The Ethics Behind Organ Transplant

By
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In the last century there have been a lot of medical advances. Just a few decades ago the DNA was discovered, a lot more disease states were understood better, a great deal of medications became available, the human genome was fully discovered, a lot more vaccines that saved and still saving million of people are more accessible and the medical technology has improved immensely. All of this advances gave our professionals the chance to serve better their patients, to increase the life expectancy, to improve the quality of life and ultimately to save lives. The technology is our master. But should it always be? Bioethics is another field that has grown over the time span. Much of the concern about ethics is driven by the power of the new technological medical prowess. All too often it seems as though medicine asks, “Can we?” before asking “Should we?” and thus many Americans are doubtful that ethics can ever keep pace with rapidly changes in technology. A very controversial field in medicine is organ transplant. The progress in the field has been astounding but a lot of ethical issues need answers. There are so many hard questions that ethicists try to answer over time trying to make it fair and still keep it human to our society, without making it take off the robe of dignity. Who is eligible for an organ transplant? Where do they come from? Can you receive two of them? Are they any rules that apply to receiving organ? Is there a line between death and life? The number of people needing transplant increases everyday and with that, a lot of ethical issues that need understanding.

An organ transplant is a surgical operation where a failing or a damaged organ in the human body is removed or replaced with the new one. The organ transplant is a very sensitive
subject. There are currently 97,900 on the waiting list. (12/3/2007). An average of 18 men, women and children die every day waiting for an organ transplant; in 2006, there were 5423 people who died waiting. More than one million people benefit from organ transplant each year. A single tissue donor can improve the quality of life of more than 50 people. The most wanted transplants are kidney and liver with 73,913 and 16,678 respectively. If we compare the demand and the supply in 2006 there were only 17,092 and 6,650 kidney and liver transplant respectively performed, which leaves thousand and thousands of people waiting in the agony of death. The number of donors in 2006 was close to 15,000 from which 8,024 deceased and 6,732 living.¹

**How does this process occur?**

If a person does not have a readily available living donor or is ineligible for a living donation because their predicted outcome is questionable, they are placed into a waiting pool for an organ from a cadaver by their transplant center. The United Network for Organ Sharing (UNOS) maintains the list for the national waiting pool.

When organ donors are available after a person dies an organ procurement organization (OPO) takes the organs into custody. The OPO then matches the donor organs with the appropriate transplant patients and by gathering information about the donor organs and entering it into a computer program. The program takes this information and compares it to the information about the patients in the waiting pool. The computer then generates a ranked list of transplant patients who can receive the donor organs. Information that factors into this ranked list include:

- Organ type, blood type and organ size
- Distance from the donor organ to the patient
- Level of medical urgency (not considered for lung transplant agencies)
- Time on the waiting list
After the generation of the ranked list, the donated organ is offered to the first patient’s transplant center. However, the first person on the ranked list may not receive the organ. Additional factors can be evaluated before the organ procurement organization selects the appropriate candidate are:

- Is the patient available and willing to be transplanted immediately?
- Is the patient healthy enough to be transplanted?

Once the candidate is located, the organ procurement organization takes the organ and delivers it to the transplant center where the transplant will be performed. This entire process must occur very quickly as organs are only transplantable for a short period after they have been removed. After the surgery takes place, the patient still faces the possibility of a rejection, where body fights off the newly implanted organ. In fact, the body’s immune system treats the organ as it would any other harmful foreign invader by producing antibodies that go to the transplanted organ and try to kill it. This is the main reason why people who have transplants need to be on immunosuppressant for a long time in order to allow this organ to become an integrated and independent functional part of the human body.\(^2\)

There are two sources of organ donors. The first source of organ removes them from recently deceased people. These organs are called cadaver organs. A person becomes a cadaver organ donor by indicating that he would like to be an organ donor when he dies. This decision can be expressed either on a driver’s license or in a health care directive. In Minnesota, designating your organ donation desires on a driver’s license is legally binding.\(^3\)
The other source for donor organs is a living person. Living donors are often related to the patient, but that is not always the case. Spouse and close friends frequently donate organs to the ailing loved ones. Some people who wish to donate their organs may decide to donate to a stranger. A few non-for-profit organizations maintain a list of willing living donors. For example the National Marrow Donor Program maintains a list of people willing to donate bone marrow to a stranger and there are a variety of non-related living kidney donor organizations that maintain regional lists of willing donors.\

Individuals who wish to donate one of their organs to a stranger may also initiate a nondirected donation (NDD). Nondirected donors approach either a transplant center or a nationally sponsored organ procurement organization and offer one of their organs for transplant to anyone who may need it.

