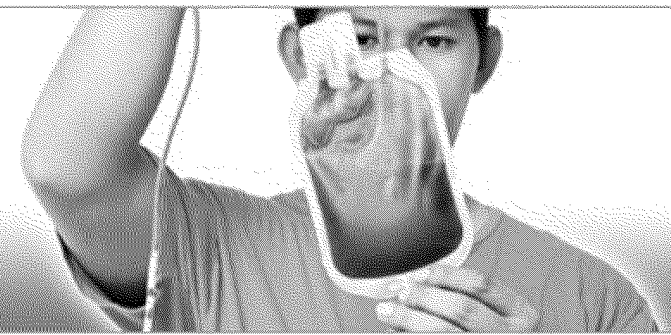


learnbloodtransfusion

e-learning for safe, effective and appropriate transfusion practice



Learnbloodtransfusion **the essential guide**

Produced by the UK Blood Services

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Blood transfusion, if used safely and appropriately, will improve the quality of life or be a life saving treatment for many patients.

Learnbloodtransfusion has been developed to ensure that all healthcare workers can participate safely in the transfusion process, in line with the Health Service Circular Better Blood Transfusion – Safe and Appropriate Use of Blood (2007).

The e-learning has been developed by the UK Blood Services and is reviewed by a UK-wide editorial board and supported by:

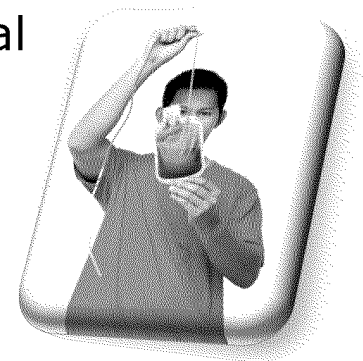
- UK and ROI Blood Services
- The Serious Hazards of Transfusion (SHOT) scheme
- The National Blood Transfusion Committee (NBTC) of England and the respective committees in Northern Ireland, Scotland, Wales and Republic of Ireland



Learnbloodtransfusion offers eleven courses & two learning pathways:

- Safe Transfusion Practice - 7 units/sessions
- Blood Components and Indications for Use - 8 units/sessions
- GMP for Hospital Blood Banks - 9 units/sessions
- Safe Transfusion Practice (Paediatrics) - 7 units/sessions
- Anti-D Clinical – 6 units/sessions
- Anti-D Laboratory - 5 units/sessions
- Learn Cell Salvage – 4 units/sessions
- Safe Transfusion Laboratory Practice - 6 units/sessions
- Consent for Transfusion – 5 units/sessions
- Acute Transfusion Reactions – 6 units/sessions
- Safe Blood Sampling for Transfusion – 1 unit/session
- Phlebotomy Pathway – 4 parts
- Blood Collection Pathway – 3 parts

Each unit/session within the courses has been given a nominal approximate completion time of 20 minutes; this is however variable dependent on the learner and the level of engagement with the learning content.



Learnbloodtransfusion course topics include:

- ◆ ABO blood group system and serology
- ◆ The correct procedures for each step in the transfusion process
- ◆ Blood components and derivatives and their indications for use
- ◆ The management of massive transfusion
- ◆ Recognising and managing a transfusion reaction
- ◆ Good manufacturing practice
- ◆ Anti-D and Haemolytic disease of the Foetus and Newborn (HDN)
- ◆ Blood conservation
- ◆ Cell salvage
- ◆ Obtaining consent for transfusion



Units in this course:

1. Haemovigilance in the UK and ROI
2. Blood Group Serology
3. Requesting Procedure
4. Sampling Procedure
5. Collection Procedure
6. Administration Procedure
7. Management of Transfused Patient

Course has been designed for:

- Doctors
- Nurses
- Midwives
- Operating Department Practitioners
- Clinical support workers
- Phlebotomists
- Porters

Approximate completion time: 2hr 20min

Course learning outcomes:

- ✓ Identify the most common errors in the transfusion process
- ✓ Understand basic ABO serology
- ✓ Describe the correct procedures for all the steps in the transfusion process
- ✓ Explain the initial action required to manage an adverse event

Revalidation option process:

The *Safe Transfusion Practice* course has a 'Revalidation' option designed for staff who have already **completed** and **passed** *Safe Transfusion Practice* on at least one previous occasion.

