NHS National Services Scotland

Information for Hospital Transfusion Committee Chairs and Consultant Transfusion Leads

SNBTS Transfusion Team and Scottish National Blood Transfusion Committee

SCOTTISH NATIONAL BLOOD TRANSFUSION SERVICE®

Contents

Introduction

This information sheet is intended mainly for Hospital Transfusion Committee Chairs but also for Consultant Transfusion Leads and contains a summary of information about clinical transfusion practice in Scotland, and the wider United Kingdom, to support those individuals who take up these really important and valuable roles. We have provided some useful links, references and contact details for further information and support and a glossary of terms and abbreviations at the end of the document.

This was produced by the SNBTS Transfusion Team and Scottish National Blood Transfusion Committee and will be updated annually.

Dr Megan Rowley
Consultant in Transfusion Medicine
Clinical Lead SNBTS Transfusion Team
Megan.Rowley@ GRO-C

Dr Lynne Anderson
Consultant Anaesthetist
Chair SNBTC
Lynne.Anderson@ GRO-C

Scottish National Blood Transfusion Service

SNBTS is part of NHS National Services Scotland. In 2020 SNBTS collected 136,010 whole blood donations and 3,683 apheresis platelet donations. For more information on blood donation go to the Scotblood website: https://www.scotblood.co.uk/. SNBTS aims to stock between 3 and 6 days' supply of red cells and the daily stock levels are displayed on the Scotblood website.

SNBTS is one of four UK blood services and is the provider of blood and blood components throughout Scotland. In 2020 SNBTS issued 126,093 red cell units, 21,653 platelet units, 16,610 units of fresh frozen plasma (including Octaplas™ and MBT-FFP) and 2651 cryoprecipitate pools.

SNBTS manages and funds the Transfusion Practitioners (TP) working in the Health Boards (HB) throughout Scotland and the regional Transfusion Support Assistants (TSA) who support the TPs in their role. A description of the role of TPs can be found in **Appendix 6**.

SNBTS runs four clinical Transfusion Laboratories in Edinburgh (RIE), Dundee (Ninewells), Aberdeen (ARI), Inverness (Raigmore) and Red Cell Investigation (RCI) reference services in Glasgow (Gartnavel).

SNBTS clinical webpages are under development and can be found at https://www.nss.nhs.scot/browse/blood-tissues-and-cells. It is hoped that this will be a really valuable resource for all staff involved in transfusion practice in Scotland.

Scottish National Blood Transfusion Committee

This is a multidisciplinary committee accountable to Scottish Government as well as being represented on a number of transfusion-related UK bodies.

SNBTC was previously known as the Scottish Clinical Transfusion Advisory Committee (SCTAC) and changed its name in 2021. SNBTC is a forum for HTC/OTC chairs or their alternates to discuss and agree matters of organisational and strategic importance to clinical transfusion practice within Scotland. There is provision for a patient or lay representative to attend the group but this position is currently vacant.

SNBTC is supported by SNBTS who provides the administrative support and subject matter expertise. SNBTC also provides oversight of the daily work and national outputs of the SNBTS Transfusion Team.

SNBTC business meetings are held four times a year - previously in Edinburgh but by Microsoft Teams since Spring 2020.

A free one-day educational meeting is usually held annually in Edinburgh each November/December. The next (virtual) meeting will be on 26th November 2021.

SNBTC Chair: Dr Lynne Anderson, Consultant Anaesthetist, GJNH
SNBTC Administrative Support: Lindsay Hunter, SNBTS

Role of the Transfusion Practitioner

The Better Blood Transfusion Team was renamed the SNBTS Transfusion Team in 2019 and organised into four regional teams (see **Appendix 3**). The regional model provides mutual support and resilience.

The original TPs in the BBT team were mostly from a nursing background. More recently, TPs with a scientific background have joined the SNBTS Transfusion Team providing subject matter expertise across the whole spectrum of clinical transfusion practice.

The TP role within the health boards throughout Scotland is explained in **Appendix 6**.

The TPs also have a national role in 'pillar' or 'strategy' groups which enables the Transfusion Team to deliver the 5-year strategy as outlined in **Appendix 5**

The TPs are supported by Transfusion Support Assistants (TSAs) and the names of the TPs and TSAs are given in **Appendix 3**.

The SNBTS TT Annual Report provided for each Health Board in June/July gives an overview of the work of the team national and locally. Copies of this report can be obtained by contacting your local TP or emailing nss.snbtstransfusionteam@nhs.scot.

Any other queries about the work of the SNBTS TT can be addressed to
Head of Nursing- Anne Marie Carr Anne-Marie.Carr@ GRO-C
Senior Nurse- Susan Cottrell Susan.Cottrell2@ GRO-C
Clinical Lead- Megan Rowley Megan.Rowley@ GRO-C

Transfusion Committees

Hospital Transfusion Committee

The HTC is a multidisciplinary group of blood 'users' working with the blood 'providers' which include transfusion laboratory leads and other transfusion subject matter experts such as the TP and Transfusion Lead Consultants. The HTC provides the clinical governance framework and strategic oversight of clinical transfusion practice within a hospital or Health Board.

Overarching Transfusion Committee

The OTC may cover one (or more) hospitals or one (or more) Health Boards. If there is only one hospital within a HB the HTC and OTC may be one and the same thing.

The HTC/OTC chair should be appointed by the hospital or HB Medical Director and the HTC/OTC chair is responsible for reporting through the appropriate local clinical governance channels, which will enable HBs to have assurance regarding clinical transfusion practice.

A list of current HTC/OTC chairs can be found in **Appendix 3**

HTC/OTC Meetings

It is expected that the HTC/OTC meet at least three times per year with representation from all areas where blood is transfused including community hospitals and hospices. The Hospital Transfusion Team (HTT) are core members of the HTC/OTC. Each HTC/OTC has a link consultant from SNBTS who is available to support the local haematologist leading for transfusion. There should be hospital and/or HB management in attendance as well as senior nursing representation. Each HTC/OTC should consult with local patient groups or consider appointing a lay representative.

Administrative support can be provided by the Transfusion Support Assistant.

