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Living Donor Transplantation: The Perfect Balance of Public Oversight and Medical Responsibility

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Each year more individuals are added to the transplant waitlist than are transplanted.¹ In the past decade, 84,871 individuals have died or become too sick to be transplanted while waiting for an organ.² Living donor (LD) organ transplantation offers the only alternative for those individuals who are unlikely to survive until a deceased donor (DD) becomes available. Even among patients with end-stage renal disease who do have a lifesaving alternative — dialysis — as the waiting times grow longer, a significant number are dying on the waitlist.³ Not only does a transplant offer better survival and quality of life compared to dialysis for the kidney recipient, an LD transplant provides better outcomes than a DD transplant.⁴ In 2001, the total number of LDs surpassed DDs in the United States.⁵

However, LD transplantation has a significant disadvantage — unnecessary risk to the donor. Defining acceptable risk for LDs is the topic addressed by Steinberg in this issue of *The Journal of Clinical Ethics*. He argues for the active involvement of the citizenry in this area where medicine depends on the altruism of members of society. Steinberg proposes a process in which community members would represent the interests of the public and would set thresholds of acceptable risk with the medical community in LD organ transplantation.

Organ transplantation is one area in medicine in which there is great national public oversight already, either through direct involvement or through federal oversight on behalf of the public. The federally regulated U.S. Organ Procurement and Transplantation Network (OPTN), the organization responsible for tracking all transplants and developing policies and procedure for organ recovery, distribution, and transplantation is planning on expanding its role to follow LD transplants and outcomes. It also has an active Living Donor Committee who works at improving LD transplantation for the donors.⁶ One of their key goals is to minimize donors' risk by evaluating LD program outcomes. Five of the 26 members of the LD committee are members of the general public.⁷

On the research front, the National Institutes of Health (NIH) funded the Adult to Adult Living Donor Liver Transplantation Cohort Study (A2ALL) in 2002⁸ and the Renal and Lung Living Donors Evaluation Study (RELIVE) in 2006,⁹ which are multi-center trials that will study medical and psychosocial outcomes of LD liver, kidney, and lung donation. These trials were started in response to not only the calls by the medical community, but also the public for scientifically rigorous data on the incidence of potential risks of organ donation.

Living organ donation may be increasing; however, this is entirely due to kidney donors, who represent 95 percent of all LDs.¹⁰ Perioperative mortality for living kidney donation is 0.03 percent,¹¹ and morbidity, including minor complication, is less than 10 percent.¹² Despite such small risks, the scientific community continues to study risks of kidney donation to minimize morbidity for the altruistic donor. In addition, the transplant community has proven to be quite conservative in adopting the potentially riskier LD liver and lung transplantation, which account for less than 1 percent of each of those transplants.¹³ While there have never been any reports of mortality for LD lung donors, only one case was performed in the U.S. last year.¹⁴

So, we have to ask, what would direct public oversight in reviewing protocols at a local level really offer to the LD? Would it result in a safer donor environment or would it legitimize risky behavior by transplant programs? Could such oversight limit innovation that is crucial to the longevity of our society by random selection of allowable percent risk early in the course of developing new surgical techniques? Public oversight at a national level has served society well by urging the OPTN to follow outcomes of LDs and the NIH to fund more studies of the outcomes of live organ donation. In addition, the transplant community has shown great restraint in adopting transplants that have higher associated morbidity.

Living donor transplantation is an area of medicine in which an appropriate balance of public oversight with the medical and scientific communities' sense of responsibility to healthy donors has resulted in a system that is both innovative and conservative. Further public oversight is not needed.

NOTES

1. Based on the U.S. Organ Procurement and Transplantation Network data as of 19 January 2007.

2. Ibid.

3. R.W. Evans et al., "The quality of life of patients with end-stage renal disease," *New England Journal of Medicine* 312, no. 9 (1985): 553-9; R.A. Wolfe et al., "Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant," *New England Journal of Medicine* 341, no. 23 (1999): 1725-30; P. Schnuelle et al., "Impact of renal cadaveric transplantation on survival in end-stage renal failure: evidence for reduced mortality risk compared with hemodialysis during long-term follow-up," *Journal of the American Society of Nephrology* 9, no. 11 (1998): 2135-41.

4. F.G. Cosio et al., "Patient survival after renal transplantation: I. The impact of dialysis pre-transplant," *Kidney International* 53, no. 3 (1998): 767-72; H.U. Meier-Kreische et al., "Effect of waiting time on renal transplant outcome," *Kidney International* 58, no. 3 (2000): 1311-7.

5. See note 1 above.

6. www.optn.org.

7. Ibid.

8. K.M. Olthoff et al., "Outcomes of 385 adult-to-adult living donor liver transplants: a report from the A2ALL consortium," *Annals of Surgery* 242 (2005): 314-25.

9. www.nih-livingdonor.org.

10. See note 1 above.

11. W.H. Bay and L.A. Hebert, "The living donor in kidney transplantation," *Annals of Internal Medicine* 106, no. 5 (1987): 719-27; J.S. Najarian et al., "20 years or more of follow-up of living kidney donors," *Lancet* 340, no. 8823 (1992): 807-10; A.J. Matas et al., "Morbidity and mortality after living kidney donation in 1999-2001: A survey of United States transplant centers," *American Journal of Transplantation* 3, no. 7 (2003): 830-4.

12. E.M. Johnson et al., "Complications and risks of living donor nephrectomy," *Transplantation* 64, no. 8 (1997): 1124-8.

13. See note 1 above.

14. Ibid.