

BEHAVIOURAL ASPECTS OF INTERNATIONAL IMPORTATION

SPI-B Policing and Security subgroup

Key points and recommendations

- The UK currently has no control over the quality of test certificates issued by other countries. Fraudulent certificates are already in circulation and this renders their validity suspect, unless issued in countries in which the UK has confidence.
- Removing exemptions to current testing arrangements (e.g. for hauliers) is therefore unlikely significantly to lower risk of infection.
- Layering of pre-travel measures (e.g. PCR tests within 72 hours of embarkation; symptom screening and testing immediately prior to departure) would mean that it would be more difficult for individuals to manipulate or evade such measures.
- Confidence in testing for inbound travellers could be increasing by providing certification on arrival (i.e. at large testing centres established at ports, railway stations and airports).
- Large commercial vessels arriving in the UK could be tested before allowing crew to disembark (as in South Korea), particularly if sailing from ports in high-risk countries.
- The current exemption of air-crew from testing needs to be re-examined in the light of reports of malpractice by some airlines.
- Until the UK can be sure of the validity of certificates issued overseas, or can establish effective on-arrival certification, the success of infection control is likely to depend heavily on quarantine.
- Institutionalised quarantine is a viable short-term option if the UK wishes to increase incoming travel. However, it should be considered an emergency expedient or as an auxiliary to self-regulated quarantine for individuals who do not have that option.
- For the foreseeable future, the UK is likely to be reliant on 'self-regulated' quarantine if it wishes to ease travel bans and encourage greater movement.
- Self-regulated quarantine poses problems of adherence. If non-travelling members of households in which an incoming traveller resides were also included within the remit of quarantine they would be less likely to adhere to it than travellers.
- Adherence to quarantine could be enhanced using various methods, particularly more frequent spot-checks. Such checks are more likely to be acceptable than the use of technologies such as facial recognition or electronic tagging.
- An international framework for testing, screening and certification is essential for the global economy and particularly to assist economic recovery in the UK. The UK will be particularly vulnerable in an environment in which a protocol is absent.
- International parity on issues relating to quarantine and surveillance of recent arrivals is also desirable but is likely to be harder to achieve than an agreement on testing, screening and certification.
- Until an international agreement is concluded, the UK needs to assess the risks posed by certificates issued by different countries, with the same care as it assesses their epidemiological situation. This will require a framework for pooling police intelligence sources between nations and international bodies such as Interpol.
- The legal status of individuals with counterfeit certificates and the potential responsibilities of governments and carriers towards such persons, requires close attention in the context of bi-lateral travel-corridor agreements or an international protocol.

1. Questions addressed

SPI-B was asked to consider a range of questions on behavioural aspects of cross-border travel including: testing pre-travel; counterfeit certificates; post-travel quarantine behaviours, including compliance and deliberately hiding symptoms.

SPI-B was also invited to consider other issues including the behaviour of different types of traveller and problems unique to different modes of transport.

Additionally, the list of questions discussed at the meeting of the Borders working group (15 January) included requests for behavioural insights into longer-term issues such as international travel protocols.

In this briefing, we have focused primarily on the issues of most immediate importance but begin with some high-level observations on the likely behaviour of state actors in respect of international protocols or their absence. This is intended to flag some issues that will require more detailed consideration in future. Our reflections on these issues provide a framework for the rest of the paper.

When discussing the issue of certification, we have focused on testing rather than vaccination, because the scope of the commission did not include vaccination. Vaccination is potentially a game-changer, so the issues identified below will need to be reconsidered when there is extensive roll-out of vaccination in the UK and other nations and when its potential sterilising effects are known.

The particular issue of cross-border travel along the ROI/NI border has not been addressed in this paper, although much of what is discussed below is applicable to that context. The specific issues relating to this border need to be addressed elsewhere.

It should be noted that there is a particular lack of data concerning specific types of travellers in and out of the UK and reasons for travel at different points in the pandemic. Such data would be useful for estimating the profile of travellers when restrictions are removed.

2. International context and protocol

The long-term viability and legitimacy of sanitary measures in the UK depends on a degree of parity with those of other nations, particularly those regarded as similar to the UK in terms of the balance they strike between public health and individual freedoms. Removing discrepancies between individual nations is also widely regarded as desirable from an economic point of view and for this reason has long been an object of diplomacy.¹²

The absence of international protocols on cross-border travel means that there is likely to be prolonged disruption in the last phase of the pandemic and for some time beyond. Nations will continue to respond harshly and sometimes precipitately on the basis of limited and possibly flawed epidemiological intelligence. States are also likely to use public health concerns/travel restrictions to gain economic/political advantage or as a form of retaliation. Every sanitary system so far devised has been abused in this way.³

An international protocol on measures to replace travel bans is therefore vital. The UK is peculiarly vulnerable because of its highly developed system of genomic surveillance, which is likely to identify Covid19 variants before they are identified in other nations. The reputation (and economic well-being) of nation states is likely to depend crucially on the extent to which they are seen to comply with international norms.⁴ This was seen clearly in the wake of SARS in 2004. It is important for the UK to have a formative role in shaping these norms.

