

PORTIUNCULA HOSPITAL

BLOOD BANK

PRIMARY SAMPLE COLLECTION MANUAL

TITLE: PRIMARY SAMPLE COLLECTION MANUAL

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1.0 INTRODUCTION

- 1.1 This manual is designed to give an overall view of the services available in the Blood Bank. It is intended as a quick reference guide for all Blood Bank users.
- 1.2 All Blood bank services undergo continuous review through quality assurance and audit activities. The Blood Bank is committed to performing its activities in accordance with the requirements of the International Standard ISO 15189 (current version).
- 1.3 **This manual is intended for users of the Blood Bank Services both within the hospital, and those from outside agencies e.g. general practitioners.**
- 1.4 Blood Bank management are committed to:-
- staff recruitment, training, development and retention at all levels to provide a full and effective service to it's users.
 - the proper procurement and maintenance of such equipment and other resources as are needed for the provision of the service.
 - the collection, transport and handling of all specimens in such a way as to ensure the correct performance of laboratory examinations.
 - the use of accredited examination procedures and methods that will ensure the highest achievable quality of all tests performed.
 - reporting results of examinations in ways which are timely, confidential, accurate and clinically useful.
 - the assessment of user satisfaction, in addition to internal audit and external quality assessment, in order to produce continual quality improvement.

2.0 GUIDE TO USING THIS MANUAL

- 2.1 A **controlled hardcopy** of this manual has been issued to the Blood Bank laboratory and other relative locations as authorised by the Laboratory Manager.
- 2.2 For internal users a **controlled electronic version** of the manual is available on Q-Pulse.
- 2.3 All clinical areas are provided with a controlled official copy.
- 2.3 The document is stored in Adobe Acrobat format which allows all computer users to read the document while preventing modification.
- 2.3 The laboratory tests and profiles you require information on can be located in the manual under sections 9 to 13 traceable to the department where the tests are performed.

3.0 GENERAL INFORMATION

3.1 Laboratory Opening Times

Department/activity	Opening Hours
Laboratory Reception	Monday to Friday 09.30am - 5.30pm
Phlebotomy Out-patient Service	Monday to Friday 10.00am - 3.30pm
Phlebotomy In-patient Service	Monday to Friday from 7.30am - 9..30am 9.30am - 11.30am
Specimen Reception	Monday - Friday from 08.30am - 5.30pm Saturday 09.30am – 1.00pm
Routine Laboratory Diagnostic Service	Monday to Friday 9.30am - 5.30pm Saturday from 9.30am - 1.00pm
Emergency out of hours service (on call diagnostic service)	Monday to Friday, 5.30pm - 9.30am Saturday 1.00 pm Thru Sunday - Monday 9.15am Bank Holidays (24 Hours)

3.2 Laboratory Department Telephone Numbers

There are a number of different disciplines within the Pathology Department. Where **Medical and Scientific advice is required** on medical indications and appropriate selection of available procedures the Pathology Department welcomes your queries. For **telephone queries** use the provided listing.

Section	Phone extension inside the Hospital	Phoning from outside the hospital
Hospital Reception	9 / 218	090-9648200
Laboratory Office	259	090-9648259
Blood Bank	370	090-9648370
Quality Manager	689	090-9648689
Hematology	366	090-9648366
Haemovigilance Officer	535	090-9648200
Phlebotomy	615	090-9648615
Laboratory Manager	371	090-9648371
Laboratory Information Systems Manager	371	090-9648371
Consultant Haematologist (via Consultant Pathologist's Office)	217	090-9648217
Consultant Pathologist	217	090-9648217

3.3 Laboratory Fax Number

090-9648200 Ext. 363

3.4 Portiuncula Hospital Website and Telephone Number

Website (intranet): <http://phbintranet/>

Phone No.: 090- 9648200 (Portiuncula Hospital Number)

3.5 Staffing

The Blood bank team consists of :-

- Laboratory Director - Consultant Pathologist
- Consultant Haematologist
- Laboratory Manager
- Laboratory Quality Manager
- Head of Department - Chief Medical Scientist
- Senior Medical Scientists
- Medical Scientists
- Haemovigilance Officer
- Support Services
 - Household
 - Information Technology
 - Phlebotomy
 - Secretarial
 - Specimen Reception

The laboratory has been accredited as a training laboratory by the joint committee for Biomedical Sciences for the in-service year for Medical Laboratory Scientist students.

