

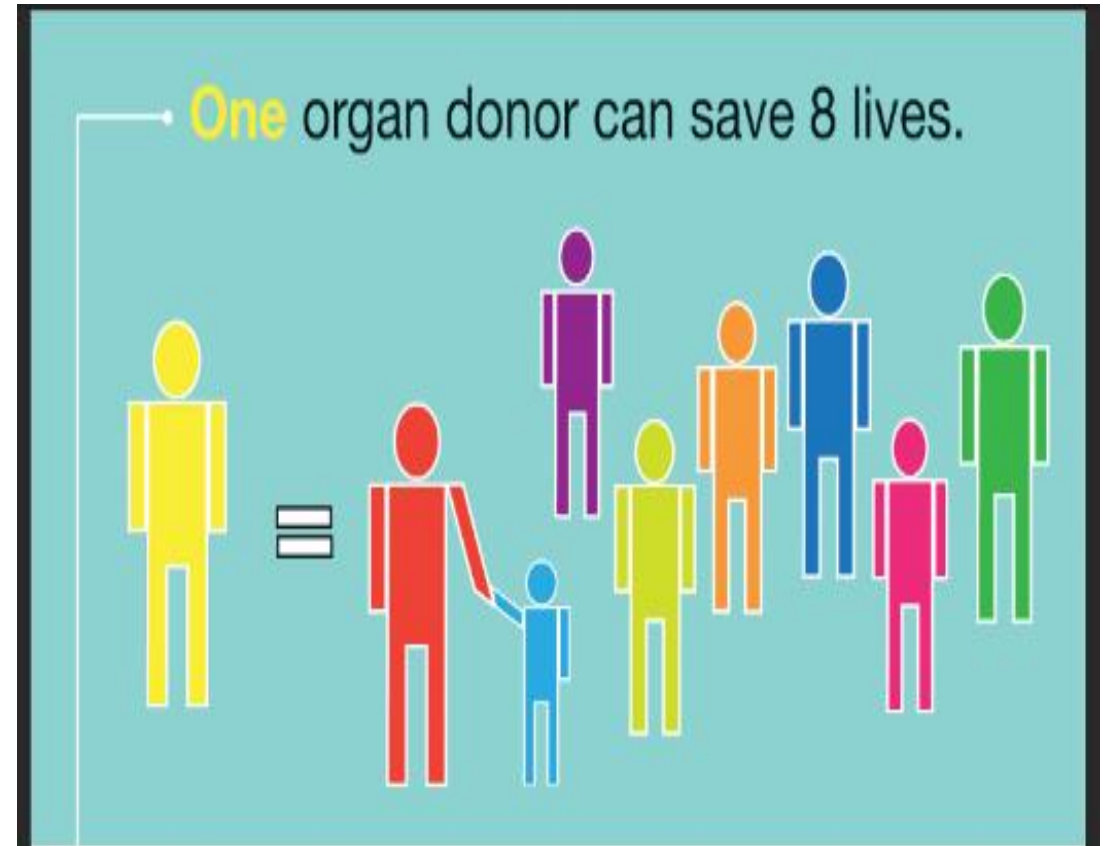


BRAINSTEM DEATH & ORGAN DONATION

Not an uncommon scenario....



OUTCOME



TOPICS DISCUSSED

History of brainstem death (BSD)

Definition of BSD

Causes of BSD

Organ Donation Facts



HISTORY



- ❑ 1959 - Mollaret and Goulon coined the term on brain death “le coma depasse”
- ❑ 1968 -First clinical definition as the Harvard Brain Death Criteria
- ❑ 1980 - Uniform Determination of Death Act (UDDA) established a legal basis for a neurologic determination of death in the U.S.



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- ❑ 1987 - American Academy of Pediatrics task force on brain death in children published guidelines for the pediatric population (revised 2011)
 - ❑ 1995 - American Academy of Neurology (AAN) guidelines on the determination of BD/DNC for adults (revised 2010)
 - ❑ **1994** - The Transplantation of Human Organs Act (**THOA**) legalized Brainstem death in India

DEFINITION



DEATH

An irreversible, biologic event that consists of permanent cessation of the critical functions of the organism as a whole

BRAIN DEATH

Irreversible loss of the entire brain, including the brainstem determined by complete loss of consciousness (coma), brainstem reflexes, and apnea in the absence of any reversible factors

