

## COVID-19 immunity passports and vaccination certificates: scientific, equitable, and legal challenges



Many governments are looking for paths out of restrictive physical distancing measures imposed to control the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). With a potential vaccine against coronavirus disease 2019 (COVID-19) many months away,<sup>1</sup> one proposal that some governments have suggested, including Chile, Germany, Italy, the UK, and the USA,<sup>2</sup> is the use of immunity passports—ie, digital or physical documents that certify an individual has been infected and is purportedly immune to SARS-CoV-2. Individuals in possession of an immunity passport could be exempt from physical restrictions and could return to work, school, and daily life. However, immunity passports pose considerable scientific, practical, equitable, and legal challenges.

On April 24, 2020, WHO highlighted current knowledge and technical limitations, advising “[t] here is currently no evidence that people who have recovered from COVID-19 and have antibodies are protected from a second infection...[a]t this point in the pandemic, there is not enough evidence about the effectiveness of antibody-mediated immunity to guarantee the accuracy of an ‘immunity passport’”.<sup>3</sup> In a follow-up tweet, WHO clarified that it is expected that infection with SARS-CoV-2 will result in some form of immunity.<sup>4</sup> Caution is warranted about how population level serology studies and individual tests are used. It is not yet established whether the presence of detectable antibodies to SARS-CoV-2 confers immunity to further infection in humans and, if so, what amount of antibody is needed for protection or how long any such immunity lasts.<sup>3</sup> Data from sufficiently representative serological studies will be important for understanding the proportion of a population that has been infected with SARS-CoV-2. These data might inform decisions to ease physical distancing restrictions at the community level, provided that they are used in combination with other public health approaches.<sup>5</sup> The use of seroprevalence data to inform policy making will depend on the accuracy and reliability of tests, particularly the number of false-positive and false-negative results, and requires further validation.<sup>6</sup> At the individual level, this reliability could

have public health ramifications: a false-positive result might lead to an individual changing their behaviour despite still being susceptible to infection, potentially becoming infected, and unknowingly transmitting the virus to others. Individual-targeted policies predicated on antibody testing, such as immunity passports, are not only impractical given these current gaps in knowledge and technical limitations, but also pose considerable equitable and legal concerns, even if such limitations are rectified.

Immunity passports would impose an artificial restriction on who can and cannot participate in social, civic, and economic activities and might create a perverse incentive for individuals to seek out infection, especially people who are unable to afford a period of workforce exclusion, compounding existing gender, race, ethnicity, and nationality inequities.<sup>7</sup> Such behaviour would pose a health risk not only to these individuals but also to the people they come into contact with. In countries without universal access to health care, those most incentivised to seek out infection might also be those unable or understandably hesitant to seek medical care due to cost and discriminatory access.<sup>8</sup> Such incentives must be understood in the context of the pressure governments might face from businesses seeking to adopt policies that return employees to the workforce, with corporate entities being the beneficiaries of the immunocapital

Published Online  
May 4, 2020  
[https://doi.org/10.1016/S0140-6736\(20\)31034-5](https://doi.org/10.1016/S0140-6736(20)31034-5)



Reuters/Andrew Kelly

of workers.<sup>9</sup> Furthermore, immunity passports risk alleviating the duty on governments to adopt policies that protect economic, housing, and health rights across society by providing an apparent quick fix.

Like all such privileges administered by a government, immunity passports would be ripe for both corruption and implicit bias. Existing socioeconomic, racial, and ethnic inequities might be reflected in the administration of such certification, governing who can access antibody testing, who is front of the queue for certification, and the burden of the application process. By replicating existing inequities, use of immunity passports would exacerbate the harm inflicted by COVID-19 on already vulnerable populations.

The potential discriminatory consequences of immunity passports might not be expressly addressed by existing legal regimes, because immunity from disease (or lack thereof) as a health status is a novel concept for legal protections, despite historical examples of the discriminatory impacts of immunoprivilege such as with yellow fever in New Orleans during the 19th century.<sup>9</sup> Depending on the jurisdiction, anti-discrimination laws might cover health status generally as a protected class, and also those for whom infection poses disproportionate risk—eg, older individuals, people who are pregnant, individuals with disabilities, or those with comorbidities. This inequity is not a consequence that can be legislated out of existence: adopting laws that prevent discrimination on the basis of immune status is incongruous with a process expressly intended to privilege socioeconomic participation according to such status. Under international human rights law, states have obligations to prevent discrimination, while also taking steps to progressively achieve the full realisation of social and economic rights.<sup>10</sup> Immunity passports would risk enshrining such discrimination in law and undermine the right to health of individuals and the population through the perverse incentives they create.

When larger scale international travel recommences, countries might require travellers to provide evidence of immunity as a condition of entry. Under the International Health Regulations (2005) (IHR), states can implement health measures that “achieve the same or greater level of health protection than WHO recommendations”; however, such measures must have a health rationale, be non-discriminatory, consider the human rights of travellers, and not be

more restrictive of international traffic than reasonably available alternatives.<sup>11</sup> Given current uncertainties about the accuracy and interpretation of individual serology testing, immunity passports are unlikely to satisfy this health rationale evidentiary burden<sup>12</sup> and are inconsistent with the WHO recommendations against interference with international travel that were issued when the WHO Director-General declared COVID-19 a Public Health Emergency of International Concern (PHEIC).<sup>13</sup> Given the discriminatory impact of immunity passports, any changes to WHO’s recommendations should be considered in the context of the IHR’s human rights protections.

