

## Long Term Care Facility Guidance on Fans and Air Conditioning During an Outbreak of COVID-19 June 30, 2020

### Background:

The use of portable fans and air conditioners can promote the spread microorganisms through the air and can pose a risk to patients and staff. Organisms dispersed through the air can contaminate environmental surfaces, patient wounds, and open areas. Portable fans and air conditioners can disturb the normal air flow within a room or patient care area, altering the expected airflow pattern (e.g., disturbance in negative air pressure air exchanges). Propping doors and opening windows causes positive airflow pressure and may cause imbalances in mechanical airflow throughout the facility. Fans and air conditioners may also signal the existence of a temperature control or ventilation problem, which in turn may impact equipment and overall patient care.

Individual facilities must determine whether or not the risks associated with the use of fans and air conditioners in various locations can be appropriately managed. Development of a policy or process whereby your Infection Control practitioner evaluates the risks associated with the use of fans and air conditioners in patient care areas, and establishes their position is recommended.

This guidance is specific to fans (e.g., portable fans and ceiling fans) and portable air conditioners (e.g., window units) and does not include recommendations for maintaining HVAC systems. Alternatively, information on HVAC systems can be found in this [CDC MMWR report](#) and by consulting DHHS Licensing and Facilities.

**A brief note on HVAC systems:** Do not shut down HVAC systems in patient-care areas except for maintenance, repair, testing of emergency backup capacity, or new construction. Ensure that heating, ventilation, air conditioning (HVAC) filters are properly installed and maintained to prevent air leakages and dust overload. HVAC systems should be evaluated to increase room and overall building ventilation, including increasing the number of air exchanges, increase outdoor air ventilation, limit internal air circulation, and improve central air filtration. Ventilation system filters must be routinely replaced and other [necessary maintenance](#) should be performed as needed.

### Procedure for Utilizing Portable Fans or Air Conditioning Units:

1. Contact facility maintenance to review and adjust airflow.
2. Provide alternate cooling methods:
  - Cool washcloths and ice packs.
  - Portable patient cooling blankets.
3. Confirm all alternate cooling methods have been attempted with no success, **and** the patient is in a non-restricted use location, **and** the use of a fan is determined to be of benefit to the patient's clinical condition or well-being.
4. Environmental Assessment:
  - Assess the risk of contamination to patient care equipment and healthcare delivery areas.

- **Assess whether the fan or window air conditioner is requested for an isolation room. Fans should not be used when transmission based precautions are in place. Window unit or portable air conditioners should only be used if alternative cooling methods are ineffective.**
  - Ensure cords will not be a tripping hazard.
  - Floor-mounted portable fans cannot be set on top of other equipment, such as tables or chairs.
5. Implementing a portable **fan**:
- **Do not use portable fans in patient isolation rooms where any transmission based precautions are in place.**
  - Clean portable fan before use.
  - Do not place portable fan at floor level.
  - Position the portable fan to blow at the patient's bed level or higher.
  - Do not aim the fan toward the door or across environmental surfaces.
  - The portable fan should be turned off during patient care procedures (e.g., line insertions, dressing changes, etc.).
6. Implementing a portable **window air conditioner**:
- **To the extent possible, do not use portable AC units in patient isolation rooms where any transmission based precautions are in place.**
  - Window AC units can be used with the following considerations in mind:
    - 1) The window unit should be consistently cleaned and maintained
    - 2) It is recommended that the patient's door is closed
    - 3) It is recommended that the patient room has [negative air pressure in relation to the hallway](#)
    - 4) Consider using a portable HEPA filtration unit in the room to further reduce airborne contaminants
  - Clean window air conditioner and replace filter before use.
  - After installation, ensure the window is well sealed and exhaust is not aimed toward a HVAC intake valve.
  - Maintain and monitor positive air pressure in relation to the corridor.
  - Do not aim the air conditioner across environmental surfaces.
  - The air conditioner should be turned off during patient care procedures (e.g., line insertions, dressing changes, etc.).
7. Cleaning and disinfection policies:
- Have the infection preventionist review cleaning and disinfection procedures before purchasing portable fans and air conditioners. If family members purchase fans and air conditioners for resident, please review instructions for cleaning and disinfection before implementation.
  - Assign someone to be responsible for cleaning and disinfecting portable fans and air conditioners.
  - Develop protocol and policies to clean and disinfect portable fans/air conditioners on a weekly basis or when fan becomes visibly soiled.
  - Fans and air conditioners must be cleaned and disinfected according to manufacturer's instructions between patients.
  - After discharge of the patient or when the fan or air conditioner is no longer required, it must be cleaned and disinfected before placing in storage. Fans and air conditioners should be covered during storage.

References

1. <http://ipac.vch.ca/Documents/Acute%20Resource%20manual/Portable%20Fans%20in%20Acute%20Care.pdf>
2. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm>
3. <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>
4. [http://healthfacilityguidelines.com/ViewPDF/ViewIndexPDF/iHFG\\_part\\_d\\_isolation\\_rooms](http://healthfacilityguidelines.com/ViewPDF/ViewIndexPDF/iHFG_part_d_isolation_rooms)