Governed Financial Incentives as an Alternative to Altruistic Organ Donation

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In 1984, an offensive proposal for kidney sales by a US physician led the National Organ Transplant Act to become a law in the United States. Similar legislation passed in many other countries. An ethical consensus developed around the world that there should be no monetary compensation for transplantable organs, either from living or deceased persons. Unfortunately, the altruistic supply of organs has been much less than adequate, and thousands of patients die each year waiting for organ transplantation. As the altruistic system of organ donation has met with failure, some from the transplant community believe that altruism alone is not enough to satisfy the needs of the thousands of patients on organ transplant waiting lists, and providing some financial incentives or social benefits to organ sources is necessary to increase the number of cadaveric or living organ donations. In this article, the many controversies surrounding altruistic and compensated organ donation systems are discussed. The Iran model for renal transplantation, a compensated and well-regulated living-unrelated donor renal transplantation program that has successfully eliminated a renal transplant waiting list in Iran, is briefly reviewed.

Key words: Organ shortage, Organ transplantation, Donor compensation, Iran model for renal transplantation, Transplantation ethics

Over the past 3 decades, organ transplantation (Tx) has been used increasingly as a highly effective therapy in the treatment of patients with end-stage organ failure. The revolution in medical technology has led to a dramatic increase in the value of human body parts to be used in organ Tx.

As advances in immunosuppressive therapy have improved patient and graft survival rates and as the number of indications for organ Tx has grown, the field of organ Tx has expanded, and the number of patients needing a Tx has steadily increased. Unfortunately, the supply of transplantable (Txable) organs has been much smaller than the demand for Tx. As a consequence, the number of patients on Tx waiting lists has continually increased, and each year thousands of patients die waiting for an organ Tx.

Since the 1980s, many countries have passed legislations prohibiting monetary compensation for organ donation for Tx. All organ donations have become altruistic, meaning that no financial incentive or compensation to persons willing to have their organs, or organs of their deceased family members, used for Tx. Unfortunately, the altruistic supply of organs has been far less than adequate, and the results of this altruistic system are disappointing. Several approaches have been adopted to increase organ supply, but the gap between supply and demand has worsened over time. Organ shortage remains the most serious problem in Tx today.

As the organ shortage has become more severe worldwide, some from the Tx community believe that altruism alone is not enough to satisfy the needs of the thousands of patients on Tx waiting lists, and that providing some financial incentives or social benefits is necessary to increase the number of cadaveric or living organ donations. Some Tx ethicists also believe that prohibition of all forms of financial incentives to organ donors, which
has resulted in much patient death and suffering worldwide, should not be considered an ethical attitude.

In this article, I will show that how a 1984 offensive proposal for kidney sales by a US physician led to the National Organ Transplantation Act (NOTA), which became law in the United States, and how similar legislation passed in many other countries. This Act led to an ethical consensus around the world that there should be no monetary compensation for Txable organs, either from living or dead persons. I will also show that the organ shortage is much more severe today than it was in 1984, emphasizing that efforts to provide a sufficient supply of organs through altruism have failed. Secondly, I will argue that under the present altruistic system, Txable organs already are the subject of market activity, and that human organs are bought and sold every day as a part of Tx services. Third, I will describe how financial incentives for organ donors might be structured and regulated, emphasizing that providing social benefits in addition to financial incentives will make compensation programs more attractive and ethically more acceptable. Fourth, I will review the many controversies in the altruistic and compensated organ donation programs and will talk in favor of providing financial incentives that I believe hold promise for decreasing organ shortage. Finally, I will briefly review the Iran model of compensated living unrelated donor renal Tx program and show that how providing financial incentives has successfully eliminated a renal Tx waiting list in Iran.

I. An offensive proposal for kidney sales by a US physician led to the National Organ Transplantation Act (NOTA), which became law in the United States in 1984. This altruistic organ donation system was adopted in many other countries.