The Revalidation option uses short **scenarios** based on the transfusion process to assess knowledge. As the learner works through the scenario they will be asked multiple choice questions based on the information that is presented.

The learner must feel **confident** in their **knowledge** and **understanding** of *Safe Transfusion Practice* before undertaking this option.

When launching each of the *Safe Transfusion Practice* course units, the learner will be asked to **choose** whether they wish to complete the **full unit** or the **Revalidation** option.

NOTE! The learner must answer each question correctly and gain **100%** in order to pass.

If the learner answers a question incorrectly they will be unable to continue. They will be advised to review the learning material for that unit and sit the main assessment again to ensure that their knowledge is up to date.

Units in this course:

1. Safe and Appropriate Transfusion Practice
2. Blood Group Serology
3. Red Blood Cells
4. Platelets
5. Plasma Components
6. Massive Transfusion
7. Plasma Derivatives
8. Adverse Effects of Transfusion

Course has been designed for:

People who have completed 'Safe Transfusion Practice'

- Doctors
- Nurses
- Midwives
- Operating Department Practitioners
- Blood transfusion trainers

Approximate completion time: 2hr 40min

Course learning outcomes:

- ✓ Demonstrate an understanding of the ABO blood group system
- ✓ Summarise the pre-transfusion testing process and selection of compatible blood components
- ✓ Describe the different blood components/derivatives that are available and the indications for their use
- ✓ Describe the common signs and symptoms of a transfusion reaction and outline how to take appropriate action
- ✓ Illustrate how you are professionally accountable in relation to the transfusion process

Units in this course:

1. Quality Management System
2. Personnel
3. Documentation
4. Premises and Equipment
5. Quality Control
6. Service Provision
7. Contracts and Analyses
8. Complaints and Blood Component Recall
9. Audit

Course has been designed for:

- Hospital transfusion laboratory staff
- Biomedical scientists
- Medical laboratory assistants

Approximate completion time: 3hr

Course learning outcomes:

- ✓ Describe the basic principles of good manufacturing practice and how they relate to your role in the transfusion process
- ✓ Explain the requirements of the UK Blood Safety and Quality Regulations (BSQR 2005) in relation to your practice
- ✓ Demonstrate an understanding of the roles and responsibilities of the hospital transfusion laboratory staff in complying with and maintaining good manufacturing practice

Units in this course:

1. Haemovigilance in the UK and ROI
2. Blood Group Serology
3. Requesting Procedures
4. Sampling Procedures
5. Collection Procedures
6. Administration Procedures
7. Management of Transfused Patient

Course has been designed for:

NHS staff in a paediatric setting who are involved in the transfusion process:

- Doctors
- Nurses
- Midwives
- Operating Department Practitioners
- Clinical support workers
- Phlebotomists
- Porters

Approximate completion time: 2hr 20min

Course learning outcomes:

- ✓ Identify the most common errors in the transfusion process
- ✓ Describe basic ABO serology
- ✓ Describe the correct procedures for all the steps in the transfusion process
- ✓ Explain the initial action required to manage an adverse event

Units in this course:

1. Understanding Maternal Sensitisation
2. Anti-D Prophylaxis
3. Management of Pregnancies at Increased Risk
4. Anti-D – Routine Use
5. Anti-D – Informed Decision Making
6. Anti-D – Safe Storage and Administration

Course has been designed for:

- Obstetricians
- General Practitioners
- Midwives
- Nurses

Approximate completion time: 2hr

Course learning outcomes:

- ✓ Explain the significance of RhD during pregnancy, antibody formation following fetomaternal haemorrhage and how anti-D immunoglobulin prevents sensitisation
- ✓ Describe the impact that anti -D prophylaxis has had on outcomes
- ✓ Discuss the management of potentially sensitising events during pregnancy and the care of women already sensitised to the RhD antigen
- ✓ Recognise the need to facilitate informed decision making in relation to anti-D
- ✓ Describe the safe storage and administration of anti -D immunoglobulin

