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The Law of Human Organ Procurement: A Modest Proposal

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THE LAW OF HUMAN ORGAN PROCUREMENT: A MODEST PROPOSAL

The Uniform Anatomical Gift Act (UAGA)[1] was promulgated in the summer of 1968, and subsequently was adopted, with slight variations, by all of the states and the District of Columbia, making it the most successful, in terms of universal acceptance, of any legislation proposed by the National Conference of Commissioners on Uniform State Laws.[2] The UAGA was intended to provide a simple and practical mechanism for the donation of human cadavers and parts thereof for, among other things, transplantation.[3] Although generally acclaimed as a well-balanced approach to an inherently sensitive area of public policy, it is clear that in at least one important respect, the UAGA has failed to live up to its promise: the procurement of sufficient numbers of organs for transplantation. For example, there are approximately five thousand kidneys being transplanted annually, while an equal or somewhat greater number of patients who are suitable candidates for kidney transplants are maintained through dialysis treatment. The single most significant impediment to transplantation for these patients is the lack of availability of suitable organs.[4] Statistics indicate an even more acute shortage of organs for heart, heart-lung, and pancreas transplants, where living donors and dialysis-like maintenance are not available options, and patients often die waiting for suitable organs to become available.[5] Recent cases involving the use of animal organs and artificial organs for transplantation into human patients indicate both the severity of the need for organs and the drastic steps which may become necessary if the supply of human organs is not sharply increased in the near future.[6]

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1. In general, the UAGA provides for any adult to indicate during his life a desire to donate some or all of his tissues or organs after death, for use in research, teaching, or transplantation. A specific donee, such as a hospital, physician, or medical school may or may not be stated. There is also an alternative mechanism whereby specified relatives may, in the absence of a contrary expression during life, donate the organs or tissues of a deceased family member. For additional detail, *see,* Uniform Anatomical Gift Act, 8 Uniform Laws Annotated (1972).

2. Katz, Jay, & Capron, *Catastrophic Diseases: Who Decides What?*, Russell Sage Foundation, New York at 196 (1975); *see supra* note 1.

3. National Conference of Commissioners on Uniform State Laws, 1968 Annual Report, Prefatory comment on the Uniform Anatomical Gift Act.

4. *Organ Donor Recruitment,* 246 J.A.M.A. 19 (1981).

5. *Id.*

6. On October 24, 1984, the heart of a young baboon was transplanted into a critically ill human infant identified only as "Baby Fae." The hospital and physicians involved claim that

Ironically, the vast improvements in transplantation techniques and related technology, as well as the increasing availability of trained personnel, properly equipped facilities, and funding promise to make the problem more acute. As various forms of transplantation become accepted therapy for a variety of life-threatening conditions, and the capability to perform such surgery becomes increasingly available, the shortage of organs will contribute directly to a greater number of potentially avoidable deaths.[7]

In response to the growing public concern over this increasingly visible problem, federal legislation was recently proposed which attempts to deal with the shortage of organs available for transplantation.[8] Although potentially useful in several respects, this legislation is completely inadequate in terms of the central problem, the need to substantially increase the supply of organs available for transplantation.[9]

As the shortage becomes ever more acute, it is increasingly clear that bold steps must be taken with respect to human organ procurement if we are to fully realize the potential benefits of the great strides made in transplantation in recent years. If the technical and financial problems can be resolved, it is unthinkable that our society would allow thousands to suffer and die needlessly each year simply because an effective and acceptable mechanism for organ procurement has not been developed.

The thesis of this comment is that the recent advances in the technical, logistical and financial aspects of organ transplantation have given rise to a compelling state interest in generating an adequate supply of organs for transplantation. This heightened state interest justifies, indeed demands, that aggressive steps be taken by the state to improve the availability of organs for transplantation, but that such steps must not be more intrusive than

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an appropriate human heart would not have been available in time to save the infant, who survived for approximately three weeks. For additional details on the precedure itself, and the legal and ethical debate which has ensued, *see* New York Times, Oct. 28, 1984, at 1, col. 2; TIME, Nov. 12, 1984, at 70, col. 1. In December of 1982 and November of 1984, Barney B. Clark and William J. Schroeder, respectively, were fitted with artificial hearts by Dr. William C. Devries. Mr. Clark survived for 112 days, and Mr. Schroeder was in critical but stable condition at this writing. *See*, Washington Post, Nov. 28, 1984, at A4, col. 1.

