UNOS Region 5 Educational Collaborative

The Mirage, Las Vegas, NV • August 24, 2022 • 8:00 am–5:30 pm

Reception to follow – 5:30 pm–6:30 pm

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#DonateLife

Organ Recovery Systems
UNOS Region 5 Collaborative
UCI Irvine COVID-19 Updates

Uttam G. Reddy, MD
Medical Director
UC Irvine Kidney-Pancreas Transplant Program
August 24th, 2022
COVID-19 Updates

- Vaccination Policy
- Monoclonal Ab use
- COVID+ donors
- Paxlovid Cautionary Tale
Is Vaccination Mandatory at Your Center?

• At UCI, vaccination is NOT mandatory for transplant
  • Highly recommended and encouraged amongst our waitlisted and pre transplant patients
  • High percentage of lower socioeconomic patients
Vaccine Refusal

• Rising rates of vaccine refusal has challenged transplant centers
  • Do transplant centers deny organ transplantation on the basis of vaccine refusal?
    • YES? Based on scarce resource, stewardship and beneficence
    • NO? Justice and respect for persons. Avoid health care disparities or medical coercion
Argument against Forced Vaccination

• Not against vaccines, just against denying candidates on the basis of it
• Crosses a moral boundary
• Concerns regarding justice, autonomy, freedom of choice
• Initial differences in transplant outcomes between vaccinated and unvaccinated recipients did not include treatments such as mAb, Evusheld, etc
  • Vaccinated patients are also still dying
Opposing Vaccine Mandates in Transplant

- From the individual transplant patient, even if unvaccinated, transplant clearly remains in the patients best interest.
  - Immediate, certain and potentially severe harm in denying an organ transplant worse than the downstream possibility of complications due to a vaccine preventable illness.
- What about patients who have medical contraindication?
Transplant Disparities and Vaccination

- Vaccine refusal differs by racial, ethnic and socioeconomic, education or religious groups.
- Vaccine hesitancy exists in white and well educated.
- Vaccine hesitancy is more common among African Americans.
  - Past instances against AA as source of ongoing fear and mistrust of medical system.
  - Denial of transplantation can exacerbate trans-generational traumas and worsen already documented inequities in transplantation.

Worsening Disparities

- Risk of magnifying existing disparities in transplantation by disproportionately affecting people of color, immigrants, and non English language speakers, patients with less education, or minority groups.\(^1\)
- We have been able to convince the majority of our unvaccinated patients to get vaccinated after transplant. Building trust with each clinical encounter.

1 Gilkey MB, et al. Hum Vaccin Immunother, 2017
Monoclonal Ab Use - >10 days symptoms

- REGEN-COV Casirivimab + Imdevimab
- Bamlanivimab (Delta)
- Sotrivimab (Omicron)
- Bebtelovimab (BA.2 subvariant)

- Close to 100 doses of mAb given to Transplant Patients at UCI. Zero deaths.
Transplant recipients are particularly vulnerable to catastrophic sequelae of COVID-19. In an early multi-center study from 2020 that followed 482 solid organ transplant (SOT) recipients with COVID-19, the authors reported a large percentage of hospitalizations (78%), mechanical ventilation (31%), and death (20.5%) during a 28 day window. Despite mortality reduction following the vaccine, COVID remains a high mortality risk in this patient population. Bamlanivimab is a recombinant neutralizing human IgG1 monoclonal antibody (mAb) directed against the spike protein of SARS-Cov-2.

We sought to identify interventions which could mitigate the mortality risk of COVID-19 by evaluating patient outcomes when early disease diagnosis was paired with bamlanivimab therapy.

In a single center cohort of 147 kidney transplant patients who tested positive for COVID during a 12 month period from March 2020 to March 2021, 41 eligible patients received IV bamlanivimab therapy. Eligible patients had symptoms <7 days and did not require supplemental oxygen at the time of bamlanivimab therapy. Eligible patients were identified by the on-call transplant team who arranged for both expedient COVID testing and bamlanivimab infusions. Patients in the exclusion group include patients diagnosed with COVID before bamlanivimab was available. None of the patients in our cohort received the COVID vaccine as this predated widespread vaccination efforts.

Of 41 patients who received IV bamlanivimab therapy, zero deaths were observed and only four hospitalizations. Two patients required ventilatory support but were eventually successfully extubated. In contrast, of the 106 patients who did not receive bamlanivimab the mortality rate was 15 deaths (14%).

In the total cohort of 147 kidney transplant patients, 68 patients required hospitalization (47%) though the bamlanivimab cohort accounted for less than 3% of total hospitalizations. Of the total 68 hospitalized patients, 21 patients were intubated (14%) and all 15 deaths occurred in patients deemed ineligible for bamlanivimab.

With new variants of the SARS-Cov-2 virus continuously being detected, it is evident that COVID-19 will continue to pose a risk to transplant recipients. Since treatment options are still limited it is even more crucial to identify strategies that can mitigate morbidity and mortality in this high risk population. Vigilant testing and early detection of COVID-19 within 7 days of symptom onset allowed for timely intervention with mAb bamlanivimab therapy that significantly reduced disease severity and mortality risk amongst kidney transplant recipients.

Further mutations to the SARS-Cov-2 genome have affected the spike protein which bamlanivimab targets to prevent virus entry into host cells.

However, multiple different monoclonal antibodies are also now available.

Use of mAb is still an effective treatment strategy.

Availability of COVID home testing has facilitated early detection and intervention in transplant patients who are found to be COVID-19 positive.

Early detection remains crucial in minimizing the impact of COVID-19 in transplant recipients.


The authors have no disclosures.
Bamlanivamab Improved Outcomes

Effect of Bamlanivimab on Patient Outcomes

- Bamlanivimab: 4 patients, 2 hospitalizations, 0 intubations, 1 death
- No Bamlanivimab: 19 patients, 64 hospitalizations, 15 intubations, 15 deaths

UCI Health
Bebtelovimab

• Since May 2022, 41 patients had COVID.
  • 32/41 got Bebtelovimab
    • Zero hospitalizations, zero deaths
  • 9/41 did not get Bebtelovimab
    • 2 deaths (Vaccinated, but not boosted)
COVID+ Decreased Donors

- To date, our program has transplanted 6 COVID positive donors (2 on Monday 8/22/22)
  - Other causes of death (non-COVID)
  - COVID seemed to be incidental
  - High Cycle times (over 25)
  - Offered to COVID vaccinated patients only
  - All doing well. No transmission or random events
Paxlovid Use in Transplant Patient

70 year old Chinese male with ESRD due to IgA s/p preemptive DDRT in China in April 2019 in China. Vaccinated x 2, boosted x 1.

