Blood Transfusion User Handbook (Medway Site)

Medway Maritime Hospital
Windmill Road
Gillingham
Kent
ME7 5NY

Timely, Accurate Results; Providing Effective Care

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Active Date: 10/11/2022

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DEPARTMENT OF BLOOD TRANSFUSION (MEDWAY SITE)

1. GENERAL INFORMATION

Medical and Scientific staff within the Blood Transfusion Department have compiled this handbook in consultation with users to provide information about our services and ensure a full understanding of those services to enable their use to full potential.

The information is accurate at the time of issue, but is reviewed and updated as appropriate.

We welcome your comments or suggestions so that we are aware of, and can consider your requirements.

The Blood Transfusion Laboratory carries out blood group analysis and compatibility testing to ensure that blood components are selected safely and appropriately for patients. Diagnostic laboratory work is undertaken by Biomedical Scientists and Healthcare Scientist Support Workers (BMS and HSSW's).

The laboratory is located in the Pathology Department, on Level 4 Red Zone of Medway Maritime Hospital. Entry to the Pathology Department is for authorised personnel only by swipe card access. All other personnel must report to Pathology Reception.

The laboratory complies with the Trust Information Governance procedures and has an internal policy document (Policy for Management of Data and Information - Pathology 2887) to ensure protection of personal information.

Formal laboratory complaints should be sent to the PALS office, who will then forward to the General Manager of Pathology or Designated Individual to investigate. For further information, refer to Pathology 2889 Complaints Assessment Policy.

The Blood Transfusion department participate in National External Quality Assessment Schemes for all tests wherever possible.

1.1 LOCATION

Blood Transfusion Department
Pathology, Level 4 Red Zone
Medway Maritime Hospital
Windmill Road
Gillingham, ME7 5NY

1.2 OPENING HOURS

Routine Working Hours:

Contact Number – Extn: 5117

Medway Maritime Hospital	Pathology Reception	Central Specimen Reception	Blood Transfusion Laboratory
	Monday - Friday	Monday - Friday	Monday – Friday
	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00

Out of Hours Service:

The Blood Transfusion Department operates an out of hours service for the acute service users outside of the routine working hours stated above for urgent samples and clinical advice.

Contact number – 07799 656654

Out of Hours Service	Week Days	Weekends	Bank Holidays
	18:00 – 08:00	Continual Out of Hours cover	Continual Out of Hours cover

1.3 DEPARTMENTAL KEY PERSONNEL

	Secretary / PA	Direct Line
Associate Director of Operations	(01322) 428488	(01322) 428499
Clinical Director	5230	
Business Operations Manager		(01322) 428490
Pathology Quality and Governance Manager		(01322) 428476
Head of Blood Transfusion		6051
Senior Biomedical Scientists		6051
Transfusion Practitioner		6418

Consultants and Speciality Doctors

	Secretary / PA
Dr Maadh Aldouri – *Consultant Haematologist*	Ext. 6178
Dr Sarah Arnott – *Consultant Haematologist*	Ext. 5219
Dr Himali Mendis – *Consultant Haematologist*	Ext. 6178

Dr Winnie French – *Consultant Haematologist*	Ext. 5214
Dr Nahla Osman – *Consultant Haematologist*	Ext. 5214
Dr. Mozghan Samimi – *Speciality Doctor*	Ext. 5214

1.4 LABORATORY VISITS

A successful pathology service depends on the quality of the relationship it has with its Users and so the Department welcomes visits to meet the staff.

To make an appointment please contact the Head of Department on extension 6051, or Senior Biomedical Scientists on extension 6051 and 5117 (laboratory).

All visitors to Pathology must report to Pathology Reception where they will be met by the reception staff who will inform laboratory personnel of their arrival. All visitors must sign in the visitors' book on arrival and departure from the department and will be issued with a visitor's badge which must be returned when they leave.

