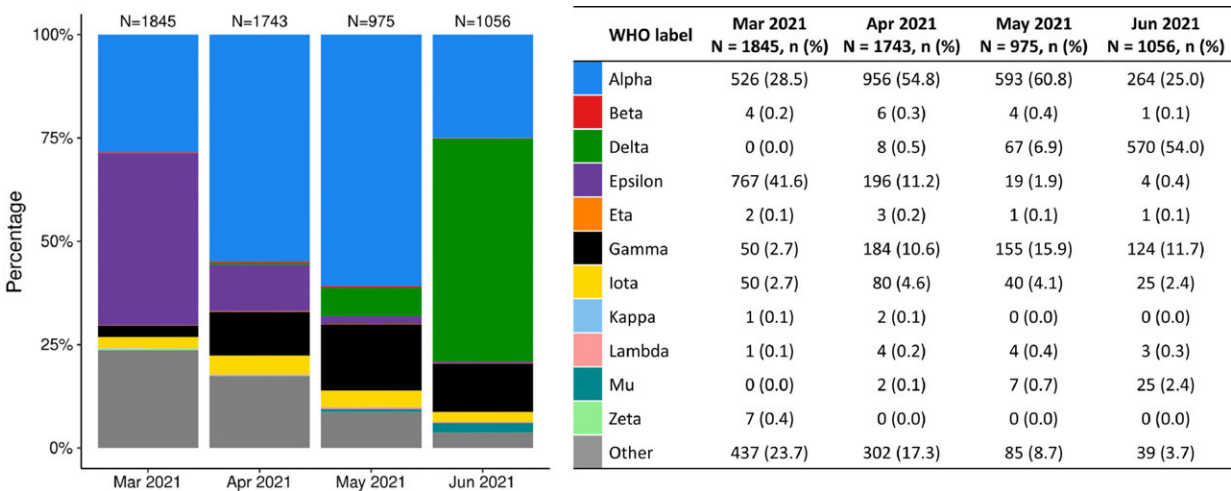


Moderna COVID-19 vaccine effective 5 months after 2nd dose

December 2 2021



Distribution of SARS-CoV-2 variants from March to June 2021 at KPSC.
Credit: DOI: 10.1016/j.lana.2021.100134

Kaiser Permanente research in Southern California has confirmed high Moderna COVID-19 vaccine effectiveness up to five months after the second dose. Effectiveness was 87% against COVID-19 infection, 96% against COVID-19 hospitalization, and 98% against COVID-19 death. The research results were published in [The Lancet Regional Health—Americas](#)

"This research provides reassuring evidence of the high effectiveness of the Moderna COVID-19 vaccine in preventing infection, hospitalization,

and death from COVID-19," said Katia Bruxvoort, Ph.D., an adjunct investigator with the Kaiser Permanente Southern California Department of Research & Evaluation. "One of the important aspects of this study was that it included more than 700,000 adults who were racially and ethnically diverse and had a broad range of underlying conditions including chronic diseases, immunocompromising conditions, and autoimmune conditions."

This study evaluated the 5-month effectiveness of the Moderna COVID-19 mRNA vaccine as part of a 5-year observational study within Kaiser Permanente, an integrated health care organization with 4.7 million members in Southern California.

The study included 352,878 recipients of two doses of Moderna COVID-19 vaccine matched to 352,878 unvaccinated individuals by age, sex, race, and ethnicity. Vaccinated individuals received two doses of Moderna COVID-19 vaccine from December 18, 2020, to March 31, 2021. Individuals in both groups were followed until June 30, 2021.

- During follow-up, COVID-19 infections occurred among 289 vaccinated patients and 1,144 unvaccinated patients. Vaccine effectiveness against COVID-19 infection was 87%.
- COVID-19 hospitalization occurred among 13 vaccinated and 182 unvaccinated patients, and COVID-19 in-hospital deaths occurred among one vaccinated and 25 unvaccinated patients. Vaccine effectiveness against COVID-19 hospitalization was 96%, and [vaccine](#) effectiveness against COVID-19 in-hospital deaths was 98%.
- Vaccine effectiveness against COVID-19 infection remained high across age, sex, racial, and ethnic subgroups, with results ranging from 83% to 92%.
- Vaccine [effectiveness](#) was higher against symptomatic COVID-19 (88%) than asymptomatic COVID-19 (73%).

- From March to June 2021, there were 5,619 SARS-CoV-2 positive specimens that were successfully sequenced. The most prevalent variants were alpha (42%), epsilon (18%), delta (12%), and gamma (9%), with delta increasing to 54% of variants by June 2021.

"This study adds evidence of real-world Moderna COVID-19 [vaccine effectiveness](#), particularly among the [general population](#)," said Hung Fu Tseng, Ph.D., a researcher with the Kaiser Permanente Southern California Department of Research & Evaluation and the senior author of the study. "Additionally, our follow-up on these fully vaccinated patients occurred through June 2021, a period that overlapped with the emergence of the delta variant in the United States. Long-term follow-up is ongoing to further evaluate the durability of protection."

More information: Katia J. Bruxvoort et al, Real-world effectiveness of the mRNA-1273 vaccine against COVID-19: Interim results from a prospective observational cohort study, *The Lancet Regional Health - Americas* (2021). [DOI: 10.1016/j.lana.2021.100134](https://doi.org/10.1016/j.lana.2021.100134)

Provided by Kaiser Permanente

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