NHS BLOOD AND TRANSPLANT
ORGAN AND TISSUE DONATION AND TRANSPLANTATION

MINUTES OF THE FORTY FIFTH MEETING OF THE LIVER ADVISORY GROUP HELD ON 29th NOVEMBER 2023, 11:00 - 15:30, Mary Ward House, 5-7 Tavistock Place, London, WC1H 9SN AND VIA MS TEAMS

ATTENDEES

Doug Thorburn	**Chair, Liver Advisory Group/Royal Free Hospital**
Anya Adair	Royal Infirmary of Edinburgh
Mike Allison	Addenbrookes Hospital, Cambridge
Varuna Aluvihare	Kings College Hospital, London
Matt Armstrong	University Hospitals Birmingham
Sarah Banks	Recipient Co-ordinator Representative
Joan Bedlington	Patient Representative
Will Bernal	King's College Hospital, London
Lisa Burnapp	AMD for Living Donation and Transplantation, NHSBT
Andrew Butler	MCTAG Chair/ Addenbrookes Hospital, Cambridge
Lee Claridge	St James's University Hospital
Becky Clarke	Regional Head of Nursing, NHSBT
Matthew Cramp	University Hospitals Plymouth/BLTG Representative
Ian Currie	National Clinical Lead for Organ Retrieval, ODT
Bobby Desari	University Hospitals, Birmingham
Audrey Dillon	St Vincent's Hospital, Dublin
Ewan Forrest	Glasgow Royal Infirmary
Paul Gibbs	Addenbrookes Hospital, Cambridge
Tassos Grammatikopoulos	King's College Hospital, London
Pam Healy	Chief Executive, British Liver Trust
Jade King	Statistics and Clinical Research, NHSBT
Andrew Madden	Lay Member
Derek Manas	Medical Director, OTDT, NHSBT
Aileen Marshall	Royal Free Hospital, London
Steven Masson	The Freeman Hospital, Newcastle upon Tyne
Joerg Matthias-Pollock	Royal Free Hospital
Krish Menon	Kings College Hospital, London
Marumbo Mtegha	Paediatric Representative, Leeds Teaching Hospital
Suzie Phillips	Statistics and Clinical Research, NHSBT
Peter Robinson-Smith	Recipient Co-ordinator Representative
Ian Rowe	Chair of the National Liver Offering Scheme Monitoring Committee
Ken Simpson	Royal Infirmary of Edinburgh
Sanjay Sinha	National Surgical Lead, Clinical Governance, NHSBT
Rhiannon Taylor	Statistics and Clinical Research, NHSBT
Dhakshina Vijayanand	Leeds Teaching Hospital
Chris Watson	University of Cambridge
Sarah Watson	Commissioning Manager, Highly Specialised Services, NHSE
Gwilym Webb	Addenbrookes Hospital, Cambridge
Steve White	PAG Chair/The Freeman Hospital, Newcastle upon Tyne
Julie Whitney	Head of Service Delivery - ODT Hub, NHSBT

