



DIVISION OF MEDICAL ETHICS  
HIGH SCHOOL BIOETHICS PROJECT

# Organ Donation

## Overview

The ethical questions raised by organ transplantation are multiple and complex. Three main issues include the fundamental morality of transplanting body parts, the ethics of organ procurement, and the ethics of allocation. Does organ transplantation involve too much manipulation of nature, and lead to scenarios of “playing God”? The technological and medical advancements associated with organ transplantation have saved the lives of many, but with more than 100,000 candidates on the waiting list in the United States, viable organs are far too scarce to meet every patient’s needs. Given the shortage, who should get the available organs, and by what criteria should this decision be made?

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## **Learning Outcomes**

1. Understand the different methods of organ donation and the different definitions of death
2. Understand different religious and ethical concerns about organ donation
3. Think critically and form opinions about which issues are most important to consider in the determination of allocation

## **Procedures and Activities**

This unit uses a student-centered and interactive approach to teaching. Activities are designed to allow for a maximum degree of student participation and collaboration. Each activity is marked as an individual, partner, or group activity, or as a teacher-directed class discussion. The following terms are used to designate the different types of activities:

- Individual Activity
- Partner Activity
- Group Activity
- Teacher-Directed Class Discussion

### **1. Introduction to Topic**

Students should answer these questions individually at the start of the unit. The purpose of the activity is to collect the student's opinions and ideas *before* learning the information in the unit, so teachers should avoid answering too many questions about terminology.

1. Is there anything fundamentally wrong with organ transplantation? Does it cross the boundaries of Western values of medicine?
2. What should matter more in the process of allocation: gauging the best match for the organ, or factors of justice, such as time spent on a waiting list?
3. Should everyone be required to register as an organ donor?
4. What ethical concerns are most important in the retrieval of organs for donation?
5. How can you ethically persuade someone to become an organ donor?

## **2. Definitions of Death and Current Systems of Donation**

### **Teacher Directed Class Discussion**

The purpose of this activity is to provide background on the various definitions of death and the current systems in place to acquire organs for transplantation. This section will help students fully understand the complex nature of this topic and form opinions about which definitions they think should be used.

### **Definitions of Death**

In the last two decades, four major definitions of death have emerged.

#### *1. Traditional*

A person is considered dead when he is no longer breathing, and his heart is not beating. In other words, death is defined by a permanent cessation of breathing and blood flow. This can also be referred to by the more modern name, the circulatory-respiratory definition of death. Once the body has been without circulation for long

enough that auto-resuscitation is impossible, the cessation of circulation quickly becomes irreversible.

## *2. Whole Brain*

Death is viewed as the irreversible cessation of all brain functions. There is no electrical activity in the brain, including in the brain stem, responsible for the most basic of bodily functions.

## *3. Higher Brain*

Death is considered the permanent loss of consciousness. Someone in a persistent vegetative state would be considered dead, even though the brain stem is still regulating breathing, heartbeat, and other functions.

## *4. Personhood*

Death occurs when an individual ceases to be a *person*. Criteria for personal identity or for being a person typically include activities such as reasoning, remembering, feeling emotion, possessing a sense of the future, and interacting with others. This definition is more concerned with individual function than brain function.

# **Systems of Donation**

## *Deceased Donation*

This is the most popular form of donation in the U.S. It refers to donation of organs after death. Nearly all organs in the body can be donated, including skin and eyes. The United States Uniform Anatomical Gift Act, passed in 1968, provides a regulatory framework for organ donation. It allows for the use of donor cards to grant medical staff permission to harvest a person's organs for transplantation after death. Donor information is included on driver's licenses to make this information easier to find. However, since registration is elective, a large portion of Americans do not sign up to be organ donors for one main ethical reason: the fear that if they agree to donate, they will receive suboptimal care so their organs can be obtained sooner.

Even when people are willing to donate organs after death, there are sometimes barriers to retrieving their organs. Organs may not be viable for donation due to the nature of the illness or disease that caused death. Sometimes death occurs outside the hospital, and organs go too long without blood flow or oxygen between death and time of retrieving the organs, meaning that the organs may not be suitable for transplant. Finally, even when a person has registered as an organ donor, the family of the deceased person can override their decision at the time of death.

