

Lessons Learned Covid-19 Disinfection in Aviation

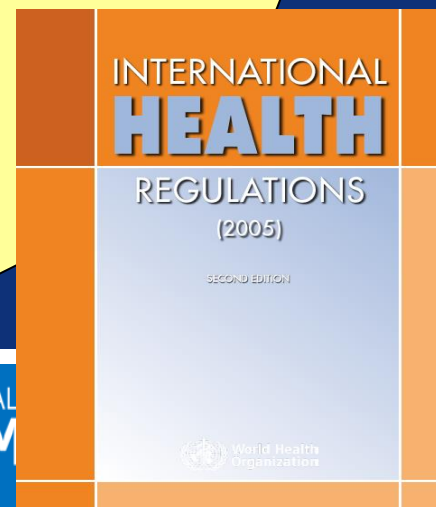
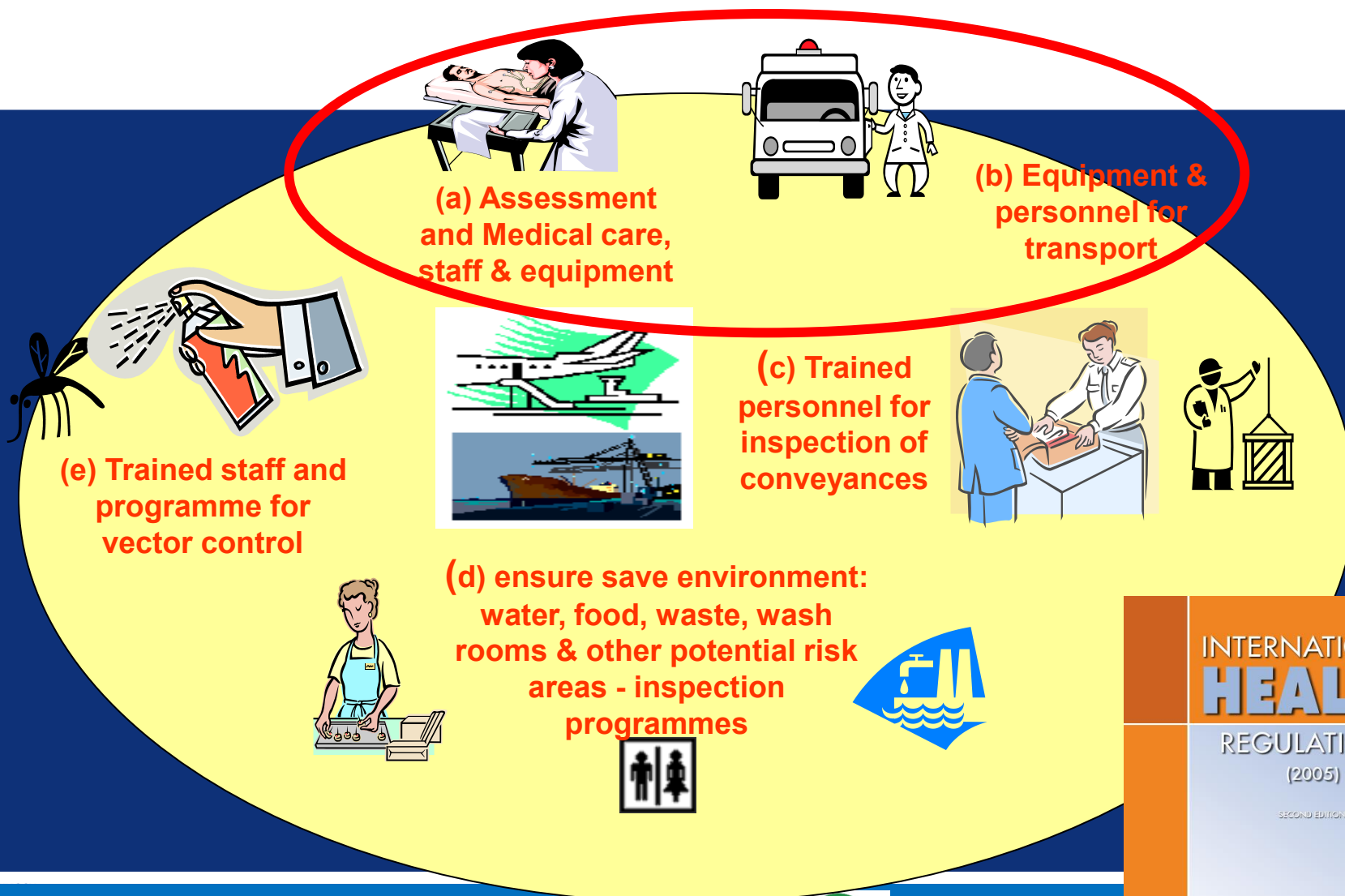
**Dr.Lesego Bogatsu
SM:Aviation Medical Department**