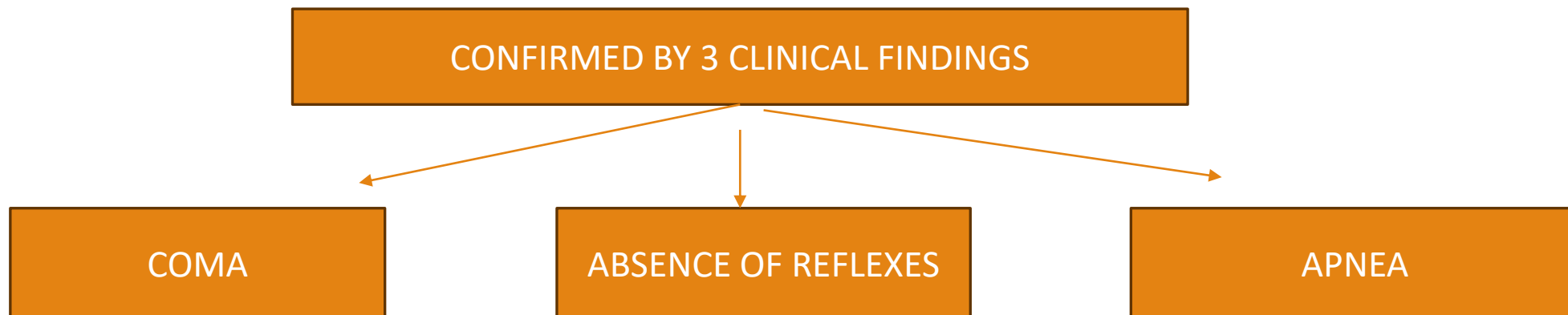


LEGALLY ACCEPTED??

YES, As per the Transplantation of Human Organs Act 1994 Brain Stem Death is legally accepted as death

The declaration of brain stem death is made with accepted medical standards

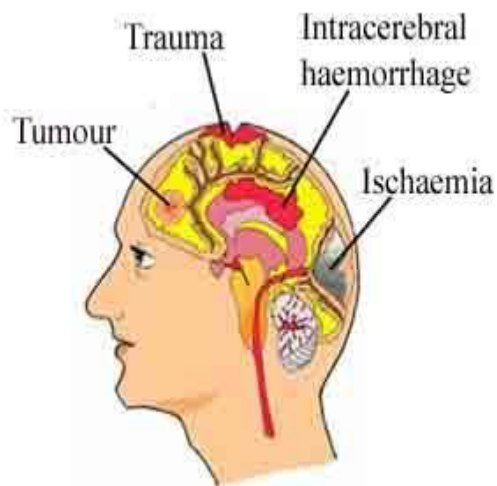
Tests are carried out twice at the interval of at least 6-12 hours by a team of Medical Experts



CAUSES OF BRAIN DEATH

INTRACRANIAL

- Trauma
- Subarachnoid hemorrhage
- Intracerebral hemorrhage
- Hypoxic-ischemic encephalopathy
- Ischemic stroke



EXTRACRANIAL

- Post cardiopulmonary arrest with delayed resuscitation
- Asphyxiation
- Drug overdose
- Hanging, drowning, meningitis, carbon monoxide poisoning
- Primary cardiac arrest

NEED FOR BSD DECLARATION

Once an unequivocal diagnosis of brain death has been made,

- ❑ Most medical and legal authorities agree **that continuing treatment is not in the interest of the patient** or is ethically permissible.
- ❑ This is not related to withdrawing support to allow a patient to die, but rather **to ceasing a futile intervention in a patient who is already dead.**

Acceptance of this approach would

- ❖ Reduce human distress
- ❖ Lead to the rational use of the limited ICU facilities
- ❖ Increase the availability of organs.

Solid organs can be donated only after confirmation of brain death.

Unless medical personnel provide family members with information that all cognitive and life support functions have irreversibly stopped, the **family may harbor false hopes for the loved one's recovery.**



ORGAN DONATION (Facts & Figures)



Organ Donation



Give thanks. Give life.

Organ Donation Facts

Living Donors



A living donor **elects** to give his/her organ to someone in need

Organs & Tissues

that can be donated by Living Donors



PARTIAL INTESTINE



KIDNEY



PARTIAL LUNG



PARTIAL LIVER



PARTIAL PANCREAS

Deceased Donors



A deceased donor allows his/her organs to be **donated at death**

Organs & Tissues

that can be donated by Deceased Donors



HEART



LIVER



KIDNEY



INTESTINE



TENDONS
LIGAMENTS
& VEINS



LUNGS



CORNEA



PANCREAS



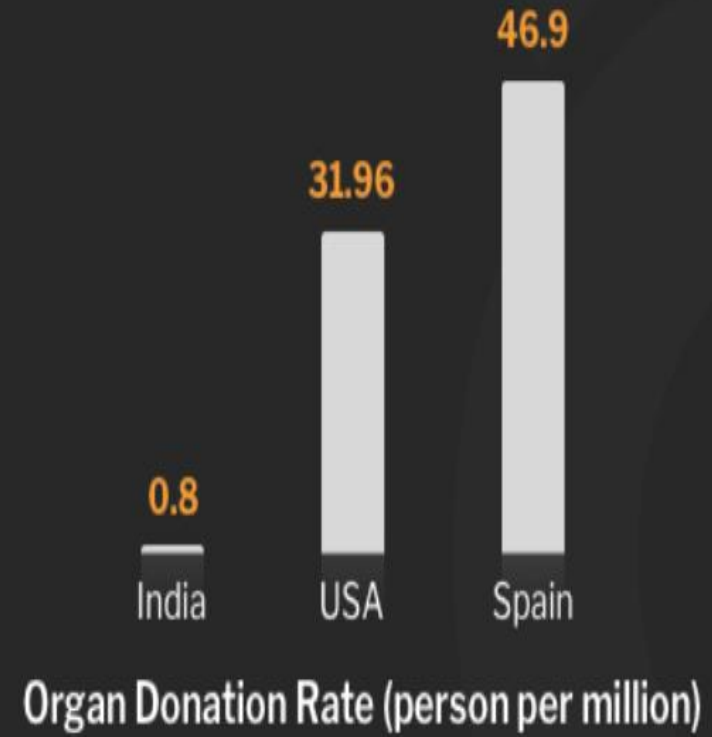
BONES

Why India Needs More Organ Donors



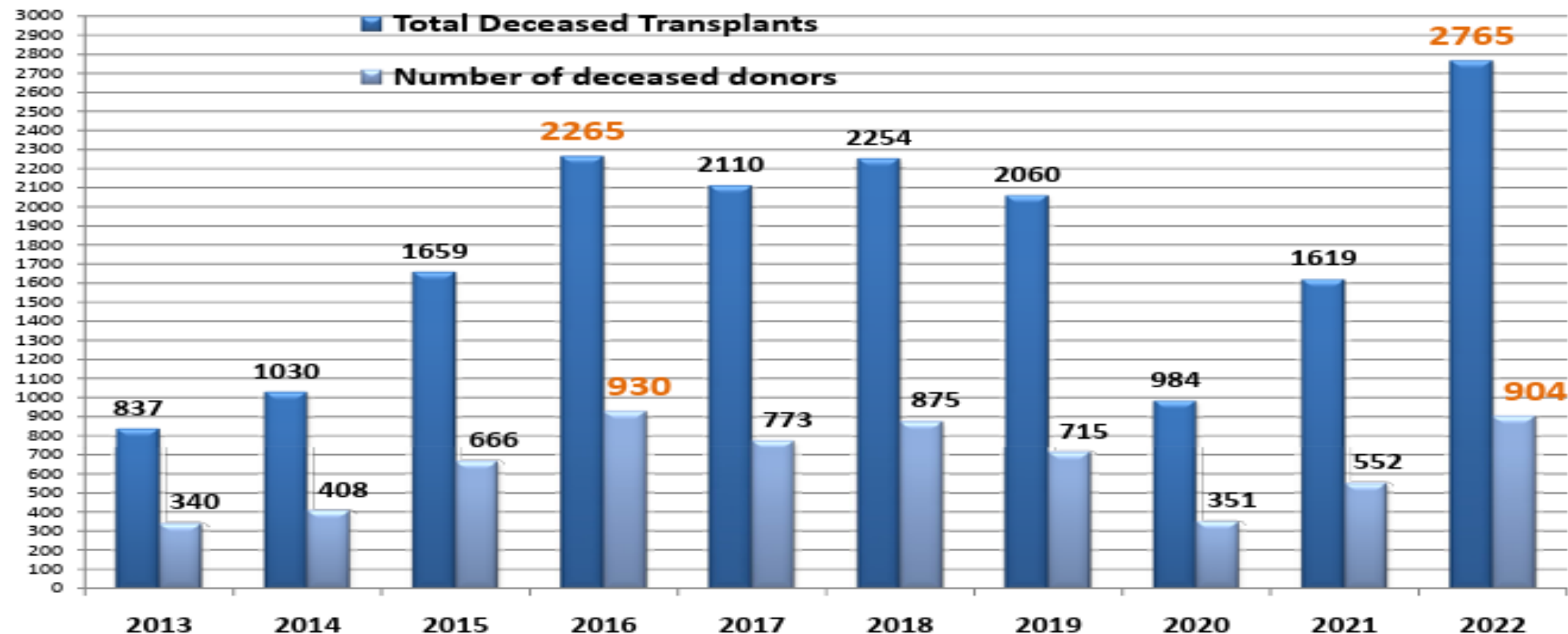
4 lakh people die every year waiting for a transplant

Why India Needs More Organ Donors



Organ donation rate (Number of persons who donate organs after death in one million population) *in India is less than one* as compared to a maximum of around 48 in Spain

Organ donation rate has increased to about ten times in the last decade from 0.08/million to 0.8/million



2016

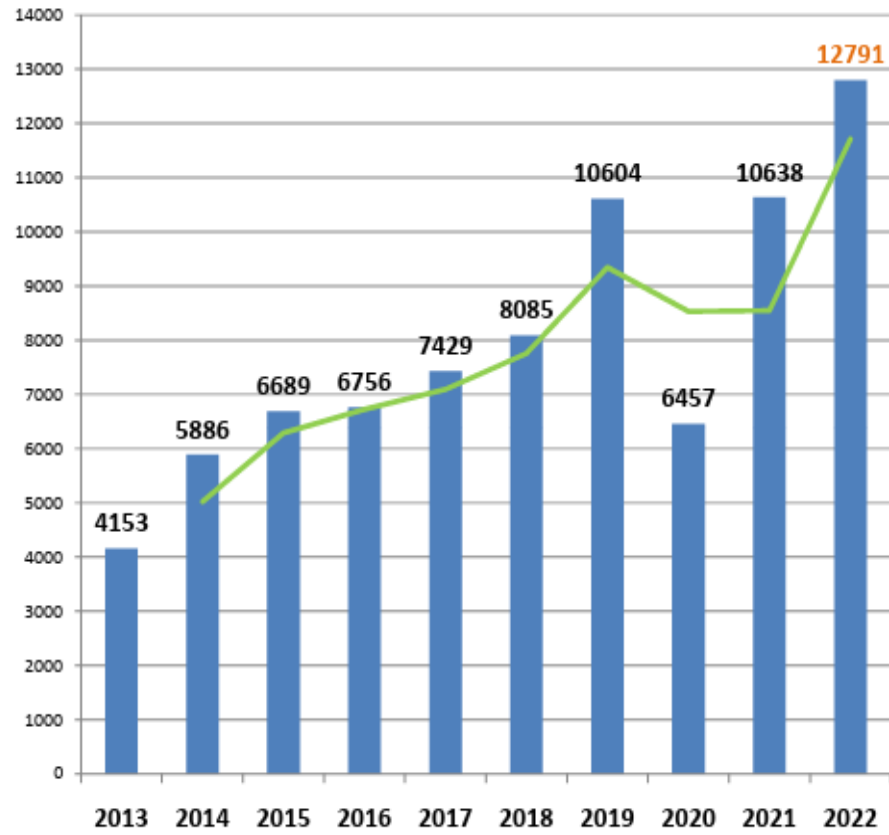
Total Deceased Donors : 930
 Total deceased Transplants : 2265
 Avg. Transplants per donor : 2.43

Vs

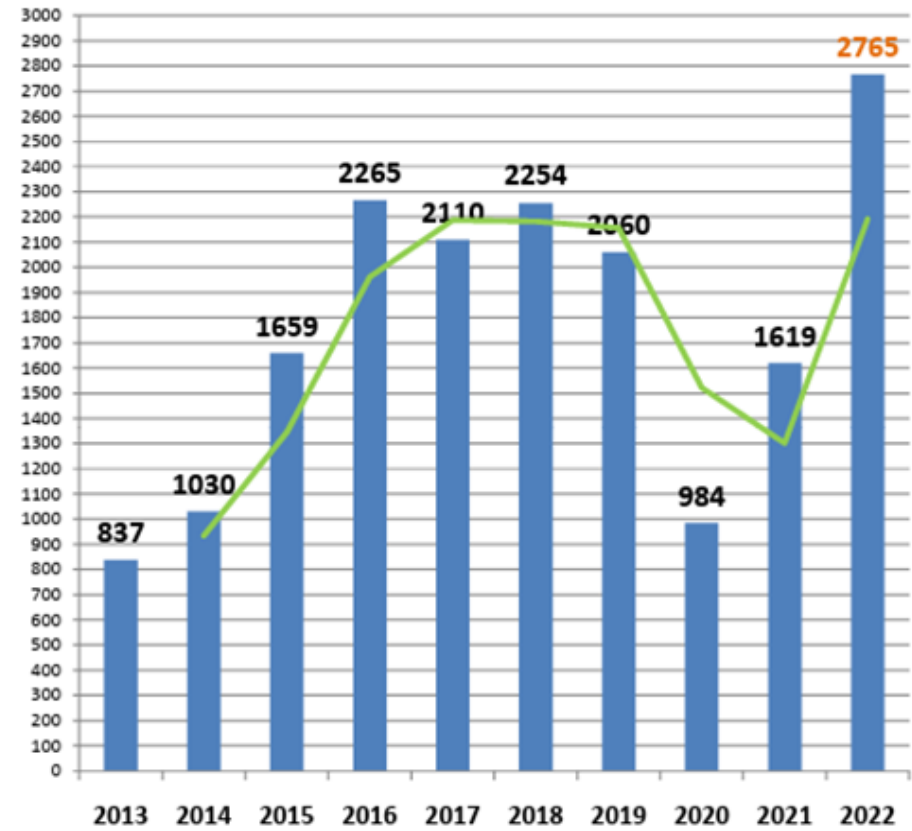
2022

Total Deceased Donors : 904
 Total deceased Transplants : 2765
 Avg. Transplants per donor : 3.05

