

**NHS BLOOD AND TRANSPLANT
CARDIOTHORACIC ADVISORY GROUP – HEART**

SIX MONTH REVIEW OF 20CM RULE CHANGE FOR GREAT ORMOND STREET

BACKGROUND

- 1 For a heart from an adult donor which gets offered to non-urgent recipients, Great Ormond Street can only accept for recipients who have a height difference of less than 20cm with the donor at their position of second centre in the matching run, and can consider for any recipient only after decline by all other centres. On 4 May 2023, this rule was relaxed so that for donors in the Harefield zone, Great Ormond Street can consider for all recipients at their position of second centre. This report reports on activity in the first six months of this change and its impact.

DATA

- 2 Data were extracted from the UK Transplant Registry on 5 October 2023, for the period 4 May 2023 – 3 October 2023. Data considered includes potential donors (including those who did not proceed to donate any organ), offering data, the non-urgent Great Ormond Street waiting list over the period, and all non-urgent paediatric heart activity resulting from adult donors.

RESULTS

- 3 **Figure 1** shows the adult donors who had their heart offered in the period with how many were offered at the non-urgent tier and subsequently from within the Harefield zone and the offering and organ outcome. In total, 260 donors had their heart offered in the six month window, with 167 offered to the non-urgent tier (52 (31%) transplanted). Of these, 39 were from Harefield's zone, and 29 were declined by Harefield. Great Ormond Street accepted and transplanted 1 donor. **Table 1** shows the reasons for decline for the 28 donors not accepted, the most common reason was no response to offer, followed by donor history and donor size.
- 4 **Figure 2** shows the distribution of heights of the 29 donors offered to Great Ormond Street from Harefield's zone. The median height was 170 cm, inter-quartile range 163-179 cm.
- 5 The heights of the 24 patients who have been active at any point on the non-urgent list at Great Ormond Street between 1 May 2023 and 3 October 2023 are shown in **Figure 3**. The median height was 91.5 cm, inter-quartile range 78.5-127.5 cm.
- 6 Weight matching between donor and recipient is important in paediatric heart transplant, more so than height matching. **Figure 4** shows the distribution of weights of the 29 donors offered to Great Ormond Street from Harefield's zone, the median height was 72 kg, inter-quartile range 61-90 kg. **Figure 5** shows the distribution of weights for the 24 patients active at any point on the Great Ormond Street non-urgent list, the median weight was 15 kg, inter-quartile range 8.8-24.95 kg.

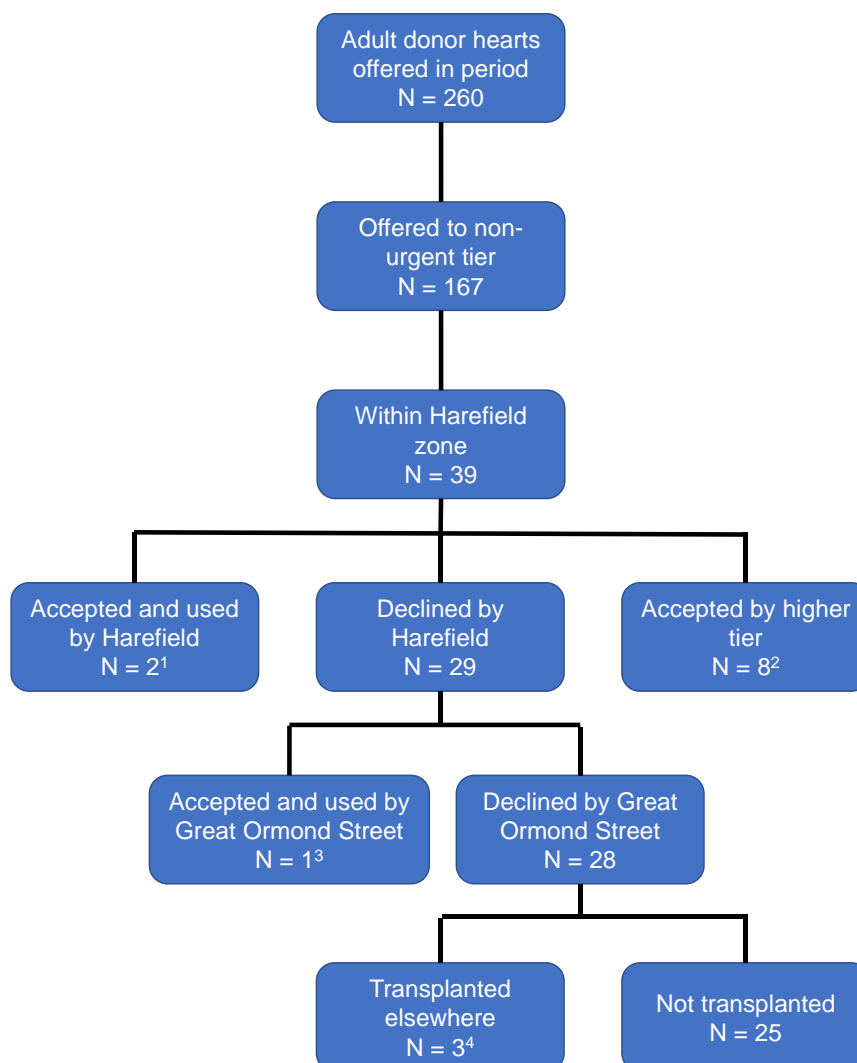
- 7 **Table 2** shows all non-urgent paediatric heart transplants in the six month period that utilised adult donors. In total there were two, both performed by Great Ormond Street performed two. The donors came from Harefield and Newcastle zones and both had a height difference between donor and recipient of less than 20cm.
- 8 In the six month period, there were 12 non-urgent transplants using adult donors and transplanted by a non-zonal centre. **Table 3** shows the details of these donors, including size and the allocation zone.

