NHS
Blood and Transplant

DCD Heart Retrieval Sustainability

CTAG 18 September 2025

Introduction

There is no doubt that the use of perfusion technology to enable the retrieval of hearts from DCD donors has been enormously successful in increasing the number of heart transplants.

Since 2015, when the initial service evaluation was supported by NHSBT to test the use of the Transmedics OCS device to retrieve hearts from DCD donors, there have been more than 400 additional heart transplants that would not have taken place.

For 2024/25 there were 40% more heart transplants as a direct result of the available technology to support DCD heart retrieval.

Despite the perceived success when looking at the transplant numbers, the picture from the operational DCD heart retrieval service delivery tells a different story. As a result of lack of commitment to substantive funding over the years the service has become fragile and the goodwill that was evident in the early days has been eroded.

The impact on staff of delivering the DCD hearts service is increasingly complex and time consuming with the challenge of other perfusion technologies being introduced.

Key experienced DCD heart staff have been lost to overseas countries where investment in DCD heart services has been more consistent and robust. In addition, there has been an impact on the ability to attract younger surgeons and perfusion specialists into the vacant roles.

The DCD Heart Oversight Group (DCD HOG) have identified the current issues with the service, including the service delivery model which was developed as a pilot to test the UK wide retrieval and is no longer fit for purpose. The service reached a critical stage in 2024, where it was increasingly likely that one or more of the DCD heart retrieval teams would withdraw from the DCD heart rota and the DCD heart retrieval and transplant service would collapse.

DCD HOG triggered a DCD heart service review, and a fixed term working group was set up, The DCD Heart Stabilisation Group (DCD HSG), chaired by Ian Currie, to initially progress short term solutions to enable continuation of the DCD heart service.

The confirmation of substantive funding in April 2025 will enable a medium to longer term service redesign to be considered.

DCD Heart Service Challenges

As a result of the previous funding challenges, it has been impossible to move the service away from the pilot service, deigned to prove the concept of UK wide retrieval, to a more sustainable long term delivery model.

The DCD Heart Oversight Group (DCD HOG) has undertaken work to identify the key issues of the current service delivery model, across the three retrieval and seven transplant centres. There are three key themes:

Lack of Sustainable Funding

The current service delivery model, which has one DCD heart retrieval team on call to cover the UK, has been impacted by the increase in DCD donors. Teams are being mobilised more often, and increased numbers of sequential retrievals are occurring, resulting in the pilot service model no longer being fit for purpose.

Trusts have been unwilling or unable to invest in the clinical workforce that is required to deliver DCD heart retrieval and transplantation due to the uncertainty about the long-term funding for the service.

The DCD HOG has received confirmation in April 2024 of substantive funding, which will enable a wider review of the service to be undertaken once initial stabilisation has been achieved.

Workforce

Surgeons with DCD heart experience are choosing to leave the UK. Organ procurement agencies in the USA are actively recruiting retrieval surgeons from the UK with experience of DCD heart retrieval.

As experienced surgeons are leaving the service there are difficulties attracting younger surgical trainees into retrieval and transplantation roles. Whilst this issue is wider than DCD hearts, it is compounded by the current pilot model of DCD heart service delivery.

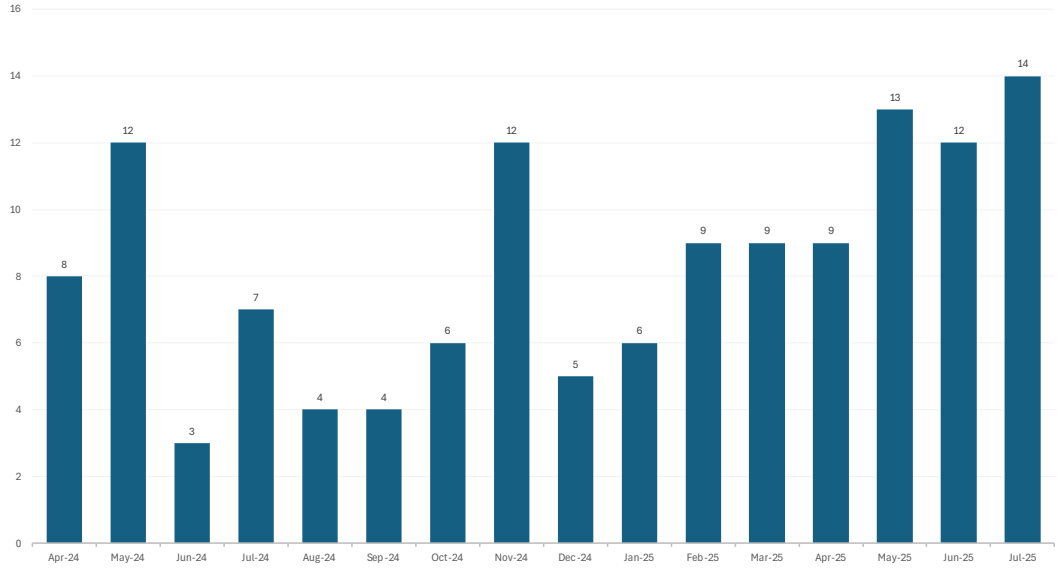
There was a perceived lack of commitment to the future of DCD hearts within the UK. This not only impacted on the goodwill in the system to maintain a pilot model of delivery but also impacted young surgeons who are unlikely to commit to many years of training to deliver a service that may not be commissioned in the future.

The funding that has been provided for DCD heart staffing by NHSBT to the Trusts has not always been utilised to remunerate individuals who spend many anti-social hours delivering the service. This acts as a disincentive for individuals to participate in the DCD heart retrieval rota. The dissatisfied senior staff are likely to influence the decisions of younger surgeons choosing surgical pathways.

Workload

The changes in the mix of DCD/DBD donors has resulted in a much higher level of DCD heart referrals than predicted when the JIF was initiated. This has resulted in the on-call team being mobilised more often than expected. Whilst UK wide travel for one team on call was acceptable when teams were less busy, the increased activity has created more pressure on the DCD heart service.

DCD Heart attendances by month, 1 April 2024 – 31 July 2025



DCD Heart retrieval is a bolt on to the standard commissioned NORS service. There are three cardiothoracic teams on call each week, one of which has DCD heart capability. The on-call DCD heart team is also mobilised to retrieve DBD Hearts, DBD lungs and DCD Lungs when they are on call for NORS.

When DCD hearts are retrieved, they are accompanied by a surgeon and a perfusion specialist, on the OCS machine, to the recipient hospital. Once the heart has been removed from the machine the two staff members return to their base. The nature of retrieval is ad hoc but this additional journey adds many hours to the standard retrieval process for the two members of staff, often leaving them away from base when their shift has ended. This is compounded by the pathway delays due to theatre access that are more commonplace since the pandemic.

The increase in DCD donor activity has led to an increase in requirement for sequential DCD heart retrievals. These have always been part of the nature of retrieval but the loss of surgical and perfusion specialist staff in the DCD heart service makes it increasingly difficult for a team to mobilise fresh staff, increasing pressure on the staff on the DCD retrieval on call rotas.

There has been an increase in the technicalities of retrieval since the pilot service was launched under JIF. The use of Abdominal Normothermic Regional Perfusion (ANRP) has increased from infrequent use by two retrieval teams to more frequent use across seven teams, with full roll out across the UK planned. There are increased surgical complexities when a DCD heart is retrieved alongside DCD lungs and ANRP is used by the abdominal retrieval team.

DCD Heart Sustainability Group

The DCD Heart HOG have been awaiting confirmation of substantive funding to trigger a DCD heart service review since 2021/22. In that time the pilot service delivery model had become increasing unfit for purpose and the operational service more fragile so it was decided that a review should be undertaken to ensure the safety and continuity of the service and staff.

Ian Currie was asked to chair the review, and the DCD Heart Stabilisation Group (DCD HSG) was set up with representation from all seven cardiothoracic retrieval and transplant centres.

At the first meeting in October 2024 the focus was to determine how all cardiothoracic retrieval centres could come together to support stabilisation of the service to ensure a safe pathway for continued retrieval and transplantation of DCD hearts, particularly in the short term.
Attendees were allocated into two groups to discuss the workforce and workload issues and develop actions that could be taken forward in the short term and medium term. Ideas and actions that are likely to take longer than 24 weeks were noted and placed on hold.

The seriousness of the current status of the service was discussed. It was clear that the service was on the brink of collapse, with reduced staff members covering DCD heart rotas, the extended duration of DCD heart retrieval and increased sequential retrieval impacting staff.

It was noted that there is no additional funding to support any of the proposals suggested and that anything implemented must fit within the current financial envelope for the NORS/DCD hearts service.

Data was collated and several further meetings of the DCD HSG have been held to review the data and identify measures and actions to take forward. Some of these were discounted by the group, but the following were agreed and have either been implemented or are currently being worked up:

<u>11-hour rest period</u>

- As there is only one DCD heart team on the rota to cover the UK leading to extended travel and hours away from base it was agreed that a rest period of 11hrs for the on-call DCD Heart team should be introduced before they could be called out again.
- The rest period was introduced in December 2024 as a safety net for teams to use as required.
- Further impacts on the fragility of DCD heart teams led to the 11-hour rest period being mandated in June 2025.The impact of the rest period is currently being monitored.

<u>Non-DCD heart centres becoming involved in the DCD heart pathway</u>

- At the initial October meeting it was agreed by all centres that support should be provided by all centres to support stabilisation of the service. One suggestion was that centres could collect a heart that had been allocated to them. Clear criteria

would need to be agreed regarding whether the support could be provided by non-DCD teams in their on-call NORS weeks and/or non-on-call NORS weeks
- Training was provided by Transmedics and the three non-DCD heart centres all sent surgeons and perfusion staff to Germany
- A training and competence plan has been developed to support sign off of surgeons and perfusion staff in a robust and well governed manner. Signed off staff will be approved to take the heart on the OCS from the donor centre back to their recipient centre.
- Further data has been considered to determine how this movement of heart back to recipient centres can be operationalised without impacting the standard NORS service and without additional funding.

Additional of another centre to cover the 4th week of the rota

- The current rota is provided by three centres Papworth, Glasgow and Harefield. Papworth cover the rota two weeks out of four whilst Glasgow and Harefield each cover one week.
- It was agreed that Papworth would step back from the 4th week of the rota, and a non-DCD heart centre would be trained to cover that week.
- Due to the relatively small numbers of DCD heart retrievals and the complexity of retrieval, particularly as Abdominal Normothermic Regional Perfusion (ANRP) is rolled out, it would be difficult to maintain competence if all teams were signed off to retrieve DCD hearts.
- Birmingham, Manchester and Newcastle are all interested in covering the 4th week.
- To ensure all centres can be considered fairly a bid process has been established with defined criteria against which centres will be assessed. The date for submission is 26th September

Potential Risks

There is a potential risk that some of the measures that are being progressed may impact on the number of DCD heart transplants over the short term whilst the supporting processes are evaluated and introduced.

By invoking a compulsory rest period to ensure that the retrieval teams remain safe there is a chance that some donor families may withdraw consent for the heart as they may not want to wait until the retrieval team become available again. This could potentially be managed with the family by the SNOD provided that clear processes are in place. Risks and impacts are being identified and will be mitigated as far as possible.

Governance

The DCD HSG will report recommendations into both DCD HOG and Cardiothoracic Advisory Group (CTAG) and any recommendations with a financial impact will be presented to OTDT SMT for agreement.

Debbie Macklam

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