NHS BLOOD AND TRANSPLANT
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE
THE SEVENTEENTH MEETING OF THE NHSBT CTAG HEARTS ADVISORY GROUP
ON MONDAY 22 MARCH 2021
VIA MICROSOFT TEAMS

MINUTES

Attendees:

Jayan Parameshwar (Chair)	JP	CTAG Hearts and Lungs Chair, Royal Papworth Hospital
Ayesha Ali	AA	Highly Specialised Services, NHS England
Lynne Ayton	LA	Transplant Managers Forum Representative
Cliona Berman	CB	Regional Manager, South East & Eastern**,** Organ Donation Services Teams
Stephen Clark	SC	Cardiologist, Freeman Hospital, Newcastle
Ian Currie	IC	National Clinical Lead for Organ Retrieval, NHSBT
Philip Curry	PC	Consultant Cardiac / Transplant Surgeon. Golden Jubilee National Hospital
Jonathan Dalzell	JDal	Centre Director, Cardiologist, Golden Jubilee National Hospital
Owais Dar	OD	Cardiologist, Harefield
Philippa Doherty	PD	Transplant and LVAD Coordinator, QEH, Birmingham
Matthew Fenton	MF	Centre Director, Paediatric Cardiologist, Great Ormond Street Hospital
John Forsythe	JF	Medical Director, OTDT, NHSBT
Diana Garcia Saez	DGS	Specialty Doctor Cardiothoracic Surgery and Transplantation, Harefield
Shamik Ghosh	SG	CTAG Lay Member Representative
Rob Graham	RG	Chair, CTAG Patient Group
Margaret Harrison	MH	CTAG Lay Member Representative
Delordson Kallan	DK	CTAG BHSI Representative
Sern Lim	SL	Cardiologist, Queen Elizabeth Hospital, Birmingham
Guy MacGowan	GMG	Cardiologist, Freeman Hospital, Newcastle
Kirsty McNally	KM	Team Manager, OTDT, London
Derek Manas	DM	Associate Medical Director - Clinical Governance, Retrieval and Transplantation, NHSBT
Jorge Mascaro	JM	Centre Director, Queen Elizabeth Hospital, Birmingham
Stephen Pettit	SP	Centre Director, Cardiologist, Royal Papworth Hospital
Rochelle Pointon	RP	Transplant Clinical Lead, Birmingham
Katharine Pretty	KP	Statistics and Clinical Studies, NHSBT
Tracey Rees	TR	Scientific Advisor, NHSBT
Zdenka Reinhardt	ZR	Cardiologist, Freeman Hospital, Newcastle
Marian Ryan	MR	Specialist Nurse Organ Donation
Sally Rushton	SR	Principal Statistician, NHSBT
Philip Seeley	PS	Transplant Co-ordinator, Freeman Hospital
Steven Shaw	SS	Cardiology, Wythenshawe Hospital
Ulrich Stock	US	Centre Director, Surgeon, Harefield Hospital
Rajamiyer Venkateswaren	RV	Centre Director, Surgeon, Wythenshawe Hospital
Sadie von Joel	SVJ	Lead Nurse Recipient Coordinator, NHSBT
Sarah Watson	SW	Highly Specialised Services, NHS England
Julie Whitney	JW	Head of Service Delivery, OTDT Hub, NHSBT

In attendance:

Jacqui Bennett	JB	PA/Secretary, Clinical and Support Services, NHSBT
Caroline Robinson (Minutes)	CR	Clinical and Support Services, NHSBT

Apologies:
Malcolm Brodlie, Marius Berman, Anthony Clarkson, Catherine Coyle, Ben Hume, Fernando Riesgo-Gil, Michael Stokes,

