

Covid passes: How are they used, are they ethical and do they work?

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MORE and more countries are moving towards requiring a form of covid pass for international travel or attending large events or nightclubs, bars and restaurants.

Their introduction is provoking protests in countries including France and Italy, however. So what are covid passes, how effective are they and are they ethical?

What is a covid pass?

The basic idea is that people who are immune to the coronavirus can come into close contact with each other without catching the virus or spreading it. We don't have any easy way to measure immunity, though, so covid passes are intended to act as a proxy, providing evidence that someone has had an approved vaccine.



Paradiso in Amsterdam, the Netherlands, opened at full capacity in June

Many passes can also be obtained on the basis of a positive covid-19 test in the past six months or so, suggesting that a person has natural immunity. For people who haven't been vaccinated or infected naturally, a lot of schemes will also provide a short-term pass on the basis of a negative test in the past day or two, to show that an individual isn't currently infected.

These three criteria are what countries are starting to converge on, says Christopher Dye at the University of Oxford, one of the authors of a February report on vaccine passports. "I think we are moving towards a system that makes sense," he says.

"A vaccine pass sounds like it's restricting liberties, but it's actually restoring people's freedom"

While the term "vaccine passport" is often used, it isn't an accurate description of passes that can also be obtained on the basis of a negative test or past infection, such as the EU Digital COVID Certificate.

"I think it's a misnomer to call it a vaccine passport," says bioethicist Nancy Jecker at the University of Washington School of Medicine in Seattle.

What you need to do to get a covid pass depends on where you live. In England, the National Health Service Covid Pass can be obtained from the NHS App. A travel pass can be obtained if you have been vaccinated, or had a positive PCR test in the past six months. These or a negative test in the past two days can also get you a short-term pass to attend domestic events. Passes are also available in paper form.

Covid passes are already required for travel to many countries, or for avoiding quarantine. In some places, they are also needed for other activities. From September, for instance, people in New York City will have to show they have had at least one vaccine dose to eat inside a restaurant or go to theatres.

How effective are they?

If vaccines provided complete protection against transmission, if tests for infection were completely

accurate and if everyone stuck to the rules, covid passes would be 100 per cent effective at, say, preventing people going to nightclubs infecting others there.

But not everyone follows the rules, not all tests for infection are highly accurate and some vaccinated people can still get infected and infect others.

This means covid pass schemes will only lower the risk of infection rather than stop it. By how much isn't clear. Surprisingly, there have been no real-world trials, nor even any modelling studies relevant to the current situation in wealthy countries, as far as New Scientist can establish. "Analytical studies have not been done," says Dye.

For instance, when the Netherlands reopened nightclubs for people with negative tests, there were several superspreader events and a surge in cases. Some politicians blamed this on people using fake passes, while others blamed it on false negatives due to the rapid tests used, which are less accurate than slower PCR tests.

However, if nightclubs had been reopened without the negative test requirement, there could have been an even bigger increase in cases. No country is deliberately doing such an experiment, but by looking at what happens in the US, say, where only some cities and states are introducing covid passes, it might be possible to compare areas to get an idea of how much passes reduce the risk.

One modelling study did look at what would happen if lockdowns and face coverings are keeping infections at a low level and restrictions are relaxed only for those who are vaccinated. It concluded that a vaccine needs to be about 80 per cent effective at blocking transmission – not just at preventing symptoms – to prevent another wave of infections.

According to a large UK study, the Pfizer/BioNTech vaccine is 85 per cent effective at preventing infection by the delta variant two weeks after the second dose, but by three months, its efficacy wanes to 75 per cent (see page 16). The Oxford/AstraZeneca vaccine is 68 per cent effective against delta initially and wanes to 61 per cent over this period.

These studies together suggest that if the aim is to prevent outbreaks, many vaccines aren't effective enough for vaccine passports to work and even those that are don't remain so for long. However, if the aim is just to keep case numbers lower when easing restrictions, vaccine passports will help, says B. Shayak at Cornell University in Ithaca, New York. "There's no denying that vaccine passports are better than no vaccine passports," he says.

Can passes boost vaccination rates?

