



LifeSource
ORGAN, EYE AND TISSUE DONATION



CHANGING & IMPROVING
SOUTH AFRICA'S TRANSPLANT FUTURE
28th SATS & 5th SATiBA
CONGRESS
6 - 8 September 2019
KRYSTAL BEACH HOTEL
GORDONS BAY • CAPE TOWN

Measuring Performance for Improvement

Susan Gunderson, MHA

Chief Executive Officer, LifeSource OPO

President, ISODP

6 September 2019

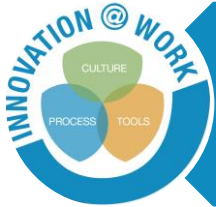
LifeSource
ORGAN, EYE AND TISSUE DONATION

 **ISODP**
International Society for Organ
Donation and Procurement

Successful Donation Strategies



Donation System Performance



DCD



Effective Practices



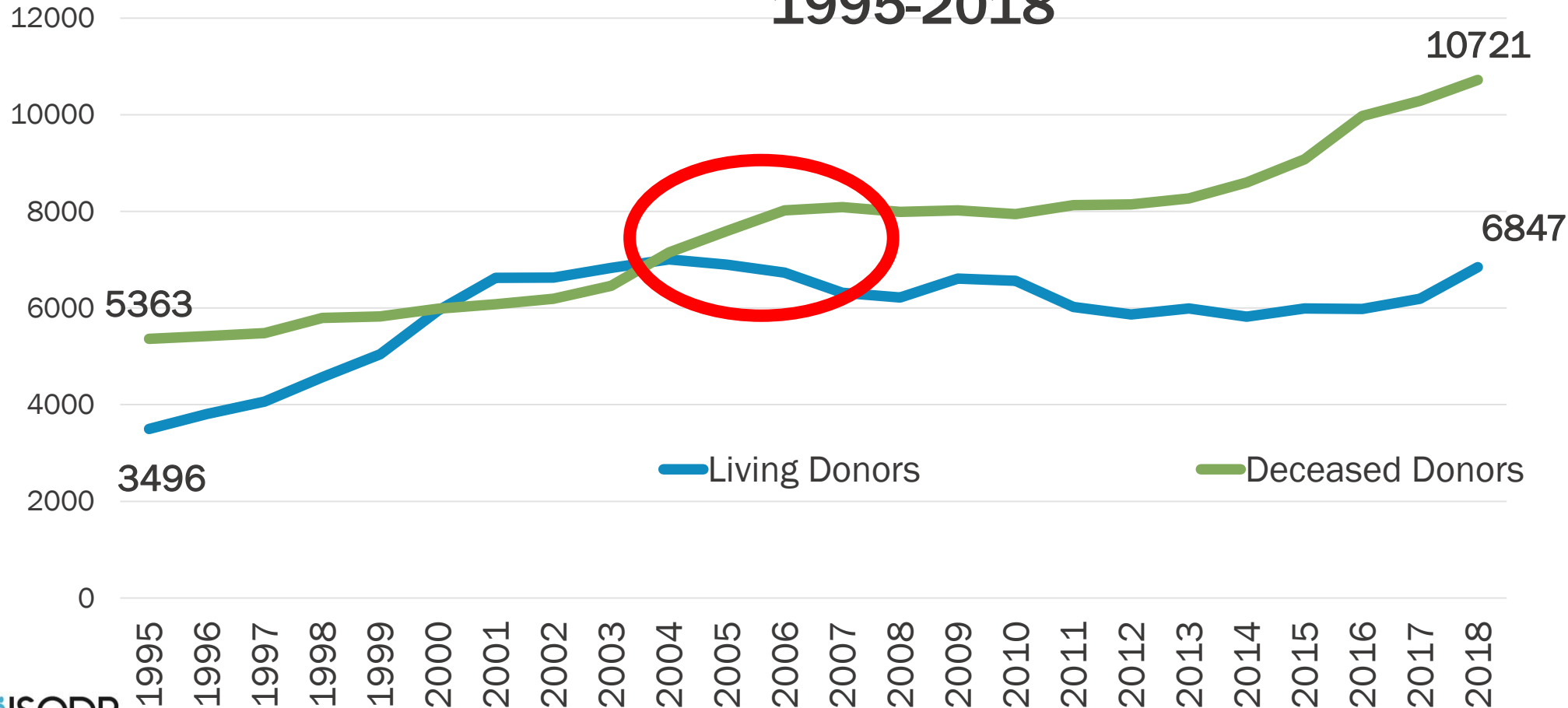
Howard Nathan
President & CEO

U.S. National Trends

Living and Deceased Organ Donors



1995-2018



Deceased
DPM 33.2

Living
DPM 20.9

Wait list
deaths
5427

U.S. Deceased Organ Donors By Cause of Death 1996 - 2018

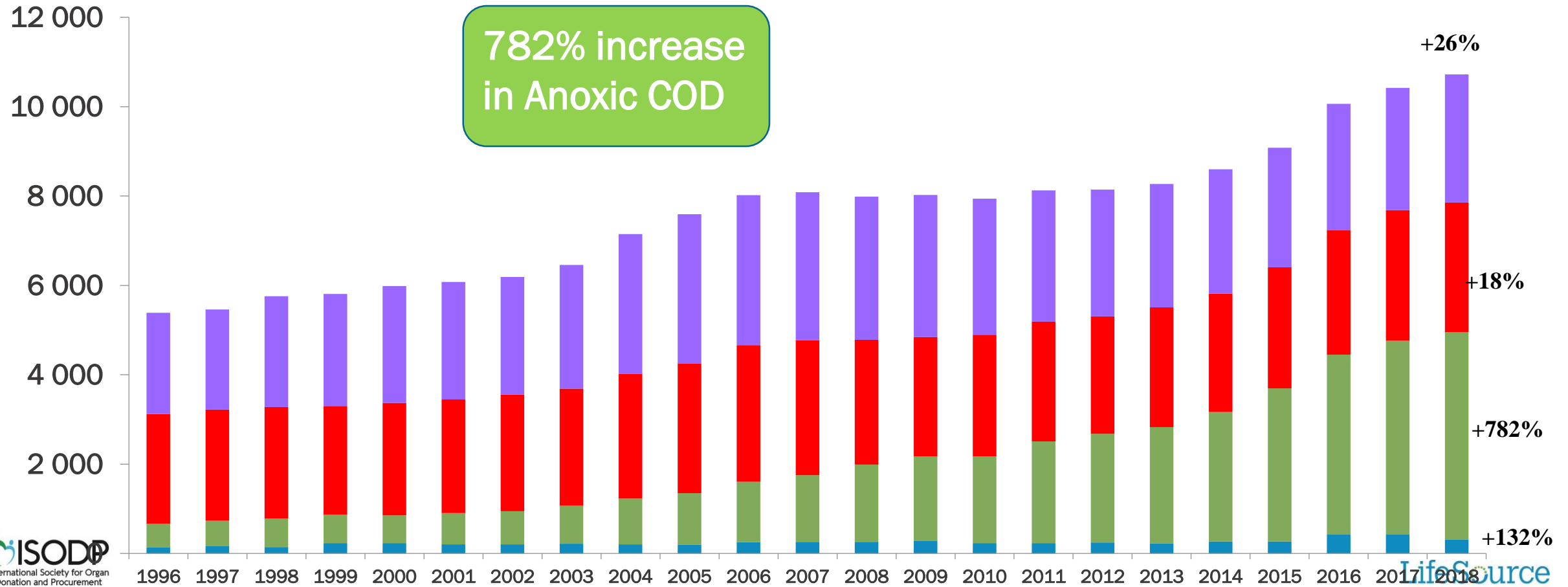
Tumor/Oth

Anoxia

Trauma

CVA

782% increase
in Anoxic COD

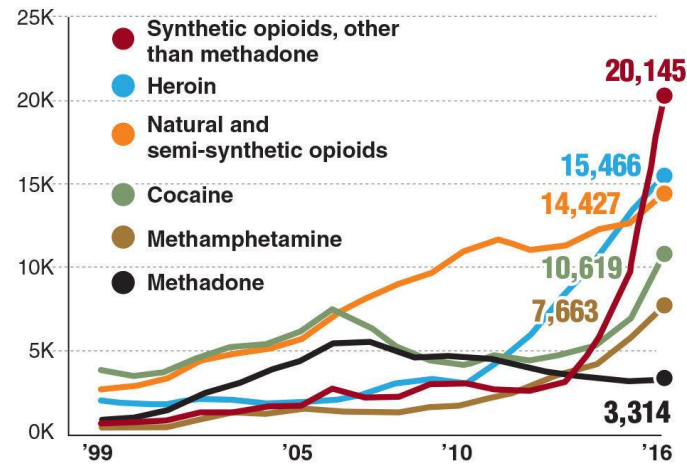


United States Drug Epidemic



U.S. drug overdose deaths

Among the more than 64,000 drug overdose deaths estimated in 2016, the sharpest increase occurred among deaths related to fentanyl and fentanyl analogs (synthetic opioids), more than 20,000 overdose deaths.



