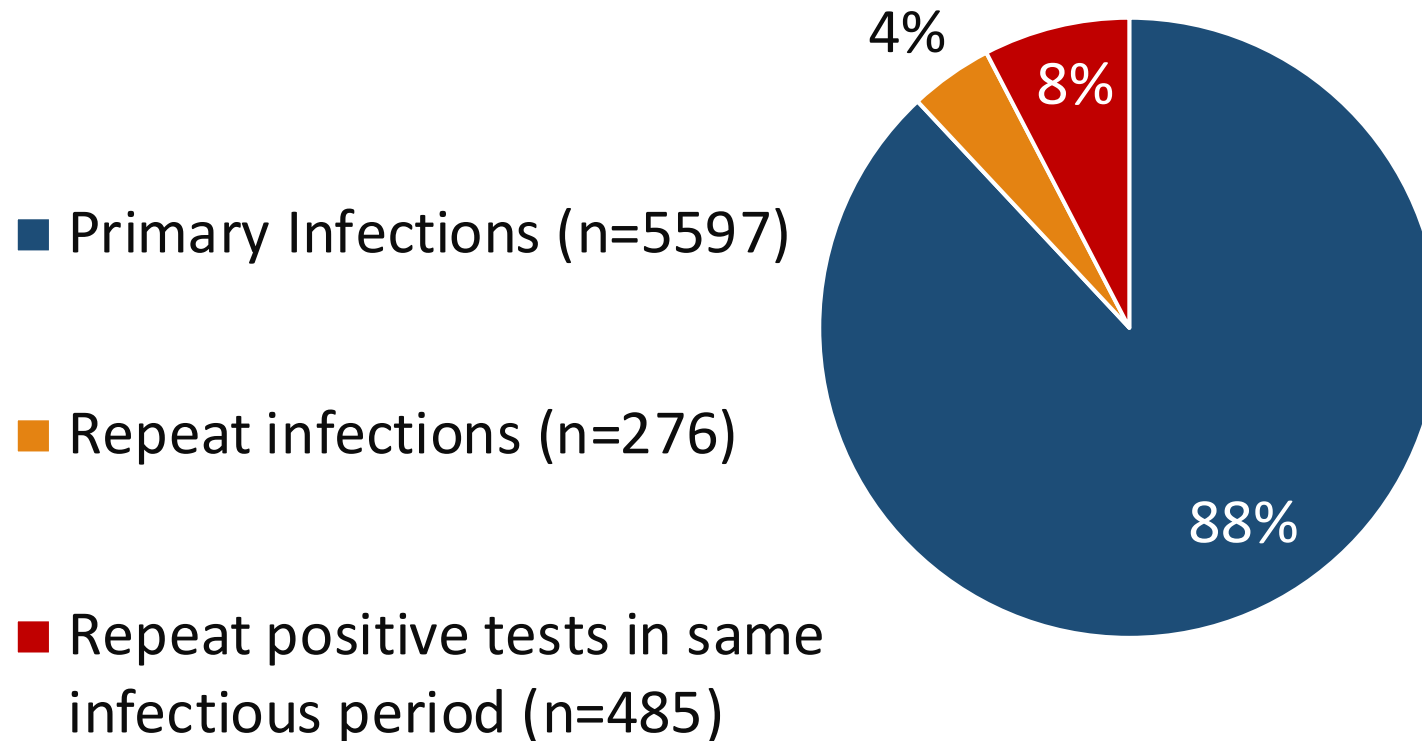
6,358 positive tests (9%)
5,597 Primary Infections
276 Re-infections

