

Government of Punjab
Department of Health & Family Welfare
(NHM, Punjab)

No. MD/NHM/2020/3376(R)-3380(R)

Dated, Chandigarh the 12th May, 2020

To

1. Principal Secretary (Transport), Punjab.
2. Principal Secretary, Civil Aviation, Punjab.
3. All Divisional Commissioners, Punjab
4. All Deputy Commissioners, Punjab.
5. All Civil Surgeons, Punjab.

Subject: Advisory regarding the quarantine of returnees from outside the country- asymptomatic contacts in the hotel/private facilities in the wake of COVID-19 pandemic.

Corona virus Disease 2019 (COVID -19) is a systemic disease caused by a novel Corona virus (SARS-CoV-2), transmitted in most instances through respiratory droplets, direct contact with cases and also through contaminated surfaces/objects. Since the virus is contagious, it is essential that all contacts of virus are quarantined and medically followed up. The State has already issued detailed instructions on Home quarantine vide letter no MD/NHM/2020/3322(R)-3326(R) dated 8.5.2020. The Government of Punjab has also allowed the quarantine of all the returnees from outside the country at private quarantine facilities. All such persons who are either “asymptomatic on arrival” or “who have similar symptoms but test negative for COVID-19” on arrival shall be kept in strict quarantine- at home or private facilities, as per the option of such person.

A large number of facilities such as hotels, service apartments, lodges etc. are unoccupied due to the impact of COVID-19 on travel and tourism. Similarly, there may be instances where people do not have requisite space at home and may opt for a private facility for quarantine. The guidelines for quarantine at such private facilities are laid as under:

I. Guidelines for the Facility managers

A facility manager shall ensure the following before opting to offer his/her private facility for this model:

1. The quarantine and isolation facility (applicable only if home/private facility isolation is permitted by GoP) will not co-exist and the facility owner will have a choice to dedicate the facility for either of the two.

2. These facilities will offer single room with attached washrooms on paid basis to contacts
3. The tariff for the accommodation and services shall be fixed by the facility in consultation with the Government and shall be widely publicized.
4. The tariff shall be properly explained to the interested person who opts for such facility before hand.
5. Such facility that opts for both quarantine and isolation (though not presently permissible) will have to have earmark separate areas for keeping suspect cases and confirmed cases and shall ensure that no inter-mingling of these two categories happen at any time.
6. The contact opting for such quarantine facility will give an undertaking in Annexure-1 (English)/ Annexure 2 (Punjabi) (enclosed).
7. The facility owner of the quarantine shall make such additional arrangements asunder:
 - a. She/he shall ensure the availability of the doctor on daily basis.
 - b. The doctor shall monitor the contacts in quarantine facilities once a day on basic parameters -- temperature, pulse, blood pressure, respiratory rate and pulse oxymetry and keep a record of the same with regard to all contacts in the facility.
 - c. The doctor engaged by the facility will inform the District Surveillance Officer regarding the list of contacts admitted to such facility and their health status on daily basis.
 - d. The facility should network with an approved laboratory for testing samples as per the ICMR guidelines.
 - e. The quarantined persons should not be allowed to meet visitors, including relatives. They can, however, talk on phone.
 - f. The facility shall provide Wi-Fi facility and ensure that the client downloads the COVA App (https://play.google.com/store/apps/details?id=in.gov.punjab.cova&hl=en_IN) on mobile and it should remain active at all times (through Bluetooth and location service).
 - g. The facility should train its staff to call 108 free Ambulance service or any other Ambulance as per requirement.

h. Disinfection of the facility.

- i. **Indoor Areas:** Indoor areas including office spaces, lobbies, common rooms etc. should be cleaned every evening and early in the morning before the rooms are occupied. If the contact surface is visibly dirty, it should be cleaned with soap and water prior to disinfection. Prior to cleaning, the cleaner should wear disposable rubber boots, gloves (heavy duty), and a cloth mask.
- Start cleaning from cleaner areas and proceed towards dirtier areas.
 - All indoor areas such as entrance lobbies, corridors and staircases, escalators, elevators, security guard booths, office rooms, meeting rooms, cafeteria should be mopped with a disinfectant with 1% sodium hypochlorite or equivalent disinfectants commercially available in the market.
 - High contact surfaces such as elevator buttons, handrails / handles and call buttons, escalator handrails, public counters, intercom systems, equipment like telephone, printers/scanners, and other office machines should be cleaned twice daily by mopping with a linen/absorbable cloth soaked in 1% sodium hypochlorite. Frequently touched areas like table tops, chair handles, pens, diary files, keyboards, mouse, mouse pad, tea/coffee dispensing machines etc. should specially be cleaned.
 - For metallic surfaces like door handles, security locks, keys etc. 70% alcohol can be used to wipe down surfaces where the use of bleach is not suitable.
 - Carefully clean the equipment used in cleaning at the end of the cleaning process.
 - Protective gear used during sanitation process should be discarded as per the requirements.
- ii. **Quarantine Rooms:** The rooms occupied by the contacts cases should be cleaned by the cleaning staff only after wearing appropriate protective gear (rubber gloves, masks, rubber boots, apron etc.).

- Persons under quarantine should be instructed to bag their trash and place the closed bag outside their door for daily pick up.
- Similarly, persons under quarantine should also be instructed to bag their soiled linens and place the closed bag outside their door for pick up.
- Cleaning, laundry, and trash removal staff should wear disposable gloves and gowns for all tasks in the cleaning process, including collection of closed bags.
- Staff should remove and change gloves after cleaning a room or area occupied by persons under quarantine before moving to the next room.
- After delivering bags to their final destination, staff should clean and disinfect any hard, cleanable surfaces where bags have been stored (such as on carts or on the floor).
- Laundry and trash removal staff collecting the closed bags should remove their gloves promptly after bags are delivered to their destination and cleaning and disinfection has been performed.
- Any time staff removes gloves, wash the hands with soap for at least 40 seconds by applying the soap gently on the palm and back of the hand including web spaces between the fingers and space as well as between the finger and the thumb and the wrist.
- Also, the staff can use alcohol-based sanitizer (minimum 70% ethyl alcohol v/v) which can be mounted at the entrance of the rooms. The sanitizers are to be refilled/replaced frequently. Use a minimum of 3mL of the sanitizer (approximately 2 pushes of sanitizer dispenser) on DRY HANDS for at least 30 seconds for good hygienic hand disinfection.
- If possible, for fabrics or other materials that can be laundered, use the warm water setting and dry items completely on high heat.

- If a person under quarantine has a special need for assisted cleaning (e.g., an elderly person who is unable to clean a spill such as vomiting in their quarters), appointed health personnel will oversee the cleaning process as part of their evaluation of the individual.
 - Rooms vacated by contacts cases should remain closed to further use until cleaned and disinfected by appropriately trained cleaning staff. The room should not be entered by cleaning staff for at least for 24 hours.
- i. The in-house catering should only provide room services for freshly cooked food duly following physical distancing and environmental sanitation.
 - j. Pantry in the facility, if any, should also be cleaned as the other inside office spaces. Special care needs to be taken while cleaning the slabs and the sinks, if any with soap/detergent and water.
 - k. The utensils should be properly cleaned with dish wash bars /liquids and water.
 - l. The utensils should not be shared amongst the staff/contacts.
 - m. Raw fruits/vegetables should be washed with lukewarm water before consumption. Similarly, the milk packets shall be washed with soap and water before opening the same for usage.
8. The facility owner will give an undertaking, as per the Annexure 3 (English) & Annexure 4 (Punjabi), to follow the above guidelines and to have adequate manpower including the above mentioned health workers as per the prescribed protocol.
 9. The contacts/suspected cases will stay under quarantine period for 14 days from the date of last exposure.

II. Guidelines for the Quarantined person:

The guidelines for the quarantined person shall be the same as the guidelines for the person in Home quarantine issued vide no. MD/NHM/2020/3322(R)-3326(R) Dated 8.5.2020.

III. Air-Conditioning

The air-conditioning should be used as per the guidelines for healthcare facilities (as enclosed in Annexure 5).



**Secretary Health &
Mission Director, NHM, Punjab**

No. MD/NHM/2020/3381(R)-3383(R)

Dated, Chandigarh the 12th May, 2020

1. A copy is forwarded to OSD to Chief Secretary, Punjab for the kind information of Worthy Chief Secretary please.
2. A copy is forwarded to PS to ACS (Home), Punjab for the kind information of Additional Chief Secretary (Home)
3. A copy is forwarded to PS to PSHFW, Punjab for the kind information of Principal Secretary, Health & Family Welfare.



