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The Buying and Selling of Human Organs From the Living: Why Not?

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CONCLUSION

In the past 30 to 40 years, the Board has attempted to lay down guidelines for both management and unions to adhere to in conducting themselves during a representation election. The Board has recognized the far-reaching impact of a representation election in that it can effect the relations between workers and management for many years to come. In furthering a policy of giving the voters a fair and free choice at the polls, the Board in supervising these elections will allow only a certain type of conduct. The Board's task is to set forth guidelines to be followed. Furthermore, by lawing down these guidelines, the Board offers the parties to an election a system under which they can operate legitimately without risking objections being filed that would lengthen the process of choosing a representative. It is not to either side's advantage to conduct themselves in such a way so as to come under the Board's scrutiny and thereby create an atmosphere of dissension while waiting for the Board's decision as to alleged objections. The more advantageous course to follow is to conduct the election under the Board's guidelines and to have the election results certified immediately after the election.

JOHN D. FRISBY, JR.

THE BUYING AND SELLING OF HUMAN ORGANS FROM THE LIVING:

WHY NOT?

I. INTRODUCTION

This article will examine the propriety of establishing a system for the sale of human organs, especially the kidney. Initially, the debilitating malady of end stage renal disease will be discussed as will the marginal “cure” of the disease via hemodialysis. Next, the superior alternative to dialysis, i.e., kidney transplantation will be discussed in two ways. First, the current procedure of using living, related donors will be examined as well as harvesting kidneys from cadaver “donors”. Second, the practice of transplantation will be explored for its ramifications to society and the participants in the following areas: medicine, psychology, and the law. As will be shown, the recipient, donor and the physician are affected by the legal aspects of transplantation in many ways.

Then, the scarcity of the availability of life-saving organs under the current procedures will be discussed. Next, a new alternative to current practice, i.e., the sale of kidneys, will be considered as a solution to the scarcity problem. As was done earlier with the current methods, this pro-
posed practice will be explored in two ways. First, the procedural aspects of such a course of action will be examined. Second, the effect of sales on society and the participants in the medical, psychological, legal, and in addition, ethical and economical dimensions will be analyzed and compared to the earlier discussion of the current procedures. Finally, a concluding statement will espouse the establishment of a regulated system for the sale of kidneys as the best method of saving the lives of those who are in danger today for the lack of a kidney.

The kidney has been chosen as the representative organ for a discussion on the sale of human body parts for one primary reason. It is the only transplantable organ, essential to life, that can be removed from another to save that life with very little effect on the provider. Organs such as the heart and liver are essential to life but can not be removed from a live provider, while organs such as the cornea are not essential to maintain life. Therefore, the kidney is the most vital organ that can be easily sold by a living individual.

One final point needs to be made about the scope of this comment. Discussion in this entire article will focus primarily on the donation and sale of kidneys from individuals who are living. Numerous articles have adequately considered the legal, ethical and medical dimensions peculiar to cadaveric transplantation. Therefore, discussion of cadaver transplants and the Uniform Anatomical Gift Act will be limited throughout this article.

II. END STAGE RENAL DISEASE (ESRD) AND DIALYSIS

End Stage renal disease (ESRD) is chronic, permanent, irreversible damage to both kidneys. As a result the body does not excrete water, salt and other waste materials. If the disease remains untreated, death is imminent. Sixty thousand deaths occur in the United States every year from complications arising from ESRD.

However, death due to ESRD can be prevented by hemodialysis, a process in which the patient's blood is filtered and cleansed through an

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1 Bone marrow transplantation can be life-saving and is said to have very little effect on the donor. However, sale of bone marrow tissue is not indicated because most potential providers in a sales situation would be unrelated to the recipient. "Random, unrelated donors are of no value to the patient." Dr. Louis Pietragallo, Pittsburgh Post-Gazette, July 27, 1978, at 4, col. 3.


artificial kidney machine. Unfortunately, this treatment, although life-saving, is very debilitating to the 15,000 people in the United States currently receiving dialysis. First of all, dialysis patients must come into a treatment center two or three times a week for dialysis lasting 3½ -5 hours in order to stay alive. Often this involves traveling many miles to the center. The time involved with dialysis plus the debilitating effects of the illness prohibits the majority of patients from maintaining a job, even if the patient can be dialyzed at home. The patient must have an operation to join a vein and artery in the forearm, where the patient is hooked to the machine during dialysis. This operation leaves a very noticeable scar.

Furthermore, dialysis patients are told to follow a complex and trying diet regimen which restricts foods containing protein, sodium and potassium. The intake of fluids often must be curbed. Patients usually feel fatigued due to anemia and a phenomenon called "dialysis hangover". Most patients must take nine to 12 large capsules of phosphate-binding pills daily as well as vitamins, drugs to reduce blood pressure, and other medications. Sexually, a combination of psychological and physiological factors may produce impotence in men, while women, who are less likely to lose sexual function, worry about their desirability as a sexual partner due to physical changes such as hair loss and yellowish skin. Consequently, marriages may falter under the stress.

Psychologically, the dialysis patient may have periods of confusion, disorientation, difficulty in concentration, impaired memory, hallucinations and difficulty in thinking, speaking and making himself understood. Such changes may arise from a dialysis-induced organic brain syndrome. Sometimes a few dialysis patients become so depressed that they attempt or commit suicide, frequently through the overt method of non-compliance with dietary restrictions. Others decide that all these changes are not

5 Moore, Psychiatric Aspects of Chronic Renal Disease, 60, No. 5 POSTGRADUATE MED. 140 (Nov. 1976) [hereinafter cited as Moore].
6 Everything (almost) You Ever Wanted to Know About Dialysis and Were Afraid to Ask (P. Hartman ed. 1976) (unpublished handbook of Akron City Hospital).
7 Moore, supra note 5.
8 Id.
9 Hartman & Becker, Non-Compliance with Prescribed Regimen Among Chronic Hemodialysis Patients, 7 DIALYSIS & TRANSPLANTATION 978 (Oct. 1978) [hereinafter cited as Hartman & Becker].
10 Interview with Paula E. Hartman, M.A., Former Renal Counselor, Akron City Hospital Dialysis Unit (March 29, 1979) [hereinafter cited as Hartman interview].
11 Hartman & Becker, supra note 9.
12 Moore, supra note 5 at 142.
worthwhile and withdraw from treatment, dying shortly thereafter from uremic poisoning.\textsuperscript{15}

Finally, dialysis is not a sure method of escaping death. It has been estimated that only $\frac{1}{2}$ of dialysis patients are still living after 5 years of treatment.\textsuperscript{16} Dialysis, therefore, may be just a method of delaying imminent death. In summary, "the chronic renal patient is a marginal man . . . in that he is suspended in a state of limbo between the world of the sick and the world of the well, belonging to neither, yet a part of both."\textsuperscript{17}

Fortunately, though, most of the hardships of dialysis, including eventual death, can be avoided by the alternative of kidney transplantation. The bulk of the remainder of this article considers the transplantation alternative, especially with respect to kidney providers who are living when they donate their kidney.

