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### Global Kidney Exchange: Analysis and Background Papers from the Perspective of the Right to Health


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# Global Kidney Exchange: Analysis and Background Papers from the Perspective of the Right to Health

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GLOBAL KIDNEY EXCHANGE: ANALYSIS  
AND BACKGROUND PAPERS FROM THE  
PERSPECTIVE OF THE RIGHT TO HEALTH



Edited by Alejandro Cerón  
UNIVERSITY OF DENVER, 2017

# Introduction

Alejandro Cerón

University of Denver

December 18, 2017

Global Kidney Exchange (GKE) is a program aimed at facilitating trans-national kidney donation. Although its proponents aim at reducing the unmet demand of kidneys in the United States through the trans-nationalization of kidney exchange programs, the World Health Organization (WHO) and The Transplantation Society (TTS) have expressed concerns about its potential effect on black markets of organs and transnational organ trafficking, as well as on low- or middle-income countries health systems. For GKE to be implemented, it would need to be permitted to operate in at least some low- or middle-income countries. What are the right to health implications of GKE's implementation?

With the aim of answering this question, the eighteen University of Denver students in the First Year Seminar course I taught in autumn 2017 with the title "The Right to Health in Theory and Practice", identified and researched the different aspects that would affect this issue, and produced the analysis we present in this report.

Based on our analysis, the potential right to health implications of GKE are: First, the program may improve timely access to organ donation primarily to patients with health insurance in the United States. Second, a large-scale implementation of the program may have a positive impact on health costs savings, which potentially could benefit the United States health system. Third, on a global health level, the program relies on existing health inequalities among countries in terms of funding, human resources, and health system strengthening, and it is likely to exacerbate those inequalities. Fourth, the program has the potential of negatively affecting the efforts that low- and middle-income countries are already doing to address end-stage renal failure, including the improvement of their own organ donation systems. Finally, given what we have learned about the current situation of organ trafficking, it is easy to think that GKE would unintentionally end up being linked to chains of organ trade. The only way how a program like GKE could have a positive impact from a right to health perspective is if it establishes local partnerships that have the effect of decreasing health inequalities. Additionally, we identified some issues of concern that are beyond the level of influence of local authorities: the unmet demand of kidneys in high-income countries is a reality that incentivizes organ trade and transplant tourism, and this is a problem in need of solutions; transnational organ trafficking as well as human trafficking with the purpose of organ donation are problems that need more visibility; for a global exchange of organs to be implemented, it would need to rely on supranational or transnational regulation and oversight; and the global epidemic of chronic kidney disease needs to be addressed through a public health perspective that emphasizes prevention.

**Acknowledgements:** We are thankful to Licda. Juana Mejía, of the Guatemalan office of the Pan-American Health Organization, for the logistic support she gave to this project. Dr. Rudolf García-Gallont, of The Transplantation Society, who shared his knowledge, experience and insights about organ transplantation in general. Dr. Luis Pablo Méndez, at the time serving technical advising roles at the Guatemalan Ministry of Health, invited us to analyze the problem, facilitated important documentation and coordinated this collaboration.

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# Analysis of Global Kidney Exchange

Alejandro Cerón  
University of Denver  
December 20, 2017

The Global Kidney Exchange (GKE) program was created with the goal of enabling transnational kidney donation. It is a United States-based initiative motivated by the need of reducing the unmet demand of kidneys in that country through the implementation of kidney exchange programs similar to those already available within several countries, but doing it this time at a transnational level. Kidney exchange programs enable donation when a donor is incompatible with the initially attempted recipient, creating a chain of donations that eventually assists every recipient in the chain in getting a transplant. The way it has been proposed, GKE would be financed by the US-based recipient's health insurance (public, private or mixed), which would also pay the immediate costs for the foreign, uninsured donor and recipient. The financial motivation for health insurance companies is that paying for such transplants is less expensive than paying for dialysis over several years. However, the World Health Organization (WHO) and The Transplantation Society (TTS) immediately expressed their concerns about GKE, arguing that it would offer financial and symbolic inducements with the potential of promoting organ trafficking, it incorrectly assumes that poor countries do not offer organ transplantation, and it would increase the challenges countries are facing to tackle end-stage renal failure and organ trafficking. For GKE to be implemented, it would need to be permitted to operate in at least some low- or middle-income countries. What are the right to health implications of implementing GKE?

With the goal of responding this question, the eighteen University of Denver students enrolled in the First Year Seminar "The Right to Health in Theory and Practice" during the fall of 2017, under my direction as the course instructor, analyzed the different facets of the issue. Informed by readings and discussions about the nature and implications of the right to health, we did the following activities. First, we analyzed articles, editorials, and comments directly speaking about GKE that were published in 2017. Second, we read and discussed an ethnography about organ trafficking in several countries. Third, we asked Dr. Rudolf García-Gallont, expert in transplants and member of TTS, to talk to our class about the global situation of organ transplant and his analysis of GKE. With all this input, we identified themes we needed to know better related to the broader context of kidney disease and organ transplants, and each student worked on a research paper addressing one of the themes, which included: illegal organ trade, organ trafficking, legislation, organ donation, ethical considerations, international efforts at addressing organ trafficking, and others. Each student informed to the class on his or her assigned theme, and we then analyzed the issue through a process that included several iterations of making mental maps to encourage divergent thinking, to then build conceptual maps that helped convergent thinking.

Based on our analysis, the potential right to health implications of GKE are as follows: First, the program may improve timely access to organ donation primarily to patients with health insurance in the United States. Second, a large-scale implementation of the program may have a positive impact on health costs savings, which potentially could benefit the United States health system. Third, on a global health level, the program relies on existing health inequalities among countries in terms of funding, human resources, and health system strengthening, and it is likely

to exacerbate those inequalities. Fourth, the program has the potential of negatively affecting the efforts that low- and middle-income countries are already doing to address end-stage renal failure, including the improvement of their own organ donation systems. Finally, given what we have learned about the current situation of organ trafficking, it is easy to think that GKE would unintentionally end up being linked to chains of organ trade. The only way how a program like GKE could have a positive impact from a right to health perspective is if it establishes local partnerships that have the effect of decreasing health inequalities.

Additionally, it should be obvious that the impact of GKE on a given country would depend on the country's specific characteristics. Some aspects that need to be considered at the country level are: the country's current and projected needs related to kidney transplant, as well as the capacity for addressing those needs; the country's current situation related to organ trafficking, transplant tourism and black markets for organs; the current and projected legislation related to organ donation and human trafficking; the prevailing ethical considerations that inform the practice of all professionals related to organ transplant in the country; and the public health measures aimed at health promotion, as well as primary, secondary and tertiary prevention of end-stage renal failure.

Finally, some issues of concern need to be addressed at the transnational level: the unmet demand of kidneys in high-income countries incentivizes organ trafficking and organ trade, problems that need solutions; transnational organ trafficking as well as human trafficking with the purpose of organ donation are problems that needs more visibility if solutions are ever going to be found; for a global exchange of organs to be implemented, it would need to rely on supranational institutions harmonizing national legislation and also regulating the imbalances in counties' wealth and regulatory power; and the global epidemic of chronic kidney disease needs to be addressed through a public health perspective that emphasizes prevention.

# **EU HOTT: Combatting Trafficking in Persons for the Purpose of Organ Removal**

**Kiaryce Bey**

University of Denver November 20, 2017

## **The HOTT Project**

It is the general consensus amongst organizations like the World Health Organization, the European Union, and the United Nations that “trade for profit in human organs” is not to be encouraged. However, organ trafficking is constantly met with weak enforcement, and inconsistent regulations across the world. The HOTT project was created to halt organ trafficking from a non-legislative perspective. All over the world people are negatively affected by organ trafficking. The lack of organs for those in need, was the catalyst for a now immense organ trafficking system. The victims of organ trafficking are usually from impoverished Countries and, are incapable of advocating for themselves. Common sources of organs come from “India, Pakistan, Egypt, and the Philippines, deceased organ donors in Colombia, and executed prisoners in China” (Danovitch, Gabriel M.; Chapman, Jeremy; Capron, Alexander M 2013). By spreading awareness about organ trafficking, the HOTT project is helping victims in impoverished countries receive justice.

The HOTT project is an EU funded project, and members of HOTT conduct research on illegal organ trafficking. Their research began in November 2012, and ended October 2015. HOTT conducted a multitude of different types of research around the world, specifically on THBOR. THBOR stands for trafficking in human beings for the purpose of organ removal, and is the main focus of the research conducted by HOTT. By conducting empirical research on organ trafficking, they hope to inform people about the dangers of organ trafficking. They respond to organ trafficking worldwide, and present their research by writing literature reviews, conducting a study on transplant tourism, and researching prosecuted cases. The HOTT project targets certain groups in order to combat THBOR. All research conducted was forwarded to organizations, and individuals on a data base. By spreading their findings, they are more likely create positive change. Some of their target groups were “transplant professionals, legal experts, representatives of



ministries and international organizations, national rapporteurs, individuals of expert groups, organ trafficking researchers, persons working for human rights organizations...” (The HOTT project 2015). The main objective of project HOTT is increase knowledge about THBOR.

## **Organ Trafficking and its affects**

Organ trafficking is a major issue around the world and many organizations like the HOTT project feel that it is imperative to insure the safety of those targeted in organ trafficking. There have been improvements in transplant laws around the globe but organ trafficking still occurs. Poor people who are desperate for money are being taken advantage of. In India for example, private transplant centers are scattered around the country, despite the positive changes in transplant laws. Organ trafficking is prohibited partially because the World Health Organization deemed it as “... inconsistent with the most basic human values...” (F. Ambagtsheer, W. Weimar 2011). Prohibiting organ trafficking might inherently worsen the problem. Because organ trafficking is demand-driven, prohibition does not end the problem. Many studies show that prohibition (like the prohibition of alcohol in the U.S) “generates black markets, drives up prices, provides illegal incomes, displaces crime to other regions and drives trade underground leading to higher crime rates and victimization” (F. Ambagtsheer, W. Weimar 2011). The HOTT project aims to inform the public of the dangers of believing the sole solution to organ trafficking is prohibition.

## **Reports and Findings**

Project HOTT conducted interviews with people who were seeking organs abroad. These interviews were conducted in “Macedonia, the Netherlands, and Sweden” (Ambagtshteer, Fredericke Gunnarson, Martin Balen, Linda 2014). The HOTT project conducted a study on transplant tourism in order to understand the mindset of a patient who is traveling abroad for an organ. The table below depicts organ trafficking that took advantage of the poor. The demand is being met, and brokers are profiting, but innocent people who are desperate are being mistreated. “...physicians and other health care professionals seem well placed to play a role in the monitoring and, perhaps, the reduction of organ trafficking practices” (Ambagtshteer, Fredericke Gunnarson, Martin Balen, Linda 2014). Although physicians are required to provide their patients with their medical documentation, they are not required to provide any other assistance that might be involved with illegal activity. Project HOTT believes that organ trafficking can be immensely diminished if physicians do not condone the illegal activity. Other organizations like the transplant journal agree that physicians play a role in organ trafficking. “The DoI has been likened to another

major statement designed to guide the behavior of physicians and healthcare institutions” (Danovitch, Gabriel M.; Chapman, Jeremy; Capron, Alexander M 2013), meaning physicians and healthcare institutions should aid in ending organ trafficking, by denying services to those who are participating in the buying and selling of organs.

Authors	N	Type	Origin	Economic Status	Payment
Zargooshi et al (203)	100	Kidney	Iran	'abject poverty'	Standard US \$1,219
Goyal et al. (177)	305	Kidney	India	annual family income: US\$660, Six years after surgery: \$420	US \$1,219 (Promised \$1,410)
Naqvi et al (175)	239	Kidney	Pakistan	Monthly income: US\$15	US \$1,377 (Promised \$1,737)
Malakoutian et al (171)	478	Kidney	Iran	'62% below poverty line'	Standard US \$1,219
Moazam et al (105)	32	Kidney	Pakistan	Extreme Poverty"	US \$1,600 (Promised \$2,400), \$240 to Broker
Padilla (189)	135	Kidney	The Philippines	-	US \$2,300 (less than promised)
Awaya et al (182)	311	Kidney	The Philippines	-	US \$6,368
Moniruzzaman (58)	33	Kidney	Bangladesh	Poor'	27 not received full promised amount of US\$1,400
Mendoza (84)	151	Kidney and liver	Colombia	Below Poverty Line'	(k) US \$1,712 (l) US\$1,881
Yea (91)	15	Kidney	The Philippines	'from the urban slums of Baseco'	US\$2,750; not all received full promised amount
Mendoza (83)	121	Kidney	The Philippines	below poverty line'	US \$2,133

**Table 1.** Overview of payments to organ suppliers (mean amounts) [Trafficking In Human Beings For The Purpose of Organ Removal, 2013].

## Why the HOTT Project?

The HOTT project is different than any other organization attempting to make a positive change in organ trafficking, because they have three main goals. They aim to increase knowledge, raise awareness, and increase the non-legislative response. The HOTT project was put in place to inform people about organ trafficking, and to persuade them to help minimize organ trafficking. They accomplish this through expelling an immense amount of knowledge on the subject of organ trafficking.

## Conclusions

The HOTT project was created to inform people about the dangers of organ trafficking, and to minimize organ trafficking from a non-legislative perspective. They accomplish this by conducting empirical research on organ trafficking and organ tourism. The HOTT project is funded by the EU. By writing literature reviews, conducting a study on transplant tourism, and researching prosecuted cases they hoped to raise awareness.