Role of the HTC/OTC:

- Promote safe and appropriate blood transfusion practice through local protocols based on national guidelines.
- Audit the practice of blood transfusion against the hospital or HB policy and national guidelines, focusing on critical points for patient safety and the appropriate use of blood.
- Lead multi-professional quality improvement projects on the use of blood within the hospital or HB, focusing on specialities where demand is high, including medical as well as surgical specialities, and the use of platelets, plasma, and other blood components as well as red cells.
- Provide feedback on audit of transfusion practice and the use of blood to all hospital or HB staff involved in blood transfusion.
- Regularly review and take appropriate action regarding data on blood stock management, wastage and blood utilisation provided by Account for Blood and the SNBTS Laboratory Dashboard.
- Develop and implement a strategy for the education and training for all clinical, laboratory and support staff involved in blood transfusion.
- Promote patient education and information on blood transfusion including the risks of transfusion, blood avoidance strategies and the need for positive patient identification at all stages in the transfusion process.
- Consult with local patient representative groups where appropriate.
- Modify and improve blood transfusion protocols and clinical practice based on new guidance and evidence.
- Be a focus for local contingency planning and management of blood shortages.
- Report regularly to the SNBTC.

A template for the **HTC/OTC Agenda** and **Terms of Reference** are under development from the SNBTS Transfusion Team National Policy Group.

Standing HTC/OTC agenda items should include:

- Transfusion documentation – transfusion-related policies and guidance to promote safe and appropriate use of blood

- Transfusion incidents
- Key performance indicators including traceability
- Audits and quality improvement projects
- Transfusion education participation and blood collection competency assessment compliance
- Transfusion research and developments
- SNBTS Transfusion Team update

The HTC is recommended to develop an annual work plan which is ratified by the HTC with progress against individual objectives measured at the HTC and HTT meetings

Duties and responsibilities of HTC and OTC chairs

- Chair the HTC/OTC and ensure appropriate membership and attendance
- Work in partnership with the HTT who will provide subject matter expertise
- Draw up the agenda with the support and advice of the HTT
- Liaise with the administrative support to arrange meetings, circulate papers and take notes/minutes
- Develop and monitor the annual HTC work plan to align with local issues and national initiatives and convene working groups to deliver initiatives
- Represent HB at SNBTC by attending in person, nominating an alternate or providing a report
- Report to the hospital or HB Clinical Governance meeting via the local processes
- Escalate any issues via Clinical Governance which may be impacting on clinical transfusion and laboratory practice
- Ensure the minutes of each meeting are a true reflection of discussion and that actions are completed in a timely manner.

Hospital Transfusion Team

The Hospital Transfusion Team (HTT) is a local multidisciplinary operational group comprising the Transfusion Practitioner, Transfusion Laboratory/Blood Bank Manager and Transfusion Lead Consultant. Other members may include the Quality Manager and administrative support.

The HTT should meet at least monthly and at least 2 or the 3 core members should attend. An example of a HTT Statement of Purpose are available from the SNBTS Transfusion Team.

Standing HTT items should include:

- Operational issues between clinical and laboratory areas.
- Progress of HTC work plan and HTT action plans
- Implementation of transfusion-related policies and guidance
- Progress of investigation, reporting of, and learning from, transfusion incidents
- Usage, wastage and traceability of blood components and rejected samples.
- Support of audit and quality improvement
- Scheduling of transfusion induction, face-to-face transfusion teaching and promotion of LearnBloodTransfusion and other learning opportunities
- Relevant involvement with SNBTS Transfusion Team initiatives

Duties and responsibilities of the HTT

- Implement and deliver the HTC work plan and support HTC working groups
- Provide transfusion subject matter expertise to the hospital or HB
- Respond to locally agreed KPIs, incidents, operational problems or new initiatives that arise and communicate as appropriate with the HTC chair
- Keep notes of actions arising from meetings

Consultant Lead for Transfusion

Each hospital with a blood bank should have a haematologist who is designated the Consultant Lead for Transfusion and this role covers transfusion in all hospitals and community settings supplied by the blood bank. It is advisable to have this role identified in the consultant job plan.

It is recognised that some smaller hospitals do not have a support from a consultant haematologist, let alone a transfusion lead and that this role may be fulfilled by someone working within another hospital and sometimes another Health Board.

A list of Consultant Leads for Transfusion can be found in **Appendix 3.**

The roles and responsibilities include:

- Attending and supporting the HTT and HTC to provide medical input and transfusion expertise
- Supporting the Transfusion Laboratory/Blood Bank Manager in the delivery of laboratory services
- Having oversight and responsibility for compliance with the Blood Safety and Quality Regulations and UKAS Accreditation Standards for transfusion
- Working with haematology colleagues to provide a liaison service to advice clinical colleagues on the safe and appropriate use of blood and blood components
- Undertaking mandatory transfusion training and other CPD activities relevant to this role
- Signposting e-learning and where necessary providing transfusion training for medical staff involved in any aspect of the transfusion process
- Supporting clinical and laboratory staff in the investigation of transfusion incidents and working with TPs to report incidents to SHOT/SABRE where necessary
- Providing medical expertise to the development of local transfusion guidance and local transfusion developments.
- Working with SNBTS Transfusion Consultants where specialist input is required

SNBTS Consultants

The haematologists employed by SNBTS support the SNBTS blood banks as detailed below where they act as the Consultant Lead for Transfusion and are members of the HTT (see **Appendix 3**).

- **Aberdeen** (Aberdeen Royal Infirmary) – Professor Mark Vickers, *Dr Margarita Gonzalez*
- **Dundee** (Ninewells) – Dr Katie Hands
- **Edinburgh** (Royal Infirmary of Edinburgh) –Dr Jenny Easterbrook, *Dr Megan Rowley*
- **Glasgow** (Gartnavel) – Dr Jennifer Laird, *Dr Richard Soutar*
- **Inverness** (Raigmore) – Dr Margarita Gonzalez, *Professor Mark Vickers*

SNBTS consultants have expertise in different areas of clinical and laboratory transfusion practice as well as donor medicine as detailed below:

- **Blood Banking** – Dr Katie Hands (Lead), Dr Jennifer Laird, Dr Margarita Gonzalez, Dr Jenny Easterbrook, Dr Megan Rowley
- **Red Cell Investigation** – Dr Jennifer Laird (Lead), Dr Katie Hands, Dr Margarita Gonzalez, Dr Jenny Easterbrook
- **Clinical Apheresis** – Dr Lynn Manson, Dr Kenny Douglas, Professor Mark Vickers, Dr Katie Hands
- **Transfusion Team** – Dr Megan Rowley
- **Histocompatibility and Immunogenetics** – Dr Dave Turner and Dr Richard Battle
- **Donor Medicine** – Dr Lorna McLintock and Dr Nicole Priddee
- **Tissues and Cells** – Dr Sharon Zahra

SNBTS consultants also provide

- An out-of-hours national on-call service for transfusion-related issues across Scotland. Accessed via the local SNBTS blood bank.
- An in-hours advisory service provided locally from the SNBTS centres with national cover
- A link for each HTC/OTC to support local Transfusion Lead Consultants (**see Appendix 3**)

Scottish Transfusion Data

SNBTS has three linked databases - Account for Blood (AfB), Account for Patient (AfP) and Account for Donation (AfD) - which contain information about blood donation and transfusion throughout Scotland including data from hospital blood bank laboratory information management systems (LIMS). This data can be linked to clinical coding data through the Scottish Transfusion Epidemiology Database.

