

Challenges of Organ Donation in Developing Countries

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African Basis



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Organ Transplantation

- Deceased
 - Donation after Brain Death – DBD
 - Donation after Circulatory Death – DCD
- Living Donation
 - Living Related
 - Living Non-related/Altruistic
 - Directed

Cape Town





Patient SM

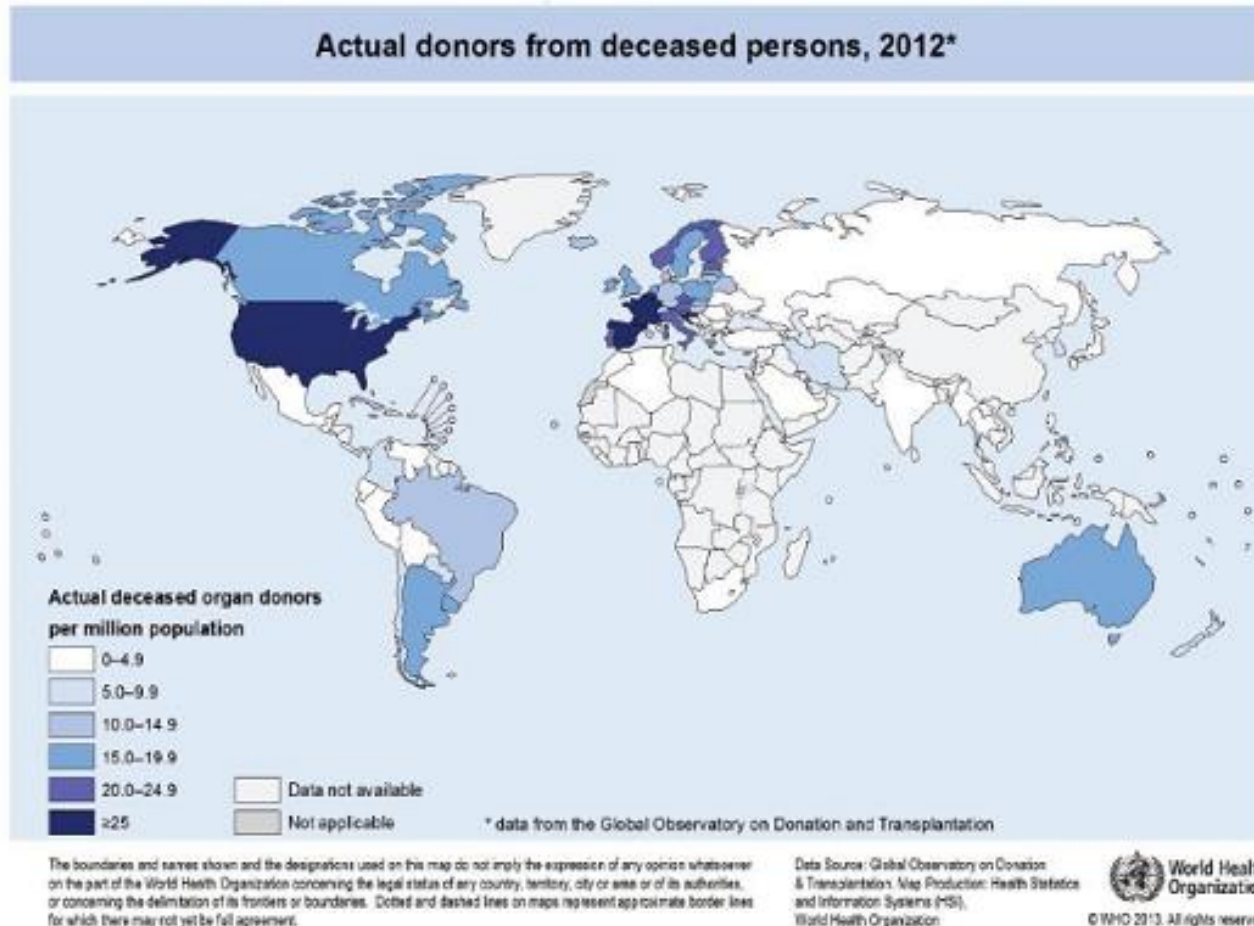
- 12yr old girl presented with headaches, BP 180/100 and fluid overload
- Guest of our PICU
- Creat 1200mmol/l(13.5mg/dL)
- Background – Eastern Cape remote village with no electricity or running water
- Now living in a RDP house outskirts of Cape Town with mom and younger sibling
 - Mom works at airport coffee shop
 - Never heard of renal failure OR Organ transplant



What's happening in the rest of the World?