## References

- Ambagtsheer, Frederike Gunnarson, Martin Balen, Linde. *“ORGAN RECIPIENTS WHO PAID FOR KIDNEY TRANSPLANTATIONS ABROAD.”* November 2014.  
<http://hottproject.com/userfiles/Reports/2ndReportHOTTproject-OrganRecipientsWhoPaidForKidneyTransplantsAbroad.pdf>
- Ambagtsheer, F. Weimar, W. *“A Criminological Perspective: Why Prohibition of Organ Trade Is Not Effective and How the Declaration of Istanbul Can Move Forward.”* December 7, 2011. <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-6143.2011.03864.x/full>
- Budiani-Saberi, Debra A.; Raja, Kallakurichi Rajendiran1; Findley, Katie C.; Kerketta, Ponsian; Anand, Vijay. *“Human Trafficking for Organ Removal in India: A Victim-Centered, Evidence-Based Report.”* *Transplantation*. February 27, 2014.  
[http://journals.lww.com/transplantjournal/Abstract/2014/02270/Human\\_Trafficking\\_for\\_Organ\\_Removal\\_in\\_India\\_\\_A.4.aspx](http://journals.lww.com/transplantjournal/Abstract/2014/02270/Human_Trafficking_for_Organ_Removal_in_India__A.4.aspx)
- Caulfield, Timothy. *“Trafficking in Human Beings for the Purpose of Organ Removal and the Ethical and Legal Obligations of Healthcare Providers.”* August 2015.  
<http://hottproject.com/userfiles/Reports/Group1OrganTraffickingandtheEthicalandLegalObligationsofHealthcareProviders.pdf>
- Shashank, Bengali Ramin, Mostaghim. *“Kidney for sale’: Iran has a legal market for the organs, but the system doesn’t always work.”* October 17, 2017.  
<http://www.declarationofistanbul.org>

# Deceased Donation and Presumed Consent

Kelly Bonk  
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November 17, 2017

## Introduction

Lack of access to kidney dialysis caused approximately 2-7 million premature deaths in 2010 (Rees et al. 2017, 782), and the World Health Organization estimates nine in ten people in need of a kidney transplant do not receive one (The Economist 2008). These staggering numbers reflect the growing scarcity of organs for transplantation across the globe (Abadie and Gay 2004). This growing dilemma has caused considerable debate about the types of organ donation and their corresponding legislation. The policy of presumed consent presents a possible solution to the problem, but at the same time it raises questions about deceased donation, especially regarding familial involvement, education, and trust in the healthcare system.

## Presumed Consent as a Solution to Global Organ Scarcity

The problem is indeed growing. The number of patients waiting for organs in the United Kingdom rose from 5,500 in 1992 to 6,500 today. Even more shockingly, in the United States the number rose from almost 30,000 in 1992 to nearly 80,000 in 2002. Given the scope of the problem, countries are in desperate need of a solution. A study conducted in 2004 investigated the impact of presumed consent laws on donation rates. After collecting and analyzing data on organ donation rates and related factors in twenty-two countries over ten years, the study concluded that countries with presumed consent legislation have a 25% - 30% increase in organ donation rates (Abadie and Gay 2004). Therefore, presumed consent legislation may be a viable solution to the dilemma.

Currently the United States, the United Kingdom, and many others operate under the informed consent (opt-in) policy, in which the default option is no donation and citizens must expressly consent to be a deceased organ donor (Abadie and Gay 2004). Under a presumed consent (opt-out) policy, all individuals are considered organ donors after death unless they expressly decline. In this way, the default is donation (Childress and Liverman 2006, 205).

## Familial Consent

Furthermore, there are two variations of presumed consent, weak and strong, which differ in how rigorously the legislation is enforced. In the weak version, the transplantation team obtains consent from the decedent's family before proceeding with the organ donation. Families are given

the last word, and this is the most common practice in countries with presumed consent legislation. On the other hand, countries such as Austria enforce strong presumed consent, in which any person who has not opted-out is considered an organ donor regardless of the family's approval (Abadie and Gay 2004).

Many argue that familial consent is a key aspect of the global organ scarcity. The number of families that do not consent to organ donation is still large, resulting in a gap between the supply and demand of organs. This number could be linked to whether a country has presumed consent legislation. In the United States and Great Britain, informed consent (opt-out) countries, about half of families approached for organ donation refuse. Spain and France, on the other hand, with presumed consent legislation, have a 20% and 30% refusal rate respectively. In addition, the authors of the study suggest that simply the adoption of presumed consent legislation may begin to shift public opinion toward deceased donation, and families would be more likely to consent to donation even if the policy were not enforced (Abadie and Gay 2004).

## **Closing the Gap**

Considering the empirical results of the study, it is possible for presumed consent legislation to increase the supply of cadaveric organs for transplant but not close the gap completely. The data suggests a 25% - 30% increase in organ donation if presumed consent legislation were passed. That has the potential to close the gap in the United Kingdom, but not the United States. Clearly the problem is complex and must be addressed from all angles, so it is important to consider presumed consent as a promising solution, not a silver bullet (Abadie and Gay 2004).

## **Underlying Elements of Presumed Consent**

Implementing a policy of presumed consent would automatically lead to increased organ donation rates if not for the strong impact of underlying ethical and social aspects. For example, there is more than one definition of consent. Perhaps the most familiar type is express or explicit consent. Tacit consent, on the other hand, describes "consent that is expressed silently or passively by omissions or by failures to indicate or signify dissent." Tacit consent can be just as valid "depending on the nature and structure of social practices, as well as the competence of the individual whose silence is presumed to be consent, their understanding, and the voluntariness of their choices" (Childress and Liverman 2006, 209). In this way, the public must be educated about brain death, organ donation, and what tacit consent involves. This type of consent is also closely tied to trust in physicians and the healthcare system. All of these factors combine to determine the success or failure of presumed consent legislation.

## **Trust in Healthcare System**

Lack of trust in the healthcare system and widespread confusion about the concept of brain death has proven to be a significant barrier to organ donation worldwide. In a survey of 129 Spanish journalism students, only 43% (54 students) understood the concept of brain death. Even more surprisingly, 13% (16 students) said they believed a brain-dead person could completely recover and live a normal life (Martínez-Alarcón et al. 2010). If there is that amount of confusion in Spain, which has the highest organ donation rates in the world, there must be even more confusion in other countries. A high level of trust in doctors and the healthcare system is imperative, otherwise families are not likely to believe their loved one is truly deceased, let alone to consider donating their organs. This lack of trust also invokes fears that doctors will not do everything possible to save a loved one, seeing them only as a source of organs. When Brazil introduced a strong form of presumed consent (no familial involvement) in 1997, public outrage led to the legislation being completely revoked by 1998. Thus, this confusion and lack of education about brain death leads to mistrust of the healthcare system and ultimately blocks efforts to implement presumed consent legislation (Murphy, Matesanz, and Fabre 2010).

## **Education**

The extent to which the public is informed about brain death, organ donation, and consent is also crucial. “To be ethically acceptable, a policy of presumed consent would require widespread and vigorous public education to ensure understanding, along with clear, easy, no burdensome, and reliable ways for individuals to register dissent” (Childress and Liverman 2006, 210). 66% of the Spanish students surveyed thought it would be helpful to learn more about Spain’s National Organ Transplant Organization, namely through an informative talk (Martínez-Alarcón et al. 2010). Therefore, even though Spain is the greatest success story for presumed consent, the country still struggles with educating the public on organ donation. When there is not widespread education, the ethics of the program may be called into question.

## **Opposition**

Many countries have debated implementing presumed consent legislation over the past several years. Some argue that since familial consent is so important, addressing it will improve donation rates more than consent legislation (Abadie and Gay 2004). Also, in 2008 the United Kingdom assembled an Organ Donation Taskforce to investigate the merits of presumed consent. They concluded that it would not improve organ donation rates in the United Kingdom, reporting that “...the costs of implementing presumed consent – approximately £45 m (€53; \$70m) in establishment costs, and several million pounds per annum thereafter – might divert resources away from more effective initiatives.” They also believed that presumed consent would violate individual and familial autonomy, and that higher donation rates could be achieved through other unspecified means (Murphy, Matesanz, and Fabre 2010). Yet contrastingly, on October 4, 2017, Prime Minister of Great Britain Theresa May announced her intention to pursue presumed consent legislation (United Kingdom 2017).

Finally, it has been argued that the high organ donation rates in Spain are not due to presumed consent legislation at all, but instead to the “Spanish Model,” with its sophisticated transplant coordination network, as well as already high public support of organ donation (Shepherd, O’Carroll, and Ferguson 2014). Even Dr. Rafael Matesanz, the director of Spain’s National Transplant Organization (ONT), says, “What we have brought to this area is organization. Following a philosophy that states that donors do not simply fall from the heavens, we have provided organization and professionalism” (Badcock 2015). Finally, still more argue that some societies just are not ready, saying, “A major shift in social-cultural attitudes...is a prerequisite for an effective and productive system of presumed consent” (Childress and Liverman 2006, 223). There are certainly many barriers and factors contributing to a decision to implement presumed consent.

## Conclusions

Moreover, presumed consent legislation is a potential solution to global organ scarcity, but not a silver bullet. It has been successful in a few countries, and especially in Spain, but it has also failed in others. Presumed consent legislation may increase organ donation rates by 25% - 30%, but a decision to implement it cannot be made overnight. The public must have a thorough understanding of brain death, organ donation, and presumed consent. Data suggests that strong presumed consent is not the only option, as weak presumed consent has been shown to improve public opinion about organ donation. In addition, trust in the healthcare system is fundamental, and it directly affects whether a family decides to grant consent to donate a loved one’s organs. Presumed consent is not the solution for every country, but if these underlying elements of presumed consent come together, it may be possible for presumed consent legislation to significantly impact the growing organ scarcity dilemma.

## References

- Abadie, Alberto, and Sebastien Gay. 2004. *The Impact of Presumed Consent Legislation on Cadaveric Organ Donation: A Cross Country Study*. NBER Working Paper No. 10604. National Bureau of Economic Research.
- Badcock, James. 2015. “How Spain Became the World Leader in Organ Donations.” *Newsweek*. Last Modified February 11, 2015. <http://www.newsweek.com/2015/02/20/spain-has-become-world-leader-organ-donations-305841.html>.
- Childress, James F., Catharyn T. Liverman, eds. 2006. *Organ Donation: Opportunities for Action*. Washington, D.C.: National Academies Press.

- Martínez-Alarcón, L., A. Ríos, J. Sánchez, G. Ramis, A. López-Navas, P. Ramírez, and P. Parrilla. 2010. "Evaluation of the Law of Presumed Consent after Brain Death by Spanish Journalism Students." *Transplantation Proceedings* 8 (42): 3109-3112. <https://doi.org/10.1016/j.transproceed.2010.05.073>.
- Murphy, Paul, Rafael Matesanz, and John Fabre. 2010. "Presumed Consent is Unnecessary." *BMJ: British Medical Journal* 341 (7779): 922-924. <http://www.jstor.org/stable/20800293>.
- Rees, Michael A., Ty B. Dunn, Christian S. Kuhr, Christopher L. Marsh, Jeffrey Rogers, Susan E. Rees, Alejandra Cicero et al. 2017. "Kidney Exchange to Overcome Financial Barriers to Kidney Transplantation." *American Journal of Transplantation* 17 (3): 782-790. <http://doi.org/10.1111/ajt.14106>.
- Shepherd, Lee, Ronan E. O'Carroll, and Eamonn Ferguson. 2014. "An International Comparison of Deceased and Living Donation/Transplant Rates in Opt-in and Opt-out Systems: A Panel Study." *BMC Medicine* 12 (131). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4175622/>.
- The Economist. 2008. "The Gap between Supply and Demand." Last modified October 11, 2008. Accessed November 10, 2017. <http://www.economist.com/node/12380981>. United Kingdom. 2017. Cabinet Office and Department of Health. "Government announces consultation on organ donation opt-out system." October 4. Accessed November 5, 2017. <https://www.gov.uk/government/news/government-announces-consultation-on-organ-donation-opt-out-system>.



# Incentivizing Deceased Donation

Ellie Carson  
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November 20, 2017

## Introduction: Current State of the Global Organ Shortage and a Search for Solutions

Every year, millions of individuals require new organ transplantations all across the globe, yet the lack of access to transplantable organs is so severe that many patients are left to choose between a long waiting list, and a vicious black market.

The current level of demand for organs is causing issues globally such as high death rates amongst patients on the transplant waiting list, increased risk for individuals seeking to sell or buy from the black market, and unethical pressures placed on living people to donate. In the wake of such disparities, the medical community has been pondering solutions to the organ shortage for years now; paired donation (demonstrated in programs such as the Global Kidney Exchange) and incentivizing deceased donation are among the most popular potential solutions.

The sheer volume of patients placed on waiting lists for organ transplants is astounding in and of itself. In 2011, there were 40,000 people on the waiting list for a kidney in Western Europe alone (Domingos, Gouveia, Nolasco, Pereira, 290). The most recent statistics in the United States reveal that approximately 116,617 people are on a waiting list for an organ transplant, yet only 26,034 transplant operations have been performed in 2017 thus far while 20 people die on the waiting list everyday (U.S. Department of Health and Human Services). All across Asia, the number of people in need of a transplant continues to rise as the number of donors remains extremely low (Lo, S5). From these statistics, one can see that there is a strong need for action, especially when donors are so scarce. In addition, approximately 10% of all organs transplanted in 2010 were obtained illegally as the black market was performing thousands of illegal and unethical operations (Wagner, 1).

In most countries with an organ donation registry, less than 40% of the public are donors (Li, Dixon, Prakash, Kim, 291), which makes finding a method to increase donors the main priority as of the present.

## Theorized Solutions

The four main solutions that have been proposed to aid in solving the organ shortage crisis are paired donation, deceased donation, xenotransplantation, and organ donation education programs (Abadie, 3). None of these methods are mutually exclusive, however, some are definitely more sound and impactful than others. For example, xenotransplantation, which is the utilization of organs from other species (such as pigs) for transplantation, can be an extremely helpful tool in

mending parts of the human heart, arterial structure, etc., but it cannot be the only solution, and thus has to be accompanied by something like promotion of deceased donation, paired donation systems, or educational programs for potential donors. Also, some programs have more medical and ethical integrity than others, making certain solutions more favorable, even if the others may continue to exist. To provide another example, while many have theorized immense benefits from paired donation, it can continue to perpetrate a vicious cycle targeting lower income families to sell their organs in order to receive financial or medical help, but deceased donation could be an ultimately more effective and more ethical tactic for tackling the global organ shortage. Ultimately, if the medical community is being forced to push one of these four options to improve public health in light of the organ shortage, deceased donation is the best route.

