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# Ethical Aspects of Organ Transplantation: Role and Implications for Nurses



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## ABSTRACT

**Background:** Because of technological advancements, organ transplantation has been made possible, prolonging, and often improving the quality of life for those who receive them. Without a doubt, this medical intervention has saved thousands of lives; however, serious ethical dilemmas have emerged regarding many aspects of this intervention. Role and implications for nurses in the United States are discussed in this review.

**Purpose:** The purpose of this review was to highlight the ethical aspects of organ transplantation. **Method:** This was a review of pertinent literature on organ transplantation. **Findings:** The cost-effectiveness of this intervention alone questions whether it is ethical to spend so much on transplants when funds can be utilized in other interventions that can potentially benefit more patients. Among other ethical issues are the questions about when and how a person is considered 'dead' to retrieve their organs for transplantation. Because of a large supply-and-demand inequality, deceased donor organs are a scarce resource. This has caused further ethical issues as patients are prioritized to receive organ transplants. Furthermore, issues have emerged as euthanasia is tied to organ donation. Should organs from a person that was euthanized be used for transplants? **Conclusion:** Healthcare providers have a moral and ethical duty to learn and understand the implications of this intervention. Exploring the ethical aspects of organ transplantation is also essential to providing informed consent to donors, recipients, and families.

## INTRODUCTION

Organ transplantation is considered a lifesaving medical intervention for many end-stage organ failure patients. Transplantation is needed because the recipient's organ has failed or has been damaged by disease or injury. This intervention could improve quality of life for the recipient. However, because there is an excessive demand for organs compared to the supply available, the urgency to find more organ donors is greater each day. According to the Health Resources & Services Administration (HRSA), the entity overseeing organ donation in the United States, 17 people die each day waiting for a transplant, while one person can donate up to eight lifesaving organs [1]. Understanding the need for organs is the first step to exploring the ethical aspects of organ transplantation. The aim of this literature review was to highlight the ethical aspects of organ transplant.

## BACKGROUND

Organ donation has been a precursor to an infinite number of ethical dilemmas. In the late 1960s, the Uniform Anatomical Gift Act was first passed into law in every state in the United States, which has been revised several times since then. It allows individuals, while still living to authorize the donation of any parts of their body after death. If the deceased person has not permitted such donation but has not explicitly prohibited it, specified family members can give authorization [2].

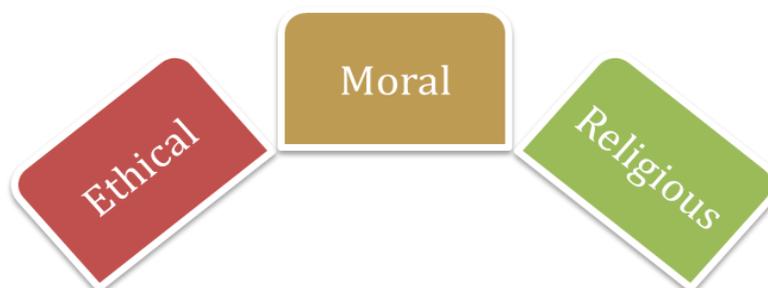
From the 1950s thru the 1970s, ethical questions gave rise when the first kidney and heart transplants were performed as people questioned who should receive this scarce resource and if taking an organ for transplantation was considered murder [3]. As these and many other questions emerged about the ethical aspects of organ transplantation, the involvement of bioethics became an essential part of this medical innovation. Controversies revolve around two main areas: the ethically acceptable sources of donation and the system of organ allocation. Furthermore, with the spread of legalized physician-assisted suicide and euthanasia, new ethical dilemmas have arisen when considering this a donation source.

Ethical aspects of organ transplantation include conflicts with religious beliefs. While many religions in the U.S. support the gift of organ donation, differences exist among *which* organs

should be donated as well as *when* recipients should accept an organ for transplantation. Christian principles specifically do not support euthanasia. Therefore, the decision to accept an organ from someone who was euthanized should be carefully considered. Organ transplantation also poses religious ethical dilemmas for healthcare personnel involved including, doctors, nurses, transplant coordinators, and members of the organ-harvesting team. However, serious conflicts are evident among Christians in these roles when euthanasia is involved in the organ transplantation process.

