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Vaccination certificates, immunity passports, and test-based travel licences: ethical, legal, and public health issues

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Dear editor,

In a recent editorial of this journal, Patricia Schlagenhauf and colleagues exposed some of the most prominent challenges and opportunities for travel medicine during the next stages of COVID-19 pandemic [1]. This correspondence aligns with their main thesis regarding the need for urgent measures to make travel safe as soon as possible. However, in our opinion, the progressive reopening of travel practices should be built on the broader concept of immunity-based licenses (which include natural immunity, vaccination record, and negative results in diagnostic tests) instead of the narrower one of vaccination certificates. We think that relevant ethical, legal, and public health reasons support our position. We show that, although all ways of granting immunity-based licenses involve risks and uncertainties, this system is less discriminatory and more respectful with the freedom of movement than accepting only vaccine certificates. Finally, we defend our proposal from the objections of the risk of increasing self-infection and of disincetivizing vaccination.

Let us start by analyzing the case of vaccine certificates. These documents are problematic because vaccination cannot ensure sterility, due to several reasons. Firstly, not all vaccinated people become immune. Even the best vaccines fail in a small percentage of cases. Secondly, it is unclear whether vaccination causes sterilizing immunity (the immunity status that prevents transmission) in those who are vaccinated. Finally, the length of the immunity elicited by vaccines is yet unknown. This means that vaccinated people may become vulnerable to the virus again in the future. The novel strains of the virus and its particular virulence could be also relevant factors that may influence the immunity of vaccinated individuals. Moreover, not all vaccines may have the same effectiveness against the upcoming variants, which would make it necessary to specify in the certificates the particular vaccine administered. Consequently, vaccine certificates are deficient tools to grant zero risk.

There are two alternative ways of providing evidence of the relative risk of infection: natural immunity and testing. On the one hand, natural immunity has the shortcoming that reinfections do occur, even if rarely. Indeed, it is probable that the frequency of reinfection is being underestimated [2, 3]. In addition, we do not know exactly how long natural immunity lasts—and how will it be challenged by novel variants of the virus. It has been suggested that it may generally last for around 6 to 8 months [4], but its exact duration remains open to periodic scientific analysis. This creates a considerable interval of doubt in the longevity of natural immunity. On the other hand, certificates based on the performance of diagnostic tests also face a remarkable problem—they can give false negatives, especially if only a single test is required.

Therefore, both alternatives to vaccination suffer from uncertainty problems. Still, these uncertainties are not necessarily greater than those offered by vaccination. If we concede that the latter can serve as proof of non-infectivity, a diagnostic test with high percentages of sensitivity and specificity could also be acceptable from the point of view of scientific evidence and the value judgment corresponding to the estimation of risk. This is particularly true if we adjust the type and number of tests and their time intervals appropriately. Likewise, there are no reasons to believe that vaccination is better than natural immunity in terms of preventing infection.

Furthermore, there are other arguments in favor of an immunity-based license (or so-called immunity passport) that can be obtained not only through vaccination, but also through testing and certification of natural immunity. Providing passengers with the possibility of substituting vaccination for a certificate of natural immunity or a test against SARS-CoV-2 could serve well to avoid some unjust discriminations. For instance, we should keep in mind that it is currently not possible to vaccinate children under the age of 18. This means that if only those who can show a vaccination certificate are allowed access to long-distance transport, we would be excluding children, teenagers, and young adults from something as important to human beings as traveling far from home. This, in our view, is against article 3.1 of the UN Convention on the Rights of the Child [5].

Of course, it is true that allowing natural immunity to be used to enable access to a means of transport may encourage deliberate self-exposure among those who cannot afford a vaccine, or must wait still for their uptake, to become intentionally infected.

This objection is a recurrent criticism against immunity passports. However, this would not necessarily occur if passengers were offered the option of access to diagnostic tests at locations arranged by the airlines themselves and at prices subsidized by them or by the State. Besides, it is hard to imagine that anyone who has the purchasing power to buy a plane ticket would not pay a little more to undergo the tests. If the opposite is the case, where few individuals decide to expose themselves to self-infection, it would make more sense to assume this rarefied scenario than to veto the use of natural immunity as a travel license. To do otherwise would be to levelling down equality, that is, a pernicious effect extreme egalitarianism consisting of making several people worse off to prevent other individuals from enjoying certain advantages.

Finally, if vaccination is not required for travel, one related objection is that this policy could disincentivize vaccination. We think that this objection is not important to our argument. Immunity passports should be granted to ensure mobility irrespective of whether they encourage or discourage vaccination—because they are important to guarantee freedom of movement [6] and they can elicit economic benefits for society at large. Conversely, vaccination is based, in principle, on solidarity and the moral duty to benefit others. Taking this into account, only allowing altruistic, vaccinated people to travel is as striking as preventing others from travelling who have not yet had the opportunity to show solidarity because they have not yet been able to get vaccinated, (or cannot, for medical reasons).

Authors' contribution

Both authors have contributed equally to the conception and writing of the manuscript.

Declaration of competing interest

Authors declare no conflict of interest.

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