Came to the UCI ER on August 11th, 2022. ER discharged patient on oral Paxlovid

Patient re-admitted on August 15th, 2022 with abdominal pain, nausea, vomiting, diarrhea.
Paxlovid – Cautionary Tale

- Labs showed AKI and Prograf level that remained >60 for 3 days. On day 4, Prograf level came back at 55.
- Tacrolimus level held with plan to repeat lab in a few days. By day 7 of having held FK, level came back within therapeutic range.
Intermountain Transplant Services

COVID Vaccine Requirement

Amy W. Herbert, RN, BSN, CCTC
Nurse Manager Kidney/Pancreas Transplant
Disclosures

Relevant Financial Relationships:
• Salaried, full-time employee of Intermountain Healthcare.
Intermountain Transplant Services Leadership

Dr. Diane Alonso, MD, FACS
Program and Surgical Director
Abdominal Transplant Services

Dr. Donald Morris, MD
Medical Director
Kidney/Pancreas Transplant

Dr. Richard Gilroy, MD
Medical Director Liver Transplant and Hepatology
Intermountain Liver Transplant Team
Vaccine Requirements Prior to November 1, 2021

- Hepatitis A series
- Hepatitis B series
- MMR
- PCV 13/ PPSV 23 –or-
  - PPV 20
- Influenza (annually)
- Shingrix
- tDap
Proactive Approach
Intermountain Transplant Services

Timeline of Vaccine Information and Requirement

August 2021
Internally, we began tracking percentage of listed patients that were COVID vaccinated.

August-November 2021
All patients were educated, and it was “highly encouraged” to be vaccinated but not required.

September 8, 2021
Intermountain held virtual ‘fact’ meeting for all caregivers

September 9, 2021
Fact sheet/talking points for caregivers
Intermountain Transplant Services Process

Timeline of Vaccine Information and Requirement

- **September-November 2021**: Coordinators and MD’s to contact all patients.
- **November 1, 2021**: All patients moving forward are required to receive COVID vaccine at our center.
- **November 2, 2021**: 86% vaccination rate of all listed patients (status 1 and 7) for both liver, kidney, and pancreas.
- **August 9, 2022**: 92% of all listed patients at Intermountain Transplant Center are COVID vaccinated.
QUESTIONS?
Considerations for Organ Procurement During an Evolving Pandemic

Angela Velleca, MHDS, BSN, RN, CCTC
Clinical Operations Manager, Heart and Lung Transplant
Cedars-Sinai | Comprehensive Transplant Center | SMIDT Heart Institute
I have no relevant financial relationships to disclose
**COVID-19 Donor Screening Pathway**

**Heart Transplant - Potential Organ Donor**

All donors should undergo screening questionnaire for COVID-19 symptoms and PCR test for SARS-CoV-2

**Clinical Scenario 1**
Reported h/o Positive COVID PCR

Donor Characteristics
- Known h/o COVID Positive PCR
- Asymptomatic
- Non-COVID related COD (such as MVA)

Infection < 10 days
- Decline Organ
- PCR Negative
  - Ok to Proceed
  - CT < 25 → Decline Organ
  - CT > 35 → Ok to Proceed
- PCR Positive
  - Ok to Proceed

Infection > 10 days
- Decline Organ

**Clinical Scenario 2**
COVID Recovered - Positive PCR

Donor Characteristics
- Known COVID Positive PCR/infection
- Non-COVID related COD
- Symptomatic Illness - newly recovered
- Asymptomatic, afibrile x 24-48hr

< 21 days from infection
- Decline Organ
- PCR Negative
  - Ok to Proceed
  - CT < 25 → Decline Organ
  - CT > 35 → Ok to Proceed
- PCR Positive
  - Ok to Proceed

> 21 days from infection
- Decline Organ
- Obtain CT
  - CT < 25 → Decline Organ
  - CT > 35 → Ok to Proceed

**Clinical Scenario 3**
Incidental finding of Positive PCR

Donor Characteristics
- Non-COVID COD
- Asymptomatic
- Afibrile 24-48hrs

*Consider for high urgency Status 1-3 pts

Obtain CT
- CT < 25 → Decline Organ
- CT > 35 → Ok to Proceed

**Clinical Scenario 4**
COVID Related COD

Donor Characteristics
- COVID Related COD
- Negative PCR

Decline Organ

*All potential recipients of a COVID positive donor organ will be consented.

*Cycle Time (CT) is an indirect quantitative measure of active or inactive virus.

*CT assay range for this algorithm provided by One Legacy-OPO (Keck lab) is 15-39 (high to low titer).

*COVID PCR by nasopharyngeal swab only, rapid test not definitive due to potential for false results.

*Serum antibody testing may be helpful in certain situations, but IgM result should be reviewed with caution and involvement of transplant ID specialist will likely be needed for interpretation.

*CT in the intermediate range of 25-35 would need clinical interpretation by transplant ID specialist.
Understanding Cycle Threshold (Ct)

Interpretation of Ct values:
23.8 and 33.2 – positives
37.0 – high Ct positive

Indeterminate zone
Ct 38.1 to 39.9

Positive control
Ct 27.0

Threshold line
Donor Evaluation

Donor tests COVID PCR positive

- Cycle threshold
- Donor/Recipient vaccination status
- Symptom presentation
- CXR results
- Lung- BAL required
- COVID PCR testing from admission and throughout hospital course
- Transplant Infectious Disease collaboration
Informed Consent for Organ from Donor Positive For SARS COV-2

COMPREHENSIVE TRANSPLANT CENTER
ORGAN FROM DONOR POSITIVE FOR SARS COV-2 (COVID-19) INFORMED CONSENT OR DECLINATION

To be completed by patient:

I (please print your name), ____________________________, have been advised by my doctor (please print your doctor’s name), ____________________________, MD, of the option to choose to receive the following organ or organs from a donor who has tested positive for the virus SARS COV-2 associated with COVID-19 disease.

☐ Heart ☐ Lung ☐ Liver ☐ Kidney

I understand this means that the donor may have an active COVID-19 infection or may have a history of having an active COVID-19 infection.

I also understand that while there have been no reports of recipients getting a COVID-19 infection from blood transmission associated with a donor organ, there also has been very limited research on the use of organs from donors with COVID-19.

I further understand that guidelines have been developed by experts based on best available evidence to limit the risk of using organs from donors that may have been or known to have been exposed to COVID-19; and my transplant physicians are following these guidelines.

Finally, I understand that by opting to allow organs from donors who have or may have had an active COVID-19 infection in addition to donors who have no history of COVID-19 infection, I will be offered the first available organ(s).