III. THE CURRENT PRACTICE OF KIDNEY TRANSPLANT DONATION

A. Procedures of Kidney Removal and Transplantation

1. Introduction

The first successful kidney transplant was performed on December 23, 1954 in Boston's Peter Bent Brigham Hospital between living identical twins.\textsuperscript{18} Transplants using cadaver kidneys had already begun two years earlier.\textsuperscript{19} Between 1963 and June 1976, a total of 25,108 reported kidney transplants have been undertaken.\textsuperscript{20} Of those patients transplanted, 68% are still alive, two thirds (45%) of whom have a functioning transplant.\textsuperscript{21} Of the patients who are dead (32%), two thirds (20.5%) died with a functioning kidney.\textsuperscript{22} Therefore, 89% of those who received kidney transplants between 1963 and 1976 are either alive today or had died with a functioning kidney. Two main types of sources have served as the kidney donors for these transplants—cadavers (75%) and living donors related to the recipient (25%).\textsuperscript{23}

\textsuperscript{15}G. Schreiner, Problems of Ethics in Relation to Haemodialysis and Transplantation, in LAW & ETHICS OF TRANSPLANTATION, 126 at 129 (G. Wolstenholme and M. O'Connor ed. 1966) [hereinafter cited as TRANSPLANTATION LAW & ETHICS].
\textsuperscript{16}Baron, Botsford & Cole, Live Organ and Tissue Transplants From Minor Donors in Massachusetts, 55 B.U.L. REV. 159, 163 [hereinafter cited as Baron, Botsford & Cole].
\textsuperscript{17}Landsman, The Patient with Chronic Renal Failure: A Marginal Man, 82 ANNALS OF INTERNAL MED. 268 (1975).
\textsuperscript{18}Bennett & Harrison, Experience with Living Familial Renal Donors, 139 SURGERY, GYNECOLOGY & OBSTETRICS (1974) [hereinafter cited as Bennett & Harrison].
\textsuperscript{19}Id.
\textsuperscript{21}Id. at 2.
\textsuperscript{22}Id.
\textsuperscript{23}Id. at 6.
2. Important Factors in the Removal and Allocation of Kidneys

There are three important interrelated factors to consider in the removal and allocation of kidneys—matching, time and the pre-transplant health of the donor. Matching is the process in which the tissue of the donor is tested to determine which recipient will be best-suited to receive the transplant. The better a match is, the less likely the kidney will be rejected by the recipient’s immunological system which protects the patient from disease and foreign objects, such as the new kidney.24

The second factor, time, is critical in transplantation, especially with cadaveric kidneys. Kidneys must be transplanted quickly25 since they deteriorate for lack of oxygen as soon as the heartbeat of the cadaver stops.26

The third factor is the pre-transplant health of the donor. If the cadaver donor has had any trauma to the kidney, either due to the cause of death or a disease, such as cancer, transmissible diseases, renal disease or hypertension,27 that existed before death, the kidneys will not be used. These latter complications also negate the use of a living related donor. Sometimes, psychological trauma in the living donor will cause a transplant team to conclude that removal should not occur. The psychological effects of the transplant to both donor and recipient will be discussed later.

Allocation of cadaveric organs are usually made locally,28 due to time restraints and economic factors.29 However, there are regional and national computer lists of waiting transplant recipients who are occasionally accommodated when local potential recipients are poor-risk candidates for transplant. New innovations in a device called a kidney perfusion machine, which allows transplants up to 48-72 hours after removal since it minimizes kidney deterioration, makes such transplants possible.30 Even so, the general rule is that all other factors being even, the longer the kidney

24 Interview with Hayes H. Davis, M.D., Chief of Nephrology, Akron City Hospital, Akron, Ohio (March 15, 1979).
28 Address by Blech, Buszta, Williams & Zachary, Recovery, Preservation, Tissue Typing, and Transplantation of Cadaveric Kidneys, Third Renal Symposium, Cleveland, Ohio (March 4, 1978) [hereinafter cited as Blech address]. Of recent transplants done in the northeastern Ohio area, 83% of the kidneys were removed in northeastern Ohio hospitals. Id.
29 It is estimated that the cost of transporting a kidney out of the state is $5,000 to $6,000. Id.
30 Reidell, Dilemma for Patient and Physician: ‘Brother, can you spare a kidney?’, 45 No. 6 MOD. MED. 46, 50 (March 15, 1977) [hereinafter cited as Reidell].
Summer, 1979]

is perfused after removal, the less likelihood that it will result in a functioning transplant.

3. Kidney Removal and Transplantation

Cadaveric “donors” are taken to a hospital as soon as possible and both kidneys are removed by a transplant surgeon in about thirty minutes. However, storage of the kidneys in a perfusion machine is necessary, usually for an average of 24 hours so that matching tests can be conducted to find suitable recipients.

For living donors, the operation takes 2½ hours. No perfusion of the kidney is usually necessary since the donor and recipient are side by side on the operating table. Most often, the left kidney is used since it is easier to remove from the donor and fits more easily into the recipient. The transplant operation itself lasts 5 to 6 hours.

B. Ramifications of Kidney Transplants from Living Donors

1. Medical Ramifications of Living Donor Transplants

a. Introduction

There is no doubt today that kidney transplantation is a medically accepted therapy for ESRD and therefore cannot be regarded as a form of experimentation on humans. Transplant operations offer the greatest likelihood of prolonging the life of the recipient without unduly threatening the well-being of the donor.

b. Medical Changes in the Recipient

In addition to saving life, a kidney transplant allows the individual to leave his existence as a “marginal man” and become a normal functioning individual once again.

