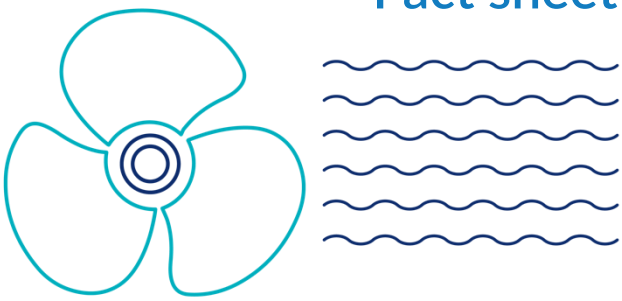
Fact sheet

Maximising airflow in schools



The purpose of this fact sheet is to provide information on how schools can reduce the risk of COVID-19 transmission through using outdoor school spaces and ventilating indoor school spaces.

Overview

Reducing COVID-19 transmission in schools can be achieved through adapting the use of school spaces including maximising the use of outdoor learning areas, maximising ventilation of indoor spaces, and minimising the use of spaces that can't be ventilated with fresh air.

Ventilation is an important part of the broader suite of controls to reduce the risk of COVID-19 transmission in school settings including vaccination, physical distancing, good hygiene, cleaning and mask wearing as required in accordance with advice from the Northern Territory Chief Health Officer.

Additional measures to maximise airflow

From Term 1, 2022, Northern Territory Government schools will use a range of solutions, recommended by the Department of Infrastructure, Planning and Logistics (DIPL) and endorsed by the Department of Health.

Currently, all fixed plant school air-conditioning systems in Northern Territory government schools meet or exceed relevant Australian Standards for fresh air intake and circulation.

As an additional measure, air conditioning contractors have been engaged to adjust existing fixed plant school air-conditioning systems to maximise air flow.

The Department of Education, based on advice from the Department of Infrastructure, Planning and Logistics (DIPL) is distributing portable air purifiers to those government schools that have been identified as not having access to any areas with central mechanical plant air conditioning systems.

The use of air purifiers will not eliminate COVID-19 transmission risks but, combined with other interventions in schools – including vaccination, physical distancing, good hygiene, masks and cleaning, – will create a safer school environment

NORTHERN TERRITORY GOVERNMENT

Standard guidance on maximising airflow

Schools are encouraged to:

- maximise the use of outdoor learning environments wherever practicable
- maximise ventilation of their indoor spaces, either naturally (where appropriate) or mechanically
- minimise the use of indoor space that can't be ventilated with fresh, outdoor air (e.g. spaces where windows cannot be opened, or where the windows open onto a noisy road), and where possible, reduce density quotient if the space needs to be occupied
- prioritise the use of air purifiers in (in addition to maximising ventilation, rather than as a replacement, where possible).

Maximise ventilation of indoor spaces with fresh outdoor air

Ventilation of a space can be provided either mechanically (via ventilation and air conditioning (HVAC) systems) or naturally (for example, open windows).

Indoor ventilation (mechanical or natural) is an important strategy in reducing the risk of aerosol transmission by increasing circulation of outdoor air, increasing the delivery of clean air, and diluting and filtering out respiratory particles.

Recommended strategies and considerations for schools when naturally and mechanically ventilating indoor spaces are outlined below:

Natural ventilation

- It is not possible in tropical climates to use natural ventilation as this can lead to mould which can have other health implications
- In dry climate environments keep all windows, doors and vents open as much of the day as possible and when unoccupied, if practicable
- Keep these openings clear of any obstruction to air flow
- Door jambs should be used to keep doors open
- Aim to open windows and vents that are higher or towards the ceiling during poor or windy weather
- Exhaust fans are to be used as much as possible
- Take measures to maintain thermal, noise and other comforts, such as flexible uniform and seating arrangements

Mechanical ventilation

- All central fixed plant air-conditioning systems in government schools are being adjusted to maximise air flows
- Demand-controlled ventilation controls that reduce air supply based on occupancy or temperature are being disabled
- Air recirculation should be eliminated or minimised by setting air conditioning units to use external air rather than recycling, where possible

- Not all mechanical systems can operate using outside air (for example, most split systems). Air conditioners that are unable to bring in outside air should not be considered as providing mechanical ventilation
- Air handling units (where installed) should be operational at all times that rooms are occupied and when unoccupied, if practicable
- Air conditioning unit and air handling unit filters should be maintained according to maintenance plans, checked and cleaned
- Turn on mechanical ventilation, where available and practicable. Run systems during school hours, including when rooms are unoccupied and, if possible, ideally 2 hours before and after the use of a space. Where available, timers can be used to manage operation

Use of natural and mechanical ventilation at the same time

- In dry climates natural and mechanical ventilation should be used together as much as practical and possible
- It is not possible in tropical climates to use combined natural and mechanical ventilation as this can lead to mould which can have other health implications
- Using more than one ventilation method creates greater opportunity to create a comfortable learning environment and maximise ventilation

Use of fans

- Fans are only to be used with other natural and mechanical methods in place
- Fans should not be used if a person with respiratory symptoms is in the room
- Fans, such as pedestal fans, should not be directed to blow air from one person directly past another and should be set to the lowest speed

Bathrooms, kitchens, and thoroughfares (hallways, corridors)

- All available mechanical and natural ventilation options in bathrooms and kitchens should be operated for as much of the day as possible
- Maximise natural and/or mechanical ventilation in thoroughfares and minimise gatherings in these spaces
- The use of enclosed spaces with little or no ventilation should be minimised, and numbers should be limited in these spaces

Poor outdoor air quality

- Action to protect students during periods of poor outdoor air quality (such as smoke, dust storms) takes priority
- Take steps to close windows and doors, set air conditioners to re-circulate air, and enhance other COVID safe behaviours and controls. These include maintaining separation between class groups, reducing class density and staggering classes, and wearing face masks until the risk is reduced, as advised by public health or emergency services.