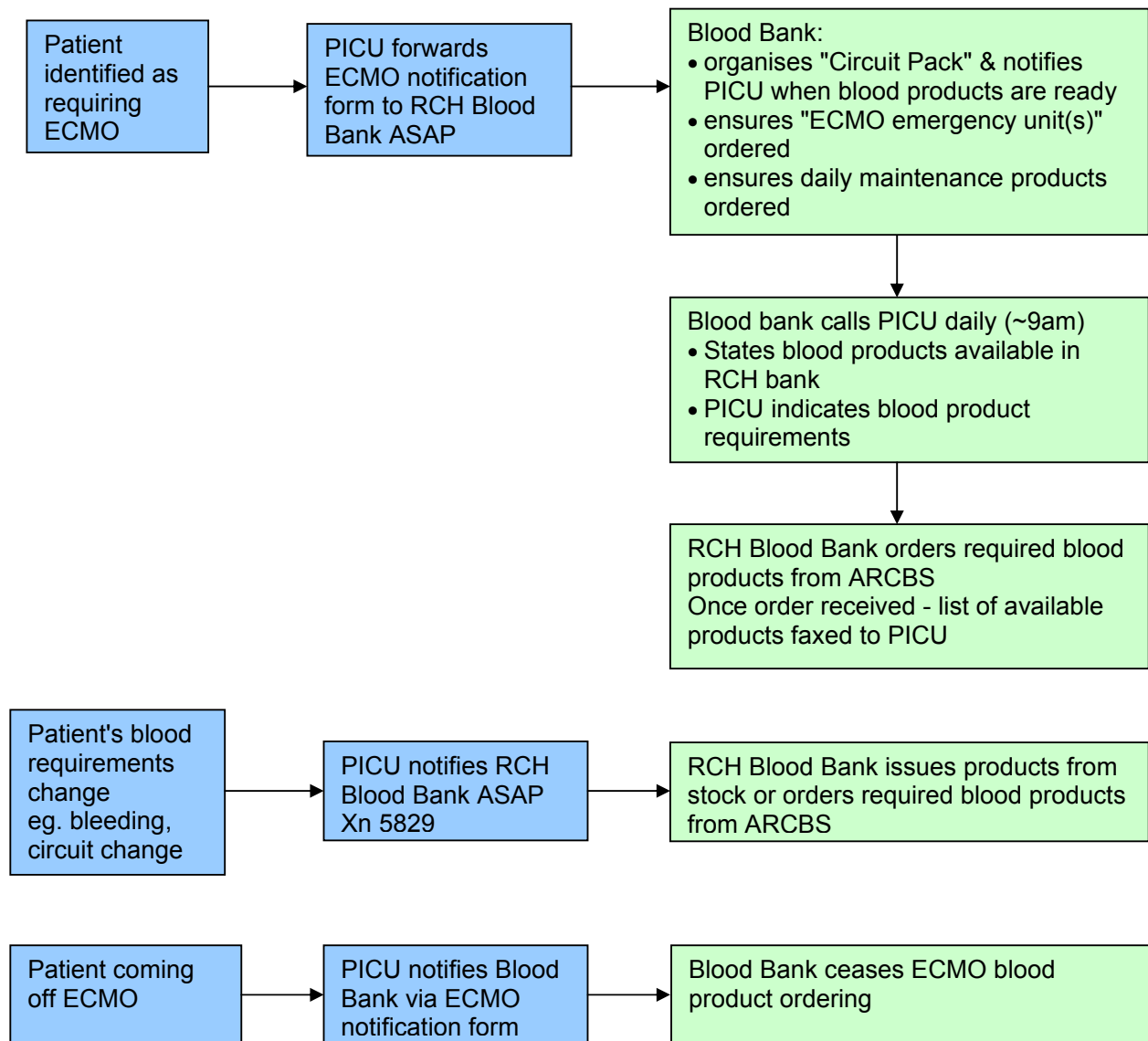


# Provision of Blood Products for ECMO/VAD patients (PICU)



**Note:**

PICU notifies RCH Blood Bank (Xn 5829) when blood products are required for transfusion

- Blood bank will irradiate red cells immediately prior to issue (allow 5 minutes)
- Blood bank thaws FFP/cryo (allow 30 minutes)

See page 2 for further information

# Blood product support for ECMO/VAD patients

**Good communication** is the key to obtaining the best possible support from your blood bank/laboratory during the management of ECMO patients. Keep RCH Blood Bank informed of the patient's blood product requirements: e.g. going on/off ECMO/theatre/bleeding.

To facilitate timely provision of blood products the following will be assigned to each ECMO patient by RCH Blood Bank:

Clinical indication	Blood products issued/reserved	< 10kg	10-30kg	>30kg
<b>"Circuit pack"</b> For initial priming ( <b>notify Blood Bank</b> )	Red cells (< 7 days old)	2	2	3
	Platelets	2 Paediatric	2 -3 Paediatric	1 Pool
ECMO Emergency Unit (bleeding, theatre, etc)	Red cells (< 14 days old)	1	1	1
Daily maintenance (top-up)	Red cells (Suitable until product expiry)	1 (or 2 pedipaks if on ASBT)	1	2
	Platelets	1 Paediatric	2-3 Paediatric	1 Pool

RCH Blood Bank will telephone the ECMO nurse each morning (~9am) to:

- notify re available blood products
- discuss blood product requirements for that day
- notify if further crossmatch required

RCH Blood Bank orders required blood products from ARCBS. Once order received - list of available products faxed to PICU.

## Freshness of red cell products:

In the absence of conclusive evidence it is reasonable to provide "fresh" red cells where large volume transfusion is required, e.g. priming of ECMO circuit. Red cells < 7 days old will be provided in this situation. Red cells for emergency transfusion are acceptable at < 14 days. Red cells for daily maintenance requirements are acceptable until product expiry.

Note that freshness of red cell products is dependent on availability from ARCBS.

In an emergency, the age of available red cell products **should not** defer commencement of ECMO.

**Ordering of red cell and platelet products:** RCH blood bank will order red cell and platelet products from ARCBS to ensure products for daily maintenance and emergency are available. Telephone blood bank if additional products are required - Blood Bank will issue from existing stock where available or place an order to ARCBS if required.

**FFP and cryoprecipitate:** RCH blood bank maintains stocks of FFP and cryoprecipitate - allow 30 minutes for thawing.

**ASBT protocol:** The ASBT protocol enables us to omit repeated crossmatching for infants during the first 4 months of life, providing certain criteria are met. Once an infant is accepted on the ASBT Protocol, further samples are not required for pretransfusion testing for that admission. Blood can be ordered by telephoning the blood bank.

**Pedipaks:** Pedipaks are one blood donation split into four equal volumes (approximately 50ml). Once a baby receives a pedipak, the remaining segments are reserved for that infant. The use of pedipaks enables us to minimise patient exposure to multiple donors and adhere to maximum hang time for blood products (4 hours).

**Note:** All red cell and platelet products should be irradiated and leucocyte depleted.

Aim for children on ECMO/VAD to have a haemoglobin >100 g/L and platelet count >100 x 10<sup>9</sup>/L