### *Donation After Brain Death*

This is the most common kind of organ donation. These donors are declared dead by cerebral criteria, either whole-brain death or higher-brain death. Such donors are typically terminal patients who will not survive once their life-sustaining interventions (e.g. breathing tubes) are withdrawn. These patients are brought into the operating room where the life support is withdrawn. Usually within a couple of minutes, the heart will stop beating and blood will stop flowing. The organs are then removed for transplantation.

This harvesting method keeps blood flowing to the organs to be transplanted until organ retrieval occurs. This means that organs do not go long without oxygen or blood flow, as usually happens when death occurs outside the hospital. The organs that are retrieved are safe to transplant.

### *Live Donation*

Live donation is possible for certain organs, for example the kidney and liver. Live donors can donate one kidney or a piece of their liver without suffering major adverse consequences. Undergoing major surgery as a live donor does come with its own risks, and they may suffer complications from liver and/or kidney disease later in life. Live donors must undergo extensive education about the retrieval procedure and its risks, as well as a medical and psychosocial evaluation. This process is in place to ensure that the decision to donate is informed, freely made, and altruistic, and to make sure the donor is a match for the recipient.

It is currently illegal in the U.S. to accept payment for the donation of a kidney, liver, or any other organ. Live donation is legal only when the donation is made altruistically.

### **3. Religious and Cultural Perspectives**

#### **Group Activity**

The purpose of this activity is to provide a background on religious perspectives regarding organ donation and transplantation. This section is important for understanding the full picture of organ donation because most decisions about donation involve, at least to some degree, the religious beliefs of the donor and the family. Whether a particular family identifies with a religion or not, it is important for the physician to respect the family's specific wishes. These are general descriptions of beliefs of the world's major religions; there are other religions, and of course variety within the religions discussed.

Information from:

Gillman J. "Religious perspectives on organ donation." *Critical Care Nursing Quarterly*. 1999;22(3):19–29.

The major faith traditions can be split into two main groups: Eastern and Middle Eastern. Eastern religions include: Hinduism, Buddhism, Shinto, and the Chinese traditions of Confucianism and Taoism. Middle Eastern religions include: Judaism, Christianity, and Islam.

#### **Hindu, Buddhist, and Shinto beliefs**

Continual rebirth, or reincarnation, is a core aspect of Hinduism and Buddhism. According to the Hindu Temple Society of North America, individuals are not prohibited by law from donating organs. In fact, "Hindu mythology has stories in

which the parts of the human body are used for the benefit of other humans and society. There is nothing in the Hindu religion indicating that parts of humans, dead or alive, cannot be used to alleviate the suffering of other humans.” In Japan, where both Buddhism and Shinto are prominent, religious leaders have not taken a strong stance on the matter. However, there is some evidence to support that they have an affirmative position on organ donation. In general, the altruistic traditions and high value placed on compassion in these religions leads to wide support of organ donation.

## **Chinese beliefs**

Chinese culture is heavily influenced by Confucian ethics and the Taoist tradition. A high regard is placed on filial piety, which poses a great barrier to organ donation. In this culture, your body is sacred and does not belong to you but rather it is a gift that is inherited from one’s parents and ancestors. Due to these strong beliefs, organ donation is not supported because a person is not allowed to damage the body or place it at risk.

## **Judaism**

Conservative and Reform Jewish beliefs permit, and even encourage, organ donation. For the Orthodox sector, there is no consensus regarding the criteria for death. However, some religious leaders have come out in favor of the brain death definition, thus making organ donation possible. Additionally, Orthodox Rabbi Moses Tendler, chair of the Bioethics Commission of the Rabbinical Council of America, has gone on to assert that “if one is in the position to donate an organ to save another’s life, it’s obligatory to do so.” In the Jewish tradition, saving a human life is considered one of the noblest acts a human can perform, which provides further support for organ donation.

## Christianity

All three branches of Christianity—Catholic, Protestant, and Orthodox—support and encourage donation. The U.S. Conference of Catholic Bishops affirms that organ donation is morally permissible, encouraging it as an act of charity. Other Christian groups who do not have explicit views about organ donation believe that it is an individual choice for people to decide on their own.

## Islam

Most Muslim scholars promote the value of preserving human life and thus allow organ transplantation as a necessary means to attain a noble end. However, there is not unanimous support among the community. Some Muslims believe that the body should be returned to Allah without change.

