NHS BLOOD AND TRANSPLANT
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE

THE TWENTY-THIRD MEETING OF THE RETRIEVAL ADVISORY GROUP (FORMERLY NATIONAL RETRIEVAL GROUP) ON TUESDAY 1 OCTOBER FROM 10:30 UNTIL 15:15 AT THE WESLEY CONFERENCE CENTRE, 81-103 EUSTON STREET, LONDON NW1 2EZ

MINUTES

Present:

Ian Currie	National Clinical Lead for Organ Retrieval **(Chair)**
Marius Berman	Associate Clinical Lead for Organ Retrieval
Shahid Farid	Consultant Transplant and Retrieval surgeon, Leeds (Depute to Mr Dhakshina, NORS Lead
Theodora Pissanou	NORS lead, Abdominal, Royal Free
Sandrine Rendel	QUOD representative
Richard Quigley	Cardiothoracic Recipient Coordinator Representative
Ian Bateman	Director of Quality, NHSBT
Victoria Gauden	National Quality Manager, ODT, NHSBT
Jeanette Foley	Head of Clinical Governance, NHSBT
Cecilia McIntyre	Retrieval and Transplant Project Lead Specialist
Debbie Macklam	Senior Commissioning Manager, NHSBT
Derek Manas	Clinical Governance Lead, NHSBT
John Hammond	NORS lead, Abdominal, Newcastle
Majid Mukadam	Representing NORS lead, CT Birmingham
Bart Zych	Harefield Hospital, attending on behalf of Andre Simon, NORS lead
Rutger Ploeg	QUOD representative, NHSBT
Afshin Tavakoli	NORS lead, Abdominal, Manchester
Elijah Ablorsu	NORS lead, Abdominal, Cardiff
Hynek Mergental	NORS lead, Abdominal, Birmingham
Hector Vilca-Melendez	NORS lead, Abdominal, King's Hospital
Douglas Thorburn	Chair, Liver Advisory Group
John Stirling	NORS Workforce Transformation Lead, NHSBT
Nicky Ramsay	Cardiothoracic Perioperative Representative
Isabel Quiroga	NORS lead, Abdominal, Oxford
John Casey	Chair, Pancreas Advisory Group
Gavin Pettigrew	NORS lead, Abdominal, Addenbrookes
Colin Wilson	BTS representative
Chris Watson	Chair, Kidney Advisory Group
Andrew Butler	MCTAG representative
Gemma Claudio	Perioperative rep, scrub team, Addenbrookes
Cathy Miller	Legislation implementation coordination representative, NHSBT
Michael Hope	Abdominal Recipient Coordinator Representative
Jackie Brander	Lead Nurse Service Delivery, NHSBT
Julie Whitney	Head of Service Delivery, ODT Hub, NHSBT
Dale Gardiner	National CLOD, NHSBT
Jayan Parameshwar	Chair, Cardiothoracic Advisory Group
Craig Wheelans	National Medical Advisor, NHS Scotland
Rebecca Curtis	Statistics and Clinical Studies, NHSBT
John Forsythe	Associate Medical Director, ODT, NHSBT

In Attendance:

Ms Hannah Westoby	Clinical and Support Services, ODT, NHSBT **(Minutes)**

		ACTION
1.	**WELCOME, INTRODUCTION & APOLOGIES**	
1.1	I Currie welcomed the new appointments to the meeting: Richard Quigley, Lisa Hodgson, Nicky Ramsay and Mike Hope	
1.2	Apologies were received from Melissa D'Mello, Gabriel Oniscu, Peter Friend, Philip Curry, Liz Armstrong, Vicky Fox, Chris Callaghan, Olive McGowan, Ayesha Ali, Catherine Coyle and Sian Lewis.	
2.	**ACCURACY AND FOLLOW UP OF PREVIOUS MINUTES AND ACTION POINTS OF THE NATIONAL RETRIEVAL GROUP**	
2.1	Minutes - The Minutes of the last NRG meeting on 24/4/2019 were approved with no amendments.	
2.2	Action Points - The Action Points from the previous meeting were updated as follows:	
	AP1: Advisory Group Priorities – Pancreas It was agreed that I Currie would discuss with J Casey and P Friend regarding retrieval of both the small bowel and pancreas with enough vessels and will report back at the next meeting in March 2020.	**I Currie**
	AP2: Organ Damage report – It was agreed D Manas will speak to J Casey regarding a KPI for pancreas injury below a specified threshold such as <5%. AP2 has been superseded by the Retrieval Injury FTWU, chaired by Derek Manas.	**CLOSED**
	AP3: Glasgow DCD Heart Protocol - I Currie will write to N Al Attar requesting an update regarding modification of the protocol. This item has now been closed as it has been superseded by the Joint Implementation Fund application in which all teams will use the same protocol.	**CLOSED**
	AP4: PITHIA trial – It was confirmed that a letter has gone out to all NORS centres on behalf of the Chair of RAG regarding work to reduce delays in the donation pathway. This item has now been closed.	**CLOSED**
	AP5: Clinical Governance report – M Berman reported that e-learning modules for retrieval of heart valves has been added to the retrieval course.	**CLOSED**
	AP6: Clinical Governance report – clarification is needed regarding certain items relating to training in retrieval. This is an ongoing project, in which I Currie will join V Gauden in meetings with HTA to build understanding. As this will go forward as a separate endeavour, this item has been closed.	**CLOSED**
	AP7: Organ Damage report – The fixed working group has been set up to investigate what should be flagged as issues for concern as reports currently have several errors. This is ongoing separately, so item AP7 has been closed.	**CLOSED**
	AP8: Organ Quality Assessment (OrQA) Project – C Wilson circulated a report (attached to the minutes from 1 Oct circulated for this meeting).	**CLOSED**
	AP9: Training and Competence – C Wilson reported that he has attended a meeting in Holland and will report back at the next meeting.	**Ongoing**
	AP10: NHSBT does not purchase cardiothoracic boxes, so it is up to the individual teams what they use. R Venkateswaran and M Berman will liaise with results. Will report back at the next meeting.	**Ongoing**
	AP11: Training and Registration: The issue of competence for retrieval of tissue was raised as HTA are likely to check NHSBT records to ensure this is recorded. Follow up with V Gauden, I Currie,	**Ongoing**

	I Bateman to formulate ideas and arrange meeting with HTA in the upcoming months.	
	AP12: INOAR – On the agenda for the meeting, so item AP12 has been closed.	**CLOSED**
	AP13: Video Heart and Lung Project: Following interest in use of video to make better decisions regarding retrieval, M Berman will discuss this further with J Asher and C Callaghan (based on experience of kidney and pancreas imaging projects) and will report back at the next meeting.	**Ongoing**
	AP14: Uterine Transplant: Case 1 of this project will be reviewed prior to proceeding with other retrievals to determine whether Oxford team can be off line for other retrievals once consent for uterine transplant has been agreed.	**Ongoing**
2.3	Matters Arising – there were no matters arising.	
3.	**MAJOR INITIATIVES**	
3.1	Re-Configuration of the National Retrieval Group as the Retrieval Advisory Group	
3.2	**Terms of reference –** IC stated that the terms of reference and membership have been amended extensively to include the NORS leads, Commissioning, Clinical Governance and other relevant bodies. QUOD have expressed an interest in attending and will be in touch with IC separately regarding this. All members to express any amendments on the terms of reference directly to IC and MB. The meeting will take place twice a year. The terms of reference will be ratified at the next meeting.	All to comment and send to IC/MB. HW to put on agenda for next meeting
3.3	**Blue Light Group –** IC and MB explained the background following the letter earlier in the year sent to NORS leads. The letter alerted Unit Directors to the potential for liability if a vehicle travelling with an organ (or team) travelling under blue lights was involved in a collision, and suggested documentation, governance and risk minimisation would be prudent. IC and MB recounted the meeting with the Department of Transport representative Mark Parry. Mr Parry has been tasked with drawing up secondary legislation relating to road traffic act exemptions. Mr Parry described the three broad exemptions under discussion; crossing to the left or right side of traffic (to the other carriageway or hard shoulder), passing through red lights and travelling in excess of the posted speed limit. Mr Parry was minded not to grant exemptions to vehicles carrying organs. However, he would listen to reason if a robust governance and risk mitigation strategy could be put in place. It was broadly agreed that the risk of blues must always be mitigated, and exemptions must only be used for the minimum time and must cease if the threat to the patient ceases. The group agreed that a detailed governance structure will be developed after which this would be re-discussed with Mr Parry. It was hoped to develop a draft over the next 8 weeks. Will report back at the next meeting in March. E Ablorsu considered that Teams (rather than organs) should never travel with blue lights, as the risk to staff was not acceptable. If so, a separate vehicle would be needed for organs travelling under blues.	HW to put on agenda for next meeting **D Macklam and MB/IC to work on the draft.**

	D Manas felt that the need for exemptions will apply only in a small subset of organ transfers. At the moment, 7% of transfers involve blue light exemptions. For the future, there will have to be a clear threat of severe organ deterioration or severe patient deterioration as the indication for blue light transfer. Otherwise, it was felt that blue transfers could not be justified. Governance will be key. C Wilson felt that once the governance structure is agreed, there will need to be a simplified framework for use on the ground. **This will be part of the outcome measures for the Blue Light Group.** Long journeys under blue lights do not mitigate risk effectively. Flights should be considered when the alternative is a whole journey with planned blue lights, such as in heart transfers. H Mergental thought that organ dispatch should be expedited. The time saved is a more effective and safer than blue light transfer. J Whitney acknowledged that such a process may be complex for the Hub. The hub currently record blue light usage. The police will need to be able to verify that a vehicle travelling under blue lights does indeed have authorisation, without needing to stop the vehicle. The Blue Light Group will need to develop a means by which this can be achieved.	
4.	**Associate Medical Director's update**	
	AMD update – J Forsythe was unavailable at this time of the meeting but would be present later.	
5	**ADVISORY GROUP PRIORITIES**	
	There were updates from Cardiothoracic (Jayan Parameshwar), Kidney (Chris Watson), Liver (Doug Thorburn) and Pancreas (John Casey) Advisory Groups. CTAG Joint innovation fund for DCD hearts has been agreed in principle. Up to all centres to make it work. Bid is being sent round to all cardio centres for info. KAG – new kidney offering scheme has now gone live. All donors over 70 years will have kidneys offered as a pair. LAG – offering scheme in place for 18 months now for DBD livers, however, some issues have been noted. Increased rate of transplants for patients added to the list but not those on the list already. Fast tracking has increased. 80% of livers now being retrieved 'out of zone' and travelling a distance, adding 30mins in CIT. HCC possibly disadvantaged? Centres may be declining first offer because they know they are first in the fast track list. Knew when NLOS was set up that re-transplantation could be disadvantaged.	

	The areas where groups may be disadvantaged are under consideration and review by LAG. PAG – new pancreas offering scheme started. The pancreas imaging pilot began in Spring/summer – images of pancreas should be sent routinely for all pancreas retrievals. SNODS are set up to obtain and send images. Imaging project will be reviewed at next PAG. Kidneys over 65, or where there is concern, should also be imaged. High incidence of damage in pancreas transplantation. There is a perception that the pancreas will be less carefully retrieved if known at time of retrieval that it is placed for islets. However, re-allocation is common, and parenchymal damage excludes a graft from islet preparation as it does for solid organ transplant. Therefore, the pancreas should be retrieved in exactly the same way regardless of presumed destination, and iliac vessels are required to go with every pancreas for the same reason.	
6.	**UPDATE ON NOVEL TECHNOLOGY IMPLEMENTATION GROUP**	
6.1	<u>Minutes of the Novel Technology Implementation Group on 22/7/2019</u> MB advised that the first NTIG meeting took place on 22 July, and that meetings are likely to be twice a year with Chris Watson as the co-chair for abdominal and Marius Berman, co-chair cardiothoracic. DCD heart steering group ended its term as a short-term working group. MB advised members that the group will take on the remit of the DCD heart steering group (which is now dissolved) and will address the broader challenges of implementing NRP and other new technologies and techniques in future as required by the Retrieval Advisory Group (RAG). The group will complement RINTAG, taking forward projects discussed at RINTAG for implementation nationally. It will report to RAG.	
6.2	<u>DCD Passports (NRP/OCS)</u> – new 'passports' have been created that will travel with organs when novel technologies are used as part of abdominal (NRP) or cardiothoracic (DCD heart/lungs – OCS) retrievals. The characterisation data captured on the forms will then be used by implanting surgeon to aid in decision making. There was a discussion regarding passports and the duplication of data collected. A DCD heart form already exists however this is to be completed at 30 days following transplant, the heart passport proposed is for use at the time of transplantation to support clinicians. This data will not require storage by NHSBT on the UK Transplant Registry (UKTR). Similarly, the proposed NRP passport form is for interpretation at the time of implant and contains traceability information for blood units, as well as characterisation information. An NRP form already exists too and this is sent to NHSBT Information Services for data input and storage on the UKTR, this will be reviewed as it takes one hour perform to complete, and data has not been	

	analysed by since capture began. There are plans to add perfusion questions to the HTA-A forms for each organ that should supersede this existing form. Therefore, it may be possible to remove the pre-existing NRP form and only have the new NRP passport for implanting surgeon review. **This is under review.**	
6.3	Joint implementation Fund(JIF)/DCD hearts – A consortium of all cardiothoracic centres came together to submit a bid for the fund. Some additional questions are still to be addressed by the consortium. The JIF implementation board is to be set up. This board will oversee implementation of the bid and report back to the change programmed board, NTIG, and groups within NHS England. JIF implementation group to meet in early November (before Christmas at latest). The key things to be delivered; DCD heart allocation scheme, finalising the mobilisation of NORS teams for DCD heart retrieval to allow mentoring and support of new teams whilst delivering safe DCD heart retrieval.	
6.4	NRP Business Case. D Macklam confirmed that a business case for NRP had gone to the English DHSC. This had been delayed by a spending review until November.	
7.	**UPDATE ON RESEARCH DEVELOPMENTS**	
7.1	RINTAG – There was no update available from RINTAG at the meeting.	
7.2	INOAR – V Gauden provided an update on INOAR advised that the 'go live' date of 23 October is no longer feasible for reasons outside the project team's control. Nonetheless, preparatory training is taking place across the country with SNODs. INOAR makes use of the 41 satellite HTA licences held by the donating hospitals in UK (No licence required in Scotland). For this reason, retrieval surgeons need to be up to date with HTA training on the website. The weblink is included with Training and Registration documents sent to all NORS leads by IC and MB earlier in 2019. INOAR will need to be added to NORS guidelines, which are currently under review. The updated guidelines will be available at the next RAG meeting but will be published before. Access to organs for research will need to be monitored to ensure no disadvantage.	
7.3	QUOD developments and proposals - R Ploeg explained current developments. The QUOD presentation, circulated prior to the meeting, was reviewed. QUOD incidents remain infrequent but may be serious. Notably, there have been no SAR/SAEs for liver biopsy throughout QUOD. The SAR/SAE rate for renal biopsy is 0.21%, although this is expected to fall with the 2mm punch biopsy now in use. A discussion arose around the matter of organs which have been biopsied under QUOD, and the degree to which recipients have been made aware of the biopsy and the implications. It appears that the practice of informing recipients that a QUOD biopsy may have been taken prior to transplant may not be universal. As organs may be re-allocated to a secondary recipient, a QUOD biopsy may have been	

