RAG(M)(25)02

NHS BLOOD AND TRANSPLANT
ORGAN AND TISSUE DONATION AND TRANSPLANTATION DIRECTORATE
THE THIRTY-SEVENTH MEETING OF THE RETRIEVAL ADVISORY GROUP (RAG)
ON WEDNESDAY 19 NOVEMBER 2025
VIA MICROSOFT TEAMS

MINUTES

Present:

Marius Berman (Chair)	Associate Clinical Lead for Organ Retrieval
Chris Johnston	Deputy Chair RAG / NORS lead, Abdominal, Edinburgh
Elijah Ablorsu	NORS Lead, Abdominal, Cardiff
Aimen Amer	NORS Lead, Abdominal, Newcastle
Irum Amin	MCTAG Chair, Cambridge
Jennifer Baxter	BTS Representative
Sarah Beale	Service Development Manager, OTDT, NHSBT
Carlo Cerasa	NORS Lead, Abdominal, Royal Free Hospital
Ben Cole	Service Development Manager, NHSBT
Jeanette Foley	Deputy Chief Nurse, OTDT, NHSBT
Shamik Ghosh	RAG Lay member
Rachel Hogg	Senior Statistician, Statistics and Clinical Research, NHSBT
Michael Hope	Abdominal Recipient Coordinator Representative
Wayel Jassem	NORS Lead, Abdominal, Kings
Ian Currie	AMD Retrieval, NHSBT
Isabel Quiroga	NORS lead - abdominal - Oxford
Derek Manas	Medical Director, OTDT, NHSBT
Liz Middlehurst	Head of Operations, Organ Donation, NHSBT
Debbie Macklam	Head of Service Development, OTDT
Gavin Pettigrew	NORS Lead, Abdominal, Addenbrookes
Steven Potter	RAG Lay member
David Quinn	NORS Lead, CT, Birmingham
Jerome Jungschleger/Tanveer Butt representing BC Ramesh	NORS Lead, CT, Newcastle
Zia Moinuddin representing Afshin Tavakoli	NORS Lead, Abdominal, Manchester
Daniel White	Recipient Transplant Co-ordinator
Julie Whitney	Head of Service Delivery, OTDT Hub, NHSBT
Bart Zych	NORS Lead, CT, Harefield Hospital
Shahid Farid	BTS Rep; NORS lead - abdominal - Leeds
Sarah Whittingham	Team Manager, OTDT Yorkshire, NHSBT
Additional Attendees:	
Kate Hulley	Perioperative Practitioner, Newcastle
Beverly Blanco	Perioperative Practitioner, Newcastle
Janeth San Diego	Perioperative Practitioner, Cambridge
Helen McManus	Professional Development Specialist Nurse, NHSBT
Laura Barton	Portfolio and Programme Manager, NHSBT
Arlene Torio	Deputy Lead, Perioperative Practitioner, Cambridge
Emma Lawson	Innovation and Research Lead OTDT, NHSBT
Thomas Billyard	Guest
Mohamed Osman	Guest
Christopher Bowles	Guest
Luke Williams	Guest
Louise Kenny/K Hulley	Guest

In Attendance:

Lawna Pugh	Advisory Group Support, NHSBT (Minutes)
Cherrelle Francis Smith	Advisory Group Support, NHSBT

