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Introduction

The Transfusion 2024 strategic plan outlined the urgent need to strengthen support for Hospital Transfusion Laboratories (HTL) to ensure safe provision of care for patients in need of transfusion¹, with an action to undertake pilots of integrated transfusion services between NHSBT Red Cell Immunohaematology (RCI) and HTLs.

RCI Assist and Remote Interpretation

To meet this need NHSBT has developed RCI Assist, a referral algorithm and transfusion education resource, which acts as a guide to improve staff confidence and ensure appropriate investigation of patients requiring red cell transfusion support.

The algorithm forms an essential part of the Remote Interpretation pilot, and includes:

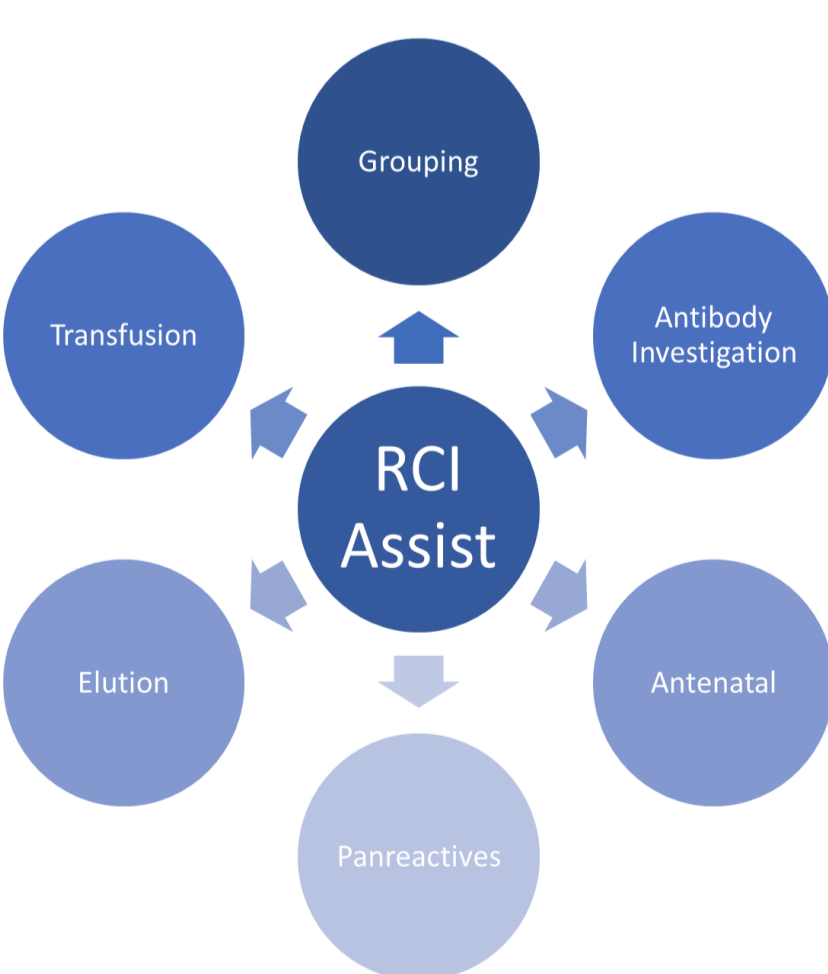


- 19 decision points to aid in-house resolution and standardise work performed on samples prior to referral to RCI
- 4 potential Remote Interpretation referral points; analyser results are sent to RCI for investigation not samples – avoids duplication of work
- Supporting information to guide less experienced staff. RCI in an app!

The algorithm contains several decision points at which a remote referral to RCI can be made; HTL analyser results are sent to RCI via secure email for interpretation instead of a traditional wet sample for serological investigation.

As well as avoiding duplication of work, there is no sample travel time, which could reduce transport costs for the HTL. Results and blood selection advice can be provided quickly and, in some cases, reduce waiting times for results and provision of blood for patients.

In addition to the referral algorithm, NHSBT are developing an app which allows users to navigate their way through serological investigations, with pop-up information available at each decision point. Furthermore, supporting digital training modules will help to improve underpinning transfusion knowledge, strengthening support for HTLs. Links to transfusion resources will be readily available at the touch of a button.



