What Constitutes a Historical Sample?

Dr. Megan Rowley
Consultant Haematologist

On behalf of the BCSH compatibility and IT guidelines writing groups

There is much discussion about the second or ‘group-check’ sample….

…..what counts as a first or ‘historical’ sample?

TOPIC	GUIDELINE TITLE	DATE	FULL GUIDE	PUBLISHED VERSION	AUDIT TEMPLATE
Anaemia, alternatives to allogeneic transfusion	**Guidelines on the Identification and Management of Pre-Operative Anaemia**	2015			
Major Haemorrhage	**A Practical Guideline for the Management of those with, or at risk of Major Haemorrhage**	2015			
Apheresis	**Clinical use of apheresis procedures for the treatment of patients and collection of cellular therapy products**	2015			
IT, information technology	**IT in blood transfusion**	2014			
Prophylactic Anti-D immunoglobin	**Prophylactic Anti-D immunoglobin AMEN**	2014			
Prophylactic anti-D immunoglobulin	**BCSH guideline for th use of anti-D immunoglobin for the prev on of haemolytic disease of the**	2014			
Irradiated blood	This addendu tion to patients receiving T-cell depleting agents such as alem ab for non-haematological indications including solid organ transpla multiple sclerosis and vasculitis.	2012			
Pre-transfusion compatibility	**Guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories** The gap analysis tool (audit template) only covers areas specific to pre-transfusion testing or interaction with the IT systems. It does not cover general quality issues. It can be downloaded as a word document. Please note minor error in text: In Section 7.15.4 it mentions 7.14.3 this is incorrect. It should read section 7.15.3.	2012			
Blood Components	**Addendum to Administration of Blood Components**	2012			

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Possible scenarios for defining a historical sample suitable for use when providing compatible blood

“AT A DIFFERENT TIME”

20-30 minutes apart to ensure patient is re-bled

On a different day during current admission or in pre-admission clinic

During a previous admission to the same hospital

“WITH THE SAME FOUR CORE IDENTIFIERS”

minutes
hours
days
weeks
months
years?

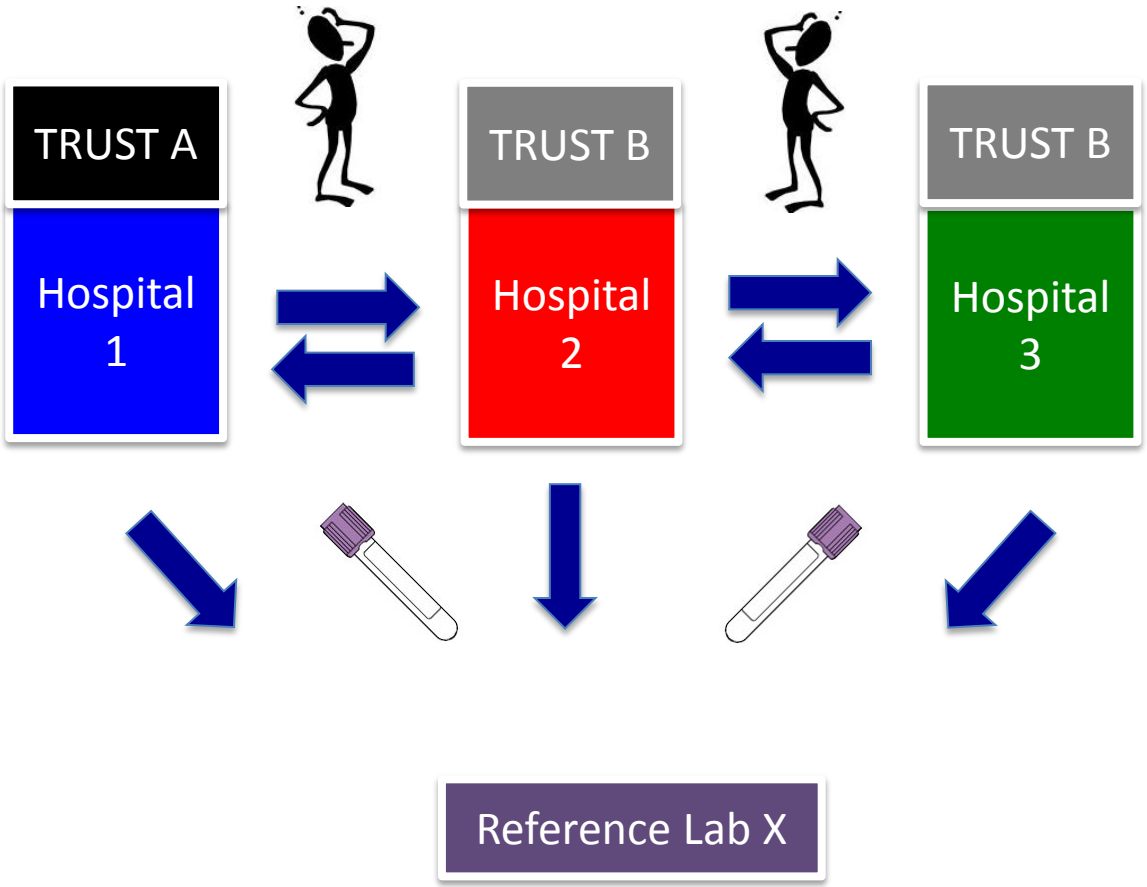
THE DETAIL MAY BE LOST IN THE MISTS OF TIME