* Includes 74 deaths without IHS test data

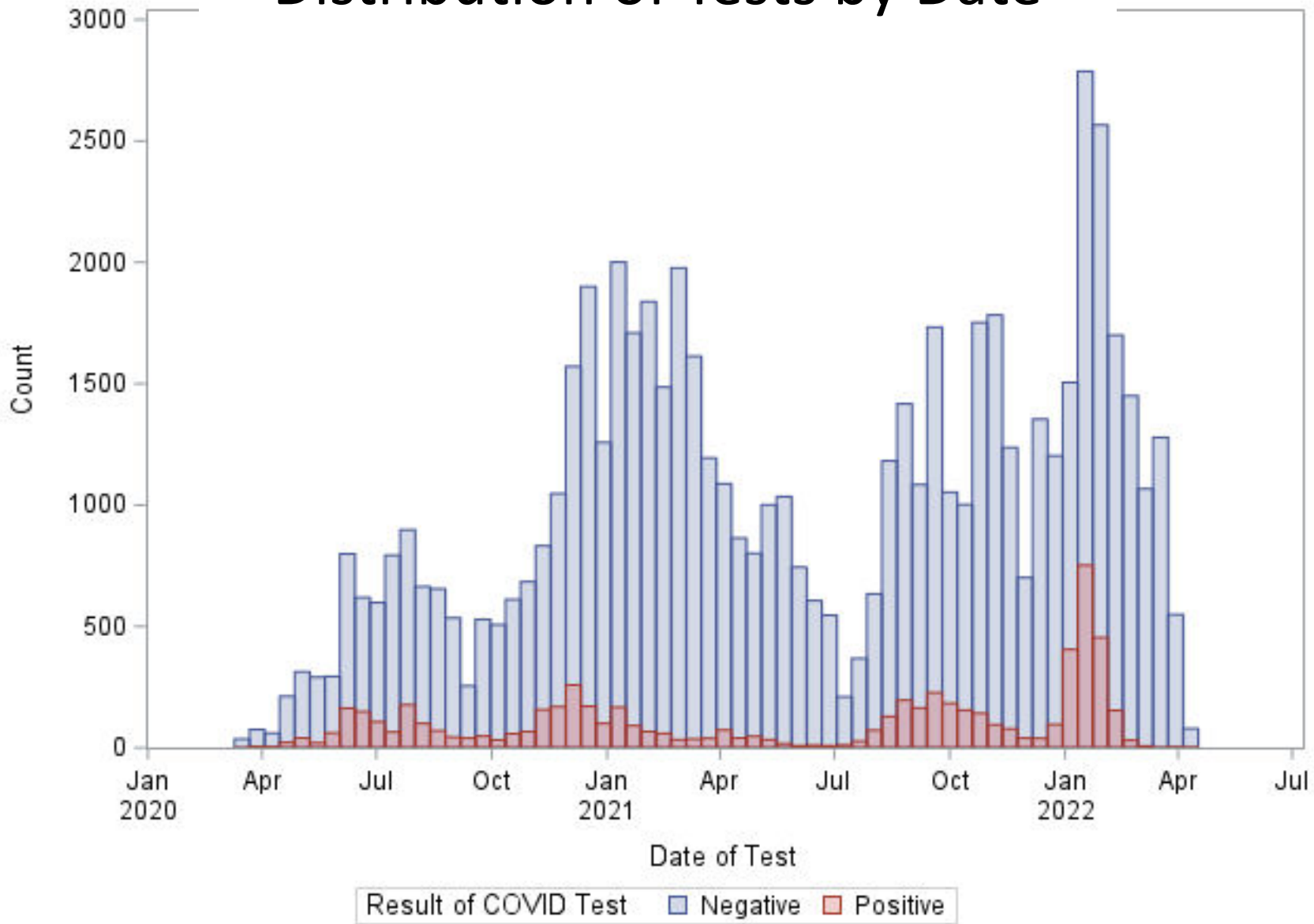


Classification of positive tests

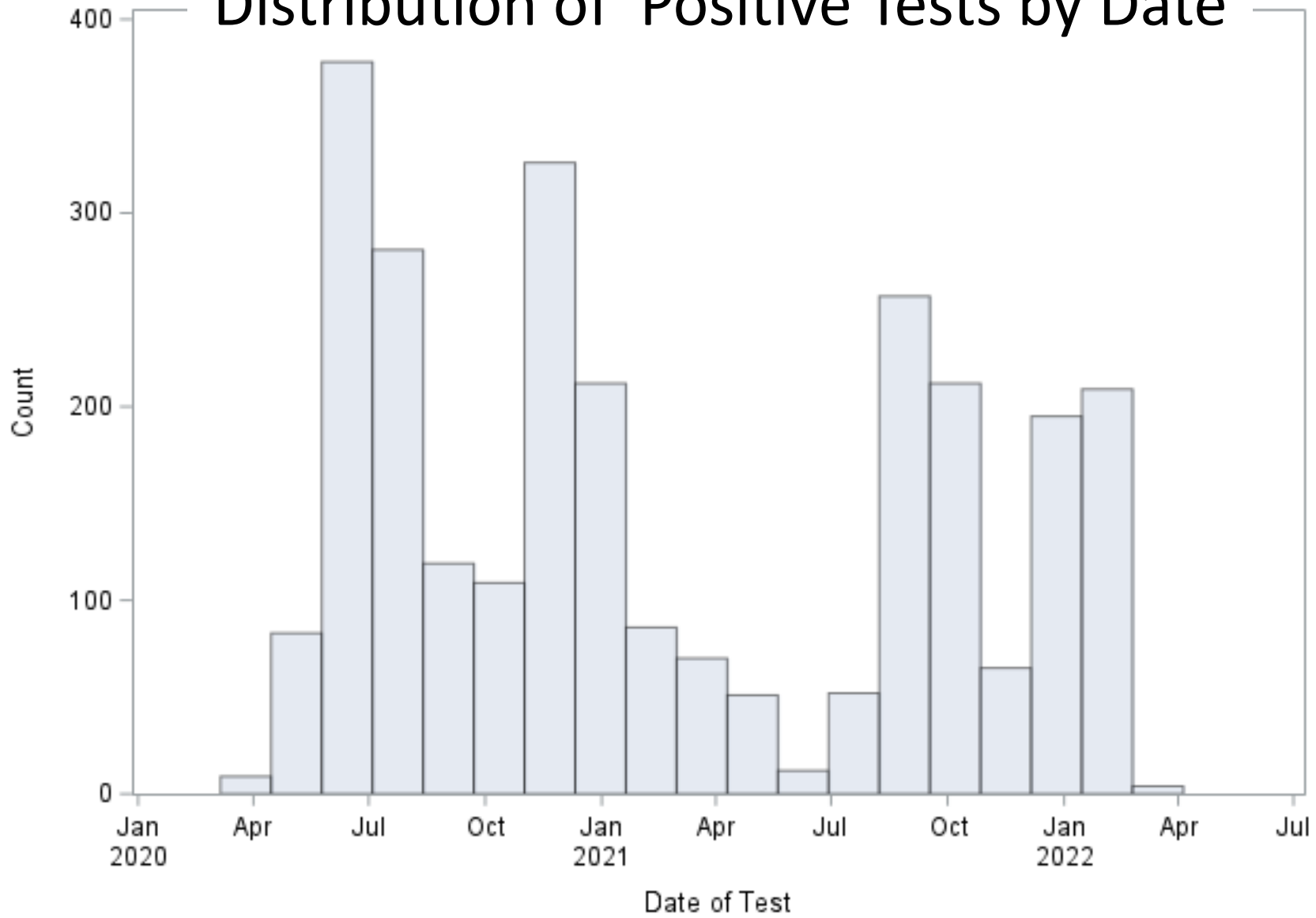
Proportion of tests



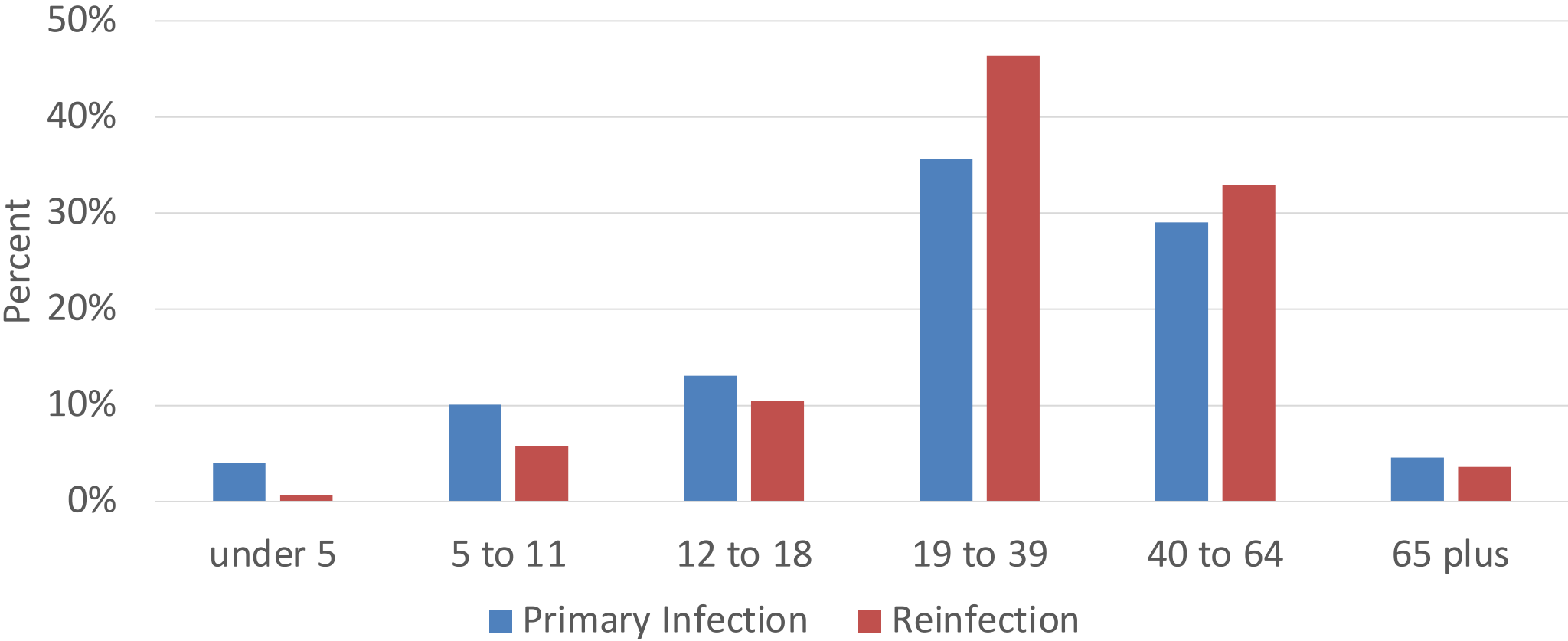