SUMMARY

- 9 In the six month period since the rule change, there have been no non-urgent heart transplants performed with a height difference of more than 20cm between donor and recipient at Great Ormond Street. There were 29 donors from Harefield's zone available to Great Ormond Street in the time period, one of which was accepted and used by Great Ormond Street, which had a height difference of 9 cm. Of the other 28, only 3 were ultimately transplanted by any centre. A longer observation period may be required to notice any impact this change will have for this group of patients.

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Figure 1 Adult donor hearts offered and outcomes, 4 May 2023 – 3 October 2023

¹ Donor heights – 160cm, 178cm

² Donors offered via super-urgent pathway or fast track and accepted for named patient at this stage

³ Donor height – 163 cm, Recipient height – 172 cm

⁴ Donor heights – 166cm, 173cm, 183cm

Table 1 Decline reasons for hearts offered to Great Ormond Street from Harefield's zone, 4 May 2023 – 3 October 2023

Reason	Number (%)
No response to fast track/group offer	8 (29%)
Donor unsuitable - past history	5 (18%)
Donor unsuitable - size	5 (18%)
Donor unsuitable - age	3 (11%)
No suitable recipients	3 (11%)
HLA/ABO type	1 (4%)
Organ used elsewhere	1 (4%)
Poor function	1 (4%)
Total	28

Figure 2 Distribution of height of donors offered to Great Ormond Street from Harefield's zone, 4 May 2023 – 3 October 2023

