SPI-B: Health status certification in relation to COVID-19 - Behavioural and Social considerations

Key Recommendations

Certification of health status in relation to COVID-19 – outside of the context of international travel – **has the potential for harms as well as benefits.** There is extremely limited evidence on the nature and scale of these outcomes and so, if certification is to be introduced, this should be done with caution, and only provided:

- core ethical considerations are met, particularly concerning equality and fairness;
- pilot studies are conducted, with pre-registered research protocols, to engender public trust and confidence in the effectiveness of certification in achieving the predicted benefits.

The key uncertainties to be assessed as part of these pilot studies are:

- the impact of certification on behaviours that reduce transmission;
- the differential impact of certification intended to enable or limit access to different activities *e.g.* access to a care-home to visit a relative *vs* access to a pub to drink with friends;
- equality of opportunity to access to certification and equality of outcome from certification.

If used, certification of health status in relation to COVID-19 should be seen as just **one part of a package of evidence-based measures to reduce transmission** of SARS-CoV-2 equitably, including:

- participation in NHS T&T, including supported self-isolation;
- vaccination for COVID-19;
- protective behaviours of social distancing, wearing face-coverings, and hand-washing;
- shared spaces – public and private – that enable protective behaviours and provide sufficient ventilation.

Executive Summary

Certification of health status in the context of COVID-19 refers to the action or process of providing an official document – on paper, electronically or other approved medium – indicating that the holder is at low risk of acquiring or transmitting SARS-CoV-2 due to a test-negative result for current infection, a test-positive result for a test assessing natural immunity or vaccination conferring immunity.

Certification has the potential to enable increased access to a wide range of activities in ways that could reduce transmission of the virus. Realising these benefits will depend in part upon the behavioural and social impact of certification. Research evidence on these impacts is extremely limited both in quantity and quality[1]. Nonetheless, some patterns are evident.

Public acceptability

- Public attitudes are generally favourable towards the use of immunity certificates for travel (based on vaccination or antibody tests), and unfavourable towards their use for work purposes (apart from use in health-related occupational settings). ***High confidence.***

[1] Confidence levels reflect our judgment of the strength of evidence to support the statement, reflecting quality and quantity of evidence.

- A significant minority is strongly opposed to certificates of immunity (whether based on antibodies or on vaccination) for any purpose. ***High confidence.***

Uptake of tests and vaccination

- There is little evidence regarding the impact of offering certification on uptake of tests or vaccination
- Intention to get vaccinated varies with the activity that would be allowed by such vaccination ***High confidence***

Impact on behaviours that reduce transmission

- Offering access to settings and activities through antibody test certification may lead to deliberate exposure to infection in a minority, especially among young adults and those in precarious employment. ***Medium confidence***
- Behaviours that reduce transmission may decrease upon receipt of virus-free certificates and immunity certificates, including social distancing and hand-washing. ***Medium confidence***
- There is the potential for any decrease in protective behaviour amongst those with certificates to become normative in their wider in-group thereby influencing the behaviour of those without certificates. ***Medium confidence***
- The possible impact of certificates based on vaccination on these behaviours is unknown.

Public disorder and crime

- Certification will likely become a greater focus of ongoing protests against government measures for COVID-19, but the nature and scale of this is unknown. ***High confidence***
- Certification will lead to some fraudulent activity, but the nature and scale of this is unknown. ***High confidence***

Inequalities and equity in testing, vaccination and certification

- Trust in both the information provided and security of certification data storage will likely influence uptake, particularly in marginalised communities, but the scale of this is unknown. ***High confidence***

Maximising potential benefits and mitigating potential harms

Realising the potential benefits of certification while minimising harms requires:

- Equality and equity of access to tests, vaccinations and certificates;
- Clear and open communication **that is accessible to different communities** of the meaning of any results and certificate. This must include the residual risks of infection and transmission and the implications for individual behaviour;
- No group to be disproportionately disadvantaged by loss of access to an activity or setting requiring certification particularly if access to income will be impacted by these.

Achieving public trust in these systems will require clarity and openness in communications with national and local leaders, including community members and community organisations.

1.0 Background

Certification of health status in the context of COVID-19 refers to the action or process of providing an official document - on paper, electronically or other approved medium - that the holder is at low risk of acquiring or transmitting SARS-CoV-2 due to a test-negative result for current infection, a test-positive result for natural immunity or vaccination conferring immunity.