ORGAN DONATION GLOBALLY

Source: Global Observatory on Donation & Transplantation (WHO/ONT); Courtesy: B. Dominguez-Gil, ONT

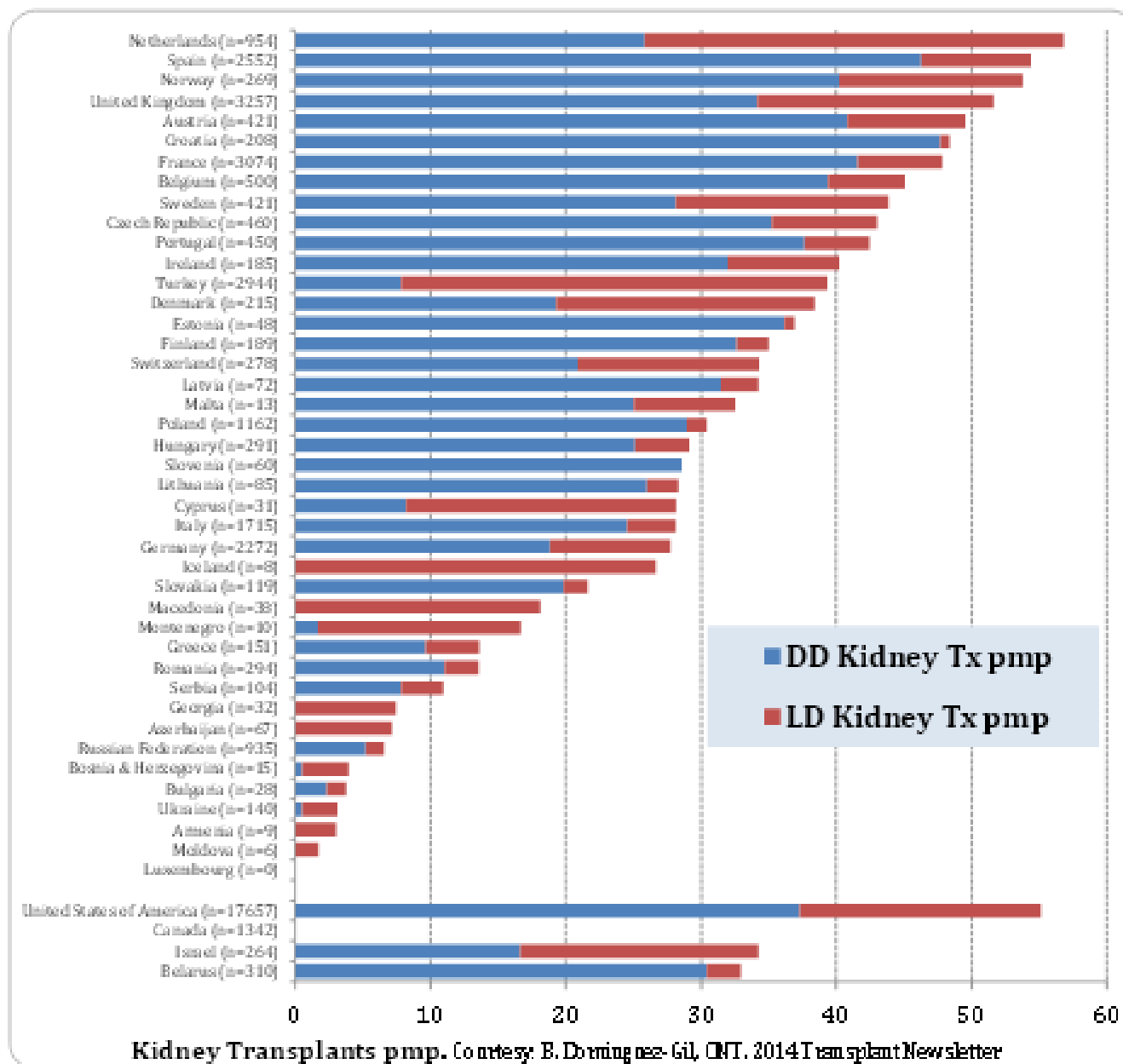


Donor rates

Spain 30pmp USA 20 – 30pmp UK 16pmp Russia 6.9pmp SA 4pmp

BEYOND THE EUROPEAN UNION: COUNCIL OF EUROPE COUNTRIES

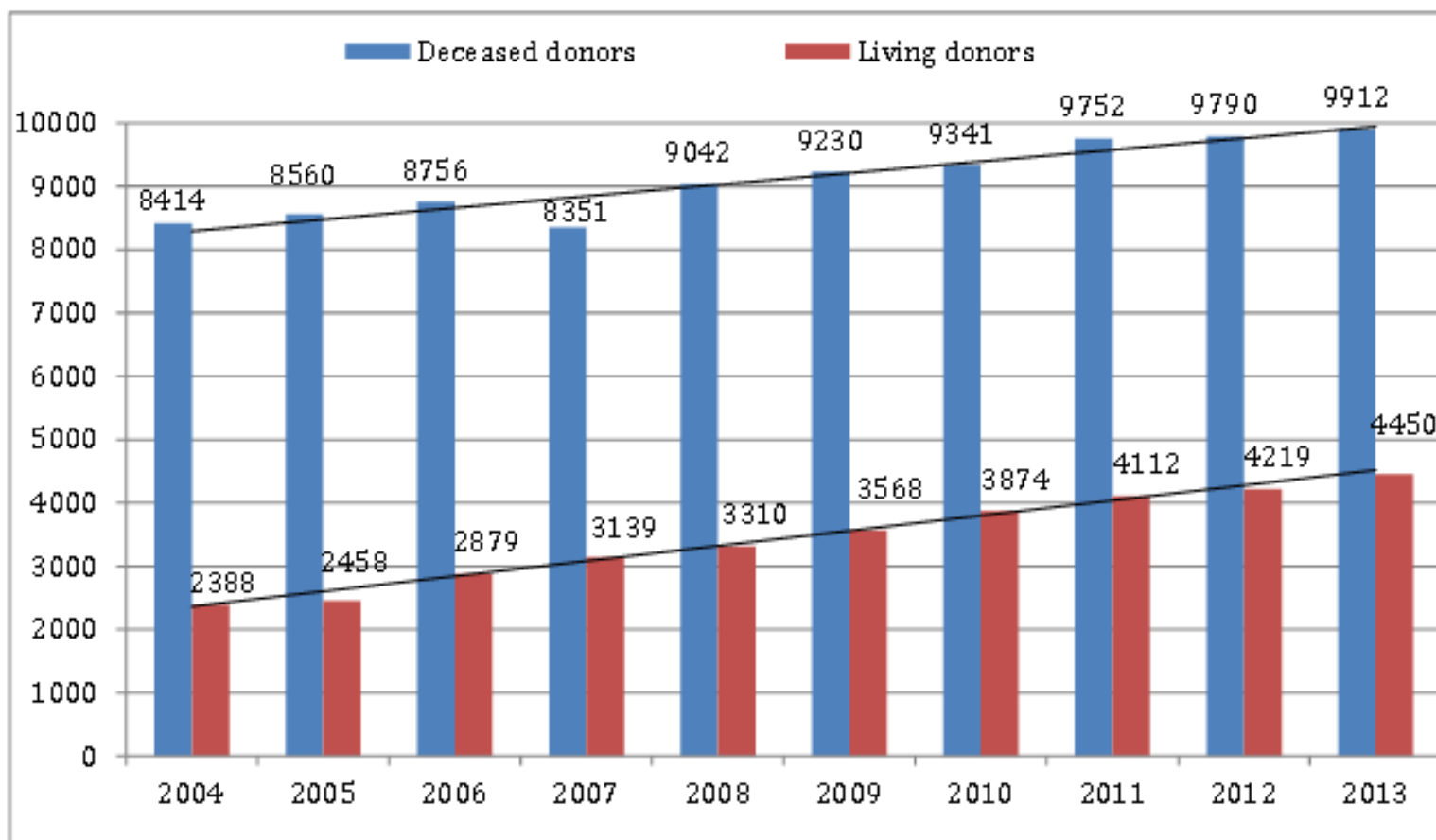
2013 kidney transplants per million population, Council of Europe members & observers



Kidney Transplants pmp. Courtesy: B. Dominguez-Gil, CNT, 2014 Transplant Newsletter

DONATION FIGURES OVER 10 YEARS FOR THE EUROPEAN UNION

Organ transplants from deceased and living donors in the EU, from 2004 to 2013 (All 28 EU Member States in 2013 are captured in this graph, even if they joined the EU after 2004. Source: Annual Transplant Newsletters 2005 to 2014)



increase in
deceased
donation
+ 18 %

increase in
living
donation
+ 86 %

→ total
increase in
donation:
+ 33 %



Transplantation

- Treatment of choice for severe organ failure
- Demand for organs outstrips supply in virtually every country in the world
Med J Aust 2005 Matthew T
- Many approaches to increase donor rates
- Practises that have crossed the boundary of legal and ethical acceptability
- International practices of organ donation
Br J Anaesth 2012 – Rudge C, Delmonico FL, Chapman
- Exploitation of vulnerable living donors
- Balance between:
 - Reduced need for transplantation VS
 - Developing deceased donation to its maximum potential



Organ Trafficking

UPDATED 08 APRIL 2016

The dark world of internet kidney trafficking

One man says he was so desperate to save his car from being repossessed that he turned to the black market online to sell his kidney. Health24 investigates.