	taken prior to any discussion with the recipient team. Therefore, the potential that an organ may have had a biopsy prior to transplant and the implications of this should form part of the consent process. It was pointed out that the decision to contribute to QUOD is a donor family decision, and is part of the donor gift to transplantation over and above organ donation. It may not be appropriate or workable for recipient teams to intervene in this (to request no QUOD biopsy). It was asked that all QUOD-related incidents are reported through governance. It was noted that the provision of QUOD samples attracts a fee for researchers. There is a differential scale depending on the request, with academic requests paying a lower fee level than commercial bodies. The fees are required to offset the maintenance of the QUOD infrastructure. IC felt that retrieval surgeons must bear the consequences of obtaining QUOD biopsies (governance investigations and the like) without deriving any benefit, whereas researchers derive all the benefit without consequences. IC felt that this inequity could be addressed if retrieval surgeons had fee-free access to QUOD samples. IC and RP will discuss further. On-line training materials are available to Masterclass candidates for a year after Masterclass attendance. It was suggested that it might be reasonable to get free access for longer than a year. IC and RP agreed to discuss this further outside of the meeting.	**IC and RP to discuss.**
7.3.1	Bile sampling – S Rendel advised members of the proposal to collect bile for QUOD. The paper had previously been to RINTAG and LAG and has been approved in principle and was asked to be taken to RAG for discussion. S Fahrid, Consultant Surgeon, Leeds, discussed the proposal to ligate the common bile duct to facilitate the collection of bile during DBD liver graft retrieval. Mr Fahrid described the use of a needle to aspirate the bile sample after 5-15 minutes of bile duct ligation in liver grafts, as shown on the pre-circulated paper (7.3.1.). There was general unease about the use of duct ligation. If there was a distraction, the ligature may remain in place for longer than intended, which could injure the liver. H Vilca-Melendez described the use of a 4 French nasogastric tube secured in the common duct, connected to a sample tube (or perhaps syringe barrel). This achieves the goal of bile collection but will not injure the liver if left in place longer. Mr Fahrid will review the technique and discuss with I Currie.	**Mr Fahrid to review the suggested technique and incorporate into document 7.3.1. which IC may then review for approval.**
7.3.2	Transplantable hearts QUOD biopsies Heart biopsies taken from the ventricular muscle prior to clinical transplantation were discussed. M Berman described a successful number of heart biopsies. There was general unease about such biopsies as part of a national protocol. IC felt that if specific centres wished to carry out bespoke research protocols with the usual ethical and governance permissions, then this was reasonable. However, routine QUOD	

	biopsy of hearts prior to clinical transplantation would not be supported.	
7.4	Uterine transplant update IQ discussed the current situation for the uterine transplant project. There have been no cadaveric uterine transplants as yet, although there are candidates for live donor uterine transplant who are fully assessed and potential live donors also prepared.	
7.5	PITHIA - G Pettigrew updated that it is going well. There was an update on the centres currently involved and those about to be included, to enable more PITHIA biopsies to guide clinical transplantation. It was acknowledged there was a brief pause earlier this year but this matter was now settled.	
8	**PERI-MORTEM INTERVENTIONS PROJECT -**	
	D Gardner advised that work has commenced with the Intensive Care Society and BTS on 'Peri-Mortem Interventions in Potential Organ Donors: The Development of a Statement from Professional Stakeholders'. An initial strategy meeting with the executive group has taken place – and a wider stakeholder meeting is to be held in November 2019. The English and Welsh Department of Health have asked NHSBT to co-ordinate and support the development and updating of professional guidance in this area. Specifically, this work follows from the DHSC withdrawing their 2009 NHBD legal guidance, as it was decided that professional bodies are better suited to giving this type of guidance going forward. This opportunity will also be used to update the 2010 BTS / ICS Consensus Statement on DCD as well as incorporate the now closed UK DEC guidance into a professional statement. The work will cover both DCD and DBD, including ante-mortem interventions as well as post-mortem. In Scotland, a slightly different approach is being taken with guidance on "pre-death procedure" as part of proposed deemed authorisation legislation.	
9	**CLINICAL GOVERNANCE**	
	There has been an increase in the number of incidents around the staple line not holding in pancreas retrieval. This has led to graft loss in several cases. Staplers being used across teams are from different manufacturers, so this fault is not specific to one make. The 'blue' staple cartridge in current use is designed for bowel and colon. It may not be adequate for the thicker tissue of the stomach or duodenum. The green cartridge for thicker tissue (longer staples) may be more effective. Jeanette Foley to clarify the size of the staples and which colours for which manufacturers correspond to longer staples.	**JF**
10	**ORGAN DAMAGE**	
10.1	Organ Damage Report **–** R Curtis discussed the organ retrieval damage rates from 1 April 2017 to 31 March 2019. She provided a detailed analysis (paper circulated). It was noted that data quality which underpins such reports can be variable. For example, a fatty pancreas may be recorded as	