		ACTION
1.	**WELCOME, INTRODUCTIONS, APOLOGIES, ANNOUNCEMENTS AND THANKS**	
1.1	M Berman (Chair) welcomed everyone to the meeting. Apologies were received from Emma Billingham, Liz Armstrong, Victoria Gauden, Pradeep Kaul, Karen Quinn, BC Ramesh, Mark Roberts and Afshin Tavakoli.	
1.2	M Berman welcomed C Johnston as the new Deputy Chair of RAG.	
2.	**DECLARATIONS OF INTEREST**	
	• No declarations of interest were reported. • ***RAG members are asked to declare if any information in papers for this meeting is sensitive content that should <u>not</u> be published on the public facing NHSBT OTDT website as soon as possible. A request for papers <u>not included</u> on the website should be made in writing to advisorygroupsupport@nhsbt.nhs.uk***	
3.	**MINUTES, ACTION POINTS AND MATTERS ARISING FROM 14 MAY 2025**	
3.1	Accuracy – **RAG(M)(25)01** – The Minutes of the last RAG meeting on 14 May 2025 were approved.	
3.2	<u>Action Points</u> – all actions were completed or on the agenda.	
3.3	<u>Matters Arising</u> – no issues were raised.	
3.4	<u>Terms of Reference</u> **ACTION:** M Berman and C Johnston to review.	**M Berman/ C Johnston**
4.	**MEDICAL DIRECTOR UPDATE** • Interim CEO C Walker post ends and shortlisting is in progress. • K Quinn will continue to lead in SCORE, NRP (Normothermic Regional Perfusion), and Transport Transformation programmes. E Billingham will continue as Head of Commissioning. • Assistant Director for Transplantation - N Earl has been appointed and starts in January 2026. • ARCs (Assessment and Recovery centre) - B Hume (Assistant Director - Strategy Transformation and Business Development) will solely focus leading the ARCs programme for the next 18 months - recruitment to cover the remaining work will commence for this period. The ARC pilot locations have been announced. • Assistant Medical Directors are deputising for D Manas – J Casey as clinical deputy and R Ravanan as R&D deputy. • NRP and is now rolling out. • ISOU (Implementation Steering group for Organ Utilisation) has come to an end with lots of ongoing work. Many thanks to team. • Transplant Oversight Group – a sub- group called the National Transplant Clinical panel has been established to work collaboratively with NHSEs National Transplant lead and look at risks, quality and emerging concerns.	

	• Utilisation - C Callaghan is moving on from this role and is now chair of PAG (Pancreas Advisory Group) Significant improvements have taken place and there will be no replacement for his role. • MCTAG new chair is Irum Amin from Cambridge. • Organ Utilisation Group (OUG)– is led by G Jones and supported by B Stutchfield. • Organ Donation Joint Working Group is working with DHSE with recommendations that include looking at donors outside of ICU. • National Histopathology Services has started, with agreement from Commissioners to fund scanners and Pathologists. Hopefully a national service will commence in 2026. • HHV8 Working Group is looking at developing pre-transplant testing. • HUB Transformation Programme - J Whitney will be leading on the SCORE digital acceptance/decline work and alongside ARCs regarding any operational impact. • Patient Engagement group will have Patient Partners joining the Advisory groups from 2026.	
5.	**COMMISSIONED SERVICE UPDATES**	
5.1	Colour identification of bowl for liver transport – C Johnston and C McIntyre provided an update: Some centres reported issues with the green liver bowl cracking. The bowl was in the basic pack, which is opened before confirming organ retrieval. The green bowl is now placed inside the blue bowl for protection, and this change has reduced cracking. Teams are keen to maintain colour identification throughout the process as it supports workflow consistency. Governance concerns have been addressed, and the intervention appears to have resolved these issues.	
5.2	Update of packaging of Livers – S Farid provided an update: Pictures on Transplant path have shown ice (or ice blocks) in contact with the liver or the liver on top of ice. Incident reports have come in from implanting centres. Clarity is requested as centres have their own way of packing. I Quiroga added that there is no evidence of damage to the liver if ice is in contact, and it is vital to cool down the liver. All organs must be removed prior to packing the liver. C McIntyre explained that a video will be put together for the NORS (National Organ Retrieval Service) Masterclass for packing of livers and uploaded onto the LearnPro platform. There will also be an update of the NORS standards that the liver is submerged in ice and preservation fluid and not put on ice – this should address any confusion. **ACTION**: C McIntyre to share the video of the NORS Masterclass when available. E Ablorsu requested training for SNODs and transport providers on how to protect organs during transportation. There is a difference to liver size and liver box, movement and tilting can damage the organ.	**C McIntyre**