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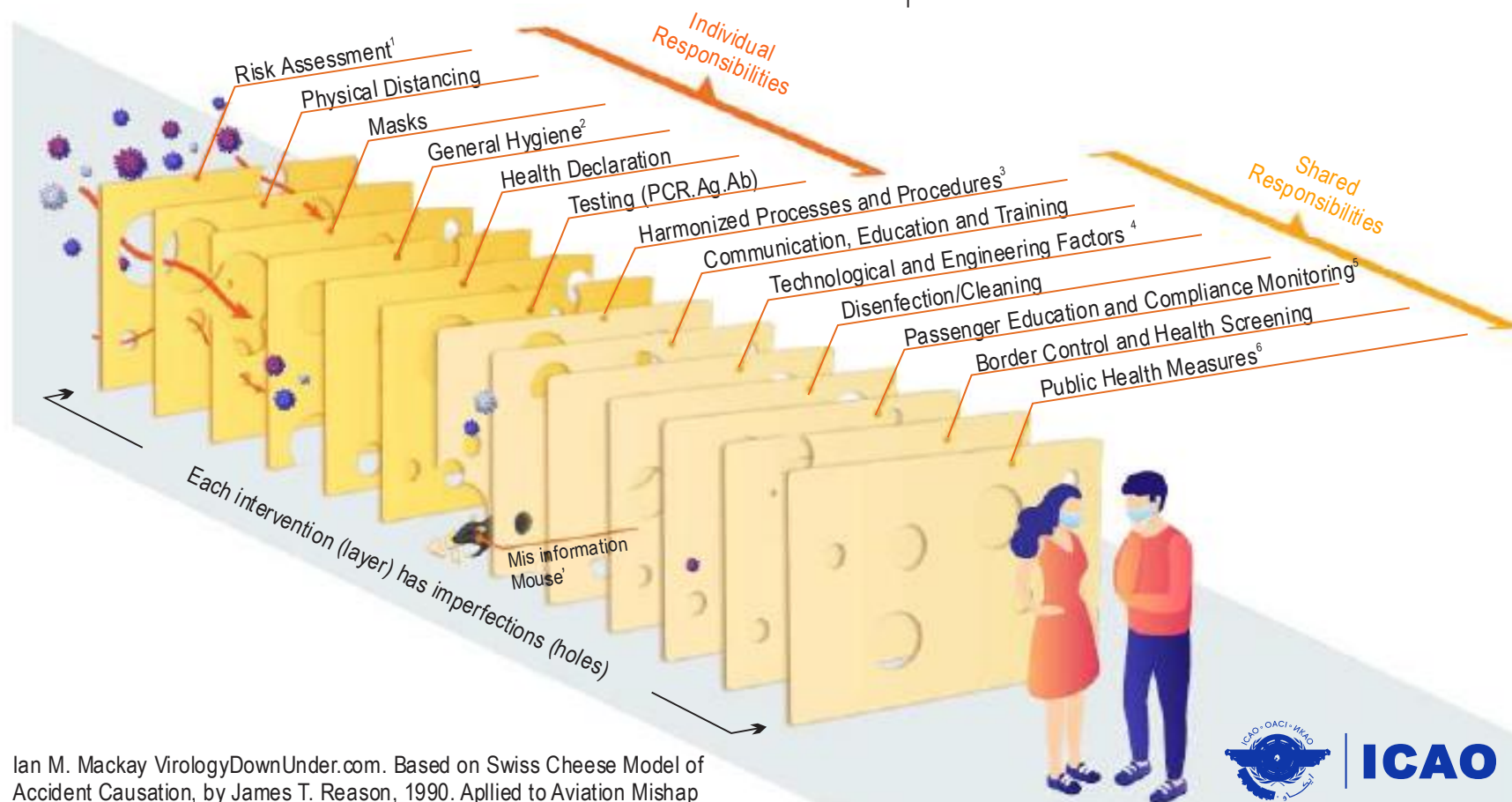
MOU BETWEEN THE CAA AND DOH



AVIATION MULTILAYERED DISEASE DEFENCE STRATEGY

A multilayered approach increases success

- 1 Do not travel when sick or had close contact
- 2 Hand hygiene, cough etiquette
- 3 Multi-sector multi-State collaboration (PHC)
- 4 Touchless procedures, cabin airflow HEPA filter
- 5 By airports, airlines and relevant aviation personnel
- 6 Contact tracing, quarantine isolation, vaccinations, and travel restrictions
- 7 The “misinformation mouse” eats holes into the defence slices, creating opportunities for the virus



ICAO

programme

WFSA

REGIONAL OFFICE FOR Africa

Sociedade Portuguesa de Anestesiologia

Sociedade Brasileira de Anestesiologia

PART 113 REGULATION -AIRPORT RISK ASSESMENT AND DISINFECTION OF THE AIRPORT

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PART 113 AVIATION PANDEMIC PREPARENESS PLAN

APPLICABILITY

- Air service operator
- Aerodrome licence
- Handling agents
- Air traffic service operator
- ATO
- Aircraft
- Airworthiness organisation;
- General aviation
- Aviation security



PART 113 AVIATION PANDEMIC PREPARENESS PLAN

- Review the national aviation pandemic preparedness plan within one year with consultation with aviation industry, labour stakeholders and public health experts
- When necessary, within three years
- **An air service operator is required to monitor and assess the risk level of transmission of the communicable diseases for each route**
- Monitor risk levels based on the rate of local transmission, passenger numbers, load density, and duration flight operated as well as any other applicable factors.

The Director shall develop the aviation pandemic preparedness plan provided in Part 113

The Authority and Health Authority, when contemplating health measures to prevent and mitigate the spread of a communicable

Disease shall consider a multi-layered risk

-based on the mode of transmission,

transmissibility, degree of mortality and

morbidity and other associated issues.

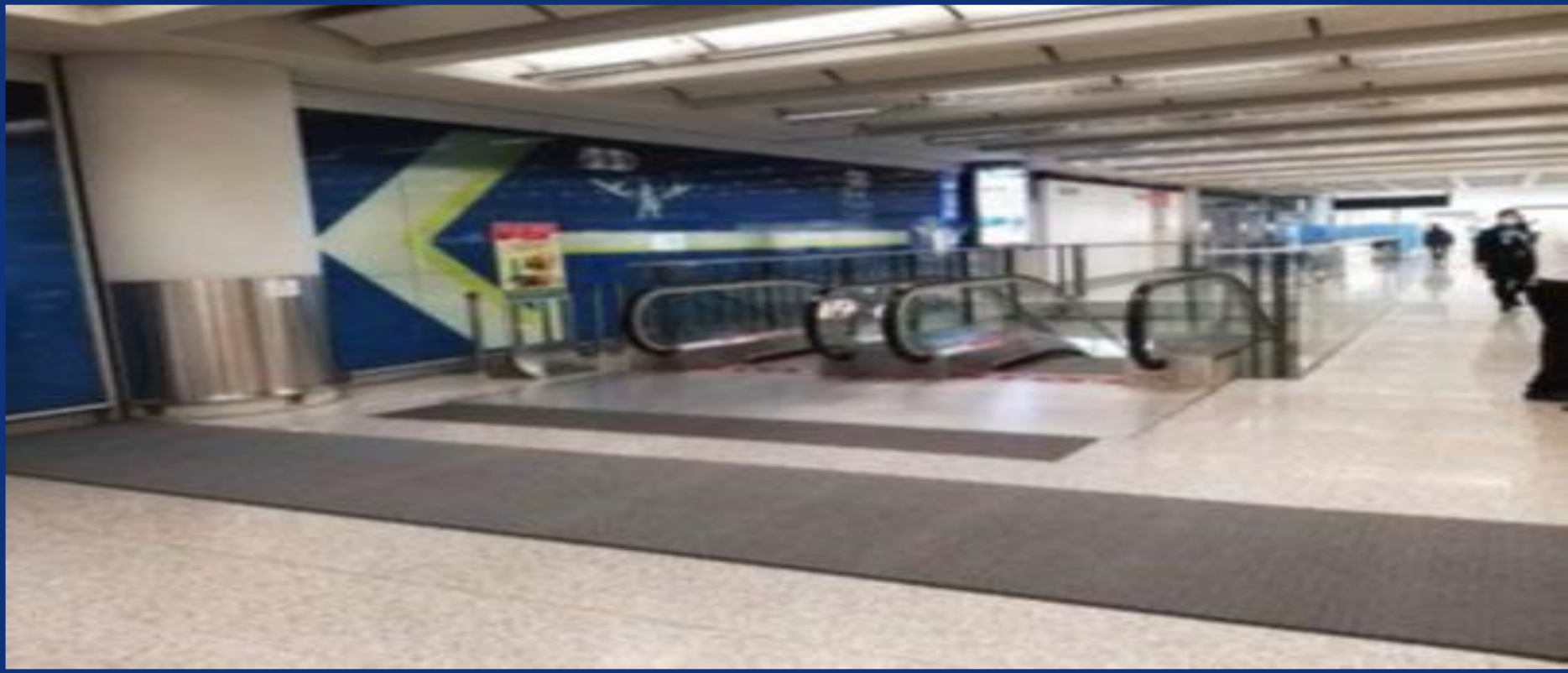
Part 113 Regulations Operator Risk Assessment

