Increasing the Availability of Organs for Transplantation—We Can Do It!

Eliezer Katz, MD


Any physician involved in the treatment of patients with end-stage organ failure is familiar with the acute shortage of organs for transplantation. The waiting time for organs such as hearts and livers can be as long as 1 to 2 years. Every day patients are dying on the waiting list and others are being admitted to intensive care units for treatment of life-threatening complications from a failing organ. Can we do anything to improve this difficult situation?

Although most of the effort to increase the number of donors for transplantation is directed at public education and family consent, the primary responsibility to achieve this important goal lies with the medical community. Organ availability for transplantation is primarily dependent on the identification of all potential donors, a process that precedes the request for donation from the family. Therefore it is our obligation to create a system that would identify each potential organ donor. This should be a priority in the medical community at all levels. Hospital administrators, treating physicians, intensive care physicians, nursing services, social services, transplant surgeons and physicians, all need to work closely together to increase awareness of potential organ donors and to create a mechanism in each hospital that would identify all potential donors. This most important task cannot be left only to the organ procurement organizations (OPO). The recent new regulations published by the Department of Health and Human Services [1] require, as a condition for participation in Medicare, that hospitals report all deaths to the OPO and that death records be reviewed. This requirement is an indication of our failure, as a medical community, to identify all potential donors and to initiate the donation process.

In New England, 40 hospitals out of 180 contribute 95% of the organ donors [2]. If each of the 140 hospitals that are not donor hospitals would contribute one donor per year, this would result in almost doubling the number of organ donors per year in New England. However, if only 30% of these 140 hospitals would contribute one donor per year, the increase in the number of organ donors would still be very significant (20–25%). About 9% of the hospitals in New England are transplant centers; however, these centers contribute approximately 50% of the organ donors [2]. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) mandates the existence of an intensive care unit and an intensive care physician in each hospital. Therefore 99% of hospitals in the United States have an ICU. Is it not realistic to assume that in each of these ICUs there should be at least one potential donor per year?

In a report of the “Spanish Model” for improving the organ procurement rates [3], the contribution of nontransplant small hospitals to the overall donation activity increased from 23.6% in 1989 to 33.0% in 1995, while the total number of donors rose from 550 in 1989 to 1,037 in 1995. This indicates that the actual change in the donation activity of these small hospitals was from 130 donors in 1989 to 348 in 1995, an increase of 167%. What is striking in the report of the Spanish Model is that the significant increase in the number of organ donors in Spain from 1989 to 1995 (88.5%) occurred while the family consent rate has remained stable at around 75%. This implies that the increase of almost 90% in the number of organ donors in Spain is entirely the result of increasing the potential donor pool.

Increasing the potential donor pool, or identifying any potential donor, is the least that we as a medical community should do. In this volume, Delmonico and Reese review in their article the specific organ donor issues relevant to the intensive care physician. This is an important contribution because the intensive care physician is usually situated at the crossroads of the organ donor identification process. If intensive care physicians throughout the country embrace the concept of identifying potential organ donors, we will take a significant step toward increasing the number of organs donated.

The system that we should create in each hospital
to maximize the potential donor pool must comply with the strict policies and regulations that govern the process of donation. The shift from treating the victim of severe brain damage to managing the organs of a cadaver for transplantation is very difficult for any physician, and particularly for the intensive care physician who is actively involved in the unsuccessful effort to save the life of the potential donor. This shift requires the diagnosis of brain death and a change of concepts in medical management, both of which are outlined in the article by Delmonico and Reese.

Over the last few years the definition of potential organ donors has been extended to include higher age groups and donors that were traditionally rejected as not being "optimal donors." This change has been driven by the severe shortage of organs and by the wide experience that has been gained over the years with using suboptimal organs for transplantation. At present we should identify any patient with severe brain damage and imminent brain death, regardless age, past medical history, or the cause for the brain damage. Patients with anoxic brain damage from cardiac arrest and patients with extensive CVA in the age group of 50 to 80 years can be potential organ donors. The final decision to accept organs from a potential donor should be left to the transplant centers and the OPOs.

What type of system do we need in order to achieve this goal? The basic concept of the Spanish Model is the appointment of a "key person" in each hospital who is in charge of the identification and donation process. This key person should be a respected member of the hospital staff and should have the full support of the director of the hospital. He should develop the protocols that will ensure the identification of all potential donors in the hospital, the appropriate medical management of the potential donor, and together with the OPO’s staff, improve the practice of obtaining family consent.

The Spanish Model can be adapted to the U.S. healthcare system. The key person can be a physician, a nurse, or an administrator, as long as there is an identified person in the hospital who is committed to organ donation and takes responsibility for the identification and donation process. The intensive care physician, as has been suggested by others, may be the ideal key person. No matter what system we end up implementing, the important thing is for us, the medical community, to take the challenge and work together to solve this painful shortage of organs for transplantation.

References

1. Federal Register, 42 CFR Part 482, June 22, 1998