When tying euthanasia to organ transplantation, severe moral and ethical issues emerge for healthcare providers as well. Conscientious objections by providers and nurses are inevitable as their duty to protect all human life becomes compromised. Based on the American Nurses Association, nurses are especially vulnerable to having their principles and right of conscience questioned because of the role they play in patient care, in this case, whether it is with the donor or recipient. Nursing carries the ethical responsibility to promote health and safety and preserve the integrity and dignity of the patient [4].

As the need for organs increases, the demand for innovation will rise, giving way to further ethical issues surrounding organ transplantation. The purpose of this review was to highlight some of these ethical issues. All parties involved in the organ transplantation process have ethical, moral, and religious aspects to consider (see Figure 1). Understanding these ethical aspects is essential to providing informed consent to patients and their families concerning organ transplantation. In addition, healthcare providers must explore such ethical aspects to evaluate their participation in this intervention, thus shaping the future of organ transplantation.



**Figure No. 1: All parties involved in the organ transplantation process have ethical, moral, and religious aspects to consider.**

## **Definitions**

Organ transplantation is a surgical operation to give a functioning human organ to someone whose organ has stopped working or is close to failing. A living person can donate all or part of a functioning organ [5]. In other cases, the donor would be someone who has recently passed away.

Organs transplanted include liver, kidney, pancreas, heart, lung, intestine, and vascularized composite allografts such as face and hand transplantation. Factors considered in organ matching and allocation include blood type and size of the organ (s) needed, time spent awaiting a transplant, the relative distance between donor and recipient. For specific organs, other factors are considered, such as the medical urgency of the recipient, the degree of immune system match between donor and recipient, and whether the recipient is a child or an adult. The organs are distributed locally first, and if no match is found, they are then offered regionally and nationally until a recipient is found. Once they are added to the national organ transplantation waiting list, they may receive an organ the same day or wait many years [5].

## **METHOD**

A review was conducted to explore the ethical implications of organ transplantation for patients and healthcare providers. The EBSCOhost research platform was used to retrieve most of the articles. The terms used were organ transplantation ethical implications, organ donation, Christianity and organ donation, organ donation after euthanasia, and nurses in organ donation. The Cumulative Index to Nursing & Allied Health Literature (CINAHL) database advanced search was also used to search for articles. The studies used are articles from the years 2012-2021.

## **LITERATURE REVIEW**

### **Cost-effectiveness of Organ Transplantation**

Organ transplantation is a lifesaving intervention for many end-stage organ failure patients. When considering that organ transplantation is limited by the number of organs supplied by humans rather than by time, money, or natural resources, the argument that more organs would

equal more lives saved makes logical sense. This assumption has driven the pursuit of further innovation to procure more organs for transplantation. However, the premise that more transplantations are needed to save more lives is questioned. Persad [6] argues that although organ transplantation saves lives, it also consumes resources that could have been used to save a greater number of other people suffering from other illnesses. The ethical dilemma of whose lives can be spared and saved depending on how resources are directed becomes evident.

As with any other medical intervention, an organ transplant has an opportunity cost even when it saves a life. For example, Persad [6] reports the cost-effectiveness of a heart transplant would be between \$45,000-\$76,000/quality-adjusted life-year (QALY) compared to metformin for prediabetes which is only \$1,640-3,630/QALY or inhaled steroids for chronic obstructive pulmonary disease (COPD) which is \$7,800-13,400/QALY. Given the data, providing medications like metformin to prediabetic patients or steroids to patients suffering from COPD would be more cost-effective, and resources would impact more lives. Therefore, supporting the argument that procurement efforts for organ transplantation should be reconsidered.

### **Brain Death and Organ Transplantation**

There is a multitude of ethical, legal, and philosophical questions implicated by death and organ transplantation. There are also scientific questions about the biology of death and dying in deliberating about whether organ removal from brain death or total brain failure and donation after circulatory death (DCD) patients is ethically permissible [7]. When the first powerful immunosuppressive drug was discovered in 1972, transplantation technology was revolutionized. It helped to make possible organ transplantation from cadavers. However, the crucial conceptual notion here was that of brain death [2].

