



# Sources of Donor Organs & Their Ethical Implications

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# Organ Donation and Transplantation Statistics



## Global Activity in Organ Transplantation 2014 Estimates

Kidney	Liver	Heart	Lung	Pancreas	Small bowel
84347	27759	7023	5046	2299	196

≈ 126,670 solid organs reported to be transplanted in 2015

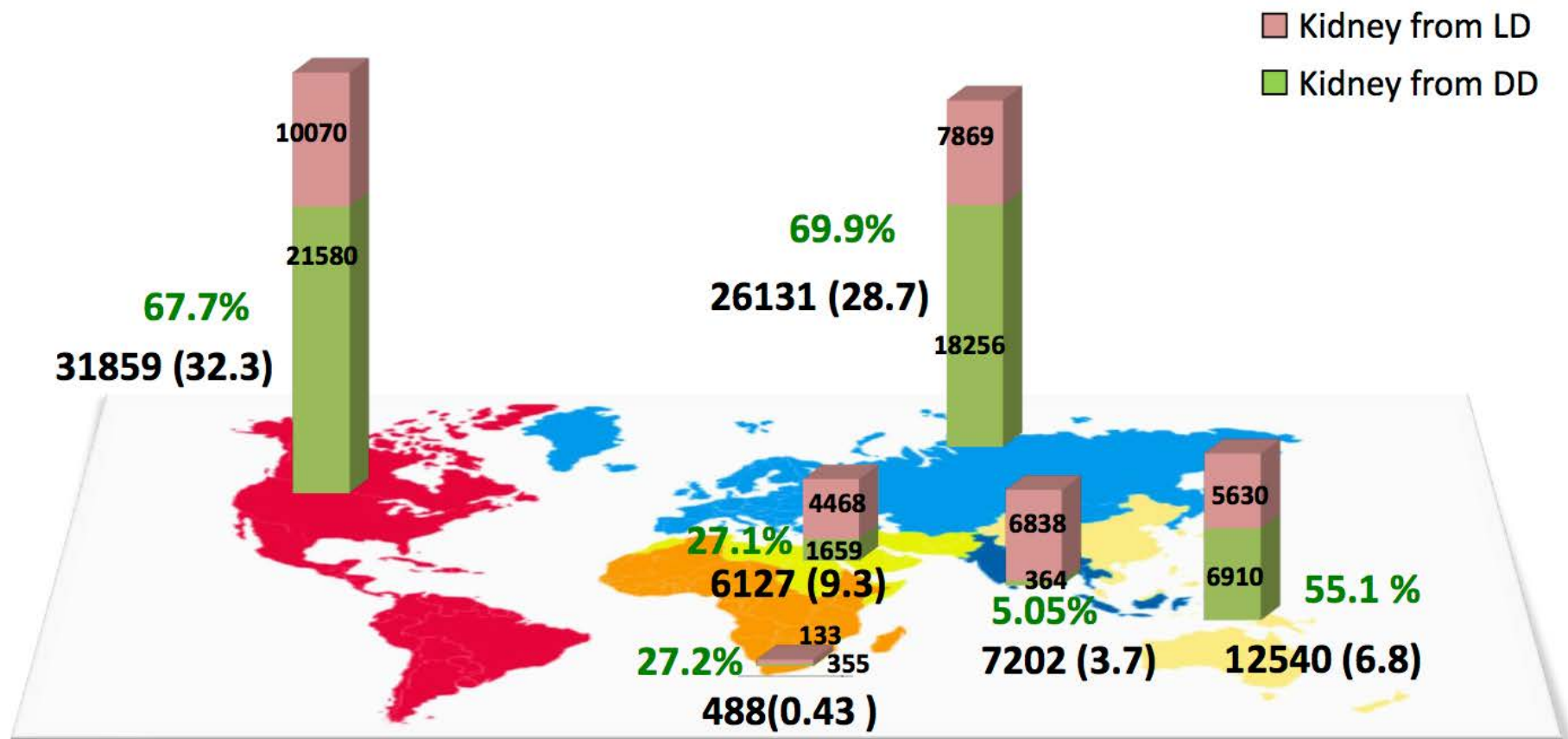
≈ 5.8 % of increase over 2014

≤ 10% of global needs

41.8% of living kidney transplants and 21% of living liver transplants

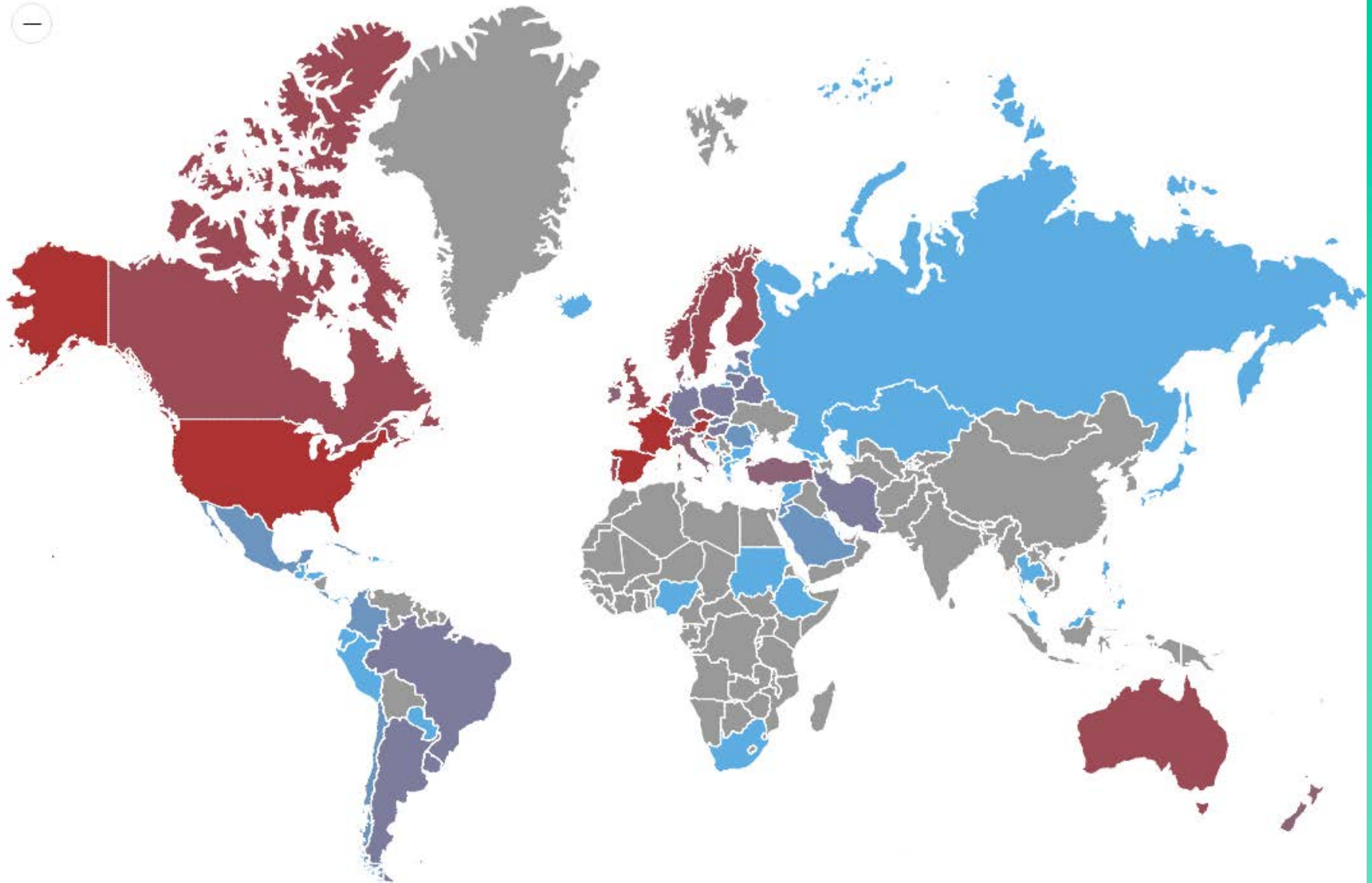
## Kidney Transplantations per Region

Kidneys from Deceased Donors (%); Absolute number; Kidney Tx (pmp)



# Total Rate (pmp) Transplant sum: KIDNEY+HEART+LUNG+LIVER+PANCREAS+SMALL BOWEL (Global.2016)

Source: GODT (<http://www.transplant-observatory.org>)



No data

0

0.01-17.7

17.7-35.39

35.39-53.09

53.09-70.79

70.79-88.48

88.48-106.18



# Organ Shortage Challenge

- The primary ethical dilemmas surrounding organ transplantation arise from the shortage of available organs.
- In 2003 in US only 19,000 transplants were conducted while 83,000 people remained on the waiting list

# Organ Shortage Challenge: US

## Statistics at a Glance

**116,000+**

**Number of men, women and children on the national transplant waiting list as of August 2017.**

**33,611**  
transplants were  
performed in 2016.

**20**  
people die each day  
waiting for a transplant.

# 114,974

people need a lifesaving organ transplant (total waiting list candidates).

Of those, 74,827 people are active waiting list candidates. Totals as of  
today 8:42am EST

