NHS BLOOD AND TRANSPLANT
ORGAN AND TISSUE DONATION AND TRANSPLANTATION DIRECTORATE
THE TWENTY-SEVENTH MEETING OF THE RETRIEVAL ADVISORY GROUP (RAG)
ON TUESDAY 29 MARCH 2022 FROM 9:30 UNTIL 3:00 VIA MICROSOFT TEAMS

MINUTES

Present:

Ian Currie **(Chair)**	UK Clinical Lead for Organ Retrieval
Elijah Ablorsu	NORS lead, Abdominal, Cardiff
Aimen Amer	NORS lead, Abdominal, Newcastle
Sarah Beale	Service Development Manager, OTDT, NHSBT
Marius Berman	Associate Clinical Lead for Organ Retrieval
Emma Billingham	Head of Commissioning, OTDT, NHSBT
Andrew Butler	Chair, Multi-visceral Advisory Group, NHSBT
Chris Callaghan	AMD, Organ Utilisation, OTDT, NHSBT
Miriam Cortes Cerisuelo	NORS lead, Abdominal, Kings
Sarah Cross	National Operational Coordinator, QUOD
Diana Garcia Saez	Royal Brompton and Harefield NHS Foundation Trust
Dale Gardiner	Associate Medical Director, Deceased Donation
Shahid Farid	NORS lead, Abdominal, Leeds
Jeanette Foley	Head of Clinical Governance, OTDT, NHSBT
Victoria Gauden	National Quality Manager, NHSBT
Shamik Ghosh	Lay Member for RAG, NHSBT
Rebecca Hendry	Statistics and Clinical Research, NHSBT
Rachel Hogg	Statistics and Clinical Research, NHSBT
Michael Hope	Abdominal Recipient Coordinator Representative
James Hunter	Clinical Science Coordinator, QUOD
John Isaac	Deputy Chair, Liver Advisory Group
Jerome Jungschleger	NORS lead, Cardiothoracic, Newcastle
Emma Lawson	Innovation and Research Lead, OTDT, NHSBT
Debbie Macklam	Head of Service Development, OTDT, NHSBT
Derek Manas	Medical Director, OTDT, NHSBT
Cecelia McIntyre	Retrieval and Transplant Project Lead Specialist, OTDT, NHSBT
Vipin Mehta	NORS lead, Cardiothoracic, Manchester
Hynek Mergental	NORS lead, Abdominal, Birmingham
Majid Mukadam	NORS lead, Cardiothoracic, Birmingham
Jas Parmar	Chair, CTAG Lungs Advisory Group
Gavin Pettigrew	Chair, RINTAG
Theodora Pissanou	NORS lead, Abdominal, Royal Free
Rutger Ploeg	Principal Investigator, QUOD
Richard Quigley	Cardiothoracic Recipient Coordinator Representative
Isabel Quiroga	NORS lead, Abdominal, Oxford
Aaron Ranasinghe	CLU Rep, CTAG Hearts Advisory Group
Mark Roberts	Head of Commissioning Development, OTDT, NHSBT
Antonio Rubino	Intensive Care Physician, Royal Papworth Hospital (Guest)
Avinash Sewpaul	NORS lead, Abdominal, Edinburgh
Afshin Tavakoli	NORS lead, Abdominal, Manchester
Ines Ushiro-Lumb	Consultant, Virologist Microbiology Services, NHSBT
Chris Watson	Joint Chair, Novel Technology Implementation Group
Steve White	Chair, Pancreas Advisory Group, NHSBT
Julie Whitney	Head of Service Delivery, OTDT Hub, NHSBT
Claire Williment	Accountable Executive – Organ Utilisation Programme; Legislation Implementation, NHSBT

In Attendance:

Caroline Robinson	Advisory Group Support, NHSBT

		ACTION
1.	**WELCOME, INTRODUCTION & APOLOGIES**	
	• I Currie welcomed all to the meeting. Apologies were received from Ayesha Ali, Liz Armstrong, Richard Baker, Hannah Poulton, Karen Quinn, Isabel Quiroga, John Stirling, Rajamiyer Venkateswaran, Chris Watson, Steven White, Bart Zych. • M Mukadam, CT NORS lead in Birmingham, was congratulated for achieving 22 years on the retrieval rota.	
2.	**DECLARATIONS OF INTEREST**	
	No declarations of interest were reported. RAG members are asked to declare if any information in papers for this meeting are sensitive content and should not be published on the public facing NHSBT OTDT website.	
3.	**MINUTES, ACTION POINTS AND MATTERS ARISING**	
3.1	Minutes – **RAG(M)(21)02** – The Minutes of the last RAG meeting on 28/09/2021 were approved.	
3.2	Action Points - **RAG(AP)(21)02** - The Action Points from the previous meeting on 28/09/2021 were updated as follows:	
3.2.1	AP1 - Update from Advisory Group Chairs – MCTAG – A Butler raised the order of sequence needed to avoid delays in cross clamp where both MV and CT organs are retrieved. The explant procedure is often long, and donation is constrained by cold ischaemic time so as soon as MV organs are accepted, the recipient is prepared for implantation and the anaesthetic procedure starts. A Butler highlighted that although a request for laparotomy prior to any CT intervention to reduce delays in cross clamp applies to only approximately 15-20 donors per year, it is often not granted and there is perhaps lack of understanding currently between CT and MV surgeons of each other's needs. **ACTION: Agreed to invite A Butler to discuss this at CTAG meetings coming up.**	**M Berman / R Venkateswaran / A Butler**
3.2.2	AP2 - NORS Report 2020-21 - R Hogg will update the report with DCD heart hybrid team deployment in future reports.	**Ongoing**
3.2.3	AP3 - NORS Report 2020-21 - The 'length of retrieval' figure will include those retrievals involving flights in future data reports.	**Ongoing**
3.2.3	AP4 - HTK in Kidney only donors – The protocol is now on the website and changes from the previous protocol have been highlighted.	**Complete**
3.2.4	AP5 - NORS Performance Data group – On agenda	*See Item 8.3.1*
3.2.5	AP6 - NHSBT Clinical Governance Report (INC5425) – On agenda	*See Item 7.1*
3.2.6	AP7 - NORS Performance Imaging Group for Organ Damage – On agenda. D Manas highlighted that there are now several organ imaging groups and these should come together to share what they are doing to avoid duplication. It was noted that this group looks specifically at organ damage and that the policy regarding appropriateness and governance for use of photography/filming is currently being updated.	*See also Item 8.4*
3.2.7	AP8 - Recording heart for tissue/research on RTI – A reminder that the team which does not remove the heart from the donor (but may have packaged it) should not report that they retrieved the heart on the RTI form.	**Complete**
4.	**OTDT MEDICAL DIRECTOR'S REPORT**	
4.1	New appointments – In his first report as Medical Director for OTDT, D Manas announced the following:	

	• Richard Baker becomes AMD for Clinical Governance • Lorna Marson becomes AMD for Research & Development • The new surgical Clinical Governance Lead will be Sanjay Sinha (replacing R Baker) • Following a Clinical team strategy day, it was decided to create an AMD for Retrieval recognising the key importance of this activity in OTDT's remit. I Currie has been appointed to this role starting on 1 April. • Both I Currie and M Berman will continue their work on RAG for a further 2 years and M Berman will now co-chair RAG alongside I Currie. • Workstream leads for the Organ Utilisation Programme (OUP) appointed to support Claire Williment's work are Agimol Pradeep, Jessica Jones and Helen McManus. Although the outcome of the funding review is not yet known, OUP work remains an important programme that includes ARCs, CLUs and education.	
4.2	Other Developments: • OUG report – This is anticipated during the summer parliamentary session once time has been found in the minister's diary. There will be a final face to face OUG meeting and a national virtual conference will take place in May. • Advisory Group Structure - In future, the Advisory Group Chairs will work with the AMDs and provide a link to the Medical Director. • Funding issues – Confirmation of funding for DCD Hearts and NRP is still awaited. • OTDT Together – Work on this programme that brings Tissues and Eyes into the new Organ and Tissue Donation and Transplantation Directorate (OTDT) continues. • Histopathology – NHSBT continues to work with NHSE to ensure a properly commissioned service is available. A significant number of histopathology incidents have been reported so this work remains a priority and an interim plan will be in place to avoid organ loss and further incidents. • DM noted the sudden passing of Professor Paulo Muiesan, an internationally-acclaimed figure who had done so much to advance DCD liver transplantation in the UK. Most recently in Italy, but formerly of King's College and Birmingham liver transplant centres, his death was a great loss for the liver surgical community.	
5.	**FOCUSSED UPDATE FROM ADVISORY GROUP CHAIRS**	
5.1	MCTAG – A Butler reported: • An increase in age (up to 60) and weight (90kg) of donors is now in place for potential bowel donation. • In situ splitting for livers was discussed at MCTAG. Currently, the increased waiting time of 8 months for liver-containing grafts for adults is having a very negative effect. Changing to in-situ splits would allow a liver to be utilised for both hepatoblastoma and liver-containing MV grafts. Kings and Birmingham are keen to explore this with Leeds, although the logistical, technical and manpower issues need to be considered. • At MCTAG Simon Kay discussed increased waiting times for limb transplantation and the potential to access potential donors from other parts of the country through use of IT to transmit pictures and donor characteristics. An educational	