No.	Item	Action
	Welcome and Apologies	
	J Parameshwar welcomed everyone to the meeting and details of apologies were given (see above). S Ghosh was also later welcomed to the meeting as a new lay member.	
1.	**Declarations of Interest in relation to the Agenda CTAGH(20)22**	
	There were no declarations of interest in relation to today's Agenda.	
	Please note that it is the policy of NHSBT to publish all papers on the website unless the papers include patient identifiable information, preliminary or unconfirmed data, confidential and commercial information or will preclude publication in a peer-reviewed professional journal. Authors of such papers should indicate whether their paper falls into these categories	
2.	**Minutes and Action Points of the CTAGH Meeting held on 28 September 2020 CTAGH(M)(20)02 and CTAGH(AP)(20)02**	
2.1	The Minutes of the CTAG Hearts Meeting held on 28 September 2020 were accepted as a true record.	
2.2	The following Action Points were discussed: • AP1 – Heart Allocation Sub-Group – This work on sensitisation and which data should be included in the analysis of factors affecting waiting times to heart transplant will be discussed in a future meeting. **ONGOING** • AP2 – Organ offering and Fast Track – J Whitney reported that small operational changes to offering are being discussed in monthly calls with co-ordinators. Massive steps have been made regarding a single point of contact and having a minimum core data set available at the time of offer which will hopefully help to speed up the donation pathway. Work is now ongoing on the Super-Urgent liver pathway and implementing changes to expedite this. **ONGOING** • AP3 – Donor Statin Study – John Dark has now presented this to the CT Patient Group and other advisory groups. **COMPLETE** • AP4 – Changes to Offering Process – These are now included in the allocation document for hearts and lungs and are being circulated. **COMPLETE** • AP5 – SherpaPak – *see item 9.3 below* • AP6 – RAG Update - M Berman has circulated details and a full protocol for a proposed study (St Thomas's vs Custodial) for which there is full support. **COMPLETE** • AP7 - Smart glasses – Funding has been secured from the Papworth Charity for a 6-month pilot, where retrieval fellows will be using Smart Glasses with microphones to communicate live streaming of organ assessment. An application is now planned to the Harefield Charity for similar funding. **COMPLETE**	
3.	**Medical Director's Report**	
3.1	Developments in NHSBT	
3.1.1	COVID Bulletins and update – Regular bulletins have been circulated over the last 12 months regarding COVID 19 to keep everyone up to date with the current position for donation and transplantation. All transplant centres are now open, although some still have limited lists. Activity data is now up to 30 donors per week and 60-65 transplants per week. It is hoped that this will improve further over coming weeks.	
3.1.2	Strategy post 2020 and New Appointments – NHSBT's post 2020 strategy will be announced and launched in the next few days. Two key themes will involve bedding in changes to donation that have been made over the last few years and a pivot towards transplantation and utilisation issues. Multiple projects are planned and will be initiated. Those around the table were thanked for their work during COVID and going forward. Changes are also being made in the clinical team at NHSBT to emphasise the importance of donation and transplantation in future strategy as follows: • Dale Gardiner becomes Associate Medical Director for Deceased Donation	

	• Derek Manas becomes Associate Medical Director for Governance, Retrieval and Transplantation • Chris Callaghan becomes Associate Medical Director for Organ Utilisation An AMD role for Transplant Medicine has now been advertised and further changes will be circulated in due course.	
3.2	Thanks to Jayan Parameshwar - J Forsythe offered grateful thanks to J Parameshwar for his superb work and diligence as Chair of both CTAG Hearts and Lungs over several years and for his thoughtful, diplomatic yet decisive leadership during a challenging period. It has been good to have him in post during the pandemic and he will be a hard act to follow. Other members of CTAG Hearts present also offered their thanks and appreciation. Congratulations are noted for the two new chairs of these two advisory groups; R Venkateswaren becomes Chair of CTAG Hearts and J Parmar will be Chair of CTAG Lungs. J Forsythe also thanked all those who had applied for these two roles.	
4.	**Governance Issues**	
4.1	Non-Compliance with Heart Allocation – There have been recent issues with urgent heart-lung listings. As previously reported, those patients listed for urgent heart also requiring lungs have been missed off the matching run. Urgent heart-lung numbers are small and have been registered as 'urgent heart, routine lungs' which is not accurate. The meeting was asked whether a new category for these patients, which would involve an IT change, is needed. It was noted that there is a similar problem for heart-liver patients (brought up by Newcastle) as there is currently an interaction between two offering sequences. This causes significant problems for the Recipient Co-ordinators as potentially two team members are alerted to the offer in the middle of the night. It was agreed that this will be discussed further in the monthly meetings the Hub has with Recipient Co-ordinators. The Chair pointed out that the patient in question was highly sensitised and on the Urgent Heart list and would invariably generate multiple offers that would eventually prove unsuitable. **ACTION: J Parameshwar, J Whitney and S Rushton to meet initially and a fixed term working group will be formed after this meeting.**	**JP / JW / SR**
4.2	Clinical Governance Report - **CTAGH(21)01 -** D Manas reported that retrieval incidents have reduced due to COVID and fewer cardiac retrievals taking place during this period. While there have been some communication issues, these have been improving. D Manas also stated that the imaging project continues, and progress has been made towards a business case regarding histopathology which should result in a workable solution for current issues. J Forsythe paid tribute to the work D Manas, E Armstrong and colleagues in NHS E&I have done to find solutions to histopathology issues particularly.	
4.3	CUSUM Monitoring of 30-day outcomes following heart transplantation – **CTAGH(21)02 –** This report was circulated prior to the meeting. S Rushton reported that there have been 42 heart CUSUM charts since the last CTAG meeting; of these, the review of practice following the most recent signal in April 2020 at Harefield is still ongoing.	
4.3.1	Update to baseline mortality rates – **CTAGH(21)03 –** S Rushton stated that every 2-3 years the baseline period is updated to reflect current clinical practice. Previously this period was Jan 2013-Dec 2016 for adult and paediatric transplants. This is now being updated to 2015 to 2018. • For adults, the 30 days mortality rate decreases from 8.9% to 8.7% • For paediatric patients the update reduces the rate from 6% to 3.5 % (because of a marked decrease in GOSH) Circulation of new charts will start in April 2021. Where centres have a lower centre specific rate than the national rate they will receive two charts, one national rate chart and one centre rate chart to aid in internal monitoring, but only signals in the former are considered formal signals. It was agreed that GOSH would not receive a centre rate chart as their expected mortality rate is very low and may lead to unnecessary signals. It was noted that re-transplantations are not counted as separate observations in the CUSUM, but if a patient receives a re-transplant within 30 days of the first transplant and survives this is counted as a success, while if they receive a re-transplant within 30 days and die also within 30 days of the first transplant this is a	**SR**

	failure. There was discussion that 90 day outcomes would better reflect the "success" of the transplant and that graft failure should not be a "success". **ACTION: S Rushton to explore using 90-day outcomes in heart CUSUMs, include re-transplant as a "failure" and include DCD heart in the baseline mortality rates** The meeting discussed the negative effects CUSUM triggering can have on a centre. Investigation of a CUSUM trigger can shake confidence at a centre and lead to risk averse behaviour. It was noted that CUSUM monitoring is not designed to put pressure on centres to be risk averse, but should be to ensure that overall, there is consideration of the best use of donor hearts for the patient population. The trigger is an indication that a review of the data is required and the investigative process should encourage reflection on whether the increased mortality rate is due to chance or whether there are systemic problems at the centre. It can also demonstrate variations in the way different centres work and whether this is significant. Overall, it should be regarded as good governance. The Chair also said that in the last 15 years no CUSUM trigger had been found to be due to bad luck alone, there was always examples of practice that could be improved.	
4.4	Group 2 Transplants – There were no recent transplants to discuss.	
5.	**OTDT Hub Update**	
5.1	Changes to offering process – The liver super-urgent pathway will come in at the start of next month so this may result in an increase in group offers/fast tracks. If the liver is accepted for a super-urgent patient, group offers will be made for all CT organs (taking into account the named patient sequence) to expedite offering. This process will be reviewed after 6 months.	
5.2	Organ Offering and Fast Track – *see Item 2.2 (AP2) above*	
5.3	Single Point of Contact – *see Item 2.2 (AP2) above.* J Whitney confirmed that the human to human contact and having one telephone number is working well. This process will now be introduced for liver centres as well.	
5.4	Update on Heart Offering Scheme Changes – **CTAGH(21)04 –** On 13 October 2020 two changes were made to the UK heart offering scheme as agreed by CTAG. • A super urgent tier was introduced for paediatric patients. Small adults 16 or over and weighing less than 30 kg may also be considered on this tier subject to approval from the adjudication panel. • Large paediatric patients were given access to adult donor hearts by being given the option to register on either the urgent or super-urgent adult lists. Their ranking would therefore be alongside all non-zonal adult patients according to the waiting time on the list. It was noted that a patient can only be on one list at any given time. It was agreed that it would be useful for CTAG to discuss whether there should be a small adult category at future meetings. GOSH representatives noted that registering a large paediatric on Harefield's list instead of using the new large paediatric facility gives them access to adult zonal donors.	
5.5	Length of the CT offering process analysis – J Whitney reported that offers are being expedited a lot quicker and decisions are being made by centres for all patients on their lists. All centres and co-ordinators were thanked for their co-operation in this process.	
6.	**DCD Hearts**	
6.1	JIF (Joint Innovation Fund) Board meeting update – A Ali gave an update on the funding of a 2-year pilot to boost DCD transplantation. COVID has had a huge impact on this project with lower than anticipated activity recorded. As a result of decreased activity there will be funding post-pilot from September 2021 to allow the DCD project to continue. Unfortunately the Manchester team has stated it cannot continue on the rota for DCD retrievals for logistical reasons so the implications of this now need to be investigated with the remaining two centres (Harefield and Papworth) before the next JIF meeting in June. **ACTION: R Venkateswaren, J Whitney, M Berman and U Stock to discuss prior to 29th March how Manchester may be able to continue some support of this**	**RV / MB / JW / US**