	ACTION: C Johnston to check the NORS Standards regarding packing of livers.	**C Johnston**
5.3	Mobilisation – **RAG(25)26** (paper which is circulated with the minutes), full details are given in this paper in E Billingham absence M Berman provided an update: There have been several issues with NORS teams arriving late at the donor hospitals. Breaks are included in the overall time. If there are any issues, all centres please update the SNODs as soon as possible. Further discussion took place with the following points noted: • Recent impressions from some abdominal teams are that CT (Cardiothoracic) teams are not arriving on time. Yorkshire have performed an audit to submit to BTS to look at the issue. • When arriving at a donor hospital which is unfamiliar, it can take time to find the SNODs location. • M Berman clarified that CT teams need to arrive 1 hour before the abdominal teams. If it is a DCD Heart team, they need to arrive 2 hours before, to set up. If there is a combined and ANRP team, the suggestion is that both teams arrive 2 hours before, to set up. The mobilisation times are in the KPIs which states that teams should leave within 90 min of the call to mobilise. Packing the van is not considered, so if there are any delays the team need to update Hub Ops. All these factors can affect the retrieval. Teams arriving at the same time impacts the abdominal team, who are significantly busier. The whole community agreed the timings which are set. SCORE will address some of the issues around traffic. • D Macklam added that communication is key, and all transport data is being analysed under SCORE. Any penalties are fully investigated, and meetings with the teams arranged, penalties are there as a last resort. The recommendation is to communicate enroute with Hub Ops and onsite with other teams. **ACTION:** M Berman to ask E Billingham to recirculate timings as agreed in the KPIs.	**M Berman/ E Billingham**
5.4	Perfusion fluid tender update - in E Billingham absence M Berman provided an update: Following the recent tender, Commercial department (NHSBT) will confirm when the contracts have been signed off. There are two suppliers against each of the contracts (HTK/Custodiol, UW, and Perfadex Plus) details and prices will be confirmed in due course. The consumables tariffs will be amended from next year's contracts to reflect the new prices.	
5.5	Retrieval issues when both cardiothoracic and Mult visceral organs are retrieved – I Amin highlighted two recurring issues which caused delays:	

	1. It was advised that the implanting surgeon from the multi-visceral side and the CT team have a conversation regarding the complexity of the recipient and how long potentially to cross clamp. The last three occasions the CT team had not returned the call. 2. It was also agreed that at a multi-visceral retrieval, to try to reduce the time, the abdominal team could open the abdomen to inspect the organs, so that the implanting centre could start the ex-plant. Unfortunately, this was not permitted, stating it would result in an arrest in the donor - this added hours to the process. At CTAG it was discussed and agreed that advanced communication needs to be in place. It is also in the NORS guidelines to allow exploration of the abdominal organs. The recommendation if there are any delays the team need to contact the Operational manager on call or ask the SNODs to call them to advise. When these events occur raise an incident so that it is highlighted. **ACTION:** M Berman/L Middlehurst/I Amin to discuss the multi-visceral issues and recirculate the recommendations.	**M Berman/ L Middlehurst/ I Amin**
6.	**SERVICE DEVELOPMENT**	
6.1	Paediatric Cardiac Business Case Workstream - D Macklam provided an update: L Kenny is leading on development of this technology, to enable retrieval of paediatric hearts down to <25kg and extend travel times particularly from European donors. A working group with NHS England, NHSBT, Great Ormond Street, and Newcastle is finalising a business case for a national service, as no current funding exists. The model will mirror but require additional perfusion specialists and congenital surgeon support. The business case will go through NHSBT governance and SMT in December 2025. Discussions with UK Health departments and Commissioners have begun, but alternative funding routes may be needed. **ACTION:** Update expected at the next RAG meeting.	**D Macklam**
6.2	ARC pilot update – **RAG(25)27** (paper which is circulated with the minutes), full details are given in this paper. L Barton provided an overview: The long-term vision is to establish 2-3 multi-organ ARC centres with UK-wide coverage. These centres have the potential to deliver up to 750 additional transplants per year. The goal is to have them fully operational by 2030. A spending review settlement was confirmed in June 2025 and hoping to start pilots early 2026. The aim is to submit an outline business case to the DHSC by January 2027. Looking at a standardised approach as the pilot relies on staff working overtime, to share the load as well as maximise experience across centres. To ensure a UK equitable service the 2-3 centre locations could be agreed via a consortium to ensure fairness and collaboration. Working groups have been set up and the finer details will be discussed for each organ. Definition of service models will come from these groups, and commissioned services will take priority. The pilot will be taken slowly to learn as it goes along and minimise impact to staff.	