AT THE TIME OF THE PREVIOUS SAMPLE - DID YOU HAVE THE SAME:

- **PATIENT IDENTIFICATION (OR TRANSFUSION) POLICY?**
- **PATIENT IDENTIFICATION NUMBER?**
- **PATIENT ADMINISTRATION SYSTEM?**
- **LABORATORY INFORMATION MANAGEMENT SYSTEM?**


THINGS
Change
HOSPITALS MERGE
PATHOLOGY NETWORKS - LABORATORY MERGERS
A NEW PAS AND/OR LIMS IMPLEMENTED
PEOPLE CHANGE THEIR NAMES
A COMBINATION OF THE ABOVE!

And there are complex patient journeys and transfusion laboratory service delivery models



PATIENT

Local or centralised clinical services - including tertiary/supra-regional services?

Outpatient/daycare in different location to inpatient care?

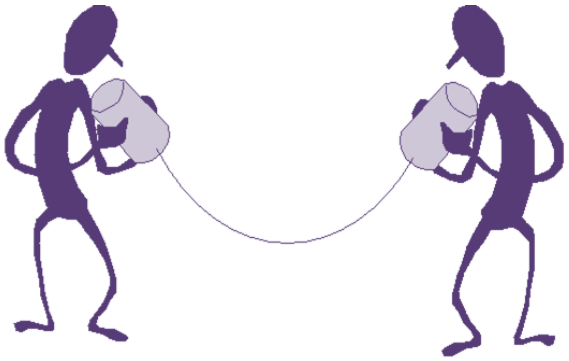
SAMPLES

Hub and spoke laboratories?

Tests in reference laboratories?

Secure and Accurate Communication

- Electronic data
  - Entered onto the same LIMS (single site or networked)
  - Transferred from another laboratory computer
  - Accessed from another computer and transcribed
- Paper Report (or Clinical Letter)
  - Printed (hand-written??)
  - Faxed
  - Emailed
- Telephone message



SEVEN SCENARIOS – AT LEAST ONE WILL APPLY TO YOUR LABORATORY!

Assumptions

(for all these scenarios – unless otherwise stated)

1. Samples are tested in laboratories accredited to national standards –**THE ABO GROUP IS CORRECT**
2. Samples are labelled according to national sample acceptance criteria – **THE SAMPLE IS CORRECT**
3. The current (valid) group meets these criteria
   - Same ABO/D type (automated group, no edits)
   - Antibody screen is negative (or known)
   - The result was transmitted via analyser interface to LIMS
   - The result has not been manually edited

BCSH guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories 2012

Q1. Is the current valid sample from the same patient as the historical sample?

<u>What Variation in Patient ID is Allowable?</u>
Variation in Patient ID Number?
Variation in Patient Name?
So, compare NHS Number, DOB, Address…….

Q2. Is the historical sample valid as a group-check?

Q3. Is the historical sample suitable for electronic issue?

<u>How is Patient ID and ABO/D group communicated?</u>
Has the information been transmitted electronically?
Has the information been edited?

Additional information should be available on historical samples such as **previously clinically significant antibodies** and/or **special requirements**

a) to determine eligibility for electronic issue

b) to improve patient care by taking all available information into account

Different rules may apply in…….