However, critics of living donor use say the risk of using living donors is not justified since there is no guarantee of transplant function or patient survival over an extended period of time. However, 70% of kidneys from living related donors (parents and siblings) are still functioning in the recipient one year after transplant and over 60% are still working

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31 Blech address, supra note 28.
33 Bennett & Harrison, supra note 18 at 895.
34 Id. at 896.
35 Blech address, supra note 28.
37 Baron, Botsford & Cole, supra note 16.
after five years.39 One study reports that children who receive a relative’s kidney have a 68% success rate of kidney functioning after five years.40 These figures compare very favorably against those who receive cadaver kidneys where only 46% function for a year and 35% function after five years.41 Moreover, one year after transplant, 86% of recipients who have a relative’s kidney are still living; this figure drops to only 76% after five years.42 In children, 78% are still surviving five years after a transplant from a living related donor.43 Again, these figures should be compared with figures of 72% and 51% for one and five year survival rates, respectively, for cadaver kidney recipients.44 It is also to be remembered that only 50% of dialysis patients are still living after five years on the machine.45

Transplant recipients also have some unpleasant side effects which occur primarily due to the necessary ingestion of immunosuppressant drugs to ward off rejection of the new organ. Common side effects are bone marrow toxicity, liver damage, a roundish face, a small hump on the back of the neck,46 and increased susceptibility to infection.47 Occasionally, bones will deteriorate and peptic ulcers and cataracts will form.48

However, all things considered, it is apparent that the recipient's chances of survival when a kidney is received from a living source greatly outweighs adverse side effects and the results that can be expected from cadaver sources. Moreover, the opportunity for a longer period of improved quality of life is a much more substantial possibility for recipients from living sources, than for those who receive cadaver kidneys or those who are maintained on dialysis.

c. Medical Risk to the Living Donor

An individual with two functioning kidneys has four times as much kidney tissue as is necessary to adequately cleanse the blood and perform other vital functions.49 Therefore, one kidney can be thought of as a “spare” organ that can be made available for a transplant.

The risks to the transplant donor are primarily two-fold, the risk of the operation itself and the possibility of failure of the remaining kidney in

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40 Fine, Long-Term Results of Renal Transplantation in Children, 61 PEDIATRICS 641 (1978) [hereinafter cited as Fine].
41 Renal Transplant Report, supra note 20 at 7.
42 Id. at 7.
43 Fine, supra note 45.
44 Renal Transplant Report, supra note 20 at 7.
45 Baron, Botsford & Cole, supra note 16.
46 29 Conn. Supp. at 373, 289 A.2d at 389.
47 Blech address, supra note 25.
48 29 Conn. Supp. at 373, 289 A.2d at 389.
49 Sharpe, The Minor Transplant Donor, 7 OTTAWA L. REV. 85, 92 (1975) [hereinafter cited as Sharpe].
the future. The risk of the operation itself is attendant to the use of general anesthesia. It is estimated that the risk of death due to the operation is .05%; only five donors have died from thousands used. The operation lasts 2½ hours and the average stay in the hospital is 8 days. The donor is able to engage in normal activities after 30 days. One study reported that major postoperative complications, such as wound infection and pneumonia occur in 4% of the cases while minor postoperative complications such as urinary retention and fever arise in another 24% of the donors. However, most of these complications disappear in a few days and many of them were attributed to the use of donors with chronic pulmonary disease.

The second risk, that of the failure of the remaining kidney, is said to be .07%. Normally, the only worry is that some sort of trauma will cause the remaining kidney to malfunction. However, it was reported in 1975 that in over 20 years of renal transplantation there never had been a reported case of total renal failure in a donor. The five year life expectancy of a 35 year old male donor is 99.1% compared to a non-donor figure of 99.3%; consequently, most insurance companies do not raise their premiums for individuals who have had one kidney removed.

Therefore, it can be seen that from a medical standpoint, donating a kidney is a very low-risk procedure. When the discomfort of a kidney donor is compared to the life-saving potential of the gift to the recipient, it can be seen why living donors are used for transplantation.

2. Legal Ramifications of Living Donor Transplants

a. Introduction

Three parties are present in any transplantation from a living donor—the recipient, the donor and the physician or surgeon. The following discussion will attempt to analyze the legal relationships among these parties. Before beginning, it is necessary to note that the donation of a kidney from a living donor is not prohibited by any law of any state or by federal law.

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50 Hamburger, in Discussion to Woodruff, Transplantation: The Clinical Problem, in TRANSPLANTATION LAW & ETHICS, supra note 15, 6 at 20.
51 Bennett & Harrison, supra note 18; Baron, Botsford & Cole, supra note 16 at 164.
52 29 Conn. Supp. at 374, 289 A.2d at 389.
53 Bennett & Harrison, supra note 18 at 897.
54 29 Conn. Supp. at 374, 289 A.2d at 389.
55 Bennett & Harrison, supra note 18 at 896.
56 Id. at 897.
57 Hamburger, in Discussion to Woodruff, Transplantation: The Clinical Problem, in TRANSPLANTATION LAW & ETHICS, supra note 15, 6 at 20.
58 Baron, Botsford & Cole, supra note 16 at 164.
60 Dukeminier, supra note 2 at 850.
b. Legal Standing of the Parties

It appears that in a purely donative situation free of coercion, neither the recipient or donor would have a cause of action against one another. However, the recipient might have a basis for suit against the physician or surgeon if the latter did not fully inform him of the risks of transplantation and the potential success of the operation to which the understanding recipient acknowledged his consent. In other words, the recipient must give his informed consent to the operation. In addition, should the surgeon or physician perform the operation in a negligent manner, he could be liable to the recipient for medical malpractice.

Most of the controversy in this area, however, has focused on the legal position of the donor in four ways. The first concern is whether a donor who is related to the recipient can really give "informed consent" to the removal of his kidney. It is possible that pressure from family members can be so great that it is questionable whether the requisite "consent" is present.

The second issue concerns the information that the surgeon or physician must give the donor so as not to be subject to civil liability for assault and battery or wrongful death, should death occur. The surgeon or physician must not minimize the dangers of the surgical procedure, nor withhold any facts necessary for the donor to form an intelligent consent, such as the fact that the transplant may not be successful. Therefore, if as a result of his explanation to the (adult) donor, the donor understands the nature of the procedure, and voluntarily consents to removal of the kidney for transplantation, the surgeon or the physician is not normally subject to civil liability. One source concludes,