SNBTS have a team of business analysts and a transfusion researcher (Dr Kate Forrester) working together to make transfusion data available for the purposes of monitoring and understanding local transfusion practice. Initially this was in the form of monthly pdf reports for each hospital and HB

but more recently interactive dashboards have been developed for hospitals to look at their own data.

- SNBTS Blood Bank Dashboard – *refreshed on the 4th of every month*
- SNBTS Hospital Blood Bank Transfusion Overview Dashboard – *refreshed daily at 6.00am*
- SNBTS Issuable Blood and Platelet Stock – *refreshed daily at 9.30am*
- Medical Blood Use Dashboard (coming soon)

It is also possible to carry out transfusion quality improvement projects or to ask specific transfusion-related questions by putting in a data request to the SNBTS Transfusion Team.

SNBTS Transfusion Researcher: Dr Kate Forrester
Katherine.Forrester@ GRO-C for quality improvement projects and data queries

SNBTS TT Administrator: Lindsay Hunter
Lindsay.Hunter@ GRO-C for password controlled access to the dashboards

Key Performance Indicators

A number of indicators are used by SNBTS and SNBTC to monitor clinical and laboratory transfusion practice. It is useful to have a national comparison but KPIs should be applied locally and related to local services

Key Performance Indicator	Green	Amber	Red
Traceability	100%		
O negative RBC booked in as a % of all RBC	<13.5%		
% RBC fated as 'Time Expired'	<1.5%	1.5-3.0%	>3.0%
% RBC fated as 'Clinical Discards'	<1.5%	1.5-3.0%	>3.0%
% Platelets fated as 'Time Expired'	<7.5%	7.5-10%	>10%
% Platelets fated as 'Clinical Discards'	<1%	1-3%	>3%

HTCs and OTCs may wish to establish local KPIs and link these into the HTC/OTC work plan at the same time ensuring that data collection is locally sourced as the TPs do not have the capacity to undertake data collection.

- Transfusion training completed
- Rejected pre-transfusion testing samples;
- Single unit transfusions;
- Crossmatched to transfused ratio for surgery.

Transfusion Policies, Guidance and Transfusion Documentation

The HTC/OTC is responsible for having up-to-date policies and evidence-based guidance as well as supporting documentation to cover all services within the hospital or HB. Some of these resources have been developed by the SNBTS TT for local implementation.

Transfusion Record

This is a 4-page chart for authorising (prescribing) and documenting transfusion. It includes a consent checklist and TACO risk assessment as well as an administration guide and a flowchart for managing any adverse events. *This resource has been developed by the SNBTS TT and was available for implementation from September 2020.*

Hospital Transfusion Policy

Describes all aspects of the clinical transfusion process from sampling to administration and is essential for all hospitals and HBs to have one. *A template for this policy has been developed by the SNBTS TT and was available for local configuration from March 2021.*

Appropriate Use of Blood and Blood Components

Based on the principles of Patient Blood Management and existing evidence-based guidelines each hospital or HB should ensure that blood and blood components are used appropriately including specific requirements (irradiated cellular components, antigen matched red cells, HLA patched platelets, washed components etc.) where these are indicated. *The SNBTC endorses the NICE guidance on Blood Transfusion [https://www.nice.org.uk/guidance/NG24] (note no SIGN guidelines are available for blood transfusion).*

Major Haemorrhage Protocol

Describes how to get blood and blood components to patients with major haemorrhage in a safe and timely way. The local Hospital or HB protocol should accurately describe local process and relate to the specific needs of the specialities within the hospital. *SNBTC has set up a working group to produce top tips and best practice guidance for local MHP*

Management of Blood Shortages

Each hospital should have Emergency Blood Management Arrangements in place to respond to blood shortages as declared by SNBTS.

The number of day's supply of red cells held by SNBTS of the 'core-four' blood groups (O positive, A positive, O negative and A negative) determines the EBMA status

- **Green** is normal supply at 3-6 days
- **Pre-Amber** is less than 3 day's supply
- **Amber** is less than 2 day's supply
- **Red** is less than 1 day's supply

A national Integrated Blood Shortage Plan for Blood and Platelets was produced in March 2020 and ratified by SNBTC in July 2020

.

Patients Who Refuse Blood and Blood Components

It is advisable to have a process in place for patients who refuse blood components.

This guidance from the Association of Anaesthetists has recently been updated Anaesthesia 2019, 74: 74-82. https://associationofanaesthetists-publications.onlinelibrary.wiley.com/doi/full/10.1111/anae.14441

Patient Information

SaBTO guidance on consent for transfusion was issued in 2011 and updated and reissued at the end of 2020.

Patients who will be transfused, or are likely to be transfused, with blood or blood components should be given written information to explain the process of transfusion prior to consenting for transfusion. They should be explained the risks and benefits of transfusion and any alternatives if available. They should have the opportunity to ask questions based on what

they have been told, or what they have read, and the right to refuse the treatment that is being offered. SaBTO guidance aligns with the Realistic Medicine principle of shared decision-making and the outcome of the conversation should be recorded on the patient's transfusion record or in the medical notes.

The SNBTS TT produces Patient Information Leaflets (PILs) which are regularly reviewed and updated. These are currently stored and distributed by PHS and your transfusion practitioner will be able to help coordinate the ordering, delivery and distribution of the PILs.

