

BLOOD PRODUCT SUPPORT FOR ECLS/VAD PATIENTS

PURPOSE

Good communication between the RCH Blood Bank, Hospital Medical Officers and ECLS Nurse Specialists is the key to obtaining the best possible support from the RCH Blood Bank during the management of ECLS patients.

This document outlines the responsibilities of the Blood Bank Scientists, Hospital Medical Officers and the ECLS Nurse Specialists to facilitate timely provision of blood product support to patients on ECLS/VAD.

RESPONSIBILITY

Position	Responsibility
Hospital Medical Officer (HMO)	<ul style="list-style-type: none"> Prescribe and document blood product orders per the RCH Blood Transfusion Procedure.
ECLS Nurse Specialist	<ul style="list-style-type: none"> Place blood product orders per HMO's prescription in patient's records. Advise Blood Bank of patient's expected blood product usage Advise Blood Bank of any planned procedures (chest exploration or decannulation)
Blood Bank Scientist	<ul style="list-style-type: none"> Telephone the ECLS Nurse Specialist twice a day (approx. 0900hrs and 1700hrs) to: <ul style="list-style-type: none"> Notify what blood products are currently available for the patient. Advise any supply restrictions impacting blood product availability for the patient. Advise if new sample for pre-transfusion testing required. Ensure a weight based 'ECLS kit' is available at all times. Ensure that the blood products reserved for the patient are of the appropriate age.

PROCEDURE

1. ECLS PACK

- To facilitate timely provision of blood products a weight based 'ECLS Pack' will be assigned and maintained 24/7 for each ECLS patient by RCH Blood Bank:

	Blood products issued/reserved	< 10kg	10-30kg	>30kg
ECLS Pack	Red cells	2 adult +2 paedi	2 adult	2 adult
	Platelets	2 paedi	2-3 paedi or 1 adult	1 adult

2. DAILY COMMUNICATION

- The Blood Bank Scientist will telephone the ECLS Nurse Specialist twice a day at 0900hrs and 1700hrs (approx.) to:
 - advise what blood products are currently available for the patient and any supply restrictions impacting availability

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- advise when a new pre-transfusion sample required.
- ECLS Nurse Specialist will:
 - advise expected blood product usage (e.g. if patient bleeding)
 - any planned procedures (chest exploration or decannulation) which may require blood product support.

3. BLOOD PRODUCT SUPPORT

3.1. Transfusion triggers for children on ECLS/VAD

Haemoglobin <80 g/L

Platelet Count <80 x 10⁹/L unless otherwise advised

3.2. Red Cells

ALL ECLS patients will receive IRRADIATED Red Cells (including all emergency cannulations).

Note, NON-IRRADIATED Red Cells will be provided if MTP Procedure is activated

3.3. Age and Type of Blood Products

- Blood Bank Scientists are responsible to ensure that the blood products reserved for the patients are of the appropriate age and in accordance with the weight based ECLS pack.
- Paediatric sized packs (paedi packs) are one adult sized pack (donation) split into four equal volumes of Red Cells, Platelets or Fresh Frozen Plasma (FFP). Use of paedi packs enables us to minimise patient exposure to multiple donors and adhere to maximum hang time for blood products (4 hours).

3.4. Ordering of Blood Products

- The RCH Blood Bank sources blood products from the Australian Red Cross Blood Service. Occasionally, supply restrictions imposed by the Blood Service will impact the inventory supplied to the RCH Blood Bank, especially of platelets. Advise the Blood Bank **early** if use of additional blood products (especially platelets) is anticipated so that additional products can be ordered from the Blood Service.
- The Blood Bank Scientists will endeavour to maintain a 'complete' ECLS/VAD pack for each patient at all times and will advise the ECLS Specialist Nurse if this is not possible due to supply restrictions.
- RCH Blood Bank maintains stocks of Fresh Frozen Plasma (FFP) and Cryoprecipitate (CRYO) - allow 30 minutes for thawing.

3.5. Blood Box

- The Blood Box is a validated container (esky) suitable for short term storage (up to 4 hours) for Red Cells at the point of care.
- The Blood Box is available to store Red Cells for up to 4 hours for 'just in case' specific blood requirements at bedside e.g. chest exploration, decannulation or circuit change.

