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Donation after Cardiac Death: Consent Is the Issue, Not Death

Maryam Valapour

Maryam Valapour, MD, is an Assistant Professor at the Center for Bioethics and an Assistant Professor in the Department of Medicine, Division of Pulmonary and Critical Care Medicine, at the University of Minnesota in Minneapolis, valap001@umn.edu. © 2006, *The Journal of Clinical Ethics*. All rights reserved.

A significant challenge facing the organ transplant community is a critical shortage of organs. In the past decade, 83,928 individuals have become too sick to be transplanted or died while waiting for an organ.¹ As long as the supply of deceased organs remains stagnant and the net number of transplants remains the same, new sources of organs will be sought. One strategy has been to encourage the recovery and use of organs from donors after cardiac death. Donation after cardiac death (DCD) — although it predates donation after brain death — accounts for only 2.04 percent of all donors.² The disproportionate use of brain-dead donors is largely due to the fact that continued mechanical ventilation and circulation in brain-dead donors permits more optimal conditions for organ procurement. In addition, the practice of DCD has encountered some controversy — one of which is addressed in this issue of *The Journal of Clinical Ethics*.

James Bernat tackles the question of whether organ donors after cardiac death are really irreversibly dead, the confirmation of which is required by the Uniform Determination of Death Act (UDDA). The UDDA provides that "an individual, who has sustained either *irreversible* cessation of circulatory and respiratory functions, or *irreversible* cessation of all functions of the entire brain, including the brain stem, is dead."³ This article draws a distinction between *permanent* and *irreversible*, and clarifies that a permanent state is a contingent state that quickly progresses to irreversible if there is no intervention. Bernat convincingly argues and concludes that DCD does not violate the dead donor rule, and to alter public policy by employing the permanence standard produces an inconsequential outcome for DCD donors.

I agree with Bernat's conclusion. Furthermore, I believe that the more significant ethical dilemma in using DCD donors is *consent* — specifically, the consent of the recipient of the DCD organ, and not the donor. This point becomes clear when one reviews the effects of DCD on transplant outcomes. There is a higher risk of graft failure for DCD livers as compared to livers procured from standard criteria donors (SCD).⁴ For certain populations, the hazard ratio of death following transplantation with a DCD liver exceeds the risk of death without a transplant. Kidney transplants from DCD and SCD donors have similar adjusted one- and three-year graft survival; however, the rate of delayed graft function is almost doubled for DCD kidneys (40.1 percent compared to 21.2 percent).⁵ The national conference on DCD has recommended that the Organ Procurement and Transplantation Network require transplant centers to keep a list of candidates who are willing to accept DCD livers.

Organ transplantation is a field of medicine that is subject to rapid changes. New techniques, new drugs, and new technologies alter clinical practice routinely. The process of informed consent is especially problematic when transplant techniques are new and outcomes are uncertain, or worse when compared to standard practice, such as using the "ideal donor." In most areas of medicine, such procedures would never be offered to patients. However, with an average organ wait list mortality of 7,000 patients per year, not all patients can afford to wait for the ideal donor to become available.⁶ Informed consent by recipients in these cases requires continued discussion based on varying risk as the health of the recipient changes, the status of the donor changes, and medical knowledge grows.

NOTES

1. Based on the U.S. Organ Procurement and Transplantation Network data as of 14 April 2006.
2. R.J. Howard, J.D. Schold, and D.L. Cornell, "A 10-year Analysis of Organ Donation after Cardiac Death in the United States," *Transplantation* 80, no. 5 (15 September 2005): 564-8.
3. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, *Defining Death: Medical, Legal and Ethical Issues in the Determination of Death* (Washington, D.C.: U.S. Government Printing Office, 1981): 72-84.
4. New York State Department of Health Workgroup, "Workgroup on Expanded Criteria Organs for Liver Transplantation," *Liver Transplantation* 11 (October 2005): 1184-92.
5. J.L. Bernat et al., "Report of a National Conference on Donation after Cardiac Death," *American Journal of Transplantation* 5 (24 November 2005): 1-11.
6. U.S. Department of Health and Human Services, "Table 1.6," *2005 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients: Transplant Data 1995-2004* (Rockville, Md.: Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation), <http://www.hrsa.gov/>. The data and analyses reported in the *2005 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients* have been supplied by the United Network for Organ Sharing (UNOS) and the University Renal Research and Education Association (URREA) under contract with DHHS. The authors alone are responsible for reporting and interpreting these data; the views expressed therein are those of the authors and not necessarily those of the U.S. Government.