

Managing suspected or confirmed COVID-19 patients in positive pressure operating theatres

Not all facilities have access to a negative pressure room or have the option to convert rooms from positive to negative pressure settings. This document provides recommendations for managing suspected and confirmed COVID-19 patients in positive pressure operating theatres.

Where possible, operating theatres should be designated for COVID-19 and non-COVID-19 patients to minimise transmission risk and reduce turnover time between patients.¹ All local processes should be aligned to the statewide [Response and Escalation Framework](#). The ACI updated [guidance for the management of surgery during COVID -19](#) document provides updated advice for the management of surgical services in NSW at this time. The [ACI Personal Protective Equipment in the Operating Theatre decision support tool](#) outlines the minimum standards for personal protective equipment (PPE) to be worn by each health worker in the operating theatre environment.

Where feasible, COVID-19 suspected patients should have rapid testing prior to an emergency procedure. It is vital to ensure all staff caring for COVID positive or suspected patients are fully vaccinated. For respiratory protection, staff must also be fit tested for the appropriate respirator and perform fit checking every time a respirator is donned.

Interim advice for the setup of a positive pressure theatre*

- **Verify that operating room ventilation, and especially air changes per hour, comply with specification.**
- **Have an understanding of the pressure differentials between the operating theatre and anaesthetic bay.**

- **Do not tape up doors and cracks as this will increase the jet effect from inside to outside (that is, change the air pressure and flow).**
- **Have a marked exclusion zone of 1.5m outside the operating theatre entry and exit doors. The exit zone can also double as the doffing zone for masks and eye wear when the door is closed.**

Principles of best patient care apply when a positive pressure operating room is the only option available to a healthcare facility while looking after a suspected or confirmed COVID-19 patient, or where a high risk aerosol generating procedure (AGP) is being undertaken.

- Preoperatively, the patient should be in the most suitable isolation areas available, with advice on hand hygiene and provided with a surgical mask to wear.
- Infection prevention and control precautions should be in place during transfer to the operating theatre, including appropriate PPE for staff involved in the transfer and a clear route.¹ Lifts should not be shared with any other patients, staff or visitors.
- Provision for rapid confirmation of the correct patient and correct procedure with prompt transfer to the operating theatre without waiting in holding areas or the anaesthetics bay.¹
- Minimise unnecessary equipment, and staff or company representatives, in the operating theatre and in the immediate vicinity of that operating theatre.¹

* this advice is not available in current guidelines

+ Time required for air changes must be established by individual facilities after discussion with their local engineering department and infection prevention and control. Further detail on the rationale behind Air Changes Per Hour is available in the [CEC Infection Prevention and Control Manual](#).

- Minimise staff in the room for any AGPs. Staff in the room for any AGPs should wear appropriate PPE as per current guidelines.¹
- After AGPs, a pause to allow five air changes should occur, where clinically appropriate⁺, before additional staff enter the room.¹ (The Australian Standard for operating rooms is a minimum of 20 air changes per hour. The local facility's air changes performance should be verified.)
- Any staff immediately outside the room, who are likely to be handed equipment from inside the operating theatre or will be required to hand equipment into the room, should wear PPE appropriate to the procedure.
- Consider recovering the patient in the procedural room. If workload does not allow, choose the most suitable single room or dedicated space if available.
- Transfer the patient back to the most appropriate space for ongoing care, with precautions for the transfer.
- Undertake cleaning and disinfection as per current guidelines.

Relevant resources

- [CEC COVID-19 Prevention and Control Manual](#)
- [CEC – COVID-19 Infection Prevention and Control – Health worker safety](#)
- [ACI Updated guidance for the management of surgery during the COVID-19 pandemic](#)
- [ACI Personal Protective Equipment in the Operating Theatre](#)
- [Critical Intelligence Unit - Non-Invasive Positive-Pressure Ventilation Evidence Check](#)

Evidence base

For the development of the document, a Google search was undertaken in May 2020 and repeated in July 2021, using the key search terms positive pressure theatre, negative pressure key search terms positive pressure theatre, negative pressure theatre and COVID-19. No new evidence regarding practical guidance on managing in a positive pressure operating theatre was identified in the July 2021 search. Guidance from state and national bodies has been included in the document. This evidence was supplemented with experiential evidence from subject matters experts to provide practical advice to help solve an infection control issue.

The Anaesthesia Community of Practice Executive developed the document, with input from the broader Anaesthesia Community of Practice. Consultation was undertaken with the Surgery Community of Practice and Infection Prevention and Control Community of Practice. The final document was approved by the Clinical Lead of the Anaesthesia Community of Practice.

References

1. Clinical Excellence Commission. Infection Prevention and Control Manual – Chapter 6: Specific Healthcare Settings [Internet]. Sydney. CEC; 2021 [cited 13 July 2021]. https://www.cec.health.nsw.gov.au/_data/assets/pdf_file/0003/644007/Chapter-6-COVID-19-IPAC-manual.pdf

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