

COVID-19 infection prevention & control (IPC) in the context of air travel

15 Dec 2022

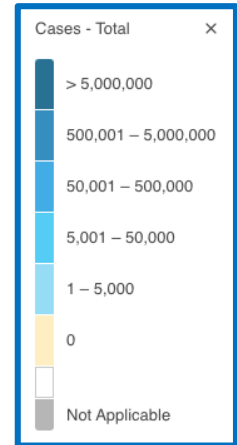
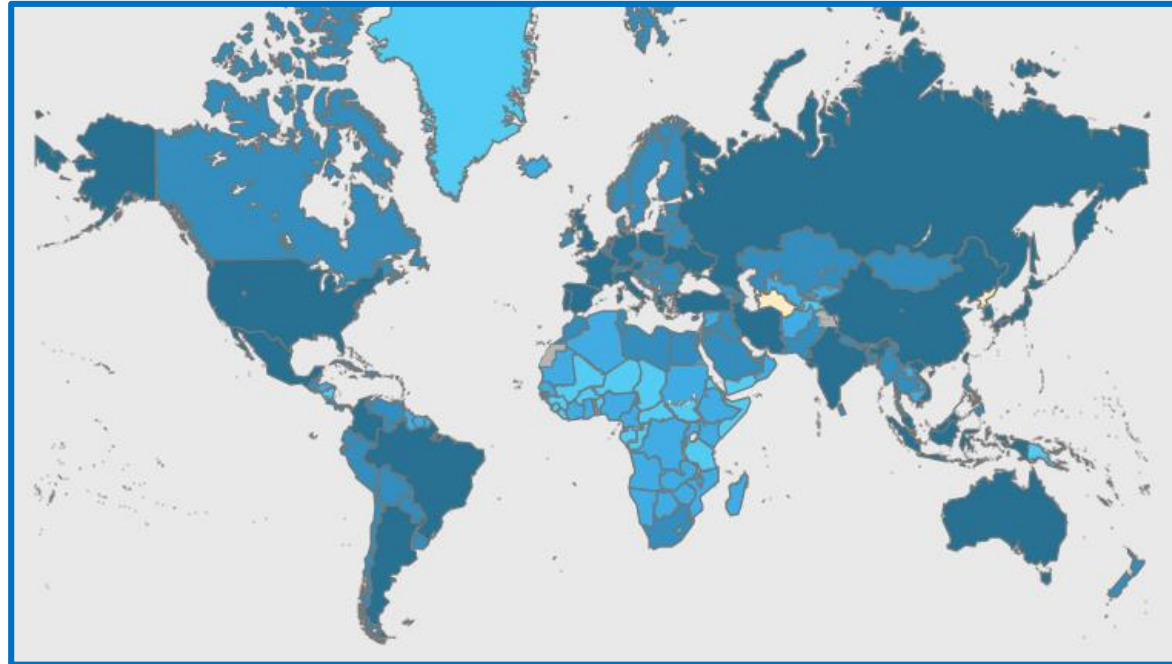
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357,949
new cases in last 24hrs

642,379,243
cumulative cases

6,624,118
cumulative deaths



IPC originated in the health care setting

“Infection prevention and control is a practical, evidence-based approach which prevents patients and health workers from being harmed by avoidable infection and as a result of antimicrobial resistance” (WHO, 2022).

World Health Organization. 2022. Infection prevention and control. <https://www.who.int/teams/integrated-health-services/infection-prevention-control>

But many “standard precautions” can be adopted during air travel

1. Hand hygiene
2. Respiratory hygiene & cough etiquette
3. Personal protective equipment (e.g. masking)
4. Environmental cleaning (and disinfection)
5. Waste management
6. Placement (e.g. physical distance, isolation)
7. Decontamination & reprocessing of reusable supplies (e.g. cutlery, blankets)

World Health Organization. 2022. Aide memoire:
Standard precautions for the prevention and control of infections.
<https://www.who.int/publications/i/item/WHO-UHL-IHS-IPC-2022.1>

Hand hygiene

Health workers should perform hand hygiene the right way and at the right time, as described below. It is also important to take care of the hands by regularly using a protective hand cream or lotion.



