

COVID-19, Global Cooperation and Reigniting the Economy: Do we Need Vaccine Certificates?

Series | COVID-19 & response strategy

ISGlobal Barcelona
Institute for
Global Health

Authors: Denise Nanche, Gonzalo Fanjul, Jeffrey Lazarus, José Muñoz, Antoni Plasència, Oriana Ramírez and Rafael Vilasanjuan (ISGlobal)*

[This document is a part of a series of discussion notes addressing fundamental questions about the COVID-19 crisis and response strategies. These documents are based on the best scientific information available and may be updated as new information comes to light.]

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At the start of the COVID-19 pandemic, as infection rates soared, the idea of immune certificates as a strategy for de-confinement was raised. It was suggested that people who had been infected by the SARS-CoV-2 virus would generate protective immunity which could allow them to go back to work or participate in other activities. With very little scientific knowledge on the immunity to SARS-CoV-2 and the inherent discrimination accompanying such a certificate, the idea was largely discarded. Now, **a year into the pandemic**, we have 13 vaccines approved in different countries and the idea of issuing vaccine certificates is a reality¹.

The globally diverse recipes of confinement and restrictions imposed on populations since the start of the COVID-19 pandemic have brought many economic

sectors to a standstill. Particularly hard-hit sectors include **air travel and tourism**. This has led to a 4% plus contraction of the world economy², which in human terms translates into massive loss of employment, destruction of livelihoods and swathes of the population falling into poverty. In 2021, the world embarked on the largest vaccination campaign in human history. Forecasts predict that wealthy countries are likely to achieve herd immunity necessary to halt SARS-CoV-2 transmission (a minimum of 70% population vaccine coverage, but possibly even higher) by 2022. However, due to the tremendous disparities in vaccine access, most low-income countries (LIC) are unlikely to reach adequate population vaccine coverage until at least 2024³.

In the midst of worldwide mass immuni-

* Denise Nanche is ISGlobal's scientific director, Gonzalo Fanjul is ISGlobal's policy director, Jeffrey Lazarus is the head of the Health Systems Research Group at ISGlobal, Jose Muñoz is an associate research professor at ISGlobal and head of the International Health Service at Hospital Clinic in Barcelona, Antoni Plasència is ISGlobal's director general, Oriana Ramirez is ISGlobal's global health and policy analysis coordinator and associate researcher, and Rafael Vilasanjuan is ISGlobal's policy and global development director.

¹ [FAQs on COVID-19 Vaccines.](#)

² [World Economic Situation And Prospects: February 2021 Briefing, No. 146.](#) United Nations. 1 February 2021.

³ [Coronavirus \(COVID-19\) vaccines for developing countries: An equal shot at recovery.](#) OECD. 4 February 2021.

zation, there is an urgency to kick start national economies and bring people back to work. Thus, many countries have resuscitated the **immunity passport**, now presented as a vaccine certificate which could allow vaccinated individuals extended freedom to safely engage in travel and other activities. Several countries have unilaterally initiated paper-, app- or QR-code- based vaccine certificate programs. These include **China's** "international health travel certificate" rolled out in March 2021, and **Israel's** "green passport". **Denmark** is considering a digital passport for business travel, and **Greece** is rolling out its own certificate in order to revive tourism for the summer of 2021. Several private sector initiatives are also in the pipeline such as the "digital health pass" by **IBM** as well as the "travel pass" by the International Air Transport Association (**IATA**). The "CommonPass" app, backed by the **World Economic Forum** is currently being piloted by All Nippon Airways. The **European Com-**

mission has announced that a "digital green passport" will be implemented by June 2021⁴.

As the world scrambles to develop their vaccine certificates, several **important issues** remain unresolved:

- 1) Will there be global cooperation to harmonize vaccine passports?
- 2) Will the vaccine certificates widen existing inequalities and discrimination?
- 3) How will sensitive data be protected? ●

1. Will There Be Global Cooperation to Harmonize Vaccine Certificates?

"Most of the challenges to harmonization of a vaccine certificate are linked to geopolitics and to the economic interests of high-income countries."