	package for SNODs is being organised to alleviate some concerns. • A national policy for retrieval teams regarding consent to take and store images for educational purposes was emphasised and D Manas will be sending out a letter shortly regarding this to all centres. Imaging for **organ quality and safety purposes** does not require specific consent and can be managed by SNODs via email as usual.	
5.2	Cardiothoracic (CTAG Hearts and CTAG Lungs) – R Venkateswaran (Chair – CTAG Hearts) was unable to attend due to surgical commitments. J Parmar (Chair – CTAG Lungs) reported that there is progress in donation and transplantation and new allocation programmes will aim to even out inequities in the system.	
5.3	Kidney (KAG) – no report.	
5.4	Liver (LAG) – J Isaac (Deputy Chair – LAG) reported: • Retrieval numbers are recovering following the pandemic when liver transplantations delivered were down 18% since 2018-19. • New rules for liver transplant listing were being introduced and will play a big part in enabling transplantation for cholangiocarcinoma, colorectal metastases and neuroendocrine tumours. NRP will be helpful in dealing with the shortage of organs. • A new perfusion FTWU group chaired by Chris Watson aims to develop a protocol and SOP to clarify governance, use of machine perfusion, quality of grafts and parameters for acceptance. D Manas has asked all solid organ groups to look at machine perfusion for the future.	
5.5	Pancreas – NAD at meeting in the absence of S White – apologies noted.	
5.6	RINTAG – G Pettigrew highlighted two areas being discussed currently: • A group is working on how to achieve uterine retrieval for uterine transplantation, and it is hoped this will become a reality this year. • Discussions on research restrictions and family consent for retrieval of organs to be used in commercial studies. Is ongoing.	
6.	**NORS AND COVID**	
6.1	Retrieval and transplant from Covid + ve donors – I Ushiro-Lumb reported that abdominal organs from COVID positive donors have been offered for some time while in the CT community this is a more recent development. While understanding of the impact of the disease on organ donation remains limited, there is currently no evidence of donor transmission to the recipient within 14 days of transplant. Early virology input is important to ascertain donor risk, as well as regular testing during the first 2 weeks post-transplantation. There is a differential risk for different organs, which needs to be balanced against need. Further information can be found at https://www.odt.nhs.uk/covid-19-advice-for-clinicians/.	
7.	**CLINICAL GOVERNANCE**	
7.1	NHSBT Clinical Governance report - **RAG(22)01 –** this report was circulated prior to the meeting. Two incidents were highlighted: • Issues arising during a retrieval process including behaviour, filming and the respect shown for the patient donating were highlighted. There were several non-essential observers in theatre which created an exceptionally busy	

