

Save Life After Life: The Noble Act of Organ Donation

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Abstract: Organ donation is a noble act that offers the opportunity to save lives after death by donating organs for transplantation. Despite advancements in medical technology, India faces a significant shortfall in organ donations, particularly deceased donations, resulting in long waiting lists and numerous deaths daily. Studies highlight the increasing rates of organ donations in tertiary care hospitals and the importance of expanding donor pools through better management and awareness. Legal frameworks and amendments have been established to regulate and encourage organ donation while addressing challenges such as public mistrust, medical compatibility, and logistical issues. To bridge the gap between organ demand and supply, extensive public awareness and improved infrastructure are essential.

Keywords: organ donation, transplantation, deceased donors, public awareness, legal frameworks

1. Introduction

Being forever remembered for the lives you saved...
This sounds inspiring and exhilarating.

Organ donation is a noble act, which gives an opportunity to save lives after death. The process of giving an organ or a part of an organ at the time of the donor's death, for the purpose of transplantation to another person is known as deceased organ donation or cadaver organ donation. It not only save lives but also transforms the quality of life infinitely. In the following years, there has been an immense increase in organ donation with the advance in technology all over the world

Statistics of Organ Donation

With a waiting list of over three lakhs patients and at least 20 persons dying each day waiting for an organ, India's paucity of organ donations especially deceased donations, has been exacting a steep toll. According to health ministry's own data, the number of donors (including deceased) only grew from 6916 in 2014 to about 16041 in 2022. As per Indian society of organ transplants, India's deceased organ donation rate has been under one donor per million population for a decade now. Hence increasing knowledge, awareness and fostering more organ donation is essential because even one deceased organ donor can save upto 08 lives.

Kapil G Zirpe et. al 2020 conducted a study on the increase in cadaver organ donation rate at a tertiary care hospital. To study the change in organ donation rates and the reasons for changes in rates, the family of brain dead declared patients consented for organ donation were evaluated. From the year 1997 to 2020 there was a fourfold rise in the rate of transplantation due to widening of the donor pool by the selection of more of non - RTA brain death donors, acceptability of elderly population donor and better protocol - based management of the cadaver organ donor.

Cadaver Organ Donation

Anyone regardless of their age, race and gender can become an organ and tissue donor after his or her death. Consent of near relative or a person in lawful possession of the dead body is essential. A deceased donor can generally donate the organs & tissues with the age limit of:

- Kidneys, liver: up - to 70years

- Heart, lungs -: up - to 50 years
- Pancreas, intestine: up - to 60 - 65 years
- Corneas, skin: up - to 100years
- Heart valves: up - to 50 years
- Bone: up - to 70 years

In India deceased organ donation is only possible in case of brain stem death. A person is said to be brain stem dead when there is irreversible loss of consciousness, absence of brain stem reflexes and irreversible loss of the capacity to breathe.

ASM Tanim Anwar et al 2019 conducted a study on medical management of brain dead organ donors. This review described how to identify brain dead donors and evaluated the physiological changes that occur following brain death. The study also summarized the management of braindead organ donors and proposed recommendations for a treatment protocol to be developed in the future.

Procedure of Deceased Organ Donation

- 1) Organ Retrieval Banking Organization (ORBO) coordinates the process of cadaver organ donation. The process starts with declaring a person brain dead by a team of authorized doctors (a panel that includes a registered medical practitioner in charge of the hospital, a registered medical practitioner nominated by authorized authority, a neurosurgeon and a registered medical practitioner treating the deceased).
- 2) The donor's family has to give consent for donation before the process of organ retrieval can be carried out meanwhile the donor is kept under life support.
- 3) Suitable recipients for all the organs are identified from the waiting list. They are notified and asked to reach their respective hospitals.
- 4) After retrieval the body of the donor is respectively handed over to the family.

Legal Aspects of Organ Donation

The increasing gap between the need and availability of organs led to organ trafficking with exploitation of poor people who were made to sell their organs. To address the issue of organ trafficking and to ensure a fair allocation of organs from cadaver donors, the transplantation of human organ and tissue act was passed in 1994 and came into force on Feb 1995 in India.