1.5 INFORMATION GOVERNANCE

Receipt of a recognised test request assumes that the patient has agreed that the test may be carried out, together with any follow-on tests required, and that information may be shared with healthcare professionals and statutory bodies as required. In accordance with legal requirements the department adheres to the Data Protection Act 1998 for all patient information and follows the guidelines laid out by the Royal College of Pathologists for the retention and disposal of laboratory records and specimens (5th edition 2015). Further information on this topic is available from the department upon request.

1.6 BLOODTRACK

BloodTrack is an electronic blood tracking system employed at the Trust for vein to vein recording and audit of the blood transfusion process. Use of the system is mandatory for blood transfusion sample labelling, blood collection and blood administration at the bedside. Refer to Intranet SOP0025 Blood Transfusion – BloodTrack system.

1.7 SOP's AND POLICIES

All Blood transfusion SOPs and policies can be found on the intranet under Policies and Procedures > Q-Pulse document library and searching keyword "blood".

2. SAMPLE COLLECTION

2.1 Potentially Infectious Samples and High Risk Samples

All samples, but particularly those from patients suspected of having certain blood borne and other infectious diseases constitute a hazard to portering and laboratory staff handling them.
Staff are reminded to consider all samples as potentially high risk and therefore must wear gloves when handling blood, body fluids and tissue samples.
If a patient is in a particularly high risk group e.g. viral haemorrhagic fever, SARS, anthrax; the laboratory must be contacted for further advice prior to sample testing.
The Blood Transfusion laboratory can only accept and process samples up to Category 2 risk rating.

2.2 Requesting Tests

Transfusion tests should be requested via a pink blood transfusion paper request form or via EBOS (Electronic Blood Ordering System). We are also able to take requests over the telephone.
The information on all request forms and accompanying specimen bottles must correspond and minimum acceptance criteria are set out in

2.3 Request Forms.

The request form must have the full name and date of birth, gender and a unique identifier present and these must match the sample. Request form mandatory fields are shown in red.
NB: BloodTrack collection labels cannot be used in patient demographics section as this means the patient identification process was not followed prior to sample collection.
The bottom sample collection box MUST be completed fully and signed by the person who has collected the sample. The BloodTrack collection label may be used as this is printed at the bedside and contains all the required information.
Incomplete forms may cause delays in availability of results as samples may be delayed or not processed.

Refer to Intranet SOP0016 Blood Transfusion – Pre transfusion compatibility testing, requesting and prescribing

2.4 Urgent Requests

If a request is clinically urgent please contact the laboratory and give the appropriate information to ensure priority is afforded. The samples must be clearly marked as urgent and kept separately from other samples being delivered at the same time.

Out of hours tests must only be those required for the immediate care of the patient. The out of hour's service is available to acute care only.

2.5 Venous Blood Collection

An evacuated blood collection system is used to collect venous blood samples within the Trust by trained individuals.

*If taking blood using a syringe and needle **DO NOT** transfer the blood into a vacutainer by using the vacuum to draw the blood into the bottle as this can haemolyse the sample.*

Additional information can be found in the Vacuette blood container system section of the Medway Maritime Hospitals Intranet pages, under Directorates and departments>Diagnostics>Pathology >Test and container details.

Samples should be tested within **48 hours** of collection.

2.6 Sample Labelling

Samples are collected into EDTA containers (paediatric EDTA samples are acceptable for children or where difficulty is encountered in bleeding the patient).

Identification of the patient is paramount. In-patients **must** be identified with their request form using their wristband to confirm their full name, DOB and hospital number. In addition, the patient **must** be asked verbally to give their full name and date of birth wherever possible. Out-patients' details **must** be confirmed verbally with the patient (in cases of language difficulties, young children or confused elderly patients' details may be confirmed with an accompanying relative).

- Samples **must** be labelled using the BloodTrack System in all areas where BloodTrack is deployed. This will decrease the risk to patient safety through positive electronic identification of patients using wristband.
- **Samples without BloodTrack label will be rejected.** All staff that do not use BloodTrack will be contacted before the sample is rejected.