## Group Activity

Optional Assignment: Ask each group to research and find a news story about a case where one of the religions listed interfered with a decision about organ donations or otherwise made a public statement about organ donation.

<b>RELIGION</b>	Yes to Donation	No to Donation	No Strong Stance
Hindu			
Buddhism			
Shinto			



<b>RELIGION</b>	Yes to Donation	No to Donation	No Strong Stance
Chinese beliefs (Confucianism and Taoism)			
Judaism (discuss Conservatism, Reform, and Orthodox separately)			
Christianity			
Islam			

#### 4. Allocation

The purpose of this section is to present the social impact of organ donation. The background on medical definitions and religious views will help students form opinions on how organs should be allocated.

Information from:

Munson R. “Scarce Medical Resources.” *Intervention and Reflection: Basic Issues in Medical Ethics*. Belmont, CA: Thomson Wadsworth. 2008:454–508

HRSA: Organ Donor Statistics. <https://www.organdonor.gov/learn/organ-donation-statistics>. Accessed 9 Dec 2021

#### Teacher-Directed Class Discussion

Nearly 40,000 people received organ transplants in 2020. However, about 17 people die each day while waiting for organs, and at any given time, 100,000+ people are

on the organ transplant waiting list, with a person added every 9 minutes. As you see, healthy, transplantable organs are a very scarce resource.

The United States Network for Organ Sharing (UNOS) is a federally funded group that is responsible for allocating organs for transplantation. It was created in 1984. It runs the Organ Procurement and Transplantation Network (OPTN). Members of the OPTN facilitate harvesting and transplanting organs. UNOS oversees and creates policies for the allocation of organs. They seek to allocate organs in accordance with defensible ethical principles. Two guiding principles are explained below.

## **Utility**

The principle of utility holds an action or practice to be right if it promotes as much or more total benefit than any alternative action or practice. The principle of utility specifies that allocation of organs should maximize the expected net amount of overall good (that is, good adjusted for accompanying harms), thereby incorporating the principle of beneficence (do good) and the principle of non-maleficence (do no harm).

Utilitarianism considers all possible goods and harms that can be envisioned, considering the quantity and probability of the various outcomes, e.g. giving an organ to Person A instead of Person B. Goods and harms are not limited to what may be defined as “medical goods.” For example, factors to be considered in the application of the principle of utility are:

1. Patient survival: the person who is most likely to survive transplantation
2. Graft survival: the person whose body is least likely to reject the transplanted organ, determined by who is better suited for the HLA tissue match
3. Quality of life: the person who will enjoy a greater quality of life after transplantation

4. Availability of alternative treatments: those who can be medically managed in the short-term or have alternative long-term treatments
5. Age: those who are younger tend to do better post-transplant and have fewer comorbidities.

There is wide societal acceptance that we should ignore the social worth or value of particular individuals, and ignore predictors of group outcomes from consideration in utility models of allocation. This means we do not consider things like socioeconomic status, career (e.g., a doctor vs an office worker), race, or education in determining who ought to receive an organ.

Those who are sicker, who tend to be older and suffering from multiple diseases or illnesses, tend not to receive organs, while those who are likely to do well after transplantation, and so benefit more from the transplant, will be prioritized. This principle is supported by most of the medical community because it would lead to the highest possible number of successful transplants, since it will prioritize those who are the best matches and are likely to receive best follow-up care.

## **Justice**

Under this principle, all people should have an equal right to the benefits of the transplant program regardless of their genetic makeup including race, gender, or HLA pattern, quality of life, age, or other factors that go into determining utility. People who support justice-based allocation systems tend to support adjustments in the UNOS system that would provide more equal access. Such adjustments might include adding weight to factors such as time on the waiting list (prioritizing those who have been waiting longest), blood type (prioritizing those who have a rare blood type), and a marker for previous exposure to foreign tissue that decreases the chance of finding a suitable organ. It is mainly non-physicians who support this system.

Justice, as used here, refers to fairness in the pattern of distribution of the benefits and burdens of an organ procurement and allocation program. Thus, it is concerned

not exclusively with the aggregate amount of good that is produced, but also with the way in which that good is distributed among potential beneficiaries. This does not mean treating all patients the same, but it does require equal consideration and concern for each patient. In general, allocation of organs based on social characteristics (such as race, socioeconomic class, gender) will conflict with the principle of justice. From the OPTN Website:

“In a public program, all members of the public are morally entitled to fair access to its benefits. This means that even if we could determine precise measures of medical benefits such as predicted quality adjusted years of life added, the allocation that maximizes [Quality-Adjusted Life Years] may not always be the morally right allocation, all things considered. For this reason, allocation schemes routinely consider medical need as well as medical benefits, prioritizing the medically sickest patients even if it is predictable that other patients who are not as sick will have better outcomes.