Various terms are used to refer to these documents including 'certificates', 'passes' and 'passports', referring to infection, virus, antibodies, immunity and vaccination. The terms used in this document are *Infection Certification* based on test-negative results for infection (LFD or PCR) and *Immunity Certification* based on either a test-positive result for antibodies or a completed COVID-19 vaccination. While the term *Immunity Certification* is used here, as in other SAGE and NERVTAG documents, we would discourage its use in practice in relation to antibody tests given that it can engender false reassurance [1] (See 2.3 below).

If certification of health status in relation to COVID-19 is to be considered, the aims must be clear. We propose three overlapping aims of certification.

First, certification may contribute to other measures to reduce transmission of SARS-CoV-2 equitably through achieving high uptake of (a) tests for infection (accompanied by high rates of self-isolation in those testing positive) and (b) vaccination.

Second, certification may contribute to other measures to reduce the amount of virus circulating in shared public spaces through restricting access to those with a low likelihood of being infected as evidenced by tests showing no infection, the presence of natural immunity to infection, or vaccination.

Third, certification may increase public confidence to engage in a wide range of activities within COVID-19 restrictions and thereby reduce the negative economic, social and psychological impacts that these restrictions create. The activities include:

a. *Access to institutions to visit relatives eg* care homes, health and other settings
b. *Access to institutions and other places for work or education eg* school or university
c. *Access to venues for leisure activities eg* sports stadia, pubs, restaurants, theatre, cinema
d. *Access to transport for domestic and international travel*

Annex C gives examples of COVID-19 health certification, and Annex D has historical examples of certification for other infectious diseases.

While it is hoped that certification will increase participation in testing and vaccination programmes, in practice it could reduce participation, equitably or inequitably. Participation in asymptomatic mass testing is around 25% [2]. Globally, vaccine confidence is volatile [3]. This volatility is seen in intentions to undergo COVID-19 vaccination, which have declined globally from 79% to 60% between March-May and June-October [4]. The same time trends were evident in the seven data sets included from the UK.

The possible behavioural and social impact of certification can be informed by considering five areas: (1) public acceptability, (2) uptake of tests and vaccination, (3) impact on behaviours that affect transmission, (4) public disorder and crime, and (5) inequalities and equity in testing, vaccination and certification. These are detailed below. To inform this paper, we conducted a literature search as detailed in Annex A. This identified few studies, likely at high risk of bias. Certification for occupational requirements including healthcare workers was excluded from the search.

2.0 Possible behavioural and social outcomes

Summary

- Research evidence on the behavioural and social impact of certification of health status in relation to COVID-19 is extremely limited both in quantity and quality, making it difficult to estimate the nature and scale of any potential benefits and harms from their use.
- Any pilots of certification should be conducted with pre-registered research protocols to estimate the potential benefits and harms.

Few empirical studies were retrieved. Most studies concerned public attitudes towards the use of certificates most often for travel and work. Few studies concerned the use of certificates for access to leisure-related activities other than travel. These studies are supplemented below by evidence from related contexts.

2.1 Public acceptability

Summary

- Public attitudes are generally favourable towards the use of immunity certificates (based on vaccination or antibody tests) for travel, and unfavourable towards their use for work purposes (excluding any use in health-related occupational settings). ***High confidence.***
- A significant minority is strongly opposed to certificates of immunity (whether based on antibodies or on vaccination) for any purpose. ***High confidence.***

Seven studies were found that examined the acceptability of certification of three different types: infection, immunity from antibodies, and immunity from vaccination.

Infection Certification

One study surveyed plane passengers from 11 countries in August. 84% were in favour of infection certification for air travel [5].

Immunity Certification: from antibody testing

Across three studies (n ~1000 to ~1400) conducted in three countries between April and November, a majority of participants (60% to 73%) were in favour of the use of immunity certificates, particularly in the context of travel. A minority (15-20%) strongly opposed their use [6] [7] [8].

One study (n ~1000) conducted in Germany in May found the opposite, with more people opposed to than supporting *immunity cards* [9].

The percentage in favour of immunity certificates for use for the right to work is much lower. Across three studies in three countries carried out in April – September (ranging from n=1000 to 1500) support ranged from 20% to 51% [6] [7] [10].

There was little information on how any of the attitudes described above varied across social groups. In the UK, acceptance increased with age, greater trust in government, and higher perceived risk of COVID-19 [6].