- Screening
- Social distancing;
- Protective equipment;
- training;
- On board requirements
- disinfection;
- Non-pharmaceutical interventions;
- Vaccination certificates acceptance after consultation with Port Health Authorities;
- Personal protective Equipment (PPE) protocols and use.
- Medical and non-medical waste management;
- Ventilation;
- Testing for communicable diseases;

PART 91.07.36 Disinfection Aircraft

- The Director shall, in consultation with public health authorities, establish and determine, based on a risk assessment, procedures prescribing the conditions under which an aircraft is disinfected.
- An owner or operator of an aircraft shall ensure that the following requirements apply to a disinfection
 - Statement by a PIC indicating that passengers and crew were disembarked from an aircraft when
 - Disinfection measures are put in place for equipment or tools used to disinfect surfaces or equipment of an aircraft contaminated by bodily fluids;
 - Disinfection of contaminated areas or surfaces is conducted in accordance with the measures referred to in paragraph (a) and in accordance with procedures provided by **an aircraft manufacturer and subject to any prescripts issued by the World Health Organization;**

INFECTION CONTROL MEASURES



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RISK ASSESSMENT AT AIRPORTS :INFECTION

- en-route to the airport by public transport;
- before boarding an aircraft & in line at the check-in counter;
- waiting in the gate area &
- security check in point;
- immigration check point;
- access to an aircraft via “jetways” or transport to an aircraft by bus; and
- other crowded and confined spaces.



DISINFECTION OF COMMONLY TOUCHED AREAS AT AIRPORTS



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SECURITY CHECK POINTS AS AN EXAMPLE



INFECTION CONTROL

- increased frequency of cleaning and disinfection activities, including commonly touched surfaces
- Hazardous waste bins for disposal of tissues and Personal Protective Equipment (PPE)



Commonly Touched Surfaces



DISINFECTION OF THE BUSES

- Buses are cleaned
- Ensure that critical rest rooms and facilities are identified to enable cleaning and maintenance resources to be scheduled accordingly
- Restrict access to optional or high-risk items such as massage chairs, water fountains, children play areas or multipurpose spaces.



INFECTION CONTROL MEASURES





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Auburn researchers say harmful bacteria can survive for a week inside airliner cabins

Disease-causing bacteria can linger on surfaces in commercial airplane cabins for up to a week, according to an Auburn University study presented this week at the annual meeting of the American Society for Microbiology.



