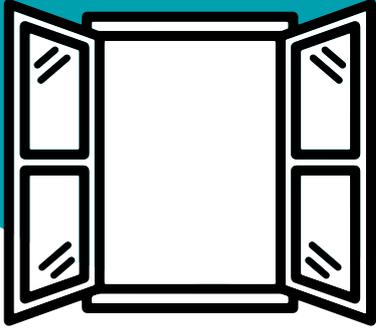


Ventilating your clinic during COVID-19



Along with general recommendations for hand hygiene, respiratory hygiene and social distancing, the early response to COVID-19 centred around cleaning and disinfection of the clinic environment to prevent **fomite** transmission of the virus.

As new evidence emerges, there is increasing [scientific consensus](#) that COVID-19 can be contracted via airborne transmission of microdroplets from normal breathing, speaking, singing etc. This is one of the reasons for the broad shift in [government recommendations about wearing masks](#) in settings where there is community transmission of COVID-19 and social distancing cannot be maintained.

Airborne transmission of COVID-19 through normal breathing and talking has obvious implications for risk management in all clinic settings, but particularly for environments with poor or no ventilation, because the airborne droplets will continue to circulate around the space for several hours.

Some types of air-conditioning may actually increase the risks of airborne transmission of COVID-19. A [recent study](#) found that even strong ventilation systems may only filter about 10% of the aerosols generated (the study used three indoor simulations). These ventilation systems actually created aerosol "hotspots" where droplets circulated in vortexes until they settled on walls.

Natural ventilation

Outdoor settings have proven to be far less risky overall than indoor settings. Natural ventilation from fresh air is the gold standard for ventilation in the clinic setting.

Air conditioning systems

Split systems

In a small clinic environment, the most common air conditioning type will be a wall hung split system or multi-head split system.

These systems **recirculate** the air within a room. The air gets sucked in through the top, filtered, blown through the evaporator, and then finally blown out the bottom into the room. The "filtering" that occurs is for larger dust and pollen particles, not viruses like COVID-19.



ADVICE

Use window-driven natural ventilation as much as possible. If you cannot keep windows open during treatment, allow at least 30 minutes to open windows between appointments.

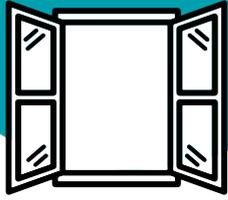


ADVICE

Split system air-conditioning is not a form of ventilation and should not be used where there is community transmission of COVID-19. If the split system is running continuously and the virus is present, it is simply being recirculated.

If essential for heating or cooling, use the split system for brief periods **AFTER** the treatment room has been well ventilated via open windows or doors.

Consider another method of ambient heating and cooling.



Air conditioning systems (cont...)

Ducted systems

A ducted system involves a large compressor on the outside of the building, an internal evaporative unit, and ducts that bring conditioned air to various rooms through vents.

The internal **air is actually recirculated** continuously, as with split air-conditioning systems.

Commercial HVAC systems (Heating, Ventilation, Air Conditioning)

If the clinic is part of a large complex, it may share its ventilation system with the rest of the building. This would be a large, commercial HVAC system and may involve cooling towers.

[HVAC systems](#) can potentially spread a virus across rooms when high-speed air flows past an infected person to others. This was shown with [Severe Acute Respiratory Syndrome in 2004](#).

Fans

Fans could potentially spread droplets further than they would normally travel and thus facilitate the dispersion of infected droplets.

Air purifiers and HEPA filters

Commercial grade HEPA filtration systems are far more complex than the in-room, portable models that are available for purchase. Many hospitals, planes and clean rooms work on a combination of HEPA filtration systems and negative air pressure to clean the air.

Some portable HEPA air purifiers may play a role in reducing the transmission of COVID-19, but there is no hard, scientific evidence to recommend their use.



ADVICE

Ducted systems should not be used where there is community transmission of COVID-19. Consider another method of ambient heating and cooling.



ADVICE

Speak to your building facilities manager to ensure that the “dampers” are on “winter mode” (this means more fresh air is circulated).

Be aware that the risk may increase in summer when the system recirculates more cool air as an energy saving measure.



ADVICE

Fans are not a form of ventilation. Do not use them in the clinic setting where there is community transmission of COVID-19.



ADVICE

There is currently not enough evidence to make a strong recommendation for using portable in-room air purifiers and HEPA filters. Please stay tuned as we monitor emerging evidence.