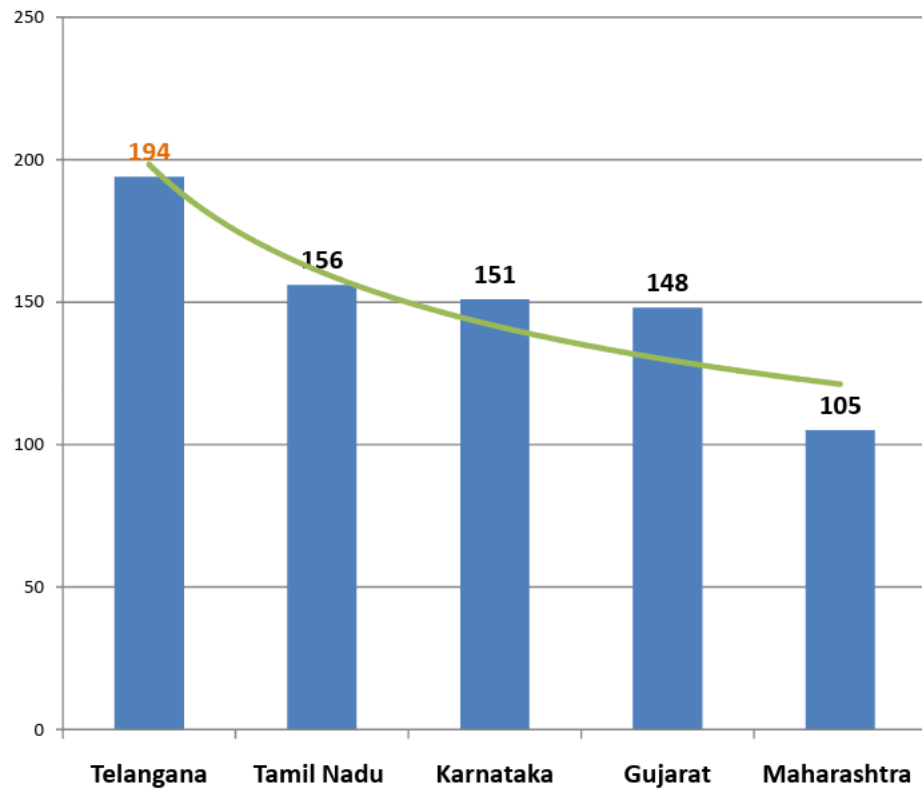
Total living Transplants



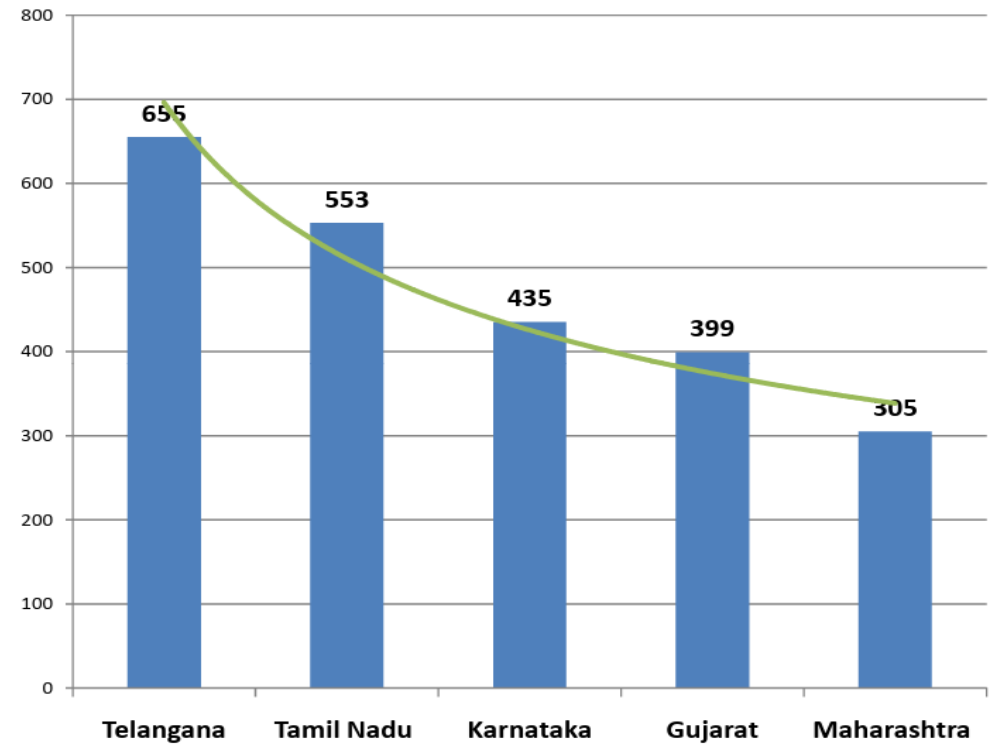
Total Deceased Transplants



**Top 5 States : Number of Deceased Organ Donors
2022**



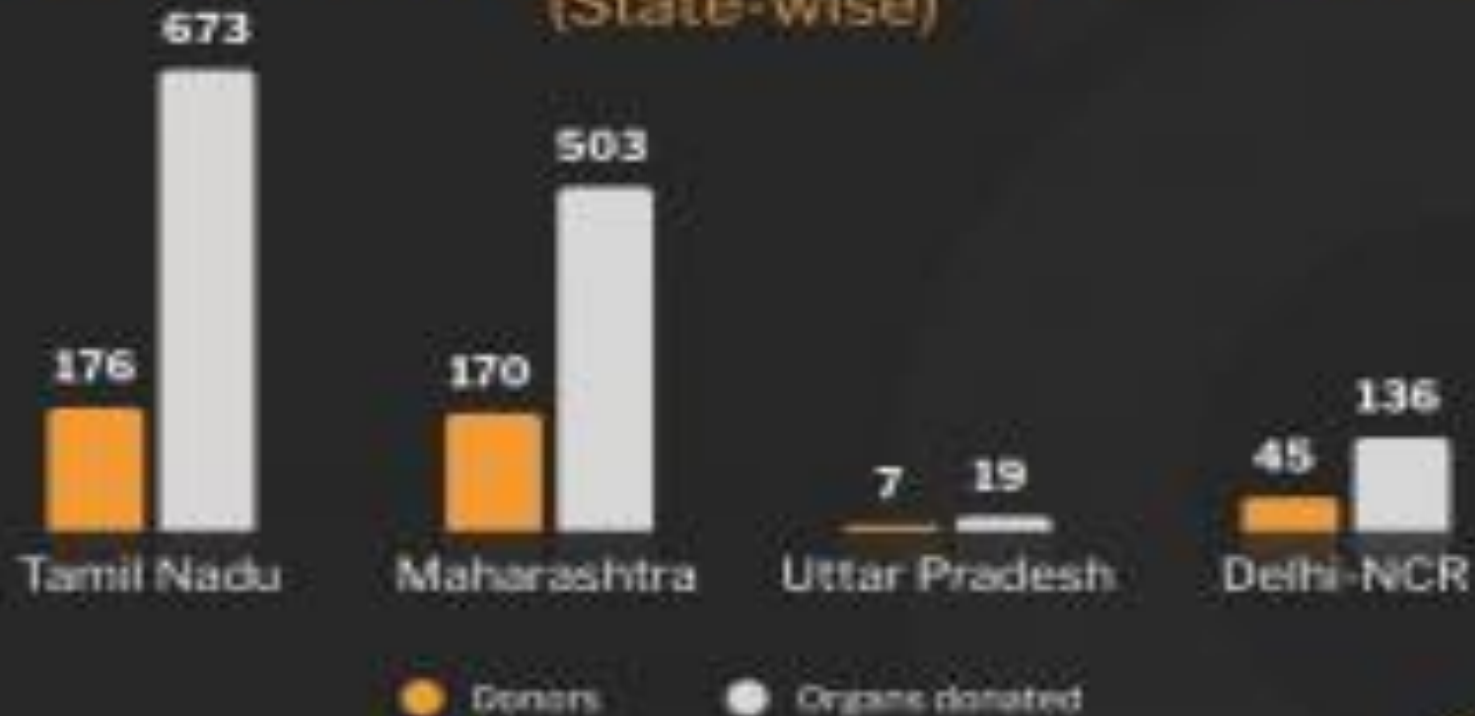
**Top 5 States : Number of deceased Donor
Transplants 2022**



#MoreToGive

ndtv.com/moretogive

Number Of Donors And Organs Donated In 2017 (State-wise)



Source: NOTTO

ORGAN TRANSPLANT



The Organ Transplantation System

It takes everyone to make the system work.