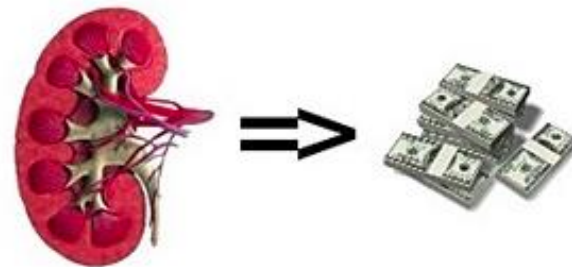


South Africa has its own scandal involving illegal kidney transplants (see below) and the internet has become a powerful tool for those willing to let go of a kidney for a price.

People in urgent need of organs are often not in a position to wait in the long donor queues, so some have taken to the black market and online traders to source the organ they so desperately need to survive. On the other side, desperately poor people are offering their kidneys for sale and, as Shaun Swingler finds out for Health24, the only winners are the scammers in the middle.

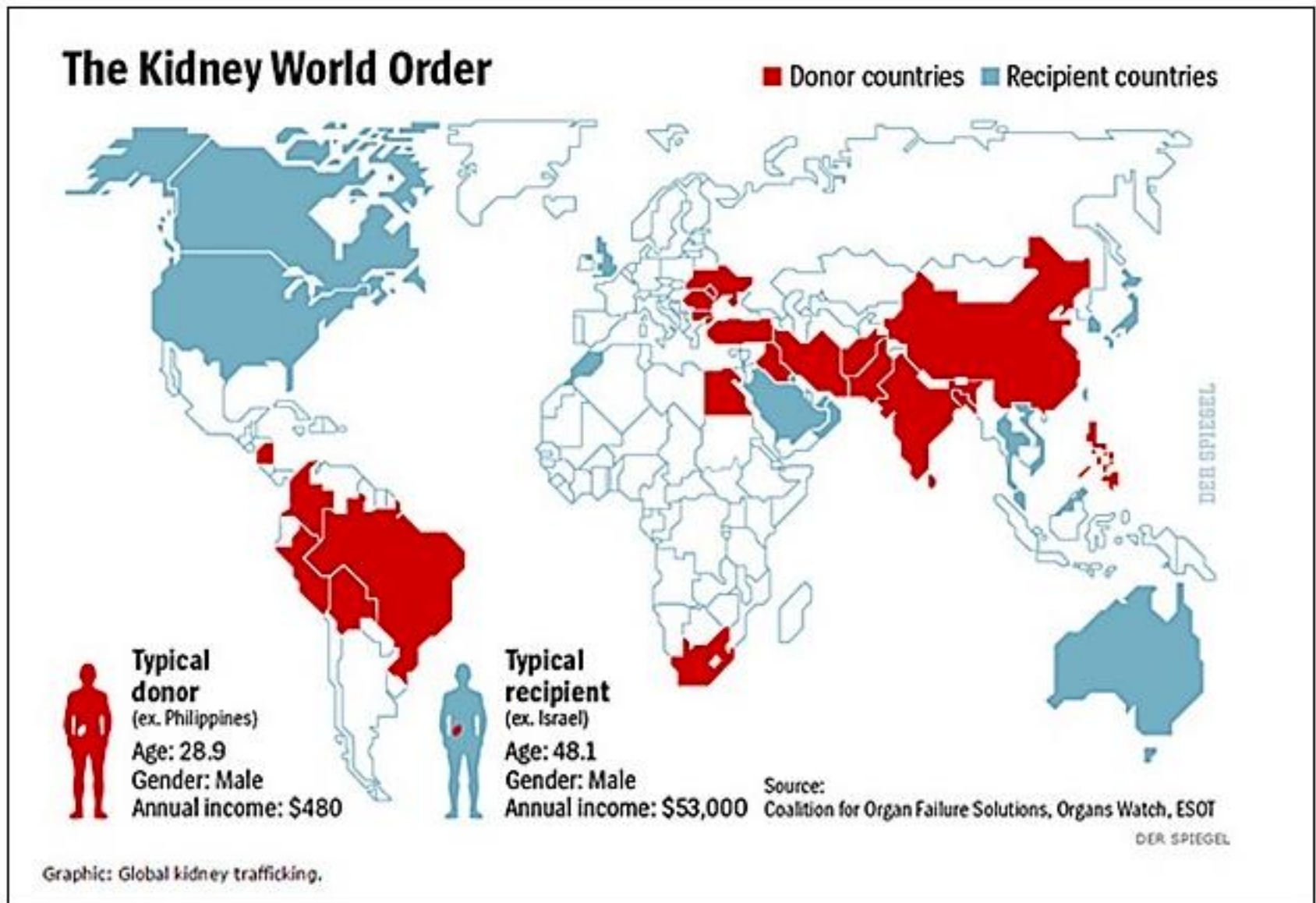
Read: [Should you have the right to sell your organs for profit?](#)