Immunity Certification: from vaccination

We found only one survey of attitudes to vaccination certificates (n = 4311), conducted in the UK in November 2020, assessing attitudes towards their use on international flights. 72% supported their use (42% strongly) and 11% strongly opposed them [11]. Support was strongest in older age groups, and unrelated to gender or social class.

2.2 Uptake of tests and vaccination

Summary

- There is little evidence regarding the impact of offering certification on uptake of tests or vaccination
- Intention to get vaccinated varies with the activity that would be allowed by such vaccination ***High confidence***

Few studies addressed the possible impact of certification on uptake of vaccines or tests. A number show that intention to get vaccinated varies with both the activity enabled by this and the source recommending vaccination.

Infection Certification
No studies were found.

Immunity Certification: from antibody testing
An online experiment (n=1204) carried out in April 2020 found that 85% would definitely (56%) or probably (29%) have an antibody test if offered [1].

Immunity Certification: from vaccination
One US study (n ~1000) conducted in September assessed the 'vaccine rules that would resonate'. The activities requiring vaccination certification for which most people said they would get a COVID-19 vaccination were: visit a hospital or nursing home (likely uptake rate of 70%), for travel to another state (70%), for air travel (68%), for work (60%), attending large non-religious gatherings (59%), attending large religious gatherings (55%), attending school (51%) [12].

Indirect, weak evidence that certification of vaccination for access to work could reduce uptake of vaccination is provided in a survey of 13,426 adults in 19 countries carried out in June 2020. 71% reported that they would be very or somewhat likely to take a COVID-19 vaccine, compared with 61% when the vaccine was recommended by an employer [13].

Those reporting higher levels of trust in information from government sources were more likely to accept a vaccine and take their employer's advice to do so [13]. Extrapolating from evidence summarised in Section 2.5 below, which describes higher distrust in government and information systems upon which testing and vaccination certification depend, it is likely that such distrust could result in lower use of certification based on testing and vaccination. The size of this predicted effect is unknown.

2.3 Impact on behaviours that reduce transmission

Summary

- Offering access to settings and activities with immunity certificates conditional on testing for antibodies may lead to deliberate exposure to infection in a minority, especially among young adults and those in precarious employment. ***Medium confidence***
- Behaviours that reduce transmission may decrease upon receipt of virus-free certificates and immunity certificates, including social distancing and hand-washing. ***Medium confidence***
- There is the potential for any decrease in protective behaviour amongst those with certificates to become normative in their wider in-group thereby influencing the behaviour of those without certificates. ***Medium confidence***
- The possible impact of certificates based on vaccination on these behaviours is unknown.

Regardless of the type of certificate issued, this will indicate that the holder has been deemed to pose a lower risk of infection or transmission of the virus than those without a certificate who have not undergone a test for current infection or antibodies, or been vaccinated. Risks may indeed be lower, but to what extent is not yet fully known and importantly risks will not be zero. Given relatively low sensitivity of rapid non-PCR tests, those testing negative with have a low but not zero risk of being infected and transmitting the virus [14]. The extent to which current vaccines prevent infection or reduce transmission and for how long remain uncertain [15]. Similarly, the degree and duration of protection from infection for those testing positive on current antibody tests is uncertain [16].

Of concern from a behavioural perspective is that **certification may foster an erroneous sense of *no risk* – both in those with and those without certificates - resulting in behaviours that increase risk of infection or transmission.** We summarise evidence for these possible behavioural outcomes first, amongst those with a certificate, and second, amongst those without a certificate.

Those with a certificate

Infection Certification

An online experiment (n = 4765) conducted on 13-16 November 2020 in a UK sample assessed the impact on behaviours that reduce transmission of providing a certificate to those asked to imagine they had received a negative test result on mass testing. Receipt of a certificate reduced intentions to fully follow guidance from 61% for those receiving a negative test result to 56% for those receiving a certificate alongside their negative test result [17]. Amongst those not asked to imagine they had undergone testing, 63% reported fully following guidance.

In related evidence, an online survey of over 6,000 adults in the UK conducted in April 2020, found that those who believed that they had had COVID-19 were more likely to agree that they had some immunity to COVID-19 and less likely to report adhering to lockdown measures in place at the time [18]. This non-adherence included meeting up with friends or family outside of the household and shopping for nonessential items. These findings fit with concerns expressed by the WHO that believing oneself to have had COVID-19 reduced adherence to protective behaviours [4] [19].

