Scientific evidence for COVID certification

SAGE noted in April 2021 that, in relation to COVID-19:

"There are three main ways in which baseline measures can reduce transmission (from most to least effective)":

1. Reducing the likelihood that people who are infectious mix with others.

2. For those potentially infectious people who are not isolated, reducing the likelihood that they enter higher risk settings or situations.

3. Decreasing the transmission risk from a potentially infectious person in any given environment.

While COVID certification potentially contributes to each of the three mechanisms above, it does not on its own provide a complete solution, but must be used in conjunction with other non-pharmaceutical interventions, with effective implementation through high adherence to guidance or enforcement of regulation.

The aim of the combination of these measures is to allow as much of society and the economy to function in a near normal way as possible, and to minimise the potential need for more severe restrictions to avoid the hospital system from becoming overwhelmed.

COVID-19 certification will therefore have the following benefits:

- It will reduce virus transmission, primarily by reducing the likelihood of infections individuals entering high risk settings
- Hence, it will reduce the risk of serious illness and death and in doing so alleviate current and future pressure on the healthcare system
- It will increase the likelihood that higher risk settings can continue to operate as an alternative to closure or more restrictive measures

There is also likely to be a secondary benefit in relation to increased vaccine uptake

There is overwhelming evidence that vaccination reduces the risk of becoming infected with the virus and in particular that it reduces the risk of serious illness requiring hospitalisation[1].

In addition, there is recent evidence that in the event of a vaccinated individual becoming infected with the delta variant, they have a reduced likelihood of transmitting the virus to others[2-3].

Previous infection (as evidenced by a positive PCR between 30 – 180 days ago) is also associated with a reduced risk of reinfection, though the degree of immunity is likely to be more variable than after vaccination.

A negative lateral flow test within 24 – 48 hours of an event will reduce the risk of the most infectious individuals entering the setting, though there is concern about the potential for self-reporting to allow the manipulation of test results.

If attendance at high risk settings is limited to individuals who are less likely to be infectious there will be a reduced risk of virus transmission in those settings.

In addition, there is evidence that the use of mandatory COVID-19 certificates leads to an increase in vaccine uptake[4], which will make a further contribution to reducing infections and protecting against sever illness requiring hospital admission.

References:

1. VEEP: Vaccine effectiveness table, 24 September 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1029794/S1411_VEEP_Vaccine_Effectiveness_Table_.pdf

2. Eyre DW et al, The impact of SARS-CoV-2 vaccination on 1 Alpha & Delta variant transmission. medRxiv preprint https://doi.org/10.1101/2021.09.28.21264260

3. de Gier, B et al. Vaccine effectiveness against SARS-CoV-2 transmission to household contacts during dominance of Delta variant (B.1.617.2), August-September 2021, the Netherlands. medRxiv preprint doi: https://doi.org/10.1101/2021.10.14.21264959

4. Mills, MC and Ruttenauer T. The impact of mandatory COVID-19 certificates on vaccine uptake: Synthetic Control Modelling of Six Countries. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1027643/S1401_University_of_Oxford_and_Nuffield_College_The_impact_of_mandatory_COVID-19_certificates_on_vaccine_uptake_Synthetic_Control_Modelling_of_Six_Countries__14_October_2021.pdf