Transplantation of Human Organs and Tissues Act, 1994 (THOA)

- Regulated organ removal, storage, and transplantation for therapeutic purposes.
- Prevented commercial dealings in human organs.
- Brain stem death recognized as legal death for organ donation

**Transplantation of Human Organs (Amendment) Act, 2011 (THOA Amendment)**

- Permitted swapping of organs.
- Expanded donor pool to include grandparents and grandchildren.
- Simplified brain death certification process.
- Mandatory transplant coordinator for organ removal and transplantation coordination.
- National Human Organs and Tissues Removal and Storage Network.
- National Registry of Donors and Recipients.
- Higher penalties for organ trading.

**Transplantation of Human Organs and Tissues Rules (THOT), 2014**

- Organ transplantation team medical practitioner cannot be part of the Authorization Committee.
- Approval process for non - Indian nationals as donors or recipients.
- Evaluation of commercial transactions and payments in non - relative donor cases.
- Swap donation approval process.
- Expedited evaluation for critical condition recipients.
- Quorum requirements for Authorization Committee meetings.
- Requirement for authorized transplantation centers to have a website.
- Timely display of Authorization Committee decisions.
- National, Regional, and State level networking organizations for organ procurement and transplantation.
- National Registry on Donors and recipients of Human Organ and Tissue.

2. Challenges regarding Organ Donation

Deepak Saxena, et al 2023 conducted a study on the obstacles and motivating factors in the decision of families to donate organs in Ahmedabad, Gujarat and their suggestions to improve the processes involved in organ donation. This quantitative study from Oct 2021 to Feb 2022 among 10 relatives of deceased organ donors concluded that the challenges were mistrusting the organ donation process, fear of being responsible for any mishappening and feeling of shock.

N Gracious, et al 2019 conducted a study on challenges of deceased organ donation in a low middle income country. This study conducted in government medical college, Thiruvananthapuram, Kerala focused on reasons for rise and fall of donations from brain death. This study observed that the biggest barrier in donation after brain death is lack of

uniform practice pattern in hospitals on brain death diagnosis, inequity in access to transplantation and expense factor.

Ancy H Patel, et al 2018 conducted a study on patients with end stage renal disease to recognize the challenges encountered in organ donation and give possible solutions. The study viewed that there is a great disparity between the number of potential donors and actual cadaveric donors. Public awareness is the major and foremost factor that can lead to improved rates of deceased organ donation in India. Effective communication, involvement of media religious and political leaders with transparent organ allocation system will provide necessary boost for organ donation.

Some of the challenges identified in deceased organ donation are:

a) Lack of education and awareness

This includes limited awareness of general public about organ donation and insufficient education of medical professionals to identify potential donors and counsel their families effectively.

b) Family consent and decision making

The emotional and ethical dilemma leads to family reluctance in organ donation even when the deceased individual has expressed a willingness to donate

c) Organ trafficking and black market

Illegal organ trafficking and existence of black market undermines legitimate organ donation process

d) Medical eligibility and compatibility

The process of matching suitable donors and recipients based on medical compatibility led to a prolonged waiting periods for patients

e) Infrastructure and logistics

Inadequate infrastructure and resources for organ retrieval, preservation and transplantation challenges the timely transportation of organs from donors to recipients

3. Conclusion

Organ donation is an amazingly generous act and can save thousands of lives. It's a life - giving, life enhancing opportunity to those who are at the end of the line of hope. The government of different countries have put up different systems in place to encourage organ donation. However, the demand for organs is still quite high as compared to their supply. Effective steps must be taken to meet this ever increasing demand. To sum up, organ donation is a noble deed. Most noteworthy, organ donation can save plenty of

lives. Extensive awareness regarding organ donation must certainly be spread among the people.

