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## GUIDANCE ON INFECTION PREVENTION AND CONTROL MEASURES IN ALL HOTELS AND HOSTELS AMID THE COVID-19 SITUATION

### (A) Introduction

- 1 This document provides specific guidance on infection prevention and control (IPC) measures in all hotels and hostels receiving domestic and foreign guests (e.g. travellers serving their stay-home notice (PSHNs)). Please refer to other documents for operational guidance and instructions.
- 2 With the latest provision to allow travellers to serve their SHN and, if tested C+/Ag+, to recover in-situ at the accommodation of their choice, including any hotel/hostel, segregation and differentiated IPC interventions targeted at only specific groups will not be practical or effective.
- 3 In the current context of living with COVID as the 'new normal', all hotels and hostels should focus their efforts in implementing universal infection prevention and control measures as part of their daily operations applicable to all hotel guests. Aside to the recommendations made in this document, hotels/hostels may choose to implement additional measures that are deemed necessary.
- 4 Universal infection prevention and control measures should include the following and will be further elaborated in this document:
  - a) [Prevailing safe management measures](#);
  - b) [Personal hygiene](#);
  - c) [Hand hygiene](#);
  - d) [Streamlining processes to reduce direct and close contact](#);
  - e) [Staff Safety](#);
  - f) [Environmental hygiene and linen management](#);
  - g) [Ventilation system](#).
- 5 For specific guidance on management of rooms / hotel guests with known C+/Ag+, and are recovering in-situ, to refer to [Section D](#) for details. The prevailing criteria for home recovery programme<sup>1</sup> should apply to hotels with C+/Ag+ cases that are recovering in-situ.
- 6 To minimise disruption to hotel operations and ensure that business remains viable amid the COVID-19 situation, facilities are encouraged to implement business continuity plans for key business operational risks such as human resource management.

### (B) Universal Infection Prevention and Control Measures

#### Prevailing SMMs

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<sup>1</sup> Refer to MOH website (<https://www.covid.gov.sg/unwell/hrp>) for latest criteria.

- 7 Prevailing safe distancing, masking up and other public health measures should be complied with.

### Personal Hygiene

- 8 Staff must always maintain good personal hygiene and exercise personal responsibility, by:
  - a) Wearing masks at all times, except during mealtimes;
  - b) Observing safe distancing measures at all times, including mealtimes;
  - c) Performing frequent hand washing with soap and water or alcohol-based hand rub, depending on which is available;
  - d) Close monitoring of their health for respiratory symptoms such as cough, runny nose, sore throat, loss of sense of taste/smell, or breathlessness, and to seek medical attention immediately if unwell, even with mild flu-like symptoms; and
  - e) Ensuring staff who are unwell do not come into work nor come into close contact with colleagues outside of work where possible.

### Hand Hygiene

- 9 Performing hand hygiene properly is the basic infection control measure to prevent the spread of communicable diseases. When hands are visibly soiled, hand washing using soap and running water should be performed. When hands are not visibly soiled, application of alcohol-based hand rub is equally effective.
- 10 Facilities should ensure that materials for adhering to hand hygiene are easily accessible by staff, including alcohol-based hand rub and, where sinks are available, supplies for handwashing (i.e. liquid soap). It is a good practice to provide small bottles of alcohol based handrubs for staff who may not find it convenient to access sinks or handrubs in between attending to different groups of guests, to carry around with them.
- 11 All personnel should perform hand hygiene often, especially during the following key times while carrying out their work duties:
  - a) Before and after touching your own mouth, nose and eyes;
  - b) Before handling, preparing or serving food;
  - c) Before eating and drinking;
  - d) After touching common surfaces or potentially contaminated surfaces;
  - e) After contact with a guest and/or their personal belongings;
  - f) After removal of mask or personal protective equipment (PPE).
- 12 Wearing of gloves for non-specific tasks is not recommended as it provides a false sense of security and self-contamination can occur if staff touch their own eyes/ nose/ mouth and/or personal belongings with contaminated gloves.