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61 Louisell, Transplantation: Existing Legal Constraints, in Transplantation Law & Ethics, supra note 15, 78 at 80.
62 However, Jeddeloh & Chatterjee, supra note 36 at 246-247 suggest that transplant surgeons have not been sued by recipients for three reasons; 1) there is no recognized standard of care in kidney transplantation since the procedure is relatively new; 2) most recipients realize that success is not assured; and 3) a careful personal relationship usually develops between the patient and the surgeon.
63 Sharpe, supra note 49 at 104.
64 Louisell, Transplantation: Existing Legal Constraints, in Transplantation Law & Ethics, supra note 15, 78 at 80.
66 Dukeminier, supra note 2 at 850. There have been no cases in which consenting adults subsequently have argued that the consent was invalid and have sued the surgeon for removing the kidney. Id. at 851. A good example of a consent form has been reprinted in Castel, Some Legal Aspects of Human Organ Transplantation in Canada, 46 Can. B. Rev. 345 (1968). It states:

Doctor ——— has explained to me that the life of ——— is endangered due to irreversible kidney disease . . . . The immediate risks of the operation for removal of my kidney, as well as the possible future permanent injury to my health suffered as a direct result of the removal of my kidney have been fully explained to me. I am also aware of the possibility that such kidney transplant might not be successful.
The physician and transplant center are practically immune from civil liability for activities relating to organ transplantation, unless there is a clear showing of an extreme departure from professional standards of due care.°

Two state statutes concur with this conclusion.°

The third legal concern is the use of non-adult donors, i.e., minors and incompetents such as the mentally retarded, for transplantation. In British Columbia, a minor who is 19 can give an informed consent to kidney removal provided the consent is free of all coercion.° In Michigan, an incompetent or a minor of 14 years of age can consent to kidney removal upon the application of any interested party provided there is a showing that the minor understands the needs of the recipient and the consequences to both himself and the donee.° With minors who are younger, and therefore with very limited ability to “consent”, courts have groped for a rationalization to allow such transplants. Primarily, the courts have delineated two reasons for authorizing these transplants: 1) the doctrine of substituted judgment; and 2) the existence of emotional benefit to the donor. In the classic case of Strunk v. Strunk,° an incompetent’s parents sought to transplant his kidney into their dying normal son. The court allowed the transplant noting that all the members of his family, the Department of Mental Health and both the county and circuit courts gave their approval to the transplant (i.e. substituted consent).° Furthermore, the court held that it would be disturbing blow to the incompetent if his brother were to die since the normal brother often visited the incompetent. Therefore, it was important to the incompetent’s emotional well-being to keep his brother alive.° In Hart v. Brown,° the court authorized a transplant between two twins, seven years of age. The court held that the children’s parents would

In an effort to benefit — I nevertheless wish and do request, authorize and direct Doctor —— to remove one of my kidneys by means of surgical operation in order that this kidney may be transplanted into ——.

Id. at 368. Also the form is to be signed by a witness who acknowledges that the donor read the statement in his presence, and understands it and the risks and consequences inherent in the procedure. Id.


° ILL. ANN. STAT. ch. 91, § 181-84 (Smith-Hurd 1971) indicates that it is “important to the health and welfare of the people of this state” that organs be made available for transplantation. Id., § 181. As long as the physician exercises due care and professional standards of care in providing services according to the current state of medical arts, he would only be liable for negligence or willful misconduct. Id., § 181 and § 183. Mich. Comp. Laws § 691.1511 (Supp. 1977) also only provides for physician liability in transportation for negligence or willful misconduct.

° Mich. Comp. Laws Ann. § 701.19(a) and (b) (Supp. 1972).

°445 S.W.2d 145 (Ky. 1969).

° Id. at 147.

° Id. at 146.
be able to substitute their consent for their children's only after a close, independent and objective investigation of their motivation and reasoning.\(^75\)

However, the court in *In re Guardianship of Pescinski*,\(^76\) disallowed a transplant holding that there was no evidence whatsoever that a 39 year old catatonic schizophrenic would receive any benefit from a transplant to his sister. Even though the family wanted the transplant to be performed since it would have saved the life of a mother of six, the court recognized that the incompetent was incapable of giving consent. Furthermore, his guardian ad litem was opposed to the transplant and there was no showing that the incompetent was supported in any way by his sister.\(^77\)

Some commentators\(^78\) agree with the latter of the three cases and feel that the use of living minors and incompetents for transplantation should be prohibited since the theories authorizing such transplants in the past have been mere rationalizations. The ability of the courts to allow such transplants as within their equity powers has also been questioned.\(^79\) Perhaps the best solution is to apply a test formulated by Justice Day in his dissent to *In re Guardianship of Pescinski*.\(^80\) He feels that a transplant from an incompetent or minor is not permissible unless: 1) the donee will die without it; 2) reasonable steps to secure a transplant from another source have been made, but failed; 3) the minor and recipient are related so as to infer that if the minor were competent, he would most probably consent to the procedure; 4) the donor is in good health; and 5) there is a minimal risk to the donor and a showing that he could function with only one kidney.\(^81\) In addition, no transplants should be permitted using minors or incompetents without appointment of a guardian ad litem and a demonstration of the *real* reasons behind the consent by other family members.\(^82\)

The final legal problem in relation to the living kidney donor is the use of prisoners as donors. In one study, prisoners from three state prisons in Denver were used as donors.\(^83\) No compensation was involved and no reduction in the prisoner's sentences was offered. The donors volunteered via a notice on a bulletin board at the prisons. Even though there was a feeling that the actions of these particular convicts were truly volitional,\(^84\)

\[^{75}\text{Id. at 375, 289 A.2d at 391.}\]
\[^{76}\text{67 Wis.2d 4, 226 N.W.2d 180 (1975).}\]
\[^{77}\text{Id.}\]
\[^{78}\text{Sharpe, supra note 49 at 98; Jeddeloh & Chatterjee, supra note 40 at 254.}\]
\[^{79}\text{However, Mich. Comp. Laws Ann. §§ 701.19(a) and (b) (Supp. 1972), give the probate court this power.}\]
\[^{80}\text{Id. at 4, 226 N.W.2d 180 (1975).}\]
\[^{81}\text{Id. at 10, 226 N.W.2d at 183 (1975) (Day, J., dissenting).}\]
\[^{82}\text{29 Conn. Supp. at 375, 289 A.2d at 391.}\]
\[^{83}\text{Starzl, in Discussion to Murray, Organ Transplantation: The Practical Possibilities, in Transplantation Law & Ethics, supra, note 15, 54 at 75.}\]
\[^{84}\text{Id. at 76.}\]
it was decided by a group of leaders in the transplantation field that further use of penal volunteers would inevitably lead to abuse if the practice were accepted and applied broadly. The major factor in the decision was the rationale that a person held under restraint could not be presumed to consent.