Crisis? Crisis is running over the planet, but you've got a chance! The cost of a human kidney is **\$70-80K** and it could be enough to pay all your debts, credits and much more. You can help yourself right now: just sell your kidney. Hurry up!



This is one of the many advertisements found online luring people to sell their kidneys. (Screen grab) –

Below is a map showing where organ donors and recipients reside, globally. 2012:



Credit: Der Spiegel. Source: Coalition for Organ Failure Solutions (COFS), Organs Watch



Illegal kidney transplants in South Africa

In South Africa, between 2001 and 2003, 109 illegal kidney transplants took place at St Augustine's hospital in Durban – a Netcare group hospital. Five of those transplants involved the removal of kidneys from minors.

These illegal operations were allegedly facilitated by an Israeli organ broking syndicate run by Ilan Peri, an alleged organ trafficking kingpin. The syndicate brought paying Israeli citizens in need of kidneys to South Africa, where they would receive the organ from willing sellers the syndicate had arranged. The recipient would pay US\$120 000 (±R1.4 million) per kidney.

At first the syndicate used sellers who were also from Israel, where they were paid on average US\$20 000 (R231 800) for their kidney, but after the syndicate realised they could find people elsewhere in the world who would demand less money for their kidneys, they sourced sellers from Brazil and Romania who were willing to let them go for as little as US\$6 000 (±R69 500).



Transplant Tourism

- Regulations

- International political organisation WHO
 - Revised Guiding Principles on Human Cells, Tissue and Organ Transplantation – orderly, ethical & acceptable framework
- Professional Bodies – The Transplantation Society(TTS)
 - Declaration of Istanbul on Organ Trafficking and Transplant Tourism 2008