	untransplantable which is later ascribed to a retrieval injury, clearly not the case. To gather the most complete data, data are collected from B forms completed by recipient surgeons, and from RTI forms completed by retrieving surgeons. This allows comparison between retrieving and receiving surgeon's data. RC stated that monthly reports are sent out to each team containing this data. If there are discrepancies or errors, these should be queried at the time. Discussion that for every severe injury reported this should then be raised as an incident but this is not always the case. A sentence could be added to the HTA-B form prompting people to go to the Governance reporting system once B form completed. Jeanette Foley and Rebecca Curtis to investigate this.	**RC/JF**
10.2	Retrieval injury FTWU – D Manas advised that the small fixed term working unit has been asked to look at a more practical and robust way of assessing retrieval performance. The group has agreed two aims of the project: improving the damage rating scale and introducing a damage monitoring system. To address the need for a damage monitoring system an exponentially weighted moving average method was initially suggested based on the understanding that CUSUM monitoring would not be fit for purpose – but after some discussion with the NHSBT statistics team, it was felt that CUSUM monitoring could be introduced as a pilot using the current damage data (mild, moderate and severe) as soon as the systems could be put in place. In the first instance, monitoring for graft loss (severe damage) would be considered, with national data to start, rather than unit data. The HTA-B form would be used to produce these reports. Other levels of graft injury could be considered in the light of experience, and unit-level data could be developed. In future, moderate and severe damage would not be added together, as this is confusing. The revised damage scale would take longer to implement and would need changes to both the RTI and HTA-B forms.	**DM et al**
10.2.1	Proposed changes to organ damage reporting - CUSUM – RC outlined the proposed changes, and there was a short discussion following this. There were concerns that a CUSUM signal might occur incorrectly as non-transplantability reported by receiving surgeons may be mis-coded, for example a fatty pancreas which is not transplanted should not be reported as damaged. Data quality would need to be reliable. A follow up telecon will be planned for the organ damage monitoring FTWU will consider data quality and implementation of the CUSUM monitoring.	**D Manas and RI FTWU**
11	**TRAINING AND REGISTRATION**	
11.1	NORS team registration – IC advised that the training and registration has been streamlined for NORS leads. They are now empowered to determine whether their team members are safe to retrieve organs independently, compared to the previous rather complex process.	**HW to ask remaining NORS leads for information on teams.**