When Israel introduced its green pass in February, allowing people with it to go to gyms, restaurants and so on, one of the aims was to boost vaccination levels. The scheme was stopped as cases fell but was reintroduced as they rose again due to the delta variant. This time, people who get the pass on the basis of a negative test when they are eligible to be vaccinated have to pay for the test.

With no controls to compare, it isn't clear if this kind of approach increases vaccination levels, but one survey in the UK suggests it might backfire. In April, Alexandre de Figueiredo at the London School of Hygiene & Tropical Medicine and his colleagues asked nearly 18,000 people how the introduction of vaccine passports would affect their intention to get a first or second dose.

People who were already intending to get vaccinated said they would be more likely to do so, but those who were opposed or hesitant – including many younger and Black people – said they would be less inclined. Overall, the findings suggest there may be a net negative impact.

Even making vaccinations compulsory might not increase uptake. A 2014 study comparing countries in Europe found no evidence that vaccination levels are higher where childhood vaccines are mandatory.

Covid passes differ depending on where they are issued

Place	Scheme	Requirements	What is it for?
European Union	EU Digital COVID Certificate	Vaccination, recent negative test or recovered from covid-19 in past 180 days	Travel within the EU and to some other countries
France	Pass sanitaire	Vaccination, negative test in past three days or recovered from covid-19 in past 180 days	Mandatory for restaurants, shops, hospitals and long-distance trains
Italy	Green Pass	Vaccination, negative test in past three days or recovered from covid-19 in past 180 days	Required in most public venues except shops
England	NHS COVID Pass	Vaccination, positive PCR in past six months or (domestic only) a negative test in past 48 hours	International travel, some venues may ask for it
Wales	NHS COVID Pass	Vaccination	International travel
Scotland	Coronavirus vaccination status	Vaccination	International travel
Northern Ireland	Covid certificate	Vaccination	International travel
New York City	Key to NYC	At least one vaccine dose	From September, mandatory for indoor public activities such as restaurants and theatres
New York state	Excelsior Pass	Vaccination or recent negative test	Some state employees must have one, businesses can choose to require it
Israel	Green Pass	Vaccination, negative test paid for privately in the past 72 hours or recovered from covid-19	All venues except shops and malls
China	Green, yellow or red health codes indicating risk level	Based on a health survey early in the pandemic but now also takes account of vaccination or recent negative test	Not mandatory but green codes required by most workplaces, restaurants, shops, gyms and transport systems

Rebecca Brown, an ethicist at the University of Oxford, is sceptical about the survey results. She thinks covid passes will increase vaccination, but doesn't think they should be used for this. "I don't think that would be a legitimate use of the passport scheme. It might have this extra benefit, but that is not what justifies introducing it," she says. "If it's safe for

people to have those freedoms, then they should absolutely be able to access those freedoms."

Are covid passes ethical?

Many people have questioned whether covid passes can ever be ethically justified even for reducing infection rates.

"A vaccination passport sounds very frightening. It sounds like we are introducing further restrictions on people's liberty," says Brown. "My view is that people are getting things the wrong way round. An immunity passport is a way of restoring freedom."

Dye compares covid passes to driving licences. We accept these are necessary to keep everyone safe, he says, and the principle is the same for covid passes.

Jecker broadly agrees. "In the US, there are people that are really opposed to any kind of interference with individual liberty," she says. "But we are in an era now where we have responsibilities to every other person on the planet. Respect for individual autonomy needs to be balanced against these other values, whether we're talking about emerging infectious diseases or climate change."

One objection to vaccine passports is that they can be discriminatory. Not all firms give workers time off to get vaccinated, for example. Vaccine passports can also make travelling harder for people in low-income countries, where far fewer people have been able to get vaccinated.

For these reasons, Jecker is opposed to any system based solely on vaccination, but supports schemes that allow alternatives such as a negative test.

Brown agrees that requiring vaccine passports for international travel can be discriminatory, but doesn't see this as a valid argument against them. "What people who are objecting to vaccine passports under those circumstances are doing is that they are advocating some kind of levelling down," she says. "You're saying, 'not everybody can access this, so nobody should access it'. I don't think that's justified."