My doctor has informed me that the potential or known risks of opting in include:

- Becoming infected with COVID-19 from the transplanted organ(s).
- There are currently no available medications to treat COVID-19 infection except for certain medications to potential reduce the duration of illness.
- COVID-19 infection may result in complications including but not limited to acute respiratory failure, acute injury to the liver, heart and/or kidneys, septic shock, and blood clotting disorders. All such complications could impact survival rate and/or quality of life after organ transplantation.
- There are potentially unknown risks, including that long-term outcomes of transplants from donors with COVID-19 is not understood or known.
In Summary

• Screening pathway effective in evaluating COVID-19 donors.
• Able to successfully utilize scarce organs for critically ill candidates.
• 8 heart and 8 lung transplants performed utilizing COVID PCR positive donors
• Kidney and liver transplant programs
NRP: Transplant Center & OPO Collaboration

Brandon Jackson, CTP
Disclosures

I have no actual potential conflict of interest in relation to this program/presentation.
Normothermic Regional Perfusion

- Restore flow of **oxygenated blood** following cardiac arrest

- Reverse warm ischemic injury of thoraco-abdominal organs after circulatory death
Pre-OR Preparedness
Early OPO/Transplant Center Collaboration

• Pre-recovery communication is crucial in supporting the success of NRP !!!

• Discuss needs of transplant center
  – Anesthesia
  – Blood
  – Medications
  – Special Equipment

• Discuss OPO policy on withdrawal
  – Location
  – Stand off Period
  – Vital Sign Update
  – Withdrawal Time (arriving ready to w/d)
Transplant Center Collaboration

• Prior to OR have transplant programs discuss NRP (i.e.- abdominal team)

• Discussion should include
  − Cannulation
  − Abdominal Team on Standby for incision
  − WIT thresholds
  − Liver Needs (liver enzymes, time on pump, lactates, etc)

• Surgeon to Surgeon discussion !!!
Hospital Partner Readiness/Education

• Early communication to hospital OR on NRP needs
  − Large OR Room

• Typical NRP Cases will increase OR hours
  − Withdrawal Time + 4-5 hours in OR

• Detailed Discussion with ICU Team
  − Understanding NRP process

• Anesthesia Request
  − If anesthesia is needed (reintubation, a-line, bronch)

• Education/Communication
  − Standardized messaging to OR staff
Normothermic Regional Perfusion is a worldwide established surgical technique used by transplant centers to increase organ potential and utilization. It involves using machine perfusion to evaluate and assess organs deeming them suitable for transplant.
Operating Room Readiness
NRP OR Recovery Setup

Anesthesia Machine

Donor OR Bed

Back-Table

Suction

CST

Bovie

CPB

Heart Backtable

Perfusionist
OR Communication

• **HUDDLE, HUDDLE, HUDDLE !!!!!**

• Proper Introductions
  - Increase number of transplant personnel

• Define Roles
  - Transfer of Donor
  - Time Out
  - Positioning of patient
  - Announcing Incision

• Prepare for Rapid Incision
  - Allow NRP team space to move quick and efficient
  - Noise to a minimum until initiation of CPB
  - Once on CPB, we can slow down and move like a DBD donor.
NRP Surgical Technique
Chest Emergently open

Head vessels exposed and clamped

Venous cannula placed in right atrium, blood drained into pump

Aortic Cannula placed in aorta

Cardio-pulmonary Bypass initiated

Average time from incision to CPB, 4 min

NRP Steps
Head Vessels

• All 3 head vessels (brachiocephalic, left common carotid, and left subclavian) are cleanly dissected and identified.

• Vascular clamp is placed over all three head vessels prior to any cannulation of CBP.

• Clamping all 3 head vessels occludes flow to the brain.

• Aortic Root Cannula placed in the innominate artery to stop all potential collateral flow from the vertebral.

• Result in loss of upper limb blood pressure monitoring.
OR Documentation
Times and Documentation

- **Warm Ischemic Time**
  - Varies by program/Opo
  - Defined as agonal phase to initiation of CPB

- **Clamp Time**
  - Initiation of Cold flush
  - NOT off CPB

- **Bypass Record**
  - Should be kept by NRP team
  - Flow Parameters
  - Pressures
  - Lab Values
  - Uploaded to UNET
NRP Challenges and UCSD Best Practices
CHALLENGES

- Transplant Center On Time
- OR Readiness
- Increase in OR Attendees
- Longe Wait Times
- Shorter Notice of Organ Offer
- Family Anxiety/Push to extubate
- Transplant Teams Collaboration

Allowing Transplant Center Proper time to set up
Completely Self Contained Specialized Team

UCSD Shows up 1 hour to 45 mins prior to withdrawal.

No Demands/Request for Withdrawal

Meetings with abdominal colleagues

Stationed a Plane in SD ready for quick turn around

No additional needs from OPO (blood, meds, anesthesia)

OPO Liaison/First Call

Attempt at backing up livers with UCSD

UCSD Shows up 1 hour to 45 mins prior to withdrawal.

Responses/UCSD Best Practices
SUCCESS of NRP Program
UC San Diego Health DCD Heart History

NRP DCD Heart Activation

May 2021

NRP 2021 Statistics

25 NRP DCD Hearts Transplanted

NRP 2022 Statistics

YTD 28 NRP DCD hearts transplanted

40-50% DCD Volume
Current DCD Heart Centers

DCD transplant from 1/2/21-present
UNOS Data Services
UCSD Abdominal NRP Team

- Collaboration and education for UCSD abdominal surgeons and CPB cannulation

- Abdominal only NRP completed by cardiac team in conjunction with training

- Plans for independent abdominal only NRP program

- Increased WIT threshold for DCD livers

- Offering our local OPO NRP recovery DCD resources
Teamwork
Thank You !!

Brandon Jackson, CTP
UC San Diego Health Center for Transplantation
Stacking the Odds in Our Favor:
Navigating the Implementation of NRP
One OPO’s Journey

Jaclyn Russe RN, BSN, CCRN
Kiersten Smith RN, BSN
New Frontiers

- First NRP Case in May 2021
- Abdominal only in September 2021
- Lots of bumps in the proverbial road
- Facilitated increased communication with our transplant partner
- Started with heavy HD involvement to prepare hospitals for what was coming

Lifesharing

28 Hospitals
3.5 million people
Navigating the Implementation of NRP

Overview

• Mitigating Barriers
• Managing Relationships
• Communication/Sharing Information
• Forms & Consent
• New Template
• OR Procedure
• Logistics
Potential Barriers to Advancing NRP

- Ethical questions
  - 2021 ACP Statement of Concern
    - Defining Death
    - Clamping of cerebral arteries
    - Transparency with donor families
- Logistics
  - Equipment, available team, transportation, timing, etc.
- Donor hospital misconceptions
  - Rumors or spread of inaccurate information
Navigating the Implementation of NRP

Interpersonal Management

- **We are not there to force anyone!**
- Integrating NRP and other initiatives into routine in-services
- HD committed to onsite, real time Q&A with unit staff in early cases
- Every hospital and OPO is unique
- Questions were abundant, don’t let them derail you!
- Perception is reality
Navigating the Implementation of NRP

Interpersonal Management

- Managing Relationships
  - We are there to help facilitate communication between surgeons and transplant centers
  - Teamwork CASD teams have been more than willing to initiate those calls
  - Leveraging NRP/OCS teams for hospital huddles prior to extubation
Navigating the Implementation of NRP

Interpersonal Management

Communication/Sharing Information

Avoid:
- “Restarting”
- “Reanimating”
- “Resuscitating”

Use:
- “Reperfusion”
- “This does not occur until after cardiac death”
- “Provides a select reperfusion to allow for a more thorough organ assessment for transplantation”
NRP (Normothermic Regional Perfusion) is a method of preserving organs from deceased organ donors that can give transplant recipients a better chance of survival.