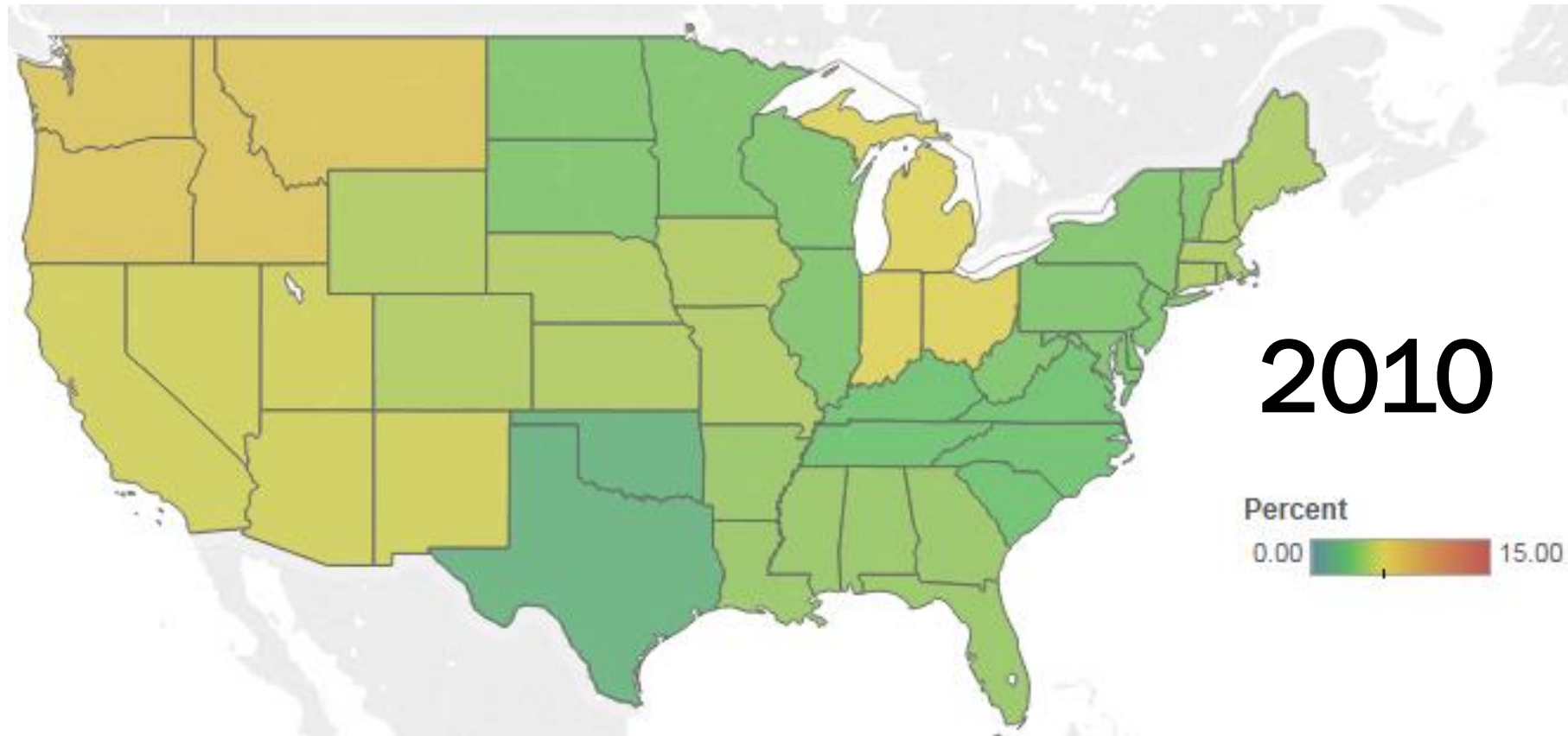
Source: CDC
Graphic: Staff, TNS

As Drug Deaths Soar, a Silver Lining for Transplant Patients

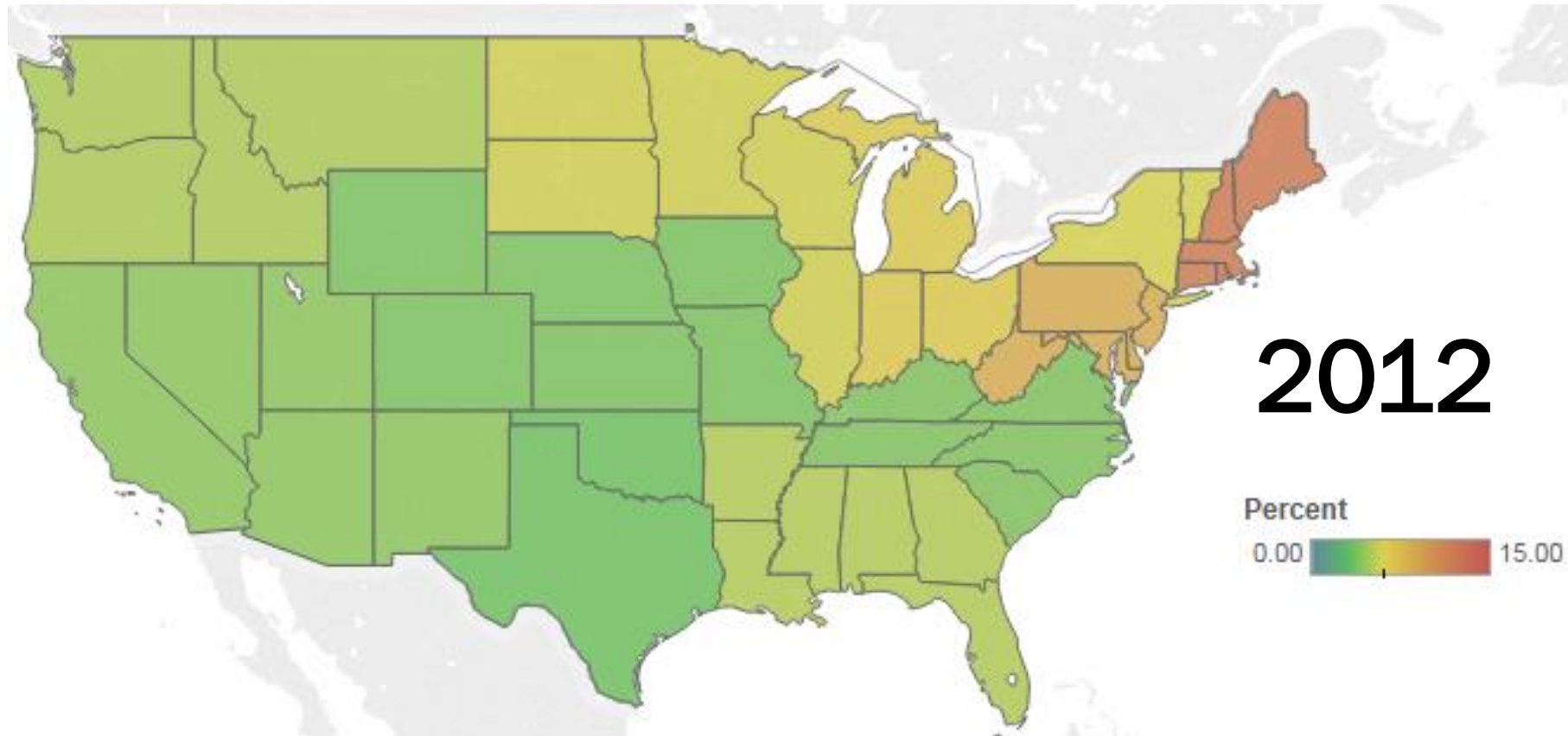
By KATHARINE Q. SEELYE OCT. 6, 2016

“The surge in deaths from drug overdoses has become an unexpected lifeline for people waiting for organ transplants, turning tragedy for some into salvation for others...”

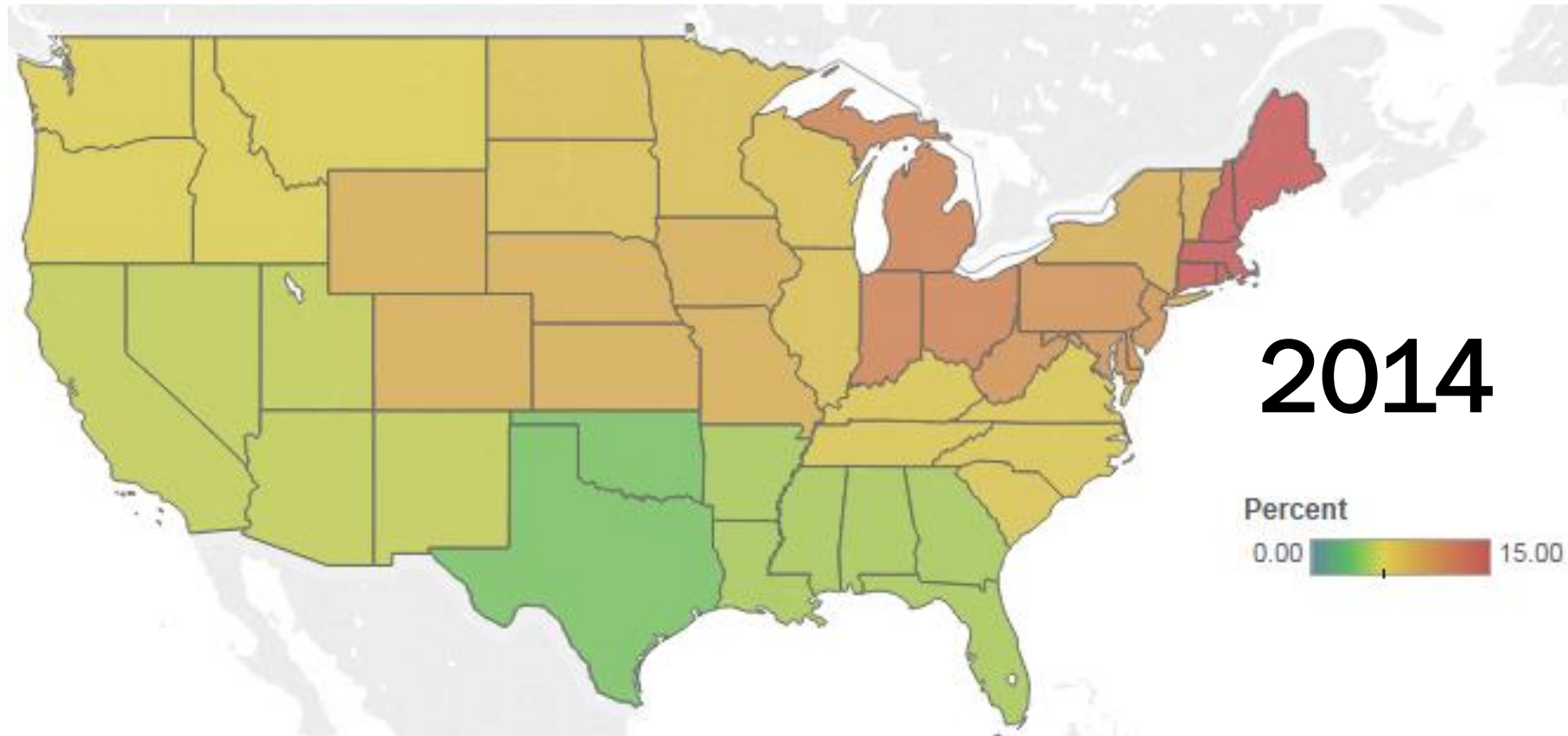
Deceased Donors Recovered in the US with Drug Intoxication as Mechanism of Death



