North-East and Yorkshire RTC End-to-End Transfusion IT Group: 2023 IT Profiling Survey Results

Background

The North-East and Yorkshire End-to-End Transfusion IT Group was established as a regional transfusion committee working group in September 2022, with the main objectives of this group being the sharing of knowledge, resources and supporting each other across the region.

To support the objectives of the group and inform RTC members across the region, the decision to undertake a regional IT profiling survey was an early action identified by the group. Data from this survey will be used to help facilitate and promote shared learning across the region and provide focus for the educational content of the North-East and Yorkshire End-to-End Transfusion IT Group meetings.

Acknowledgements

With thanks to the London Region Transfusion Practitioner Group and Brian Hockley the NHSBT Data Analyst and Clinical Audit Manager for sharing their IT profiling survey and results. The London survey was built and undertaken in early 2022, this provided a basis for the design of the North-East and Yorkshire IT profiling survey.

This survey was developed by the members of the North-East and Yorkshire End-to-End Transfusion IT Group, which includes - Transfusion Laboratory Managers, Transfusion Practitioners, transfusion biomedical scientists, senior transfusion biomedical scientists, pathology/ haematology/ blood stocks and transfusion operational managers, a Blood Sciences Lead, a Blood Transfusion Quality Coordinator and the NHSBT Regional Patient Blood Management Practitioner.

Thank you to all the hospitals that contributed to this survey.

Method

The North-East and Yorkshire IT profiling survey was developed in Microsoft Forms and draft questions were reviewed and developed by members of the End-to-End Transfusion IT Group. Prior to launch a Transfusion Laboratory Manager, from within the group, undertook user acceptance testing of the form.

This electronic survey was launched following our North-East and Yorkshire regional education event, *Advancing Transfusion: Going Paperless*, it was open for 3 weeks, between 18th January and 9th February 2023. It was sent to all Transfusion Laboratory Managers, Transfusion Practitioners in the region, and members of the North-East and Yorkshire End-to-End Transfusion IT Group. We asked for one response per organisation.
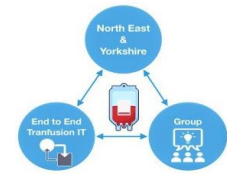
Response Rate

We had responses from 13 Trusts: With 22 Trusts in the North-East and Yorkshire region, this represents a 60% response rate.
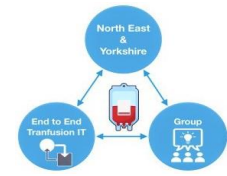
Name of Trust
Calderdale & Huddersfield NHS Foundation Trust
Sheffield Children's NHS Foundation Trust
The Rotherham NHS Foundation Trust
Sheffield Teaching Hospitals NHS Trust
Airedale NHSFT
Newcastle upon Tyne NHS Foundation Trust
Northumbria Healthcare NHS Foundation Trust
Leeds Teaching Hospitals Trust
North Cumbria Integrated cate NHS Foundation Trust
North Tees and Hartlepool NHS Foundation Trust
County Durham and Darlington Foundation Trust
Gateshead NHS Foundation Trust and South Tyneside and Sunderland Foundation Trust
South Tees

The responses we received represented 20 hospitals

| Name of hospital |
| --- |
| Huddersfield Royal Infirmary |
| Sheffield Children's NHS Foundation Trust |
| Rotherham General Hospital |
| Royal Hallamshire and Northern General, Sheffield |
| Airedale General Hospital |
| Freeman |
| Northumbria Specialist Emergency Care Hospital |
| Leeds General Infirmary and St James's |
| Cumberland Infirmary and West Cumberland Hospital |
| University Hospital North Tees |
| Darlington Memorial Hospital, University Hospital of North Durham (UHND) |
| Queen Elizabeth Hospital, South Tyneside District Hospital and Sunderland Royal Hospital |
| James Cook & Friarage Hospital |

Survey Results

- There is a significant amount of work related to IT change being undertaken across the region, with every respondent citing an example of IT projects in progress within their Trust.
- IT change related to the Laboratory Information Management System [LIMS] was cited by 12/13 Trusts.
- There was insufficient data available from sites where electronic systems have been implemented to evaluate how robust these system have been in preventing avoidable transfusion related errors.