**Secretary Health &
Mission Director, NHM, Punjab**

No. MD/NHM/2020/3384(R)-3391(R)

Dated, Chandigarh the 12th May, 2020

Copy forwarded to :

1. Commissioner, FDA, Punjab for information please.
2. MD, PHSC for information please.
3. Commissioner AYUSH cum PD-PSACS for information please.
4. Director Health Services, Punjab for information please.
5. Director Family Welfare, Punjab for information please.
6. Director (ESI), Punjab for information please.
7. Director, NHM, Punjab for information please.
8. Executive Director, SHSRC, Punjab for information please.



**State Programme Officer (IEC)
NHM, Punjab**

Annexure 1

Undertaking on quarantine in private facilities

1. I S/W of, resident of do hereby voluntarily submit that I am not coming out of any containment zone and I undertake to remain in quarantine for a period of 14 days and during this period I shall monitor my health and maintain distance with those around me and interact with the assigned surveillance team in case I suffer from any deteriorating symptoms or any of my close family contacts develops any symptoms consistent with COVID-19.
2. I have been explained in detail about the precautions that I need to follow while I am under quarantine.
3. I have active COVA app on my phone and I assure that it will remain active throughout the period of quarantine.
4. I am liable to be acted on under section 188 of IPC as per provision of “The Epidemic Diseases Act 1897” for any non-adherence to self-quarantine protocol.

Signature_____

Date_____

Contact Number

Annexure-2

ਪ੍ਰਾਈਵੇਟ ਫੈਸੀਲਿਟੀ ਵਿੱਚ ਇਕਾਂਤਵਾਸ ਲਈ ਸਵੈ-ਘੋਸ਼ਣਾ ਪੱਤਰ

1. ਮੈਂ _____ ਪੁੱਤਰ/ਪੁੱਤਰੀ _____
ਨਿਵਾਸੀ _____ ਹਾਂ ਅਤੇ ਮੈਂ ਸਵੈ-ਇੱਛਾ ਨਾਲ ਘੋਸ਼ਣਾ ਕਰਦਾ/ਕਰਦੀ ਹਾਂ ਕਿ ਮੈਂ ਕਿਸੇ ਕਨਟੇਨਮੈਂਟ ਜ਼ੋਨ ਤੋਂ ਨਹੀਂ ਆ ਰਿਹਾ/ਰਹੀ। ਮੈਂ ਅੱਜ ਤੋਂ 14 ਦਿਨ ਤੱਕ Quarantine ਵਿੱਚ ਰਹਾਂਗਾ/ਰਹਾਂਗੀ ਅਤੇ ਇਸ ਸਮੇਂ ਦੌਰਾਨ ਮੈਂ ਆਪਣੀ ਸਿਹਤ ਦੀ ਸਥਿਤੀ ਤੇ ਨਜ਼ਰ ਰੱਖਾਂਗਾ/ਰੱਖਾਂਗੀ ਅਤੇ ਆਪਣੇ ਆਸ-ਪਾਸ ਦੇ ਲੋਕਾਂ ਤੋਂ ਵਾਜਿਬ ਦੂਰੀ ਬਣਾਕੇ ਰੱਖਾਂਗਾ/ਰੱਖਾਂਗੀ। ਜੇਕਰ ਮੈਨੂੰ ਕੋਵਿਡ-19 ਦੇ ਕੋਈ ਲੱਛਣ ਮਹਿਸੂਸ ਹੁੰਦੇ ਹਨ ਤਾਂ ਮੈਂ ਖੇਤਰ ਦੀ ਸਰਵੀਲੈਂਸ ਟੀਮ ਨੂੰ ਸੂਚਿਤ ਕਰਾਂਗਾ/ਕਰਾਂਗੀ।
2. ਮੈਨੂੰ ਇਕਾਂਤਵਾਸ ਦੌਰਾਨ ਵਰਤੀਆਂ ਜਾਣ ਵਾਲੀਆਂ ਸਾਵਧਾਨੀਆਂ ਬਾਰੇ ਵਿਸਥਾਰਪੂਰਵਕ ਦੱਸ ਦਿੱਤਾ ਗਿਆ ਹੈ।
3. ਮੈਂ ਆਪਣੇ ਫੋਨ ਵਿੱਚ ਕੋਵਾ ਐਪਲ ਡਾਊਨਲੋਡ ਕਰ ਲਈ ਹੈ ਅਤੇ ਇਹ ਐਪ Quarantine ਦੀ ਅਵੱਧੀ ਦੌਰਾਨ ਕਿਰਿਆਸ਼ੀਲ ਰਹੇਗੀ।
4. ਜੇਕਰ ਮੈਂ ਇਕਾਂਤਵਾਸ ਦੇ ਪ੍ਰੋਟੋਕੋਲ ਦੀ ਉਲੰਘਣਾ ਕਰਦਾ ਹਾਂ ਤਾਂ ਮੇਰੇ ਵਿਰੁੱਧ Epidemic Diseases Act 1897 ਦੇ ਅਨੁਸਾਰ ਆਈ.ਪੀ.ਸੀ. ਦੀ ਧਾਰਾ 188 ਦੇ ਤਹਿਤ ਕਾਨੂੰਨੀ ਕਾਰਵਾਈ ਕੀਤੀ ਜਾ ਸਕਦੀ ਹੈ।