NRP is used in DCD cases where the patient’s family has elected to withdraw care and donation has been authorized.

During NRP, oxygenated blood is pumped to the specific organs being procured. This happens after the donor has died — but before the organs are removed from the deceased donor’s body.

During NRP, oxygen is not circulating to the deceased donor's brain.

NRP can help reverse organ damage that occurs during the dying process. But it does not and cannot reverse death.

By law, organ donation cannot occur until after a patient has died. Death must be declared by a medical expert who is not involved in the organ donation or transplantation process.

Utilizing NRP during recovery does not deviate from the standard DCD protocol. NRP occurs after death is declared and cardiac standstill has been confirmed.
Navigating the Implementation of NRP

Process/Protocol Formation and Adaptation

Forms & Consent
- Consent woven into current DCD notification forms
- Consent now has attestation
- Heparin Consent

“Organs may need to be placed on machines before being transplanted. These machines help to optimize an organ’s function before transplant and assist transplant doctors with determining if an organ is suitable to safely transplant.”
Navigating the Implementation of NRP

Process/Protocol Formation and Adaptation

New Template in Donor Highlights:

Definition of WIT - Agonal time to circulation restoration

Patient extubated:
Agonal phase started at:
CTOD at:
NRP (ECMO) started:
Aortic Flush at:
WIT (Agonal phase to start of NRP):
Navigating the Implementation of NRP & OCS

• Challenges
  o Staffing
  o Transportation and logistics of machines
  o Anesthesia
  o Transplant center protocol, labor intensivist, more supplies
• Total of 7 DCD cases with 4+ OTPD since implementing NRP in March 2021
  o A total of 35 organs transplanted from those 7 cases
• Improved outcomes in rapid and expedited DCDs
  o Able to allocate after x-clamp if placed on OCS pump
• 9 DCD hearts transplanted since March 2021
  o 8 with NRP, 1 on OCS Pump
  o 70 hearts transplanted in that timeframe, making DCD hearts 13% of our total heart transplanted
Thank you!
OCS Utilization at a Busy Lung Transplant Program

Kate Grief, MBA, MSN, RN, CCTC
Sr. Director of Transplant Services
August 24th, 2022
Work that uplifts humanity has dignity and importance and should be undertaken with painstaking excellence.

-Martin Luther King Jr.
St. Joseph’s Hospital and Medical Center

<table>
<thead>
<tr>
<th>Transplant Program</th>
<th>Volume Since Inception</th>
<th>Centers of Excellence</th>
<th>CMS Approved Transplant Program</th>
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<tbody>
<tr>
<td>Lung</td>
<td>1064</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Kidney</td>
<td>207</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Liver</td>
<td>141</td>
<td>Yes</td>
<td>Yes</td>
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</table>
NTI Lung Transplant Program Overview

• Established in 2006
• UNOS approval 2007
  – Transplant ~ 100 lung transplant patients/year
  – Quality outcomes better than national average
  – Lung: Transplant #1065
  – Short waitlist times (<3 weeks)
Total Lung Transplants Performed at NTI

Lung Transplant Volume

- 2007: 11
- 2008: 10
- 2009: 15
- 2010: 32
- 2011: 42
- 2012: 56
- 2013: 70
- 2014: 73
- 2015: 93
- 2016: 114
- 2017: 89
- 2018: 104
- 2019: 119
- 2020: 94
- 2021: 97
- 2022: 45

Lung Transplant Volume
Indications for Lung Transplant

• Chronic, end-stage lung disease
  – High risk of death (>50%) within two years if not transplanted
  – High likelihood (>80%) of surviving at least 90 days after transplantation
  – High likelihood (>80% of 5 year post transplant survival from a medical perspective provided that there is adequate graft function

• All other medical therapies have been exhausted

• Candidates Usually report a poor quality of life
Indications For Lung Transplant

- Chronic Obstructive Lung Disease
  - Emphysema
  - A1AT Deficiency

- Interstitial Lung Diseases
  - Ideopathic Pulmonary Fibrosis (IPF)
  - Sarcoidosis
  - Lymphangioleiomyomatosis (LAM)

- Infectious Lung Diseases
  - Cystic Fibrosis
  - Bronchiectasis

- Pulmonary Vascular Diseases
  - Primary Pulmonary Hypertension
  - Eisengmenger’s Syndrome

- Retransplantation
Current Realities of Lung Transplantation
Waitlist in USA

<table>
<thead>
<tr>
<th>Organ</th>
<th>Candidates</th>
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<tbody>
<tr>
<td>Kidney</td>
<td>97,277</td>
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<tr>
<td>Liver</td>
<td>11,281</td>
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<tr>
<td>Pancreas</td>
<td>870</td>
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<tr>
<td>Kidney/Pancreas</td>
<td>1,987</td>
</tr>
<tr>
<td>Heart</td>
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<tr>
<td>LUNG</td>
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<tr>
<td>Heart/Lung</td>
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<tr>
<td>Intestine</td>
<td>201</td>
</tr>
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Source: United Network for Organ Sharing
## Waitlist in Region 5

![Pie chart showing organ distribution]

### Organ Candidates

<table>
<thead>
<tr>
<th>Organ</th>
<th>Candidates</th>
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</thead>
<tbody>
<tr>
<td>Kidney</td>
<td>21,462</td>
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<tr>
<td>Liver</td>
<td>2,433</td>
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<tr>
<td>Pancreas</td>
<td>74</td>
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<tr>
<td>Kidney/Pancreas</td>
<td>293</td>
</tr>
<tr>
<td>Heart</td>
<td>372</td>
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<tr>
<td>LUNG</td>
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<tr>
<td>Heart/Lung</td>
<td>6</td>
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<tr>
<td>Intestine</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: United Network for Organ Sharing
Current Realities of Lung Transplantation

Lung Shortage

Source: United Network for Organ Sharing
Transmedics Organ Care System

Expanding the Donor Pool
Rationale for Ex-Vivo Lung Perfusion

**Cold Static Storage**

- Slow metabolism
- Decreases need for O2/nutrients
- Preservation by slowing organ deterioration for a short period
- Unable to assess/recondition

**Normothermic EVLP**

- Tissue physiologically active
- Allows for several hours:
  - Preservation
  - Assessment
  - Reconditioning
Cold vs. Normothermic
Ice Bath
Warm Bath
How Does Transmedics Organ Care System Work?