	Surgeons may be registered provisionally when they join a team. Having completed the HTA training on line (10 minutes) and watched the QUOD biopsy video (10 minutes), surgeons must attend the masterclass. Having completed these, the surgeon may become fully registered, providing the NORS lead is satisfied that the surgeon is ready to retrieve independently. Ideally, there would be online verification that a surgeon had viewed the QUOD video and performed the HTA online module, however, this is not currently feasible. Experienced surgeons from outside the UK who join teams will still be required to attend the masterclass to gain full registration. They will also need to do the HTA training and watch the QUOD biopsy video. However, the NORS Lead may permit the surgeon to retrieve independently if the surgeon is safe to do so and has completed HTA/QUOD, and all that is awaited is the masterclass attendance. Such a surgeon will still only be provisionally registered but will be retrieving independently if the NORS lead agrees. Given the simplification of the process for registering surgeons, it is hoped that NORS leads will be able to provide names and registration status for their team members, so that NHSBT has an understanding of the current cadre in UK retrieval. Hannah Westoby will ask the remaining NORS teams for information so that we have 100% return. IC encouraged NORS leads to complete the information. **If there are serious adverse events related to retrieval, there may be scrutiny of the registration of surgeons, hence the need to ensure all are registered fully or provisionally.**	
11.2	Feedback on process of registration/documentation. IC asked if NORS Leads would try to ensure their surgeons were registered with NHSBT. NORS Leads are welcome to feedback to IC/MB as regards any problems or comments.	
11.3	Masterclass update: - Isabel Quiroga advised members that the masterclass is on 17th and 18th December in Bristol and there are still places left. The programme is still being finalised but can be sent round to encourage teams to sign up. It was confirmed that novel technologies will be included in this year's programme.	
12	**NORS TEAMS**	
12.1 **12.2**	Increasing NORS capacity – D Macklam reported that abdominal NORS team capacity will increase to 8 WTE teams on-call at any given time (currently 7). This was originally planned for October 2019 but has been postponed until January 2020 due to challenges in recruitment of new staff. QUOD liver biopsies – This will be covered under the retrieval masterclass in December 2019 according to the latest protocol. This item arises from biopsies having been taken from locations in the liver which potentially could injure major structures in the graft. Preservation fluid contamination. Discussion around contamination and risk of complications which depends on nature of contaminant. Candidal contamination agreed to be most worrying. More likely in DCD than DBD, given operative speed. There was brief discussion of previous serious adverse events relating to candida. Current sampling, culture and result reporting to the Hub to allow early	

	treatment appears reasonable risk mitigation, although reducing risk to zero is not feasible. Organ dispatch times – Timing of steps in organ retrieval is not recorded adequately. An index of quality in retrieval surgery is the time on ice for each organ. Liver recorded currently but not other organs. Organ dispatch time not available. Ideally have cross clamp time, organ on ice time, and dispatch time. Such times are recorded in different formats, but not in a searchable database, and not readily available for audit. NORS team position in departmental structure – it was reported that some transplant teams have difficulty in retaining staff, and work needs to be done to improve this. Discussion about what is happening around the UK. Maybe better to link retrieval work with a transplant post or other attractive work. Status of retrieval is a concern – career progression. Incision for Retrieval Surgery. Midline incision is the default incision. At a recent retrieval, the abdominal surgeon proposed to perform a cruciate incision in a young, low BMI donor. This had not been mentioned to the SNOD beforehand, and therefore had not been discussed with the family. A call was made to IC and the donation proceeded with a midline incision. Discussion considered that a midline incision was optimal in nearly all donors. A show of hands revealed that very few surgeons had used a cruciate incision in the last 5 years. Routine cruciate incisions, which it transpired this surgeon was employing, were not felt to be reasonable. Nonetheless, there needed to be flexibility. It was concluded that advance warning to the SNOD was essential if an unusual incision was considered, but this should not be routine.	
13	**OPT-OUT LEGISLATION AND EFFECTS ON THE NATIONAL ORGAN RETRIEVAL SERVICE** CM presented the opt-out legislation and effects on the national organ retrieval service (presentation available if needed). Thanks were expressed to the team, it was agreed that potentially a crib sheet could be created and shared amongst teams, although all work relating to opt out donation will have been done prior to the donor coming to theatre. It was suggested that a video could be included to show the paperwork and the handover to surgeons.	**C Miller**
14	**WORKFORCE AND SUSTAINABILITY** Due to time limits of the meeting, this was postponed, as it was reported there was a Sustainability meeting immediately following the RAG meeting today. Presentation, papers and workstreams will be circulated with the minutes of the RAG meeting. This will be put on the agenda for the next meeting in March 2020.	**HW to circulate presentation to RAG members.**
15	**AOB**	
	None	
19	**DATE OF NEXT MEETING**	
	The next meeting of RAG: Tuesday 31 March 2020 from 10:30-3:00, venue to be confirmed Tuesday 29 September 2020 from 10:30-3:00, venue to be confirmed	