One final area in the use of living donors for kidney transplants needs to be explored. Are transplant surgeons criminally liable for their actions? Arguably, the surgeon could be charged with assault, mayhem and even murder. In all three situations consent by the “victim” is no defense to the crime and a justification argument would have to be advanced. However, the state would seem to have an insurmountable burden to demonstrate guilt beyond a reasonable doubt. The touching in a transplant setting is definitely not meant to inflict serious harm. It would also be difficult for a prosecutor to intimate that transplantation involves mayhem, i.e., a willful, malicious and permanent disfigurement or disablement of the body accompanied by breaking of the skin. Transplantation is in no way comparable to the mayhem that occurred in State v. Bass where a physician twice injected two different individuals with anesthesia so that they could amputate their fingers to collect insurance benefits. The all important requisite of medical benefit exists in the transplantation situation and should immunize the surgeon from any criminal liability.

3. Psychological Ramifications of Living Donor Transplants
   a. Effects on the Recipient

The primary psychological changes in the recipient are overwhelmingly favorable should the transplant be successful. Since the patient has a new lease on life, the only worries should be the possibility of future kidney failure and the side effects of the immunosuppressant drugs. Even if the transplant fails, the patient’s depression should be alleviated by the realization that he can still be maintained by dialysis until a second opportunity for a transplant becomes available. Although it was once thought that recipients who rejected a kidney previously became “immunized” against transplants, a recent study has shown that rates of success for a second
transplant are only slightly lower than first transplant success rates. It is only necessary that care be taken to assure that the match of the second donor is not identical to that of the first rejected kidney.

b. Effects on the Donor

Before living relatives are accepted as transplantation donors, psychological evaluations are routinely given to determine the mental stability of the potential donor and the amount of pressure he is experiencing from other members of his family to submit the "donations." In one transplant center in Paris, 40% of the potential donors were eliminated from consideration due to the donor's lack of stability and/or the existence of coercion upon him. So as to avoid scorn by other members of the family should this individual be a suitable match, the individual and his family are told that he was a poor match. Often potential donors opt out since they may fear the operation, losing a body part, developing kidney disease and thinking that the procedure may cause the death of the recipient or the rejection of the organ.

On the other hand, it has been reported that some family members fight among themselves to see who will be the "lucky" one to donate their kidney. A decision to donate is often internally made before the physician informs the donor of the risks of the procedure. After the operation, although the donors sometime experience mild postoperative depression, it is short-lived. In fact, most donors felt that the procedure was one of the most rewarding experiences of their lives and they would not hesitate to do it again. Donors would receive notoriety as heroes for their generosity and they felt increased self-esteem for having done something valuable in their lifetime, often, to save the life of another. Some of the psychological factors mentioned above effect the ability

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94 Blech address, supra note 28.
95 Hamburger, in Discussion to Woodruff, Transplantation: The Clinical Problem, in TRANSPLANTATION LAW & ETHICS, supra note 15, 6 at 14.
96 Id. Other examples of articles which discuss the coercive factors found between family members are: Reidell, supra note 34; Eisendrath, Guttmann & Murray, Psychologic Considerations in the Selection of Kidney Transplant Donors, 129 SURGERY, GYNECOLOGY & OBSTETRICS 243 (1969) [hereinafter cited as Eisendrath]; Simmons, Hickey, Kjellstrand & Simmons, Family Tension in the Search for a Kidney Donor, 215 J.A.M.A. 909 (1971); Kemph, Psychotherapy with Patients Receiving Kidney Transplant, 124 J. AM. PSYCH. 623 (1967).
97 Id.
98 Baron, Botsford & Cole, supra note 16, at 164.
100 Id. at 1247.
101 Eisendrath, supra note 101 at 246.
of the potential donor to make an informed consent. As discussed earlier, powerful coercive pressure may be placed on the individual by his family to donate irrespective of his own concern of the risks involved. On the other hand, individuals who decide to donate before they even learn of the potential dangers have certainly consented but obviously without knowledge. Hopefully, good psychological evaluation and good physician-patient communication will eliminate these types of donors.

In the final analysis, once it is clear that an informed consent is given, it is almost certain that a kidney donor, although possibly under a great deal of stress initially by his family to make a donation to save a family member, is nevertheless emotionally uplifted by his act of heroism.

IV. THE SCARCITY OF KIDNEYS FOR TRANSPLANTATION

A. Introduction

Dr. Woodruff foretold in 1966 that the shortage of kidneys was a major limitation in the use of organ transplants and that before long it would become the dominant drawback.103 Time has borne out his prediction. It is estimated that only one of every ten patients per year gets a needed kidney transplant.104 Furthermore, the number of dialysis patients is expected to increase threefold from 15,000 today to 45,000 in the mid 1980's.105 Many of these patients will become potential transplant recipients. In Ohio alone, there are 250 people on a kidney transplant waiting list.106

B. The Scarcity of Cadaver Organs

In some areas of the country, it takes four to five years to get a cadaver kidney for transplant.107 At that rate, 50% of the potential recipients will have died before they could receive a transplant.108 The Uniform Anatomical Gift Act (UAGA), which has been passed in all 50 states, was supposed to be the primary source of kidney transplants. However, it is clear that reliance on the UAGA to supply kidneys for transplantation is not warranted. Recently, of one hundred cadavers used for kidney transplants in Gainesville, Florida, not one was carrying a donor card.109 Even more disconcerting is the practice of the Northeastern Ohio Organ Recovery Program. In their manual110 they require the physician at the scene of death to have the next-of-kin sign a consent form even

103 Woodruff, Transplantation: The Clinical Problem, in TRANSPLANTATION LAW & ETHICS, supra note 15, 6 at 10.
104 Weissman, Why the Uniform Anatomical Gift Act Has Failed, 116 Tr. & Est. 264, 265 (1977) [hereinafter cited as Weissman].
105 Id.
106 Blech address, supra note 28.
108 Baron, Botsford & Cole, supra note 16.
109 Weissman, supra note 104.
though the donor has properly completed a Uniform Donor Card. Under the UAGA, once a donor has signed this card disposing of his body or a part thereof, the wishes of the next-of-kin can not supersede that "bequest". One of the purposes of the UAGA was to preserve precious time to minimize deterioration of the organ. This purpose is sabotaged by such practices of organ recovery programs. Another recent disappointing development is the fact that organ donation centers reported a sharp decrease in the number of donated cadaver organs for the first six months of 1978 as compared with the first six months of 1977. Even before that, the number of transplants that have been performed in the 1970's has remained rather steady despite the increasing numbers of potential recipients. Eleven years ago it was said:

All evidence indicates that the act [UAGA] will not relieve the shortage of free cadaver organs to any appreciable extent and that thousands of people will continue to die because of lack of a needed organ. The Act is a placebo, easily swallowed, but not a remedy.

