

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 Provisional data for the last financial year shows an increase in the number of deceased donors and transplants performed, making 2017/18 another record breaking year. In particular, lung transplant numbers are 14% higher than last year and heart transplant numbers are exactly equal to 2016/17. An increase has also been seen in combined heart-lung transplantation.
- 3 Since the last CTAG meeting we have published the 2016/17 Annual Report on Cardiothoracic Transplantation in October 2017, the 2016/17 Annual Report on Mechanical Circulatory Support Related to Heart Transplantation in January 2018 (previously the VAD Report) and the 2017/18 Interim Report on Cardiothoracic Transplantation in March. All reports are accessible via: <http://www.odt.nhs.uk/statistics-and-reports/organ-specific-reports/> along with other reports on organ donation and transplantation.
- 4 Please note our current arrangements for staff responsibilities, as at 12 April 2018, below.

Area	Lead	Support(s)
Donation	Susanna Madden	Rebecca Curtis
Organ retrieval	Kate Martin	Sophie Hughes
Enquiries	Mark Jones	Statistical.enquiries@nhsbt.nhs.uk
Kidney transplantation	Lisa Mumford	Matthew Robb, Chloe Brown
Pancreas transplantation	Claire Counter	Jo Bunnnett
Liver transplantation	Rhiannon Taylor	Cathy Hopkinson, Agne Zarankaite
Small bowel transplantation	Sally Rushton	Rachel Hogg
Cardiothoracic transplantation	Sally Rushton	Rachel Hogg

PRESENTATIONS

- 5 There were presentations from statisticians and clinical colleagues during the NHSBT symposium opening session at the annual BTS conference in March, as well as a presentation on the impact of the Welsh opt-out legislation. An overview of the recent changes to heart and lung allocation was presented by Sally Rushton. All slides

presented at the BTS congress can be accessed via <http://www.odt.nhs.uk/statistics-and-reports/slides-and-presentations/>.

- 6 The NHSBT Clinical Trials Unit had a stand at the BTS conference promoting the unit, the services they can offer and demonstrating the trials in which they are involved, including those in organ donation and transplantation. If you are interested in setting up a trial you can contact them on CTU@nhsbt.nhs.uk.
- 7 Two oral presentations were given at the International Society for Heart and Lung Transplantation Meeting in April on the UK Heart and Lung Allocation Schemes, as well as a poster presentation on Patient Survival and Therapeutic Outcomes in the UK Bridge to Heart Transplant VAD Population.

PUBLICATIONS

- 8 A paper entitled “The interval between brainstem death and cardiac assessment influences the retrieval of hearts for transplantation” based on analysis performed by the Statistics and Clinical Studies team was published in January 2018 in the European Journal of Cardiothoracic Surgery. Other studies that we have been involved in, including the Analysis of Bridge to Candidacy Patients on the VAD Database, the Long-Term VAD Outcomes project and Outcomes from Lung Listing, have recently been submitted to journals for publication.

CLINICAL FELLOWS

- 8 Our contract with NHS England funds two clinical fellows to support our programme of audits and analyses. One of these is an ongoing post in cardiothoracic transplantation and is currently based in Papworth. The second post is currently vacant and will be advertised shortly as a fellow to work in abdominal organ transplantation. Please email Rachel Johnson (Rachel.Johnson@nhsbt.nhs.uk) for information.
- 9 Additionally, an NHSBT funded clinical fellow, Maria Ibrahim, has recently started work in organ utilisation alongside Professor John Forsythe, Mr Chris Callaghan and the Statistics team.

RECENT AND FUTURE WORK

- 10 Recent work has involved the monitoring of the 2016 Super-Urgent Heart Allocation Scheme and the 2017 Super-Urgent and Urgent Lung Allocation Schemes. Statistical support has been provided to the Heart Allocation Sub-Group which has been established to improve on the current heart allocation policy. Additionally, the final phase of the separation of the heart and lung allocation zones was implemented in January 2018 following an updated analysis of registration and donor data.
- 11 Improvements have been made to the reporting of data on mechanical circulatory support, however there are still concerns about data completeness. It has been agreed that work will be done this year to update the UK VAD Database to remove unnecessary data items and make it more user friendly. It is hoped that this will lead to better data completeness.
- 12 We have been working on provision of UK data on DCD lung transplants to the ISHLT DCD Registry and will be reviewing existing data provision.