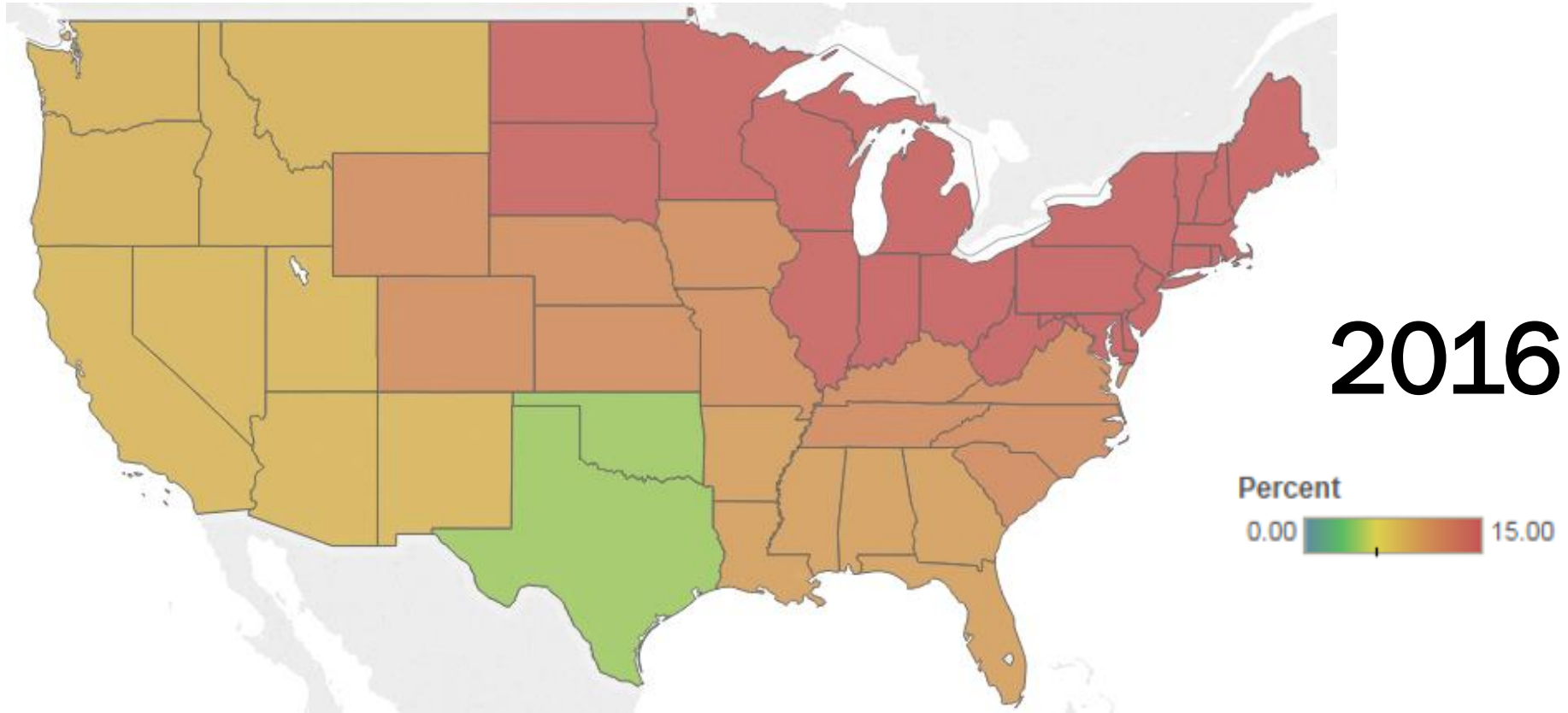
Deceased Donors Recovered in the US with Drug Intoxication as Mechanism of Death



Deceased Donors Recovered in the US with Drug Intoxication as Mechanism of Death



Deceased Donors Recovered in the US with Drug Intoxication as Mechanism of Death



2003

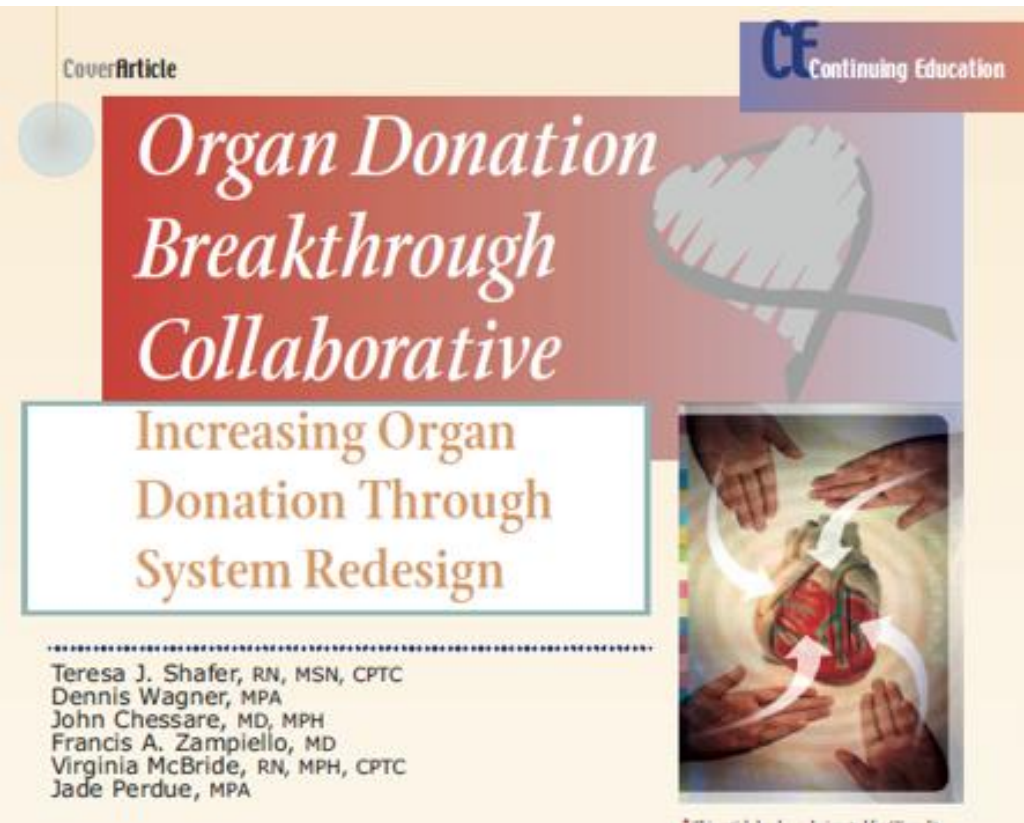
Health and Human Services



- U.S. Deceased Donor Organ Transplants Were Only Increasing 1 - 2% Per Year
- The Transplant Waiting Lists and Waiting Times Were Rapidly Growing
- Deaths On The Waiting List Were Increasing Sharply (*from 3,512 in 1995 to 6,703 in 2001*)
- *We had more deaths than donors...*

Organ Donation Breakthrough Collaborative

- An intensive, full-court press to facilitate breakthrough transformations in the performance of organizations, based on what already works.



Designed to:

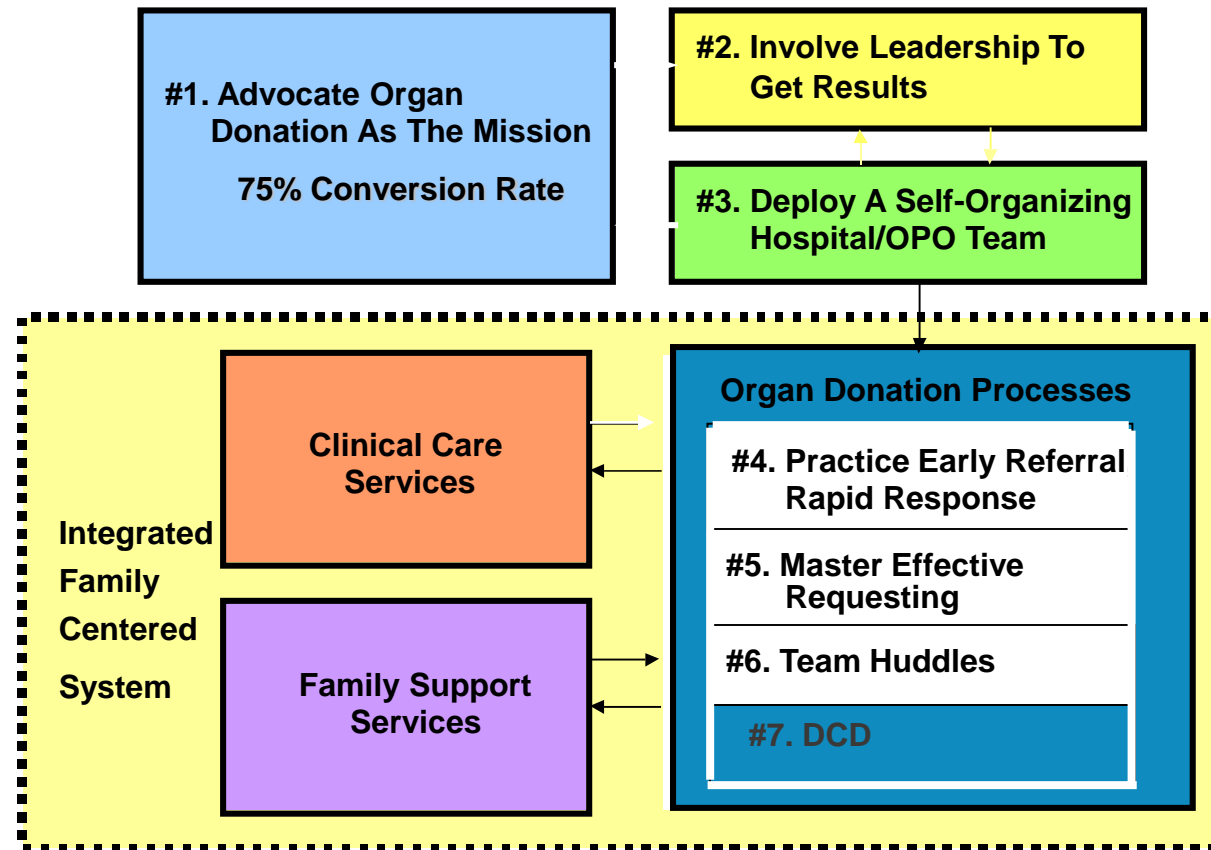
- Define, document and disseminate good ideas
- Accelerate improvement

GOALS

- 75% Conversion Rate
- 3.75 Organs Transplanted per donor
- 10% DCD

Organ Donation System Re-Design: *High Leverage Changes*

Seven (7) High Leverage Changes



Donation After Circulatory (Cardiac) Death (DCD)

Definition:

A procedure whereby organs are surgically recovered following pronouncement of death based on “irreversible cessation of circulatory and respiratory functions.”

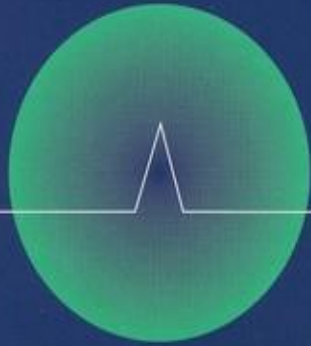
Controlled

Death & organ recovery can be predictably controlled following the withdrawal of life support.

Uncontrolled

Cardiac arrest is unplanned. Timing of other aspects of organ recovery are not controlled.

Non-Heart-Beating Organ Transplantation



Practice and Protocols

2000

INSTITUTE OF MEDICINE

IOM Recommendation: **Non-Heartbeating Donor** **Organ Donation** (Donation after Cardiac Death)



“All organ procurement organizations (OPOs) should explore the option of non-heartbeating organ transplantation, in cooperation with local hospitals, health care professionals and communities.”