	environment resulting in increased noise levels throughout. Members of the local hospital team also changed at the start of the retrieval and so were not present for the initial safety briefing. There was also a request for a member of the local team to film. It is agreed that filming of retrievals in operating theatres should only be done for organ quality and safety reasons. If there is a desire to record images for educational or other purposes, **specific family consent is required**, as well as a need to use **NHS equipment and data storage for the images**. This is the subject of a separate communication from D Manas. • In the second incident, intimal tears on the renal artery were identified on backbench review of the kidney at the accepting transplant centre and the organ was declined for transplant. It is agreed that a blunt cannula is preferred to a sharp venflon. An example of a disposable blunt ('Tibbs') cannula is available here; https://dtrmedical.com/product/tibbs-arterial-cannula/. Other vendors are available.	
7.2	HTA A forms; Chase Process –In a few cases HTA A forms have not been returned over a long period of time or information is inaccurate or unclear. The HTA has now asked that this issue is addressed, and a new chase process is being instigated: • If forms are not returned within 2 weeks, individual surgeons will be chased. • If there is still no reply, NORS leads will be asked to chase the surgeons • If there is still no reply, J Whitney or I Currie will chase the licence holder for a response.	
8.	**ORGAN QUALITY**	
8.1	Organ Damage Interim Report - **RAG(22)02** – The new organ damage grading system went live on 22 July 2021 to allow for more objective damage recording. This report covers organs retrieved by a NORS team from UK donors from 22 July 2021 to 31 January 2022. Results for each centre are shown in the paper circulated for this meeting. For DBD donors, rates of damage-free retrieval across organs were high, ranging from 84% for pancreas to 100% for heart. DCD donors had slightly lower rates ranging from 78% for lung to 89% to kidney. Most reported damage was mild effect. Concern was expressed regarding results for DCD lungs. It was also noted that DCD hearts are not recorded as they are not part of the standard service yet. More organs appear to be declined based on trivial damage and it was queried whether this reflects caution. RAG also emphasised the importance of reporting damage from the implanting centres' point of view as well as the NORS teams as this may highlight those who grade damage higher than others. **ACTION: R Hogg to look at DCD lung results in context of DCD heart donation.**	**R Hogg**
8.2	Impact of Damage on Pancreas Outcomes – **RAG(22)03 –** This report looks at damage information recorded by recipient centres on the HTA-B form between 1 January 2019 and 31 December 2019. In 2019, there were 468 pancreases retrieved, with 363 retrieved for use as whole pancreas and 105 for islets. Overall, 441 had a grade of damage reported, and of those reported, 378 had no damage reported, 28 had mild damage, 7 moderate damage, and 28 severe damage.	

	When looking at SPK patient outcomes, there was no significant difference between those with damage and those with no damage in initial graft function and graft function at 3 months. There was also no significant difference in 30 day and 1 year graft and patient survival between the two groups. This suggests there is no negative impact on patient outcomes if the pancreas is transplantable, but results are based on small numbers so should be interpreted with caution. Although the pancreas is an insubstantial organ that is easier to damage, caution in utilisation may be because although damage is not severe, the frail recipient may not be able to tolerate complications, and so transplantation appears to be more high risk than for other organs with damage.	
8.3.1	NORS Performance Data Group – **RAG(22)17 -** This fixed term data group will examine NORS performance and support organ utilisation. The group includes Rachel Hogg, H Mergental, P Kaul, I Currie and M Berman. Initial work and outputs will focus more on abdominal followed by CT retrievals. It is intended to produce CUSUMS which will be distributed to centres along with the organ damage reports.	
8.3.2	Organ Damage CUSUM Proposal - **RAG(22)04** – Following the update to the organ damage grading system, the grades are listed below along with the definitions collected on the HTA-B form: • No Effect/No Damage - Surgical damage was absent or had no clinical effect. • Mild Effect - Damage was present but organ was repaired for transplant. • Moderate Effect - Damage contributed, along with other serious concerns, to the decision not to use the organ. • Severe Effect - Damage was the primary factor in the decision to decline for transplantation. The organ would have been used if no damage was present. Details of the proposal are in the paper circulated. The meeting asked whether there will be support mechanisms in place if a CUSUM triggers or whether this will be an issue for centres to sort out independently. It is proposed that CUSUM data is collected without triggers to get people used to the idea of performance monitoring. It was however, noted that some form of monitoring and accountability is needed and that there should be an SOP on how monitoring will be done to avoid any conflict of interest due to centres investigating themselves.	
8.4	NORS Organ Damage Imaging Group - **RAG(22)18** - This group has been set up to develop guidance regarding photographic evidence of damage to organs at the time of retrieval that can be made available to the accepting centre. The aims are to: • optimise organ utilisation • shorten the process of organ acceptance, • support of the governance process in case of clinical incident to the damaged organ. A lot of work has gone into the technicalities of how to take images. A small-scale pilot study has been agreed to assess feasibility of this initiative to identify potential problems and the impact on NORS teams and SNODs. The process is outlined in the paper circulated for this meeting. An analysis report will be shared and discussed with working group members and recommendations presented to NHSBT.	

	A letter will also come out from D Manas regarding guidance on filming and consent. It was agreed that the 3 groups discussing imaging need to come together to discuss the work they are doing on how accurate imaging for quality is achieved, where images are stored and how pictures are taken. **ACTION: D Manas to determine the linkage between the imaging groups**	**D Manas**
8.5	*Updated RTI form – circulated for information* - ***RAG(22)05*** This will be changing in summer and formal comms will come out when they are introduced. More timepoints are being added in for NORs teams and support of warm perfusion in the donor hospital, as well as questions regarding imaging and if they are communicated. M Berman highlighted a recent incident where a heart was retrieved which then waited in theatre for the spleen and lymph nodes. This had a negative impact for the recipient awaiting the heart who remains on ECMO. ACTION: **M Berman to send details of this event to J Foley to be reported.**	**M Berman**
8.6	*Pancreas A form Update – circulated for information* – ***RAG(22)06 -*** This form will also come out in the summer which will include questions around machine perfusion biopsies. It was noted that there is still no 'pancreas removed from body time' on the A form. **ACTION: R Hogg to add this to list of requests for the pancreas A form in future.**	**R Hogg**
9.	**NTIG**	
9.1	DCD Heart Program update – M Berman stated that 55 hearts have been retrieved over the last 18 months with very good outcomes accounting for 30% of transplants and donor utilisation. However, consumables will not be reimbursed from 1 April at present. Post meeting, bridging funding was confirmed until 22 June. Confirmation of full funding is still awaited from NHSE.	
9.2	ANRP Steering Group – In C Watson's absence, I Currie presented the following below:	
9.2.1	*NRP quarterly report* - **RAG(22)07** – The report was circulated prior to the meeting. DCD liver results over 5 years up to 30 September 2020 were highlighted from the report and show a survival advantage for NRP particularly in the early stages. Although statistical significance is not indicated, it is anticipated that this advantage will increase as time goes by.	
9.2.2	*Kidneys retrieved with and without NRP* - **RAG(22)08** – The report was circulated prior to the meeting. NRP was brought in due to poor results experienced with standard DCD livers. However, it is increasingly apparent that the benefits of NRP for kidneys is significant. The benefit to graft survival and 1 year egfr, and a summary of the data, can be found in the paper circulated for the meeting. The benefits of utilising organs from older donors, especially livers, by using NRP were also noted.	
9.3	TANRP – A Rubino shared the draft protocol *'Validation of UK Protocols to Exclude brain blood flow during Normothermic Regional Perfusion'* at the meeting. This pilot study has been designed to utilise the multimodal elements of CT angiogram of the brain, transcranial doppler and the measurement of cerebral oximetry and Delta HbO2 to confirm that the brain is not perfused during ANRP. Consent will follow national protocols. The study will go to RINTAG and will then be circulated for comments. It was agreed this is really important work particularly for DCD hearts from smaller donors.	

9.4	State of the ARC – **RAG(22)20** – C Williment gave a presentation which was circulated post meeting. The ARCs project scope encompasses the delivery of two core pillars: Physical ARC and Devolved ARC. A physical ARC includes the use of a GMP facility on existing hospital premises, equipment, consumables, people and logistics required for establishing a single location where 'marginal' organs would be sent to be machine perfused and repaired ahead of transplantation. A devolved ARC refers to the clinical forums and data analysis that is required to ensure that the ARCs project is effectively delivered. Following work in FTWU for each organ the next steps are to: • Develop an outline business case to be shared with UK Commissioners and health departments and to await confirmation of funding allocation. • Fixed term working groups to finalise and deliver data sets • Continue with work regarding governance, policies and protocols There will be a reduced team in future who will keep this work going until funding is confirmed.	
9.5	XVIVO heart preservation; UK progress – A Ranasinghe gave a presentation of a multi-centred European clinical trial conducted with XVIVO on non-ischaemic preservation of the donor heart. This single-blinded randomised controlled trial aims to evaluate if NIHP with XVIVO Heart Preservation is safe and superior to cold static storage of donor hearts. 202 subjects are randomised 1:1 throughout Europe. Birmingham/Newcastle/Papworth are taking part in the UK to include 40 patients (20 randomised to cold static storage and 20 randomised to XVIVO) although they have not yet started. The study has MHRA, IRAS and RINTAG approval and there have been initial discussions with the cardiac centres, NORS teams and Hub Operations. The trial does not aim to extend donor criteria, ischaemic time or recruit DCD donors. To randomise a patient, centres must be happy to receive a donor heart in an ice box. The first 7 patients recruited have had good outcomes. 70-80 transplants have taken place with no issues reported for abdominal retrieval teams. Most offers will be for named patients (urgent list) and as soon as an offer is accepted by Birmingham/Newcastle/Papworth a request will be made for them to attend as long as they are randomised for NIHP, and it is hoped that they would be able to retrieve their own organs. During 'off weeks' the Birmingham/Newcastle/Papworth team would attend once the heart is explanted to place the heart on NIHP and to transport it to the implanting centre. For cold static storage patients, any NORS team can be mobilised. An additional requirement for NIHP is that the SNOD will need to request 3 units of blood for priming of the machine. Exclusions include participant involvement in another transplant-related intervention study but participation in the Signet trial is approved. It is hoped that adoption of the study will place UK transplantation at the forefront of an exciting development, and it fits in with the 2030 strategy to improve outcomes, increase transplantation and demonstrate good research and innovation. It was noted that changing the structure of NORS to accommodate this study would be **unacceptable** and there will be no change in offering sequence. For clarity, Hub Operations will muster NORS teams according to the normal NORS rota, and Birmingham/Newcastle/Papworth will	

	not be given precedence because of their involvement in this study. Any accommodation to the study retrieval teams requires that the retrieval process is **not delayed** by such accommodations.	
10.	**RESEARCH AND DEVELOPMENT**	
10.1	QUOD – S Cross reported as follows below:	
10.1.1	QUOD Data and Governance Report **RAG(22)09** • In January QUOD reached nearly 6000 donors and 109561 samples. No incidents from QUOD liver biopsies have been reported and only 2 incidents for kidney in 2021. Consent levels have now returned to normal levels and research applications are increasing with 32000 samples going to research projects. It was confirmed that the process deviation will now end for all DCD and DBD donors undergoing bronchoscopies and there will be a return to pre-COVID status where BAL QUOD samples are taken. • Biopsy changes - As of 19 May there will be a change in biopsy size for kidney from 2mm to 3 mm punch and a new training video on how to take the biopsies will go out to all NORS team leads to cascade. On the same date, there is also a change to heart biopsies for INOAR or those organs declined for transplant from 1 x 5 mm to 2 x 4 mm punches in left and right ventricles.	
10.1.2	*QUOD Award – for information – **RAG(22)10*** QUOD has been named UK Biobank of the Year 2022. All are thanked for their collaborative work in this endeavour.	
10.2	INOAR update – **RAG(22)11 –** Full data collected and analysed for organs removed from for research from 1st February 2021–28th Feb, 2022 is in the report circulated. Using the Liverpool Research HTA Licence has increased the number of organs available for research. In addition, the following benefits are achieved: • Reduction in the complexities of the consent process for families • Reduction in the complexities of the consent process for SNODS • A more consistent and transparent research allocation system • Reduction in the complexities for researchers by reducing the requirement for specific HTA licences Heart acceptance and removal remains a concern with researchers reporting that the lack of in situ perfusion means it has not been possible to accept hearts for research. The three options being considered are outlined in the report circulated.	
10.3	PITHIA update – G Pettigrew stated that PITHIA is now coming to an end and thanked all those who have been involved in a very successful project.	
11.	**BLUE LIGHT GROUP UPDATE**	
11.1	Blue Light Policy and Governance – **RAG(22)12** - circulated for information.	
11.2	Blue Light Data Collection and Audit – **RAG(22)13 -** Due to Department of Transport requirements, the usage of blue lights was analysed for the transport of organs and teams for both living and deceased donors between 1 August 2021 and 30 January 2022 and the report was circulated. It was noted NORS teams should not activate blue lights if they are not carrying an organ. Most blue light usage was for liver transportation with heart and lungs following and pancreas last.	