- Receiving a blood transfusion was published in July 2021
- Irradiated blood components was updated in July 2021

These leaflets are also available online to be viewed or printed by going to https://www.nss.nhs.scot/blood-tissues-and-cells/transfusion-team/national-policies-factsheets-and-patient-information/

Transfusion Training

It is mandatory in Scotland for all staff involved in the transfusion process to be trained for their roles and responsibilities

Undergraduates - Medical students, nursing and midwifery students should all have transfusion topic teaching during their training. The SNBTS TT has developed some resources and can put you in touch with other undergraduate tutors to share resources. Undergraduates can have access to LearnBloodTransfusion modules.

Induction – Clinical transfusion practice should be included in the induction of all clinical staff. The SNBTS TT has produced induction guides for these staff groups phlebotomy and portering staff and more of these guides are in preparation. Contact your TP for more information.

FY1 and FY2 – many hospitals provide transfusion training during the preparation for practice week prior to FY1 doctors starting work. Face to face transfusion training is usually provided by the Clinical Transfusion Lead for FY1 and FY2 doctors as part of their education programme. The SNBTS TT is happy to share these teaching resources which are updated annually.

LearnBloodTransfusion – this modular e-learning programme is available via LearnPro (or TURAS LEARN) in Scotland. A SNBTS TT mandatory training matrix (see **Appendix 4**) has been developed to indicate which modules are appropriate for role. All staff involved in any aspect of blood

transfusion should complete the LBT: Safe Transfusion Practice module ideally within 6 weeks but no longer than 3 months of starting in post and this should be repeated every 2 years.

Blood Collection Competency Assessment Programme -The BSQR states that evidence of competence is required for all staff who collect blood and blood components before they can participate in the procedure.

The MHRA requires evidence of compliance on an annual basis. In order to help HBs meet this legal obligation the SNBTS TT has developed a formal training programme (BCCAP) for local assessors to, in turn, provide local transfusion education and take formal assessment of competency. Information on this resource can be obtained from your transfusion practitioner.

SNBTS TT Transfusion Education Specialist: Andy King-Venables
andy.king-venables2@ GRO-C or your TP for any questions on this programme.

Legislation and Regulation

Blood transfusion is highly regulated from vein-to-vein (donation to recipient) to ensure the safety of the collection, processing, testing and distribution of blood. It is important to understand the background to this because it is a legal requirement to follow this set of rules and failure to comply could result in closure of a hospital blood bank and therefor the transfusion service which has serious implications for the services within that hospital.

Blood Safety and Quality Regulations

The regulations in the UK are based on the EU Blood Directives and the UK law is contained in the Blood Safety and Quality Regulations (BSQR 2005, updated for EU Exit in 2019) which regulate Blood Establishments (BE), Hospital Blood Banks (HBB) and Blood Facilities (BF). The Competent Authority for the BSQR is the Medicines and Healthcare Products Regulatory Agency (MHRA) that requires a yearly self-assessment to be filed in April (the 'Compliance Report'). Most compliance reports are satisfactory but the MHRA can carry out 'for cause' inspection or 'check' inspections of any hospital blood bank and they only have to give 7 days' notice.

Read more about blood transfusion regulation on the MHRA website https://www.gov.uk/guidance/blood-authorisations-and-safety-reporting

where you can see guidance on completing the compliance report links to the legislation.

Hospitals and Blood Establishments report via the SABRE (Serious Blood Reactions and Events) portal which is the same route for reporting to SHOT. A guide to reporting including the MHRA/BSQR definitions of Serious Adverse Events (SAE) and Serious Adverse Reactions (SAR) can be found here:https://www.shotuk.org/wp-content/uploads/myimages/Joint-UK-Haemovigilance-user_guide-2017.pdf

Laboratory Accreditation

Medical diagnostic laboratories, including hospital blood banks, are expected to accredited by the UK Accreditation Service (UKAS) to meet international standards for medical laboratories (ISO15189) as described on the UKAS website: https://www.ukas.com/services/accreditation-services/medical-laboratory-accreditation-iso-15189 /.

Laboratories apply for accreditation based on their scope of practice and you can check whether a laboratory has been assessed and provided with a certificate of accreditation on the same website.

Joint Professional Advisory Committee (JPAC)

JPAC prepares detailed service guidelines for the four UK blood services through Standing Advisory Committees (SACs) including Transfusion Transmitted Infection, Blood Components, Clinical Transfusion Medicine, Care and Selection of Donors, Immunohaematology and Information Technology.

The JPAC website https://www.transfusionguidelines.org/ contains some other useful resources including:

- **Handbook of Transfusion Medicine** is a clinical textbook and a useful quick reference guide which can be browsed online or downloaded as a pdf.
- **The 'Red Book' Guidelines for the UK Blood Services** containing useful information about the testing of blood components as well as the exact specification of every single blood component available in the UK.
- **The UK Cell Salvage Action Group resources** including the 'Interoperative cell salvage workbook' (2018) and guides for all aspects of cell salvage as well as patient information leaflets https://www.transfusionguidelines.org/transfusion-practice/uk-cell-salvage-action-group

- **The Systematic Reviews Initiative** on all aspects of transfusion practice and links to the Transfusion Evidence Library http://www.transfusionevidencelibrary.com/

Serious Hazards of Transfusion

SHOT is the UK Haemovigilance Scheme and it has been producing annual reports on errors and reactions related to blood components since 1996. During this time much has changed in clinical transfusion practice.

The principle behind SHOT is an open and learning culture to which enables us to correct what has gone wrong and prevent, where possible, things going wrong in the future. The early SHOT reports showed that the risk of getting the wrong blood was much, much greater than getting a transfusion transmitted infection. This focussed effort on designing robust transfusion pathways based on accurate identification of patients at the point of sampling, in the laboratory, on collection and at the point of administration of blood components. ABO incompatible red cell transfusion still occurs in the UK, but far less frequently.

The SHOT website https://www.shotuk.org/ has a number of useful resources for learning and teaching.

- The current and all previous annual reports
- A slide deck of cases, figures and key points from the latest report
- A summary of recommendations, key messages and learning points in a format that supports development of a local action plan https://www.shotuk.org/wp-content/uploads/myimages/2020-SHOT-Recommendations-Gap-Analysis-Tool.xlsx
- The SHOT BITE series is particularly useful and regularly updated https://www.shotuk.org/resources/current-resources/shot-bites/.

SHOT recommendations are reviewed by the SNBTS TT Haemovigilance Group and discussed/ presented at SNBTC. HTC chairs and local TPs should ensure that the report is discussed at the HTC/OTC.