### Streamlining process to reduce direct and close contact

- 13 As a first principle, staff should avoid any physical or close contact with hotel guests and always observe a minimum safe distance of at least 1-2 metres, wherever possible.
- 14 Facilities are **strongly encouraged to implement contactless payment and/or registration systems, and to streamline services to minimise waiting time/crowding and interaction between staff and hotel guests.** Some processes which may be streamlined include:
  - a) Mobile check-ins and check-outs;
  - b) Contactless payment via mobile devices;
  - c) Ordering of in-room services via mobile devices;
  - d) Meeting guests needs via mobile devices (e.g. digital chats);

e) Contactless in-room room services.

- 15 If contactless check-in/check-out is not possible, it is recommended that staff wipe down the reception desk with effective disinfectant or 70% alcohol wipes after each guest, group of guests or wherever possible. The list of effective active ingredient can be found in NEA's [List of household disinfectants and self-disinfecting surface coating products against COVID-19 virus](#).

#### Staff Safety

- 16 **It is strongly recommended that that all on-site staff (including seniors aged > 60 years) whose duties require them to come into direct contact with hotel guests and their belongings/items, especially cleaners, are fully vaccinated and are updated with their booster doses<sup>2</sup>, unless medically ineligible.** This should also include all external staff who are working on-site, including those from outsourced services and not under direct employment.
- 17 **Individuals who are unvaccinated due to medical ineligibility, especially seniors aged > 60 years, must not be deployed to areas where their duties require them to perform cleaning activities or come into direct contact with hotel guests and their belongings/items.** If possible, it is recommended that measures are put in place to reduce the risk of transmission to this group of staff within the work settings (e.g. dedicated rest area etc).
- 18 All staff must wear a mask at all times and adhere to the prevailing SMMs. The facility operator should ensure that prevailing SMMs are being enforced.
- 19 Staff toilets should be provided for in the staff rest areas. Staff are encouraged to use the dedicated staff toilets and refrain from using toilets meant for hotel guests or public, wherever possible.
- 20 The facility operator should inform all staff of the measures to be adopted, as well as the measures that could protect their health and that of others, including the recommendation to stay home and seek medical attention if they have respiratory symptoms. The prevailing MOH health protocols should apply. Training may also be needed for specific procedures e.g. cleaning of rooms.
- 21 The facility operator should implement measures to allow safe distancing between staff e.g. tables/chairs should be arranged such that staff are spaced out at least 1m apart. Physical dividers may be considered to enforce the safe distancing or prevailing SMMs.
- 22 It is strongly recommended that portable air cleaners are used at staff rest areas or in staff pantry where staff are likely to remove their mask (e.g. for eating and drinking). For detailed guidance on ventilation measures and sizing of air cleaners, please refer to the "[Guidance on improving ventilation and indoor air quality in buildings amid the COVID-19 situation](#)" and "[Technical Advisory on Use of Air-Cleaning technologies to Mitigate COVID-19 Aerosol Transmission Risk](#)".

#### Environmental Hygiene

- 23 Since infective agents / viruses may remain viable on surfaces for a period of time, it is vital to observe environmental hygiene which include regular environmental cleaning and disinfection of common areas / facilities and high-touch surfaces.

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<sup>2</sup> Refer to MOH website (<https://www.moh.gov.sg/covid-19/vaccination>) for latest information on COVID-19 vaccines and booster doses.

24 Common high-touch surfaces (e.g. tables and chairs) and flooring must be cleaned and disinfected regularly (at least 3 times a day) using effective disinfectant or 70% alcohol wipes. The list of effective active ingredients can be found in NEA's [List of household disinfectants and self-disinfecting surface coating products against COVID-19 virus](#). Staff rostering for this should be clearly documented.

25 Mattress protector should be used for all beds.

#### Cleaning of guest rooms

26 It is strongly recommended that all stakeholders and premises owners take precautionary measures to implement a structured cleaning and disinfection regime which can be carried out by in-house cleaners to minimise the risk of transmission.

27 To manage environmental contamination due to infected cases among guests unknown to hotel management, premises owners may perform in-house cleaning and disinfection measures, taking reference from the "[Guidelines for In-House Cleaning and Disinfection of Areas Exposed to COVID-19 Cases in Non-Healthcare Premises](#)".