ਹਸਤਾਖਰ _____

ਮਿਤੀ _____

ਸੰਪਰਕ ਨੰਬਰ. _____

Annexure 3

Undertaking by Facility Owner while offering private facility for quarantine of Contacts

1. I/We S/W of, resident of
....., owner of
(in case of more than one owner of the facility, the undertaking be given jointly) do hereby voluntarily submit that I/ We are ready to offer my/our above-named facility on my/our own volition for the purpose of providing quarantine facility to the Contact cases of COVID-19 and that I/We undertake to comply with the guidelines issued by the Government from time to time in this regard.
2. I/We undertake that the facility named
have all the requisite arrangements, as stipulated by the Government, in place and that the facility shall continue to provide the Quarantine facilities for the period stipulated by the Government to all the Contacts who opt for the facility.
3. I/We also undertake that I/We have trained our entire staff working in the facility on the guidelines issued by the Government and that I/We shall ensure the availability of the Doctor On daily basis for regular check-up and reporting of the Contacts admitted in the facility.

4. I/We also understand that I/We are liable to be acted on under section 188 of IPC as per provision of “The Epidemic Diseases Act 1897” for any non-adherence to the protocol/guidelines issued by the Government in this regard.

Signature_____

Date_____

Contact Number _____

Annexure 4

ਸੰਪਰਕਾਂ (Contacts) ਦੇ ਇਕਾਂਤਵਾਸ (Quarantine) ਦੇ ਸੰਬੰਧ ਵਿੱਚ ਪ੍ਰਾਈਵੇਟ ਫੈਸੀਲਿਟੀਜ਼ (Facilities) ਦੇ ਮਾਲਿਕ ਵੱਲੋਂ ਦਿੱਤੇ ਜਾਣ ਵਾਲੇ ਸਵੈ-ਘੋਸ਼ਣਾ ਪੱਤਰ (Undertaking)

