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Payment for donor kidneys: Pros and cons

EA Friedman[1] and AL Friedman[2]

[1]Division of Renal Diseases, Department of Medicine, Downstate Medical Center, State University of New York, Brooklyn, New York, USA and [2]Yale University, School of Medicine, New Haven, Connecticut, USA

Continuous growth of the end stage renal disease population treated by dialysis, outpaces deceased donor kidneys available, lengthens the waiting time for a deceased donor transplant. As estimated by the United States Department of Health & Human Services: '17 people die each day waiting for transplants that can't take place because of the shortage of donated organs.' Strategies to expand the donor pool – public relations campaigns and Drivers' license designation – have been mainly unsuccessful. Although illegal in most nations, and viewed as unethical by professional medical organizations, the voluntary sale of purchased donor kidneys now accounts for thousands of black market transplants. The case for legalizing kidney purchase hinges on the key premise that individuals are entitled to control of their body parts even to the point of inducing risk of life. One approach to expanding the pool of kidney donors is to legalize payment of a fair market price of about $40 000 to donors. Establishing a federal agency to manage marketing and purchase of donor kidneys in collaboration with the United Network for Organ Sharing might be financially self-sustaining as reduction in costs of dialysis balances the expense of payment to donors.

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Correspondence: *EA Friedman, Division of Renal Diseases, Department of Medicine, Downstate Medical Center, State University of New York, 450 Clarkson Avenue, Brooklyn, NY 11203, USA. E-mail: elifriedmn@aol.com*

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In early September, 2005, 65 000 candidates were listed in the United States by the Organ Procurement and Transplant Network as waiting for a deceased donor kidney (http://www.optn.org/latestData/rptData.asp).[1] At least 3000, of those on the wait list who will die each year might have survived had a suitable donor kidney been available.[2] The United States Department of Health and Human Services advises: 'Each day, about 74 people receive an organ transplant. However, 17 people die each day waiting for transplants that cannot take place because of the shortage of donated organs.'

Intensive public relations efforts, celebrity endorsements, National Kidney Foundation efforts and State Drivers License advance permission have not increased the number of deceased donor kidney transplants in the United States over the past decade. As listed by the United Network for Organ Sharing,[3] while kidney transplants performed between 1988 (8873) and 2004 (16 004) increased by 80.3%, deceased organ transplants in the same interval increased only 32.5% from 7061 to 9357).

To address this shortage of donor kidneys, acceptance of what previously have been termed 'marginal' kidneys termed 'expanded criteria donors' from geriatric, hypertensive, and even proteinuric donors has increased progressively.[4] Purchasing kidneys from compensated donors, a highly controversial and evocative issue, has gradually evolved from an unmentionable practice performed occultly in developing (poor) countries to be openly debated by the American Society of Nephrology and the American Transplantation Society.

Selling a human organ in the United States is proscribed. The National Organ Transplant Act states: 'It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce'[5] Punishment includes fines up to $50 000 and/or 5 years in prison, but has not been meted out. A year after enactment of National Organ Transplant Act, the Ethics Committee of the Transplantation Society issued a supporting Policy Statement: 'No transplant surgeon/team shall be involved directly or indirectly in the buying or selling of organs/tissues or in any transplant activity aimed at commercial gain to himself/herself or an associated hospital or institute.'[6] Within 5 years, several countries and the World Health Organization issued similar bans.[7]

Medical associations globally decry the sale of human organs, transactions deemed 'morally and ethically irresponsible,' or 'inhumane and unacceptable.' Berkeley anthropology professor Nancy Scheper-Hughes who has studied actual conditions and consequences of kidney sales in Brazil and other countries believes permitting legal solid organ sales would permit 'one relatively privileged population [to] claim property rights over the bodies of the disadvantaged.'[8]

Near universal strong condemnations of selling organs have been issued by voluntary health agencies and religious authorities including Pope John Paul II who wrote that buying and selling organs violates 'the dignity of the human person.'[9] American transplantation associations repeatedly endorsed the stance that paying donors for their organs was not only illegal but unethical. Furthermore, the American Society of Transplant Surgeons expounded the position that solicitation for organ donation is inappropriate, even absent the exchange of 'valuable consideration': The American Society of Transplant Surgeons is opposed solicitation of organs (deceased) or organ donors (live) by recipients or their agents, whether through personal or commercial websites, billboards, media outlets, or any advertising when the intent of such solicitation is to redirect the donation to a specific individual rather than according to the fair policies of allocation (United Network for Organ Sharing policy on organ allocation).[10]