Kiril Vaglenov, a graduate student in Auburn's Department of Biological Sciences, conducted a two-year study—funded through the Federal Aviation Administration's Airliner Cabin Environmental Research Center—to determine how long *E. coli* O157:H7 and methicillin-resistant *Staphylococcus aureus*, or MRSA, would survive on commonly touched surfaces under typical airplane conditions. A major airline carrier supplied researchers with material from armrests, plastic tray tables, seat-pocket cloth, window shades and metal toilet buttons.

"Our data show that both of these bacteria can survive for days on these surfaces, particularly the porous material such as armrests and seat-pockets," said Vaglenov. "Air travelers should be aware of the risk of catching or spreading a disease to other passengers and practice good personal hygiene."

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Current News

Auburn's Aquaponics 101 workshop will give teachers new way to bring science into the classroom
5/30/2014

Auburn University opens unique, world-class plasma physics research laboratory today
5/29/2014

Disinfection :The procedure whereby measures are taken to control or kill infectious agents on a human or animal body, on a surface or in or on baggage, cargo, containers, conveyances, goods and postal parcels by direct exposure to chemical or physical agents;

“decontamination” means a procedure whereby health measures are taken to eliminate an infectious or toxic agent /biological or matter on a human or animal body surface, in or on a product prepared for consumption or on other inanimate objects, including conveyances, that may constitute a public health risk;

deratting” means the procedure whereby health measures are taken to control or kill rodent vectors

DISINFECTION DURING SHORT TURNAROUND TIMES



DISINFECTION OF FLIGHT DECK



- Disinfect pilot and co-pilot seat, including armrests, table and seat controls
- Seatbelt buckles & flight controls (control column etc.)
- Sidewalls lining and associated controls (nose wheel steering tiller, display controls, electronic flight bag etc)
- Instrument panel and associated controls (gear lever etc.)
- glareshield and associated controls (autopilot, warning/caution buttons etc)
- Overhead panel including grips and handles

ICAO CART – DISINFECTION



- Do not allow the liquid to pool or drip into the equipment.
- IPA is flammable, so precautions should be taken around potential sources of ignition.
- Because the frequency of disinfection has significantly increased due to COVID-19
- There is no data on the long-term effects associated with this frequent application, long term effects should be monitored by the operator.
- If damage is observed, contact the OEM for guidance on alternate disinfectants

DISINFECTION - PASSENGER SEATING AREA

- Arm rests, TV screens and passenger control units
- Disinfect magazine racks
- Waste in seat pockets, then clean and disinfect
- Cabin window, window shade, dimmable window controls
- Floors/carpets before cleaning
- Headcovers and pillow covers from



DISINFECTION - LAVATORY



Functional and re-filled with liquid soap

Hand basin, handles and steel filings

door lock, knobs/lever, grip and door grilles and coat hook

Clean flushing mechanism

Disposable gowns should be worn while cleaning the cabin and lavatories

DISINFECTION - GALLEYS

- Clean ovens
- coffee makers
- waste compactors
- containers and trolley storage
- collapsible trolleys
- Drain and disinfect sinks, including taps and drain plug



FACTORS THAT AFFECT PROBABILITY OF DISEASE TRANSMISSION AT RISK CARGO-

Road Feeder to Freight Reception and Freight Pick Up

- Risk Assessment
- Surfaces (e.g. handles, kiosks)
- Physical handover of goods (truck offload)
- Documentation handover (office)-Digital
- Rotation of staff & not mixing



HANDLING CARGO FROM AFFECTED COUNTRIES –RISK ASSESMENT

- How should ramp handling personnel carry out operations when there is suspected communicable disease.
- Is it necessary for Ground Support Equipment, GSE to be regularly cleaned or sanitized –If yes how often?
- Does the process change for cleaning of catering trucks, PRM vehicles, passenger buses & crew transport and passenger boarding bridges



ATC ENVIRONMENT DISINFECTION MESUARES

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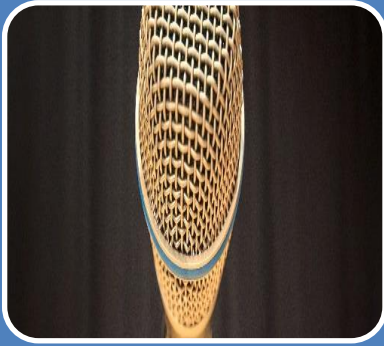
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FACTORS THAT AFFECT PROBABILITY OF DISEASE TRANSMISSION IN THE ATC ENVIRONMENT

