CHAPTER I
CLINICAL ASPECTS OF ORGAN DONATION AND RECOVERY
(1 CONTACT HOUR)

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Learning objectives

- Identify members of the transplant team.
- Discuss the factors involved in the waiting times for a transplant.
- Discuss transplant options.
- Identify select provisions of the National Organ Transplant Act.
- Explain the process of nursing self-assessment as it pertains to transplant issues.
- Identify key elements of the role of procurement organizations and hospitals in organ recovery.

Introduction

According to the United Network for Organ Sharing (UNOS) on January 3, 2013 there were 117,000 waiting list candidates for organ transplantation. Between January and September, 2012 21,132 transplants were performed.5

Transplant data show that more people receive transplants every year and that many persons who have received transplants are living longer after receiving organs than ever before.4

The issue of organ donation and recovery is fraught with ethical and legal questions such as the definition of death, conflict of issues among family members of the potential donor, the wishes of the donors themselves, grief over the death of a loved one, and the needs and hopes of those who are waiting for transplants (as well as their families).

The purpose of this education program is to discuss the clinical aspects of organ donation and recovery and the nurse’s role in the organ donation and recovery process.

Members of the transplant team

Successful organ transplant depends on many people. Each person who serves on a transplant team functions as an expert in various areas of transplantation. The transplant team members include, but are not limited to, the following professionals.3,4

- Clinical transplant coordinators: These individuals are responsible for evaluating the patient, his/her treatment, and the care following transplant.
- Financial coordinators: Financial coordinators must have in-depth knowledge of financial matters, the costs associated with organ donation and transplantation, and hospital billing. These financial experts must work with a variety of persons including other members of the transplant team and insurers to coordinate financial features of the patient’s care before, during, and following transplantation. This often includes helping patients and families to navigate the complexities of insurance billing as well.

Nurses: Transplant nurses are involved in the care of living donors and organ recipients. Transplant nurses are also involved in preparing the patient for transplantation, offering emotional support for the recipient and his/her loved ones, and providing postoperative transplant care and patient/family education.

Social workers and case managers: These individuals help to coordinate care and services associated with transplantation. They may also take on responsibilities for some aspects of financial coordination as well.

Transplant physicians: These physicians manage the patient’s medical care, diagnostic and other tests, and medications. They do not perform surgery. Transplant physicians work in conjunction with other members of the transplant team to coordinate care until the patient is transplanted, and usually provide follow-up care for the organ recipient.

Transplant surgeons: These physicians perform the actual transplant surgery and may also provide the recipient’s follow-up care. Special expertise, education, and training, in transplantation are part of the transplant physician/surgeon’s qualifications.

Other persons who may be members of the transplant team are psychologists, clergy, and therapists depending on the needs of the individual patient. Follow-up care with physicians who have expertise in transplantation and other relevant specialists is also necessary.

Waiting times for a transplant

One of the most frustrating, and frightening, aspects of transplantation can be waiting for a donor organ. Patients are sick and are generally becoming sicker the longer they wait for a suitable organ. The physical and emotional effects of any long-term illness are intense. Waiting for an organ adds to the discomfort, fear, and frustration of illness. Patients and families are fearful that patients may die before transplantation is possible. They may also worry that, after receiving a transplant, the recipient’s body may reject the organ. In the event of a successful transplant, they must anticipate dealing with life-long follow-up care and immunosuppression medication to avoid organ rejection and a relapse back into illness. Thus, significant stressors exist in conjunction even with a successful transplant.

Waiting times differ significantly among patients who are on the transplant waiting list. Reasons for such differences include, but are not limited to3,4:

- The severity of illness of the patient (medical urgency).
- The response of patients to their current treatment regimens.
- The medical conditions that make a transplant necessary.
- The patient’s blood type.
- The patient’s tissue type.
- Height and weight of the patient.
- The size of the donor organ.
- The length of time the patient has been on the waiting list.
- The availability of donors.
- The transplant center’s criteria for accepting donor organ offers.

It is important that all healthcare professionals involved in the transplant process work to enhance communication between transplant centers and their patients. If patients and families understand the waiting list and transplant process, it is possible to reduce some of the stress and anxiety they experience.

Review of transplant options

Patients must be notified of their waiting list status. They must be notified in writing within 10 business days of registration that they have been placed on the national transplant waiting list. Likewise, the transplant program must notify patients in writing within 10 days after evaluation is completed if they are not going to be placed on the patient waiting list.4

Patients must also be notified if they are removed from the list for any reason other than death or transplantation. The transplant program must notify patients, in writing, within 10 business days if they are removed from the list.4

Patients waiting for organs have a variety of options such as listing at hospitals in different geographic regions in the country and transferring waiting time to a different center. Here is a summary of some of the options.4

- Multiple listing: Patients may elect to register for a transplant at more than one hospital. Patients who list at a transplant hospital are usually considered for organs in that local area first. If patients are listed at multiple hospitals, they will be considered for donor organs in more than one local region.

Transplant alert! Although national transplant policy allows the registration for transplants at more than one transplant hospital, each hospital may have its own policies for allowing patients to be on multiple lists. Multiple listings do not guarantee that patients will receive donor organs more quickly.4

- Transferring waiting time: Patients are allowed to switch to a different transplant hospital and transfer their waiting time to that new hospital. The amount of waiting time from the original hospital is added to the time collected at the new hospital.3

Transplant alert! The transplant teams at the original and new hospital are responsible for coordinating the information exchange and notifying the United Network for Organ Sharing (UNOS).6

- Living donation: Patients may also receive organs from living donors, who offer (another option for persons waiting for organs). In 2007, there were more than 6,300 living donor transplantations. The first successful living donor transplant was performed between identical twins in 1954, and the
stage was set for both related and unrelated donors to be tested as matches for persons needing organs.4

**Transplant alert! A critical issue regarding transplantation is the length of time an organ is viable once procured until transplantation:**
- Heart: Approximately 4-6 hours.
- Lungs: Approximately 4-6 hours.
- Liver: Approximately 12 hours.
- Pancreas: Approximately 12-16 hours.
- Kidneys: Approximately 48 hours.

### The National Organ Transplant Act

In 1984, The National Organ Transplant Act (NOTA) called for an Organ Procurement and Transplantation Network (OPTN) to be created and run by a private, non-profit organization under federal contract. The act mandates that the OPTN should:6
- “Increase and ensure the effectiveness, efficiency and equity of organ sharing in the national system of organ allocation.”
- “Increase the supply of donated organs available for transplantation.”

The United Network for Organ Sharing (UNOS) was awarded the national OPTN contract in 1986 by the U.S. Department of Health and Human Services. UNOS is the only organization to ever operate the OPTN. As part of the OPTN contract, UNOS has established:6
- An organ sharing system to maximize the efficient use of deceased organs.
- A process to collect, store, analyze, and publish data concerning the patient waiting list, organ matching, and transplants.
- A process of informing, consulting, and guiding persons and organizations concerned with human organ transplantation to help increase the number of organs available for transplantation.

### Nursing ethical self-assessment pertaining to transplantation issues

Nurses are expected to provide compassionate care without bias or judgment. They face situations that may deal with ethical and/or legal issues frequently. Transplantation involves issues that relate to the definition of death, the effect of refusing to donate organs, and the cultural and religious beliefs pertaining to donating parts of the body after death.

Nurses may have their own deep-rooted, cultural and religious beliefs pertaining to the issue of transplantation. However, they must not project their values and beliefs on their patients and their patients’ loved ones. Nurses routinely care for patients nearing the end of life, but only specially trained nurses from an Organ Procurement Organization should approach and counsel patient family members about organ donation. Nurses trained in transplantation are best suited to care for patients after they have received donor organs. In order to provide safe, compassionate and appropriate care, nurses should perform a self-analysis of their feelings and beliefs regarding transplantation.

Ethical discussions show that nurses have a variety of beliefs about transplantation. Some of these (sometimes conflicting) beliefs include:1
- **Organ donation is a moral obligation.**
- **The needs of the transplant recipients take priority over the terminally ill or injured potential donor.**
- **Removal of vital organs is the cause of death not the existing illness or injury.**
- **Removal of vital organs is a violation of certain religious beliefs.**

Self-analysis begins with a review of the definition of death. What is the legal definition of death? What is the nurse’s personal definition of death? How does the potential donor’s family define death?

