How do I refer a child?

Contact your nearest ECMO Centre using the phone number on the back of this leaflet - a nurse will take initial details and will put you in touch with a senior clinician at each centre. You can discuss the case and once accepted, organisation for transfer and treatment will follow. Should the centre you contact not have a bed, they will arrange a bed in one of the other centres. Thus, one telephone call will initiate a process whereby the child you are treating will be found a bed.



For information about the ECMO service at your local centre call: Great Ormond Street, London (0207) 813 8523 smithel@gosh.nhs.uk Glenfield Hospital, Leicester (0116) 250 2423 gail.faulkner@uni-tr.nhs.uk Freeman Hospital, Newcastle (0191) 223 1016 jon.smith@tfh.nuth.northy.nhs.uk Yorkhill Hospital, Glasgow (0141) 201 9329 morag.liddell@yorkhill.scot.nhs.uk



For consultation or referral call:

South

Great Ormond Street Hospital, London (0207) 829 8652 (*identify as an ECMO referral*)

Midlands

Glenfield Hospital, Leicester (0116) 287 1471 (ask for ECMO co-ordinator or ECMO Fellow)

North

Freeman Hospital, Newcastle upon Tyne (0191) 223 1016 (identify as an ECMO referral)

Scotland

Yorkhill Hospital, Glasgow (0141) 201 0000 (ask for ECMO Coordinator) or (0141) 201 0255 (*Neo-natal surgery*)

Treatment for neonates and infants with severe respiratory failure

Centrally funded service commissioned by the National Specialist Commissioning Advisory Group of the Department of Health

NATIONAL ECMO SERVICE for England

Glenfield Hospital, Leicester

Yorkhill Hospital, Glasgow

Great Ormond Street Hospital, London

Freeman Hospital, Newcastle upon Tyne

sprinters limited

What is ECMO?

ECMO is a modification of conventional

cardio-pulmonary bypass. Cannulae are placed through a small incision in the neck. The use of an oxygenator for gas exchange allows the lungs to rest and recover. This minimises the effects of barotrauma and oxygen toxicity which are associated with prolonged conventional or high frequency ventilation.



The UK Collaborative Trial¹ of ECMO

ECMO (Extra Corporeal Membrane Oxygenation) is an effective therapy for neonates with severe respiratory failure. In the UK Trial the mortality of ECMO was almost half that of children receiving conventional therapy. There was no difference between the groups in the frequency of respiratory or neurological problems at the one year followup.³ In 1997 the Department of Health (via the National Specialist Commissioning Advisory Group) funded four centres in England and Scotland to provide a national ECMO service.

Who benefits from ECMO?

The key is "reversible" cardio-respiratory failure.

Neonates

Children with the following conditions can benefit from ECMO support in the neonatal period:

- meconium aspiration syndrome
- persistent pulmonary hypertension
- neonatal sepsis/pneumonia
- respiratory distress syndrome
- congenital diaphragmatic hernia
- severe RSV pneumonia

The following criteria define ECMO eligibility:

- oxygenation index* (0.1.) > 40
- gestational age > 34 weeks
- weight > 2 kg
- reversible lung disease
- (< 10 days high pressure ventilation)
- no lethal congenital anomalies

***O.I.** = mean airway pressure x Fi0₂ x 100 post ductal PaO₂ (mmHg)

Older babies

Infants below six months of age with severe respiratory failure are also included in the service.² Although often viral in origin (such as respiratory syncytial virus), the cause may not be identifiable. As criteria are less well defined at this age please phone to discuss potential cases.

Service

The four units work in co-operation to provide a co-ordinated service. At present it is estimated that up to 100 infants per year will benefit from ECMO support. The service includes all ancillary treatments and transfer from the referring centre to the ECMO centre.

Consultation or referral?

You are encouraged to contact your nearest unit to discuss any child who might benefit. If it is felt that ECMO is appropriate then transfer can be arranged at the optimum clinical time.

Transport?

The ECMO centres will provide a specialist transport team to bring the child to the ECMO unit. If the anticipated journey by road is longer than two hours, air transport will usually be used.

References

- 1 The UK collaborative randomised Trial of Neonatal ECMO. Lancet 1996;348:75-82.
- Khan JY, Kerr JY, Kerr SJ, Tometski A et al. The Role of ECMO in the treatment of RSV bronchiolitis. Arch Dis child 1995;73(2);F91-4.
- 3 UK Collaborative ECMO Group. The collaborative UK ECMO Trial: Follow-up to 1 year of age. Paediatrics 1998;101(4)