SHOT Office: Manchester Blood Centre SHOT@nhsbt.nhs.uk
Medical Director: Dr Shruthi Narayan (NHSBT Consultant Haematologist)
Steering Committee Chair: Professor Mark Bellamy (ITU Consultant, Leeds.
The chair of SNBTC sits on the SHOT Steering Committee to represent Scotland.

Safety of Blood Tissues and Organs

SaBTO is an advisory committee to UK ministers and health departments on the most appropriate ways to ensure the safety of blood, cells, tissues and organs for transfusion/transplantation. The UK government then instructs blood services, and wider blood transfusion networks, based on the advice they have received.

The reports and guidance from SaBTO can be found on the website https://www.gov.uk/government/collections/sabto-reports-and-guidance-documents.

Publications of relevance to clinical transfusion include:

- Guidance on consent for transfusion,
- Testing blood components for hepatitis E,
- Blood donor selection guidance
- COVID-19 convalescent plasma

Chair of SaBTO: Professor James Neuberger

Scotland is represented by Dr Lynn Manson, SNBTS haematologist in Edinburgh and Professor Marc Turner, the Medical Director of SNBTS.

Summary

This information sheet is intended to provide some useful information but cannot cover everything! If you have any suggestions for sections that are missing or information that is incorrect please contact us and let us know on the emails given at the start of the information sheet.

Megan Rowley and Lynne Anderson

October 2021

Appendix 1: Transfusion Glossary

ABBREVIATION	FULL TEXT/DESCRIPTION
ABO	ABO blood group system
AfB, AfP, AfD	Account for Blood, Account for Patient, Account for Donation
AS	Antibody Screen
ATR	Acute Transfusion Reaction
(H)BB	(Hospital) Blood Bank
BE	Blood Establishment
BF	Blood Facility
BSQR	Blood Safety and Quality Regulations
BTS	Blood Transfusion Service
DAT	Direct Antiglobulin Test
(R)EI	(Remote) Electronic Issue
FAHR	Febrile, Allergic and Hypotensive Reactions
EBMA	Emergency Blood Management Arrangements
EBMS	Electronic Blood Management System
FFP	Fresh Frozen Plasma
G&S	Group and save/Group and Screen
HB	(Territorial) Health Board
HTC/OTC	Hospital/Overarching Transfusion Committee
HTT	Hospital Transfusion Team
IBCT	Incorrect Blood Component Transfused
KPI	Key Performance Indicator
LBT	LearnBloodTransfusion
LD	Leucodepletion – all blood donations are filtered to removed white blood cells
LIMS	Laboratory Information Management System

PID	Patient Identification Details
PBM	Patient Blood Management
QMS	Quality Management System
RBC/PRBC/RCC	Red cells, packed red cells, red cell concentrate
RhDCcEe	Rh blood group system
RM	Realistic Medicine
SNBTC	Scottish National Blood Transfusion Committee (formerly SCTAC = Scottish Clinical Transfusion Advisory Committee)
STED	Scottish Transfusion Epidemiology Database
STP	Safe Transfusion Practice (LBT e-learning module)
TACO	Transfusion-Associated Circulatory Overload
TRALI	Transfusion-Related Acute Lung Injury
TTI	Transfusion Transmitted infection
UK NEQAS	UK National Quality Assessment Scheme
WBIT	Wrong Blood In Tube
WCT	Wrong Component Transfused
XM	Crossmatch

Appendix 2: Useful Transfusion Links

ORGANISATION/RESOURCE	LINK
American Association of Blood Banks	http://www.aabb.org/
British Blood Transfusion Society	https://www.bbts.org.uk/
British Society for Haematology	https://b-s-h.org.uk/
Duty of Candour	https://www.gov.scot/policies/healthcare-standards/duty-of-candour/
European Union Optimal Blood Use Project	http://www.optimalblooduse.eu/
International Society for Blood Transfusion	http://www.isbtweb.org/
Joint Professional Advisory Committee	https://www.transfusionguidelines.org/
LearnBloodTransfusion	https://www.learnbloodtransfusion.org.uk/
Medicines and Healthcare Products Regulatory Agency	https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency
National Comparative Audit of Blood Transfusion	https://hospital.blood.co.uk/audits/national -comparative-audit/
NHS Blood and Transplant	https://hospital.blood.co.uk/
National institute for Health and Care Excellence	https://www.nice.org.uk/
Australian National Blood Authority Patient Blood Management	https://www.blood.gov.au/patient-blood-management-pbm
Realistic Medicine	https://www.realisticmedicine.scot/
Safety of Blood Tissues and Organs	https://www.gov.uk/government/groups/advisory-committee-on-the-safety-of-blood-tissues-and-organs
Serious Hazards of Transfusion	https://www.shotuk.org/
UK Accreditation Service	https://www.ukas.com/sectors/health-safety/
World Health Organisation	https://www.who.int/health-topics/blood-transfusion-safety#tab=tab_1

Appendix 3: Scottish Transfusion Network

Western Region 1						
Health Board	Hospital	Chair HTC/OTC	Transfusion Practitioner	Transfusion Support Assistant	Lead Transfusion Consultant	Link SNBTS Consultant
NHS Ayrshire and Arran		**Steven Boom**	**Karen Smith**			**Jennifer Laird**
	Crosshouse Hospital					
	Ayr Hospital					
NHS Dumfries and Galloway		**Ewan Bell**	**Jill Gardiner**		**Mark Crowther**	**Jennifer Laird**
	Dumfries and Galloway Royal Infirmary					
NHS Forth Valley	**Forth Valley Hospital**	**Gavin Lamb**	**John Faulds**		**Hugh Edwards**	**Richard Soutar**
NHS Lanarkshire			**Laura Fraser/Moira Caldwell**		**Andrew Fyfe**	**Jennifer Laird**
	Hairmyres	Duncan Allen	Laura Fraser			
	Monklands	Andrew Russell	Moira Caldwell,			
	Wishaw		Laura Fraser			