7. *See supra* note 4. *See also* Bart, Macon, Humphries, et. al.: *Increasing the Supply of Cadaveric Kidneys for Transplantation,* 31 TRANSPLANTATION 383 (1981); Bart, Macon, Whittier, et. al.: *Cadaveric Kidneys for Transplantation: A Paradox of Shortage in the Face of Plenty,* 31 TRANSPLANTATION 379, (1981).

8. H.R. 5580, 98th Cong., 2d Sess., — Cong. Rec. H3390 (1984).

9. H.R. 5580 would provide for grants to establish and expand local organ procurement organizations and to support a national computer matching system. The bill would also establish a federal registry of transplant recipients; mandate an annual report on transplantation; create a task force to study the medical, legal, social, and ethical issues involved in transplantation; and prohibit the buying and selling of organs. In short, everything except increase the available supply of organs.

necessary. Various proposals such as the legalization of organ purchasing and the granting of authority to the state to retrieve organs irrespective of consent are considered and rejected as counter productive in various ways, overly intrusive, and inconsistent with important ethical and policy considerations. The recently proposed federal legislation mentioned above[10] is also analyzed and rejected as ultimately ineffective in significantly increasing the availability of organs. Finally, this comment will analyze and argue in favor of a bold but realistic and potentially effective proposal to alleviate the shortage of organs. This proposal would merely reverse the presumptions which underlie the current UAGA system of allowing an individual to "opt-in" to organ donation. The so-called "opt-out" proposal would presume the intent to donate useful organs, but allow for a simple and convenient mechanism for stating a contrary intent during life which would be binding.[11]

I. THE EVOLUTION OF TRANSPLANTATION

Since the first experimental successes with human organ transplants in the early 1960's, the technology of transplantation has improved at an astounding rate.[12] The recent advent of the highly successful immunosuppressant agent, Cyclosporine A, promises to largely eliminate one of the major remaining complications, the rejection of the transplanted tissue by the immune system of the organ recipient.[13] In recent years, kidney transplantation has become standard therapy for a variety of renal conditions. Heart, heart-lung, liver, and even pancreas transplants are in various stages of moving from experimental to standard procedures.[14] In addition, governmental and private health insurance programs have gradually moved toward acceptance of certain transplant procedures as standard (and therefore insured) services.[15] The trend in this direction appears to be

10. *See supra* notes 8, 9.

11. *See supra* note 2 at 198.

12. *See generally,* Hearing on Organ Transplants, Hearings on H.R. 4474 Before the Subcommittee on Investigations and Oversight of the House Committee on Science and Technology 98th Cong., 1st Sess. 98-16 (1984). [Hereafter *Hearings*]

13. *See generally,* Calne, Rolles & White, *et. al., Cyclosporine: A in Clinical Organ Grafting,* 13 TRANSPLANT PROC. 349 (1981).

14. *See supra* note 12.

15. According to The Washington Post, June 25, 1984, at A2, col. 1, the five largest commercial health insurers in this country currently pay, on some basis, for heart, liver, and kidney transplants. Blue Cross and Medicare pay for kidney transplants in virtually all cases, and in thirteen states Blue Cross pays for heart and liver transplants. The trend is clearly toward increased coverage as these procedures evolve out of the experimental stage. For a general overview of the federal government's involvement in paying for kidney transplants on a widespread basis through the End Stage Renal Disease program under Medicare, *see* Caplan, *Kidneys, Ethics and Politics: Policy Lessons of the ESRD Experience,* 6 J. HEALTH POL., POL'Y. &

accelerating.

It is also significant that considerable progress has been made in a relatively short time toward achieving universal acceptance of uniform criteria for determination of death based on the cessation of brain function.[16] This development has helped to resolve many of the legal, ethical, and technical problems which caused a reluctance to remove organs from a body with circulatory and respiratory functions, even if artificially maintained, in spite of the fact that in order to be useful for transplantation, organs must be removed and treated very soon after the cessation of such funtions.[17]

Finally, a sophisticated network of one hundred and ten interrelated organ procurement organizations has evolved which, although inefficient in some respects, does have an amazing and expanding capacity to match available organs to appropriate recipients and to transport such organs across the country in a matter of hours.[18] These existing systems, operating within the current legal framework, have been generally unsuccessful in increasing the aggregate number of available organs, in spite of repeated and innovative efforts to stimulate donation.[19]

In short, to a large and rapidly increasing extent, the technological, financial, logistical, and legal framework necessary to support a large-scale organ transplantation effort are falling into place, to the potential benefit of tens of thousands of seriously ill patients each year. The single weak link in the development of this amazing chain of resources, knowledge, and dedication is the shortage of organs available for transplantation relative to the rapidly increasing demand for such organs.