Units in this course:

1. Understanding Maternal Sensitisation
2. Anti-D Prophylaxis
3. Routine Laboratory Testing in Pregnancy
4. The Role of the Laboratory in Anti-D Prophylaxis
5. The Role of the Laboratory in Anti-D Sensitised Pregnancies

Course has been designed for:

- Hospital transfusion laboratory staff
- Biomedical scientists
- Medical laboratory assistants
- Obstetricians
- General Practitioners
- Midwives
- Nurses

Approximate completion time: 1hr 40min

Course learning outcomes:

- ✓ Explain the significance of RhD during pregnancy, antibody formation following fetomaternal haemorrhage and how anti-D immunoglobulin prevents sensitisation
- ✓ Describe the impact that anti -D prophylaxis has had outcomes
- ✓ Discuss the role of the routine blood transfusion and haematology laboratories in pregnancy, role of the laboratory in anti-D prophylaxis and the role of routine laboratory and reference laboratories in the management of sensitised pregnancies

Units in this course:

1. Basic Blood Facts
2. Blood Conservation
3. Intraoperative Cell Salvage
4. Postoperative Cell Salvage

Course has been designed for:

- Doctors
- Nurses
- Operating Department Practitioners
- Cell salvage operators
- Clinical perfusionists
- Clinical support workers

Approximate completion time: 1hr 20 min

Course learning outcomes:

- ✓ Describe the basic composition and physiology of blood
- ✓ List the donor blood components that are currently available for clinical use in the UK
- ✓ Understand the importance of planning a blood conservation strategy for a surgical patient
- ✓ Explain the indications and limitations of the various blood conservation techniques available

Units in this course:

1. Haemovigilance in the UK and Republic of Ireland
2. Laboratory Communication
3. Sample Reception
4. Serology Testing
5. Provision of Blood Components
6. Adverse Reactions and Events

Course has been designed for:

- Healthcare scientists (Biomedical & Clinical) and
- Biomedical support workers working in the transfusion laboratory

Approximate completion time: 2hr

Course learning outcomes:

Demonstrate an understanding of -

- ✓ The role of the hospital transfusion laboratory in supporting safe & appropriate transfusion practice
- ✓ The laboratory workflow and the various critical stages in the process
- ✓ The importance of effective communication
- ✓ Component/product traceability
- ✓ The mechanisms in place for investigating and recording adverse/near miss events

Units in this course:

1. Consent for Transfusion
2. Patient Information
3. Benefits and Risks of Blood Transfusion
4. Alternatives to Transfusion
5. The Consent Process

Course has been designed for:

- Doctors, Nurses and Clinicians involved in the consent process
- All healthcare professionals caring for transfused patients
- Should be used in conjunction with courses 1 and 2

Approximate completion time: 1hr 40min

Course learning outcomes:

- ✓ Understanding of the rationale and legal requirement for consent for transfusion
- ✓ Understanding of where to access information resources available to patients and healthcare staff
- ✓ Understanding of the benefits, risks and the alternatives to transfusion
- ✓ Understanding of how to undertake the consent process

Units in this course:

1. Recognition of Acute Transfusion Reactions
2. Transfusion Reactions in Special Groups
3. Immediate Management of Transfusion Reactions
4. Investigation of Transfusion Reactions
5. Further Management
6. Haemovigilance Reporting in the United Kingdom and Republic of Ireland

Course has been designed for:

- Doctors
- Nurses
- Midwives
- Operating department practitioners
- Any other allied health professionals involved in transfusion

Approximate completion time: 120 min

Course learning outcomes:

- ✓ Recognise the signs and symptoms of an acute transfusion reaction
- ✓ Demonstrate an understanding of the immediate management and investigation of patients with a transfusion reaction
- ✓ Recognise the potential requirements for further transfusion management for patients who require ongoing transfusion support
- ✓ Recognise the importance of haemovigilance reporting and the contribution to patient safety

Units in this course:

1. Safe Blood Sampling for Transfusion

Course has been designed for:

- Any clinical staff who take blood samples for pre-transfusion testing:
e.g. Doctors, Nurses, Phlebotomists
Midwives, Clinical support workers
- Should be used in conjunction with unit 4 (Sampling Procedures) of 'Safe Transfusion Practice'.