Western Region 2						
Health Board	Hospital	Chair HTC/OTC	Transfusion Practitioner	Transfusion Support Assistant	Lead Transfusion Consultant	Link SNBTS Consultant
NHS Greater Glasgow and Clyde		**Lynne Anderson**				**Jennifer Laird**
	Glasgow Royal Infirmary	Geraldine Gallagher	Moira Caldwell		Louisa McIlwaine	Jennifer Laird
	QEUH	Phil Bolton	April Molloy, Louisa Wood		David McLaughlin	Jennifer Laird
	Gartnavel Hospital		Tina Watson			Richard Soutar
	Royal Alexandra Hospital	Simon Millar	Tina Watson			Kenny Douglas
	Inverclyde Hospital		Tina Watson			Kenny Douglas

	Vale of Leven Hospital					
	New Victoria Hospital					
Golden Jubilee National Hospital		**Lynne Anderson**	**Avril Marshall**		**Jennifer Travers**	**Jennifer Laird**
Northern Region						
Health Board	Hospital	Chair HTC/OTC	Transfusion Practitioner	Transfusion Support Assistant	Lead Transfusion Consultant	Link SNBTS Consultant
NHS Highland		**Charles Lee**	**Vanessa Rodrigues**		**Peter Forsyth**	**Margarita Gonzalez**
	Raigmore Hospital					
	Argyll and Bute	David Robinson	Avril Marshall			Kenny Douglas
	Lorne and Islands	Colin Millar	Avril Marshall			Kenny Douglas
NHS Grampian		**Alastair McDiarmid**	**Carla Ferguson**		**Mark Vickers**	**Mark Vickers**
	Aberdeen Royal Infirmary		Carla Ferguson			
	Dr Grays, Elgin		Carla Ferguson			
NHS Orkney	**Balfour Hospital**		**Vanessa Rodrigues**			**Megan Rowley**
NHS Shetland	**Gilbert Bain Hospital**	**Dawn Smith**	**Vanessa Rodrigues**			**Megan Rowley**
NHS Tayside		**Gillian Campbell**	**Eleanor Knight**		**Katie Hands**	**Katie Hands**
	Ninewells Hospital		Eleanor Knight			Katie Hands
	Perth Royal Infirmary		Eleanor Knight		Duncan Gowans	Katie Hands
NHS Western Isles	**Western Isles Hospital**	**Grazyna Stanczuk**	**Vanessa Rodrigues**			**Megan Rowley**
Eastern Region						
Health Board	Hospital	Chair HTC/OTC	Transfusion Practitioner	Transfusion Support Assistant	Lead Transfusion Consultant	Link SNBTS Consultant
NHS Borders	**Borders General Hospital**	**John O'Donnell**	**Helen Adams**		**Jean Leong**	**Megan Rowley**
NHS Fife	**Victoria Hospital, Kirkcaldy**	**Alasdair Macmillan**	**Jennet Getty**		**Sucheta Mane**	**Megan Rowley**

NHS Lothian		**Huw Roddie**	**Jane Oldham Bella Brownhill**		Jennifer Easterbrook	**Megan Rowley**
	Royal Infirmary of Edinburgh	Craig Beattie	Bella Brownhill		Jennifer Easterbrook	Megan Rowley
	Western General Hospital	Huw Roddie	Jane Oldham		Huw Roddie	Megan Rowley
	St John's Hospital, Livingstone	Anne Armstrong	Bella Brownhill/Jane Oldham			Megan Rowley

Appendix 4: Transfusion Training Matrix

'Once for Scotland' approach to Transfusion Education

SNBTS Transfusion Team Training Matrix aligned to roles

Learn Blood Transfusion (LBT) Module	Registered Nurse	Registered Midwife	Nurse / Non Medical Authoriser	ODP	Consultant & SAS Doctor	Doctors in training	GP covering community hospitals	Nurse in community hospital	BMS in Transfusion	MLA in Transfusion	Porter	HCSW & MCA	Phlebotomist	Student Nurse	Student Midwife	Medical Student
Safe Transfusion Practice																
Safe Transfusion Laboratory Practice																
Safe Transfusion Practice for Paediatrics																
Blood Components and Indications for Use																
Anti D Clinical Module																
Acute Transfusion Reactions																
Consent for Transfusion																
Learn Cell Salvage																
Nurse Authorisation/NMABT																
Anti D Laboratory Module																
GMP for Blood Establishments*																
GMP for Hospital Blood Banks*																
Blood Collection Pathway**																
Phlebotomy Pathway***																
Safe Blood Sampling for Transfusion Video																

*** course relevant to staff working in either a blood establishment or a blood bank**
**** for staff only involved in the blood collection procedure who have not completed LBT: safe transfusion practice as mandatory training**
***** for staff only involved in the sampling procedure who have not completed LBT: safe transfusion practice as mandatory training**

KEY
M - Mandatory for role
M - Mandatory if working in obstetrics
M - Mandatory if appropriate to role / clinical area
e.g. Paediatrics, A&E, Theatres, Critical Care, Haematology, cell salvage
R - Recommended for this role

Abbreviations	
ODP	Operating Department Practitioner
BMS	Biomedical Scientist
MLA	Medical Laboratory Assistant
HCSW	Health Care Support Worker
MCA	Maternity Care Assistant
SAS	Speciality and Associate Specialists

NHS Board Transfusion Committees are asked to use professional judgement in relation to mandatory training for specific staff roles where no transfusion requirements exist.

2020-04-24SNBTSTT_LBTTrainingMatrix_Version1.2_ReviewDecember2021
Endorsed by the Scottish Clinical Transfusion Advisory Committee November 2019