- 13 We have been supporting Professor Dark in the ideal lung initiative and will be continuing this support with the introduction of an ideal heart initiative.
- 14 Modelling has been performed by the team to inform the Scout Subgroup of the NORS Workforce Transformation Project.
- 15 We have also been providing statistical guidance to Aravinda Page and Sanjeet Singh, the CTAG Clinical Audit Fellows. Projects and regular reports in the cardiothoracic area that require resource from Statistics and Clinical Studies are outlined in **Table 1** and **Table 2** respectively.

Sally Rushton
Statistics and Clinical Studies

April 2018

Table 1 Fixed Term Projects

	Title	Planned completion date	Current priority	S&CS resource reqd
1	Heart Allocation Sub-Group (HASG) Support implementation of 2018 Heart Allocation Scheme	Unknown	***	**
2	Paediatric Allocation Working Group Support implementation of paediatric allocation zones	Unknown	**	**
3	Scout Project Support scout sub-group of NORS Workforce Transformation Board	Unknown	**	**
4	DCD Heart Programme Support RINTAG DCD Heart Working Group	Unknown	***	**
5	Implementation of new data collection			
	Grading of retrieved organs	Unknown	**	**
	Ischaemia time and perfusion techniques	Unknown	***	**
	Decline reasons	Unknown	***	**
	Update Transplant Record form	Unknown	*	**
6	Organ utilisation projects			
	Ideal lung donor initiative	On-going	***	***
	Ideal heart donor initiative	On-going	***	***
7	VAD Database overhaul	2018	***	***
8	Long-term VAD outcomes analysis	Spring 2018	**	**
9	Impact of duration between brain stem death and retrieval on lung utilisation and post-transplant outcomes	Unknown	**	**
10	Analysis of impact of ischaemia time on lung transplant outcomes	Unknown	**	**
11	Outcomes from lung listing analysis	Spring 2018	**	**

Table 1 Fixed Term Projects

	Title	Planned completion date	Current priority	S&CS resource reqd
12	Analysis of Bridge to Candidacy patient on the VAD Database	Spring 2018	**	**
13	DCD lung transplant outcome analysis	On-hold	*	***
14	Review data submitted to ISHLT	2018	**	**
15	VAD risk-adjustment for Annual MCS report	Summer 2018	**	***

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	Biannually	**	<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	Fast track scheme review for CTAG	Biennial	*	One day
8	DCD Heart activity report for CTAG	Biannually	**	One day
9	Organ grading form return rates	Quarterly	**	Two days
10	<i>Audit of ischaemia time components</i>	<i>Annually (once data collection process is in place)</i>	*	<i>One day</i>
11	Annual Report on Cardiothoracic Transplantation	Annually	***	Two weeks
12	Interim Report on Cardiothoracic Transplantation	Annually	***	One week
13	Annual Report on Mechanical Circulatory Support Related to Heart Transplantation	Annually	***	Two weeks
14	Monthly reporting of transplant and VAD numbers to NHS England	Monthly	***	Half day
15	Centre specific organ offer reports	Weekly, Monthly and Quarterly	**	Half day

Table 2 Regular Reports

	Title	Frequency	Current priority	Time taken
16	CUSUM reports to centres	Monthly	***	Half day
17	Organ damage and usage reports to NORS teams	Monthly	**	<2 hours
18	<i>Cardiothoracic NORS KPIs</i>	<i>Monthly/quarterly (in development)</i>	**	<i>One day</i>
19	Regular data submission to METHODS for cardiothoracic transplant dashboard for NHS England	Annually	**	One day
20	VAD data chasing reports	Monthly/quarterly	**	<2 hours
21	Harefield transplant record report	Quarterly	*	<2 hours
22	Glasgow survival report	Biannually	*	<2 hours