

Chapter 27

Organ Donation and Transplantation: Processes, Registries, Consent, and Restrictions in Saudi Arabia

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ABSTRACT

Organ transplantation is the best and often times the only opportunity for patients with end-stage organ disease to survive. In 1985, the Kingdom of Saudi Arabia was one of the few Arab countries to have started an organ donation program. The program was later expanded and renamed the Saudi Center for Organ Transplantation (SCOT) in 1994. This chapter reviews the literature around organ donation and transplantation and introduces the different types of consent and registries available from different parts of the world as a solution for enhancing the process of donation and increasing organ donation rates. It also explores the organ donation process, the role of the SCOT program, and the social and public factors that influence organ donation in Saudi Arabia.

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INTRODUCTION AND BACKGROUND

Organ transplantation is the best, and often times the only opportunity for patients with end-stage organ disease to survive (Axelrod et al., 2008). Currently, there is a vast shortage of organs for transplant due to the fact that the demand for life-saving organs vastly exceeds the number of organs available (Aldawood, Al Qahtani, Dabagh, & Al-Sayyari, 2007; Brezina, 2009). The waiting list for organs in the United States alone consists of over 107,596 patients (Aldawood et al., 2007; Organ Procurement and Transplantation Network, 2010).

Organ donation is a process used to surgically remove organs and tissues from a dead or a living person and transplant them “in [to] a person or persons who need that particular organ or tissue to save or improve their life” (“Patient notes”, 2004, p. 67). Indeed, organ donation has been one of the major breakthroughs of modern medicine. A half century ago, organ failure was a death sentence; however, organ transplantation is now a routine operation with increasingly satisfactory results (Brezina, 2009). Numerous parts of the human body can be donated, including organs, such as the lungs, heart, kidney, pancreas, liver, and intestines, and donor tissue, such as connective tissue, skin, heart valves, corneas, and bone marrow. The major development and advancements in surgical techniques and anti-rejection drugs in the recent years has drastically enhanced survival rates among transplant recipients (“Patient notes”, 2004).

In the 18th century, scientists began conducting experiments on animals and humans to learn more about organ transplantation, and after many failures, they were finally able to achieve successful results by the middle of the 20th century (Schooley Mitchell Telecom Consultants, n.d.). The first successful kidney transplant was carried out in 1954 using a living donor, while the first simultaneous kidney/pancreas transplant was per-

formed in 1966. Between 1967 and 1981, the first successful liver, heart, and heart-lung transplants were achieved. Also, the first successful single and double lungs were transplanted in 1983 and 1981, respectively. Finally, between 1989 and 1990, scientists successfully completed the first living-related liver and lung transplants (Petersen, 2007; United Network for Organ Sharing, n.d.).

The Kingdom of Saudi Arabia is one of the few Arab countries that have started organ donor programs (Al Sayyari, 2008). In 1985, the Kingdom of Saudi Arabia established the National Kidney Foundation; it was expanded in 1994 and renamed the Saudi Center for Organ Transplantation (SCOT) (Al-Attar et al., 2006; SCOT-Statistics, 2008). The center is responsible for the successful implementation of the deceased organ donation program, which has improved transplantation in the country (Al-Attar et al., 2006; Shaheen & Souqiyyeh, 2004a). The first live donor and deceased donor kidney transplants in Saudi Arabia were performed in 1979 and 1984, respectively, while the first liver transplant was carried out in 1990. Between the mid-1980s and 2008, a total of 153 hearts, 28 lungs, 12 pancreases and more than 16,000 corneas were transplanted in the kingdom (Al Sayyari, 2008; Jawdat et al., 1993; SCOT-Statistics, 2008).

Organ donations can be made by deceased or living donors. Deceased donors need to be declared as either brain dead donors or non-heart-beating donors. Brain death is defined as “complete and irreversible cessation of all brain and brain stem functions synchronously. It is characterized by complete apnea, absent brain stem reflexes, and cerebral unresponsiveness.” (Akrami, Osati, Zahedi, & Raza, 2004, p. 2883). In case of brain death, a mechanical ventilator is used to sustain respiratory functions (Jonsen, Siegler, & Winslade, 2006). A protocol for brain death determination was created in 1999 and implemented worldwide to considerably reduce death declaration time (Akrami et al., 2004). Caution must be taken when

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