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Aerosol generating respiratory therapies
Nebulisers

Nebulisers generate a high level of aerosolised particles that spread widely and can infect staff and other patients.

Please make sure there is no alternative to delivering medication via a nebuliser for your patient with acute respiratory viral illness (including COVID-19).

Remember

- Metered dose inhalers (MDIs) are the most effective way to deliver bronchodilators for asthma or chronic obstructive pulmonary disorder (COPD) and are much safer.
- MDIs should be used in conjunction with spacer devices, or MDI adapters in the case of patients requiring non-invasive (NIV) or invasive ventilatory support.
- For severe acute bronchospasm* in:

  adults and children 6 years and older
  - salbutamol 12 puffs (100mcg per actuation) via MDI and spacer
  - ipratropium 8 puffs (21mcg per actuation) via MDI and spacer.

  children 1–5 years old
  - salbutamol 6 puffs
  - ipratropium 4 puffs (21mcg per actuation) via MDI and spacer.
- There are limited circumstances where nebulisers are the only way to deliver aerosolised medications to patients. These include severe life threatening exacerbations of asthma, nebulised adrenaline for croup in children, or aerosolised medications used in treatment of cystic fibrosis.
- When starting nebulisers, please document a detailed management plan for review and cessation of nebulisers – including end of life planning when appropriate.
- When nebulisers are the only appropriate therapy, administer in a negative pressure or single room using contact, droplet and airborne precautions. If this is not possible then efforts should be made to move the patient to a negative pressure or single room as soon as possible.
- 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 page 4 of Infection Prevention and Control Novel Coronavirus 2019 (2019-nCoV) – Hospital setting by the Clinical Excellence Commission.

Additional consideration should be given to the use of nebuliser therapies in conjunction with NIV.

Use of these therapies in combination is potentially much higher risk as they could transfer a high load of infectious aerosols over a greater distance. Care should be delivered in a negative pressure or single room using airborne precautions. If this is not possible then efforts should be made to move the patient to a negative pressure or single room as soon as possible.

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* National Asthma Council. Australian Asthma Handbook: Managing acute asthma in clinical settings)

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