

Neonatal Components

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Neonatal blood Components

Put Neonatal blood components in context

- Briefly cover how we process our whole blood units
- What tests and checks we perform
- How Neonatal products differ from adult products
- What Neonatal components we supply

Whole Blood donations

We process all WB donations

Produce 3 main product groups

Red Blood Cells

Frozen Products FFP and Cryo

Platelets

All our products are leucodepleted

Most RBC are suspended in SAG M

Apheresis

- We currently produces platelets by apheresis
- This process can also be used for FFP and RBC
- We only remove the products we need from the donor

Why is everything processed

- To ensure we only transfuse what the patient requires so some patients may require multiple products
- Makes best use of donations

Testing

- 2 groups of tests performed
- Mandatory
- Additional testing

Mandatory testing

- These are ABO and RHD testing
- Antibody Screen
- Hepatitis B and C
- HIV 1 and 2
- HTLV
- Syphilis

If any of these are positive or not tested the donation will not be used

Additional testing

- These include
- Further phenotyping
- CMV testing
- PANTS “Paediatric antibody screen”
- HT High titre anti A and B
- HbS Sickle
- We don't test all donations for these and products can be issued with positive results or without testing

Adult Products

- For routine cases products are selected by ABO and Rh group in the hospital transfusion lab, from their stock and cross matched
- In most cases additional testing is not required

Neonatal products

Blood products for Neonatal and Paediatric use is different

The criteria of what is suitable is a lot stricter

This is due to

Immature Immune system and differences in physiology

Patients are small

Need to prevent future problems

Neonatal products RBC

- Adenine and Mannitol in SAGM are potentially toxic to neonates so we supply SAG free products
- NHSBT supplies 2 products that have no SAGM
- Red Cells for Intrauterine transfusion
- Red Cells for Neonatal exchange transfusion

Neonatal Products

- In addition to be SAGM free these units need to meet other criteria
- CMV neg
- PANTS neg
- HbS Neg
- K neg
- HT neg

Neonatal products cont

They also need to come from donors who have been bled within past 2 years

Be less than 5 days old when transfused

There are also restriction on timings for their processing

And if they are Rh D neg they need to be rr

For IUT units they also have adjusted heamatocrit

Neonatal products Frozen

- Both FFP and Cryo is produced for Neonatal use
- This is produced from non UK plasma
- Methylene blue treated
- Supplied in small volume packs

Neonatal Platelets

- Platelets can be supplied as splits 1 adult dose is split into 4 packs
- These units are always from aphaeresis donations and are
- CMV neg
- HT neg
- PANTS neg

Paediatric Products

Red cell splits

these are adult doses of RBC split into 6 packs

They contain SAGM but otherwise have the same specifications as for Neonatal products

LVT,s

Same specifications as splits but whole pack supplied

Paediatric products

- Paediatric FFP is available
- This is the same specification as Neonatal but larger volume
- Platelet splits are equally suite for Neonatal and Paediatric use

- Any questions