Blood Transfusion Laboratory
Bantry General Hospital

Bantry General Hospital Primary Sample Collection Manual

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19/10/2006	**Version 1**	• **Final document submitted to INAB (Pre-Inspection) which Documents BGH system as per ISO15189:2007.**
04/06/2008	**Version 1.1**	• **Correction of minor clerical errors** • **Document History page inserted**
23/02/2010	**Version 2**	• **Updated to account for Consultant Haematologist Governance and clinical advise** • **Fibrinogen Concentrate and Prothrombin Complex concentrate introduced**
20/02/2012	**Version 3**	• **Updated to change key contact personnel** • **Document extended working day practice** • **Review / update of turn around times**
22/05/2013	**Version 4**	• **Review and update MSBOS** • **Insert control version for Crossmatch report and label** • **Insert control version for Confirmation of Transfusion Form**
22/04/2015	**Version 5**	**Revised to include advisory service information on consultancy, scientific and Haemovigilance aspects, as well as patient consent.** **Changes made to accommodate the discontinuation of the Typenex system.**
02/02/2016	**Version 6**	**Updated to cover commitment to protection of patient data and freedom of information**
02/02/2018	**Version 7**	**Updated to cover change to sample requirements for Platelets and Red Cells**
02/12/2018	**Version 8**	**Updated to cover introduction of Bloodtrack EBTS sampling**
06/03/2020	**Version 9**	**Updated to Include Consultant Haematologist Authorisation of this document**
03/12/2021	**Version 10**	**Updated to include new version of request form and MSBOS**
25/10/2024	**Version 11**	**Updated to include new version of Request form and give clear instruction around contacting a Consultant Haematologist for advice**

DISCLAIMER

This manual has been prepared by the Blood Transfusion Laboratory, Bantry General Hospital. While every care has been taken in its completion this manual is intended for use as a guide only.

Practitioners should use this manual as a guide to individual testing on the basis of clinical findings, not as a complete or authoritative statement of such testing.

The Department shall not be liable to users of the manual nor to any other person, firm, company or other body for any loss; direct, indirect, or consequential, in contract or in tort, or for any negligent mis-statement or omission contained herein, by reason of, or arising from or in relation to any such user, other person, company or body relying or acting on, or purporting to rely or act upon any matter contained in this manual.

PREFACE

The essential role of the Blood Transfusion Laboratory is to aid clinicians in the effective and efficient management of the Blood Transfusion needs of the patient. The quality and usefulness of laboratory testing depends on many factors. Within the laboratory, processing and analysis are subject to designated protocols and procedures with the application of Quality Assurance techniques at all stages. However, just as critical to the performance of laboratory investigations are the many pre- and post analytical factors that can influence quality. These include elements such as appropriate test selection, patient preparation, requesting and sampling procedures, preservation and handling of specimens, transportation and the timely communication and interpretation of results. Errors or omissions in any of these areas may compromise the value of investigations and lead to delays in the appropriate management of patients.

This handbook has been designed and produced to provide convenient ready access to essential information for all users of the Blood Transfusion Service at Bantry General Hospital. Every effort has been made to ensure that the information provided is correct at the time of publication. However, it is our policy to continuously review and develop our services and where changes occur, we will circulate appropriate addenda. We hope that all healthcare staff involved in using the Laboratory Services will find this a useful publication and we welcome any criticisms or suggestions with respect to this handbook or any aspect of the service.

BGH Blood Transfusion Department

Quality Policy

The aims of the Blood Transfusion Laboratory, within Bantry General Hospital are to provide, impartial, confidential, safe, timely, risk averse and cost effective Blood Transfusion practices within Bantry General Hospital. In the interest of this, the management and staff of the Blood Transfusion Department commit to the following;

- Provision of a safe and timely blood transfusion service through investment in systems, training and Information Technology
- Compliance with best practices within our laboratory through competency assessment and through reference to accepted Blood Transfusion Guidance, through compliance with INAB Policies and Procedures and through accreditation to standards such as ISO15189 & AML-BB
- Compliance with the requirements of all relevant regulatory legislation
- Continuous Professional Development for management and staff
- Continuous self-assessment in support of quality improvement
- Understanding of the blood transfusion needs of Bantry Hospital through consultation and feedback
- Effective and timely handling of issues which fall below the stated objectives

To comply with these commitments the following Quality Indicators will be monitored and communicated;

- Indicators of Patient Safety processes within Bantry General Hospital
- Indicators of Management of processes within the Quality Management System
- Review of the Governance functions within Bantry General Hospital
- Indicators of the Traceability requirements central to modern transfusion practices

Signed:

Director of Blood Transfusion, Bantry General Hospital

Signed:

Hospital Manager, Bantry General Hospital

Signed on behalf of the management and staff of the Blood Transfusion Laboratory, Bantry General Hospital

1.0 INTRODUCTION

This manual is designed to give an overall view of the services available in the Blood Transfusion Department at Bantry General Hospital. It is intended as a quick reference guide for all users.
All Laboratory services undergo continuous review through quality assurance and audit activities. The laboratory is committed to performing its activities in accordance with the requirements of the International Standard ISO 15189:2022 and AML-BB.
The manual is intended for users of the Laboratory Services both within the hospital, and those from outside agencies.
Laboratory management are committed to:

- Staff recruitment, training, development and retention at all levels to provide a full and effective service to its 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

A controlled hardcopy of this manual has been issued to relevant locations as part of the Haemovigilance documents, as authorised by the Laboratory Director.

Information on laboratory tests and profiles you require can be located in the manual under sections 11 to 15.

This document is controlled within the BGH Blood Transfusion Document Control System. It is the user's responsibility to ensure that all printed versions match the Master version retained on the CUH-LAB Q Pulse database.

3.0 GENERAL INFORMATION

3.1 Population Served

Bantry General Hospital (BGH) is the acute hospital for south Counties Cork and Kerry and serves both the existing population and that caused by of tourism during the summer months. Bantry General Hospital has over 120 inpatients and daycase beds providing acute general hospital services including an Acute Medical Assessment Service and Local Injury Unit. The Hospital also supports a Rehab Unit, 19 long-stay and 5 respite care geriatric beds and is co-located with the Bantry Hospital Psychiatric unit.

The Laboratory Department provides a frontline laboratory service to hospital and community users in conjunction with advice on tests requiring referral. In 2023 the laboratory carried out approximately 1,460,000 tests.

3.2 Location

The Laboratory Department, Bantry General Hospital is situated on the ground floor of the outpatient's section of the hospital building. It shares the main corridor of this building with the x-ray department.
It is provides a laboratory service in three main disciplines: Clinical Biochemistry, Haematology, and Blood Transfusion and further limited testing in Microbiology (Blood Cultures, Respiratory Virology testing & C.S.F. biochemical examination).

Further to this, the laboratory prepares (where necessary) and transfers samples to Cork University Hospital for further examinations.

3.3 Laboratory department Opening Times

Department/Activity Opening Hours

Laboratory Reception	Mon. to Friday 9.00am – 8.00pm*
Routine laboratory Diagnostic Service	Monday to Friday 9.00am – 8.00pm
Hospital Emergency out of hours service (on call diagnostic service)	Monday to Friday 8pm – 9am Saturday, Sunday, Bank Holidays (24 Hours – On-call)

*Samples may be delivered to Laboratory outside of these hours by leaving the specimens at the Hospital Reception.
(Proper storage conditions may however, be compromised).

Routine samples arriving after the stated deadlines may be processed on the next routine working day.

An on-call system operates outside normal hours for emergency work i.e. non-deferrable tests necessary for decisions regarding patient treatment. Refer to the "On-call/Emergency service" Section of this manual.

Depending on the volume of work processed by the Department, GP samples may not be processed until the following day, if they arrive in the laboratory after 4.00 PM.
(The blood samples will be centrifuged for analysis the following day.)

All urgently required processing (regardless of the time of day) should be communicated to the Laboratory at the earliest possible opportunity.

3.4 Postal Address

The postal address for specimen delivery is:

The Laboratory
Bantry General Hospital
Bantry
Co. Cork
Ireland
P75 DX93

3.5 Laboratory Department Telephone Advice

The laboratory at Bantry General Hospital has a multi-discipline structure and as such all queries to the laboratory can be dealt with by phone or by visiting the specimen reception area. Queries regarding selection of tests, appropriate sample, sample timing and availability of specific product are also dealt with by appendix 1 of this document.

Blood Transfusion **clinical advice** is available on a 24hours / 7 days basis through the Haematology team based in the Cork University Hospital (see below).
Governance of the transfusion services at Bantry General Hospital rests with Dr. D O'Shea, Consultant Haematologist contactable at the same number.
Queries with respect to advice on selection or interpretation of available tests are welcomed.

For telephone queries use the provided listing.

