DCD Heart Oversight Group (DCD HOG)

December 2022

Allocation Mechanism for DCD Hearts

Executive Summary

The Allocation Rota Working Group met initially in August to discuss amending the existing allocation mechanism for DCD hearts from a centre-based offer to a named patient offer. Data for the 44 hearts offered, retrieved and transplanted for the period April 21 to March 22 was gathered, and analysis undertaken to see what the impacts would have been if the hearts had been offered to named patients. The group met again in November to review the impacts.

The key potential impacts are:

- 17 of the 44 hearts (39%) would have travelled further, with an average increase of c2.5 hours
- There would have been an increase of from 12 to 19 (58%) of hearts spending over 5 hours on the OCS
- The average duration of hearts on the OCS for 5 hours would have increased by 16% from 5.5 hours to almost 6.5 hours
- Increased requirements for staff to spend longer away from base would impact on ability to mobilise for other retrievals – both DBD and DCD
- Increased pressure on staff at a time when staffing situations are fragile and some teams are struggling to cover the existing requirements of the DCD rota and the NORS service
- It would likely increase pressure to use LVAD's as a destination therapy rather than a bridge to transplant as there would be no pathway to heart transplant for some patients

The increased road time/time on the OCS could be mitigated by using additional flights. This would increase the cost pressure of the DCD heart service and would put additional pressure on flights that are sometimes already difficult to source. The commissioned NORS service would take priority for flights.

Having reviewed all the information available there were mixed views regarding changes to allocation mechanism at this time. The current allocation mechanism has vastly increased the number of hearts transplanted and individual centres can still choose to transplant super urgent/urgent patients under the current mechanism.

The recommendation is that at the current time it would not be appropriate to make the changes required, due to the issues identified, and that the situation should be reviewed once full sustainable funding is awarded to allow robust commissioning of the DCD hearts integrated with NORS.

Action Requested

The DCD HOG is asked to:

Support the recommendation that the existing allocation mechanism remains in place until sustainable funding is identified to enable the retrieval of DCD hearts to be robustly commissioned as part of NORS.

Background

When the JIF funding was awarded in 2019 an Allocation Working Group was established to review how DCD hearts could be allocated. The key objectives of the allocation mechanism at that time were that it would:

- be fair to all centres across the UK
- allow DCD hearts to be allocated without introducing a new system that would require IT

The group agreed that the DCD mechanism should be based upon the existing DBD allocation mechanism. There was further discussion regarding the difference in centres experiences of DCD heart transplant at that time. It was identified that the less experienced centres should be given the opportunity to become confident with DCD hearts, with appropriate support and governance, in the same way that the experienced teams had.

It was noted that at launch the new model needed to balance the requirements of the new centres, who at the time were not receiving any hearts for transplant, with increasing the heart pool for urgent and super urgent patients.
The aim was to retrieve and transplant more hearts overall.

It was agreed that a centre would receive an offer and make their own determination which recipient would receive the heart. This approach allows experienced centres to transplant urgent and super urgent patients and less experienced centres to transplant non-urgent patients.

All agreed that the centre allocation mechanism would be short term to allow all centres to become confident with DCD heart transplantation. It was anticipated that the business case would be approved, and substantive funding would be awarded to fund the workforce to support the same allocation model in place as that for DBD hearts.

Review

Substantive funding has still not been secured. In 2022 the transplant centre Clinical Directors discussed DCD heart allocation and agreed that DCD heart offering should be moved away from a centre-based offer to a named patient offer.

It was discussed at DCD HOG that a review be undertaken, and the Allocation Working Group met to discuss. There was centre representation from Papworth, GOSH, Wythenshawe, Glasgow and Harefield.

It was highlighted that having two different allocation mechanisms for hearts has created issues when a DBD donor becomes a DCD donor.

It was agreed that all centres have now had experience of transplanting DCD hearts that have been retrieved by another centre and that the time is right to allocate DCD hearts to those most in need.

There was discussion that there may be an issue re how patients are listed on the waiting lists with potential inconsistencies across the 7 transplant centres (this was agreed as out of scope for the DCD allocation review).

It was recognised by all that a group of patients will be disadvantaged whichever allocation mechanism is in place as there are not enough hearts available.

The group (including Birmingham and Newcastle post meeting) agreed that the allocation should be changed to a named patient basis. It was noted that the implications of the change

must be understood before a final decision can be made, in particular operational, logistical and increased duration impacts on the DCD heart pathway.

A further detailed review of DCD hearts retrieved and transplanted between April 2021 and March 2022 was undertaken.

Recipient Category

The change from centre-based allocation to named patient allocation would have, as expected, decreased the non-urgent recipient of DCD hearts from 43% to only 2% and increased the urgent recipients from 36% to 59% and super urgent recipients from 20% to 39%. The average age of recipients would be slightly lower.

	Actual Centre allocation	Based on named patient allocation
Non Urgent (number)	19	1
Urgent (number)	16	26
Super Urgent (number)	9	17
Average Age of recipient (years)	43	42

Transplant Centre Allocation

If DCD hearts had been allocated to named patients during the period there would have been 10% less DCD hearts allocated to centres within the zone, increasing the number of hearts travelling outside the zone.

The number of DCD hearts allocated to each transplant centre would have been different during the period, with some centres receiving more offers and others less as outlined below.

Transplant Centre Recipients:	First Centre allocation	Actual Centre allocation	Based on named patient allocation	
- Birmingham	3	3	5	
- Glasgow	0	3	3	
- GOSH	2	2	1	
- Harefield	14	11	11	
- Manchester	4	1	5	
- Newcastle	16	14	13	
- Papworth	5	10	6	
Transplant Centre in Zone		19	17	
Transplant Centre outside Zone		25	27	8%

Duration of the heart on the OCS

During the period reviewed if hearts had been allocated to named patients it is estimated that there would be a 58% increase in the number of hearts spending over 5 hours on the OCS machine. The average duration of these 19 hearts on the OCS machine would be around 6.5 hours.

Travel implication

Transport would be impacted as an increased number of DCD hearts would travel further to the named patient destination. The analysis shows that there would be 17 cases of increased travel time, with the average additional travel time being almost 2.5 hours. There would be 9 cases of reduced travel time and 18 cases where there was no change.

The increased travel time, and increased time spent on OCS could be mitigated by increasing the numbers of flights utilised, but this relies on availability which is already sometimes stretched. There would also be a cost implication of c£100k.

Other impacts

There were concerns regarding the current fragility of staffing in the retrieval teams and the additional pressure that moving to the named patient allocation would have. In particular, the longer journey times that would be incurred and the increased duration on the OCS with the pressures that would bring.

It was also noted that increasing the number of flights may not be an option to reduce the travel time/time on OCS as there have been difficulties sourcing flights to cover standard NORS activity and this change has the potential to put additional pressure on requirements.

There were also concerns raised that the current group of patients who have LVAD's as a bridge to transplantation, and currently receive a proportion of DCD hearts, will no longer have access to hearts if the allocation mechanism is changed. This change has the potential to impact patients who require an LVAD's, as they will be used as a destination therapy rather than the bridge to transplant as intended.

Conclusion

The group reviewed the data and discussed the potential impacts at length, including the issue that funding past Mar 2023 has not been identified.

Four potential options were outlined:

- do not amend the allocation mechanism
- do not amend the allocation mechanism until substantive funding is identified
- amend the allocation mechanism
- amend the allocation mechanism with clinical discussion on the night

The recommendation is that at the current time it would not be appropriate to make the changes required, due to the issues identified, and that the situation should be reviewed once full sustainable funding is awarded to allow robust commissioning of the service.

Debbie Macklam
December 2022

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