	ACTION: M Berman to add ARC update as a standard agenda item for RAG	**M Berman**
6.3	Overview of MOReS (Mobile Organ Refrigeration System) - in the absence of P Kaul, J Baxter provided an overview: Papworth started using the device in 2021 for DBD Hearts and more recently DCD/DBD lungs. A manual was created and for ease of mobility the unit was made taller. The top can be removed for packing into the vehicle and shows no impact for travel - it is the same size as the OCS. The unit can be plugged into the mains and also has a 5-hour battery as a backup. Fourteen DBD hearts have been transported with MOReS and seven lungs. Data shows no significant differences in donor recipient and operative baseline characteristics. No differences in ICU stays and possible improvement in short-term graft survival.	
6.4	Update on Uncontrolled DCD – R Gaurav proved an update: Almost one year since the pilot started with one proceeding retrieval using NRP. The second did not proceed and the pilot was put on hold for a few months while this was investigated. Of the forty calls the most common reason for not proceeding were timings. The proposal is to perform five proceeding transplants. A protocol has been submitted to include research for livers of these donors. Also submitted is a proposal to incorporate an ECMO CPR service.	
6.5	Operational Governance for Service Development – In the absence of E Billingham this item is to be added to the next RAG.	**L Pugh**
6.6	Computed tomography Imaging - **RAG25)18** (paper which was circulated before the meeting), full details are given in this paper. T Billyard presented. In summary: The principles are supported by NODC (National Organ Donation Committee), although not to perform blanket CT scanning for all. The suggestion is to support donors at risk of cancer (smoking etc.) and donors over 40 years. The next step is for NHSBT to establish and resource a project group to incorporate CT scanning into donor characterisation and set out how the impact will be monitored. The following points were raised: • Diabetes patients are not included • Concerns that this will reduce the number of donor referrals • CT scanning is not an inclusion criteria for donation • Make more selective criteria so scans show evidence • Looking for safety outcomes in recipients not pathology assessment and add in multi-visceral and liver split organs • Family impact if the scan shows unexpected issues and delays • Positive impact for the kidneys with pre-donation scanning • Image sharing of scans prior to consent is necessary • Impact on SCORE modelling which is based on CT scans and ECHOs already received – need to be investigated before the pilot • DBD and DCD donors to be included (apart from Scotland)	

	• Possible additional delays in donor characterisation **ACTION:** M Berman to set up a call with T Billyard/ /C Johnston to discuss the concerns raised and refine the criteria.	**M Berman**
6.7	Cardiothoracic staples in Lung retrieval in NRP – B Cole provided an update: There was a clinical issue with blood loss and to implement use of staples. A paper was presented at SMT to request reimbursement of staples which was approved in September 2025. Can all CT centres document this on the passport to ensure reimbursement for CT NORS consumables. **ACTION:** B Cole to circulate the update on staples.	**B Cole**
7.	**PATIENT SAFETY**	
7.1	Patient Safety Report - **RAG(M)(25)19** (paper circulated before the meeting). J Foley provided an update: • For awareness there is one case where persistent hypoxemia on the OCS machine was detected - changes have been made to rectify this. • To review the organ damage process, a pathway has been mapped. Some processes have been superseded – this is in progress. • NORS standards states that no offers should be made without an ECHO. The SNOD documentation stipulates that if an ECHO is not available within three hours of registration, then offering can commence. Work will be carried out to align the guidance to define decision-making. **ACTION:** J Foley to send M Berman and I Currie the draft guidance paper for ECHO offering.	**J Foley**
7.2	Organ Utilisation with NRP and CT retrieval - R Hogg provided an update: ANRP and CT attendance shows lots of growth in past 5 yrs. Overall there were 159 attendances which 135 proceed to donate - 133 abdominal and 82 CT. The recommendation is to capture as much data as possible due to the difference in donors with this process. To include blood volume loss on passport and raise as an incident so NHSBT can investigate. Debriefs are monthly and additional training available. Due to small numbers of NRP and CT retrieval, Birmingham finds it difficult to gain experience and confidence and ask for proctoring to support these centres. **ACTION:** C Johnston/ M Berman/R Hogg/I Currie to discuss how to capture data and discuss proctoring with Birmingham.	**C Johnston/ M Berman/ R Hogg**
8.	**Sustainability and certainty in organ retrieval (SCORE)**	
	Link circulated with the minutes. S Beale provided an update. In summary: The programme has now received full Investment committee approval to implement the programme, and a full business case will be submitted in	