# 2,853

transplants performed this year

Total Transplants January - January 2018 as of 02/22/2018

# 1,410

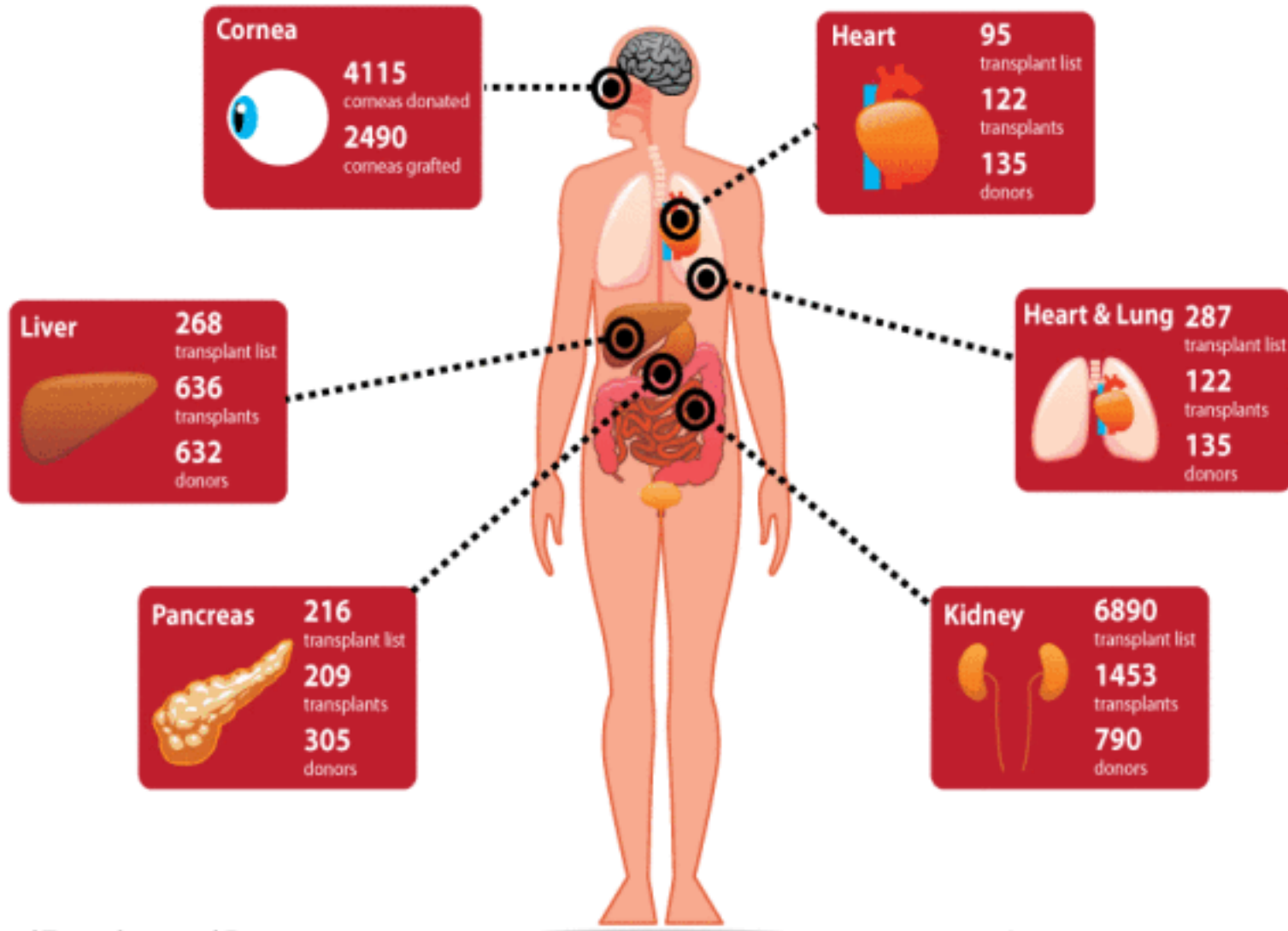
donors

Total Donors January - January 2018 as of 02/22/2018



# Organ Donation in the UK

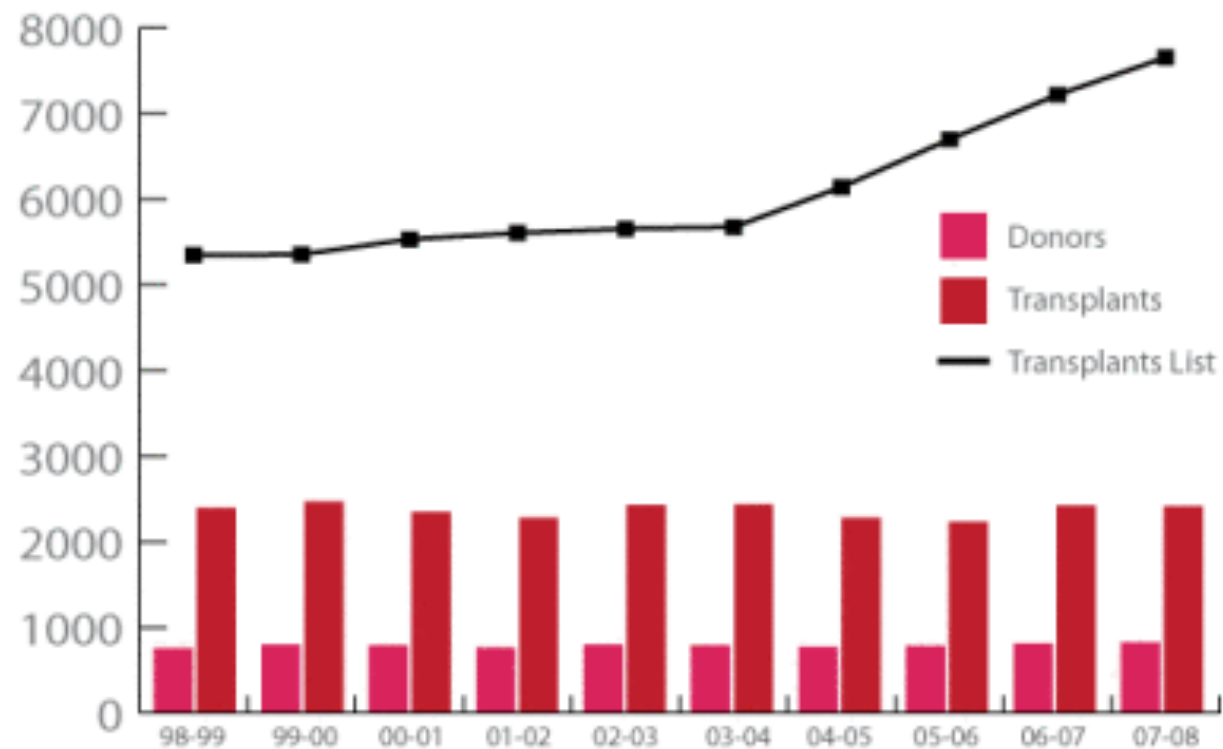
After a year of concerted effort to boost UK organ donation rates, the number of people agreeing to donate their organs after death is growing. But it is still at a slower rate than it's required to be.



Total Transplants and Donors

Statistics for 2008 - 2009

## Total Transplants and Donors



## Statistics for 2008 - 2009



**3513**  
organ transplants



**977**  
lives were saved through  
transplants



**2,711**  
had their sight restored  
through cornea transplant



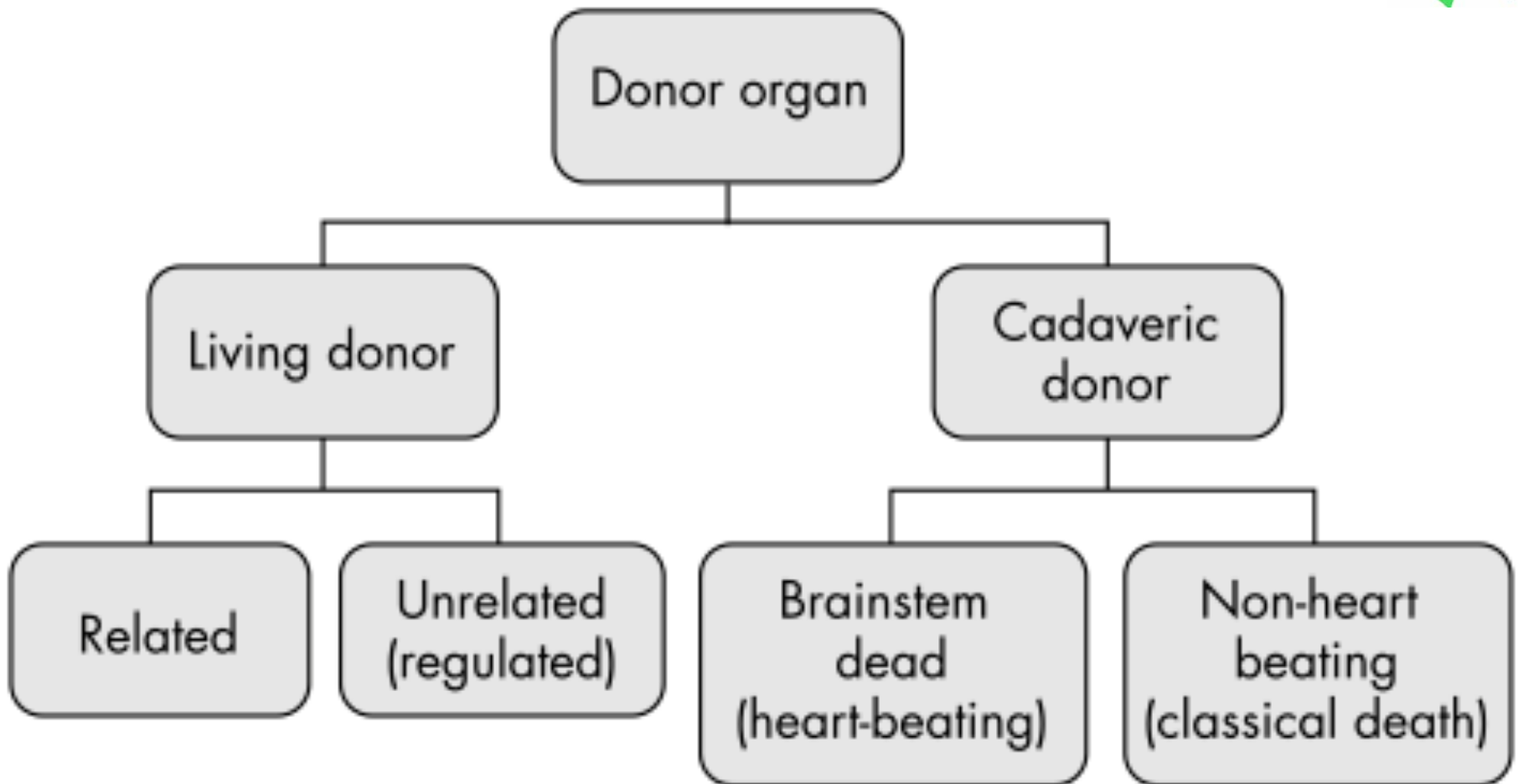
**7,877**  
patients are actively  
waiting for a transplant

Source: NHS Transplant Activity in the UK



# The main sources of donor organs

- The three sources of transplantable organs:
  1. Cadaveric donors,
  2. Living donors, and
  3. Alternative organ sources<sup>1</sup>.
    - Animal organs
    - Artificial organs
    - Stem cells
    - Aborted fetuses



6. Bell, M. (2003). Non-heart beating organ donation: old procurement strategy - new ethical problems. *J Med Ethics*, 29(3), 176 - 181.



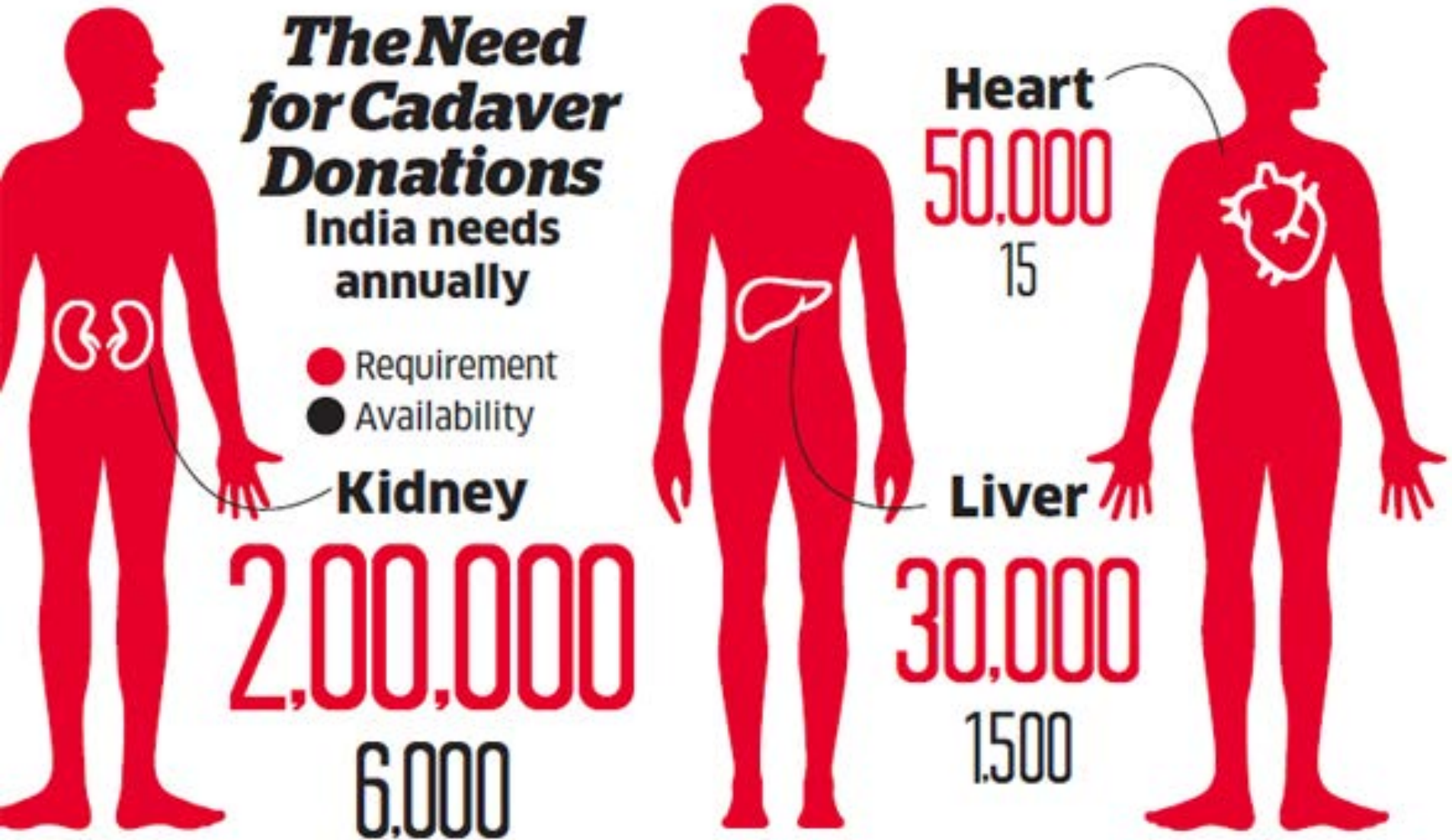
# Ethical Challenges Related to Cadaveric Donors



# Cadaveric Organ Donation



- Once a person dies, his or her organs may be donated if the person consented to do so before they passed away.
- A person explicit consent to donate their organs while still living or Presumed consent can be used in some countries.
- If possible, the deceased person may be kept on life support once they have died until the organs can be taken, in order to preserve the organs until they are removed<sup>1</sup>.



SAVES

8

PEOPLE WITH ORGANS



1 DONOR

HELPS

50

PEOPLE WITH TISSUES





# Opt In vs. Opt Out System

- Globally, these are two main default options for determining voluntary consent of organ donor
  - **Opt in (explicit consent):** only those who have given explicit consent are donors
  - **Opt out (presumed consent):** anyone who has not refused consent to donate is a donor.



# Opt In (Explicit Consent)

- Opt-in policy requires people have to actively register their consent to the posthumous donation of their bodily organs
- If the deceased person's organ donation wishes are unknown, the organ procurement organization will approach a family member to obtain consent to remove the organs



## Opt In (Explicit Consent) cont...

- The family members with the authority to do so is generally determined by this hierarchy
  - Spouse. If no spouse, then
  - Adult child. If no adult children, then
  - Parent. If no parents, then
  - Adult sibling. If no siblings, then
  - Legal guardian



# Opt In (Explicit Consent) cont...

## Challenges

- People who did not get opportunity to opt in , then their organs are not used
- This policy leads to a shortfall in the supply of organs that leave many people who need organs suffering and some dying while on waiting list

# Opt Out (Presumed Consent)



- In countries that favor opt-out policy the default position is that everybody is a donor posthumous unless he/she has registered an objection.
- Advocates of a this approach might argues that it is every person's civic duty to donate their organs once they no longer need them (i.e. after death) to those who do.

Centre for Bioethics, (2004). Ethics of Organ transplantation. In U. o. Minnesota,  
[https://www.ahc.umn.edu/img/assets/26104/Organ\\_Transplantation.pdf](https://www.ahc.umn.edu/img/assets/26104/Organ_Transplantation.pdf)

Saunders, B. (2012). Opt-out organ donation without presumptions. *J Med Ethics*, 38, 69-72

# Opt Out (Presumed Consent)



## Challenges

1. It is wrong to take someone's organs without their consent
2. People may fail to register for various reasons e.g. ignorance, remoteness, poor communication etc.
3. This approach regard consent as a mental attitude rather than an act. "If consent is something that must be given, then it cannot simply be presumed when no such act has taken place"

# Opt Out (Presumed Consent)



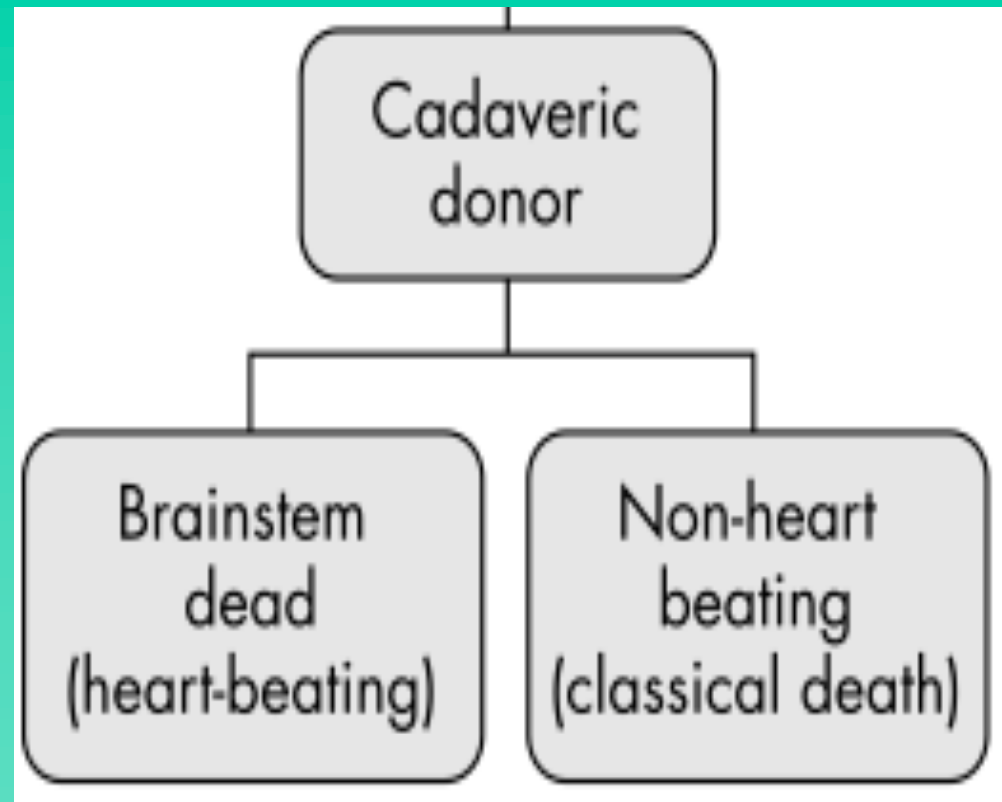
## Challenges

4. People who frequently choose not to donate organs for religious and cultural reasons might find it the most challenging to opt out of donating due to language barriers, transportation difficulties or for other reasons



# The Dead – Donor Rule (DDR)

- DDR states that vital organs should be taken only from persons who are dead.
- The ethical and legal battle is on the definition of death.
  - Brainstem dead vs. Classical death





## DDR CASE 1

“The parents of a young girl wanted to donate her organs after an accident had left her with devastating brain damage. Plans were made to withdraw life support and to procure her organs shortly after death. But the attempt to donate was aborted because the girl did not die quickly enough to allow procurement of viable organs. Her parents experienced this failure to donate as a second loss; they questioned why their daughter could not have been given an anesthetic and had the organs removed before life support was stopped.” (Robert D. Truog, Miller, & Halpern, 2013)



# The Dead – Donor Rule (DDR)

- Before the advancement of critical care, the diagnosis of death was straight forward: patients were declared dead when they were cold, blue, and stiff.
  - Unfortunately, organs from could not used for transplantation.
  - Most organs do not tolerate the ischemia that follows classical cardiorespiratory death.



# The Dead – Donor Rule (DDR)

- The concept of brain death has been the ethical and legal justification for thousands of lifesaving donations and transplantations.
  - Brain dead organ donors are considered to be the principal source of transplantable organs.
  - However, there have been persistent questions about whether patients with massive brain injury, apnea, and loss of brainstem reflexes are really dead.
  - Is brain death is the same as biological death?

Truog, R. D., & Miller, F. G. (2008). The Dead Donor Rule and Organ Transplantation. *N Engl J Med*, 359(7), 674 - 675.

Truog, R. D., Miller, F. G., & Halpern, S. D. (2013). The Dead-Donor Rule and the Future of Organ Donation. *N Engl J Med*, 369(14), 1287 -1289.

# What to we know on DDR?



Several scholars urge to either revisit or abandon the DDR in order to increase the availability of life saving donor organs

- In the cross sectional survey to evaluate the public's opinion about organ removal if explicitly described as causing the death of a donor in irreversible apneic coma. Some 71% of the sample agreed that it should be legal for patients to donate organs in such situation; 67% agreed that they would want to donate organs in a similar situation; 85% agreed that they were willing to donate organs after death, 76% agreed that they would donate in the scenario of irreversible coma with organ removal causing death; Nair-Collins, M., Green, S. R., & Sutin, A. R. (2015) *J Med Ethics*, 41, 297-302.



# Elective Ventilation for Organ Donation

- The use of ventilation for the sole purpose of retrieving the organs of patients close to death, is an option which offsets the shortage of organ donation.
- Patients with catastrophic brain injury or irreversible brain injury (with a high probability of brain death and death is believed to be imminent) are transferred to the ICU, with the only purpose of donation

Frati, P., Fineschi, V., Gulino, M., Vergallo, G. M., Mario Di Luca, N., & Turillazzi, E. (2014). Ethical and Legal Implications of Elective Ventilation and Organ Transplantation: “Medicalization” of Dying versus Medical Mission. *BioMed Research International*, 2014.

Escudero, D., Otero, J., Menéndez de León, B., & Perez-Basterrechea, M. (2017). Organ Donation and Elective Ventilation: A Necessary Strategy. *BioMed Research International*, 2017, 7518375.