28 It is recommended that if dry vacuums are used, they should be fitted with HEPA filter.

#### Cleaning of public toilets and toilets of guest rooms

29 Conduct toilet cleaning according to the '[Guidelines for Environmental Cleaning and Disinfection of Public Toilets in Non-Healthcare Premises](#)'.

#### Linen

30 The hotel's prevailing standard operating procedure for handling of used / soiled linen should apply.

31 As a guiding principle, all used / soiled linen should be handled as gently as possible to prevent possible contamination of the handler or environment (e.g. do not toss or throw about while they are being packed into laundry bags).

32 Disposable gloves should be used when handling soiled linen contaminated with blood or bodily fluids.

33 Staff should avoid "hugging" used / soiled linen and bedding prior to washing it to prevent contaminating themselves and must wash their hands thoroughly with soap and water after performing their duties.

#### Ventilation system

34 All occupied spaces should be provided with adequate and operational ventilation systems. Outdoor air intake and supply to occupants should meet the requirements prescribed in the Code of Practice for Air-conditioning and Mechanical Ventilation in Buildings (ACMV; SS553:2016 including Amd 2). For further guidance on measures to reduce risk of airborne transmission in indoor spaces, please refer to the "[Guidance on improving ventilation and indoor air quality in buildings amid the COVID-19 situation](#)".

35 Guestrooms should be served by individual ACMV systems or natural ventilation. Recirculated air should be treated by high efficiency filters (at least MERV14). As a precaution, premises owners could be guided by the recommendations provided by BCA

and NEA (Please see [Annex A - Enhanced Ventilation Measures for Hotels and Hostels Amid the COVID-19 Situation](#)).

- 36 It is strongly recommended that adequately-sized portable air cleaners with HEPA filter are deployed at high risks spaces, such as rooms with poor ventilation, common corridors, and common areas / facilities where hotel guests are engaging in activities which require them to remove their mask (e.g. restaurants, gyms etc), and common corridors with confirmed C+/Ag+ guestrooms. Please refer to the '[Technical Advisory on Use of Air-Cleaning Technologies to Mitigate COVID-19 Aerosol Transmission Risk](#)' for details on selecting air cleaning technologies.
- 37 ACMV systems should be regularly checked to ensure proper operations and maintenance. This includes the changing of filters and cleaning of the air ducts and pipes. Please refer to SS553:2016 for guidance on ACMV system maintenance.
- 38 Staff should don the appropriate PPE (i.e. eye protection, surgical mask, gloves) when changing the filters of the air-conditioning and mechanical ventilation system.

### **(C) Business Continuity Plan**

- 39 Wherever possible, facility operator should have in place a business continuity plan to ensure that there is enough staffing level to operate should there be an infected employee. Reduced cross infection will keep employees healthy and business units viable. With all business units able to function collectively, operations are sustained, and overall business continuity is maintained.

### **(D) Management of rooms / hotel guests with known C+/Ag+**

- 40 As a first option, **staff must avoid entering rooms that are occupied by guests with known C+/Ag+ or pending PCR results** and leave items/meals outside the rooms for guests to collect. If staff are required to enter guest rooms for any reason, they must minimise contact and time spent in the rooms, wear minimally surgical or N95 mask, and perform hand hygiene immediately after leaving the rooms.
- 41 **It is strongly recommended that portable air cleaner with HEPA filter is used in rooms that are occupied by guests with known C+/Ag+ to provide localised air cleaning effect.** Please refer to the '[Technical Advisory on Use of Air-Cleaning Technologies to Mitigate COVID-19 Aerosol Transmission Risk](#)'.
- 42 **It is strongly recommended that disinfectant of appropriate concentration be provided to rooms with C+/Ag+ for disinfection of floor trap and sink trap.** Please refer to the "[Guidelines for Environmental Cleaning and Disinfection of Public Toilets in Non-Healthcare Premises](#)".
- 43 Advisory (Refer to [Annex B](#)) should be provided to guests known to be C+/Ag+. These include minimising opening of entrance door, wearing of mask when opening door to collect food or items, flushing the toilet with toilet lid closed and regular pouring of disinfectant into the floor traps.
- 44 Rooms occupied by hotel guests with known C+/Ag+ should be disinfected after these guests have checked out, and preferably, after the rooms occupied by **non-C+/Ag+** guests are cleaned.
- 45 **Rooms occupied by hotel guests with known C+/Ag+ status must be disinfected as per NEA guidelines.** Cleaning staff must don appropriate PPE (i.e. minimally surgical or

N95 mask, eye protection, gown and gloves). Refer to the relevant cleaning sections in NEA's "[Cleaning and disinfection guidelines for households on home recovery](#)" for details on cleaning of these rooms and PPE requirements.

