

Should COVID-19 vaccination be mandatory?

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Mandates for lockdowns seem to be implemented less hesitantly despite greater uncertainty regarding their supporting evidence and trade-offs.

Some countries have recently introduced a new series of restrictions, including military-enforced lockdowns, to reduce the surge of new cases attributable to the spread of the delta variant.¹ Lockdowns may be effective tools to reduce the number of cases, and subsequently death attributable to infectious diseases; however, as a complex intervention, there are important uncertainties as to which of its components may be more effective and what are the ideal triggers for implementing and lifting each restriction.² In addition, lockdowns and some of their components have sparked heated debates considering the short-term and long-term harms, especially in the area of school closures.³ Moreover, people may comply with lockdown regardless of its mandatory component, although the effect size of these voluntary restrictions might be smaller,⁴ and there might be substantial differences in the implementation of these interventions targeting complex behavioural changes across different cultures and settings. On the other hand, vaccine uptake has reached a plateau due to vaccine hesitancy in countries where sufficient supply is guaranteed, and this might be a substantial contributor to breakthrough cases in what has been called 'a pandemic of the unvaccinated'.⁵

COVID-19 vaccines are highly effective, and there are good reasons to consider the investigation of the effectiveness of universal vaccine mandates for the general population, especially in the context of rising cases and the subsequent implementation of mandates for lockdowns with likely inferior effectiveness and greater harms.

Considering the evidence from randomised controlled trials and observational data from countries with high vaccination rates, they effectively reduce cases, hospitalisations and deaths.⁶⁻⁷ Additionally, while there are ongoing concerns regarding the effects of vaccines on transmissibility among vaccinated individuals and delta, there seems to be only a modest reduction in their effectiveness against this variant.⁸⁻⁹ While there are also concerns regarding the level of transparency of vaccines and the lack of long-term safety data, it is very likely that the benefits of vaccination largely outweigh potentially rare long-term harms.¹⁰ There have been compelling cases made for mandatory vaccinations in health-care workers, balancing not only their benefit but also their patients' against the risks of staff quitting and possibly increasing staff shortage. The impact of this risk might vary in different contexts, as

some care homes found in public consultations that half their workers would be against this policy, but others successfully implemented vaccine mandates along with education and support with no severe repercussions.¹¹⁻¹² Vaccine mandates are not new nor rare: over a hundred countries had vaccine mandates before COVID-19, primarily for childhood vaccinations, and more than half of these countries implemented different types of penalties to enforce such mandates.¹³

Mandates can be 'hard' (ie, vaccines required to work or attend school) or 'soft' (nudging people into the easiest choice), and they appear to have been effective for other vaccines.¹⁴⁻¹⁵ Moreover, these mandates are not usually linked to criminal sanctions or the use of armed forces in cases of non-compliance, in contrast to how lockdowns were implemented in some countries. Recent guidance from WHO does not recommend universal mandates for vaccines and highlights some key ethical considerations that need to be considered before introducing mandates: the necessity and proportionality of these measures, public trust, ethics process of decision making, safety and efficacy data, and sufficient supply of jabs.¹⁶ While this guidance has considered the 'vaccinate-or-mask policies', it has not considered competing restrictions (ie, lockdowns) that might be necessary to impose if the virus gets out of control due to insufficient vaccination. Moreover, mandates have other important limitations, including the limited experience worldwide in enforcing them in the adult population and the relative lack of safety and efficacy data for childhood vaccination for COVID-19. The latter is especially important in the context of the expansion of vaccination programmes in the younger populations, where the risk to benefit ratio of vaccination is being defined by ongoing research. Mandates might also trigger distrust in the government and increase polarisation and antivaccination sentiment.¹³⁻¹⁷⁻¹⁸ These downsides, however, may also be present in mandates for non-pharmaceutical interventions.¹⁹⁻²¹

Considering that vaccines are likely more effective and carry less collateral damage than many non-pharmaceutical interventions such as lockdowns, we have a unique opportunity to gather data on the effectiveness of mandates for COVID-19 vaccines. This could be done in numerous ways, including cluster-randomised controlled trials, step-wedge trials or at the very least gathering high-quality observational data, considering their limitations.²² However, this sometimes might not be possible, feasible or attractive to policymakers. In this case, the same



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way the precautionary principle has been invoked for the early adoption of lockdowns, it is likely to be more ethically acceptable to adopt mandates for interventions with higher proven efficacy and a more favourable balance of benefits and harms such as vaccines for COVID-19. Otherwise, we are sending the message to the public that mandatory lockdowns are more important than vaccinations in the context of vaccine hesitancy and antivaxer propaganda.

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