<http://doi.org/10.1155/2017/7518375>



# Elective Ventilation for Organ Donation cont...

- While complying with the patient prior organ donation consent/willingness or family consent an elective nontherapeutic ventilation (ENTV) is performed to allow the organ transplant team to get prepared
- Artificial ventilation is initiated as soon as respiratory arrest occurs, thus preserving the organs until brain death can be established

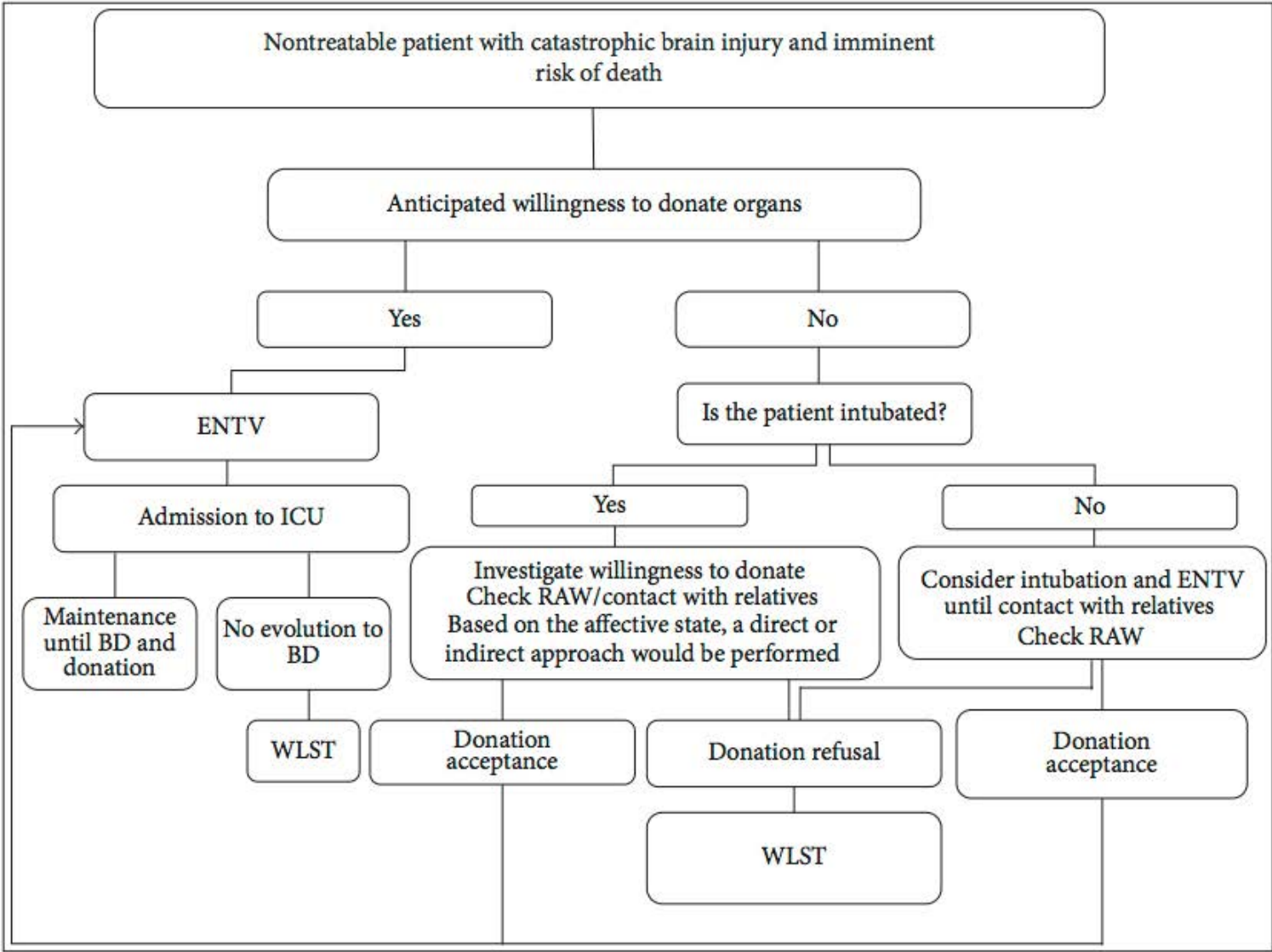


FIGURE 1: Clinical decision making. ENTV (elective nontherapeutic ventilation), RAW (registry of anticipated willingness), WLST (withdrawal of life-sustaining treatments), BD (brain death), and ICU (Intensive Care Unit).



# Elective Ventilation for Organ Donation cont...

## Challenges

- Continuation of treatment that can provide no benefits to the patient's own health or clinical prospect create a question to the medical mission
  - Potential conflict of interest: the best interests of the “donor” patient (subject to intensive care) versus (ii) the best interests of the patient “recipient” of the transplanted organ (who becomes the final target of the intensive care provided to the “donor” patient)

Coggon, J. (2013). Elective ventilation for organ donation: law, policy and public ethics. *J Med Ethics*, 39, 130 - 134.



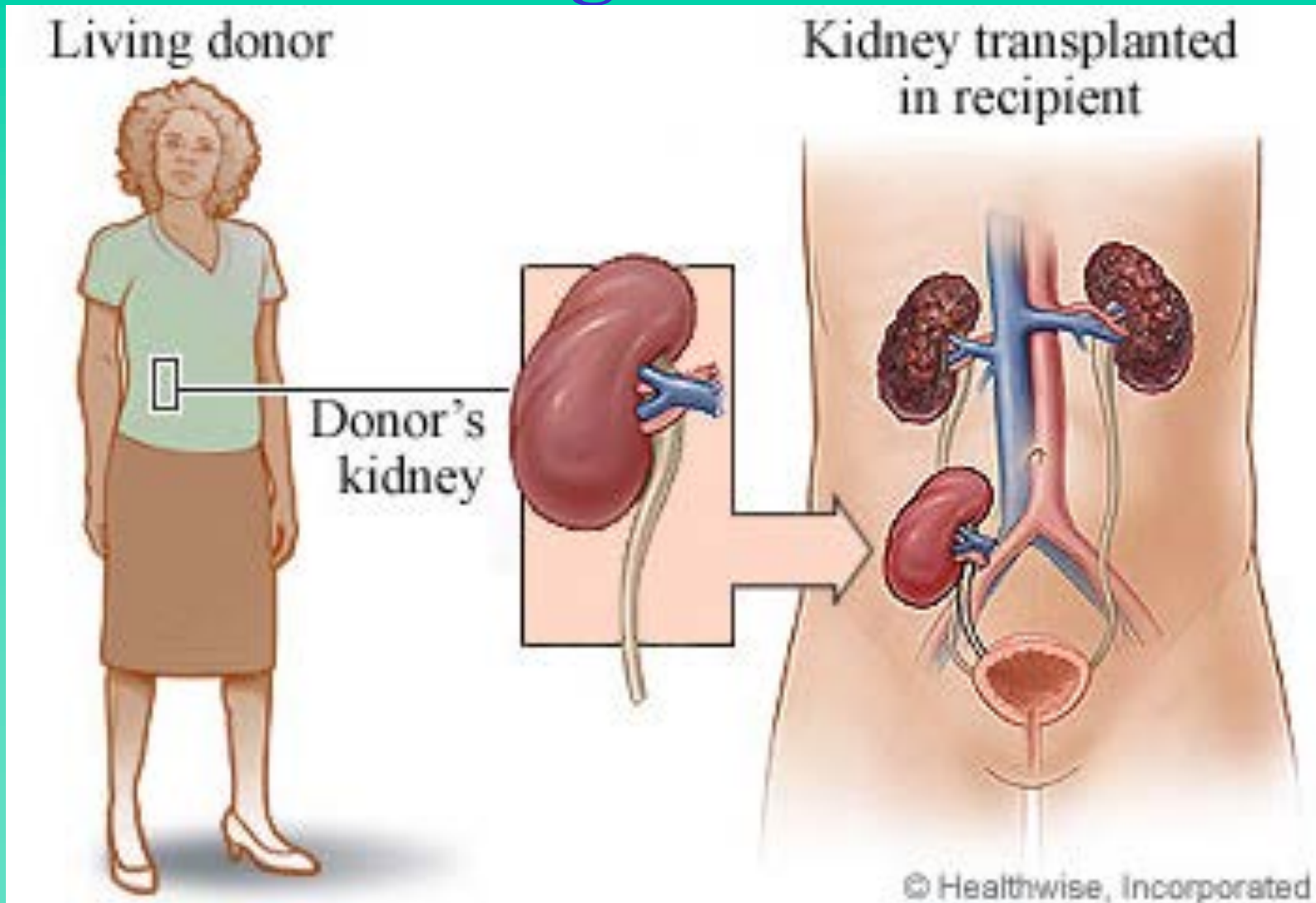
# Cadaveric Organ Donation cont...