IN ATTENDANCE

Alicia Jakeman	Clinical Support Services, NHSBT

APOLOGIES

Maria Jacobs, Tracey Rees, Khalid Sharif, Craig Wheelans

ITEM	Welcome	ACTION
1	**Declarations of interest in relation to the agenda**	
	There were no declarations of interest.	
2.	**Minutes of the last Meeting, held on 24 May 2023 - LAG(M)(23)01**	
2.1	**Accuracy**	
	The minutes of the last meeting were agreed as an accurate record and ratified.	
2.2	**Action Points - LAG(AP)(23)01**	
	Action Points that were not marked as complete have been added to the agenda, with verbal updates asked for during the meeting. Those not given will be carried forward to the next meeting.	
2.3	**Matters Arising, not separately identified**	
	There were no matters arising.	
3.	**Medical Director's Report**	
	D Manas informed members of new appointments with a new Chair (Varuna Aluvihare) and deputy Chair (Steven Masson) of the Liver Advisory Group (LAG) from 1 December 2023 with Anya Adair the new surgical lead. L Armstrong will be supported by Carrie Scuffell. D Manas advised that L Burnapp will retire in March 2024 and return for three days per week. Interviews for the Lead Nurse in Living Donation will be held on Friday 1 December with the appointee working alongside Lisa, to continue with operational aspects of the program. Funding for NRP is being sought from the Department of Health (DoH) and whether this is approved is awaited. CLUs have funding until mid-2024. Histopathology has been funded for the interim. Sub-Groups have been set up to support implementation of the OUG recommendations: an oversight group, a Trust engagement group, a stakeholder sub-group a patient stakeholder sub-group and an innovation sub-group. Workforce issues, with teams lacking resilience, are being supported as much as possible. This is mainly affecting paediatric renal transplants. D Manas confirmed flights should not be used for transporting organs (unless in exceptional circumstance) when a road journey option is available. The BTS liver machine perfusion meeting was held recently at the Wellcome Trust, a consensus was not reached. D Manas advised that the data will be collated to draw up a summary. K Menon advised that the seven centres that were represented will be presented in the data. It was agreed that DCD livers need some form of perfusion. If data can be presented from all centres, this will support a strong case for a sustainable solution. RINTAG will become an R&D Steering Group and Research Operational Feasibility Group. There were very few CUSUM signals in the last six months. TransplantPath will be released in early 2024. D Manas has met with the MHRA, he confirmed that alternative fluids will be refunded if purchased through Trusts. He advised that one of the OUG recommendations was to further develop learning from COVID on mutual aid. G Jones has been working with renal centres to extend National Collaboratives, these will now be extended to Liver. D Manas advised that TA-NRP (Cardiothoracic NRP) discussions have been held with a study in development to move this on.	

	D Manas thanked D Thorburn for his Chairmanship of LAG for the last five years.	
3.1	**Organ Utilisation Group recommendations**	
	This item was covered under Agenda item 3.	
3.2	**National Liver Offering Scheme review**	
	It was confirmed that a formal review of NLOS will be established in early 2024 with D Thorburn leading the review.	
3.3	**Sustainability and Certainty in Organ Retrieval (SCORE)**	
	This item was discussed under Agenda 10.1	
3.4	**Regional collaboratives**	
	This item was covered under Agenda item 3.	
3.5	**Liver Utilisation Report for noting - LAG(23)31**	
	D Thorburn advised that this report is presented at the monthly Centre Directors meeting. Transplant activity is down 5%, DCD donors now exceed DBD donors. The waiting list has nearly 700 patients active. C Watson asked for data on machine perfused organs to be incorporated in this report accurately. This data needs a narrative recording with an IT change, which has been requested. R Taylor will scrutinise the forms received by NHSBT listing NRP use. D Manas confirmed that consent has now dropped to 61%.	**R Taylor**
4.	**LDLT Project**	
	L Burnapp provided an update on the LDLT project, whose aim is to expand the Living Donor Liver Transplant Programme across the UK. She confirmed that the first year of the project focused on developing the operational model and getting the recommendations for indications up and running. The Operational Model has been developed and been signed off. An Engagement Event was held in February 2023 at the Royal Free Hospital. In the second year, time was devoted to establishing the Proctor Team so that the operational model could be rolled out, the MDT Proctor Team has now produced a detailed operational template. This Team has been funded by NHS England with an additional £10k received from Scottish Commissioners. The aim now is for this to be embedded by March 2024, to deliver 41 transplants adult to adult LDLT transplants by 2025/26. L Burnapp confirmed that there are constraints currently, including equity. She asked Centres to consider their referrals to the programme, to engage prior to March 2024. Also, she asked for local MDT champions for living donor liver transplantation, wo have an interest in this across all centres, to contact her. The first meeting for these has been scheduled for 21st May 2024, in Leeds. S Watson will email LAG members to provide further details on the funding for transplantation.	**All** **S Watson**
5.	**Update on the National Liver Offering Scheme**	
5.1	**Compliance with Sequential Data Submission - LAG(23)32**	
	D Thorburn reminded centres that they should be providing data on a three-month basis. NHSBT data has highlighted that not all centres are providing the forms within 90 days. It was reiterated that this needs to be contemporaneous and single sample data.	**All centres**
5.2	**National Liver Offering Scheme (66 month data) and Summary Feedback of key points from NLOS - LAG(23)33**	
	I Rowe, Chair of the NLOS Monitoring Committee thanked R Taylor and D Thorburn for all their hard work. He highlighted that this monitoring is challenging with COVID, changes in donor characteristics and changes in donor numbers. Overall, he confirmed that there hasn't been a change in waiting list mortality over the course of the last twelve months and particularly since the parameter changes on 4th October 2022. Individual patient characteristics have not changed in terms of removal from the waiting list.	

