

# Is an Immunity Passport an Option as Part of a Deconfinement Strategy?

Series | COVID-19 & response strategy

ISGlobal Barcelona  
Institute for  
Global Health

**Author:** Denise Nanche is Scientific Director and Research Professor at ISGlobal

[ This document is 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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As the world rounds the top of the COVID-19 epidemic curve and heads down the hill to safety, countries are scrambling to define **policies of gradual deconfinement**. Everyone agrees that we need to ensure a safe return to work and outdoor life while preventing resurgence of COVID-19 cases.

There is a **relative consensus** on PCR testing individuals with symptoms, identifying SARS-CoV-2 infections, isolating the cases and quarantining the contacts in a targeted approach. There is also agreement on distributing personal protective equipment as well as reinforcing physical distancing outdoors and at the work place. Certain collectives are at a higher risk for contracting and transmitting COVID-19 such as front-line health workers, firefighters, police, retirement home workers and supermarket cashiers, among others. Thus, extra care must be taken to ensure protective measures in

these collectives in order to **safeguard our vulnerable populations**.

Case fatality rates for COVID-19 increase with age, with estimates ranging from less than 1% in young adults, to 10% in adults over 80 years of age or with comorbidities, but the exact **figures depend on country and SARS-CoV-2 testing capacity**<sup>1</sup>.

However, the large majority of people infected with SARS-CoV-2 **will develop an immune response** and survive. In many cases, a robust antiviral immune response will protect an individual from being re-infected or transmitting an infection to others. Acute viral infections such as measles, rubella, smallpox, polio, hepatitis A, Ebola and others elicit a long-lived immune response which protects from re-infection. Some viruses such as influenza, mutate rapidly and thus immunity may protect against the original virus but not against a mutated version.

<sup>1</sup> [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30243-7/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30243-7/fulltext).

Although we already know that SARS-CoV-2 elicits an immune response, **we do not yet know if this response is protective and for how long<sup>2</sup>.**

In order to gradually ease lockdown measures, some governments have suggested issuing **immunity passports** or certificates to individuals who test positive for antibodies to SARS-CoV-2. This strategy is thought to be helpful in allowing some individuals to return to their previous activities sooner than others.

Given the knowledge we have gained in the four and a half months since the first case in Wuhan, China coupled with the great economic and societal pressure for a successful deconfinement, **can immunity passports help guide our return to normality?** ●

# 1. The Technical and Scientific Answer

**“Serological testing in the context of an epidemiologic study, such as those initiated by Spain and Germany, may thus generate valuable population-level information regarding the evolution of the epidemic, but lack robustness to make decisions about an individual’s rights.”**

The test that detects SARS-CoV-2 in the respiratory tract, called a PCR test, amplifies the virus’ genetic material and detects active cases of COVID-19. However, **a negative PCR test does not give information about a past infection.** This requires serological tests that detect antibodies against the virus.

**Antiviral antibodies** are an easily detectable marker indicating a specific immune response –a footprint of the viral infection. According to basic tenets of virology and immunology, those individuals who have been infected by SARS-CoV-2 should have detectable antibodies, and studies thus far have shown that they do.

But, what exactly does a positive serological test tell us? First of all, it depends on the test used to detect the antibodies. The current tests for antibodies to SARS-CoV-2 are very new and have shown **high rates of false negatives and positives.** If used for deciding on individuals’ access to certain rights and employment, this might unknowingly **put a false-positive non-immune in-**

**dividual in a vulnerable position** posing a risk to others.

For argument’s sake, let’s assume we have a highly accurate test. What will a positive result tell us? It will indicate the presence of antibodies, but **may not inform us as to whether or not these antibodies ensure protective immunity.** There are many kinds of antibodies and not all of them are protective. Thus, we will be unsure as to whether the positive antibody result is merely indicative of past infection, or whether it reflects protective immunity. Furthermore, we will not know how much antibody is needed for protection, nor how long this protection lasts. Serological testing in the context of an epidemiologic study, such as those initiated by Spain and Germany, may thus generate **valuable population-level information regarding the evolution of the epidemic, but lack robustness to make decisions about an individual’s rights.**