Distribution of Tests by Date



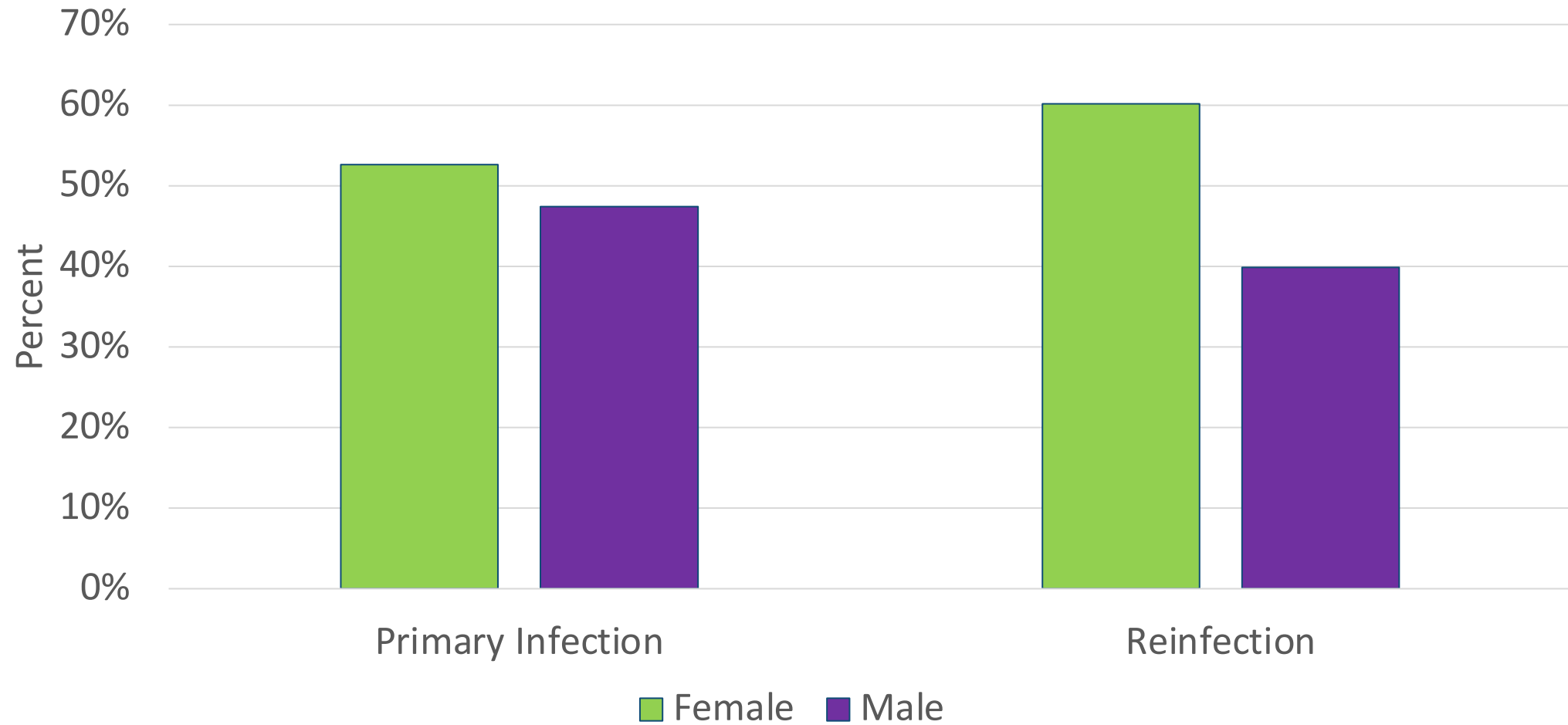
Distribution of Positive Tests by Date



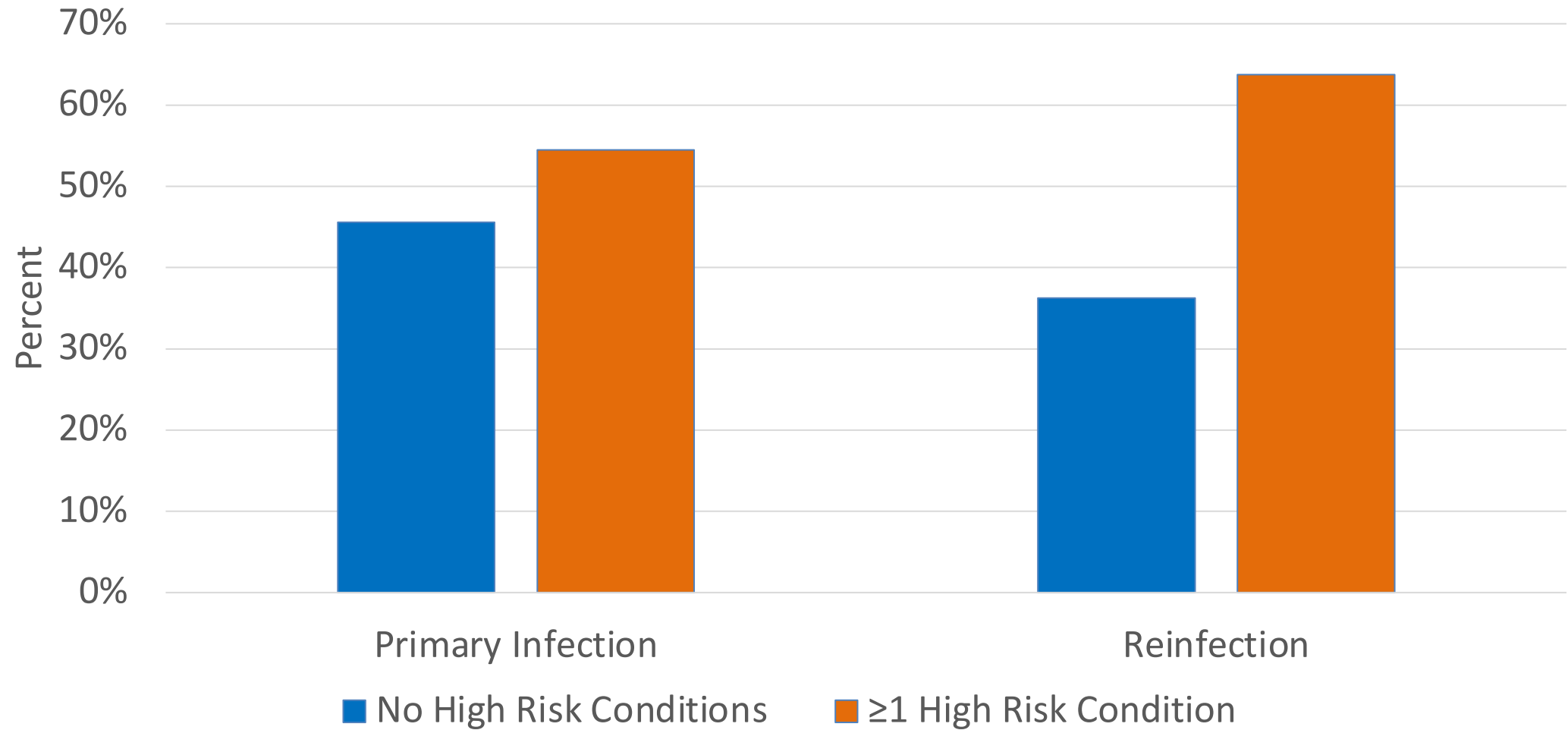
Distribution of Primary Infections and Re-infections by Age Group