## **Deceased Donation**

Deceased donation would allow for the burden to be taken off of living people from lower-income nations such as Guatemala, Bolivia, Mexico, India, etc. Furthermore, it would provide a massive amount of transplantable organs to the global medical community. An increase in individuals consenting to deceased donation offers immense growth of the number of transplantable organs coming into the global organ pool, seeing as how millions of people die of circulatory failure or brain death every day, and would thus have viable organs to donate. Overall, deceased donation not only allows for a less risky situation for the donor, but it can also provide more organs in general without asking living people to put their health at risk to become donors.

## **Dispelling Contentions**

In order to effectively incentivize deceased donation, one must first consider the contentions people could have with such a concept. For example, many have concerns that consenting to deceased organ donation could prompt doctors to let people die more easily, since there is an incentive to harvest organs. However, a study conducted in Ontario showed that physicians were much more likely to be donors themselves, 43.3% of them being donors in comparison to 29.5% of the general public that were registered donors (Li, Dixon, Prakash, Kim, 292). Therefore, it has to say something about the integrity of medical professionalism for doctors to be more directly invested in organ donation, making it unlikely that a professional would abandon the most basic principle of medicine, “do no harm,” just to harvest organs.

Furthermore, many individuals have also expressed concern over the issue arising from certain cultures and religions valuing the body so strongly that they could not be convinced to offer it up to medicine. In many Asian Countries, for example, Confucian or Muslim values often subscribe to the idea of sacredness within the human body. However, many Muslim-centric nations still have strong trends of illegal organ trade, and many Confucian-centric communities in places such as China experience extremely high death rates from lack of access to transplantable organs (Lo, S6). Another argument against deceased donation comes from the fact that organs from deceased donors don't always last as long as organs donated from living people. On average, kidneys donated from deceased donors last for about 10-15 years for the patient, and kidneys from living donors last closer to 15-20 years (Explore Transplant).

Ultimately, the need for ethical and medical integrity that one gets from subscribing to deceased donation outweighs the need for longer-lasting organs. In addition, one can harvest many

more organs, including more vital organs, from deceased donors since the pressure to keep the patient alive and healthy is irrelevant post-mortem. Harvesting the organs from one deceased donor can save up to 8 lives, and can impact even more lives if the donor consented to tissue and eye donation as well (U.S. Department of Health and Human Services).

## **Methodology of Incentivizing**

One of the popular methods for incentivizing is creating opt-out legislation, also known as “presumed-consent laws,” which makes it so that a person is considered a potential donor until they explicitly opt out of being a donor. In Israel, for example, Parliament passed a presumed-consent law in 2008 called The Organ Transplantation Law, which has incentivized donation by giving priority on waiting lists to patients who are first-degree relative of deceased organ donors, or who are registered as organ donors themselves (Stoler, 2639). From a scientific, philosophical, and sociological standpoint, promoting this kind of legislation makes a lot of sense, and could help progress incentivization for deceased donation. The same has gone for much of Europe, including France and Spain (Abadie, 2).

In addition to promoting opting in through promotional programs, or promoting opt-out legislation, determining mandates for brain death and circulatory death are incredibly important. In an analysis conducted by the Committee on Increasing Rate of Organ Donation, the committee stated that “of the more than 2 million deaths that occur each year in the United States, it is estimated that there are only 10,500 to 16,800 eligible donors,” (Childress, 127), further explaining that those numbers are compiled of brain-dead eligible donors, and there could be more eligible donors if the U.S. had mandates clearly outlining circulatory determination of death in addition to determination of brain death.

## **Post-Incentivization Improvements**

The promotion of opt-out legislation, brain/circulatory death mandates, and educational programs focused on donation would have a major impact on organ donor populations across the globe. An example of where donation levels could be headed is in the fact that “...approximately half of the families that are approached to request donation refuse it in the U.S. and Great Britain, compared to around 20% in Spain and around 30% in France,” (Abadie, 2). Also, it was statistically determined in an international study that countries with presumed consent laws have 12% more donors on average than those who don’t (Abadie, 10). This increase in donors could be improved upon even more by supplementing presumed-consent laws with educational programs, and determination of death mandates.

## Conclusions

In summation, the need for more organ donors is incessant, and deceased donation seems to be the most logical and ethical path toward better results. This concept can be promoted and supported on multiple levels, and would ultimately lead to saving the lives of millions suffering from diseases that require patients to get organ transplants. The current state of global organ donation and transplantation is dire, but promotion of deceased donation would lead to more accessibility to organs, shorter transplant waiting lists, more ethically sound practice, and decreased incentive to participate in dangerous practices such as organ tourism or black market involvement. The intentions of deceased donation are clear and precise, free of pressure or danger brought upon donors in addition scientific and medical integrity. Incentivization of this concept in a global setting offers the best possible opportunities to both patients and donors, bringing focus to safety, equality, and science in the global medical community.

## References

Abadie, Alberto, Sebastien. Gay, and National Bureau of Economic Research. *The Impact of Presumed Consent Legislation on Cadaveric Organ Donation A Cross Country Study*. Working Paper Series (National Bureau of Economic Research: Online); No. 10604. Cambridge, Mass.: National Bureau of Economic Research, 2004.

Childress, James F., Catharyn T. Liverman, Ebrary, Inc, ProQuest, and Institute of Medicine. Committee on Increasing Rates of Organ Donation. *Organ Donation Opportunities for Action*. Washington, D.C.: National Academies Press, 2006.

Domingos, Margarida, Miguel Gouveia, Fernando Nolasco, and João Pereira. "Can Kidney Deceased Donation Systems Be Optimized? A Retrospective Assessment of a Country Performance." *The European Journal of Public Health* 22, no. 2 (2012): 290-94.

Explore Transplant. 2016. "Deceased and Living Donation." Accessed November 15, 2017. <https://exploretransplant.org/for-kidney-patients/transplant-options/deceased-and-living-donation/>.

Li, Alvin Ho-Ting, Stephanie Dixon, Versha Prakash, S. Joseph Kim, Greg A Knoll, Ngan N Lam, and Amit X Garg. "Physician Registration for Deceased Organ Donation." *JAMA* 312, no. 3 (2014): 291-93.

Lo, Chung-Mau. "Deceased Donation in Asia: Challenges and Opportunities." *Liver Transplantation* 18, no. S2 (2012): S5-S7.

Stoler, A., J. B. Kessler, T. Ashkenazi, A. E. Roth, and J. Lavee. "Incentivizing Authorization for Deceased Organ Donation with Organ Allocation Priority: The First 5 Years." *American Journal of Transplantation* 16, no. 9 (2016): 2639-645.

# Organ Procurement in Spain

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## Introduction

“22 people die every day waiting for a transplantation,” (Facts 2010). The greatest obstacle in organ donation is the shortage of organs in comparison to the high demand. Spain is the leading country in organ trade worldwide. In this essay, the implementations of the overall Spanish model and organization that Spain utilizes will be evaluated to determine Spain’s success in attaining organ donors.

## The Spanish Model

The basis of the Spanish Model rests on the creation of a transplant co-ordination network at three levels, national, regional and hospital coordinators. There are 17 regions in Spain and a Regional Coordinator was created for each one (Matesanz 1996). The implementation of this nationally helps to ensure the effectiveness of the transplantation system. The Spanish model has many aspects which overall contribute to Spain’s success in organ trade.

## Positives on the Spanish Model

The success of the Spain’s organ trade has to do mainly with the implementation of the Spanish model. According to Dr. David Rodriguez-Arias, “Success factors of the Spanish Model include its legal approach and a comprehensive programme of education, communication, public relations, hospital reimbursement, and quality improvement,” (Rodriguez-Arias 2010). The Spanish model uses these approaches which create a positive stigma regarding organ donation. Due to the fact that Spanish citizens have universal right to health care which includes organ donation people are more likely to have a positive attitude towards donating their organs. The Spanish model entails extensive training to be sure that the doctors and transplantation professionals not only effectively perform the operation but also communicate to family members and ensure that the families affected understand the procedure fully and feel comfortable. An example of this promotion of satisfaction with patients is Spain’s utilization of transplant coordinators. Transplant coordinators are usually professional doctors who are familiar with the interworkings of hospitals and procedures, thus gaining the trust of their patients. The transplant coordinators keep in contact with the families and evaluate all aspects of the transplantation process (Rodriguez-Arias 2010). These aspects of the Spanish model

exemplify the way that Spain has increased organ donation.

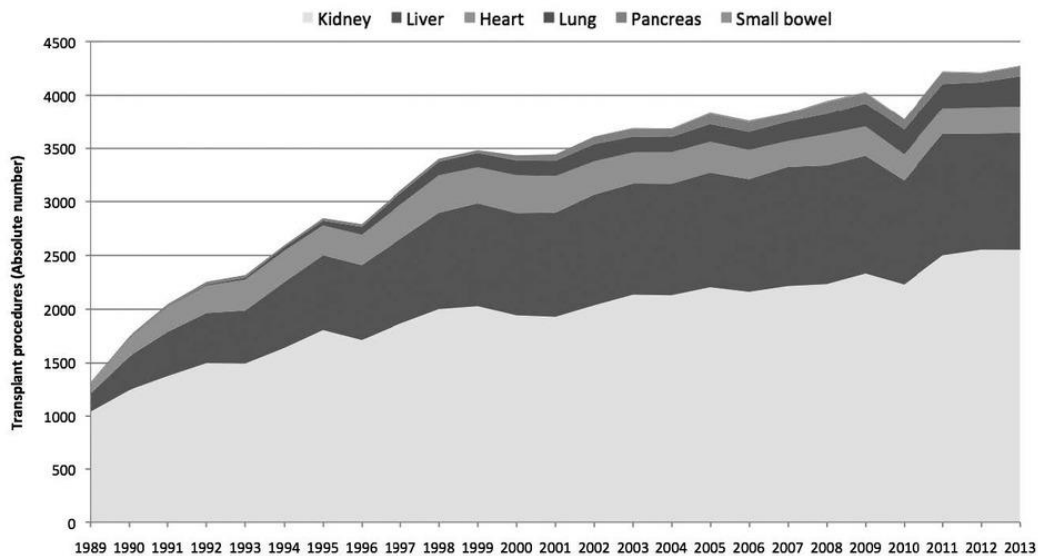
## **Controversy on the Spanish model**

Spain utilizes the controversial phenomenon of presumed consent. Presumed consent was introduced into law in Spain in 1979. The law established that in the absence of an explicit refusal of organ donation the patient is then a potential donor. “In an annual Spanish census, two thirds of the Spanish population are against a presumed consent approach as they consider this kind of legislation an abuse of authority and offensive to relatives,”(Matesanz 1996). This uncertainty is because Spain has no national registries of refusal which can create situations in which the wishes of the deceased might not be respected. An example of this was with Megan Jones a British toddler died of natural causes. Physicians in Spain removed more organs than the family expected since Spanish physicians can remove organs without permission during the postmortem process (Spooner 2003, 1). This incident had huge media coverage revealing the controversy of presumed consent but also bringing to light the success Spain has in organ donation. “A survey by Spanish researchers found that of 200 families that declined to have their relatives' organs donated, 78% changed their minds after the process was explained in detail,” (Spooner 2003, 1). This exemplifies that although people are skeptical of the presumed consent, the effectiveness of the overall Spanish model and ONT ultimately drastically improve the number of organs donated in Spain.

## **Organizacion Nacional de Transplante**

The ONT was created in 1989 and contributes to Spain leading the world in organ donation. The ONT is a network of transplant coordinators in 139 intensive care units across the country that deals with all aspects organ donation. The uniqueness of the ONT is attributed to its ability to control all aspects of organ donation. The organization manages the organ transplant list, arranges for transplant teams or the transport of organs. They not only arrange for the transplant to take place but to ensure that people feel informed, according to the Founder and former director of the ONT, “It maintains a telephone line 24 hours a day, 7 days a week, to address any doubts or answer any questions about organ procurement or transplantation,” (Matesanz 1996). The ONT is also very different than many organizations because it is completely transparent in showing everything that it does. “It is the unit in charge of official reports in the field of organ donation and transplantation, and it guarantees the complete equity and transparency of the system” (Rodriguez-Arias 1996). This organization is the first of its kind to be initiated on such a large scale. According to representatives from ONT, “The number of kidney transplants from cadaver organs rose from 1477 in 1992 to 1998 in 2002. The number of liver transplants rose from 412 to 1003, and heart transplants from 254 to 310,” (Spooner 2003,1) The ONT changed the Organ procurement in the Spain drastically allowing so many more people to have the opportunity to donate. This was extremely beneficial because the major issue is too many people needing organs and not enough being available. Spain solved this problem by creating the ONT, a nationwide framework to regulate organ donation making it more effective. The differences when comparing to Spain and other countries are in many ways due to the ONT and its regulation of transplantation. When the ONT was created in 1989, Spain had 14 organ donors per million population (pmp), which has increased over the past twelve years to 33. In comparison with the rates in other countries, such as the USA, and Italy which was very low in the early 1990s and is now 16 pmp. Spain’s organ donor

rate is by far the highest in the world (the United States has 21.8 per million people, Canada has 13.8, and the mean of the other European countries is 14.3), which has also resulted in the highest transplant rates of cadaveric kidney, liver, heart, and lungs (Matesanz 1996).



**Figure 1.** Evolution in the absolute number of solid organ transplants performed in Spain since the start of the ONT (Chapter 16 2013)

## Organ Trade Evolvement

Organ trade in Spain has evolved over the years. With some significant cases and implementations that bring to light why Spain is the world leader in organ donations. Similarly, to other countries there is no age limit on becoming a brain-dead organ donor in Spain. The proportion of elderly donors in comparison to other countries is much higher in Spain. Concerning kidney donation specifically, due to the high percentage of deceased donations there is a shortage of kidneys for young recipients. This is one reason that Spain has increased the growth of living donation. “Growth in living donation, which in Spain rose by 50% from 2008 to 2009,” (Rodriguez-Arias 1996). The increase of living donation can be effective in Spain because of their nationally regulated transplantation system. The country did not have a nationwide organ trade regulation before 1989 it followed the standard organ transplantation meaning that everything was privately regulated. This changed with the introduction of the Spanish Model and the Organizacion Nacional de Transplante created in 1989. Drastically altering not only Spain’s organ procurement, but also the worlds.