Vital organs for transplantation can only be removed from a patient after death, a law known as the Dead-Donor Rule. However, because the concept of brain death is not uniformly defined, ethical questions surrounding when the removal of organs can take place are present [3]. The concept of brain death has a deliberate purpose, which allows for the recovery of organs for transplantation in as optimal state as possible after death [3]. Under the Dead-Donor Rule, organs for transplantation must also undergo a period without blood flow, resulting in a decrease in the organ's optimal state. As de Groot et al. [8] stated, ethical considerations can result in a

discrepancy between general willingness to donate and the actual refusal of a donation request. HRSA reports that 90% of U.S. adults support organ donation, but only 60% are signed up as donors [1]. The lack of knowledge and understanding among people only worsens the shortage of organs available for transplantation. Figure 2 shows ethical issues to consider during organ donation process.

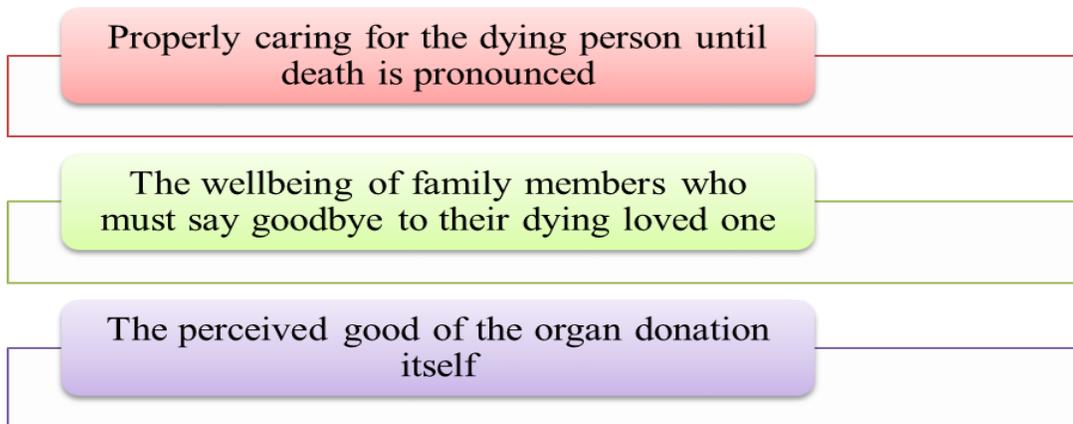


Figure No. 2: Ethical issues to consider during organ donation process.

### Supply and Demand for Organs

Organ procurement is the obtaining, transferring, and processing organs for transplantation through systems, organizations, or programs (see Figure 3). There is an organ shortage. There is evidence that people continue to choose not to donate their organs which is one reason for the severe imbalance between supply and demand [9]. Due to this, there are different procedures they want to put in practice to increase the organ donation rate, such as resuscitation of brain–death donors who go into cardiac arrest [10].

