NHS BLOOD AND TRANSPLANT

KAG -PAEDIATRIC STEERING GROUP - H&I UPDATE REPORT

6th May 2026

1. BACKGROUND AND LAY SUMMARY

Histocompatibility and Immunogenetics (H&I) laboratories, often referred to as "Tissue Typing", are linked with renal transplant centres. They are involved in the assessment of patient and donor compatibility pre-transplant. This work involves comparison of the Human Leucocyte Antigen (HLA) proteins produced by an individual to provide an assessment of the level of HLA matching and immunological compatibility between the recipient and potential donors. Antibodies produced against non-self HLA proteins can lead to rejection of a donor kidney. Transplantation in the presence of donor-directed HLA antibodies should be avoided wherever possible. H&I laboratories support deceased and living renal transplantation through HLA typing of all potential donors and compatibility assessments for recipient-donor pairs.

This report provides an update on H&I-related work/issues which impact on kidney transplantation. This includes:

- National deceased donor HLA typing discrepancies [Section 2]
- H&I incidents reported to NHSBT related to kidney transplantation [Section 3]
- National Transplant Database (NTxD) outages [Section 5]
- Assessment and Recovery Centre (ARC) H&I Update [Section 6]

The contents of this report are intended for informational and discussion purposes only.

2. HLA DECEASED DONOR CHARACTERISATION – DISCREPANCY MONITORING

There have been two discrepancies reported over a twelve-month period (December 2024-December 2025) for national Human Leucocyte Antigen (HLA) deceased donor characterisation [**TABLE 1**] with NHSBT Patient Safety incidents raised for both. Incident ODT-INC-9130 involved an error in laboratory analysis which was corrected pre-allocation, so had no clinical impact. Incident ODT-INC-9632 was also attributed to an error in the initial analysis that was not recognised until the following working day, this led to two adult recipients missing a potential kidney offer but did not lead to antibody incompatible transplants.

TABLE 1 *– HLA typing incidents reported between December 2024 – December 2025. Royal Free incident investigated as ODT-**INC-9130**, Birmingham incident investigated as ODT-**INC-9632***]. *Data reported to NHSBT CARE on 24/02/26.*

Dec 2024 - Dec 2025		
Centre	Donor HLA Types (N) Annual	Total Incidents (N)
BARNSLEY	98	0
BELFAST (DCERT)	68	0
BIRMINGHAM	160	1
BRISTOL (DCERT)	117	0
CAMBRIDGE	193	0
CARDIFF	83	0
DUBLIN	0	0
EDINBURGH	65	0
GLASGOW (DCERT)	62	0
GUY'S	115	0
HAMMERSMITH (DCERT)	79	0
LEEDS	98	0
LEICESTER	51	0
LIVERPOOL (DCERT)	79	0
MANCHESTER (DCERT)	111	0
NEWCASTLE	120	0
OXFORD CHURCHILL (DCERT)	69	0
PLYMOUTH	73	0
ROYAL FREE (DCERT)	26	1
TOOTING	187	0
ROYAL LONDON	99	0

The Donor Characterisation Electronic Results Transfer (DCERT) programme enables the electronic transfer of deceased donor HLA typing results from the H&I laboratory into the NHSBT database without transcription. Nine laboratories are now live with DCERT with Edinburgh having joined in January 2026. The remaining 11 UK laboratories will be going live in 2026.

3. H&I INCIDENTS RELATED TO KIDNEY TRANSPLANTATION

There were a total of 29 incidents reported to the NHSBT Patient Safety team in 2025 that had a potential impact on kidney transplantation [**FIGURE 1**]. Incorrect information transfer from Hub to the H&I laboratory and problems with the spleen/lymph node crossmatch material had the highest number of reported incidents. Further details are available in **TABLE 2** for incidents not previously reported in the November 2025 KAG-PSG.

FIGURE 1 *– Trending HLA/H&I related incident reports from January to December 2025. Categories are for information only and do not correspond to NHSBT incident categories:*

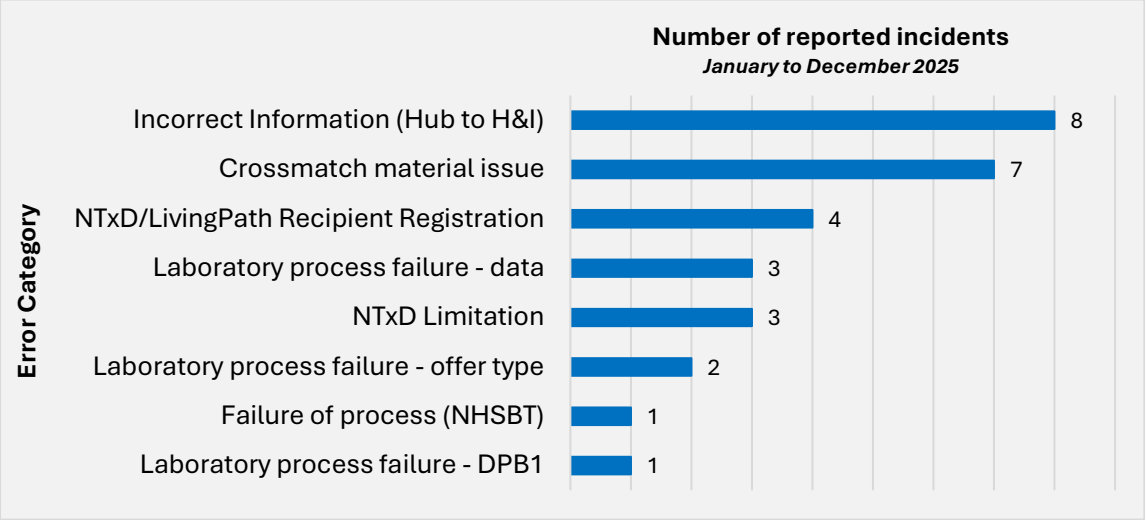


TABLE 2 – Further details for NHSBT Patient Safety incidents reported between September and December 2025:

Incident Number	Event Date	Description
ODT-INC-9434	07/10/2025	Unable to perform a retrospective allogeneic crossmatch as there was no viable donor cells obtained from both the donor spleen and lymph sample
ODT-INC-9444	10/10/2025	Missing UAGs on patient record following reactivation on 25/06/2025 for pancreas alone.
ODT-INC-9616	02/12/2025	Mismatched PID in email body vs attachments from Hub to H&I.
ODT-INC-9632	05/12/2025	Revised HLA type for 177465 following offering. DQ7, DQ8 to DQ7, X. Led to two adult recipients missing a kidney offer.
ODT-INC-9642	10/12/2025	Smashed spleen pots received.
ODT-INC-9682	22/12/2025	DPB1 not reported with offer type due to test failure.
ODT-INC-9685	20/12/2025	Incorrect laboratory analyser report attached via DCERT leading to incorrect information in TransplantPath for HLA offer type.
ODT-INC-9698	30/12/2025	Incorrect laboratory report attached to FRM4936 for HLA offer type.
ODT-INC-9704	30/12/2025	DRB3/4/5 heterozygous allele reporting issue with one laboratory via DCERT - no patient harm

A consistent theme is mismatched information received by the laboratory through manual processes of data upload, including email. This is a reminder to double-check all donor identifiers when reviewing information relating to a kidney offer.

4. CALCULATED REACTION FREQUENCY (cRF) CALCULATOR UPDATE

No further update – the work to develop the cRF calculator is currently on hold pending completion of the modelling work for KAG with regards to matchability score 10.

5. NTxD FAILURE – IMPACT ON H&I

There have been two unplanned NHSBT National Transplant Database (NTxD) failures in 2026. The first was on Friday 23rd January lasting until the early hours of Saturday 24th January 2026. The second was during the afternoon of Thursday 16th April 2026. In both situations, ODT Hub were unable to generate local matching runs for several hours but did not need to initiate local allocation processes.

Following KAG in February 2026, a joint letter was sent out to KAG members and H&I Heads of Laboratories from the KAG Chair and OTDT H&I lead advising that Transplant Centres and H&I laboratories work together to consider how a request for local allocation of kidneys during unplanned NTxD downtime would be managed and to ensure that appropriate contingencies are in place. For example, regular planned local downloads of the "Configurable Waiting List" from ODT Online. There are plans to develop a national guidance document on how to select patients, but any guidance will be reliant on having a source of local contemporaneous transplant waiting list data available.



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6. ARC H&I UPDATE

For kidneys offered out from Assessment and Recovery Centres (ARCs), it has been agreed that peripheral blood from donors will not be available for prospective crossmatching. Donor material (spleen and lymph node) will accompany the kidney to the ARC and then to the recipient centre.

AUTHOR(s):

Carla Rosser H&I Consultant Clinical Scientist, NHSBT OTDT H&I Lead