**What IT change projects are members of the Transfusion Team at your hospital/ Trust currently working on?**

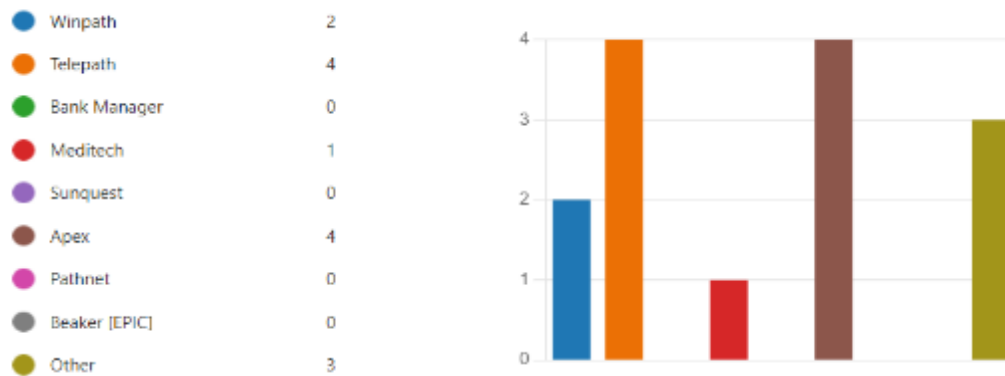| Name of Trust/s	What IT change projects are members of the Transfusion Team at your hospital/ Trust currently working on?
Calderdale & Huddersfield NHS Foundation Trust	New LIMS
Sheffield Children's NHS Foundation Trust	1) Engagement with South Yorkshire and Bassetlaw regional network regarding new LIMS procurement. 2) Upgrade of current LIMS operating systems. 3) Implementation of a new Blood Bank analyser and associated LIMS work required (test building, rule building, interfacing). 4) Role out of ordercomms (not used for blood bank requests).
The Rotherham NHS Foundation Trust	Electronic order comms for BT
Sheffield Teaching Hospitals NHS Trust	EPR - changing from Lorenzo to Cerner Millennium. Order Comms when Millennium goes live. LIMS - APEX to Cerner Pathnet. Blood Tracking - Outline case submitted to trust, no agreement to proceed yet.
Airedale NHSFT	We are in the process of installing a new LIMS. Once this is in place, we will be looking at implementing blood track. Initially to start with the fridges but the trust has purchased Tx.
Newcastle upon Tyne NHS Foundation Trust	LIMS
Northumbria Healthcare NHS Foundation Trust	Replacement LIMS Electronic transfusion requesting on ICE Refresh of Blood360 Kiosks Replacement of Blood360 servers
Leeds Teaching Hospitals Trust	New LIMS, ICE implementation, Electronic Patient record Blood Transfusion Tab, remove issue blood fridges, Tx administration for recording transfusions, QPulse
North Cumbria Integrated cate NHS Foundation Trust	New LIMS installation from Cerner along with 4 other Regional Trusts
North Tees and Hartlepool NHS Foundation Trust	Regional LIMs Investigating if the current LIMs has more functionality
County Durham and Darlington Foundation Trust	EPR - post go live phase Regional LIMS Project BloodTrack Tx Business Case
Gateshead NHS Foundation Trust and South Tyneside and Sunderland Foundation Trust	Business case for BloodTrack Tx at Queen Elizabeth site. Upgrade to the LIMS at some point this year
South Tees	Regional LIMS project. Blood Transfusion sample ordering in WebICE.
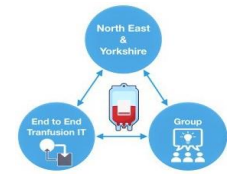
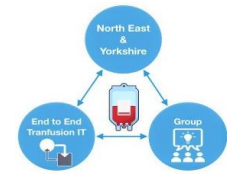**Question: Is your Transfusion Laboratory within a Pathology Network?**

🔵 Yes	11
🟠 No	3

Question: How are your laboratory services provided?

🔵 NHS stand alone	12
🟠 Private provider	0
🟢 Other	2
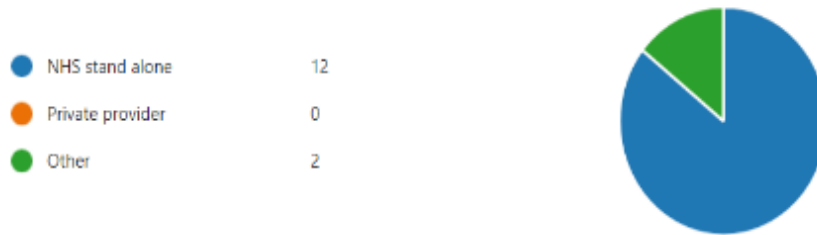
Question: Which Laboratory Information System [LIMS] are you using in the Transfusion Laboratory?

🔵 Winpath	2
🟠 Telepath	4
🟢 Bank Manager	0
🔴 Meditech	1
🟣 Sunquest	0
🟤 Apex	4
🔴 Pathnet	0
⚫ Beaker [EPIC]	0
🟡 Other	3

Detail: Which Laboratory Information System [LIMS] are you using in the Transfusion Laboratory?	What version of LIMS are you currently using?
Apex	5.8
Telepath 2000	V7
Winpath	WinPath Enterprise 7.21
Apex	6.0
Fordman	Fordman
Apex	6.0p1b10
Telepath	2.2
Telepath	5.3
Telepath	IAX V7
Omni	11.2.4
Winpath	v5.34

Question: Have you got plans to change your LIMS system?

🔵	Yes	12
🟠	No	1
🟢	Other	1

Question: Which Electronic Patient Records system are you using?

🔵	Cerner	3
🟠	Meditech	1
🟢	EPIC	0
🔴	Careflow	1
🟣	Bespoke In-House System	1
🟤	None	2
🩷	Other	6
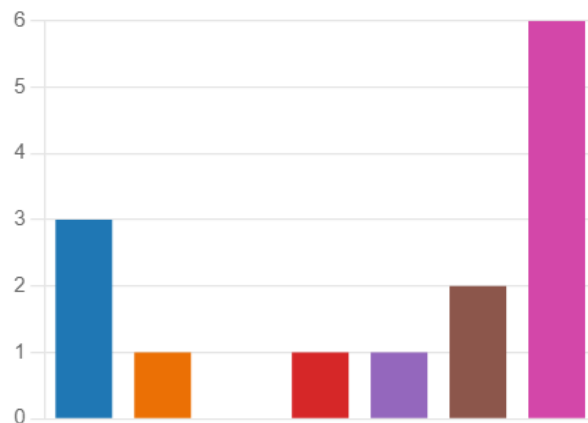
Detail: Which Electronic Patient Records system are you using?
Cerner
Careflow
Meditech
Lorenzo, but changing to Cerner
System one but not fully electronic
Cerner
Silverlink PAS
PPM+
None
ICE
Cerner
Careflow and Meditech EMR
None

Question: Do you undertake electronic issue [where applicable] in the BT laboratory?

● Yes	11
● No	1
● Planning to implement	2

Question: Have you implemented remote issue of blood?

|	
● No - with no plans to implement	5
● Yes - fully implemented	0
● Yes - implemented in specific lo...	2
● No - but planned & business ca...	2
● No - but business case approve...	3
● No - but planned with no agree...	1
● Other	1
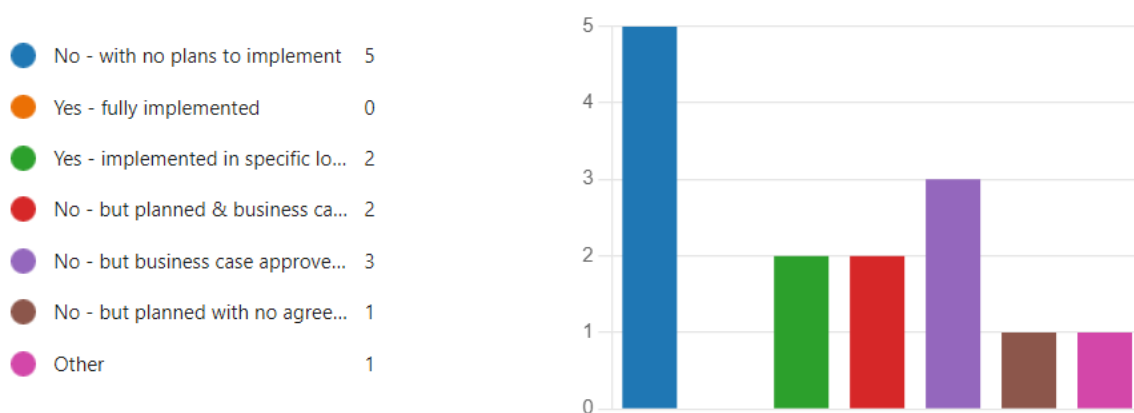
Detail: Have you implemented remote issue of blood?
No - but business case approved & project underway
No - with no plans to implement
No - with no plans to implement
No - with no plans to implement
No - with no plans to implement
No - but business case approved & project underway
No - but planned with no agreed date & business case not developed
No - but business case approved & project underway
No - but planned & business case being developed.
No, but can envisage it in the future
Yes - implemented in specific locations
No - with no plans to implement
No - but planned & business case being developed.
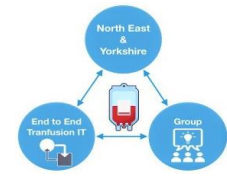
Question: Where you have implemented remote [point of care] issue of blood: Please tick all the options below that apply at your hospital

|	
● We have designated Emergency...	2
● Our group O Emergency Units a...	0
● We use have Major Haemorrhag...	0
● We have blood stock with speci...	1
● We have neonatal units availabl...	0
● We have both O negative and O...	0
● Fractionated products can be co...	0
● Fresh frozen plasma can be coll...	1
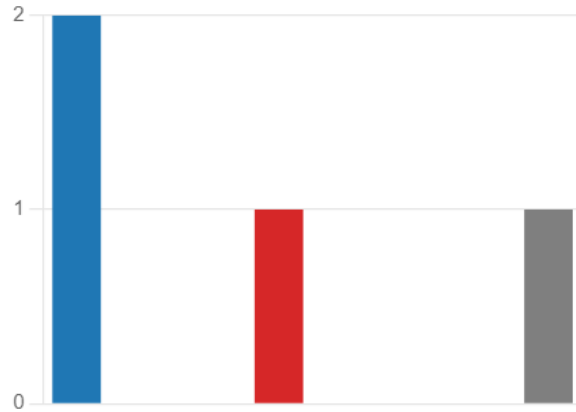
| Detail Where you have implemented remote [point of care] issue of blood: Please tick all the options below that apply at your hospital. |
|---|
| We have designated Emergency Units in our remote issue fridges; |
| We have designated Emergency Units in our remote issue fridges; We have blood stock with special requirements e.g. irradiated - available for issue in relevant areas; Fresh frozen plasma can be collected from our remote blood fridges. |

Question: Blood Collection Documentation - In relation to remote issue of blood at satellite fridges and use of pick-up slips and involvement of porters or equivalent in collection process