- 46 Conduct toilet cleaning according to the '[Guidelines for Environmental Cleaning and Disinfection of Public Toilets in Non-Healthcare Premises](#)'.
- 47 After performing cleaning or waste disposal activities for rooms occupied by C+/Ag+ guests, all staff must remove their PPE appropriately, place and seal them in a bag and discard the bag in general waste bins, and wash their hands using soap and running water.
- 48 Staff should avoid "hugging" used / soiled linen and beddings prior to washing it to prevent contaminating themselves and must wash their hands thoroughly with soap and water after performing their duties.
- 49 Bed linens (e.g. bedsheets, mattress protectors, cotton blankets, pillowcases) should be bagged for transfer of laundry, and should be washed in the warmest setting on the washing machine with detergent, while woollen blankets may be washed in warm water or dry-cleaned. If quilts are used, these could be washed with hot water and detergent, or dry cleaned.
- 50 Non-washable items such as plastic covers for mattresses and pillows can be wiped down with disinfectant. Mattresses, pillows, upholsteries, and carpets that cannot be wiped down should be steam cleaned. Pillows can also be washed using hot water and detergents, or dry-cleaned.
- 51 Items that cannot be washed or disinfected, such as mattresses, should not be used by other guests for at least 3 days.

## **Annex A**

### **Enhanced Ventilation Measures for Hotels and Hostels Amid the Covid-19 Situation**

#### Notes:

- 1) The recommendations listed below apply to all hotels and hostels that receive guests serving their stay-home notice (PSHNs).
- 2) Facilities owners and managers should conduct a review of ventilation system before taking in PSHN guests. The review should include identifying the most unfavourable guestrooms in terms of ventilation and taking mitigation measures.

	<b>Recommendations</b>	<b>Remarks</b>
<b>A</b>	<b>Ensure basic ventilation</b>	
<b>1</b>	<b>Ensure all occupied spaces are provided with adequate and operational ventilation systems</b>	<ol style="list-style-type: none"><li>a. Review the facility's ventilations system to ensure adequate ventilation is provided for each occupied space. Capacity of outdoor air supply should minimally meet requirements specified in SS553<sup>3</sup> or equivalent (corridor &amp; lobby: 1.1 m<sup>3</sup>/h per m<sup>2</sup> floor area; guestroom: 54 m<sup>3</sup>/h per room). System upgrades or improvements should be considered if non-compliance or inadequacy is observed.</li><li>b. Monitor ventilation systems to ensure they operate properly and provide acceptable indoor air quality for current occupancy level/usage for each space, based on actual operation schedule, occupant density, and ventilation air delivery. Major ventilation equipment should be checked daily to ensure they are functional and operating.</li><li>c. Outdoor air supply dampers should not be closed or blocked, to ensure outdoor air provision to all occupied spaces.</li><li>d. Outdoor air supply and/or exhaust system operations should be continuous for guestrooms and corridors.</li><li>e. ACMV systems should be maintained regularly. This includes the inspection and maintenance of supply fans, air dampers, exhaust fans, filters, etc., and should be recorded in maintenance log. The maintenance frequency should minimally follow recommendations in SS553 and SS554<sup>4</sup>.</li><li>f. Conduct pre-occupancy check on guestroom ventilation prior to arrival of PSHN.</li></ol>
<b>B</b>	<b>Enhance ventilation</b>	
<b>2</b>	<b>Ensure highest possible ventilation provision on guestrooms floors</b>	<ol style="list-style-type: none"><li>a. Ventilation fans in AHU/PAU/FAF/EAF should be set to high speed to enhance ventilation. Operate all ventilation fans continuously even when there is no occupancy. Check the furthest point in the air distribution system to ensure adequate ventilation is delivered.</li></ol>

