

OPTN DCD Procurement Collaborative Executive Report

Background

The Donation after Circulatory Death (DCD) Procurement Collaborative project, led by the OPTN Collaborative Improvement (CI) Team, supported the OPTN's efforts to increase organs available for transplant. Procuring DCD organs and subsequently transplanting these organs with favorable outcomes is a practice conducted nationwide and was noted to be an area for growth potential.

The primary aim of the project was to increase the number of DCD donors recovered by Organ Procurement Organizations (OPOs). Following discovery visits to practice model organizations, three key drivers for change were identified: optimizing clinical practices and staffing structures, strengthening donor hospital and transplant program relationships, and enhancing the process for obtaining authorizations.

Methodology

The CI team utilized a collaborative framework, based on the Institute for Healthcare Improvement's Breakthrough Series Collaborative Model, to deploy this project through the following phases:

Design and Pre-Work Phase (Cohort A: October – December 2020; Cohort B: August – October 2021)

Prior to the start of Cohort A, the CI team identified and interviewed four practice model OPOs to learn about their DCD procurement practices and processes. Several key drivers to successful DCD procurement were identified and incorporated into an improvement guide outlining the three change concepts mentioned above.

After 26 OPOs enrolled in Cohort A, all were oriented to the collaborative improvement framework, process improvement methodology, and the goals of the initiative. Due to the success of Cohort A, Cohort B was approved and opened to both new OPOs and those continuing from Cohort A. Of the 30 total participating OPOs in Cohort B, 17 were newly enrolled and 13 were returning.

Engagement Phase (Cohort A: January – June 2021; Cohort B: November 2021 – April 2022)

During both cohorts, participants identified opportunities for improvement within one or more of the three identified change concepts. As this effort was not prescriptive, participants were encouraged to test multiple interventions within the Improvement Guide using the Plan-Do-Study-Act process. Participants utilized a web-based platform with resources, a discussion board, and data dashboards in order to explore their own data and that of other participating OPOs. CI Performance Improvement (PI) Specialists routinely hosted collaborative calls, facilitated webinars, and provided individualized OPO coaching that included aim setting and charter development.

Evaluation Phase (January 2022 - ongoing)

After analyzing data on the performance of each participating OPO, of each collective cohort, and the overall project effort, the team shared preliminary project data during the collaborative Learning Congress and will refine as available; see Results section for detailed data.

Participation and Improvement

Collaborative participants across both cohorts included 43 OPOs that represented a wide geographical distribution. Seventy-five percent of all OPOs nationwide participated in the collaborative during Cohort A and/or Cohort B. A complete list of project participants can be found in Appendix A.

OPOs developed individual project charters representing a variety of improvement topics. Across both cohorts, 27 OPOs focused on optimizing clinical practices and staffing, 21 OPOs worked to improve their relationships with donor hospitals and transplant programs, and 28 OPOs aimed to enhance their authorization processes. While most OPOs chose to focus on one change concept, several worked on changes in multiple areas.

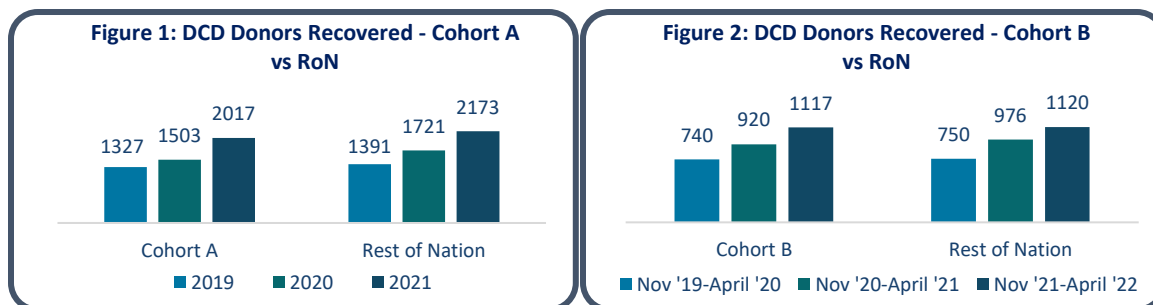
Results

Outcome Measures

Each cohort had a collective aim related to the number of DCD donors procured. Cohort A aimed to increase the procurement of DCD donors by 20% over the year prior, while Cohort B aimed to increase DCD donor procurement by 28% over the same six-month period during the year prior.

In addition to the collective aims, each participating OPO set individual DCD donor procurement aims, based on what they felt was achievable during the project. Individual aims across the cohorts ranged from 6% to 59%. Sixty-five percent of Cohort A participants met their individual aims, while 47% of Cohort B participants met their aims.

From 2020-2021, Cohort A surpassed their collective aim by increasing DCD donor procurement by 34%, while the rest of the nation increased by 26% (Figure 1). When comparing November 2020 – April 2021 to the November 2021 – April 2022, Cohort B fell slightly short of their collective aim, recovering 21% more DCD donors, as the rest of the nation showed a 15% increase (Figure 2).



Based on OPTN data as of 7/15/2022. Data subject to change based on future data submission or correction.

Cohort A: Participant N=26 OPOs, Rest of Nation N=31 OPOs. Cohort B: Participant N=30 OPOs, Rest of Nation N=27 OPOs.

Organs recovered from DCD donors followed a similar trend across both cohorts. Cohort A saw a 33% increase in DCD organs recovered, while the rest of the nation saw a 23% increase. Cohort B increased DCD organ procurement by 20%, as the rest of the nation showed a 13% increase.

Balancing Measures

While the goal of the collaborative was to increase DCD donor procurement, it was important to make sure these improvements did not cause unintended consequences in other areas of donation.

When looking at specific six-month time periods within Cohort A (active engagement: January 2021 – June 2021; post engagement: July 2021 – December 2021), the number of donation after brain death (DBD) organs recovered decreased slightly by 2% between the active and post-engagement periods, while the number of DCD organs recovered decreased by 6%. The rest of the nation experienced a 6% decrease in DBD organ recovery between the same time periods, while DCD organ recovery increased by 16%. When evaluating data from Cohort B (active engagement: November 2021 – April 2022; post engagement: May 2022 – October 2022), the number of DBD organs recovered increased by 5%, while

the number of DCD organs recovered increased by 14%. DBD organ recovery increased by 12% across the rest of the nation, while DCD organ recovery increased by 2%.

Between the active and post-engagement time periods referenced above, the Cohort A organ non-use rate of DCD organs recovered increased slightly from 28% to 30%, while the rest of the nation also experienced an increase from 28% to 32% during the same timeframe. The DCD organ non-use rate increased slightly from 33% to 34% between the Cohort B active and post-engagement time periods; however, Cohort B also saw a 12% increase in the number of DCD organs transplanted. The rest of the nation experienced a slight decrease in organ non-use rate from 30% to 28% during the same timeframe, with a 4% increase in the number of DCD organs transplanted.

Process Measures

During both cohorts, OPOs were asked to submit monthly data on the following process measures related to DCD donors: donor hospital referrals, family approaches, authorizations granted, withdrawals of support, and procurements for transplant. Analysis of these data showed several limitations, namely inconsistent data definitions across OPOs, as well as variability in the submission and completeness of data. These limitations made it difficult to identify definitive monthly reporting trends and causes for data outliers.

Project Analysis

The DCD Procurement Collaborative was launched as part of the OPTN contract under Task 3.6.6 and offered an opportunity for the CI team to test and improve collaborative project structures and processes. Throughout the course of the project, participants provided feedback on the overall initiative. Participants reported that collaboration with other OPOs, UNOS PI support, monthly collaborative calls, and topic-specific webinars were the most beneficial aspects of the project. Most participants indicated that their OPO improved at least one DCD procurement process during the collaborative, with a desire to participate in future OPTN collaborative efforts.

While the breakout room format of the monthly collaborative calls encouraged open discussion, future calls may benefit from more structured facilitation. Participants found the website's resources and data dashboards to be very useful, but felt the discussion boards could be better utilized. The six-month active engagement timeframe was challenging for some, therefore future collaborative efforts may benefit from longer participant pre-work and engagement periods. Participant feedback will be incorporated to improve future collaborative offerings.

Summary

Learning Congress

On July 26-27, 2022, representatives from forty-three of the nation's OPOs participated in an in-person learning congress where collaborative participants shared successes and insights from their improvement journeys. Many attendees indicated their intent to implement practices learned during the event as well as a desire to attend another OPTN-led congress. Plenary session recordings and accompanying slide sets will be made available to all OPTN members via the ***OPTN DCD Procurement Collaborative*** playlist in the OPTN Learning Management System (available through the OPTN contractor web portal known as [UNOS Connect](#)).

Future Projects

To maintain the collaborative momentum and complement the findings of this project, the CI team recently initiated a DCD Lung Transplant Collaborative, with the potential for additional organ-specific

DCD transplant projects in the future. As the value and community interest in collaborative improvement efforts is favorable, the CI team will continue to assess relevant topics for potential initiatives.

Appendix A: Participating OPOs

**indicates Practice Model Organization*

Code	Name	Cohort A	Cohort B
ALOB	Legacy of Hope	X	X
AROR	Arkansas Regional Organ Recovery Agency	X	X
*AZOB	Donor Network of Arizona	X	
CADN	Donor Network West		X
CAGS	Sierra Donor Services	X	
CASD	Lifesharing-A Donate Life Organization		X
CORS	Donor Alliance	X	X
DCTC	Washington Regional Transplant Community		X
FLFH	OurLegacy	X	
FLMP	Life Alliance Organ Recovery Agency		X
FLUF	LifeQuest Organ Recovery Services		X
FLWC	LifeLink of Florida	X	X
HIOP	Legacy of Life Hawaii	X	X
IAOP	Iowa Donor Network	X	X
INOP	Indiana Donor Network		X
KYDA	Kentucky Organ Donor Affiliates		X
LAOP	Louisiana Organ Procurement Agency		X
*MAOB	New England Organ Bank	X	
MDPC	Living Legacy Foundation of Maryland	X	
MIOP	Gift of Life Michigan		X
MSOP	Mississippi Organ Recovery Agency	X	
NCCM	LifeShare Carolinas	X	X
NCNC	Honor Bridge	X	X
NEOR	Live on Nebraska	X	
NJTO	New Jersey Organ and Tissue Sharing Network OPO		X
NMOP	New Mexico Donor Services	X	
NVLV	Nevada Donor Network	X	X
NYRT	Live On NY		X
NYWN	Upstate New York Transplant Services Inc.		X
OHLB	Lifebanc		X
OHLP	Lifeline of Ohio	X	
OHOV	LifeCenter Organ Donor Network		X
OKOP	LifeShare Transplant Donor Services of Oklahoma	X	X
ORUO	Pacific Northwest Transplant Bank	X	X
*PADV	Gift of Life Donor Program	X	
TNDS	Tennessee Donor Services	X	
TNMS	Mid-South Transplant Foundation		X
TXGC	LifeGift Organ Donation Center	X	X
TXSA	Texas Organ Sharing Alliance		X
TXSB	Southwest Transplant Alliance	X	X
VATB	LifeNet Health		X
*WALC	Pacific Northwest Transplant Bank	X	
WIDN	Versiti Wisconsin, Inc.	X	