DOES ONE DOSE OF VACCINE STOP COVID-19 INFECTION IN CARE HOME RESIDENTS?

UCL

A single dose of COVID-19 vaccine gives care home residents a good level of protection against COVID-19 infection after one month.

Between December 2020 and March 2021, we investigated whether one dose of vaccine protects care home residents against COVID-19 infection. We looked at vaccination information, blood tests and nasal swab tests from 10,000 residents in 310 care homes across England. This was a period before most people in the UK had been offered their second COVID-19 vaccine. The results showed that one dose of vaccine provides some protection against COVID-19 in care home residents, but it is important to get a second dose to get the best level of protection.

WHAT IS THE VIVALDI STUDY?

Researchers on the VIVALDI Study are investigating the impact of COVID-19 on care homes and what can be done to prevent infection from spreading among staff and residents. The study was set up in June 2020 and is collecting information from over 50,000 care home staff and residents across more than 300 care homes in England.

WHY DID WE DO THIS STUDY?

The COVID-19 pandemic has hit care homes very hard. Care home staff and residents have higher rates of infection, hospital admissions and deaths compared to other people. Vaccines protect people against COVID-19 infection and are especially important for care home residents. However, we know from other studies that the level of protection provided by vaccines can be lower for older adults compared to working-age adults.

WHAT DID WE WANT TO FIND OUT?

Research studies in the general population show that COVID-19 vaccines are safe and give a good level of protection against infection even after just one dose. Care home residents were not included in these studies. We wanted to know whether the first dose of vaccine protects care home residents against COVID-19 infection.

WHAT DID WE DO?

We looked at vaccination records of over 10,000 care home residents across England. We linked these records with results of nasal swab tests which are taken monthly from every care home resident as part of the national testing programme. This allowed us to identify anyone with a current infection.

GLOSSARY

Antibody
Produced by the body to fight specific infections.

Care Home
A residential facility for people who need extra help with looking after themselves.

Care Home Resident
A person who lives in a care home.

COVID-19
Coronavirus disease (COVID-19) is a highly contagious respiratory infection caused by the SARS-CoV-2 virus.

Immunity
The ability to resist a particular infection by the action of specific antibodies.

Nasal Swab Test
A device inserted in the nose, used to look for active COVID-19 infection.

Older Adult
A person aged 65 years and over.

Working-age Adult
A person aged under 65 years.

Vaccine
A product which stimulates a person's immune system to protect them from a specific disease.

This summary was produced in partnership with patient and public representatives.

vivaldi

We also collected information about past infection based on blood tests that looked for antibodies against COVID-19 in some of the residents.

Each person in the study had at least one nasal swab taken before vaccination and at least one taken after vaccination. This allowed us to compare the risk of infection before vaccination, with the risk of infection after vaccination. Unfortunately, we were not able to collect reliable information on the ethnicity of people taking part in the study.

WHAT DID WE FIND?

By January 2021, most care home residents in our study had received at least one dose of vaccine (either the Astra Zeneca/Oxford or Pfizer vaccines).

We found that approximately one month after vaccination, a single dose of either vaccine provides a good level of protection against COVID-19 infection. We estimated in an average month between December 2020 and March 2021, **6** out of 100 residents who were NOT vaccinated would get infected with COVID-19, whereas only **2** out of 100 residents who WERE vaccinated would get infected with COVID-19.

The Oxford/ Astra Zeneca and Pfizer vaccines gave similar levels of protection against COVID-19 infection. Vaccination does not seem to provide any extra protection from infection in residents who had been infected with COVID-19 before. We also found that vaccinated residents who get infected may be less likely to pass on COVID-19 infection to others, compared to unvaccinated residents who get infected.

WHAT DOES THIS MEAN FOR CARE HOMES?

The findings suggest that vaccination reduces the total number of people who get infected with COVID-19. These results support evidence that vaccinations work well in preventing COVID-19 infection in care homes. It is recommended that people have two doses of these vaccines to give the best level of protection against infection.

WHAT HAPPENS NEXT?

We are now working with staff and residents across 300 care homes to find out how much protection vaccination with two doses provides against infection and for how long. This will help us to work out how often people need to be re-vaccinated, and when it might be safe to relax social distancing measures in care homes.

Read the full report:
Vaccine effectiveness of the first dose of ChAdOx1 nCoV-19 and BNT162b2 against SARS-CoV-2 infection in residents of Long-Term Care Facilities
www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00289-9/fulltext

CONTACT US
VIVALDI Study
UCL Institute of Health Informatics
222 Euston Rd
London, NW1 2DA

Email
vivaldi.covid19@ucl.ac.uk

Website
www.ucl.ac.uk/health-informatics/research/vivaldi-study

Icons made by Freepik from www.flaticon.com

This summary was produced in partnership with patient and public representatives.

vivaldi

DOES ONE DOSE OF VACCINE STOP COVID-19 INFECTION IN CARE HOME RESIDENTS?

