

The 13th Joint Annual Congress of the American Society of Transplant Surgeons &
The American Society of Transplantation

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Disclosure of Information

I have no financial relationships to disclose.

-and-

I will not discuss off label use and/or investigational use in my presentation.

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I do not intend to reference unlabeled/unapproved uses of drugs or products in my presentation.

**New Proposed National Allocation
Policy for Deceased Donor Kidneys
in the U.S. and Its Possible Impact
on Patient Outcomes**

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May 21, 2013



SRTR's Complementary Role to the OPTN

OPTN	SRTR
Organ Allocation / Policy Development	Research / Policy Evaluation

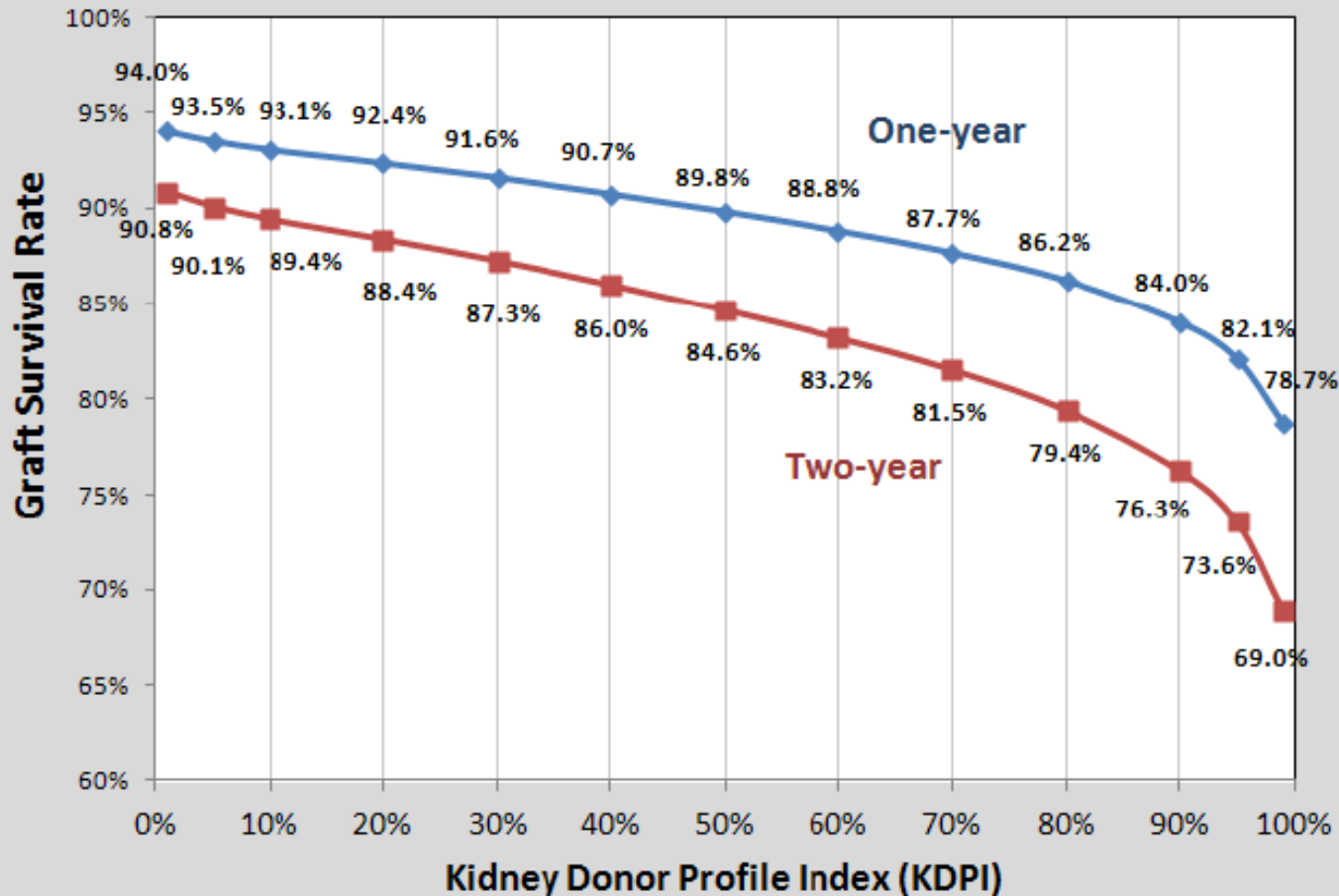
When a committee is considering a change to allocation policy, the committee members may wish to simulate what changes may occur if the policy is implemented. SRTR uses Simulated Allocation Modeling Software to accomplish this goal.

