Aviation Health Expert Panel

SARS-CoV-2 Containment Measures at Airports and on Aircraft

Introduction

The UK aviation industry has established an Aviation Health Expert Panel to consider the measures needed to provide a healthy and safe experience for passengers and staff, in light of the risks presented by SARS-CoV-2. The Panel is chaired by Professor Ashley Woodcock (Professor of Respiratory Medicine, University of Manchester), with representation from a range of medical and scientific disciplines. This short report summarises the key recommendations from the Panel.

Background

There has been a pandemic of acute respiratory coronavirus-2 (SARS-CoV-2), which causes a severe multi-system disease with pneumonia. Some individuals infected with SARS-CoV-2 have minimal or no symptoms. All passengers have to be treated as if they are carrying SARS-CoV-2, because small numbers will be carrying the virus without symptoms (~1 in 400 in UK at end May 2020). This will require new levels of hygiene.

During air travel, the main risk of transmission of SARS-CoV-2 is from a contaminated surface (e.g. door handles), and then touching the face and mouth, or via person-to-person droplet transmission, especially when coughing or sneezing.

Key recommendations:
- Frequent cleaning of all surfaces
- Frequent use of alcohol hand sanitisers (e.g. gels, or wipes) for staff and passengers (with gloves as optional; if gloves are worn, they should be compatible with hand sanitisers which should still be used)
- Facemasks or face-coverings, which limit the spread of virus containing aerosols/droplets from symptomatic or asymptomatic individuals
- Physical separation between individuals and family groups, and from airport staff whenever possible. Where possible, 2 metres separation is currently recommended by UK Govt.

The above recommended measures:
- minimise any risk where it is impossible to maintain a specific distance;
- provide the current best balance of risks and reassurance to passengers; and
- can be relaxed in line with guidance from national authorities.

These measures taken together provide passengers and staff with a risk-reduced environment for safe travel through airports and on aircraft.

The following measures are not considered clinically valuable,
- Thermal Imaging
- Screening by point of care serology tests
- Screening tests for virus by PCR on nose/throat swabs

These tests all have substantial false positive and/or false negative rates. The majority of carriers of SARS-Co-V2 will have no symptoms or raised temperature. Thermal screening identifies anyone with an elevated temperature, and so has substantial high false positive rate for SARS-CoV-2. A screened subject would then need a throat swab for SARS-CoV-2 RNA, which has a false negative rate of up to 30%, missing about one third of subjects who are infectious. They have the potential to cause hold-up for substantial numbers of passengers, disrupting efficient transit through the airport. Airports would need to manage these issues, and it is unclear who would be responsible for the delays consequent on incorrect screening.

Presumptions:
- Any passenger could be carrying SARS-CoV-2, but without any symptoms or raised temperature.
- The main risk of transmission of SARS-CoV-2 is from a contaminated surface; surfaces must be cleaned regularly; passengers should use alcohol hand gel frequently.
- Anyone with acute cough related due to SARS-CoV-2 should not travel. Some passengers with mild symptoms might still attempt to travel.
- Face masks and face coverings control droplet spread especially from coughers.
- Many passengers have chronic cough, mainly due to lung diseases; they are less likely to have co-existing SARS-CoV-2 because they will have been "shielded", and consideration should be given to helping these passengers to positively identify themselves in this way to reduce personal anxiety and anxiety of other passengers.
- In an airport and particularly on aircraft it will often be impractical to maintain a "social distance" of 2 metres or less.

Access to airports

- Access will need to be regulated and restricted to reduce queuing and minimise the number of direct contacts.
- Only passengers and staff to be allowed inside airport terminals with rare exceptions.
- Electronic booking, check in, and boarding passes used with 'no touch' terminals should be used wherever possible throughout the passenger journey.

- Airline check-in should include questions on current health and recent exposure to SARS-CoV-2.
- Passengers with symptoms suggestive of SARS-CoV-2, should not come to the airport. In this case, airlines should allow passengers to change their travel plans without penalty.
- Posters at entry will raise awareness and provide information and recommendations, particularly by reinforcing that it is the personal responsibility of passengers (and staff) to observe the new protocols.

Airport-related measures

Personal Measures for Passengers
- **Frequent alcohol hand gel disinfection** (**Strongest recommendation)** (with or without gloves). Liberal supplies of hand gel provided at entry and frequently throughout the airport. Passengers advised to use alcohol hand gel after every contact point e.g. shops, food vendors.
- Gloves reduce hand-face contact and provide personal protection. However, they do not reduce the need for hand alcohol gel to avoid virus transfer.
- **Face masks or Face coverings for all passengers (Strong Recommendation)** to block the droplet spread from coughing.
- **Physical Separation**: Travellers are responsible for maintaining physical separation from other groups and individuals, and their baggage (i.e. no physical contact). (Groups from the same household do not need to maintain physical separation within the group). Where possible, 2 metres separation is currently recommended by UK Govt.