● Not applicable - Not implement...	9
● Pick-up slips are mandatory for ...	1
● Pick-up slips are mandatory for ...	3
● Porters or equivalent can remot...	2
● Pick-up slips are printed from a ...	1
● Pick-up slips are generated usin...	1
● A new pick-up slip must be prin...	2
● A pick-up slip can be re-used fo...	1
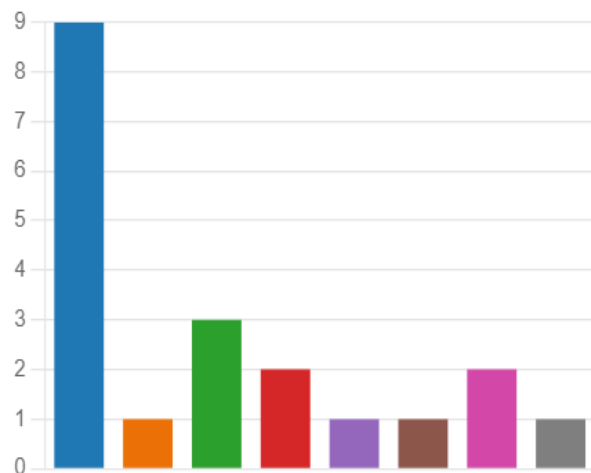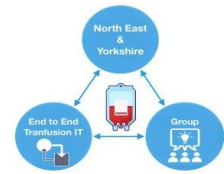
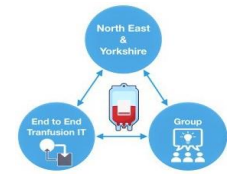| Detail: Blood Collection Documentation – Where remote issue implemented |
|---|
| Pick-up slips are mandatory for collection of all components from remote issue blood fridges - Except for Emergency Blood; Pick-up slips are generated using a bedside [point of transfusion] printer using electronic vein to vein system; A new pick-up slip must be printed for each collection episode; |
| Pick-up slips are mandatory for collection of all components from remote issue blood fridges - Except for Emergency Blood; Porters or equivalent can remotely issue / collect blood from remote blood fridges; A new pick-up slip must be printed for each collection episode; |
| Pick-up slips are mandatory for collection of all components from remote issue blood fridges; |
| Pick-up slips are mandatory for collection of all components from remote issue blood fridges - Except for Emergency Blood; Porters or equivalent can remotely issue / collect blood from remote blood fridges; Pick-up slips are printed from a standard printer; A pick-up slip can be re-used for the whole transfusion episode after printing; |

Question: Who is your compatibility label supplier?

Brenmoor
Midco
Midco
MIDCO
Unsure
MidCo
Hague
Midco currently, will move to Brenmoor
Midco
Labels Plus LTD
Midco
Trace Safe
Midco

Question: Do you have an electronic on demand [at point of phlebotomy] printed label system for transfusion samples, which includes ID check [barcoded wristband or equivalent]?

|	
● We still require 2 independent tr...	1
● We only require 1 transfusion sa...	2
● The device used for blood transf...	0
● Our EPR system is used for on-d...	0
● We use Haemonetics Blood Trac...	2
● We use MSoft sample 360 for o...	0
● We use another electronic syste...	0
● Other	7
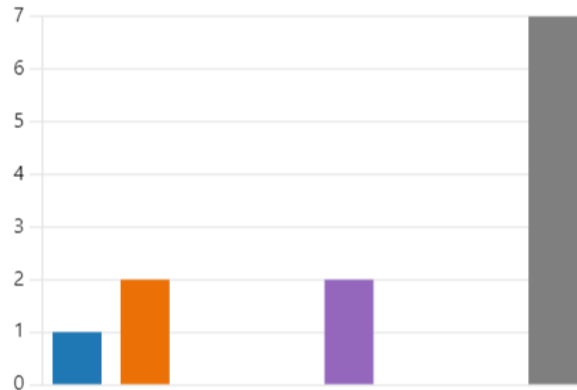
Detail: Do you have an electronic on demand [at point of phlebotomy] printed label system for transfusion samples, which includes ID check [barcoded wristband or equivalent]? [Excludes 'No' responses]
Yes - for in-patients and out-patients
No - but implementation plan in progress
Yes - for in-patients and out-patients
Yes - for in-patients and out-patients
No but trying to get funding for one
Not in our trusts, but we do accept for samples we process from Nuffield Hospital, Newcastle.

