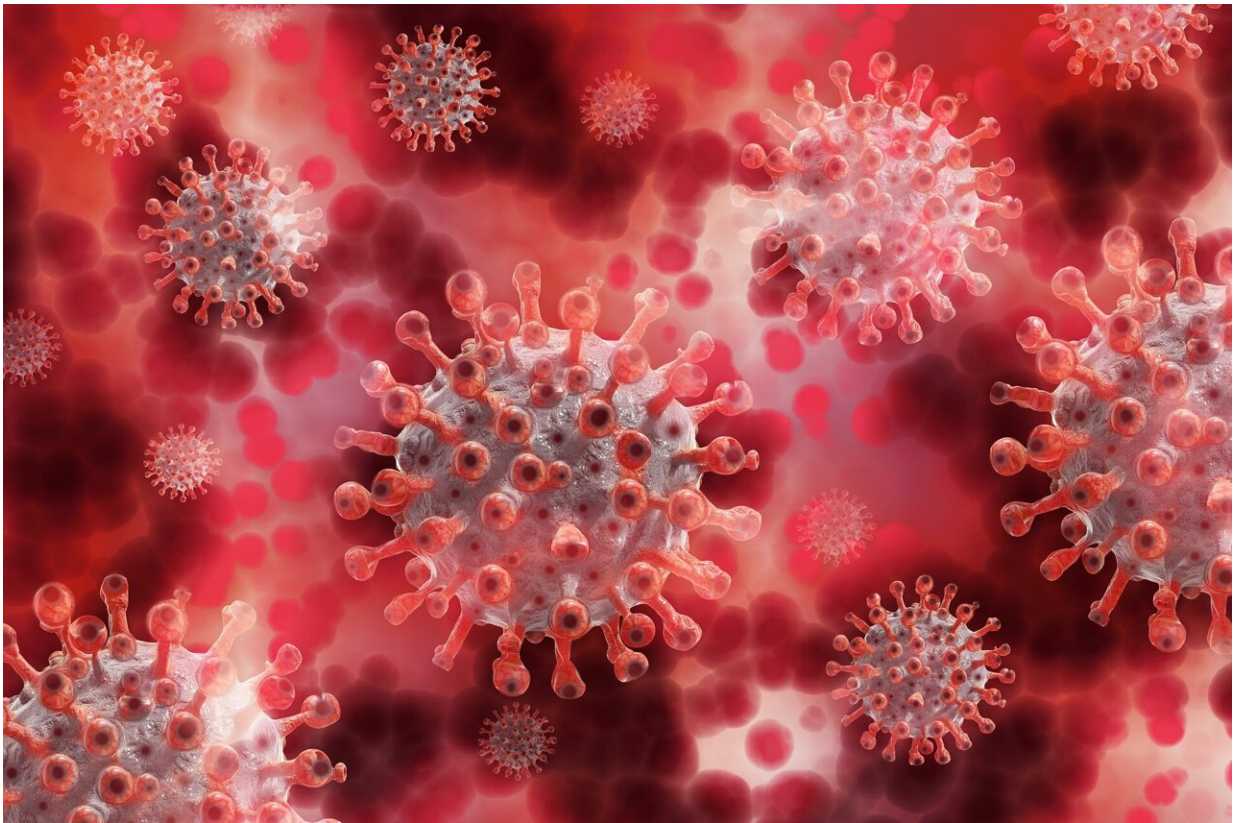


'Mass testing' linked to 25% cut in COVID-19 related hospital admissions

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Credit: Pixabay/CC0 Public Domain

The first ever voluntary "mass testing" pilot for people without COVID symptoms was associated with an overall 25% reduction in COVID-19 related hospital admissions, including an initial 43% reduction with

military assistance, finds a study published by *The BMJ* today.

Assuming this effect was causal, the researchers say the pilot prevented 6,829 infections and led to 239 fewer hospital admissions across the city of Liverpool, before being rolled out to the rest of the UK.

Transmission of the COVID-19 virus by people without symptoms has been a major challenge in controlling the pandemic. These latest findings show that large scale voluntary community testing for COVID-19 can potentially reduce virus transmission and prevent hospital admissions.

The pilot, known as COVID-SMART, offered supervised voluntary lateral flow testing to all people over the age of 5 years without symptoms who were living or working in Liverpool from November 6, 2020 to January 2, 2021. The aim was to identify infectious people sooner and disrupt transmission.

COVID-SMART coincided with the start of the second national UK lockdown (November 5 to December 2, 2020). At the time, the unvaccinated population of Liverpool had the highest COVID-19 case rate in the country.

The researchers wanted to find out whether such large scale testing was effective at reducing COVID-19 related hospital admissions.

To do this, they compared weekly COVID-19 related hospital admissions among the pilot (intervention) population with a control population selected from the rest of England with similar previous COVID-19 hospital admissions and sociodemographic factors to the intervention population.

When analysis was restricted to the first month of the pilot (November 6 to December 3, 2020), the results show that it was associated with a 43%

reduction in COVID-19 related hospital admissions in Liverpool compared with the control population.

In absolute numbers this is the equivalent of 146 fewer admissions in the period up to December 3, 2020.

However, the researchers stress that this was a time of intensive testing with military assistance when Liverpool was under higher (tier 3) lockdown restrictions than many other areas of the country.

When analysis was extended across the full intervention period (November 6, 2020 to January 2, 2021), and [regional differences](#) in lockdown restrictions were taken into account, a 25% reduction in COVID-19 related hospital admissions was seen (equivalent to 239 fewer admissions) compared with the control population.

This is an [observational study](#), and the researchers stress that care should be taken when interpreting the findings in the context of different variants, levels of immunity, and testing policies. What's more, they can't rule out the possibility that other unmeasured (confounding) factors may have influenced their results.

Nevertheless, their approach ensured that control areas were likely to have been affected by similar coronavirus transmission patterns before the introduction of COVIDSMART in Liverpool, and the results were similar after additional analyses, suggesting that they are robust.

As such, they say, "It is plausible that the main effect in our analysis is causally related to the COVID-SMART intervention, especially as the study period pre-dates the main roll-out of COVID-19 vaccination."

They note that large scale community testing is a complex intervention, where one person's testing may affect another's (e.g., family member's)

COVID risk behavior, and therefore the testing effect is not a simple relationship between one test and one chain of virus transmission. They also emphasize that success relies on high levels of uptake and effective support to enable isolation of infectious people and their close contacts.

But they say their findings suggest that even when uptake is unequal and barriers to effective isolation exist, "widespread community testing can potentially reduce transmission and subsequent [hospital](#) admissions at least in the short term."

More information: Impact of community asymptomatic rapid antigen testing on covid-19 related hospital admissions: synthetic control study, *The BMJ* (2022). [DOI: 10.1136/bmj-2022-071374](https://doi.org/10.1136/bmj-2022-071374)

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