	Since December 2019, the proportion of CLD patients and HCC/HCC downstaging patients registered post NLOS and transplanted within a year of registration has been decreasing. He confirmed that a potential increased mortality within the age group 25-39 will be investigated further. Since NLOS was introduced, there has been a small decrease in utilising DCD organs. Since the parameter changes removal due to condition deteriorated has decreased, there is a small increase in patients with Blood Group A&B, not Blood Group O. Impact of NLOS by aetiology will be examined in further detail. It is difficult to see the relative impact on waiting list outcomes, this will be intensely monitored. The median length of stay remains at two weeks, on average. In Variant Syndrome patients, the decrease DBD offers could be driving the increased use of DCD grafts. It seems that there is variation over centres in registration of severe HPS patients which may affect potential offering. The offer outcome for DBD grafts that are offered and subsequently transplanted is 30% and rising over time. V Aluvihare asked for data on outcomes of second opinions. D Thorburn confirmed that this data is not centrally recorded but may be looked at by the collaboratives. Mortality on the variant list is between 1-2%, they receive a high number of offers although there are high rates of decline. The proportion of patients on the variant remains at 7-8%. There was a statistically significant difference in ninety-day survival for HCC patients and CLD patients, which is impacted due to small numbers of patients. 90-day survival is better for DCD than DBD transplants. Re-graft data and reasons for patient removal due to condition deteriorated remains constant. The outcomes are not a consequence of the offering scheme but are at increased risk of waiting list removal. D Thorburn confirmed that data from King's College Hospital came to the same conclusion. M Armstrong asked if data on increased use of DCD NRP preventing an increase in deaths could be used as a business case for support in centres. I Rowe confirmed this data cannot be easily collected and waiting list mortality remains the same as 2017/18 due to a number of factors. D Thorburn confirmed that NLOS identifies those patients at risk of highest mortality after registration. K Simpson asked if separating the data for M1 and M2 complicates the data. P Healy advised that enabling patients to understand how complicated this is will be useful. British Liver Trust will help to produce better communication for patients, to highlight this process is fair and transparent. D Thorburn confirmed that the NLOS review will contain these themes.	
5.3	**DCD zones - LAG(23)34 - for noting**	
	D Thorburn advised that this paper included updated analysis from the paper presented at last November's LAG meeting. This will be taken to the next LAG Core Group for discussion and what the implications are from donor zones. C Watson asked for reference to the term 'donors' to clarified.	**R Taylor**
5.4	**Flight costs and blue light paper - LAG(23)35**	
	D Thorburn highlighted that £150k was spent on flights arranged and charged to NHSBT, for offers that were not transplanted. Most of the flights are used for named patient offers rather than fast track. Flights have been used for travel times of less than 5 hours, D Thorburn asked for the use of flights to be reflected on by centres.	**All centres**
5.5	**DCD SLK - LAG(23)36**	
	D Thorburn confirmed that the scheme has been reviewed following a change in November 2021 that, subject to there not being high	

