

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

No. MD/NHM/2020/3308(R)-3311(R)

Dated, Chandigarh the 7th May, 2020

To

1. Commissioner, Food and Drug Administration, Punjab.
2. All Divisional Commissioners, Punjab.
3. All Deputy Commissioners, Punjab.
4. All DHOs, Punjab.

Subject: Advisory on maintaining and ensuring the safety of food and other essential household items during the COVID-19 pandemic.

Coronavirus 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. Correct and timely information and knowledge about the corona virus is the key to control the pandemic.

The Government of Punjab has imposed severe restrictions on free movement of people in the larger public interest of controlling the spread/transmission of Corona virus through the imposition of Curfew in its all 22 districts. The Government has also allowed shops selling varied products to operate subject to such shops meticulously following the preventive measures to control the spread of Corona virus. The Government has also allowed the functioning of delivery of essential services such as cooked food, groceries etc. on the condition they comply to all the necessary safety and hygiene measures.

A comprehensive and a detailed advisory on maintaining the hygiene and sanitisation of shops has been issued vide no. MD/NHM/2020/3168 (R) - 3177 (R) dated 28th April, 2020. However, a need has been felt to specifically issue the guidelines for the shops selling groceries, cooked food etc. as to allay the apprehensions in the minds of customers on how to handle such essential commodities as also to create awareness amongst the owners in handling food in the context of COVID-19.

I. General Advisory

The detailed advisory issued vide no. MD/NHM/2020/3168 (R) - 3177 (R) dated 28th April, 2020 be referred to. The highlighting features are reiterated below:

1. The shop-owner, delivery staff and customers are advised to wear cloth masks at all the times. The mask should also be worn even if the purchase of groceries or collection of an order takes a fraction of time.
2. The masks shall be worn in a manner that it snugly covers the nose as well as the mouth.
3. The cloth mask should be washed with soap and water daily after use.
4. The customers are advised not to indulge in any handshakes/hugs even with a known acquaintance. Similarly, the shop-owners/delivery staff should not handshake/hug amongst themselves or with anyone else.
5. All are advised to follow strict social distancing measures and maintain a minimum distance of 1 metre amongst them at all times.
6. The customers and delivery staff are advised to strictly adhere to the social distancing circles or markings laid down by the shopkeepers outside their shop. All should wait patiently for their turn and avoid crowding at all costs.
7. All the shop-owners, customers and delivery staff should meticulously wash their hands using the foot-operated hand washing stations, if available.
8. 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 between the finger and the thumb and the wrist wherever and whenever the opportunity to wash the hands is available. However, a two-hourly hand wash is recommended.
9. Alternatively, all the customers and delivery staff is advised to sanitise their hands with the sanitizer bottles mounted at the entry point of the shop premises.
10. Alcohol-based sanitizer (minimum 70% ethyl alcohol v/v) should be mounted at the entrance wall of the shops for the shopkeeper and his/her workers as well as the customers to sanitize their hands before entering the premises further. The sanitizers are to be refilled/replaced frequently. Use a minimum of 3 ml of the sanitizer (approximately 2 pushes of sanitizer dispenser) on DRY HANDS for at least 30 seconds for good hygienic hand disinfection.
11. Sanitize or wash the hands even if the hands appear to be apparently clean.
12. The hands should be either sanitized or washed with soap and water whichever is feasible and available.

13. The shop-owners, customers and the delivery staff should not smoke or chew tobacco-based products such as gutka, pan masala etc. in the shop/market places.
14. In case of a cough/sneeze, the shopkeeper/customers/delivery staff should use the handkerchief to cover the face which shall then be kept in his/her own pocket/purse in a manner that the surface of the handkerchief exposed to the cough/sneeze shall not touch the other parts of the belongings directly.
15. In case shopkeeper/customers/delivery staff is not carrying the handkerchief he/she should cough/sneeze into the *flexed/bent elbow*.
16. In either case, the shopkeeper/customers/delivery staff should immediately hand wash with soap in the manner prescribed his hands/other exposed surfaces to cough/sneeze.
17. The shopkeeper/customers/delivery staff should refrain from touching face, mouth, nose and eyes with his hands at all times.
18. The shopkeeper/customers/delivery staff should not spit except when absolutely essential and only in the washbasin of the toilet in the shop/public toilet, which shall then be thoroughly cleaned in the manner prescribed.
19. The shopkeeper/customers/delivery staff should avoid all type of gatherings like social, religious, political etc.
20. The customers should preferably pay through digital means. The shopkeeper/his workers as well the customer shall sanitize their hands immediately before or after cash transactions, if it is so.
21. The shopkeeper/customers/delivery staff should not indulge in gossip/rumours with regard to COVID-19 without verifying the facts. All are encouraged to download “COVA APP” developed by the Government of Punjab for the correct, timely and authentic information.