In 1983, Dr. H. Barry Jacobs, a Virginia physician whose medical license had been revoked after conviction of Medicare mail fraud, founded the “International Kidney Exchange Ltd.” He sent a brochure to 7500 American hospitals offering to broker contracts between patients with end-stage renal disease (ESRD) and persons willing to sell one kidney. His intention was to buy kidneys from third world countries for resale to renal Tx candidates in the United States. His testimony and his very offensive proposal, in the wake of press reports, helped legislators make NOTA a federal law. This law was enacted hastily and without enough legislative debate [1].

From 1984 to 1989, about 20 countries, the World Health Organization (WHO), and several medical associations related to Tx passed legislation similar to NOTA. In 1989, the Human Organ Transplant Act (HOTA) was hastily enacted by the British Parliament after it had been documented that a British physician had been involved in removing and selling a kidney from a poor foreigner without the foreigner’s consent [2]. At present, in almost all countries, it is illegal to provide financial incentives for Txable organs. An ethical consensus has developed worldwide that one should not buy or sell human organs, either from living or deceased persons.

The legal and regulatory conditions of organ Tx are significantly different today than they were in 1984. In 1984, the shortage of Txable organs was less severe than it is today, and the Tx community was optimistic that altruistic organ donation would be an effective strategy for alleviating organ shortage. These are some of the main reasons that NOTA was enacted without adequate legislative debate [3].

In 2004, it became evident that efforts to provide a sufficient supply of organs through altruism had met with failure. Introduction of new immuno-suppressive drugs also had led to greater success in Tx and an increased number of patients on Tx waiting lists. However, the severe organ shortage that has resulted in many patient deaths has convinced many Tx experts that providing financial incentives as an alternative to altruism needs careful reconsideration.

II. Under the current altruistic system, Txable organs are already the subject of market activity.

The NOTA states: “It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration if the transfer affects interstate commerce.”

This prohibition on payment for Txable organs does not extend to all transactions. While the initial transfer from organ sources to organ procurement organizations (OPOs) is uncompensated, subsequent transfers are carried out with some financial interest. This is because transplant centers make a reasonable payment to OPOs for removal and transportation of organs and then sell the organs to patients as part of a comprehensive package of Tx
services [3]. Tx recipients can undergo organ Tx only if they are covered by medical insurance or are able to pay for the Tx. In other words, the ability to pay plays an important role in this organ allocation system, with only those patients able to pay for these organs receiving transplantation [4]. Although Tx centers frequently state that Tx recipients are charged only for Tx services and not for the organ itself, these Tx services would be useless without Txable organs. While organ sources are not permitted to receive financial incentives for organ donation, other participants in the Tx process are. It is assumed that if only organ donors remain uncompensated, then a market for organ Tx will not occur.

The failure to uncover the existence of a market in Txable organs not only makes the debate for financial incentives for organ donation very difficult, it also gives a false impression that Txable organs are donated by forces of altruism alone—not sold in stages from organ source to final recipient. The main reason against financial incentives for organ donors is rooted in the idea that human body parts should not be bought or sold; thus, the present organ Tx system remains an ideal compromise. At the same time, because limited market activity in human organs is permitted, the image of the human body not being for sale remains intact [3].

The question is, If the concept of financial incentives in organ Tx is so bad, why have proposals not been submitted that would eliminate financial incentives at all stages of organ Tx? The answer is very simple: If financial incentives were made unavailable at each stage of organ Tx, the present Tx system would collapse and many Tx centers would close [3].

III. How financial incentives might be structured and regulated: Providing social benefits in addition to financial incentives will make compensation programs more attractive.