Immunity Certification: from antibody testing

Another UK online experiment (April 2020, n = 1204) assessed the impact of describing a positive test indicating presence of antibodies on risk perception and protective behaviours [1]. Using the term 'immunity' as opposed to 'antibody' increased the proportion who erroneously perceived they would have no risk of catching coronavirus in the future given an antibody-positive test result, from 9.8% to 19.1%. Perceiving no risk of infection with coronavirus given an antibody-positive test result was associated with an intention to wash hands less frequently.

Immunity Certification: from vaccination

We are not aware of any studies exploring the potential impact of immunity certification from COVID-19 vaccination on other behaviours that reduce risk of transmission or infection.

This question has been most studied in one other vaccination programme, for HPV, a virus that is transmitted sexually. Based on systematic reviews of clinical trials, vaccination does not increase risky sexual behaviour [20]. This accords with other studies assessing *risk compensation – i.e. increases in risky behaviour after adoption of a protective behaviour* – following different non-pharmacological interventions for a range of health threats including COVID-19 [21] [22]. We note, however, that this evidence may not predict behavioural responses to a vaccine developed during a pandemic to protect against a novel disease for which hitherto changes in behaviour were the main protective measures.

Those without a certificate

Having failed an immunity test
The majority of participants in a Swiss survey expected that tests showing an absence of antibodies to encourage people to take more precautionary measures such as wearing of face coverings (76%) and respect for social distance measures (87%) [7].

Having not applied for a test
Immunity Certification based on antibody testing might lead to paradoxical effects among those not (yet) with a certificate, [23]. Three studies in three countries conducted between April and June (n > 1000 each) reported between 12% and 29% expecting to self-infect to get a certificate [10] [6] [7]. More students agreed that there was a risk of deliberate infection (58%) compared to other groups [6]. Younger people are more likely to say they would self-infect; and 29% of gig workers reported they would seek self-infection to maintain or access employment working with older adults [10].

Evidence from other health contexts suggests that risky practices can increase when people are in the company of others they are familiar with or who they see as ingroup [24] [25]. Shared social identity has been found to be associated with sharing personal resources (e.g. drinks, cigarettes), unprotected sex, and greater physical proximity [25].

Extrapolating to the context of Covid-19 certification, having relatives, friends, neighbours or work colleagues with a virus-free or immunity certificate may foster a spurious sense of safety thereby decreasing behaviours that reduce risk of transmission such as maintaining physical distance and not touching others. In addition, where those with certificates decrease their protective behaviours, such decreases can readily become seen as normative, leading others in their ingroup -- including those without certificates -- to do the same [26] [27] [28].

2.4 Public Disorder and Crime

Summary
- Certification will likely become a greater focus of ongoing protests against government measures for COVID-19, but the nature and scale of this is unknown. ***High confidence***
- Certification will lead to some fraudulent activity, but the nature and scale of this is unknown. ***High confidence***

No studies were found in relation to COVID-19 protests or public disorder in our literature search. Observations from the Policing & Security SPI-B subgroup suggest that in view of the prominence of 'health passports' in anti-lockdown protests since September, it is likely that the introduction of certification for either testing or vaccination will result in even greater importance being attached to this issue. However, the scale and intensity of protests will be determined by many factors [29].

There are reports of fake QR based certificates being used by truck drivers to cross the border from China into Myanmar despite high quality QR systems in place [30]. One recent report in the Lancet [31] described the use of counterfeit certificates for yellow fever. In December 2018, Nigeria and other countries introduced a machine-readable e-yellow fever cards but cards could still be obtained without evidence of vaccination. More outbreaks are predicted as people continue to carry fake vaccination certificates throughout Africa.

Extrapolating to the context of Covid-19 certification, a robust infrastructure to ensure the authenticity of vaccination certificates, to mitigate fraudulent activity will be necessary.

2.5 Inequalities and equity in testing, vaccination and certification

Summary

- Trust in both the information provided and security of certification data storage will likely influence uptake, particularly in marginalised communities, but the scale of this is unknown. ***High confidence***

Using certificates of COVID-19 health status to allow access to different activities raises a number of ethical concerns including discrimination, equality and privacy [23] [32] [33] [34] [35]: see **Annex D.**

Pilots and broader implementation of certification should be accompanied by access to good quality ethical support and advice and informed by the development of a coherent, clearly explainable, and co-produced ethics framework specifically developed for the purpose.