	March 2026. Phase 2 of the shadow modelling was implemented in real time and took into consideration SNODs and recipient coordinators within a busy period of activity over 33 days. 500 organs accepted in the time frame, 99% donors were attended in the first PAW (Planned arrival window). 95% of NORS team arrival much nearer to 2000-0300 hrs. Hopefully phase 3 of shadow modelling will show reduced travel times for the abdominal teams. Overall, a better use of resources with an 11% reduction in flights. Go live aim is for Jan 2027. Hub Ops digital model needs to be established, and the clinical role implemented. Full slide desk for each centre can visit the link below to look at specific centre reports: https://www.odt.nhs.uk/retrieval/sustainability-and-certainty-in-organ-retrieval-score/	
8.1	NORS contract, quality standards and KPIs - RAG(M)(25)28 (circulated with the minutes) full details are given in the paper. J Whitney provided an update in E Billingham absence: Potential NORS contract changes are likely: • Abdominal teams' reduction from 24 to 20 hrs service. Rotas 1:4 – 1:6 to be investigated. • Back-office reduction as source data directly. • Uplift for peri-operative teams from band 5 to band 6 (factored into finance calculations). Individual letters to centres will be sent and NHSBT are keen to work with teams to ensure the best solutions and outcomes. Financial/contract changes will not come into force until 2027. Proposed KPIs changes: • Team arrival time within 30 mins of time proposed by Hub Ops. • When team on call to be available. • At least 4 competent team members. • HTA forms submitted within 30 days of retrieval. • RTI forms submitted within 28 days retrieval. Proposed Quality indicators (during shadow monitoring period): Xvivo machine perfusion start times for all organs. If there are any implications for trusts and potential solutions the ask is to work together to share ideas and for centres to inform NHSBT what is required to support teams locally. One concern raised that the KPIs do not refer to the time the liver is removed, and this is the only marker of retrieval quality – all times of when organs are removed should be made available. J Whitney explained that NHSBT are collating times for all organs which may not be visible initially but, this analysis will be enabled retrospectively. **ACTION:** J Foley/J Whitney to confirm if there is a plan for organ removal times to be included into TransplantPath for visibility to centres.	**J Foley/ J Whitney**

