Invited Commentary

Time to Test Incentives to Increase Organ Donation

Sally Satel, MD; David C. Cronin II, MD, PhD, MHCM

In 1987, when the United Network for Organ Sharing began keeping records, there was a gap between supply of organs and demand. With time, that gap has become a chasm. Last year, more than 120 000 people were in need of a kidney, liver, heart, or lung; roughly 7000 of them died while waiting.[1]

During the past 2 decades, states have tried several ways to encourage nondirected organ donation from deceased and living donors. These methods have included, for example, a state tax deduction for expenses incurred by living donors. But do such policies wield a meaningful effect? In this issue, Chatterjee and colleagues,[2] to our knowledge, conduct the first examination of the national effect of a variety of policies on organ donation, and find that the policies barely made a dent.

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The authors report their discouraging conclusion after examining United Network for Organ Sharing data on the per capita rate of donations and transplant operations from 1988 to 2010. They assess those data in relation to 6 state-level policies: the presence of first-person consent laws whereby the family cannot override an individual's documented desire to be a donor at death, donor registries, dedicated revenue streams for donor recruitment and promotion activities, public education, paid job leave for living donors who work in the public and private sectors, and tax benefits for donors covering costs of living donation, such as child care, transportation to a medical center and follow-up trips, and lost wages. Only a modest rise in the rate of transplants was found and it was attributable to the revenue policy.

Chatterjee and colleagues[2] suggest possible explanations for the disappointing findings. Perhaps some states did have positive results but the signal was obscured when pooled with data from other states. Possibly the tax breaks were too modest; after all, the maximum cash value of tax deductions under existing state policies is approximately $600.[3] Along these lines, it would be interesting to see whether Utah and Idaho, the only 2 states with a tax credit for organ donation (a more generous form of tax break), fare better than the 15 other states that allow only a tax deduction.

Looking back across the past decade, only 1 policy has wielded a notable effect on deceased donation. The Organ Donation Breakthrough Collaborative, a federal effort initiated by the US Department of Health & Human Services in 2003, helped to increase the conversion rate (the number of deceased individuals whose organs are taken, divided by the number of people who are eligible to become posthumous donors) in participating centers by 60% by improving coordination between donor hospitals, where organs are procured, and transplant centers, where the organs are transplanted.[4] However, transplant operations have hovered between 28 000 and 29 000 annually during the past 10 years.[4]

To be sure, paired kidney exchanges (wherein 2 biologically incompatible donor and recipient pairs "switch" donors and thus become compatible) and domino chains (the same idea as paired exchanges, involving multiple incompatible donors) are excellent developments for patients with poorly matched donors, but they are not intended to recruit new donors in large numbers. Presumed consent—wherein the organs are taken posthumously unless an individual has specifically forbidden their retrieval—will not yield enough new kidneys for transplant because less than 1% of deceased individuals are medically eligible to donate.[5]

We believe it is time for disruptive innovation. By this concept, we mean compensating donors, not simply seeking to soften the financial ramification of donation. It is time to test incentives, to reward people who are willing to save the life of a stranger through donation.

In-kind donor compensation will likely increase the donor pool, as have outright cash payments in other domains. We have no shortages of ova, sperm, and cadavers for medical school dissection. In a controlled-comparison trial, Lacetera et al[6] showed that paying for blood plasma led to greater donation at Red Cross sites. Notably, the United States pays donors for their blood plasma and is, in fact, the supplier of plasma to the rest of the world.

Kidneys provided by living donors, the would-be targets of a benefit program, confer a survival advantage on the recipient because they have longer graft survival than cadaveric kidneys. Preemptive transplants are also fiscally superior because they avert or decrease costly care associated with dialysis and the development of comorbid conditions while undergoing dialysis.

Rewarding donors is not a new idea, but it remains to be tested. In 1983, Rep Al Gore, who championed the National Organ Transplant Act, explicitly allowed for the possibility of rewarding donors if the altruism-driven system did not keep up with demand.[7] Notably, a close reading of the National Organ Transplant Act's legislative history[7] implies that the law's felony provision against "valuable consideration" in exchange for an organ was intended to prohibit brokered or direct cash sales between buyer and seller, not a system of in-kind, third-party compensation, as we and others have proposed.[8]

No one is suggesting a free market. Donors would not get a lump sum of cash; instead, a governmental entity or a designated charity would underwrite and offer them in-kind rewards, such as a contribution to the donor's retirement fund, an income tax credit, or a tuition voucher worth roughly $50 000. (This is the amount we have most often heard proposed among advocates of incentives, yet there are no US precedents to rely on. The benefits themselves could be funded by Medicare and Medicaid savings that come from averting dialysis or from charity.) To enhance deceased donation, a funeral benefit could be offered. In 1994, Pennsylvania passed

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a law that would permit family members of a posthumous donor to receive a burial benefit of up to $3000, paid directly to the funeral home, to supplement the cost of the donor's burial. The law was never implemented, however, because of concerns it would run afoul of the National Organ Transplant Act.[7]

Finally, with a third party providing the compensation, all recipients, not just the financially secure, will benefit. All donors, too, would receive benefits of comparable value. An imposed waiting period of at least 6 months would help limit impulsive live donation and subsequent remorse. Prospective donors would be carefully screened for physical and emotional health, as is done for all donors currently. Their kidneys could be distributed according to Organ Procurement and Transplantation Network policies now in place for deceased donor allocation. Of course, people who wanted to donate a kidney to a specific person—for example, a father to a son—would still be able to do so. Finally, as part of their compensation package from federal or state government or charity, all rewarded live donors would be guaranteed follow-up medical care for any complications, which is not ensured now.

Some worry that a rewarded donation will attract only low-income individuals. This outcome is possible. One response is to require a minimum income for donors, but that strategy will eliminate some individuals wanting to participate.

Whether a benefit program would actually enhance donation (as we anticipate), to what extent, and whether it would attract certain types of people as would-be donors are empirical matters to be addressed in clinical trials. At present, even small-scale, local increases remain to be demonstrated.

The study by Chatterjee and colleagues[2] is yet another reason to get serious about meaningful reform. Our current transplant system is inadequate for the task of boosting the volume of organs needed for life-saving transplantation. Altruism is not enough. Pilot trials of incentives are needed.

ARTICLE INFORMATION

Author Affiliations: Department of Psychiatry, Yale University School of Medicine, New Haven, Connecticut (Satel); Department of Surgery, Medical College of Wisconsin, Milwaukee (Cronin).

Corresponding Author: Sally Satel, MD, Department of Psychiatry, Yale University School of Medicine, 300 George St, Ste 901, New Haven, CT 06511 (slsatel@gmail.com).

Published Online: June 1, 2015. doi:10.1001/jamainternmed.2015.2200.

Conflict of Interest Disclosures: None reported.

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