<sup>3</sup>Singapore Standard Code of Practice for Air-Conditioning and Mechanical Ventilation in Buildings (SS553:2016)

<sup>4</sup>Singapore Standard Code of Practice for Indoor Air Quality for Air-Conditioned Buildings (SS554:2016)

		<p>b. Demand control ventilation systems (e.g. those with CO<sub>2</sub> sensors), heat recovery wheels, interlocking of lighting with ventilation fans, should be disabled during occupancy.</p>
3	<b>Ensure higher ventilation provision at venues with high occupancy or potential high risk</b>	<p>a. All spaces that are occupied by PSHNs should be identified and evaluated for risk levels based on occupancy, density, and duration.</p> <p>b. Areas where there may be aerosol-generating activities (e.g. swabbing) should be open or semi-open spaces with good natural ventilation. If such spaces are unavailable, the space should receive the maximum ventilation possible by the dedicated ACMV system using single pass systems (no re-circulation of indoor air) to achieve at least 6 outdoor air changes per hour<sup>5</sup>.</p> <p>c. Waiting areas (for registration, swabbing, serology testing, etc.) should be well ventilated, preferably in open spaces such as balconies, exterior corridors, or at perimeter zone of the building with doors/windows opened. If such spaces are unavailable, the space should receive the maximum ventilation possible by the ACMV system with minimal recirculation of air.</p>
4	<b>Purge the air in the guestrooms and high-risk areas before and after occupancy (mandatory; good practice for other areas)</b>	<p>a. Purging of air in guestrooms should be conducted before occupancy. This can be achieved by setting the FCU fan speed to the maximum and opening windows for a minimum of 2 hours. The duration should be longer for rooms occupied by confirmed C+/Ag+ cases.</p> <p>b. If high-risk activities are done indoors, then purging of air in high-risk areas should be done immediately after the high-risk activities (such as swabbing or serology testing) have concluded. This can be done by switching on all available fans and opening all windows and/or doors for a minimum duration of 2 hours.</p> <p>c. Purging in other areas (such as public accessible areas, staff areas etc) should be conducted regularly following BCA-NEA-MOH Guidance Note.<sup>6</sup></p>
<b>C</b>	<b>Enhance Air Cleaning for Recirculated Air</b>	
5	<b>Ensure adequate air cleaning for guest rooms and corridors</b>	<p>a. Return air to AHUs should be minimised in common areas.</p> <p>b. If possible, air purifiers may be placed along the corridors on guest room floors and in every guest rooms.</p> <p>c. Air purifiers should consist of a layer of HEPA filter. The size or number of units used should be based on the Clean Air Delivery Rate (CADR) or equivalent. If the unit of CADR is in m<sup>3</sup>/h, the total CADR of the air purifier(s) should be at least <u>5</u> times the room volume in m<sup>3</sup>.</p>

<sup>5</sup> Considerations for Quarantine of Contacts of COVID-19 Cases, WHO Interim Guidance, Aug 2020

<sup>6</sup> BCA-NEA-MOH Guidance Note on Improving Ventilation and Indoor Air Quality in Buildings Amid the Covid-19 Situation, May 2021