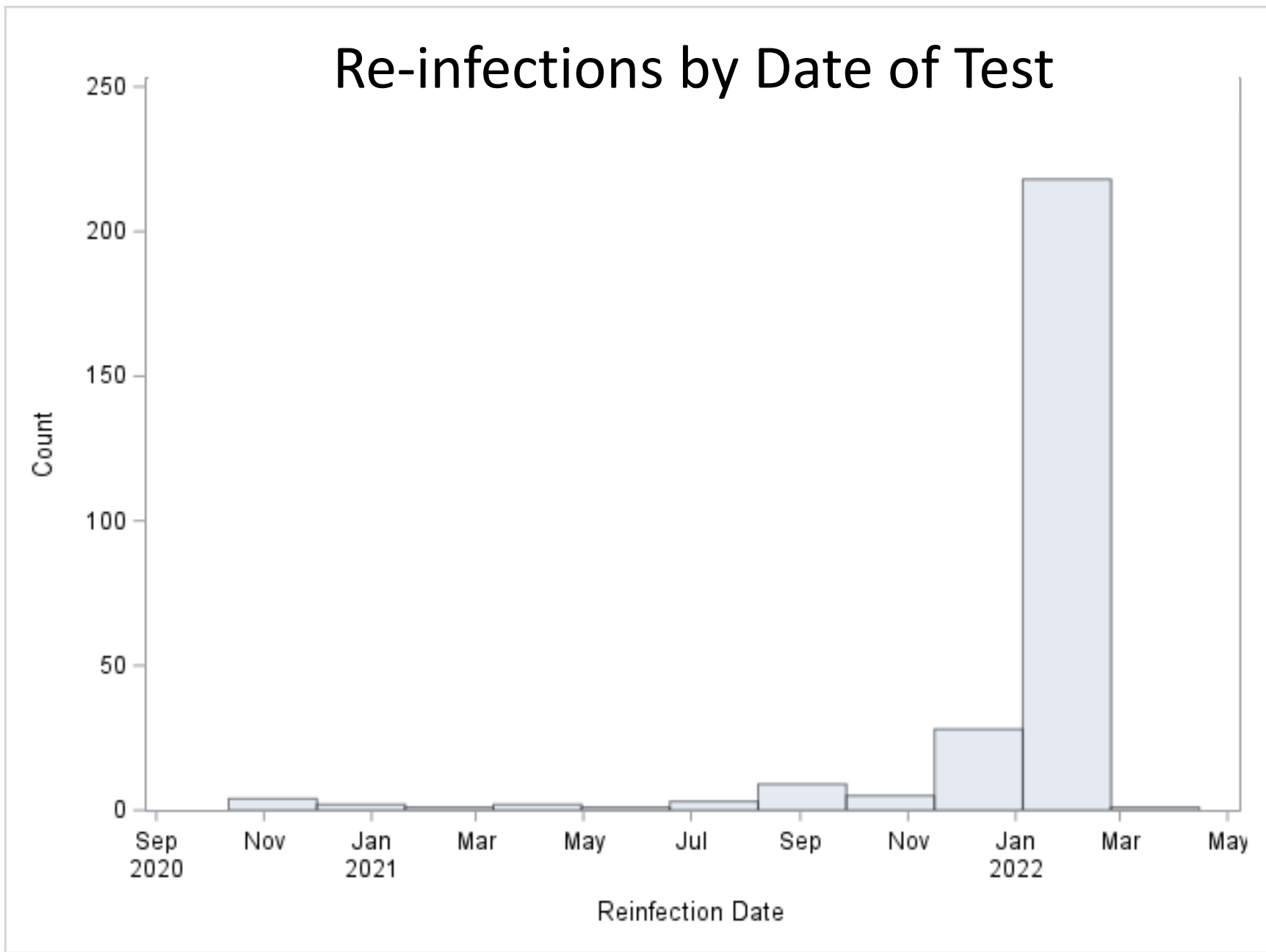
Infection Status by Sex



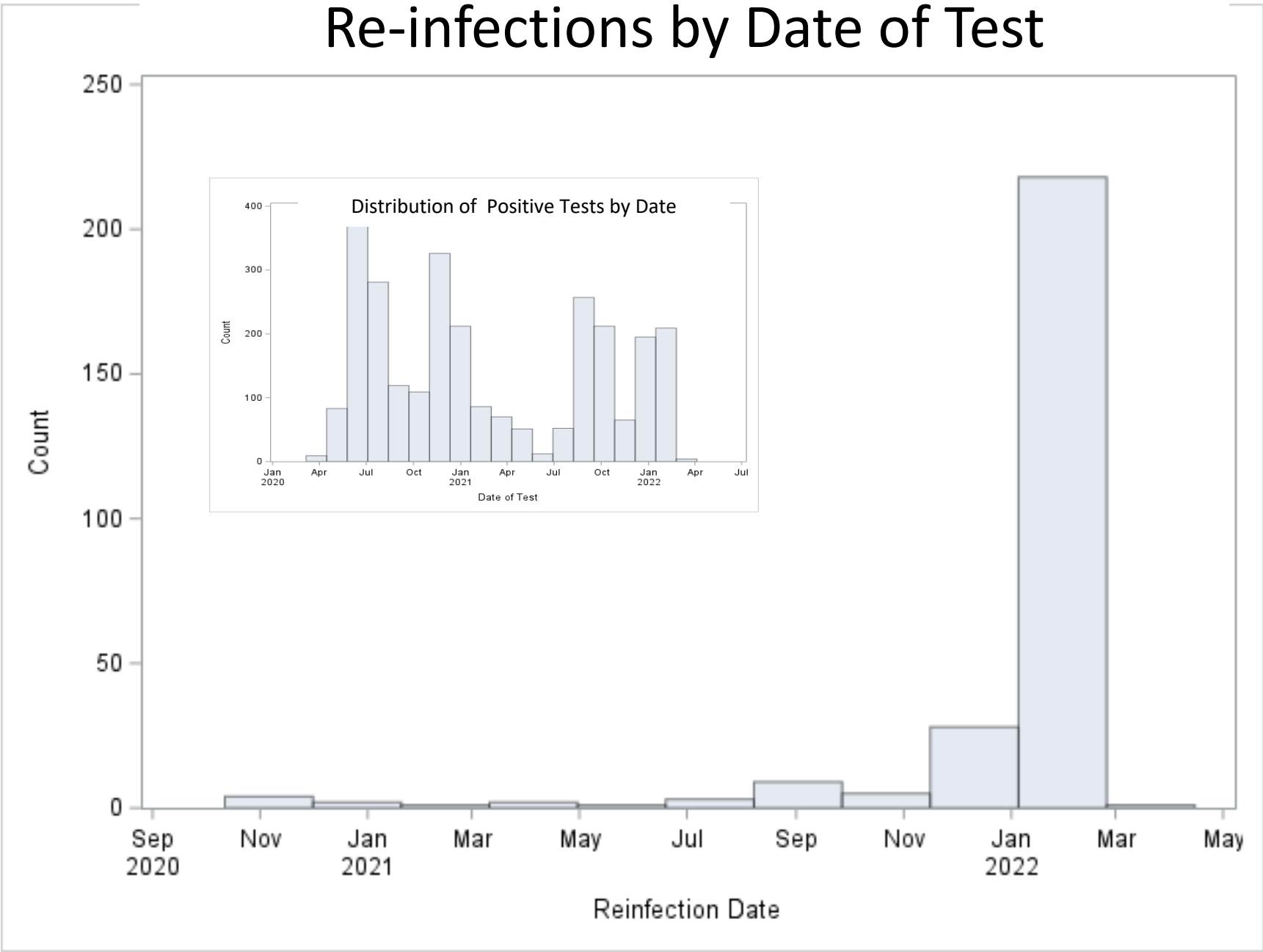
Infection Status by Presence of High Risk Conditions



Re-infections by Date of Test



Re-infections by Date of Test



Vaccinations



10,299 of 19,093 (53.9%) were fully vaccinated. Of those, 4,970 (48.3%) had received a third or booster dose. 1,614 (8.4%) were partially vaccinated



Mean Age* = 35 years
53.5% Female

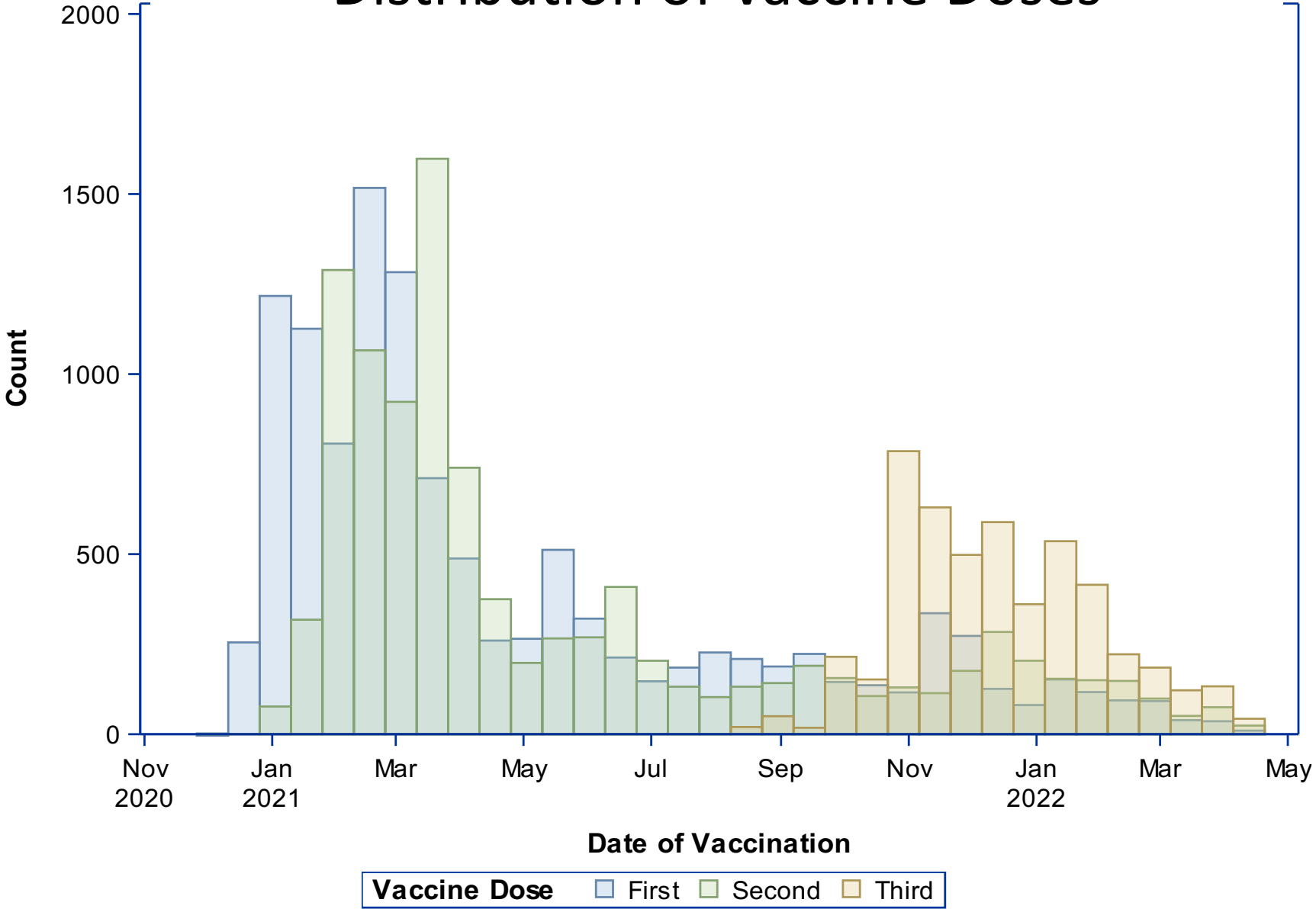
* At time of first vaccine dose



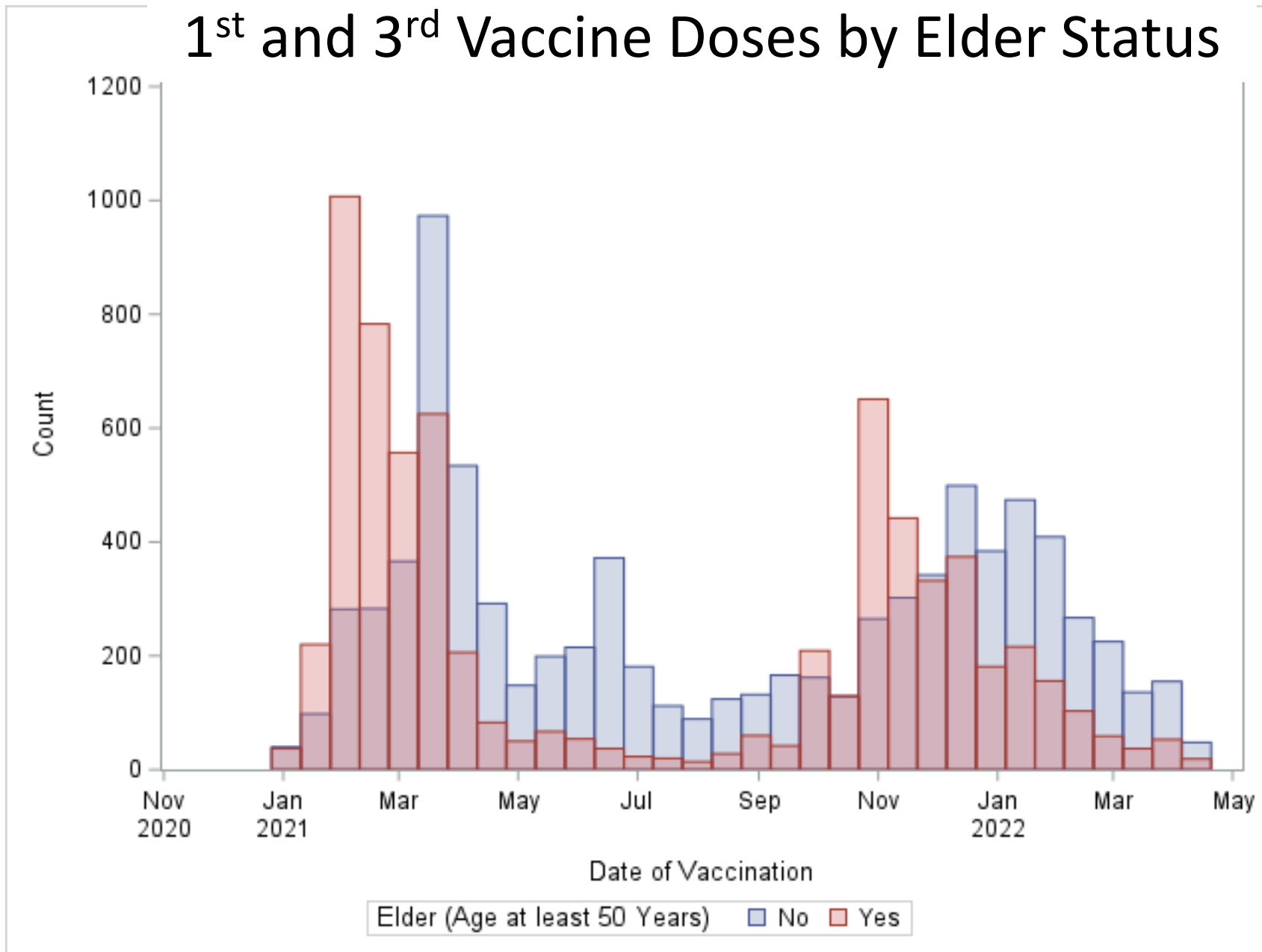
1,302 breakthrough infections
(24% of all infections)
Partially vaccinated=82
Fully vaccinated=1027
Boosted=275