Tran
one
do

Organ transplant is the best treatment for patients with end-stage organ failure. However, there is a gross discrepancy between supply and demand for organs worldwide, and the Indian subcontinent is no exception

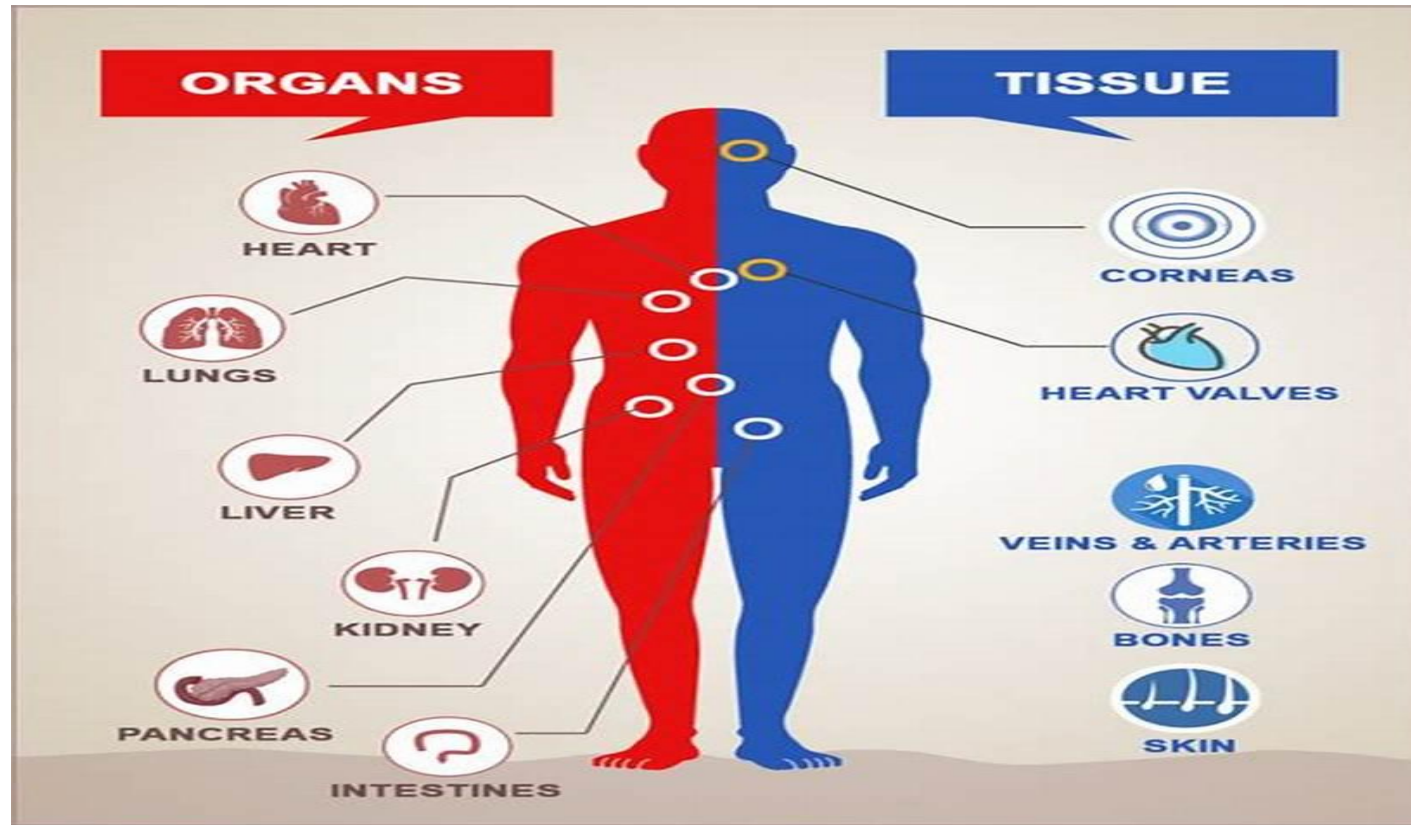
been damaged due to illness or injury.