	priority patients on the National Kidney Waiting List, a kidney from a DCD donor is reserved until the zonal and linked centres had declined the kidney. The paper highlights that three DCD SLK transplants have been performed since 1 November 2021. It was agreed by members to offer a DCD D4 kidney directly to the kidney offering scheme rather than holding a kidney back until the zonal and linked liver transplant centres declined the kidney. This will be raised and discussed at the next Kidney Advisory Group meeting.	**R Taylor/ J Whitney**
5.6	**New service evaluations and HPS patients - LAG(23)37**	
	D Thorburn updated members on review of the service evaluations for patients with either neuroendocrine tumours (NETs) or unresectable Colorectal liver Metastases (CRC Mets) which were introduced in August 2022 and outcomes after registration for those patients listed under the new indications. He asked if members were content with the outcomes seen with the current system. A prospective audit was proposed to analyse the 3 month-blood gases for those these patients who have not received a named offer within three months, to measure the trajectory. It was agreed that this should continue to be looked at closely, with no adjustment required at present This data will be reviewed by LAG Core Group.	
6.	**Paediatric Subgroup/Standing Working Group**	
	The first meeting has not yet been scheduled, with this due to be held in December. Their recommendations will be bought to LAG.	
6.1	**Paediatric offering data - LAG(23)38**	
	D Thorburn confirmed that this paper highlights the unequal number of offers received by centres and the unequal distribution of donor organs that fulfil the splitting criteria between the three centres.	
7.	**New indications**	
7.1	**ACLF - LAG(23)39**	
	D Thorburn highlighted the success of the ACLF programme, recruiting 50 patients into the pilot. He asked LAG members how they should pursue this moving forward. W Bernal detailed some proposed processes within the paper, advising that there are also a number of ongoing studies. He felt that the outcomes should continue to be monitored. Longer term follow-up data is being collected, he confirmed that it is difficult to assess frailty as there is no matrix. He advised that a third of PSC patients have had a undiagnosed cholangiocarcinoma on the explant. J Whitney confirmed that there is a risk to Hepatoblastoma patients if this is amended to a 7-day service, for those patients registered over a weekend. S Watson if there will be resource implications, however, D Thorburn confirmed that this is within the current guidance and is within the existing criteria of patients being transplanted. W Bernal confirmed that resource implications are quantified in terms of length of stay, with the exclusion criteria keeping the numbers small. The proposal to operationalise this as an accepted indication, allowing centres to register patients automatically without going through the LAG Chair, with some revisions on a 5-day basis was agreed. This will be moved to a 7-day basis, when it is perceived safe to do so.	
7.2	**Hilar Cholangiocarcinoma**	
	D Thorburn confirmed that he is working with the FTWG to develop the EMPHATIC Protocol for the Clinical Trial of the neoadjuvant pathway including proton beam therapy. The final changes will be made with a view to submitting to Ethics before Christmas. This is one of four pilot evaluations for commissioning PBT. Governance approval from Christie will be sought following Ethics approval.	

7.3	**Liver transplantation for severe alcohol-associated hepatitis - LAG(23)41**	
	D Thorburn confirmed that a previous pilot in 2016/17 recruited very low numbers and was closed due to the entry criteria poorly selecting patients with a poor prognosis. E Forrest and M Allison submitted a proposal to establish a new pilot for this indication, circulated prior to the meeting. Members were asked to consider how these patients would be prioritised. E Forrest advised that he understood the reticence to consider an additional indication at this time. He confirmed that there is far more experience internationally since the original pilot, however it is understood that Communications will need to manage the message due to possible concerns regarding unintended consequences. It was agreed that a FTWG will be set-up, to include representation across all transplant centres and specialties, Lay members and patient groups.	
7.4	**Adenoma listing patients - LAG(23)42**	
	D Thorburn advised that several appeals had been made for transplants for patients who had not yet developed a life-threatening complication, but these might arise as a consequence of adenoma. B Desari confirmed that the FTWG aimed to identify patients before they develop a malignancy, to be considered for a transplant without an appeal process. Those patients with high-risk adenomas were recommended surgical resection wherever possible. Two sub-sets of patients have been identified who would not benefit from transplant as a treatment option. D Manas asked for ablation to be included for patients who will go into the HCC pathway. K Menon asked for oversight of decision making of what is and isn't resectable. B Desari advised that these referrals could follow a regional transplant MDT model. D Manas advised that an oversight group should look at the patients referred, for decision making. I Rowe advised that this document is outside of international guidance. This will be bought back to the next LAG meeting to agree the criteria for listing patients, the appeals process will remain in place for these patients.	
7.5	**HCC downstaging - LAG(23)43**	
	D Thorburn confirmed that 66 patients have been registered with 55 transplanted. He advised that the proposal is to move this to routine indication, recurrence is less than 10%. This was agreed by LAG members and the Liver Selection Policy will be updated	**R Taylor**
7.6	**Appeals process for small HCCs**	
	D Thorburn reiterated that the group meet monthly to review patients that have been registered without discussion at MDT. This has been open for one month, all centres have been contacted.	
7.8	**UKTR data collection - LAG(23)45**	
	This was not discussed during the meeting.	
8.	**Liver CLU Scheme and Liver Utilisation**	
8.1	**Ideal liver report - LAG(23)46**	
	A Adair advised that centres are written to following high-offer declines, as a consequence positive feedback has been received in terms of education and learning. Trainees are included. There will be a series of Webinars. D Thorburn confirmed that the rate of right lobe utilisation is falling and the Cold Ischaemia Time of those right lobes will be looked at in LAG Core Group.	
9.	**Liver Transplant Commissioning**	
9.1	**NHS England**	
	S Watson advised that transplant meetings will be set-up with standing agenda items, including Unit capabilities and asked for	