II. Specific Advisory for the consumers/customers

1. Consumers are advised to carry cloth bags while going out to buy the essentials. The cloth bag should be washed thoroughly with soap and water immediately after use.
2. Consumers are advised to wash all the products/goods with warm soda water and then wipe them with a clean cloth.
3. Wash all food items thoroughly with clean, potable water. Use 50 ppm chlorine with clean, potable water for fruits and vegetables to be consumed raw.
4. The consumers are advised not to keep any spoiled food in the refrigerators.

5. The consumers should clean their refrigerators regularly thoroughly inside out.
6. The consumers are encouraged to use digital payment methods as a precautionary measure while receiving any delivered grocery or food items.
7. The consumers are advised not to leave any cooked/ready-to-eat food items in open. The consumers are advised to keep all their food items in containers with built-in lids.

III. Specific Advisory for the food handlers

1. Food handlers should wear a clean uniform, gloves, cloth masks/face cover, and head covers at all times.
2. The lockers, if any, for keeping the personal belongings should not be shared.
3. Social distancing of at least 1 meter amongst the staff shall also be ensured inside the food preparation area/kitchen.
4. Food handlers should frequently wash their hands with soap and water. They should wear gloves while handling/preparing food.
5. Food handlers should avoid wearing jewellery, watches etc. within the food premises.
6. The food handlers are advised to clean and disinfect the food service area after every meal is prepared. The spillage, if any, should be wiped clean.
7. Disinfect high-contact points such as working counters, door knobs, equipment handles, billing counters, card machines etc. repeatedly.
8. Food handlers must use tongs, gloves or other utensil to prevent direct contact with food.
9. The food handlers are advised to avoid displaying any cooked/ready-to-eat food items in open or glass windows.
10. All food handlers must be pre-screened for the symptoms of COVID-19. Any food handler showing any symptom should be isolated and the nearest medical facility should be informed. Act as per the medical advise and such staff be encouraged to stay at home.
11. High contact surfaces such as handrails / handles and call buttons, 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.

12. Hand-washing facility should be available, preferably, at the entry gate of the retail premises to assist the delivery staff or the customer (in case of a pick-up) to wash their hands thoroughly. Ensure availability of soap at all times and social distancing of at least 1 meter for the persons waiting for their turn to hand-wash.

IV. Specific Advisory for Food Delivery staff

1. The food delivery staff is advised to use a clean cloth mask at all times, including at the time of pick-up and delivery of food, in the manner prescribed. The cloth mask should be washed with soap and water daily after use.
2. The food delivery staff should disinfect the area where the food packets are kept with soap and water/sanitizer.
3. The food delivery staff should use a hand sanitizer in the manner prescribed before pick-up and after delivery.
4. The food delivery staff should avoid contact with common touch points such as door bell, door handles etc. However if the touch is unavoidable, e.g.: ringing the door-bell of the customer house, use a hand sanitizer after coming in contact with such touch points.
5. In case of pick-up delivery by the customer himself, the food joint Apps (e.g. mobile based Apps etc.) should encourage the customers to place the orders online or using a telephone well in advance in order to reduce the waiting time at the premises.
6. Similarly, the customers should be encouraged to pay digitally. In case of payment through credit/debit cards, the PoS machine should be sanitised with 70% alcohol based sanitizer after every use. Special attention during the sanitisation shall be paid to the touch points on the machine.

V. Air-conditioning

1. All the retail outlets, shops, canteens etc. should have adequate facilities for cross-ventilation in the premises.
2. Exhaust fans should be installed in the premises.
3. For further information, refer to the advisory for the use of Air-conditioners (refer to the Annexure).

VI. In case food handler/delivery staff is diagnosed as COVID-19 with whom one had a contact, there is no need to panic. One should report to the Helpline No. 104/State Control Room No. 01722920074 / 08872090029, detailing the exact nature of exposure so as to assist the medical facility to undertake further necessary actions.

VII. The food handler, in case a worker is diagnosed as corona positive and such a worker has reported to shop for duty, shall immediately inform the Helpline No. 104/State Control Room No. 01722920074 / 08872090029 along with all the facts about the worker and the contacts he/she might have during the work at shop. A complete and proper record of all workers working at the shop on any particular day should be maintained.