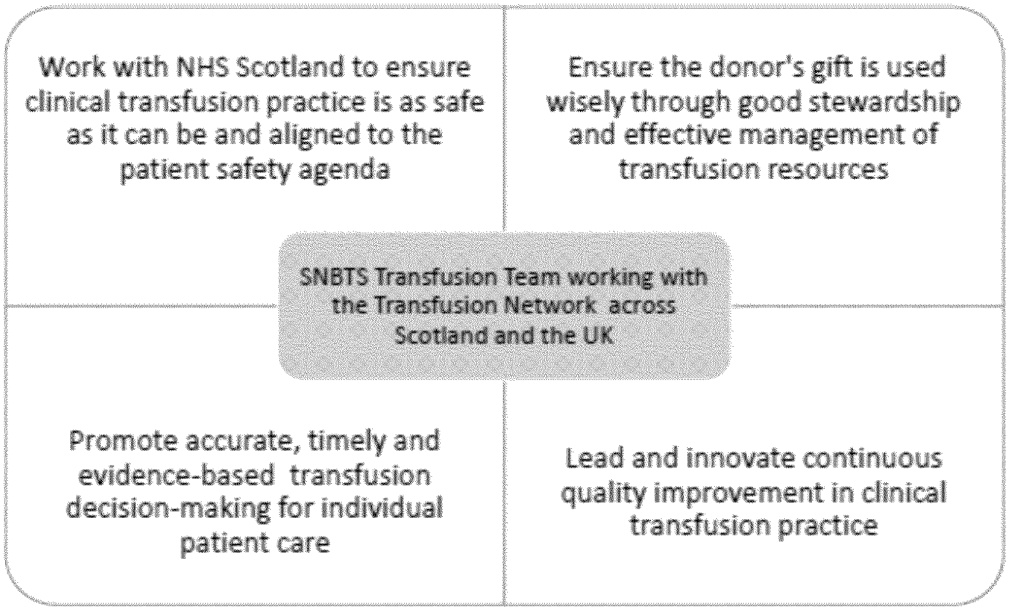
Appendix 5: SNBTS TT 5-year Strategy

Mission: Supporting safe and appropriate transfusion for patients in Scotland

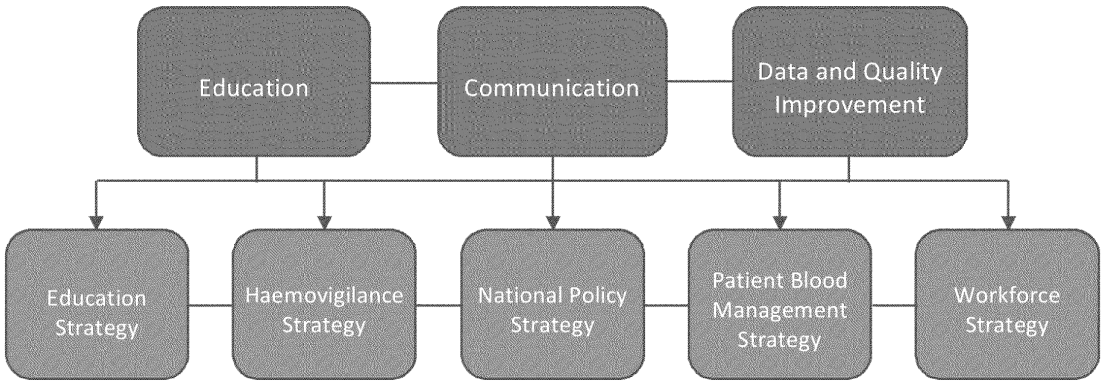
SNBTS Transfusion Team Description

The SNBTS Transfusion Team (SNBTS TT) comprises four regional teams (West 1, West 2, East and North) of transfusion practitioners working within territorial health boards throughout Scotland. Transfusion practitioners have either a nursing or biomedical scientist background and are subject matter experts in clinical transfusion practice. They work within local multidisciplinary Hospital Transfusion Teams with medical and scientific colleagues and support the wider Scottish transfusion network through Hospital and Overarching Transfusion Committees and the Scottish Clinical Transfusion Advisory Committee. In addition, the SNBTS TT is supported by a Central Team based at SNBTS Headquarters, the Jack Copland Centre, in Edinburgh and by Transfusion Support Assistants based with the regional teams.

SNBTS Transfusion Team Strategic Priorities



SNBTS Transfusion Team Strategic Approach



Strategy	Key Goals	Action
Education Strategy	To continue to educate and develop a workforce to deliver person centred care with the key focus on the safe, effective and appropriate use of blood for patients in Scotland.	Implement the national mandatory training matrix aligned to roles. Standardise national undergraduate education for delivery across all HEIs. Continue to respond to the development of virtual learning aligned to the digital education agenda. Work with HEIs to align national post graduate programmes of education to the changing needs of multidisciplinary staff involved in transfusion.
Communication Strategy	To develop effective communication between team members and the transfusion network to promote and share initiatives in clinical transfusion practice.	Develop SNBTS TT brand. Publish and present TT initiatives. Use social media and other digital communication. Develop patient-orientated information to promote shared decision-making.
Data and Quality Improvement Strategy	To use the unique opportunity of Account for Blood (AfB) and the Scottish Transfusion Epidemiology Database (STED) along with other healthcare datasets and dashboard capabilities to set and monitor KPIs and CQIs which continually improve clinical transfusion practice.	To develop a programme of quality improvements relevant to Scottish clinical transfusion issues. To develop and promote the medical blood use data to identify unwarranted variation in practice.
Haemovigilance Strategy	To promote patient safety in clinical transfusion practice through a culture of shared learning from both adverse events and exemplary practice.	Continue to provide subject matter expertise to local teams to promote and support incident investigation and incident

Strategy	Key Goals	Action
		reporting including Duty of Candour events. Develop patient-safety campaigns guided by SHOT recommendations.
National Policy Strategy	To produce national guidance documents and templates that can be adapted by health boards to standardise and harmonise clinical transfusion practice across Scotland and ensure equity of access to best clinical transfusion practice.	National transfusion record for authorisation of blood components including consent, TACO risk assessment and bedside checklist. National transfusion policy to support safe transfusion practice. Provide topical transfusion factsheets to inform and guide.
Patient Blood Management Strategy	To support and promote evidence-based clinical transfusion practice and align with NHS Scotland Realistic Medicine agenda.	Implement SaBTO consent guidance by promoting shared decision making and individualised transfusion support. Implement appropriate anaemia management in the pre-operative and acute medical setting. Implement single unit transfusion policies to minimise harm and maximise benefit. To promote electronic blood management systems throughout Scotland. Scope out the role of the TP in sustainability of remote and rural areas.
Workforce Strategy	Continue to develop the multidisciplinary members of the SNBTS TT workforce to support and enhance the delivery of the SNBTS TT mission.	Develop a new induction programme for all SNBTS TT roles. Develop a continuing professional development programme for all SNBTS TT roles. Provide access to relevant external courses, meetings and qualifications. Support the SNBTS TT representation on national and UK-wide groups. Provide SME and participation in HTTs, HTCs and other network meetings. Strive to Identify development and innovation opportunities.