Background: Limitations of Current System

- Variability in access to transplantation by candidate blood type
- High discard rates of kidneys
- Differences in access to transplantation for populations such as candidates with high CPRA
- Kidneys with long potential longevity allocated to candidates with significantly shorter longevity and vice versa
 - Results in unrealized graft years and high retransplant rates

Background: KDPI Correlated with Graft Survival

Estimated Graft Survival Rates by KDPI



Background: Estimated Post-Transplant Survival (EPTS)

- Based on following recipient factors:
 - Candidate age
 - Length of time on dialysis
 - Prior transplant (any organ)
 - Diabetes status(All negative factors, leading to higher EPTS score)
- Higher EPTS score = lower expected patient survival

Background: New Proposed National Allocation Policy & CPRA Sliding Scale

- Currently, candidates with a CPRA of 80% or greater get 4 points; candidates with a CPRA below 80 get no additional points.
- To mediate the “spike” in points at 80, the kidney committee along with histocompatibility committee developed the CPRA sliding scale.

CPRA	Points
0-19	0
20 - 29	0.08
30 - 39	0.21
40 - 49	0.34
50 - 59	0.48
60 - 69	0.81
70 - 74	1.09
75 - 79	1.58
80 - 84	2.46
85 - 89	4.05
90 - 94	6.71
95	10.82
96	12.17
97	17.3
98	24.4
99	50.09
100	202.1

Background: Proposed Point System to Rank-order Within Each Category

- 1 point per year (awarded as $1/365$ point per day) for qualified time spent waiting
- 0-202 points based on degree of sensitization (CPRA)
- 4 points for prior living organ donors
- 1 point for pediatric candidates if donor is <35 yrs old
- 4 points for pediatric candidates (age 0-10 at time of match) when offered a zero antigen mismatch
- 3 points for pediatric candidates (age 11-17 at time of match) when offered a zero antigen mismatch