Over the last 150 years, pandemics and regional disease outbreaks have been a catalyst to international protocols/cooperation.⁵ But it normally takes some time to achieve this. The chief difficulty in drafting a protocol is that countries differ in their approach to quarantine and travel restrictions. For geographical, political and historical reasons, remote island nations such as

Australia and authoritarian regimes with large land frontiers tend to favour strict arrangements, whereas nations like the UK, which depend heavily on trade and movement, tend to favour more liberal ones.⁶⁷

Three issues are likely to be especially problematic when it comes to drafting an agreement. One is the extent to which signatory states are able to differ from international norms if they judge that an emergency threatens them in particular. This has been a major issue with the operation of the WTO's Sanitary and Phytosanitary Agreement, for example. The second issue is achieving oversight of procedures in other countries (e.g. certification of testing and vaccination). The third and most difficult issue is to reach agreement on a mechanism for dispute resolution.

In the case of the WTO, breaches/abuse of sanitary and phytosanitary agreements have been hard to resolve because of competing interpretations of the science behind state actions and because of lengthy bureaucratic procedures. The delays caused by this have had a disproportionately negative effect on smaller, export-dependent states, while advantaging larger entities such as China, the US and EU.⁸ The UK therefore needs to press strongly for an effective dispute resolution mechanism and ensure that it has trained and knowledgeable negotiators not only to frame the protocol but to be involved in dispute resolution thereafter.

In this context, the unintended consequences of policies designed to encourage reporting of infectious disease outbreaks must be considered. Laxminarayan et al.'s (2014) study of meningococcal meningitis reporting data compiled from 54 African countries between 1966 and 2002 identified different reasons for failing to report outbreaks to the WHO.⁹ For example, the 1998 Hajj vaccination requirements were associated with countries who had previously reported low levels of infection changing to higher levels of reporting. Laxminarayan et al. argued that policies that change the benefits of reporting made very little impact on the reporting habits of countries with a high level of disease, but significantly altered reporting by countries with a smaller burden.¹⁰

3. Pre-travel measures for infection control

The UK, like most other countries, is currently relying partly on travel bans to provide protection against Covid19, and particularly new variants of the virus causing this disease. However, evidence on the efficacy of such bans is difficult to assess. On the one hand, Errett et al.'s (2020) review of evidence on the impact of travel bans in reducing geographic spread of emerging infectious diseases (EIDs) (ie.MERS, SARS, EVD, and ZVD) led them to conclude that the effectiveness of travel bans was limited by the conflation of travel bans with airline cancellations, airport closures, failure to consider land and sea crossings, and failure to consider changes in traveller behaviour.¹¹ On the other, a study on travel bans during the present pandemic concluded that they were successful.¹² The fact that the study focused on Australia, however, means that it may not be typical because of that country's lack of land borders.

There are three main pre-embarkation measures currently in use which could provide protection if travel bans were lifted: PCR testing before arrival at the airport; LAMP or lateral flow testing immediately prior to departure; and symptomatic screening. These may be employed individually or together. The details of these tests and their efficacy are considered in accompanying scientific papers.

The observations below refer chiefly to inbound passengers but the discussion of certification is also relevant to passengers leaving the UK.

When it comes to making decisions about whether or not to travel, there is evidence from other countries to suggest that the perceived risk of infection at the destination is a more important factor in decision-making than perceived risk of infection during travel.¹³ However, there is little

evidence to enable us to evaluate the behavioural impact of any of the specific measures currently used (tests and symptom-screening) on cross-border travellers.

There is a possibility that negative test results can induce lack of caution in other contexts, although there is as yet limited evidence relating to this hypothesis.^{14,15} It is plausible that a negative test result could have an impact on an individual's willingness to adhere to self-regulated quarantine after having arrived in the UK. However, it also seems reasonable to suppose that testing at the airport and pre-embarkation symptomatic screening may deter passengers with symptoms, or those who suspect they may be infected with Covid-19. Testing may suppress the desire for travel more generally, since a positive test could mean that a passenger loses a ticket without reimbursement.

However, there is evidence that passengers have evaded symptomatic screening by using drugs to reduce fever. In one case, a South Korean student was able to suppress Covid-19 symptoms on a flight from Chicago to Incheon and then an internal flight to Busan. He was able to evade screening at these airports because he took 20 tablets of the antipyretic acetaminophen. This was only revealed once he tested positive in Korea, following routine contact-tracing questions from the Korean CDC.¹⁶ Similarly, a Chinese tourist took antipyretics to visit France, despite having both a fever and cough before departing Wuhan.¹⁷

The best-documented behavioural aspects of test certification (for travel) are emerging patterns of criminality. Counterfeit vaccination and PCR test certificates are already in circulation. Foreign organised criminal gangs (OCGs) have produced them, sometimes for their own use (e.g., for international travel and business).¹⁸ In the UK, too, counterfeit 'fit to travel' certificates have been available for some time. They have been made relatively easily by photo-shopping and sold at a price of £50-150. To-date, the greatest demand within the UK has been for certificates that have enabled travel to Pakistan.¹⁹ If certification of testing (or vaccination) prior to travel becomes the norm, it is highly likely that many more fake certificates would be produced and sold in this and other countries, thus potentially undermining the reliability of pre-embarkation measures to reduce infection.

One way of mitigating these risks is to use digital passes, which would offer a more secure method of verification. Theoretically, this could operate in a similar way to the bar-coded boarding pass system used for entry into the departure area of airports. Cross-border rail or ferry travellers could also make use of such a system. However, it may not be possible to insist on digital passes. Although they could be issued to those undergoing tests immediately prior to departure, the difficulty would arise with PCR test certificates issued previous to arrival at the port of embarkation. An entirely digital scheme would discriminate against those who did not have access to such technology or whose mobile device was not working/forgotten. Hence, paper certification may have to be relied upon to some extent and this would inevitably encourage fraud. Covid-related fraud is currently the fastest growing form of crime in the UK and presumably in many other countries.