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

No. MD/NHM/2020/3312(R)-3314(R)

Dated, Chandigarh the 7th 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/2020/3315(R)-3321(R)

Dated, Chandigarh the 7th May, 2020

Copy forwarded to :

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



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

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

No. MD/NHM/2020/3168 (R) - 3177 (R)

Dated, Chandigarh the 28th April, 2020

To

1. Financial Commissioner, Taxation, Punjab.
2. Principal Secretary, Food & Civil Supplies, Punjab.
3. Excise & Taxation Commissioner, Punjab.
4. All Divisional Commissioners, Punjab.
5. Director, Food and Civil Supplies's, Punjab .
6. Managing Director, Markfed
7. Managing Director, PUNSUP
8. Managing Director, Punjab Agro Industries Corporation Ltd.
9. All Deputy Commissioners, Punjab.
10. All Commissioners of Police/All Senior Superintendents of Police, Punjab.

Subject : Advisory on maintaining the hygiene and sanitization of shops during the 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. Though the virus survives on environmental surfaces for a varied period of time, it gets easily inactivated by chemical disinfectants. Correct and timely information and knowledge about the corona virus is the key to control the pandemic.

The Government of Punjab has imposed severe restrictions on free movement of people in the larger public interest of controlling the spread/transmission of Coronavirus through the imposition of Curfew in its all 22 districts. The Government has, however, allowed essential activities to continue with an objective to minimise the hardships. The Government has also allowed shops selling varied products to operate subject to such shops meticulously following the preventive measures to control the spread of Coronavirus.

I. General guidelines:

1. Only the shops allowed by the Government of Punjab shall open. The Department of Home Affairs and Justice, Government of Punjab vide its letter no SS/ACSH/2020/310 dated 20.4.2020 has issued the detailed and consolidated guidelines elaborately laying the shops which have been allowed to operate. For the ease of reference, the extant guidelines provides that all facilities in the supply chain of essential goods, whether involved in manufacturing, wholesale or retail of such goods through local stores, large brick and mortar stores or e-commerce companies are allowed to operate. Shops (including Kirana and single shops selling essential goods) and carts, including ration shops (under PDS), dealing with food and groceries (for daily use), hygiene items , fruits and vegetables, dairy and milk booths poultry, meat and fish, animal feed and fodder etc, are allowed to operate subject to such shops following the special norms laid down by the Government to combat COVID-19 .
2. The shopkeepers are, thus, advised to meticulously follow the guidelines issued by the Government with regard to the nature of the shops that have been allowed to operate and to comply with the Standard operating procedure laid down in these guidelines as far as operating the shop is concerned.

3. The Shopkeepers associations are advised to install foot-operated Hand-washing Stations for the benefit of Shopkeepers/their workers and visiting customers. However, the social distancing norm of maintaining a distance of at least 1 meter shall be followed while washing the hands by drawing marking circles in front of such Hand-washing Stations.
4. 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 between the finger and the thumb and the wrist wherever and whenever the opportunity to wash the hands is available. However, a two-hourly hand wash is recommended.
5. Alcohol-based sanitizer (minimum 70% ethyl alcohol v/v) should be mounted at the entrance wall of the shops for the shopkeeper and his/her workers as well as the customers to sanitize their hands before entering the premises further. 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.
6. Sanitize or wash the hands even if the hands appear to be apparently clean.
7. The hands should be either sanitized or washed with soap and water whichever is feasible and available.
8. The Shopkeeper and his workers should wear cloth mask at all times, i.e., immediately from leaving the house till the entry back into the house.
9. The masks shall be worn in a manner that it snugly covers the nose as well as the mouth.
10. The cloth mask should be washed with soap and water daily after use.
11. The shopkeepers and his workers should not indulge in any handshakes or hugs to greet/see-off each other.
12. All are advised to follow strict social distancing measures and maintain a minimum distance of 1 metre amongst themselves at all times.
13. The shopkeepers and his workers are advised not to roam unnecessarily in the market places.
14. The shopkeepers and his workers should wash their hands with soap in the manner prescribed or sanitize them in the manner prescribed before taking tea-breaks/lunch breaks. Sharing of food and utensils amongst themselves should not be done.
15. The shopkeeper and his workers should not smoke or chew tobacco-based products such as gutka, pan masala etc. in the shop/market places.
16. In case of a cough/sneeze, the shopkeeper/workers should use the handkerchief to cover the face which shall then be kept in his/her own pocket/purse in a manner that the surface of the handkerchief exposed to the cough/sneeze shall not touch the other parts of the belongings directly.
17. In case a shopkeeper/worker is not carrying the handkerchief he/she should cough/sneeze into the *flexed/bent elbow*.
18. In either case, the shopkeeper/worker should immediately hand wash with soap in the manner prescribed his hands/other exposed surfaces to cough/sneeze.
19. The shopkeeper/worker should refrain from touching face, mouth, nose and eyes with his hands at all times.
20. The shopkeeper/workers should not spit except when absolutely essential and only in the washbasin of the toilet in the shop/public toilet, which shall then be thoroughly cleaned in the manner prescribed.

