

# Aerosol generating respiratory therapies

## Non-invasive ventilation (NIV)



**Non-invasive ventilation (CPAP/BIPAP) generates a high level of aerosolised droplets that spread widely, and its use has been shown to increase the risk of transmission of respiratory viruses to healthcare workers.**

**Please make sure that non-invasive ventilation is the most appropriate intervention for your patient with acute respiratory viral illness (including COVID-19).**

### Remember

- NIV is of limited value in the context of hypoxic respiratory failure associated with pneumonia. Overseas experience and local guidelines suggest a very limited role in the setting of COVID-19.
- There remains value in using NIV as a treatment for hypercapnic respiratory failure in the context of COPD, acute decompensation in neuromuscular disease, and obesity hypoventilation. NIV should be used in these patients if clinically indicated. For all these indications, a time window exists that should be adequate to ensure that NIV is commenced in the safest possible environment.
- Before starting NIV, the presence of an advance care plan or directive should be determined. In conjunction with this, if present, a resuscitation plan should be created in the light of the clinical context.
- When NIV is an appropriate therapy for a patient with suspect or confirmed COVID-19, the optimal location is a negative pressure room or if not available a single room. Both settings require institution of contact, droplet and airborne precautions. If there is no single room available and NIV could only be delivered in an open ward setting, the benefits to that patient would have to be balanced against the risks of virus transmission to other patients, healthcare workers and visitors.
- Any room which has had an aerosol generating procedure in it requires airborne precautions for a minimum of 30 minutes after. The exact time depends on air changes per hour. See [Infection Prevention and Control Novel Coronavirus 2019 \(2019-nCoV\) – Hospital setting](#) from the Clinical Excellence commission.

<b>Document information</b>	
Version number	2
Original publication date	25 March 2020
Developed by	Professor Peter Wark, Dr Matthew Peters, Dr Paul Hamor, Nick Yates (NP), John Harrington (CNC), Helen Kulas (ACI Respiratory Network Manager)
Consultation	ACI Respiratory Network, ACI Evidence Generation and Dissemination Team, Ministry of Health (Ron Manning), ICU (Nhi Nguyen, Mark Nicholls), ED (Michael Golding, Clare Skinner), Infection Control (Kathy Dempsey, James Mackie), Paediatrics (Matthew O'Meara), Anaesthetics (David D'Silva)
Endorsed by	Nigel Lyons
Review date	17 April 2020
Reviewed by	Respiratory COVID-19 Community of Practice Expert Reference Working Group
For use by	All NSW Health staff coming in to contact with patients receiving these therapies and all NSW Health COVID-19 Communities of Practice