

Solving the Kidney Shortage Crisis Through the Use of Non-Heart-Beating Cadaveric Donors: Legal Endorsement of Perfusion as a Standard Procedure

MARLA K. CLARK*

INTRODUCTION

An emergency caller reports that a thirty-two-year-old man is experiencing severe chest pain. An ambulance crew responds to the call, but en route to the hospital, the man's heart stops beating. Despite heroic resuscitation efforts, medical personnel are unable to revive him. At the hospital, the emergency room physician declares the man dead. The only tasks remaining are to notify the man's next of kin and deliver his body to the morgue. At most hospitals in the United States today, this would be the end of the story, despite the fact that technology exists to create something positive from this tragic event.

Because most hospitals do not consider cardiac death patients such as the man just described to be potential organ donors, thousands of people each year are denied the opportunity to become organ donors upon their death.¹ The use of the medical technique of perfusion,² however, would permit physicians to successfully transplant kidneys from donors who have suffered cardiac death.³ Part I of this Note examines the status of organ transplantation efforts in the United States and the current organ shortage crisis. Part II outlines the medical procedure of kidney perfusion, which would allow a greater number of people to become organ donors and thereby substantially increase the supply of transplantable kidneys. Part III examines the contradictory and confusing legal framework which currently impedes widespread implementation of this procedure in the United States. Finally, Part IV proposes a model law to facilitate the use of this procedure and markedly increase the supply of available transplantable kidneys in the United States.

I. CURRENT ORGAN TRANSPLANTATION EFFORTS AND THE ORGAN SHORTAGE CRISIS

Since the mid-1970's there have been two legal standards under which medical personnel may declare a patient dead.⁴ The Uniform Determination

* J.D. Candidate, 1995, Indiana University School of Law—Bloomington; B.b.a., 1992, University of Houston.

1. The Uniform Anatomical Gift Act ("UAGA") creates a right to donate one's organs upon death. UNIFORM ANATOMICAL GIFT ACT § 2(a), 8A U.L.A. 33 (1987); see *infra* note 19.

2. In the medical context, perfusion is the insertion of a tube into a cadaver, through which a solution is flushed to cool the organs temporarily without removing them. See discussion *infra* part II.

3. See A.M. Castelao et al., *Long-Term Renal Function of Kidneys Transplanted from Non-Heart-Beating Cadaver Donors*, 23 TRANSPLANTATION PROC. 2484 (1991).

4. See 4 TREATISE ON HEALTH CARE LAW § 21.01 (Michael G. Macdonald et al. eds., 1992); Derek J. Jones, *Retrospective on the Future: Brain Death and Evolving Legal Regimes for Tissue Replacement Technology*, 38 MCGILL L.J. 394 (1993).

of Death Act, which has been adopted in some form by at least thirty states,⁵ provides that “[a]n individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead.”⁶ Prior to the adoption of this definition, death was defined only by the cessation of circulatory and respiratory functions, with no reference to neurological functioning.⁷

Currently, in the United States, patients whose death has been determined by neurological criteria are the sole source of donated organs. Persons determined to lack brain function are commonly referred to as “brain dead.”⁸ Brain-dead patients who become donors are called “heart-beating cadaver donors” (“HBCD’s”) because their hearts continue to beat after death. HBCD’s are considered good sources for organ procurement because normal heart and lung function can be maintained,⁹ thereby preventing damage to the organs during the time period necessary to coordinate the organ transplant. Tasks to be performed during this period include obtaining consent from the next of kin, selecting a donee,¹⁰ and assembling a transplant team.

In spite of the public’s overwhelming support for organ transplantation,¹¹ there is a severe shortage of available organs. As of December 31, 1994, there

5. Peter S. Janzen, Comment, *Law at the Edge of Life: Issues of Death and Dying*, 7 HAMLIN L. REV. 431 app. at 457 (1984).

6. UNIF. DETERMINATION OF DEATH ACT § 1, 12 U.L.A. 414 (1980 & Supp. 1994). This definition excludes those patients who have activity in the brain stem, which controls autonomous body functions such as respiration. These patients, who lack higher brain activity but have brain stem activity, experience coma or persistent vegetative state (“PVS”). Some commentators argue that these patients should be considered legally “dead” since there is virtually no realistic chance of recovery. This approach would allow PVS patients to become organ donors and would therefore increase the supply of available organs. See *infra* note 26 and accompanying text.

Other commentators emphasize the need for precise language in this area to avoid confusion. The use of the term “brain death” may erroneously imply to some that there is more than one kind of death, or that “brain death” is not in fact “final” death. Although death is a single phenomenon, there are multiple ways in which it may be determined. Dr. Alexander Capron and Professor Fred Cate suggest that life should be viewed as a tripod structure of neurological, circulatory, and respiratory activity. When any one “leg” is destroyed, the structure collapses and the person is dead. See 4 TREATISE ON HEALTH CARE LAW, *supra* note 4, § 21.01, at 21-13.

7. This was the common law notion of death. See, e.g., 4 TREATISE ON HEALTH CARE LAW, *supra* note 4, § 21.01, at 21-4 to 21-5.

8. These patients usually die from a head trauma. Typically, they are victims of automobile accidents or gunshot wounds to the head. The term “brain death” is used to distinguish these cases from “cardiac death” and does not imply that “brain death” is not “really” death.

9. Aggressive treatment can maintain function of the organs for two to ten days. PRESIDENT’S COMM’N FOR THE STUDY OF ETHICAL PROBLEMS IN MEDICINE AND BIOMEDICAL AND BEHAVIOR RESEARCH, DEFINING DEATH: A REPORT ON THE MEDICAL, LEGAL AND ETHICAL ISSUES IN THE DETERMINATION OF DEATH 17 (1981).

10. The process of matching donors and donees raises several practical concerns in itself. See William E. Braun, *Every Kidney Counts*, 327 NEW ENG. J. MED. 883 (1992) (discussing the importance of matching antigens in the donee and the donated organ); Owen S. Surman, *Psychiatric Aspects of Organ Transplantation*, 146 AM. J. PSYCHIATRY 972 (1989) (discussing post-operative psychiatric factors which are significant to transplant recipient selection); *New Solution Stretches Organ Transplant Time*, N.Y. TIMES, Feb. 7, 1989, at C8 (noting the difficulties in matching procedures and organ preservation, retrieval, and transportation); *Transplant Survival Discussed*, N.Y. TIMES, Sept. 10, 1987, at A22 (discussing the importance of tissue-type matching in long-term survival of transplant recipients).

11. A recent poll reported that 85% of Americans support organ donation. THE GALLUP ORGANIZATION, INC., THE PARTNERSHIP FOR ORGAN DONATION, THE AMERICAN PUBLIC’S ATTITUDES TOWARD ORGAN DONATION AND TRANSPLANTATION 3 (1993). Sixty-nine percent of the survey participants said that they were “very likely” or “somewhat likely” to request that their own organs be donated. *Id.* at 4.

were 37,684 patients awaiting transplants.¹² Of that number, 27,498 (over two-thirds) were waiting for kidney transplants.¹³ The mean waiting time for an organ is more than one year, with many patients waiting three to five years.¹⁴ Some patients, however, simply cannot wait that long. One report suggests that each year approximately 60,000 people who could benefit from a kidney, heart, liver, heart-lung, pancreas, or lung transplant die or are maintained suboptimally.¹⁵

Meanwhile, the Centers for Disease Control estimates that only fifteen percent of potential donors actually become donors.¹⁶ A number of factors may contribute to the discrepancy between the public's acceptance of organ donation and the lack of donated organs. Some commentators suggest that the rate of public approval is actually less than the survey data indicate.¹⁷ Other commentators blame the manner in which medical professionals approach, or more often, fail to approach, the subject of organ donation with the families of potential donors.¹⁸ Still others cite physicians' refusal to honor completed organ donor cards without first consulting the next of kin.¹⁹

12. UNOS Research Dep't, *Patients Waiting for Transplants: Number of Patent Registrations on the National Waiting List—12/31/94*, UNOS UPDATE, Jan. 1995, at 42.

13. *Id.*

14. Teri Randall, *Too Few Human Organs for Transplantation, Too Many in Need . . . and the Gap Widens*, 265 JAMA 1223, 1223 (1991).

15. Roger W. Evans et al., *The Potential Supply of Organ Donors: An Assessment of the Efficiency of Organ Procurement Efforts in the United States*, 267 JAMA 239, 239 (1992).

16. Arthur L. Caplan, *Sounding Board: Ethical and Policy Issues in the Procurement of Cadaver Organs for Transplantation*, in HUMAN ORGAN TRANSPLANTATION 272, 273 (Dale H. Cowan et al. eds., 1987).

17. The very fact that the people are participating in a survey may distort the answers they give. Poll interviewees tend to give socially acceptable, but sometimes insincere, responses. Don Colburn, *Changing the Life-and-Death Rules for Transplants*, WASH. POST, June 15, 1993, Health Section, at 10.

18. One author noted that an important factor in the decision to donate is the way in which medical personnel raise the subject with the family of the potential donor. *Id.* Many doctors are reluctant to raise the issue of donation. A survey of medical professionals shows that 35% believe that donation requests place an unfair strain on the family. A.O. Gaber et al., *Survey of Attitudes of Health Care Professionals Toward Organ Donation*, 22 TRANSPLANTATION PROC. 313, 314 (1990). Forty-three percent believe that the solicitation would be offensive to the family. *Id.* Health care professionals also have little training in effective approaches to requesting donation. Colburn, *supra* note 17, at 13. Thus, families tend to refuse donation requests. Other authors have noted that families are more likely to donate if their reception by hospital staff is satisfactory, if they have felt involved in the medical decision process, and if they have had a good rapport with the staff throughout their loved one's hospitalization. Teri Randall & Charles Marwick, *Physicians' Attitudes and Approaches Are Pivotal in Procuring Organs for Transplantation*, 265 JAMA 1227, 1227 (1991); H.A. Werkman et al., *Organ Donation from Trauma Victims*, 23 TRANSPLANTATION PROC. 2553, 2554 (1991).

Another study suggests that separating the message of death from the request for organ donation may improve procurement rates. Researchers from the University of Kentucky found that 53 of 93 families (or 57%) agreed to donate their loved one's organs if, before the request was made, they had time to come to terms with their loved one's death. When the request to donate organs accompanied the notification of death, only 11 of 62 (or 18%) consented to organ donation. *Id.* A delay between the notification of death and the request for organ donation is not only more humane, but also appears to increase the rate of positive responses.

19. The UAGA states that any individual 18 years of age or older may make an anatomical gift of his organs upon death. UNIF. ANATOMICAL GIFT ACT § 2(a), 8 U.L.A. 33 (1987). Twenty-eight percent of Americans report that they have signed a donor card. THE GALLUP ORGANIZATION, INC., *supra* note 11, at 15. Nonetheless, even when emergency medical personnel find the donor card in time, doctors are reluctant to remove organs without first obtaining permission from the prospective donor's family because of fear of malpractice liability. 4 TREATISE ON HEALTH CARE LAW, *supra* note 4, §21.02[2],

Whatever the cause, the present system of procuring transplantable organs from HBCD's cannot supply enough organs to meet the current demand. In 1989, the vast majority of states (73%) and organ procurement organizations (69%) procured only between ten and twenty donors.²⁰ Clearly, this is not enough to supply the tens of thousands of organs that are needed. One expert has calculated that even if the current system were to operate at optimal levels (reaching 80% of all potential donors), it would supply only 1596 additional donors per year.²¹ In terms of the kidney shortage, this would yield only 3192 more kidneys per year, assuming that both kidneys from each donor could be used. Nearly 24,000 people are on waiting lists for kidneys. Each month, 1000 more people are added to the list of those waiting,²² while only 800 are removed from the list.²³ Thus, even the maximum organ donor pool, as presently defined, may be insufficient to provide organs to all patients waiting for them.²⁴

This dilemma has caused many commentators to call for an expansion of the pool of possible donors.²⁵ Among the groups that have been considered as potential additions to the donor pool are patients in a persistent vegetative state²⁶ and anencephalic infants.²⁷ Another possibility for creating a larger pool of potential donors, however, is to utilize organs retrieved from patients

at 21-55. In addition, some state statutes specifically grant family members the right to veto a decedent's decision to donate. *Id.* at 21-55 & n.46.

20. Evans et al., *supra* note 15, at 241.

21. David Anaise, *The Non-heartbeating Cadaveric Donor: A Solution to the Organ Shortage Crisis*, UNOS UPDATE, Oct. 1992, at 32, 32 (1992).

22. Randall, *supra* note 14, at 1223.

23. Of the 800 removed from the list, 600 patients received kidney transplants, and 200 died. *Id.*

24. Anaise, *supra* note 21, at 32. *But see* Theodore Cooper, *Survey of Development, Current Status, and Future Prospects for Organ Transplantation*, in HUMAN ORGAN TRANSPLANTATION, *supra* note 16, at 18, 22-23 (arguing that the organ shortage is not caused by a lack of potential donors, since 12,000 to 27,000 automobile accident victims die in hospitals each year).

25. Other commentators believe that the current system could be improved by creating an incentive to donate. Some researchers believe that the medical community may be able to meet the demand for organs by accessing more potential donors. Evans et al., *supra* note 15, at 245. The Mexican Government has considered a proposal granting all donors "Heroes of the Nation" status, equivalent to that bestowed on war veterans. The government would then subsidize the donor's burial costs and offer estate tax abatements. Randall & Marwick, *supra* note 18, at 1228. This proposal has been advocated in the United States as well. Glenn Ruffenach, *Trying to Cure Shortage of Organ Donors*, WALL ST. J., Mar. 13, 1991, at B1, B3.

Another commentator has concluded that government remuneration for organ donation could generate a larger supply of donor organs. *Developments in the Law—Medical Technology and the Law*, 103 HARV. L. REV. 1519, 1615, 1627-30 (1990). Other commentators have advocated the creation of a market for human organs as a solution to the shortage. *See, e.g.*, Roger D. Blair & David L. Kaserman, *The Economics and Ethics of Alternative Cadaveric Organ Procurement Policies*, 8 YALE J. ON REG. 403 (1991); Susan H. Denisc, Note, *Regulating the Sale of Human Organs*, 71 VA. L. REV. 1015 (1985).

26. David R. Smith, *Legal Recognition of Neocortical Death*, 71 CORNELL L. REV. 850, 883-84 (1986).

27. Advocates of classifying anencephalic infants as potential donors rely on a beneficence rationale and the certainty of death for infants born with anencephaly. Jay A. Friedman, *Taking the Camel by the Nose: The Anencephalic as a Source for Pediatric Organ Transplants*, 90 COLUM. L. REV. 917 (1990); Charles N. Rock, Note, *The Living Dead: Anencephaly and Organ Donation*, 7 N.Y.L. SCH. J. HUM. RTS. 243 (1989). *But see* Debra H. Berger, *The Infant with Anencephaly: Moral and Legal Dilemmas*, 5 ISSUES L. & MED. 67, 80-85 (1989) (arguing against the use of anencephalic infants as organ sources based on the theory of personhood).

whose death has been established by an absence of respiratory and circulatory function (cardiac death). These potential donors, called non-heart-beating cadaver donors ("NHBCD's"), were the sources of organs for the first human organ transplants, which took place before the concept of "brain death" was accepted in the United States.²⁸ Many transplant specialists support the retrieval of organs from NHBCD's²⁹ and believe that the introduction of a protocol for using NHBCD organs in hospitals in the United States has the potential to increase the number of available organs.

II. KIDNEY PERFUSION AND THE SUCCESSFUL USE OF NON-HEART-BEATING CADAVER DONOR ORGANS

When surgeons were pioneering the technique of human organ transplantation in the 1960's, the organs used necessarily came from cadavers of patients whose hearts had stopped, because cardiac death was the only definition of death recognized in the United States at the time.³⁰ Foremost among the reasons for the limited success of these early transplants is that once the heart stops, organs begin to deteriorate. In a short time, the damage caused by ischemia, the absence of blood circulation in the organ,³¹ renders the organ unsuitable for transplantation.³²

Ischemia proved to be a major hurdle for successful transplantation.³³ Medical researchers sought to overcome this obstacle both by searching for ways to reduce ischemia and by redefining the donor pool. By the early 1970's, scientists had developed methods to preserve organs by means of a perfusion tube inserted into a cadaver shortly after death.³⁴ Around the same time, another group advocated the addition of a neurological component to the determination of death. The result was the proliferation of "brain death" laws a few years later.³⁵ By allowing physicians to declare death based on the absence of brain function, brain death laws⁶ cleared the way for organ procurement from the bodies of people who had suffered irreversible, complete brain damage—HBCD's. By using HBCD's as organ donors, physicians were able to supply organs to all of the potential recipients on waiting lists at that time. Consequently, further research regarding ways to limit ischemia, and thus make NHBCD organs usable for transplant, were

28. See *supra* notes 4-10 and accompanying text.

29. Randall, *supra* note 14, at 1223 (citing Dr. Felix Rapaport, director of the transplantation service and chair of surgery at the State University of New York at Stony Brook). Some experts resist the use of NHBCD's for ethical reasons. See, e.g., Stuart J. Youngner & Robert M. Arnold, *Ethical, Psychological, and Public Policy Implications of Procuring Organs from Non-Heart-Beating Cadaver Donors*, 269 JAMA 2769, 2770 (1993).

30. See *supra* notes 4-9 and accompanying text.

31. WEBSTER'S THIRD INTERNATIONAL DICTIONARY 1197 (Phillip B. Gove ed., 3d ed. 1986).

32. Michael A. DeVita et al., *History of Organ Donation by Patients with Cardiac Death*, 3 KENNEDY INST. ETHICS J. 113, 114 (1993).

33. See Youngner & Arnold, *supra* note 29, at 2770.

34. Anaise, *supra* note 21, at 32.

35. See *supra* notes 4-7 and accompanying text.

abandoned.³⁶ Thus, doctors in the United States ceased using cardiac death patients as organ donors for technical, not ethical, reasons.³⁷ In countries where the concept of brain death has never been legally recognized, NHBCD's have continued to be the sole source of donated organs.³⁸ Physicians in other countries retrieve organs from both HBCD's and NHBCD's.³⁹

Two transplant programs in the United States, one at the Regional Organ Bank of Illinois ("ROBI") and another at the University of Pittsburgh Medical Center, have begun to use organs from NHBCD's.⁴⁰ These programs use the perfusion process, as described by a pioneer in the field, Dr. David Anaise:

The clinical situation envisioned is of a trauma victim who succumbs in the emergency room shortly after arrival. All resuscitative measures are attempted but fail. After formal declaration of death by the emergency room physician, a team not involved in the resuscitative process will be called. An organ procurement tube will be inserted into the femoral artery of the deceased, and rapid high flush pressure [in place] cooling of UW solution will be instituted. Simultaneously, two peritoneal dialysis catheters will be inserted percutaneously. Continuous hypothermic peritoneal perfusion will further reduce and maintain the core temperature of the organs for five hours after death. After locating the next of kin, organ donation will be offered. If refused, the embalmed non-mutilated body will be released to the family.⁴¹

Many medical centers in Japan and Europe currently use this technique.⁴²

Several features of the process Dr. Anaise describes merit emphasis. First, the insertion of the tube requires only two small incisions in the abdomen.⁴³ Second, these incisions are made, and perfusion begun, only after a declaration of death has been confirmed. The protocol of organ procurement centers and the laws of many states mandate that the physicians involved in the care of the decedent and in the declaration of death must not be involved in any way with organ procurement efforts.⁴⁴ Thus, the insertion of the perfusion tube could not legally be performed by those physicians involved in the resuscitation efforts or in the declaration of death. The procedure to insert the tube would also be delayed for at least two minutes after the attending

36. Anaise, *supra* note 21, at 32.

37. Colburn, *supra* note 17, at 12.

38. Youngner & Arnold, *supra* note 29, at 2769-70. In Japan, physicians report that it is difficult to procure organs from HBCD's because the concept of brain death has become unacceptable. M. Kozaki et al., *Procurement of Kidney Grafts from Non-Heart-Beating Donors*, 23 *TRANSPLANTATION PROC.* 2575, 2577 (1991).

39. Youngner & Arnold, *supra* note 29, at 2770.

40. The Washington Hospital Center has also recently begun designing a protocol for using perfusion to preserve organs from NHBCD's. The current proposal, however, extends only to those patients with donor cards in their possession or who have next of kin present. A consensus conference felt that it was unwise and possibly illegal to perfuse bodies of patients who do not have donor cards in their possession when no next of kin could be immediately located. Medlantic Research Institute, Executive Summary and Summary of the Consensus Conference on Fatal Trauma Victims and Organ Donation 5 (1994) (unpublished report, on file with the *Indiana Law Journal*).

41. Anaise, *supra* note 21, at 32.

42. See, e.g., Kozaki et al., *supra* note 38, at 2578.

43. Anaise, *supra* note 21, at 32.

44. See Colburn, *supra* note 17, at 13.

physician declared the patient dead. This delay would allow for the possibility of auto-resuscitation and would provide a check against a premature declaration of death.⁴⁵ Finally, no organs would be removed without first obtaining consent from the decedent's next of kin.⁴⁶ Presently, only the kidneys can be preserved by perfusion. Nonetheless, because the great majority of potential organ recipients are waiting for kidneys, perfusion could significantly reduce the current shortage of those organs.

Perfusion also conforms to the two tenets of organ procurement. First, the "dead donor rule" commands that organs must be taken only from patients who are irreversibly dead.⁴⁷ The technique meets this requirement because *independent* medical personnel must make the declaration of death and must observe the two-minute-waiting period before beginning the procedure. Thus, the irreversibility of death is established before procurement measures are initiated.

The second tenet, that the care of living patients who are potential donors must never be compromised in favor of potential organ recipients,⁴⁸ is satisfied by strict protocol rules requiring the separation of organ procurement teams and care teams.⁴⁹ This separation insures that there will be no conflict of interest on the part of those responsible for the care of dying patients.

45. Auto-resuscitation is the spontaneous start-up of the heart after previous nonfunction. Although studies of the subject are scarce, experts believe that auto-resuscitation will occur, if at all, within 12-15 seconds of cessation. Thus, the two-minute wait prescribed by the University of Pittsburgh Medical Center Policy for the Management of Terminally Ill Patients Who May Become Organ Donors After Death ("Pittsburgh Protocol") would appear to eliminate the possibility that auto-resuscitation will occur. See Michael A. DeVita & James V. Snyder, *Development of the University of Pittsburgh Medical Center Policy for the Care of Terminally Ill Patients Who May Become Organ Donors After Death Following the Removal of Life Support*, 3 KENNEDY INST. ETHICS J. 131, 139 (1993). But see Joanne Lynn, *Are the Patients Who Become Organ Donors Under the Pittsburgh Protocol for "Non-Heart-Beating Donors" Really Dead?* 3 KENNEDY INST. ETHICS J. 167, 170-72 (1993) (asserting that insufficient data has been collected and analyzed to determine whether the two-minute period is adequate to reasonably rule out the possibility of auto-resuscitation).

46. Anaise, *supra* note 21, at 32; cf. Daniel J. Crothers & Catherine G. Uglem, *A Proposal for a Presumed Consent Organ Donation Policy in North Dakota*, 68 N.D. L. REV. 637 (1992) (advocating a system that does not require actual consent prior to organ removal).

There is a proposal at the Pittsburgh Medical Center to remove organs from terminally ill patients who request to be removed from life support systems and become donors. This is a different scenario than that considered in this Note, and one which raises a whole spectrum of other ethical concerns. In cases which involve competent, conscious patients, it is conceivable that the doctor would not need to seek the consent of the next of kin. Pittsburgh Protocol, *reprinted in* 3 KENNEDY INST. ETHICS J. app. at A-1 (1993).

