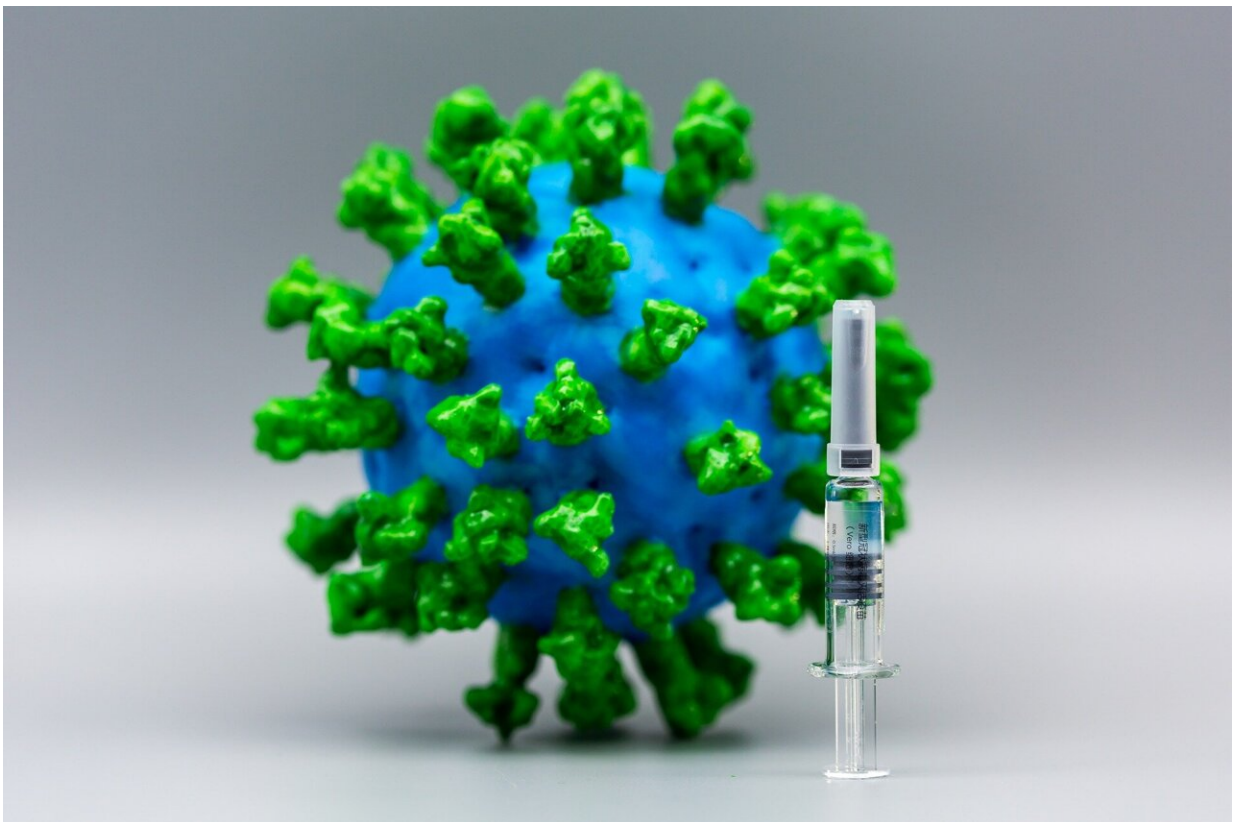


# No association between out-of-hospital cardiac arrest and COVID-19 vaccination, show study

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Victorian cardiovascular disease (CVD) experts have found no association between out-of-hospital cardiac arrests and COVID-19

vaccinations.

The study, published this week in *Circulation*, is one of the larger of its kind thanks to a unique registry set up in Victoria in 2019 to examine out-of-hospital cardiac arrests.

Potential cardiac complications of COVID-19 vaccination have created global concern, with CVD experts keen to document and share scientific evidence around this issue.

The Australian researchers' analysis did not show increased rates of out-of-hospital cardiac arrest, fatal myocarditis or unascertained out-of-hospital cardiac arrest either during the pandemic or following the introduction of nationally mandated COVID-19 vaccination.

Baker Heart and Diabetes Institute researcher and cardiologist Dr. Liz Paratz said her team examined whether rates of out-of-hospital cardiac arrest (OHCA) in young people, particularly those due to unascertained causes or myocarditis, increased after COVID-19 vaccination commenced. Causes of [sudden death](#) in young people within 30 days of their COVID-19 vaccination were also examined.

She said the combination of Australia's high rates of community vaccination (98.1% receiving a first dose of COVID-19 vaccination), prolonged lockdowns and relatively low community COVID-19 transmission created an optimal setting to assess OHCA rates following the introduction of widespread vaccination.

The study examined data from the EndUCD registry, which investigates all OHCAs aged 1–50 years in Victoria, looking at data from April 2019 to March 2022, with comprehensive adjudication against hospital and forensic data, thereby providing far more granular detail than other similar studies in the world.

She said three time periods were defined—before the pandemic (April 2019–Feb 2020); during the pandemic but preceding vaccine availability (March 2020–January 2021); and the third period correlating to both COVID-19 presence in the community and [vaccine](#) availability (Feb 2021–March 2022). These time periods were compared against age-specific vaccination and COVID-19 rates for Victorians aged 1–50 years on a monthly basis.

Dr. Paratz said the primary outcome was comparison of the defined time periods against OHCA rates, unascertained OHCA or OHCA due to myocarditis. The second outcome was causes of young sudden death within 30 days of COVID-19 vaccination.

2,242 people experienced OHCA during the study period (unascertained OHCA = 233, myocarditis causing OHCA = 13). No variation was seen in median monthly rates of OHCA, myocarditis causing OHCA or unascertained OHCA according to the defined time periods.

Thirty-eight people experienced sudden death within 30 days of their COVID-19 vaccination and were referred for forensic assessment. No difference was seen in underlying causes of sudden death compared to previously-published, age-matched data.

She said although COVID-19 vaccinations have been associated with cardiac complications such as myocarditis or pericarditis, the majority of these episodes have been reported to be mild, with the data showing no rise in death rates from it.

With the Federal Government recently introducing options for fifth boosters, Dr. Paratz said the community could be reassured by these results.

"It is important to do these robust studies utilizing large data sources so

that the scientific evidence is clear and can guide our health response," she said.

"Health care professionals and government can utilize this data, which has been peer reviewed for the leading international cardiology journal, to reassure people in the community about the safety of the vaccines with regards to out of hospital cardiac arrests and COVID-19 vaccination."

**More information:** Elizabeth D. Paratz et al, No Association Between Out-of-Hospital Cardiac Arrest and COVID-19 Vaccination, *Circulation* (2023). [DOI: 10.1161/CIRCULATIONAHA.122.063753](https://doi.org/10.1161/CIRCULATIONAHA.122.063753)

Provided by Baker Institute

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