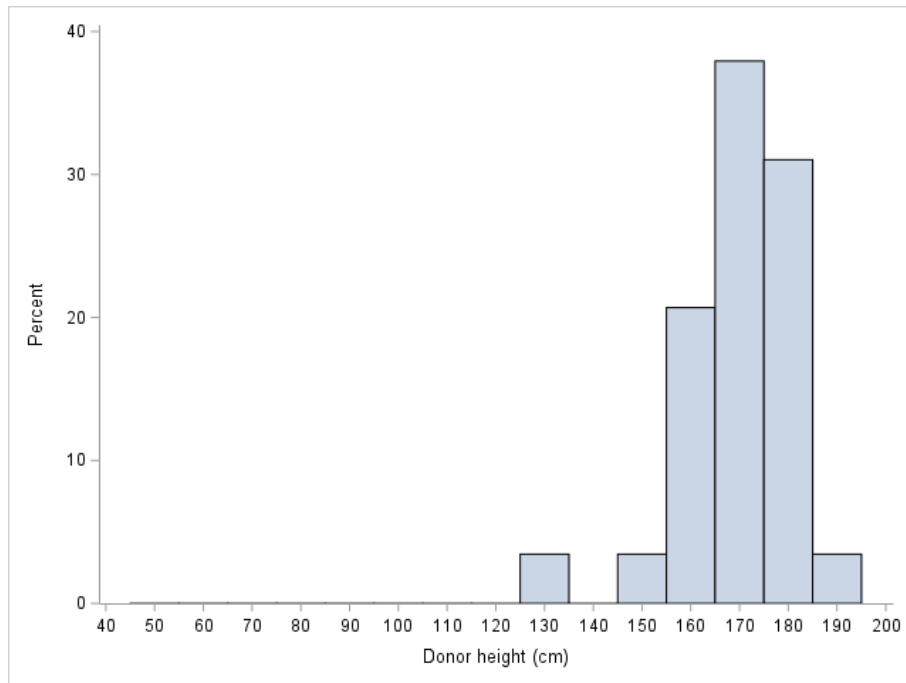


Figure 3 Distribution of height of patients active on the non-urgent list at Great Ormond Street, 1 May 2023 – 3 October 2023

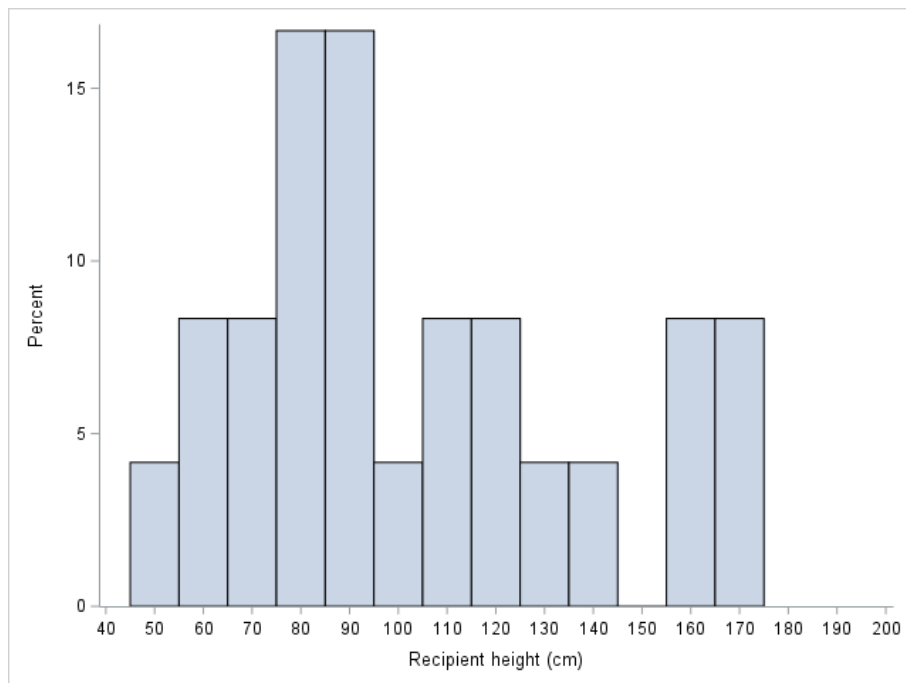


Figure 4 Distribution of weight of donors offered to Great Ormond Street from Harefield's zone, 4 May 2023 – 3 October 2023