## Five Strategies to Increase Cadaveric Organ Donations

1. **Education**
2. **Mandated choice** (everybody should indicate their wishes)
3. **Presumed consent (Opt-out)**
4. **Incentives:** funeral costs, financial incentives, offer recognition etc.
5. **Prisoners:** Prisoners who are put to death

# Ethical Challenges Related to Living Donors





# Living organ donation

- A person with organ damage or organ failure may look for a living donor to donate an organ, allowing the patient to bypass the national waiting pool to receive a cadaveric organ.
- Living organ donation is still the major source of organs for transplant in most of developing countries, including Tanzania

Centre for Bioethics, (2004). Ethics of Organ transplantation. In U. o. Minnesota, [https://www.ahc.umn.edu/img/assets/26104/Organ\\_Transplantation.pdf](https://www.ahc.umn.edu/img/assets/26104/Organ_Transplantation.pdf)

Naqvi, A. A. (1995). Ethical Issues in Renal Transplantation in Developing Countries. *BJUI*, 76(2), 97–101.

# Related Donors Vs Non-Related Donors



- Most of living organ donors are living related individual who may be a brother, sister, parent, a child etc. or someone who is emotionally attached to the patient like a spouse.
- The use of non-related donor is not encouraged to avoid organ trade, unless the patient has failed to get a donor from living related donors

Naqvi, A. A. (1995). Ethical Issues in Renal Transplantation in Developing Countries. *BJUI*, 76(2), 97–101.



# Living organ donation cont...

- Benefits to living donation, both for the donor and the patient:
  - The donation can be pre-arranged, allowing the patient to begin taking anti-rejection drugs in advance, thereby increasing the chances of success
  - There are often better matches between donors and recipients with living donation, because many donors are genetically related to the recipient
  - Psychological benefits for both the donors and recipients

# Living organ donation cont...



- Challenges to becoming a living donor may include:

## **Both Living related & non-related donor**

- Informed consent: in both the living related donor and the living non-related donor
- No donor advocate: While the patients have advocates

# Living organ donation cont...



- Challenges to becoming a living donor cont...

- Living related donors**

- Excessive Family pressure: Family members may feel pressured to donate when they have a sick family member or loved one
    - Difficulty to refuse when someone do not want to donate due to fear of distortion of their image towards other family members and cultural factors; e.g. in a male dominated cultures women cannot refuse

# Living organ donation cont...



- Challenges to becoming a living donor cont...

- **Living non-related donors**

- The main arguments base on coercion and commercialization of organs, which can lead to exploitation of vulnerable for the benefit of wealthy
      - The moral objection raised most often argues that selling organs will appeal to the socio- economically disadvantaged (people who are poor, uneducated, live in a depressed area, etc.) and these groups will be unfairly pressured to sell their organs by the promise of money

Ghods, A. J. (2009). Ethical Issues and Living Unrelated Donor Kidney Transplantation, 3(4), 183–192.

Naqvi, A. A. (1995). Ethical Issues in Renal Transplantation in Developing Countries. *BJUI*, 76(2), 97–101.



# Organ Trafficking & Transplant Tourism: The Declaration of Istanbul 2008

## Definitions

**Organ trafficking** is the recruitment, transport, transfer, harboring or receipt of living or deceased persons or their organs by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability, or of the giving to, or the receiving by, a third party of payments or benefits to achieve the transfer of control over the potential donor, for the purpose of exploitation by the removal of organs for transplantation (6).

**Transplant commercialism** is a policy or practice in which an organ is treated as a commodity, including by being bought or sold or used for material gain.