4.0 **LABORATORY REQUEST FORMS, SPECIMEN BOTTLES AND CONTAINERS**

4.1 **General Information**

This section deals with the **information** that is required to be documented on the Blood Transfusion **request form** and on the **specimen bottle**, prior to the analyses of samples.

The Blood Bank laboratory has one request form. It is used for different Blood Bank analyses as outlined below. It is **important** that the correct information is supplied for a particular test.

1. LAB-QS-FORM-031 : Blood Transfusion & Ante Natal Request Form is used for blood transfusion and antenatal requests.

4.2 **Completing the Request Form**

4.2.1 The following **essential** information must be documented in a **legible** manner on the request form :-

1. Patient's **Hospital Number** (MRN)
2. Patient's **Full Name** (Surname, Forename)
3. Patient's **Date of Birth**

4.2.2 The following desirable information should be documented in a **legible** manner on the request form :-

1. Patient's **Location** (Hospital Ward / Outpatient / Private Consulting room). Where the requesting Physician is at an external location to that of Portiuncula Hospital (e.g. antenatal outreach clinic in Loughrea) the postal address of the location should be included.
2. Patient's **gender**
3. The name of the **requesting Clinician**
4. Specimen type
5. **Examination(s)** required
6. **Date and time of specimen collection.**
7. Relevant **clinical information** appropriate to the test(s) requested must be supplied e.g. antenatal history, blood transfusion history etc
8. Specific requirements of individual laboratories:-

- **Blood Transfusion** - If specific blood products are required i.e. CMV negative, irradiated, this should be requested.
- **Blood Transfusion** - The specific surgery or reason for a transfusion request must be documented on the transfusion form.

9. A clear indication as to whether the tests requested are **routine or emergency**.
10. The **signature** of the person requesting the test and the signature of the person who draws the sample.

Note: When labeling, the request card must be signed on the lower right hand side by the person ordering the analysis. The Person who draws the sample even if it is the same person ordering the analysis, must sign for the correct identification of the patient and blood sample as outlined on the lower left hand side of the Blood Transfusion Request Form

Note: Staff Midwives MUST sign both sides of the Request Form as both the person ordering the analysis and as the person who draws the sample (Cord Blood)

- 4.2.3**
1. Telephone requests are accepted in emergency situations **only**, and must be followed up by a written request.
 2. Telephone requests should be documented in the patients medical records by the requesting doctor and documented by the medical scientist in the Laboratory. The following minimum information must be given and confirmed:
 - Surname.
 - First Name.
 - Hospital Number (MRN)
 - Location.
 - Number / volume and type of component.
 - Reason for request.
 - Date and time required.

4.3 Patient Identification and Labeling The Sample Bottle at the Bedside.

- 4.3.1**
1. The blood group / cross match sample is taken by the Doctor, Nurse or Phlebotomist.
 2. Positive identification of the patient is essential. A sample must only be taken from a patient who has a hospital identification wristband in situ (securely fastened). The details on this wristband must be correct and legible and include the patients surname, forename, date of birth, hospital number.
 3. Confirm patient identity by checking the patient's wristband and asking the patient to verbalize their name, date of birth and current address.
 4. If there are any discrepancies or the wristband is not present, the sample must not be taken.

5. Only one patient should be bled at a time (to minimize the risk of error) and never pre-write the tubes.
6. Obtain blood sample in an “EDTA KE FOR BLOOD TRANSFUSION” sample tube.
7. If the patient is confused or unconscious confirm details with staff treating the patient.