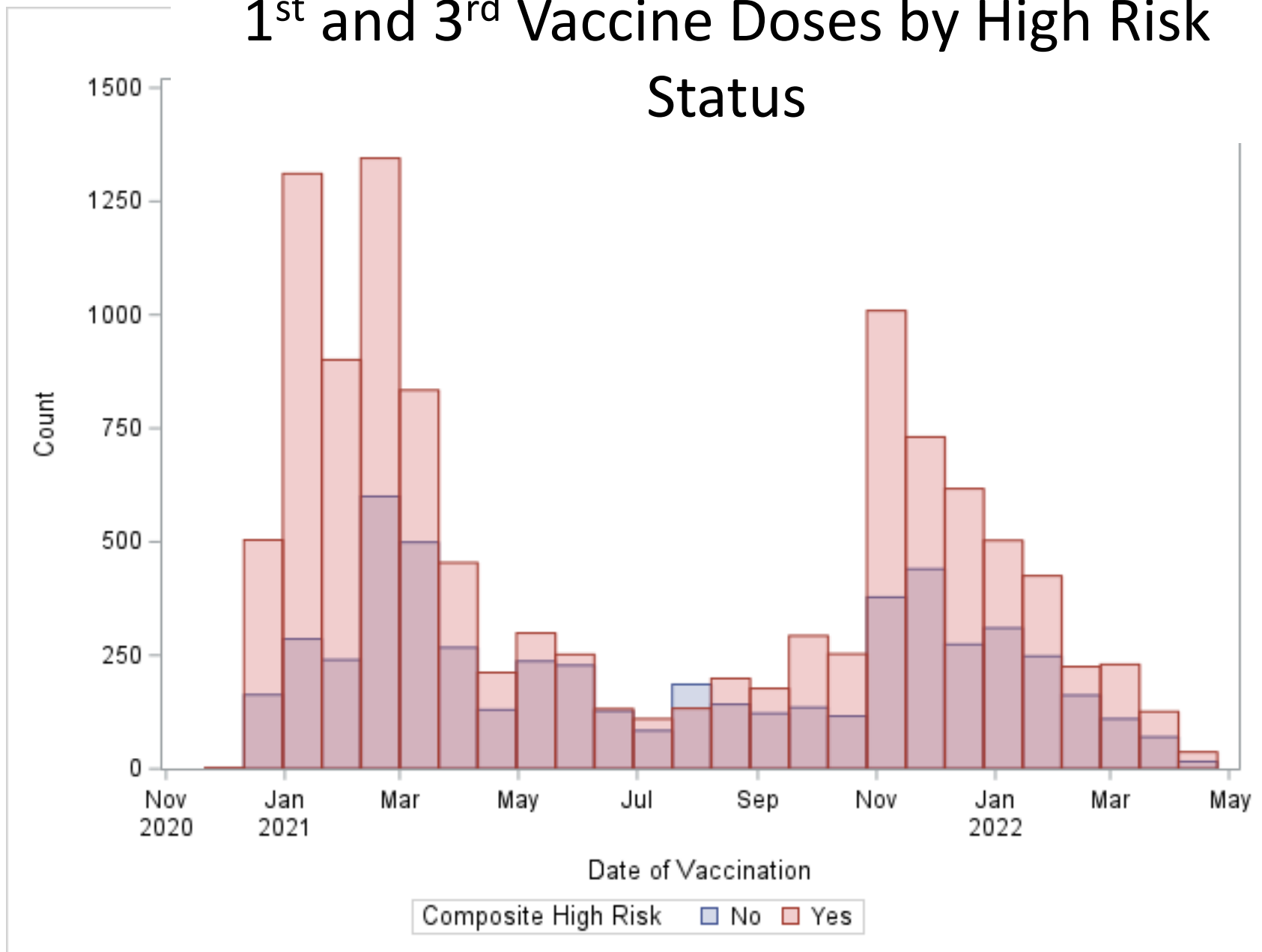
Distribution of Vaccine Doses



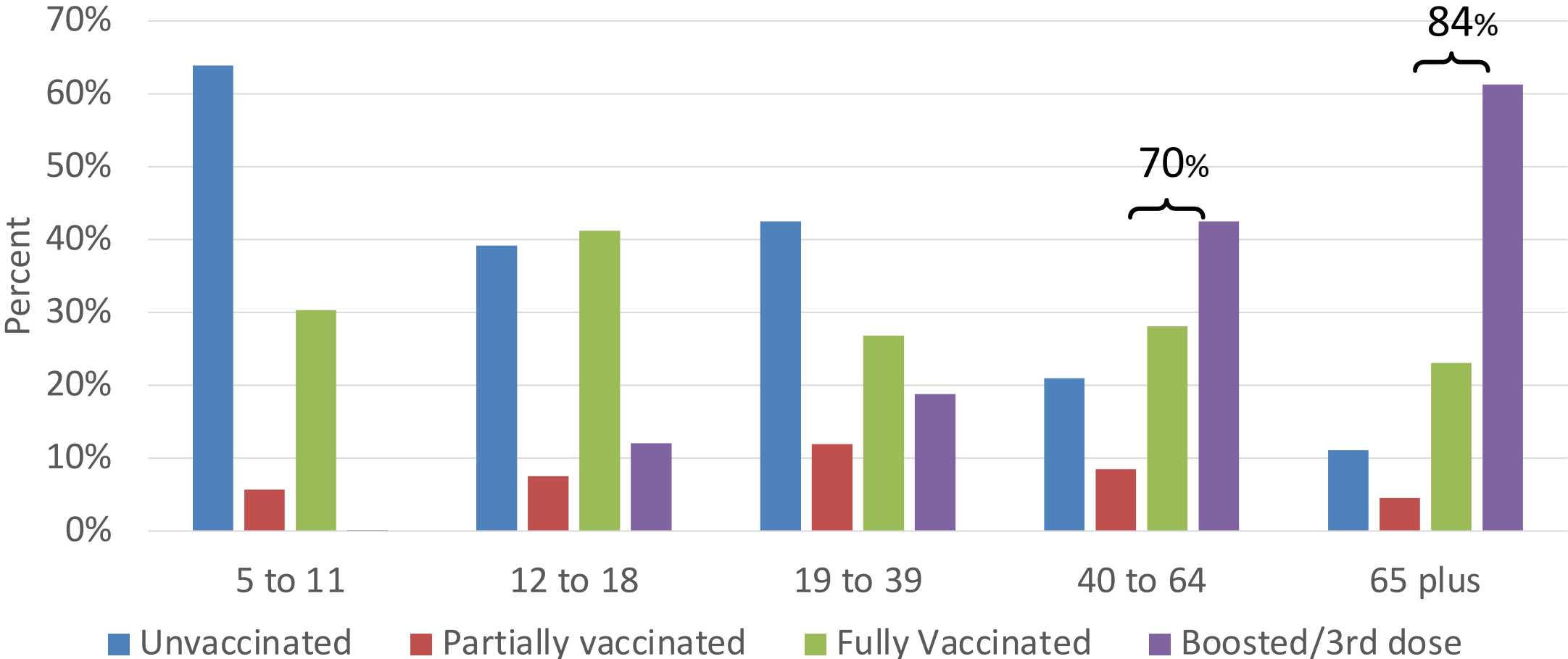
1st and 3rd Vaccine Doses by Elder Status



