

Nebulised iloprost or epoprostenol for COVID-19 associated Acute Respiratory Distress Syndrome (ARDS) Position Statement

- **Nebulised iloprost or epoprostenol (off-label) is recommended for refractory COVID-19 associated Acute Respiratory Distress Syndrome (ARDS), in line with NHS England guidance**
- **A clinical trial to investigate the effectiveness of pulmonary vasodilators for COVID-19 associated ARDS would be informative and is encouraged**

Background

- Nebulised iloprost and epoprostenol (both prostacyclins) reduce PaO₂/FiO₂ ratio in patients with ARDS.¹ It is unknown whether nebulised prostacyclins reduce the risk of mortality.¹
- Nebulised prostacyclins for ARDS, similar to inhaled NO, is hypothesised to be beneficial in patients with right heart problems linked to pulmonary vascular pathology, which is a problem in severely ill COVID-19 patients.²
- However, the effectiveness of nebulised prostacyclins in COVID-19 associated ARDS is unknown.

COVID-19 guidelines

- NHS England's [Clinical guide for the management of critical care for adults with COVID-19 during the coronavirus pandemic](#) states the pulmonary vasodilators (e.g. inhaled nitric oxide and nebulised epoprostenol) can be considered to improve V/Q mismatching where available³

Other considerations

- The use of pulmonary vasodilators, when nitric oxide is not available, is recommended for refractory ARDS (not specifically COVID) by the Severe Acute Respiratory Failure Centres²
 - SARF centres' criteria often include a trial of pulmonary vasodilatory therapy before accepting patients for transfer²
- National stock levels of both epoprostenol and iloprost are adequate to use for the proposed indication²
- There are no clinical trial available to assess the efficacy of prostacyclin for this indication. If one were available, NHS England's guidance would be reviewed²
- The Committee heard from Intensive Care physicians that a trial was feasible.

References

1. Cochrane. Aerosols of prostacyclin for management of acute respiratory distress syndrome (ARDS). <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007733.pub3/full> (2017) doi:10.1002/14651858.CD007733.pub3.
2. Personal communication with Dr Moonesinghe, National Clinical Director for Critical Care, NHSE England/NHS Improvement. (2020).
3. NHS England & NHS Improvement. Clinical guide for the management of critical care for adults with COVID-19 during the coronavirus pandemic (Version 2). https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0216_Specialty-guide_AdultCritiCare-and-coronavirus_V2_-8-April.pdf (2020).

Groups / Individuals who have overseen the development of this guidance:	NCL JFC Secretariat
Groups which were consulted and have given approval:	NCL JFC
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