The race for COVID-19 immunity has led to fierce vaccine nationalism and has hindered global cooperation in the production, purchase and distribution of vaccines. Unfortunately, the race to develop digital vaccine certificates has started down the same path. Thirteen vaccines have received approval in different countries and 23 more candidates are undergoing trials for efficacy. We are thus faced with a multitude of national and regional regulatory agencies differentially giving approval to a plethora of vaccines. A vaccine certificate valid for cross-border travel is thus likely to bring disorder and confusion if it does not go hand in hand with global cooperation. Multiple **mixed messages** from public administrations,

private companies and the media will only compound the chaos. For example, China's vaccine certificate is only valid for Chinese vaccines. EU's certificate would include the four vaccines approved by the EMA-European Medicines Agency (EMA): Pfizer-BioNTech, Moderna, Astrazeneca/University of Oxford and Jansen. Individual European countries such as Hungary or Slovakia which have added non-EMA approved vaccines (including Sputnik V and Sinopharm) to their arsenal would include these in their certificates. Greece and Israel have already made agreements to allow their citizens to move freely between their countries. The situation becomes even more complicated if IATA and groups of

⁴ Coronavirus: Commission proposes a Digital Green Certificate. European Commission. 17 March 2021.

airlines create their own systems alongside those of national governments.

The International Civil Aviation Organization has called for harmonization of global standards⁵ and the WHO has established a Smart Certificate Working group to figure out how to standardize and incorporate all of the different vaccines approved in individual countries of the world⁶. Vaccine certificates can only be successful if there is global cooperation.

There are some **scientific hurdles** to the global standardization of a vaccine certificate. For example, we do not have a firm grasp on the duration of immunity for each of the vaccines nor on their capacity to stop transmission. However, most of the challenges to harmonization of a vaccine certificate are linked to **geopolitics** and to the **economic interests** of high-income countries ●

2. Will the Vaccine Certificates Widen Existing Inequalities and Discrimination?

“No population will reach 100%, nor does it need to in order to reach herd immunity. A vaccine certificate should thus not be mandatory for travel or other activities.”

Implementing a vaccine certificate is a **double-edged sword**. On the one hand, it allows people in different economic sectors, including tourism, to go back to work and rebuild their livelihoods. On the other hand, it could deepen inequalities by giving privileges to vaccinated individuals while withholding them from the non-vaccinated. Given the global shortage and disparities in access to vaccines, at this stage in time, a vaccine certificate for travel would likely deepen inequalities. Within the EU, the digital green passport plans to combine information on vaccination, negative PCR test and recovery from COVID-19 for travel which has been touted as a mechanism to ensure equality.

However, with the slow pace of immunization and the prohibitive cost of PCR tests, many people could be left behind. The only way to prevent that from happening is to guarantee, in the first place, that these certificates are a way to *speed* up screening processes, rather than replacing them altogether. Secondly, by extending massive and affordable testing mechanisms that can provide all people

with a sensible alternative to mobility restrictions. This is the common practice in countries such as Denmark⁷.

The certificates have mainly been discussed in the context of opening up travel but some have considered giving freedom of access to facilities for “vaccinated only” such as fitness centres, theatres and restaurants. In Israel, concerts and theatres have already staged events accessible only for those with a green passport. Again, although it allows people to go back to work, it also discriminates and creates second class citizens who have no access or cannot take the vaccine. COVID-19 vaccines are as of yet approved for individuals over 16 years of age and are not recommended for pregnant women and people with a history of severe allergies. COVID-19 vaccination is not mandatory and **using vaccine certificates** to withhold goods and services from individuals who do not wish to receive the vaccine will only increase distrust in public health institutions. More efforts in public health messages are needed to increase trust and address vaccine hesitancy. No population will reach 100%, nor does it need to in

⁵ Updated ICAO guidance supports harmonized global recovery, says ACI. Airports Council International. 12 March 2021.

⁶ Smart Vaccination Certificate Working Group. WHO.

⁷ Corona tests for the public. The Capital Region of Denmark. 13 April 2021.

order to reach herd immunity. A vaccine certificate should **thus not be mandatory** for travel or other activities.

Vaccine certificates for deadly and/or highly contagious infections have been used for travel and school attendance in many parts of the world. For example, the **yellow fever vaccine** certificate is

a requirement to enter certain countries. In Europe and the United States, proof of **measles** vaccination for children and young adults is often required to attend school and university with exemptions for contraindicated populations. HIV travel restrictions are also another unfortunate precedent⁸.

Box 1. International vaccine certificates: immunity passports already in existence.

Vaccine passports are nothing new. Today, under the framework of the **2005 International Health Regulations (IHR)**, some vaccinations (e.g. yellow fever) are already required for international travellers to enter certain countries, while others (e.g. meningitis, polio) are required under certain circumstances. In Spain, these vaccines—as well as any others that may be recommended on the basis of the traveller’s personal history, type of journey or destination—are usually dispensed at International Vaccination Centres.

1. Yellow fever: This is the only vaccine listed as a requirement for international travel in the 2005 IHR (Annex 7). Each year, the WHO updates the list of countries where this vaccine is required. Some countries—about 20, mostly in Africa—require it for all travellers, while others—about 80 countries on every continent, including Asia, where, despite the presence of the mosquito vector, there has been no community spread in modern history—require it only for travellers arriving from countries with risk of yellow fever transmission. In general, vaccination is required for everyone over 9 months of age, except when contraindicated on medical grounds, in which case the traveller must carry an Exemption Certificate, which, however, does not guarantee entry (travellers may be required to quarantine if deemed necessary by the local health authorities).