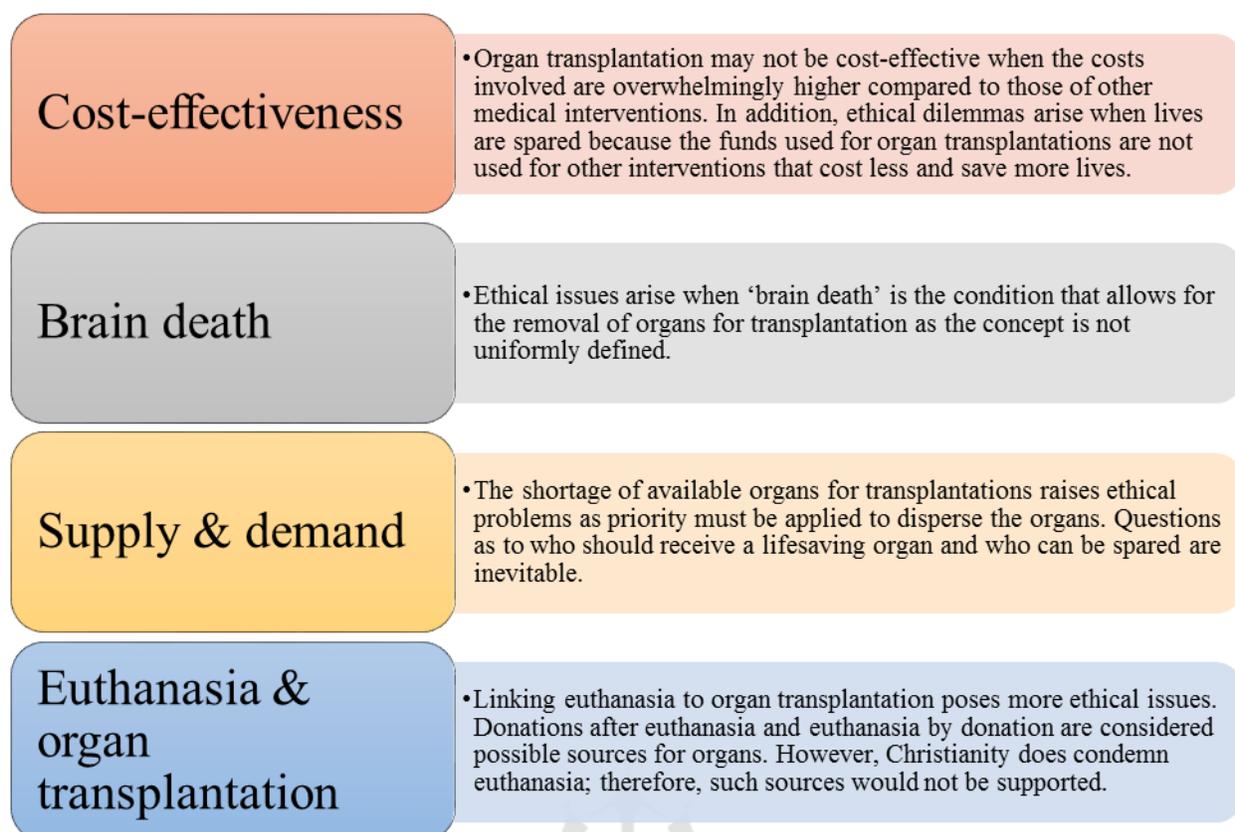


Figure No. 3: Organ procurement is the obtaining, transferring, and processing organs for transplantation.

As of November 2014, more than 123,000 people were waiting for organ transplants [9]. As of February 2021, the number of men, women, and children on the national transplant waiting list in the U.S. was 107,000+. In addition, every nine minutes, another person is added to the list [1]. The shortage of organs gives into several other ethical dilemmas regarding allocation systems as prioritization is inevitable. How should patients be prioritized? Is it ethical to choose who receives an organ? Should priority be given to children or younger patients since they may live longer? Although these questions may not have a single right or wrong answer, understanding they exist affects people's views on organ transplantation and outcomes. Having the necessary information about interventions, whether good or bad, is essential to informed consent.

### **Euthanasia and Organ Transplantation**

Linking euthanasia to organ transplantation is controversial and has added to the ethical issues pertaining to organ transplantation. As euthanasia and physician-assisted suicide become an acceptable form of medical intervention for terminally ill patients, a question becomes relevant if using the organs from these patients ethical. Summerville [3] poses the idea that if organ donation after euthanasia is ethical, then euthanasia by donation could also be considered a source of the donation. In the case of competent terminally ill patients, who would be allowed to consent before death, their vital organs would be removed, causing death. Tying euthanasia to organ transplantation also poses ethical dilemmas among all healthcare providers involved with the donor and recipient. Should the organs from a euthanized patient be used in transplants? If not, what should be done with the organs? Is it ethical to let people needing the organs die if these organs would not be used? Would recipients be informed how organs were retrieved? These are serious issues that conflict with the principles guiding the care of patients for healthcare providers. In addition, healthcare providers and patients must consider ethical aspects of organ transplantation that conflict with religious principles when euthanasia is linked. In the case of Christianity, van Ittersum and Hendriks [10] stated that the church condemns euthanasia; therefore, any procurement of organs by this means would not be supported. Figure 4 highlights the ethical aspects of organ transplantation and summarizes overall findings.

