

NHS BLOOD AND TRANSPLANT
CARDIOTHORACIC ADVISORY GROUP
ALLOCATION ZONAL BOUNDARY CHANGES
SUMMARY

INTRODUCTION

- 1 On 30 April 2014, the CTAG Allocation Zone Working Group agreed a process for assessing balance between donor and registration numbers for each allocation zone and a methodology for adjusting zonal boundaries when an imbalance occurs. This is based on a statistically significant difference being observed between the percentage share of registrations and the percentage share of donors for any one cardiothoracic allocation zone. It was agreed that the cardiothoracic allocation zones would be reviewed on an annual basis.
- 2 Following the first analysis run in September 2014, an imbalance in the donor to registration percentage share was identified and changes to the allocation zones were made on 15th January 2015 to address this.
- 3 This paper presents the results of the second annual analysis which has been performed for the registrations between 1st April 2013 and 31st March 2015.

RESULTS AND CONCLUSION

- 4 When comparing the proportion of lung registrations made with the proportion of lung donors available at each centre in turn, there were found to be no statistically significant differences observed for any centre. The same conclusion was found for hearts. No changes will therefore be made to the current cardiothoracic allocation zones.

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September 2015

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INTRODUCTION

- 1 On 30 April 2014, the CTAG Allocation Zone Working Group agreed a process for assessing balance between donor and registration numbers for each allocation zone and a methodology for adjusting zonal boundaries when an imbalance occurs. This is based on a statistically significant difference being observed between the percentage share of registrations and the percentage share of donors for any one cardiothoracic allocation zone and that the cardiothoracic allocation zones would be reviewed on an annual basis.
- 2 Following the first analysis run in September 2014, an imbalance in the donor to registration percentage share was identified and changes to the allocation zones were made on 15th January 2015 to address this.
- 3 This paper presents the results of the second annual analysis which has been performed for the registrations between 1st April 2013 and 31st March 2015.

DATA AND METHODS

- 4 Changes to the cardiothoracic allocation zones are based on a statistically significant difference being observed between the percentage share of registrations and the percentage share of donors for any one cardiothoracic allocation zone (at the 5% significance level adjusted to account for the largest difference in percentage share being tested for significance). The cardiothoracic allocation zones are reviewed on an annual basis and presented for endorsement at each Autumn CTAG meeting. Any subsequent changes to zonal boundaries are then implemented in the Autumn, around November. This paper presents the results of the second review.
- 5 Registrations were defined as:

The total number of UK adult (≥ 16 years at time of registration) Group 1 heart, lung or heart/lung registrations in the **two year period** from 1 April 2013 and 31 March 2015, but excluding a) any registrations made by Great Ormond Street Hospital and b) any patients with no active waiting time. Registrations that ended in a domino or live donor transplant, multi-organ registrations and urgent heart registrations are included. Retrospective registrations made after an unlisted patient was transplanted were also included.

For patients registered twice in the registration period, the following rules apply:

- If a patient was registered, removed then reregistered, only the first registration is included.
- If a patient was registered, transplanted then reregistered, both registrations are included.
- If a patient was active, suspended then reactivated, only the first activation is included.
- If a patient was non-urgent, then made urgent, only the first registration is included, and vice versa.

Note that registrations for heart/lung transplantation were included in the number of heart registrations as heart/lung blocks are allocated according to the cardiac centre rota.

6 Donors were defined as:

The total number of UK adult (≥ 16 years at time of death) heart and/or lung donors after brain death over the **three year period** from 1 April 2012 to 31 March 2015. Donors whose heart or lungs were not transplanted were excluded. If only one lung from a donor was transplanted, this was included as a lung donor. Paediatric donors who donated to adult patients were included, along with adult donors whose organs are transplanted into paediatric patients. In this analysis, donors were allocated to centres as per the current allocation zones (implemented 15th January 2015) as opposed to the zones that were in place at the time of offer.

RESULTS

- 7 **Table 1** summarises the proportion of heart and lung registrations made by each centre over the two year period, from 1 April 2013 to 31 March 2015, and compares this with the number of heart and lung donors that arose under each allocation zone as they are currently defined (as of 15th January 2015) over the three year period, from 1 April 2012 to 31 March 2015.
- 8 There were 45 lung donors in Glasgow's allocation zone between 1 April 2012 and 31 March 2015. These donors are incorporated in the 138 Newcastle donors recorded in **Table 1**.
- 9 When comparing the proportion of lung registrations made with the proportion of lung donors available at each centre in turn, there were found to be no statistically significant differences observed for any centre. The same conclusion was found for hearts. No changes will therefore be made to the current cardiothoracic allocation zones.

Table 1 Number of heart and lung registrations and donors by registering centre/allocation zone (2015/16)

Centre	Heart Registrations		Heart Donors		Adjusted P-value	Lung Registrations		Lung Donors		Adjusted P-value
	N	%	N	%		N	%	N	%	
Birmingham	78	15	67	14	1.00	79	13	60	12	1.00
Glasgow	51	10	47	10	1.00	-	-	-	-	-
Harefield	89	18	97	20	1.00	175	28	117	24	0.65
Manchester	86	17	68	14	1.00	94	15	65	13	1.00
Newcastle	95	19	79	17	1.00	165	27	138	29	1.00
Papworth	108	21	119	25	1.00	107	17	104	21	0.38
UK	507	100	477	100		620	100	484	100	