6	<b>Ensure adequate air cleaning for high-risk spaces where it is air-conditioned</b>	<p>a. For indoor swabbing areas, air purifiers with a layer HEPA filter should be used. The size or number of units used should be based on the CADR.</p> <p>b. In other high-risk spaces (e.g. F&amp;B areas), if the recirculated air cannot be treated by a MERV 14 filter, air purifier with HEPA filter should be used</p> <p>c. The use of air purifiers should not replace the need for increased ventilation.</p>
7	<b>Use high efficiency filters and additional air cleaning devices for recirculated air</b>	<p>a. For AHUs, at least MERV14 filters should be installed to treat the recirculated air. Filters should be properly installed and maintained according to manufacturer's recommendation to prevent filter bypass.</p> <p>b. Filters should be changed with the system turned off and disposed in sealed bags. Personnel must wear personal protective equipment such as gloves, gown, and respiratory protection (fitted N95 mask)</p> <p>c. Additional air cleaning measures such as upper room UVGI may be considered.</p>
<b>D</b>	<b>Isolation and Directional Airflow</b>	
8	<b>Prevent air exchanges between rooms and air flow from dirty zone to clean zone</b>	<p>a. Guestrooms should be served by individual ACMV system to prevent mixing of recirculated air. Such system should be kept running all the time, except in cases where the room is known to be contaminated. In cases where the room is known to be contaminated (e.g. PSHNs tested C+/Ag+), measures should be implemented to prevent the exfiltration of air from the room to corridor to adjacent rooms.</p> <p>b. Separate air distribution/ventilation systems should be used for clean and dirty zones, such that air is designed to flow from clean zones to dirty zones. In cases where separate ACMV system is unavailable, the air within the space should not be recirculated.</p> <p>c. All guestrooms' doors should be kept closed to minimise air exchange between corridors and guestrooms.</p> <p>d. Airflow between rooms and corridors should be minimised by installing door seals.</p> <p>e. Air exchanges between adjoining rooms should be minimised by sealing the connecting door, unless the adjoining rooms are occupied by a family or if only 1 side of the adjoining rooms is occupied at any time.</p> <p>f. All gaps within partition walls (e.g. above ceiling walls between toilet and the common riser; between toilet and guestrooms; between common corridor and guestrooms; masonry exhaust shaft;) should be sealed to ensure no air leakage, without compromising fire safety.</p> <p>g. SOP control should be implemented to minimise door opening. If door opening is necessary, ensure opening of doors in adjacent and opposite rooms do not overlap at any time.</p>

<b>9</b>	<b>Ensure all supply and exhausts have the intended air flow directions</b>	<ul style="list-style-type: none"> <li>a. Airflow direction should be checked at all supply air diffusers and exhaust air grilles to ensure proper functioning of air supply and exhaust.</li> <li>b. Air exhausts in guestroom toilets should always be functional and there should not have any reverse air flow.</li> <li>c. Exhaust systems, including masonry and/or ducted exhaust shaft, should be checked to ascertain that there is no air leakage.</li> </ul>
<b>E</b>	<b>Airflow through Sanitary System</b>	
<b>10</b>	<b>Ensure no backflow of air from all sanitary fittings</b>	<ul style="list-style-type: none"> <li>a. Water seals for all sanitary fittings (e.g. toilet bowl) and floor drain traps should be checked regularly to ensure sufficient water is present to maintain the water seal, especially in rooms which have not been occupied for long periods.</li> <li>b. Floor wastes from different rooms should not be connected to the same floor trap.</li> </ul>

*Last Revised: 17 Nov 2021*

## **Annex B**

### **Advisory for Hotel Guests with Known C+/Ag+**

#### **General**

- 1) Guests should stay in their rooms throughout the recovery process.
- 2) If an air purifier is provided, to turn on to the maximum mode at all times and avoid putting it on auto-mode.
- 3) Minimise opening of entrance doors for non-essential activities.
- 4) Wear a surgical mask if the room needs to be accessed by hotel staff or medical personnel.
- 5) Perform simple housekeeping within the guest room using disinfectants provided by the hotel operator.
- 6) Wear a surgical mask and perform hand hygiene (wash hands with soap and running water or use a hand sanitiser) before opening entrance door to collect food/daily essentials left outside the guest rooms.
- 7) Perform hand hygiene often, especially during the following key times:
  - a. Before and after touching your own mouth, nose, and eyes
  - b. Before and after eating.

#### **Use of toilet**

- 1) To close the toilet lid before flushing the toilet bowl. Wash hands with soap and running water after using the toilet.
- 2) For rooms with en-suite toilets, the door of the toilet should be shut at all times, even when not in use.
- 3) Pour disinfectant provided into sink trap and floor-trap twice a day, and after use of sink.

#### **Waste Management**

- 1) Throw all waste e.g. used surgical mask, tissues, disposable utensils, food containers into bins lined with waste bag.
- 2) All wastes are to be double-bagged and sealed to prevent leakage prior to their collection and disposal into general waste bins.
- 3) Perform hand hygiene immediately after disposal of waste.

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