In light of this evidence, the WHO issued a scientific brief on April 24<sup>th</sup> 2020 stipulating: “At this point in the pandemic, **there is not enough evidence about**

<sup>2</sup> Huang, A. T. et al. A systematic review of antibody mediated immunity to coronaviruses: antibody kinetics, correlates of protection, and association of antibody responses with severity of disease. doi:10.1101/2020.04.14.20065771.

the effectiveness of antibody-mediated immunity to guarantee the accuracy of an “immunity passport” or “risk-free certificate.” This is based on the statement that “there is currently no evidence that people who have recovered

from COVID-19 and have antibodies are protected from a second infection”<sup>3</sup> ●

## 2. The Social and Ethical Answer

**“The discrimination via a COVID-19 immunity certificate could lead to stigma against the non-immune individuals branding them as “unemployable”. Access to many amenities could be denied on the basis of immunological discrimination.”**

Despite the technical uncertainties in the SARS-CoV-2 antibody tests available, several countries including the United States, the UK and Germany have discussed the idea of issuing immunity certificates or passports and Chile has begun establishing a plan. The proponents of the certificates argue that those individuals who have SARS-CoV-2 antibodies **could return to work and help jump start the economy.**

Let’s again assume we have an accurate SARS-CoV-2 antibody test and we use it to prioritize people who return to work. Considering that the overall **prevalence of immunity against SARS-CoV-2 in the general population may be between 1%-20%** depending on area, this translates into giving a **priority or privilege to a very small proportion of the work force.** But, even if the proportion were higher, such a certificate would create great inequality by granting an immuno privilege to a select few. This is reminiscent of 19th century New Orleans, where people had to have immunity to yellow fever to get a job<sup>4</sup>. In fact, giving jobs to the so-called “acclimatized” benefited a small proportion of people but at a **high cost for social justice, and condemned sectors of the population to poverty.**

**The discrimination** via a COVID-19 immunity certificate could lead to **stigma against the non-immune individuals** branding them as “unemployable”. **Access to many amenities could be denied** on the basis of immunological discrimination: life insurance, education, salary increases, promotions, visa applications. People might also deliberately seek to become infected or to **falsify certificates** in order to go back to work ●

<sup>3</sup> <https://www.who.int/news-room/commentaries/detail/immunity-passports-in-the-context-of-covid-19>.

<sup>4</sup> Immunity, Capital, and Power in Antebellum New Orleans Kathryn Olivarius The American Historical Review, Volume 124, Issue 2, April 2019, Pages 425–455 (cited in <https://www.theatlantic.com/science/archive/2020/04/immunity-divide/610054/>).

# 3. Does the Immunity Certificate Have a Place in Society which Strives for Equity?

**“The only situation where an accurate individual serology result might orient decision making is in professions which balance high and low risk functions.”**

The only situation where an accurate individual serology result might orient decision making is in **professions which balance high and low risk functions**. For example, hospitals might use the serologic result to prioritize those presumably immune individuals to highly sensitive oncology or geriatric wards. This would not determine whether or not they could work, but rather aid in **distributing personnel**.


When a **COVID-19 vaccine** is developed and shown to confer detectable immunity, we can envision delivery of an immunization certificate. Vaccines are considered a public good, provided for individual and collective benefit and striving for immunoequality rather than immunoprivilege ●

## TO LEARN MORE

- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30788-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30788-1/fulltext)
- <https://www.cdc.gov/coronavirus/2019-ncov/lab/serology-testing.html>
- <https://www.the-scientist.com/news-opinion/what-do-antibody-tests-for-sars-cov-2-tell-us-about-immunity--67425>

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