Many other factors might be included in an allocation policy not because they promote utility, but because it appears necessary to treat potential recipients fairly by giving everyone an equal opportunity to receive an organ when they are in need. Factors to be considered in the application of the principle of justice are: 1) medical urgency; 2) likelihood of finding a suitable organ in the future; 3) waiting list time; 4) first versus repeat transplants; 5) age; and 6) geographical fairness.”

## **Balancing Social Utility and Justice**

The UNOS committee has been unable to decide which principle is more important so they reached a compromise. Half the weight in the allocation process is given to social utility and the other half to considerations of justice.

## **Criteria Chart**

## Individual or Group Activity

Students should fill out this chart individually and then discuss in small groups. The purpose of this activity is to determine which criteria are most important for determining which recipient is most deserving of the organ. This activity should help the students figure out if they think the principle of justice or social utility is more important.

<b>CRITERIA</b>	Important to consider	Not important (because...)
Age		
Gender		
Quality of HLA tissue match		
Medical condition of recipient		
Place of residence/ proximity to transplant site		
Personal accomplishments		
Worth to community		
Parental status		
Lifestyle choices: smoker, alcoholic		
Intelligence		

## 5. Increasing Supply

### Partner Activity

Clearly, the major obstacle to the organ transplant system is simply that there are not enough organs for everyone who needs them. In this section, present students with the different possibilities for increasing supply that are explained below. Then, split them up into pairs to answer the following questions:

1. Which system do you think is best?
2. Come up with and design a system that would work better. Suggestions include: technological solutions, animal transplantation, and stem cells.
3. What are the potential ethical problems that might come up with your new system?

After they have answered these questions in pairs, bring the class back together and discuss all potential ideas together.

### Potential Solutions

#### *Required Request and Required Response Laws*

Virtually all states promote laws to increase donation. A federal law passed in 1997 mandated that donor cards be sent with each tax refund check that was mailed to U.S. citizens to encourage participation in the donor registry. Citizens are not required, however, to return the donor registration card.

Required response laws would require individuals to respond to the question “Would you like to be an organ donor?” to receive certain benefits, e.g. a driver’s license. People can decline, but they must respond. Required response laws might increase donation by requiring citizens who are willing to donate to register. Some people may be willing to donate but not know how to sign up for a donor registry.

Required response will ensure that all those who are willing to donate register to do so. Permission from immediate family at the time of death is still required to follow through with the donation.

### *Donation after Cardiac Failure*

This system involves acting on the requests of patients (and their representatives) to remove their organs when their hearts stop beating even if they may not yet be legally brain-dead. An example of this would be a patient on a ventilator who wants to be weaned off even though this weaning will result in death, or someone who is in an irreversible coma. The ventilator would be removed in the operating room and three minutes after the heart stopped, indicating cardiac failure, organs would be removed for transplant.

### *Organ Protection before Obtaining Consent*

This is an extremely innovative but controversial approach. It involves injecting organ-preservation drugs into patients who died in the emergency room or on their way to the emergency room or even outside the hospital. The organs would not be removed but rather preserved to gain more time to get family permission. Preservation drugs keep the organs intact and healthy until the decision whether to donate can be made. This means that more organs can be safely transplanted even when death occurs outside the hospital, since they will have been preserved properly.

Critics of this technique claim that hospitals do not always determine that the patient is dead before injecting the drugs and that the drugs can harm living patients. Supporters say that it gives the family more time to recover from the shock of losing a loved one and allows for them to make reasoned decisions. In this sense, it is more humane than asking the family immediately after death.

For further reading on this proposal, see Wall, Plunkett, and Caplan (2015).

### *Selling Organs*

There are many different possibilities for this scenario. Patients can arrange payment for the posthumous use of their organs before their death, or families

might sell the organs after death. Another proposal is that the donor or their family should receive tax credits. However, the public typically reacts negatively to these ideas, due to the fear that it would result in the open auction of organs. In 1984, the National Organ Transplantation Act made the sale of organs for transplant illegal in the United States.