4.3.2 The following **essential** information should be documented in **legible HANDWRITTING** on the Sample Bottle :-

1. Patient’s full name
2. Date of birth
3. Hospital Number (MRN)
4. Signature of person drawing the sample
5. Date and time of sample collection

4.4 **Addressograph Labels are NOT permitted on Sample Bottles**

4.5 **Quality of Blood Samples**

4.5.1 Laboratory personnel must inspect prior to testing each blood sample received for:-

- Evidence of Haemolysis / Gross Lipemia

In such instances, a **second sample** may be requested or the **issued report** will have an appended comment noting the presence of haemolysis or lipemia as appropriate.

4.6 **Non-Conforming Sample Bottles, Forms or Sample Quality Issues**

4.6.1 Where the requirements with respect to labelling the request form and sample container or sample quality issues are not met the following will apply.

SPECIMEN ISSUES	ACTION	DOCUMENTATION
<ul style="list-style-type: none"> ➤ No sample received ➤ Samples unlabelled ➤ One of the three mandatory unique identifiers are not correct or absent from the sample bottle (Full Name, DOB, MRN) ➤ No Signature on Sample Bottle ➤ Addressograph label on blood sample bottle. ➤ Miscellaneous sample issues 	<ul style="list-style-type: none"> ➤ A second sample must be collected 	<ul style="list-style-type: none"> ➤ Non-conformance is generated on Q-Pulse

FORM ISSUES	ACTION	DOCUMENTATION
<ul style="list-style-type: none"> ➤ No request form provided with specimen ➤ Inadequate or incorrect patient details:- <ul style="list-style-type: none"> • hospital number • name • date of birth 	<ul style="list-style-type: none"> ➤ A second sample is requested. 	<ul style="list-style-type: none"> ➤ Non-conformance is generated on Q-Pulse
SAMPLE APPEARANCE/ QUALITY ISSUES	ACTION	DOCUMENTATION
<ul style="list-style-type: none"> ➤ Evidence of Haemolysis ➤ Gross Lipemia ➤ Age of sample 	<ul style="list-style-type: none"> ➤ Laboratory staff will make a decision on whether or not the sample is suitable for testing or a second sample is requested as appropriate. 	The presence of haemolysis / lipaemia will be noted on the report.

4.7 **Further Additional Testing**

If on sending a specimen for testing and **further additional testing** is required, please contact the Blood Bank to investigate the feasibility of using the initial sample for analysis as age of sample may impact on the validity of test results. Ideally, a request form should accompany such a request but the lack of the request form should not impede the processing of an urgent request.

5.0 DELIVERY, PACKING, TRANSPORT OF SAMPLES

5.1 General Information

It is the policy of the Laboratory to treat all samples as potentially infectious or high risk. Therefore, we advise you to take universal precautions in the collection, packaging and the delivery of specimens being sent to the Blood Transfusion Department for analysis.

5.2 Sample Delivery From Within the Hospital

- During the **routine** laboratory opening times **blood samples** will be **collected** by the **Phlebotomy** team.
- **Outside routine laboratory opening times blood samples** will be taken by either medical doctors or nurses on the ward.
- All Blood Transfusion & Ante Natal Samples being sent to the Blood Bank laboratory should be placed in the plastic sample bag, which is attached to the Blood Transfusion & Ante Natal request form (LAB-QS-FORM-031). The Yellow Adhesive strip should be removed, the bag folded over and sealed.

5.2.1 Procedure for the “Out of Hours” Delivery of Samples to the Blood Bank laboratory.

5.2.1.1 Urgent & Non-urgent samples should be delivered directly into the Blood Transfusion Laboratory.

5.3 Sample Delivery From Outside of the Hospital

The requirements stated below apply to all specimens or samples directed to the Pathology Department. These will be required to be packed and transported in accordance with the European Agreement concerning the International Carriage of Dangerous Goods by Road (UNADR).

Samples are delivered to the Laboratory from General Practitioners by contract courier.

5.4 Disposal of Waste Material Used in Specimen Collection

All materials used in specimen collection should be treated as potentially hazardous and discarded using sharps containers and other appropriate colour coded bags. Please refer to the current hospital guidelines for Waste Management prepared by the Infection Control Committee.

