**PAEDIATRIC RESPIRATORY ECMO GUIDE**

**JANUARY 2014**

The following guide has been developed from the full Paediatric ECMO Plan, to provide on-call managers and directors with an understanding of the function and activities of those critical care units and networks that have ECMO capability, during periods of high or excessive demand that may warrant an overview by the Regional Team.

**Paediatric Respiratory Extra Corporeal Membrane Oxygenation (ECMO)**

**Background**

Extra corporeal membrane oxygenation (ECMO) is a technique that allows babies and children with severe respiratory difficulties (including infection and structural problems with lungs or airway and for whom mechanical ventilation is insufficient to support life) to have the function of their lungs (and also their heart if needed) supported with a mechanical pump and artificial lung.

**Designated Centres**

There are three *designated* centres in England that provide this service and with whom NHS England has standard contracting arrangements:

* Great Ormond Street Hospital for Children NHS Foundation Trust [two normal beds and two surge beds]
* The Newcastle upon Tyne Hospitals NHS Foundation Trust [two normal beds and up to two further beds]
* University Hospitals of Leicester NHS Trust [four beds and also provides a mobile ECMO service]

There is also a *designated* centre in Scotland to which the English NHS has access:

* The Royal Hospital for Sick Children, Glasgow [four normal beds, potentially one surge bed and a mobile ECMO service when necessary.

There are also two *surge* centres that provide capacity when there is no bed available in any of the designated centres:

* Alder Hey Children’s NHS Foundation Trust [two surge beds (provided no cardiac patients on ECMO) and potentially a further bed for a limited period]
* Birmingham Children’s Hospital NHS Foundation Trust [two surge beds]

**ORGANISATIONS AND ROLES**

**NHS England**

**Paediatric ECMO Lead in-hours**: between the hours of 9am and 5pm from Monday to Friday (except for bank holidays), the Paediatric ECMO Lead is **Fiona Marley, telephone 07795 636 830, e-mail fiona.marley@nhs.net.** Colleagues are notified of any deputising arrangements for annual leave, etc.

The role of the Paediatric ECMO Lead in-hours is to:

* Be responsible for the day-to-day management of the standard operating procedure
* Review the standard operating procedure as necessary
* Ensure that appropriate payments are made for surge activity in line with agreed tariffs
* Convene and chair the weekly teleconferences during pre-surge phases
* Ensure that any actions following the weekly pre-surge teleconferences are implemented
* Send an e-mail to the Paediatric ECMO Lead out-of-hours every Friday at 4pm
* Link with other leads – for example, the Paediatric Critical Care Lead – when there is an indication that ECMO capacity issues may impact/are impacting on other services
* Confirm when a surge point is reached
* Monitor bed capacity on a daily basis when a surge point is reached
* Convene and chair teleconferences with the paediatric respiratory ECMO centres during surge phases
* Ensure that any actions following surge teleconferences are implemented
* Confirm when a surge point has passed and pre-surge arrangements can be reinstated
* Confirm surge arrangements when these have been deployed out-of-hours
* Confirm (in conjunction with the Medical Directorate Lead) when an escalation point is reached
* Convene teleconferences with the paediatric respiratory ECMO centres during escalation phases
* Ensure (in conjunction with the Medical Directorate Lead) that any actions following escalation teleconferences are implemented
* Provide support to the Paediatric ECMO Lead out-of-hours during escalation phases
* Confirm (in conjunction with the Medical Directorate Lead) when an escalation point has passed and surge arrangements can be reinstated
* Prepare (in conjunction with the Medical Directorate Lead) a debrief following any escalation phases, including recommendations for improvement
* Discuss post-escalation debriefs at the weekly teleconferences
* Implement any changes agreed as a result of post-escalation debriefs

**Paediatric ECMO Lead out-of-hours**: between the hours of 5pm and 9am Monday to Friday, at weekends and on bank holidays, the Paediatric ECMO Lead is the on-call Operations Director supported by the on-call Emergency Preparedness Resilience and Response (EPRR) officer, telephone 0845 000 5555, e-mail england.eprr@nhs.net. The role of the Paediatric ECMO Lead out-of-hours is to:

* Send an e-mail to the Paediatric ECMO Lead in-hours every Monday at 8am
* Confirm (in conjunction with the Medical Directorate Lead) when an escalation point is reached
* Convene teleconferences with the paediatric respiratory ECMO centres during escalation phases
* Ensure (in conjunction with the Medical Directorate Lead) that any actions following escalation teleconferences are implemented (in conjunction with the Paediatric ECMO Lead in-hours)
* Confirm (in conjunction with the Medical Directorate Lead) when an escalation point has passed and surge arrangements can be reinstated

**Medical Directorate Lead**

The role of the Medical Directorate Lead is to:

* Confirm (in conjunction with the Paediatric ECMO Lead) when an escalation point is reached
* Chair teleconferences during escalation phases
* Ensure (in conjunction with the Paediatric ECMO Lead) that any actions following escalation teleconferences are implemented
* Act as the NHS England lead in the event of any media communications
* Confirm (in conjunction with the Paediatric ECMO Lead) when an escalation point has passed and surge arrangements can be reinstated
* Prepare (in conjunction with the Paediatric ECMO Lead), a debrief following any escalation phases, including recommendations for improvement

**Medical Directorate Lead**

* Confirm (in conjunction with the Adult ECMO Lead) when an escalation point is reached
* Chair teleconferences during escalation phases
* Ensure (in conjunction with the Adult ECMO Lead) that any actions following escalation teleconferences are implemented
* Act as the NHS England lead in the event of any media communications
* Confirm (in conjunction with the Adult ECMO Lead) when an escalation point has passed and surge arrangements can be reinstated

**NHS England** will circulate a brief note of the meeting. The regional representatives will be responsible for feeding back to their constituent Area Teams if, for example, there is an indication that ECMO capacity issues may impact on other services.

The teleconference details are as follows:

UK Freefone: 0800 917 1950

Chairperson passcode: 56527758 then #

Participant passcode: 76793881 then #

**Interdependencies / links with other services**

* Critical Care Networks to prioritise repatriation to create capacity in ECMO centres. Regional leads to support the repatriation of patients from ECMO centres to create capacity during surge, accepting that repatriation may not be back to originating Trusts.
* ECMO centres supported by Regional leads to manage repatriation of patients to create capacity.
* Acknowledgement in Regions that prioritisation of ECMO may impact on Trust waiting times for elective services.
* Regional leads to facilitate local clinical teams to support the physical repatriation of patients.