There are a few ethical issues that exist regarding this whole topic. One of them is the organ shortage. Not everyone who needs an organ gets one and in fact, the scale tips on the opposite direction. According to UNOS in 2003 there were 19,000 organ transplant performed. These organs were taken from approximately 9,800 donors both living and deceased. Even though that number is still considerable there are over eighty thousand on the waiting list and this number keep getting bigger and bigger every day.

One key in this problem is the distribution of the available organs. The concept of distributive justice states that there is not one “right” way to distribute organs, but rather many ways a person could justify giving an organ to one particular person over someone else. One distributive justice criteria is equal access. Organs are distributed to patients based on objective factors aimed
to limit bias and unfair distribution. Those criteria include length of time waiting (first come first serve bases) and age (young vs. old).

Equal access supporters believe that organ transplantation is a valuable medical procedure and worth offering to those who need it and it should be accessed equally. This theory encourages a distribution process that is free of biases based on race, sex, income level, and geographic distance from the organ and free of medical or social worthiness biases.  

According to the United Stated Department of Health and Human Services the waiting time for an intestine transplant is mostly 1-5 years. The transplant data from 1996 to 2006 from the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients provided us with some interesting results. We generally see an increase in number in the last decade. There were 150 such transplants procedures done during 2005 and 35.3% had been waiting less than 5 years.

The same study differentiated also that the people who received these services were mostly U.S Citizens, a small percentage of nonresident alien and a minute percentage were unknown. From 1997 over 90% of Americans were able to receive these services and in 2005 all people were American citizens. In the last 2 and 3 years we see less and less Aliens benefiting from these services. The demographic data showed that 56% were males and 44% were females. Ethnicity data showed that 63.3 percent of the patients were white, 18.7% were African Americans followed by 13.3% Hispanics/Latinos.

Let’s come back to the issue of equally accessing sources.

What I meant above by medical bias is exclusion factors for people who smoke or drink since this lifestyle damaged their organs. Social “worthiness” biases would factor in a patient’s place in society or societal contribution before giving them an organ.
At this point everyone will ask himself or herself and wonder: What about the prisoner? Are they allowed to have a transplant?

It really hard to base the organ transplant on the worthiness theory because the individual worth does not in determine medical need. It also get more complicated when you think about who will determine who is or who is not worthy of a medical procedure and how fair it is to label someone worthy or not worth of a medical procedure.

On the other hand, some ethicists argue that individual worth is important to consider during organ distribution. They argue that the distribution is biased against worthy individuals when individual worthiness is not included.

One example of this argument comes from the 1990 article in the Canadian Medical Association Journal by E. Kluge. Kluge argues that equal access distribution of organs is not fair and just if it includes people whose lifestyle choices, namely tobacco and alcohol use, ruined their organs. His logic behind it is that people who engage in poor lifestyle choices are behaving irresponsibly and could have prevented their illness and are, in essence, increasing the need for organs and depriving people who, “have no control over their need”, of necessary treatment. 7

The second type of distributive justice criteria is maximum benefit. The goal is to maximize the number of successful transplants and to avoid wasting since the organs are so scarce. 8 So the maximum benefit criteria include: medical need and probable success of a transplant (i.e. giving organs to the person who will be most likely to live the longest).

There are also arguments that oppose the maximum benefit distribution criteria. First, predicting medical success is difficult because a successful outcome can vary. Is success the number of years a patient lives after transplant? Is success the level of rehabilitation and quality of life the patient experience afterward?
The second argument against the maximum benefit distribution is that distributing organs in this way could leave the door open for bias, lying, favoritism and other unfair practices more so than other forms of distribution due to the subjective nature of these criteria. Third, some ethicists argue against using age and maximizing life years as criteria for distributing organs because it devalues the remaining life of an older person waiting for a transplant. Regardless of how old someone is, if that person does not receive a transplant they will be still loosing “the rest of his or her life”.\(^9\)

As I mentioned above, there are a lot of ethical issues associated with organ transplant and in order to avoid them a simple solution would be to increase the number of organs available for transplant. But on the other side this could be controversial because driven by the desire to harvest the organs, people might declare premature death.

I personally support the whole idea of organ transplant and being in the health field I can appreciate even more the importance of organ donation in continuation of life. Once I was asked if I wanted to add in the driver’s license to be an organ donor and I hesitated. The only thing that came into my mind was: What about if they do not try to save or declare me dead just to harvest my organs? I felt like my soul and body did not belong together.

Dr Lawrence A. Howard says in the article Ethics of Organ Donation in the JS Online Milwaukee Journal Sentinel that it is hard to define death in a person with heartbeat and some intact vital functions, supported by a ventilator and intravenous drugs. Defining death was easier when the definition of death was, simply, no heartbeat and no effort to breathe. Consider this situation and describe how hard it is to make the decision.