An additional option involves allowing living donors to sell non-vital organs for money. The main concern with this scenario, however, is that it would most likely take advantage of economically distressed individuals. Is it ethical to take advantage of the poor in order to harvest more organs? Who should decide whether the poor are allowed to sell non-vital organs?

HBO Documentary Films produced *Tales from the Organ Trade* with filmmaker Ric Bienstock. According to the website, it “explores the controversial practice of black-market organ trafficking: from the street-level brokers who solicit kidney donors, to the rogue surgeons who perform the operations; from the impoverished donors willing to sacrifice a part of their bodies for a quick payday, to the desperate patients who face the agonizing choice of obeying the law or saving their lives. With unprecedented access to all the players, this 83-minute documentary explores the legal, moral and ethical issues involved in this complex life-and-death drama.” It is available to watch (subscription required) on HBO’s website: <http://www.hbo.com/documentaries/tales-from-the-organtrade/index.html>. Teachers might consider watching the film to spur discussion of the ethics of selling organs.

### *Presumed Consent/Opt-Out*

This system involves a state or federal law that would allow hospitals to assume that a deceased person has agreed to donate, unless the person had indicated otherwise, or the family objects. Organs would be harvested unless there is proper notation that the deceased person does not want to donate her organs, or her family objects. This system has been adopted in many European countries, but it is unclear if it would increase the number of available organs for transplant, and it is unlikely to be tolerated in the United States.



## *Altruistic Donation*

Altruistic donation is currently in place in the U.S. Many argue that it is the most effective, and that families who donate can be satisfied knowing that the death of their loved one brought some benefit to another person.

## **6. Debate Topic**

### **Group Activity**

Students should read the following articles (both of which can be found in Intervention and Reflection)

1. Appel JM. "Wanted dead or alive? Kidney transplantation in inmates awaiting execution." *Journal of Clinical Ethics*. 2005;16(1):58–60.
2. Sade RM. "The prisoner dilemma: Should convicted felons have the same access to heart transplantation as ordinary citizens?" *Journal of Thoracic and Cardiovascular Surgery*. 2003;125(3):452–53.

Split the class into two groups to debate the following statement: Convicted felons and ordinary citizens should have equal access to organs on the transplant list.

## **7. In the News**

### **Group Activity**

The purpose of this section is to present the students with actual news stories about ethical issues involved with organ transplants, while also having the students form their own opinions. Split the class up into three equal groups, one for each article. They should read the article and prepare a presentation for the class that includes the following:

- Brief summary of the story
  - How it relates to the topics learned in this section
  - Their personal opinion on the topic
1. The Controversy Surrounding Steve Jobs’s Liver Transplant  
<https://www.nytimes.com/2009/06/23/business/23liver.html?adxnnl=1&ref=technology&adxnnlx=1320642848-eXlhiiC1poFOc1n0UvvPhA>
    - a. Should some people get preferential treatment? Do you think this was the case for Steve Jobs?
    - b. Should transplants be given even when it hasn’t been proven that it will be helpful?
  2. Recipient gets HIV shortly after kidney transplant  
<http://abcnews.go.com/Health/Wellness/organ-donor-hiv-recipient-unsafe-sex-transplant-cdc/story?id=13159889>
    - a. Who is at fault?
  3. All adults in England will be considered organ donors unless they opt out of the system <https://www.theguardian.com/society/2020/may/19/deceased-uk-adults-to-be-deemed-organ-donors-in-opt-out-system>
  4. Seeking Solutions to the Organ Donor Shortage  
<https://www.nytimes.com/2019/08/27/opinion/letters/organ-donor-shortage.html>
    - a. Is op-out an ethical system? Why or why not?
    - b. If not, what is a more effective way to increase organ donation?

## 8. Conclusion

Teachers should have their students return to the original questions:

1. Is there anything fundamentally wrong with organ transplantation? Does it overstep the boundaries of medicine?

2. What should matter more in the process of allocation: who is the best match for the organ, or factors of justice, such as time spent on a waiting list?
3. Should everyone be required to donate his or her organs?
4. What ethical concerns are most important in the retrieval of organs for donation?
5. What system should be used to convince more people to donate organs?

Based on the activities in this unit, have your answers changed?

## 9. References

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