47. Youngner & Aruold, *supra* note 29, at 2771. The issue of defining "irreversible" both here and in the Uniform Determination of Death Act is hotly debated and involves medical and philosophical questions that law cannot answer. See David Cole, *Statutory Definitions of Death and the Management of Terminally Ill Patients Who May Become Organ Donors After Death*, 3 KENNEDY INST. ETHICS J. 145 (1993); Tom Tomlinson, *The Irreversibility of Death: Reply to Cole*, 3 KENNEDY INST. ETHICS J. 157 (1993).

48. Youngner & Arnold, *supra* note 29, at 2771.

49. University of Pittsburgh Medical Center Policy and Procedure Manual (1992), *reprinted in* 3 KENNEDY INST. ETHICS J. app. at A-4 to A-5 (1993).

Although NHBCD kidneys have a greater incidence of delayed function,⁵⁰ studies indicate that the long-term success rates of NHBCD kidney transplants are nearly as high as those of HBCD kidney transplants.⁵¹ In addition, the greater number of transplants that could be performed by routinely retrieving organs from NHBCD's would lessen the consequences of nonfunction—another kidney would be available for a second transplant should the first transplant prove unsuccessful.⁵² One researcher has concluded that NHBCD's are a good alternative for maintaining an active transplant program.⁵³ Researchers estimate that widespread adoption of kidney perfusion could provide an additional 20,000 to 30,000 kidneys each year.⁵⁴

Administrators of a transplant program in the Netherlands which utilizes kidney perfusion report that using NHBCD kidneys increased procurement rates by twenty percent, from thirty-two to forty-one kidneys per million inhabitants.⁵⁵ This report also estimates that a rate of sixty kidneys per million is possible.⁵⁶ Such dramatic increases illustrate that kidney perfusion could potentially eliminate the current shortage of transplantable kidneys which costs thousands of lives each year. Significantly, kidney perfusion would also benefit thousands of potential donors by preserving their right to donate organs. This would also make the option to donate available to a greater number of families as a means to cope more effectively with their tragedy.⁵⁷

In a preliminary study by ROBI of the acceptability of perfusion, a perfusion tube was inserted in fourteen deceased patients without first consulting their families. In eleven of those cases, the families consented to organ donation and in no case did the family object to the procedure.⁵⁸

50. See G. Kootstra et al., *Twenty Percent More Kidneys Through a Non-Heart Beating Program*, 23 *TRANSPLANTATION PROC.* 910, 910 (1991).

51. Castelao et al., *supra* note 3, at 2585; see also P. Rigotti et al., *Non-Heart-Beating Donors: An Alternative Organ Source in Kidney Transplantation*, 23 *TRANSPLANTATION PROC.* 2579 (1991) (discussing the feasibility of transplanting kidneys after a long period of ischemia); Werkman et al., *supra* note 18, at 2554 (concluding that in the long term, the results of kidney transplants from NHBCD's are not different from those achieved by HBCD's); Gordon J. Kinzler, *Retrieval of Kidneys from Non-Heart-Beating Human Cadavers Using In-Situ Perfusion and Iced Saline Peritoneal Lavage* (1994) (unpublished study, on file with the *Indiana Law Journal*) (finding that in-situ perfusion can result in functional success of transplanted NHBCD kidneys).

52. Rigotti et al., *supra* note 51, at 2580.

53. Castelao et al., *supra* note 3, at 2585-86.

54. Randall, *supra* note 14, at 1227.

55. G. Kootstra et al., *supra* note 50, at 911.

56. *Id.*

57. Studies show that many families found organ donation to actually aid in the grieving process. In an unpublished survey by the Nashville Regional Procurement Agency, 66% of the families who responded reported that organ donation was a source of comfort in their time of grief. Eighty-seven percent responded that they would donate organs again if they were given the choice. Luke Skelley, *Practical Issues in Obtaining Organs for Transplantation*, in *HUMAN ORGAN TRANSPLANTATION*, *supra* note 16, at 261, 264.

58. Colburn, *supra* note 17, at 12.

III. LEGAL FRAMEWORK FOR THE USE OF KIDNEY PERFUSION ON NEWLY DEAD BODIES

Current law relating to kidney perfusion suggests the possibility of criminal⁵⁹ or civil actions against the parties who are responsible for performing the procedure without consent. A civil action could be brought only by the decedent's next of kin.⁶⁰ Cases involving unauthorized perfusion, however, would be ones of first impression.

A. The Relevance of Consent

Despite the fact that the Uniform Anatomical Gift Act ("UAGA") assigns the primary right to donate organs to the decedent, physicians still normally seek the consent of the next of kin before beginning any procedure relating to organ retrieval.⁶¹ Although this conservative approach appears to be legally unnecessary and often impedes the retrieval of organs, there are several justifications offered for this practice. First, there is a vague common-law notion of a property interest held by the next of kin in the dead body which medical personnel try to accommodate.⁶² The medical community also has seemingly unfounded fears of liability to the family for relying on the decedent's wishes alone.⁶³ Finally, many physicians take every precaution

59. The Model Penal Code provides: "Except as authorized by law, a person who treats a corpse in a way that he knows would outrage ordinary family sensibilities commits a misdemeanor." MODEL PENAL CODE § 250.10 (1980). A physician may not be liable under this law because the mens rea of "knowledge" is required. Since perfusion is performed to allow time to discuss the option of donation with the family, it would be unnecessary in cases where the doctor knows that the family objects to donation. It is valuable only when the doctor does not know the family's position on donation at the time of the decedent's death.

60. The parties may also be subject to a civil action brought by the decedent's estate under a constitutional rights theory. There are federal constitutional grounds for a right to privacy that extend to a legitimate refusal of health care. *See, e.g., Cruzan v. Director, Missouri Dep't of Health*, 497 U.S. 261, 277 (1991) ("[T]he common-law doctrine of informed consent is viewed as generally encompassing the right of a competent individual to refuse medical treatment."); *Griswold v. Connecticut*, 381 U.S. 479 (1965) (recognizing a constitutional right to privacy). The limits of this right are explored in Kenneth F. Schaffner, *Philosophical, Ethical, and Legal Aspects of Resuscitation Medicine. II. Recognizing the Tragic Choice: Food, Water, and the Right to Assisted Suicide*, 16 CRIT. CARE MED. 1063 (1988).

A claim by the decedent's estate could assert that the physician had violated the decedent's right to self-determination and privacy, which includes the right to bodily integrity, by performing the perfusion procedure without the decedent's consent. Since the procedure is performed after death, however, such a claim assumes that a dead person has rights that may be violated. Courts that have considered the issue have rejected this idea, finding that personal rights end with the person's death. *Guyton v. Phillips*, 606 F.2d 248 (9th Cir. 1979); *Whitehurst v. Wright*, 592 F.2d 834 (5th Cir. 1979). Actions after death cannot violate the decedent's rights and are not actionable by the decedent's estate. *Guyton*, 606 F.2d at 250-51. Since allowing a decedent's estate to sue a physician for administering a perfusion tube to a newly deceased person would necessitate granting rights to the dead, it is highly unlikely that perfusion would support a cause of action by the decedent's estate.

61. Fred H. Cate, *Increasing the Supply of Organs for Transplantation: The Role of Ethics and Law*, THE MEDICAL STAFF COUNSELOR, Fall 1990, at 35, 36.

62. *See* discussion *infra* part III.B.1.

63. In a survey of medical personnel, 31% reported that they were concerned that merely requesting organ donation from the family could expose the hospital to litigation. Gaber et al., *supra* note 18, at 314.

to maintain the goodwill of the public in organ transplant efforts because the current altruistic supply system relies completely on the public's perception that organ transplant programs should be supported. Thus, experts stress the need to act conservatively in order to earn and maintain the public's trust.⁶⁴

If consent is obtained before perfusion is begun, there is no issue about the legality of the procedure. Unfortunately, this is precisely when perfusion is unnecessary. When the family can be contacted and consulted immediately upon the decedent's death, organ procurement can be instituted before ischemia begins.