Compensation of organ sources can take a variety of forms. The simplest means of providing financial incentives for cadaveric donors would be for OPOs to offer compensation directly to surviving relatives. The disadvantages of payment of financial incentives to surviving relatives would be its explicitness and that the incentive would come at a difficult time—shortly after death, when the family is in shock [3]. The advantages are that the number of options for survivors would increase: to donate, to not donate, or to exchange organs for financial interest. Another advantage would be that financial incentives would increase public awareness that organs can be exchanged for monetary compensation. Organ sources could also introduce a charitable organization as the recipient of the financial incentive, such as charitable organizations for the care of children with cancer or for the care of children with organ failure, and many others. Obviously, this option would be more attractive to some.

Providing financial incentives for living organ donors must be regulated. Advertising organs on the Internet or in newspapers should not be permitted. Organs should not be purchased from foreign nationals and should not be donated to them. In the Iran model compensated renal Tx program, foreigners are not allowed to undergo renal Tx from Iranian living donors. They also are not permitted to donate kidneys to Iranian patients [5]. The donor also should have adequate health insurance before being permitted to donate. Donors and recipients should undergo complete medical and psychological evaluations before Tx. The program should be structured so that compensated donors receive their financial incentives from OPOs, Tx services, or charitable organizations, and not directly from recipients. In the Iran model compensated living-unrelated donor (LURD) renal Tx program, charitable organizations provide financial incentives to donors on behalf of poor patients. This is one of the main reasons that in this program, more than 50% of the LURD kidney recipients are patients from a poor socioeconomic class [6].

One of the concerns in allowing individuals to donate their kidneys is that they will face excessive risks to their health. However, this risk is present whether the living donor is giving a kidney with financial incentives or without [7].

In Iran, we have 16 years’ (1988-2004) experience with a compensated LURD renal Tx program. In this program, all LURDs receive a government award and health insurance (first financial incentive). The majority of them also receive an arranged rewarding gift from the recipient or from a charitable organization (second financial incentive). The following recommendations will make the Iranian compensated organ donation program ethically more acceptable: 1) The entire donor reward or financial incentives should come from the government or charitable organization, not partly from the recipient. 2) The quantity and quality of the finan-
cial incentive should have a life-changing potential. This means that the same amount that the donated kidney changes the life of the recipient, the rewards or the financial incentives should change or improve the life of the donor. The financial incentive also should have a long-term compensatory effect. In other words, it should not merely be cash that will only satisfy the donor in the short term. 3) Providing social benefits in addition to financial incentives will make compensated programs more attractive and meaningful. When a LURD donates a kidney to a patient with ESRD, the intent is to save or improve the life of another member of society. Therefore, the society should feel an obligation to provide compensation for this service. This might be compared with an injury or loss of an organ by a soldier defending his country or a fireman risking his life in service. There are some legal and social benefits for war-injured veterans or on-duty—–injured firemen in each country. Several of these items can be offered to each organ donor in addition to the financial incentives as a token of appreciation and compensation by society [8].

IV. Controversies in altruistic and compensated organ donor programs

1. The use of self-interest (ie, financial incentives) to shape human behavior is much better understood than the use of altruism. Altruism or concern for other peoples’ welfare and happiness is a complex phenomenon and a component of human nature [9]. Only under certain and limited circumstances does the human being show willingness for uncompensated transfers and generosity toward others; whereas the forces of self-interest are basic for almost all of our daily activities [10]. This is the main reason why efforts to use altruism for organ donation have met with limited success and why by providing financial incentives it is expected that the number of available organs for Tx will increase.

2. It may be said that, “Altruism is always preferred to providing financial incentives in organ donation because it is compatible with law and social norms.” But it is not clear why—from the many services that people provide to each other in a society by self-interest (such as medical, educational, and other services)—that only organ donation should be singled out to be altruistic [3].

3. Making financial incentives available does not mean that altruistic organ donation should be eliminated. Rather, both methods should coexist. Supporters of financial incentives believe that compensation will prove an effective strategy for increasing the supply of Txable organs. Opponents of financial incentives argue that compensation will provoke outrage in potential donors, and altruistically motivated organ donations will be reduced or even eliminated [11-13]. However, a mixed system of donation and compensation would be more desirable.

4. Supporters of altruism may argue that to allow organ sources or their survivors to receive financial incentives could be viewed as putting a price on human body parts, thus risking that the respect and dignity of the human body would be eroded [14,15]. As mentioned before, prohibition of financial incentives at the first stage of distribution of organs (from organ source to OPO) while allowing market activity in later stages of organ Tx cannot guarantee that a loss of respect for the human body will be prevented [3]. It should also be noted that compensation is already available for several usable tissues from human sources, such as sperm and ova [16].

5. Txable organs from altruistic donors are frequently assumed to be safer for Tx recipients compared with organs obtained from compensated donors. This conclusion is the result of studies carried out on the outcome of commercial renal Tx performed in third world countries. In this type of kidney Tx (or Tx tourism), the kidneys of poor people were sold by brokers to wealthy patients. Almost all of these renal Txs were performed in private back-street clinics, with incomplete donor and recipient evaluations, which resulted in a high incidence of surgical complications, transmission of HIV, and hepatitis infections [17]. The safety of Txable organs depends on the safety criteria used for accepting donor organs and the complete medical evaluation of donors and recipients prior to Tx.

6. Financial incentives for organ donors have the potential to increase the safety and quality of Txable organs. It is expected that providing financial incentives will make a large number of organs available. Tx teams would then be in a position of greater selectivity in choosing Txable organs. As a result, the average quality and safety of organs would increase [18]. At present, owing to the shortage of Txable kidneys, an Expanded Criteria Donor (ECD) kidney program is being used in United States to decrease patients’ wait time to Tx. The ECD
program includes all cadaveric donors over the age of 60 years or those between 50-59 years with two of the following characteristics: hypertension, death due to stroke, and most recent serum creatinine level greater than 1.5 mg/dL. With informed consent, some centers have included nearly all of their patients on the ECD list, and other centers have been extremely selective. As of November 30, 2003, 42.2% (25,139 patients) of all those on the kidney Tx waiting lists in the United States also had been selected for the ECD list [19]. In 2002, only 1200 ECD kidneys were transplanted. The death-censored graft survival rates have been significantly lower in ECD kidneys [20]. As financial incentives increase the number of Txable kidneys, the use of ECD kidneys will be eliminated, and the quality of Txable kidneys and results of renal Tx will improve.

7. Supporters of altruism need to explain why the death of thousands of patients on organ Tx waiting list and also why subjecting thousands of living organ donors to surgery is preferable to providing financial incentives for cadaveric donors [3]. Prohibiting financial incentives for cadaveric donors is a major reason for the exacerbation of organ shortage. In 2002, nearly 6650 patients were reported to the Organ Procurement and Transplantation Network in the United States who died waiting for an organ Tx [19].

As the organ shortage has worsened over time, the number of living donors as a source for Txable organs has increased. Since 2001, the number of living donors has surpassed the number of cadaveric donors in the United States [21]. In other countries such as Canada, the number of living kidney donors also is increasing [22]. Being a living organ donor is not risk free. We have reported 3 perioperative donor deaths in 15,000 live donor nephrectomies in Iran (0.02%). Our major perioperative complication rates are 1.5% and minor perioperative complication rates are 8.5%. The long-term outcome of living kidney donors is not yet clearly known; however, several donors have developed ESRD.

8. It has been claimed that providing financial incentives to organ sources will increase the total costs of Txs. As organ Tx is already a very expensive procedure, it will be even more expensive and inaccessible for patients who lack quality medical insurance [23]. Some experts believe that the effect of financial incentives on the cost of Tx is likely to be the opposite. At present, organ shortages permit Tx teams to charge extremely high prices for their services [24]. Providing financial incentives to organ donors will increase Txable organs and competition among Tx teams. As a result, the cost of Tx services will likely fall. Additionally, the present system devotes funds to persuade potential organ donors to donate. This includes spending money for public education for organ donation and for education of health professionals and Tx coordinators [25]. Providing financial incentives may turn out to be a less expensive means of obtaining organs as it will most likely eliminate a large component of the aforementioned costs.

9. To evaluate the desirability of an altruistic organ donation system, the parameters of who is giving and who is receiving organs should be analyzed to discern the impact of altruism on organ donation. In altruistic systems, poor and uninsured patients have limited access to Tx services. Unfortunately, poor people are more often donors than they are recipients, so asking them for altruistic organ donation cannot be a desirable social policy [3]. Regrettably, providing financial incentives also will increase the number of organ donors from the poor. Charitable organizations should be more active; by paying for Tx services, they can increase the number of organ Txs in this population.

10. The question remains whether providing financial incentives would be a successful strategy for reducing or eliminating organ shortage. It is not really possible to answer this at present because for the past 2 decades, providing financial incentives for organ donors has been illegal in almost all countries [26]. Not enough data are available to analyze its success. There is, however, some evidence that financial incentives will increase organ supply: Small financial incentives given for burial expenses in Spain did increase organ supply, and adoption of a compensated LURD renal Tx program in Iran has increased living kidney donors and has eliminated renal Tx waiting lists since 1999 [27].

11. Some studies have shown remarkable public support for the idea of altruistic organ donation; in practice, however, the majority of persons exhibit an unwillingness to donate their organs [28]. The attitude of prominent members of the Tx community is very important in shaping public opinion for adoption and success of altruistic or compensated organ donation programs. Their support for providing financial incentives will result in public acceptance, while their opposition to it will end in public rejec-
tion and failure [3].

In 2001, several legislative proposals were submitted to the US Congress to promote organ donations. These proposals called for a donor medal of honor and a tax credit or tax refund for donation of an organ from a living or a deceased person. However, several influential senior experts in Tx have urged the US Congress to retain the prohibition established by the NOTA [29].

12. Some Tx experts and ethicists agree that providing financial incentives will increase the supply of Txable organs; however, they believe it should be used as a final strategy when all other measures fail. As all other strategies have failed to alleviate organ shortage, proposals for financial incentives for organ donations should be submitted and supported.

Compensated organ Tx programs should not be forbidden simply because ethical issues cannot be solved. Providing financial incentives for organ sources can save or improve the lives of thousands of patients each year. Instead of condemnation, Tx experts and ethicists must organize meetings and discussions to develop ethical guidelines for the use of this type of organ donation, at least in developing countries [8].

13. In almost all countries, providing financial incentives to living organ sources for donation of a kidney, or very rarely, for a portion of liver or lung, is prohibited. In developed countries, it may not be necessary to provide financial incentives for living organ donors, because compensation of cadaveric organ sources will increase Txable organs including kidneys. In developing countries, where an effective cadaveric organ Tx program cannot be established owing to infrastructural deficiencies, adoption of a compensated living donor Tx programs would increase Txable kidneys and may even eliminate renal Tx waiting lists (see the Iran model Tx program) [30].

V. Iran model compensated living unrelated donor renal Tx program

Iran is a developing country located in the Middle East, between the Caspian Sea and the Persian Gulf. It covers 1,648,000 km² and has 70 million inhabitants. Its GDP per capita is $1493 USD with a public health expenditure of only 1.7% of its GDP.

The prevalence of patients with ESRD in Iran is about 24,000 or 340 patients per million. Iran has a unique and very successful, but ethically somewhat controversial, compensated LURD renal Tx program. By adopting this program in 1988, the renal Tx waiting list was eliminated by 1999. Iran is the only country without a renal Tx waiting list, and more than 50% of all patients with ESRD in the country are living with functioning grafts. The backgrounds, characteristics, results, and ethical issues of this program have already been published [5, 8, 27].

There have been two periods in the evolution of the renal Tx program in Iran. During the first period (1967-1988), almost all renal Txs were from living-related donors (LRD), and the number of renal Txs performed was much lower than the national demand. There was a large number of patients undergoing dialysis that needed renal Tx but had no LRD. The cadaveric organ Tx program had not been established, and it did not seem as though it would be started any time in the near future. As a result, many patients undergoing dialysis became part of a long renal Tx waiting list at the Ministry of Health to travel abroad with government funds for cadaveric renal Tx. Only a very limited number of these patients could be transplanted. By 1988, attention at cultural, religious, and socioeconomic levels gave rise to the adoption of a government funded, compensated, and well-regulated LURD renal Tx program. By providing financial incentives to volunteer living donors, the number of renal Txs rapidly increased so that by 1999, the renal Tx waiting list was eliminated.

Figure 1 shows the number of renal Txs performed in Iran from 1984 to 2003. Renal Tx activity in Iran has reached 25 renal Txs per million per year. By the end of September 2004, 16,810 renal Txs had been performed (3,095 LRD, 13,222 LURD, 493 cadaveric). More than 79% of all renal Txs have been from LURDs (Figure 2).

After considerable effort, in April 2000, legislation was finally passed by the Parliament accepting brain death and cadaveric organ Tx. Between April 2000 and September 2004, 493 kidney, 131 liver, 78 heart, 7 lung, and 2 heart-lung Txs were performed. Figure 3 shows the number of cadaveric renal Txs from 2000 to 2003. The annual number of cadaveric renal Txs is steadily increasing. This also demonstrates that providing financial incentives to living kidney donors has not inhibited or stopped cadaveric renal Tx. In 2003, cadaveric renal Tx increased to 9% of all renal Txs. This slow increase is due to infrastructural deficiencies in the health system of the country.
In the Iran model renal Tx program, during evaluation of all Tx candidates, the Tx physician emphasizes the advantages of LRD compared with LURD renal Tx (such as fewer rejection episodes and longer graft survival rates) and recommends renal Tx from an LRD. He also discusses the scarcity of cadaveric kidneys. If the patient has no LRD or the potential donor would not be willing to donate a kidney, the patient is referred to the dialysis and Tx patients association (DATPA) to locate a suitable LURD. Those who volunteer as LURDs also contact the DATPA. All members of the DATPA are patients with ESRD who receive no incentives for finding a LURD or for referring the patient and donor to a renal Tx team. There is no role for a broker or agency in this program. All renal Tx teams belong to university hospitals, and the government pays all the hospital expenses of renal Tx. After renal Tx, the LURD receives an award and health insurance from the government. The government also provides essential immunosuppressive drugs such as cyclosporine and mycophenolate mofetil at a greatly reduced price to all Tx recipients. Charitable organizations are also very active in providing drugs to poor patients. A majority of LURDs also receive a rewarding gift from the recipient or from one of the charitable organizations. Renal Tx teams receive no incentives from the gifts or from the government’s awards. The program is under the close scrutiny of the Tx teams and the Iranian Society for Organ Tx regarding all ethical issues [5,8,27]. Foreigners are not allowed to undergo renal Tx from Iranian LURDs. Also, foreigners are not permitted to volunteer as kidney donors for Iranian patients. As an example, in the last 2 decades, owing to the civil war in Afghanistan, Iran has hosted more than 2.5 million Afghan refugees. During this period, no any Afghan refugee was used as a kidney donor for an Iranian patient. On the other hand, 241 of these refugees had ESRD, and they all had access to our dialysis and Tx
facilities on equal basis with Iranian nationals. Sixty-two refugees who had been renal Tx candidates have been Txed by the Iran model Tx program from their LRD or from an Afghani LURD. Tx of these refugees, who are from a very poor socioeconomic class, is another strong reason against commercialism and for practicing renal Tx with ethical standards in the Iran model renal Tx program [31].

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