Participation in NHS T&T is lower in marginalised groups [36], and in areas of high deprivation [37]. Participation in mass testing is also lower in areas of higher deprivation for mass testing with the recent pilot in Liverpool reporting uptake rates ranging from about 6% to 60% in the most and least deprived areas of the city [2].

Data from several countries observe that those with lower incomes or education and from minority ethnic groups have lower intentions to undergo COVID-19 vaccination [4]. Recent polling in London reported only 39% from minority ethnic groups would take the vaccine compared with 70% of white respondents [38].

In part these differences reflect higher mistrust in government amongst marginalised communities [39], with fears that any data provided might be misused [36]. For example, migrants may fear being reported to immigration authorities [40]. Stigmatisation, discrimination and racism might also reduce migrants' and ethnic minority communities' willingness to come forward, as has been shown both in relation to COVID-19 [41] and hepatitis [42]. These themes emerged in focus group and social media analyses conducted as part of service evaluations in Liverpool [2].

Certification will likely be most readily available as a digital record. This has the potential to exclude those without access to electronic platforms. It also has the potential to exclude groups with lower levels of trust in government and fears about the misuse of any data provided for certification [36], groups more likely to be those who are marginalised, from minority ethnic communities and those living in areas of high deprivation [29].

3.0 Maximising potential benefits and mitigating potential harms

Summary

- Pilot studies of health certification for different activities should be conducted using pre-registered research protocols to engender public trust and confidence in the effectiveness of Certification in achieving the stated benefits.

Pilot programmes for certification should be designed to maximise potential benefits and mitigate potential harms. Certification should be modified when required in the light of evaluations conducted using pre-registered research protocols. To maximise potential benefits and mitigate potential harms, any systems of certification need to be set up to ensure:

- Equality and equity of access to tests, vaccinations and certificates;

- Clear and open communication **that is accessible to different communities** of the meaning of any results and certificate. This must include the residual risks of infection and transmission and the implications for individual behaviour;
- No group is disproportionately disadvantaged by access to an activity or setting requiring certification particularly if access to income will be impacted by these

Achieving public trust in these systems will require clarity and openness in communications with national and local leaders, including community members and community organisations. It will also be fostered by trustworthy behaviour of those in positions of leadership [43].

Some of the potential harms might be mitigated by:

- use of information that has been evaluated for its effectiveness in communicating the meaning of a certificate and the residual risks and uncertainties concerning infection and transmission [1] [44] [45]
- use of an ethics framework, co-produced with those designing a certification scheme

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Annex A Focused Questions of the Commission and Search Strategy

What are the likely behavioural and social outcomes of enabling access to different settings and activities through certificates indicating health status in relation to COVID-19 including:

i. Public attitudes towards testing, vaccination and access to different settings and activities conditional on these?

ii. Uptake of (a) testing for the virus (b) testing for immunity (c) vaccination?

iii. Behaviours that reduce transmission of the virus including low social contacts, wearing of face-coverings and hand-washing

iv. Public disorder and crime

How do these outcomes vary by:

(a) different settings and activities allowed by certification such as access to care homes, pubs, sports stadia, and aeroplanes.

(b) demographic groups including age, gender, ethnicity, geographical area

(c) those certificated vs those not, in relation to outcomes iii & iv above

Method: Search and sources
Search strings
"Mandatory vaccin*" OR "Vaccin* certificat*" OR "Test to enable" OR "Immunity certificat*" OR "Immunity passport" OR "Health passport" OR "Health certificat*" OR "Health pass" OR "Digital health pass" OR "Health code" OR "Health code app*"

Databases searched:

- Web of Science (includes Core Collection, BIOSIS Citation Index, BIOSIS Previews, KCI-Korean Journal Database, Medline, Russian Science Citation Index, SciELO Citation Index)
- Ovid
- APA PsycInfo
- Scopus

Pre-print databases searched:

- SocArXiv
- SSRN
- MedRXiv
- PsyArXiv

(A Boolean search didn't seem as effective with these databases, so our approach was to type in each term individually and then scan for relevant hits.)

Time period covered: 2010-2020. Search began 24/11/20 and was completed 2/12/20

Annex B: Contemporary examples of health certification for COVID-19

Certification has been in use in China in the form of QR codes used to allow or disallow entry into public spaces and a range of settings including workplaces, public transport, schools, airports, restaurants and grocery stores [46]. These codes amass data including exposure to places and people at higher risk of transmission.