Today, it is certain that:

The UAGA has thus far been a failure and may never fulfill earlier expectations by creating an adequate supply of human body parts. It is clear that the time to consider alternatives to the UAGA is now.

C. Possible Alternatives

Many alternatives have been postulated to provide enough essential organs for transplant. One of them, organ banks, is not feasible in kidney transplantation today since kidneys must be transplanted within 72 hours of death. Also, forced "donation" is not permissible. In the case of McFall v. Shimp, a man dying of a bone marrow disease brought a suit to compel his cousin to donate his marrow. The court dismissed the suit and said:

For a society which respects the right of one individual to sink its teeth into the jugular vein or neck of one of its members, and suck from it sustenance for another member, is revolting to our hard-wrought concepts of jurisprudence.

The use of incompetents, minors and prisoners has been discussed earlier. It is apparent that none of these potential resources could be tapped due

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111 Akron Beacon Journal, July 13, 1978, at D1, col. 5-6. It is suggested that the film, "Coma", which depicts a blackmarket operation for providing organs for transplant, may be partly responsible for this trend. This film was based on a novel by Robin Cook, a physician. R. Cook, Coma (1977).
112 Renal Transplant Report, supra note 20 at 6-7.
113 Dukeminier, supra note 2 at 866.
114 Weissman, supra note 104 at 282.
116 Id. at 4, col. 5.
117 See text accompanying notes 69-86, supra.
to inherent difficulties in obtaining consent and the court's and state's duty to look out for the benefit of its wards and children.

Compulsory removal of organs at death has also been suggested.\(^{118}\) It is currently being practiced in France where there is much furor over the situation.\(^ {119}\) In addition to ethical pitfalls, there are also Constitutional snags in its application.\(^ {120}\)

A milder form of compulsory removal, i.e., removal of organs at death unless there is an objection, has been espoused by a leading commentator.\(^ {121}\) It can be suspected that as many people as participate in the UAGA system to donate a part of their body at death will be obliged to participate in this proposed system to not donate their body at death. Consequently, although most Americans would not want their bodies violated at death (or they would be UAGA donors today), such violations would occur as a result of their failure to object to the taking. Thus, this system would be no better than compulsory removal.

Another system envisions the sale by a living individual of his body at his death.\(^ {122}\) Such a system is faulty, however, since there are legal problems of adequate consideration which arise. What has the buyer received for his payment? How can the buyer keep track of the seller to "collect" his organ?

Although the final three alternatives all have some merit, they are primarily hampered by two factors. First, they provide cadaver kidneys to a potential recipient. As has been discussed before, cadaver kidneys are clearly inferior in desired effect as compared to living kidney sources. Second, since cadavers are used in these systems, they are subjected to the raging controversy over the issue of the definition of "death".\(^ {123}\) This problem will remain paramount until a generally acceptable legal definition of death is formulated. Therefore, the sale of kidneys by individuals who will be referred to hereinafter as providers, i.e., those who are living at the time they part with their kidney, needs to be considered as a potential source of life-saving organs.


\(^{120}\) Dukeminier, *supra* note 2 at 831-37.

\(^{121}\) Id. at 837-42.

\(^{122}\) Body Part Sales, *supra* note 88 at 1218-19.

V. THE SALE OF KIDNEYS BY THE LIVING FOR TRANSPLANTATION

A. The Proposed Practice of Kidney Sales

It is clear that many individuals have already actively sought to sell their organs. For example, in Chicago dozens of people have been calling eye banks and kidney foundations to offer to sell an eye or a kidney.\textsuperscript{124} Why are these people being refused when the main advantage of sale over donation is considered? This advantage is that by using living sources all the disturbing attributes of kidney harvesting, such as determining the time of death, getting permission from the next-of-kin and removing the organs as soon as possible, would be alleviated.\textsuperscript{125}

A provision for the sale of kidneys could be easily incorporated into existing federal law as will be shown later allowing remuneration for kidney providers. Of course, payment would not necessarily have to be monetary. For example it has been suggested that the seller could receive a paid up life insurance policy,\textsuperscript{126} or receive free medical care for the remainder of his life,\textsuperscript{127} or “trade” his kidney to an organ bank for an organ needed by him or his family,\textsuperscript{128} in return for selling his kidney. However, it would seem more predictable and just to establish a set price, e.g., of $5,000.00 that would be paid by the government to the individual provider. In effect, the government would purchase the organ for transplantation. Five thousand dollars would be a good sum, high enough to provide an incentive for providers and low enough not to be prohibitive economically, as will be discussed later.

B. Ramifications of Kidney Sales by the Living

1. Ethical Permissability of Kidney Sales

Many arguments have been made by philosophers and moralists deploiring the sale of human organs. However, in turn, many of these arguments can be dispensed with given the creation of a government-controlled system where sales outside the system would be expressly prohibited and sanctioned by strict criminal penalties. Therefore, there will be no unsavory trafficking of organs,\textsuperscript{129} the poor will not be exploited\textsuperscript{130} and since payments

\textsuperscript{124} Wertz, Transplant Market Blooms, reprinted in CNSW Newsletter, supra note 119 at 35.
\textsuperscript{125} Body Part Sales, supra note 88 at 1217.
\textsuperscript{126} Dukeminier, supra note 2 at 848.
\textsuperscript{127} Murray, in Discussion to Woodruff Transplantation: The Clinical Problem, in TRANSPLANTATION LAW & ETHICS, supra note 15, 6 at 17.
\textsuperscript{128} Dukeminier, supra note 2 at 848.
\textsuperscript{129} Body Part Sales, supra note 88 at 1218.
will be made by the government, everyone, not only the rich, will be able to afford the operation.\textsuperscript{131} The problem of risk to the provider has already been previously discussed and it was concluded to be minimal.\textsuperscript{132}

Other theorists deplore the sale of the organs on the basis that payment to the provider is repugnant.\textsuperscript{133} It has been said that the body is not marketable\textsuperscript{134} and that giving up a kidney only for the motive of financial reward is despicable.\textsuperscript{135} Experience has shown, however, that the body is marketable; blood and sperm are sold for payment all the time.\textsuperscript{136} The only difference with a kidney is that it is not regenerative; however, it is not necessary to have two kidneys. It is questionable, too, whether the only reason for a person to sell his kidney would be for the money; even so, there is nothing inherently wrong in receiving compensation as long as nobody is injured thereby. Two final arguments against organ sales are not so easily disposed. The first position is that certain individuals may be pressured into selling their kidney\textsuperscript{137} so that the others would benefit from the payment. Psychological evaluations before transportation as described earlier\textsuperscript{138} should weed out some of these non-consenting providers. Also, sales by minors and incompetents should be prohibited unless an informed consent is demonstrated and there is a guarantee that the payment made flows directly to the provider. The court could hold such payments in trust for the minor until the age of majority is reached. With incompetents, maybe the payment could be used to provide care and maintenance for the individual.