	programme and to see if there are alternative options, (eg a single or hybrid centre approach) A Ali also reported that there was a useful discussion about allocation of adult hearts to paediatric centres. An agreed amendment to the original protocol is now being actioned.	
6.2	DCD hearts regular report – **CTAGH(21)05 –** This brief summary of activity from 1 February 2015 to 31 December 2020 was circulated prior to the meeting. S Rushton reported that a new data collection form came in alongside the JIF. However, there are 4 outstanding DCD supplementary forms and DCD heart passport forms in total for Papworth currently. It was noted that there can be issues when a different team transplants to the retrieval team. The form needs to be completed by both retrieval and transplant teams before being passed to NHSBT. There has been a reduction in transplant activity due to COVID. The meeting discussed why DCD results are included in CUSUM but excluded from expected mortality rates. It was noted that while CTAG previously agreed that DCD heart outcomes could adversely affect baseline mortality as only two centres were then doing DCD heart transplants, the change in circumstances with all centres able to participate now means they should be included in the baseline.	
7.	**Heart Allocation**	
7.1	Summary of Adjudication Panel Appeals – **CTAGH(21)06** – This paper (circulated prior to the meeting) reports on patients referred to panel who do not meet the standard criteria for urgent or super-urgent heart transplant listing. The report always starts in October 2016 when the super-urgent scheme came in. • 95 urgent adult appeals have been referred - 75 have been approved (83.2%). • 19 super urgent appeals referrals – 9 have been approved (47.4%) • 24 urgent paediatric appeals referrals – 23 have been approved (95.8%) • 27 Urgent heart lung appeals referrals – 19 have been approved (70.4%) J Parameshwar stated that the Heart Adjudication Panel works well, and they were thanked for their work.	
7.2	Long waiting patients on urgent list – **CTAGH(21)13 –** This paper details patients who have been on the urgent list for over a year. It was suggested by Tracey Rees that a national rather than a single centre approach to sensitisation may help. A review of practice at H&I labs and transplant centres to understand approaches to this problem has recently started and will be taken forward by the H&I representatives at the meeting. **ACTION: D Kallan and T Rees to discuss outside this meeting. D Kallan to follow up H&I labs review**	**DK / TR**
7.3	LVAD complications project – S Lim explained that this project will review transplant outcomes for patients with LVAD who have been referred to the Adjudication Panel for Urgent listing and try to determine factors determining outcome. There are 80+ patients in total and there will be more information at the next CTAG meeting.	
7.4	Trigger for updating allocation zones – **CTAGH(21)07** – S Rushton explained that changes to the heart and lung allocation zones are made if there is a statistically significant difference (at the 5% level) between the percentage share of registrations and the percentage share of donors for any centre Statistical significance is determined by multiple chi-squared tests adjusted using the Bonferroni correction. At present, numbers are reviewed every autumn and changes to the zones are only made rarely. This approach used for CTAG was copied from LAG who are no longer using this as their new allocation scheme does not rely on zonal allocation. Usually the data looks at 2 years of registrations and 3 years of donors. However, it was noted that COVID has had a significant effect on transplantation this year with a potential 3rd or 4th wave possible and some centres still experiencing more of an impact than others. It was agreed that the Bonferroni correction will be removed in future, and the issue of adjusting time periods for COVID will be discussed with the new CTAG chairs and brought back to CTAG in the autumn. **ACTION: S Rushton will discuss this issue with the two new chairs of CTAG Hearts and Lungs before the next CTAG meetings.**	**SR / RV / JasP**
7.5	Heart-Liver Update – **CTAGH(21)08 –** The paper presented reports on recent cases of combined CT and liver transplant listing. In the last year there have been 2 new	