	ACTION: J Whitney to ask I Currie and E Billingham to indicate that more formal meetings with NORS leads are to be set up.	**J Whitney**
9.	**ORGAN DAMAGE**	
9.1	Organ Damage Report - **RAG(M)(25)20** (circulated prior to the meeting) full details are given in the paper. R Hogg provided an update. In summary: The reported organ damage rates are from 1 January 2024 – 30 June 2025. For DBD donors, rate of damage-free retrieval across organs were high, ranging from 90% for pancreas to 97% for heart. DCD donor had slightly lower rates, ranging from 83% for pancreas to 95% for heart. It was raised there are sometimes cases where NORS teams disagree with mild effect damage reported by the recipient centre on the HTA-B form. This is difficult to moderate and NHSBT agreed to focus to only look at the impact to CUSUMS - teams are getting better at reporting accurately. All centres to please emphasis suggestions to add to the Masterclass to teach the best practice.	
9.2	CUSUM - **RAG(M)(25)21** (circulated prior to the meeting) full details are given in the paper. R Hogg provided an update: There have been three sets of CUSUMS run with one signal from Birmingham which is still under investigation.	
10.	**NORS ANNUAL REPORT**	
	RAG(M)(25) (Link to the paper was circulated prior to the meeting) full details are given in the paper. R Hogg provided an update: This report presents organ retrieval data from the most recent financial year, 1 April 2024 to 31 March 2025. Data were extracted from the UK Transplant Registry on 04 July • From 1 April 2024 to 31 March 2025, 1,599 potential organ donors were attended by a retrieval team. 1398 (87%) of these proceeded to abdominal organ donation and 318 (57% of the 559 attended by a cardiothoracic team) proceeded to cardiothoracic organ donation. • There was a 9% decrease in the number of donors attended in this financial year compared to the previous year (from 1,761 to 1,599). • On average, 4.4 potential donors were attended by a retrieval team per day, which is a decrease from the previous year (4.9). • On average, abdominal teams attended at least one donor on 49% of on-call days in the year (51% the previous year), while cardiothoracic teams attended at least one donor on 41% of on-call days (40% the previous year). • There were statistically significant differences in the mean number of DCD abdominal organs transplanted across abdominal NORS teams. • The transplantation rates for retrieved organs were variable across organs, from 45% for DCD pancreases, up to 99% for DBD hearts. Additionally, 61 were retrieved, 57 of which were transplanted. • There were 211 A-NRP attendances, with 187 proceeding to organ donation.	

	ACTION: L Middlehurst to share data validation for the predicted PTA algorithm and provide an update at next RAG.	**L Middlehurst**
11.	**A-NRP STEERING GROUP**	
	I Currie provided an update: C. Watson has now stood down after many years of involvement. NHSBT recognise his contribution and commitment and are deeply grateful. • The last meeting was held in September 2025 and included seven debriefs in total. • Discussions have taken place regarding a block contract for consumables, which is now with National Funding. A national contract is expected to benefit all centres. • B. Cole and D. Macklam met with centres to review team readiness. A webinar for all centres was suggested to enable collaboration and shared learning. • Commercial aspects are being investigated around maintenance to secure the best price within the NHS structure. • The Perfusion Matrix was discussed, focusing on estimating quality and addressing potential increased blood loss during CT retrieval. It was agreed to include the number of blood units on the passport so this can be recorded centrally. • Staffing challenges remain a recurring theme, even with funding support. • The ANRP study has concluded five satisfactory cases. The next phase will involve performing five TA-NRP cases starting in January 2026. This will help teams improve understanding of effective case management.	
11.1	A-NRP roll out - **RAG(M)(25)22** (paper circulated prior to the meeting). B. Cole and D. Macklam provided an update: • NHSBT provided funding for the service evaluation in 2015. Since then, teams accessed charity funding and non-recurrent funding to start their own individual programmes which has been limited and ad-hoc. • NHSBT set up steering group in 2019 with C Watson as lead. This enabled to bring forward mentoring and share experience. • The business case UK wide service was submitted in 2018 and refreshed in 2021. • Seven of ten abdominal centres are now signed off to deliver ANRP. • Success of ANRP show an increase in liver transplanted from 17% in 2019/20 to 39% in first 6 months of 2025/6. In 2024/25 one off funding was received from DHSE and the majority was used for training at the NORS Masterclass and reimbursement for consumables. Substantive funding in April 2025 has enabled NHSBT to engage with centres to better understand the challenges for roll out of ANRP by April 2026. Funding allocation for 2025/26 agreed against milestone plans and will be commissioned as part of the NORS contract from April 2027 along with a Service Specification. All centres are doing all they can to maintain ANRP – thank you to all centres for the positive attitude and overcoming some of the challenges, which include workforce and rota cover. Further discussion took place with the following points noted:	