Samples **must** be labelled according to the **Blood Group & Crossmatch Labelling Protocol** (refer to Trust SOP, SOP0176 – Pathology Request Form and Sample Labelling Procedure) & current BSH guidelines:

Blood Track label on sample, or if not available and reason stated in box on the request form, ensure the following details are handwritten on the sample:

Last Name/Surname in block capitals (or a coded identifier as in GU patients)

First name – print in lower case script

Hospital number – (PAS generated unique identifier or full Symphony A/E number or NHS number).

Date of Birth

Date collected

Gender

Time collected – use 24 – hour clock

Source/location of the patient

Clinical details / Reason for Transfusion

Signature or initials of the person that bled the patient.

NB: If PAS is down and PAS number not available, effort should be made to locate the PAS number from other clinical systems, for example, Symphony or iLab. If the NHS number can be sourced, then this should be used in the absence of the PAS number. If neither PAS number nor NHS number is not available, please use first line of patient's address **and** post code.

Routine Ante-Natal samples for blood grouping may not have a unique number available, but must be labelled fully with the patients full name, date of birth & first line of address AND postcode or NHS number.

2.7 Sample Validity

The performance of any test and the resulting interpretation is totally dependent on the quality of the sample received into the laboratory. Samples should be sent to the laboratory as soon as possible and, in general, should be kept cool - ideally in the fridge and must be kept out of direct sunlight. Whole blood samples will deteriorate over a period of time. Problems associated with storage include red cell lysis, decrease in potency of red cell antibodies, particularly IgM antibodies and bacterial contamination.

Patient Type	**Sample Type**	
	Whole blood stored @ room temperature	**Whole blood stored @ 2-8°C**
patient transfused or pregnant in last 3 months	up to 48 hours from time of collection	up to 3* days from time of collection
patient NOT transfused or pregnant in last 3 months	up to 48 hours from time of collection	up to 7 days from time of collection

**this is the time between sample collection & subsequent transfusion*

2.8 Rejection of Samples

If a sample is not suitable for processing (i.e. inadequately labelled, wrong sample tube used, request form not completed correctly etc.) the request will be rejected, the ward or surgery informed by phone or email and the details of reasons for rejection recorded on the request form.

Samples may also be rejected for the following reasons:

a) The sample is insufficient for testing
b) The sample labelling requirements (see section 2.6) are not met
c) The sample is haemolysed /clotted
d) The sample is too old to process (>48 hours after sample was taken)
e) The incorrect specimen type is sent to the laboratory

f) There is any doubt over the specimen origin.

2.8 Factors to be considered that may affect sample processing

1. Wharton's Jelly in cord samples
2. Fibrin in sample
3. Patients with atypical antibodies
4. Patients on monoclonal antibody therapy

2.9 Sample Volume and Appropriate Vacutainer

Please refer to Section 6 for volumes and type of vacutainer to use, if unsure please contact the Blood Transfusion laboratory for advice.

Additionally:

- For patients that have been transfused within the last 3 months or had recent BMT: these may affect crossmatching / phenotyping / DAT/ group and antibody screen.
- The Blood Transfusion laboratory can facilitate transfer of specialist tests to the referral NHSBT centres and to Anthony Nolan Trust.

3 TRANSPORTATION OF PATHOLOGY SAMPLES

3.1 Sending Samples to the Laboratory

Samples for the Blood Transfusion Department can be sent to the laboratory in one of three ways:

- By Pneumatic Air Tube delivery
- By the Hospital Portering Service
- By Courier Service

Pneumatic Air Tube Delivery

There are a variety of locations throughout the Hospital that have the facility to send suitable Pathology samples to the laboratory using the Pneumatic Air Tube delivery system. These include:

- Accident and Emergency
- Intensive Care Unit
- SCBU
- FMU
- CCU
- SAU
- Medical HDU
- GDU
- MAU

The pneumatic air tube system is for transport of pathology samples only. The sample(s) must be secured in the air tube carrier pod.

The pneumatic air tube system must NOT be used for:

- Blood components including used blood/FFP/platelets etc.

- Histology specimens
- Blood culture bottles
- Known high risk samples (e.g. viral haemorrhagic fever cases) or suspected emerging diseases
- Blood gas samples
- Ad hoc documentation.

