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The Gift that Keeps on Giving: Increasing Donation Rates by Offering Incentives

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Abstract

Across the globe, there is a shortage of donor organs for patients with end-stage organ disease. In most countries, organ donation is stagnant. Over the years, different approaches have been attempted with variable success. Most have focused on media appeals to encourage organ donation. A more direct means to try to improve organ donation would be to reward individuals who either agree to donate (in the event of their brain death) or authorized donation of their next-of-kin. For example, in Singapore (which has an ‘opt out’ organ donation system, whereby, all citizens are considered eligible for donation unless they formally ‘opt out’ of consideration), priority for transplant is given to individuals who have not opted out (1). A different system was recently implemented in Israel where citizens were rewarded for either donor registration or authorizing donation for their next-of-kin. Israel, like most countries has an ‘opt in’ donation system whereby organ donation is not presumed and requires specific authorization by registration of the individual (prior to brain death) or authorization by next-of-kin. Specifically, the Israeli law provided two incentives: 1) patients waitlisted for solid-organ transplant who had previously registered as an organ donor 3 years before listing received higher transplant priority; and 2) first-degree relatives of individuals who either donated an organ while alive or authorized donation for their next-of-kin were granted higher transplant priority. Stoler et al. reviewed changes in organ donation before and after implementation of this novel national policy (2).

In this manuscript, the authors highlighted several important findings. First, authorization rates from next-of-kin of potential donors increased from 45.0% (1998-2010) to 55.1% (2011-2015), with an all-time high of 60.2% in 2015. In addition, authorization rates from next-of-kin of non-registered potential donors increased from 42.2% (1998-2010) to 51.1% (2011-2015). Furthermore, in logistic regression models, the authors demonstrated a significant increase in the yearly trend in deceased-donor authorization rates ($p=0.04$). This indirectly demonstrates that incentives rewarding next-of-kin for authorizing donation were successful to some degree. Finally, authorization rates from next-of-kin or registered donors

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decreased insignificantly from 91.3% (1998-2010) to 87.0% (2011-2015). The authors hypothesize this may reflect “fake” registrations among individuals who register to gain a listing advantage in the event that they might require a transplant while living, while simultaneously instructing their family not to respect their wishes. While plausible, this explanation is speculative.

Overall, these data are encouraging, but must be taken with caution. First, this epidemiological study only demonstrates an association between passage of a law and donation rates, and not cause-and-effect. Without a “control” group or a difference-in-differences analysis, the authors cannot definitively conclude that the policy led to changes in donation rates, instead of changes in attitudes towards donation or changes in the population demographics. Also, the policy changes occurred concurrently to a public awareness campaign about organ donation, which may have changed donation rates. Second, while the authorization rates improved over time, the total number of donors was flat despite an increase in the population (2). Therefore, novel donor initiatives may be successful without actually increasing the number of actual donors. In addition, the baseline donation rates in Israel are low, especially compared to many Western countries. Thus, whether these incentives would yield similar results in more ‘organ-rich’ countries is unclear. While these interventions could be tested in targeted populations in the US that have lower authorization rates yet higher rates of end-stage organ disease (i.e., African Americans and Hispanics) or in regions of lower donor registration, concerns exist about offering an incentive only to certain demographic or geographic populations (3). The other finding that is potentially concerning is the decreased authorization rates in next-of-kin of registered individuals. If the authors' hypothesis is correct, then policy revisions are needed. For example, an argument could be made that once a donor is registered, next-of-kin would not be able to reverse such decisions. Not only would this be honoring patient autonomy, but would prevent fake registrations. Independent of the results of this study, one needs to consider the ethical implications of reciprocity under the Israeli system. While there is likely little opposition to awarding higher waitlist priority to an individual who has registered as an organ donor, rewarding the next-of-kin of donors raises ethical questions. If an individual's next-of-kin has justified oppositions to being an organ donor, does that mean that person should be prioritized lower than someone whose relative is supportive of organ donation. This is an important consideration in a system that rewards not only donation decisions by an individual, but also those of their first-degree relatives, especially in countries like the United States that includes people of all religions and cultures, some of which are not supportive of organ donation (in Israel, nearly all citizens are either Jewish, Arab Muslim, or Arab Christian). This also raises the issue of ethics, whereby allocation priority is based on organ donation, rather than medical need.

In conclusion, the novel donor incentive policy recently introduced in Israel was associated with some improvements in organ donation. Consequently, these initiatives could be considered in other countries with baseline low authorization rates, but may not be successful in the US.

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References

1. Singapore Statutes Online: Human Organ Transplant Act. 2008; Chapter 131A
2. Stoler A, K J, Ashkenazi T, Roth AE, Lavee J. Incentivizing authorization for deceased organ donation with organ allocation priority: The first five years. *Am J Transplant*. 2016; doi: 10.1111/ajt.13802
3. Goldberg DS, Halpern SD, Reese PP. Deceased organ donation consent rates among racial and ethnic minorities and older potential donors. *Critical Care Medicine*. 2013; 41:496–505. [PubMed: 23263585]