Rethinking Organ Utilization

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Disclosures

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Rethink Everything

HEALTH
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TRANSPLANT SUMMIT 2020
BALANCING EQUITY AND UTILITY IN THE FACE OF AN ORGAN SHORTAGE

March 5–7, 2020 | Arizona Biltmore | Phoenix, AZ
» myAST.org/meetings/CEoT
The Challenge

• The kidney waiting list continues to increase
• Waiting times are increasing nationally
• Approximately 30-35% of kidneys are not being utilized
• High KDPI kidneys have the lowest utilization
Deceased Donor Kidney Discard Rates by Month
(December 1, 2013 - September 30, 2018)

Donor Recovery Date (Month and Year)
KDPI  0-20%  21-34%  35-85%  86-100%  Overall

What’s the evidence?

COMPARISON OF MORTALITY IN ALL PATIENTS ON DIALYSIS, PATIENTS ON DIALYSIS Awaiting TRANSPLANTATION, AND RECIPIENTS OF A FIRST CADVERIC TRANSPLANT

ROBERT A. WOLFE, PH.D., VALERIE B. ASHEY, M.A., EDGAR L. MILFORD, M.D., AKINLolu O. OLoo, M.D., PH.LD., ROBERT E. ETTINGER, M.D., LAWRENCE Y.C. AGODOA, M.D., PHILIP J. HELD, PH.D., AND FRIEDRICH K. PORT, M.D.

Developing Organ Offer and Acceptance Measures: When ‘Good’ Organs Are Turned Down

R. A. Wolfe,⁎,†, F. B. LePorte⁎, A. M. Rodgers⁎, E. C. Roys⁎, G. Fant⁎ and A. B. Leichtman⁎

New Solutions to Reduce Discard of Kidneys Donated for Transplantation

Peter P. Reese,⁎,†,‡ Meera N. Harhay,§ Peter L. Abt,‖ Matthew H. Levine,¶ and Scott D. Halpern⁎,†

Marginal kidney transplantation: the road less traveled

Neeraj Sharma, Arnav Mahajan, and Yasir A. Qazi

Original Clinical Science—General

Predictors of Deceased Donor Kidney Discard in the United States

Wesley J. Marrero, BS; Abhijit S. Naik, MD, MPH; John J. Friedewald, MD; Yongcai Xu, BS; David W. Hutton, PhD; Meryl S. Lavey, PhD, and Neeraj D. Parkh, MD, MS.
Let’s look at high KDPI kidney non-utilization

• Increased risk of DGF
• Longer Length of Stay
• High readmission rates
• Increased risk aversion
• Inefficient organ allocation and distribution
• Long cold ischemia times
And there’s more....

• Increasing refusal number
• Absence of kidney photograph
• Night-time offer
• Neither kidney placed at the time of the offer
• Change in the donor pool
• Pumping and Biopsy practices
Is it the cost?

- Increased cost to transplant centers when transplanting high KDPI kidneys
- 10 year discrete event simulation revealed that the use of high KDPI kidneys is more expensive than maintenance dialysis over 10 years
- It also correlates with an increase of 5.2 quality adjusted life years
- The gain in survival years makes transplanting high KDPI kidneys cost-effective
Will there be a better offer?

A kidney offer acceptance decision tool to inform the decision to accept an offer or wait for a better kidney

Andrew Wey¹ | Nicholas Salkowski¹ | Walter K. Kremers² | Cory R. Schaffhausen³ | Bertram L. Kasiske¹,³ | Ajay K. Israni¹,³,⁴ | Jon J. Snyder¹,⁴

– Studied patients 30-40 years old waitlisted for 5 years and estimated the probability of a functioning graft in 5 years from the time of offer with a KDPI of 95% and 30 hours of cold ischemia time
– Candidates were unlikely to undergo transplant after an additional 5 years on the waiting list
– Translates into a 76% probability of having a functioning graft 5 years post-offer
Leveraging marginal structural modeling with Cox regression to assess the survival benefit of accepting vs declining kidney allograft offers

Jordana B. Cohen¹,² | Vishnu Potluri¹ | Paige M. Porrett³ | Ruohui Chen² | Marielle Roselli² | Justine Shults² | Deirdre L. Sawinski¹ | Peter P. Reese¹,²

- Used national data registry to evaluate the survival benefit of accepting vs turning down kidney offers in candidates waitlisted in 2007-2013
- Among candidates who declined their first offer 43% eventually received transplants
- Recipients who received transplants after declining the first offer had significantly longer wait times
- 56% received kidneys of the same or lower quality than the first offer
- Survival benefit of accepting an organ offer is clinically meaningful and persistent beyond 3 months posy kidney transplantation
What are the outcomes?