	How teams will achieve 100% compliance and address barriers such as rota maintenance and recruitment challenges. Previous practices were safe but now require review under new commissioning guidelines - KPIs for the NORS contract will need to be agreed and worked through. In the meantime, centres can reach out to I Currie to review flexibility for cross-centre training under updated guidelines. Independent centres may offer ANRP freely, but cross-centre ANRP requires an SLA and agreement. **ACTION:** I Currie to share with the Steering Group and review emerging scenarios and onboarding processes.	**I Currie**
11.2	Update on Paediatric abdominal A-NRP –D Macklam provided an update: A paediatric perfusion technology group discussed and agreed that there is a demand for and the use of ANRP, particularly the CT side. ANRP can be applied to donors weighing ≥30 kilograms without significant changes to clinical or operational protocols, while donors below this weight would require different procedures. Spanish experts were identified as having experience in performing NRP in small paediatric cases. Additionally, a training session scheduled for December 2025 was mentioned, which will be investigated. A separate business case will likely be required for abdominal and cardiothoracic applications due to differing trajectories. It is a priority to try and consolidate all groups, especially MCTAG.	
11.3	ANRP training and registration – C Johnston provided an update: The Framework document was discussed, and it was agreed to expand the register. The current training and registration form are for NORS surgeons, and want to include NRP, DCD surgeons and operators, and perfusion practitioners. It is useful to have a register of those that have reached a level of competencies. The following points were noted: • Vital for governance and oversight especially with warm perfusion, and a request to keep this document centrally, with active management of register. • Registration is a legal term therefore the name of the form needs to change. **ACTION:** M Berman/I Currie to discuss with D Macklam and B Cole a change to the document title and adding additional columns.	**M Berman/ I Currie**
12.	**DCD Hearts**	
12.1	Oversight Group (HOG) - **RAG(M)(25)23** (paper circulated prior to the meeting). D Macklam provided an update: This group has come to a natural conclusion with substantive funding. This group will move into a service development group which I Currie will lead. The group is now known as: Cardiac Retrieval Service Development (CRSDG).	
12.2	DCD Heart retrieval service stabilisation workstream - I Currie provided an update:	

	The group have put plans in place to change the rota from three teams to four. It's not fully in place yet but will be once recruitment is complete. To help with the transition, rest periods have been built in. Overall, things are looking much better for the DCD Heart teams. A couple of patient safety cases were investigated, but these were routine. Goals have been set for the CRSDG group toward a fully commissioned service. M Berman gave thanks to D Macklam, I Currie and B Coleman in stabilising the service. D Manas is available if additional support is required.	
12.3	Impact of 11-hour rest – B Cole provided an update: This was implemented and mandated in June 2025 with a positive impact on NORS teams. The average time was 11-12.5 hours away from base, with some occasion losing donors due to consent with long waiting times – this will be investigated. Thank you to all the teams for their efforts.	
12.4	DCD heart training and registration - B Cole provided an update: Shared data with teams and training plan has been implemented. In terms of attending retrievals and training there has been a disparity. The need to return the feedback forms and logging of attendance is vital - training has not been logged and forms not completed. If a copy of the feedback forms or attendance log in required, please contact Ben Cole - Ben.Cole@nhsbt.nhs.uk	
12.5	Final update from DCD Paediatric heart workstream – M Berman provided an update: The three technologies for Paediatric hearts - HOPE, mOrgan and TA-NRP have now moved into various workstreams, therefore this group has come to an end and no longer required.	
12.6	European DCD Paediatric heart retrieval – in L Armstrong absence, D Macklam provided an update: This is an ongoing working group to progress DBD and DCD Paediatric heart retrievals. Work is moving forward with governance and change controls are in place, anything outside of this practice falls into this group. D Manas added that SMT did not approve funding, however there is an agreement from a Newcastle charity to fund some of these retrievals.	
12.7	Clinical update DCD Paediatric – K Hulley/L Kenny provided an update: Lots of work has been completed with good outcomes of 3 paediatric donors and recipients being the smallest in the world, the Smallest being 10 kilogrammes, using HOPE. Another recommendation for sign off has been submitted for another surgeon, pending attendance to the Masterclass. Staff training event is pending including training staff for Xvivo to ensure cover.	