The five-digit numbers listed below can only be dialled from within this hospital. External numbers are also listed

Section Extension	Internal Number	External Number	Comment
Haematology Team, Cork University Hospital.	22541	021 4546400	Ask for the Haematology Dept., or the Haematologist on-call (out of hours)
BGH Laboratory Reception	55910	027 52910	No secretarial cover is available within the laboratory so we request your patience when we are busy.
BGH Laboratory office	51472	027 53472	This number is not always manned. If no reply is received please try the Laboratory reception number.
BGH Haemovigilance Office	55968	027 52968	This number is not always manned. If un-answered please leave your Name,

			Number and brief message otherwise please try the Laboratory reception number.
Laboratory Fax	n/a	027 53473	

3.6 Hospital main Telephone Number

Phone No.: +353 27 52900 (Bantry General Hospital Number)

3.7 Staffing

The Laboratory Department consists of:

- Chief medical Scientist
- Senior Medical Scientist x 4
  (1 as Deputy Head of Department / 1 responsible for Quality Management System / 1 responsible for Laboratory Information System & 1 responsible for Point of Care Testing)
- Haemovigilance Officer
- Medical Scientist responsible Microbiology section
- Medical Scientists

The Laboratory participates as a training laboratory for the Post Graduate Diploma in Clinical Placement year for Biomedical Sciences Degree graduates.

3.8 Patient Information Management Systems

It is the policy of the Laboratory, BGH to adhere to HSE policies regarding protection of patient data and freedom of information. To this end, each staff member agrees to be bound by these requirements within their job descriptions and all patient data is protected by access control measures to the laboratory physical environs and password access to the Laboratory Information System.

iCM (Clinical Information Management System) and PIMS are the electronic register of patient demographics used in Bantry General Hospital. These interface to the laboratory computer system and significantly reduces the requirement for data re-entry in the laboratory, speeds up the specimen processing, and minimises typographic error.

Use of unique patient identifiers (MRN / APX numbers) facilitates effective protocols for the management of data quality and enhances the integrity and consistency of the patient record on the Laboratory database.
BloodTrack is the Electronic Blood Tracking System which, when used correctly, provides the unequivocal traceability of the patient to the request form and sample and by return, the Issued Blood back to the patient. This system also provides timely information to the clinical area regarding availability of blood for patients

and captures the required time stamps of administration transactions and observations.

WITH REGARD TO THE ABOVE PROCESSES WE ASK FOR YOUR FULL COOPERATION.

3.9 Contact Information
Contact Details of key members of staff

Name	Title	Telephone	e-mail
Dr Hugh Brennan	Chief Medical Scientist / Laboratory Manager	**027 53472**	hugh.brennan@hse.ie
Ms. Angela Brennan	Haemovigilance Officer	**027 52968**	angela.brennan3@hse.ie

3.10 Complaints (Feedback) Procedure
The laboratory strives at all times to provide a quality driven, patient focused service. To facilitate this objective, it is necessary to receive feedback from users of the service.
It is the policy of the laboratory to treat all Feedback / Complaints seriously. All service users are encouraged to contact the department and all Feedback / Complaints received are initially logged on the Feedback / Complaint Log Form to facilitate recording. All recorded Feedback / Complaints that cannot be resolved at the point of initial contact will be escalated to laboratory management for review and full investigation. On review, the Chief Scientist will make contact with the complainant in order to facilitate the resolution of outstanding issues as laid out in our Feedback / Complaints Handling procedure.

4.0 BLOOD TRANSFUSION LABORATORY REQUEST FORMS and SPECIMEN BOTTLES

4.1 General Information
This section deals with the documented information that is required on the laboratory request form and the specimen bottle or container, prior to the analysis of samples. The Blood transfusion laboratory has a unified request form designed to facilitate requesting from within the hospital and requests from G.P.s'. Requests received from G.P.s'on CUH Antenatal request forms will also be processed since the Cork University Maternity Hospital operates a shared care model between G.P.s' and CUMH.

4.2 Supplies of Request Forms and Specimen Containers
Within Bantry General Hospital, Blood Transfusion Request forms and sample/specimen containers are issued from the Laboratory Bantry General Hospital. Orders from G.P's are handled by the HSE Supplies Department at the hospital. Please order supplies in advance to facilitate processing.

4.3 General Guidelines on Collection of Specimens

Refer to the Test Directory for a list of tests performed, the sample required, turnaround time, reference range, and other information regarding specimen collection.

Terms and Conditions:

- Requests for Blood Transfusion laboratory tests must be made by or on behalf of a registered medical practitioner.
- Issues concerning patient consent for laboratory investigations are the responsibility of the requesting doctor. The Laboratory assumes that specimens submitted to it were obtained with the consent of the patient for the performance of serological analysis to facilitate the provision of Blood Transfusion cover.
- The service provided is intended to assist in the clinical management of patients and is not provided for medico-legal or forensic purposes or criminal investigations.
- Information provided on the request form and the results of laboratory investigations will be stored by the laboratory in accordance with the policies of the Health Service Executive on Confidentiality, Data storage and document retention.
- Occasionally requests for tests not performed in this laboratory will be referred to specialist external laboratories. This will involve the communication of patient information and clinical details to the external laboratory which, for consent purposes is identified to the patient at the information giving step in compliance with GDPR.
- The patient identification details given in laboratory reports are drawn from the Patient Information Management System (PIMS) of the Health Service Executive and are based on the information supplied on the request form by the requesting doctor.
- Results are reported to the appropriate hospital clinician or general practitioner, who can then explain their significance to the patient within the context of their discussions of the clinical problem as a whole.
- Laboratory reports are copyright of the Health Service Executive.
- Unless a specific request is made, a patient is deemed to accept the usual procedures of the Laboratory relating to the storage and disposal of specimens. Any such specific request made must be practical, reasonable and given with sufficient notice.

4.3.1 Patient preparation before primary sample collection

Where possible, all specimens collected for the purposes of Blood Transfusion from in-patients of Bantry General Hospital are done having first received informed consent from the patient as laid out in the BGH Procedure for Informed Consent **(BGH-HV-HP-0002).**

4.4 Health and Safety

- Universal precautions are adhered to at all times:
- Gloves to be used when dealing with patients.
- Gloves to be changed after each patient.
- Needles are not to be recapped after use.
- Needles and Holders to be disposed of safely.
- Sharp bins provided for disposal of sharps.
- Yellow bags provided for any bloodstained material.
- Spillages of blood/body fluid – refer to local Safety Manual
- Large spillages of blood/body fluid – refer to Department of Health, National Clinical Guideline No. 30 -Infection Prevention and Control (IPC)

4.5 Completing the Request Form

The primary blood collection system employed within Bantry General Hospital is the Bloodtrack Electronic Blood Tracking System (EBTS). This allows electronic confirmation of the requesting clinician, the patient and the clinical staff involved in administration. This system provides real time labels for the request form and sample tube and for insertion into the patients transfusion record sheet (TRS) to capture Start time, End Time and possible transfusion reactions. These labels can provide much of the information required for the Request form and the sample and are an acceptable replacement for second check signatures in the clinical area. See below for further information;

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

- Patient's Medical Record Number – MRN (in-patients)/ APX number where available.
- Patient's Full Name (Surname, Forename)
- Patient's Full Home Address ***(not required if Bloodtrack sampling is active)***
- Patient's Date of Birth
- Patient's Gender
- Patient's Location (Hospital Ward, OPD).
  (Where the requesting Physician is external to Bantry General Hospital, the location code should be provided if available).
- Name of Consultant
- The name and signature of the requesting Clinician and bleep number. Medical Council Number (MCN) may also a be required in line with local guidelines (not required if Bloodtrack sampling is active)
- Specimen type
- Examination(s) required
- Date and time of specimen collection

- Relevant clinical information appropriate to the test(s) requested should be supplied e.g. antenatal history, blood transfusion history etc.
- Increasingly, greater emphasis will be placed on clinical information should anomalous results be obtained.
- Requests may be rejected if adequate information is not supplied in certain cases.
- A clear indication as to whether the tests requested are urgent or routine.

Specific requirements of individual laboratories:
Blood transfusion

- If specific blood products are required i.e. CMV negative, irradiated, this should be requested.
- The specific surgery or reason for a transfusion request must be documented on the transfusion form.
- Patient's transfusion history & obstetric history
- Signature of the person drawing the blood ***(not required if Bloodtrack sampling is active)***
- Date & Time required

NOTE: ***Addressograph labels are not permitted on blood transfusion forms because of the potential risk and the significant Implications of mislabeling a request.***

4.5.1 Desirable information

Previous address & patient's maiden name

4.6 Labelling the Specimen Container

Specific Requirements of Bantry General Hospital In-patients requiring Blood Transfusion:

- The following essential information must be documented in a **legible** manner, on the specimen container ***(captured on the "Collect" label if Bloodtrack sampling is active):***

  - Patient's full name
  - Date of birth
  - Medical Record Number (MRN), where available
  - Signature of clinician ***(not required if Bloodtrack sampling is active)***
  - Date and time of specimen collection.

Incorrectly/illegibly labelled specimens may incur significant delays or may not be processed.

Requirements for all other patient samples requiring non-transfusion related Testing from the Blood Transfusion department (for e.g. Issue of Albumin):

- Patient's full name
- Date of birth
- Signature of clinician***(not required if Bloodtrack sampling is active)***
- Date and time of specimen collection.