The final argument made against organ sales is that potential donors will be driven away once sales are allowed.\textsuperscript{139} Although this is true, it must be assumed that many more “donors” will sell their kidneys if there is a pecuniary benefit to be had. It is obvious that there are not enough “pure” donors now to meet the needs of potential recipients, many of whom are dying from lack of a transplant. Payments should also act as an incentive to spur reluctant family members to “donate” a kidney to a loved one.

The overriding ethical consideration, however, is that life should be preserved.\textsuperscript{140} As long as the provider exercises his free will in making a

\begin{thebibliography}{99}
\bibitem{131} Body Part Sales, supra note 88 at 1217, P. Simmons, Kidney Transplantation in TISSUE TYING AND ORGAN TRANSPLANTATION (Yunis ed. 1973) at 165.
\bibitem{132} See text accompanying notes 49-59.
\bibitem{133} Dickens, supra note 130 at 165; Freund, supra note 130 at 176.
\bibitem{135} Id. E. Nizsalovszky, A LEGAL APPROACH TO ORGAN TRANSPLANTATION 183 (1974).
\bibitem{136} Dukeminier, supra note 2 at 847.
\bibitem{137} Sharpe, supra note 49 at 104; Dickens, supra note 130 at 169.
\bibitem{138} See note 95, supra.
\bibitem{139} Body Part Sales, supra note 88 at 1223; Weissman, supra note 109 at 266; Katz & Capron, supra note 134.
\bibitem{139} Dukeminier, supra note 2 at 857.
\end{thebibliography}
voluntary, informed consent to a minimal risk procedure in order to dramatically improve the quality of life in a recipient, and even save that life, the mere fact that there is a pecuniary reward given to the provider is a mere ethical technicality. No public policy of the state will have been violated.

2. Legal Ramifications of Kidney Sales

a. Legal Standing of the Parties

Referring back to the legal positions of the parties in a donation setting, it is obvious that sale, instead of donation should not impact greatly on the conclusions made therein. For example, neither the provider or recipient would have a cause of action against one another. Transplant physicians could be liable to either party in two ways, by failing to get an informed consent or by performing the operation in a negligent manner. Perhaps the proposed sale statute could pattern some of the state statutes mentioned earlier which make transplant surgeons liable only for negligence or willful misconduct.

With reference to the provider, truly voluntary informed consent can once again be a problem if the individual is pressured into selling his organ by members of his family or friends who seek to snatch the payment for their own use. Furthermore, as described above, extreme caution must be used when a minor or incompetent seeks to sell his kidney. In addition, it appears that the same rationale described above to prohibit kidney donation from convicts should also apply in the present instance.

Finally, there would not be any threat of criminal liability to the surgeon as long as he was performing transplants within the government system. However, there would be criminal sanctions imposed on any physician, provider or recipient who attempted to set up a private sale without the government as a party. Naturally, the same three parties could be found guilty of criminal acts under a sales statute if a transplant was performed outside of the established system.

b. Legal Dilemmas Peculiar to Organ Sales

i. Warranty and Strict Liability Issues

There are no cases which have considered whether the sale of organs is a sale of goods or a service. If it is the former, there would possibly be implied warranties under U.C.C. Sections 2-314 and 2-315 flowing to the recipient. Cases analogous to transplantation have considered this question with respect to blood transfusions. Although one leading case held that

141 See text accompanying notes 61-90, supra.
142 See text accompanying notes 61-62, supra.
143 See note 68 supra.
144 See text accompanying notes 83-86, supra.
145 Cunningham v. MacNeal Memorial Hospital, 47 Ill.2d 443, 266 N.E.2d 896 (1970).
blood was a product and thus its purchase was a sale, the case of *Perlmutter v. Beth David Hospital*\(^{148}\) held that the sale of blood was a service necessary for a course of medical treatment. *Perlmutter* is regarded as the majority position in the United States;\(^{147}\) consequently, no implied warranties of merchantability or fitness for a particular purpose should arise out of the sale of organs either. The kidney would be regarded as a part of a treatment service of transplantation. This majority position is further buttressed by the existence of a few state statutes\(^{148}\) which expressly refer to transplant operations. These statutes provide that transplantation is a service and not a sale even if remuneration is provided.\(^{149}\)

The case law is less clear, however, with respect to whether a physician and hospital could be strictly liable in tort for transplantation.\(^{150}\) Certainly, the physician would warrant that the tissue is adequate for its intended use, has no detectable defects, is properly typed and has no disease.\(^{151}\) However, the physician should not have to warrant that the organ would actually function and respond in the recipient.\(^{152}\) Once again, many states\(^{153}\) hold that blood transfusions are services and thus strict products liability is not an issue. Furthermore, a few statutes\(^{154}\) expressly abolish strict liability for transplant surgeons and physicians. In summary, it would appear that a recipient would not be able to maintain an action against a physician on the basis of breach of implied warranty and strict liability. Of course, an action based on medical malpractice, i.e., negligence, can still be maintained.

### ii. Tax Issues

Since the provider would be receiving $5,000 for his kidney, tax ramifications are created. The payment could either be regarded as ordinary income as compensation for services\(^{155}\) or gains derived from dealings in property\(^{156}\) or the payment could be regarded as a capital gain.\(^{157}\) In an analogous setting, remuneration from the sale of blood is re-

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148 *See* note 68, *supra*. The Illinois statutes were passed to overturn the holding of Cunningham *v.* MacNeal Memorial Hospital, 47 Ill.2d 443, 266 N.E.2d 896 (1970).
149 *Id.*
150 *Body Part Sales, supra* note 88 at 1255. Three cases held in favor of strict liability and three cases rejected its applicability. All the cases involved blood transfusions. *Id.*
151 Jeddeloh & Chatterjee, *supra* note 36 at 257.
152 *Id.*
153 *Body Part Sales, supra* note 88 at 1255.
154 *See*, note 68, *supra*.
155 I.R.C. § 61(a)(1).
156 I.R.C. § 61(a)(3).
157 I.R.C. § 1221.
garded by the Internal Revenue Service as ordinary income.\textsuperscript{158} Perhaps a new statute would be needed to clarify this issue.

