



Financial rewards for organ donation: are we getting closer?

Anthony Monaco

To cite this article: Anthony Monaco (2007) Financial rewards for organ donation: are we getting closer?, Expert Review of Pharmacoeconomics & Outcomes Research, 7:4, 303-307, DOI: [10.1586/14737167.7.4.303](https://doi.org/10.1586/14737167.7.4.303)

To link to this article: <https://doi.org/10.1586/14737167.7.4.303>



Published online: 09 Jan 2014.



Submit your article to this journal [↗](#)



Article views: 1197



View related articles [↗](#)

For reprint orders, please contact reprints@future-drugs.com



Anthony Monaco
Harvard Medical School, Beth Israel
Deaconess Medical Center,
110 Francis Street, 7th Floor,
Boston, MA 02215, USA
Tel.: +1 617 632 9822
Fax: +1 617 632 9820
amonaco@bidmc.harvard.edu

Financial rewards for organ donation: are we getting closer?

'If every eligible brain death donor in the USA became an actual donor there still would be a shortage of transplantable kidneys.'

Expert Rev. Pharmacoeconomics Outcomes Res. 7(4), 303–307 (2007)

Organ transplantation is frequently the preferred therapy for end-stage organ failure but its application is limited by availability of transplantable organs. A total of 96,964 people were registered on organ transplant waiting lists in the USA on July 3, 2007, of which 72,329 were waiting for kidneys [101]. The kidney waiting list grows at the rate of 7–8% per year. Waiting times continue to lengthen (to over 5 years in many areas) producing cardiovascular and other dialysis-related complications that augment pre- and post-transplant morbidity and mortality. Approximately 8% of renal transplant candidates die waiting [1,2]. This editorial describes efforts to expand the donor pool. Not surprisingly, the possibility of fostering organ donation by financial incentives is receiving increasing consideration.

Total organ donation (deceased and living) in the USA has steadily increased over the past decade (from 9208 donors in 1996 to 14,488 in 2005). Deceased donors have grown over 50% since 1996, predominantly owing to the use of so-called marginal donors [3], specifically extended criteria donors (ECD) and donors after cardiocirculatory arrest (DCD). The use of ECD donors (donors aged 50–59 years with at least two of the following conditions: serum creatinine greater than 1.5 mg/dl, hypertension or death by cerebrovascular accident) has doubled in the past decade [3]. Although ECD kidneys have a 1.7 relative risk of graft failure versus standard criteria kidneys (SCD; donors aged 10–39 years without the ECD criteria), they have been used effectively in older, higher risk candidates with limited life expectancy [4]. The survival benefit of these kidneys is significant for recipients aged over 40 years facing

long waiting times, but only in diabetics with shorter waiting times [2]. Although extra-renal organs from ECD donors have been used, most transplant surgeons consider them less ideal and their use has been curtailed. Of all USA deceased donors in 2005, 9342 were SCD, 3102 were EDC and 869 were DCD. These numbers represent increases since 1996 of 15, 78 and 697%, respectively, documenting that increases in deceased donors occurred in the ECD and DCD groups [3]. Unlike ECD kidneys, DCD kidneys have survival rates comparable with SCD donors [5,6] and their use is increasing [7,8]. In September 2003, a US government sponsored initiative, the Organ Donation Breakthrough Collaborative (ODBC), was inaugurated to apply the most successful organ procurement methods to all organ donor hospitals. Specific goals were to increase organ donation (conversion) rates (the ratio of donors obtained/eligible donors), the number of organs transplanted per donor and the number of deceased donors identified, especially DCD donors. The conversion rate has increased from 52.0 (2003) to 58.4% (2005) [3] and possibly up to 62.7% (2007), and the total number of all deceased organs has increased 6–8% per year through 2005. The average number of organs recovered and transplanted per donor remained stationary in 2005 at 3.53 and 3.06, respectively, underscoring the fact that while ECD and DCD donor kidneys are increasingly accepted, other organs from these donors are considered less than ideal and not utilized [9]. Sheely *et al.* suggested that if every eligible brain death donor in the USA became an actual donor there still would be a shortage of transplantable kidneys [10].

Increased ECD and DCD deceased donors achieved by the ODBS (recently expanded in October 2005) suggests this conclusion could be premature.