13.	**CRITICAL UPDATES**	
	All updates are covered on the agenda.	
14.	**NORS CLINICAL LEADS FORUM**	
	C Johnston provided an update: This group has met recently, and it is good for newer NORS leads to discuss implementation and speakers to address NORS leads as a group. the aim is to meet on a quarterly basis. It has been extremely beneficial that E Billingham has been leading on these meetings. One query raised if it was a quorum requirement for M Berman and I Currie to be at the meeting as noted in the Terms of Reference. It was agreed that is it important for this group to flourish by themselves and goal is to encourage connection of the NORS leads. **ACTION:** E Billingham/C Johnson to remove I Currie and M Berman from the ToR.	**E Billingham/ C Johnson**
15	**EDUCATION**	
15.1	Masterclass Update – virtual and cadaveric - C Johnston/I Currie provided an update: The virtual Masterclass with new course directors received positive feedback. The cadaveric masterclass is for those who have attended the virtual Masterclass and was limited to 40 delegates. Key changes to the next Masterclass will be 3 days not 2. The third day will feature new machine technologies with a reduced faculty. Everyone is encouraged to apply as this is mandatory for sign off for all NORS surgeons. The next masterclass 13 -15 January 2026.	
15.2	LearnPro retrieval video library - C McIntyre provided an update: In early 2024 a contract was signed with LearnPro to host NORS educational material. There is only 1 video uploaded currently however, this will build over time. In April 2024 communications were shared with teams and currently there are 456 staff registered on the LearnPro platform. After the Masterclass there will be more videos available to upload. C Johnston noted that fellows are asking for more videos and is keen to add a video for CT heart and lung retrieval. If family consent is approved C Johnston will help facilitate.	
16.	**TA-NRP** Marius Berman provided an update on behalf of Antonio Rubino. The trial finished recruiting 5 aNRP patients and is finalising the trial protocol for the TANRP phase, due to start spring 2026.	
17.	**RESEARCH**	
	Study 155 - Coronary Artery Disease in Hearts Donated for Transplantation - **RAG25)24** (paper circulated prior to the meeting). C Bowles/M Osman attended RAG and presented. In summary:	

	The study approval was attainted and activated in January 2025. RAG is asked for all retrieval teams to send hearts not suit for transplant homograph, for analysis to Harefield. **RAG AGREED TO SUPPORT THIS REQUEST** **ACTION:** M Berman to contact M Stevens and E Lawson to set up change controls to achieve this.	**M Berman**
18.	**ANY OTHER BUSINESS**	
18.1	Items for next RAG agenda – RAG Members are asked to send suggestions for the next RAG meeting to advisorygroupsupport@nhsbt.nhs.uk	
18.2	NORS PERI Operative RAG attendance C McIntyre shared that 3 practitioners will be attending the next face to face meeting and 4 at the virtual meeting. This is to feedback at the NORS Perioperative forum. These are valuable members and expose them to view the process and connect to the community.	
18.3	NORS LOGO **ACTION:** All to send to C Johnston/M Berman expression of interest to send design samples.	**All**
18.4	New consent form – RAG(25)29 - (form circulated with the minutes). C Miller provided an update: The new from will be piloted in Yorkshire, London and Northwest. The start date is not confirmed yet (likely December/January). A letter from O McGowen will be circulated prior to go-live, along with a webinar. **ACTION:** Feedback or thoughts would be appreciated in advance of the rollout to Cathy.Miller@nhsbt.nhs.uk	**All**
19.	**KEY POINTS FROM TODAY'S MEETING FOR CASCADE TO CENTRES**	
	M Berman to complete.	**M Berman**
	1. **Important for all NORS and SNODS to familiarise themselves with the new retrieval KPI timings.** 2. **Civility and communication between teams prior to complex retrievals are key for successful outcomes. I encourage colleagues to speak with each other aiming to better planning and execution in these scenarios.**	
20.	**FOR INFORMATION ONLY**	
20.1	QUOD Data and Governance Update – **RAG(25)25** - (paper circulated prior to the meeting).	
20.2	Genex and F-CUSToS – **RAG(25)26** was circulated prior to the meeting. **ACTION:** To be added to the next RAG agenda and L Williams to present.	**L Pugh/L Williams**

23.4	<u>Date of the next meeting</u> Thursday 14 May – Face to face venue TBC Thursday 22 October - Microsoft Teams	