“RCI assist is a potential game changer for the way in which valuable resources and expertise is shared, particularly relating to improving and supporting training and confidence levels. We are proud to be involved in the development of the RCI assist application”

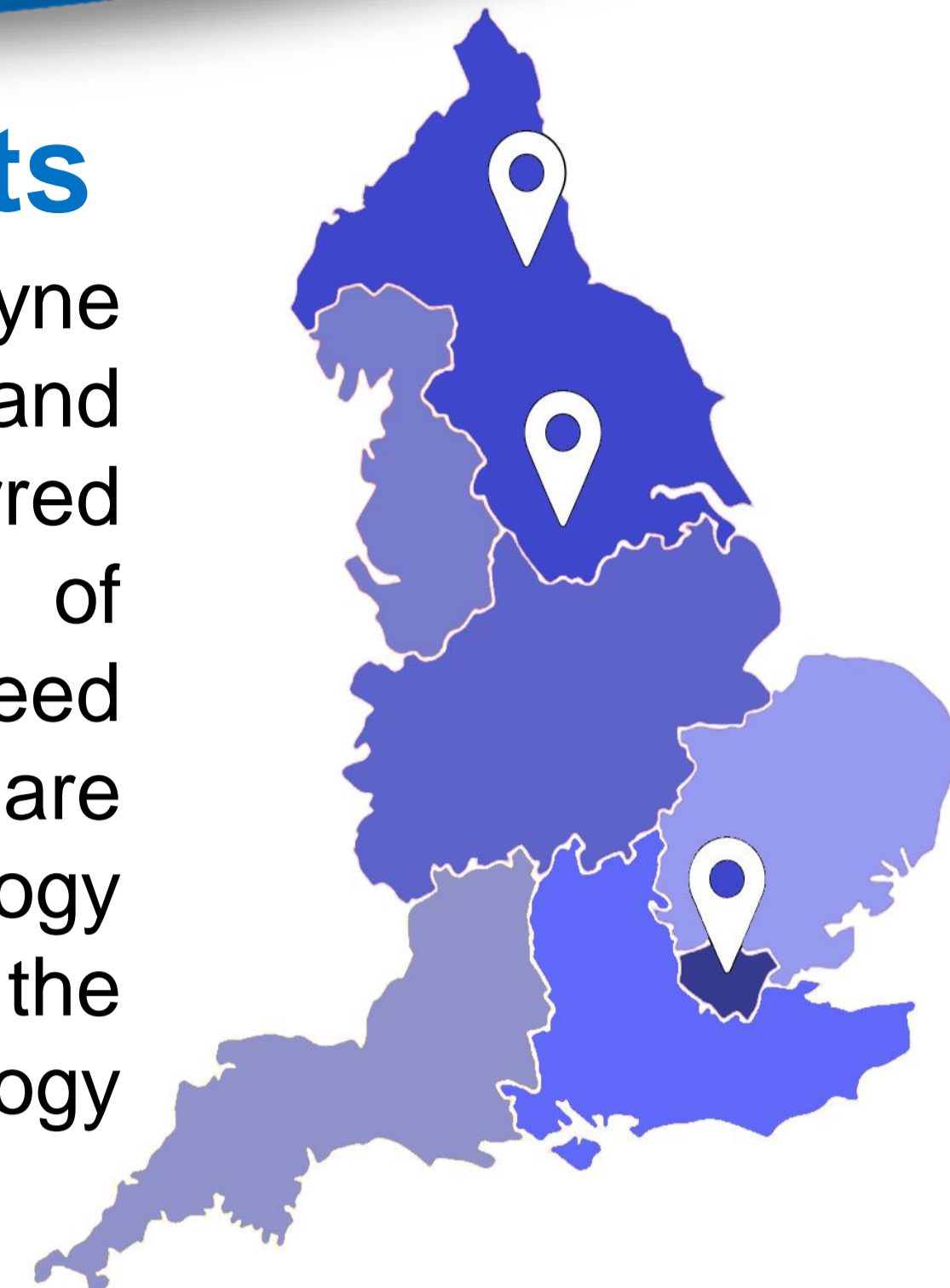
Patricia Richards, Blood Transfusion Scientific Lead, ESEL Pathology Partnership

“The algorithm provides a comfort blanket for those multi-disciplinary staff working in Blood Transfusion and gives them confidence when processing samples”

Kimberley Garnett, Blood Transfusion Manager, Path Links

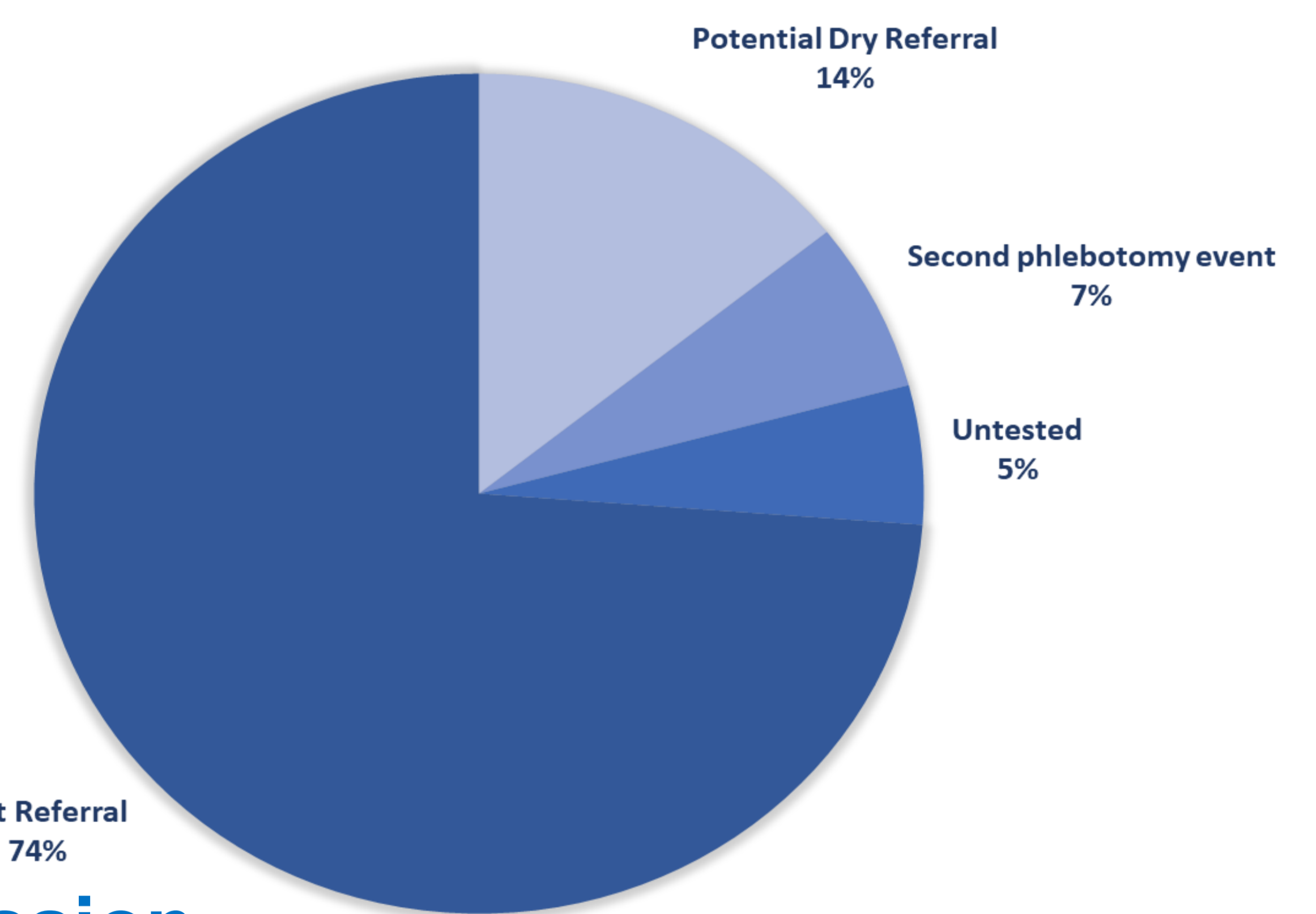
Remote Interpretation Pilots

A 2020 pilot between Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH) and RCI Newcastle identified that 10% of referred cases were suitable for remote referral, of which 80% were concluded without the need to refer a sample to RCI. Further pilots are currently live across the Path Links Pathology Network (supported by RCI Barnsley), and the East and Southeast London Pathology Partnership (supported by RCI Tooting).



A retrospective review of 1329 reference referrals for the nine pilot sites was undertaken and looked at the decision point at which samples would have been referred to RCI if using the algorithm. This also included any samples referred to, but not tested by RCI, such as second phlebotomy events or untested due to sample quality. The number of potential remote referrals was calculated. Prospective data is being captured during the pilot. The review identified:

- On average, 14% of reference referrals could potentially be concluded remotely, supporting the findings from the original pilot
- This varies between 7 and 25% across HTLs in the two pilot regions, the lower referral rates correlate to where staff are exposed to complex serology



Discussion

RCI Assist has the potential to improve safety and outcomes for patients requiring transfusion. By aiding HTL decision-making and provision of transfusion education resources, hospital staff capability could greatly improve. Remote Interpretation of referrals and in-house resolution could enable a reduction in costs to the HTL. These in turn will provide faster patient results and transfusion support and improve patient management.

Approximately 52,000 reference samples were referred to NHSBT RCI in 2022-23. Based on the retrospective data analysis, around 7000 reference investigations annually could be concluded via Remote Interpretation, saving time and resources, and reducing waiting times for provision of blood for patients

RCI Assist sees RCI moving from a transactional relationship with HTLs, to one of support and partnership. Using RCI Assist as a transfusion educational resource, will improve staff confidence, particularly in settings where complex serology is not routine.

Interested in joining the Remote Interpretation pilot? Scan here:



Reference: ¹ National Blood Transfusion Committee and NHS Blood and Transplant, Transfusion 2024 A Five-year Plan for Clinical and Laboratory Transfusion Practice: <https://nationalbloodtransfusion.co.uk/transfusion-2024>

Acknowledgements

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