Under modern immunosuppression, kidneys from unrelated (non-consanguineous) living donors survive as well as those from related (consanguineous) donors within equivalent HLA matches [11]. Eligible donors such as spouses, friends, lovers, fellow church goers and others expanded living donor kidney transplantation through 2000 [3]. Increased living donor availability also permitted exchanges (swaps) between one or more ABO living donor-recipient pairs or crossmatch incompatible pairs (or even combinations thereof), thereby enabling use of the other (incompatible) donors for transplantation [12]. Unfortunately, superior results with living donors, even unrelated, non-consanguineous donors, has probably caused the use of less-than-ideal living donors, specifically obese, older and/or medication-controlled hypertensive donors. My impression is that the selection criteria for kidney donors, both deceased and living, have been lowered significantly – a fact noted in the lay press [13]. Overall, living organ (kidney) donation has been essentially constant for 5 years with a 2% decrease in 2005 [3]. The etiology of this is no doubt multifactorial; negative publicity for living donor safety and possible tightening of selection criteria by transplant programs have been suggested.

Two other aspects of living kidney donation have received significant attention: the altruistic donor and the publicly solicited directed donor.

Totally altruistic or so-called 'Good Samaritan' donors are people who present themselves as potential kidney donors to anyone on a waiting list [14]. They have not met and have no emotional or social connection to the recipient prior to the transplant. Previously considered inappropriate, these kidney donors are now accepted in a majority of transplant programs in the USA. Since altruistic donors do not have a designated recipient, it is frequently possible to transplant the altruistic donor kidney into a recipient of an incompatible living donor-recipient pair, thereby generating one (or more) additional kidney transplants by employing the previously incompatible living donor in another recipient. Public solicitation for organs or organ donors for directed donation takes the form of pleas by recipients or their agents on websites, billboards, newspaper ads, neighborhood flyers, TV, radio and so on. This activity has provoked vigorous debate [15–19] and Hanto has summarized the ethical challenges and problems presented [20]. In the USA, deceased donor organs are allocated to waiting list patients in a non-directed fashion according to the United Network for Organ Sharing (UNOS) established protocols; exceptions are allowed only for directed donation of deceased organs to family members or friends on the waiting list. Solicitation of a living donor for a specific recipient does not violate any existing national policies as long as there is no payment (or valuable consideration) for the organs. Arguments given to justify direct donor solicitation include donor autonomy, possible

'There is increasing concern that other incentives will be required to eliminate the transplant organ shortage.'

improvement in a system perceived unfair by many and facilitation of public awareness for organ donation. Arguments against direct solicitation are that it may bypass fair allocation policies, could foster organ allocation based on discriminatory practices and could favor advantaged patients with money and the know-how to utilize media, internet and other resources [20]. Also, direct solicitation could divert organs to unsuitable transplant candidates and lead to illegal demands for financial payment. MatchingDonors.com is a non-profit website created to permit recipients to solicit prospective living donors via the internet. Recipients place a summary biography and make a case for their need. Allegedly motivated donors respond directly to the recipients. As of June 16, 2007, 4161 prospective organ transplant recipients have registered and thus far 41 organ transplants have been arranged and performed [102]. The American Society of Transplant Surgeons (ASTS) initially opposed public solicitation as exemplified by MatchingDonors.com, since it could undermine fairness of the UNOS organ allocation system; recently, the ASTS acknowledged that public donor solicitation may make more organs available for transplantation, thereby providing credibility to the use of the internet for this activity. A similar qualified endorsement was provided by Frank Delmonico, immediate past president of

UNOS in the lay press [102]. In addition, Richard Fine, outgoing president of the American Society of Transplantation (AST), provided support and justification in his 2006 presidential address for any reasonable means

(including public solicitation) that increases the number of organs available for transplantation [103]. Indeed, a recent conference convened by UNOS in collaboration with the ASTS and AST established guidelines for the psychosocial evaluation of living unrelated donors, including donors identified by the internet and print media [21]. Many transplant programs will now perform organ transplants in recipients with publicly solicited donors. Acceptance of altruistic donors and donors after direct public solicitation represents a clear relaxation of the rigid standards to the contrary previously held by the transplant community.