Immunity passports have been compared to international certificates of vaccination, such as the “Carte Jaune” for yellow fever.<sup>14</sup> However, there are significant differences between the two types of documents, occasioning fundamentally different burdens on individuals’ health risk and bodily integrity, the public health risk, and an individual’s capacity to consent and control. The main distinction between the two is the nature of the incentive. Vaccination certificates incentivise individuals to obtain vaccination against the virus, which is a social good. By contrast, immunity passports incentivise infection. Under the IHR, states can require travellers to provide vaccination certificates, but this is limited to specific diseases expressly listed in Annex 7, which currently only includes yellow fever, and if included in WHO recommendations, such as those issued following the declaration of a PHEIC as is the case for polio.<sup>13</sup> Once, and if, a vaccine is developed, COVID-19 vaccination certificates could be included in revised WHO recommendations for the COVID-19 PHEIC, while member states could consider requesting standing recommendations or revising the IHR’s Annex 7 for the longer term.

Until a COVID-19 vaccine is available, and accessible, which is not guaranteed, the way out of this crisis will be built on the established public health practices of testing, contact tracing, quarantine of contacts, and isolation of cases. The success of these practices is largely dependent on public trust, solidarity, and addressing—not entrenching—the inequities and injustices that contributed to this outbreak becoming a pandemic.

I declare no competing interests.

Alexandra L Phelan  
alexandra.phelan@georgetown.edu

Center for Global Health Science and Security, Georgetown University Medical Center, Washington, DC 20057, USA; and O'Neill Institute for National and Global Health Law, Georgetown University Law Center, Washington, DC, USA

- 1 Thanh Le T, Andreadakis Z, Kumar A, et al. The COVID-19 vaccine development landscape. *Nat Rev Drug Discov* 2020; published online April 9. DOI:10.1038/d41573-020-00073-5.
- 2 Bartlett J. Chile's "immunity passport" will allow recovered coronavirus patients to break free from lockdown, get back to work. *Washington Post*, April 20, 2020. [https://www.washingtonpost.com/world/the\\_americas/chile-coronavirus-immunity-passport-antibody-testing-card/2020/04/20/8daef326-826d-11ea-81a3-9690c9881111\\_story.html](https://www.washingtonpost.com/world/the_americas/chile-coronavirus-immunity-passport-antibody-testing-card/2020/04/20/8daef326-826d-11ea-81a3-9690c9881111_story.html) (accessed April 27, 2020).
- 3 WHO. "Immunity passports" in the context of COVID-19 scientific brief. April 24, 2020. <https://www.who.int/publications-detail/immunity-passports-in-the-context-of-covid-19> (accessed April 27, 2020).
- 4 @WHO. April 25, 2020. <https://twitter.com/WHO/status/1254160937805926405?s=20> (accessed April 27, 2020).
- 5 WHO. Considerations in adjusting public health and social measures in the context of COVID-19. Interim guidance. April 16, 2020. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/critical-preparedness-readiness-and-response-actions-for-covid-19> (accessed April 28, 2020).
- 6 Johns Hopkins University Center For Health Security. Developing a national strategy for serology (antibody testing) in the United States. April 22, 2020. [https://www.centerforhealthsecurity.org/our-work/pubs\\_archive/pubs-pdfs/2020/200422-national-strategy-serology.pdf](https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200422-national-strategy-serology.pdf) (accessed April 29, 2020).
- 7 Wadhera RK, Wadhera P, Gaba P, et al. Variation in COVID-19 hospitalizations and deaths across New York City boroughs. *JAMA* 2020; published online April 29. DOI:10.1001/jama.2020.7197.
- 8 Watson L. The case for single-payer in a pandemic. *The New Republic*, April 14, 2020. <https://newrepublic.com/article/157287/case-for-single-payer-coronavirus> (accessed April 29, 2020).
- 9 Olivarius K. Immunity, capital, and power in Antebellum New Orleans. *Am Historical Rev* 2019; **124**: 425–55.
- 10 UN General Assembly. International Covenant on Economic, Social and Cultural Rights, Dec 16, 1966. 993 UNTS 3.
- 11 WHO. International Health Regulations (2005), WHA 58.3, 3rd edn. Geneva: World Health Organization, 2005.
- 12 Rhymmer W, Speare R. Countries' response to WHO's travel recommendations during the 2013–2016 Ebola Outbreak. *Bull World Health Organ* 2017; **95**: 10–17.
- 13 WHO. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Jan 30, 2020. [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)) (accessed April 27, 2020).
- 14 Rainsy, S. Testing coronavirus survivors' blood could help reopen U.S. *The Geopolitics*, April 8, 2020. <https://thegeopolitics.com/international-immunity-passports-can-help-restore-freedom-of-movement/> (accessed April 27, 2020).