Transfusion Practitioners Group
British Blood Transfusion Society

Highlight Report – TP Special Interest Group (SIG): December 24

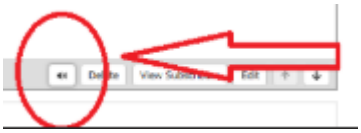
- BBTS Annual Conference 2025 will be held in **Harrogate on 13th - 16th October.**

  - We are excited to announce the newly launched **BBTS TP SIG Award** – to be presented within the TP session during the annual conference. This award will be given in recognition of the outstanding contribution made to the transfusion community by a TP or individual working in an equivalent role. For more information and to nominate a colleague, please refer to the Award Nomination Form. The closing date for nomination submission is the end of March 2025.

  - We are delighted to offer all TPs and those working in equivalent roles, an opportunity to present at the BBTS TP SIG session this year. Your regional representative will provide further information and will gladly receive your Speaker Nomination form. The closing date for submission is the end of February 2025.

- TP SIG submit/support TP-related articles for publication in the BBTS magazine Bloodlines. The latest article entitled 'Electronic Blood Sample Labelling – Back to Basics' is published in edition 151 and is attached below for interest.

- We have refreshed the BBTS TP forum so please do add a post - its free to join and you don't need to be a BBTS member.
  Once logged in, please click on this icon to activate email notifications:



- Work is ongoing to develop the National TP Framework in England. All related presentations and updates are available on the National Blood Transfusion Committee website under the National Transfusion Practitioners Network page: Documents and Resources | National Blood Transfusion Committee

- Please contact your regional representative(s) if you have anything you would like escalated to the TP SIG for discussion and feedback. Contact details and further information can be found on our dedicated webpages: BBTS | Transfusion Practitioners | or by emailing the Chair: Karen.Mead@nbt.nhs.uk

ELECTRONIC BLOOD SAMPLE LABELLING – BACK TO BASICS

Authors
Pedro Valle Vallines
Lead Transfusion Practitioner
Royal Cornwall Hospitals NHS Trust

Karen Mead
Specialist Transfusion Practitioner
North Bristol NHS Trust

Contributors
James Davies
Senior Blood Transfusion Practitioner
Kings College Hospital

Amanda Gould
Transfusion Practitioner
East Cheshire NHS Trust

Pioneered in Oxford (England) during 2001 and implemented in other NHS hospitals since then, blood transfusion electronic blood sample labelling (EBSL) has been in use for over 20 years in the UK.

However, there are no detailed criteria on the minimum requirements for an EBSL system. Such specifications should be used as guidance for providers and users of said systems to avoid discrepancies in system functionality, clinical practices and to unify sample acceptance criteria across different Blood Banks.

For Blood Banks who are looking to implement an EBSL system, we would suggest that initial configuration of the system should consider the following as a minimum:

User access
The British Society for Haematology (BSH) guideline for 'Administration of Blood Components'1 recommends that the identification of the member of staff who took the blood sample should be recorded on the sample tube. Therefore, the EBSL system should be set up to record individual user identity and to print this on the label.

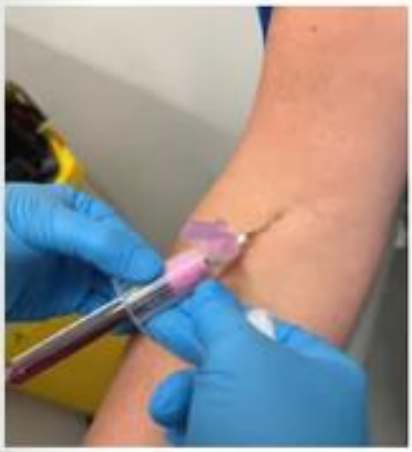
The National Blood Transfusion Committee (NBTC) training requirement2 is for all staff involved in the transfusion process to undertake training, knowledge and understanding assessments a minimum of every three years. EBSL systems should be configured to only allow staff in date with training/assessment to generate a sample label. An interface from the Trust/Organisational training system into the EBSL system would allow electronic transmission of such data.

Patient ID band
The BSH guideline for 'Administration of Blood Components'1 specifies that 'Pre-printed labels (pre-printed away from the patient or taken from the patient's notes e.g. 'addressograph' labels) must not be used to label transfusion blood sample tubes for compatibility testing. Only labels that are printed 'on demand' next to the patient and immediately attached to the sample tube at the time of phlebotomy by the individual who took the blood sample are acceptable.'