There is increasing concern that other incentives will be required to eliminate the transplant organ shortage. Routine recovery (conscription) of cadaveric organs [22] and proposals to eliminate financial disincentives (e.g., travel expenses and wages lost) incurred by living donors [23] have been suggested. Direct financial rewards or compensation to voluntary donors is now debated [24–27]. Payment for organ donation is prohibited in the USA by the National Transplant Act of 1984, which makes acquisition of any human organ for valuable consideration (money) punishable by fine and/or imprisonment. This legislation was designed to protect the poor and disenfranchised from potentially dangerous and unhealthy exploitation by unscrupulous middle-men and avaricious brokers. This law has been very effective in the USA, but an extensive black market in living donor kidneys – many of marginal quality and transplanted

under less than optimal conditions – has flourished in numerous countries around the world [28]. Many North American patients utilize these organ black markets and later seek post-operative care in North American programs [29].

Opponents to financial incentives for organ donation identify two dangerous consequences: potential exploitation of the poor and loss of altruism as a motivation for organ donation. Government prohibition of buying and selling organs to protect the poor is appropriate, as is its regulation of the way organs are processed and distributed to insure organ quality, safety and fair access. Nevertheless, the idea that any type of reward, gain or compensation – financial or otherwise – is inherently unethical or undesirable does not necessarily follow. Rewards for doing good, for making self-sacrifices, for taking personal risks to help one's family, community or country are common in Western society. Perhaps the most obvious example is the system of voluntary service in the US military. Although the overwhelming majority of volunteers are motivated by idealism and patriotism, they also receive inducements of paid college educations, enlistment bonuses, re-enlistment bonuses and substantial recovery for injury and mortality [30]. That minority group citizens with limited financial resources are disproportionately represented in the US military is not surprising. One can only conclude that by encouraging acts of self-sacrifice '...the idea that any type of reward, gain or compensation – financial or otherwise – is inherently unethical or undesirable does not necessarily follow.'

people will undertake self-sacrifice and personal risk in part to gain financial rewards. Although exploitation of the poor as paid organ donors has been well documented in areas in which illegal black markets in human organs flourish [31], my impression is that this is becoming less of a concern for advocates of scrupulously regulated government-administered programs for donor financial incentivization. By contrast, the potentially negative effect financial incentives could have on the altruistic basis for organ donation is of great concern. Danovitch and Leichtman cite instances where organs have become available on the black market and living donations in countries with easy access to these markets decrease [32]. Also, there is concern that when pediatric recipients receive preferential attention for deceased donor lists, living family donations may decrease [33]. These examples suggest that many related and nonrelated, well-motivated, committed donors, who might otherwise donate a kidney freely, apparently do so with some reluctance and ambivalence and therefore might not do so if another organ source were available.

Unfortunately, many proponents and opponents of financial incentives for organ donation refer to it exclusively as vending or buying and selling of organs [24–27]. These terms imply financial negotiations between recipient (buyer) and donor (seller), suggest higher or lower prices depending on perceived quality and value, involvement of brokers or middle-men and evoke

stereotypes of black markets and financial and physical exploitation of the poor. Certainly this is not desirable and is not what proponents of financial incentives envision: a scrupulously supervised government program that would guarantee a person or his/her estate a valuable enhancement or reward (money and other considerations) for deceased or living organ donation. I previously proposed the establishment of a government administered insurance and/or trust fund to provide a specific fixed amount reward or honorarium to all living donors and estates of deceased donors [27]. The reward would be dispersed similar to the payout of an insurance policy; payment would be implemented after certification by accredited transplant programs for a living organ donation or by United Network for Organ Sharing (UNOS) or the Organ Procurement Organizations (OPO) for a deceased organ donation. Thus, ratification of organ donation would be provided by the transplant community but payment for donation would come directly from the federal government – with all its powers to audit, investigate and prosecute for false certification and other fraud. Estimated savings accrued from decreased dialysis requirements for successfully transplanted patients would make the donor reimbursement program financially feasible [34]. Matas, an eloquent and strong proponent for financial incentives for living organ donation, recently proposed a system in which potential living donors seeking financial reward for donation would apply to a UNOS-certified OPO and go through the standard transplant donor evaluation process; if found acceptable, their kidney would be transplanted to the first appropriate recipient on the OPO waiting list [35]. The OPO would be responsible for all expenses (including the donor reward) for which it would bill the recipients insurance and/or government. In Matas's scheme, the living donor would also be provided with long-term health insurance, guaranteed long-term donor follow-up, short-term life insurance for 1 year and reimbursement for donation-related expenses (e.g., travel or wages lost) – considerations that address critical needs for many living donors [23]. I agree with all Matas's suggestions except direct payment by the OPO to the living donor. The transplant community (OPO and/or transplant program) should provide certification that donation occurred; the certified donor/estate should apply directly to the government for the reward for obvious reasons.

