

NHS BLOOD AND TRANSPLANT

CARDIOTHORACIC ADVISORY GROUP

SUMMARY FROM STATISTICS AND CLINICAL STUDIES

INTRODUCTION

- 1 This paper provides an update from Statistics and Clinical Studies and summarises recent presentations, publications, and current and future work in the area of cardiothoracic transplantation.

UPDATE FROM STATISTICS AND CLINICAL STUDIES

- 2 New and updated reports, all Advisory Group papers and conference presentations continue to be posted on the ODT Clinical Site www.odt.nhs.uk. The following reports have been published on the ODT Clinical Site and circulated to cardiothoracic centres and commissioners since the last CTAG meeting:

The 2018/19 Interim Report on Cardiothoracic Transplantation, and
The 2017/18 Annual Report on Mechanical Circulatory Support Related to Heart Transplantation.

- 3 Rachel Johnson has continued as Assistant Director for Statistics and Clinical Studies. Helen Thomas has been appointed to the new role of Head of Clinical Trials Statistics and Lisa Mumford has been appointed to Head of ODT Studies. The group includes statisticians working across NHSBT's remit, the Insight team who support blood donation and the NHSBT Clinical Trials Unit.
- 4 Please note our current arrangements for staff responsibilities in support of organs and tissues.

Area	Lead	Support(s)
Organ donation	Susanna Madden	Rebecca Curtis, Chloe Brown
Organ retrieval	Rebecca Curtis	
Ocular Tissue	Elinor Curnow	Lewis Downward
Organ utilisation	Sally Rushton	Frederick Smith
Enquiries	Statistical.enquiries@nhsbt.nhs.uk	
Kidney transplantation	Matthew Robb	Rachel Hogg, Chloe Brown
Pancreas transplantation	Claire Counter	Joanna Bunnnett
Liver transplantation	Rhiannon Taylor	Lewis Downward
Small bowel transplantation	Sally Rushton	Rachel Hogg
Cardiothoracic transplantation	Sally Rushton	Frederick Smith, Rachel Hogg

PRESENTATIONS

- 5 A presentation was given on Recent Developments in Cardiothoracic Transplantation in the opening plenary of the Joint NHSBT and British Transplantation Society Conference 6-8 March 2019. The slides are available here <https://www.odt.nhs.uk/statistics-and-reports/slides-and-presentations/>.

PUBLICATIONS

- 6 The following study has been published since the last report:

A Kourliouros, R Hogg, J Mehew, M Al-Aloul, M Carby, J Lordan, R Thompson, S Tsui, J Parmar. Patient outcomes from time of listing for lung transplantation in the UK: are there disease-specific differences? *Thorax*. 2018

CLINICAL FELLOWS

- 5 We have a number of clinical fellows working in collaboration with the Statistics team; Maria Ibrahim working in organ utilisation supervised by Professor John Forsythe and Mr Chris Callaghan, and George Greenhall working in malignancy in transplantation supervised by Professor Chris Watson and Mr Chris Callaghan. The new fellow in cardiothoracic transplantation, Gillian Hardman, has been appointed and will begin in August 2019, supervised by Professor John Dark and Ms Karen Booth.

RECENT AND FUTURE WORK

- 7 Recent work has included specifying the changes to the UK VAD Database in consultation with the VAD teams. Some teleconferences will be held during the last week of March to finalise the changes. IT development should commence in Summer 2019 with considerable support from the Statistics and Clinical Studies team.
- 8 On-going support has been provided to the Heart and Lung Allocation Sub-Groups with regards to monitoring and refining the existing allocation schemes. Statistical support has also been given to the ECMO as Bridge to Lung Transplant NHS England working group.
- 9 There have been several recent Applications for Data as detailed in the CTAG Clinical Audit Group Chairs Report. We have also been working with the Cystic Fibrosis Trust to provide lung transplant data for their annual report. Additionally, we have worked with Public Health England on a Respiratory Atlas of Variation which is going through final review.
- 10 We have finished data collection on Reasons for Decline of Cardiothoracic Organs in January 2019 and the final report has been produced for this meeting. We continue to collect data on Organ Grading at time of retrieval and implant while these data fields are incorporated into the new electronic HTA A and B forms which are in development.
- 11 Fixed term projects and regular reports are listed in **Tables 1** and **2** below.

ACTION

12. **Appendix I** shows the Quarterly Harefield Report which was discussed at the last CTAG meeting. Centre representatives are asked whether they would find a report like this useful for their centre.