A 32-year-old man is totally unresponsive to pain and makes no effort to breathe
on his own following a traffic accident. He is brought to the operating room for the kidneys and his liver. The anesthesiologist in charge of keeping his heart beating to preserve the organs before their removal gives him an antidote of a muscle relaxant that were given when the accident victim was first hospitalized. The dead man begins to breath and grimaces in pain as the surgeon cut. “Stop,” calls out the anesthesiologist! “This man is still alive!” “Too late,” answers a member of the surgical team, “We have already removed his liver.”

Another example:

A young woman has lapsed into a coma during childbirth from a rare complication. She has been on a ventilator for three days and she is totally unresponsive. On the way to the operating room, the anesthesiologist notes that the ventilator had been set to give too much inflation. After correcting this problem the woman began to breathe on her own. The transplant team wants to go ahead because everything has been set up for an organ transplant. The anesthesiologist refuses to assist in the operation. The surgeons tell him that they will continue without his help. He calls an administrator to stop the procedure. Several days later, the woman is able to sit up in bed and can talk to her husband.

In Medieval times, noblemen were buried with a bell they could ring if revived in their caskets. Being buried alive in that medically unenlightened era was a distinct possibility.

Today, we use medical tests, some of which are dependent on the perfect functioning of complicated electronic devices. Clearly, this is wrong. Most, but not all, doctors use more than just EEG showing no brain wave activity because the brain may recover after showing no activity and a loose connection or malfunctioning transistor can result in a false result.
It is now recommended that several things are needed before declaring a person with a beating heart a corpse.

- No brain wave activity.
- Fully reversed sedation, anesthetics, and muscle relaxants that may mimic a death-like condition by causing reduced brain wave activity and lack of responsiveness or coma.
- No attempt to breathe in the presence of normal blood gases during ventilator support.
- No cranial nerves.
- Brainstem evoked potentials are absent.
- No blood flow in the brain.

As you notice the coma is not included in the criteria. The problem with declaring a person dead because they appear to be in a hopeless coma is a controversial, especially in a young person, since the miraculous recoveries from coma are well recorded. Dr Lawrence stresses the fact that people in coma condition should not be considered organ donors until coma is hopeless. Living wills can help caregivers make a decision of life and death. Anyone making that decision of life and death must follow the strict guidelines to avoid murder. Organ harvesting teams must practice with scrupulous ethics and avoid “for profit” motivation. The concept on a non-person must be very clear and not subject to interpretation. Anesthesiologists must always act as a patient advocate before participating in organ harvesting.  

As I mentioned a little bit above once the person dies the organs will be harvested in case he consented prior to death. If not then the hospital, the physician or an organ procurement
organizations will approach the family to obtain consent to remove the organs. The family members with the authority to do are generally determined by this hierarchy:

- Spouse. If no spouse, then ….  
- Adult child. If no adult child, then….. 
- Parent. If no parent, then…. 
- Adult sibling. If no adult sibling, then …. 
- Legal guardian. 11

Typically several organs can be recovered from a single cadaver so this is the natural place to look to increase the number of available organs. There are five strategies that can help achieve that goal.

1. Education:

Some educational efforts focus on increasing the number of people who consent to be an organ donor before they die. Other educational efforts focus on educating families when they are considering giving consent for their deceased loved one’s organs. Social responsibility and the idea of “the gift of life” are popularized by UNOS and other organizations that seek to promote the idea of cadaver organ donation.

2. Mandated Choice:

Under this strategy, every American would have to indicate their wishes regarding organ transplantation, perhaps on income tax forms or drivers licenses. When a person dies, the hospital must comply with their written wishes regardless of what their family may want.

The positive aspect of this strategy is that it strongly enforces the concept of individual autonomy of the organ donor.

A mandated choice policy would require an enormous level of trust in the
medical system. People must be able to trust their health care providers to care for them no matter what their organ donation wishes. A 2001 survey of 600 family members who had experience donating organs from a deceased loved one, found about 25% of respondents would be concerned that a doctor wouldn’t do as much to save their loved one’s life if they knew they were willing to donate their organs.

3. Presumed consent:

This method of procuring organs is in fact the policy of many European nations. In countries with presumed consent, their citizens’ organs are taken after they die, unless a person specifically requests to not donate while still living.

Advocates of a presumed consent approach might say that it is every person’s civic duty to donate their organs once they no longer need them (i.e. after death) to those who do. People against presumed consent would argue that to implement this policy; the general public would have to be educated and well informed about organ donation, which would be difficult to adequately achieve. Doubters of the presumed consent approach might also argue that requiring people to opt out of donating their organs requires them to take action and this might unfairly burden some people. There are worries that people who frequently choose not to donate organs for religious and cultural reasons (minority cultural groups and immigrants, primarily) might find it the most challenging to opt out of donating due to language barriers, transportation difficulties or for other reasons.