Society of Critical Care Medicine

Critical Care Medicine 2001 Vol. 29, No 9



General Recommendations

DCD is medically acceptable and ethical provided informed consent is obtained from patient or designee

Informed consent is ethical cornerstone - special training required for those obtaining consent due to complexity

Death must be certified using standardized, objective, and auditable criteria and must follow state law

It is ethically reasonable for DCD to occur with pediatric patients

If, in the process of delivering high quality end-of-life care, organ donation is possible then the professional should support that outcome

2001

Incidence of Deceleration of Care

Recommendations for end-of-life care in the intensive care unit: The Ethics Committee of the Society of Critical Care Medicine

Robert D. Truog, MD; Alexandra F. M. Cist, MD; Sharon E. Brackett, RN, BSN; Jeffrey P. Burns, MD; Martha A. Q. Curley, RN, PhD, CCNS, FAAN; Marion Danis, MD; Michael A. DeVita, MD; Stanley H. Rosenbaum, MD; David M. Rothenberg, MD; Charles L. Sprung, MD; Sally A. Webb, MD; Ginger S. Wlody, RN, EdD, FCCM; William E. Hurford, MD

Key Words: palliative care;

These recommendations tended to provide and advice for clinicians deliver end-of-life intensive care units (ICUs). The deaths that occur in the ICU withdrawal of life support is with one recent survey finding of patients who die in ICUs after a decision to limit therapy though there is significant variation in the frequency of withdrawal of support both within countries (2) cultures (3), the general trend is national in scope (4). Nevertheless evidence indicates that patient families remain dissatisfied with the care

“The number of deaths that occur in the ICU after the withdrawal of life support is increasing, with one recent survey finding that 90% of patients who die in ICU’s now do so after a decision to limit therapy.”

Clinical Considerations: Family Discussion

Discussions about withdrawal of support and organ donation are independent of each other

Considerations for Informed Authorization



1. Heparin administration
2. Organs may be unsuitable for transplant
3. Family presence in the OR
4. Patient may not arrest within required timeframe for donation

Note: A separate authorization is required for any invasive procedure.

DCD Clinical Considerations

Pronouncement of Death



Attending Physician pronounces death via cardiopulmonary criteria



Transplant team **NOT** permitted in OR until death has been pronounced

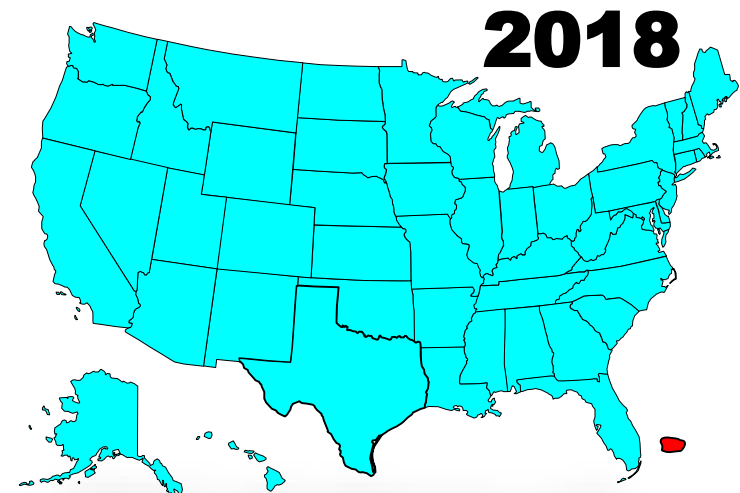
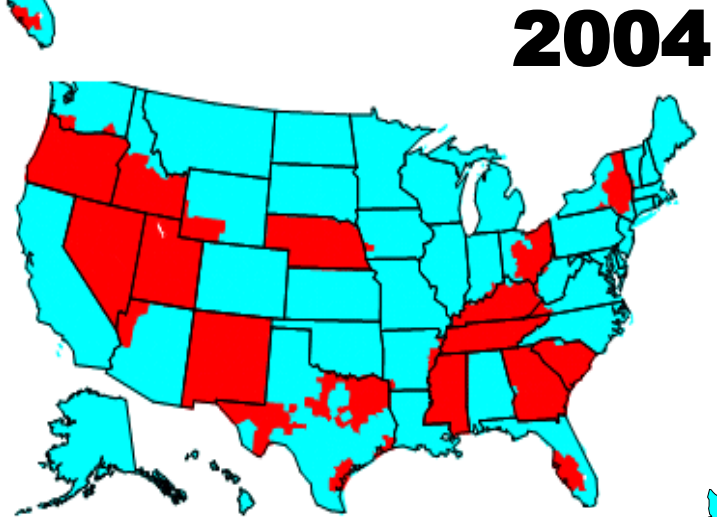
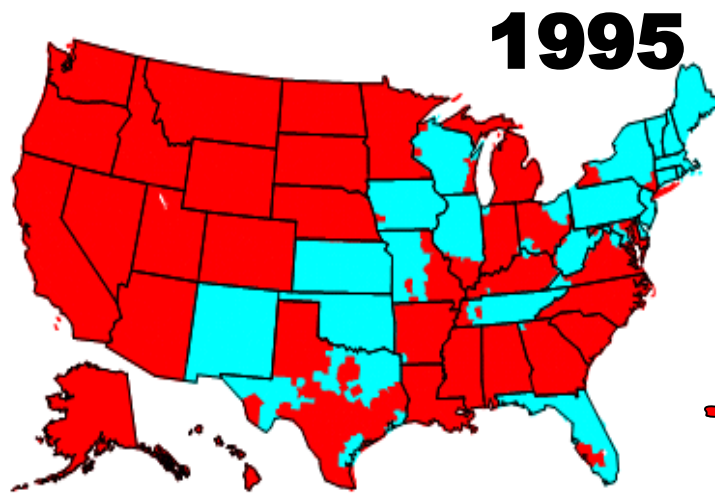


IOM guidelines are followed
(5 minute waiting period)



If patient does not die in timeframe that allows for successful organ recovery, the patient is returned to pre-determined area and comfort care / family support will be continued.

DCD Recoveries by OPO

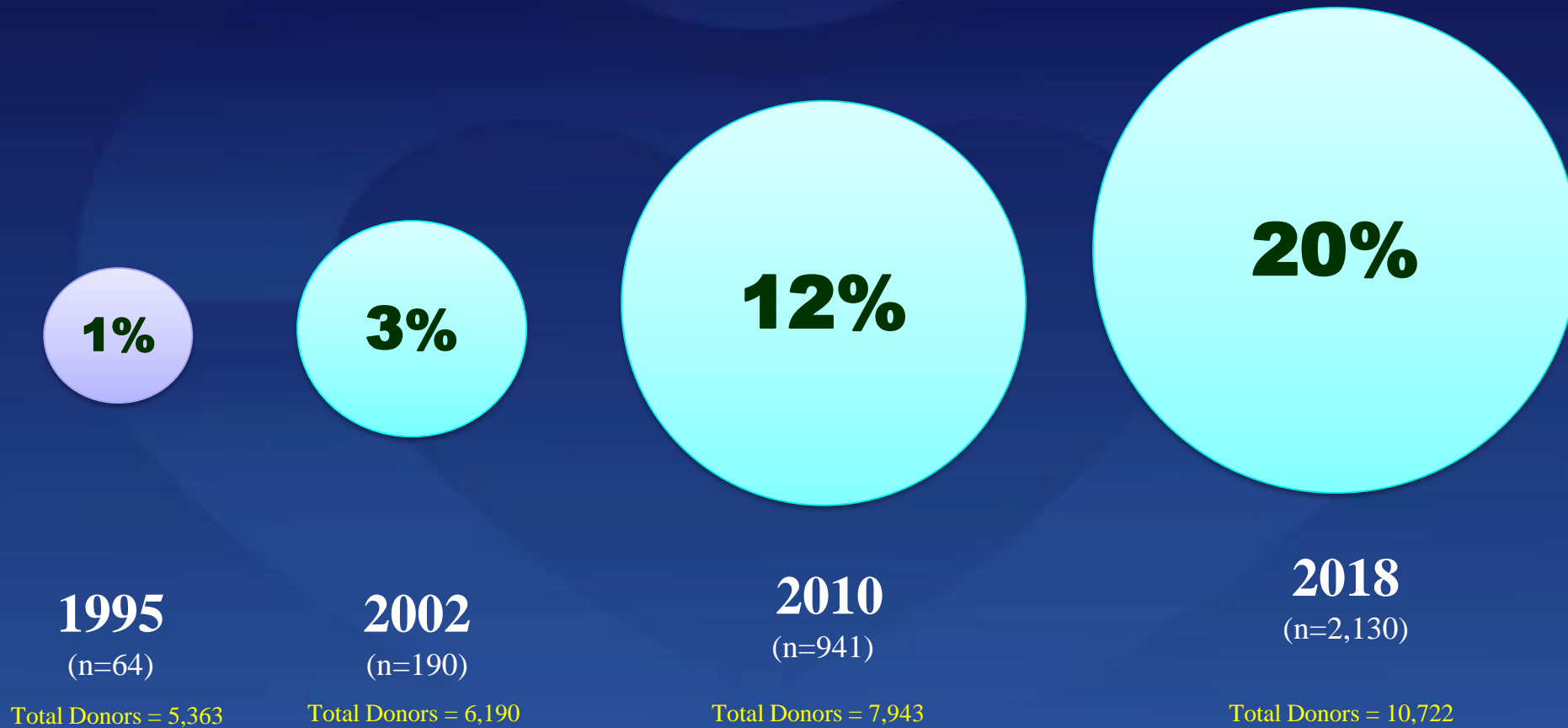


Number Recovered:

- None Recovered
- At Least 1 Recovered



United States DCD Increasing the Donor Pool 1995 - 2018

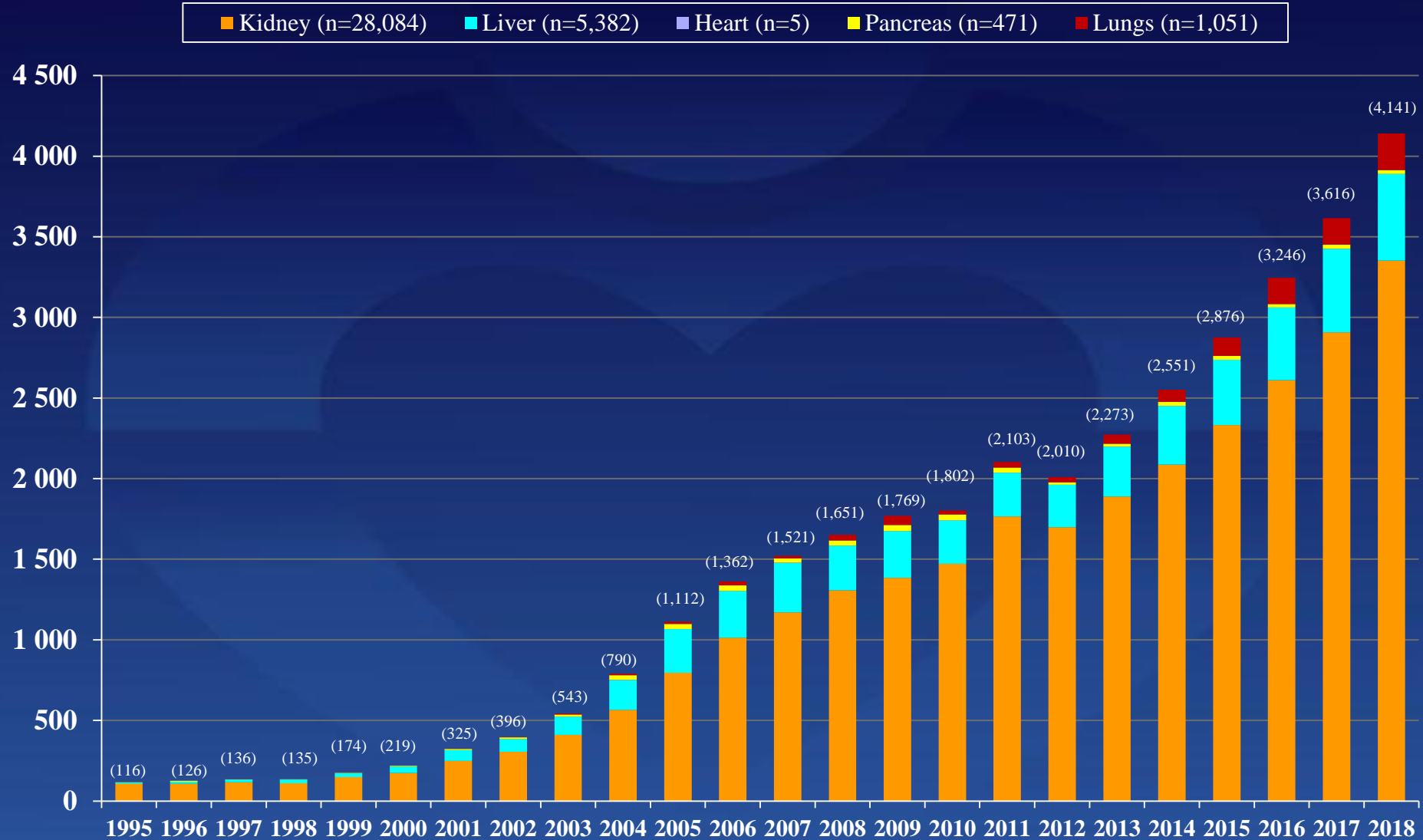




U.S. DCD Organ Donor Experience (18,075 DCD Donors)

DCD Organs Transplanted ~ 1995 – 2018

(34,993 Total Organs Transplanted)



Source: Based on OPTN data through December 31, 2018.

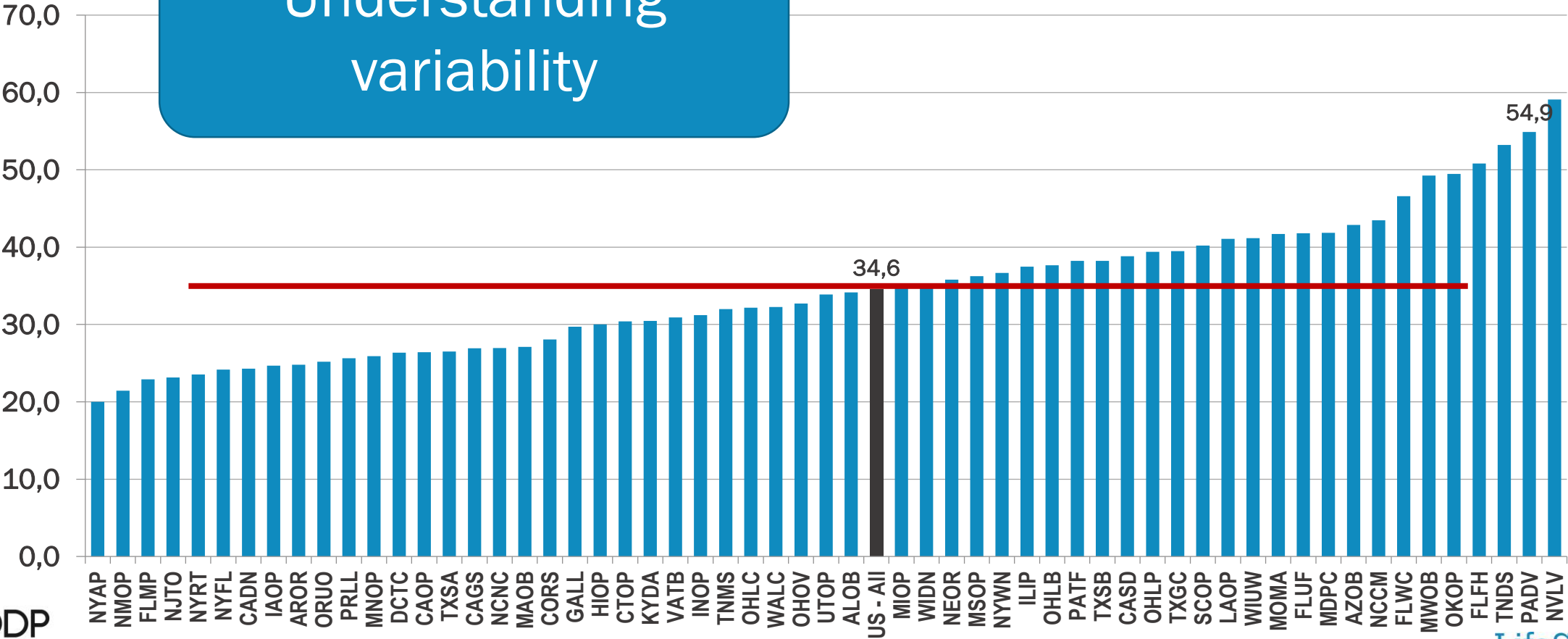
Summary of DCDs in the U.S.

- 20 % of all deceased organ donors in 2018
- 57 of 58 OPOs recovered DCDs
- Extensive literature on DCD protocols
- Most hospitals have DCD policies
- Transplant outcomes comparable to DBDs
- Uncontrolled DCDs/Rapid Recovery in some OPOs
- DCDs could increase donor pool significantly and reduce deaths on the wait list



2018 Organ Donors Per Million Population US Organ Procurement Organizations

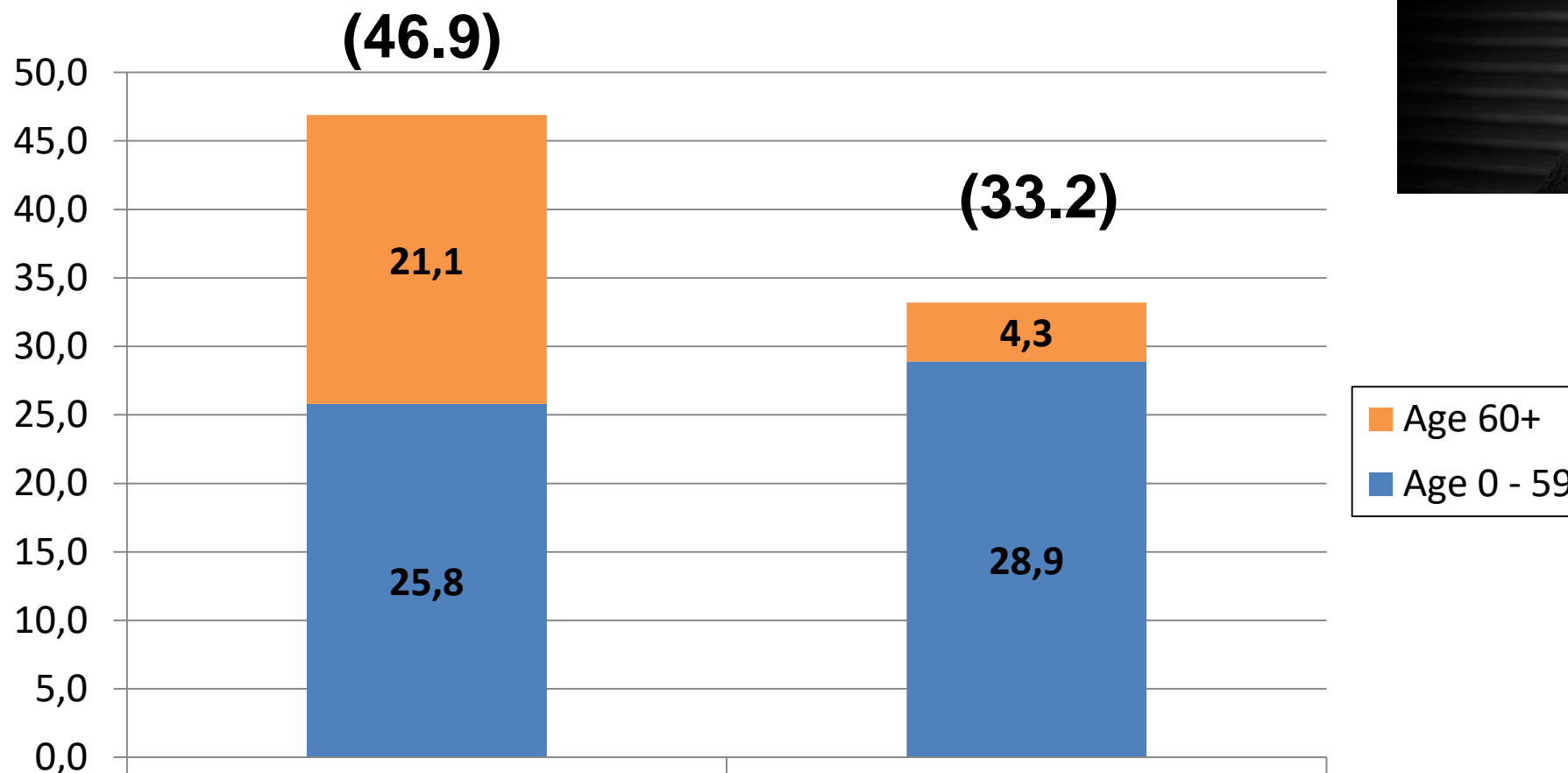
Understanding
variability



Impact of Age on Donation Rates

Comparison of 2017 Deceased Donor Data

Spain, United States Donors per Million



Percent of Donors Age
+60 years

Spain



55%

U.S.



13%

Disparities in Acceptance of Deceased Donor Kidneys Between the United States and France and Estimated Effects of Increased US Acceptance

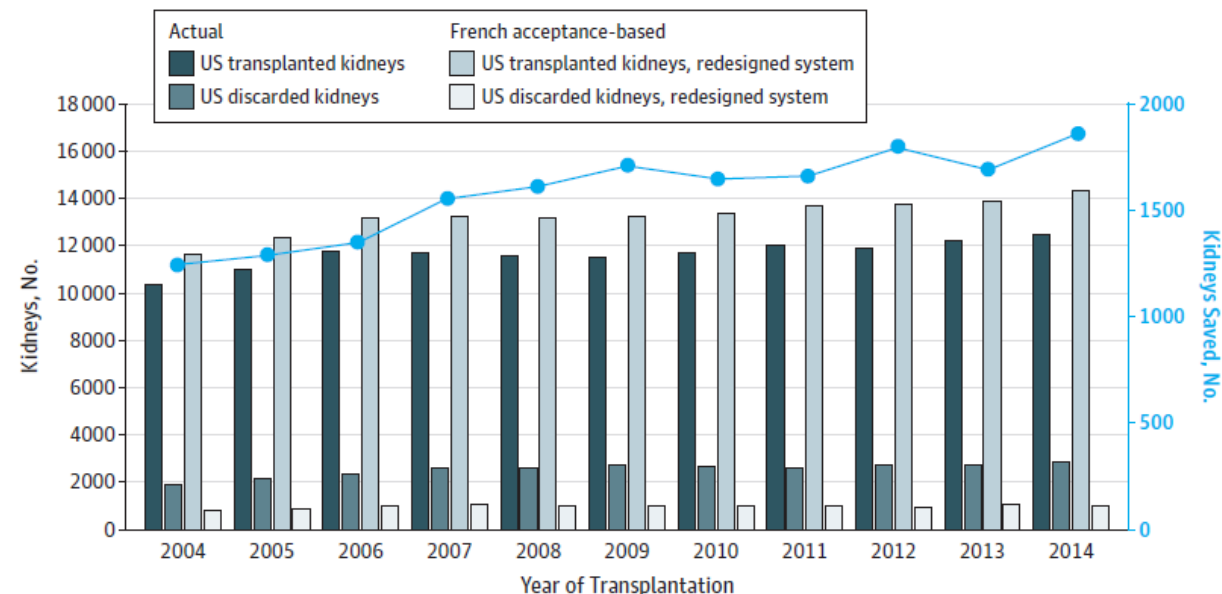
Olivier Aubert, MD, PhD; Peter P. Reese, MD; Benoit Audry, PhD; Yassine Bouatou, MD, PhD; Marc Raynaud, MSc; Denis Viglietti, MD; Christophe Legendre, MD; Denis Giotz, MD, PhD; Jean-Philippe Empiana, MD, PhD; Xavier Jouven, MD, PhD; Carmen Lefaucheur, MD, PhD; Christian Jacquellinet, MD, PhD; Alexandre Loupy, MD, PhD

IMPORTANCE Approximately 3500 donated kidneys are discarded in the United States each year, drawing concern from Medicare and advocacy groups.

OBJECTIVE To estimate the effects of more aggressive allograft acceptance practices on the donor pool and allograft survival for the population of US wait-listed kidney transplant candidates.

+ Invited Commentary
+ Supplemental content

Figure 2. Number of Actually Transplanted and Discarded Kidneys in the United States Contrasted With the Number of Kidneys That Would Have Been Saved and Discarded Using a Redesigned System

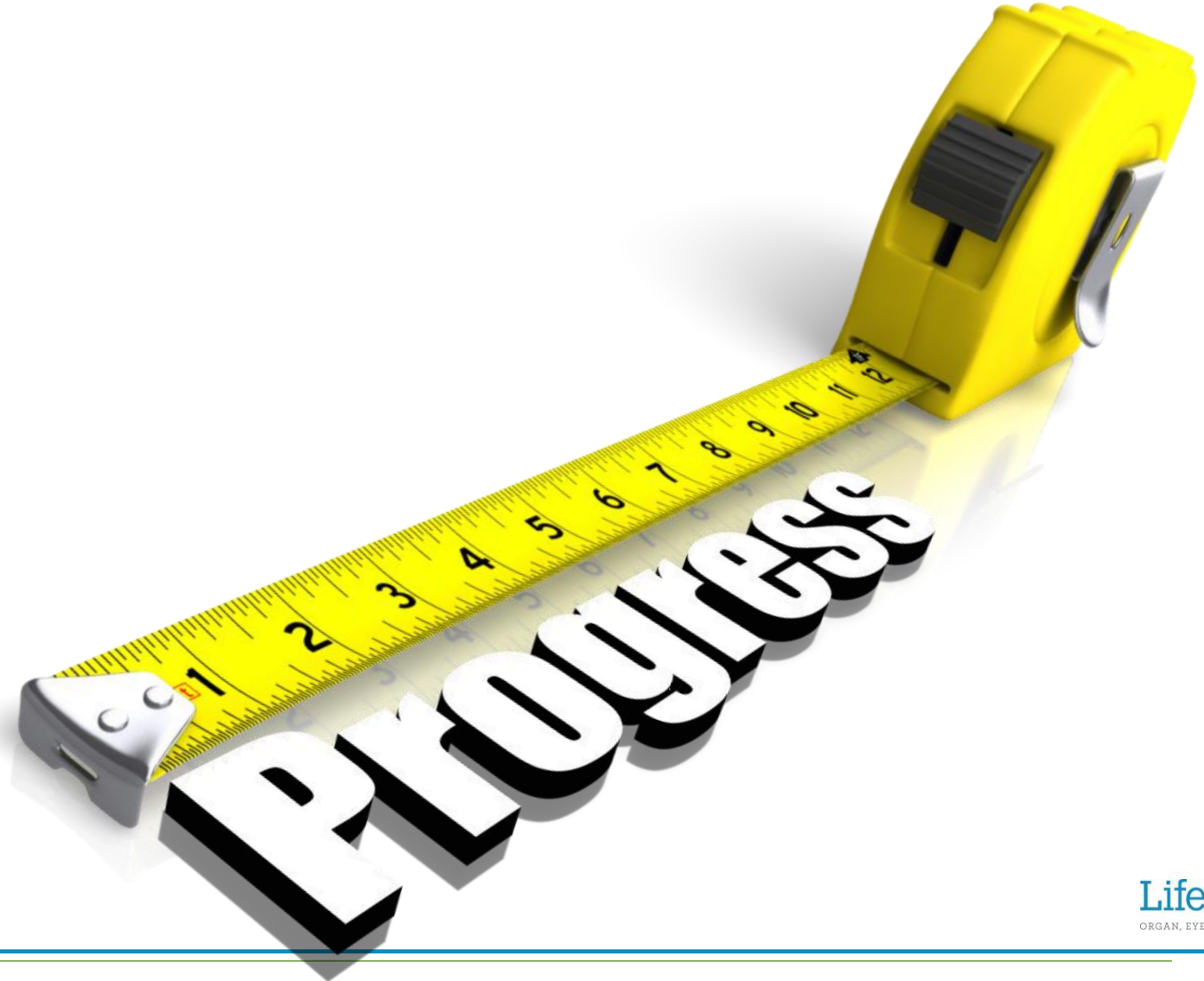


Kidney Utilization USA vs. France

- High rate of discard of kidneys by US transplant centers due to:
- Intense regulatory scrutiny
- Financial disincentives to transplant higher risk (KPDI) kidneys



How Do We Measure Our Progress?



Outcome Measures – OPO

Outcomes - Brain Dead and DCD	Process	Comparative
Total Organ Donors	Timely Referral	Donors per 10,000 deaths
Total Organs Transplanted	Authorization Rate	Donors per million population
Total Patients Transplanted	Conversion Rate	Donors per potential deaths (CDC Mortality data) *likely 2020
Organs transplanted per donor (OTPD)		Donation rate: Observed to Expected (O:E)
Organ Yield – Observed: Expected (O:E)		

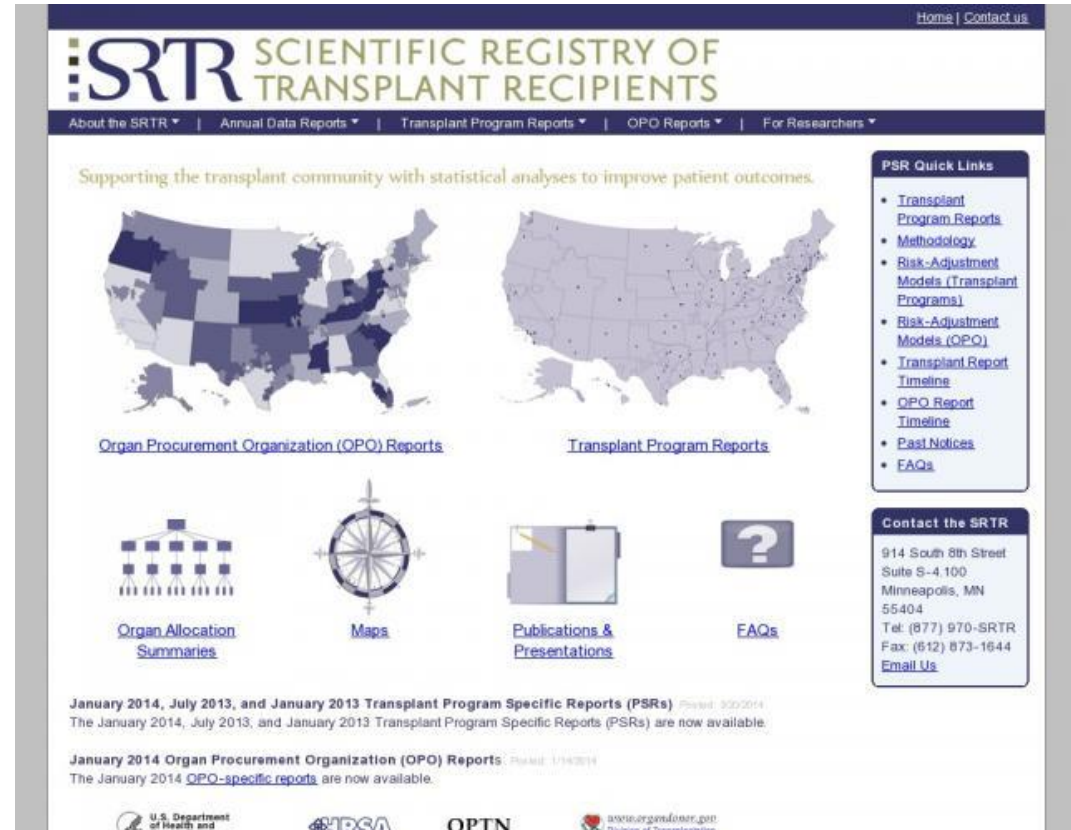
Scientific Registry of Transplant Recipients



Chronic Disease
Research Group



From Left to Right: Susan Stuart, 2013-2014 President of AOPT and CEO of the Center for Organ Recovery and Education (CORE); Jon Snyder of SRT; Elling Eidbo, Executive Director of AOPT
Photo Courtesy of Jenny Miller, AOPT



Transplant Center Reports



SCIENTIFIC
REGISTRY OF
TRANSPLANT
RECIPIENTS

DISTANCE
DECEASED DONOR
TRANSPLANTS IN A
YEAR
LIVING DONOR
TRANSPLANTS IN A
YEAR
SURVIVAL ON THE
WAITLIST
GETTING A
DECEASED DONOR
TRANSPLANT FASTER
1-YEAR LIVER
SURVIVAL

For liver transplant candidates, this measure has the **largest impact on survival after listing** among these three measures. 1 year liver survival includes only candidates who received a transplant.