- Reduction of ischemia
- Immediate and sustained recruitment/resuscitation
- Continuous monitoring and assessment of function
- Efficient utilization of resources

Portable EVLP

Up to 10+ hours

Portable OCS™ physiologic support

Donor

Recipient

Transplantation
How OCS Works

• Cold perfusate flush in donor and retrieval
• Lungs placed on device in the donor OR
• System primed with perfusate/additives
• Perfusate warmed to 32 deg C
• Gradually increase pump speed (1.5-2 L/min) as temp increases to 37 deg C
• Start ventilator when temp gets to 34 deg C
Implementing an OCS Program

• Requirements:
  – Specialized surgeon training with Transmedics
  – Specialized OCS operator training with Transmedics
  – Blood Bank Protocol
  – Pharmacy Protocol to release medications
  – Adequate storage space for device and disposables
Specialized Surgeon Training

- Passive antegrade and retrograde flush
- Ensure sufficient trachea to put on device
- Clear redundant tissue from around the left atrial cuff
- Reconstruct PA if heart is taken
- Excluded from OCS if:
  - Moderate to severe pneumothorax, hemothorax, or pulmonary contusions
  - Presence of pneumonia of lung infection
Specialized Surgeon Training
Healthy Lungs on OCS Device
Specialized Operator Training

Parameter Adjustment and Assessment

- **Hemodynamics**
  - Flow
  - PA pressure
  - PVR
  - LA pressure
  - HCT

- **Ventilation**
  - Settings (TV, rate, PEEP, FIO₂)
  - Airway pressures
  - Compliance
  - Oxygenation capacity (S₉PA O₂, S₉LA O₂, P/F ratio)

- **Modes/Settings**
Specialized Operator Training
Hospital Processes

- Blood Bank Protocol
  - Requires 3 units of ABO compatible or O-Neg PRBC’s
  - Ordering and release process for a non-admitted donor
  - Temperature control transportation method
  - Return process for unused blood products

- Pharmacy Protocol
  - Requires multiple drugs
  - Ordering and release process
  - Return process for unused medication
  - Charge process for used medications
Device Storage
Equipment Needed for OCS Run
Advantages

- Recovery and placement of marginal lungs
- Multiple transplants feasible
- More complex cases considered
- Staggering cases based on complexity
- Allows for procurement with a crossmatch pending
- Increased mileage to capture lung donors
Considerations

- Purchase of device, disposable kits, and OCS preservation solution/equipment
- Storage of device, disposable kits, and OCS solution/equipment
- Transportation logistics
- Specialized training of staff
- Long procurement runs
- Communication with OPO (OR space)
- Contracting with insurance companies to cover costs of disposables
Transmedics National OCS Program

• Transmedics partners with OPO’s
  – Primary center can choose to use the service
  – If lungs not allocated prior to donation, Transmedics may place on device so allocation can continue

• Local recovery surgeon/team
  – Surgeon to surgeon communication needed
  – No charge to transplant center if lungs declined in the OR

• +/- travel logistics support

• Clear communication between OPO/TX Center/Transmedics
Different Processes for Coordinating the Implant

- Standard Procurement
- OCS Procurement
- Transmedics National Recovery
- DCD Procurement
- Local Recovery Surgeon
- NRP
Conclusion

- Lung utilization is low nationally and in our region
- Lung perfusion devices offer opportunity to recover lungs that may otherwise be discarded
- Implementing a hospital based OCS program requires specialized training, additional resources and well defined processes
- Using OCS can allow for multiple transplants, staggering transplants, or optimize the timing for complex cases
- Communication is key
Thank You
Review of OCS™ use in Heart Transplantation

Angela Velleca, MHDS, BSN, RN, CCTC
Clinical Operations Manager, Heart and Lung Transplant
Cedars-Sinai | Comprehensive Transplant Center | SMIDT Heart Institute
I have no relevant financial relationships to disclose
OCS™ (Organ Care System)

• “Heart in a box” or “TransMedics®”
• Currently, the only FDA approved technology for Ex-vivo perfusion and preservation of the donor heart
• Ex-vivo resuscitation of donor organs from the insult of brain/circulatory death
• Ex-vivo metabolic and functional assessment
The Organ Care System (OCS™)

Wireless Monitor
- Controls and displays heart parameters

Organ Care System Console
- Portable, easy to use, and fits within all modes of transportation

Heart Perfusion Module
- Provides the sterile blood circuit and protected environment for the donor heart

Heart Solution Set
- Infused into blood circulation in order to optimize heart perfusion
OCS™ “Heart in a Box”
Benefits of OCS™ (Organ Care System)

- Portable system that provides warm perfusion
- Maintains continuous beating state outside of the body
- Provides further assessment of organ viability
- Ability to procure organ at a further distance
OCS™ Research Trials in Heart Transplantation

Proced I
2007-2008

Proced II
2009-2013

EXPAND
2015-2018

EXPAND D CAP
2019-2021

DCD
2019-2020

DCD CAP
2021
OCS™ (Organ Care System)
When do we deploy?

Heart
Offer

DBD

Total Ischemic Time < 4 hours

SOC

Total Ischemic Time > 4 hours or marginal donor

OCS™

DCD

OCS™

Marginal donor
Considerations

Financial

- **Transportation** - Larger plane and vans, more pilots for longer flights (Hawaii)

- **Staffing** - More team/personnel, increased wages for longer hours, time away from medical center

- **Supplies** - OCS™ module, solution set, gas, supplies, etc. (~$70,000)
Considerations

**Donor Management** – More communication

- Hematocrit > 28% (q6), lactate (q12), reduce pressor dependency prior to OR (if possible), euvoletic

**Donor OR**

- Neptune suction preferred (DCD), 1-5L blood prior to XClamp, timing of opening OCS™ module and supplies to prevent waste, i-STAT processing time, CSMC pharmacy kits for readily available meds

**OPO**

- Larger donor OR, early team arrival (~1 hr.) d/t prolonged setup, 2 units of packed RBCs (washed/irradiated) available in the OR, liver team DCD delay d/t donor blood collection for OCS™ circuit
Lessons Learned

- Donor blood collection failure from right atrium-clotting
  - Now use suction into cell saver reservoir
  - Need 1L of donor blood then supplement with blood units if needed
  - Need 2 units washed/irradiated blood on standby

- Sternal saw battery failure for DCD OCS™ heart cases
  - Backup saw battery on surgeon Mayo stand

- Abdominal team unaware of blood collection delay on DCD
  - Transplant surgeon pre-OR meeting + huddle at donor OR with all staff/teams
Lessons Learned

• Miscommunication of type of case w/ OPO – “pump case”
  o Need to cite all types of terminology – OCS™, Heart in the Box, TransMedics® machine

• Nearly exceeded pilot duty time to Hawaii
  o Coordinate a departure time w/ aviation team to circumvent FAA restrictions (third pilot)
Future Directions

• Increased DCD heart procurement using OCS™
• DCD policies aimed to value donation
• Pilot study using NRP (Normothermic Regional Perfusion)
Thank You
OCS Liver and OPO Logistics

Valerie Chipman, RN, BSN
Director of Organ and Allocation Operations
Objectives

• Review OCS Liver process
• Discuss logistical challenges for OPO’s
Donation Service Area

- **45** Counties Serving Northern California & Nevada
- **175** Hospitals
- **44** Coroners & Medical Examiners
- **500+** Funeral Homes
- **5** Transplant Centers
- **14** Million People
- **1987** Year Founded
- **120,000** Square miles
OCS Liver

• DNW has had it in use since 2/2022
• OCS keeps the liver in normal physiological condition (not ischemic).
  – Can tell it’s working because it produces bile
• Suitability for OCS:
  – All BD donors
  – DCD donors <55, < 30 min WIT, <15% macrosteatosis
  – TxC request
  – No split livers or livers with moderate or severe traumatic injury or active bleeding
OCS Liver- why being used?

