

Specialty guides for patient management during the coronavirus pandemic

Clinical guide for extra corporeal membrane oxygenation (ECMO) for respiratory failure in adults during the coronavirus pandemic

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As doctors we all have general responsibilities in relation to coronavirus and for these we should seek and act upon national and local guidelines. We also have a specific responsibility to ensure that essential care continues with the minimum burden on the NHS. We must engage with those planning our local response. We may also need to work outside our specific areas of training and expertise and the General Medical Council has already indicated its support for this in the exceptional circumstances we may face: <https://www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus>

ECMO for respiratory failure

Respiratory ECMO is indicated for acute severe but potentially reversible respiratory failure. It is therefore expected that the service will experience increased demand in response to patients with COVID-19.

Before seeking advice regarding a patient with suspected or confirmed COVID-19 please familiarise yourself with the latest guidance, advice and recommendations from the [Professional Bodies](#).

Referral information

To refer a patient to the National ECMO service or to seek clinical advice on the management of severe acute respiratory failure, including those with COVID-19, please use the [online ECMO referral form](#).

This new national referral system will help us coordinate the national response to the COVID-19 pandemic.

Referral criteria

The [ICNARC](#) report on COVID-19 in critical care suggests that those who have so far become the most unwell as a result of COVID-19 are often not suitable for ECMO due to underlying health problems and co-morbidities.

However, patients who meet the following clinical criteria may be considered suitable for ECMO support.

Inclusion Criteria (updated June 2020)

- Potentially reversible severe respiratory failure
- Lung Injury Score ≥ 3 or uncompensated hypercapnia with a pH 7.20 or less
- Failed trial of ventilation in prone positioning ≥ 6 hrs (unless contraindicated)
- Failed optimal respiratory management / lung protective ventilation
- [Clinical Frailty Scale](#) category ≤ 3
- If RESP Score ≤ 3 ECMO should be considered only after agreement across at least two centres

Exclusion Criteria

- Refractory multiorgan failure
- Evidence of severe neurological injury

Service providers

There are five commissioned centres in England for the provision of ECMO, each working to a specified geographical area (detailed [here](#)). However, in order to manage service demand, following assessment and triage, admission may take place at any of the designated centres.

- Guy's and St. Thomas' NHS Foundation Trust
- Royal Papworth Hospital NHS Foundation Trust
- Royal Brompton and Harefield NHS Foundation Trust
- University Hospitals of Leicester NHS Trust
- University of Manchester NHS Foundation Trust

(Note: Two additional centres have been identified to support the national network during surge (if required): Newcastle upon Tyne Hospitals NHS Foundation Trust and Barts Health NHS Trust).