



WHAT IS THE INDOOR AIR QUALITY IN OUR AGED CARE FACILITIES?



OUR VALUED AGED PEOPLE NEED PROTECTION

In Australia, people aged 65 years and older were 1.3 million (9%) of the population in 1977 and 3.8 million (15%) of the population in 2017. This population proportion is projected to increase to 8.8 million (22%) by 2057.

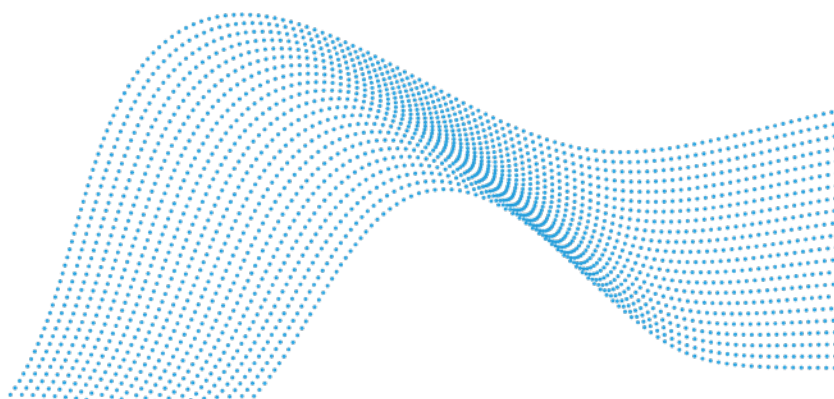
Because most of the elderly spend almost all their time indoors, the need to ensure they are not unnecessarily exposed to indoor pollutants becomes very crucial.

The current COVID-19 pandemic and its direct impact on Aged Care facilities with a high proportion of fatalities, raises very real concerns as to the responsibility of administrators to do everything within their control to minimise the risk of infection within the facility.

Controlling INDOOR AIR QUALITY is one of the most important ways to prevent the transmission of disease. Introducing fresh air, expels germs, virus, droplets and other infections to protect the aged and the healthcare workers and make your aged care facility a safe place for all.

“ *The quality of the air we breathe can have considerable impact on health, wellbeing, productivity and the economy.*

Older adults in aged care facilities are especially vulnerable to worsening air quality. ”



It is now the responsibility of every administrator to ensure that you have minimised the risk of infection. Additional fresh air in indoor areas is the number one safeguard to virus protection.

WHY FRESH AIR?

Current Government requirements centre around social distancing and hygiene.

What cannot be overlooked is the fact that Australians now spend up to 90% of their time indoors often without adequate Fresh Air.

It goes without saying that having clean air indoors is crucial for the health of the population, in particular our vulnerable groups, the elderly and our children.

Aged Care facilities require heating and cooling, but the fresh air component is often neglected, and the opening of windows is not used as this causes the comfort conditions to be compromised.

Where fresh air is absent, community use air is recirculated, along with all the health allergies that exist.

Fresh Air requirements are outlined by the Building Code of Australia and documented in the Australian Standard AS 1668 Part 2.

This standard requires the introduction of fresh air into Bedrooms/Living rooms to be 10 -12 L/sec per person. Recent white papers indicate the significant advantages to upgrade this to a minimum of 12 - 15 L/sec per person.

HOW TO CALCULATE THE AMOUNT OF FRESH AIR REQUIRED

A minimum of 12-15 L/sec per person for a community area with 20 occupants, simply means you need 240-300L/sec continuous supply of fresh air.

Seek advice from your local contractor

KEY RECOMMENDATIONS FOR INDOOR AIR QUALITY

AIR CIRCULATION

To maintain proper air circulation the air change rate should be at least 6-8 air-changes per hour in the room so that adequate air movement is maintained.

FILTRATION

All heating or air conditioning unit should contain filters. Filters installed in most units only remove dirt and dust which are the large particles in the air leaving the small particles to recirculate. These filters rely on regular maintenance which is often neglected. High efficiency filters can remove pollen and smaller particles but will still not remove virus particles

UV-C AIR PURIFICATION



Germicidal lights are used in specific applications to kill pathogens like bacteria and viruses. UV-C lights alter the pathogen DNA, destroying their ability to multiply. Because of its pathogen fighting ability UV-C is believed to have the ability to stop viruses from spreading. UV-C light is extensively used in hospital, clean rooms, medical labs, schools, and aged care centres.

UV-C lights can be installed in the ductwork of the air conditioning system or in a small housing which consists of a fan, UVC light and filters. These unit are easily mounted, run off single phase power and are suitable up to 30-40 occupants per room.

FRESH AIR USING ENERGY RECOVERY VENTILATORS

Energy recovery ventilators are commonly used in aged care applications as an efficient way to continuously introduce Fresh Air to meet the statutory requirements, improve the indoor air quality and provide a safer environment for the occupants. Energy recovery ventilators bring fresh air into the building while expelling stale, contaminated air. Both the fresh air and the exhausted air go through a heat exchanger which recovers heat from the exhausted air and transfers it to the incoming fresh air without any cross contamination. Filters are incorporated to maintain the efficiency of the heat exchanger and filter the incoming fresh air.

INDIRECT EVAPORATIVE COOLING (INDEC™)

Indirect Evaporative Cooling has recently been introduced into Australia and is very effective in dry climates to produce cool air without any added moisture. Indirect evaporative cooling uses 100% fresh air instead of recirculated air. These units do not have any CFC gases and have very low running costs.



Indirect Evaporative Cooling

Indirect evaporative cooling is the latest breakthrough in cost effective fresh air cooling systems. It cools using the basic natural principles of water evaporation, but without adding any moisture to the airstream.



Fresh Air Indoors

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