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Commentary

Restarting international travel will be messy but enabled by improved risk-based analyses

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There is now abundant evidence that international travel has been a major driver of the COVID-19 pandemic and its prolonged duration [1–2]. Travel restrictions adopted, in an attempt to stem the spread of SARS-CoV-2, have impacted billions of lives and the functioning of whole societies. Alongside cancelled events large and small, disruptions to trade [3] and shuttered businesses, millions have become stranded or separated from family, friends and work [4]. The UNWTO describes 2020 as “the worst year on record for tourism,” with an estimated US\$1.3 trillion loss in international expenditures [5]. It is little wonder that easing travel restrictions, or at least applying them in more discerning ways, has become an urgent policy priority.

Multiple systems have already been agreed, or are under negotiation, for easing restrictions based on immunization status [6]. For some high-income countries rolling out vaccines at speed, along with countries keen to revive tourist revenues, overcoming the logistical challenges of creating a secure, interoperable certification system has become a major focus. The introduction of so-called vaccine passports will create categories of travellers entering a jurisdiction and determine the testing and quarantine requirements they will be subject to. The airline industry, in particular, is pressing governments to implement these systems ahead of the summer holiday season in the northern hemisphere, describing the resumption of high volumes of travel as “absolutely critical” [7].

Amid this intense pressure, however, what has become clear is that there remains a lack of agreed methodology to assess travel-related public health risks from COVID-19. When the World Health Organization (WHO) recommended against travel restrictions on 30 January 2020, upon declaring a public health emergency of international concern, the Director-General reminded States Parties that any “additional health measures” needed to be supported by scientific principles and available evidence [8]. It soon became apparent that available evidence from previous outbreaks was not helpful for informing the control of SARS-CoV-2 in a globally interconnected world. When States Parties proceeded near universally

to adopt a host of travel restrictions, and then keep them in place for an unprecedented duration, what filled this evidence vacuum was a blend of precautionary principle, evolving science, economic lobbying and political ideology.

In this context, Benjamin Cowling and colleagues [9] provide a timely methodological contribution. Their study seeks to determine whether it is possible to assess the transmission risk of international arrivals, based on source country, as the basis of screening travellers for admission. Much of the evidence describing the role of travel in SARS-CoV-2 importation, demonstrated through genomic sequencing data, has been retrospective [10]. The limited availability of methodologies to inform real time decision making, bringing together epidemiology, observational studies and other evidence to enable risk assessment, leaves border management reliant on less discriminate measures such as travel bans by citizenship or perceived “hot spots”.

While the methodology put forth by Yang et al. may soon be overtaken by the implementation of immunization-based systems, until much of the world is fully vaccinated, better methods of risk assessment remain helpful. In December 2020, WHO issued guidelines to support the development of a risk-based approach to border management to inform mitigation measures [11]. Whether variables such as case incidence per 100,000 population over time, median incubation period and travel volumes prove the right ones to assess travel-related risks during COVID-19, the important advance is recognition by WHO of the need to shift from blanket recommendations to algorithms that enable real time, context specific decision making. The International Health Regulations Review Committee, in its final report in April 2021, affirmed the need to support the development of risk-based approaches [12].

Importantly, strengthening risk assessment should be seen as an enabler, not a hindrance, to the easing of travel restrictions. Risk assessment will help identify the appropriate testing and quarantine protocols for fully vaccinated, partially vaccinated, unvaccinated, and previously infected travellers. These protocols will be

directly informed by the evolving science on the efficacy of different vaccines (especially against known and emerging variants of concern), the transmissibility and virulence of these variants, and the occurrence of breakthrough infections. SARS-CoV-2 surveillance data, alongside vaccination rates by jurisdiction, will also be key data points. Risk assessment brings this data together with consideration of the social and economic impacts of travel restrictions. But it is not led by these considerations. Reopening travel in Europe during the summer months of 2020, driven by economic interests, undid much of the hard work of suppressing the virus through repeated lockdowns [13]. The reality is that no travel during this pandemic has been risk free and future travel will entail risk. The key challenge is to appropriately assess and manage those risks in ways that enable travel to resume in a sustainable way. To do so, without appropriate risk assessment, would be like a pilot flying blindly without navigation.

Declaration of Competing Interest

The author declares no competing interest.

References

- [1] Russell T, Wu J, Clifford S, Edmunds WJ, Kucharski A, Jit M. Effect of internationally imported cases on internal spread of COVID-19: a mathematical modelling study. *Lancet Public Health* 2020. December 7 [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30263-2/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30263-2/fulltext) .
- [2] Sigler T, Mahmuda S, Kimpton A, et al. The socio-spatial determinants of COVID-19 diffusion: the impact of globalisation, settlement characteristics and population. *Globalization and Health* 2021;17 Article 56. doi:10.1186/s12992-021-00707-2.
- [3] Söderlund B. The impact of travel restrictions on trade during the COVID-19 pandemic. *VoxEU*; 4 November 2020. <https://voxeu.org/article/impact-travel-restrictions-trade-during-covid-19>.
- [4] OECD Managing international migration under COVID-19, Paris: OECD Policy Responses to Coronavirus (COVID-19); 10 June 2020. <https://www.oecd.org/coronavirus/policy-responses/managing-international-migration-under-covid-19-6e914d57/>.
- [5] United Nations. How COVID-19 is changing the world: a statistical perspective, Volume III. New York, 2021. https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa_voi3.pdf
- [6] McGregor G. Vaccine passports are here – so why are there still so many travel restrictions? *Fortune*; 9 June 2021. <https://fortune.com/2021/06/09/vaccine-passport-app-covid-travel-restrictions/>.
- [7] Gilbertson D. Absolutely critical to both countries': US, UK airlines urge lifting of travel restrictions. *USA Today* 7 June 2021. <https://www.usatoday.com/story/travel/airline-news/2021/06/07/covid-travel-restrictions-airlines-can-us-citizens-travel-to-uk/7584332002/>.
- [8] WHO. WHO Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Geneva, 30 January 2020. [https://www.who.int/news/item/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/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
- [9] Yang B., Tsang, T, Wong, J., He Y. et al. The differential importation risks of COVID-19 from inbound travellers and the feasibility of targeted travel controls: A case study in Hong Kong. 10.1016/j.lanwpc.2021.100184
- [10] da Silva Filipe A, Shepherd JG, Williams T, et al. Genomic epidemiology reveals multiple introductions of SARS-CoV-2 from mainland Europe into Scotland. *Nature Microbiology* 2021;6:112–22 2021. doi:10.1038/s41564-020-00838-z.
- [11] WHO. Risk assessment tool to inform mitigation measures for international travel in the context of COVID-19. Geneva, 16 December 2020. https://www.who.int/publications/i/item/WHO-2019-nCoV-Risk-based_international_travel-Assessment_tool-2020.1
- [12] WHO. Report of the Review Committee on the Functioning of the International Health Regulations (2005) during the COVID-19 response. Geneva, 30 April 2021. <https://www.who.int/publications/m/item/a74-9-who-s-work-in-health-emergencies>
- [13] Mallon P, Crispie F, Gonzalez G, et al. Whole-genome sequencing of SARS-CoV-2 in the Republic of Ireland during waves 1 and 2 of the pandemic. *MedRxiv* (pre-print); 10 February 2021. <https://www.medrxiv.org/content/10.1101/2021.02.09.21251402v1.full.pdf>.