The more interesting question is whether perfusion should be allowed absent the consent of the next of kin. This is a different issue than organ removal without consent because perfusion does not involve the removal of any organ and can be utilized to involve families more fully in the organ donation decision. Instead, perfusion leaves the body intact and is an aid to preserving a family's opportunity to donate—a way to accommodate both the interests of those needing organs and those who may consent to donating organs. Before perfusion can gain widespread acceptance, however, physicians must be confident that they do not risk incurring legal liability for performing the procedure. Under the current legal framework, a decedent's next of kin might present a variety of claims for unauthorized perfusion.

B. The Possible Claims of the Decedent's Next of Kin Against Parties Performing Perfusion Without Consent

The decedent's next of kin could assert three possible claims as the basis for civil liability against the physician responsible for inserting the perfusion tube prior to obtaining consent. First, she may claim that the procedure interfered with her right to possess the body. A tort action to recover damages under this theory would rely on a traditional property-type interest in the cadaver vesting in the decedent's next of kin.⁶⁵ The decedent's family might also bring a tort suit for the infliction of emotional distress.⁶⁶ Finally, the next of kin might claim that perfusion violated her religious beliefs. Provided that the doctor's or hospital's involvement constituted "state action," she could bring a civil action based on the violation of his constitutional right of freedom to exercise his religion.⁶⁷

64. Youngner & Arnold, *supra* note 29, at 2773.

65. See *infra* part III.B.1.

66. See *infra* part III.B.2.

67. See *infra* part III.B.3.

1. The Next of Kin's Quasi-Property Right in a Corpse: A Judicial Barrier to Modern Organ Transplantation

At common law, there was no property right in the body of a deceased person.⁶⁸ Some courts have, however, recognized a quasi-property right in dead bodies in the next of kin,⁶⁹ which arises out of that person's duty to bury the decedent.⁷⁰ Although considered to be a right to the possession of the remains in the same condition as they were at the moment of the decedent's death,⁷¹ this quasi-property right concept has been widely criticized.⁷² Unlike other property rights, the "property" right in a cadaver cannot be bought, sold, or traded.⁷³ In fact, the quasi-property holder is not entitled to do anything with the cadaver other than dispose of it according to the public health laws of the state.⁷⁴ The UAGA, adopted in some form by every state, and other statutes governing the disposition of dead bodies have unwittingly strengthened this notion of a property interest in cadavers by allowing bodies to be donated upon death, thus treating bodies like other property subject to devise upon death.⁷⁵

Characterizing this obligation of the next of kin to bury the dead as a quasi-property right has caused great confusion and has proved to be an impediment to organ procurement efforts.⁷⁶ Some courts have confronted this conflict directly when addressing challenges to laws that allowed the nonconsensual removal of corneas from cadavers during autopsies. For example, in *Georgia Lions Eye Bank, Inc. v. Lavant*,⁷⁷ the mother of the decedent sued a hospital and an eye bank for the removal of the corneas from her deceased child pursuant to a statute authorizing removal absent objection by the next of kin. The plaintiff based her suit on the theory that the law violated her due process rights by depriving her of property without notice or opportunity to object. The Supreme Court of Georgia denied her claim, stating that there was no constitutionally protected property right in a dead body. Rather, the court characterized the right as merely a recognition of the

68. 22A AM. JUR. 2D *Dead Bodies* § 2 (1988).

69. *See, e.g., Fuller v. Marx*, 724 F.2d 717, 719 (8th Cir. 1983); *McCoy v. Georgia Baptist Hosp.*, 306 S.E.2d 746, 748 (Ga. Ct. App. 1983); *Strachan v. John F. Kennedy Memorial Hosp.*, 507 A.2d 718, 725 (N.J. Super. Ct. App. Div. 1986); *see also* 22A AM. JUR. 2D, *supra* note 68, § 3, at 10 n.22 (citing other useful authority).

70. 22A AM. JUR. 2D, *supra* note 69, § 3.

71. *Id.*

72. W. PAGE KEETON ET AL., *PROSSER AND KEETON ON THE LAW OF TORTS* §12, at 63 (5th ed. 1984).

73. *Id.*

74. 22A AM. JUR. 2D, *supra* note 68, § 5.

75. Ironically, the UAGA was enacted to give the decedent autonomy regarding anatomical gifts upon death. By creating a system that treats organs like other forms of property, the UAGA may have created additional support for those who would argue that the ownership of this "property" devolves upon the decedent's next of kin upon death—because the dead cannot literally own property. *See* 4 *TREATISE ON HEALTH CARE LAW*, *supra* note 4, § 21.01[2].

76. *Id.*

77. 335 S.E.2d 127 (Ga. 1985).

interests of the survivor's possession and control of a cadaver.⁷⁸ The court added that laws may be changed by the legislature unless prevented by constitutional limitations.⁷⁹ Consequently, the legislature could constitutionally limit the legal interests in cadavers. Finally, recognizing the substantial benefits to transplant recipients, the court relied on the traditional governmental function of promoting the public health to conclude that laws authorizing removal of corneas absent objection are within the authority of the legislature.⁸⁰

The Supreme Court of Florida confronted the same issue in *State v. Powell*,⁸¹ where the petitioner challenged a similar law authorizing cornea removal by medical examiners without first consulting the next of kin. In *Powell*, the next of kin advanced two arguments. First, they argued that the law constituted an impermissible taking of private property.⁸² The court examined at length the "property right" of the next of kin in a dead body and rejected the argument, concluding that cadavers are not constitutionally protected private property.⁸³

The next of kin also argued that the actions of the medical examiner deprived them of the fundamental liberty right to dispose of the decedent's remains.⁸⁴ In rejecting this argument, the court declined to apply strict scrutiny analysis, stating, "We find that the right of the next of kin to a tort claim for interference with burial . . . does not rise to the constitutional dimension of a fundamental right traditionally protected under either the United States or Florida Constitution."⁸⁵ Instead, the court relied on rational basis review and upheld the law, finding that it was rationally related to the legitimate purpose of restoring sight to the blind.⁸⁶

At least one other state court has also ruled on this issue. In *Tillman v. Detroit Receiving Hospital*,⁸⁷ a Michigan court upheld a similar law following the same analysis. The court noted that only fundamental rights are guaranteed by the constitutional right of privacy. It found that any interest of the next of kin in a dead body is not fundamental, and thus, there is no constitutional conflict with a law allowing cornea removal without the consent of the family.⁸⁸

These cases illustrate a judicial trend to strictly limit the "quasi-property" right of the next of kin to the duty to bury. They also indicate a judicial inclination to support governmental efforts to advance organ transplantation

78. *Id.* at 128.

79. *Id.* at 128-29.

80. *Id.* at 129.

81. 497 So. 2d 1188 (Fla. 1986).

82. *Id.* Although the next of kin's argument was based on the Florida Constitution, the same argument could be brought based on the Federal Constitution. See U.S. CONST. amend. V.

83. *Powell*, 497 So. 2d at 1189.

84. *Id.* at 1193.

85. *Id.*

86. *Id.* at 1191.

87. 360 N.W.2d 275 (Mich. Ct. App. 1984).

88. *Id.* at 277-78.

as a legitimate state goal. All of these cases concerning the removal of corneas involved: (1) actions specifically authorized by statute, and (2) a relevant state interest in restoring sight to the blind. At least one court, however, has been faced with a similar "property" claim where the defendant was clearly guilty of wrongdoing. In *Arnaud v. Odom*,⁸⁹ the plaintiff parents asserted a claim for deprivation of property without due process against a coroner who performed an unauthorized experiment on the decedent's body. Although the court suggested the availability of another type of tort claim to the plaintiffs for the defendant's actions, it stated:

[W]e decline to create from the substantive parameters of the due process clause a liberty interest in the next of kin to be free from state-occasioned mutilation of the body of a deceased relative and to possess the body for burial in the same condition in which death left the body.⁹⁰

This court's holding was an even stronger statement than those of the other courts. In this case, not only were the coroner's actions not authorized by statute, but no state interest was served. By denying constitutional status to the rights in dead bodies even in light of the coroner's wrongful mutilation of the body, the court implicitly acknowledged that such protection, though equitable here, would be disastrous in other contexts.

The Sixth Circuit, however, has recognized a property claim to a dead body. Using an analysis similar to that suggested by petitioners in other due process cases, the court found that such a claim is entitled to the protection of the Due Process Clause and thus invalidated an Ohio provision which was analogous to the Georgia, Florida, and Michigan laws upheld by other courts. In *Brotherton v. Cleveland*,⁹¹ the court acknowledged the difficulty in calling the claim of the next of kin "property," but maintained that the next of kin had a "legitimate claim of entitlement" which rises to the level of constitutional protection.⁹²

With such a distinct difference in treatment among jurisdictions, this area of the law is long overdue for reconsideration. The vague notion of interests in cadavers was developed at common law to create a cause of action in the next of kin against grave robbers.⁹³ Because grave robbing is no longer the concern that it once was, legal interests in cadavers are unnecessary relics from an earlier time. In contrast with the pre-transplantation era during which the quasi-property concept evolved, today, cadaver organs hold great value to society as a means of saving lives. This new use for organs is poorly served by the old legal framework. The elusive property interest has been limited by

89. 870 F.2d 304 (5th Cir. 1989).

90. *Id.* at 305.

91. 923 F.2d 477 (6th Cir. 1991).

92. *Id.* at 482.

93. Under the common law, since cadavers were not property, no action would lie against anyone disturbing or stealing them. This loophole allowed some to make a business of procuring cadavers for anatomy schools. This "quasi-property" concept evolved to allow the next of kin to sue for the return of the body. For an excellent historical discussion of the evolution of property rights in dead bodies, see Paul Matthews, *Whose Body? People as Property*, 36 CURRENT LEGAL PROBS. 191 (1983).

many courts, but stubbornly maintained by others. Furthermore, most jurisdictions have yet to consider the issue. With such uncertain legal precedent, it is understandable that medical personnel are fearful of the legal consequences of taking any action to procure organs without the consent of the next of kin.⁹⁴

Perfusion fares favorably under a balancing analysis. On one side of the balance is the interest of the next of kin in controlling the disposition of the dead body. This interest is not fundamental and thus can be legislatively circumscribed, as has been done in many states in the context of cornea removal.⁹⁵ Compared to cornea removal, perfusion presents a lesser intrusion on the quasi-property right of the next of kin in the cadaver because nothing is taken from the body. Instead, perfusion leaves the body wholly intact except for the incisions into which the perfusion tube is placed. Because nothing is *taken* without due process, the pure takings argument advanced in *Powell* would be inapplicable to perfusion. The abdominal incisions required for perfusion are small and undetectable on a clothed corpse. Furthermore, if the family objected to organ donation, a physician could remove the tube and close the incision with no effect on the decedent's body. Thus, the next of kin's right would be substantially preserved.

On the other side of the balance is the important benefit to society from saving the lives of those who need kidney transplants. Governmental measures in support of perfusion would qualify as actions to promote the public health, a factor that both the Florida and Georgia courts considered.⁹⁶ It is doubtful that a majority of the courts which have ruled on the property claims of next of kin would object to perfusion because these courts have declined to classify this claim of a property right as fundamental. Accordingly, most courts have reviewed the statutes at issue using only a rational basis standard and ultimately have upheld them. Even the Sixth Circuit's analysis, which recognized a "legitimate claim of entitlement,"⁹⁷ would not necessarily prohibit perfusion without consent. The court's analysis required only *predeprivation* process.⁹⁸ Consequently, a court could adequately distinguish perfusion as not involving deprivation of a property right (because nothing is taken), and thereby avoid triggering the process requirement. It is probable, however, that a court would characterize the right implicated as the right to possess the body in its condition at death. Strictly speaking, perfusion does operate to deprive the next of kin of this "right." Therefore, a law allowing the technique would be unconstitutional under this analysis.

94. See *supra* notes 18, 63, and accompanying text.

95. See Daphne D. Sipes, *Does It Matter Whether There is Public Policy or Presumed Consent in Organ Transplantation?*, 12 WHITTIER L. REV. 505, 525 (1991). Thirteen states have statutes that operate as "presumed consent" statutes. Unless there is evidence to the contrary, these statutes presume that the deceased wished to become an organ donor.

96. See *supra* text accompanying notes 77-86.

97. See *supra* text accompanying notes 91-92.

98. *Brotherton v. Cleveland*, 923 F.2d 477, 482 (6th Cir. 1991).

Because the position of most courts is generally unclear and physicians are unsure of the liability they might incur, perfusion will continue to be sidelined until a definitive change is made and courts discontinue their use of the unfortunate term "quasi-property." This right merely consists of a duty to bury, *not* a property interest.

2. Tort Claims for Emotional Distress

The next of kin could also bring a tort claim against a physician for negligent infliction of emotional distress, intentional infliction of emotional distress, or outrage (depending upon which cause of action is recognized under the relevant state law) for perfusing a decedent's body without first obtaining consent.⁹⁹ The theory of such a claim would be that the defendant's conduct in perfusing the cadaver caused additional suffering beyond that caused by the death of the decedent. The Restatement of Torts ("Restatement") identifies a claim specifically for interference with dead bodies. It states: "One who intentionally, recklessly or negligently removes, withholds, mutilates or operates upon the body of a dead person or prevents its proper interment or cremation is subject to liability to a member of the family of the deceased who is entitled to the disposition of the body."¹⁰⁰

A comment to this Restatement section recognizes that the technical basis for such a claim is the quasi-property right of the next of kin, but notes that in practice, decedents' families have typically relied on mental distress as their cause of action.¹⁰¹ Cases have been brought under this theory of recovery against undertakers for withholding bodies for payment¹⁰² and for improperly embalming corpses.¹⁰³ Plaintiffs have also brought mental distress claims against carriers for improper shipping¹⁰⁴ and against medical examiners for performing unauthorized autopsies.¹⁰⁵

Recognizing mental distress claims in these contexts enables plaintiff families to recover damages absent any physical injury. For this reason, some

99. See, e.g., *Rauhe v. Langeland Memorial Chapel*, 186 N.W.2d 848 (Mich. Ct. App. 1971); *Dale v. Thomas Funeral Home*, 466 N.W.2d 805 (Neb. 1991); *Clark v. Smith*, 494 S.W.2d 192 (Tex. Ct. App. 1973).

100. RESTATEMENT (SECOND) OF TORTS § 868 (1977).

101. *Id.* cmt. a.

102. See, e.g., *Dale*, 466 N.W.2d 805.

103. See, e.g., *Clark*, 494 S.W.2d 192.

104. See, e.g., *Rauhe*, 186 N.W.2d 868.

105. See, e.g., *Division of Labor Enforcement, Dep't of Indus. Relations v. Gifford*, 290 P.2d 281 (Cal. Dist. Ct. App. 1955). The traditional view of liability for unauthorized autopsies is that the person responsible is liable even if the body is not mutilated and can be properly buried, since the primary consideration for the rule is the emotional effect on the next of kin. But there is also authority for the view that damages cannot be recovered based only on the fact that an autopsy was performed unless the body was mutilated or changed in some way. See 22A AM. JUR. 2D, *supra* note 68, § 4. Since perfusion is a non-mutilating procedure, the latter group of authorities would probably decline to award damages for perfusion without consent. This point is moot, however, if the Restatement is adopted, since it also establishes liability for *operating* on dead bodies and does not predicate liability solely on mutilation.

courts have rejected such claims.¹⁰⁶ For example, some courts limit the application of this cause of action by also requiring that the act be at least intentional, that is, done with the purpose or knowledge of the likelihood of causing the injury, in order for a plaintiff to claim damages for emotional distress.¹⁰⁷

Some courts also require that the plaintiff show more than simple negligence to recover damages.¹⁰⁸ These courts have articulated a difficult standard for plaintiffs to meet; one court stated that the plaintiff must show that the defendant's conduct was "so outrageous in character and so extreme in degree as to go beyond all possible bounds of decency and is to be regarded as atrocious and utterly intolerable in a civilized community."¹⁰⁹ Such proof obviously exceeds the requirements of simple negligence and would thus limit the number of potential plaintiffs.

In jurisdictions where courts utilize this standard, a physician is not likely to be held liable for perfusing a cadaver without consent. Taking action to preserve the possibility of using the organs from a cadaver to save the lives of organ recipients is hardly the type of action at which the rule is aimed. The level of culpability required by these courts would insulate physicians from liability for this type of claim. On the other hand, jurisdictions adopting the Restatement approach, which requires a showing of simple negligence, might hold a physician liable for perfusing cadavers. Moreover, the issue of negligence would be an individualized determination that could lead to liability for perfusion in some cases but not in others. Accordingly, under the current legal framework, the medical community could not be broadly reassured that they will not face liability for tort claims for routinely perfusing dead bodies. This lack of certainty will prevent physicians from adopting perfusion to a meaningful degree.

Furthermore, because the law differs among jurisdictions, physicians in some states might be able to utilize the technique while their colleagues in other states would be liable for tort damages for performing the same procedure. While this is true of all acts governed by state tort law, this differential treatment is particularly harmful when it operates to suppress new, life-saving technology and prevents the adoption of a standardized medical practice. The existing framework might be made somewhat more amenable to the widespread adoption of perfusion if all courts were to require that plaintiffs show at least an intent to harm in order to recover for emotional distress damages from physicians. Such a universal position in all jurisdictions is unlikely, however.

106. 1 DAMAGES IN TORT ACTIONS § 7-31 (Marilyn Minzer et al. eds., 1993).

107. *E.g.*, *Naughle v. Feeney-Hornak Shadeland Mortuary*, 498 N.E.2d 1298 (Ind. Ct. App. 1986).

108. *E.g.*, *Nichols v. Busse*, 503 N.W.2d 173, 179 (Neb. 1993) (requiring a showing of "intentional or reckless" conduct).

109. *Id.* (quoting *Gall v. Great Western Sugar Co.*, 363 N.W.2d 373, 377 (Neb. 1985)).

3. A Free Exercise Claim Against Parties Responsible for Perfusion

A third claim that might be asserted by the decedent's next of kin is that perfusing the cadaver violated her constitutional right to freely exercise her religion.¹¹⁰ Assuming that the state is implicated, a court would evaluate a free exercise claim by weighing the state's asserted interest against the individual's claim.¹¹¹ To justify the impingement of an individual's exercise of religion, the state's interest must be substantial. Here, the state could assert an interest in (1) increasing the supply of transplantable organs and thereby promoting the public health, and (2) preserving the rights of the decedent or the family to make an organ donation.¹¹² In response, the next of kin would then likely assert that her religion required that the body of the decedent not be changed from its condition at death. Because perfusion does not involve the removal of any organs, this argument would require more than an objection to organ removal.¹¹³ The argument would require an absolute religious prohibition against any incision or change in the condition of a dead body.¹¹⁴ A court would then presumably weigh alternative methods of accomplishing the same state objective. Other methods that have been suggested to increase the supply of available organs include creating a market

110. See U.S. CONST. amend. I. An obvious threshold problem to a free exercise claim against perfusion currently is that there is no law authorizing or mandating the perfusion of cadavers without consent, thus there appears to be a lack of state action. The Constitution guarantees the freedom only from *governmental* intrusion into the exercise of one's religion, so as an initial matter, a court would have to construe perfusion without consent as an action of the government. But the adoption of a law authorizing the procedure would clearly constitute state action. Furthermore, performing perfusion at a government-operated facility would very likely constitute state action even without a law specifically authorizing the procedure.

111. *Wisconsin v. Yoder*, 406 U.S. 205, 214 (1972).

112. See *supra* note 1.

113. Most of the major religious denominations in the United States allow or encourage the donation of organs. Sipes, *supra* note 95, at 507 (citing TASK FORCE ON ORGAN TRANSPLANTATION, OFFICE OF ORGAN TRANSPLANTATION, ORGAN TRANSPLANTATION: ISSUES AND RECOMMENDATIONS (final report, Apr. 1986)); see also R.P. Bulka, *Jewish Perspective on Organ Transplantation*, 22 TRANSPLANTATION PROC. 945 (1990) (concluding that Jewish philosophy encourages organ donation); Peter J. Kalshoven, *A Humanistic Concept of the Human Body After Death*, 22 TRANSPLANTATION PROC. 950 (1990) (concluding that organ donation is "a truly humanistic gesture"); Emiko Namihira, *Shinto Concept Concerning the Dead Human Body*, 22 TRANSPLANTATION PROC. 940 (1990) (arguing that Shinto beliefs are not inconsistent with organ donation); Ahmad F. Sahin, *Islamic Transplantation Ethics*, 22 TRANSPLANTATION PROC. 939 (1990) (concluding that nothing in Islamic ethics would forbid transplantation); Suzanne Scorsone, *Christianity and the Significance of the Human Body*, 22 TRANSPLANTATION PROC. 943 (1990) (noting that donation is actually encouraged by Christian principles); S.H.J. Sugunasiri, *The Buddhist View Concerning the Dead Body*, 22 TRANSPLANTATION PROC. 947 (1990) (concluding that Buddhism does not prohibit organ transplantation); H.L. Trivedi, *Hindu Religious View in Context of Transplantation of Organs from Cadavers*, 22 TRANSPLANTATION PROC. 942 (1990) (concluding that Hindu tenets encourage organ donation).

114. One must keep in mind that the decedent's next of kin would have to assert that a third party's actions on *another* party (and a dead one at that) violated her religious beliefs. Her own body was not harmed. She must assert the claim that her belief is in maintaining the integrity of the *bodies of all relatives*. It is questionable whether the Free Exercise Clause is implicated when the claim is that someone else is violating the claimant's rights, but that the claimant herself is not in any way coerced into violating her religious principles. See *Lyng v. Northwest Indian Cemetery Protection Ass'n*, 485 U.S. 439 (1988); *Bowen v. Roy*, 476 U.S. 693 (1986).

for organs,¹¹⁵ conscripting organs,¹¹⁶ and presuming consent to donation¹¹⁷ (the type of procurement system at issue in the *Georgia Lions, Powell, Tillman, and Brotherton* cases).¹¹⁸ Allowing perfusion would surely be a less objectionable method of obtaining kidneys than would these other proposals, each of which involves either the sale of human organs¹¹⁹ or ignoring the family's wishes to some degree.

A law allowing perfusion would be analogous to other doctrines in the field of medical care law which, in certain circumstances, effectively allow physicians to perform medical procedures that may violate the religious beliefs of the patient.¹²⁰ For example, the emergency doctrine allows medical personnel to provide emergency treatment without ascertaining the wishes of the patient.¹²¹ Because of the time constraints in emergency care, obtaining consent is not always possible. The law simply presumes that everyone wants emergency care that might preserve their life.¹²² Similarly, perfusion is emergency care that preserves organs, statutory rights, and the lives of others. The time constraint is similar. Thus, the policy that supports the emergency doctrine would also support a similar protection for physicians who, under a time-pressured clinical situation, decide to perfuse a body but later discover that the family objects to the treatment on religious grounds. This extension has, of course, not yet been made and the legal viability of such claims has not yet been tested. Thus, as the law currently exists, physicians face potential liability under a free exercise claim as well.

IV. A MODEL LAW TO PROMOTE THE USE OF PERFUSION TO SALVAGE TRANSPLANTABLE KIDNEYS

With the variety of claims that could be asserted by the next of kin against a physician perfusing a dead body without consent and the substantial legal ambiguity of the issue, physicians are justifiably cautious about the widespread use of perfusion to salvage kidneys. This apprehension will prevent perfusion from being utilized to any significant degree.

115. See, e.g., Blair & Kaserman, *supra* note 25.

116. Theodore Silver, *The Case for a Post-Mortem Organ Draft and a Proposed Model Organ Draft Act*, 68 B.U. L. REV. 681 (1988).

117. Crothers & Uglem, *supra* note 46.

118. See *supra* text accompanying notes 72-92.

119. See generally Denise, *supra* note 25 (discussing the arguments against human organ markets).

120. Other medical procedures which might violate the beliefs of individuals and families, such as intubation, are often performed surreptitiously on newly deceased bodies without first obtaining consent from the next of kin. An analogy could be drawn between intubation and perfusion. Although some argue that the practice is justified by the great need of young physicians to learn the procedure, the minimal risk to the dead body, and the substantial social benefits, others say that this practice is unethical and physicians should try more diligently to obtain consent from the next of kin before the body is used for any purpose. James P. Orłowski et al., *The Ethics of Using Newly Dead Patients for Teaching and Practicing Intubation Techniques*, 319 NEW ENG. J. MED. 439 (1988). Perfusion also risks little harm to the dead body and could bring great benefits to society.

121. See *Miller v. Rhode Island Hosp.*, 625 A.2d 778, 784 & n.5 (R.I. 1993) (explaining the emergency exception to the informed consent doctrine).

122. See RESTATEMENT (SECOND) OF TORTS § 892D cmt. a (1977).

The issue, like so many in the law, distills to a process of balancing. On one side are the interests of a few families who might object to being unable to bury their dead in precisely the same condition as when they died. On the other side are the thousands of people whose lives could be saved or improved if only there were enough kidneys available for them. It is also necessary to consider the interests of those who strongly wish to become organ donors but will be denied this right according to current medical practice.

Perfusion can enable thousands of people to donate organs who were unable, until now, to do so. It will also allow more time for medical personnel to approach families about organ donation. This more sensitive approach, in turn, will increase the positive response rate and thus, the supply of transplantable kidneys. If, after perfusion is begun, the family opposes donation, the procedure is completely reversible—the tube is simply removed and the incision sutured. The family has not suffered any significant detriment to their “property” interests, their emotional well-being, or their religious beliefs.

In order to encourage physicians to adopt perfusion as a standard procedure in those cases of cardiac death in which organ donation is an option, a law specifically allowing such measures should be adopted. The following is a proposed model:

A licensed physician not involved in the care of a deceased patient may use reasonably accepted medical practices to preserve the right to donate organs upon death until the decedent's wishes can be ascertained (1) provided no organ or tissue is removed or detached and (2) any care so provided to maintain the viability of donation is free to the prospective donor.

Each element of this proposed statute will operate to maintain the integrity of the procedure for which it was adopted.

“A licensed physician not involved in the care of the deceased patient” would prevent a conflict of interest between providing the best possible care for those dying and prescribing treatments that will produce the most usable organs. By prohibiting physicians involved in the care of dying patients from performing any procedure on the individual to procure organs, the law requires terminal care physicians to always honor the interests of the dying patients and to ignore organ procurement issues. These issues, including perfusion, are properly handled by another physician who must not be involved until after the patient's death.

“Reasonably accepted medical practices” would enable the law to apply to other new non- or semi-invasive technologies designed to preserve organs as these procedures are developed. The specific wording of this phrase will also allow a physician to determine what the reasonable course of action might be in a particular case. Mandated perfusion would be unsound because not all cardiac death patients will be medically fit to become organ donors. In such cases, a physician should not be required to perfuse the body, but instead should rely on her reasoned judgment of the utility of perfusion to procure transplantable organs under the circumstances.

“To preserve the right to donate organs upon death” would limit the purpose for which procedures may be performed on a dead body. Any other purpose is not authorized by this statute. The phrasing of this element also emphasizes that organ donation is a statutorily created right that must be preserved and respected.

“Until the decedent’s wishes can be ascertained” would prohibit a physician from continuing perfusion after consent for organ donation has been denied. Since perfusion is strictly a tool to preserve the opportunity to consent to donation, it should be discontinued once medical professionals have had sufficient time to approach the family thoughtfully and humanely about organ donation and the family still has chosen not to donate. Secondly, this phrasing mirrors that of the UAGA by authorizing reliance on the wishes of the decedent, if they are known. Thus, the statute would not require a physician to obtain consent from the decedent’s next of kin if the decedent’s wishes could be ascertained from an organ donor card or by other means. Although this practice is not embraced in the medical community today, if physicians begin to rely on organ donor cards alone, they might also do so under the proposed statute in cases involving cardiac death patients.

“Provided no organ or tissue is removed or detached” would prevent medical personnel from using any invasive procedure, mutilating the body, or removing organs without consent. By analytically and legally separating procedures to *preserve* organs without consent from procedures to *remove* organs without consent, the statute highlights the great difference between these two cases. It allows even strong opponents of presumed consent systems of donation to support perfusion, not as a way to undermine or otherwise overrule the family’s decision, but instead as a means to preserve the opportunity to consent.

“Any care so provided to maintain the viability of donation is free to the prospective donor” would require transplant services to include the costs of such care in the price charged to the organ recipient. Clearly, the extra procedures performed after death are not for the benefit of the deceased and should not be borne by her estate.

Such a law would clarify the legal landscape regarding organ transplant efforts and would give physicians the legal protection they will require before perfusion and similar measures are adopted. Although this law would defeat a claim by the next of kin on either a property rights or emotional distress basis, the next of kin could still bring a constitutional challenge based on interference with religious beliefs because a law authorizing perfusion constitutes state action. Again, a court hearing such a claim would weigh the significant benefits of perfusion against the possible religious objection to perfusing a dead body.

Although a law authorizing perfusion would not completely insulate physicians from liability, it would significantly decrease the number of possible bases for legal claims. This law would be a less drastic measure than conscription of organs or presumed consent and would supply kidneys to nearly all of those who need them. By utilizing available technology that is

currently in use outside the United States, more people could become organ donors and tens of thousands of lives could be saved.

CONCLUSION

There is currently an organ shortage of crisis proportion in the United States. Kidneys are the organ most in demand. The current system simply does not supply enough organs to benefit all of those who need them. Perfusion is a technologically viable method of increasing the supply of transplantable kidneys by utilizing a group currently overlooked as potential donors. With the multiplicity of claims that can be brought against physicians and the confusing differences in legal interpretations among jurisdictions, however, physicians are not likely to adopt perfusion as a common practice unless the legal community can provide them with some degree of assurance that they will not be held liable for doing so.

Why does American society move so slowly to adopt a life-saving procedure that other countries currently use? Elements in the mix probably include a superstitious concept of dead bodies and discomfort in general with issues of death and dying. And, of course, the legal system is designed to move slowly and cautiously. Some would argue that this caution is most needed in the face of new, untried technologies with uncertain consequences. While such caution may be useful in some abstract, formalistic sense, it is inappropriate when real individuals die each day despite the fact that viable medical procedures could save them.

Kidney perfusion builds on previously accepted principles such as the traditional definition of death, the power of the state to define the content of non-constitutional rights, and the right of the state to, in some circumstances, assume that the decedent would wish to donate organs.

A law specifically authorizing perfusion would be the most expedient way to convince liability-wary physicians to make kidney perfusion a routine procedure in applicable cases. The law would also create a uniform national standard which would facilitate interstate organ procurement efforts.

In the interim, courts could take steps to limit the applicability of the three possible claims of a decedent's next of kin. First, a definitive statement that the next of kin hold no property interest in a cadaver would prevent these "property-based" claims. Second, emotional distress claims could be limited to cases where the person operating upon a dead body does so for a malicious purpose or with reckless disregard of the wishes of the family. Finally, an exception to liability for violating the next of kin's freedom of religion could be modeled after the emergency doctrine for kidney perfusion.

Science and medicine sprint forward to the benefit of us all, while the law drags its heels. Science and medicine make discoveries and find new information while the law seeks to fit this new information into its old framework. So as not to stifle medical progress, the law must endeavor to keep pace with science and be willing to adopt a new framework when the old one is no longer workable. The law impacting kidney perfusion is just such a case. A new statute authorizing kidney perfusion would endorse the acts of physicians that save lives and benefit us all.