2. Bacterial meningitis: Vaccines against the various types of meningococcal disease are not covered by the 2005 IHR. However, as envisaged in Article 43, some countries have adopted additional public health measures for certain circumstances, such as events involving mass congregations of people. Saudi Arabia, for example, requires all international travellers who visit Mecca and Medina for the annual *Hajj* or for an off-season pilgrimage (*Umrah*) to receive the quadrivalent conjugate vaccine ACYW-135.

3. Polio: Polio vaccines (oral or inactivated) are also not covered by the 2005 IHR. However, given that the global increase in outbreaks of wild and vaccine-derived poliovirus was declared a Public Health Emergency of International Concern in 2014, countries at risk of re-introduction and spread may require vaccination for travellers arriving from countries with circulating poliovirus, as set out in the Temporary Recommendations issued every three months by the WHO Emergency Committee.

If vaccines are an easily available global public health good with few contraindications and good uptake, a vaccine certificate could be part of the solution. However, we are far from this scenario. In high-income countries, access to COVID19 immunization is often limited and vaccine hesitancy

and distrust are rampant. Furthermore, limited access to vaccines in low- and middle-income countries threatens to deepen divisions between the rich and the poor ●

⁸ HIV related restrictions on entry, residence and stay in the WHO European Region: a survey. *Journal of the International AIDS Society*. 15 January 2010.

3. How Will Data, Identity and Privacy be Handled?

“A digital vaccine certificate poses challenges with regards to identity proofing and privacy, avoiding forgery and updating vaccine information.”

A digital vaccine certificate poses challenges with regards to **identity proofing** and privacy, avoiding forgery and updating vaccine information. Some have called for linking the vaccine certificate to foundational ID registries, but not all countries have centralized ID registries, and when linked to birth, they depend on civil registries which, in low- and middle-income countries, often lack robustness. According to the World Bank’s ID4D database⁹, in 2018 about one billion people worldwide, mostly women and in poorer countries, did not have basic ID documents. Additionally, security levels of identity proofing to ensure the person showing the certificate is the designated holder range in complexity and **forgeability**: from signed identity cards to biometrics.

The second challenge to development of a vaccine certificate is the cybersecurity required to prevent forgery. Counterfeit Israeli green pass QR certificates have already surfaced, and vaccine certificates and COVID-19 test results can be bought online; sellers have cropped up at European airports¹⁰.

Finally, certificate systems will need to accommodate doses and/or future boosters administered in different health settings and countries as well as include a **duration of validity**; Israel has set the duration at 6 months after the second dose ●

⁹ The World Bank. Identification for Development.

¹⁰ Ran Bar Zik. Despite Warnings, Anyone Can Still Fake Israel’s Coronavirus Vaccination Certification. *Haaretz*. 18 February 2021.

4. Conclusion

“A vaccine certificate adapted to the rapidly evolving vaccine landscape may be a part of the solution for reigniting the travel and culture sectors and putting people back to work.”

In conclusion, a vaccine certificate adapted to the rapidly evolving vaccine landscape may be a **part of the solution** for reigniting the travel and culture sectors and putting people back to work. The following are some measures that could make that happen:

- **Global cooperation** between the public and private sector is essential and vaccine certificates should be unified via a set of international requirements, much as are passports or the WHO yellow fever vaccine card.
 - Such a certificate might exempt individuals from quarantine but should be **complementary** to non-medical interventions and PCR testing, and under no circumstances should prevent an **individual’s fundamental right of movement**.
 - Public administrations should seriously invest in addressing vaccine hesitancy in order to maximize vaccine coverage.
 - In parallel, high income countries should play a more active role in the scale up of COVID-19 **vaccination in low and middle-income countries**, *a sine qua non* requisite for recovery of the global economy.
- **Communication of unified messages** between public administrations and media is essential to maintain vaccine confidence and ensure that an internationally regulated vaccine certificate can bring benefits to all •
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TO LEARN MORE

WHO position and role in a smart vaccination certificate

- [About us](#)
- [Interim position paper: considerations regarding proof of COVID-19 vaccination for international travellers](#)

Europe Digital Green Certificate


- [Commission proposes a Digital Green Certificate](#). European Commission. 17 March 2021.

Limited access to vaccines in LMIC

- [Covid-19: Many poor countries will see almost no vaccine next year, aid groups warn](#). *BMJ* 2020;371:m4809. Published 11 December 2020.

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