## Conclusions

Spain's success has attracted attention across the EU. In September, officials from 6 countries met

in Frankfurt to discuss transplantation and agreed upon a statement calling for governments to increase donations toward Spanish levels (Spooner 2003, 2). Although there are still some ethical questions regarding presumed consent, the overall implementation of the Spanish model created huge success in gaining more organ donors. Spain revolutionized the organ trade system, and brought to light the benefits of having a national transplantation system.

## References

- "Chapter 16. The Spanish Model." Simplebooklet.com. Accessed November 17, 2017. <http://simplebooklet.com/publish.php?wpKey=rNeJ29OLbbH7nbxJGxiQV5#page=4>.
- "Facts about Organ Donation." Facts about Organ Donation | National Foundation for Transplants. 2010. Accessed November 17, 2017. <http://www.transplants.org/facts-about-organ-donation>.
- Matesanz, R., B. Miranda, C. Felipe, and M. T. Naya. "Continuous Improvement in Organ Donation." *Transplantation*61, no. 7 (1996): 1119-121. Accessed November 10, 2017. doi:10.1097/00007890-199604150-00025.
- Rodriguez-Arias, David, Linda Wright, and David Paredes. 2010. "Success factors and ethical challenges of the Spanish Model of organ donation." *The Lancet*376 (9746): 1109–12. doi:10.1107/s0108768104030617/bs5012sup1.cif.
- Spooner, Mary Helen. "34 Spain: Organ Donation and Transplantation: ONT's Success Story." *Health Systems Improvement across the Globe: Success Stories from 60 Countries*, 2017, 257-64. Accessed November 12, 2017. doi:10.1201/9781315586359-38.



# Human Rights Watch and Amnesty International and more, on Organ Trafficking

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## Introduction to Organ Trafficking

The first organ transplant was successfully completed between a set of identical twins in 1954 (4). Through years of perfecting the process, now organ transplants are happening between two people who never knew of each other. There is a correct and safe way of doing this, however it is costly and time consuming. This has led many people to begin practicing this trade of organs illegally. Now one can go onto the black market and purchase an organ for up to 200,000 dollars. These organs usually come from someone in an underdeveloped country who originally sold it for around 5,000 dollars. The impoverished in underdeveloped countries are targets for exploitation in black market organ trafficking. But to them, they have no choice but to adhere to unsafe organ harvesting to feed their families.

## Current Situations of Organ Trafficking

Human organ transplant and procurement from wrongfully convicted prisoners is a very serious ethical dilemma in China at the moment. This violates the UN's Universal Declaration of Human Rights which states, "No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment" (3). Since there is a high demand for organ transplant operations and a low number of willing organ donors, the Chinese government has turned to harvesting the organs of executed prisoners. China is known for wrongful convictions and frequently sentencing prisoners to death, more so than any other country, which is motivated by the high demand for organs. Human Rights Watch estimates two thousand to three thousand organs, mostly kidneys and livers, come from these executed prisoners every year (1). This is a huge violation of human rights for prisoners, which are usually a product of low-income communities and systematic oppression. China has also known to purposely mess up executions to keep prisoners alive while removing their organs so that the organ is not affected by the person being dead. (1) Another method of obtaining organs is executions vans that use the execution method of lethal inject and are specially made to facilitate and speed up the execution process, which typically is completed by a firing squad in China (2). These organs are typically removed without consent of the prisoner or their families, which is highly illegal and extremely unethical. The feelings of the families and prisoners are not accounted for in these cases making it appear that the Chinese government views prisoners as second class citizens. Besides that, there is a huge network of people involved in illegal organ trafficking. Not only is this all supported by the Chinese government, but doctors are heavily involved in the process to make sure the prisoners organs can be used in transplants and to remove said organs. After the execution takes place, organs are removed from the condemned prisoner by the on-site doctor, typically minutes following the execution, and then

body is instantly cremated so the families of the victims have no knowledge of the organ removal(1). These organs are used in the estimated 60,000 organ transplant operations that occur in China, 50,000 more operations than the government claims to occur. China isn't the only country with a high rate of black market organ transplantations. In addition to illegal organ trades occurring in China, there are high rates of organ trade happening in Lebanon. About 1.5 million people have sought refuge in Lebanon since the Syrian conflict began in 2011. This accounts for about a quarter of the population. Reports have come out describing the new ways these refugees are working to staying above the poverty line and they involve black market organ trafficking. In order to save their families, Syrian refugees have been selling their organs including kidneys and eyes. Though they are not physically forced like Chinese prisoners are, they are forced to participate in a system because of their disposition in a new country after losing everything in a warzone. To these Syrian refugees, they don't have a lot of choices for income in a system that oppresses them.

## Conclusions

Though the process of performing organ transplantations has changed since 1954, like in the case of the two identical twins, there are still significant problems now in 2017 that lead to organ trafficking in the black market. Many that are desperate and in poor health try to find shortcuts that ultimately introduce people to the dangerous cycle of organ trade. Besides safety and legality problems that involve every participant involved in the black market organ transplantation system, the poor are the most that are negatively affected. As stated before, China is the biggest offender in black market organ trade: using prisoners that can't consent as living organ donors and as executed ones. But China isn't the only country that participates in nationwide illegal organ trafficking. Organs on the black market are a worldwide crisis and usually interconnected between poor and developed nations. The Human Rights Watch and Amnesty International are important players on an international level to make sure that human rights aren't being violated. Organ trafficking is a significant violation to human rights that will possibly be improved with the right legislation and program in place.

## References

Human Rights Watch. Accessed November 15, 2017.

[https://www.hrw.org/reports/1994/china1/china\\_948.htm](https://www.hrw.org/reports/1994/china1/china_948.htm) .

"Execution Vans, Organ Harvesting – Business as Usual in China – Amnesty International USA." Amnesty International USA. August 28, 2017. Accessed November 15, 2017. <https://www.amnestyusa.org/execution-vans-organ-harvesting-business-as-usual-in-china/> .

"Universal Declaration of Human Rights." United Nations. Accessed November 15, 2017. <http://www.un.org/en/universal-declaration-human-rights/>.

The Penn Center Guide to Bioethics. "Organ Trafficking and Transplant Tourism." Credo Reference.

[http://search.credoreference.com.du.idm.oclc.org/content/entry/sppbioeth/organ\\_trafficki](http://search.credoreference.com.du.idm.oclc.org/content/entry/sppbioeth/organ_trafficki)

ng\_and\_transplant\_tourism/0. 5. University Libraries Login Page. Accessed November 18, 2017.

<http://library.cqpress.com.du.idm.oclc.org/cqresearcher/document.php?id=cqrglobal2011071900&type=hitlist&num=0>.

# Kidney Procurement in the United States of America

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## Understanding Kidney Procurement

Chronic kidney disease is a major health concern in the United States affecting more than eight million Americans (UCSF Department of Surgery n.d.). When kidney function drops to a certain level, patients may acquire end-stage renal disease and require dialysis or a kidney transplant to survive. According to The UCSF Department of Surgery (n.d.), there are more than 74,000 people currently on the national waiting list for a kidney transplant, with the number increasing daily. In the United States, there are two ways to procure a kidney, from a living donor or a deceased donor. A living donor must be over the age of 18, in good health and should have a compatible blood type. A deceased donor is typically between a newborn to 65 years of age, in good health, and has a compatible blood type. Obtaining a viable kidney in the procurement process is multistep and varies depending on the situation of the donor as well as the patient. These deciding factors in procuring a kidney will be discussed below.

## Organ Eligibility for Donor and Receiving Patients

There are many medical factors affecting kidney donation eligibility. Transplant programs are required to have selection criteria in place and make these available to their patients. There are many reasons someone may be ineligible to donate including, age, smoking, drug-use, pre-existing health concerns, obesity, psychosocial issues, health coverage and more (UC Davis, n.d.). However, despite the criteria for donation associated with living donors, living donors are still considered the best donors for a successful transplant. This is because using a living donor's kidney decreases the risk of rejection, there is less of a waiting list, the surgery can be planned, and there are lower risks of unknown complications. However, patients who are eligible to receive a kidney transplant need to meet certain criteria as well. According to Tampa General Hospital (n.d.) and Barnes Jewish Hospital (n.d.) some factors that might prevent patients from getting a kidney transplant are: current life expectancy of less than 5 years, active malignancy (cancer), uncorrectable heart disease, untreatable psychiatric illness, non-adherence to treatment (e.g. not taking medications as advised), active substance abuse (alcohol or drugs), lack of health insurance or Medicare/Medicaid coverage, and an inadequate support system of family, friends, or others to help provide care.

The UCSF Department of Surgery (n.d.) discusses phases of a kidney transplant. After all the necessary medical precautions have been taken, the surgery will be approved by doctors and scheduled. The actual transplantation process is relatively quick and typically takes between two and four hours. Patients are most vulnerable immediately post-transplant. Up to 30% of patients can anticipate rejection of the kidney and this is considered a common side effect. However, in most cases prompt treatment can reverse the rejection.

## **National Organ Transplant Act**

The National Organ Transplant Act (NOTA) (n.d.) allowed for the Secretary of Health and Human Services to create grants for organ procurement organizations and made it illegal to compensate donors for their organs. This act received bipartisan support and was signed into effect by President Ronald Reagan (Reagan, 1984). This affected kidney donation for the future in many of ways. Since NOTA was passed, legislation regarding organ donations has continued, including, The Omnibus Budget Reconciliation Act passed in 1986 and the Amendment to the Organ Transplant Amendment passed in 1990. These acts were created to make efforts towards protecting transplant patients (U.S. Department of Health & Human Services, n.d.). While there is always a high demand for kidneys, there is not a large enough supply to satisfy it. Medical Daily reported, “At the time, it was a great idea because deceased organ donation was able to cover the demand of 10,000 people on the organ waiting list, but because the demand grew exponentially, there are now over 121,000 in line. Even if all of the deceased donated their organs it would still not be enough to cover the current organ shortage” (Olson 2014). This information explains the demand for transplantable organs not being fulfilled and therefore, suggests that there should be an alternative way to get organs, such as the ability to buy and sell organs across state lines. However, the purpose of NOTA was to eliminate the potential of buying and selling; this is because, according to the Gale Encyclopedia of Everyday Law, “the committee responsible for this provision felt strongly that human body parts should not be viewed as commodities” (2013)

## **Implications and Controversy**

There are many controversies surrounding organ procurement such as, religious implications regarding organ donation (Rady and Verheijde 2014), whether it's ethical for parents to allow donation amongst siblings (Fleck 2004), and if prisoners with life long sentences should have access to organ transplants (Cameron, et. al. 2008, 88-91). The controversy on prisoners accepting organ donations is one that is garnering a lot of attention. The system prioritizes medical need and does not discriminate against people's personal lives. Under this process each candidate is treated equally. This is controversial because most of these recipients are going to die in prison. Some believe organ transplant agencies such as the United Network for Organ Sharing (UNOS) should consider medical need and no other factors, while others argue there is no reason to sustain the life of a criminal.

One case involves Mr. Reading, a prisoner serving a life sentence for double homicide who requires an organ transplant in order to live. AMA Journal of Ethics states, “If Mr. Reading is eventually granted a transplant, his medications will be regulated by the prison staff until he dies and that all illegal drugs and alcohol are banned behind bars. In this sense, Mr. Reading seems like

an excellent candidate” (Cameron, et.al. 2008, 88-91). This explains that not many people take into account that prison is highly monitored and that these recipients are going to be watched closely. It decreases the chance of them requiring another transplant or abusing substances that could lead to further harm of this organ.

## Conclusion

Kidney disease is a widespread issue that affects more than eight million people in the United States (UCSF Department of Surgery n.d.). Those who wish to donate or be eligible to receive a transplant are screened through a rigorous process to ensure that there will be a successful transplant. Government policies have been put into place to help regulate the safety and legitimacy of transplants. There are still many debates and controversies surrounding transplants and the procurement process in this country and many implications to explore when it comes to creating the most ideal environment for kidney donation.

## References

- Barnes-Jewish Hospital. N.d. “Becoming a Kidney Recipient.” Accessed November 09, 2017. <https://www.barnesjewish.org/Medical-Services/Transplant/Kidney-Transplant/Becoming-a-Kidney-Recipient>
- Cameron, Andrew M., Aruna K. Subramanian, Mark S. Sulkowski, David L. Thomas, and Kenrad E. Nelson. 2008. “Should a Prisoner Be Placed on the Organ Transplant Waiting List?” *Journal of Surgery* 10, no. 2: 88-91. <http://journalofethics.ama-assn.org/2008/02/ccas2-0802.html>.
- Center, UC Davis Transplant. n.d. "Donor Selection Criteria." Accessed November 08, 2017. [http://www.ucdmc.ucdavis.edu/transplant/livingdonation/donor\\_criteria.html](http://www.ucdmc.ucdavis.edu/transplant/livingdonation/donor_criteria.html).
- Fleck, Leonard M. "Children and Organ Donation: Some Cautionary Remarks." *Cambridge Quarterly of Healthcare Ethics*. Vol 13, no. 2 (2004): 161-66.
- Olson, Samantha. 2014. “Organ Transplants Problem In America: 30 Years Since The National Organ Transplant Act Was Passed”. Last modified Sep 29, 2014. <http://www.medicaldaily.com/organ-transplants-problem-america-30-years-national-organ-transplant-act-was-passed-305578>.
- “Organ Donation” 2013. In *Gale Encyclopedia of Everyday Law*, edited by Gale. 3rd ed. Gale, [http://du.idm.oclc.org/login?url=http://search.credoreference.com/content/entry/galegel/organ\\_donation/0?institutionId=1676](http://du.idm.oclc.org/login?url=http://search.credoreference.com/content/entry/galegel/organ_donation/0?institutionId=1676).

