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Why England's COVID 'freedom day' alarms researchers

Easing restrictions amid rising infections raises the risk of new variants emerging and risks the health of those are not vaccinated, say researchers around the world.

Philip Ball



A crowded train on the London Underground in June. Credit: Tolga Akmen/AFP/Getty

In less than a week, the UK government plans to drop nearly all measures for

mitigating the spread of COVID-19 across England – despite steeply rising infections in the partially vaccinated population. The decision, widely hailed by its advocates as heralding a ‘freedom day’, has been sharply criticized by many scientific and public-health experts in the United Kingdom and beyond.

Some scientists call the relaxation an unprecedented public-health experiment that could result in large numbers of hospitalizations and deaths, and increase the chances of vaccine-resistant variants of SARS-CoV-2 emerging.

“There is absolutely no justification for relaxing restrictions now,” says Peter English, former chair of the British Medical Association’s Public Health Medicine Committee. “If anything, they should be tightened, at least until the increase in case rates has reversed.”

Researchers worldwide are concerned in particular because of the potential for high infection rates in a partially vaccinated population to breed further concerning variants that could then be exported around the world. “The world has its eyes on the UK,” says Lauren Ancel Meyers, director of the University of Texas at Austin’s COVID-19 Modeling Consortium.

“The decision, and the way it has been presented, repeats a pattern of foolishly promising an outcome when dealing with a highly infectious agent,” says epidemiologist William Hanage, at the Harvard T. H. Chan School of Public Health in Boston, Massachusetts, alluding to the government's earlier, premature assurances that the pandemic would soon be over.

From 19 July, all businesses in England will be allowed to open as normal, there will be no social-distancing requirements, and mask-wearing will no longer be legally mandated in public spaces. Yet infections in the United Kingdom are already at levels comparable to those in last winter’s devastating second wave of the pandemic and are still rising. The local governments of Scotland, Northern Ireland and Wales, which set public-health policy independently, do not plan to

lift all restrictions yet.

A dangerous experiment

In late February, UK Prime Minister Boris Johnson announced a four-step road map that would take England from full lockdown to an ending of all restrictions on 21 June. That schedule was delayed for a month because of the spread of the more-infectious Delta variant of the virus.



Chris Whitty, chief medical adviser to the UK government, in a 12 July press conference with Prime Minister Boris Johnson (centre) and chief scientific adviser Patrick Vallance (right). Credit: Daniel Leal-Olivas/AFP/Getty

The government said that relaxation of restrictions would be guided by “data, not dates”, and that each stage of the opening up would happen only if certain criteria were satisfied. In particular, reopening would be postponed or reviewed if a rise in infection rates risked causing a surge in hospital admissions, or if new variants of

the virus altered the picture. It is unclear whether those measures have been met for the reopening in July, say researchers. On 11 July, there were 31,000 recorded new cases of COVID-19 – total infections are now around 300 per 100,000 people. And a new modelling study shows an impending surge of hospitalizations, although the exact numbers are highly uncertain.

The government argues that, nonetheless, relaxation is justified – given the damage to the economy, livelihoods, education and mental health caused by restrictions – because the country's good progress on vaccinations has weakened the link between infections and hospitalizations or deaths. As of early July, around 68% of the population had received at least one shot of a vaccine, and 52% had received two doses. Although current infections are comparable to the situation in February, hospitalizations and deaths are more than ten times lower.

The government has decided that this is an acceptable compromise, but many scientists and health professionals have grave doubts. "Even with lower hospitalization and fatality rates, current trends in the UK are likely to strain healthcare systems and lead to substantial public health consequences," says Meyers. On 7 July, *The Lancet* published a letter¹ with around 100 signatories from the United Kingdom and beyond, accusing the UK government of "embarking on a dangerous and unethical experiment".

Some are concerned that the government is willing to accept widespread infections among young people and children, who are not vaccinated and currently make up most of the known cases. Although this group is at far lower risk of serious illness and death than are older people, public-health specialists say that a policy that encourages the spread of infectious disease is unprecedented. Some think that the government is aiming to achieve 'herd immunity' in the population through a mix of natural infection and vaccination.