21. The shopkeepers/workers should avoid all type of gatherings like social, religious, political etc.
22. The shopkeepers/workers should not indulge in gossip/rumours with regard to COVID-19 without verifying the facts. All are encouraged to download “COVA APP” developed by the Government of Punjab for the correct, timely and authentic information.

23. Disinfection of the shops

a) **Indoor Areas:** Indoor areas including the entire shop premises should be cleaned every evening at the time of closure of shops or early in the morning at the time of opening the shop. If the contact surface is visibly dirty, it should be cleaned with soap and water prior to disinfection. Prior to cleaning, the worker 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 the shelves, aisles, storage areas, godowns, basements etc. should be mopped with a disinfectant with 1% sodium hypochlorite or equivalent disinfectants available in the market.
- High contact surfaces such as public counters, intercom systems, equipment like telephone, printers/scanners, and other machines, handrails/handles 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.

In addition, all workers should consider cleaning the work area in front of them with a disinfecting wipe prior to use and sit one seat further away from others, if possible with 2.

b) **Outdoor areas:** Outdoor Areas have less risk than indoor areas due to air currents and exposure to sunlight. Cleaning and disinfection efforts should be targeted to frequently touched/contaminated surfaces as already detailed above.

c) **Public toilets:** Sanitary workers must use separate set of cleaning equipment for toilets (mops, nylon scrubber) and separate set for sink and commode. They should always wear disposable protective gloves while cleaning a toilet. All the areas of the toilet such as the sinks, commode, taps etc. should be thoroughly cleaned/scrubbed using soap and water and then wiped with 1% sodium hypochlorite solution or equivalent commercial disinfectants available in the market.

II. Specific Guidelines:

1. The shopkeeper should encourage home delivery, at-least to its long-established customers.
2. The shopkeepers, in case of the visiting customers, should ensure a minimum distance of 1 metre amongst its waiting customers by marking the circles at the distance of 1 metre from each other outside the premises.
3. The shopkeeper should ensure that the visiting customer is wearing the mask properly.
4. All the customers entering the shop should be encouraged to sanitize their hands in the manner prescribed in point 5 of the general advisory. Similarly, the customer should be encouraged to sanitize their hands while leaving the shop premises.
5. The customers should be advised to avoid touching any of the items displayed or kept otherwise in the shops which he/she does not intend to buy.
6. The shopkeepers should encourage the customer to spell out the list of the items required at the designated counters whereby the same may be supplied by the shopkeeper or his/her workers.
7. The shopkeeper should encourage the customer to digitally pay for the items purchased.
8. The shopkeeper/his workers as well his customers shall sanitize their hands immediately before or after cash transactions.
9. The shopkeeper should encourage the customers to carry cloth bags from their home only for making the purchases and carrying them. The cloth bags can then be washed with warm water and soap/detergent.

III. Air-Conditioning/Coolers:

- a) Prefer natural ventilation at workplace.
- b) Exhaust Fans can be installed in the shop premises to increase the ventilation.
- c) The detailed guidelines issued in this regard may be meticulously followed. (Copy Annexed).

IV. In case a shopkeeper/worker is diagnosed as COVID-19 with whom one had a contact, there is no need to panic. One should report to the Helpline No. 104/State Control Room No. 01722920074 / 08872090029, detailing the exact nature of exposure so as to assist the medical facility to undertake further necessary actions.

V. The shopkeeper, in case a worker is diagnosed as corona positive and such a worker has reported to shop for duty, shall immediately inform the Helpline No. 104/State Control Room No. 01722920074 / 08872090029 along with all the facts about the worker and the contacts he/she might have during the work at shop. A complete and proper record of all workers working at the shop on any particular day should be maintained.

All are encouraged to take proper diet, assimilate correct information and keep themselves aware and updated with the information at all times, and indulge in useful and productive activities during the available free time.



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

No. MD/NHM/2020/3178 (R) - 3180 (R)

Dated, Chandigarh the 28th 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 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/2020/3181 (R) - 3188 (R)

Dated, Chandigarh the 28th 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. Executive Director, SHSRC, Punjab for information please.
8. All Civil Surgeons, Punjab for information & necessary action.



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

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**