The above risks can be mitigated by making certificates more challenging to copy (ideally to internationally agreed standards, detailed in a protocol of the kind discussed above). It is also essential that implementation should ensure that legitimate certificates are quick and convenient for all to access, meaning the financial opportunities for OCGs are limited. The challenge of delivering this rapidly should not be underestimated, even in the UK. In other countries, it could be far more difficult.

Unless opportunities for fraud are designed out (that is, unless authentication is very secure), it would also create an opportunity for scammers to offer fake test certificates that are never actually produced (or that are useless); this would be highly profitable and involve little effort for the fraudsters.²⁰ Within each nation, there would be need to be careful regulation of approved persons/businesses providing testing/vaccination and certification. Ideally, regulation should be in accordance with international standards and individuals would need to access specific types of test stipulated under the agreement. This may require each state to

have 'industrial partners' that supply test or 'certificated' partners which could administer them. For outbound travellers, these may need to be reciprocated by the UK to create 'certificate corridors.'

A key issue for the UK would be to determine the reliability of oversight in other countries. Ideally, this should have a bearing on the assessment of risks posed by each country to the UK and the inclusion or exclusion of nations from travel-corridors.

Interpol and Europol are already alert to the issues outlined above.^{21,22} Establishing an enduring mechanism for international police cooperation and sharing of intelligence on false certification of testing/vaccination will be vital to the protection of the UK and maintaining confidence in international travel generally. Within Europe, there are useful precedents for cooperation of this type, such as in the policing of international football fixtures, for example.^{23,24}

Another issue that currently lacks clarity is what security measures would surround personal data contained in certificates or how a fraudulent certificate could be cross-referenced (see below). The question of who should hold the data is also unclear because of private sector involvement, e.g. in issuing certificates or receiving and checking them, e.g. airlines. Safeguards would be needed to maintain public confidence.

4. Behaviour during travel

A key issue for the travel industry – particularly for port, rail and airport authorities – is how passengers are likely to behave while in transit, while being transported and at interchanges/hubs. Available evidence on changes to travel habits during the pandemic suggests that people have generally embraced measures such as social distancing.²⁵ However, there have been complaints about social distancing in some situations. For example, the recent introduction of new testing requirements for entry into the UK has resulted in delays and breaches of social distancing at Heathrow airport, although this problem may be temporary. Enabling people to adhere to regulations/guidance is therefore vital. As air and other forms of travel resume, hubs will need to be redesigned in order to permit social distancing and avoid overcrowding at pinch points. Even if certified negative, passengers and crew still pose some risk, since no test can be completely relied upon. The degree of social distancing deemed desirable would probably depend on the prevalence of the virus globally.

Most transport and public health authorities (e.g. IATA, PHE) have already given considerable thought to these matters. However, as the number of travellers increases, it may become more difficult to maintain current arrangements. The mixing of travellers from different parts of the world – with different conventions on social distancing, for example – will prove challenging in major hubs such as Heathrow. In New Delhi international airport, for example, a passenger tracking system was introduced to reduce delays and help people maintain social distance.²⁶ In South Korea, where there is a relatively high volume of internal travel, passengers wear face coverings at all times except when eating or drinking, as in the UK. All rail seats are booked in advance and only window seats are available. Single passengers taking flights sit in window seats only. Passengers boarding as a group may sit together but rows before and behind are kept empty in that case. These simple expedients are complemented by palm vein biometric systems at airports and major railway stations to reduce the need to remove masks for identification. The latter system permitted large numbers to travel safely at holiday seasons²⁷.

5. Post-travel measures

a. Arrivals into the UK

Doubts over the validity of certification may present problems at the point of passenger arrival. For example, if intelligence is received about the reliability of certification of passengers while

in transit – or if there is intelligence to suggest an alteration of the risk status of the nation from which they have travelled – what measures should be taken to deal with arrivals? Also, if entry is refused, whose responsibility are they (their own nation, the state into which they have travelled, or the carrier)?

The answer to these questions would depend partly on what certificates allowed or prevented. If a passenger has a negative test certificate (or two certificates) on arrival into UK then it may be the case they do not require quarantine. If they do not have a valid certificate, they could still be allowed into UK if they perform quarantine. If so, rules for quarantine following non-certificated arrival could be different from those for certified arrival, e.g. longer or with additional surveillance.

Challenging the status of individuals entering the UK is likely to be fraught with difficulty because of possible accusations of racism at UK Borders or possible diplomatic incidents. Mechanisms for individual dispute resolution need to be worked out, even in advance of such a protocol (e.g. in the case of bi-lateral agreements in travel-corridors).

Another issue to consider is whether the individual should be liable if they have a false certificate. Currently, if a person arrives in the UK with a test certificate that contains incomplete data, or if tests do not meet the specified requirements, they are committing a criminal act and face a £500 fine.²⁸ In some cases, they may have knowingly purchased a counterfeit certificate but in other cases they may have undergone a test or vaccination without realising it was fake. Should the individual be liable for the failure of regulation in another state? This should be addressed in bi-lateral and multi-lateral agreements.