1st and 3rd Vaccine Doses by High Risk Status

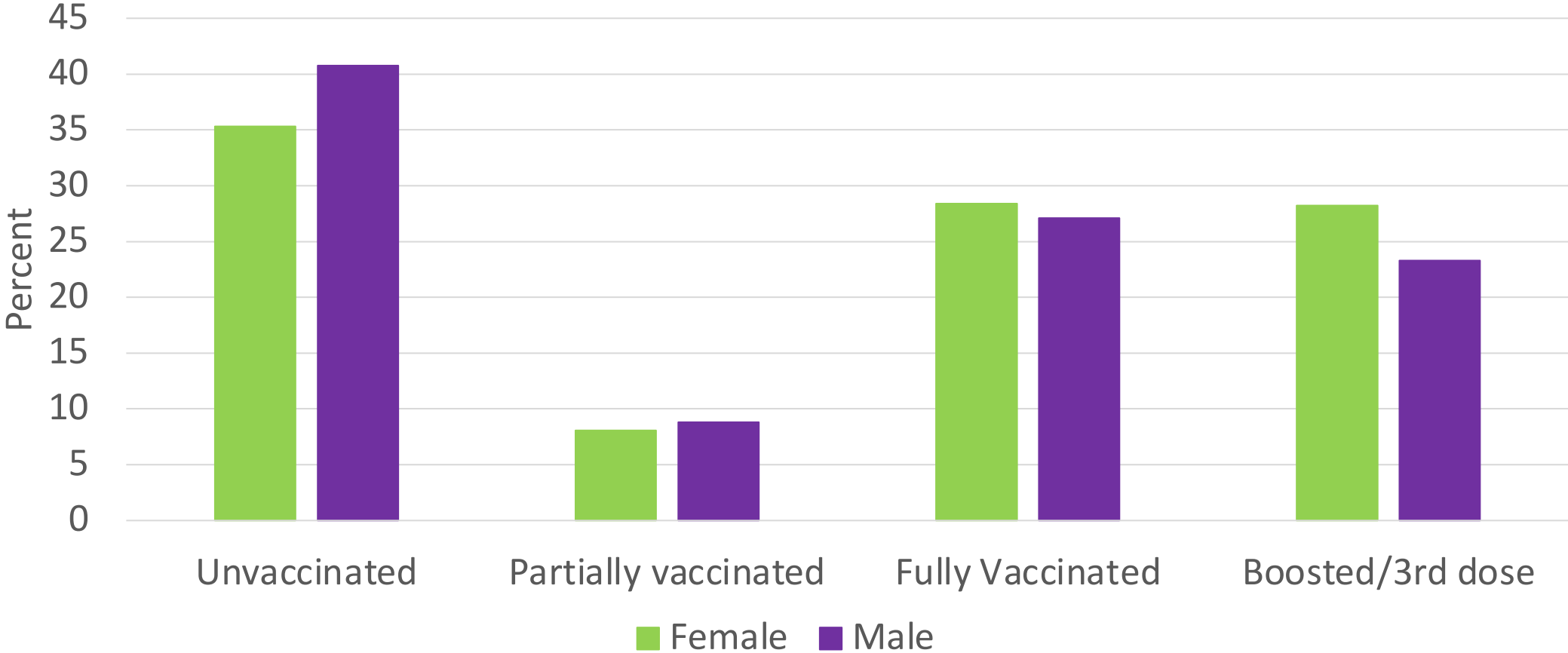


Vaccination Status* by Age Group



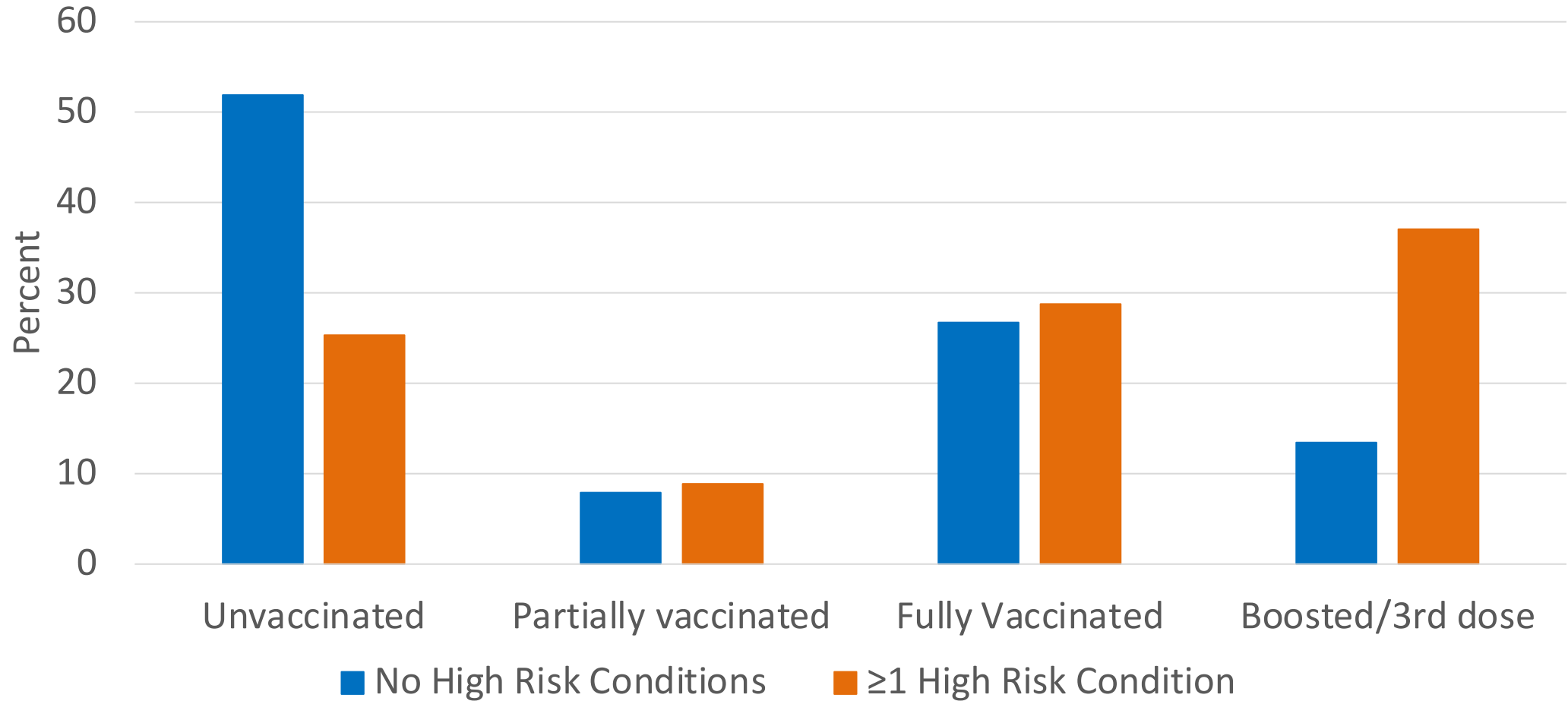
*Among those tested

Vaccination Status* by Sex



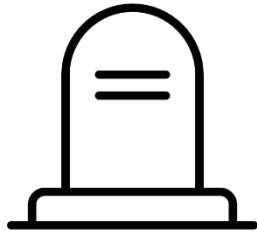
*Among those tested

Vaccination Status* by Presence of Underlying Conditions



*Among those tested

Deaths



We collected information on 144 individuals whose deaths we classified as being directly from COVID-19 (n=133) or were COVID-19 related (n=11)



