



Royal Papworth Hospital
NHS Foundation Trust

Extra-corporeal membrane oxygenation (ECMO)

A patient's guide

You have been given this leaflet because your relative or friend is, or has been, receiving ECMO support in the Intensive Care Unit (ICU) at Royal Papworth Hospital.

You should also read the leaflet explaining ICU care at Royal Papworth Hospital which you will be given. If you require any further information, please feel free to ask a member of the team or request a private meeting.

What is ECMO?

ECMO is a technique that oxygenates blood by pumping it through a machine outside of the body. It can be used in potentially reversible severe respiratory failure when conventional ventilation is unable to oxygenate the blood adequately. The aim of ECMO in respiratory failure is to allow the injured lung to recover whilst avoiding certain recognised complications associated with conventional ventilation.

ECMO can also, in some circumstances, support the heart by circulating the blood around the body when the heart is too weak to do this.

The procedure involves removing blood from the patient, taking steps to avoid clots forming in the blood, adding oxygen to the

blood and pumping it back to the patient.

Different types of ECMO

There are different types of ECMO and each is used in a specific situation. We use many different terms to describe the ECMO circuits. Please ask us if you would like more information on the type your relative/friend has.

Who needs ECMO?

ECMO is high risk and is therefore only used as a matter of last resort in patients who have a condition of the heart or lungs that they may recover from. Other treatments will be used before ECMO is considered.

Are there any risks associated with ECMO?

We work hard to minimise the risks and patients are continuously monitored. The most common problems are:

- **Bleeding**
To prevent the blood clotting in the tubing, the blood may need to be thinned with a drug called heparin. This increases the risk of bleeding. Patients are continuously monitored for signs of bleeding.
- **Infection**
Because of the tubes inserted there is an increased risk

of infection. Patients are monitored for early signs of infection and any infection is treated.

- **Problems with the ECMO tubing itself**

To try to prevent these problems the circuit is checked regularly. An ECMO Specialist, who is a highly trained senior nurse, is always available in ICU.

Who cares for the patient on ECMO?

Whilst on ECMO your relative/friend needs highly specialised care. This is provided by a large team that includes intensive care specialists, cardiothoracic surgeons as well as ECMO-trained nurses, physiotherapists and perfusionists.

Please ask if you are unsure of an individual's role.

When will ECMO be removed?

The time spent on ECMO is different for each patient and can vary from a few days to several weeks. All patients are seen several times a day and plans changed according to medical status. Staff will tell you about any changes in treatment.

The doctors and nurses will discuss with you any changes in your relative/friend's condition.

If, at any time, you would like to speak to one of the consultants in intensive care medicine or the ECMO nurse consultant, please ask the Sister on duty.

Frequently asked questions

- Q. Will the patient have to stay asleep?
- A. Not necessarily, this will be assessed on an individual basis.
- Q. Will the patient have to stay in bed?
- A. This will depend on the type of ECMO and the patient's condition. This is regularly re assessed.

Will visiting be restricted?

Visiting is the same as for all patients in the Intensive Care Unit. There is open visiting on the unit except for patient rest period from 2-3pm. (Further details can be found in the 'The Critical Care Area - A visitor's guide' leaflet).

Why does my relative/friend have to go to Royal Papworth?

There are only five hospitals in England that can care for patients with ECMO and usually a patient will come here because Royal Papworth is the ECMO hospital closest to their hospital.

Royal Papworth Hospital NHS Foundation Trust

Papworth Road

Cambridge Biomedical Campus

Cambridge

CB2 0AY

Tel: 01223 638000

www.royalpapworth.nhs.uk

A member of Cambridge University Health Partners

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Department: ICU
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