Mayo Clinic Hospital

Phoenix, AZ

N/A

128
ADULTS

1
ADULTS



[View Summary Data](#)
[View Complete Report \(PDF\)](#)

Northwestern Memorial Hospital

Chicago, IL

N/A

98
ADULTS

8
ADULTS



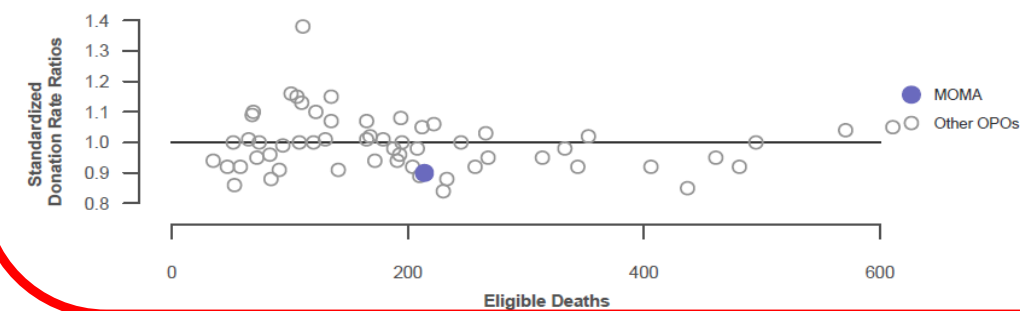
[View Summary Data](#)
[View Complete Report \(PDF\)](#)

Table B1. Measures of donation rate* 01/01/2018 to 12/31/2018

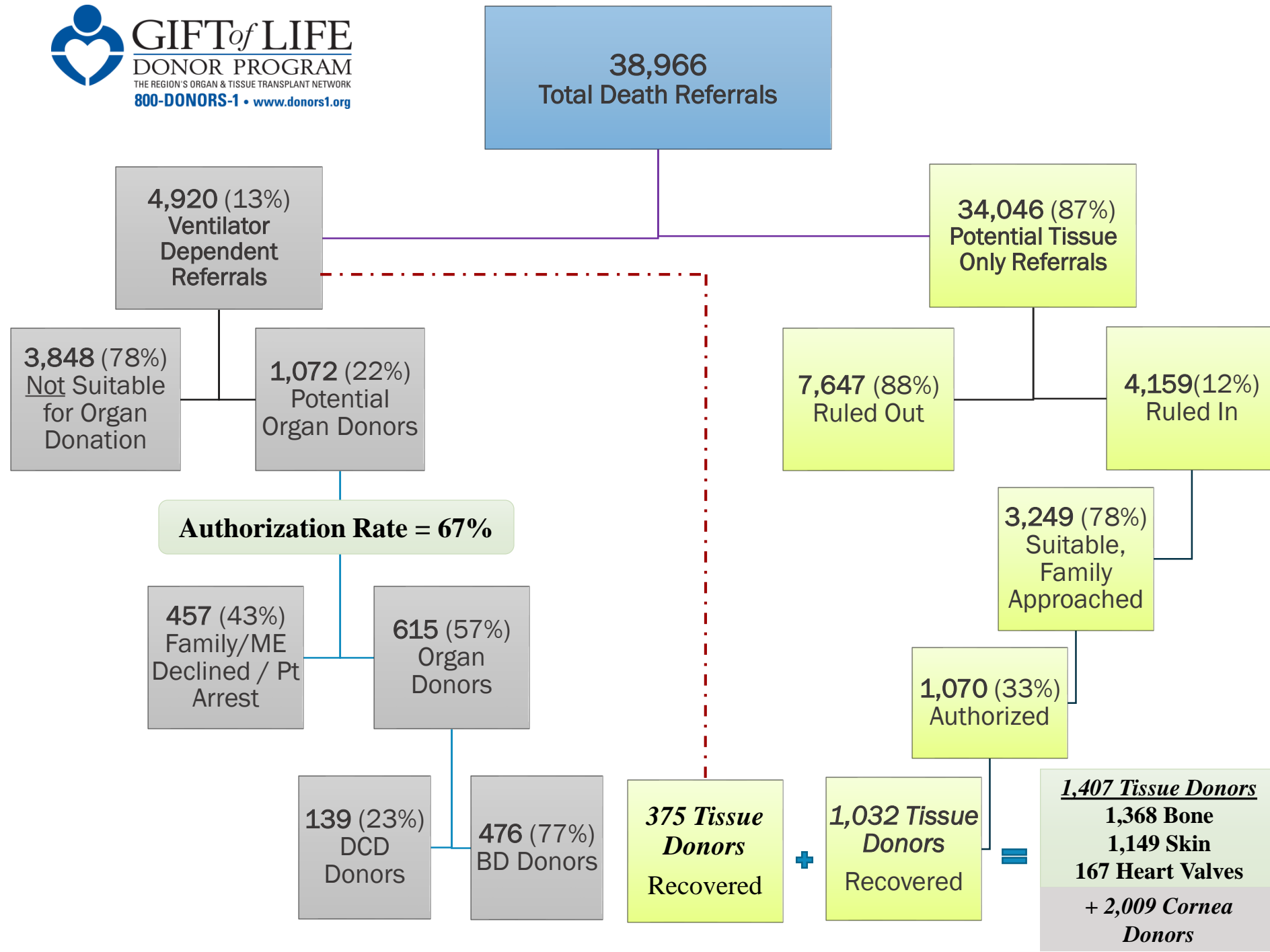
	MOMA	Min.	National Average	Max.
Eligible Deaths	214	35	200.84	611
Deceased Donors (All)	196	42	184.86	616
Deceased Donors Meeting Eligibility Criteria	145	25	142.67	466
Observed Donation Rate Per 100 Eligible Deaths	67.8	56.3	71.0	90.1
Expected Donation Rate Per 100 Eligible Deaths	75.3			
Standardized Donation Rate Ratio (95% CI)	0.90 (0.81,0.98)			
P Value	0.011			

*The donation rate is calculated as the number of deceased donors meeting eligibility criteria per 100 eligible deaths.

Figure B4. Standardized donation rate ratios (observed/expected), 01/01/2018 to 12/31/2018



OPO Reports

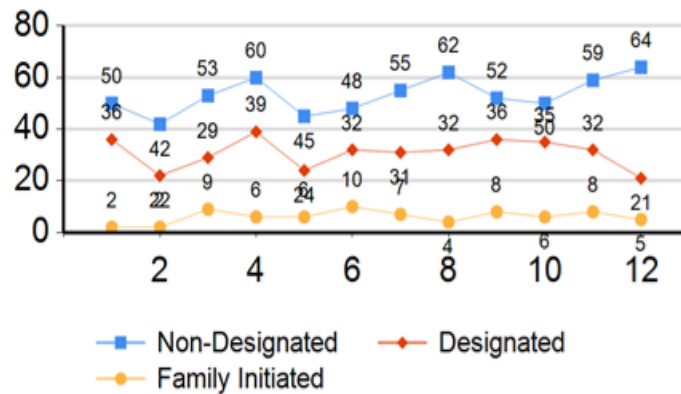


Organ Donation Dashboard

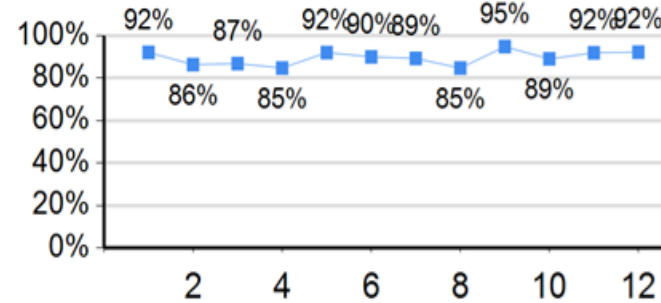
1/1/2018 to 12/31/2018

Monthly Trends

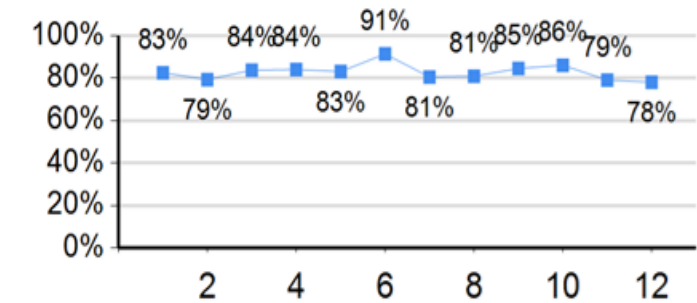
Potential Organ Donors Referred



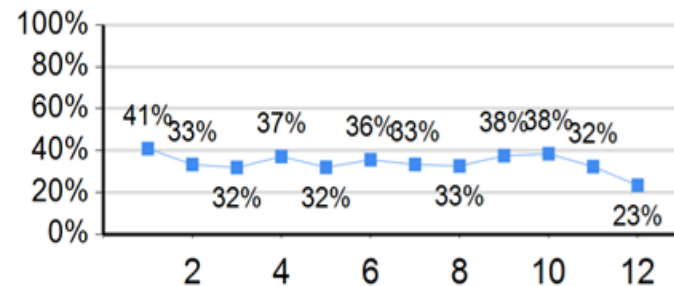
Timely Notification Rate



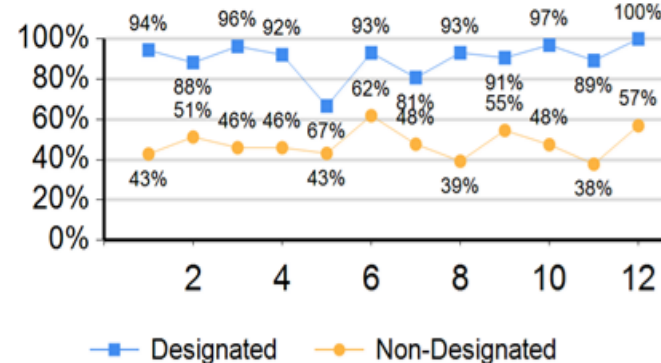
Planned Approach Rate



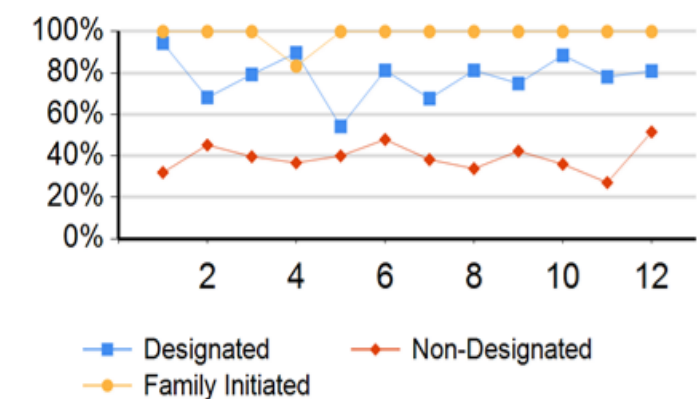
Designation Rate



Authorization Rate



Donation Rate





Measuring Donor Hospital Performance

Organ and Tissue Referral and Donation Summary						
HOSPITAL XYZ						
	Organ Referrals	Potential Organ Donors	Total Organ Donors	DCD Donors	Conversion Rate	Tissue Donors
January 1 through November 9, 2018	149	35	19	4	54%	32

Definitions:

Potential Organ Donor:

All brain dead, medically suitable patients referred for possible organ donation, + all patients age ≤ 75 years discovered during death record review + all donors.