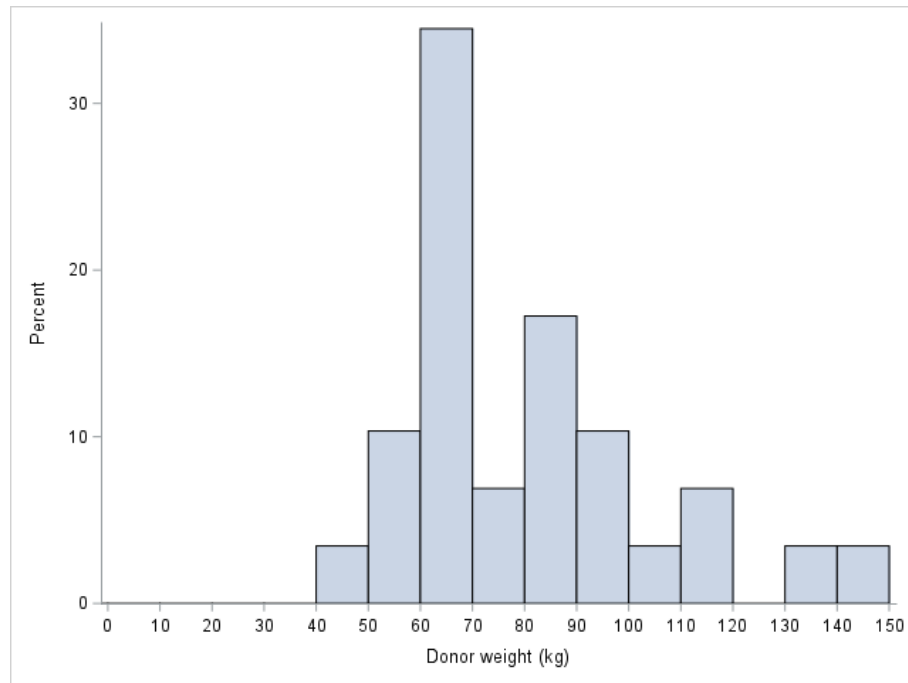


Figure 5 Distribution of weight of patients active on the non-urgent list at Great Ormond Street, 1 May 2023 – 3 October 2023

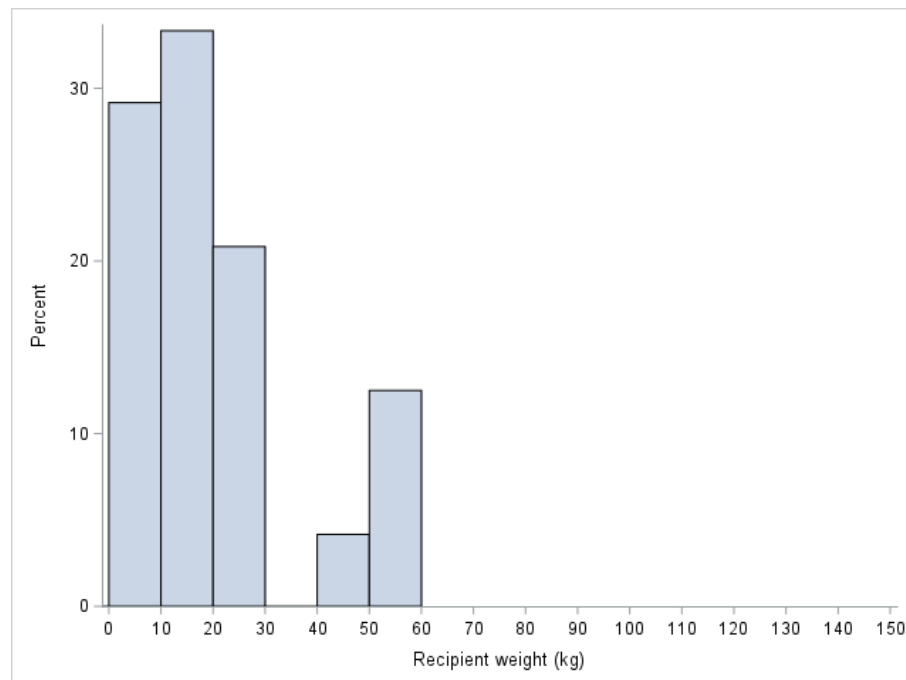


Table 2 Details of adult donor hearts transplanted into non-urgent paediatric recipients, 4 May 2023 – 3 October 2023

Centre	Donor type	Allocation zone	Donor age	Donor height	Donor weight	Recipient age	Recipient height	Recipient weight	Height difference
GOSH	DCD	Newcastle	18	170	50	12	155	44	15
GOSH	DBD	Harefield	41	163	85	15	172	59	9

Table 3 Details of adult donor hearts transplanted into non-zonal non-urgent recipients, 4 May 2023 – 3 October 2023

Donor type	Allocation zone	Donor age	Donor height	Donor weight
DBD	Papworth	52	160	53.8
DBD	Birmingham	56	166	60
DBD	Birmingham	48	159	60
DBD	Newcastle	41	187	87
DBD	Harefield	44	173	92
DBD	Birmingham	28	182	72
DCD	Glasgow	40	180	100
DCD	Glasgow	40	186	83
DBD	Glasgow	38	176	95
DBD	Glasgow	39	179	110
DBD	Papworth	52	165	65
DBD	Harefield	61	166	72