What then might ease the shortage of kidney donors? Congress has been urged to conduct a trial to assess the value of compensating deceased donor families as well as to test some form of payment to live kidney donors. Dr Francis L Delmonico, Director of renal transplantation at Massachusetts General Hospital, speaking on behalf of the National Kidney Foundation, testified to congress: 'Congressional endorsement of a payment for organs … could propel other countries to sanction an unethical and unjust standard of immense proportions, one in which the wealthy readily obtain organs from the poor, justified by the citation of congressional sanction. In that reality, the poor person will remain poor but lose health and maybe more than one organ in the process of a government authorized abuse of the poor for the rich.'[11]

By contrast, some transplant surgeons advocate regulated sale of kidneys to prevent death of as many as 100 000 people annually. At the American Transplantation Congress, Arthur Matas of the University of Minnesota transplant team, noting that a wait time of over 5 years, induces death on the waiting list of 7% annually, called for a regulated system of living kidney sales.[12] The Matas proposal includes careful donor medical and psychosocial evaluations with a fixed tax-free payment to the donor plus an option of short- or long-term health and life insurance. Matas pointed out that surrogate mothers are individuals who benefit others without losing their dignity or becoming victims. Similarly, paid organ donors are not victims who unable to determine what happens to their body.

In early 2006, the lessons learned from the wild and extensive racketeering spawned by America's 1920s 'Prohibition' of alcoholic beverages are pertinent. Clearly, legislation, *per se*, may not force human behavior compliance.[13] Thus, while the sale of human organs is against existing law, in nearly every country, illegal kidney transplants are widely available through devious and often unsavory vendors in India, Turkey, China, Russia, and South Africa as described in the New York Times.[14] Organs Watch, a non-government transplant monitoring organization, estimates that '…thousands of illegal transplants occur every year bought by patients from the Persian Gulf states, Japan, Italy, Israel, the US and Canada supplied by 'donor' nations, including India, Pakistan, Turkey, Peru, Mexico, Romania, and South Africa.'[15] The late Michael Friedlaender, a transplant nephrologist at Hadassah University Hospital in Israel, remarked: 'What's happening now is absurd. Airplanes are leaving every week. I've seen 300 of my patients go abroad and come back with new kidneys… it's a free-for-all.'[16] Friedlander characterized today's kidney market as forcing potential kidney purchasers to be 'exposed to unscrupulous treatment by uncontrolled free enterprise.'

Voices favoring kidney sales are becoming more evident. For example, a surprisingly positive endorsement for legalizing human organ sales was provided by Robert Berman of the Orthodox Jewish Halachic (*interpreted by orthodox rabbis*) Organ Donor Society writing in the Jerusalem Post of 9 August 2005: 'The choice before us in not between buying or not buying organs. This is happening regardless of the law. The choice is whether transplant operations and the sale of organs will be regulated or not.'[17]

Nobel Laureate (Economics), Gary S Becker and his co-worker Julio J Elias established a 'market price' for a live donor kidney as a commodity.[18] Assuming that an American earning a mean of $40 000 annually has a life valued at $3 million, faces a risk of death from nephrectomy of 1%, a decrease of 5% in quality of life, and will lose $7000 of income due to convalescence from surgery, they calculated a kidney purchase price of $45 000. Using a more probable death risk of one in 300 nephrectomies (the true reported risk is three in 10 000);[19] reduces the kidney price to $20 000. Our current non-system promotes a kidney black market available only to the wealthy who bear the total expense for what may be inadequately screened, suboptimally matched organs inserted by unregulated (inferior?) surgeons. Becker and Elias's proposal would end advantages of wealth in organ acquisition since poorer individuals would obtain their kidneys via Medicaid or Medicare.

Each of us may opt to engage in risky behaviors (e.g. sky diving, volunteering for military service, working on oil rigs, and smoking cigarettes). Lacking wealth does not preempt making a rational decision. Prohibiting the poor from donating organs leaves them still poor; consequently, according to Matas, withholding the ability to be paid for donation eliminates one path to improve a person's financial situation. Just what is so ethically wrong? How is it worse than selling one's sperm or egg cells, actions now legal and widely advertised? Indeed, commercialization of semen and

ova is more morally questionable than organ sale because those cells might create entirely new human beings.

In his 'Advice to the Ethics Committee of the Transplantation Society,' AS Daar, Director of the Program in Applied Ethics and Biotechnology, University of Toronto, writes: 'The position of the Transplantation Society is that the buying and selling of organs is wrong, that we must base transplantation on altruism, that we must encourage legislation to ban commerce, and that any member of the Transplantation Society who participates in the buying and selling of organs will be expelled from the society. Adopting this position on its own has been totally useless in stopping the increase of the buying and selling of organs.'[20] Trong[21] recently thoughtfully reassessed the ethics of accepting living donor organs.