4.7 Addressograph Labels on Specimen Bottles

Addressograph labels are different from the "Real time" labels generated by the Bloodtrack EBTS and are not permitted on any specimens.
Specimens with addressograph labels will not be processed.
On receipt of such a specimen, because of the risk of mis-identification, a repeat specimen will be requested.

4.8 Quality of Blood Specimens

Laboratory personnel must inspect prior to testing each blood specimen received for:

- Evidence of Haemolysis
- Gross Lipaemia

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

4.9 Non conforming Specimen Bottles or Forms

Where a sample is clearly irreplaceable (i.e. in an emergency transfusion request), provision will be made to facilitate the processing of Blood Transfusion testing providing an emergency MRN is used and the requesting clinician is clearly identified. These deviations will be reviewed with the requesting doctor as soon as is practicably possible. In such instances, the requesting doctor will be asked to correct the Patient Demographics at an appropriate remove from the incident.

For a Risk Assessment around proceeding with a compromised sample or for rejecting a compromised sample please see Appendix 6 Risk Assessments.

4.10 Additional Testing

If additional testing (for e.g. further crossmatching or Issue of other components) is required, please contact the Laboratory to confirm sufficient sample remains and discuss the urgency of the request.

All further requests should be accompanied by a request form to clearly identify the requesting doctor, but lack of an additional request form should not impede the processing of an urgent request.

4.11 Repeat Examination

On discovery of anomalous or unexpected results, it is the policy of the Blood Transfusion Laboratory to request a repeat specimen for referral to the Irish Blood Transfusion Service for confirmation. Such samples should be labelled ***manually*** (the IBTS does not accept Bloodtrack EBTS labels) but referred to the IBTS using their BT 7 request form. The urgency of the referred specimens will be communicated to the I.B.T.S.

5.0 DELIVERY, PACKING, TRANSPORT AND POSTAL REQUIREMENTS OF DIAGNOSTIC SPECIMENS

5.1 General Information

It is the policy of the Laboratory Bantry General Hospital, to treat all specimens and 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 Laboratory for analysis.

The transport of specimens to the laboratory must be done so as to minimise the risk of infection to those who may come in contact with the specimens e.g. couriers, porters, laboratory staff etc.

Please label known biohazard samples.

- Specimens must be placed within the bag that is attached to the request form.
- This bag must then be sealed.
- When sending several samples to the laboratory Biohazard bags should be used.
- Specimens must never be sent in paper carrier bags.
- Under no circumstances should anyone transport specimen containers in their hands or pockets.
- The specimen container and request form must be adequately labelled to enable laboratory staff to identify the source of the sample quickly should the need arise (e.g. after a laboratory accident).
- To avoid specimen rejection, please follow the specimen requirement instructions in the test directory. If in doubt contact the laboratory.

5.2 Specimen Delivery From Within the Hospital

5.2.1 Samples taken during routine hours

It is the responsibility of the doctor taking the sample to ensure that it is delivered to the laboratory.
Specimens delivered to the porters desk may not always be acted upon immediately because of the porters being committed to other duties

5.2.2 Samples taken out of hours:
In urgent situations, it is the responsibility of the doctor taking the sample to communicate directly with the On-Call Medical Scientist to ensure that the sample is processed in line with the urgency of the request.

Non-urgent specimens may be stored on the sorting bench in Specimen reception and processed during the next routine day.

5.3 Specimen Delivery from Outside of the Hospital

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

Packing Procedure for the Transport of Diagnostic Specimens

- Place samples in hard shell Sample transport casing which has absorbent material for spill management.
- If the hard shell container is unavailable, wrap the sample bottle in tissue or cotton wool, which will act as absorbent material in the event of any spillage.
- The wrapped sample must be placed in a secondary watertight receptacle.
- This will be placed in a padded (jiffy bag) envelope or sample transport box.
- Label the envelope with a hazard-warning label, “Diagnostic Specimen” and “Biological Substance, Category B –UN3373”.
- Place the name, address and contact number of the destination laboratory on the outside of the envelope. (See section 3.4)
- Place the name, address and contact number of the originator on the outside of the envelope.
- The specimen can be delivered or couriered as appropriate.

5.4 Disposal of Waste Material used in Sample 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

6.0 EXTERNAL THIRD PARTY ASSESSMENT PROGRAMME

6.1 External Third Party Assessment Schemes

The department is committed to providing service users with a service of the highest quality, through adherence to laboratory procedures approved by appropriate regulatory bodies, staff competency, comprehensive internal quality control procedures, regular quality assurance audits and participation in national and international quality assessment schemes.
The Blood Transfusion Laboratory participates in external third party assessment schemes **External Quality Assesment (EQA) Schemes** operated by:

- NEQAS (UK, National External Quality assurance Scheme)
  - **UK Neqas controls the following**:
    - ABO Rh D Grouping
    - Antibody screening
    - Antibody Identification
    - Compatibility Testing
    - Phenotyping

    Frequency: 10cycles per annum

- Labquality (Finnland, administered by the Irish EQA Scheme)
  - Direct Antiglobulin Testing

- TACT (Transfusion Assessment and Competency Tool, Administered by UK NEQAS British Transfusion Laboratory Practice)
  - Transfusion Scenario Testing

An assessment of the Blood Transfusion laboratory's current performance within the schemes and it's historical data is on display in the department and individual staff competencies are assessed as part of the BGH Laboratory Authorisation Policy.

7.0 AUXILIARY SERVICES AVAILABLE

Haemovilgilance Service / Clinical Advice to the Lab
A Haemovigilance service is available in Bantry General Hospital. For further information please contact the Haemovigilance Office at ext. 55968. This service is under the auspices of the Laboratory Department but on a 2o hours per week basis.

Some aspects of the service are covered by the Blood Transfusion on-call personnel (for e.g. liaison regarding rapid notification of SAR / SAE during Haemovigilance out-of-hours periods). Information is also available by referring to the hospital Transfusion Resource Pack that is available on all wards.

Consultant Haematologist Services are available through Dr Derville O'Shea, Dept. of Haematology, Cork University Hospital (see section 3.5 above) or the CUH Haematology on-call service for out of hour's requirements.

For out of hours assistance contact Cork University Hospital main switchboard and ask for the Haematology on Call team member (See Phone list in lab reception for numbers)
Clinical and Technical advice is also available on a 24hrs / 7 days basis from the **Munster Regional Transfusion Centre** at St. Finbarr's Hospital Cork **(Phone 021 4807400).**

8.0 LABORATORY TESTS/PROFILES AVAILABLE

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

8.1 Laboratory Disciplines

Each laboratory discipline provides a description of the services it provides, including information on the following (where applicable): -

- Laboratory location
- Specimen type/site
- Request form
- Clinical indication
- Comment
- Reference Range
- Turnaround time - (Turnaround time is defined as the time from specimen receipt in the Laboratory Department to the time a report is available in the laboratory.)
- Special requirements - The special requirements section defines for each diagnostic test (if applicable) the following: -
    - Patient preparation, e.g. fasting
    - Consent form, if applicable.
    - Special timing for collection of samples e.g. pre and post drug administration
    - Any special handling needs between time of collection and time received by the laboratory (transport requirements, refrigeration, warning, immediate delivery etc.)

8.2 Tests not listed

If you require a diagnostic test that is not listed, please contact the Blood Transfusion Laboratory personnel, who will endeavour to identify your test requirement and information regarding the relevant laboratory.
Samples requiring further testing of this nature should be sent to the laboratory where they will referred through CUH as appropriate.

8.3 External Laboratory Testing

Some specimen/samples are referred to external laboratories for testing. This will be stated in the **index of Blood Transfusion Laboratory Tests.**

8.4 Emergency Out of Hours Testing

The following table outlines availability of tests during out-of –hours service.

Test	Unrestricted	Deferred
Direct Coomb's test	✓	
Blood components and products (e.g. fresh frozen plasma)	✓	
Group & Save/Crossmatch as per protocol – see below	✓	
Transfusion reaction investigations	✓	

Tests in the "Unrestricted" column will be performed on receipt by the lab.

The on-call service is restricted to "Urgent and Non-deferrable" situations.

The turn-around time is adversely affected if excessive demands are made on the service.

8.5 Protocol for Out of Hours Transfusion Testing

A restricted range of assays is available as an out-of-hours service, outside of the core working hours. This service is also available on public holidays. A detailed list of on-call tests is outlined in the Section "On-Call Tests" **(See Blood Transfusion Section 11.12).**

9.0 INSTRUCTIONS FOR USING LAB ENQUIRY

(Not applicable to GP's)

Please Note: Lab Enquiry does not allow access to some disciplines. Please contact the lab if you require assistance.