Instructions for use of the system are located at pneumatic tube stations.

Hospital Portering Service

In all other areas of the hospital, samples are sent to Pathology via portering services, using the Call a Porter service, accessed via the intranet. All sample containers must be properly sealed; samples must be in individual sample bags with corresponding request form.

Courier Service

Samples from local GP surgeries are collected by courier and delivered to the Pathology Department.

3.2 Sample Spillages and Leaks

Sample bags containing leaking containers will be discarded and rejected via a report on the LIMS.
If the leak has contaminated the inside of the air tube carrier, the carrier will be taken out of service and decontaminated appropriately by Pathology staff.
If a leak has contaminated the outside of the air tube carrier, the air tube system will be closed down in order that a decontamination procedure may be carried out.
All areas with an air tube station will be notified to ensure other arrangements for sample transportation can be put in place.
Once the decontamination process is complete and the air tube system is working, users will be notified.

3.3 Sample Referral

Samples for referral to another hospital must always be sent via the Pathology Laboratory. This will ensure correct packaging to meet regulatory requirements and provide an audit trail for each sample.

4. TRANSFUSION TRAINING FOR STAFF

All staff handling blood or blood products **MUST** undertake annual mandatory training to ensure safest practice in clinical care. All the blood transfusion certifications can be found on ESR by searching “275 blood”. The names of certifications are as follows:

Certification Name	Course content
275 Blood sampling certification	Blood sample process for blood transfusion & using BloodTrack for sample labelling
275 Blood collection Certification	Collecting blood & blood components from the blood fridges
275 Blood Prescription & Administration	Prescription, consent and administration and monitoring of a blood transfusion including use of BloodTrack

Following eLearning staff will need to complete a face to face practical session: classes can be booked on ESR by searching" 275 blood training" and booking onto a class.

For further details, contact the Transfusion Practitioner or the Trust Education Team.

5. TRANSFUSION ADVICE

Haematology Consultants, Transfusion Practitioner, HoD Blood Transfusion and Senior Biomedical Scientists are happy to discuss and advise on Transfusion matters with patient's medical/ surgical staff and General Practitioners.

6. TEST REPERTOIRE

Test	Sample Type (blood unless otherwise indicated)	Reference Range	Turn Around Time	Comments
Transfusion				
Adult Blood Group and Antibody Screen	6ml **PINK (EDTA)** bottle 4ml **MAUVE (EDTA)** is accepted for paediatrics over 4 months of age.	None applicable	Within 24 hours Urgent samples requiring blood can be processed in 40 minutes if there are no special requirements	*Sample **MUST** have patient's full name, hospital number, date of birth, date and time of sample collection and be signed by the person taking the sample. Bloodtrack **MUST** be used in all areas where it is deployed. DO NOT USE pre- printed labels*
Cross match	6ml **PINK (EDTA)** bottle 4ml **MAUVE (EDTA)** is accepted for paediatrics over 4 months of age.	None applicable	Non-urgent <4 hours Urgent E-Issue 5 minutes Serological 1 hour	If ordered in advance, blood will not be issued until the day before to best rotate blood stocks. Urgent cross matches must be followed up with a phone call to ensure these are prioritised and issued within 1 hour. This can be added up to 6 days after taking the G+S sample. (2 days after for patients transfused or Pregnant within last 3 months)
Direct Antiglobulin Test	6ml **PINK (EDTA)** or 4ml **MAUVE (EDTA)** bottle	None applicable	Within 24 hours	* Can use FBC sample or G+S. This can be added up to 6 days after taking the G+S sample.
Kleihauer	6ml **PINK (EDTA)** bottle	None applicable	Within 24 hours	If sample is post-delivery, it must not be taken within 30 mins of delivery. The optimum sample time is 30-60 mins post-delivery
Neonatal Group and IgG	1 ml **PINK (EDTA)** bottle	None applicable	Within 24 hours	*Sample **MUST** have patient's full name,