But Hanage sees no grounds for thinking that natural infection would be better than vaccination for generating population-level protection – not least because

the vaccines are known to be safe, whereas COVID-19 is not.

Mike Ryan, executive director of the World Health Organization's Health Emergencies Program in Geneva, Switzerland, has said that a rush to re-open economies that accepted infections as inevitable and encouraged them to occur "sooner rather than later" amounted to "moral emptiness and epidemiological stupidity".

Grave risks

One particular concern with letting infections run high, even among groups, such as children, young people and vaccinated people, that are less likely to experience severe disease, is 'long COVID' – symptoms of COVID-19, such as exhaustion and difficulty concentrating, that persist for many months after infection. The UK Office for National Statistics currently says that close to a million people in the country have this condition. (Whether vaccines confer significant protection against long COVID is still unclear.) Chris Whitty, chief medical adviser to the UK government, has said that cases of long COVID seem sure to increase over the summer after opening up.

And, even among the vaccinated population, there will be more hospitalizations and deaths as infections rise. None of the vaccines used in the United Kingdom offers complete protection against hospitalization due to the Delta variant. For the widely used AstraZeneca vaccine, the protection has been found to be about 92%, so there will still be many casualties if infection rates are very high. People vulnerable to serious illness, for example those with compromised immune systems, will be put particularly at risk.

Many researchers acknowledge that compromises are needed: the economic and social costs of restrictions are too grave to impose indefinitely. "We should certainly be considering, in the light of all we've learned, which measures are most effective, and which we might be able to drop," says English. But experts criticize the abandonment of measures that could reduce infection with minimal cost or

inconvenience, particularly mandatory mask-wearing.

“Many of the relevant interventions are pretty mild”, says Hanage, “and getting people to accept small inconveniences for the greater good is what leadership is about.” He warns that forgoing minor interventions might end up necessitating a return to major disruptions and lockdowns later on.

English thinks that masks should remain compulsory in shops and on public transport, and that ventilation efficacy could be used to determine the rules in other spaces, as is currently done in Belgium. He also thinks that Germany's practice of making restrictions and mitigations contingent on local rates of infection is a good model.

Johnson has insisted that the decision to open up reflects a judgement that the summer is the best time to do so. Spreading is reduced when people can be out in the open air, schools are on holiday, and hospitals are less pressured by seasonal ailments, such as flu, than they will be in the autumn and winter.

But English says relaxation when case numbers are high and rising does not make sense. Hanage says that a further delay of complete opening up could be used to vaccinate remaining age groups and thereby evade the worst consequences of a later relaxation.

Azra Ghani, an epidemic modeller at Imperial College London, agrees. “I think many of us in the scientific community would have preferred to see a more gradual relaxation,” waiting for all adults to have had the opportunity to get fully vaccinated, she says. “With a complete relaxation of interventions, we could see infection levels rise much higher than at any previous time during the pandemic.”

Once the change is implemented, “a very sharp spike in infections can be expected, maybe blunted a little by schools breaking up”, says Hanage. That was the experience in the Netherlands, where most restrictions were dropped on 26 June. Infections quickly began to soar, so the Dutch government was forced to

reintroduce some safety measures from 10 July.

One of the gravest concerns is that if England's number of infections grows as high as anticipated – some forecast up to 100,000 new infections per day over the summer – the chances of a variant emerging with even greater vaccine evasion are greatly increased. “All the experience we have with viruses”, says virologist Richard Tedder at Imperial College London, “is that if you let them replicate in a partially immune population, you will select inevitably for [vaccine] escape variants.”

So far, vaccines have mostly held up well against the concerning variants. But if more variants appear, this could cease to be true, at which point vaccines will need to be redesigned. “Why, at this point in time, with the virus on the rise again, are we prepared to rely on vaccines with the knowledge that if the vaccines fail then we’re going to have to rebuild them?” Tedder asks. More death and long COVID, although seriously concerning, are minor problems compared to wiping out the efficacy of any vaccines, he says. “Once you’ve generated a lot of vaccine-resistant viruses, where do you go?”

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References

1. Gurdasani, D. *et al.* Lancet [https://doi.org/10.1016/S0140-6736\(21\)01589-0](https://doi.org/10.1016/S0140-6736(21)01589-0) (2021).
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