9.1 If the MRN is Available

- Double click on Lab Enquiry icon (results prior to 15th August 2003 are archived – contact the laboratory for further information)
- Enter Username……. Press Return.
- Enter Password and press TAB.
- N.B. At Patient Number prompt type C for Cork University Hospital / Bantry General Hospital PIMS registered patients followed by the Patient's Medical Record Number (OR T for KGH PIMS registered patients.) Press TAB.
- Type first three letters of patient's surname and click on "Number Search".
- Select "all disciplines" from the drop down menu and click "Continue"
- From the search results select the link under the required reference number of sample date and time.
- Select "Earlier" or "Later" to move through the patients records chronologically

9.2 If an MRN is Unavailable

- Click in the patient's Surname field and press TAB,
- Enter Forename and press TAB.
- Enter Date of Birth or Age.
- Click on "Search".
- Click on the link to confirm patient details selection
- Select "all disciplines" from the drop down menu and click "Continue"
- From the search results select the link under the required reference number of sample date and time.
- Select "Earlier" or "Later" to move through the patients records chronologically

10.0 REPORTING OF TEST RESULTS

Reports are printed with reference ranges and/or suitable comments wherever appropriate, to aid interpretation of results. Reports will only be given to the requesting clinician. Private individuals will not receive reports.

10.1 Reporting of Results within the Hospital

General laboratory request results, once released, are available on the hospital computer system. Blood Transfusion requests are reported on hard copy.
Hard copy reports (whether from a specific request or from Blood Transfusion) are printed and placed for collection at the lab reception. At close of business, these will be distributed to the porter's desk for further distribution.

10.2 Reports for External locations

Hard copy reports (where applicable) for locations outside the hospital will be posted on the day of testing if reports are available before 3pm. Electronic reporting of results is available to all GP surgeries with the required software and issued on a download basis.

10.3 Telephoned Results

It is the policy of the Laboratory Department to telephone results when specific clinical parameters (alert levels) have been reached. In respect of Blood Transfusion, this is any anomaly or unexpected finding that might delay the provision of blood to the patient.

Verbal report requests are entertained by the Laboratory however because of the limited staff available these should be restricted to urgent cases.

10.4 Faxed Reports

Reports may be faxed following authorisation by the Chief Medical Scientist or nominee. In such instances, every practicable effort will be made to ensure the transmission is in line with current HSE guidelines.

10.5 Reference Ranges (Biological Reference Intervals)

Reference ranges for Blood Transfusion test attributes are not documented on reports.

Warning: *Many diaries and handbooks provide lists of reference intervals for common analytes. You are asked not to refer to these in the interpretation of results generated by the Laboratory, Bantry General Hospital. We have prepared our own reference intervals, which are dependent on the method of analysis used, and are also specific to the population that we serve. The use of inappropriate reference intervals can be at best confusing and at worst dangerous. If you are in doubt about the validity of any reference interval provided to you, please contact the Laboratory for clarification.*

11.0 BLOOD TRANSFUSION

11.1 Department Profile

Appendix 1 of this document - A TO Z INDEX OF BLOOD TRANSFUSION LABORATORY TESTS within the Bantry General Hospital, Blood Transfusion Laboratory, contains detailed information regarding services and blood products provided by and available from the Blood transfusion laboratory.

11.2 Blood Transfusion-Phlebotomy Instructions

11.2.1 Specimen Requirements

Refer to A to Z (appendix 1) tests for specimen type required for test.

- Specimens must be collected using the Bloodtrack EBTS system or hand written, **addressograph labels are not accepted under any circumstances**.
- For Group and Hold and crossmatch request specimens must be identified as described below.
    - At the bedside, confirm the details on patient's hospital ID wristband match those on the medical notes and by asking the patient to state their name and date of birth.
    - Using the Bloodtrack EBTS select "Collect Sample"
    - Scan the 2D HSE ID of the sample taker and 2D ID on the patient's wristband.
    - Select Print 2 labels and confirm the request by rescanning the patient wristband ID within 30 seconds of completing the request. Place one on the request form and one on the specimen (taking care not to cover the specimen container expiry date)
    - For full details of procedure refer to BGH procedure for Blood Transfusion Patient Sampling BGH-HV-HP-0020.)
- Specimens labeled using this system will have the following details.
    - NAME (Surname and forename)
    - D.O.B
    - MRN (Address of patient where MRN not available)
    - ID of the doctor drawing blood
    - Date and Time of sampling

- Complete the rest of the required information on the request form as per Blood Transfusion Patient Sampling BGH-HV-HP-0020.
- Non-compliance with the above may result in rejection of specimen by blood bank and cause delays in testing.
- For Group and Hold and crossmatch requests processed ***without*** the Bloodtrack EBTS specimens must be identified as described below.
  - At the bedside, Write patient identifiers on the specimen
  - Confirm the details (using a second checker) match with patient's hospital ID wristband and by asking the patient to state their name and date of birth.
  - (for full details of procedure refer to BGH procedure for Blood Transfusion Patient Sampling BGH-HV-HP-0020.)
- Specimens must have 3 patient identifiers.
  - NAME (Surname and forename, No abbreviations)
  - D.O.B
  - MRN (Address of patient where MRN not available)
- Specimen must be signed by doctor drawing blood
- Non-compliance with the above may result in rejection of specimen by blood bank and cause delays in testing

11.2.2 Request Form when Bloodtrack EBTS is unavailable

- Fill out all patient information boxes on request form **(Addressograph labels must not be used.)**
- Form must be signed by requesting doctor
- Test required i.e. Group & Save / X-Match/Antenatal etc. must be indicated
- Product required, amount and date required must be indicated
- Clinical details should be given
- Theatre dates and specific surgery should be given
- Special requirements i.e. CMV-, Irradiated etc must be highlighted
- **E.D.D.** for Antenatal patients
- Transfusion history, especially known antibodies if applicable

Non-compliance with the above may result in significant delays or in rejection of specimen by blood bank

11.2.3 Labelling requirements for the unconscious Patient

Minimum details required on sample and form:

- Patient MRN (Emergency MRN's available in ICU)
- Patient Gender
- Patient Name as per agreed protocol (Patient 1, Patient 2 etc)
- Approximate D.O.B or age

Contact medical scientist in the blood transfusion laboratory and keep him/her informed of the situation. Continue to use these details until full reliable details are available. Results from other departments may be reported using the Emergency MRN reference until a full identity is established.

11.3 Storage of Specimens for Archive and Look Back Purposes

Serum / Plasma Specimen

Storage Requirements	-20°C
Storage Location	Blood Bank Specimen Freezer
Minimum Retention Period	-1 month
Responsible	Medical Scientist

Whole Blood (Primary Sample)

Storage Requirements	4°C
Storage Location	Blood Bank Sample / Rgnt. Fridge
Minimum Retention Period	7 Days
Responsible	Medical Scientist

Request Forms

Storage Requirements	Secure / Protected from damage
Storage Location	Blood Bank Document Store or External storage facility
Minimum Retention Period	30 years
Responsible	Medical Scientist

11.4 Sample Requirements (In-house and Referred to External Laboratories)

Test	Specimen Type	Specimen Requirements			Special Requirements
		Additive Req'd.	Vol. (mls)	Container Type	
Antibody Identification	Blood	EDTA	6/9	Pink Capped	None
Antigen Typing	Blood	EDTA	6/9	Pink Capped	None
Cold Agglutinins	Blood	EDTA	10	Pink Capped	Transport at 37°C
Cytotoxic Antibodies*	Blood	Clotted	4	Red Capped	None
Direct Coombs	Blood	EDTA	2.5	Purple/pink capped	None
Group & Save	Blood	EDTA	6/9	Pink Capped	None
Group & Crossmatch	Blood	EDTA	6/9	Pink Capped	None
Haemolysin	Blood	EDTA	6/9	Pink Capped	Fresh
HLA Typing*	Blood	EDTA	10	Pink Capped	None
Platelet/WCC Antibodies*	Blood	Clotted	10	Red capped	None
Transfusion Reaction Investigation	Blood Packs and Blood Samples	EDTA, Clotted	6/9	Red, Purple, Pink capped	None
Group & Coombs	Blood	EDTA	2.5	Purple capped	Cord Sample

*** Referred to the National Tissue Typing Laboratory, I.B.T.S., St James St., D.9**

11.5 Requirements when ordering Blood Products/Components for Transfusion

Product	Requirements
Albumin (20%) 100ml.	Signed Request form
Prothrombin Complex	Haematologist consult
Fibrinogen Concentrate	Haematologist consult
Platelets	Previous Blood Group
Octaplas	Previous Blood Group
Cryoprecipitate	Previous Blood Group
Anti D I.M	Signed Request form

11.6 Red Cell Concentrates

Transfusion of red cells must begin within 30 minutes of the unit being removed from the Issue fridge (asset no. BGHYY03212).
If the transfusion has been deferred for any reason the blood must be returned to a fridge within 30 minutes.
If the transfusion has not begun within the 30 minutes the blood bank should be contacted for advice.
Units of red cells should be transfused within 4 hours of leaving the controlled storage area to avoid the possibility of bacterial contamination of the unit.

11.6.1 Routine Blood Requests

Blood samples for crossmatching should be submitted to the blood bank in a timely manner.
Routine blood requests should reach the blood bank before 4p.m. on the day prior to the planned transfusion.
Pre-op crossmatching is performed by blood banking staff before 5p.m. on the day prior to the planned theatre and will be held for 48 hours after the scheduled surgery.
The blood bank should be notified promptly if a planned transfusion or surgical procedure is cancelled.
Compatible blood may take longer to obtain for patients whose blood contains irregular antibodies or where there are special requirements. To minimise delays the blood bank should be informed before admission if possible.