Information Used To
Develop Policies
Inform Patients' and
Professionals' Decision Making

NEED : END-STAGE DISEASES

DISEASES	ORGANS
Heart failure	HEART
Kidney failure	KIDNEYS
Liver failure	LIVER
Terminal lung illness	LUNG
Corneal blindness	CORNEA
Diabetes	PANCREAS
Heart valvular disease	HEART VALVES
Burns	SKIN

ORGAN/ TISSUES FROM DECEASED DONOR



Healthy organs should be transplanted as soon as possible

Heart	4-6 Hours
Lungs	4-8 Hours
Intestine	6-10 Hours
Liver	12-15 Hours
Pancreas	12-24 Hours
Kidneys	24-48 Hours

ISSUES & CHALLENGES

High Burden (Demand Versus Supply gap)

Poor Infrastructure

Poor rate of Brain Stem Death Certification by Hospitals

Lack of Awareness of the concept of Brain Stem Death among stakeholders

Poor Awareness and attitude towards organ donation

Poor Deceased Organ donation rate



NOTTO

NATIONAL ORGAN & TISSUE TRANSPLANT ORGANIZATION
UNDER THE AEGIS OF NOTP
DIRECTORATE GENERAL OF HEALTH SERVICES
MINISTRY OF HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA

[HOME](#) | [SUGGESTIONS](#) | [RTI](#)



STATE ORGAN AND TISSUE TRANSPLANT ORGANIZATION

(SOTTO)

Proposed States/UTs to Regional Organ and Tissue Transplant Organization(ROTO)					
REGIONAL ORGAN AND TISSUE TRANSPLANT ORGANIZATION (ROTO)					
ROTO	State	Centre	HOD	Contact No.	E- mail id
ROTO	Assam	Gauhati Medical College	(Prof.)Dr.Achyut Chandra Baishya,	9954075427	achbaishya@gmail.com
				09929	rottoguwahati@gmail.com drabhijitsarmaghy@gmail.com
				756666	rottopgimerchd@gmail.com
					organstransplant@gmail.com
				75202	rottosotto.mumbai@gmail.com sujata.patwardhan@rediffmail.com
WEST		College K.E.M. Hospital	Director In-charge		
ROTO EAST	West Bengal	IPGME&R	Prof. (Dr.) Maminoy Bandyopadhyay Director, ROTTO (East)	033-22041498	rottopgmer@gmail.com

According to 2018 data, India was the second largest transplanting country in the world in terms of the absolute number of transplants

The National Organ and Tissue Transplant Organization is a national networking organization established to increase the number of donation

It also functions as the Indian national registry for organ donation and transplantation

Awareness activities are conducted by NOTTO in coordination with regional organizations (ROTTOs) and state organizations (SOTTOs) and many NGOs to improve the number of donor pledges

INSPIRATIONAL JOURNEYS



10-month-old infant dies during treatment, parents donate his organs to save two lives

The parents of the infant said that the organ could save the lives of those in need, which is why they decided to donate. "We agreed to the organ donation because we knew this could help someone else and they wouldn't need to go through the heartache that we were going through," the parents said.

Tribune News Service

Chandigarh, July 22

A 10-month-old baby became a beacon of hope for two organ failure patients. His parents' decision of organ donation amid their own grim tragedy resulted in saving the life of the two patients suffering from end-stage organ failure and battling for survival — one at New Delhi and another at the PGIMER, Chandigarh.

Dhanishtha, a 20-month-old toddler who died after falling from the balcony of her house, has become India's youngest cadaver donor after her organs were used to save the lives of five people.



New Delhi: Twenty-month-old Dhanishtha has become India's youngest cadaver donor after her organs were donated to save the lives of five critically ill patients. Her heart, liver, both kidneys and both corneas have been transplanted into five patients including a five-month-old infant.

"During our stay at the hospital, we saw many patients dying because of lack of organs. When we asked the reason from the doctors, they told us that there is scarcity of organ donors. We thought to donate organs of our child since there was no hope for her to come back to life," Ashish told *IANS*.

"We had already lost our child and we did not want others to suffer the same fate. Hence we voluntarily asked the doctors to retrieve Dhanishtha's organs and donate them to the needy ones. While she is not with us but we can see her living in others carrying her organs," he said.

Dhanishtha's heart was transplanted in the infant at Indraprastha Apollo Hospital. Her kidneys and liver were transplanted in adults.

"I will not say that I'm happy but whenever I would remember her, I would be proud that she became the reason for saving the lives of many patients," he added.

"This proud moment will replace the painful memory," he said.



16-month-old baby dies but saves many lives with his organs

By Shalini Bhardwaj | Updated: [Aug 25, 2022 16:38 IST](#)

New Delhi [India], August 25 (ANI): The family of a 16-month-old baby who was declared brain dead at AIIMS Delhi, donated his organs to help save the lives of others.





NEED OF THE HOUR

- ❑ Create awareness on organ donation
- ❑ Educate about organ donation
- ❑ Teamwork and focus by primary care and intensive care unit doctors
- ❑ Sensitise the public on transparency of organ allocation
- ❑ Help of social media in propagating the idea
- ❑ Regular brain-dead declaration and grief counseling



 **ORGAN
DONATION DAY**

13th August

“Help Someone Live After Your Death.”