Rady, Mohamed Y., and Joseph L. Verheijde. "The Moral Code in Islam and Organ Donation in Western Countries: Reinterpreting Religious Scriptures to Meet Utilitarian Medical Objectives." *Philosophy Ethics and Humanities in Medicine* 9, no. 1 (2014): 11.

Ronald, Reagan. 1984. "Statement on Signing the National Organ Transplant Act. Accessed November 08, 2017. <http://www.presidency.ucsb.edu/ws/index.php?pid=39282>.

Tampa General Hospital. n.d. "Kidney Transplant Selection & Referral Criteria." *Kidney Transplant Criteria*. Accessed November 09, 2017.  
<https://www.tgh.org/services/transplant/kidneytransplant/kidney-transplant-criteria>

The UCSF Department of Surgery. n.d. "Kidney Transplant." Accessed November 06, 2017.  
<https://transplant.surgery.ucsf.edu/conditions--procedures/kidney-transplant.aspx>.

U.S. Department of Health & Human Services. n.d. "Selected Statutory and Regulatory History of Organ Transplantation." Accessed November 08, 2017.  
<https://organdonor.gov/aboutdot/laws/history.html>.

# Types of Kidney Donation

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## Introduction

There are various causes of kidney failure. Some include diabetes, high blood pressure, inflammation of the kidney's filtering units, certain medications, polycystic kidney disease, kidney tumors/infections, and the failure of a kidney transplant. Once a patient is in kidney failure, they are treated with dialysis while the physicians place them on a waiting list for a kidney. There are two types of kidney transplants, deceased and living. Deceased transplants have only one type. A patient receives a kidney from a patient who has just died. As for living kidney transplants, the four types include Compatible Paired Exchange, Paired Donation, Domino Donation, and Ongoing Chain Donation.

## Compatible Paired Exchange

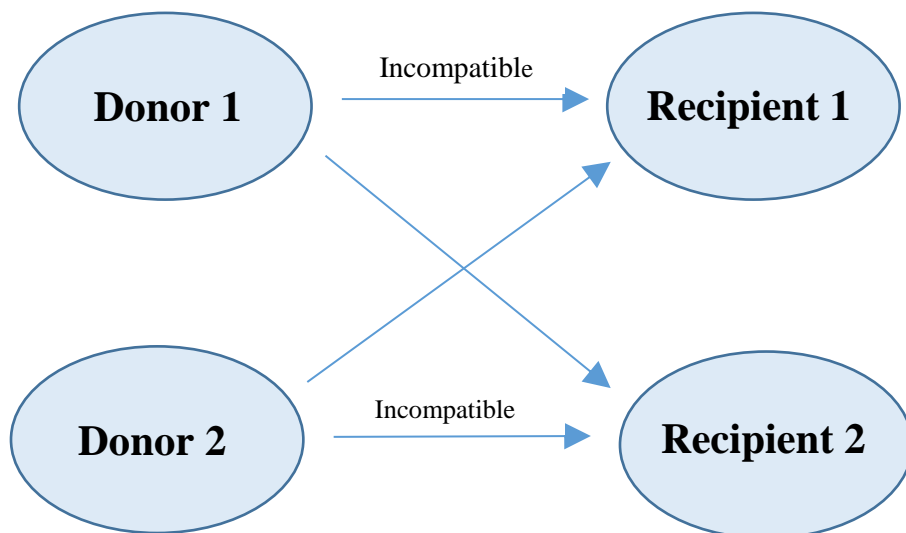
A Compatible Paired Exchange is considered the simplest living kidney transplant because it only requires two people. The exchange begins when a patient is in need of a kidney, usually due to kidney failure. The patient will either have a willing donor they know personally, or they may be matched with someone through an alternative matching service such as UNOS (Rapoza 2017). In order to be matched, each participant has to go through extensive testing to ensure compatibility. Once the testing is complete, they each sign a consent form and the transplant can begin. The transplant consists of the removal of the healthy kidney from the donating patient. After this portion is completed, the kidney can be transported to the other patient's operating room for implantation. Usually the patient's original kidneys are left in place while the new kidney is placed into the abdomen. The new kidney now assumes the function of both kidneys to filter their blood and make urine. Compatible paired exchanges are the most sought out exchanges even with their rarity.

## Paired Donation

A Paired Kidney Donation is an option for patients with kidney failure who have a willing donor who does not match their blood type, or they are unable to receive their donation due to the high possibility they will reject it after transplantation (Abbott 2009). Because this situation is



very common, this is one of the programs designed to reallocate the available donations. The process starts with the incompatible pairs and works to match one pair with another. The donor from the first pair will donate to the patient in the other pair. In return, the donor from the second pair donates to the patients from the first pair. After the conclusion of this procedure, each patient has received their transplant from a willing and compatible donor. This is an ideal solution for patients with willing donors as the transplants occur simultaneously.



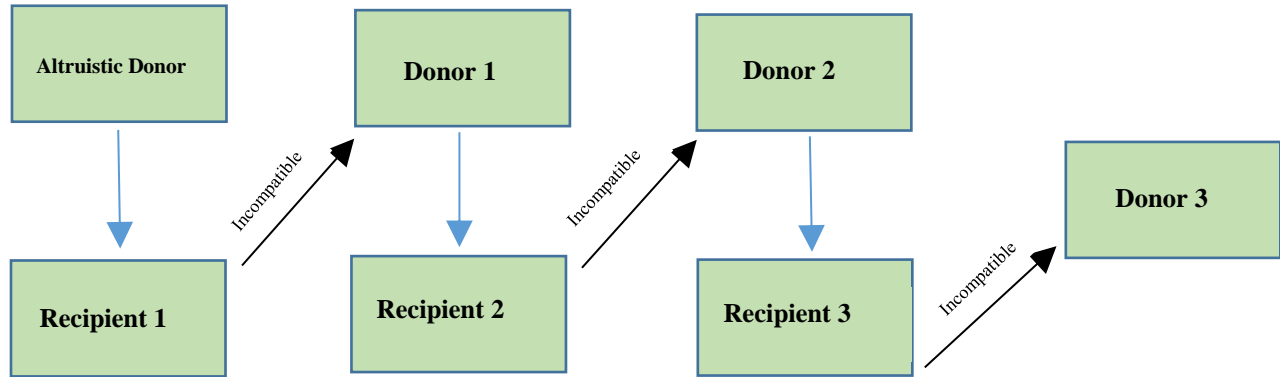
**Figure 1.** Paired Kidney Donation

## Domino and Chain Donations

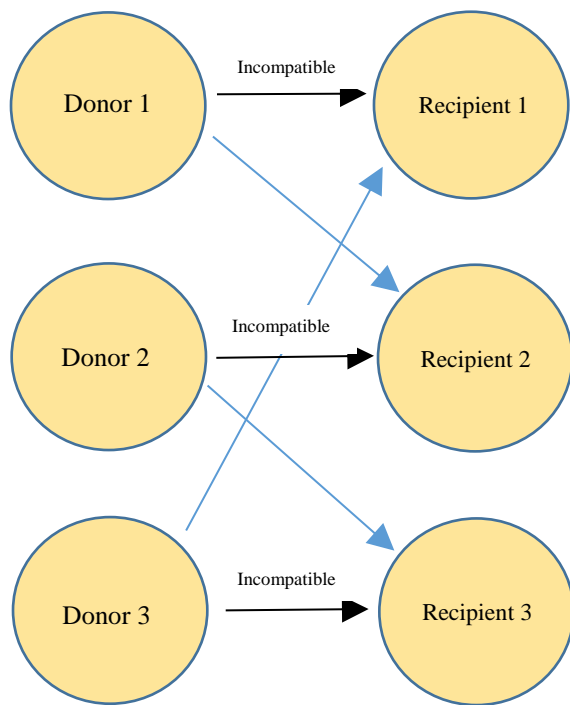
Domino Donations are another type of transplant with the purpose of relocating willing donors' kidneys that are incompatible with the other half of their pair. This process involves a pool of incompatible donor-patient pairs. It is initiated with a living, non-directed donor who wishes to donate to anyone in need. They are known as altruistic donors (Montgomery 2006). The donor begins the Domino when he/she is matched with a patient who has a willing donor but is not compatible with them. They receive their kidney and then their donor can then be matched with a patient on a waiting list. Another form the Domino Donation can take involves more patient-donor pairs that come together to form a larger system. The system starts in the same manner, with the altruistic donor being matched with a patient in a pair. Within this larger system, their donor then gives to another patient in another pairing. This exchange can continue in this manner for as many pairs as can be matched together.

Very similar to the Domino Donation is the Ongoing Chain Exchange. This exchange is the same as the second Domino Donation mentioned, involving many patient-donor pairs. The only difference with this one is in the end, the final willing donor from a pair can wait to donate their kidney. The reason they would wish to do this is to begin a new chain in the future rather than giving it to a patient on a waiting list. This is up to the donor to decide in most cases. Domino and Chain exchanges are difficult to put together considering the number of people needing to be matched and compatible with one another. Aside from that, they are beneficial because they make

use of each of the incompatible but willing donors involved. Essentially, more patients can be helped using these methods.



**Figure 2.** Ongoing Chain Exchange



**Figure 3.** Domino Donation

## Deceased Donation

Deceased Donation is another option for patients suffering with kidney failure. The transplant occurs when a person dies who was a willing organ donor. Patients can choose to be considered for deceased transplants if they wish to be, though some prefer not to be. The process of these transplants works the same as Compatible Paired Exchanges. The deceased donor can also be considered as an altruistic donor as they are capable of starting Domino or Ongoing Chain Donations.

## Conclusion

As kidney transplants have been rising in demand in recent years, the need for alternate methods grows as well. Living kidney donations add approximately 16 more years to a patient's life while deceased kidney donations add about 8.6 (Wallis 2011). Although the living donation is expected to add more years, any transplant saves a life. The addition of systems including multiple patient-donor pairs has been essential in the progress of kidney transplantation.

## References

- Abbott, Chad. 2009. "Paired Kidney Donation." Michigan Transplant News, 1–3.  
[http://umheadandneckcancer.org/trans/public/pdf/TCNews\\_Winter09.pdf](http://umheadandneckcancer.org/trans/public/pdf/TCNews_Winter09.pdf)
- Montgomery, Robert. 2006. "Domino Paired Kidney Donation: a Strategy to Make Best Use of Live Non-Directed Donation." The Lancet, July, 1–3.  
[http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(06\)69115-0.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(06)69115-0.pdf)
- Rapoza, Kristen. 2017. "Kidney Transplant." In Harvard Medical School (Ed.), *Health reference series: Harvard Medical School health topics A-Z*. Boston, MA: Harvard Health Publications. Retrieved from  
[http://du.idm.oclc.org/login?url=http://search.credoreference.com/content/entry/hhphealth/kidney\\_transplant/0?institutionId=1676](http://du.idm.oclc.org/login?url=http://search.credoreference.com/content/entry/hhphealth/kidney_transplant/0?institutionId=1676)
- Wallis, C. Bradley, Kannan P. Samy, Alvin E. Roth, and Michael A. Rees. 2011. "Kidney Paired Donation." *Nephrology Dialysis Transplantation*, Volume 26, Issue 7, 1 July 2011, Pages 2091–2099, <https://doi-org.du.idm.oclc.org/10.1093/ndt/gfr155>

# Declaration of Istanbul

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## Introduction

The immorality of illegal organ trade is a globally sweeping trend that seems to not be slowing down. The reason being that organs can be taken from certain groups of people that may be at a disadvantage with either monetary incentive, or worse, taking organs without consent of the patient. The groups that are the most targeted for illegal organ harvesting are the impoverished lower class from transplant tourists and organ traffickers who wish to acquire organs abroad for little to no cost. In order to combat this growing trend of illegal activity, doctors and specialists from around the world came together at a summit in Istanbul, Turkey in 2008 to create ways to prevent further human rights abuse and violations.

## Background

Due to the lack of transplantable organs worldwide, concerns began to develop about how to increase levels of transplantable organs ethically worldwide, while also decreasing the levels of illegal organ trade. Lower, impoverished groups on the bottom of society are the most susceptible to these acts. In 2004, the World Health Assembly, the forum of which the World Health Organization is governed, urged health care providers and governments alike to take measures to protect these groups in a stand not only against transplant tourism and organ trafficking, but also against international trafficking of organs through illegal markets as a whole (Taylor 2013). The Declaration of Istanbul was conceived at the International Summit on Transplant Tourism and Organ Trafficking from April 30<sup>th</sup> to May 2<sup>nd</sup>, 2008 in Istanbul, Turkey (Taylor 2013). This summit was made to address the issue of the growing rate of transplant tourism and organ trafficking around the world and find possible solutions to this problem that could be adopted globally. Thought up by global leaders in organ transplantation within The Transplantation Society (TTS) and International Society of Nephrology, the documents “concluded that transplant commercialism, which targets the vulnerable, transplant tourism, and organ trafficking should be prohibited” across the world (Taylor 2013, 1). The document serves to “inspire and unite all those engaged in combating unethical practices in organ transplantation” and to determine and define all actions condemned by the summit (WHO 2017, 1). The document also gives goals and standards for international governments and organizations to follow for future action. In order to make sure these goals and standards are being met, the Declaration of Istanbul Custodian Group was made. The DICG is made up of all previously acting participants of the Istanbul summit (WHO 2017).

The group's role is to develop strategies as well as implement plans it has created to ensure success in activities that countries are participating in relating to the Declaration of Istanbul (WHO 2017). By operating within these means, the group is able to manage countries activities as well as promote the well-being and adherence of the Declaration of Istanbul.

## The Principles

The main principles included in the document give good guidelines for governments to follow in order to sustain a stable and reasonable level of care to make sure the human right to adequate health care is available.