The reasons for the organ shortage are as perplexing as the result is troubling. Accusations have variously been leveled at the attitudes of physicians and other health professionals,[20] public apathy[21] and institutional ineffi-

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L. 488 (1981); Inglehart, *Health Policy Report: Funding the End-Stage Renal Disease Program*, 306 NEW ENG. J. MED. 492 (1982).

16. *See generally Guidelines for the Determination of Death*, 246 J.A.M.A. 2184-94 (1981); *see also supra* note 2, at 207.

17. *Id; see also supra* note 2, at 206.

18. *See*, Testimony of Donald W. Derry, William W. Pfaff, M.D., and Raymond Coleman, *Hearings*, pp. 126-210.

19. *Id.*

20. Burns, *Nurses: The Key to Obtaining Renal Donations*, NEPHROLOGY NURSE, Oct. 1980; Abram, Vander, Zwaag & Johnson, *Physicians' Attitudes Toward Organ Donation*, 68 S. MED. J. 4, 43 (1975); Crosby & Walters, *Survey of Attitudes of Hospital Staff to Cadaveric Kidney Transplantation*, 4 BR. MED. J. 346 (1972).

21. Council on Scientific Affairs, *Organ Donor Recruitment*, 6 J.A.M.A. 488-503 (1981); Cleveland & Johnson, *Motivation and Readiness of Potential Human Tissue Donors and Nondonors*, 32 PSYCHOSOMATIC MED. 225-31 (1970).

ciency.[22] While the low rate of donations is indisputable, the evidence clearly indicates strong public awareness and sentiment in favor of organ donation. A Gallop Poll conducted in January, 1983, indicates that 76% of the respondents had heard of organ donor cards, 85% were aware that kidneys were not always available when needed, and 83% of those aware of organ transplants indicated that they were likely to donate the kidneys of a loved one, although only 40% indicated a desire to donate their own kidneys after death.[23]

The figures cited above are striking when contrasted with the fact that of the estimated twenty thousand patients who annually die under circumstances making them suitable donors, less than 16% of the theoretically available kidneys are retrieved, as well as much smaller percentages of other transplantable organs.[24] It is estimated that in states which provide organ donor cards on drivers' licenses, or similar mechanisms, only 1 ½% to 2% of the population actually executes a donor card.[25] The level of donation by relatives of deceased patients who are actively approached is similarly far lower than public opinion would suggest.[26]

In light of the generally favorable attitude toward organ donation, the relatively low level of procurement is perplexing. It is likely that lack of awareness, laziness, disinclination to consider one's own death, and similar factors play a large role in keeping down the level of executed donor cards. Similarly, relatives approached immediately before or after the death of a loved one are usually experiencing grief, shock, and possibly disillusionment with the medical establishment, and therefore are understandably reluctant to subject the body of the deceased to what is often viewed as a mutilation. Differing feelings within the family, the desire to avoid conflict, and efforts to avoid additional anguish are also factors which come into play.

The bottom line appears to be that while most people support organ donation on a conceptual level, when placed in the position of making decisions regarding themselves or loved ones, it is easier, under the circumstances, to simply ignore the problem and do nothing. Under the current system which requires affirmative consent from the donor or relatives of the donor, the result of this inactivity, regardless of the reason, is the waste of thousands of

22. Terasaki, Wilkinson & McClelland, *National Transplant Communications Network,* 218 J.A.M.A. 1674-78 (1971); Opelz & Terasaki, *National Utilization of Cadaveric Kidneys for Transplantation,* 288 J.A.M.A. 1260 (1974).

23. GALLUP ORGANIZATION, *Attitudes and Opinions of the American Public Toward Kidney Donation,* (1983).

24. *See supra* note 4, at 7-58.

25. Opening Statement by Congressman Albert Gore, Hearings, p. 2.

26. *Id.*

potentially useful organs, and death and suffering for the thousands of patients awaiting the availability of a suitable organ.

II. ALTERNATIVE MECHANISMS

While the problem of a shortage of organs has become increasingly severe in recent years, it is not new. This issue has been debated with varying levels of intensity for almost two decades. The following discussion includes a brief analysis of each of the four major proposals for modification of the current system which have been advocated by various commentators.