Certification was used in Slovakia as part of population mass testing for infection. Those testing negative were given a paper certificate and released from strict curfew – leaving home only allowed for essential work and shopping - thereby allowing return to all work places and visits to non-essential shops and restaurants [47] [48].

Pilot studies are underway and activities requiring certification being considered in the UK or affecting UK populations include:

Access to institutions to visit relatives: A pilot study is underway for "regular testing" using rapid tests (Lateral Flow) offered to one family member or friend per resident in around 20 care homes [49].

Access to work or educational settings: while testing is widespread in universities, it is not used to grant access to these institutions.

Access to live events venues: The UK Sports Ground Safety Authority are working with DCMS on a series of pilots at sports grounds, including but not restricted to football grounds. They will be working with the Mass Testing Programme (formerly "Moonshot") with the expectation that some of the pilots with larger capacities will be based around testing/health passporting. Specifically. The English Premier League (football) are doing work on digital passports and testing trials [50]. We have no information on certification at music venues, though there has been publicity around the technology that would make this possible [51].

Access to transport for international travel: International Air Transport Association (IATA) is developing a Travel Pass, a digital health pass, to "manage and verify the secure flow of necessary testing or vaccine information among governments, airlines, laboratories and travellers". For travellers, a contactless travel app or "digital passport" is envisaged for holding all approved test and vaccination certificates [52].

A form of health pass requiring three test-negative test results in a 72 hour period is being trialled by Delta and Alitalia airlines between Atlanta and Rome to avoid a 14 day quarantine in Italy [53].

Qantas and several other airlines expect to require proof of vaccination for travellers taking international flights [54]. This will be in the form of digital passes using the platform CommonPass [55].

Annex C: Historical examples of health and vaccination certification

Health certification

Printed health passes – sometimes known as certificates of health - were used in Europe including England from the late 15c to allow travel and trade to continue while controlling the spread of plague [56]. They certified only that the bearer had come from a city that was free from plague [57]. Imagery was used to reduce fraudulent copies.


GRATIS.

Adì 16 di [illegible] 1632.

Si fà fede per noi Vfficiali della Sanità di Bologna, che da questa Città sana (per bontà del Sig. DIO) da Contagione di Peste, parte di dentro [illegible] da [illegible] d'Anni 36 statura [illegible] pelo negro per andare à [illegible] con suoi Arnesi.

Fig. 2 Wellcome Library, MS.5139/6, Health pass, Bologna, 16 November 1632

Outside of occupational settings, these are not currently used in the UK to gain access to settings or activities.

Vaccination certification

The Vaccination Act of 1853 made smallpox vaccination compulsory in Britain for infants. Parents were given a blank certificate of vaccination when registering their child's birth, to be returned, signed, within three months. Failure to do so resulted in fines and imprisonment. Resistance to this included violent protest from the working class who suspected the motives of both government and the medical profession [58]. This resistance contributed to a change in the law in 1898 allowing exemptions on the basis of conscience [59].

Annex D: Ethical Considerations of COVID-19 Health Certification

This set of considerations raised by ethicists and others came up in our literature search and includes benefits of certification and well as possible problems.

Consideration	
Inequalities and discrimination	Marginalized groups will face more scrutiny (Kofler & Baylis, 2020)
	Unfair Access (Kofler & Baylis, 2020)
	Societal stratification (Kofler & Baylis, 2020)
	New forms of discrimination (Kofler & Baylis, 2020; Greely)
	Bias (Phelan, 2020)
Backfire effects on public health behaviours	Self-infection (Greely, 2020)
	Perverse incentives (Kofler & Baylis, 2020; Phelan, 2020)
Crime	Cheating (Greely, 2020)
	Obtaining documents illicitly (Kofler & Baylis, 2020)
Fairness	Removing civil liberties unjustified (Brown et al., 2020)
	Avoiding disproportionate punishment (Brown et al., 2020)
	Avoiding levelling down (Persad & Emanuel, 2020)
Privacy	Monitoring erodes privacy (Kofler & Baylis, 2020)
Social cohesion	Undermining solidarity (Brown et al, 2020)
	Alleviating duty on governments to protect rights (Phelan, 2020)
	Broader benefits to society (Brown et al., 2020)