4. Incentives

Incentives take many forms. Some of the most frequently debated incentive strategies are:

1. Give assistance to families of a donor with funeral costs

2. Donate to a charity in the deceased person’s name if organs are donated
3. Offer recognition and gratitude incentives like a plaque or memorial

4. Provide financial or payment incentives

One of the most highly debated incentives would give donating families assistance with burial or funeral costs for their loved one. With funerals costs in the thousands, this could be an attractive incentive for many families. The majority of members of the American Society of Transplant Surgeons support funeral reimbursement or charitable organization donation as a strategy to increase donation. ²

Many people favor charitable donation or recognizing donors as an incentive for organ donation. Some argue that providing recognition of a donor is not really an incentive at all, but merely an appropriate response to a very generous donation. Another twist on this group of incentives is offering recognition or charitable donation to people while they are living to encourage them to donate. Proponents say that since the person will be dead and unable to receive the recognition, that this would not be a coercive action. ¹¹ Some ethicists believe that many of the incentives above, while not attached directly to cash money, are still coercive and unfair. They believe that some people will be swayed to donate, in spite of their better judgment, if an incentive is attractive enough. They further argue that a gesture may seem small and a mere token to one person, but others might interpret it quite differently. A final anti-incentives argument offered by some ethicists discourages the practice of incentivizing organ donation. They believe that society should instead re-culture its thinking to embrace a communitarian spirit of giving and altruism where people actively want to donate their organs.

5. Prisoners
The final strategy under consideration to increase the number of available cadaver organs is to use organs taken from prisoners who are put to death. One argument in favor of taking organs from prisoners who are put to death, is that it is the execution that is ethically unsound and not the organ removal. Indeed, in light of the severe organ shortage, some ethicists could make the argument that to not use the organs for transplantation is wasteful. John Robertson, in a 1999 article, put forth the argument that obtaining organs from condemned prisoners is allowable if the prisoner or their next of kin consents to donation, as long as organ donation is not the means by which the prisoner is killed because that violates the principle that a cadaver donor being dead prior to donation. Finally, some could argue that organ retrieval from executed prisoners is morally justifiable only if a “presumed consent” donation practice was in place.

Since there is a discrepancy between the organ donors and people waiting for an organ transplant, researchers and advocates had begun to consider non-traditional donations. Some potential non-traditional sources of organs are animal organs, artificial organs, stem cell, and aborted fetuses.

Animal Organs: Experiments with baboon hearts and pig liver transplants have received extensive attention. One cautionary argument in opposition to the use of animal organs concerns the possibility of transferring animal bacteria and viruses.

Artificial Organs: Artificial organs are yet another potential option. The ethical issues involved in artificial organs often revert to questions about the cost and effectiveness of artificial organs. People who receive artificial organ transplants might require further transplanting if there is a problem with the device.

Stem Cells: Stem cells are cells that can specialize into the many different cells found in the human body. Researchers have great hopes that stem cells can, one day be used to grow entire
organs, or at least groups of specialized cells. The ethical objections concerning stem cells have focused primarily on their source. While stem cells can be found in the adult human body, the seemingly most potent stem cells come from the first few cells of a human embryo. When the stem cells are removed, the embryo is destroyed. Some people find this practice morally objectionable and would like to put a stop to research and medical procedures that destroy human embryos in the process.

Aborted Fetuses: Aborted fetuses are a proposed source of organs. Debates address whether it is morally appropriate to use organs from a fetus aborted late in a pregnancy for transplantation that could save the life of another infant. Many people believe that this practice would condone late-term abortions, which some individuals and groups find morally objectionable. Another objection comes from people who fear that encouraging the use of aborted fetal organs would encourage “organ farming”, or the practice of conceiving a child with the intention of aborting the fetus for its organs.

Transplantation has been viewed as a model of how society generally works, the study of which has provided great insights on a variety of important topics to sociologists, philosophers, theologists and economists. The academic value of transplantation has proven to be powerful, but the ethical and practical policy issues that must be addressed by the reality of scarcity will occupy center stage in discussion of transplants for years to come. Looks like the ethical price is too high sometimes.

I tried to represent some of the most important issues in the field, even though there are so many more that need to be addressed. As the bioethics keep growing we will see even more of these issues out there and maybe as a health care professional we need to make a choice. That is
why it is really important to keep our minds open, but not only considering the scientific side of
the problem, but also the ethics behind it. In one of the above pages I explained how I felt about
being a organ donor myself. Now my prospective is completely different. Being a donor you are
giving life and this is the “legacy” I want to leave behind.

Give life.

Edited by Nissrine Kazoun 1/2008

References

1. United States Department of Health and Human Services. 2006 OPTN / SRTR Annual Report:
Transplant Data 1996-2005. Available from:


