Don't Throw Your Heart Away!

Decision Processes Explain the High Rate of Donor Discard by Pediatric Heart Transplant Teams

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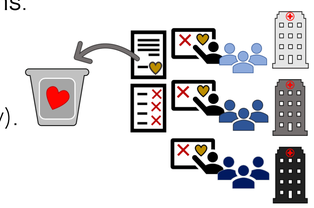
Problem

A majority of pediatric donor heart offers to children awaiting heart transplants are **declined by their transplant teams**.

44% of pediatric donor hearts are ultimately discarded (thrown away). Why?



Background

Behavioral economics predicts that decision makers will respond to **the tacit incentives embedded in a regulation or evaluation system**: even when those incentives are misaligned with the goal of the enterprise.

The goal of transplant medicine is to enhance patient longevity and quality of life, but posttransplant outcomes are the primary focus of transplant center performance evaluations. Further, transplant center report cards do not emphasize donor utilization practices by individual centers.

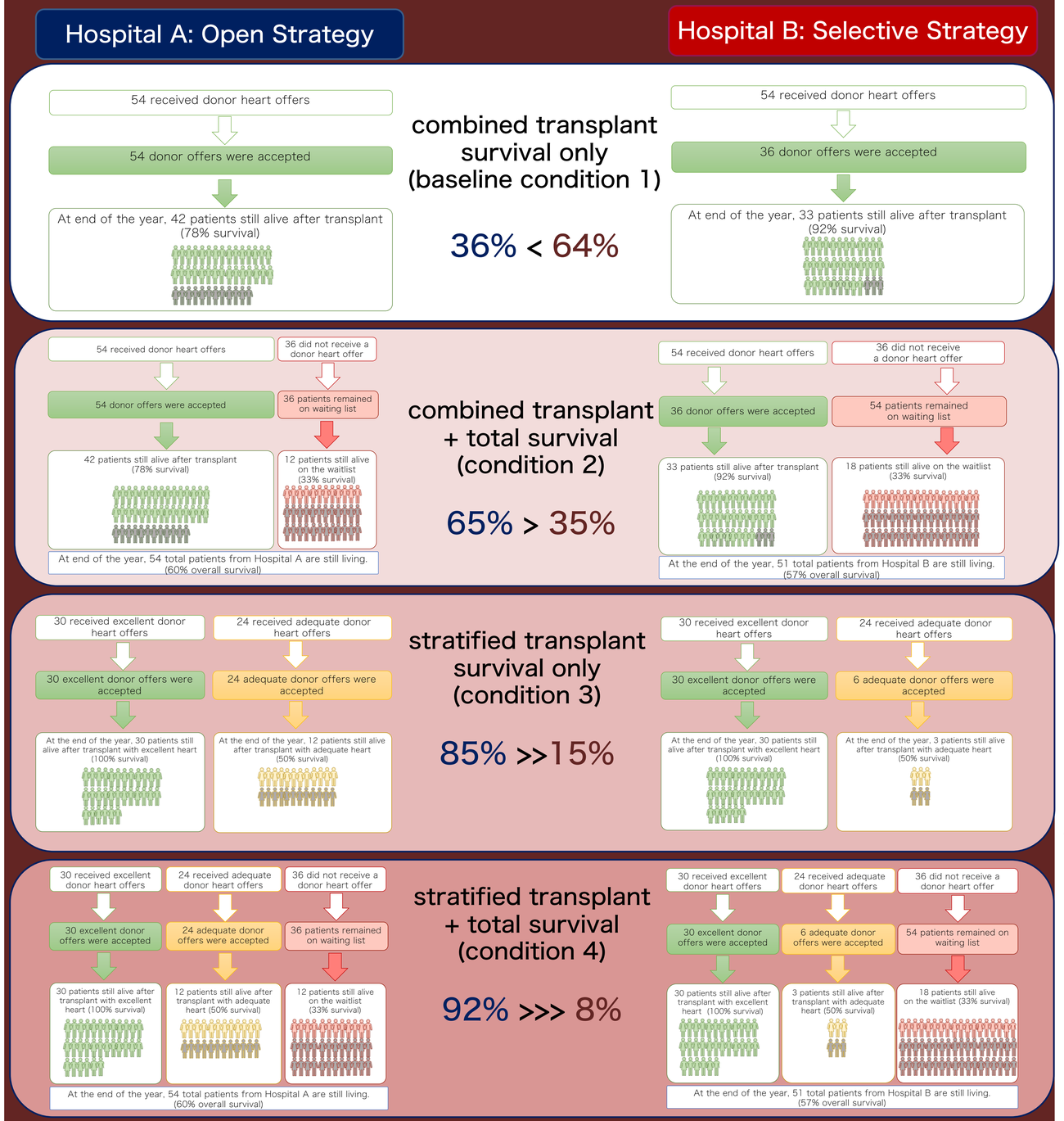
Research Questions

1. Will a new classification scheme for transplant outcomes impact how people evaluate hospitals?
2. Do specific features of the information presentation mediate its effect on hospital evaluation?

Methods

- N = **765** Amazon Mechanical Turk workers
- IV = **four information conditions** featuring different components of transplant outcome statistics
- DV = **choice between two hospitals**:
  - non-selective "open" acceptance strategy
  - selective donor acceptance strategy
- **mediating variable**: how much participants considered the **chances of getting a heart** when making choice between hospitals

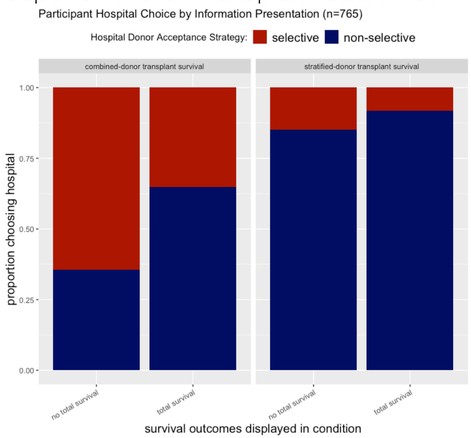
Evaluations of transplant hospital performance vary based on what information is presented for evaluation, and how that information is presented.



Main Effects

- When performance reports show:
  - **total survival rates** (conditions 2 and 4)
  - **transplant survival stratified by donor risk status** (conditions 3 and 4)

…rather than showing only combined transplant survival information (condition 1), lay participants favor the hospital (A) with high organ acceptance rates over the hospital (B) with superior overall transplant outcomes.



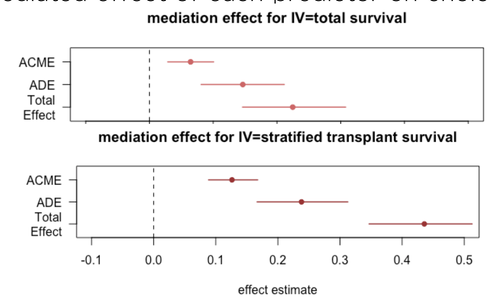
Dependent Variable: Choice of Hospital (0=selective strategy, 1=open strategy)

	(1)	(2)
Constant	-0.514***	-0.595***
	(0.142)	(0.156)
total survival	1.044***	1.202***
	(0.383)	(0.217)
stratified	2.122***	2.338***
	(0.196)	(0.257)
total survival:stratified		-0.531
		(0.392)
Observations	765	765
Log Likelihood	-379.269	-378.364
Akaike Inf. Crit.	764.538	764.728

Notes: Constant = combined transplant survival only, *p<0.05, **p<0.01, ***p<0.001.

Mediation Effects

- considering the chances of "getting a heart" mediated effect of each predictor on choice



Tingley D, Yamamoto T, Hirose K, Keele L, Imai K (2014). "mediation: R Package for Causal Mediation Analysis."