	Title	Planned completion date	Current priority	S&CS resource reqd
1	Heart Allocation Sub-Group (HASG) Support implementation of 6 Tier Heart Allocation Scheme	On-going	**	**
2	Lung Allocation Sub-Group Support monitoring of SULAS, ULAS and NULAS	On-going	***	***
3	Paediatric Allocation Working Group Support implementation of paediatric allocation zones	On-hold	*	*
4	Scout Project Support scout sub-group of NORS Workforce Transformation Board	Complete	**	**
5	DCD Heart Programme Support RINTAG DCD Heart Working Group	On-going	***	**
6	Implementation of new data collection Grading of retrieved organs	2019	**	**
	Ischaemia time and perfusion techniques	2019	**	**
	Decline reasons	2019	**	**
	Update Transplant Record form	Unknown	*	**
7	Organ utilisation projects Ideal lung donor initiative	On-going	***	***
	Ideal heart donor initiative	On-going	***	***
8	VAD Database restructure	2019	***	***
9	HM3 VAD project	2019	**	**
10	Impact of duration between brain stem death and retrieval on lung utilisation and post-transplant outcomes	Summer 2019	*	**
11	Analysis of impact of ischaemia time on lung transplant outcomes	Summer 2019	*	**
12	DCD lung transplant outcome analysis	On-hold	*	***
13	VAD risk-adjustment for Annual MCS report	On-hold	*	***
14	Data sharing with Cystic Fibrosis Trust	April 2019	**	**
15	ECMO as Bridge to Lung Transplant NHS England	2019	**	*
16	Decline reasons analysis	Complete	*	***

Table 2 Regular Reports

	Title	Frequency	Current priority	Time taken
1	Summary of CUSUM signals for CTAG	Biannually	**	< 2 hours
2	Heart-Lung transplant outcomes for CTAG	Annually	**	<2 hours
3	Urgent/Super-Urgent Heart Allocation Scheme annual review for CTAG	Annually	***	One week
4	Urgent/Super-Urgent Lung Allocation Scheme annual review for CTAG	Annually	***	One week
5	Zonal activity review and adjustment of zonal boundaries if required for CTAG	Annually	**	One week
6	Prolonged registrations for CTAG	Annually	*	Half day
7	DCD Heart activity report for RINTAG	Quarterly	**	One day
8	Organ grading form analysis	Quarterly	**	Two days
9	<i>Audit of ischaemia time components</i>	<i>Annually (once data collection process is in place)</i>	*	<i>One day</i>
10	Annual Report on Cardiothoracic Transplantation	Annually	***	Two weeks
11	Interim Report on Cardiothoracic Transplantation	Annually	***	One week
12	Annual Report on Mechanical Circulatory Support Related to Heart Transplantation	Annually	***	Two weeks
13	Monthly reporting of transplant and VAD numbers to NHS England	Monthly	***	Half day
14	Centre specific organ offer reports	Monthly and Quarterly	**	Half day
15	CUSUM reports to centres	Monthly	***	Half day
16	Organ damage and usage reports to NORS teams	Monthly	**	<2 hours
17	<i>Cardiothoracic NORS KPIs</i>	<i>Monthly/quarterly (in development)</i>	**	<i>One day</i>
18	Data submission to METHODS for cardiothoracic transplant dashboard for NHS England	Annually	**	One day
19	VAD data chasing reports	Monthly/quarterly	**	<2 hours

Appendix 1 - Quarterly Harefield report

The following data from the Cardiothoracic Transplant Record have been sent to Harefield for several years, on a quarterly basis. This comes in spreadsheet format with an additional tab containing the individual patient level information. Centres are asked whether this is something they would also benefit from receiving for their own centre's data.

Table 1. Heart only transplants performed at Harefield Hospital, 1 April 2016 - 30 June 2018

Factor	Level	Apr 16 - Mar 17 (N=22)	Jul 17 - Sep 17 (N=10)	Oct 17 - Dec 17 (N=5)	Jan 18 - Mar 18 (N=9)	Apr 18 - Jun 18 (N=12)
Survival to hospital discharge	Survived to hospital discharge					
	Hospital discharge not reported but date of death reported					
	Hospital discharge date not reported and death date not reported					
Length of ITU stay	ITU discharge date reported					
	ITU discharge date not reported					
	Median (days)					
Length of hospital stay	Range (days)					
	Hospital discharge date reported					
	Hospital discharge date not reported			DATA OMITTED		
Haemofiltration/ Haemodialysis post-transplant	Median (days)					
	Range (days)					
	Yes					
Return to theatre post-transplant	No					
	Not reported					
	Yes					
IABP post-transplant	No					
	Not reported					
	Yes					
Other mechanical assistance post-transplant	No					
	Not reported					
	Yes					

Table 2. Lung only transplants performed at Harefield Hospital, 1 April 2016 - 30 June 2018

Factor	Level	Apr 16 - Mar 17 (N=41)	Jul 17 - Sep 17 (N=19)	Oct 17 - Dec 17 (N=12)	Jan 18 - Mar 18 (N=11)	Apr 18 - Jun 18 (N=11)
Survival to hospital discharge	Survived to hospital discharge					
	Hospital discharge not reported but date of death reported					
	Hospital discharge date not reported and death date not reported					
Length of ITU stay	ITU discharge date reported					
	ITU discharge date not reported					
	Median (days)					
Length of hospital stay	Range (days)					
	Hospital discharge date reported					
	Hospital discharge date not reported			DATA OMITTED		
Haemofiltration/ Haemodialysis post-transplant	Median (days)					
	Range (days)					
	Yes					
Return to theatre post-transplant	No					
	Not reported					
	Yes					
IABP post-transplant	No					
	Not reported					
	Yes					
Other mechanical assistance post-transplant	No					
	Not reported					
	Yes					