# Recommendations for Improving Air Circulation in Child Care Centres

Toronto Children's Services follows recommendations and advice of Toronto Public Health (TPH), which provides guidance for the Infection Prevention and Control (IPAC) programs of all Child Care Centres. In May 2021, TPH released new guidance on COVID-19 Transmission, Aerosols and Ventilation. It was identified that COVID-19 can be commonly spread from an infected person through respiratory droplets (shared when a person coughs, sneezes, sings and talks); and aerosols (tiny droplets that can stay in the air for longer). While the amount of virus in respiratory droplets and aerosols produced by an infected person may differ, a person may be contagious for 48 hours before they begin to show symptoms. Environmental conditions (e.g. humidity, temperature, and air flow) may affect virus survival, risk of exposure and movement of particles and aerosols carrying the virus. To learn more about COVID-19 spread review: How does COVID-19 Spread?

As scientists and researchers continue to gather new evidence about COVID-19 including routes of transmission, it is important to keep in mind that having proper airflow and ventilation can dilute and disperse droplets and aerosols faster to ensure risk of COVID-19 transmission is mitigated. TPH has provided the following recommendations as it relates to airflow, air conditioning and ventilation in larger spaces, such as classrooms, to help reduce the spread of COVID-19:

- Ensure regular maintenance of heating, ventilation and air conditioning systems.
- Keep areas near the air conditioning units' inlets and outlets clear
- Arrange furniture away from air vents and high airflow areas
- Avoid re-circulating air
- Single Unit Air Conditioners, portable fans & ceiling fans are **not recommended**, as they do not improve ventilation and may circulate the virus in the rooms/space. If used, ensure airflow is directed upward and away from people. Single unit air conditioners are designed to cool the space of a single room or a small area. The units eject heat out of their outdoor side and blows cool air into the room on the indoor side.

Reference: Toronto Public Health – COVID-19 Fact Sheet: Transmission, Aerosols and Ventilation (Revised May 13, 2021).

## Types of air-cooling equipment you may have

### Types of Portable Fans

| Type | Description |
|---|---|
| **Tower Fan**  | • Tower Fans are **not recommend** as it sits on the floor and directs airflow only towards people's faces. |
| **Pedestal Fan**  | • Pedestal Fan can be considered as a possible replacement for tower fans.<br>• This unit sits higher off of the floor and airflow can be directed upwards towards the ceiling and away from people. |

### Types of Air Conditioning (AC) Units

| Type | Description |
|---|---|
| **Portable Air Conditioner**  | • Are freestanding, easy-to-move models that cool by pulling in fresh air, removing heat and moisture, and returning cool air into the space<br>• **Note:** These air conditioners are not recommended per TPH fact sheet, but if used, ensure the airflow is directed upward, away from people |

| Type | Description |
|---|---|
| **Window Air Conditioners**<br>  | • Use for cooling single rooms<br>• Can be used as primary cooling sources or in conjunction with a central AC<br>• **Note:** These air conditioners are not recommended per TPH fact sheet, but if used, ensure the airflow is directed upward, away from people |
| **Through-the-Wall Air Conditioners**<br>  | • Very similar to window air conditioners, thru-the-wall air conditioners are window-style ACs designed instead to install through a wall inside a chassis sleeve<br>• **Note:** These air conditioners are not recommended per TPH fact sheet, but if used, ensure the airflow is upward and away from people |
| **Ductless Mini-Split Air Conditioners**<br>  | • High-efficiency cooling, ductless split system air conditioners provide cooling for multiple "zones" within a centre<br>• Unlike portable AC units and window-style ACs, mini-split air conditioners are not self-contained appliances and do not require a duct like central air conditioner<br>• Look into modifications to redirect the cool air upward, i.e.,https://www.youtube.com/watch?v=GnIlc4HBchc<br>• **Note:** These air conditioners are not recommended per TPH fact sheet, but if used, ensure the airflow is directed upward and away from people |

Reference: Types of Room Air Conditioners | Sylvane

## Recommendations for Child Care Centres

Recommendations for the use of Fans and Air Conditioning units to help meet the TPH fact sheet with the goal of eliminating stale / re-circulated air:

## Fans

- If fans are not required, they should not be used
- Tower fans should be replaced with pedestal fans where possible
- Tower fans should only be used by one staff at a time, i.e., one staff working in the kitchen. Fan should not blow directly on the staff
- Place fans away from staff and children to avoid air blowing on them
- If possible, do not place fans in the screening area
- Open windows where possible to allow fresh air to circulate

## Air Conditioning (AC) Units

- If AC units are not required, they should not be used
- Ensure window AC units have the ability to direct air upwards and away from people or are installed at ceiling level
- Ensure the air exhaust is not blowing directly at the people in the room
- Open windows when weather permits to allow fresh air to circulate.
    - If weather is cool and the AC unit is not required, keep windows open for fresh air. If the AC unit is required, periodically open the windows or room door to allow air circulation. i.e., when the room goes out on the playground, open the windows for a short period
- If possible, replace current AC units with AC units that enable the intake of fresh air and exhaust stale air**.** An example is the Kuhl unit: https://www.friedrich.com/consumer/products/kuhl
- Air purifiers may be used as a supplement to AC's when there is no outdoor exchange
- Child care programming should be moved away from air conditioning units to avoid airflow directed at individuals