The **DECLARATION** of **ISTANBUL**
on **ORGAN TRAFFICKING** and **TRANSPLANT TOURISM**



Availability of Donors

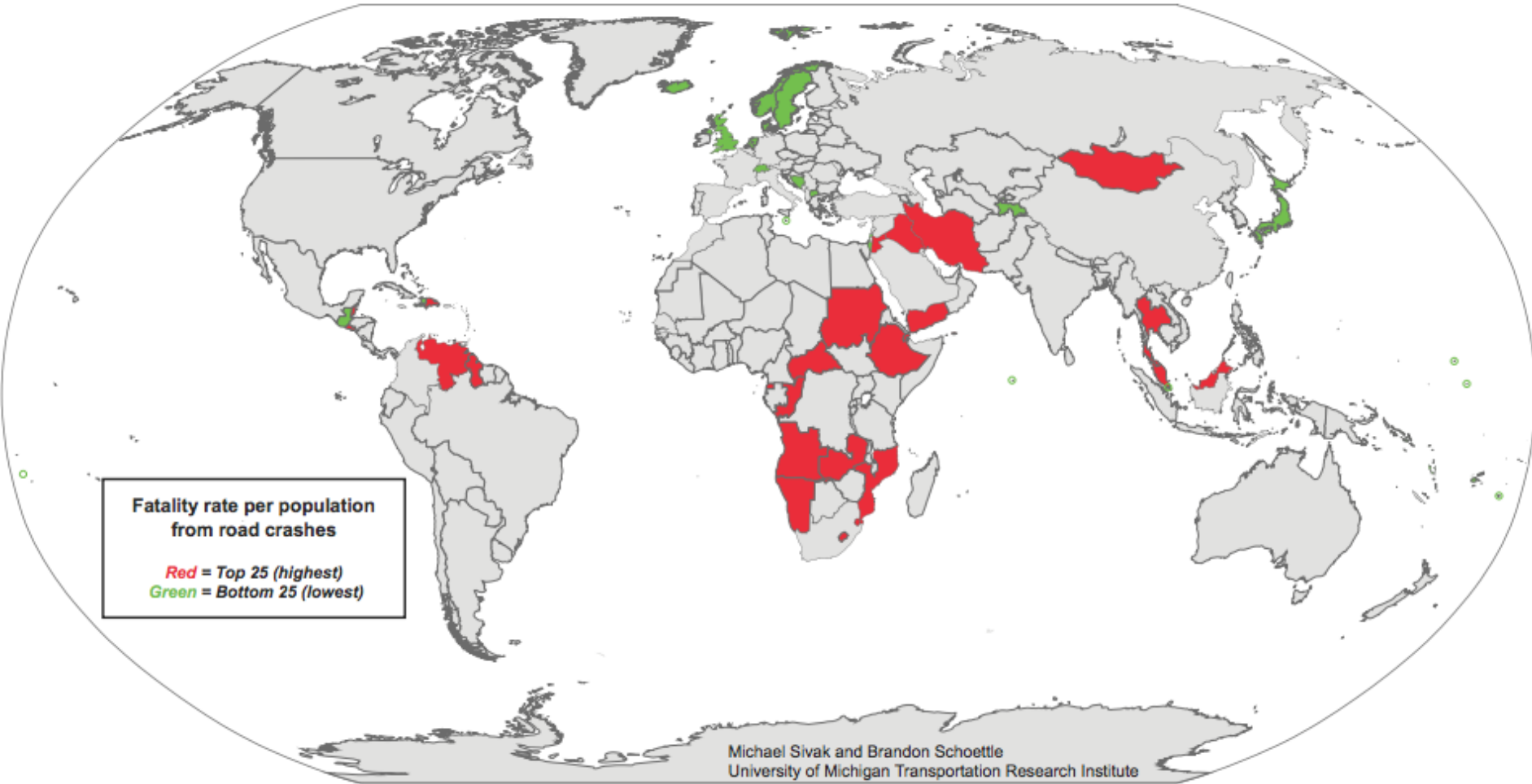




Donation Rates

- Positive attitudes towards organ donation includes
 - Education level
 - Socio-economic status
 - Being young *BMC Health Serv Res 2008 Mossialos E*
- People more willing to make living donation to family member
 - Than a donation after death *Transplant Proc 2004 Conesa C*
- Religious reasons commonly cited as barrier

ROAD CRASHES



SA 25/100 000pop

UK 2.9 Canada 5.9 India 20.7 Iran 43.5



Less Well Resourced Countries

Remote areas and High numbers





Medical Environment

- Big distances from teaching centres
- Small district general hospital with insufficient staffing
 - Possible doctor and few nurses
 - No transplant co-ordinators
 - No facility to keep a donor – ICU/High Care/EM unit
- Big centres
 - Busy with adequate facilities but need to prioritise
 - Ventilator priority – severe head injuries – GCS<6

Cause of Donor State	Consent	Organ
23 yr BM Pedestrian Vehicle Accident	Father and brother give consent but withdraw after discussion with sisters 'against' their culture	Nil
54yr CM Gunshot head	Consent only for kidneys	Kidneys x 2
22yr BM Fell off ladder Malawian citizen	Cousin in Cape Town Contacted family in Malawi – unable to come and refuse consent	Nil
28yr WF Assault	Agreed to abdominal organs only	Liver and Kidneys
35yr CF Meningioma	Consent refused Pt had made decision pre op – “been through enough”	
25yr BM MVA ped	New admission. CT and pt still to be seen by N/surgeon GCS 5T/15..... “he is gone”	
54yr BM Stab head	Arrested during Ward round (referral) 2l neg fluid balance	

Cause of Donor State	Consent	Organ
48yr CF Intra-cranial Haemorrhage	Consent refused. "Will be healed"	
32yr BM ICH	Doctor requested consent - refused	
32yr CM ICH	Consent refused. Father willing Siblings not	
40yr CF Hypoxic arrest – asthma Resuscitated ? DCD	Not brain dead Poor SATS, gasping Cough and gag pos >1hour CPR ? "collapse time" - not suitable	
27yr CF Gunshot and hypoxia	Moslem family – cultural issue Consent refused	
24yr BM ICH	HIV positive Consent	2 kidneys
59yr BM ICHx	Consent for all organs and tissues	2 kidneys Liver Eyes – cornea Skin & Bone