	registrations for combined heart liver transplants. Both patients were registered in Sept 2020 and were on the urgent heart list; one has since died. Although CTAG previously agreed that these patients should go through the panel, only one did so possibly because this was around the time that the change was made.	
7.6	Selection and Allocation policy updates – Some small updates are being made to both the selection and allocation policies. Changes include: Selection Policy: • Super-urgent paediatric criteria are being edited to ensure all paediatric registrations are approved by both centres. • The need to complete the monthly update form for urgent and super-urgent patients is being removed as it is not likely this data will be analysed in future. Allocation Policy: • Some operational detail is being removed on how offers are made. When these changes are finalised, the policies will be circulated to all centres and Recipient Co-ordinators.	
8.	**Statistics and Clinical Studies reports**	
8.1	Summary from Statistics and Clinical Studies: Spring 2021 – **CTAGH(21)09 –** This summary paper detailing a number of changes and existing projects was circulated prior to the meeting. S Rushton reported that the Statistics and Clinical Studies team is changing its name to Statistics and Clinical Research and will be joining the R&D and SRI teams following a re-organisation at NHSBT. Issues with outstanding follow up forms for one centre who had asked to skip many forms during COVID were discussed. Most centres are continuing to follow up patients, either virtually or face to face. However, it was noted that some personnel have been re-deployed during COVID and this may be affecting ability to complete follow up forms promptly. **ACTION: J Parameshwar and S Rushton to approach the centre concerned to assess the issues.**	**JP / SR**
8.2	COVID-19 Update – **CTAGH(21)10 –** This update covering a year shows data collected on patients on the waiting list and post-transplant who have tested positive for COVID. The data demonstrates that while activity dropped off significantly during the first wave, this has not been so bad subsequently. At the end of this financial year, the number of heart transplants is around 6% lower than last year. The pandemic has however, had a dramatic impact on lung transplantation with roughly half the usual numbers going ahead.	
9.	**Reports and Discussion Points from the Chair**	
9.1	RAG Update – there was no update at the meeting.	
9.2	Use of Focussed Intensive Care ECHO (FUSIC or FICE) – **CTAGH(21)11** – Antonio Rubino, an Intensive Care physician from Papworth gave a presentation on FICE. A FICE scan: • Provides additional information at time of offer • Rules out issues rather than rules in the use of a donor heart • Might be considered If TTE is difficult to obtain • Is an additional tool for donor optimisation • Is more available in ITU (although it is not a 24/7 service) • There are 1500 accredited ICU doctors • There are anecdotal stories of donation proceeding based on FICE results. There is a process of certification/accreditation to use FICE with a training pathway lasting about 12 months covering clinical governance. The meeting agreed that while it is important that this doesn't take over from TTE, this is a great initiative and very helpful in providing a qualitative rather than quantitative assessment particularly for areas that do not have easy access to TTE. There is concern that FICE is not meant to measure wall thickness which is an important metric for acceptance of a donor heart. Governance issues around image recording, reporting for quality assurance and access to expertise if clarification is needed were discussed.	
9.3	Use of SherpaPak – **CTAGH(21)12** – CTAG Hearts were asked to support an application to RINTAG to trial SherpaPak, a temperature-controlled pack that could replace the current system of transporting organs in an ordinary icebox. Issues to be discussed in any application will include:	