11.6.2 Urgent Blood Requests

Emergencies will receive priority status. When blood is required urgently contact the Scientist in the blood bank (on-call if appropriate) and maintain open lines of communication.
Every effort should be made to send an appropriately labelled specimen to the blood bank to facilitate rapid ABO and Rh D grouping. Group specific blood will then be issued.
Where there is insufficient time to obtain a patient specimen two units of O Rh D Negative blood are available from the Blood Issue fridge in the laboratory.
The laboratory must be informed if these units are used. This facilitates making

additional O Neg units available (if necessary) and expediates the nest steps in transfusion support for the patient.

11.6.3 Ordering Additional Units
Where a period of more than 72 hours have elapsed post transfusion of the first unit of red cell concentrate, a fresh specimen is required.

If a patient has been transfused in the past 3 months a group and save specimen is only valid for 72 hours.

11.6.4 Phoned Requests
Phoned requests for compatible blood to ext 55910 should be followed up by a written request; however, urgent requirements will be dealt with in line with the nature of the event.

11.7 Octaplas/Uniplas
Plasma should be ordered by telephoning the BGH transfusion laboratory, ext 55910 followed up by a written request.
If a group is not available for the patient, a Group and Screen Request (EDTA sample of 5-10mls of blood) is also required.
Unique Identifiers as before are required for plasma transfusion thereby correlating positive identification of plasma recipient.
Plasma is stored at -30°C in the blood transfusion laboratory and requires up to 25 minutes to thaw prior to use. Once thawed it must be infused within 4 hours or stored for 24 hours at 4^{O}C.

Octaplas is available in groups O, A and AB.

Plasma is not routinely necessary in the management of over-anticoagulation; refer to the BGH Procedure for Prescribing Blood Components and Products SOP (BGH-HV-HP-0030) for indications for use and recommendations for management of bleeding and excessive anticoagulation.

11.8 Fibrinogen Concentrate
Fibrinogen Concentrate should be ordered by telephoning the BGH transfusion laboratory, ext 55910 followed up by a written request.
While a blood group is not required for Fibrinogen Concentrate, Unique Identifiers are required to maintain traceability and to contribute in the positive identification of recipient.
Fibrinogen Concentrate is stored at 4°C in the blood transfusion laboratory and is reconstituted by the administering clinician prior to use. For further information see section 10 in BGH Guidelines for Administration of Blood and Blood Components (BGH-HV-HP-0065).

11.9 Prothrombin Complex Concentrate

Prothrombin Complex Concentrate should be ordered by telephoning the BGH transfusion laboratory, ext 55910 followed up by a written request.
While a blood group is not required for Prothrombin Complex Concentrate, Unique Identifiers are required to maintain traceability and to contribute in the positive identification of recipient. It is also prudent to establish the blood group and antibody status of patients requiring emergency reversal of an anticoagulated state.
Prothrombin Complex Concentrate is stored at room temperature in the blood transfusion laboratory and is reconstituted by the administering clinician prior to use. For further information see section 9 in BGH Guidelines for Administration of Blood and Blood Components (BGH-HV-HP-0065).

11.10 Cryoprecipitate

Cryoprecipitate is not stored in Bantry General Hospital. It is available through the lab in units containing approximately 100mls but there is a transport and thawing delay of approx 2 hours from order. This contains the major portion of Factor V111, Von Willebrand, Fibrinogen, Factor X111 and Fibronectin pooled from five units of fresh frozen plasma.
Cryoprecipitate should be ordered by telephoning the blood transfusion laboratory, ext 55910 followed up by a written request.
If a group is not available on the patient a serum sample of 5-10mls of EDTA blood is required.
Unique Identifiers are required for cryoprecipitate transfusion.
Cryoprecipitate is stored at -30°C and requires between 10 and 25 minutes of thawing prior to use.
Once thawed it must be infused within 2 hours.

11.11 Platelets

Platelets for transfusion are not routinely stored in Bantry General Hospital. They are provided from the I.B.T.S. in bags containing approximately 24 x 10ˆ10 platelets suspended in 200-300mls of plasma. This represents a typical adult dose of platelets. This dose should raise the patients' circulating platelet count by 25x10ˆ9 per L.
Platelets must be ordered through the laboratory from the MRTC in Cork on a patient named basis and transported to BGH by First Direct courier.
This process incurs a delay of at least two hours.
Platelets should be ordered by telephoning the BGH blood transfusion laboratory, ext 55910 followed up by a written request.
If a group is not available on the patient a blood group sample of 5-10mls of EDTA blood is required.
Unique Identifiers are required for platelet transfusion thereby correlating positive identification of recipient.

11.12 Protocol for Out of Hours Transfusion Requesting

1. All **routine pre-op work** is deferred from on-call to early next morning.

2. Groups and saves on patients with normal haemoglobin who are clinically stable are deferred to working hours.
3. Anaemia patients should only be grouped and cross-matched out of hours if the patient is clinically unstable.
4. **Emergency admissions** with no evidence of bleeding and normal haemoglobin – Defer to working hours.

The following will also apply:
Arrangements will be made in the transfusion laboratory to ensure that pre-op work is done on the morning of operation so that blood will be available from 11 o'clock for surgery.

The laboratory staff would be pleased to liaise with a member of the surgical team or with the theatre staff to confirm that blood is available for the first patient on the list.

The laboratory staff will liaise as above in the unlikely event that there is a difficulty with crossmatch or antibodies. This would be reported to a member of the surgical team.

Routine samples received by 16.00 hours are processed normally that day. If a patient is admitted the day before surgery, please send blood before 16.00 hours for cross match in routine working hours that day.

A theatre list is provided in advance of all planned surgery to ensure best practice and prioritisation so that lists run smoothly and blood is available by 9.00 for the first patient ***PROVIDED NO ANTIBODIES ARE DETECTED.***
Haemovigilance principles and the hospital transfusion policy discourage out of hours transfusion for safety reasons only.
Should the condition of any patient in the above category change or deteriorate (E.g. bleeding, surgery required urgently; symptomatic):
The NCHD will inform the blood transfusion on-call staff who will perform a group and hold or group and cross-match as requested by the NCHD out of hours.
Finally should the laboratory staff have a concern, the Haematology team in Cork University Hospital is available for advice.
Any disagreements on call will be resolved in favour of patients.
Follow up review of decisions made can occur the following day or during audit.

11.13 Maximum Surgical Blood Ordering Schedule BGH (MSBOS)

Bantry General Hospital operates a Surgical Blood Ordering schedule in support of in-house and visiting surgeons.

A Maximum Surgical Blood Ordering Schedule is agreed with surgeons in advance rather than negotiating around each surgical event and is reviewed regularly.

Current MSBOS - **Effective from 19th January 2004**

- **Next review date by Surgical dept. October 2026**
  See appendix 5.

12.0 APPENDICES

1. A to Z index of Blood Transfusion Laboratory Tests
2. Compatibility Report and Label
3. Confirmation of Transfusion Form - **BGH-HV-HVF-0120**
4. BGH Blood Transfusion Request form
5. Maximum Surgical Blood Ordering Schedule

Appendix 1

A TO Z INDEX OF BLOOD TRANSFUSION LABORATORY TESTS

All patient directed Blood and Blood Components issued by the Blood Transfusion Laboratory BGH will be accompanied by a Compatibility Report form and will be labelled with a compatibility label as shown in **Appendix 2.**

For confirmation of transfusion, traceability and Haemovigilance purposes all Blood and Blood Components issued by the Blood Transfusion Laboratory BGH will be confirmed as transfused by the Bloodtrack system.
When this system is unavailable, confirmation is made using the “Yellow” part of the compatibility label (BGH-BTR-LF-COMP) or if the system is being managed using entirely manual documentation, the accompanying Confirmation of Transfusion Form (BGH-HV-HVF-0120) which must be completed and returned to the laboratory. **Appendix 3**

Specimen Notes:

6 mL EDTA Pink top Vacuette®Specimen - Specimen should be taken using the Bloodtrack EBTS system or if processed manually they should be identified with 3 patient identifiers i.e. Full Name, MRN / APX Number (if MRN not available), DOB and address and must be signed by the doctor who took the specimen. In some circumstances we may be able to process a sample as small as 3mL but this risks the possibility that all testing may not be completed. **Addressograph labels are not acceptable on specimen containers or forms**

4 mL Clotted (Red Capped/Yellow Ring) top Vacuette specimen® -Specimen must be identified with 3 patient identifiers i.e. Full Name, MRN, DOB and address if MRN not available and must be signed by the doctor who took the specimen. Addressograph labels are not acceptable on specimen Containers or forms.