Question: In relation to your electronic on demand [at point of phlebotomy] printed label system for transfusion samples - please select options below that apply at your hospital

Detail: In relation to your electronic on demand [at point of phlebotomy] printed label system for transfusion samples – [Excludes N/A and blank responses]
We use Haemonetics Blood Track Tx for on-demand transfusion labels/ patient ID scanning; We only require 1 transfusion sample where electronic on demand labelling system used.;
I believe we will continue the 2-sample rule
Currently rolling out Trust wide. 2 samples now but once rollout is complete this will drop down to 1.
We use Haemonetics Blood Track Tx for on-demand transfusion labels/ patient ID scanning; We only require 1 transfusion sample where electronic on demand labelling system used.; Implementation of 2 sample rule planned;
Cerner EPR solution not compliant - continue to label samples by hand. Have 2 sample rule. have business case for Tx in progress;
We still require 2 independent transfusion samples for patients with no historical group on LIMS.
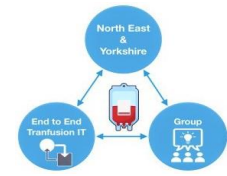
Question: Do you use an electronic system for checking and fating blood components?

|	
● No - and we have no plans to i...	4
● No - but at early planning stage	3
● Yes - roll out plan in progress	2
● Yes - fully implemented	2
● We have Haemonetics Blood Tra...	4
● We have MSoft Blood 360	0
● We use our EPR system for elect...	0
● We use another electronic bedsi...	0
● Other	4
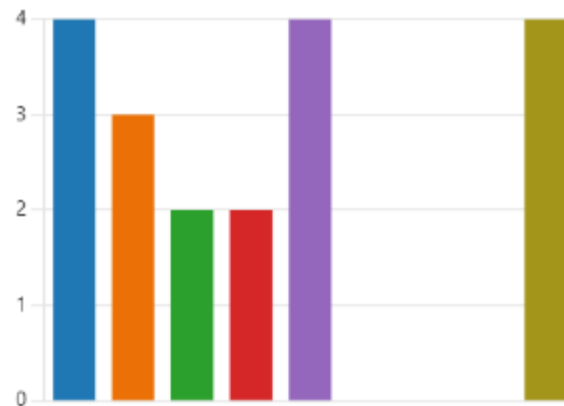
Detail: Do you use an electronic system for checking and fating blood components?
Yes - fully implemented; We have Haemonetics Blood Track Tx;
No - and we have no plans to implement;
MSoft Blood 360 for fridge release, Trust wants to use Meditech for bedside, but no funding available.;
No - and we have no plans to implement;
No - but at early planning stage;
We have Haemonetics Blood Track Tx;
No - and we have no plans to implement;
Yes - roll out plan in progress; We have Haemonetics Blood Track Tx;
No - but at early planning stage;
No, but again something we would like;
We have Haemonetics Blood Track Tx; Yes - fully implemented; BUT for fating only. Administration documented in EPR but not an ESS;
No - but at early planning stage; Currently have a business case for Blood Track Tx;
No - and we have no plans to implement;

Detail: In relation to your blood component checking process, please select option below that applies

|	
● We have a two person manual c...	8
● We have a one person manual c...	4
● We have a one person, with elec...	2
● We have a two person, with elec...	0
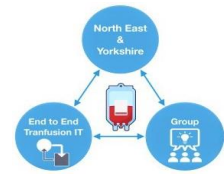
| Detail: In relation to your blood component checking process - |
| --- |
| We have a one-person, with electronic system as second check policy |
| We have a one-person manual checking policy |
| We have a one-person manual checking policy |
| We have a two-person manual checking policy |
| We have a two-person manual checking policy |
| We have a one person, with electronic system as second check policy |
| We have a two-person manual checking policy |
| We have a one-person manual checking policy |
| We have a two-person manual checking policy |
| We have a two-person manual checking policy |
| We have a two-person manual checking policy |
| We have a two-person manual checking policy |
| We have a one-person manual checking policy |

Question: Where you have an electronic system in place for transfusion sampling and/or blood component checking, what hardware is used for this?