Provision of financial incentives to enhance organ donation probably has a long way to go before it might be instituted. There seems to be no significant agitation for it from the general public or the end-stage renal disease population – a situation unchanged since it was first noted by the ethicist Joralemon in 2001 [36]. Also, financial rewards for organ donation still present a formidable political problem: perceived exploitation of the poor. On the other hand, progressive relaxation of criteria for donor acceptability, particularly the use of altruistic and publicly solicited donors, portends that financial incentives for organ donation are likely to be inevitable. Real support for

financial incentives for donation is growing in the transplant community, particularly at the leadership level. Jeffrey Crippen of the AST and Arthur Matas of the ASTS supported trials of financial incentives in their presidential addresses at the 2007 World Transplant Congress. This top level leadership support might be just the impetus to initiate a trial study on the impact of financial rewards. The early success of the OBDC suggests that additional deceased donors are procurable. A trial of a fixed specific reward to the estates of all consented donors from the identified eligible deceased donor pool might demonstrate the efficacy of financial rewards in enhancing deceased organ donation. This could have the added benefit of increasing both renal and non-renal organ

transplants and could not be criticized for exploitation of the poor. If successful, it could be expanded into trials of financial incentives for voluntary living kidney donors. To paraphrase a well-known statesman, such a trial would not mean the end, nor the beginning of the end, but it could represent the end of the beginning of the end of the organ shortage.

Financial disclosure

The author has no relevant financial interests, including employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties related to this manuscript.