Albumin for administration

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
No Specimen required	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed, indicating the volume and % albumin required. Form must be signed by the requesting Doctor	4.5% useful to treat patients with: Hypoalbuminaemia with an oncotic deficit. 20% useful to treat patients with: burns, Other hypoalbuminaemia e.g. hepatic cirrhosis, nephritic syndrome, Refractory oedema.	20% albumin routinely available in 100ml 4.5% albumin available **on request** in BGH. Issued on a patient named basis through the blood transfusion department. A stock of 20% albumin is stored on the top shelve of the Blood Stock Fridge. If removed in an emergency ***Please document the date & time / who removed the albumin/ the lot number and the recipient***. Sign for all albumin removed from the laboratory. Please refer to hospital policy for further information. Advice can be obtained from the Scientists in the blood transfusion department ext. 55910	30 minutes Available on Call	Not applicable

Antenatal Serology

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully including the EDD. Manually processed forms must be signed and dated by the requesting Doctor.	Antenatal blood grouping and antibody screening and identification in antenatal women.	Comment: Rh D negative women should be tested at: • booking • second visit (28 weeks approx) • the discretion of the antenatal clinic and may be requested by the referring GP Rh D positive women should be tested at: • Booking • Second visit. Where clinically significant red cell antibodies are detected the Patients should be retested monthly to 28 weeks and every 2 weeks thereafter, unless otherwise indicated on the blood group report form. For antibodies not clinically significant in pregnancy re-testing once at 28-34 weeks is sufficient, unless otherwise indicated on blood group report form. Cord blood investigation should be carried out on babies of all Rh D negative women and on any women who had an antibody during pregnancy.	2 routine working days	Not applicable

Anti D Quantitation

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	Request through CUH, Blood Transfusion Laboratory for referral to IBTS Dublin Specimen and Form must be completed manually and must be identified with 3 patient identifiers i.e. Full Name, MRN, DOB and address if MRN not available and must be signed by the doctor who took the specimen.		Refer to Cork University Hospital, Blood Transfusion Lab, Ante Natal section for advice. Samples taken using the Bloodtrack EBTS are **NOT** acceptable to the IBTS referral laboratory Address to, I.B.T.S., National Blood Centre, James's St., Dublin 8.	See comment	See comment

Anti-Platelet antibody -investigation of transfusion reaction only

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
4 mL Clotted **(Red Capped / Yellow Ring)** Vacuette® Specimen -see specimen notes.	Request through BGH, Blood Transfusion Laboratory for referral to IBTS Dublin. Address to, I.B.T.S., National Blood Centre, James's St., Dublin 8.	Detection of IgG and HLA class 1 antibodies to platelet or leukocyte antigens that may be responsible for a febrile non-haemolytic transfusion reaction or may result in platelet transfusions being unsuccessful. In patients who have anti platelet antibodies HLA matched platelets may be required for effective platelet transfusion.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) or IBTS form BT 255-3 must be completed fully. Form must be signed by the requesting Doctor. Samples taken using the Bloodtrack EBTS are **NOT** acceptable to the IBTS referral laboratory. Addressograph labels are not accepted on forms for referral.	2 Weeks	Not applicable

Blood Component or blood product issue

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes. Valid for 72 hours where a patient has received blood or been pregnant in the last 3 months . (See section 11.6.3)	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. The previous transfusion and obstetrical history are important. Indicate the amount, reason and any special requirements such as CMV neg or irradiated blood for transfusion on the request form to allow appropriate selection of blood component and/or product.	Requirement to treat patient with specific blood components or Blood products. Refer to Haematologist on-call C.U.H. for advice.	The indications for the use of all blood components and products are detailed in the hospital transfusion policy document on prescribing BGH- HV-HP-0030. Contact the blood transfusion laboratory or the I.B.T.S. Haematologist for advice if necessary. **Urgent specimens must be labelled as urgent and will get priority.**	Refer to individual products and hospital transfusion policy for further information. Available on Call	Not applicable

Direct Coombs Test

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully. Manually processed forms must be signed by the requesting Doctor.	Investigation to demonstrate whether red cells are coated in vivo with immunoglobulins and/or complement. Significant in auto immune disease, haemolytic disease of the newborn, suspected cases of serological incompatibility of red cells post transfusion and drug induced haemolytic anaemia.	Ref. Range:	1 hour Available on call	Negative or Positive

Fibrinogen concentrates for administration

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes. Although this product is not group specific, it is not unusual that a receiving patient may also require platelets concurrent with the fibrinogen concentrate and so for this reason the patient should have a viable sample in the laboratory.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully. Manually processed forms must be signed by the requesting Doctor.	Treatment of acquired hypofibrinogenaemia for example in patients with disseminated intravascular coagulation (DIC) Treatment of severe blood loss or failure of a hepatic synthesis (eg liver failure or cirrhosis)	One vial (1 gm) of fibrinogen concentrate is equivalent to one pool of cryoprecipitate. Fibrinogen concentrate is prescribed on the instruction of a Medical Consultant It is strongly recommended that specialist advise should be sought from the Haematologist on call in Cork University Hospital in advance of it's use. Generally 1 to 2 g of fibrinogen concentrate is administered initially to an adult patient The plasma fibrinogen level should be monitored in accordance with the advice given by the haematology team in CUH. Haematologist advise on-call can be obtained by contacting the Haematology team at the C.U.H. **Urgent specimens must be labelled as urgent and will get priority.**	30 minutes Available on call	Not applicable

Frozen plasma for administration

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully.	-Complex deficiencies of coagulation factors such as coagulopathy due to DIC, severe hepatic failure or massive transfusion.	Octaplas should **NOT** be used to correct hyperfibrinolysis caused by a deficiency of the plasma inhibitor alpha 2-antiplasmin. Octaplas should be used with caution in	30 minutes Available on call	Not applicable

Frozen plasma for administration-continued

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
notes.	Manually processed forms must be signed by the requesting Doctor.	-Reversal of the effect on fibrinolysis and rapid reversal of effects of oral anticoagulants when vitamin K is insufficient and prothrombin complex concentrates are not available -Thrombocytopenic purpura usually in conjunction with plasma exchange. -In extensive plasma exchange procedures when there is a coagulation abnormality or haemorrhage occurs.	patients with risk for thrombotic complications because of potential increased risk of venous thromboembolism due to reduced protein S activity compared with single donor Fresh frozen plasma. Fresh frozen plasma is the product indicated in the treatment of C1 esterase inhibitor deficiency. Plasma should be used immediately post thaw. It is recommended that plasma is transfused within one hour post thaw. **Urgent specimens must be labelled as urgent and will get priority.**		

Group and Crossmatch

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes. Valid for 72 hours where a patient has received blood or been pregnant in the last 3 months .	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. The previous transfusion and obstetrical history are important. Indicate the amount, reason and any special requirements such as CMV neg or irradiated blood for transfusion on the request form to allow	Requirement to treat patient with with blood Blood loss or anaemia. To reserve a specific number of red cells for a patient for a specific time.	Samples for crossmatching for elective surgery or planned transfusion should arrive in laboratory before 4 p.m. on day before surgery / transfusion to avoid undue delay. Requests that arrive after 4pm will be processed the following routine working day unless otherwise specified. Blood for theatre is crossmatched in accordance with the locally agreed Maximum Surgical Blood Ordering Schedule (MSBOS), except in exceptional cases.	Routine – 2 hours. Where complications are identified – Dependent on individual. Available on Call	Not applicable

Group and Crossmatch-continued

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
(See section 11.6.3)	appropriate selection of blood component and/or product. **Urgent specimens must be labelled as urgent and will get priority.**		Arrangements are in place for the emergency issue of blood. In exceptional circumstances, blood may be issued uncrossmatched on request. It is vital to communicate with the blood transfusion department regularly in urgent or massive transfusion situations.		

Group and Save

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes. Valid for 72 hours where a patient has received blood or been pregnant in the last 3 months . (See section 11.6.3)	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. The previous transfusion and obstetrical history are important. As the request may progress to a transfusion of components, any special requirements such as CMV neg or irradiated blood for transfusion on the request form to allow appropriate selection of blood component and/or product.	Requirement to treat patient with with blood Blood loss or anaemia. To reserve a specific number of red cells for a patient for a specific time. **Urgent specimens must be labelled as urgent and will get priority.**	Blood is grouped and an antibody screen is performed. Blood may be crossmatched subsequently on that sample within an appropriate time frame: 72 hours if the patient had a transfusion or has been pregnant within the last 3 months 3 months if the patient was never pregnant nor had a blood transfusion within the last 3 months For preoperative samples -held in the laboratory for 3 months. REFER TO MSBOS in transfusion section of this manual	Routine – 2 hours. Where complications are identified – Dependent on individual. Available on Call	Not applicable

HLA Typing

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	Request through BGH, Blood Transfusion Laboratory for referral to IBTS Dublin Please state family relationships, if applicable	Antigen typing of HLA antigens for tissue typing of prospective donors and recipients (for e.g. in platelet matching for retractile patients). Association of certain antigens with disease is noted e.g. HLA B27 with ankylosing spondylitis.	HLA typing referred to: HLA Department, I.B.T.S., National Blood Centre, James's St., Dublin 8. Samples taken using the Bloodtrack EBTS are NOT acceptable to the IBTS referral laboratory. Addressograph labels are not accepted on forms for referral.	1 Week Please avoid Fridays.	Not applicable

Phenotyping Red Cell Antigens

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. Where it is the partner of an antenatal patient being tested please indicate antigens to be tested and provide full details of the partners name.	Antigen type red cells to ensure best selection of donor blood if required. May be useful in antenatal studies in risk assessment of HDNB. The partner of an antenatal patient with clinically significant antibodies is tested.		Routine – 2 hours. Where complications are identified – Dependent on individual. Available on Call	Not applicable