- Catastrophic haemorrhage where a second method of establishing ABO compatibility can be performed on the same sample

- Vein-to-vein electronic patient identification where you can accept a single sample

And these situations are not considered any further here because there can be a local risk-assessed variation to the ‘group-check’ rule

BCSH guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories 2012

Scenario 1

- Historical sample from *same* **Hospital**, *current* **BT LIMS**, automated ABO/D type
- YES- Acceptable as a group-check ✔
- YES -Acceptable as first sample for EI ✔

Interval between current sample and historical sample must be defined locally

Scenario 2

- *Same* **Hospital**, *current* **BT LIMS**, automated ABO/D type
- Same patient ID except **NHS number** instead of **hospital number**
- YES - Acceptable as a group-check ✔
- ONLY - EI if correct rules applied to link/merge NHS number with previous hospital ID number ✔

Updated patient administration system (PAS) or electronic patient record (EPR) introduces a new numbering system

Scenario 3

Merged hospitals but transfusion IT remains separate. Find a way of linking/merging imported data as an interim?

- Same **Trust**, *different* **Hospital** location, *different* **BT LIMS**, automated ABO/D type **visible on look-up system**
- Current sample has same patient ID except *different* **hospital number**
- YES - Acceptable as a group-check ✔
- NO- Not acceptable as first sample for EI because of manual step ✗

Risk that blood will be issued and compatibility tag will not match the patient ID wristband

Scenario 4

Should find an electronic solution to accepting historical group from other sites within the Trust

- *Same* **Trust**, *different* **Hospital** location, *common* **BT LIMS**, automated ABO/D type
- Current sample has same patient ID except *different* **hospital number**
- YES - Acceptable as a group-check ✔
- MAYBE - Acceptable as first sample for EI if same NHS number (or equivalent) and no manual step ✔

Scenario 5a

This would be the ideal way to set up a pathology network - but would need to standardise ID wristbands

- *Same* **Pathology Network**, *different* **Hospital** location, *common* **BT LIMS**, automated ABO/D type
- Current sample has same PID except *different* **hospital number**
- YES - Acceptable as a group-check ✔
- MAYBE - Acceptable as first sample for EI if patient records are linked via NHS number (or equivalent) and no manual step ✔

Scenario 5b

This scenario occurs in health boards with remote and/or island based small laboratories that feed into a larger central hospital

- *Same* **Pathology Network**, *different* **Hospital** location, *common* **BT LIMS**, manual ABO/D type at remote/spoke hospital, automated ABO/D type at central/hub hospital
- Same PID, same ABO/D type more than once by manual methods at remote hospital
- YES - Acceptable as a group-check ✔
- YES - Acceptable as first sample for EI as long as the current sample was performed as a fully automated test ✔

Scenario 6

If NHS number available on LIMS and result could be downloaded to LIMS then could use reference lab as historical ID

- **Reference laboratory**, automated ABO/D type
- Same patient ID except hospital number rather than NHS number on reference laboratory request
- YES -Acceptable as a group-check ✔
- NO- Not acceptable as first sample for EI because unique patient ID is different and because result has to be manually transcribed to the BT LIMS ✗

Scenario 7

* If more than one element of the patient ID was different it would be unsafe to match the patient OR there would need to be local risk-assessed criteria for accepting the historical group information

- Any source of historical ABO/D group
- Same ABO/D type and antibody screen/antibody ID result available
- One* different point of identification:
  - Patient ID with or without an NHS number
  - First name. Could be an abbreviated name, or baby/infant
  - Last name, through marriage, provided records can be linked promptly
  - Address (Wales)
- Sample may be suitable to provide historical group information if difference in patient ID is minor or validated by the laboratory providing the information BUT another method of compatibility testing would be required on current sample
- YES - Acceptable as a group-check ✔
- NO - Not acceptable as first sample for EI ✗

- We were asked to clarify what could be used as a historical sample
  - To reduce the number of unnecessary samples
  - To reduce delays or inconvenience to patients
- Having a group-check is all about correct patient identification so there must be confidence that the historical sample is from the same patient
- The introduction of any manual step makes the process less secure so where possible there should be electronic data transfer

- Fiona Regan – for asking these questions in the first place!
- Everyone who proposed one of these scenarios – there are certainly more !
- Joan Jones – for getting the Appendix finalised and uploaded to BCSH website
- Shubha Allard – and the BCSH Transfusion Taskforce