Respiratory hygiene and cough etiquette

Health workers should apply source-control measures to individuals with respiratory symptoms (6), including:

- asking patients to wear a mask every time to cover their cough
- placing a barrier between their cough and their colleagues
- placing a barrier between their cough and their work areas.



Medical masks

Health workers should:

- wear a medical mask (also known as a surgical or procedure mask) to protect mucous membranes of the nose and mouth against splashes or sprays of body fluids, respiratory secretions and chemicals (3);
- wear a medical mask to protect the patient during aseptic procedures (e.g. during surgery or lumbar punctures).



Before takeoff, in the air, and after landing

- Identify those with signs & symptoms of respiratory infection

Syndromic monitoring of crew members and up-to-date isolation policies for those with confirmed infection

1. Criteria for discharging patients from isolation (i.e. discontinuing transmission-based precautions) without requiring retesting:

- For symptomatic patients: 10 days after symptom onset, plus at least 3 additional days without symptoms (including without fever and without respiratory symptoms).
- For asymptomatic cases: 10 days after positive test for SARS-CoV-2.

(period currently under WHO review)

Appropriate clinical management of passengers (and crew) that develop symptoms in the air, including designated, physically distanced seating area

World Health Organization. 2022. Infection prevention and control in the context of coronavirus disease (COVID-19): living guideline. <https://app.magicapp.org/#/guideline/Lr2a8L>

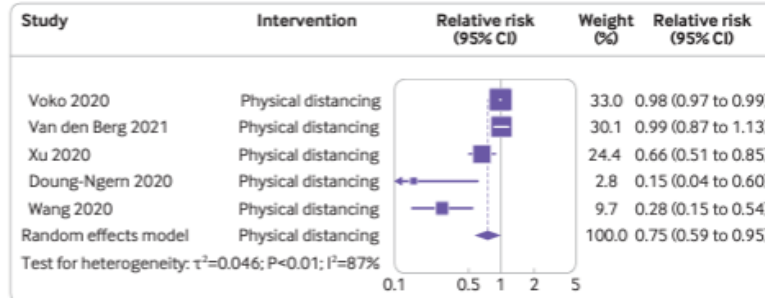
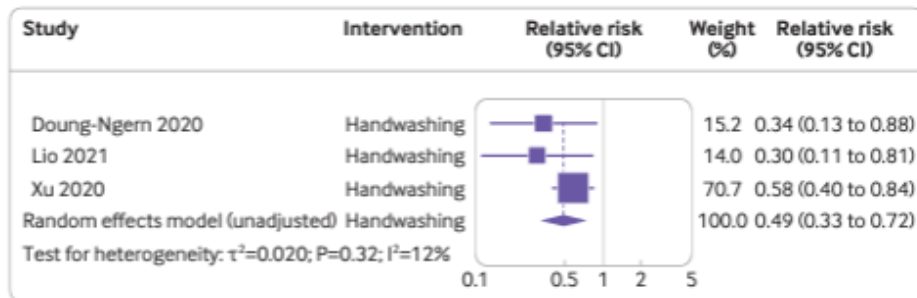
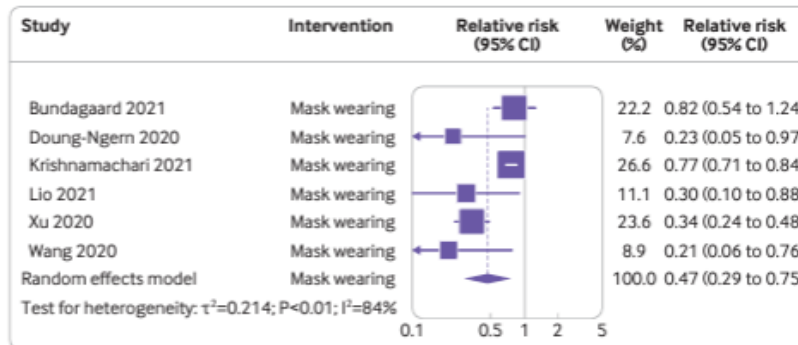
World Health Organization. 2022. Clinical management of COVID-19 patients: living guideline. <https://app.magicapp.org/#/guideline/j1WBYN>

Before takeoff, in the air, and after landing

- Advise passengers of public health expectations and airline policy prior to travel
- Advise crew of airline policy, e.g. inform supervisor and do not report if unwell
- Maintain ventilation systems in accordance with manufacturer specifications to optimize filtration efficiency and re-circulation rate
- Train crew on IPC standard precautions
- Educate public onboard – audio announcement, video, leaflets, signage, etc.
- Protect crew by providing adequate PPE (masks) and supplies for hand hygiene, environmental cleaning & disinfection, and safe disposal of infectious waste
- Advise passengers to inform crew if feeling unwell

Emphasize proven IPC interventions

Masking, handwashing, and physical distancing are shown to significantly reduce risk of COVID-19 infection



Talic et al. 2021. Effectiveness of public health measures in reducing the incidence of covid-19, SARS-CoV-2 transmission, and covid-19 mortality: systematic review and meta-analysis. The BMJ 375:e068302. <https://www.bmj.com/content/bmj/375/bmj-2021-068302.full.pdf>

Use practical resources to support IPC implementation

WHO (Europe) public health checklist for controlling the spread of COVID-19 in aviation: for travellers before travel, at the terminal, before boarding, on board, on arrival

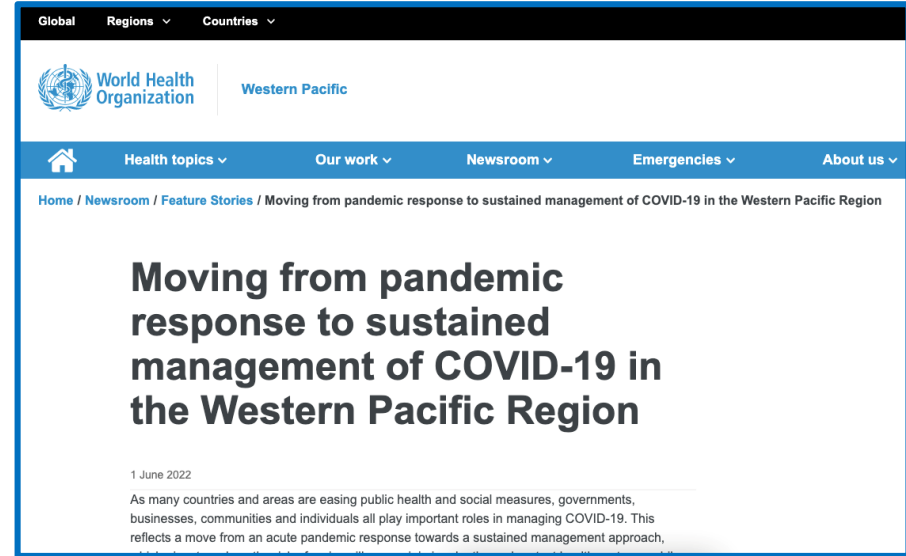
	Yes	Partly	No	Comments
2.1 Infection prevention and control (IPC) and other measures on board				
Responsible authorities: airline operators, public health and airport authorities				
2.1.1 Do all aircraft have universal precaution kits on board (as prescribed in the International Civil Aviation Organization (ICAO) standards and recommended practices (15).				
2.1.2 Are aircraft crews trained in using PPE on board (safe donning (putting on) and doffing (taking off) of PPE)?				
2.1.3 Are crews trained in managing a suspected COVID-19 case on board (i.e., separation of ill passengers by leaving two seats in all directions empty if possible; ill passengers to wear a medical mask and practice respiratory hygiene) (6)?				
2.1.4 Do crew members in contact with suspected COVID-19 cases or their waste wear full PPE (medical mask, gowns, gloves and goggles)?				
2.1.5 Have standard operating procedures been developed for managing suspected COVID-19 cases and their contacts on board the aircraft?				
2.1.6 Do aircraft operators/airlines inform travellers of the health measures				

World Health Organization, Europe. 2021. WHO public health checklist for controlling the spread of COVID-19 in aviation.
<https://www.who.int/europe/publications/i/item/WHO-EURO-2021-3467-43226-60581>

Understand the current context to inform risk-based policymaking

Most countries are calibrating their international travel-related measures* adapted to their specific epidemiological, health system, and socioeconomic context to ensure they are proportionate to public health risk.

* requirements for vaccination, testing, quarantine, etc.