Platelets for transfusion

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen - see specimen notes.	-BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. -The previous transfusion and	• To increase the number of circulating platelets. Platelet transfusions are indicated in: • Bone marrow failure • Platelet counts<10x10^9/l	Platelets are NOT usually stored on-site at BGH. Platelets for transfusion are provided in bags containing approximately 24x10^10 platelets suspended in 200-300ml plasma.	Routine – 2 to 3 hours. Available on Call	Not applicable

Platelets for transfusion-continued

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
Platelets can be issued from an Historic Blood group however if this is not available a blood group should be established.	obstetrical history are important. -Indicate the amount, reason and any special requirements such as CMV neg or irradiated blood for transfusion on the request form to allow appropriate selection of blood component and/or product.	• Platelet counts<20x10^9/l with evidence of infection, pyrexia or fresh bleeding other than purpura. • DIC where the bleeding is associated with thrombocytopenia • Cardio-pulmonary bypass if there is microvascular bleeding or bleeding that cannot be surgically corrected. • Immune thrombocytopenias: platelet transfusions should only be given to patients with life threatening haemorrhage. • Prophylaxis for surgery: • For lumber puncture, insertion of dwelling lines, transbronchial biopsy, laparotomy liver biopsy where Platelet count<50x10^9/l • Epidural anaesthesia, ophthalmic surgery, neurosurgery where the platelet count<100x10^9/l • Thrombocytopenia in neonates <50-100x10^9 in preterm infants <20-30x10^9 in full term infants • Neonatal Alloimmune thrombocytopenia is a rare serious condition and specialist advice should be obtained from the haematologist on call at the C.U.H.	Typical adult dose of platelets and should raise the patients' circulating platelet count by about 25x10^9/l. Current policy is One dose and then check increment. On the following day the circulating platelet count should ideally still be 10x10^9/l above the original level. Platelet count should be checked one hour and 24 hours post transfusion to monitor increment rise of platelets.		

Prothrombin complex concentrates for administration

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
No Specimen required	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed and must indicate the number of vials required.	• Treatment of bleeding and perioperative prophylaxis: • Treatment of bleeding in acquired deficiency of the prothrombin complex coagulation factors, such as deficiency caused by the treatment of vitamin K antagonists, when rapid correction of the deficiency is required due to life threatening haemorrhage – e.g. intra cerebral or GI. It is recommended to administer vitamin K intravenously in addition to Octaplex (Pro-Thrombin complex). • In congenital deficiency of any of the vitamin K dependant coagulation factors when purified specific coagulation factors are not available.	Dose of octaplex required for the management of reversal of over anticoagulation: INR 2-3.9 r requires 25 iu/kg INR 4-6 requires 35 iu/kg INR>6 requires 50 iu/kg Octaplex should not be given to patients with known hypersensitivity to any of the substances contained in the product or hypersensitivity to heparin or a history of heparin induced thrombocytopaenia. Haematology team advice should be sought especially in patients with a potential risk of thromboembolic complications. Advice can be obtained from the Scientists in the blood transfusion department ext. 55910 or the haematologist on-call at the C.U.H.	30 minutes. Available on Call	Not applicable

Transfusion reaction investigation

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
6 mL EDTA Pink top Vacuette® Specimen.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) must be completed fully and signed. Clinical details of the reaction should be provided.	To determine if there was a serological incompatibility or Bacterial contamination of transfused blood and allow further transfusion if applicable Contact the haematologist in C.U.H. for advice if required	Ward urinalysis on first sample post reaction should also be performed. In cases of suspected viral transmission a full viral screen should be requested.	4 Hours. Available on Call	Not applcable

Transfusion reaction investigation-continued

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
4 mL Clotted **(Red Capped / Yellow Ring)** Vacuette® Specimen Samples for FBC, Coag screen, Renal function, Blood cultures on Patient.	Transfusion reaction investigation form BGH-BTR-LF-0200 Is completed by the medical scientist to guide the investigation.				

White Cell (Leucocyte) Antibody Investigation -investigation of transfusion reaction only.

Specimen:	Request form:	Clinical indications:	Comment:	Turnaround:	Ref. Range
4 mL Clotted **(Red Capped / Yellow Ring)** Vacuette® Specimen -see specimen notes.	Request through BGH, Blood Transfusion Laboratory for referral to IBTS Dublin. **Address to, I.B.T.S., National Blood Centre, James's St., Dublin 8.**	Identification of leucocyte HLA antibodies. Useful to identify the HLA causative antibodies in a febrile reaction to transfused blood.	BGH Blood Transfusion Request form BGH-BTR-LF-0500 (APPENDIX 4) or IBTS form BT 255-3 must be completed fully. Form must be signed by the requesting Doctor. Samples taken using the Bloodtrack EBTS are NOT acceptable to the IBTS referral laboratory. Addressograph labels are not accepted on forms for referral.	2 Weeks	Not applicable

Appendix 2 Compatibility Report –current version

BGH in-house Report

An INAB Accredited Testing Laboratory BGH Blood Transfusion Dept. Tel:55910
(Reg. No. 243MT

Prof. Mary Cahill
Cork Haematology OPD

NAME:
ADDRESS:
D.O.B: SEX:

PAT.NO: PATIENT'S GROUP:**A Rh D Positive**

ANTIBODY SCREEN:NEGATIVE

Crossmatch Compatibility Report

UNIT NUMBER	UNIT GROUP	PRODUCT	EXPIRY	COMMENT Use oldest unit first
R000 124 016 511 W	**APOS**	**PCIR**	**28/10/2024**	
R000 124 114 837 U	**APOS**	**PCIR**	**29/10/2024**	

Units are irradiated.

End of Report

Blood Sample no.XB021592M Collected:21/10/2024@ 11:43 Rec'd:21/10/2024@ 11:53
Blood Product Issue authorised by: Ani on 22/10/2024 @ 15:10
Checked By: _____ Page 1

IBTS Investigations Report

INVESTIGATIONS PROCESSED BY IBTS

Dr. Fabio Calderon
BGH Medical assessment unit

NAME:
ADDRESS:
D.O.B: SEX:

PAT.NO: PATIENT'S GROUP:**O Rh D Positive**

ANTIBODY SCREEN:NEGATIVE

Crossmatch Compatibility Report

UNIT NUMBER	UNIT GROUP	PRODUCT	EXPIRY	COMMENT Use oldest unit first
R000 124 030 640 9	**OPOS**	**PC**	**30/07/2024**	

Previous Autoantibody -NOT Detected this time

End of Report

Blood Sample no.XB021420W Collected:01/07/2024@ 15:00 Rec'd:01/07/2024@ 15:21
Blood Product Issue authorised by: MD on 03/07/2024 @ 14:36
Checked By: _____ Page 1

Appendix 4 Compatibility and Confirmation of Transfusion

STOP: REVIEW REVERSE BEFORE TRANSFUSION
Blood Transfusion Compatibility / Product Label BGH
Peel off section below and place in patient's Medical Record

Date transfused: ___/___/___

Patient's Name
TEST, ERICA
MRN C4878037
Donation No R000 117 084 106 Y
Component Type PC
Component Group APOS
Component/Product COMPATIBLE for this patient

Patient's Name
TEST, ERICA
MRN
C4878037

DOB 06/08/1946 Gender M Ward BGHHDU

Patient's Group
A Rh D Positive

Antibody status
No antibodies detected

Donation No. R000 117 084 106 Y

Component Type PC
ComponentGroup APOS
Expiry Date 06/09/2017

Spec. Type: Blood
Spec. No: XB015889Y
Checked by:
Date/Time spec.collected 21/08/2017@ 23:06
Date/Time spec.received 21/08/2017 @ 23:06
Date/Time authorised by 21/08/2017@ 23:36 812
Date/Time required 21/08/2017 @ 23:06

Once transfusion has commenced one must complete all sections below & return to transfusion laboratory as per local policy This is a legal requirement

Patient's Name
TEST, ERICA
BGH-BTR-LF-COMP V1 INAB accredited (Reg. No. 243MT) page 1 of 1
MRN C4878037 DOB 06/08/1946
Donation No R000 117 084 106 Y
Component Type / Group PC / APOS

