COVID-19 certification may increase vaccine uptake in countries with below average vaccination coverage: modelling study

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COVID-19 certification led to increased vaccination uptake 20 days before and 40 days after introduction in countries with lower-than-average vaccination coverage, according to a modelling study published in *The Lancet Public Health* journal.

COVID-19 certification, or 'vaccine passports', require people to have proof of complete vaccination, negative test, or COVID-19 recovery certificate, to access public venues and events (e.g. restaurants, concerts, hairdressers). As well as helping to prevent the spread of COVID-19 in public venues, it has been suggested that COVID-19 certification might encourage more unvaccinated people get vaccinated, particularly those who perceive their own risk of hospitalisation or death from COVID-19 as low, known as vaccine complacent groups.

Many countries have introduced or are considering introduction of COVID-19 certification, but whether this public health intervention increases vaccine uptake is so far unclear. Some survey-based evidence has suggested that participants reported they would be less likely to get vaccinated if COVID-19 certification was introduced, whereas some media and national health offices have reported increases in uptake following the introduction of COVID-19 certification.

Lead author of the study Professor Melinda Mills, Director, Leverhulme Centre for Demographic Science, University of Oxford, says, "As mass vaccination programmes continue to play a central role in protecting public health in this pandemic, increasing vaccine uptake is crucial both to protect the individuals immunised and break chains of infection in the community. Our study is an important first empirical assessment of whether COVID-19 certification can form part of this strategy. Overall, we observed a significant uptick in anticipation of restrictions coming into place around 20 days before introduction, which lasted up to 40 days after, but the context of existing vaccination uptake, vaccine hesitancy, levels of trust in authorities, and pandemic trajectory was crucial to the impact."

The study linked data COVID-19 certification introduced from April to September 2021 to vaccination uptake in six countries where certification was legally mandated (Denmark, Israel, Italy, France, Germany, Switzerland). Modelling was used to estimate what vaccine uptake would have been without COVID-19 certification in each of the six countries, based on vaccination uptake trends from 19 otherwise similar control countries without COVID-19 certification. In the main analysis, authors estimated the number of additional doses per population attributable to the policy. As a secondary analysis, the authors examined the impact of the policy on reported...
infections. They also examined differences in effects used to restrict access to nightclubs and large events only, increases in vaccination uptake was only observed in people aged under 20 years old. When restrictions were expanded to include all hospitality and leisure settings, uptake also increased among those 20-49-year-olds. The authors say this suggests that the policy may be useful in encouraging uptake in particular groups, but more research investigating other factors, including socioeconomic status and ethnicity, is needed to fully understand who certificates could effectively target.

Co-author on the study, Dr. Tobias Rüttenauer, University of Oxford, says "We know that certain groups have lower vaccine uptake than others and it may be that COVID-19 certification is a useful way to encourage vaccine complacent groups, like young people and men, to get vaccinated. However, COVID-19 certification alone is not a silver bullet for improving vaccine uptake and must be used alongside other policies. Vaccine hesitancy due to lack of trust in authorities, which is common among some minority ethnic and lower socioeconomic groups, may be addressed more successfully through other interventions, such as targeted vaccine drives and community dialogue to generate more understanding about COVID-19 vaccines."

The authors note some limitations of their study. There was no data available to examine vaccine uptake by sociodemographic, gender and ethnic groups. They also emphasise that COVID-19 certification policies across the six countries were different for various reasons, including the phases of introduction, aims, eligibility criteria, level of enforcement, and pandemic context (case numbers and deaths). They also acknowledge that the causes of vaccine hesitancy are diverse across different countries, influenced by the historical experience of different social groups, which may limit the generalisability of their findings.

Finally, they point to several issues associated with certificates that policymakers should consider. This includes the risk of exacerbating inequalities among communities that have lower uptake, generating inequality in access to public spaces where COVID-19 vaccine roll-out is staggered by age,
entrenching digital divides if passes are electronic, and data privacy concerns.


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