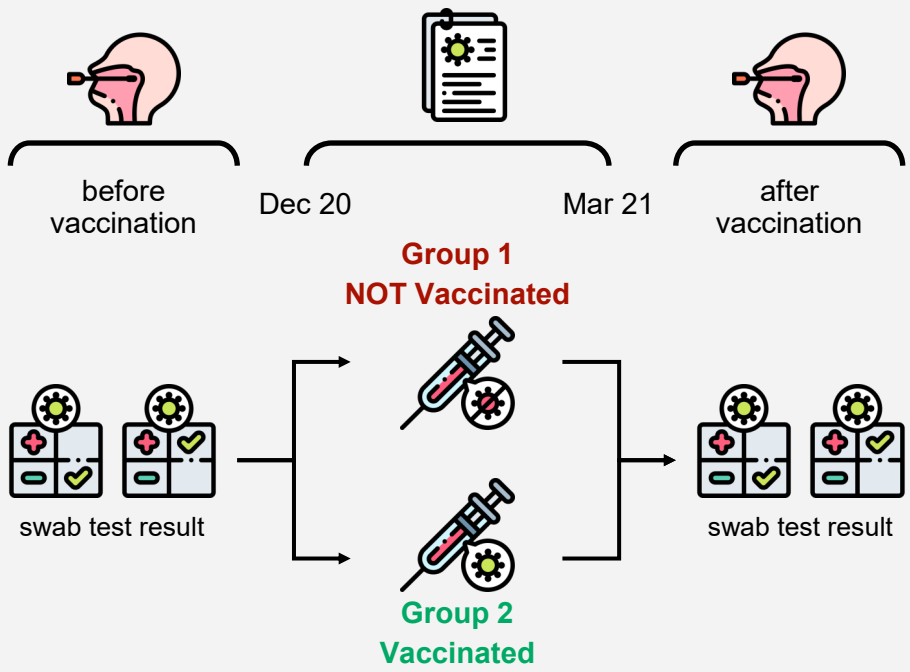
WHAT DID WE WANT TO FIND OUT?

We wanted to know if COVID-19 vaccines work in older residents in care homes.

WHAT DID WE DO?

We looked at vaccination records of more than 10,000 older residents in over 300 care homes across England.

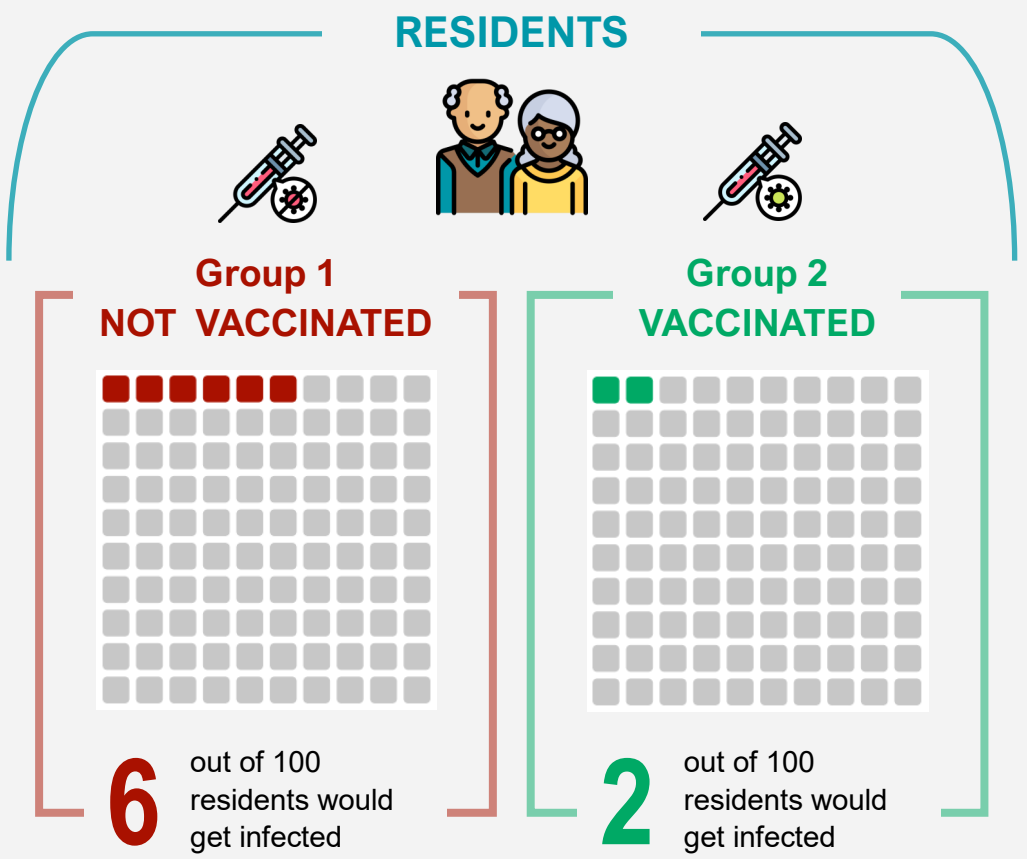
We compared these records to nasal swab results to see who had COVID-19 before and after vaccination.



WHAT DID WE FIND?

We found that one dose of vaccine provides good protection against COVID-19 infection in care home residents.

In an average month between December 2020 and March 2021, the risk of COVID-19 infection was higher in residents who were NOT vaccinated compared to residents who WERE vaccinated.



This summary was produced in partnership with patient and public representatives