5.5 Storage of Examined Samples for Archive and Look Back Purposes

ID	Specimen Description	Storage Requirement	Storage Location	Retention Period	Responsibility
1.	Plasma for group / antibody screen and crossmatch	-30°C	Blood Bank freezer	Up to 2 Months	Chief Medical Scientist Haematology
6.	Whole Blood	4°C	Fridges in scientific departments	48 hours after release of reports	Chief Medical Scientists

6.0 External Third Party Assessment Programme

6.1 The Blood bank laboratory **participates** in **external third party** quality assurance **schemes** provided by NEQAS UK, (National External Quality Assurance Scheme, UK) & IEQAS (Irish External Quality Assessment Scheme).

The Schemes:

NEQAS (BTLP) – Blood Transfusion Laboratory Practice

IEQAS (DAT) – Direct Antiglobulin Test

are required to ensure comprehensive assessment of the test repertoire.

7.0 Services Available

SERVICE	DESCRIPTION
Haemovigilance Service	A haemovigilance service is available in the hospital. Further information can be got from the Haemovigilance Officer at ext. 535 or by contacting the hospital blood bank at ext. 370. Further information can be got by referring to the Haemovigilance Blood Transfusion Manual, that is available on the intranet, in the blood bank laboratory and in Nursing Administration.
Phlebotomy Service	The Phlebotomy department is responsible for taking blood samples for diagnostic testing.
Consultant Service	There is a Consultant Haematologist available. Refer to section 3.1 of this document for contact details.
Therapeutic Phlebotomy	The therapeutic phlebotomy procedure is available for the treatment of certain clinical conditions such as Haemochromatosis and Polycythaemia. This process is performed by clinical staff. The Phlebotomy bags are provided by the Blood bank laboratory.

8.0 LABORATORY TESTS/ PROFILES AVAILABLE

8.1 This section outlines the tests that are available in the Blood Transfusion Laboratory.

8.2 Laboratory Test/ Profile Description

Each laboratory test will be described under the following headings:-

8.3 Repeat Examination due to Analytical Failure or Further Examination of the Primary Sample.

8.3.1 Repeat Examination due to Analytical Failure

It is the policy of the Blood Bank Laboratory in the event of an analytical failure to:-

- Repeat the test using a back-up techniques.
- or**
- Store the samples in appropriate conditions until the cause of the analytical failure is identified and corrected and then repeat the test. The urgency of the outstanding samples is reviewed by the relevant laboratory Consultant Haematologist or nominee.

8.3.2 Further Examination of the Primary Specimen

Where further testing is relevant to the investigation or diagnosis of the condition or symptoms which gave rise to the original test request then it is the policy of the Blood Bank laboratory to elucidate the problem by performance of additional tests using the primary sample.

8.4 Tests Not Listed

If you require a diagnostic test that is not listed, please contact the Blood Bank Laboratory Staff who will endeavour to **outsource** as appropriate your test requirement.

8.5 External Laboratory Testing

Some specimen/ samples are referred to external laboratories for testing. These will be recognised by the presence of an **asterisk *** after the test name.

8.6 Emergency Out of Hours Service

Tests provided out of hours in this service will be recognised by the presence of this symbol ♦ in the turnaround time column. If any other test is required the person requesting the test should contact the relevant Laboratory Medical Consultant or Chief/ Senior Medical Scientist to request the test.