Introducing appropriate legalization to regulate and manage kidney sales through a national regulatory body would be a 'natural' extension of the present end stage renal disease network collaborating with United Network for Organ Sharing and the OPTN. Eliminating black market brokers would divert funds to kidney sellers. Money saved by decreasing the number of dialysis patients might fund additional kidney transplants. Reservations that adoption of a federal organ marketing scheme necessitates further 'socialization' of our health care system are reasonable. Insertion of yet another federal agency to 'supervise' presently over regulated nephrologists and transplant surgeons is a less than attractive proposition. But, the mandate underlying this essay is consideration of endorsement of a strategy for resolution of a problem that has grown into a serious conundrum. At the least, debating the controlled initiation and study of potential regimens that may increase donor kidney supply in the future in a scientifically and ethically responsible manner, is better than doing nothing more productive than complaining about the current system's failure.

REFERENCES

1. Organ Procurement and Transplant Network. Website (www.optn.org), September 17, 2005. Post Office Box 2484, Richmond, VA 23218.
2. http://www.organdonor.gov August 28, 2005 US Department of Health & Human Services 200 Independence Avenue, SW Washington, DC 20201.
3. United Network for Organ Sharing (UNOS). website www.unos.org September 17, 2005.
4. Baskin-Bey ES, Kremers W, Stegall MD, Nyberg SL. United Network for Organ Sharing's expanded criteria donors: is stratification useful? *Clin Transplant* 2005; **19**: 406–412.
5. National Organ Transplant Act Public Law 98-507 Oct. 19. 1984.
6. Council of The Transplantation Society: commercialization in transplantation: the problems and some guidelines for practice. *Lancet* 1985; **2**: 715 (Transplantation 1986; **41**: 1).
7. World Health Organization: Guiding principles on human organ transplantation. *Lancet* 1991; **337**: 1470.
8. Scheper-Hughes N. Living kidney donation: controversies and realities: organs without borders: open markets, closed systems and the global search for living donors. Program and abstracts of the American Transplant Congress 2005: Sixth Annual Joint Meeting of the American Society of Transplant Surgeons and the American Society of Transplantation; May 21–25, 2005; Seattle, Washington.
9. Pope John Paul II Evangelium Vitae. Encyclical Letter on the value and inviolability of human life, March 25, 1995.
10. American Society of Transplant Surgeons. Statement on solicitation of donor organs, January 20, 2005. http://www.asts.org/donorsolicitation.cfm.
11. Delmonico FL. The House Committee on Energy and Commerce, Assessing Initiatives to Increase Organ Donations. Subcommittee on Oversight and Investigations, June 3, 2003.
12. Matas A. Living kidney donation: controversies and realities. The case for a regulated system of living kidney sales. Program and abstracts of the American Transplant Congress 2005: 6th Annual Joint Meeting of the American Society of Transplant Surgeons and the American Society of Transplantation; May 21–25, 2005; Seattle, Washington.
13. Behr Edward. *Prohibition: Thirteen Years That Changed America*. New York: Arcade Publishing, 1996.
14. Finkel M. 'This little kidney went to market'. New York Times Magazine, 27 May 2001: 28.
15. Scheper-Hughes N. 'A grisly global trade: a taboo tumbles: the market for 'fresh' human organs is expanding worldwide, with the poor providing for the rich'. Los Angeles Times, 3 August 2003.
16. Rifkin J. *The Biotech Century: Harnessing the Gene and Remaking the World*. New York: Jeremy P Tarcher/Putnam, 1998.
17. Berman R. Selling organs should be legal. Jerusalem Post, August 9, 2005.
18. Becker GS, Elias JJ. Introducing incentives in the market for live and cadaveric organ donations. Conference on Organ Transplantation: Economic, Ethical and Policy Issues, University of Chicago, May 16, 2003.
19. Matas AJ, Bartlett ST, Leichtman AB, Delmonico FL. Morbidity and mortality after living kidney donation, 1999–2001: survey of United States transplant centers. *Am J Transplant* 2003; **3**: 830–834.
20. Daar AS. Money and organ procurement: narratives from the real world. In: Gutmann Th., Daar A, Sells RA, Land W (eds). *Ethical, Legal, and Social Issues in Organ Transplantation*. Pabst Publishers: Munich, 2004.
21. Trong RD. The ethics of organ donation by living donors. *N Engl J Med* 2005; **353**: 444–446.