### The role of procurement organizations and hospitals in organ recovery

The Association of Organ Procurement Organizations (AOPO) is “the non-profit organizations recognized as the national representatives of the 58 federally-designated organ procurement organizations (OPOs) serving more than 300 million Americans.”1 The purpose of AOPO is to provide education, share information, conduct research, and offer technical assistance and collaboration with healthcare organizations and federal agencies.1

The organ recovery process is a multifaceted process that is coordinated by healthcare professionals in OPOs and hospitals. When a patient dies or is expected to die in a hospital a call is placed to the OPO. This call initiates the organ recovery and donation process.2

The following summary of steps is a general review of the organ recovery process as described by the Association of Procurement Organizations (AOPO).1,2
- **Death is declared by a physician according to brain death criteria or by cardio-pulmonary arrest in compliance with state law and hospital policy and procedure.**1,2
- **After the declaration of death, the patient must remain on ventilation before organ procurement can occur.**

**Transplant alert!** This is an especially difficult time for family and loved ones. They see the patient’s chest rise and fall with mechanical ventilation. They see that his/her heart continues to beat. It can be very difficult for them to accept that the patient has been declared dead, and even more difficult to agree to the donation of organs.

**Medicare Conditions of Participation** mandates that all hospitals must notify their local OPO when death occurs or is about to be declared. An OPO clinical recovery coordinator is given information about the patient. The coordinator then evaluates the patient’s suitability as a donor and checks the donor Registry of the potential donor’s state of residence.

- If the patient is registered to be an organ and tissue donor his/her next of kin or healthcare proxy is approached. The next of kin or proxy is informed, in detail, of the donor process. However, the patient’s wishes about donation may not be known. In this case, the coordinator discusses, with the next of kin or proxy possible donor options. Such options may include transplantation, research, education, and/or therapy.1,2

**Transplant alert!** This is a challenging time for family friends, even if the patient is registered as a potential donor. They need the support and understanding of the entire healthcare team.

- If donation is agreed upon, the OPO coordinator carries out a medical evaluation as well as a social history of the patient. If there is potential for an organ donation, the UNOS is requested to complete a waiting recipient list for every organ that can be placed for transplantation. Criteria are entered into the computer program to identify potential recipients. Information accessed includes donor blood type, body, size, and possibly genetic tissue type.

- Possible recipients are identified, and their transplant surgeons are notified. If the offered organ is accepted the recipients go to their transplant centers for transplant preparation. If the surgeon declines the offered organ, the surgeon of the next patient on the list is notified.

- The notification process can take 8-12 hours. During this time period the donor’s organs must be medically maintained by the OPO coordinator and the medical staff of the donor’s hospital.

- While the donor is being mechanically ventilated it is imperative that adequate heart rate, blood pressure, and urinary output be maintained. Federal law mandates that physicians who were responsible for the patient’s medical care prior to determination of brain death cannot be part of the recovery of organs process.

- The OPO recovery coordinator schedules use of the operating room and the arrival and departure of the surgical transplant teams. Recovery is conducted in an operating room. For removal of donor hearts, livers, and pancreas, complete operating room staffs and special surgical teams are required. Kidneys are generally removed by a local surgeon. Organs are placed in protective solutions and packaged and sent to the recipient’s hospital.1,2

- Recovery of tissues takes place after organs are removed. A recovery team removes the tissues, packs them under sterile conditions, and transports them to a tissue bank. They are prepared for transplantation, research, or therapy at the tissue bank.

- Following removal of organs and/or tissues the donor’s body is reconstructed and removed to the funeral home per the family’s wishes and hospital policy.1,2
Transplant alert! The family needs to be supported during this difficult time. They may wish to view the donor’s body to say good-by to their loved one.

Recovery follow-up is provided by the OPO. The organization sends letters to the donor family, physicians, nurses, and other hospital staff as appropriate concerning the outcome of the recovery. The recipient’s transplant hospital reimburses the OPO for costs of obtaining the organ(s) and/or tissues. That hospital is reimbursed by the recipient’s insurance company or by Medicare.

An advocate from the OPO follows up with the family of the donor by sending bereavement letters, literature, advice, support, and information about the progress of the recipient.

OPOs must provide service and education to hospitals and help them to develop best practices regarding identification of potential donors and how to provide safe, appropriate, and compassionate care to patients and families. Nurses should take every opportunity to avail themselves of such education as they work with donors and their families and recipients and their families.

References