The first principle is for governments to work with organizations abroad and at home to provide programs for “screening, prevention, and treatment of organ failure” to possibly hinder transplant tourists from taking advantage of those with end-stage diseases (WHO 2017, 2). This includes developing a system to take care of those who have already had an organ transplant and need care such as dialysis that may not be affordable for the patient, creating a fluid system to give organ transplants to those who truly need it most, and researching information or drugs that may prevent organ failure to push away the need for transplantation. The most difficult concept is having cooperation between governments and organizations and allowing a certain amount of trust between the two to allow momentum forward toward a better system.

The second principle is to have legislation allowing a government body to recover organs from living and dead donors to help fill the deficit of organs worldwide (WHO 2017). This legislation needs oversight as well as transparency and dictates that the government accurately record each donation whether it be living or deceased (WHO 2017). Though this seems like an easy task to accomplish by governments, there is always a chance of corruption in the process that the declaration wants to prevent. Most countries do not “release precise data” or even “record” the number foreign patients being seen within the country (Budiani-Saberi 2009, 1). In order for this legislation to work, the opinion of the public must be positive toward it. Proper education about the need for organs must be taught along with the bolstering of the public health system (WHO 2017). This is a problem for some underdeveloped nations not being able to afford these necessities and this is why these nations are so vulnerable to organ trafficking as well as transplant tourism.

The third principle states that allocation of organs should not be dependent on the patient's gender, race, religion, and social or financial standings (WHO 2017). Another portion of this principle tells that the allocation should not have any gain, whether it be financial or material.

The fourth principle states that procedures of transplants should be short and afterward there should be long term care provided to make ensure lasting health of patient (WHO 2017). The health of the patient should come first, no matter the monetary gain of any party in the transaction.

The fifth principle says that the regions within a country or province should work together to achieve maximum amounts organs to sustain a healthy society (WHO 2017). Countries should work together in an effort to find sustainable ways to provide health services regarding transplantations, but countries should focus on their own infrastructure before deciding

to work with others. Countries should not take in foreign patients unless they can provide care to the patient like they were a citizen of that country. This is to say that equal treatment of all is a necessity.

The last principle of the documents states that all participating countries should condemn the action of organ traffickers and transplant tourists (WHO 2017). This includes imposing penalties for performing these actions and pushing campaigns against them. Even though countries may adopt these policies, it will be difficult to maintain these high standards, which is why the document also includes measures societies should take to ensure success.

## The Proposals

Proposals made at the Istanbul summit included in the document describe how participating countries can increase level of donors as well as actual organ used to sustain healthy, successful transplants.

The most emphasized of these ideas is the idea that governments should overall try to increase organs gained from the deceased (WHO 2017). This requires proper legislation requiring donation of organs from the deceased. Countries such as Spain already have this law passed giving them the highest rates of organ donation globally. Once this is place, the proper system is need for the transportation and care of organs of the deceased. Overall, countries with stable systems are encouraged to share their information on the system that works best for them (WHO 2017).

In regard to living donors, the rules are strict. Donors are to be recognized as heroes who are doing a service to society (WHO 2017). However, donors who give consent to donate their organs must be evaluated case by case. This is due to a possible conflict of interest with parties involved. For example, a father may want to donate his kidney to his son or daughter, but this does mean that it will be compatible with the recipient. In another situation, the donor may want monetary gain and if turned away will go and support the agenda of transplant tourists.

The government is help responsible for treatment of donors post operation, providing care and making sure they do not fall prey to organ traffickers in the future (WHO 2017). Adding to this, follow up appointments are mandatory and the need for truthfulness from the patient is a must (WHO 2017). Governments must make sure that the donor is still in good health mentally and physically.

The last proposals of the document states that reimbursement for donation is not “financial compensation” but is rather a “legitimate cost of treating the patient” (WHO 2017). This only includes actual costs that regard the operation as well as any medicine used or consumed during the process of transplantation. This system can work well, as it does not give an incentive to donate, but allows for the growth in steady flow of donors.

## Conclusion

The Declaration of Istanbul is a groundbreaking document that has the power to bring countries together and give stability to health systems around the world. The biggest obstacle regarding the document is having a sustainable base to start from. The amount of inequality with health care and standards of living worldwide is devastating that not all countries can participate leaving room for organ traffickers and commercialists to thrive. With regard to the GKE, the Declaration of Istanbul is possible at a government level, but will simply not work with a private organization. There is room for corruption at the private organizational level; however, with proper oversight, the project can progress and have transparency just as the Declaration of Istanbul states. The declaration is an excellent guide for reforming transplantation in the healthcare system and will be relevant for many years to come.

## References

- World Health Organization. 2017. "The Declaration of Istanbul on Organ Trafficking and Transplant Tourism." World Health Organization, accessed 11/1, 2017, <http://www.declarationofistanbul.org/>.
- Budiani-Saberi, Debra A. and Vardit Ravitsky. 2009. "Organ Trafficking and Transplant Tourism." In *The Penn Center Guide to Bioethics*. New York, NY, USA: Springer Publishing Company. [http://du.idm.oclc.org/login?url=http://search.credoreference.com/du.idm.oclc.org/content/entry/sppbioeth/organ\\_trafficking\\_and\\_transplant\\_tourism/0](http://du.idm.oclc.org/login?url=http://search.credoreference.com/du.idm.oclc.org/content/entry/sppbioeth/organ_trafficking_and_transplant_tourism/0).
- Taylor, James. 2013. "Organ and Tissue Trade." In *Global Social Issues: An Encyclopedia*, edited by Christopher G. Bates and James Ciment. London, UK: Routledge. [http://du.idm.oclc.org/login?url=http://search.credoreference.com/du.idm.oclc.org/content/entry/sharpei/organ\\_and\\_tissue\\_trade/0](http://du.idm.oclc.org/login?url=http://search.credoreference.com/du.idm.oclc.org/content/entry/sharpei/organ_and_tissue_trade/0).

# The Transplantation Society (TTS)

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The Transplantation Society (TTS) is the global leader in the field of transplantation, promoting “the development of the science and clinical practice, scientific communication, continuing education, and guidance on ethical practice” (“About TTS,” *The Transplantation Society*, accessed 2017). With its headquarters located in Montreal, Canada, TTS maintains global outreach with over 105 countries represented and over 6,700 members composed of professionals in the field of transplantation (“About TTS,” *The Transplantation Society*, accessed 2017). Notably, TTS has published a monthly peer-reviewed journal, *Transplantation*, which has been the official journal of the society for over fifty years (“Journal,” *The Transplantation Society*, accessed 2017). For the past fifty-one years, TTS has had a tremendous global impact on the approaches, education, practices, and implementation of transplantation, providing life-saving methods for many people.

In 1966 the members of the Tissue Homotransplantation Conference, supported by the New York Academy of Sciences, formed TTS (Tilney, 2006, 1). At the conference, members drafted and approved a constitution for the society (Tilney, 2006, 1). Since its inception, TTS has convened twenty-one times all over the world (Tilney, 2006, 1). In the 1960s, Sir Michael Woodruff, who later became the president of the society, notably expressed that “[it] may well be that we shall succeed in devising methods of making tissues and organs from one human being survive permanently in another, not only when there is some special relationship between donor and host but as a general rule. If so, we shall stand on the threshold of a new era in surgery and we shall have found a new meaning to that excellent motto *Nemo sibi nascitur* - No man is born for himself alone” (Tilney, 2006, 6). These touchstone words continue to resonate with TTS’s ethical practices and guidelines.

Scholars and medical professionals widely regard *Transplantation* as the most trusted, influential, and timely journal in the field of transplantation, and its editorial board is composed of an international group of diverse and well-renowned research and clinical leaders (“Journal,” *The Transplantation Society*, accessed 2017). With over 25,000 citations a year, the journal publishes research articles in both clinical and basic science, highlighting important advances at the forefront of the field (“Journal,” *The Transplantation Society*, accessed 2017). In its “View” section, the journal includes five significant areas of expertise. The first section, “Around the World,” takes a global approach to transplant obstacles and achievements in specific regions. The “eResources” section provides useful digital links and other manuscripts on the topic of transplantation. In addition, “Game Changer” supplies important documents and sources about transplantation. The “People in Transplantation” section provides interviews with scientific and medical innovators who have greatly impacted the field of transplantation. Finally, “Research Highlights” compiles essential published discoveries from other highly respected transplantation journals (“Journal,” *The Transplantation Society*, accessed 2017). The *Transplantation* journal effectively highlights the extensive reach and networking of TTS.



TTS is part of a coalition of organizations that all share similar goals in advancing transplantation. The society itself consists of more than 6,700 members “composed of professionals with an active interest in basic science, clinical research, and/or improving clinical practice in the field of transplantation” (“About TTS,” *The Transplantation Society*, accessed 2017). Their official section of affiliations includes eight different associations. These affiliations vary categorically amongst different transplantation specialties ranging from a cellular level to infectious diseases. Thus, TTS works both nationally and internationally with a plethora of other associations. TTS has also created its own list of initiatives. One of these initiatives is the Declaration of Istanbul, which combats illegal black market organ exchange. Another significant initiative is Women in Transplantation, which ultimately strives to expand and preserve women in the transplantation field in careers such as scientists and medical practitioners. In addition, TTS’s touchstone initiative, The Global Alliance for Transplantation, seeks to broaden access for organ transplants for lower class civilians without proper healthcare. Lastly, the ISN-TTS Sister Transplant Center Program is dedicated to creating access to kidney transplants in underprivileged areas. Through these initiatives, TTS takes great strides in augmenting access to transplantation and organ donation while combating black market organ exchange.

Alongside these initiatives, TTS administers educational programs including the Working Group on Education on Organ Donation and Transplantation for Schools (EODTS). The goal of this working group is to expand awareness and education on organ donation and transplantation in schools across the globe (“Education,” *The Transplantation Society*, accessed 2017). The working group has successfully hosted three Education Forums in Montreal, Berlin, and San Francisco. Professionals and other people interested in school education have attended these forums (“Education,” *The Transplantation Society*, accessed 2017). Furthermore, TTS provides an interactive teaching series entitled “Advanced Renal Transplantation.” Since the inception of this series in 2015, TTS has provided multiple courses each year on various topics in the field. For example, this year’s courses have included “Inducing Tolerance - Clinical Approaches” and “Kidney Transplant Outcomes and Quality-of-Life: Where Do We Stand?” (“Education,” *The Transplantation Society*, accessed 2017). This interactive teaching series is geared towards doctors and trainees who wish to gain more knowledge about renal transplantation, and those who complete the series will be awarded the TTS Certification in Advanced Renal Transplantation (“Education,” *The Transplantation Society*, accessed 2017). Broadly speaking, TTS promotes a variety of courses for the general public as well as medical transplantation professionals.

In conclusion, TTS seeks to advance transplantation both nationally and internationally by spreading awareness and information about organ donation and aid. Through TTS, transplantation maintains an organized practice with checks and balances. By means of its official journal, TTS is able to communicate and publish the most up-to-date and recent findings across the discipline. The society aims to educate the general public, youth, trained doctors, and medical professionals through their educational programs and forums such as EODTS as well as their Advanced Renal Transplantation Series. Through these programs and forums, TTS is able to successfully promote education and awareness surrounding transplantation and organ donation. TTS is one of many organizations to contribute to this mission, and has many strong affiliations and associations with societies across the globe. Together, they work to better the current conditions of the transplantation process and share their expertise.

## References

“About TTS,” *TTS - The Transplantation Society*, accessed November 13, 2017.  
<https://www.tts.org/education>.

“Education Home,” *TTS - The Transplantation Society*, accessed November 13, 2017.  
<https://www.tts.org/education>.

“Journal Home,” *TTS - The Transplantation Society*, accessed November 01, 2017.  
<https://www.tts.org/>.

“TTS Home - TTS,” *TTS - The Transplantation Society*, accessed November 01, 2017.  
<https://www.tts.org/>.

Tilney, Nicholas L. “Four Decades of International Cooperation, Innovation, Growth and Progress,” *TTS - The Transplantation Society*, 2006.  
[http://www.tts.org/index.php?option=com\\_content&view=article&id=6&Itemid=9](http://www.tts.org/index.php?option=com_content&view=article&id=6&Itemid=9).

# Kidney Procurement in Spain

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November 17, 2017

## The History of Spanish Kidney Procurement

Kidney transplantation came to Spain in the year 1960's when three brilliant doctors, Gilvernet, Caralps, Alférez and Hernando made their first kidney transplantation in the hospital of Barcelona (Organización Nacional de Transplantes, 2017). Twenty years later, Kidney Transplant Teams in Spain worked together throughout the different regions and were able to increase their staff in transplants. Tons of medical experts coming from different parts of Europe had to adjust to the different ways that Spain did their transplantations. Soon an organization named "Organización Nacional de Transplantes" (ONT) opened fully in Spain and was able to help and recognize the different transplantations specifically kidneys.

## The Spanish Model

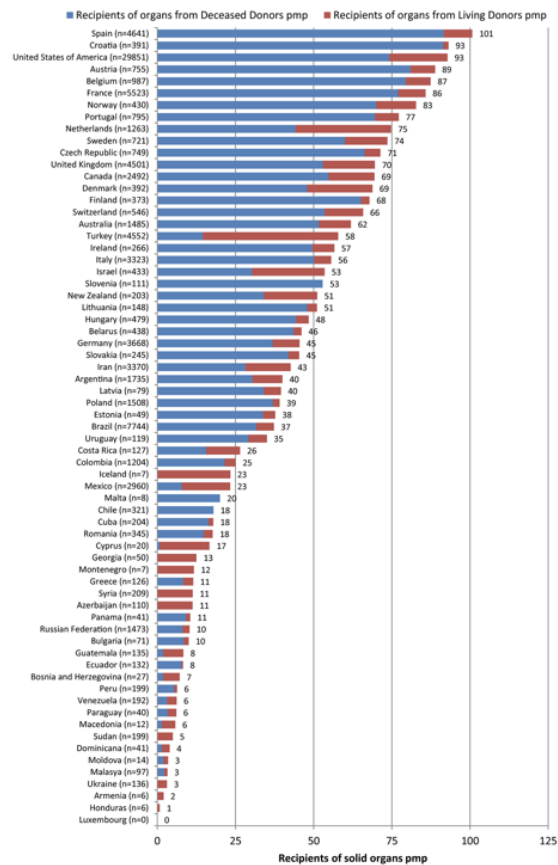
Spain has an excellent way on how they are working with their kidney transplantation. According to the World Health Organization, "The Spanish system deploys transplant coordinators who work in hospitals across the country to increase organ harvesting from deceased persons – often known as "deceased donors" – by identifying possible donors, mainly people who die in accidents or from stroke or heart attack, and by talking to the donors' next of kin to gain their consent" (WHO 2017, n.p.). Spain is receiving kidneys from deceased patients with the permission of their families and then donating them to a patient in need. Therefore, this way of kidney procurement is important because it has been shown that "Spain has achieved a kidney donation rate 33 to 35 per million population, one of the highest in the world" (WHO 2017, n.p.). This shows that Spain's kidney procurement system has been shown to be very successful. Spain also has very legal ways that they have with organ donation called presumed consent.