DCD Donors:

The number of patients who donated organs following pronouncement of death by cardiopulmonary criteria.

Total Organ Donors:

The number of actual organ donors inclusive of brain dead and DCD donors.

Conversion Rate:

The number of actual organ donors as a percentage of all potential organ donors.

GOAL: 75%

Tissue Donors:

The number of patients who donated tissue; including cornea, bone, skin, heart valves, saphenous veins and other tissue.

Calculate Conversion Rate for 1/1/2018 – 12/31/2018

Potential Donors = 35

Actual Donors = 19

$$19 \div 35 = 54\%$$

Conversion Rate = 54%



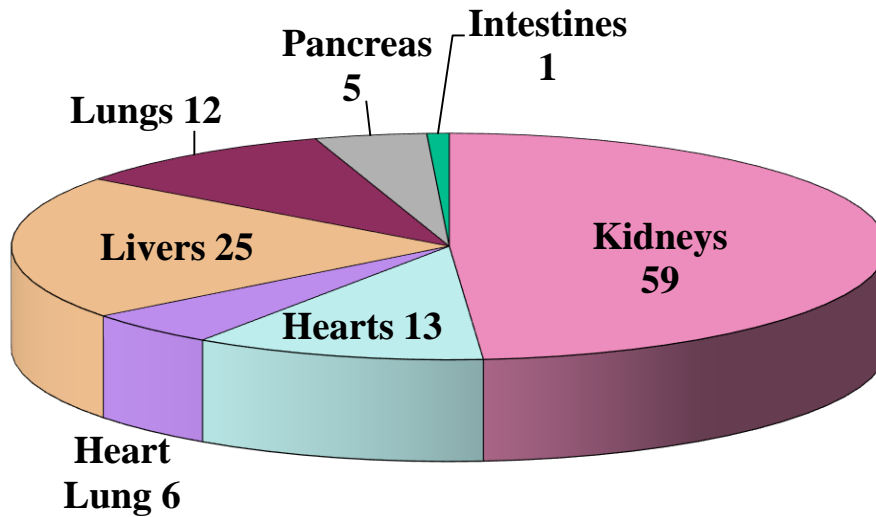
	2017	2018
All Patients Referred	1,380	1,374
Ventilated Patients Referred	405	364
Potential Organ Donors	73	66
<i>Organ Donation Outcomes</i>		
Total Organ Donors	42	41
BD Donors/DCD Donors	27/15	35/6
Observed/Expected	1.02	1.14
<i>Organ Donation Process Metrics</i>		
Referral Rate (GOAL: 100%)	100%	98%
Timely Notification Rate (GOAL: 100%)	95%	92%
Planned Approach Rate (GOAL: 100%)	86%	87%
Authorization Rate (GOAL: $\geq 75\%$)	67%	74%
Conversion Rate (GOAL: 75%)	58%	62%
<i>Tissue Donation Summary</i>		
Musculoskeletal Tissue Donors	64	62
Total Tissue Donors	91	84

Organs

41 organ donors resulted in...

121 transplanted organs

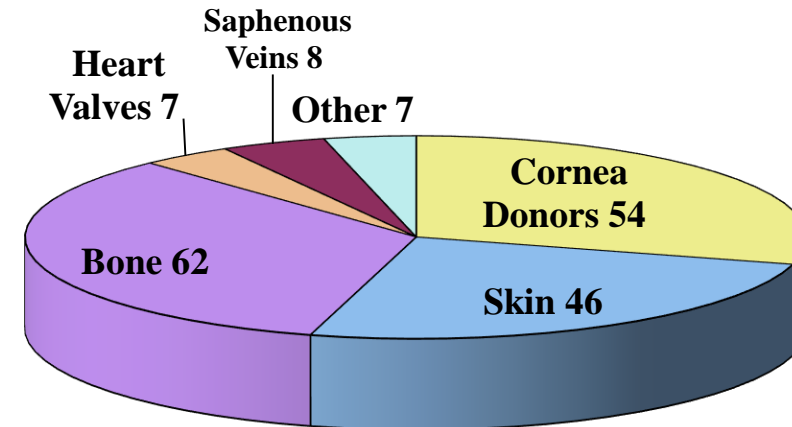
1.14 observed/expected

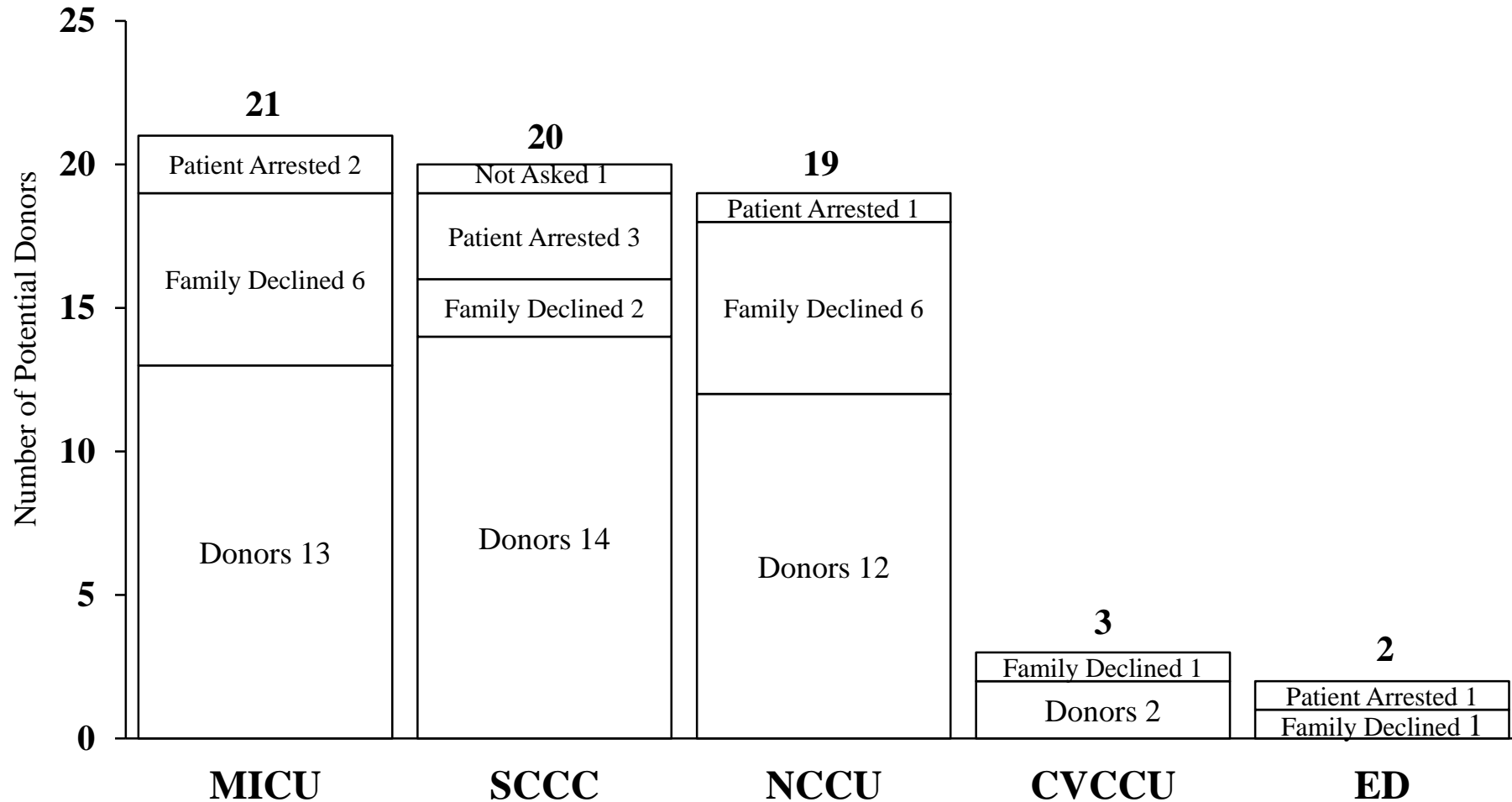


Tissues

84 tissue donors resulted in...

Life enhancing gifts to countless numbers of recipients

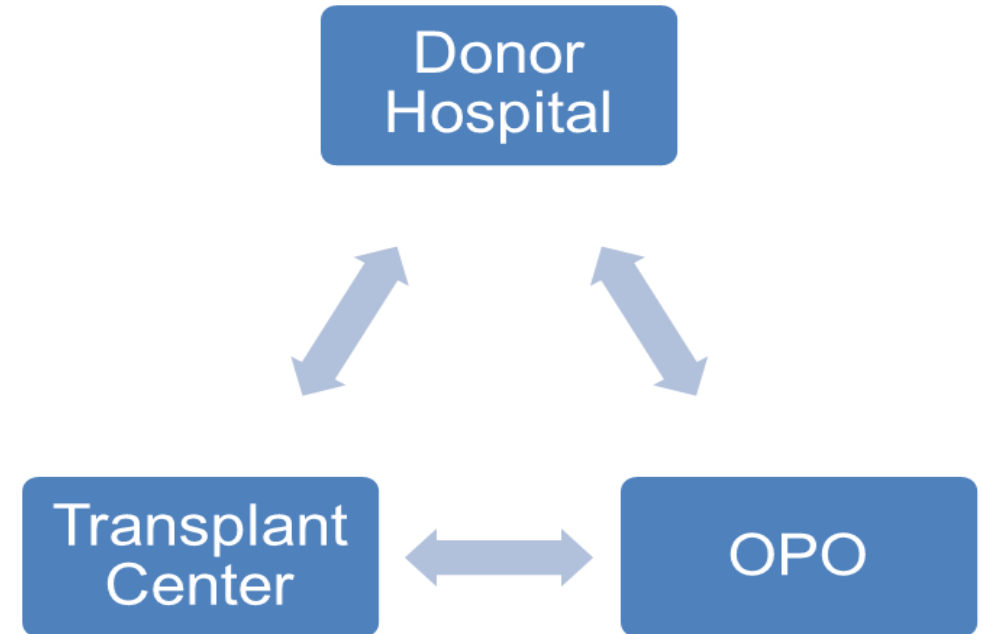




Conversion Rate:	62%	70%	63%	67%	0%
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Key Success Factors

- Investing in donation
- Coordinated national system
- Regulatory framework
- Efficient donor identification
- Professional donation teams
- Transparent data systems
- Public donor registry






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Thank you!
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