A. Payment Mechanisms

It has been suggested that permitting market forces to operate freely would be one way to alleviate the current organ shortage. Under various schemes a donor might receive payment during his life in exchange for consent to the use of any suitable organs or tissues at this death. Alternatively, his estate or specified heirs might benefit from the proceeds of the sale of the useful organs available at death, if any.[27] Regardless of whether the benefit would accrue to the donor, his heirs, or estate, it is argued that financial incentives would generate increased numbers of available organs.

Although logically appealing, at first glance, as a means for increasing the availability of organs without significant government intrusion, there are serious objections to such schemes. In general, it has been argued that the commercialization of organ procurement would damage or eliminate the current donation system, would increase costs associated with transplants, and might lead to exploitation of the poor.[28] Perhaps most importantly, there is a deep, if ill-defined, sense of repugnance generated by the concept of a market in human organs.[29] In the final analysis, whatever logical arguments are stated for rejecting payment mechanisms, the bottom line is that

27. Annas, *Life, Liberty and the Pursuit of Organ Sales,* HASTINGS CENTER REPORT, (Feb. 1984). *See generally supra* note 2 at 197; Comment, *Organ Donation,* 72 MICH. L. REV. 1182 (1974); Comment, *Transplantable Human Organs, Should Their Sale be Authorized by State Statutes?,* 3 AM. J. L. & MED. 183 (1977); Perry, *Human Organs and the Open Market,* ETHICS, Oct., 1980 at 91; Ramsey, *The Patient as Person,* ETHICS, Oct., 1980, at 91. Ramsey opposes the sale of organs, while Perry argues for policies and laws authorizing such sales.

28. *See supra* note 2 at 197; Annas, *supra* note 27.

29. *See, e.g., $3,000 Offer for Kidney Brings Man 100 Donors,* N.Y. Times, Sept. 12, 1974, at 36, Col. 2; *Kidney Cornea Sale Flourishes in Brazil,* The Washington Post, Oct. 12, 1981, at 22, col. 1. Another example of the fear and uneasiness generated by the concept of a market for human organs is the Robin Cook novel, COMA, which was made into a major motion picture. The plot involves a government-sponsored effort to create and then maintain otherwise healthy coma victims as a sort of living farm from which appropriate organs could be harvested at will. One of the most chilling scenes involves the administrator of the facility sitting in front of a computer screen, engaged in a telephone conference call for the purpose of

our society is simply not comfortable with the concept.[30]

Ironically, although the recently proposed federal legislation does not provide for a viable mechanism to increase the number of available organs, it does take preemptive action to explicitly prohibit the sale and purchase of human organs. Several states have also taken legislative action to outlaw a market in human organs for transplantation.[31] Thus, it would appear that although a consensus on how best to resolve the organ shortgage problem has not yet developed, there is wide and vehement agreement that market mechanisms are not an appropriate solution.[32]

It is interesting to note that this flurry of legislative activity was prompted by the mere possibility of the purchase and sale of human organs. Few, if any, such transactions are known to have occurred in this country, although advertisements have appeared from time to time.[33] The stimulation of legislative activity to preempt a potential development, rather than address an existing problem, is an indication of the strong sentiment against the concept of the sale of human organs.

B. Mandatory Organ Retrieval

The argument is made that just as the state's interest overrides the rights of the individual with respect to the sanctity and privacy of the human body in situations such as mandatory autopsies in the event of violent or suspicious deaths, the state's interest in providing an adequate supply of organs for transplantation is compelling enough, in light of the potential benefits to individuals and to society as a whole, to justify a system of mandatory retrieval of useful organs without regard to consent.[34] Various formulations of the public policy against waste have been expressed in support of this concept, as well as the argument that the interests of the living must take precedence over those of the dead.[35]

The principal objection to this approach is the extreme intrusiveness of

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selling certain organs to the highest bidders, in a manner in which closely approximates a broker trading in commodities.

30. For example, the recent federal legislative initiative discussed above, *see supra* notes 8, 9 (specifically prohibits the buying and selling of organs).

31. *See e.g.* M.D. PUB. HEALTH CODE ANN. § 5-408 (1984);VA. CODE § 32.1-289.1 (1984).

32. *See supra* notes 8, 9 and 31; *see also supra* note 2, at 198.

33. *Hearings*, Testimony of Alexander M. Capron, p. 282.

34. Note, *Compulsory Removal of Cadaver Organs*, 69 COLUM. L. REV. 693 (1969); Katz, *supra* note 24; Dukeminier & Saunders, *Organ Transplantation: A Proposal for Routine Salvaging of Cadaver Organs*, 279 NEW ENG. J. MED. 413 (1968).

