



## **2021 Infection Prevention & Control for General Practice**

### **Part 2 August e newsletter # 7 – we can do more to reduce risk (cleaner air, P2 resp masks, deep clean)** (using updated information to protect ourselves and others in our clinics)

#### **1. Cleaner air please**

Evidence points to airborne transmission indoors under conditions outlined as follows - still air in an enclosed room. This means respiratory particles continuously emitted and potentially laden with virus can remain suspended for hours – (larger droplets with a much higher load fall close to the patient in seconds with a higher risk to close staff).

It is the potential to reduce airborne transmission despite an air change of 4-6/hr minimum, (standard but more for comfort rather than reducing transmission risk), despite staff changing to P2 respirator masks and moving to one person per room that was explored in a hospital outbreak in Melbourne mid 2020 after admission of aged care residents. Transmission was reduced but still occurred after adopting these measure but could more have been done?

In a world first study into airflow, an experiment carried out between RMH and Melbourne University Engineering dept simulated such hospital conditions and showed that although air was being exchanged, it was escaping under door spaces into corridors and to other rooms/open office areas. Only using a negatively pressurized room avoids this but these are confined to a few rooms only in larger hospitals but not in many smaller facilities. Further work showed the potential for the use of portable room air cleaners. These have HEPA filters and results with two portable air cleaners in a specified room size showed 99% of suspended aerosols were removed within 6 minutes. Such machines provide an extra layer of protection where occupancy is high and airborne transmission is a risk. <https://www.afr.com/policy/health-and-education/cheap-domestic-air-cleaners-can-cut-covid-19-spread-melbourne-study-20210811-p58i01>

Could portable room air cleaners be useful in General Practice? Before considering these, keep risk low by having no symptomatic patients inside. Ensure surgical masks are worn correctly in low risk situations and P2 respirator masks are worn correctly for high risk situations. Ask building owner to indicate how many air changes per hour are occurring and open door to outside and windows. If these two are not/cannot occur then use then use of an air cleaner may be of benefit in reducing risk especially where asymptomatic patients attend for other reasons during an outbreak. These machines cost approx. \$880 and are used in a room with doors and windows closed. Check for HEPA filter, suitable for room size, tolerable noise level. <https://sgeas.unimelb.edu.au/engage/guide-to-air-cleaner-purchasing>.

#### **2. And what about our PPE and P2/N95 respirator masks?**

These are advised where risk is high i.e you have to poke your head into a symptomatic patient's car. I would reduce risk indoors by only seeing symptomatic patients outdoors and indoors would wear a surgical mask and faceshield. P2 masks require fit checking each time you use one and fit testing is performed once per type by a professional tester. You may be required to use it before it is fit tested so ensure you know how to use it correctly in a high risk situation with gown, gloves and face shield. PPE is not 100% effective so ask "Am I using all risk reduction measures or just relying on PPE?"

#### **3. Deep cleaning – do I need to have this done or can I do it myself after a pos case? Is cleaning that important?**

Cleaning of high touch surfaces at least daily and always after contamination is important to lower viral load to reduce risk of contact with mouth. It is performed using detergent wipes or detergent and paper towel (don't spray but apply detergent up close to paper towel). If disinfection is required or recommended, clean a soiled surface first before applying disinfectant. The main situation where transmission is more likely is in healthcare where a high touch surface e.g. contact with a machine's touch pad is not wiped and then touched by another person.

The short answer to performing deep cleaning in-house relies upon having a plan for when this eventuates, having staff trained in correct use of full PPE, experienced in cleaning/decontamination routines and can work as a pair.