One measure which could increase confidence in testing for inbound travellers is UK-issued certification on arrival (i.e. from large testing centres established at ports and airports). The UK has invested £22 billion in testing infrastructure so this may be readily achievable.

b. Adherence to quarantine

Methods of ensuring adherence to quarantine used internationally during the Covid-19 pandemic include electronic monitoring, denying entry to public spaces without electronically validated proof of being virus-free, and mandating self-isolation and quarantine in supervised facilities. The acceptability of these different methods varies across countries, with harsher measures more likely to be applied in authoritarian regimes and some states (like Australia) with historically strong traditions of quarantine. Evidence regarding the effectiveness of these methods is mixed but those that require mandatory institutional quarantine may be presumed highly effective.²⁹

Some proposals have recently been put forward in an attempt to ensure quarantine is adhered to in the UK. These include the Australian system of providing secure hotel accommodation, with the (considerable) expense being borne by incoming travellers. The Australian scheme (also used by some other countries with historically strict quarantine arrangements) provides a high degree of security, although infection appears to have entered surrounding communities through hotel staff.³⁰ The Australian system is also likely to be a major deterrent to travel and would hinder the reopening of the UK as a tourist/business destination if maintained over the long-term.

The acceptability of quarantine in Australia also rests upon different models of policing. Australia has a policing tradition based upon paramilitary/colonial policing strategies. As such, policing and social control in Australia is strongly focussed on strict enforcement and compliance, and there is (at least among white populations) greater tolerance for intrusive policing approaches. From a complex systems perspective, the UK's greater international connectivity compared to Australia and New Zealand is also highly relevant. Full UK border closure has wider and more significant effects than these less connected nations.

Most nations with collective cultures such as Singapore, Vietnam, China, South Korea have had greater success in achieving and enforcing compliance than cultures such as the US and UK, where the focus has been largely upon the impact of compliance on individual liberty.³¹ This may mean that some of the strategies used in China and Singapore, for example, are unlikely to work in the UK as they will be perceived as unacceptable limitations upon liberty. This could influence messaging in the sense that strategies may need to focus on individual concerns - e.g. small loss of liberty is good for one's self and one's loved ones – in addition to social good.

One of the main issues with self-regulated quarantine is that false information has often been provided in passenger locator forms. Additionally, only up to 10% of arrivals are checked by the UK Border Force.³² Even among those who have entered self-regulated quarantine, compliance is far from perfect. An ONS international arrivals survey in early October 2020 indicated that 67% of arrivals to the UK were compliant with the previous 14-day (now 10-day) self-isolation policy, with 12% saying that they were not compliant.³³ Given that compliance is legally enforceable, even these self-reports are presumably an overestimate. However, adherence rates in future could differ depending on levels of Covid-19 infection and vaccination, in addition to the deterrent effect of enforcement.

Data relating to self-isolation may provide additional insights into behaviour during quarantine after return from overseas. Around 29% of those reporting symptoms of COVID-19 in England reported fully self-isolating by staying at home.³⁴ This rate may be even lower in those who are asymptomatic. Rates of self-isolation of other members of a household are also likely to be lower due to physical and other practical constraints (e.g. the need to travel to supermarkets to purchase food).³⁵ This could be significant if quarantine of (non-travelling) household members is considered for those returning to the UK.

In the UK, self-reported ability to self-isolate/quarantine is three times lower in those with incomes less than £20,000 or savings less than £100. However, willingness to self-isolate is high across all income and wealth groups. Adequate financial and provisioning support for those in quarantine is therefore likely to increase adherence to quarantine.³⁶ In their survey of international arrivals, ONS noted that 19% of arrivals had left their accommodation to get basic necessities such as food or medicine.³⁷ The relative balance between providing support for self-isolation and enforcement is unknown, however.

b. Testing and release from quarantine

Early release from a stipulated period of quarantine depending on testing has the merit of reducing the length of quarantine in most cases and probably increasing levels of adherence. In the case of PCR tests which are not conducted by the individual who is quarantined, one can have fairly high confidence that release from quarantine (e.g. after 5 or 10 days) carries little risk. From a behavioural perspective, self-administered lateral flow tests are more problematic. High false positive and negative rates may undermine credibility and adherence to testing and quarantining, although this problem might be mitigated by repeated testing. The burden and complexity of repeated testing may also disadvantage people with lower incomes, other social disadvantages (e.g. language or technology barriers), or disabilities. It may therefore be necessary to offer people who will find self-testing difficult or inaccessible the option of simply quarantining.³⁸

Additionally, motivation to self-test may decline in the latter part of the quarantine period and a strong package of support would be required throughout to maintain adherence. Access to test kits would also need to be rapid and reliable or the credibility of the system would be undermined, resulting in reduced adherence. If such a system were to be introduced, it would be essential to evaluate it quickly in order to improve implementation.³⁹

c. Enforcement of quarantine

Without detection and enforcement, some objective measures of mobility have shown small increases over time during lockdowns in the UK and elsewhere, while self-reports of staying at home decreased. The same could be expected if quarantine were not enforced. However, even if the number of gross violations is small, it can be expected that the media will highlight them, which will lead to demands for stronger enforcement. In the UK – and in most other Western cultures – there is a bias towards dispositional attributions of behaviour; in other words, to attribute acts to ‘wrong-doing’ rather than to accept situational drivers or limitations. Generally, this impacts disproportionately upon people perceived as socially marginal.^{40,41,42} There is a danger that stigmatisation could result from such reporting. Furthermore, frequent reports of this kind could paradoxically create norms of non-compliance. As with adherence to other regulations and positive behaviours, it will be necessary to counterbalance negative reporting with praise for people who do the right thing. Most people will follow the rules most of the time and positive behaviour should be reinforced continually.^{43,44}

