

New study finds COVID-19 vaccines highly effective in nursing homes

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In what is believed to be the first published study of COVID-19 vaccine effectiveness in long-term care facilities such as nursing homes, a research team co-led by the Yale School of Public Health found a widely used vaccine is highly successful in preventing infections.

Residents of such facilities, particularly those in skilled nursing facilities

(SNFs), have experienced disproportionately high levels of COVID-19–related death and illness since the pandemic first arrived in the United States nearly a year ago.

Despite this, this group was not included in COVID-19 vaccine clinical trials and there is limited post-shot [vaccine effectiveness](#) data available for members of this population who are typically older, more frail, and have more underlying medical conditions than the general population.

For the study, researchers were able to capitalize on the rapid vaccine rollout in Connecticut's nursing homes facilitated by the state Department of Public Health. Specifically, they examined the "real-world" [effectiveness](#) of the Pfizer-BioNTech vaccine among 463 residents in two nursing homes in Connecticut that were experiencing COVID-19 outbreaks.

They found that the vaccine had an estimated effectiveness of 63% against SARS-CoV-2 infection among facility residents after the first dose. This is similar to estimated effectiveness for a single dose of COVID-19 vaccine in adults across a range of age groups in non-congregate settings and strongly suggests that a complete two-dose vaccination offers significant protection for medically frail and older adult residents of SNFs.

"This confirms what we had all hoped: This [vaccine](#) is highly effective in perhaps the most at-risk group and can potentially save many lives," said Sunil Parikh, an associate professor at the Yale School of Public Health and the study's senior author. "Vaccines work in this highly vulnerable population and their implementation should not be delayed."

The findings were published March 15 as an "[early release](#)" in the Centers for Disease Control and Prevention's (CDC) *Morbidity and Mortality Weekly Report*.

The study was a joint collaboration with state and federal partners—the Connecticut Department of Public Health and the CDC—and involved two Ph.D. students at YSPH, Jillian Armstrong and Hanna Ehrlich.

"This is a great demonstration of the power of collaboration between applied public [health](#) at the local and federal levels and academic public health entities," said Parikh.

Since the early days of the pandemic, Connecticut has partnered with Parikh and others at the Yale School of Public Health to conduct enhanced surveillance in all Connecticut nursing homes. This surveillance system enabled the rapid detection of outbreaks.

More information: Jennifer L. Kriss et al. COVID-19 Vaccine Second-Dose Completion and Interval Between First and Second Doses Among Vaccinated Persons—United States, December 14, 2020–February 14, 2021, *MMWR. Morbidity and Mortality Weekly Report* (2021). [DOI: 10.15585/mmwr.mm7011e2](https://doi.org/10.15585/mmwr.mm7011e2)

Provided by Yale University

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