● Workstation on wheels [WOW]	2
● Android mobile devices	0
● Apple mobile devices	0
● Zebra devices	3
● Jannam devices	0
● Not applicable	7
● Other	1
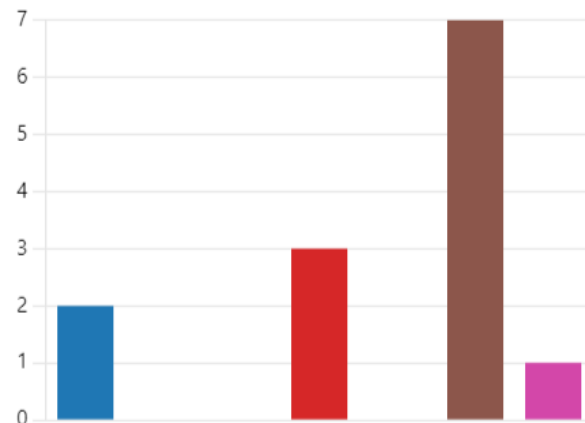
Detail: Where you have an electronic system in place for transfusion sampling and/or blood component checking, what hardware is used for this? [Excludes N/A and blank responses]
Zebra devices;
Zebra devices;
Zebra devices;
Workstation on wheels [WOW]; Note this is for prescribing, ordering, and recording administration (not a checking system).

Question: Do any of your IT systems integrate with one another? In relation to IT interfaces please select the option/s below that apply at your hospital and use other box to tell us about any interface issues you have.
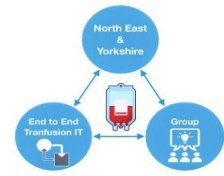
🔵 Transfusion LIMS to EPR system …	4
🟠 Blood Tracking system to EPR	2
🟢 Blood Tracking system to LIMS	9
🔴 LIMS to Sunquest ICE or equival…	7
🟣 Other	4

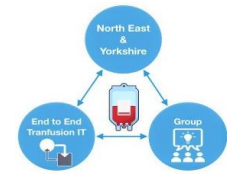| **Detail: Do any of your IT systems integrate with one another? In relation to IT interfaces please select the option/s below that apply at your hospital and use other box to tell us about any interface issues.** |
|---|
| Blood Tracking system to LIMS; |
| Transfusion LIMS to EPR system & vice versa [bi-directional]; LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; |
| Transfusion LIMS to EPR system & vice versa [bi-directional]; Blood Tracking system to LIMS; LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; Meditech to WPE testing in progress; |
| LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; |
| N/A; |
| Transfusion LIMS to EPR and BloodTrack and vice versa; |
| Blood Tracking system to LIMS; LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; |
| Blood Tracking system to LIMS; |
| None just LIMS to OrthoConnect |
| Blood Tracking system to LIMS; |
| |
| Transfusion LIMS to EPR system & vice versa [bi-directional]; Blood Tracking system to LIMS; |
| Blood Tracking system to LIMS; LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; Transfusion LIMS to EPR system & vice versa [bi-directional]; Blood Tracking system to EPR; |
| Blood Tracking system to EPR; Blood Tracking system to LIMS; LIMS to Sunquest ICE or equivalent & vice versa for requesting [bi-directional]; |

Question: What other electronic systems are in use to support the transfusion process at your hospital?

● Electronic recording of consent	2
● Electronic requesting [Order Co...	3
● Electronic authorisation/ prescri...	3
● Transfusion included on electro...	3
● Not applicable	8
● Other	0
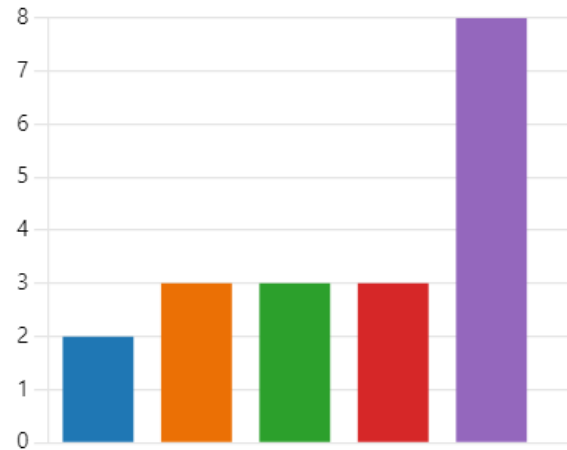
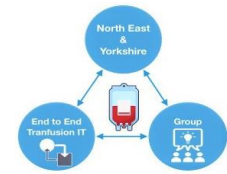| Detail: What other electronic systems are in use to support the transfusion process at your hospital? Select all that apply below [Excludes N/A responses] |
|---|
| Transfusion included on electronic discharge summary; |
| Electronic requesting [Order Comms] implemented or implementation in progress for transfusion; Transfusion included on electronic discharge summary; |
| Electronic recording of consent; Electronic requesting [Order Comms] implemented or implementation in progress for transfusion; Electronic authorisation/ prescribing for transfusion; Transfusion included on electronic discharge summary; |
| Electronic recording of consent; Electronic requesting [Order Comms] implemented or implementation in progress for transfusion; Electronic authorisation/ prescribing for transfusion; Electronic authorisation/ prescribing for transfusion; |