Concern over failure to adhere to quarantine in the UK has already led to proposals to replace self-isolation with institutional quarantine (see above) or to use methods such as facial recognition technology (FRT) to determine the movement of individuals who should be in quarantine.⁴⁵ Use of FRT is less likely to be a deterrent to inbound travellers than institutionalised quarantine but there would be concern that it might be extended to people who were self-isolating for other reasons. Extensive use of such technology or other technologies such as electronic tagging would raise concerns about civil liberties.⁴⁶ It is likely that general support for FRT would be forthcoming only if the majority of the public agreed that there was demonstrable public benefit from its use in this instance.⁴⁷ However, the functionality of FRT would obviously be confined to larger urban areas. The fact that anti-vaxx and other anti-lockdown groups are focusing on surveillance and control issues also makes it likely that use of FRT would bolster conspiracy theories.⁴⁸

One alternative which has been suggested recently is the Polish system of ‘enhanced isolation,’ in which people are contacted daily and asked to show photographs of themselves in isolation. The Polish system would be less of a deterrent to travel but is likely to be very intensive in terms of the use of human resources to check isolating individuals, unless fully automated. If automated, it would be possible to circumvent such a system if individuals were leaving their residence for relatively short periods. The system would also require the quarantined individual to have access to functioning digital technology.

More frequent, random spot-checks on self-adherence may provide a more reliable and socially acceptable alternative to the methods described above. This could be done remotely where fixed-line telephones are in place (true for around 4 in 5 UK households) but would otherwise require an in-person visit or digital approach.⁴⁹

On occasions when quarantine is broken, the police will normally be informed by neighbours, which raises the possibility of verbal/physical conflict among neighbours and, in some cases, inter-ethnic tension (e.g. involving families returning from visiting relatives overseas). Arguments between friends, family and neighbours have been exacerbated by the pandemic. Government messaging needs to be careful about how it describes people who break quarantine, as it could inflame such situations.⁵⁰

Breaches of quarantine will need to be firmly but sensitively policed. Police checks may be the first point of contact, assuming self-regulated quarantine continues to be used. The police will need to strike a balance between being seen to enforce breaches of quarantine (thus retaining public confidence) and being heavy handed. Much will depend on the specific conditions of quarantine, e.g. whether or not exercise or essential shop-visits are permitted. Egregious breaches in which quarantined individuals freely mix with others in their locality or return to work should require immediate enforcement, whereas an individual taking exercise in isolation (if not permitted) may be better dealt with using persuasion in the first instance. Policing may

also uncover situations where people require additional support in order to maintain quarantine (e.g. with shopping, providing care for others, accessing medication, or due to financial reasons) – providing links to groups that provide this support may be essential. Existing rules which prevent employers from requiring that someone attend work when they should be in quarantine will also require enforcement.^{51,52} An approach to enforcement calibrated according to harm would maintain the confidence of communities and the perceived legitimacy of the police.^{53,54,55}

An additional consideration is that whilst police have the power to give fixed penalty fines for breaches of quarantine, the perceived fairness of the system may be damaged as a result of delays in the court system.⁵⁶ In other words, challenges to imposed fines may be delayed or may fail to get court time. This might effectively mean that there is no real recourse to law if one feels a fine was excessive/inappropriate.

If police are required to visit homes to ensure compliance, this is also likely to add an extra burden upon systems that may be feeling a pinch as a result of staff absenteeism. Absenteeism is currently high in some forces, such as the Police Service of Northern Ireland.⁵⁷ It is debatable how many resources police could realistically put into widespread quarantine compliance checking when presented with other calls for service. This may become a pressing issue when lockdown is eased and more normal patterns of offending re-emerge.

Police would also face challenges to enforcement of home quarantine in that they would have to ensure that random checks are not perceived to be targeting certain members of some communities disproportionately. This will be difficult to achieve (e.g. experience of stop and search that appears to target black people disproportionately), especially as many individuals who return from overseas from trips to visit relatives may be members of BAME communities. Visits from uniformed police may cause families to feel shame at having travelled. If police are used in enforcement, non-uniformed visits may alleviate stress.

6. Types of travel and traveller

Most of the issues examined above apply regardless of whether travel is by land, sea or air, however there are some special considerations unique to certain types of transportation/traveller.

In the case of road transportation (e.g. from EU/EEA), there are opportunities for infection at multiple localities if stops are made, these being usually at the discretion of the driver. This is an important consideration as restrictions ease, as substantially more people may choose to take private transport when travelling across borders because of the perceived risk of infection from passengers on public transport.⁵⁸ In such circumstances, it is impossible to exert the same control over social distancing as might be expected on a plane or train, for example. Ferries may also provide more opportunities for infection in transit than some other modes of transport.

Hauliers: cross-border travel from the UK into France is currently only possible if drivers are issued with a negative PCR test certificate (within 72 hours of the intended journey), either from facilities near Dover or if they have a Kent Access Permit, issued after receiving a negative test from a number of Haulier Advice Centres around the UK. Negative test certificates are now required for travel into the UK but hauliers are one of a number of exempted occupations/categories. For the reasons given above, this poses a significant risk of infection, although the economic and social consequences of lifting the exemption may currently outweigh this.