This combination of recommendations for passengers i.e. hand hygiene, facemasks and physical separation, achieves an acceptable level of safety when it is impractical to maintain a specific "social distance"

Disinfection and Cleaning
- All areas to have visible increased frequency of cleaning and disinfection. Particular attention is needed for frequent touch points, e.g. boarding pass scanners, trolleys, handles, elevators and hand-rails.
- Toilets should be managed to avoid over-crowding. There should be notices to advise 20 seconds hand-washing with soap.
- There must be increased cleaning and disinfection in staff areas and hand alcohol gel easily available in all office areas. Ventilation must be optimized.

Shops and Restaurants
- Opening of shops and restaurants should follow local/national guidance.
- They should be managed to avoid over-crowding and to enable passengers to maintain physical separation.

Security
- Alcohol hand gel together with facemasks or face coverings on entry (gloves allowed).
- Passengers to maintain physical separation between separate groups and individuals.
- Security staff to complete a symptom questionnaire on arrival at work every day.
- Security staff with close personal contact searches should wear gloves, ideally with both face visors and face masks.
- Baggage searchers should wear gloves. These should either be changed regularly or treated with alcohol hand gel.
- Trays must be kept cleaned using alcohol or soap between each use (UV light in line could be considered).

Boarding Gates
- Rules for gate areas and aircraft should be visible on posters within the gate areas.
- Passengers maintain physical separation between separate groups and individuals.
- Electronic boarding passes should be used wherever possible.
- Staff to minimise handling of travel documents and to use gloves or hand gel if needed.
- Boarding of aircraft in strict order to enable passengers to maintain physical separation (e.g. with from back row to front row with a single front door; or through front and rear doors).

Arrivals/Customs
- Alcohol hand gel available on entry to the arrivals hall.
- Use of Automatic passport machines should be maximised.
- Customs officers should wear visors and gloves with frequent gel application.
- Crowds at baggage belts should be actively managed to maintain the distance from the belt, and to enable physical separation.

Aircraft-related measures

Passengers are seated side by side, reducing face to face contact. Both boarding and deplaning the aircraft can place passengers and staff in close proximity. The discipline of safety on board aircraft is valuable to maintain physical separation, even when the aircraft is full. The very low humidity at altitude on board an aircraft is not conducive to virus survival.

Recommendations for Aircraft
- Board the aircraft from the back rows of the aircraft towards the front for a single front door access.

- On landing - strict enforcement of passengers to remain seated. Passengers only able to leave seat when seat row is announced by cabin crew, with those seated at the front deplaning first and then subsequent rows towards the rear.
- Provision of cleaning sachet to each traveller.
- All passengers keep facemasks and face-coverings on.
- All crew to use masks, gloves, hand gel.
- Sequencing of toilet visits.
- Clean tables and roof lockers between flights and every 24 hours to minimise risk for cross contamination of surfaces.
- The design and frequency of air circulation/filtration should reduce the potential for virus spread through the cabin.
- Seat (co-habiting) family group together with no need for physical separation within the group, and where aircraft is not full, organise seating to maintain physical separation as far as possible.
- Availability of a reserve supply of face coverings.

Responsibility of individual passengers

- Passengers to understand that they are entering a controlled environment, and acknowledge that they understand the rules and will comply with them.
- Bookings, check-in, boarding pass, health check to be completed electronically as far as possible.
- Strict adherence to security requirements to minimise the need for searches of people and their bags.
- Strongest recommendation for frequent use of hand alcohol gel. Gloves to be allowed.
- Strong recommendation to wear facemasks or face coverings at all times.
- Stay Alert: Maintain physical separation from the next passenger.
- Consider coloured masks for passengers with long-standing cough related to chronic respiratory disorders e.g. chronic cough, asthma, COPD, bronchiectasis).

Long-term Impact

There are indications that passengers will accept their responsibility and adopt new social behaviours to protect themselves and others. For example, we expect passengers will maintain hand hygiene by using gel stations provided at airports and will clean their own seat area. Passengers with cough will wear facemasks to contain droplets.

We also expect there will be long term improvements in hygiene measures in airports and on aircraft to minimise the transmission of all infections. The organisation of air travel will change to emphasise the concept of physical separation as far as possible.

Conclusions

The Panel recommends:

- Frequent cleaning of all surfaces
- Frequent use of alcohol hand sanitisers for staff and passengers
- Facemasks or face-coverings, which limit the spread of droplets from any passenger who is coughing
- Physical separation between individuals and family groups, and from airport staff. Where possible, 2 metres separation is currently recommended by UK Govt.

These measures taken together provide passengers and staff with a risk-reduced environment for safe travel through airports and on aircraft.

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May 28 2020

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