11.3	NHSBT Contracts – Blue Light Activation Data Jan – Mar 2022 - **RAG(22)19** – this report gives a more detailed breakdown of each journey to see how often the blue light is activated. The blue light should only be activated to get the vehicle through traffic and if it is misused, the Department of Transport may withdraw support for organ transport with blue lights. There are no obvious outliers for its use currently. An additional piece of data is being collected in real time to log when blue lights are activated and an automated email from IMT will go to Hub Operations. More data will come to future RAG meetings. **ACTION: This policy and data to be re-circulated to other advisory groups.**	**I Currie**
12.	**MASTERCLASS 2021 – REVIEW AND FUTURE PLANS**	
	The Masterclass for 2021 took place as a virtual event over 3 days in December at the Royal College of Surgeons in Edinburgh. This had the biggest attendance of any previous Masterclass with 146 attendees and the opportunity to extend invitations to non-clinical staff and others who would not be able to see what NHSBT does for retrieval and transplantation. A wide range of commercial sponsors helped the event break even. The material covered the process of organ donation, roles in NORS and organ preservation. There was a mock-up of a retrieval from start to finish in anatomy lab in Edinburgh and the 3rd day looked at novel techniques with a range of world leading experts. There has been a lot of detailed feedback most of which was favourable. In future, it is likely there will be a mix of both virtual and face to face teaching in the Masterclass with the virtual component mandatory for NORS surgeons. However, the earliest face to face event is likely to be a year from now.	
13.	**NORS GUIDELINES VERSION 10 DRAFT – RAG(22)14**	
13.1	These were not discussed at the meeting but will be sent out to all members by email for comment.	
14.	**PERI-OPERATIVE FORUM AND PERI-OPERATIVE SURVEY 2019-2021**	
14.1	Forum - The first peri-operative forum was held on 9 March following the survey described in *Item 14.2*. Representatives from 5 centres attended to discuss issues such as their roles, banding and refreshments. The new 90 minutes mobilisation time introduced this year was highlighted and has been a very welcome change. This has reduced stress levels and staff would not like to see a return to 1 hour mobilisation. The group also welcomed the idea of a long service certificate. It was agreed that this group will meet every 6 months before RAG and the next meeting will be held later in the afternoon to give more people an opportunity to attend.	
14.2	Survey – This survey was done with peri-operative pre-COVID and then repeated 2 years later due to issues with staffing rotas and retention of staff. The initial survey led to a review of muster times and food provision for NORS teams. 121 responded in 2019 and 89 in 2021 with bands ranging from 4-8. The survey encouragingly showed that most people want to be in their current role in a year's time and there is a lot of pride in the role. The 3 things that came out that staff most enjoy are teamwork, travelling and saving lives. Challenges include food, unpredictability, long hours and travelling. Banding is also an issue.	
15.	**DONATION ACTION FRAMEWORK**	

15.1	D Gardiner stated that this document which is the result of nearly 3 year's work will be launched in June in Belfast at the Intensive Care Society event. to bring documents up-to-date. D Gardiner will circulate this to those who are interested in receiving it.	
15.2	D Gardiner stated that at NODC, it was agreed that the family's wishes to be with a loved one at the time of death should be respected for patients diagnosed under neurological criteria going down the DCD pathway. There should be no re-start of the heart and there should be a wait of 5 minutes. Last year this amounted to 12 patients.	
15.3	Commonwealth Tribute to Life - launched 14 March. A series of weekly webinars will take place over the next 4 months. There is more information at the following link: https://www.odt.nhs.uk/odt-structures-and-standards/clinical-leadership/commonwealth-tribute-to-life-project/webinars/	
16.	**SUPER URGENT LIVER REPORT – RAG(22)15**	
	The super-urgent liver pathway was proposed for cases where the liver has been accepted for a super-urgent patient to minimise the length of process. When a liver has been accepted for a super-urgent patient, if CT organs are also under offer, CT offering will switch to group offering to reduce the length of time taken. When CT organs are offered, offering is an hour quicker when a super-urgent liver is involved but is still hours longer than when no CT organs are offered. **ACTION: It was agreed to circulate the report at CTAG meetings for the CT teams.**	**I Currie / J Whitney**
17.	**ANY OTHER BUSINESS**	
	Training and Registration form - **RAG(22)16 -** the latest form is circulated with papers for this meeting for all NORS leads to record any provisional or full registrations to the retrieval rota.	
18.	**DATE OF NEXT MEETING**	
	In future there will be 3 shorter meetings per year for RAG in February, June and October rather than the existing 2 meetings in the Spring and Autumn. The next meeting will be **face to face** on **11 October 2022.** A rescheduled invitation will be sent out shortly. (There is unlikely to be a virtual option for attendance for this face to face meeting in October 2022).	