For this reason, the available EBSL systems must require a scan of the patient identification (ID) band to confirm the user is with the patient (assuming the correct ID band is attached to the correct patient). However, the system needs to be configured to only accept patient ID band barcodes and to stop the process if an alternative barcode has been scanned. This requires the data matrix coding (square barcode) on the patient ID band to be unique from any other barcode available. It must be noted that barcode scanning does not replace the need for the patient to verbally state who they are. For systems driven by electronic health records, there must be an alert and hard stop within the system for any mismatch between information from the ID band and currently viewed patient record. The requirements for the barcode configuration on patient ID bands are set by NHS Digital3. This GS1 compliant configuration must be implemented by the Trust/Organisation and it should be the only format accepted by any EBSL system provider.

Electronic Sample Label
The request form is one of the essential elements required for pre-sampling patient ID checks and there should be a mechanism to confirm/ensure the request is completed prior to and independent of EBSL.

The BSH guideline for 'Administration of Blood Components'1 recommends that in



addition to the identity of the member of staff, the sample label should also contain as a minimum, patient core identifiers (first name, surname, date of birth and unique ID number), and the date and time sample taken. In addition to eye-readable patient information, barcoded information may be useful to reduce transcription errors during the laboratory sample receipt process.

Other information that should be considered for inclusion on the sample label may include patient sex, clinical location where sample was taken, device used to generate the label, and an indication/prompt to affix the sticker to the sample tube (rather than a request form or patient notes). Maximum character length for forename and surname should also be reviewed in line with the local patient population demographics.

EBSL systems should be set up to print only one transfusion sample label per ID band scan, with the requirement for an additional transaction on the device if a further independent transfusion sample is required for an additional transfusion request (see below).

Second sample requirement

The BSH guideline for 'Pre-Transfusion Compatibility Procedures'4 state 'Unless secure electronic patient identification systems are in place, a second sample should be requested for confirmation of the ABO group of a first time patient prior to transfusion, where this does not impede the delivery of urgent red cells or other components', implying that with a secure electronic patient identification system in place, there is no need to duplicate venepunctures, improving clinical efficiency.

Despite this, most laboratories continue with their requirement for a second sample to confirm the ABO group of a first-time patient prior to transfusion, and for electronic issue - partly due to the need for the LIMS system to differentiate hand-labelled samples from EBSL labelled samples. This workstream needs to be progressed to avoid unnecessary samples being taken. Where single EBSL samples are accepted for ABO group and/or electronic issue, Trusts should risk assess this process with consideration to known wrong blood in tube rates and the likelihood/ability of users to work around the safety features of their EBSL system.

Device screen options

The implementation of mandatory fields/checklists alongside the scanning technology is essential to achieve secure electronic patient identification systems. The device screens should be personalised to a certain degree allowing some customisation within the process. Trusts/Organisations need to determine at which point the patient should be bled. Pre-labelling sample tubes is an unacceptable practice, but the system can be configured to take a sample either mid or post device screens.

If taken midway, the device can include a pre-sampling checklist to confirm positive patient identification and that the request form is fully complete prior to sample taking. It can also incorporate a rescan of the patient ID band to ensure the user is still in the presence of the correct patient following sample collection. Alternatively, the sample can be taken and then the device used to label the sample, but a checklist would be of limited value at this point and the user may need to leave the bedside if they forgot to take the electronic device/printer with them or if they experience a user or equipment issue, therefore rendering the process unsafe.

Sample acceptance policy

The final consideration should be for sample acceptance criteria. Trusts/Organisations need to decide whether all inpatient samples (where patients are wearing an ID band) should be electronically labelled with zero-tolerance for hand-written samples or if concessions should be permitted. A zero-tolerance approach will require each area to have multiple sets of equipment/hardware or easy access to a back-up in case of device failure.

Further consideration will be required to establish whether EBSL should be used in areas where ID bands are not traditionally used, or could this increase the risk of wrong blood in tube if the ID band is not attached to the patient? In addition, offsite and community locations may need consideration for inclusion, but potentially the IT logistics and costs may be too great.

Whilst it is valuable to have the ability to personalise a system to the individual needs of a Trust/Organisation, there should be some formal guidance and consensus regarding the generic set up of EBSL systems to enable unification of sample acceptance criteria and further ensure patient safety. This article aims to raise awareness of some of the options and considerations for those who are yet to introduce such a system.

References

1. BSH guidelines (2017): The administration of blood components: a British Society for Haematology Guideline
2. NBTC Requirements for Training and Assessment in Blood Transfusion (2016): https://www.nationalbloodtransfusion.co.uk/sites/default/files/documents/2023-02/NBTC%20Requirements%20for%20Training%20and%20Assessment%20FINAL.pdf
3. NHS England DCB1077 (2020): AIDC for Patient Identification: DCB1077: AIDC for Patient Identification - NHS England Digital
4. BSH guidelines (2012): Guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories