OPTN DCD Lung Transplant Collaborative Executive Report

Background

The OPTN completed a successful collaborative initiative to increase procurement of organs from Donation after Circulatory Death (DCD) donors which provided the opportunity for a complementary effort on utilization of these organs. The OPTN DCD Lung Transplant Collaborative was subsequently initiated to address the variation in DCD lung utilization and increase the number of DCD lung transplants at both the individual program and community levels. Forty-five percent of adult lung transplant programs nationwide voluntarily joined this collaborative and focused performance improvement efforts across two key areas: optimizing internal transplant processes and patient care practices and strengthening collaboration with Organ Procurement Organizations (OPOs).

Methodology

The Collaborative Improvement (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: (May 2022 – November 2022)
Effective DCD lung transplant practices were gathered from four Practice Model Organizations to develop an Improvement Guide. This resource included potential interventions for programs to implement to effect change based on the key drivers mentioned above. Upon determination of the project framework and scope, twenty-nine adult lung programs enrolled in the effort and were oriented to the collaborative improvement framework, process improvement methodology, and the goals of the initiative. A complete list of project participants can be found in Appendix A.

Engagement: (December 2022 – July 2023)
Participants established individual project aims to contribute to the cohort goal and developed project charters to map out Quality and Performance Improvement (QAPI) initiatives. All participants worked to improve their internal program processes, and some also focused improvement efforts on building relationships with OPOs.

Utilizing an "All Teach, All Share, All Learn" framework, participants interacted through a web-based project platform with discussion boards, resources, and data dashboards. Performance improvement specialists provided individualized coaching to participants as they worked through their respective QAPI projects, and routinely facilitated interactive webinars and collaborative calls.

**Evaluation**: (August 2023 – November 2023)
Data were analyzed on the performance of each participating transplant program, of the collective cohort, and the overall project effort. Preliminary project data was shared during the Collaborative Learning Congress as referenced in the Summary section. Detailed data is provided in the Results section below. Of note: the OPTN implemented Lung Continuous Distribution policy on March 9, 2023, which was during the active engagement period.

Results

Outcome Measures

The cohort goal was to increase DCD lung transplants collectively by 30% over the pre-engagement period (April 2022-November 2022). During the active engagement period (December 2022-July 2023), the 29 participating programs surpassed their collective aim by increasing the number of DCD lung

transplants by 45% (N=126, plus an additional heart/lung transplant), while the remaining 35 programs in the rest of the nation increased by 60% (N=72) (Figure 1).
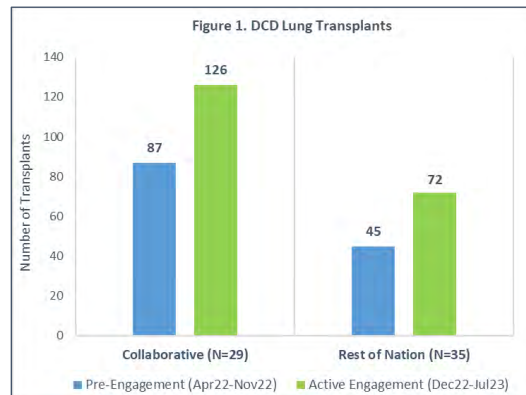
Based on OPTN data as of 11/3/2023. Data subject to change based on future data submission or correction.

In addition to the collective aim, each participating program set individual DCD lung transplant aims, based on their starting point and what they felt was achievable during the project. Individual program aims ranged from performing one DCD lung transplant to performing 21 transplants. Thirty-eight percent of participants met or exceeded their individual aims.

Balancing Measures
While the goal of the collaborative was to increase the number of DCD lung transplants, it was important to make sure these improvements did not cause unintended consequences in other areas. Donation after brain death (DBD) lung transplants were evaluated as a balancing metric. The number of DBD lung transplants decreased by 4.7% between the pre- and active-engagement periods across the cohort; however, it should be noted that this decrease was concentrated among a few programs. The rest of the nation experienced a 10.6% increase in DBD lung transplants between the same time periods.

Process Measures
Participants were asked to voluntarily submit data during the first four months of engagement to provide more details about their experiences with lung offers and transplants. Process measures included: use of local teams for recovery/assessment, perfusion utilization, warm ischemic time averages, and dry run data. There was variability in the submission and completeness of data, which made it difficult to identify definitive monthly reporting trends.

Additionally, characteristics of DCD donor lungs transplanted were reviewed. Compared to the pre-engagement period, collaborative participants transplanted more perfused lungs, lungs from older donors, higher BMI donors, and accepted lungs from farther distances.

Project Analysis
The DCD Lung Transplant 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 performance improvement specialist support, topic-specific webinars, monthly collaborative calls, and collaboration with other programs were the most beneficial aspects of the project. Most participants indicated that their program improved at least one DCD lung transplant

process during the collaborative, felt the collaborative was beneficial to their team, and have a desire to participate in future OPTN collaborative efforts. Participant feedback will be incorporated to improve future collaborative offerings.

Summary

A Learning Congress was hosted on September 26-27, 2023, to share and spread learnings from the collaborative. Every adult lung program from across the nation was invited to send representation to the in-person event and virtual attendance was encouraged and open to all. Representatives from 36 of the nation's lung transplant programs and 17 OPOs participated in-person, with an additional 7 programs and 11 OPOs joining virtually. Collaborative participants shared successes and insights from their improvement journeys and attendees engaged in discussions and activities to generate additional improvement ideas and share effective practices. 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 Lung Transplant Collaborative Learning Congress*** playlist in the OPTN Learning Management System (available through the OPTN contractor web portal known as [UNOS Connect](#)). 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 Transplant Programs

indicates Practice Model Organization

Code	Name
AZSJ	St. Joseph's Hospital and Medical Center
CACS	Cedars Sinai Medical Center
CASD	University of California San Diego Medical Center
CASF	University of California San Francisco Medical Center
CASU	Stanford Health Care
CAUC	University of California at Los Angeles Medical Center
FLTG	Tampa General Hospital
FLUF	UF Health Shands Hospital
ILLU	Loyola University Medical Center
KYUK	University of Kentucky Medical Center
MNUM	University of Minnesota Medical Center, Fairview
NCDU	Duke University Hospital
NEUN	The Nebraska Medical Center
NJBI	Newark Beth Israel Medical Center
NYCP	NY Presbyterian Hospital/Columbia Univ. Medical Center
NYMS	Mount Sinai Medical Center
OHCC	The Cleveland Clinic Foundation
OHOU	Ohio State University Medical Center
OHUH	University Hospitals of Cleveland
PAPT	University of Pittsburgh Medical Center
PAUP	Hospital of the University of Pennsylvania
SCMU	Medical University of South Carolina
TXBC	University Hospital, University of Texas Health Science Center
TXHH	Memorial Hermann Hospital, University of Texas at Houston
TXHI	CHI St. Luke's Health Baylor College of Medicine Medical Center
TXTX	Baylor University Medical Center
UTMC	University of Utah Medical Center
VAFH	Inova Fairfax Hospital
WISE	Froedtert Memorial Lutheran Hospital