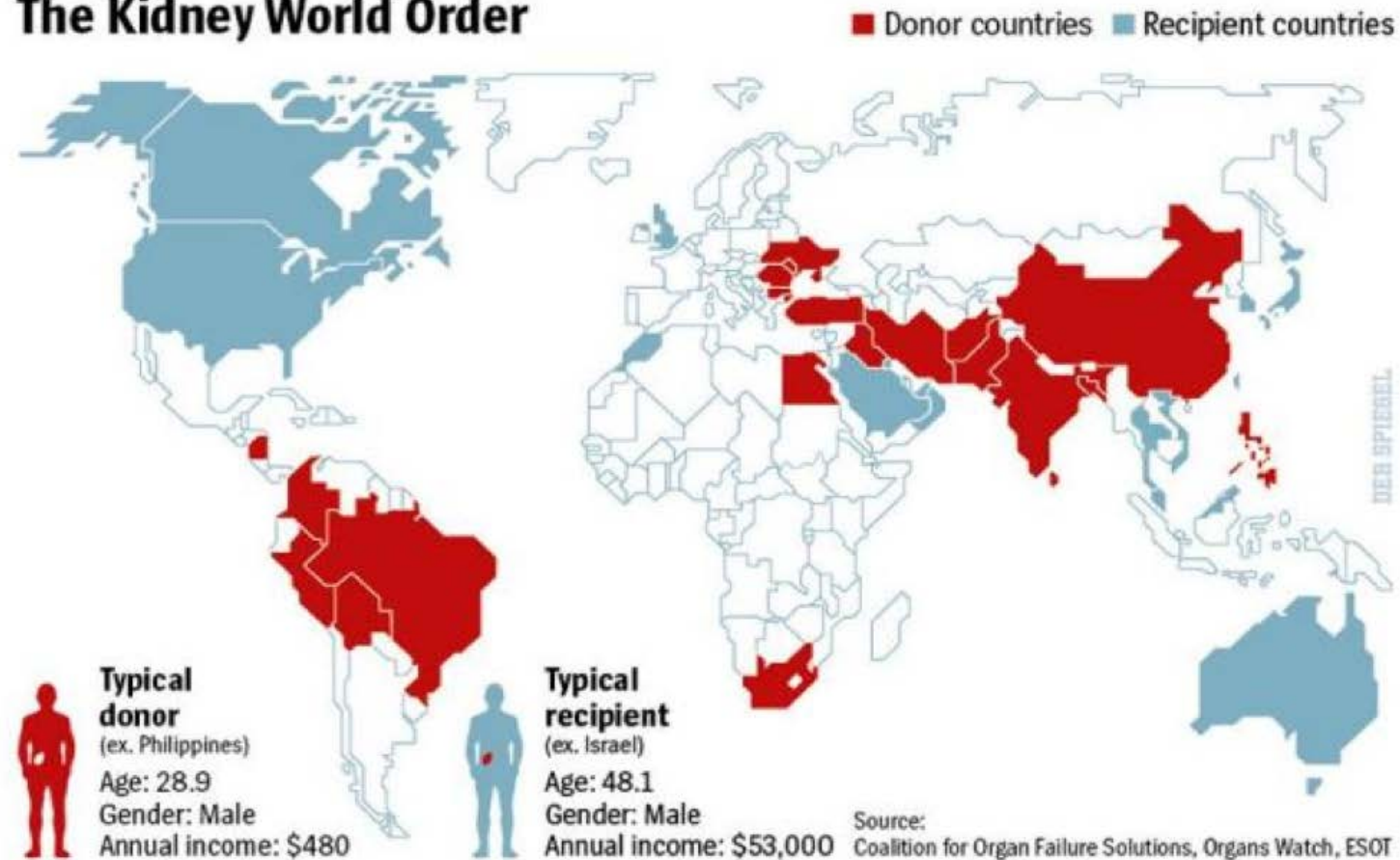
**Travel for transplantation** is the movement of organs, donors, recipients or transplant professionals across jurisdictional borders for transplantation purposes. Travel for transplantation becomes **transplant tourism** if it involves organ trafficking and/or transplant commercialism or if the resources (organs, professionals and transplant centers) devoted to providing transplants to patients from outside a country undermine the country's ability to provide transplant services for its own population.

# Organ Trafficking: An International Crime Infrequently Punished

Jul 9, 2013 12:20 PM By Susan Scutti

◀ Back to article

## The Kidney World Order



Graphic: Global kidney trafficking.

Organ trafficking, an international crime, is estimated to generate between \$600 million and \$1.2 billion in profits per year. *Der Spiegel*

# Categories of Organ Trafficking

Organ trafficking occurs in three broad categories:

1. Criminal organ trade: traffickers force or deceive victims into giving up an organ.
2. Victims formally or informally agree to sell an organ and are cheated because they are not paid for the organ or are paid less than the promised price.
3. Vulnerable people, including as migrants workers, the homeless, or the illiterate, are treated for an ailment which may not even exist and then their organs are removed without their knowledge.

# What is the situation in Tanzania?

- MO Dewji aahidi kuongeza idadi ya wanafunzi wanaopata ufadhili wa taasisi yake-Tz. (<http://dewjiblog.co.tz/mo-dewji-aahidi-kuongeza-idadi-ya-wanafunzi-wanaopata-ufadhili-wa-taasisi-yake/>)
- Translation: MO Dewji has promised to increase the number of students receiving funding from its institution
  - This year (2018), one of the beneficiary wanted to sell his kidney in order to get tuition fee
- Atangaza kuuza figo kwa Sh90 mil-Tz (<http://www.mwananchi.co.tz/habari/Atangaza-kuuza-figo-kwa-Sh90-mil/1597578-2577036-rygv4lz/index.html>)
- Translation: He announced selling a kidney for Tshs 90 mil
- Mwanafunzi ataka kuuza figo ili ajiunge na chuo kikuu-Kenya (<http://www.1clickdaily.com/Mwanafunzi-Ataka-Kuuza-Figo-Ili-Ajiunge-Na-Chuo-Kikuu-977650.html>)
- Translation: The student wants to sell a kidney to join the University

# Principle #: 6 The Declaration of Istanbul 2008

6. Organ trafficking and transplant tourism violate the principles of equity, justice and respect for human dignity and should be prohibited. Because transplant commercialism targets impoverished and otherwise vulnerable donors, it leads inexorably to inequity and injustice and should be prohibited. In Resolution 44.25, the World Health Assembly called on countries to prevent the purchase and sale of human organs for transplantation.
  - a. Prohibitions on these practices should include a ban on all types of advertising (including electronic and print media), soliciting, or brokering for the purpose of transplant commercialism, organ trafficking, or transplant tourism.
  - b. Such prohibitions should also include penalties for acts—such as medically screening donors or organs, or transplanting organs—that aid, encourage, or use the products of, organ trafficking or transplant tourism.
  - c. Practices that induce vulnerable individuals or groups (such as illiterate and impoverished persons, undocumented immigrants, prisoners, and political or economic refugees) to become living donors are incompatible with the aim of combating organ trafficking, transplant tourism and transplant commercialism.

*“The Istanbul Declaration proclaims that the poor who sell their organs are being exploited, whether by richer people within their own countries or by transplant tourists from abroad. Moreover, transplant tourists risk physical harm by unregulated and illegal transplantation. Participants in the Istanbul Summit concluded that transplant commercialism, which targets the vulnerable, transplant tourism, and organ trafficking should be prohibited. And they also urged their fellow transplant professionals, individually and through their organizations, to put an end to these unethical activities and foster safe, accountable practices that meet the needs of transplant recipients while protecting donors.”*

# Additional Ethical Questions Not covered in the Presentation

- Is it ethical to procure organs from prisoners? Or should condemned prisoners receive organ transplants?
- Should the person with HIV or any other chronic incurable disease be given an organ?
- Should people whose lifestyles choices damaged their organ be given a chance at organ transplant?
- Deemed Consent" to Facilitate Organ Procurement: Is It Ethical?
  - (<https://www.medicalbag.com/ethics/ethics-surrounding-deemed-consent-for-organ-donation/article/747227/>)

**ASANTENI SANA**