DAT				hospital number, date of birth, date and time of sample collection and be signed by the person taking the sample. Bloodtrack **MUST** be used in all areas where it is deployed. DO NOT USE pre- printed labels* Forward group for <4 months only
Rh + K Phenotype	6ml **PINK (EDTA)** bottle	None applicable	Within 24 hours	This can be added up to 6 days after taking the G+S sample (unless patient has been transfused within the last 3 months).
Cord and maternal bloods	6ml **PINK (EDTA)** and 4ml **MAUVE (EDTA)** bottles from cord. 4ml **MAUVE (EDTA)** from mother.	None applicable	Within 24 hours	Cord samples must be labelled with baby's name i.e. Baby Smith, baby's PAS and/or NHS number, baby's date of birth and date and time taken. Maternal samples should be labelled with mothers' forename and surname, mothers PAS and/or NHS number, mothers date of birth and date and time taken. Cord and maternal sample labelling.docx
Prophylactic anti-D		None applicable	Within 1 hour	
Referrals RCI NHSBT				
Alloantibody investigation	2 x 6ml **PINK (EDTA)** bottles	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting.
ABO/Rh grouping problems	6ml **PINK (EDTA)** bottle	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting.
Extended RBC phenotype	6ml **PINK (EDTA)** bottle	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting.
Autoimmune haemolytic anaemia / pos DAT	2 x 6ml **PINK (EDTA)** bottles	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting
Haemolytic transfusion reaction + lines/remnants from units	2 x 6ml **PINK (EDTA)** bottles Post transfusion 6ml **PINK (EDTA)** bottles	None applicable	2-3 working days	Sent to RCI Laboratory at NHSBT Tooting

	pre transfusion			
Compatibility testing	2 x 6ml **PINK (EDTA)** bottles	None applicable	1 working day	Sent to RCI Laboratory at NHSBT Tooting
IgA deficiency / antibodies	2 x 6ml **PINK (EDTA)** bottles	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting
Haemolytic disease of the newborn 2	2 x 6ml **PINK (EDTA)** bottles Maternal 1 ml **PINK (EDTA)** bottle Cord blood	None applicable	2-3 working days	Sent to RCI Laboratory at NHSBT Tooting
Anti-D/c quantification	2 x 6ml **PINK (EDTA)** bottles	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting
Paternal phenotyping	6ml **PINK (EDTA)** bottle	None applicable	5 working days	Sent to RCI Laboratory at NHSBT Tooting
Quantification of FMH or other minor RBC population	6ml **PINK (EDTA)** bottle	None applicable	1 working day	Sent to RCI Laboratory at NHSBT Colindale
Referrals H&I Tooting				
Platelet Refractoriness HLA type Class I HLA specific antibody screen	6ml **PINK (EDTA)** bottle 6ml **GOLD** **(**Clotted)	None applicable	5 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Tooting
Drug Hypersensitivity / Disease Association B27 - B*57:0- HFE - Narcolepsy –Coeliac Others	4ml **MAUVE (EDTA)** bottle or 6ml **PINK (EDTA)** bottle	None applicable	7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Tooting
Referrals H&I Filton				

TRALI Transfusion-related acute lung injury (TRALI)	6ml **PINK (EDTA)** bottle Pre transfusion 6ml **PINK (EDTA)** bottle Post transfusion 6ml **GOLD (**Clotted) Post transfusion	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
TRANSFUSION REACTIONS Transfusion-associated Graft Versus Host Disease (TaGVHD): (STR testing) Severe febrile non-haemolytic transfusion reaction screening for HLA, HNA & HPA antibodies	Discuss sample requirements with H&I consultant. 2 x 6ml **PINK (EDTA)** bottles 2 x 6ml **GOLD (**Clotted)	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton Only after discussion with a NHSBT Medical consultant For Post Transfusion Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
NAIT Fetal/Neonatal Alloimmune Thrombocytopenia	Mother 6ml **PINK (EDTA)** 6ml **GOLD** (Clotted) Father 6ml **PINK (EDTA)** Baby 1ml **PINK (EDTA)**	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Platelet transfusion refractoriness	6ml **GOLD** (Clotted) for HPA antibody screen; 6ml **PINK (EDTA)** for HPA typing.	None applicable	2-3 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Autoimmune thrombocytopenia	18ml **PINK (EDTA)** 6ml **GOLD** (Clotted)	None applicable	Up to 7 working days	The platelet count of the patient should be <100x10**9**/L. These samples should not be refrigerated. Sent to Histocompatibility and