9.0 BLOOD TRANSFUSION

9.1 Blood Transfusion Tests

Test/Profile	Specimen Type	Specimen Requirements			Special Requirements	Turnaround Time
		<u>Additive Required</u>	<u>Volume Required mL</u>	<u>Container Type</u>		
Anti D Quantitation*	Blood	EDTA	7.5	Blood Tube	None	1 week
Direct Coombs Test	Blood	EDTA	2.7	Blood Tube	None	1 day
Group and DAT	Blood	None EDTA	7.5 1.3	Blood Tube	Cord Sample Paed Sample	1 day 1 day
Group and Screen	Blood	EDTA	7.5	Blood Tube	None	1 to 2 days
Group and Crossmatch	Blood	EDTA	7.5	Blood Tube	None	as required
Transfusion Reaction Investigation	Blood	EDTA	7.5	Blood Tube	Refer to Hospital Haemovigilance Transfusion Manual	7 days

9.2 BLOOD PRODUCTS/COMPONENTS FOR TRANSFUSION

Test/Profile	Specimen Type	Specimen Requirements			Special Requirements	Turnaround Time
		<u>Additive Required</u>	<u>Volume Required mL</u>	<u>Container Type</u>		
Cryoprecipitate	Blood	EDTA	7.5	None	Refer to Hospital Haemovigilance Transfusion Handbook	Immediately ♦
Anti D Immunoglobulin	Blood	EDTA	7.5		Refer to Hospital Haemovigilance Transfusion Handbook	Immediately ♦
Plasma Solvent Detergent Plasma (SDP)●	Blood	EDTA	7.5	None	Refer to Hospital Haemovigilance Transfusion Handbook	30 minutes if blood group already established by laboratory ♦
Platelets (Pooled or Singled)●	Blood	EDTA	7.5	None	Refer to Hospital Haemovigilance Transfusion Handbook	3 hours ♦

● The blood specimen is required if the blood group has not been previously tested by the laboratory.

* These specimens/ samples are referred to external laboratories for testing.

♦ Tests provided in the emergency out of hours service.

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- 9.3 The Blood Bank provides a pre-operative blood group, antibody screen and freeze plasma service for elective Obstetric / Gynaecology, Surgical & Medical procedures.**
- 9.3.1** If the Patient is seen in OPD, on the Ward or in a Private Room and is for a procedure which may require blood or a blood group and antibody screen at a future date from 2 days up to 2 months (Note: obstetric samples from 2 days up to 4 weeks) a “7.5ml EDTA KE For Blood Transfusion” sample should be sent to the blood bank laboratory, together with a request form with all relevant details filled in, for Blood Group & Antibody Screen +/- Crossmatch.
- 9.3.2** The Sample will have a Blood Group & Antibody Screen performed. The plasma will be stored @ - 30°C. A day or two before Blood is required the plasma will be thawed and Blood if required will be Crossmatched & left on standby for the Patient.
- 9.3.3** If Irregular Antibody(s) are found in the patient's plasma on screening, appropriate antibody investigations will be carried out and Compatible Blood will be made available by the required date.
- 9.3.4** Clinical Staff will be advised of any difficulties encountered so that appropriate arrangements can be made for the Patient.
- 9.3.5** Because of the prevalence of Irregular Antibodies in the population it may not be possible to supply compatible blood if the crossmatch sample is received on the day of an operation or late in the evening before a scheduled operation.
- 9.3.6 Pre-operative transfusion testing is not performed ‘On-call’ for patients who arrive into hospital late in the evening for elective procedures the following morning.**
- 9.3.6** If Crossmatched Blood or a Blood Group & Antibody Screen is required for Monday morning, the sample should be sent to the blood bank laboratory by 2 p.m. on the previous Friday.

10.0 REPORTING OF TEST RESULTS

10.1 Reporting of Results within the Hospital

All results, once authorised on the Laboratory Information Management System (LIMS), are available on the hospital computer network and to general practitioners via Healthlink. Hard copy reports are printed at scheduled times and are delivered to wards. The ward reports are destined for the patient's file.

10.2 Reports for External Locations

Reports for locations outside the hospital will be posted on the day of testing if results are available before 3.30 p.m.

10.3 Telephoned Results

- It is the Laboratory Policy to telephone reports only when results for specific clinical parameters have reached critical levels.
- Requests for verbal reports are not entertained except in urgent cases.

10.4 Faxed Reports

Reports are not faxed for reasons of confidentiality of the patient results.

11.0 ATTACHMENTS

11.1 There are no attachments associated with this document.