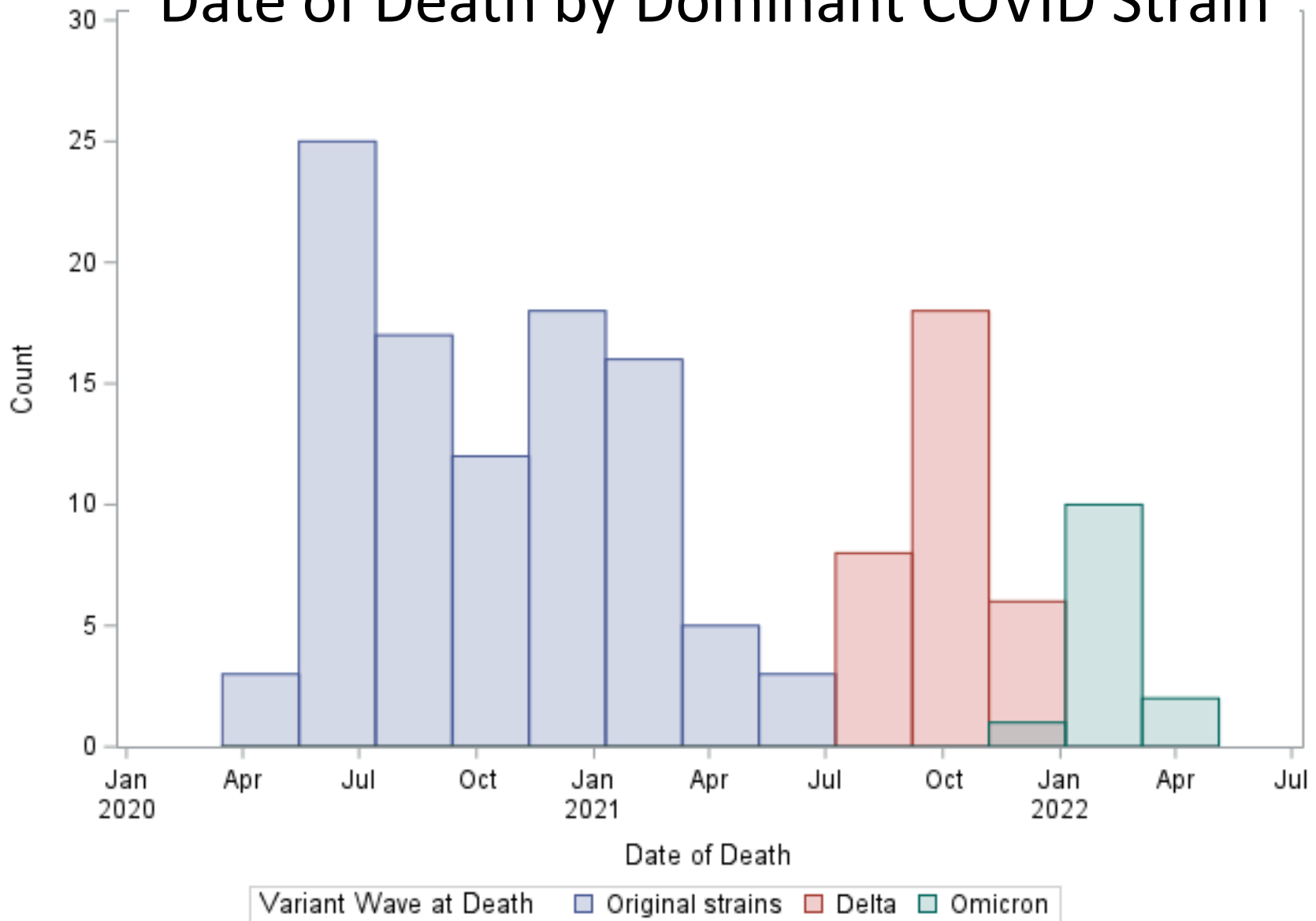
Mean Age at Death = 67 yrs
For comparison, for those who had a positive test but did not die, the Mean Age at time of test was 34 yrs;
45% of COVID deaths were Female



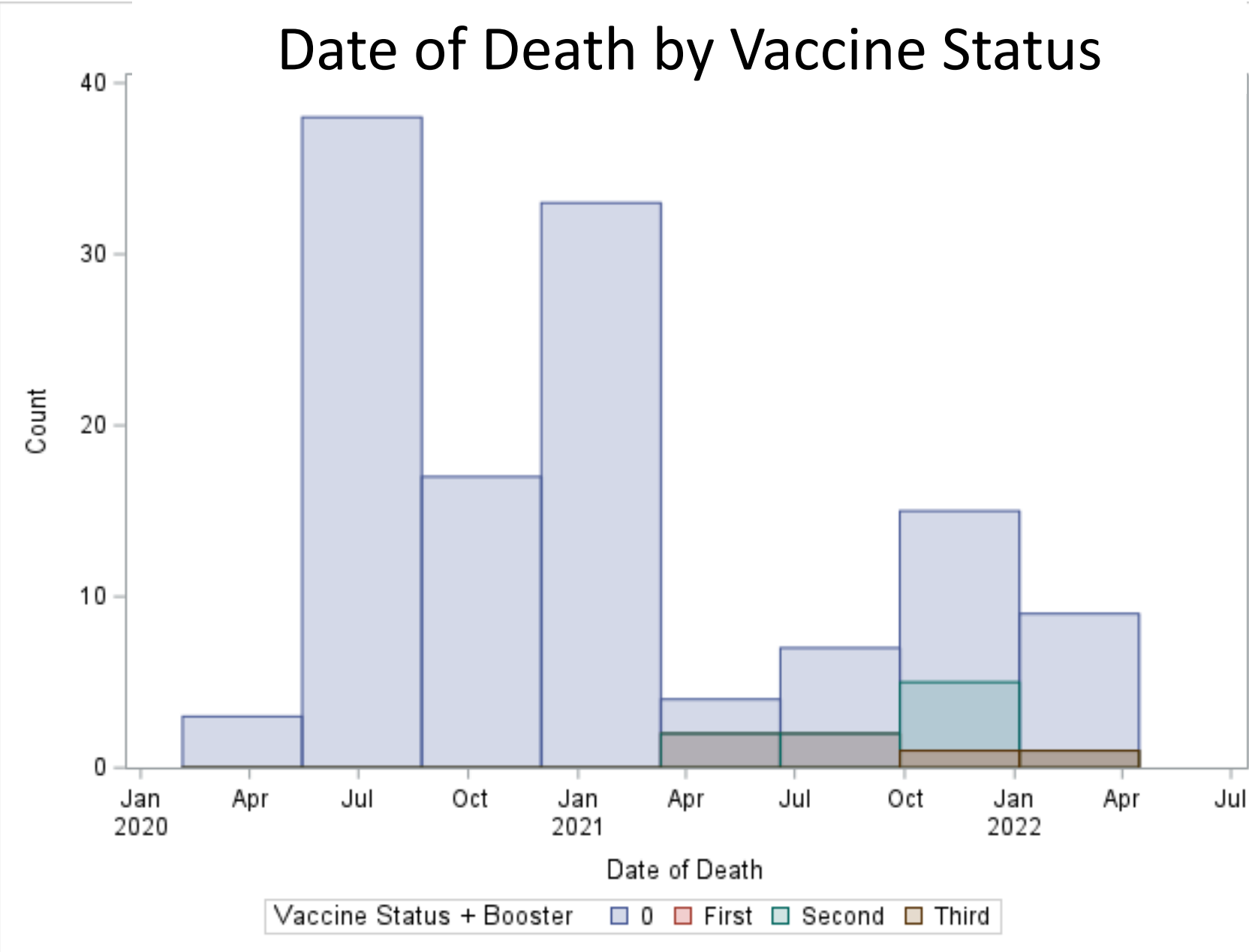
126/144 (87.5%) COVID deaths occurred before vaccines were available; 10 were fully vaccinated, 6 partially and 2 had received boosters