Donor Issues

- No name of donor
 - Unnamed Male DOB 00/00/2016
- Contact details for the donor
 - Phone or address
 - Mobile phones but out of airtime
- Travelling of family
 - Money and safety
 - Ability to leave work

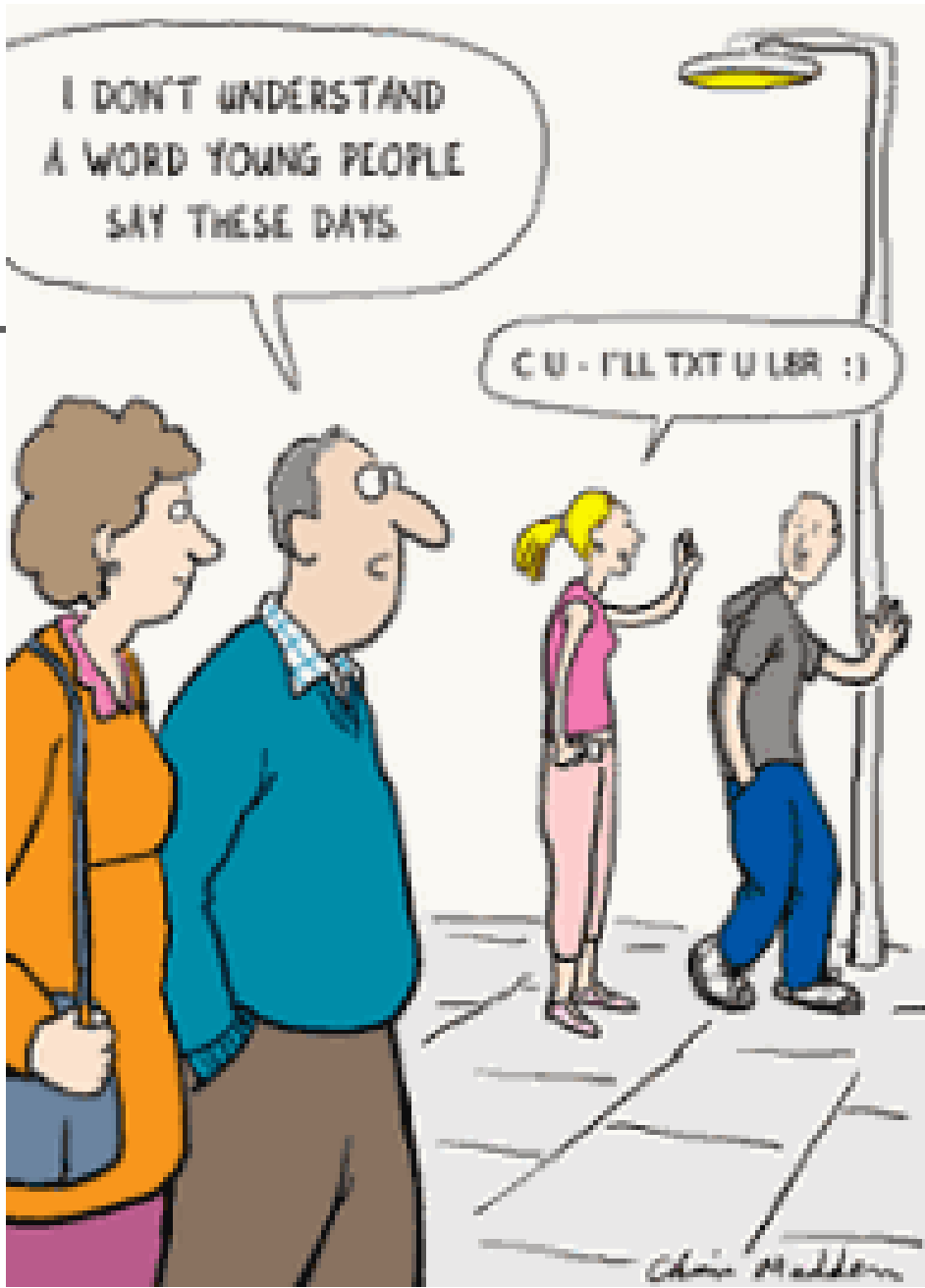
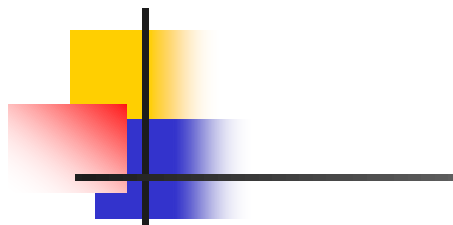
Communication