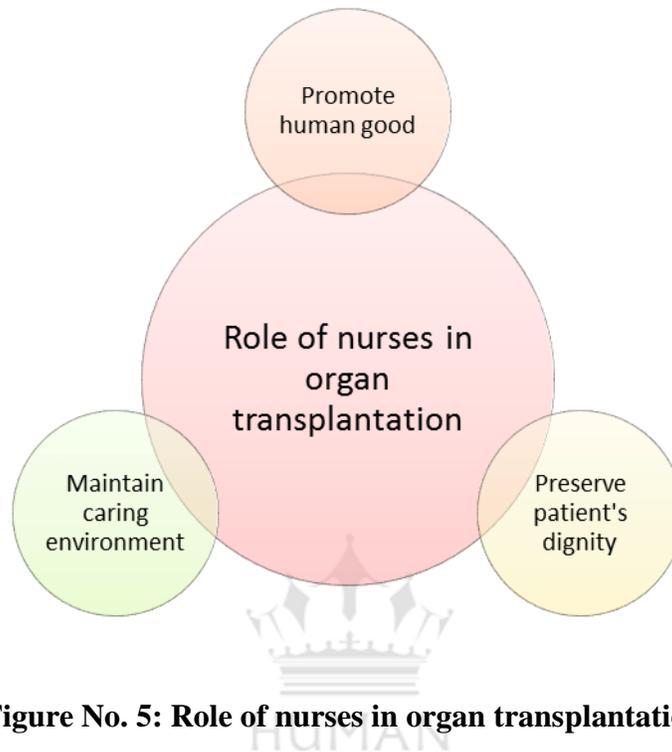


**Figure No. 4: Summary of Ethical Aspects of Organ Transplantation**

## DISCUSSION

From one perspective, organ donation can give death a certain degree of meaning, allowing the last act of benevolence and selflessness. From another perspective, patients are guaranteed autonomy and self-determination when they preregister to donate their organs [9]. As the demand for organs becomes greater, the shortage of available organs for transplantations drives the need for innovative ways to procure organs. When it comes to human life, ethical dilemmas are inevitable. Such ethical dilemmas must be explored and presented to the public, especially the patients involved, to ensure informed consent is provided. Healthcare providers, including nurses, must also consider such ethical aspects of organ transplantation to safeguard their right of conscience and personal, moral, and religious principles. As illustrated in Figure 5, the role of nurses in organ transplantation is to promote human good, preserve their patient's dignity as much as possible, and maintain a caring environment [9]. Nurses can improve donation rates through patient education, support, and partnering with their local organ procurement

organization [11]. In a systematic review, Reena et al. [12] found that the knowledge and attitude of nurses towards organ donation is not to the expected level, and the interventions such as workshop and peer education do improve their knowledge to a considerable level.



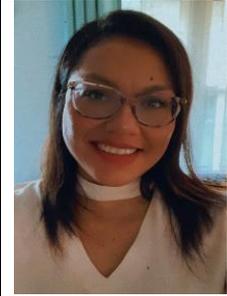
**Figure No. 5: Role of nurses in organ transplantation.**

## CONCLUSION

Regarding organ transplantation, ethical aspects cannot be ignored as this would jeopardize human regard for life and dignity. The supply and demand mismatch has forced controversial innovations to lessen the shortage, causing additional ethical issues. Euthanasia is becoming more widespread and acceptable in recent times, posing new ethical problems linked to organ transplantation. Moral and religious principles do not align with the use of euthanasia. Patients and healthcare providers must understand the conflict of interest linking euthanasia and organ transplantation to evaluate personal involvement. If the current means of procurement of organs poses significant ethical issues, focus on developing alternatives to organ transplantation may be beneficial.

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