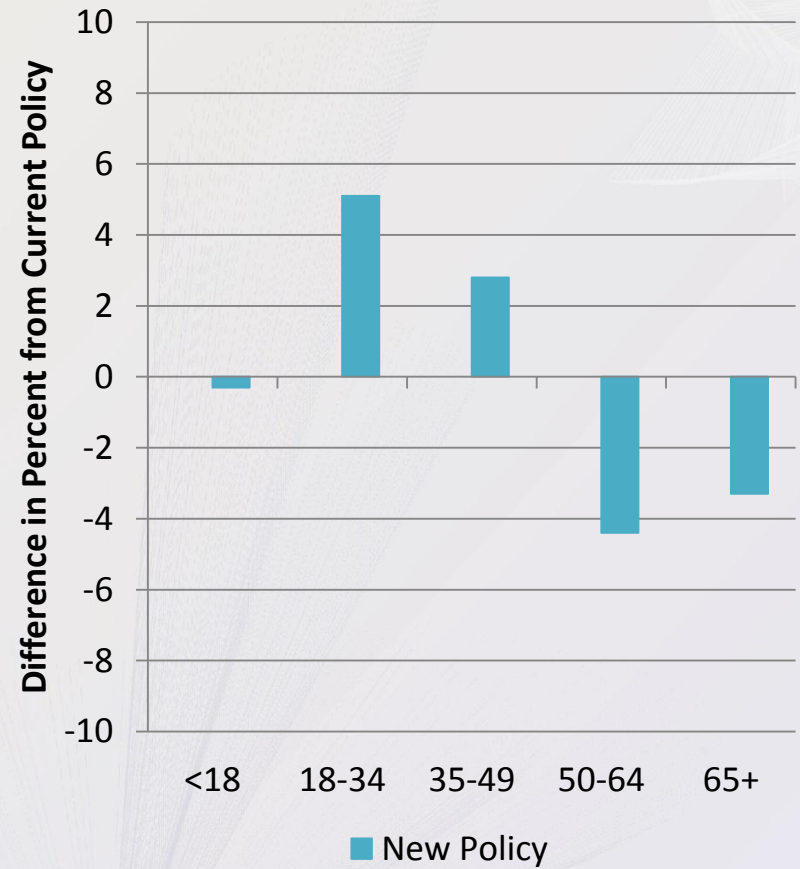
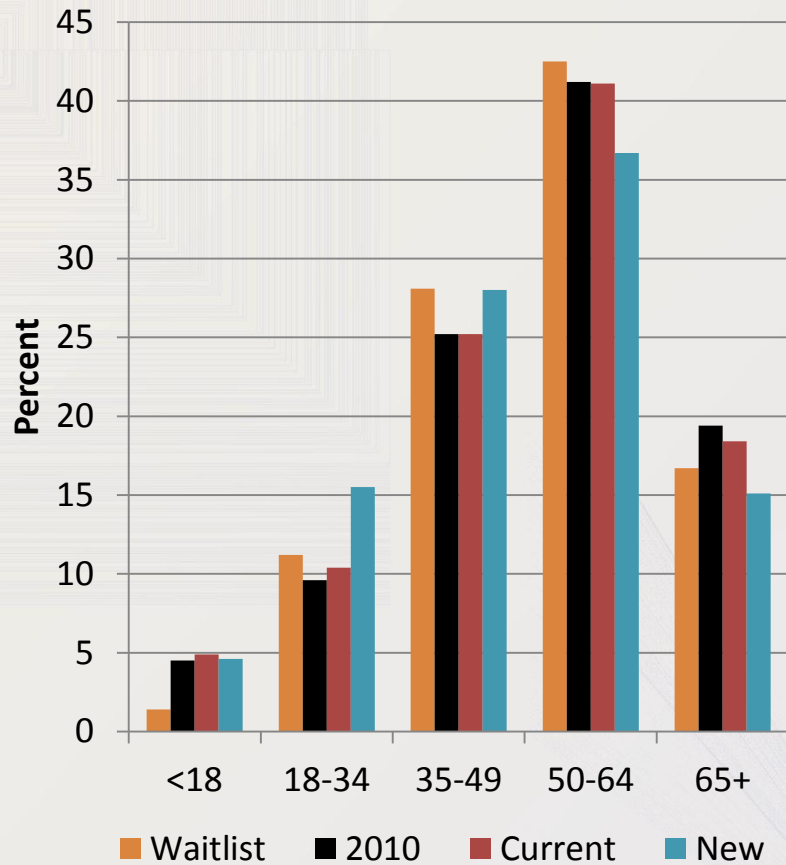
Overview of Allocation Components by Run

Concepts	Current	New
SCD allocation (defined as KDPI \leq .85 for New Policy)	X	X
DCD allocation	X	
ECD allocation (defined as KDPI $>$.85 for New Policy)	X	X
Payback system	X	
Waiting time since listing	X	
Back-dating dialysis time		X
Waiting time points based on fractional years		X
A2/A2B donor to B candidates priority(local, regional, and national)		X
Highest scoring high CPRA classification	X	
Pediatrics cannot receive non-0 mm ECD offers		X

Overview, continued

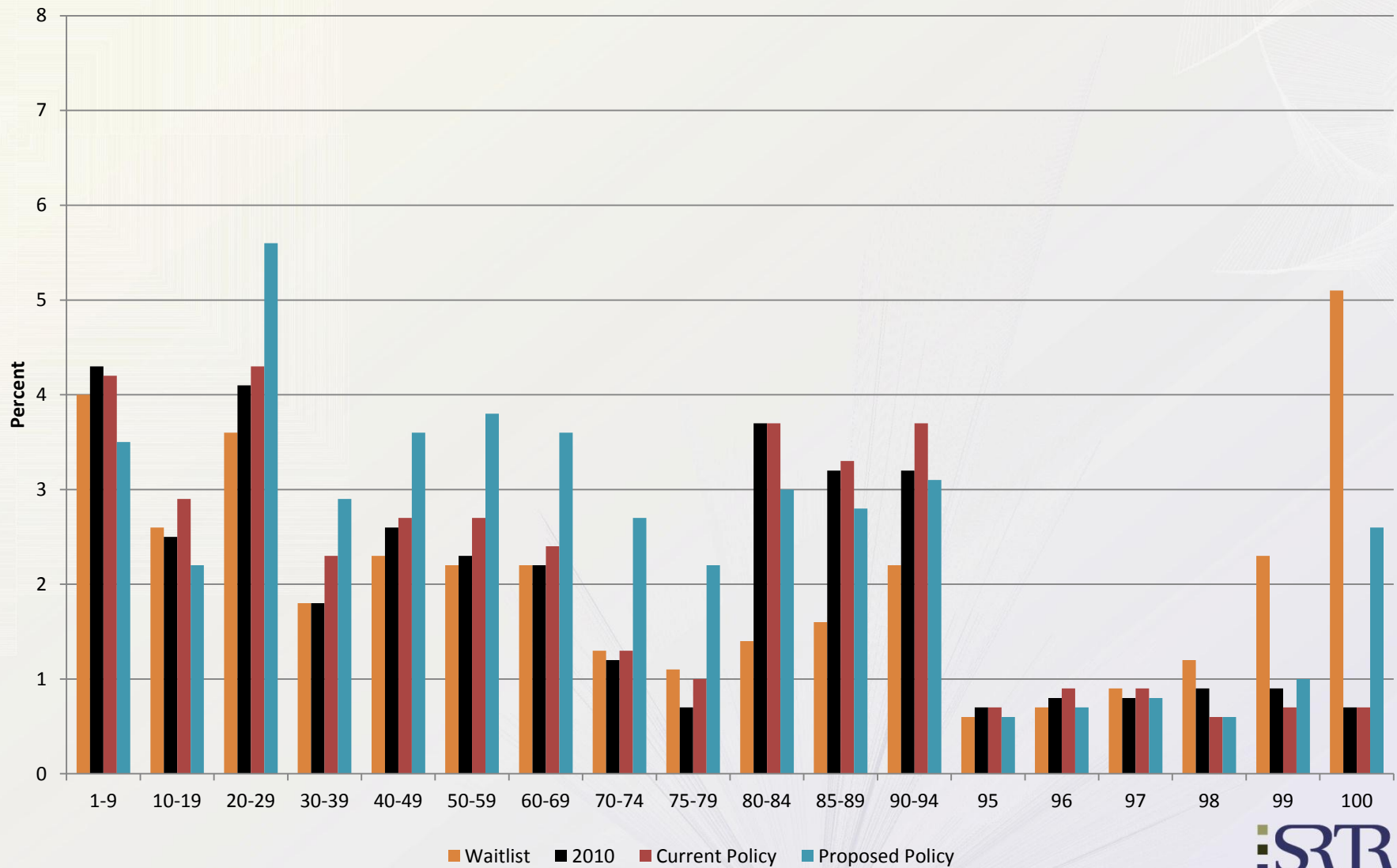
Concepts	Current	New
Longevity Matching (top 20% survivors get first chance at top 20% kidneys)		X
"Share 0.35" pediatric priority in New Policy (Donor < 35 yrs for Current)	X	X
CPRA sliding scale		X
National priority sharing for CPRA 100%, regional priority sharing for CPRA 99%, local priority for CPRA 98% candidates		X
Regional sharing for marginal kidneys (KDPI>.85)		X
KP/PA System: current	X	
KP/PA system: future		X

Kidney Transplants by Recipient Age



[To Table](#)

Results: Kidney Transplants by Recipient CPRA



Results of Simulations

Average for 10 iterations	Current	New
Number of candidates (on waitlist at start or joining during run)	122,669	122,669
Average number of primary transplant recipients (KI+KP)	11,531 (11,463-11,586)	11,365 (11,324-11,409)
Average median lifespan post-transplant (min, max of runs)	11.82 (11.75 - 11.85)	12.73 (12.65-12.79)
Average median graft years of life (min, max of runs)	8.82 (8.80-8.84)	9.10 (9.08-9.12)
Average median extra life-years for tx recipient versus waitlist candidate (min, max of runs)	5.01 (4.99-5.03)	5.27 (5.24-5.29)

Conclusion

- Simulated current allocation policy closely matched distribution of 2010 kidneys
- The new policy simulation showed increases in:
 - average projected median lifespan posttransplant,
 - allograft years of life,
 - median lifespan increase adjusted for quality of life (LYFT) per transplant
- Distribution of kidneys did not change substantively by candidate race, HLA mismatches, or regional sharing
- Candidates with CPRA $\geq 20\%$ were more likely to receive offers
- New allocation policy can potentially improve outcomes posttransplant

Acknowledgments

SRTR

Sally Gustafson, MS

Kenneth Lamb, PhD

Nicholas Salkowski, PhD

Jon Snyder, PhD

Bert Kasiske, MD

Kidney Committee of UNOS/OPTN

John Friedewald, MD

Richard Formica, MD