Question:

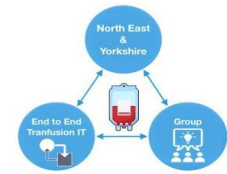| Please provide the following information below for 2022 - If electronic labelling used, please specify number of wrong blood in tube [WBIT] incidents with this method, or state Not Applicable/ Data not available [Excludes N/A responses] |
|---|
| 0 |
| Data not available. Not rolled out in 2022. |
| 3 |

Question:

Please provide the total number of WBITs across your organisation in 2022 [below]
2
0 for blood transfusion. Data not available for other disciplines. Estimate between 5 and 10.
10
11
4
7
5 reportable - 6 others that we internally classify as WBIT - e.g. where completely different patient details on form and specimen
4
2
6
9
3
6

Question:

Please provide the following information for 2022 (Total number of blood transfusion samples) – [Excludes blank responses]
28000
3400
20186
79978
34,000 approx.
2021/2022 = 65346
75,077
18,000
23812
71,333
53930

Question:

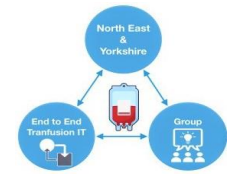| Please provide the following information for 2022 -If electronic blood component checking used, please specify number of incorrect unit and/or patient scanned incidents with this method [Excludes N/A responses] |
|---|
| 1 |
| Not known at this stage - currently being rolled out. |
| 1 at collection only |

Question:

Please provide the following information for 2022 - Total number of incorrect blood component transfused incidents across your organisation [Excludes blank response]
0
1
2
0
0
3
0
3
0
1
0
0

Question:

Do you have any Transfusion IT Top Tips you would like to share with the group?
Ensure you have proper resourcing to manage the IT systems and always try to break the system at validation to cover as many possible deviations as possible that may occur in clinical areas
Involve everyone required in the process the planning stage of the project, especially those external to Pathology such as DIT, and have good communications. Don't try to implement multiple projects at the same time
Get someone dedicated to IT

Question:

Would you be happy to share Transfusion IT related resources e.g. Business Case, Guidelines, Procedures, Training Materials with the group
Yes
Yes, if allowed to do so by the Trust / Network
Yes
Yes
Yes
Yes
Not at this time due to the number of on-going IT projects
Yes
Yes, for what we do have, but there aren't many due to how old most of the systems here are / not been uploaded to QPulse. Have got SOPs, but they are going through rewrites at the moment, so not sure if they would be much help to anyone.
Yes
Yes
Yes

Question:

If you have Transfusion IT systems in place, would you be happy to have visitors from other hospitals who are early planning stages?
Yes - we already do this and have several other trusts visit or teams call for advice or questions
Yes
Yes
Yes
Not until implementation of existing projects are complete
Nobody else would probably even consider Omni now
Yes
Yes
Yes

Question:

What would you like the regional End to End IT group to support you with? Or what topics would you like to see presentations on?
implementing remote electronic issue and new IT guidelines
Overcoming Trust financial restraints,
To help with the planning and implementation of blood track and eventually Safe Tx
Business cases
How to achieve paperless
LIMS validation
Implementation and how to drive it forward with no additional staff.

Please contact your regional NHSBT Patient Blood Management Practitioner if you would like to contact a member of the North- East and Yorkshire End-To End Transfusion IT Group or respondent to this survey.