Appendix 6: Role of the Transfusion Practitioner

Following the organisational review of the SNBTS Transfusion Team (SNBTS TT), formerly known as Better Blood Transfusion, a regional model of delivery was agreed with stakeholders throughout NHS Scotland to deliver a service aligned to the local and national transfusion agenda. The Transfusion Practitioner (TP) role is to provide subject matter expertise to NHS Boards and work collaboratively within a region to support and sustain the delivery of a consistent approach to safe transfusion practice and patient safety. The TP is strategically placed within the Board to influence and manage change through multidisciplinary stakeholder engagement and local intelligence to improve clinical transfusion practice.

An overview of the TP role is detailed below:

Transfusion Incident Management

Local incidents are owned and managed by the Board. The TP role in haemovigilance is to provide subject matter expertise to the owners of the incidents and local teams on incidents which are reportable as Serious Hazards of Transfusion (SHOT)/Serious Adverse Blood Reaction and Events (SABRE) adverse events, reactions or near miss events directly or indirectly impacting on patients and staff involved in the transfusion process.

To enable the TP to provide subject matter expertise, it is important a process is established to ensure TPs are made aware of reportable transfusion related incidents, events and reactions within their NHS Board. TPs are part of a wider transfusion incident management team and work in collaboration with local teams. All relevant events, near misses and reactions should be overseen collectively by the Hospital Transfusion Team (HTT), which includes the TP. In some Boards transfusion incident teams are established which should include the TP. The HTT must ensure follow up in a timely manner and is responsible for monitoring trends for reporting to the HTC.

The preparation of any incident reports should be undertaken by a member of the HTT and subsequently reviewed by the Hospital Transfusion Committee (HTC) and escalated accordingly via the board clinical governance route if applicable. In exceptional circumstances the TP may be required to assist with reporting of incidents on their local quality or incident management system e.g. Datix if a report has not already been generated by the clinical area or the laboratory. The TP is included as part of a reporting team to SHOT & SABRE but is not the sole reporter for clinical incidents and a process must be established to ensure resilience within the Board. The use of the SNBTS TT haemovigilance templates aligned to the SHOT dendrite reporting system are tools which can help provide a process to enable incident reporting teams to report all clinical related incidents. As part of the national overview of clinical incidents the TP or the Transfusion Support Assistant (TSA) will report the incident via the SNBTS TT portal on ServiceNow (an NSS system for NHSS) which enables local, routine reporting from ServiceNow as well as the visibility of Board specific clinical incidents via the SNBTS blood bank dashboard for review at https://viz.nhsnss.scot.nhs.uk

In summary, the TP will provide subject matter expertise on investigation outcomes, corrective and preventative action and lessons learnt. The TP will support any bespoke actions as required as an expert within safe transfusion

practice. Please refer to SHOT for further key messages and recommendations at: https://www.shotuk.org/

Education

The role of the TP in education is to support the delivery of a national transfusion education agenda. The TPs are involved in the national development of programmes of education, led by a Transfusion Education Specialist, which are adopted and implemented within the Board e.g., Blood Component Collection Assessors Programme and LearnBloodTransfusion e-learning programme. The TP will continue to train blood component collection assessors as part of the national programme but will not be responsible for the competency assessment of staff involved in collecting blood. The TP will support the delivery of specific bespoke education sessions as training needs are identified as a subject matter expert. The TP or the TSA is no longer responsible for maintaining staff training records for either blood component collection competency or completion of mandatory training. A process is required to be in place to ensure training compliance is monitored and reporting locally as part of the mandatory and regulatory training requirements. The TP can provide subject matter expertise on the process and work collaboratively within the Boards.

Quality improvement

As part of the national quality improvement (QI) programme of the SNBTS TT the TP will continue to provide subject matter expertise to the Board on any local transfusion related audit, including advice on designing and undertaking audit and QI initiatives. For nationally agreed audits and QI, TPs will work collaboratively with Boards to identify a local team to support the data collection and entry process. The TP will provide expertise on implementation of recommendations arising from QI initiatives, based on evidence based practice, and work collaboratively with Boards to influence and manage change locally. The TP will be supported in all aspects of their role in the national QI programme by the SNBTS TT Transfusion Researcher.

Other activities

Clinical Discards

As part of the TP role in the effective and efficient use of blood there should be a local reporting system in place to report all clinical discards. The TP will be involved with monitoring clinical discard trends via the blood bank dashboard and provide advice, guidance and education on preventative measures if required. All blood component discards should be discussed locally at the HTT, and reported to the HTC if applicable. The SNBTS TT can access NHS Scotland blood component discard data via the SNBTS blood bank dashboard at https://viz.nhsnss.scot.nhs.uk

Traceability

Local systems for traceability must be in place for the follow up of non-returned or incomplete traceability tags. The transfusion laboratory is responsible for monitoring trends and collating figures for reporting purposes. There may be exceptional circumstances that would require the involvement of the TP. If there

is a clinical area having persistent difficulties with returning completed tags, then the laboratory should report this directly to the clinical area and to the HTT.

Sample rejection

The TP can provide subject matter expertise on improvement interventions when a trend is identified in sample rejection but will not follow up individual incidents. The trending and monitoring of rejected sample data is the responsibility of the transfusion laboratory and the HTT.

Local projects or initiatives

If there is a request for a TP to support a local project or initiative that will require a significant time resource, please discuss with the SNBTS TT Senior Nurse. Additionally, if there are improvements initiatives which could be considered as part of a wider national project please contact the SNBTS TT on the email address below.

The SNBTS dashboards

The TP will work collaboratively with the local HTT to review and interpret data available via the Blood Bank dashboard and Board Transfusion Overview dashboard which are valuable tools to review local transfusion activity.

SNBTS TT National programme

All the SNBTS TT are involved in developing national programmes of work aligned to best practice and patient safety. The TP role within the Board is to provide subject matter expertise on the adoption and implementation of a 'once for Scotland' approach to transfusion practice. The TP will work collaboratively to influence and manage change aligned to the SNBTS TT refresh strategy and business plan. The TPs will continue to work in partnership with the Boards and strive towards excellence in transfusion practice as well as building on the successes which have been achieved as a result of a valued relationship between the SNBTS TT and the Board. Through a strategy refresh and improving the way we do things, the SNBTS TT is committed to educating a caring and compassionate workforce, provision of data and quality improvement initiatives and effective communication to meet the changing transfusion needs of the patients in Scotland associated with Realistic Medicine, patient safety and evidence based practice. Further information on the SNBTS TT refresh strategy and work plan for 2021/22 can be found below.

To contact the SNBTS TT please email nss.snbtstransfusionteam@nhs.scot or via the local TP.