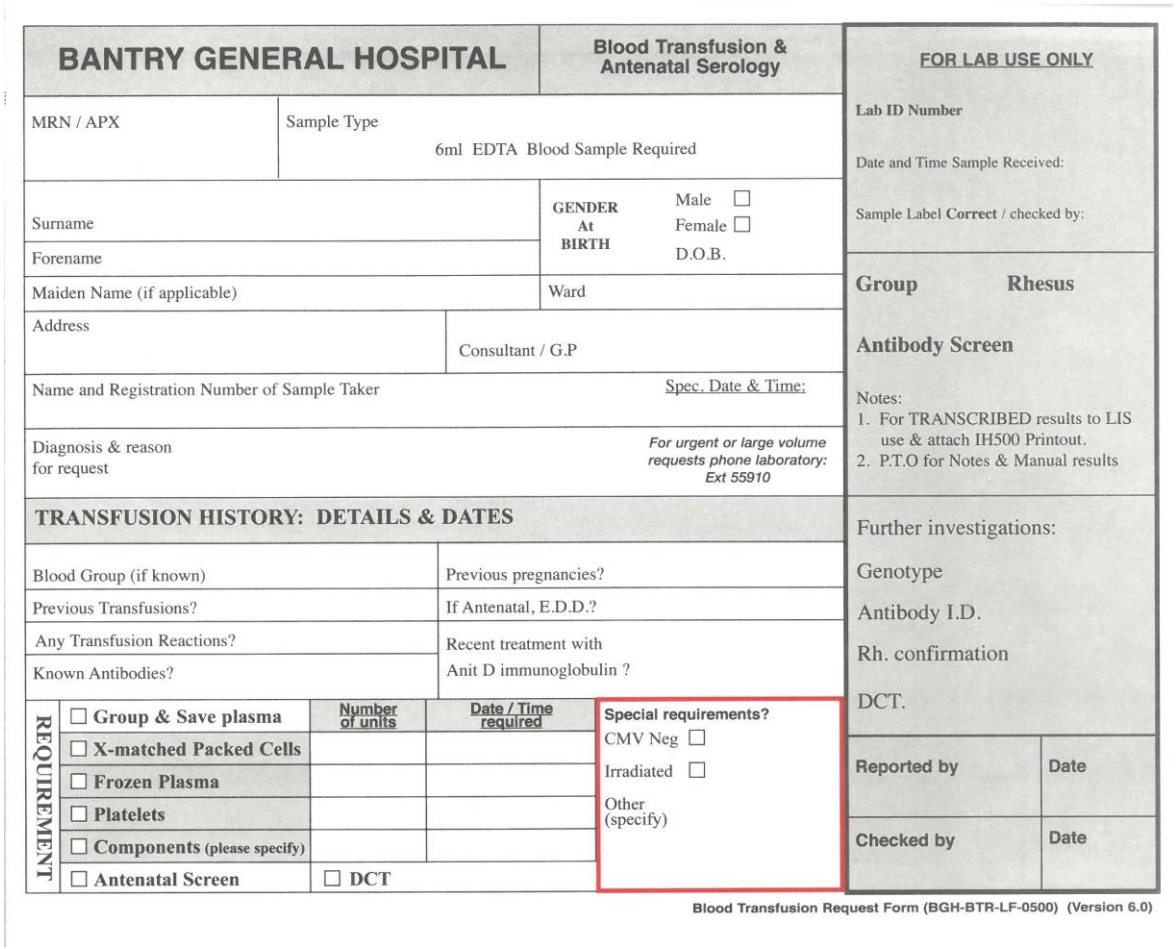
Requested by WIEN
I confirm that the above patient received this component/product

Sign /Print Name: _____

Date Given: ___/___/___ Time Given: __:__

Manual Confirmation of Transfusion "Tear-off" portion

Appendix 4 BGH Blood Transfusion Current Request Form



BANTRY GENERAL HOSPITAL | **Blood Transfusion & Antenatal Serology**

MRN / APX	Sample Type: 6ml EDTA Blood Sample Required
Surname	GENDER At BIRTH: Male ☐ Female ☐
Forename	D.O.B.
Maiden Name (if applicable)	Ward
Address	Consultant / G.P
Name and Registration Number of Sample Taker	Spec. Date & Time:
Diagnosis & reason for request	*For urgent or large volume requests phone laboratory: Ext 55910*

TRANSFUSION HISTORY: DETAILS & DATES

Blood Group (if known)	Previous pregnancies?
Previous Transfusions?	If Antenatal, E.D.D.?
Any Transfusion Reactions?	Recent treatment with Anit D immunoglobulin ?
Known Antibodies?	

REQUIREMENT		Number of units	Date / Time required
	☐ Group & Save plasma		
	☐ X-matched Packed Cells		
	☐ Frozen Plasma		
	☐ Platelets		
	☐ Components (please specify)		
	☐ Antenatal Screen	☐ DCT	

Special requirements?
CMV Neg ☐
Irradiated ☐
Other (specify)

FOR LAB USE ONLY

Lab ID Number

Date and Time Sample Received:

Sample Label **Correct** / checked by:

Group **Rhesus**

Antibody Screen

Notes:
1. For TRANSCRIBED results to LIS use & attach IH500 Printout.
2. P.T.O for Notes & Manual results

Further investigations:
Genotype
Antibody I.D.
Rh. confirmation
DCT.

Reported by	Date
Checked by	Date

Blood Transfusion Request Form (BGH-BTR-LF-0500) (Version 6.0)

Appendix 5 BGH Maximum Surgical Blood Ordering Schedule

Maximum Surgical Blood Ordering Schedule

(Effective from 19th January 2004)
Revised by Mr Mohd Yasser Kayyal- 02/10/2024

SURGICAL PROCEDURE	BLOOD ORDER (or Group & Save)
Procedure	
Hernias: Incisional, inguinal, umbilical, femoral and recurrent	
Laparoscopic hernia repair	**Group & save**
Hydrocele, variocele and circumcision	
Lap Cholecystectomy	**Group & save**
Open Cholecystectomy	**Group & save**
Above knee Amputation	
Minor procedures	
Haemorrhoidectomy	
Excision of pilonidal sinus	
Skin grafting	
Carpel tunnel decompression surgery	
Liver Biopsy	**Group & save**

Next review date 02/10/2026

Dates of previous reviews:

- 5/11/2008
- 23/8/2011
- 7/8/2013
- 11/08/2015
- 11 august 2015
- 22 August 2017
- 20 January 2020

Appendix 6

Risk Assessment RAN0019 / 2024 Acceptance / Rejection of compromised samples			
Division:	**Acute Hospital**	**Source of Risk:**	**Patient Care & Safety (Provision of Care)**
HG/CHO/NAS/Function:	**SSWHG**	**Primary Impact Category:**	**Assessment of Patient / Delivery of Care**
Hospital Site/Service:	**Bantry General Hospital**	**Risk Type: Operational - Adequacy of assessment, Lab Error, Standards of Care**	
Dept/Service Site:	**Laboratory**	**Name of Risk Owner (BLOCKS):**	**HUGH BRENNAN**
Date of Assessment:	**25/10/2024**	**Signature of Risk Owner:**	
Unique ID No:	**RAN 0019 / 2024**	**Risk Co-Ordinator:**	**Mike Davis**
Objective being impacted:		**[1]Risk Assessor(s):**	**Mike Davis**

[2]HAZARD & RISK DESCRIPTION	EXISTING CONTROL MEASURES	ACTIONS [ADDITIONAL CONTROLS] REQUIRED	[3]ACTION OWNER	DUE DATE
Patient harm caused by delays introduced through the rejection of an inadequately taken or labelled Sample or Request form (as described in BGH Procedure for Sampling and Labelling – BGH-HV-HP-0020).	NCHD training on induction to BGH. SOP in place regarding decision making for urgent / non-deferrable situations.	- Update SOP & Primary Sample manual to give clear understanding of responsibilities when accepting a non-deferrable sample.	Haemovigilance Officer Haemovigilance Officer and Quality Manager	Ongoing 25/10/2024

[4]Inherent Risk			[5]Residual Risk			[6]Target Risk			Risk Status		
Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Open	Monitor	Closed
2	5	10	2	3	6	1	3	3		✓	

[1] Risk Assessor required for OSH risks only.
[2] Where the risk being assessed relates to an OSH risk please ensure the HAZARD and associated risk are recorded. Other risk assessments require a risk description only.
[3] Person responsible for the action.
[4] Rating before consideration of existing controls.
[5] Rating after consideration of existing controls.
[6] Desired rating after actions.

[7]HAZARD & RISK DESCRIPTION	EXISTING CONTROL MEASURES	ACTIONS [ADDITIONAL CONTROLS] REQUIRED	[8]ACTION OWNER	DUE DATE
Patient harm caused by accepting an inadequately taken or labelled Sample or Request form (as described in BGH Procedure for Sampling and Labelling – BGH-HV-HP-0020).	NCHD training on induction to BGH.	-	Haemovigilance Officer	Ongoing
	SOP in place regarding decision making for urgent / non-deferrable situations.	Update SOP & Primary Sample manual to give clear understanding of responsibilities when accepting a non-deferrable sample.	Haemovigilance Officer and Quality Manager	25/10/2024
	Management of patients with Group O blood when there is doubt about the veracity of the sample.		Concessionary issue of blood should involve Haematology Team in CUH	Ongoing

[9]Inherent Risk			10Residual Risk			[11]Target Risk			Risk Status		
Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Likelihood [1-5]	Impact [1-5]	Rating [Likelihood x Impact]	Open	Monitor	Closed
2	5	10	2	3	6	1	3	3		✓	

[7] Where the risk being assessed relates to an OSH risk please ensure the HAZARD and associated risk are recorded. Other risk assessments require a risk description only.
[8] Person responsible for the action.
[9] Rating before consideration of existing controls.
[10] Rating after consideration of existing controls.
[11] Desired rating after actions.