With the legal stance of presumed consent, according to Simon Bramhall, "A number of countries have a system of presumed consent, including Spain, but very few use the system in practice. In Spain, presumed consent had been part of statute for 10 years prior to the organizational changes without any effect on rates of donation" (Bramhall 2011, n.p.). Later, Bramhall states, "The Spanish have addressed the family consent rate by adopting a long contact method in which donor coordinators identify potential organ donors at a very early stage (using clinical triggers) and spend a long time getting to know the family of the potential organ donor" (Bramhall 2011, n.p.). Therefore, the Spanish system builds a relationship with the potential donor's family in order to be able to later ask for the authorization which makes it easier for them. If there is no way of contacting the deceased person's family in some ways sometimes Spain will use presumed

consent. All of this is shown to be okay in Spain which has shown the rates of organ donation and transplants increase. All of this is followed by a plan that the Spanish System has created called “The 40 Donors pmp Population Plan”.

## The Spanish System’s Action Plan

Spain’s way of improvement can come to be with a new plan that is called the “40 donors per million population plan”. This was introduced by the Organización Nacional de Transplantes which is “an agency in charge of the coordination and oversight of donation, procurement, and transplantation activities in a politically decentralized country, albeit with an adequate legislative and technical framework from the transplantation perspective” (Matesanz 2017, 1). This plan aims to “summarize the challenges that the system has faced in further developing donation from the deceased and to describe the three strategies that have made Spain reach the target of 40 donors pmp” (Matesanz 2017, 1). Therefore, a main strategy that Spain wishes to make is to be able to get a hold of deceased patients right away with the permission of the families in order to go faster and be able to get the kidney to a patient. They are working each year to be able to increase their rates of number of organ donors and this plan is what will help keeps their stats high.



**Figure 1.** Rates of live and deceased kidney donor transplants in different countries. (Matesanz and Dominguez 2017, 1).

## What other contributions have been added to help Spain?

Spain has a successful way of training, communicating and improving their safety throughout their facility that helps improve their goal. They have been able to improve this safety of the donor by “the excellent evaluation and monitoring of donors (based on international standards) plus the use of less invasive surgical techniques are related to a low complication rate and to survival expectancies of living donors being similar to those of the general population” (Dominquez 2010, n.p.). This comes to show that the safety in Spain has improved meaning that there is a more effective and safe use of the material and to the patient. This makes the kidney system work better because they have to deal with less complications when going under a kidney transplant from the donor to the patient.

The training and communication aspect has been something very essential in the kidney system in Spain. The National Transplant Organization has made an increase in the training in many different hospitals and has provided many new training resources to help improve the medical staff. It is important that the medical staff is able to communicate and get good training as they are the ones who are working towards helping the patients receive the transplants. The ONT has stated, “There is regular meetings with informants, training courses in communication for coordinators, as well as a quick attitude of managing adverse publicity and crisis situations, have been important points throughout these years in achieving a positive climate for organ donation” (Organización Nacional de Transplantes, 2017, n.p.). All of these factors are helping them contribute to the Spanish system’s success in the kidney procurement which is important because they are able to help make more transplants possible.

## Conclusions

As Spain is a leader in kidney transplantation they have an excellent way of working with the kidney procurement. All of this works efficiently due to the great training and communication and improvement in safety that the facilities in Spain have. Therefore, their goal is to increase 40 donors per million to their population to be able to increase their kidney transplants for their patients All of this is important because this shows the excellent system in Spain that is able to provide many people with kidney transplants. The WHO, is therefore, aiming to try and get this system worldwide. It is important that different countries work towards a specific goal that will help the population who need this kind of system.

## References

[Today Online. 2017. “How Spain Became the World Leader in Organ Transplants” \*Today Online\*. April 17. Accessed November 2017. <http://www.todayonline.com/daily-focus/health/how-spain-became-world-leader-organ-transplants>](http://www.todayonline.com/daily-focus/health/how-spain-became-world-leader-organ-transplants)

- Bramhall, Simon. 2011, "Presumed consent for organ donation: a case against" *Annals of The Royal College of Surgeons of England*. May. Accessed November 2017.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3363073/>
- [Dominguez B and R Matesanz. 2017. "How Spain Reached 40 Deceased Organ Donors per Million Population" \*Wiley Online Library\*. January 19. Accessed November 2017.  
<http://onlinelibrary.wiley.com/doi/10.1111/ajt.14104/full>](#)
- Jones, Ben and Mireia Bes. 2012. "Keeping Kidneys" *Bulletin of the World Health Organization*. 90:713-792. October. Accessed November 2017.  
<http://www.who.int/bulletin/volumes/90/10/12-021012/en/>
- Nefrología. 2010. "Present situation of living-donor kidney transplantation in Spain and other countries: past, present and future of an excellent therapeutic option". *Sociedad Española de Nefrología*. November. Accessed November 2017.  
<http://www.revistanefrologia.com/en-publicacion-nef-articulo-present-situacion-living-donor-kidney-transplantation-in-spain-other-countries-past-X2013251410051432>
- Organización Nacional de Trasplantes. 2017. "El Modelo Español". *Fundación Príncipe de Asturias*. Accessed November 2017.  
<http://www.ont.es/home/Paginas/ElModeloEspanol.aspx>

# Matching Theory and Market Design: The 2012 Nobel Prize in Economic Sciences

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November 1, 2017

## Introduction

In 2012, the Nobel Prize in Economic Sciences was awarded to Lloyd Shapley and Alvin E. Roth for their cumulative works in matching theory. The two have been working together since the 1980's but Shapley's work far outdates that (University of California Los Angeles 1997). In 1962, Shapley had an article published which briefly described an economic model for creating stability based on the idea of deferred acceptance (Henderson 2012). Roth built on his ideas – applying his very theoretical model to real life causes.

## Matching Markets

In his Nobel lecture, Roth described matching markets as “markets in which you can't just choose what you want (even if you can afford it), you also have to be chosen.” He further elaborates on the subject saying “You can't just tell Google you're showing up for work. They have to hire you. And of course, it works that way on both sides. [...] Google has to compete for employees with Facebook” (Roth 2012, 344).

In the work done by Roth and Shapley, they are looking particularly at two-sided matching markets, in which both parties in the match have a preference – and both of the parties' preferences help determine the match.

Both Roth and Shapley argue for deferred acceptance, in which any proposal set forth by one party is either permanently rejected or temporarily accepted by the other. This means as the party proposing goes through their preferences in order they have just as much of a chance at their third choice as they do their second choice. This creates a market in which “they can't come to harm by revealing their true preferences” (Roth 2012, 347). This process will be expanded upon later in this paper.

## Gale-Shapley Deferred Choice Algorithm

In “College Admissions and the Stability of Marriage” Shapley and David Gale explain the principle of deferred acceptance through the examples of college admissions and marriage.

In the marriage example the goal was to create a heterosexual couple “which meets three requirements: stability, optimality and absence of manipulation”<sup>1</sup> (Forges et al. 2013, n.p.). In this example, stability “means that there is no boy-girl pair who would both rather be married to each other than to the person they did marry” (Henderson 2012, ).

In the model, there are ten men and ten women. Each man proposes to his first-choice woman. The women then reject all of the men that they do not see fit, leaving their favorite man in the running. Every man that was rejected moves onto his second-choice woman. Once again, the women reject all the men that they do not like but continue to keep their new favorite in the running. This continues until everyone has been matched with their ideal partner. This creates the most stability (Henderson 2012, n.p.). Of course, this can be reversed, with the women proposing to the men.

Interestingly, “the Gale and Shapley algorithm immediately favors one type of person, who make the marriage proposal to the other”<sup>2</sup> (Forges et al. 2013, n.p.). This means that when the men propose they are more likely to end up with a woman that they would prefer to be with; alternately, when the woman propose they are more likely to end up with a man that they would rather be with.

It is important to note that this model lacks manipulation because all the individuals that are proposing “have interest in revealing their true preferences”<sup>3</sup> (Forges et al. 2013, n.p.).

In the model of college acceptance, the algorithm remains essentially the same, with only a few minor changes. “In the natural version that favors the students (in which they apply), the only difference is”<sup>4</sup> that instead of the college only keeping the best candidate after each round, the college keeps as many candidates as they see fit with the only upper bound being their capacity (Forges et al. 2013, n.p.).

## Roth’s Applications

Roth took the theoretical models created by Shapley and began applying them to problems that presented themselves in the real world by designing markets with deferred acceptance as the backbone.

### Boston Public School Placement

In Boston, Roth was asked to look at the way that grade school aged kids were placed into schools. He found that the city was using an “immediate acceptance algorithm” which forced parents into strategizing the school preference that they listed (Roth 2012, 347). He explained that

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<sup>1</sup> My translation, was originally: “qui réponde à trois exigences: stabilité, optimalité et absence de manipulation”

<sup>2</sup> My translation, was originally: “l’algorithme de Gale et Shapley privilégie d’emblée un type d’individus, qui fait des propositions de mariage à l’autre”

<sup>3</sup> My translation, was originally: “ont intérêt à révéler leur vraies préférences”

<sup>4</sup> My translation, was originally: “dans la version naturelle qui favorise les étudiants (dans laquelle ceux-ci posent donc leur candidature), la seule différence notable est”



if parents listed their true preferences then there was a high chance that they would not get into the first-choice school, and that the second-choice school would fill up with kids whose parents listed that school as their first-choice school. This creates a problem as even third and fourth-choice schools will be filled up with kids that had it listed as their first or second choice. This forces the kids into the bottom of their preference lists.

Roth suggested that they change over to a deferred acceptance algorithm in which “the schools don’t decide who to accept until they see everyone who is going to apply” (Roth 2012, 348). This creates a safe market for parents to list their actual preference.

## **New York High School Placement**

In New York, the system “was a congested process” in which about a third of the students entering the school system each year “had not been admitted anywhere and had to be assigned administratively to schools they had not expressed a preference for” (Roth 2012, 354). Through the use of Roth’s market, the number of students that were not accepted anywhere by the start of the school year went down ninety percent.

## **Intern-Hospital Placement**

In the 1950’s the labor market between hospitals and graduating medical students got an overhaul that used an algorithm very similar to the Gale-Shapley Deferred Choice Algorithm. In it, the hospitals were the ones proposing to the medical students. They each were able to list their true preferences due to the large size of the market. In the 1970’s, when women were beginning to enter the medical field the algorithm stopped producing stable matches because married couples were treated as individuals by the algorithm rather than as a pair. Roth managed to make the algorithm deal “more gracefully with married couples” (Roth 2012, 354).

## **Kidney Exchange**

Roth also helped the kidney exchange market in America. Kidney exchange has to be a matching market because, legally, money cannot play a role in the market. “It is against the law everywhere in the world except the Islamic Republic of Iran to pay people for kidneys” (Clement 2015). In simple paired kidney exchange, there is a couple in which one person needs a kidney and the other is willing to donate the kidney, but they are incompatible. If there is another couple in the same predicament then the two couples can exchange kidneys. For a kidney exchange to happen there has to be a barter market which Roth explained saying “You need someone who needs to kidney you have *and* who has the kidney you need” (Clement 2015). Kidney exchange “can also be done in chains that begin with non-directed donors” and the only donors that can be considered non-directed are deceased donors (Roth 2012, 357). Until “Mike Rees took the initiative in conducting the first non-simultaneous chain” every exchange was done at the exact same time, to avoid putting any value on the kidneys, the new “idea is that a chain initiated by a non- directed donor can be arranged so that each patient-donor pair gets a kidney before they give one” (Roth 2012:357). This does, of course, create the problem of having to trust that each patient will get the kidney they were promised, since no contract can be written to guarantee it.

## Conclusion

In summary, Shapley and Roth got the 2012 Nobel Prize in Economic Sciences based on their work in matching theory. Shapley's algorithm played a huge part in the changes that Roth made to real world markets across America. Today, the algorithm, and the application of it, is used in hospitals across the country to maximize the efficiency of hospital systems and save lives.

## References

Henderson, David R. 2012. "On Marriage, Kidneys and the Economics Nobel." *Wall Street Journal*, October 16, 2012.

Clement, Douglas. 2015. "Alvin Roth. (Cover story)." *Region (10453369)* 29, no. 2: 14-2526. *Academic Search Complete*, EBSCOhost.

Forges, Françoise, Guillaume Haeringer, and Vincent Iehlé. 2013. "Appariement: Des Modèles De Lloyd Shapley à La Conception De Marchés d'Alvin Roth/Matching: From Lloyd Shapley's Models to Alvin Roth's Market Design." *Revue d'Économie Politique*, Sep, 663-696.

Roth, Alvin E. 2012. "The Theory and Practice of Market Design." Nobel Lecture by Alvin Roth. *The Nobel Foundation*. December 8, 2012.  
[https://www.nobelprize.org/nobel\\_prizes/economic-sciences/laureates/2012/roth-lecture.pdf](https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2012/roth-lecture.pdf)

University of California Los Angeles. 1997. "Lloyd Stowell Shapley." *University of California Los Angeles*, September 16, 1997. [www.econ.ucla.edu/shapley/ShapleyBio.1.html](http://www.econ.ucla.edu/shapley/ShapleyBio.1.html).