	agenda items for the adult or paediatric meetings. She confirmed that patient groups also attend these meetings, she will invite D Manas. S Watson will discuss using NHSBT data with R Taylor out of this meeting. She will write to Centre Directors to confirm funding for the service. Several conversations have been held regarding workforce issues, specifically at Birmingham Women's and Children's Hospital. She advised that reassurance has been given that some vacant posts have been filled.	**S Watson** **S Watson** **S Watson**
9.2	**National waiting list**	
	S Watson previously met with NHSBT IT Colleagues for them to scope the requirements for the system. This document has not yet been created. D Manas will speak to L Ellis-Morgan and feedback.	**D Manas**
10.	**RAG Update - National NRP development**	
	I Currie advised that six centres who deliver NRP continue to do so on an ad-hoc basis.	
10.1	**Super-urgent liver pathway update**	
	I Currie updated members on the SCORE programme. There are two contributions with an increase from 3 to 9 hours from the time of family agreement to registering the donor with the Hub and the time of first offering to a NORS team on the road increasing. The plan is at 8am if the donor is registered with the Hub, a guaranteed Retrieval Team will arrive that same night between 10pm and 3am. This will hopefully result in daytime transplant, having looked back at Cardiothoracic Team's data, they were able to reduce travel time and flights by 10%.	
11.	**Governance Issues**	
11.1	**Non-compliance with allocation**	
	This item was not discussed during the meeting.	
11.2	**HTA B forms** - **LAG(23)47**	
	This item was not discussed during the meeting.	
11.3	**Governance report - LAG(23)48**	
	The report was included with papers circulated prior to the meeting.	
11.4.1	**Summary of CUSUM monitoring of outcomes following liver transplantation - LAG(23)50**	
	Over the last seven months, there were no signals against the national rate for adult elective liver transplants.	
11.4.2	**Report on recent triggers (shared learning)**	
	This Agenda item was not discussed.	
12.	**National Clinical Trials** - **LAG(23)40**	
	The paper was included with papers circulated prior to the meeting.	
13.	**Statistics and Clinical Research Report**	
13.1	**Summary from Statistics and Clinical Research - LAG(23)51**	
	R Taylor advised that the manuscript on the development of the TBS and the impact of the first two years of the National Liver Offering Scheme has been submitted, with the re-submissions being worked on.	
14.	**Multi-visceral and Composite Tissue Advisory Group (MCTAG) update**	
	D Thorburn advised that discussions were held in the last MCTAG meeting regarding a liver transplant patient who might then require a small bowel transplant. He confirmed that the level of unfavourable outcomes was not finalised during the meeting. The minutes were circulated to LAG members prior to the meeting.	
15.	**AOB**	

	P Healy thanked the Royal Free for hosting the APPG on Liver Health, this meeting included two MPs. She asked that Centres invite MPs to visit, a toolkit has been developed by British Liver Trust. P Healy had asked supporters of Fibre Scans to contact their local MPs, who will then speak with the Department of Health, to ask questions in the House of Commons. P Healy advised that the Big Give Appeal has a target of £60,000 to raise by Tuesday 5th December 2023, donations can be made online.	
16.	**Date of next meeting -**	
17.	**FOR INFORMATION**	
17.1	Group 2 Transplants - **LAG(23)52**	
17.2	Outcome of appeals - **LAG(23)53**	
17.3	Prioritised paediatric patient outcomes - **LAG(23)54**	
17.4	Prolonged registrations - **LAG(23)55**	
17.5	Activity and organ utilisation monitoring (dashboard) - **LAG(23)56**	
17.6	Machine Perfusion working group - **LAG(23)57a,b,c**	
17.7	Neuroendocrine Tumours - for noting - **LAG(23)59**	
17.8	HCV positive transplants into HCV negative recipients - for noting - **LAG(23)44**	
17.9	Minutes of MCTAG meeting - **LAG(23)60**	
17.10	Minutes of the Retrieval Advisory Group - **LAG(23)61**	
17.11	QUOD Statistical Report - **LAG(23)62**	
17.12	IT Changes and Update - **LAG(23)63**	