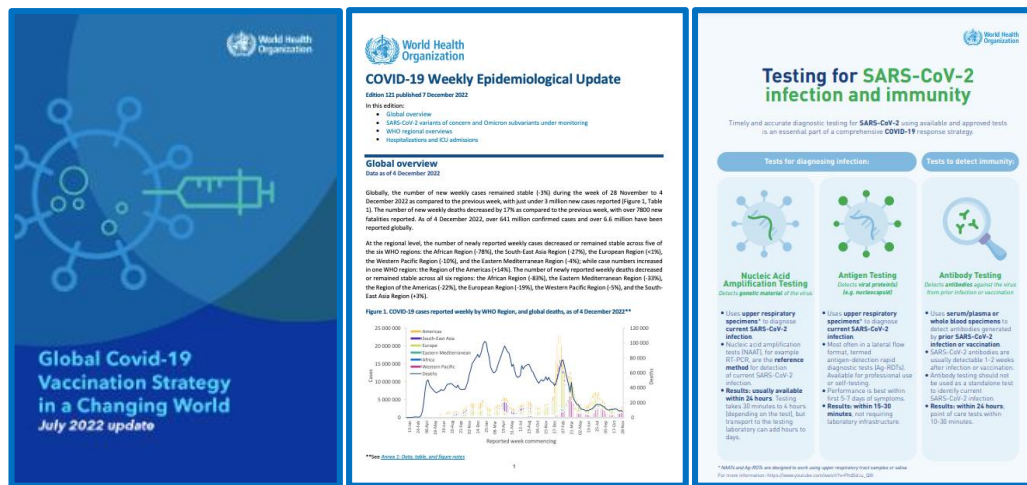


World Health Organization, Western Pacific. 2022. Moving from pandemic response to sustained management of COVID-19 in the Western Pacific Region. <https://www.who.int/westernpacific/news-room/feature-stories/item/moving-from-pandemic-response-to-sustained-management-of-covid-19-in-the-western-pacific-region>

IPC & public health programmes intersect

Be familiar with the latest public health guidance that also contributes to infection prevention and control, and can be used to reduce risk during air travel.

1. Immunization (vaccines)
2. Epidemiology (situation reports)
3. Laboratory (e.g. Ag-RDTs)
4. Risk Communications



Conclusions

- Many IPC “standard precautions” can and should be adopted before, during, and after air travel
- Emphasize the most effective IPC interventions, such as masking, hand hygiene, physical distancing when possible, and early identification & management of the symptomatic
- Understand current contexts and adapt policies to align with evolving country response strategies
- Stay up-to-date on available public health guidance that can further inform a risk-based approach to air travel policymaking

Resources & References

1. World Health Organization. 2022. Aide memoire: Standard precautions for the prevention and control of infections. <https://www.who.int/publications/i/item/WHO-UHL-IHS-IPC-2022.1>
2. World Health Organization. 2022. Clinical management of COVID-19 patients: living guideline. <https://app.magicapp.org/#/guideline/j1WBYN>
3. World Health Organization. 2022. Coronavirus disease (COVID-19) weekly epidemiological updates and monthly operational updates. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
4. World Health Organization. 2022. Diagnostic testing for SARS-CoV-2 infection. <https://www.who.int/multi-media/details/diagnostic-testing-for-sars-cov-2-infection>
5. World Health Organization. 2022. Global COVID-19 vaccination strategy in a changing world: July 2022 update. <https://www.who.int/publications/m/item/global-covid-19-vaccination-strategy-in-a-changing-world--july-2022-update>
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12. World Health Organization, Europe. 2021. WHO public health checklist for controlling the spread of COVID-19 in aviation. <https://www.who.int/europe/publications/i/item/WHO-EURO-2021-3467-43226-60581>
13. World Health Organization. 2020. Evidence to recommendations: COVID-19 mitigation in the aviation sector (Interim guidance). <https://www.who.int/publications/i/item/evidence-to-recommendation-covid-19-mitigation-in-the-aviation-sector>
14. World Health Organization. 2020. Management of ill travellers at Points of Entry (international airports, seaports, and ground crossings) in the context of COVID-19 (Interim guidance, retired). <https://www.who.int/publications/i/item/10665-331512>
15. World Health Organization. 2020. Operational considerations for managing COVID-19 cases or outbreak in aviation (Interim guidance, retired). <https://apps.who.int/iris/handle/10665/331488>