	• Need for accompaniment of the organ by a surgeon. Currently a surgeon is required to attend to travel with the organ to the recipient centre which can extend travel time and incur additional costs. • Approval of a driver to accompany the organ rather than a surgeon. This initiative is currently being supported by charitable funding. Marius Berman circulated a data set which could be collected by all centres and may help in any future application for funding. All centres supported the application to RINTAG.	
9.4	QUOD Update – **CTAGH(21)18 –** This paper was circulated prior to the meeting for information.	
9.5	Workplan – The workplan has not been updated for some time. **ACTION: J Parameshwar to discuss this with the new Chairs of CTAG Hearts and Lungs and to add a review of the previously agreed allocation of 6 Tier heart allocation system.**	**JP / RV / JasP**
10.	**Reports from sub-groups**	
10.1	CLU Update – **CTAGH(21)14 –** D Garcia-Saez gave a presentation on the work that has been undertaken by the Clinical Leads for Utilisation programme. This work has evolved due to the expectation that recent legislation will result in an increased number of donors in future, the fact that heart transplant rates have remained static over the last 7 years and the UK has the one of the lowest heart transplant rates worldwide. CLU started November last year and 3 meetings and 2 surveys to identify local and national barriers to organ utilisation have resulted. Priorities for future work identified include: • Increased availability of scouting (for which there is currently no funding) • Smart glasses to livestream during retrieval (being piloted by Papworth) • Efficient image sharing • National use of SherpaPak • Increased staffing with expertise in heart DCD htx • Audit regarding hearts declined due to coronary disease • Funding and training of retrieval surgeons • Coronary angiography • Improved recruitment and retention A conference is now planned for 20 May to go through the roadmap to define excellence in organ utilisation and to provide an update on local and national projects.	
10.2	CTAG Patient Group (18/11/20) – The Minutes from the last Patient Group meeting in November will be circulated after this meeting. The last Patient Group meeting was dominated by COVID issues, especially the impact this has had on transplantation, prospects for vaccination and the experiences the patient group has had of shielding. R Graham highlighted the confusion and consternation caused by the recent report on vaccine efficacy (after a single dose) from John Hopkins which has coincided with the end of shielding. This combined with the lack of routine antibody testing, the lack of face to face clinics and the withdrawal of the financial net for those who need to work is having an adverse effect on the mental health of patients. Whilst NHSBT and transplant centres focus more on utilisation, a request for better and more regular communication and wider support for post-transplant patients was made. Papworth offered to share its Patient Information page with other centres. The next CT Patient Group meeting is on 12 May and R Graham thanked those who have already agreed to make presentations. **ACTION: M Harrison agreed to look into an update of the Q&A for patients.**	**MH**
10.3	CTAG Clinical Audit Group (CAG) Report (10/12/20) – **CTAGH(21)15 –** There is ongoing discussion about whether the Audit Group needs to continue in its current format. There are various functions of the Audit Group that are definitely required. Most centre directors have agreed that they are willing to consider a change**.** **ACTION: J Parameshwar to discuss this with the new Chairs of CTAG Hearts and Lungs**	**JP / RV / JasP**
11.	**For Information**	
11.1	Transplant Activity Report – see attached, or go to the following page for information: https://www.odt.nhs.uk/statistics-and-reports/annual-activity-report/ **- CTAGH(21)16**	

11.2	NHSBT ICT Update for Advisory Groups – **CTAGH(21)17** – this paper was circulated for information.	
12.	**Any other business**	
12.1	Thanks from the Chair – In his final meeting as CTAG Hearts and Lungs Chair, J Parameshwar thanked all members for their support over several years and particularly all centre directors and transplant cardiology colleagues at Papworth and around the UK. R Graham offered his thanks to Jayan for his support of and presence at every CT Patient Group meeting. M Harrison also thanked Jayan for his help and advice to her as a lay member.	
12.2	Date of next meeting - **Thurs 30 September 2021** – Further information will follow in due course.	