There would also be practical difficulties in implementing a reliable scheme of certification for hauliers. If hauliers were no longer exempt, there would inevitably be a high demand for test certificates in a variety of European countries. Although specifications for the tests acceptable

to the UK are precise (as those for personal data provided on certificates), test providers are not specified.⁵⁹ This raises in acute form the issue of counterfeit documentation, considered above. It is possible that some hauliers would seek fake documentation in order to reduce transaction costs/delays.

Air crew: air crew are accustomed to dealing with discomfort and mild infections in the course of their work. At an early stage in the pandemic, many shrugged off symptoms but later realised that they had Covid-19 and became a source of infection.⁶⁰ Since then, awareness is likely to have increased substantially and IATA has issued detailed guidance on infection control.⁶¹ Most airlines have put in place strict protocols to reduce infection but recent reports suggest that some major carriers have urged crews to continue flying despite having tested positive and to monitor themselves for signs of infection.⁶² It may be worth noting that some countries (e.g. Taiwan), insist on air-crew on planes flying from high-risk countries perform quarantine for 14 days.⁶³

While air travel probably presents the greatest risk of infection by volume, considerable risks are posed by commercial vessels in which infection control procedures are negligible. For example, the embarkation of Russian-owned fishing vessels in South Korean harbours (particularly Busan) has been linked to clusters of infection locally. Locals have also been infected when coming on board to repair ships docked in Korean harbours. Large numbers of crew sailing from ports such as Vladivostok have been found to be infected, in some cases despite apparently possessing negative PCR certificates. This is a clear example of the dangers posed by commercial vessels to the UK. In the case of South Korea, the risk has been mitigated by quarantine officers boarding commercial vessels to conduct their own tests before arrival. Negative tests are required before crew are allowed to disembark or locals are permitted to board.⁶⁴

Hard to reach communities: undocumented migrants and smuggled and trafficked individuals are particularly prone to infection with Covid-19 because of the circumstances in which they live and work and conditions during trafficking.^{65,66} There are many reasons why they would not report their infection status or be unable to quarantine, most obviously intimidation and fear of deportation. However, there would need to be great care in highlighting this issue as it is well established that fears over infection by immigrants – which are quite widespread⁶⁷ – have often been exploited by anti-immigrant and Far Right groups.^{68,69,70}

Criminals: there is a realistic possibility that OCGs will change routes and modes of smuggling people, drugs and other illegal items in order to evade Covid-19 restrictions and congestion at borders due to other causes, e.g. new EU border arrangements. This means that points of least resistance – e.g. smaller ports along the east coast – may be chosen in preference to larger airports/channel ports.

In conclusion, it would be relatively easy for the UK to impose measures to reduce infection from large commercial vessels (especially those sailing from countries which pose a significant risk). The test exemption for air-crews may need to be re-examined, following further scrutiny of airline practices. Hauliers and others coming into the UK by road/ferry may pose a significant risk but in current circumstances lifting the exemption on testing is unlikely to improve security against infection – certification is not yet sufficiently reliable.

References

¹ N Howard-Jones, *The Scientific Background to the International Sanitary Conferences, 1851-1938* (1975)

² Valeska Huber, 'The Unification of the Globe by Disease? The International Sanitary Conferences on Cholera, 1851-1894', *Historical Journal*, 49 (2006), 453-76

-
- ³ M Harrison, *Contagion: How Commerce has Spread Disease* (2012).
- ⁴ D Fidler, 'Germs, Governance and Global Public Health in the Event of SARS', *Journal of Clinical Investigation*, 113 (2004), 799-804.
- ⁵ E.g. the first binding international agreements and international health organisations following the global plague pandemic of the 1890s/early 1900s. See M Harrison, *Contagion: How Commerce has Spread Disease* (2012) chap.6.
- ⁶ Alison Bashford, 'Global Biopolitics and the History of World Health', *History of the Human Sciences*, 19 (2006), 67-88
- ⁷ P Baldwin, *Contagion and the State in Europe 1830-1890* (1999);
- ⁸ M Harrison, *Contagion: How Commerce has Spread Disease* (2012) chap.9 and Conclusion.
- ⁹ R Laxminaraya, J Reif, A Malani. (2014). Incentives for Reporting Disease Outbreaks. *PLoS ONE*, 9 (3), e0090290.
- ¹⁰ R Laxminaraya, J Reif, A Malani. (2014). Incentives for Reporting Disease Outbreaks. *PLoS ONE*, 9(3), e0090290.
- ¹¹ N. A Errett, L. M Sauer, L. Rutkow, 'An integrative review of the limited evidence on international travel bans as an emerging infectious disease disaster control measure'. *Journal of Emergency Management*, 18 (2020), 7-14. <https://www.wmpllc.org/ojs/index.php/jem/article/view/2688>
- ¹² V Costantino, D J Heslop, C R MacIntyre, 'The effectiveness of full and partial travel bans against COVID-19 spread in Australia for travellers from China during and after the epidemic peak in China'. *Journal of Travel Medicine*, Volume 27, Issue 5, (2020). <https://doi.org/10.1093/jtm/taaa081>
- ¹³ K.H. Song and S. Choi, 'A Study of the Behavioural Change of Passengers on Sustainable Air Transport after COVID-19', *Sustainability* 2020, 12, 9207; doi:10.3390/su12219207
- ¹⁴ SPI-B: How behaviour may change following testing - initial response, 22 April 2020, <https://www.gov.uk/government/publications/spi-b-how-behaviour-may-change-following-testing-initial-response-22-april-2020>
- ¹⁵ SPI-B: Key behavioural issues relevant to test, trace, track and isolate - summary, 6 May 2020, <https://www.gov.uk/government/publications/spi-b-key-behavioural-issues-relevant-to-test-trace-track-and-isolate-summary-6-may-2020>
- ¹⁶ 'Haeyeolje Ibguk Miguk Yuhaksaeng Oneul Gobal' (The Korean Student from the USA who took Antipyretics will be Prosecuted today), *Hankook Ilbo*, (2020) 4 October.
- ¹⁷ <https://www.theguardian.com/science/2020/jan/23/chinese-tourist-says-she-evaded-coronavirus-checks-fly-france>
- ¹⁸ <https://www.bbc.co.uk/news/world-europe-54839434>
- ¹⁹ <https://www.lancashiretelegraph.co.uk/news/18816550.east-lancs-travellers-faking-negative-covid-certificates-can-board-flights/>
- ²⁰ Security and Policing Subgroup, SPI-B, Certification – Policing and Security Issues', December 2020. Available from the SPI-B secretariat
- ²¹ <https://www.europol.europa.eu/newsroom/news/europol-predictions-correct-for-fake-covid-19-vaccines>
- ²² <https://www.interpol.int/en/News-and-Events/News/2020/INTERPOL-warns-of-organized-crime-threat-to-COVID-19-vaccines>
- ²³ <https://www.coe.int/en/web/sport/safety-security-and-service-approach-convention>
- ²⁴ <https://www.theparliamentmagazine.eu/news/article/council-of-europe-convention-set-to-strengthen-international-police-cooperation-at-sporting-events>
- ²⁵ A Shamshiripour, E Rahimi, R Shabanpour, A Mohammadian, How is COVID-19 reshaping activity-travel behavior? Evidence from a comprehensive survey in Chicago, *Transportation Research Interdisciplinary Perspectives*, 7, (2020) 100216 <https://www.sciencedirect.com/science/article/pii/S2590198220301275>
- ²⁶ <https://www.i-cio.com/innovation/it-infrastructure/item/kac-creating-smarter-airports-that-safeguard-passenger-journeys-2>
- ²⁷ <https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/new-passenger-tracking-system-to-ensure-social-distancing-at-delhi-airport/articleshow/79987230.cms?from=mdr>
- ²⁸ <https://www.gov.uk/guidance/coronavirus-covid-19-testing-for-people-travelling-to-england>
- ²⁹ SPI-B Multi-disciplinary Task and Finish Group on Mass Testing – Behavioural Considerations, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916896/tfms-mass-testing-behavioural-considerations-s0724-200827.pdf
- ³⁰ <https://www.bloomberg.com/news/articles/2020-11-25/australian-state-overhauls-hotel-quarantine-after-mystery-cases>
- ³¹ A Maitner, D Mackie, J Pauketat E Smith.. The Impact of Culture and Identity on Emotional Reactions to Insults. *Journal of Cross-Cultural Psychology*. 48(2017) 892 <https://doi.org/10.1177%2F0022022117701194>
- ³² Oral evidence: Home Office preparedness for Covid-19 (Coronavirus), HC 232, Q868; <https://committees.parliament.uk/oralevidence/1487/html/>
- ³³ ONS, 30 September - 8 October 2020, n=1,191
- ³⁴ EMG/SPI-B/SPI-M: Reducing within- and between-household transmission in light of new variant SARS-CoV-2, 14 January 2021, <https://www.gov.uk/government/publications/emgsppi-bspim-reducing-within-and-between-household-transmission-in-light-of-new-variant-sars-cov-2-14-january-2021>

-
- ³⁵ SPI-B Multi-disciplinary Task and Finish Group on Mass Testing – Behavioural Considerations, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916896/tfms-mass-testing-behavioural-considerations-s0724-200827.pdf
- ³⁶ EMG/SPI-B/SPI-M: Reducing within- and between-household transmission in light of new variant SARS-CoV-2, 14 January 2021, <https://www.gov.uk/government/publications/emgspi-bspim-reducing-within-and-between-household-transmission-in-light-of-new-variant-sars-cov-2-14-january-2021>
- ³⁷ ONS, "Non-Exempt International Arrivals: Self-Isolation Behavioural Survey, 15 October 2020," 2020
- ³⁸ SPI-B working group paper on Testing for Initiation of Quarantine in Contacts, 15/11/2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945767/S0896_2b_2020.11.15_SPI-B_WG_-_Testing_for_initiation_of_quarantine_in_contacts__1_.pdf
- ³⁹ SPI-B working group paper on Testing for Initiation of Quarantine in Contacts, 15/11/2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945767/S0896_2b_2020.11.15_SPI-B_WG_-_Testing_for_initiation_of_quarantine_in_contacts__1_.pdf
- ⁴⁰ T. F Pettigrew. "The ultimate attribution error: Extending Allport's cognitive analysis of prejudice". *Personality and Social Psychology Bulletin*. 5 (4) (1979): 461. doi:10.1177/014616727900500407.;
- ⁴¹ Jones, E. E.; Harris, V. A. (1967). "The attribution of attitudes". *Journal of Experimental Social Psychology*. 3 (1967): 1. doi:10.1016/0022-1031(67)90034-0
- ⁴² M Hewstone. *Causal attribution: From cognitive processes to collective belief* (1989). Basil: Blackwell. ISBN: 978-0-631-17165-2
- ⁴³ ONS, "Non-Exempt International Arrivals: Self-Isolation Behavioural Survey, 15 October 2020," 2020;
- ⁴⁴ SPI-B: Positive strategies for sustaining adherence to infection control behaviours, 22 October 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/933227/S0828_SPI-B_-_Positive_strategies_for_sustaining_adherence_to_infection_control_behaviours.pdf
- ⁴⁵ <https://www.dailymail.co.uk/news/article-9155859/Hotel-quarantines-proposed-UK-arrivals-check-travellers-properly-isolating.html>
- ⁴⁶ SPI-B: Key behavioural issues relevant to test, trace, track and isolate - summary, 6 May 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/888751/4b_SPI-B_Key_Behavioural_Issues_Relevant_to_Test_J_Trace_J_Track_and_Isolate_20200506_S0327.pdf
- ⁴⁷ https://www.adalovelaceinstitute.org/wp-content/uploads/2019/09/Public-attitudes-to-facial-recognition-technology_v.FINAL_.pdf
- ⁴⁸ E.g. <https://www.standupx.info/>
- ⁴⁹ https://www.ofcom.org.uk/__data/assets/pdf_file/0032/137966/future-fixed-telephone-services.pdf
- ⁵⁰ M Harrison C Stott, 'Discussion Paper on Enforcement Implications of SAGE return for C19 STRATEGY | SEQUENCING OF SOCIAL DISTANCING BSI (Available from the SPI-B secretariat)
- ⁵¹ EMG/SPI-B/SPI-M: Reducing within- and between-household transmission in light of new variant SARS-CoV-2, 14 January 2021, <https://www.gov.uk/government/publications/emgspi-bspim-reducing-within-and-between-household-transmission-in-light-of-new-variant-sars-cov-2-14-january-2021>
- ⁵² <https://www.gov.uk/government/news/new-legal-duty-to-self-isolate-comes-into-force-today>
- ⁵³ L Smith, B Duffy, V Moxham-Hall2, L Strang, S Wessely, G Rubin. Anger and confrontation during the COVID-19 pandemic. A cross-sectional national survey. *Journal of the Royal Society of Medicine*. Doi: 10.1177/0141076820962068;
- ⁵⁴ Security and Policing subgroup, SPI-B, Covid19: Policing Enforcement Strategy – Challenges, November 2020. Available from the SPI-B Secretariat
- ⁵⁵ SPI-B Policing & Security Sub-Group, 'COVID-19: SECURITY AND POLICING CHALLENGES', September 2020. Available from the SPI-B Secretariat
- ⁵⁶ <https://www.bbc.co.uk/news/uk-55712106>
- ⁵⁷ <https://www.bbc.co.uk/news/uk-northern-ireland-55615798>
- ⁵⁸ M Abdullah, C Dias, D Muley, M Shahin, Exploring the impacts of COVID-19 on travel behavior and mode preferences, *Transportation Research Interdisciplinary Perspectives*, 8(2020)100255 <https://www.sciencedirect.com/science/article/pii/S2590198220301664>
- ⁵⁹ <https://www.gov.uk/guidance/coronavirus-covid-19-testing-for-people-travelling-to-england>
- ⁶⁰ E.g. <https://www.theguardian.com/world/2020/apr/02/air-canada-flight-attendant-exposed-to-covid-19>
- ⁶¹ <https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-crew-health-precautions-during-post-pandemic.pdf>
- ⁶² <https://www.reuters.com/article/health-coronavirus-airlines-workers-focu/united-airlines-flight-attendants-raise-alarm-on-crew-quarantine-protocols-idUSKBN28L1HE>
- ⁶³ <https://crisis24.garda.com/insights/news-alerts/wip10011887729/taiwan-officials-requiring-arrivals-with-recent-travel-history-to-the-uk-to-quarantine-at-government-facilities-as-of-dec-23-update-28>
- ⁶⁴ *Newsis*, 6 Nov, 2020, https://www.ytn.co.kr/_In/0115_202010310953554467; (Two Russian deep-ocean fishery ships in Busan, four more positive cases have been reported), 'Busanhang Reosia Won'yang Eoseon 2 cheok, hwakjinja 4 myeong deo nawatda', https://newsis.com/view/?id=NISX20201106_0001225111&cID=10811&pID=10800

⁶⁵ <https://www.theguardian.com/uk-news/2021/jan/15/new-covid-outbreak-harmondsworth-uk-immigration-removal-centre>

⁶⁶ K Page A Flores-Miller Lessons We've Learned — Covid-19 and the Undocumented Latinx Community *N Engl J Med* 2021; 384:5-7

⁶⁷ E.g. J Leask, P Hawe, & S Chapman. Focus group composition: A comparison between natural and constructed groups. *Australian and New Zealand journal of public health*. 25. (2001). 152-4.

https://www.researchgate.net/publication/11979970_Focus_group_composition_A_comparison_between_natural_and_constructed_groups

⁶⁸ <https://mg.co.za/article/2020-03-22-far-right-uses-coronavirus-to-scapegoat-refugees/>; .

⁶⁹ <https://www.bbc.co.uk/news/technology-52490430>;

⁷⁰ L. Marks and M. Worboys, *Migrants, Minorities and Health: Historical and Contemporary Studies* (1997) ISBN 9780415112130