Care home residents are at risk of COVID-19 even after being fully vaccinated

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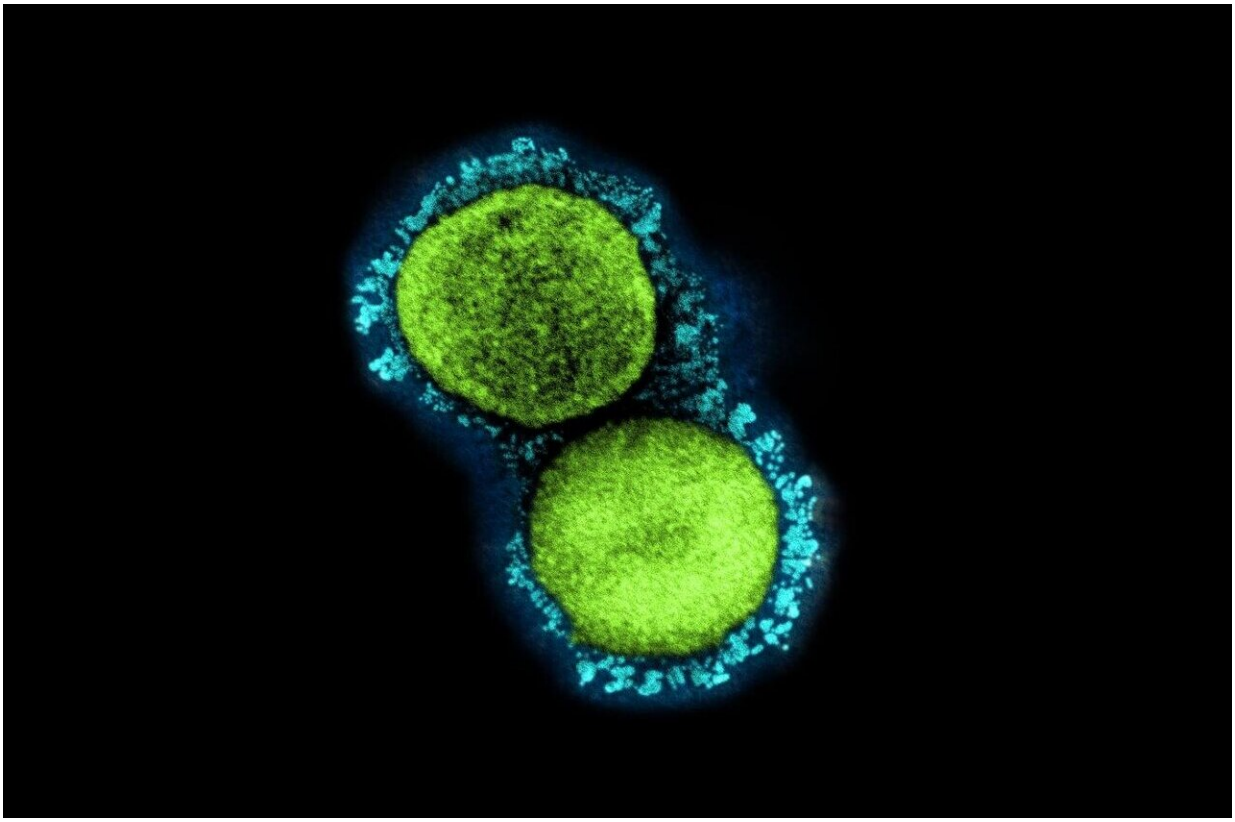

A transmission electron micrograph of SARS-CoV-2 virus particles (UK B.1.1.7 variant), isolated from a patient sample and cultivated in cell culture. Credit: NIAID

Care homes need to be vigilant for outbreaks of COVID-19, even after residents have received two doses of the vaccine, according to new

research being presented at the European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) held online this year.

Long-term care facilities, such as care homes with elderly residents with multiple underlying conditions, are at high risk of COVID-19 outbreaks and many vaccination campaigns have initially focused on care home residents and the staff looking after them. An outbreak in a French care home, however, raises questions about how effective the vaccine is in the elderly.

Martin Martinot, of the Hopitaux Civils de Colmar, Colmar, France, and colleagues studied an outbreak of COVID-19 that began in a care home in eastern France a month after a campaign to double vaccinate residents and staff with the Pfizer-BioNTech jab had ended.

Seventy (75%) of the residents and 38 (52%) of the staff were fully vaccinated by mid-February 2021.

Tests on samples of blood taken by the researchers on April 6 showed that all but one of the fully vaccinated residents had antibodies against COVID-19.

The outbreak started on March 15 and, over the next seven weeks, 24/93 residents (26%) and 16/73 staff (22%) were infected by the SARS-CoV-2 virus. Infected residents were older, with an average age of 91, than the uninfected residents, where the average age was 87.

Twelve out of the 24 infected residents had not been fully vaccinated. None of the infected staff had been vaccinated. Analysis showed that the unvaccinated residents were three times more likely to develop COVID-19 than those who had had two doses of the vaccine.

The estimated effectiveness of the vaccine in the elderly residents was

68%. This is lower than previously reported.

Infections seem to have been milder among the vaccinated residents, with no severe cases. In contrast, there were three severe cases among the residents who had not been vaccinated.

Genetic sequencing showed that the outbreak was due to the B.1.1.7 Alpha strain, which was dominant in France at that time.

The study authors say the results show that COVID-19 can still be a threat in long-term care facilities, especially those with older residents, and high rates of vaccination are essential.

Dr. Martinot adds that immunosenescence (age-related weakening of the immune system) means that the elderly may still be at risk of COVID-19, even when fully vaccinated.

He concludes: "This outbreak highlights need for high rates of vaccination of residents and healthcare workers in long-term care facilities and other centres accepting elderly patients and those with multiple underlying health conditions.

"Immunisation against COVID-19, although very protective—residents were three times less likely to develop COVID-19 when fully vaccinated—seems a bit less effective in our oldest patients. Thus, achieving the highest rate of vaccination is important to prevent outbreaks and protect residents and healthcare workers."

Provided by European Society of Clinical Microbiology and Infectious Diseases

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