				Immunogenetics Laboratory at NHSBT Filton
Heparin Induced Thrombocytopenia (HIT):	6ml **GOLD** (Clotted)	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Other drug induced antibody mediated thrombocytopenias	6ml **GOLD** (Clotted) A sample of the implicated drug(s) together with the pharmacological concentration used.	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Post Transfusion Purpura (PTP)	6ml **PINK (EDTA)** 6ml **GOLD** (Clotted)	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
NAIN: Neonatal Alloimmune Neutropenia	Mother 6ml **PINK (EDTA)** 6ml **GOLD** (Clotted) Father 6ml **PINK (EDTA)** Baby 1ml **PINK (EDTA)**	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Infant autoimmune neutropenia:	2ml **PINK (EDTA)** 2ml **GOLD** (Clotted)	None applicable	Up to 7 working days	The neutrophil count of the patient should be <2x10**9**/L. Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Adult autoimmune neutropenia	6ml **GOLD** (Clotted)	None applicable	Up to 7 working days	The neutrophil count of the patient should be <2x10$_9$/L. Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Drug induced antibody mediated neutropenias	6ml **GOLD** (Clotted) A sample of the implicated drug(s) together with the pharmacological concentration used.	None applicable	Up to 7 working days	Sent to Histocompatibility and Immunogenetics Laboratory at NHSBT Filton
Referrals to IBGRL				
Genotyping/Extended Genotyping	4ml **MAUVE (EDTA)** bottle or 6ml **PINK (EDTA)** bottle	None applicable	Within 10 working days	Sent to IBGRL

Fetal genotyping from maternal blood	16ml **MAUVE (EDTA)** or **PINK (EDTA)** per Rh test	None applicable	Within 7 business days	Pregnancy must be at least 16 weeks for RhD/C/E/c. Pregnancy must be at least 20 weeks for Kell typing.

7 BLOOD COMPONENTS AND PRODUCTS

All requests must be made by a clinician or nurse trained in prescribing blood components.
For non-urgent requests, requests are to be made via the transfusion request form.
For urgent requests, please phone the laboratory with the request.
Since January 1st 2013, **2 samples are required** from a patient before group specific blood products and components will be issued based on BSH Guidelines. If a second sample is necessary, it should be taken as a separate episode with a separate request form and after positively identifying the patient for the second time using the information on the request form.

If there is no historic blood group record, the following groups will be issued:
Group O red cells
Group A HT-negative platelets
Group AB/A FFP
Group A Cryoprecipitate

Traceability (as required by the Blood Safety and Quality Regulations 2005) is achieved primarily through BloodTrack. If Bloodtrack is not used to detail a component has been transfused, the slip at the bottom of the Bloodtrack label on the component must be returned to the laboratory.

Blood products/components kept out of the blood fridge for more than 30 minutes will be quarantined while kept within the optimal temperature. Blood/components that have been kept out of the blood fridge for more than 60 minutes will be discarded. Where this is avoidable, a DATIX will be raised.

7.1 Red Blood Cells:

The request for red cells can be made with a new group and save and or on an existing valid group and save. Cross matched blood will be available from the Issue Fridge in the Blood Transfusion Laboratory lobby. Access is controlled for blood collection only for members of staff who have undergone annual training and competency assessment for collection of blood components/ products.

7.2 Platelet Concentrates:

NICE recommendations state to transfuse one pool of platelets at a time and not undergo double dosing; consider the British Society of Haematology (BSH) guidelines for platelet transfusion.
If staff feel that the platelet transfusion is inappropriate they may challenge this.
DO NOT REFRIGERATE ON WARD as this will impair platelet function.
Platelets may require ordering from the NHSBT and may take up to 4 hours to be delivered on site; for HLA matched platelets this may take up to 48 hours, therefore give as much notice as possible for planned transfusions.

