Analysis and comment

Controversy

Payment for living organ donation should be legalised

Amy L Friedman

Governments seem resistant to allowing live donors to benefit from their gift. But a legalised system could solve organ shortages and be both safer and fairer

Section of Organ Transplantation and Immunology, Yale University School of Medicine, 333 Cedar Street, New Haven CT 06520, USA

Amy L Friedman *associate professor of surgery*

amy.friedman@yale.edu

BMJ 2006;333:746–8

The demand for life saving organ transplantation has so outpaced supply that waiting patients and transplant teams are desperate. Improved survival rates coupled with steady expansion of indications for transplantation make the organ shortage progressively severe; waiting times are now unbearably long. Although legalisation of "presumed consent" strategies has succeeded in raising organ donation rates in Spain and elsewhere,[1] other proposed solutions such as voluntary reciprocal altruism[2] remain cumbersome and risk excluding people with poor healthcare literacy.

Lack of donors has led to some patients contracting with organ brokers to purchase a kidney from a living donor. Because payment for organs is illegal in most countries, people may travel to the donor's homeland for the transplantation.[3] Limited studies indicate possible exploitation of these paid donors, who may get minimal benefit from their purported financial compensation.[4] More worrisome is our lack of knowledge about adverse outcomes they experience. If payment or reward for living donors can be made legitimate and ethically consistent with other accepted medical practices, exploitation can be prevented and both donors and recipients can be treated equitably.

PAT ROQUE/AP

What price a kidney?

Tangible benefits of living donor transplantation

In 2005, United States transplant centres reported 6562 living donor kidney transplantations.[5] It is reasonable to assume that nearly all recipients who survive surgery with a functioning kidney derive tangible benefit. But it is not only recipients who benefit. Recipients of donated organs are able to live without dialysis. Thus their family members have liberalised lifestyles and may benefit from extra income if the recipient returns to work. Doctors will be paid for each transplantation. And other hospital staff, such as administrators and transplant coordinators, whose jobs depend on the volume of transplantations, will validate their effectiveness by satisfying job requirements. Transplant programmes and their home institutions gain higher case volumes, which improves their reputation and gives them a competitive advantage.[6] Taxpayers might also benefit financially because the support of a kidney transplant recipient is less costly than haemodialysis or peritoneal dialysis.[7] Furthermore, many recipients will restart work and pay taxes.

In contrast, living donors are prohibited by law from receiving "valuable consideration" in exchange for their gift. Although US donors' immediate medical care is covered by the recipients' insurance, donors have to pay costs of travel to the site of transplantation and get no compensation for lost wages.[8] Concern that these costs might stop people donating led to incorporation of pilot grants in the signed but still unfunded Organ Donation and Recovery Improvement Act of 2004. Interestingly, the only non-psychologically derived donor benefit occurs if a previous donor needs a kidney transplant. The allocation regulations for organs from deceased donors give priority to candidates on the waiting list who have given whole or segments of organs.[9] This represents a societal determination that an individual's act of donation is morally deserving of tangible reward.

Financial rewards for other uses of the human body

Payment for donation of other bodily material is legal in the US (table). Sale of regenerative products such as hair, blood, and semen has minimal medical risk for the donor. It is accepted that they are sold for financial gain, with disproportionate representation of the economically disadvantaged. Legal and ethical consequences of misleading buyers about the risks of disease transmission (blood, sperm) or genetic legacies (sperm) make this process increasingly complex.

Human eggs are now widely sought for assisted reproduction. Although donors are sought openly for lucrative prices ($8000 (£4200; €6200) per collection in one April 2006 advertisement),[13] they are rarely fully educated about the risks such as ovarian hyperstimulation, ovarian cancer, and future infertility.[14] Egg donation requires both prolonged hormonal manipulation and an invasive procedure, so has traditionally appealed only to emotionally (or genetically) related donors or women in financial need, such as university students. The chief differences between donating an egg and donating a kidney are the degree of risk of morbidity and mortality associated with the procurement process; the size of the donor's residual reserve; and the fact that only women can donate an egg.

Use of the intact, functional body for the purposes of pregnancy or sexual gratification entails greater risk. Legalisation of prostitution has been advocated in order to reduce both crime and disease related risks and to eliminate the exploitation by third parties (pimps). Although many people spurn these arguments, prostitution is legal in several European countries and at least one US state. By contrast, rental of a surrogate mother's uterus for a pregnancy is legal throughout the US, with fees as high as $30 000. The substantial risks to the surrogate mother, including transfusion, visceral prolapse, urinary incontinence, death, and immunological sensitisation, make notable parallels with the purchase of a kidney from a living donor. Has the ethical acceptance of payment for surrogate motherhood been influenced by impassioned, articulate, assertive, and wealthy people who want to be parents? Or do we believe that the drive to procreate justifies donor risks?

Unquestionably, the strongest parallel can be drawn with payments to volunteer participants in research studies. Without payment it is unlikely that sufficient people would volunteer. Solicitations are openly advertised and condoned by regulatory bodies responsible for the supervision of human investigations. The same university newspaper that carried the advertisement for egg donors contained 23 advertisements for study participants, ranging from healthy adults to smokers, obese people, and even children younger than 3 years old. Although most of these research protocols entail safe interventions, any investigation conducted to advance medicine and science may result in unexpected and even catastrophic events, as shown by recent cases in the US and UK.[15 16] If it is reasonable, legal, and ethically justified to motivate someone using monetary reward to participate in human research, then by extension the same person should be allowed a monetary inducement or reward for donating an organ.

How would it work?

To protect potential donors, regulation and payment must be governed by a balanced, objective, and multidisciplinary body. Organ donation should be limited to the country's legal residents, but family members should not necessarily be excluded from donation solely because of lack of residency. The exclusion of other non-resident donors will limit exploitation of people from low income countries.[17] The regulatory body should determine standardised criteria for donors and recipients, as well as a uniform fee. Local panels comprised of representatives from linked transplant centres, similar to those already in existence for heart and liver transplantation, would adjudicate on individual applications not clearly meeting the accepted protocols.

Equitable access

Opponents of payments to living organ donors focus on several issues. The immediate past president of the United Network for Organ Sharing, Francis Delmonico, suggests that the kidney shortage is driven by societal failure to prevent preventable renal disease.[18] I agree that we need to improve the quality of care to all members of society. However, it seems unfair to penalise people who have already developed disease as a consequence of the flawed care they were powerless to improve or to ask patients to wait for ideal medical care that seems unattainable. This is particularly true for people who are economically or ethnically disadvantaged, among whom the rates of end stage renal disease are disproportionately high. If this approach was reasonable, people with sexually transmitted diseases and women carrying unwanted pregnancies ought to be denied the benefits of care because they have not taken appropriate precautions. There is little dignity in dying without access to a medical treatment that is known to have a high likelihood of prolonging life.

A compelling argument, that money in exchange for an organ would exploit the most needy, was countered by Anthony Monaco, a past president of the American Society of Transplant Surgeons.[19] Monaco noted that developed societies have already become comfortable with the use of tangible recognition for personal self sacrifice that is most likely to flow to the needy. If military service can be recognised with inducements such as paid education, enlistment bonuses, and financial recovery for injury or mortality,

Reimbursement and risks associated with donating or renting human body or body parts in US

	Payment legal	Donor morbidity	Donor mortality (%)
Hair	Yes	Minimal	0
Blood	Yes	Minimal	0
Sperm	Yes	Minimal	0
Egg	Yes	+	0
Surrogate pregnancy	Yes	++	0.005[10]
Participating in drug trial	Yes	++	Variable
Prostitution	Yes*	++++	0.4[11]
Live kidney	No	++	0.03[12]
Live liver	No	+++	~1

*Not in all states.

Summary points

The severe organ shortage has generated desperation among people awaiting transplantation

A black market for kidneys purchased from living donors exists despite prohibitory laws

Everyone but the donor derives tangible benefit from a living donor transplant

Controlled, regulated compensation to living organ donors should be permitted as with donation of other body material

Legalised donation is likely to improve safety for both donors and recipients

why should the decision to donate an organ be viewed differently?

At the moment, kidneys are covertly transplanted in third world countries, from indigent donors into wealthy recipients. Bringing these activities out of the closet by introducing governmental supervision and funding will provide equity for the poor, who will get equal access to such transplants. It is appropriate that living donors, indigent or wealthy, share in the tangible benefits of their ethical concern for others. Not doing so, effectively restricting the disadvantaged, is unreasonably disingenuous.

Contributors and sources: ALF is an American academic transplant surgeon with 15 years' experience in the specialty. She has three relatives with kidney failure, two of whom received kidney transplants, and has one relative who served as a live donor.

Competing interests: ALF is paid for transplanting organs from live donors.

1 Spital A. Conscription of cadaveric organs for transplantation: a stimulating idea whose time has not yet come. *Camb Q Healthc Ethics* 2005;14:107-12.
2 Landry DW. Voluntary reciprocal altruism: a novel strategy to encourage deceased organ donation. *Kidney Int* 2006;69:957-9.
3 Pancevski B. Bulgarian hospital admits role in illegal transplants. *Lancet* 2006;387:461.
4 Goyal M, Mehta RL, Schneiderman LJ, Sehgal AR. Economic and health consequences of selling a kidney in India. *JAMA* 2002;288:1589-93.
5 Organ Transplantation and Procurement Network. Transplants performed. www.optn.org/latestData/rptData.asp (accessed 25 Apr 2006).
6 Axelrod DA, Guidinger MK, McCullough KP, Leichtman AB, Punch JD, Merion RM. Association of center volume with outcome after liver and kidney transplantation. *Am J Transplant* 2004;4:920-7.
7 Laupacis A, Keown PA, Pus N, Krueger H, Ferguson B, Wong C, et al. A study of the quality of life and cost-utility of renal transplantation. *Kidney Int* 1996;50:235.
8 Wolters HH, Heidenreich S, Senninger N. Living donor kidney transplantation: Chance for the recipient – financial risk for the donor? *Transplant Proc* 2003;35(6):2091-2.
9 United Network for Organ Sharing. *Allocation of deceased kidneys*. Section 3.5.11.6: donation status. www.unos.org/policiesandbylaws/policies.asp?resources=true (accessed 25 Apr 2006).
10 Horon IL. Underreporting of maternal deaths on death certificates and the magnitude of the problem of maternal mortality. *Am J Public Health* 2005;95:478-82.
11 Potterat JJ, Brewer DD, Muth SQ, Rothenberg RB, Woodhouse DE, Muth JB, et al. Mortality in a long-term open cohort of prostitute women. *Am J Epidemiol* 2004;159:778-85.
12 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;3:830-4.
13 Classifieds. *Yale Bulletin and Calendar* 2006;34(27). www.yale.edu/opa/v34.n27/classifieds.html (30 Apr 2006).
14 Mastroianni Jr. Risk evaluation and informed consent for ovum donation: clinical perspective. *Am J Bioethics* 2001;1(4):28-9.
15 Savulescu J, Spriggs M. The hexamethonium study and the death of a normal volunteer in research. *J Med Ethics* 2002;28:3-4.
16 Wadman, M. London's disastrous drug trial has serious side effects for research. *Nature* 2006;440:388-9.
17 Erin CA, Harris J. An ethical market in human organs. *J Med Ethics* 2003;29:137-8.
18 Delmonico FL. What is the system failure? *Kidney International* 2006;69:954-5.
19 Monaco AP. Rewards for organ donation: the time has come. *Kidney Int* 2006;69:955-7.

(Accepted 10 July 2006)

doi 10.1136/bmj.38961.475718.68

Medical education

Trust, competence, and the supervisor's role in postgraduate training

Olle ten Cate

The decision to trust a trainee to manage a critically ill patient is based on much more than tests of competence. How can these judgments be incorporated into assessments?

Centre for Research and Development of Education, University Medical Centre Utrecht, PO Box 85500, 3508 GA Utrecht, Netherlands

Olle ten Cate
director

t.j.tencate@umcutrecht.nl

BMJ 2006;333:748–51

Competency based postgraduate medical programmes are spreading fairly rapidly in response to the new demands of health care. In the past 10 years, Canada, the United States, the Netherlands, and the United Kingdom have introduced competency models and other countries are following.[1–5] These frameworks are valuable, as they renew our thinking about the qualities of doctors that really matter.

Paramount in these developments is the view that quality of training should be reflected in the quality of the outcome—that is, the performance of its graduates. As postgraduate training almost fully focuses on learning in practice, training and assessment moves around the top two levels of Miller's hierarchical framework for clinical assessment (figure).[6] Knowledge and applied knowledge of residents may be interesting, but performance in practice is the real thing. The question is: How can we assess it?

Competence does not necessarily predict performance

Competency based training suggests that competence and competencies are what we want trainees to attain. But is this the same as performance? If a doctor is competent, what happens if she does not perform according to her assessed competence? Most authors agree that performance involves more than