- Reduction of Early Allograft Dysfunction
  - (27 of 150 [18%] vs 44 of 141 [31%]; P = .01)*
- Reduction in histopathologic evidence of ischemia- reperfusion injury
  - less moderate to severe lobular inflammation: 9 of 150 [6%] for OCS Liver vs 18 of 141 [13%] for ICS; P = .004*
- Higher use of DCD livers
  - 28 of 55 [51%] for the OCS Liver vs 13 of 51 [26%] for ICS; P = .007*
- Reduction of incidence of ischemic biliary complications
  - 6 months (1.3% vs 8.5%; P = .02) and 12 months (2.6% vs 9.9%; P = .02) after transplant*
- More control over recipient OR timing as well as potential for further distances

OCS Liver- How we’re using it

• OPO machine for local donor cases
• Import team partnering with local center’s for national program
• Considerations:
  – Must partner with Transmedics to find qualified surgeon
    • Will also provide an OCS clinical expert, transportation and device through the national program if not through our local OPO.
  – Blood products- 5 units of PRBC’s
  – Need backup surgeon in the OR for all DCD cases
  – Need second surgeon in the OR for pancreas (and sometimes for kidneys as well)
OCS Liver

**Pros**
- Increase used of DCD livers
- Ability to see how organ is performing following procurement
- Reduction of post-tx complications
- Greater control of recipient OR and TxC work/life balance

**Cons**
- Delay in donor OR's
  - This may not be possible in which TxC needs to decide if they will still accept.
- Increase in costs
- Logistics is more difficult
- Extra surgeons needed in OR
  - Especially for DCD who may not pass in time
- Difficulty in obtaining blood (5 units PRBC’s) and chance for wastage if not used
- Allocation is more difficult with donor cases that have time constraints (family, unstable donors or hospital barriers)
Questions?

Valerie Chipman, RN, BSN
Director of Organ and Allocation Operations
Vchipman@dnwest.org
Thank You!
Independent Living Donor Advocate (ILDA)

UCSF’s evolution of the ILDA process

Kathryn Carmichael, RN
*Living Donor Program Manager*
Rev. DeAnna Christmas, BCC-PCHAC
*ILDA Staff Chaplin*
The living donor recovery hospital must designate and provide each living donor with an ILDA who is not involved with the potential recipient evaluation and is independent of the decision to transplant the potential recipient.

OPTN Policies
Policy 14: Living Donation
The future is living donation....
<table>
<thead>
<tr>
<th>FY22</th>
<th>Liver</th>
<th>Kidney</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total dHHQ</td>
<td>1375</td>
<td>2829</td>
</tr>
<tr>
<td>Breeze Passed</td>
<td>888</td>
<td>1849</td>
</tr>
<tr>
<td>Registered</td>
<td>481</td>
<td>852</td>
</tr>
<tr>
<td>Completed Labs</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Total Transplants</td>
<td>196</td>
<td>370</td>
</tr>
<tr>
<td>LD Complete</td>
<td>28 (14% of total Tx)</td>
<td>131 (35% of total Tx)</td>
</tr>
<tr>
<td>PE</td>
<td>**</td>
<td>53 (40% of LD cases)</td>
</tr>
</tbody>
</table>
UCSF Living Donor Team: Our Mission;

Increase the amount of living donor transplants by elevating the patient experience. Assisting the donor to navigate the process, be an advocate for them, and support them to make well informed decision.
Our Current Workflow
Example: Living Donor – Kidney

Donor Application
- PMHx
- 1st set of labs

Screening
- Automated review of Hx
- ILDA

Evaluation
- RN
- 2nd set of labs
- MD chart review

Work-Up
- RN
- LDSW/ILDA
- Clinic visit

Surgery
- In-patient
- LDSW

Donor Application
- LDSW
- Discharge

Evaluation
- Data Center
- Follow-Up

Post Op Visit
- NP
# UCSF Living Donor Team

<table>
<thead>
<tr>
<th>Kidney</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice Coordinators</strong></td>
<td>Cristina Maravilla</td>
</tr>
<tr>
<td></td>
<td>Brady Ralston</td>
</tr>
<tr>
<td></td>
<td>Jessica De Leon</td>
</tr>
<tr>
<td></td>
<td>Lourdes Texin</td>
</tr>
<tr>
<td></td>
<td>Magali Vasquez</td>
</tr>
<tr>
<td></td>
<td>Michelle Acosta</td>
</tr>
<tr>
<td><strong>Clinical Patient Navigator</strong></td>
<td>Helen Christensen</td>
</tr>
<tr>
<td><strong>Nurse Coordinators</strong></td>
<td>John Nguyen</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Ortiga</td>
</tr>
<tr>
<td></td>
<td>Hanna Kim</td>
</tr>
<tr>
<td></td>
<td>Rosy Acevedo</td>
</tr>
<tr>
<td><strong>Nurse Coordinator NKR Lead</strong></td>
<td>Kelly DeDominic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liver</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Practice Coordinator</strong></td>
<td>Mary Ann Arias</td>
</tr>
<tr>
<td></td>
<td>Koki Ylagan</td>
</tr>
<tr>
<td><strong>Nurse Coordinator</strong></td>
<td>Finesse Louie</td>
</tr>
<tr>
<td></td>
<td>Caitlin Hohe</td>
</tr>
<tr>
<td><strong>Kidney Recipient</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Admin Support</strong></td>
<td>Karen Lew</td>
</tr>
<tr>
<td><strong>Nurse Coordinator</strong></td>
<td>Janine Sabatte-Caspillo</td>
</tr>
<tr>
<td></td>
<td>Anthony Swanner</td>
</tr>
<tr>
<td><strong>Living Donor</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Independent Living Donor Advocate</strong></td>
<td>DeAnna Christmas</td>
</tr>
<tr>
<td><strong>Living Donor Social Worker</strong></td>
<td>Sandy Weinberg</td>
</tr>
<tr>
<td><strong>Nurse Practitioner</strong></td>
<td>Ana Marie Torres</td>
</tr>
</tbody>
</table>
Independent Living Donor Advocate
PDSA Cycle 1
10/18/2021 - 11/12/2021
Our guiding principles

Meet CMS Interpretive Guidelines

Foundation of Patient/ILDA Relationship

Set expectations for the patient & team.