35. *See, e.g.*, Dukeminier, *Supplying Organs for Transplantation*, 68 MICH. L. REV. 811, 837 (1970).

such governmental action, especially in light of the potential emotional impact on surviving relatives.[36] Religious considerations would also be called into question, as would various due process issues, in light of the donor's obvious inability to object to such action after death. In essence, such action would be so extreme an intrusion that it would have to be demonstrated that no less intrusive and burdensome measure could achieve the government's purpose.[37]

In the absence of such a showing, it is arguable that such an approach would be unconstitutional.[38] Although a compelling state interest based upon the health and welfare of the citizenry could probably be established, it could also be argued that the governmental objective, increasing the availability of organs for transplantation, could be achieved by narrower and less intrusive means.[39]

In addition, practical political considerations would suggest that apart from the possibility of a successful constitutional challenge, it should be recognized that legislation for mandatory organ retrieval, on either the state or federal level, is unlikely ever to be enacted.

C. Increased Awareness, Study, and Coordination

The federal legislative initiative discussed earlier[40] attempts to address the problem of an adequate supply of organs through such time-honored bureaucratic mechanisms as funding, study, the accumulation of data, and increased coordination. The simple reality is that the current system requires an affirmative act by the donor or his family, and that nothing in the bill does anything to directly encourage more donations, or make fundamental changes in the system to remove the consent barrier. Although potentially useful in other ways, the mechanisms which would be established by this legislation simply would not significantly increase the availability of organs.

The emphasis in the bill on funding to improve and supplement the capabilities of the existing organ procurement network would suggest that the shortage is caused, at least in part, by the inability of the network to make efficient and appropriate use of organs which are donated. This is not borne out by an examination of the record of the hearings held in conjunction with the preparation of this bill.[41] In fact, the evidence overwhelmingly indicates

36. *See supra* note 2, at 198.
37. Id. at 199-200.
38. Id at 200.
39. *See supra* notes 38-42 and accompanying text.
40. *See supra* notes 8 and 9.
41. *Hearings*, Testimony of Donald W. Denny, William W. Pfaff, and Raymond Coleman, pp. 126-210.

that once an organ becomes available, the current system is quite efficient in seeing that it is properly utilized. The basic problem is not how to handle available organs, but rather how to substantially increase the number of available organs.[42]

By shying away from the fundamental problem, and focusing attention on collateral matters such as funding, study, and coordination, this legislation falls far short of the kind of measure which will ultimately become necessary to alleviate the growing problem.

D. Shifting Presumptions — The Opt-Out System

The best alternative to the current UAGA system which has been proposed is generally referred to as an "opt-out" system.[43] It has been noted that varients of such a system are in place in a number of countries including Denmark, France, Israel, Italy, Norway, Spain, Sweden, and Switzerland.[44] Although these systems have not completely resolved the problem of an inadequate organ supply, it is clear that the problem is much less severe than it is in this country, and that it is generally moving toward resolution.[45] In essence, an opt-out system presumes an intent to donate useful organs after one's death, unless a contrary intent is affirmatively expressed during life. The opt-out system could easily be administered through any one of a number of mechanisms including the Internal Revenue Service, the Social Security System, or the Postal Service.[46] At or near the time of death, an inquiry to a central computerized registry could be made to determine whether the patient had expressed an intent to opt out of donation, or to somehow condition or limit the donation.[47] The objections raised with respect to compulsory donation schemes would have no bearing on such a system because anyone who wanted to opt out could do so.

Serious problems do arise with an opt-out system and the implementation of such a system would require careful consideration. For example, could the intent to donate be presumed with respect to children, incompetents,

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42. *Id.*

43. First proposed in 1968 by Professors Dukeminier and Saunders 279 NEW ENG. J. MED. 413 (1968), this concept has been the subject of much debate. *See e.g.*, KATZ, JAY & CAPRON, *Catastrophic Diseases: Who Decides What? supra* note 2, at 309, Sells, *Let's Not Opt-Out Kidney Donation and Transplantation* 5 J. MED. ETHICS 165 (1979); Kennedy, *Kidney Transplants; A Reply to Sells,* 6 J. MED. ETHICS 29 (1980).

44. Stuart, Veith, & Cranford, *Brain Death Laws and Patterns of Consent to Remove Organs for Transplantation from Cadavers in the United States and 28 Other Countries,* 4 TRANSPLANTATION 21 (1981).

45. *Id.*

46. *See, supra* note 2, at 198.