References

- Ojo AO, Hanson JA, Meier-Kreische HU *et al.* Survival in recipients of marginal cadaveric kidneys compared with other recipients and wait-listed transplant patients. *J. Am. Soc. Nephrol.* 12, 589–597 (2001).
- Merion RM, Ashby VB, Wolfe RA *et al.* Deceased donor characteristics and the survival benefit of kidney transplantation. *JAMA* 294, 2726–2733 (2005).
- Punch JD, Hayes DH, LaPorte FB *et al.* Organ donation and utilization in the United States, 1996–2005. *Am. J. Transplant.* 7(2), 1327–1338 (2007).
- Port FK, Bragg JL, Metzger RA *et al.* Donor characteristics associated with reduced graft survival: an approach to expanding the pool of kidney donors. *Transplantation* 74, 1281–1286 (2002).
- Weber M, Dindo D, Demartines N *et al.* Kidney transplantation from donors without a heart beat. *N. Engl. J. Med.* 347(4), 248 (2002).
- Metcalfe MS, Butterworth PC, White SA *et al.* A case-control comparison of the results of renal transplantation from heart beating and non-heart beating donors. *Transplantation* 71(11), 1556 (2001).
- Howard RJ, Schold JD, Cornell DL. A 10 year analysis of organ donation after cardiac death in the United States. *Transplantation* 80, 564–568 (2005).
- Rudich SM, Kaplan B, Magee JC *et al.* Renal transplantation performed using non-heart beating organ donors: going back to the future? *Transplantation* 74(12), 1715 (2002).
- Johnson SR. Donors after cardiac death: Opportunity missed. *Transplantation* 8(5), 569–570 (2005).
- Sheely E, Conrad SL, Brigham LE *et al.* Estimating the number of potential organ donors in the United States. *N. Engl. J. Med.* 349, 667–674 (2003).
- Terasaki PI, Cecka JM, Gjertson DW *et al.* High survival rates of kidney transplants from spousal and living unrelated donors. *N. Engl. J. Med.* 333, 333–336 (1995).
- Wessel D. Easing the kidney shortage. *Wall Street Journal*, 17th June (2004).
- Reynolds G. Will any organ do? *NY Times Magazine* 10th July (2005).
- Morrissey PE, Dube C, Gohh R *et al.* Good Samaritan kidney donation. *Transplantation* 80, 1369–1373 (2005).
- Steinbrook R. Public solicitation of organ donors. *N. Engl. J. Med.* 353, 441–444 (2005).
- Truog RD. The ethics of organ donation by living donors. *N. Engl. J. Med.* 353, 444–446 (2005).
- Caplan A. Organs.com: new commercially brokered organ transfers raises questions. *Hastings Cent. Rep.* 34, 8 (2004).
- Ingelfinger JR. Risks and benefits to the living donor. *N. Engl. J. Med.* 9, 353–447 (2005).
- Wright L, Campbell M. Soliciting kidneys on web sites: is it fair? *Semin. Dial.* 19, 5–7 (2006).
- Hanto D. Ethical challenges posed by the solicitation of deceased and living organ donors. *N. Engl. J. Med.* 356(10), 1062–1066 (2007).
- Dew MA, Jacobs CL, Lowsey SG *et al.* Guidelines for the psychosocial evaluation of living unrelated kidney donors in the United States. *Am. J. Transplant.* 7, 1047–1054 (2007).
- Spital AS, Taylor JS. Routine recovery of cadaveric organs for transplantation: consistent, fair and life saving. *Clin. J. Am. Soc. Nephrol.* 2, 300–303 (2007).
- Gaston RS, Danovitch GM, Epstein RA, Kahn JP, Matas AJ, Schnitzler MA. Limiting financial disincentives in live organ donation. *Am. J. Transplant.* 2458–2464 (2006).
- Friedman E, Friedman A. Pay for donor kidneys: pros and cons. *Kidney Int.* 69, 960–962 (2006).
- Matas A. Why we should develop a regulated system for kidney sales. A call to action! *Clin. J. Am. Soc. Nephrol.* 1, 609–612 (2006).
- Harris J, Erin C. An ethically defensible market in organs. *BMJ* 325, 114–115 (2002).
- Monaco AP. Rewards for organ donation: the time has come. *Kidney Int.* 69, 955–957 (2006).
- Tilney NL. *Transplant: From myth to reality*. Yale University Press, New Haven, USA and London, UK, 263–274 (2003).
- Prasad GV, Shukla A, Huang M *et al.* Outcomes of commercial renal transplantation. A Canadian experience. *Transplantation* 82(9), 1130–1135 (2006).
- Brook J. On the farthest US shores, Iraq is a way to a dream: enlistment is a prize in Pacific territories. *New York Times* 31st July (2005).
- Goyal M, Mehta RL, Schneiderman LI *et al.* Economic and health consequences of selling a kidney in India. *JAMA* 288, 1589–1593 (2002).
- Danovitch GM, Leichtman AB. Kidney vending: the “trojan horse” of organ transplantation. *Clin. J. Am. Soc. Nephrol.* 1, 1–3 (2006).
- Crafter SR, Bell L, Foster BJ. Balancing organ quality, HLA-matching and waiting times: impact of a pediatric priority allocation policy for deceased donor kidneys in Quebec. *Transplantation* 83, 1411–1415 (2007).

- 34 Matas A, Schnitzler M. Payment for living donor (vendor) kidneys: a cost-effective analysis. *Am. J. Transplant.* 4(2), 2116–2121 (2004).
- 35 Matas A. A regulated system of living kidney sales – how it could work. *Am. J. Transplant.* (Suppl. 2), 232 (2007) (Abstract 329).
- 36 Joralemon D. Shifting ethics: debating the incentives question in organ transplantation. *J. Med. Ethics* 27, 30–35 (2001).

Websites

- 101 Organ Procurement and Transplantation Network
www.OPTN.org
- 102 Matching Donors
www.matchingdonors.com
- 103 Transplant News vol 16, no.17 (2006)
www.transnews.com/monthlysample.pdf

Affiliation

- *Anthony Monaco*
Harvard Medical School,
Beth Israel Deaconess Medical Center,
110 Francis Street, 7th Floor, Boston,
MA 02215, USA
Tél.: +1 617 632 9822
Fax: +1 617 632 9820
amonaco@bidmc.harvard.edu