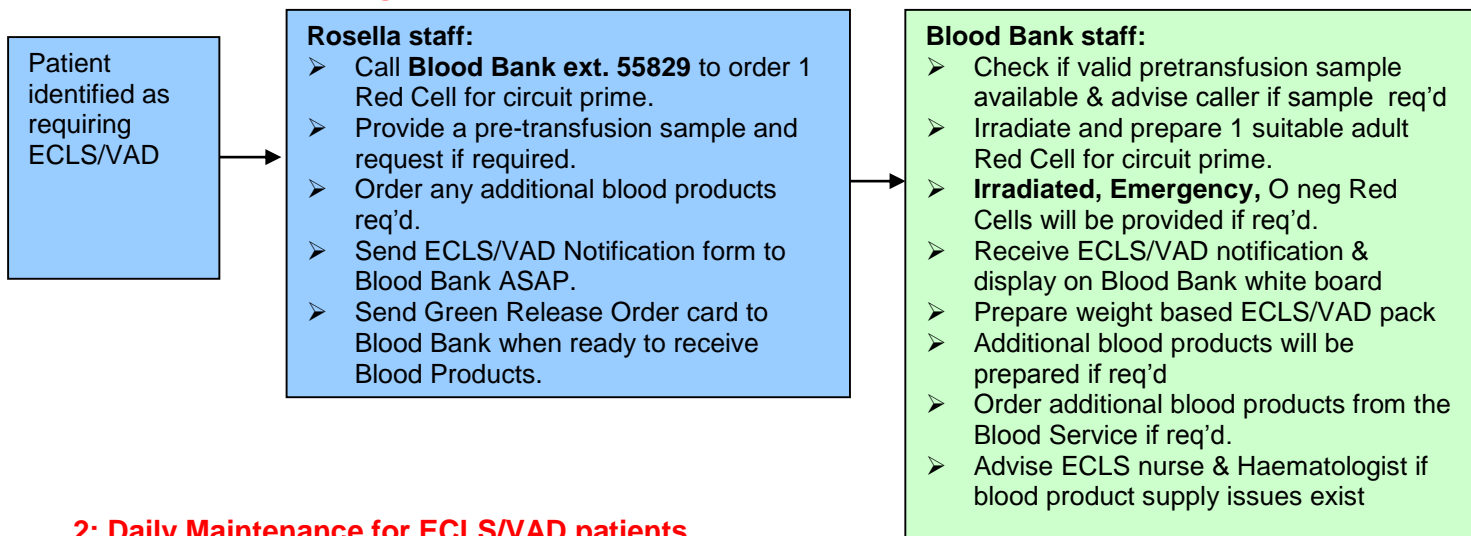
3.6. ASBT Protocol

- 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.

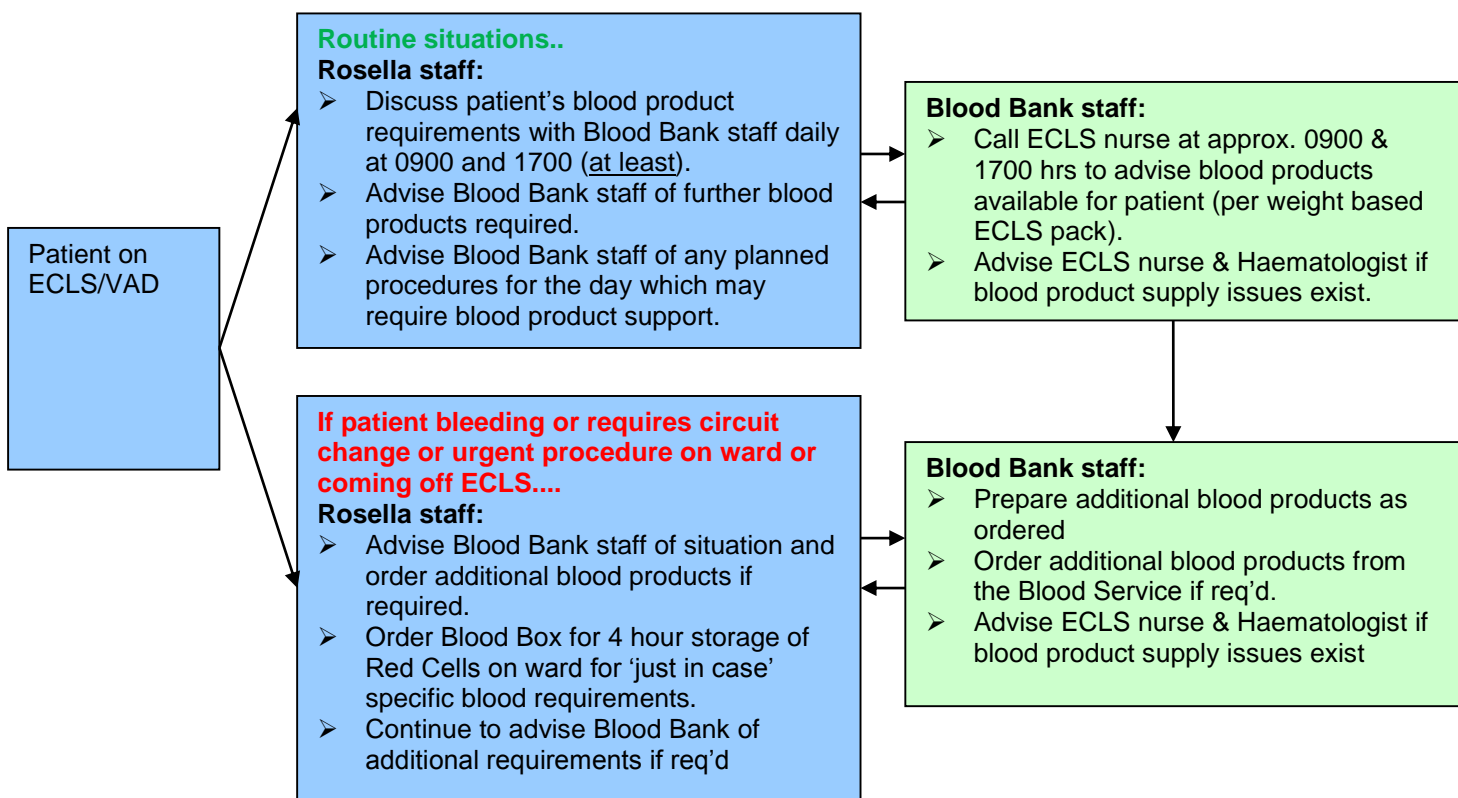
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3.7 Blood Product Support for ECLS/VAD Patients FLOW CHARTS

1: Patient commencing ECLS/VAD



2: Daily Maintenance for ECLS/VAD patients



3: Patient off ECLS/VAD