Approximate completion time: 12min

Course learning outcomes:

- ✓ A short animation video highlighting the high risk or error 'hotspots' when taking a blood sample for transfusion
 - Identifying the patient
 - Labelling the sample tube
 - Matching the blood sample with the request form
- ✓ Explains the procedure which must be followed correctly or the consequences for the patient could be fatal
- ✓ There is no assessment element to this course

Parts to this course:

1. Haemovigilance in the UK and Republic of Ireland *unit*
2. Sampling Procedures *unit*
3. Safe Blood Sampling for Transfusion *course* (not assessed)
4. ABO blood group for Phlebotomists *fact sheet* (not assessed)

Course has been designed for:

- Phlebotomists
- Any other staff undertaking solely the sampling of blood in the transfusion process

Approximate completion time: 1 hr

Course learning outcomes:

Demonstrate an understanding of -

- ✓ The most common errors in the transfusion process
- ✓ Basic ABO serology
- ✓ The correct procedures for undertaking a pre-transfusion sample safely
- ✓ This pathway is a mix of assessed and non-assessed elements

Parts to this course:

1. Haemovigilance in the UK and Republic of Ireland *unit*
2. Collection Procedure *unit*
3. ABO blood group for Phlebotomists *fact sheet* (not assessed)

Course has been designed for:

- Porters
- Any other staff undertaking solely the collection of blood in the transfusion process

Approximate completion time: 45 min.

Course learning outcomes:

Demonstrate an understanding of -

- ✓ The most common errors in the transfusion process
- ✓ Basic ABO serology
- ✓ The correct procedures for collecting blood safely
- ✓ This pathway is a mix of assessed and non-assessed elements

Learnbloodtransfusion has received academic accreditation from Napier University, Edinburgh:

Safe Transfusion Practice (adult and paediatric versions)

✓ **2 credits at Level 7 SCQF**

Blood Components and Indications for Use

✓ **4 credits at Level 9 SCQF**

Good Manufacturing Practice for Hospital Blood Banks

✓ **4 credits at Level 9 SCQF**

Anti D (clinical and laboratory versions)

✓ **4 credits at Level 9 SCQF**

Consent for Transfusion

✓ **2 credits at Level 7 SCQF**

Each e-learning session includes a self-assessment exercise and a downloadable certificate if a score of 80% or more is achieved.

CAT credits are transferable – contact your academic institution for advice on how you obtain your credits upon successful completion of these courses.



Do you work in an NHS organisation?

Learnbloodtransfusion (LBT) is available through:

- **England:** e-Learning for Healthcare Hub or Electronic Staff Record (ESR) or LearnProNHS www.learnbloodtransfusion.org.uk
- **Scotland:** e-Learning for Healthcare Hub or LearnProNHS www.learnbloodtransfusion.org.uk
- **Wales:** e-Learning for Healthcare Hub or Electronic Staff Record (ESR) or Learning@NHSWales www.mle.wales.nhs.uk
- **N. Ireland:** e-Learning for Healthcare Hub or LearnProNHS www.learnbloodtransfusion.org.uk
- **Rep. of Ireland (not NHS):** LearnProNHS www.learnbloodtransfusion.org.uk

Are you studying a healthcare course at a Higher Education Institution?

Access LBT via LearnPro by registering at www.learnbloodtransfusion.org.uk; contact your Education Lead for further information. You may also access LBT via OpenAthens if available in your country.

Do you work in an independent hospital in England?

Access via LearnPro by registering at www.learnbloodtransfusion.org.uk; contact your Transfusion Lead/Link for further information. You may also access LBT via OpenAthens if available in your country.