Connecting with patients – making the calls.
PDSA Cycle 1 - 10/18/2021 – 11/12/2021

- **10/18/2021**: Go LIVE
- **11/18/2021**: Cycle Review Meeting, Patient Survey
- **9/14/2021**: Workgroup Collaborative, Process Flow (Script / Charting / Signals), Deliverables / Documents
- **10/18/2021**: Set 2nd cycle, Communicate to All Stakeholders, Formalize Process
- **11/12/2021**: 2nd cycle ACT, PLAN, STUDY, DO

UCSF’s evolution of the ILDA process
# Study

## PDSA Cycle 1 Data

<table>
<thead>
<tr>
<th>PDSA Week</th>
<th>Date Range</th>
<th>ABO received (Liver)</th>
<th>Registered in Titus (Kidney)</th>
<th>1st attempts completed</th>
<th>Liver</th>
<th>Kidney</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td>10/10/2021 - 10/16/2021</td>
<td></td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>10/17/2021 - 10/23/2021</td>
<td></td>
<td>17</td>
<td>11</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>10/24/2021 - 10/30/2021</td>
<td></td>
<td>13</td>
<td>12</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>10/31/2021 - 11/06/2021</td>
<td></td>
<td>20</td>
<td>9</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>11/07/2021 - 11/13/2021</td>
<td></td>
<td>23</td>
<td>16</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

Total = 61 intros completed from cases assigned during PDSA weeks 1-4
8 cases expanded to 2nd attempts
1 case closed - Patient did not respond 2 weeks after 2nd attempt
2 cases have still not reached 2 weeks after 2nd attempt, but have assigned deadlines
### PDSA Cycle 1: patient survey data

42 Patients Surveyed  
8 Responses = 19% Response Rate

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Unclear / N/A</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you receive a call from the Independent Living Donor Advocate from UCSF?</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Did they introduce themselves and explain their role clearly?</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Was the concept of Informed Consent introduced / discussed?</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Were you provided with an overview of the living organ donation process?</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. If you had any questions were they all answered?</td>
<td>7</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6. Did the Independent Living Donor Advocate explain the next step in the Living Donor process <em>after</em> the Introduction Call?</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Is there anything else you would like to add? (Optional)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

> “The process was very thorough and complete”
> “very helpful”
> “UCSF made this happen very quickly and always were concerned about how soon we needed to get things started so my daughter would not [have] to start dialysis. It was amazing how everything fell into place. Thank You UCSF for giving my daughter a new life. She had never known what feeling normal felt like until she received a new kidney.”

"See 3 comments below."
PDSA Cycle 2
5/2/2022 – 5/27/2022
Our guiding principles.

- **Test Web Patient Self-scheduling**
- **Improve ILDA Productivity**
- **Expedite Scheduling ILDA Introduction Call**
- **Improve intake communication between extended team and patient.**
PDSA Cycle 25/2/2022- 5/27/2022

- Go LIVE
- X4 Weekly Check-ins
- 5/2/2022
- Patient Survey
- Cycle Review Meeting
- 6/3/2022
- Set 3rd Cycle
- Communicate to all Stakeholders
- Formalize Process
- ACT
- PLAN
- STUDY
- DO

- 3/2022 Training & Mechanics
- 4/21/22 Workgroup Collaborative
- Formalize Process
- Communicate to all Stakeholders
- Set 3rd Cycle

UCSF’s evolution of the ILDA process
Plan
Getting ready

ILDA completed Scheduling Training
ILDA & APEX Team created backend workflow and process.
ILDA Block Schedule Updated in APEX
ILDA Schedule Set to Release 7 days at a time
Pre-test 4/15/22 – 4/20/22
PDSA Team Members “Dog Food” Process

• Pre-Test;
• 22 Web-scheduling Patient Invites
• (4/15 – 4/20)
  ▪ 3 – waiting response 14%
  ▪ 14 – Patient Scheduled 63%
  ▪ 5 – ILDA Scheduled ‘1 Click’ 23%
Do

Testing 5/2/2022 - 5/27/2022

All English Language Kidney & Liver Patients

- Sending e-mail & text
- Documented in APEX
- Patient schedules via URL – or – ILDA schedules with “1 Click”

Non-English Kidney & Liver Patients

- ILDA Calls with Interpreter and schedules using “1 Click”

RN / PC / SW ILDA Queries

- APEX vs. spreadsheet
### Study

**PDSA cycle 2 Data & Findings**

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Experience / Control</strong></td>
<td>• Answers question: “What’s happening?” “What’s next?” • Patient selects time of appointment.</td>
</tr>
<tr>
<td><strong>Increased ILDA Productivity – 50% Time Savings</strong></td>
<td>• Block scheduling for appointments and follow-up.</td>
</tr>
<tr>
<td><strong>Improved Donor Intake Communication</strong></td>
<td>• ILDA Scheduling Appointment Invitation sent within 24 hours of request from Living Donor Nurse Coordinator.</td>
</tr>
<tr>
<td><strong>Decreased patient inquiries about next step.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**86 Patients / Average 20 per week**

- 33 / 38% ILDA 1 Click Scheduled
- 52 / 61% Patient Self-scheduled
- 1 / 1% Unscheduled

Note: No apparent concerns about need to answer ‘insurance’ questions.
# PDSA cycle 2 patient survey data

<table>
<thead>
<tr>
<th>84 Patients Surveyed</th>
<th>22 Responses = 26% Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 1:</strong> Did you receive a request from the Independent Living Donor Advocate (ILDA) to schedule an Introduction Phone Call?</td>
<td>Yes: I received both an e-mail and a text message. Yes: I received an e-mail. Yes: I received text message. No: I did not receive a request.</td>
</tr>
<tr>
<td><strong>Question 2:</strong> How did you schedule your Introduction Phone Call with the ILDA?</td>
<td>I scheduled the appointment using UCSF MyChart. I called the ILDA, and the ILDA scheduled the appointment for me.</td>
</tr>
<tr>
<td><strong>Question 3:</strong> On a scale of 1-5 (1 easy - 5 difficult), how easy was it to schedule the ILDA Introduction appointment?</td>
<td>Very Easy Easy Neither Easy Nor Difficult Difficult Very Difficult</td>
</tr>
<tr>
<td><strong>Question 4:</strong> Is there anything else you would like to add? (optional)</td>
<td>• <em>nothing this time</em> • <em>no</em> • <em>Call and answers were very much appreciated...</em> • <em>Yes I'm happy to give my grandmother my kidney!!</em></td>
</tr>
</tbody>
</table>
ILDA future state. Developing continuum of care. Each member of the team is a donor advocate, however by having a dedicated ILDA to support a donor through the whole process we hope that we will retain patients and see red flags earlier.
Our *Future* Workflow