7.3 Fresh Frozen Plasma (FFP), Cryoprecipitate (Cryo) and Octaplas:

(For dosing information or to request clinical advice, please contact the Haematology Consultant on-call via switchboard.)

FFP, cryo and Octaplas are frozen products that require 20 minutes to thaw before being ready to issue.

Cryoprecipitate must be used within 4 hours of defrosting.

FFP and Octaplas must be used within 24 hours of defrosting (when stored at 2-6°C).

7.4 Anti-D Immunoglobulin (Ig):

Anti-D Ig is given on a named patient basis and is available in 1500IU doses.

Anti-D Ig is given to Rh D negative women during and after pregnancy for the following reasons:

- Miscarriage before 12 weeks ONLY IF it has required medical intervention (i.e. not for spontaneous miscarriage)
- Per Vaginal (PV) bleeding, threatened abortion/miscarriage after 12 weeks
- Seat-belt injury with or without PV bleeding and trauma to the abdomen with or without PV bleeding after 20 weeks gestation,
- Invasive procedures (chorionic villous sampling, amniocentesis)
- Evacuation and removal of products of conception (ERPC) from 12 weeks gestation
- Post-delivery if baby is found to be Rh positive
- As part of the antenatal care, all Rh D negative women are offered one 1500IU dose of Anti-D Ig at 28 weeks gestation; if this is not accepted, this must be documented in patient notes and the transfusion department informed.
- Potentially this can be given if the laboratory had had to transfuse Rh positive blood components to Rh negative individual.

7.5 Coagulation Factors/Products

These products include Advate, Benefix, Voncento, Beriplex and Novoseven and are available, after discussion and approval, from the Consultant Haematologist. They are used to treat patients with coagulation factor deficiencies, in cases of massive haemorrhage or for rapid reversal of oral anticoagulation (e.g. warfarin).

7.6 PROVISION OF BLOOD IN AN EMERGENCY

Refer to Trust SOP (SOP0026 - Blood Transfusion – Emergency issue of O Rh D Negative Blood)

Emergency issue of O Rh D Negative Blood is available for use in a **life threatening emergency** at any time, 24 hours a day, when the patient's blood group is unknown, and when there is not a valid group and save sample in the laboratory. Two units of emergency blood for adult and paediatric use are kept in the issue fridge in the Pathology Blood Transfusion Department (4HP 04A), as well as three neonatal packs of emergency blood suitable for neonatal use.

There are risks associated with transfusing uncrossmatched O Negative blood. Where the patient's blood group is known and confirmed, it is safer to transfuse ABO Rh (D) compatible blood.
Fully cross-matched blood can be available within 40 minutes once the sample has arrived in Blood Bank. Group specific blood can be available within 10 minutes once the sample has arrived in blood bank.

7.7 MASSIVE BLOOD LOSS PROTOCOL

Refer to Trust SOP (SOP0369 – Massive Blood Loss Procedure)

The Massive Blood Loss Policy (MBLP) is triggered to provide blood and blood components to patients with an urgent need, in a major haemorrhage situation.

At the request of a **team leader (doctor or paramedic only)**, the 'massive blood loss protocol' (MBLP) can be initiated. If unsure whether MBLP should be initiated, consider consultant involvement. The team leader should then nominate a team member who will activate the MBLP. The Nominated Team Member (NTM) will then co-ordinate communications with the laboratory and support staff.

The Trust policy on group check samples must be adhered to. This means that the laboratory must have 2 confirmed blood groups from the patient before group specific blood will be made available. If a second sample is necessary, it should be taken as a separate episode with a separate request form and after positively identifying the patient for the second time using the information on the request form.

Until a confirmed group has been established group O blood will be made available. Where a delay occurs in the provision of group compatible blood, O RhD negative blood will be made available for women under 50, and O RhD positive for men and women older than 50.

8 TRANSFUSION REACTION

Refer to Trust SOP (SOP0019 – Blood Transfusion – Management of a Suspected Transfusion Reaction)