1. ਮੈਂ/ਅਸੀਂ _____ ਪੁੱਤਰ/ਪੁੱਤਰੀ _____

ਨਿਵਾਸੀ _____ ਮਾਲਿਕ _____ ਹਾਂ (ਜੇਕਰ

ਫੈਸੀਲਿਟੀ ਦੇ ਇੱਕ ਤੋਂ ਵੱਧ ਮਾਲਿਕ ਹਨ ਤਾਂ ਸੰਯੁਕਤ ਸਵੈ-ਘੋਸ਼ਣਾ ਪੱਤਰ ਦਿੱਤਾ ਜਾਵੇਗਾ) ਅਤੇ ਮੈਂ/ਅਸੀਂ ਕੋਵਿਡ-19 ਦੇ ਸੰਪਰਕ ਕੇਸਾਂ ਨੂੰ ਇਕਾਂਤਵਾਸ ਕਰਨ ਲਈ ਮੇਰੀ/ਸਾਡੀ ਉਪਰੋਕਤ ਨਾਮ ਵਾਲੀ ਫੈਸੀਲਿਟੀ ਨੂੰ ਮੇਰੀ/ਸਾਡੀ ਸਹਿਮਤੀ ਨਾਲ ਉਪਲਬੱਧ ਕਰਵਾਉਂਦਾ ਹਾਂ ਅਤੇ ਮੈਂ/ਅਸੀਂ ਸਰਕਾਰ ਵੱਲੋਂ ਸਮੇਂ-ਸਮੇਂ ਤੇ ਜਾਰੀ ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਦੀ ਪਾਲਣਾ ਕਰਨ ਦੀ ਘੋਸ਼ਣਾ ਕਰਦੇ ਹਾਂ।

2. ਮੈਂ/ਅਸੀਂ ਇਹ ਘੋਸ਼ਣਾ ਕਰਦੇ ਹਾਂ ਕਿ _____

ਨਾਮ ਵਾਲੀ ਫੈਸੀਲਿਟੀ ਵਿੱਚ ਸਰਕਾਰ ਦੀਆਂ ਹਿਦਾਇਤਾਂ ਅਨੁਸਾਰ ਸਾਰੇ ਜ਼ਰੂਰੀ ਇੰਤਜਾਮ ਅਤੇ ਇਸ ਫੈਸੀਲਿਟੀ ਦੀ ਚੋਣ ਕਰਨ ਵਾਲੇ ਸਾਰੇ ਸੰਪਰਕਾਂ ਨੂੰ ਇਕਾਂਤਵਾਸ ਦੀ ਸੁਵਿਧਾ ਸਰਕਾਰ ਵੱਲੋਂ ਤੈਅ ਸਮੇਂ ਤੱਕ ਜਾਰੀ ਰੱਖੀ ਜਾਵੇਗੀ।

3. ਮੈਂ/ਅਸੀਂ ਇਹ ਘੋਸ਼ਣਾ ਕਰਦੇ ਹਾਂ ਕਿ ਮੈਂ/ਅਸੀਂ ਫੈਸੀਲਿਟੀ ਵਿੱਚ ਕੰਮ ਕਰਨ ਵਾਲੇ ਆਪਣੇ ਸਾਰੇ ਸਟਾਫ ਨੂੰ ਸਰਕਾਰ ਦੇ ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਟਰੇਨਿੰਗ ਦਿੱਤੀ ਜਾ ਚੁੱਕੀ ਹੈ ਅਤੇ ਮੈਂ/ਅਸੀਂ ਇਹ ਯਕੀਨੀ ਬਣਾਉਂਦੇ ਹਾਂ ਕਿ ਫੈਸੀਲਿਟੀ ਵਿੱਚ ਦਾਖਿਲ ਸੰਪਰਕਾਂ (Contacts) ਦੀ ਰੋਜ਼ਾਨਾ ਜਾਂਚ ਅਤੇ ਰਿਪੋਰਟਿੰਗ ਲਈ ਡਾਕਟਰ _____ ਉਪਲਬੱਧ ਹੋਵੇਗਾ।

4. ਮੈਂ/ਅਸੀਂ ਇਹ ਵੀ ਸਮਝਦੇ ਹਾਂ ਕਿ ਜੇਕਰ ਮੈਂ/ਅਸੀਂ ਸਰਕਾਰ ਵੱਲੋਂ ਇਸ ਸੰਬੰਧੀ ਜਾਰੀ ਪ੍ਰੋਟੋਕੋਲ/ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਦੀ ਉਲੰਘਣਾ ਕੀਤੀ ਤਾਂ Epidemic Diseases Act 1897 ਦੇ ਅਨੁਸਾਰ ਆਈ.ਪੀ.ਸੀ. ਦੀ ਧਾਰਾ 188 ਦੇ ਤਹਿਤ ਮੇਰੇ/ਸਾਡੇ ਖਿਲਾਫ ਕਾਨੂੰਨੀ ਕਾਰਵਾਈ ਕੀਤੀ ਜਾ ਸਕਦੀ ਹੈ।

ਹਸਤਾਖਰ _____

ਮਿਤੀ _____

ਸੰਪਰਕ ਨੰਬਰ. _____

Government of Punjab
Department of Health & Family Welfare
(NHM, Punjab)