Example: Living Donor – Kidney

**Donor Application**
- PMHx
- 1st set of labs

**Screening**
- Automated review of Hx
- ILDA

**Evaluation**
- RN
- 2nd set of labs
- MD chart review

**Work-Up**
- RN
- ILDA
- LDSW
- Clinic visit

**Surgery**
- In-patient
- LDSW
- ILDA

**Post Op Visit**
- NP
- ILDA

**Data Center**
- LDSW

**Discharge**
- NP

**Follow-Up**
- Data Center
CMS Revised OPO Final Rule

OPO / Transplant Center and Donor Hospital Impact
CMS Potential Organ Donor Definition Change 42 CFR § 486.302

- Published in Federal Register: December 2, 2020
- Implementation: August 1, 2022
- First OPO performance measurement threshold period: 2023
- First OPO performance measurement period: 2024
- First OPO certification/decertification: 2026
CMS Potential
Organ Donor
Definition
Change 42
CFR § 486.302

• What remains:
  • 75 years or younger
  • Death occurred in an inpatient setting

• New Term: **Donor potential**
  • The number of inpatient deaths within the DSA among patients 75 years and younger with primary causes of death consistent with organ donation.
CMS Potential Organ Donor Definition Change 42 CFR § 486.302

• What is new:
  • Death that is consistent with organ donation
  • All deaths from state death certificates with the primary cause of death listed as the following ICD-10 CM code ranges:
    • 120-125 ischemic heart disease
    • 160-169 cerebrovascular disease
    • V1-Y89 external causes of death: Blunt trauma, gunshot wounds, drug overdose, suicide, drowning, and asphyxiation

Primary Impact:
Removes subjectivity of self reporting donor eligibility
Introduces variation of state by state death certificate data
CMS Potential Organ Donor Definition Change 42 CFR § 486.302

- **New Terms:**
  - **Donation Rate:**
    - Organ Donors ÷ Donor Potential
  - **Organ Transplantation Rate:**
    - Organs Transplanted ÷ Donor Potential
    - Risk adjusted for age

OPOs impact the numerator …

… with help from
Transplant centers transplanting organs
Donor hospitals partnerships
EMR access
OR availability
Timely referrals
Registry Support
Donor families saying yes
Funeral Homes
Medical Examiners
Media stories
CMS Potential Organ Donor Definition Change 42 CFR § 486.302

- **Organ donor:**
  - **Current:** A person who has been declared dead with at least one organ recovered.
  - **New:** A person who has been declared dead with at least one organ transplanted or Pancreas used for research or islet cell transplantation.

- **Organs Transplanted:**
  - **Current:** The number of organs recovered that results in transplant.
  - **New:** The number of organs recovered that results in transplant or Pancreas used for research or islet cell transplantation

**RNTs don’t count… unless the pancreas goes for research**
Donor Hospital Impact

- Death Record Review Process to be inclusive of review of primary diagnoses via ICD-10-CM codes
- Changes to referral criteria to evaluate those with a primary diagnosis consistent with organ donation (or broader)
- Increased DCD opportunities leads to increase in hospital resource utilization and unique navigation for donor timing
- Increased Involvement of donor families, OPO resources, transplant center resources
OPO Survey

- **Brain Death donation growth:**
  - Room for improvement, but low growth expectations

- **DCD donation growth**
  - Higher growth expectation
  - OPO variation in pursuit

- **Extended criteria organ transplants:**
  - All OPOs looking at transplant center acceptance practices and basing decisions on extended criteria center tolerance limits
  - Increasing Expedited Placement / Open Offers
Allocation Policy Changes timeline

June 2013 – Share 35 Liver allocation

November 2017 – DSA removed from Lung Allocation

February 2020 – DSA removed from Liver Allocation

December 2014 – New Kidney/Pancreas Allocation System

October 2018 – DSA removed from Heart Allocation

March 2021 – DSA removed from Kidney/Pancreas Allocation
Region 5 Donation Demographics

% Transplants in Region 5 by OPO

AZOB  CADN  CAGS  CAOP  CASD  NMOP  NVLV  UTOP

2022  2021  2020  2019
Region 5 Donation Demographics

DCD % of total donors

Year: 2019, 2020, 2021, 2022

Locations: AZOB, CADN, CAGS, CAOP, CASD, NMOP, NVLV, UTOP, Region 5

OPO Future considerations

- DCD donation growth
- Age limit increases
- NRP and Perfusion increases
- Truncated timeline cases
- Resource Realignment
- Increased hospital development
- Medical Record Reviews
- Referral Response
- Increase in Organ Offers
- We will Offer everything
Questions?
What impact have the new OPO requirements had so far on transplant centers? What changes has your center had to make?
Better Together: The DEI Journey Continues

Donyale John & Luis Mayen
Maintaining a DEI Council
“Shortly after I was hired, I learned that Donor Network West had a DEI Council and I knew instantly that this was something I wanted to be a part of. I strongly believe that folks who benefit from systemic privilege are tasked with integrating meaningful DEI action into their workplaces. It’s been an incredible learning experience thus far and I look forward to continued reflection on this essential journey towards making the world a kinder, more equitable place for everyone.”

— Samantha K.
DEI Council In Action

- Membership
- Commitment
- Ongoing education
Safe Spaces for Bold Conversations
Discussion Topics

• The Power of Allyship: Understanding the Impact and Power of Words
• Exploring Bias
• Cultural Humility vs. Cultural Competence
• Living with Disability
• Schwartz Rounds- Bumping Into Bias: Experiences When Who You Are Impacts What You Do
• Microaggressions
A Committed Organization
Passion
DNWest is composed of caring professionals aligned with our mission who give their all to help save lives & inspire our communities to donate life

Excellence
DNWest is solution oriented, team focused, bold change agents utilizing our experience & expertise to optimize the gift of life

Diversity, Equity & Inclusion
Team members respect & value people of all backgrounds; appreciate & celebrate differences in others & create an environment of equity & inclusion with opportunities for everyone to reach their potential

Relationships
Team members are respectful stewards who honor donors, show compassion and support for donor families, advocate for recipients & empower collaboration with external/internal partners
New Hires in 2022

New Hires by Ethnicity for 2022
- American Indian/Alaskan Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Not specified

New Hires by Gender in 2022
- Female
- Male
- Non-Binary

# of Employees (Sum)
Employee Count by Generation

All Employee Count by Generation

- Generation Z: 5.4%
- Baby Boomer: 12.0%
- Generation X: 32.6%
- Millennial: 50.0%
DEI in the Community

The Latino Workgroup Presents:
Nuestra Comida: Is it all about food?

The Conversation:
Making Your End of Life Wishes Known
An intimate discussion about death, organ and tissue donation and the importance of end of life planning and donation

Share the Love
Register as an organ donor

Ind. Be An Organ Donor
Questions
Thank You!
Connect with us on social media!

• Find and follow us using our handles

• Share your event experience with your network

• Tag us in your posts

@unosnews

@UNOSNews

@UnitedNetworkforOrganSharing

@UnitedNetworkforOrganSharing