Benefits of high KDPI kidneys observed in patients older than 50 and waitlisted more that 33 months

- 60 years or older undergoing pre-emptive transplantation vs compared with undergoing transplantation with KDPI 34-85% after being on dialysis 1-4 and 4-8 years
- Overall risk of graft failure and death censored graft failure in recipients who received a preemptive transplant with marginal kidney was similar to recipients who underwent a transplant with a low KDPI after being on dialysis for either 1-4- or 4-8 years
What are the outcomes?

• Compared survival for KDPI greater than 85% to remaining on the waitlist and to those who subsequently received a KDPI 0-85% transplant
• Concluded that KDPI greater than 85%, especially pre-emptive transplants, was associated with increased long-term survival compared with remaining on the waitlist for a lower KDPI transplant in patients 60 years of age or older
Limitations

• Data
  – Quality and breadth
• Selection Bias of donor and recipients
• Heterogeneous donor and candidate population
• Change in OPO regulations
• Cohorts studies with relation to KAS
• Listing practices
• Turndown reasons
• Metrics
• Lack of patient reported outcomes
• What is the expected non-utilization rate/percentage for kidneys?
• Does a high or low non-utilization rate equate to serving the community better?
• What metrics do we assign to utilization for the transplant centers and OPO’s?
• Do the metrics we currently use for the transplant centers and the OPO align?
If the answer was that simple there would be very few non utilized kidney
We are a committed, passionate and intelligent community
We lead the medical field- public data collection, multidisciplinary care.....
Are we focusing on the wrong goals?
• Do best practices in the current environment translate to meaningful progress?
• Are they really best practices?
• What is a high performer?
• Does that mean numbers, quality, both?
Rethink Everything

• This is a system problem- not a utilization problem
• What if we created a system of uniform practices and accountability across the entire spectrum of transplant care?
• Are we capable of consensus?
Rethink Everything

• How do we move to a more innovative and nimble “what’s next?” mindset like Apple and Google and my son’s soccer coach?
• Are we caught in “groupthink”?
How much of this is behavior?

- Regulatory burden for less than expected outcomes
  - How much does this influence decision making?
- We are trying to be responsible to our patients and transplant quality organs
  - Current outcome and quality metrics do not tell the whole story
• How do we change behavior?
  – Is it through Pilot projects, policy development
  • Cooin project
• How much do these initiatives really move the needle?
• Are the effects durable?
• Are there disrupters to stimulate change?
• Are they outside of our community?
What about our metrics?

• Is it time to redefine how we measure quality, outcomes and benefit?

• What metrics are important and how do we weigh them?
  – Outcomes
  – Quality
  – Benefit
Redefine and align dialysis center, OPO and transplant center metrics as a system

Include Patient-Reported Outcomes into metrics
  – Take our patients’ experiences into account
    • Graft and patient survival do not always equate with a “good outcome”

What is an acceptable non utilization rate?
  – Develop policies holding OPO’s and transplant centers accountable to utilization metrics
What data do we need?

- The data collected depend on the metrics selected
- Is it time to systematically revisit the data are we collecting?
- How do we collect data efficiently?
- Do we need to collect new and different data and perform different analyses?
  - Patient-reported outcomes
  - Hospital Readmission Rates
  - Artificial Intelligence
  - Prescriptive Analytics
Good News

SPECIAL ARTICLE

Time for reform in transplant program–specific reporting: AST/ASTS transplant metrics taskforce

Anil Chandraker\textsuperscript{1} | Kenneth A. Andreoni\textsuperscript{2} | Robert S. Gaston\textsuperscript{3} | John Gill\textsuperscript{4} | Jayme E. Locke\textsuperscript{5} | Amit K. Mathur\textsuperscript{6} | Douglas J. Norman\textsuperscript{7} | Rachel E. Patzer\textsuperscript{8} | Abbas Rana\textsuperscript{9} | Lloyd E. Ratner\textsuperscript{10} | Jesse D. Schold\textsuperscript{11} | Timothy L. Pruett\textsuperscript{12} | on behalf of the AST/ASTS Transplant Metrics Taskforce
Policy

– Dialysis Centers:
  • Access to Transplant

– Transplant Centers:
  • Listing, waitlist management, organ acceptance and outcome
  • Standardization in listing appropriate candidates and maintaining transplant readiness at all times.

– OPO’s:
  • Metrics to maximize organ donation and efficiency
  • Just because we can procure kidneys and someone may take it doesn’t mean we should
  • Metrics linked to organ outcome
Thank You