No. 3129 (R) - 3136 (R)

Dated, Chandigarh the 24th April, 2020

To

1. All the Special Chief Secretary/ Additional Chief Secretary/ Financial Commissioners / Principal Secretaries/ Administrative Secretaries to the Govt. of Punjab.
2. All the Head of the Department of the Govt. of Punjab.
3. All the Commissioners of the Divisions.
4. All the Commissioners of Police.
5. All the Deputy Commissioners/ District and Session Judges of the State
6. Registrar General, Punjab and Haryana High Court
7. All Senior Superintendents of Police
8. The Secretary, Punjab Vidhan Sabha.

Subject: Advisories regarding the use of Air-conditioning in Residential/Commercial and Hospital Settings in wake of COVID-19 pandemics.

Corona virus Disease 2019 (COVID -19) is a systemic disease caused by a novel Corona virus (SARS-CoV-2), transmitted in most instances through respiratory droplets, direct contact with cases and also through contaminated surfaces/objects. Though the virus survives on environmental surfaces for a varied period of time, it gets easily inactivated by chemical disinfectants. Thus, correct and timely information and knowledge about the corona virus is the key to control the pandemic.

With the onset of summer season in the past few weeks, concerns with regard to the safety and usage of Air conditioners/coolers etc. in the wake of COVID-19 pandemics have been raised. The Air-conditioning systems generally work on the principle of re-circulating the air inside the room and in the current COVID-19 situation, there are apprehensions that the air conditioning poses a threat to other people especially in large facilities such as malls, offices, hospitals, health centres etc.

The State has therefore decided to come up with an advisory to allay all such apprehensions and concerns with regard to safety and usage of Air conditioning/coolers etc. in different settings. The guidelines for usage of air conditioning in various settings is as follows:

SECTION A: RESIDENTIAL APPLICATIONS

1. Room Air Conditioners(Window/Split):

- a) Recirculation of cool air by Room Air Conditioners must be accompanied by outdoor air intake through slightly open windows and exhaust by natural exfiltration.
- b) The room temperature should be set between 24-27 degrees Celsius and the relative humidity should be maintained between 40% - 70%.
- c) The Air conditioners should be serviced often so as to keep the filters clean.
- d) Exhaust fans can be installed in the rooms containing a large number of people so as to create a negative pressure in the room and ensure the entry of fresh air in the premises.
- e) The circulated air inside the room should be vented out frequently.

2. Evaporative/Desert Air Coolers:

- a) It is advisable to prevent dust entry and maintain hygiene. Evaporative cooler tanks must be cleaned and disinfected and the water drained and refilled frequently.
- b) *Disinfection of Air Coolers:* The evaporative air coolers must be cleaned and disinfected at regular intervals. The water tank should be emptied and then wiped gently with a soft cloth, sponge and warm water to eliminate moldy residue that may have built up since the previous cleaning. The tank can also be washed with mild soapy water and then flushed out with clean water.

For the cooling pads and air vents, a mixture of 50-50 water and vinegar should be used to soak and rinse the pads and the vents.

- c) Evaporative coolers must draw air from outside to ensure good ventilation.

3. Fans:

- a) Fans should be operated with windows kept partly open.
- b) If an exhaust fan is located at a nearby location then it must be kept running to exhaust air for better ventilation.

SECTION B: COMMERCIAL AND INDUSTRIAL FACILITIES

1. The best action to limit the risk of spread of COVID-19 infection through air is to ventilate the indoor environments with outdoor air as much as possible.
2. Mechanical ventilation systems and air conditioning systems, which provide ventilation, can perform this function more effectively than simply opening the windows, because they improve the quality of the outdoor air with filtration.
3. If fresh air is not provided, it is advisable to introduce a fresh air duct attached to a central inline fan filter unit and distribute the fresh air by grilles into the space or near the indoor units in case of multiple cassette or multiple hi-wall units.
4. A minimum fresh air volume of 3 cubic meter/hour per person and 3.75 cubic meter per hour per square metre (5 cfm per person and 0.6 cfm per sq ft) is recommended.
5. In case of ducted fan-coiled and air handling units, fresh air must be provided by an inlet duct and fan.
6. In buildings without mechanical ventilation systems, it is recommended to actively use operable windows.
7. In case of re-circulating system, it is advisable to limit the return air circulation. The return air system could be converted to an exhaust system.