Communication issues

- Speaking the appropriate language
 - 11 official in SA
 - Availability of interpreters
- Level of Education
 - Rural and Women
- Insight and understanding
 - Strange concept – removing organs from a body





Religious

- 8 yr old TA
 - Already received a kidney transplant at young age
 - Now on dialysis waiting for 2nd kidney
 - 12yr old cousin severe head injury – brain dead
 - Family refused organ donation on religious grounds
 - Staff felt frustrated

Religious Convictions



Religious views on Organ Donation

thetransplantnetwork.com

- Is donation compatible with my religious beliefs?
- Individual interpretation
- Vast majority of religions do support donation and transplantation
- Christian – act of charity, fraternal love and self sacrifice
- Islam – strongly believes in the principle of saving human lives
 - Permitted organ transplant as necessity to procure that noble end
- Judaism – saving a life takes precedence over the sanctity of the human body
- Hindu – similar support

I, **Rabbi Yaacov Warhaftig**, agree to donate all my organs for transplant - not for research - only after (the option checked below):

- Irreversible cessation of autonomous breathing (as confirmed by brain-stem death).
- Irreversible cessation of heartbeat.

Any and all preparations for transplant may begin only after consultation with a family appointed Rabbi. All medical procedures must be done with utmost care, respect, and minimum damage to the cadaver.

Family Contact: *****

Phone: ***-***-****

Family Contact: *****

Phone: ***-***-****



Attitudes, Beliefs and Behaviours surrounding organ donation

- Hispanic individuals disproportionately in need of organ donors but less likely to donate
- Mistrust of medical profession
- Concerns about religious acceptance of donation
- Perceptions of inequity in distribution of donated organs
- Context in which donation requests typically made
 - *Breitkopf CR, Curr Opin Organ Transpl 2009 Apr*



Cultural and family background

- Young families often refer to 'Elders'
 - Young parents agree but defer decision to their parents
 - Often some distance away – may take days to get to hospital
 - No prior knowledge of this process
- Bury bodies 'intact'
 - Want bodies back for immediate burial
- Violence and Medical legal post mortem



Cultural

- Human Spirit is transferred from the Donor to the Recipient
- Need for ancestral approval before donation
 - Remaining family lose ancestral protection in future
- Importance of particular rituals to do with the grieving process
 - Organ donation may interfere with this process
 - Change in traditional cultural beliefs over time
 - Younger generations deciding to become donors



Innovative thinking

- Cultural & Religious beliefs
 - Meeting with Religious and Traditional Healers
 - TV programs – introducing themes
 - Appointing Transplant Co-ordinators of different cultural backgrounds
- Organs
 - DCD programs
 - HIV organs



Improving the Critical Situation – a DCD program

- Groote Schuur first and only transplant centre in SA with a DCD program - Maastricht Category 3 & 4
- Successful outcomes although still small numbers
- Provides an option which is more easily understood and possibly more acceptable to families AND staff
- To expand this we need to look at other centres internationally
 - use machine perfusion
 - have funds available to assist families with transport costs etc

South Africa pioneers HIV-positive transplants

Belinda Beresford in Johannesburg

[The Guardian](#), Saturday 25 October 2008



A graveyard in South Africa, a country where one in five adults is HIV-positive.



ORIGINAL ARTICLE

HIV-Positive-to-HIV-Positive Kidney Transplantation — Results at 3 to 5 Years

Elmi Muller, M.B., Ch.B., M.Med., Zunaid Barday, M.B., Ch.B., Marc Mendelson, M.D., Ph.D., and Delawir Kahn, M.B., Ch.B., Ch.M.

N Engl J Med 2015; 372:613-620 | February 12, 2015 | DOI: 10.1056/NEJMoa1408896

- Single donor into 2 men - Controversial:
 - Recipients infected with virus strain of donor - may be different
 - May increase their resistance to HAART
 - HIV positive organs damaged and less durable
- BUT...
 - Positive to positive Tx last resort
- So far program doing well...minimal immuno-suppress needed thus cheap too
- What would you do?



Future plans

- Employ more co-ordinators – *Spanish style*
- Education – starting young!
- Alternative sources of organs - HIV
- Registries – transparency maintaining public access to regularly updated data collection
- Dispel myths
- May need to individualise depending on attitudes, cultural and socio-economic issues



9th Congress of the
International Pediatric Transplant Association

IPTA

2017

BARCELONA, SPAIN

May 27-30, 2017

www.ipta2017.org

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