

PRE-OPERATIVE PREPARATION FOR PAEDIATRIC BLOOD TRANSFUSION

The Royal Alexandra Children's Hospital Standard Operating Procedure, BSUH NHS Trust

FOR THOSE PATIENTS THAT MAY NEED BLOOD PERI-OPERATIVELY:

- For a patient to receive fully cross-matched (as opposed to group specific) blood, **TWO** G&S samples are required.
- For a patient with **known anti-bodies**, **liaise immediately with transfusion as blood may not be available on site**

WHEN SHOULD I SEND THE FIRST (i.e. "HISTORICAL") GROUP & SAVE (G&S) SAMPLE PRE-OPERATIVELY?

- This first sample is the "historical" sample. It can be sent at any time pre-operatively (i.e. can be minutes to years old).

WHEN SHOULD I SEND THE SECOND (i.e. "CURRENT") G&S SAMPLE PRE-OPERATIVELY?

PATIENT:	2nd SAMPLE TO BE TAKEN NOT MORE THAN:
Patient transfused <i>or</i> pregnant within the last 3 months?	72 hours before blood required to be available
Patient NOT transfused <i>and</i> NOT pregnant within the last 3 months?	7 days before blood required to be available

WHAT IS ELECTRONICALLY ISSUED BLOOD?

- Blood that is **electronically cross-matched**
- Can be **issued EITHER one unit at a time** (conserves stock) **or as many units are needed**
- **Available immediately** on request, it just needs to be electronically scanned ("issued") from the fridge

WHAT MAKES A PATIENT SUITABLE FOR ELECTRONICALLY ISSUED BLOOD?

- Requires **TWO G&S** samples (to "double-check" for absence of antibodies, confirm patient identity and blood group)
- First ("historical") sample may be **historical or taken on the same day** (e.g. from same cannula with short gap between; ensure samples are labelled with separate timings)
- Second ("current") sample must be **no older than 72 hours if patient transfused or pregnant within the last 3 months OR no older than 7 days if patient NOT transfused or NOT pregnant within the last 3 months**
- Ideally it is taken by **two different people** to ensure correct patient identification
- To confirm availability or eligibility for electronic issue, please call **Transfusion Services on ext 4577**

WHAT PATIENTS ARE NOT SUITABLE FOR ELECTRONIC ISSUE?

- Less than 4 months old – phone transfusion as may need a sample from patient's mother
- Patient has anti-bodies
- Patient has had a positive DAT (Direct Antiglobulin Test) – needs to be fully cross-matched
- Patient has weak D
- Patient has an anomaly on current sample

WHAT BLOOD BOTTLE SHOULD THE G&S BE SENT IN?

- Blood should be taken in a **purple EDTA** bottle (with any coloured ring):
 - o **> 4 months old:** 2mL EDTA
 - o **< 4 months old:** 500µL EDTA
- Patient data should be filled in using the "**Blood Hound**" system, to avoid transcription errors
- If filled in by hand, must comply with Trust guidelines
 - o see link: <http://pathology.bsuh.nhs.uk/pathology/Default.aspx?tabid=110#Crossmatch>

WHAT SHOULD I DO IF IT'S DIFFICULT TO SEND TWO SAMPLES? (e.g. distressed patient)

- These two samples can be taken from the same cannula:
 - o If taken at **the same time**, this needs to be by **two different people preferably using bloodhound** to minimise error and confirm patient identity
 - o If taken on **different occasions**, it can be done by the **same person** (ideally should be done by different people to reduce error)
- In the rare event that it's **impossible to obtain blood** for the second G&S sample:
 - o It's reasonable for the **second sample to be taken after induction of anaesthesia** by anaesthetist (if there were no antibodies)
 - o The **surgical SHO** then has the **responsibility to personally deliver the sample to the transfusion lab and ensure that the laboratory staff are aware that this is an emergency sample**
 - o If **only 1 sample available**, then patient can **only** be issued group O red cells

FLOWCHART TO PREPARE FOR PAEDIATRIC BLOOD TRANSFUSION & ELECTRONICALLY ISSUED BLOOD

