

mRNA COVID-19 vaccines are more than 95% effective in preventing confirmed infection

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A large case-control study of participants in the Veterans Administration (VA) health care system found that currently used SARS-CoV-2

vaccines are more than 95% effective in preventing confirmed infection. Because veterans are at particularly high risk given their older age and greater burden of comorbidities compared with the general population, these findings should be reassuring. The study is published in *Annals of Internal Medicine*.

Researchers from VA Pittsburgh Healthcare System studied [health records](#) from the VA COVID-19 Shared Data Resource who had SARS-CoV-2 testing between December 2020 and March 2021 to evaluate the short-term effectiveness of vaccines in preventing SARS-CoV-2 infection. For each person who tested positive, a propensity score and demographic/health-characteristic-matched control participant who tested negative was identified. Data on vaccine administration date and the type of vaccine used were also retrieved. The researchers found that 18% of the 54,360 matched pairs of veterans who were vaccinated tested positive for SARS-CoV-2 and 32.8% tested negative. The overall vaccine effectiveness was 97.1% seven or more days after the second dose. Effectiveness was 96.2% for the Pfizer–BioNTech BNT-162b2 vaccine and 98.2% for the Moderna mRNA-1273 vaccine. Vaccine effectiveness was numerically similar (though statistically significantly higher) among persons aged 70 years or older compared with those younger than 70 years. Effectiveness was similar between Blacks and Whites, men and women, and those with and without higher levels of comorbidities.

According to the authors, these findings clearly show the effectiveness of the current vaccines in preventing infection. Their study did not assess vaccine effectiveness in preventing severe disease and death.

More information: Adeel A. Butt et al, SARS-CoV-2 Vaccine Effectiveness in a High-Risk National Population in a Real-World Setting, *Annals of Internal Medicine* (2021). [DOI: 10.7326/M21-1577](https://doi.org/10.7326/M21-1577)

Provided by VA Pittsburgh Healthcare System

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