References

- [1] Mukherjee Nagar. (2023, August 9). organ donation in india: Challenges regarding organ donation. *drishtiias.com*.
- [2] Naresh At. (2023, July 24). Organ donation: Acts related to human organ donation. *Vikaspedia*. <https://vikaspedia.in/health/organ-donation/acts-related-to-human-organ-donation>
- [3] organ [under the aegis of NOTTO]. (n. d.). *What is organ donation: Process of organdonation*. organindia.org. <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjNodiCkqCEAxW7cGwGHSxEBGYQFnoECCsQAQ&url=https%3A%2F%2Fwww.organindia.org%2Foverviews%2Fknow-organandonation%2F&usg=AOvVaw2WIhs7gJ4JiOafpg7wrYBr&opi=89978449>
- [4] Shajan Perappadan, B. (2023, August 5). Organ shortage continues to cost lives. *The Hindu*. Retrieved August 7, 2023, from <https://www.thehindu.com/sci-tech/health/indias-poor-organ-donation-record-continues-to-cost-lives>
- [5] Deepak Saxena, Poonam Trivedi, Priya Bhavsar, Farjana Memon, Abhi Thaker, Chintan Chaudhary, Sandul Yasobant, Deepika Singhal & Sanjay Zodpey (2023) Challenges and Motivators to Organ Donation: A Qualitative Exploratory Study in Gujarat, India, *International Journal of General Medicine*, 16: , 151 - 159, DOI: 10.2147/IJGM.S393240
- [6] Gracious, Noble; S, Saranya; N, Visakh; PV, Aneesh; Kumar, Vinod. 205.6: Challenges of deceased organ donation in a low middle income country - A case study from Kerala, India. *Transplantation* 103 (11S): pS22 - S23, November 2019. | DOI: 10.1097/01.tp.0000611668.60126.05
- [7] Patel, Ansy H.; Balwani, Manish Ramesh; Patel, Himanshu; Pasari, Amit S.; Patel, Utkarsh Rajesh; Tolani, Priyanka; Kute, Vivek. Deceased Organ Donation in India – Current Challenges and Scenario. *Indian Journal of Transplantation* 12 (3): p 174 - 176, Jul–Sep 2018. | DOI: 10.4103/ijot.ijot_26_18
- [8] Chandrasekaran S, Chandrasekaran VP, Nandi D, Setty RS, Srinivasan O, Kaur KN. Assessment of Awareness Level Regarding Organ Donation among Healthcare Professionals and Students in India. *Indian J Crit Care Med*. 2023 Jan; 27 (1): 57 - 63. doi: 10.5005/jp-journals-10071-24387. PMID: 36756466; PMCID: PMC9886047.
- [9] Darlington D, Anitha F, Joseph C (June 13, 2019) Study of Knowledge, Attitude, and Practice of Organ Donation Among Medical Students in a Tertiary Care Centre in South India. *Cureus* 11 (6): e4896. doi: 10.7759/cureus.4896
- [10] *Pattmaik JI, Padhy SK, Menon V. Gender discrepancies in organ donation in India: The invisible road to exploitation of womanhood? [Letter]. Natl Med J India 2021; 34: 318.*
- [11] Tamuli RP, Sarmah S, Saikia B. Organ donation - "attitude and awareness among undergraduates and postgraduates of North - East India". *J Family Med Prim Care*. 2019 Jan; 8 (1): 130 - 136. doi: 10.4103/jfmpc.jfmpc_206_18. PMID: 30911493; PMCID: PMC6396593.
- [12] Ministry of Health and Family Welfare, Government of India. Dr. Harsh Vardhan presides over the 10th Indian Organ Donation Day. Available at: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1594355>. Accessed on: 01 January 2024.
- [13] Ministry of Health and Family Welfare, Government of India. Organ donation day. Available at: https://www.nhp.gov.in/Organ-Donation-Day_pg. Accessed on: 01 January 2024.
- [14] National Organ & Tissue Transplant Organization (NOTTO). Available at: <https://notto.gov.in/>. Accessed on: 01 January 2024.
- [15] The Times of India. Toi survey: Organ Donation in India. Available at: <https://timesofindia.indiatimes.com/india/TOI-Survey-Organ-donation-in-India/articleshow/53487362.cms>. Accessed on: 01 January 2024.