47. *Id.*

non-English speaking citizens, and others who arguably could not make an informed choice to opt out? Would parents and guardians be responsible for exercising the opt-out option on behalf of their children and charges? These and other problems would inevitably arise, yet they need not prevent the enactment of such a measure. The system could initially be structured to apply the presumption only to competent adults, and be amended later to include mechanisms which provide for children, incompetents, and other problem groups, as a consensus on the appropriate approach is developed.

The problem of child organs is particularly troublesome, however, because in many instances child recipients require organs from other children. It is possible that the increased awareness and acceptance of organ procurement which would likely be generated by an opt-out system might lead to adequate voluntary donations of child organs, thereby obviating the need to deal with the problem of including children within the opt-out system.

Another potential problem which has been raised with respect to the opt-out proposal is the possibility that routine organ retrieval might create a milieu in which anxious medical personnel would be tempted to become less than fully attentive to the criteria for establishing that a patient is truly dead before removing his organs.[48] On the other hand, it can be argued that an adequate supply of organs generated by the opt-out system would eliminate any temptation to retrieve organs in inappropriate situations, simply because other organs would probably be available. It is more likely that abuses will arise from an acute shortage than from routine retrieval.

A major question is whether it would be preferable to have a "pure" opt-out system, in which the presumption and a failure to indicate an objection during life would be absolute, or whether there should be a mechanism for relatives to object after death, in spite of the presumed intent.[49] A "pure" system would be preferable, if only to avoid delay and confusion, in that the effect of the deceased patient's steps to opt-out, or the lack of such steps, should not be subject to second-guessing which might negate much of the beneficial impact, and solve no real problems.[50]

Noted ethicist James Childress has correctly stated that ethical objections would not arise with such a system:

> A system of presumed consent is *not ethically unacceptable.* Recognition of presumed consent (or tacit consent) as the basis for organ removal after a person's death does not violate principles of justice and respect for persons, if that person had an opportunity to

48. Dukeminier, *Organ Transplantation,* 279 NEW ENG. J. MED. 413; *See supra* note 2, at 200-08.

49. *See supra* note 32; *see supra note 2, at 198-99.*

50. *See supra* note 2, at 198-99.

> dissent. It has been argued that 'presumed consent would. . .be in keeping with traditional humanist values by making the basic presumption one that favors life by putting the burden of objecting upon those who would deny life to another. The policy of saving human life would be given first priority, yet the wishes of persons to preserve a corpse inviolate would also be accommodated.' In short, presumed consent (or tacit consent) enables the society both to realize utility and to respect persons.[51] (Emphasis in the original).

In sum, this shift in presumptions would provide a realistic mechanism for increasing the supply of organs for transplantation which is consistent with public opinion and public policy, while avoiding the ethical and legal pitfalls which arise with more intrusive methods.

III. CONCLUSION

Recent advances in transplantation technology have given rise to a rapidly increasing capability to save thousands of lives and relieve untold suffering. Concurrent developments in health care financing mechanisms and laws governing the determination of death, as well as the evolution of a sophisticated network or organ procurement system, have solved many of the problems which stood in the way of the realization of the full benefit of these technological advances. The single major obstacle still remaining is the inability of the current organ donation system, established under the UAGA, to generate a sufficient supply of organs. As transplantation becomes increasingly successful and available, the already inadequate supply will dwindle relative to the rapid increase in demand.

Although several alternative mechanisms to increase the availability of organs have been proposed, the best would involve an amendment to the UAGA to alter the fundamental basis of the Act from a presumption against donation to a rebuttable presumption of donative intent. The establishment of a simple and convient mechanism for opting out would resolve most of the legal and ethical objections, but evidence of wide public support indicates that relatively few persons would actually take steps to opt out, thereby creating a vast new pool of potential organ donors.

As transplantation success rates increase and funding becomes increasingly available, the pressure to increase the availability of organs will become tremendous. In light of the legal and ethical problems with both the marketplace and compulsory donation models, and the inefficiency of the "in-

51. *See supra* note 44, Testimony of James F. Childress, Professor of Religious Studies and Professor of Medical Education, University of Virginia, *Hearings*, pp. 361-62, (quoting Stuart, Veith, & Cranford, *supra* note 44).

creased awareness and coordination" approach exemplified by H.R. 5580, the opt-out model is the best alternative. It is likely that serious efforts to amend the UAGA along these lines will be undertaken within the near future. If successful, the benefit to society will far outweigh any potential abrogation of the interests of individual donors.

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