c. Federal Law on Transplantation—How It Can Coincide With Proposed Sales

A new amendment\textsuperscript{159} was recently passed by Congress to make improvements in the government-controlled ESRD program. Before the amendment, dialysis patients were eligible for Medicare payments to defray 80\% of the cost of dialysis beginning the third month of treatment and continuing 12 months after a transplant. Now in an effort to cut costs of the program, "it is the intent of the Congress that the maximum practical number of patients who are medically, socially, and psychologically suitable candidates for . . . transplantation should be so treated."\textsuperscript{160} The amendment also states that it is a "national objective" to maximize the use of "transplantation consistent with good medical practice."\textsuperscript{161} In order to help accomplish these objectives, the new law continues benefits for a transplant recipient for 36 months after the transplantation\textsuperscript{162} when post-transplantation costs are the heaviest.\textsuperscript{163} Most important of all, the new law, apparently in order to stimulate donors, provides payment to the donor "for all reasonable preparatory, operation, and postoperation recovery expenses"\textsuperscript{164} associated with the donation.

Since Congress recognizes the importance of espousing the increased use of transportation, it is conceivable that in the future a simple amendment could be made to provide for government-purchasing of human kidneys such as has been suggested here when the realization is made that not enough kidneys are available for transplantation using current sources. As it stands now, the new law does not disallow sales or the use of unrelated living donors; therefore, a sale provision amendment could be injected into the law and within days, non-related providers could be giving kidneys while all their medical expenses would be reimbursed under the present law. In summary, the current federal law provides an ideal framework for a provision to allow for the purchase of human organs by the government.

3. Psychological Effects of Kidney Sales

Psychologically speaking, the recipient's mental health with respect to a kidney sale should be no different than it was with donation.\textsuperscript{165} For the

\textsuperscript{158} [1979] 14 FED. TAX COORDINATOR 20 (RIA) ¶ J-1328.
\textsuperscript{160} \textit{Id.} § 1881(c)(6).
\textsuperscript{161} \textit{Id.}
\textsuperscript{162} \textit{Id.} § 226A(b)(2).
\textsuperscript{163} S. REP. No. 714, 95th Cong., 1st Sess., reprinted in [1978] U.S. CODE CONG. & AD. NEWS 848, 856 [hereinafter referred to as \textit{SENATE REPORT}].
\textsuperscript{165} See text accompanying notes 91-94, \textit{supra}.
provider who is a relative of the recipient, familial pressures should be minimized as a result of sale, and thus, truly informed consent can be given by such providers. However, as pointed out earlier, there is a potential for pressure being placed on non-related living providers to give their kidneys so that those who pressure can collect the payment. Hopefully these individuals will be screened out in psychological assessment.

There is no indication that potential providers in a sale situation would give their kidneys only for pecuniary motives. Even though providers would be paid, they are still making a great sacrifice. Most of them should experience the same rewarding feelings that their living related donor counterparts experienced, such as increased self-esteem and the knowledge that they may have saved the life of another.

4. Medical Ramifications of Transplantation from Kidney Sales

Since living providers are used in the proposed sale system of transplantation, many significant factors swing in favor of the successfulness of the transplant. First of all, the best possible match can be sought for the recipient using local, regional and national computer systems. If the payment incentive is effective, more providers will want to sell kidneys and better matches will result. Normally, if an excellent match can be made locally, the provider and recipient can be operated upon side by side.

Second, time can be used liberally in a sale situation. Medical and psychological assessment of the provider can be done slowly and carefully. If the kidney can be transplanted locally, no perfusion time is necessary and no deterioration of the organ occurs since the patients are side by side. Even if a kidney had to be flown coast-to-coast it would take only a matter of hours since all the necessary preparations and tests on the patients would have been done beforehand and the recipient can be on the operating table waiting for the organ to arrive. Moreover, no kidneys are wasted due to the inability to locate next-of-kin for consent.

Finally, since kidneys from living individuals are used and since there is time to locate the best possible match, the prognosis for long-term renal function of recipients should be excellent. Hopefully, the rates of success will compare favorably with those of living related donors.

5. Economic Savings in the Sale of Kidneys

Dialysis treatments cost approximately $150.00 each. Since most patients must have dialysis three times a week, costs run approximately $22,500 per year. The government’s share through Medicare amounts to $18,000 per year (80% of the total cost).

166 See text accompanying notes 99-102, supra.

A kidney transplant costs between $20,000 to $25,000.\textsuperscript{168} The first year of postoperative care amounts to an additional $3,000 and thereafter, costs average $1,500 per year.\textsuperscript{169}

These figures indicate why transplantation can be so cost-effective. After three years the government will have spent $54,000 to dialyze one patient and should the patient survive longer, the government's obligation continues. However, after three years, the government will have spent only $31,000 maximum on a transplant patient. Furthermore, at the end of 36 months the government's obligation to the transplant recipient ends.\textsuperscript{170}

The mere addition of the proposed payment price by the government of $5,000 for a sale of a kidney would not greatly alter these figures. It would only raise the final, maximum cost of transplantation to $36,000 as compared to the $54,000 it costs to maintain a dialysis patient for three years. If the rates of successful transplants from sale providers can approach the rates of living related donors (67\% after three years), it is obvious that permitting the sale of kidneys can save a lot of money especially if the number of sale providers can meet current transplant needs. Should current transplant needs be met from a sale and payment program, it is obvious that the savings gained will far outweigh the payments since so many less people will need to be on dialysis. Although the savings would not be as dramatic with home dialysis, the quality of life improvements in the recipients would be worth the cost of transplantation alone.

VI. CONCLUSION

After consideration of all the factors that could affect the decision, it has been easy to conclude that the sale of human organs, especially the kidney, is not only permissable; better yet—it is desirable. There appears to be no better way of reversing the paucity of organ sources, while improving the quality of life for the recipient to its fullest.

Of course, the sale of human organs could conceivably lapse into a "Coma."\textsuperscript{171} That is why the time is ripe for Congress to amend the current laws regarding transplantation to allow sales but only under Congress' direction and control. In this way the possible creation of a cut-throat competitive market system in the sale of human organs could be sabotaged before it becomes the monster anticipated by anti-sale advocates.

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\textsuperscript{168} Senate Report, supra note 163.
\textsuperscript{169} Id.
\textsuperscript{171} See note 111, supra.