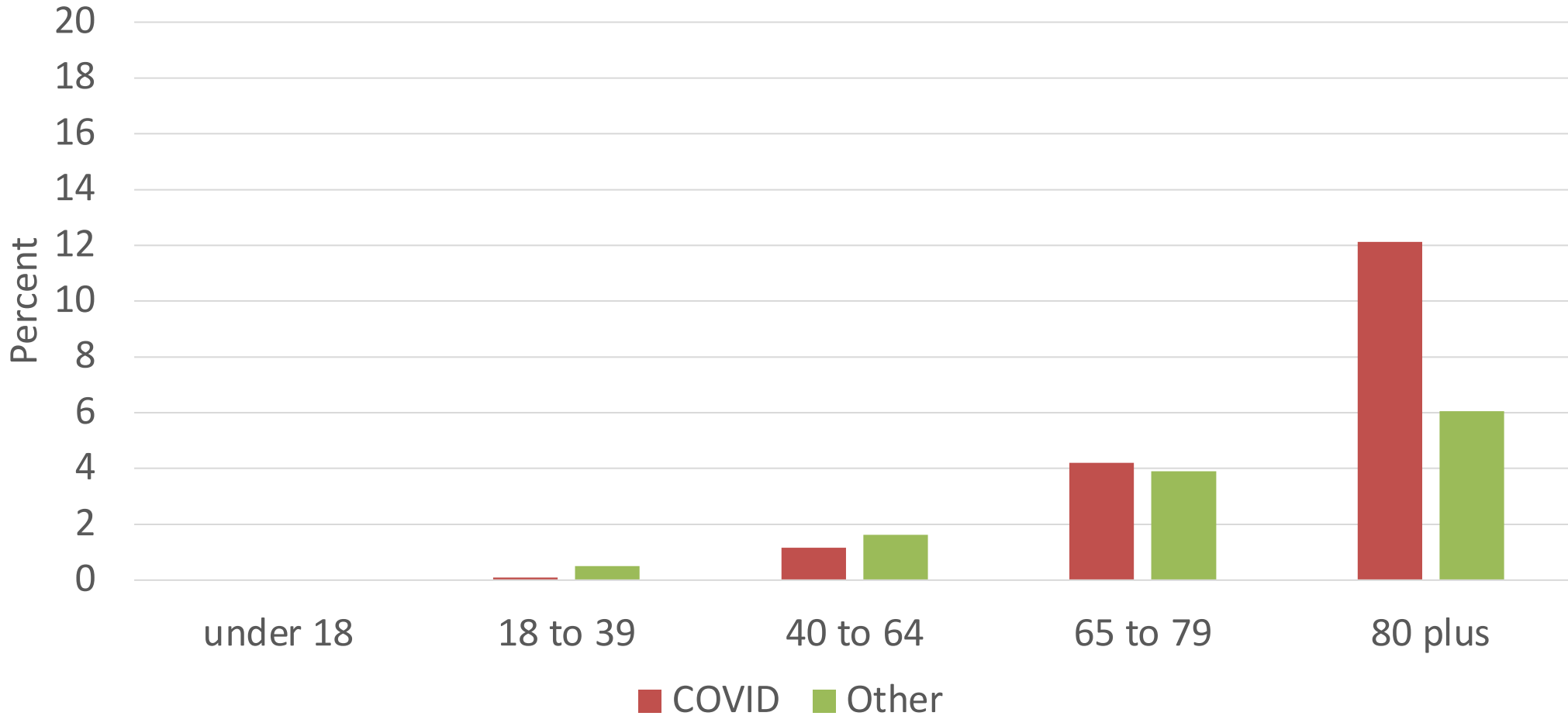
Date of Death by Dominant COVID Strain



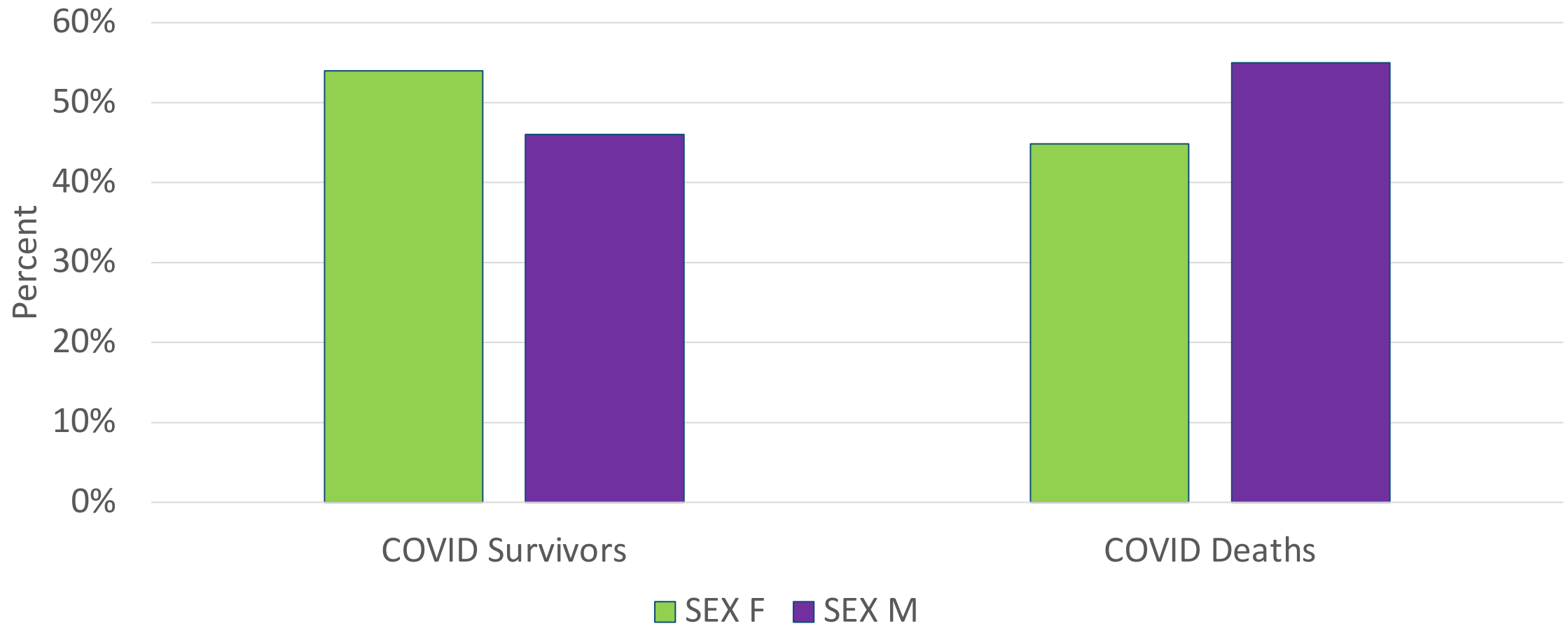
Date of Death by Vaccine Status



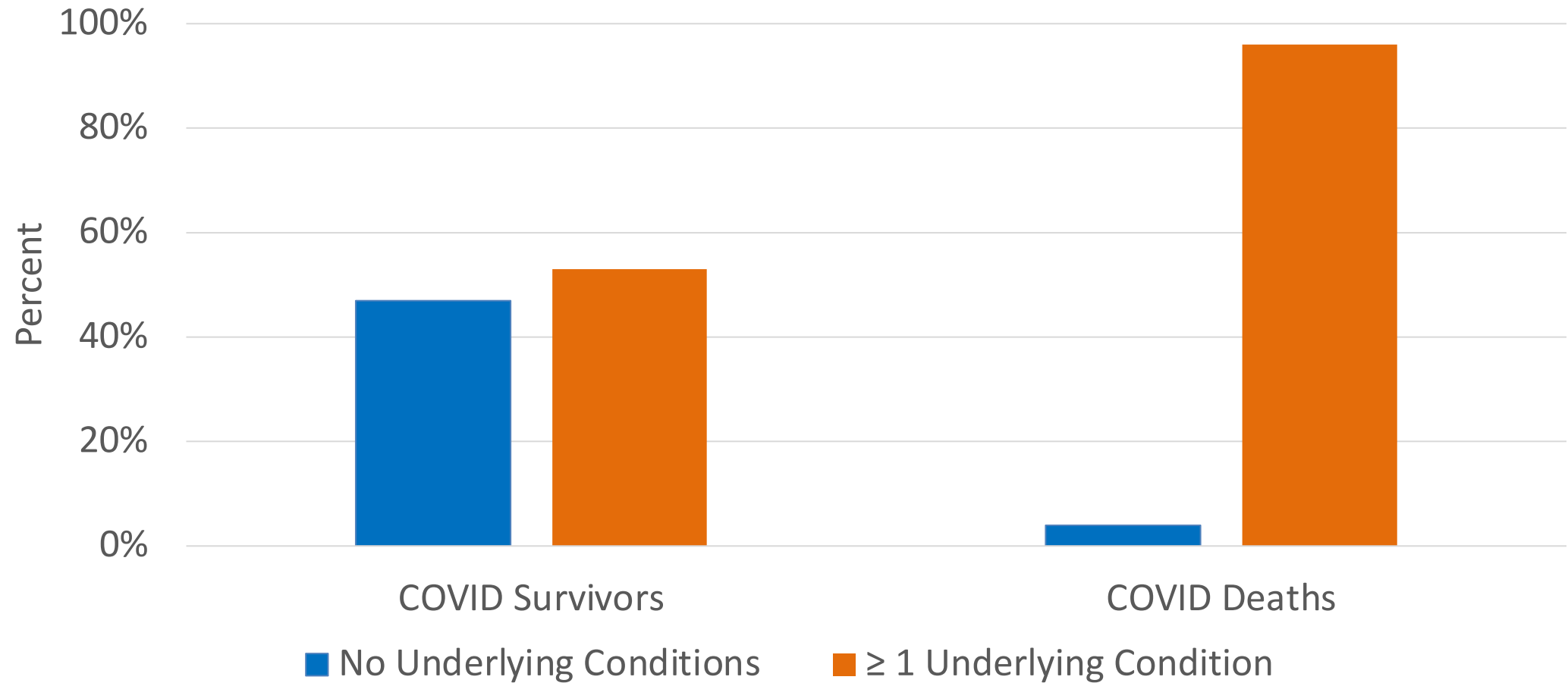
Age Distribution of Deaths



COVID Survival by Sex



COVID Survival by Presence of Underlying Conditions



Summary

This analysis provides a basic description of the COVID-19 Pandemic in the Pacific Northwest using data from six IHS Service Units, March, 2020 to March 2022.

- **Primary Infections** were similarly distributed by sex. Among those tested, those who were 19–39 and 40–64 had the highest percent of primary infections (29%–36%). Primary infections occurred in waves corresponding to differing predominant COVID strains.
- **Reinfection** was also more common among those 19–39 and 40–64 years (33%–46%). Those with at least one underlying health condition accounted for 64% of reinfections and women accounted for 60% of reinfections. Most reinfections occurred during the Omicron surge.
- **Vaccine** prioritization was successful in that those who were older or had underlying conditions had earlier and higher uptake of both the primary series and the first booster dose. 84% of those 65 and older were either fully vaccinated or received their booster dose.
- **Deaths** were mostly among those who were unvaccinated, and most of these occurred before vaccines were available. Most were 65 and older and almost all had at least one underlying condition. 55% of deaths were male.