Possible Routes of Infection

- Fact/Challenge – most ATC control towers and control rooms are configured in such a way that operational positions are in close proximity.
- Tower is confined –Social Distancing Challenge
- Radar Hall-Consoles close to each other
- Is training possible given a close proximity & Instructor
- What is feasible? – (facility management; labour representative
- Reduced traffic volumes
- adjusted shift schedules (empty work stations





Shared headsets/microphones are a risk for virus exposure and is not advised

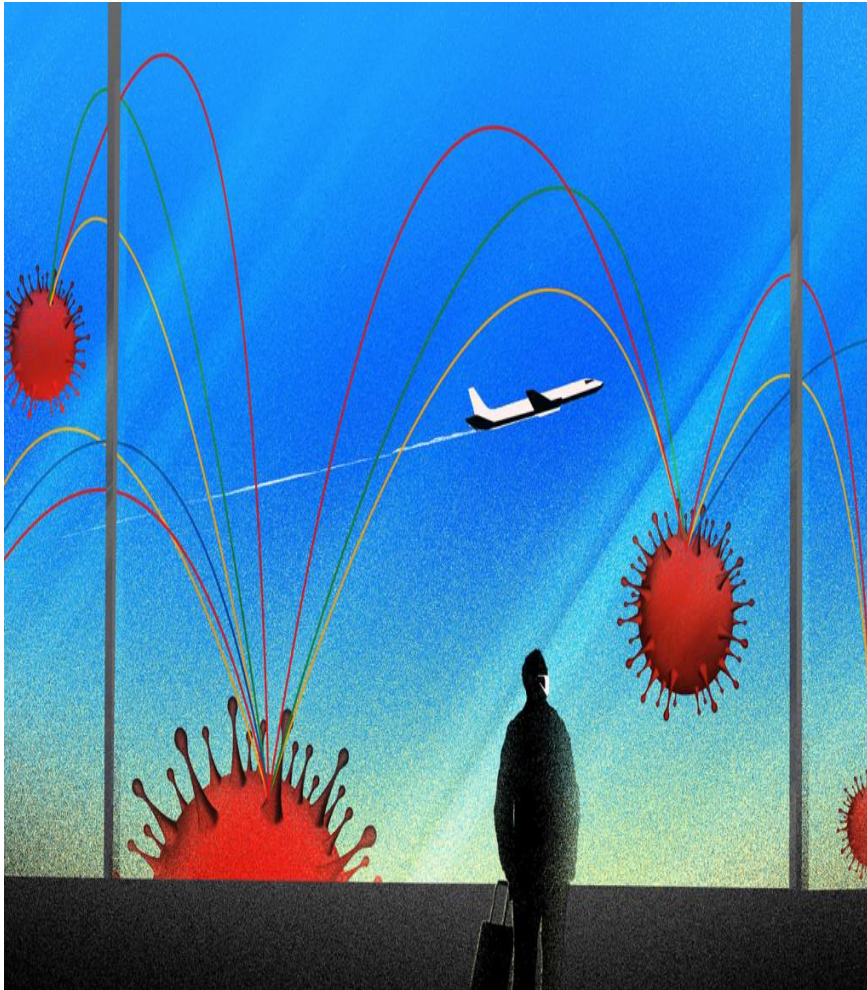


Clean headsets before and after each use



In some cases additional measures such as keyboard covers can make shared workstations easier to clean.

SACAA – COVID 19



Pre-Lockdown

- Extensive Training Contact;
- Ramp Inspections
- Simulation Exercises

Post Lockdown

- Inspections of Repatriation and Evacuation Flight;
- Training Guidelines
- Virtual Workshops
- Ammendment of Airline /Airports/ATC Procedures COVID 19 for approval by the CAA
- MSP = Audits of the Airports/Airlines
- Inspections
- Simulation Exercises Test Procedures

CHANGE IS INEVITABLE

- The situation changes frequently & **regulations** will **change** accordingly and **vary** according to the **routes** being operated and the **prevalence** of the outbreak in each country.
- Risk assessment should be continuous to ensure appropriate mitigation strategies





THANK YOU