SECTION C: HEALTHCARE FACILITIES

1. In healthcare settings, the probability of spread of infection is higher especially in COVID-19 wards or isolation centres.
2. It is therefore recommended that the air-conditioning system in these facilities should be isolated and different from rest of the hospital or the building so as to prevent the re-circulation of air which may be containing the droplet nuclei having virus.
3. In certain settings, where a separate air conditioning is not possible/feasible, exhaust air is likely to contain particles carrying the virus and hence a suitable technique should be deployed to prevent the spread of infections. The treatment of exhaust air can be done by HEPA filtration or by chemical disinfection of the exhaust air from COVID-19 patient room by bubbling the exhaust air through a “Diffused air aerator tank” (preferably of non-metallic material) holding a 1% sodium hypochlorite solution.
4. Exhaust Air can also be treated by exposing it for 45 minutes to a temperature of 75° *Celsius* to inactivate the SARS-CoV.
5. Similarly, an UVC (254 nm wavelength) irradiation with an exposure time of 15 minutes at irradiation intensity of 4016 $\mu\text{W}/\text{Cm}^2$ results in complete inactivation of SARS-CoV.
6. Due to the possibility of presence of active viral particles on the exhaust systems, it is advised to follow suitable personal and environment protection protocols during any maintenance activity on the exhaust system.
7. In resource constrained settings, certain make-shift Isolation enclosures can be designed to provide the necessary protection from the COVID-19 viral particles. This could be a temporary makeshift cubicle or tent constructed out of a skeleton structure (of plastic or metal) and plastic sheet or canvas covering.
8. A quarantine centre shall be well ventilated and preferably be maintained at a negative or neutral differential pressure. When mechanical ventilation is resorted to, it shall be a once through system (non- recirculatory system) that provides a “clean to dirty” (towards the patient and away to the exhaust) air flow pattern.

9. Preventive maintenance on all units as per the manufacturer's guidelines shall be ensured.

This should include disinfecting and cleaning of:

- i) Filters, grilles, diffusers & internal surfaces: It is recommended to use 5% Cresol solution (containing 50% Cresol and 50% Liquid soap solution) for the purpose of disinfection. Mix 1 liter of this solution in 9 liters of water. The surface shall be sprayed with this solution, left for 10 minutes and then washed / wiped clean with water / cloth. (the above methodology is only for washable filters)
- ii) Condensate drain pan: Disinfecting / treatment of condensate drain pan is suggested using UV treatment or 1% sodium hypochlorite dosing. This will apply only if the HVAC equipment is working on a re-circulatory mode.
- iii) Coils: Follow standard recommendations of coil cleaning and then sanitize using the same protocol as that of the filters specified above.

The fresh air and ventilation system should be kept on throughout the off cycle and on the weekend and holidays in air circulation mode.

SECTION D : OFFICES

1. The offices use different types of air conditioning, ie, Window/ Split air conditioners to centralized air conditioning to coolers during summer seasons. The employers are advised to refer to relevant section in this advisory depending upon the type of air conditioning installed in their offices.



**Secretary Health &
Mission Director, NHM, Punjab**

No. 3137 (R) - 3138 (R)

Dated, Chandigarh the 24th April, 2020

1. A copy is forwarded to OSD to Chief Secretary, Punjab for the kind information of Worthy Chief Secretary please.
2. A copy is forwarded to PS to PSHFW, Punjab for the kind information of Principal Secretary, Health & Family Welfare.



**Secretary Health &
Mission Director, NHM, Punjab**

No. 3139 (R) - 3145 (R)

Dated, Chandigarh the 24th April, 2020

Copy forwarded to :

1. Commissioner, FDA, Punjab for information please.
2. MD, PHSC for information please.
3. Commissioner AYUSH cum PD-PSACS for information please.
4. Director Health Services, Punjab for information please.
5. Director Family Welfare, Punjab for information please.
6. Director (ESI), Punjab for information please.
7. All Civil Surgeons, Punjab for information & necessary action.



**State Programme Officer (IEC)
NHM, Punjab**