# Reactions and Comments GKE Has Received

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## Introduction

The Global Kidney Exchange (GKE) program is a system that alleviates financial burdens for those in underdeveloped countries seeking a kidney, and alleviates immunological burdens for those in developed countries that need a kidney. The GKE program is a matching system created by Dr. Michael Rees and is a chain for kidney donation. The program was designed to increase the amount of living kidney transplants in the U.S. by enabling underdeveloped countries to take part in donation exchange. By decreasing the amount of U.S. patients on dialysis, the money saved could go to donors from third-world countries who would receive five years of care in their home countries after the transplant. GKE has received countless praises and criticisms. Some have agreed with the program completely, arguing that it solves all the major problems that donors and recipients face. Others claim that GKE is unethical and open to corruption.

## Overcoming Financial Barriers

An argument in support of GKE is that it provides kidney transplants to those who can't afford it without paired alliance. Many people in underdeveloped countries face the financial burden of not only buying a kidney, but paying for care and medicine after the surgery. With GKE, these costs are eliminated, allowing those who suffer from kidney failure to receive a kidney and up to five years of post-transplant care in their home country. Recipients are given \$50,000 to deal with follow-up health care. Dr. Alvin Roth is in support of the GKE program because he sees it as a win-win, financially, for both the donor and the recipient. Dr. Roth stated, "Because the GKE involves exchange, it benefits both the foreign pairs and the domestic pairs. It's a win for patients and the donors who love them in both countries" (Pullen 2017, n.p.). Although \$50,000 is given for healthcare, the quality of the healthcare may not be adequate depending on where the donor's home country is. "Targeting economically underdeveloped countries to solicit donors is an unacceptable tactic when there may be no reliable/available long-term care of the donor" (Delmonico and Ascher 2017, n.p.). Efforts to pay for a donor's long-term healthcare may not suffice depending on their home country's healthcare system.

## **An End to Dialysis**

While those in underdeveloped countries receive a kidney and follow-up care, the GKE program also offers an end to dialysis for those suffering from kidney failure. Dialysis is a time demanding and expensive solution to kidney failure. By increasing the number of transplants in the U.S., dialysis costs decrease significantly. “The cost saving from transplanting 24 U.S patients compared with the cost of dialysis will exceed \$7.3 million over a 5 year period” (Ekwenna 2017, n.p.). More transplants decreases the demand for dialysis, creates a better quality of life for patients, and decreases medical costs in both underdeveloped and developed countries.

## **Human Trafficking in Underdeveloped Countries**

Many have expressed concerns that donors in underdeveloped countries will be taken advantage of due to their lack of information about kidney donation. The third-world countries that the GKE program has targeted are areas of high human-trafficking; black market organ donation is prevalent in these areas (Delmonico and Ascher 2017, n.p.). Donors may be told that they are taking part in GKE, when they are actually being solicited as an object. Dr. Francis L. Delmonico is a part of the Advisory Organ Donation and Transplantation group of the World Health Organization and he strongly opposes the GKE program. Dr. Delmonico stated, “We are opposing the proposed Global Kidney Exchange plan to solicit living donors from poor countries such as Kenya, Mexico, the Philippines, India and Ethiopia” (Gathura 2017, n.p.). Dr. Delmonico expressed concern due to Kenya’s, and the other countries’, severity of human trafficking. He, along with others, fear that GKE is open to corruption and solicitation of donors.

## **Quality of Life**

Many argue that the GKE program improves the quality of life in those suffering from kidney failure. The program allows more people to have access to transplants and decreases dialysis needs. However, improving the quality of life in patients may not last due to inadequate health care in underdeveloped countries. Dr. Mark L. Mecher argues both in favor and against the GKE program, “I think if you need more people transplanted, the Global Kidney Exchange is a good thing.” Dr. Mecher also argues, “the probability of adverse outcomes climbs, and you don't have the necessary support system in the country” (Pullen 2017, n.p.). While the GKE solves the demand problem of kidney transplants, it also increases the risk in donors’ health from third-world countries in the long-run.

## **Living Donor Benefits**

Over 5,000 people die each year waiting on a list for a kidney donation. When available, living kidney donation is favored to deceased donation. Survival rates of the recipient are increased when receiving living donation. Harvey Mysel, the Founder and President of Living Kidney Donors Network states survival rates as, “On average, approximately 18 years for a kidney from a living donor compared to 13 years for a kidney from a deceased donor.” Waiting for deceased donation can take much longer, resulting in the patient’s health worsening over time. Deceased donors create an emergency surgery rather than a planned one, creating more stress and opportunities for error. Deceased kidneys can also take longer to function in the recipient, known as “Sleepy Kidney” (Mysel 2017, n.p.). Because of the health benefits of living donors, paired kidney donation is encouraged by some doctors. An article from the World Journal of Transplantation states, “The Global Kidney Exchange will increase the living donor kidney transplantation opportunity for sensitized and O group patients by direct benefit of increase in donor pool and benefit from differences in heterogeneity of blood types distribution in the population, antigens and antibodies profile. It will also improve the quality and quantity of transplant” (Kute 2017, n.p.). GKE is accepted by some due to the increase in living donors, resulting in more positive outcomes for the recipient, and an overall better quality of life after transplantation.

## Conclusions

The GKE program has received mixed reactions from well-known doctors and organizations. While the program solves many dilemmas in kidney donation, it also presents ethical concerns. The program lessens the demand of kidney transplants, but also increases the risks an individual donor may face. Some are on board with the GKE program, but organizations like The Transplantation Society and the World Health Organization oppose it. The program has a long way to go in order to appease everyone.

## References

- Delmonico, Francis L., and Nancy L. Ascher. 2017. “Opposition to Irresponsible Global Kidney Exchange.” *American Journal of Transplantation*.  
<http://onlinelibrary.wiley.com/doi/10.1111/ajt.14473/full>.
- Ekwenwa, Obi. 2017. “Mp30-10 Global Kidney Exchange: Striving for Trifecta Outcomes in Management of Kidney Failure.” *The Journal of Urology*.  
<http://www.sciencedirect.com/doi/10.1016/j.juro.2017.05.011>.
- Gathura, Gatonye. 2017. “Experts Warn Against Global Kidney Exchange Scheme.” *Rocket Science*.

<https://rocketscience.co.ke/2017/09/03/experts-warn-against-global-kidney-exchange-scheme/>.

Kute, Vivek B. 2017. "Past, present and future of kidney paired donation transplantation in India." World Journal of Transplantation.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409913/>.

Mysel, Harvey. 2017. "Benefits of Living Donation." Living Kidney Donors Network.

[http://www.lkdn.org/benefits\\_living\\_donation.html](http://www.lkdn.org/benefits_living_donation.html).

Pullen, Lara C. 2017. "Global Kidney Exchange: Overcoming the Barrier of Poverty." American Journal of Transplantation.

<http://onlinelibrary.wiley.com/doi/10.1111/ajt.14469/full>.

Wiseman, A.C., and J.S. Gill. 2017. "Financial Incompatibility and Paired Kidney Exchange: Walking a Tightrope or Blazing a Trail?" American Journal of Transplantation.

<http://onlinelibrary.wiley.com/doi/10.1111/ajt.14183/full>.

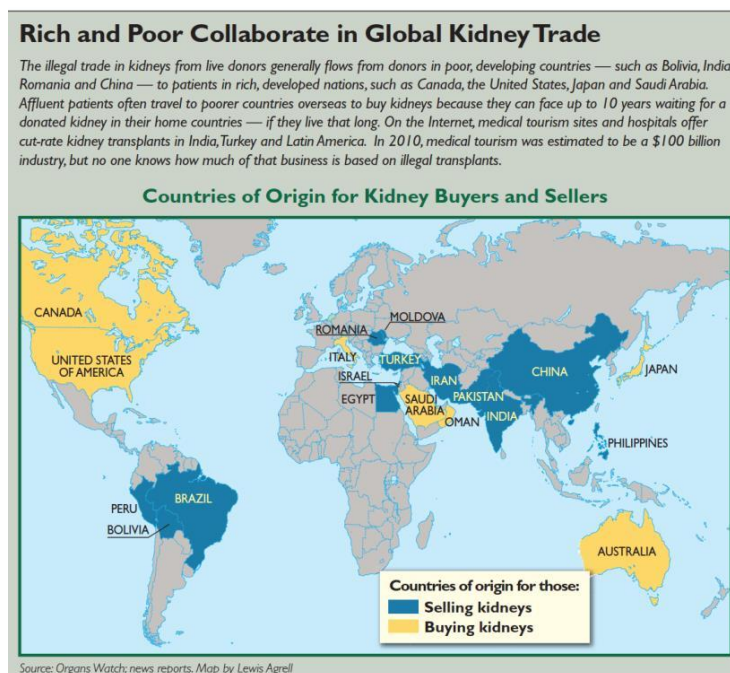
# Financial Aspects of Illicit Organ Trade Globally

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## Globalization of Organ Trafficking

Despite its questionable legality, organ trade is essentially a growing business. With all businesses, finances play a critical role for the development and growth, and the organ trade, regardless of its illicitness holds no exceptions. Though there are scarce amounts of records available detailing the exact profits, due to the black market's furtiveness, there is enough evidence available to provide an understanding that the illicit organ trade is a multimillion dollar enterprise. Through the examination of legislation in countries renowned for illicit organ trade, the scattered reports garnered from officials, and an extensive investigation of how socioeconomic status plays into it all—an understanding of the financial components of global organ trade can be reached.

Organ trade is a global disease, spreading rapidly across developing across poverty-stricken countries and taking in victims through strange means. Countries such as India, China, the Philippines, and even the US are both casualties and active participants of global organ trade. The trade of organs comes in many forms; from human trafficking and rogue doctors to methods as bizarre as organ tourism. Overall, the globalization of illicit organ trade consists of multiple financial factors that have woven a complex economic infrastructure dependent on the capitalization of the impoverished and the desperate worldwide.



**Figure 1.** It is crucial to understand that the complexity of the finances of illicit organ trade acts

as a reflection of the intricacy of the system itself.

## **Financial Components on a Global Scale**

Multiple financial components play an integral part in global organ trade. An organ's price varies greatly depending on the country to even the type of organ being brokered. Kidneys are the single most sought after organ on any market, and the average buyer can spend approximately \$150,000, though prices have been seen to be inflated to over \$200,000. The typical, consenting donor will normally be paid no more than \$5,000 regardless of the organs harvested. Generally, the “middle man”, or the broker, is the one profiting the most.

In 2010, WHO estimated 11,000 organs were being harvested annually via the black market. The illicit organ market operates on the rich and the poor, summing up to an industry worth almost 100 billion within the medical tourism branch alone, but the legality of the data remains questionable. A typical donor's income will approximate to \$480 annually if residing in a developing country, and a typical buyer's annual income nearing \$53k a year, outlining a clear disparity between the two parties. The reality is, if patients are unable to obtain a kidney, the only other medical route would be dialysis—a procedure that is extremely costly and tedious. Paying \$90k for a kidney in the US would break even the cost spent on months of dialysis.

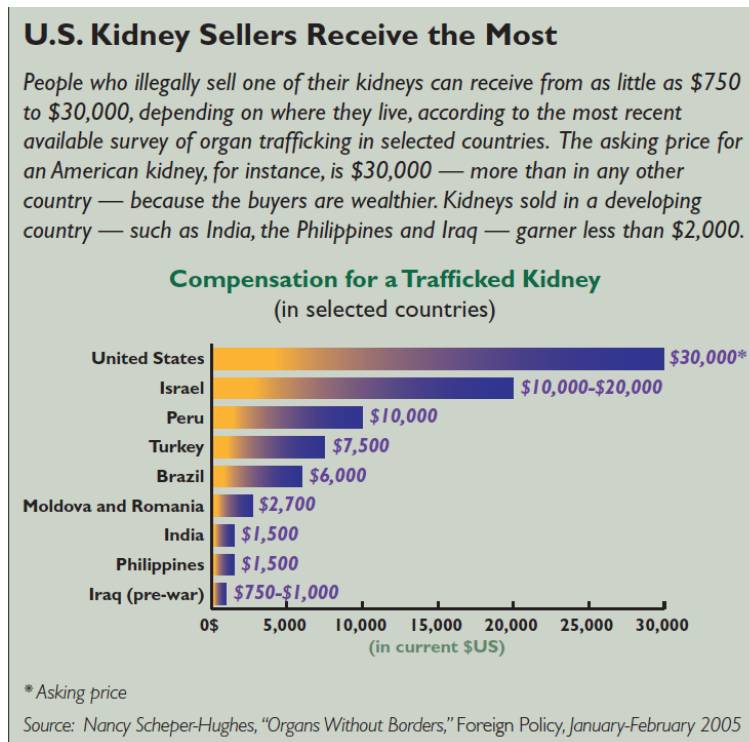
Organ tourism is another aspect of organ trade coming to life, an offspring of an industry already well equipped with financial complexities. Reports show that medical tourism has grown drastically in the twenty first century, with India's Council on Medical Research reporting up to \$2.3 billion dollars in revenue as of 2012. Undoubtedly, there are missing figures and it is nearly impossible to reach an entirely accurate summation of how much organs cost worldwide.

## **The Kidneys' Role**

Of all the organs consistently bought and sold through illicit means, kidneys appear at the highest rate. The foundation of the Global Kidney Exchange Project is built upon the premise of reducing illicit organ trade within the US. The kidney is by far the most expensive organ to obtain, regardless of legality, averaging at \$262,00 in the United States. The only organ coming close to the tremendous cost of the kidney, would be the liver, marketing at \$157,000. It is evident that the kidney costs exponentially more compared to other organs, the price staying consistently high worldwide. In Peru, another notorious hub for organ trade, a kidney operation costs up to \$100,000-\$145,000. But the buyer and seller spend and receive a disproportionate amount of money for the kidney. Sellers can receive as little as \$750 to up to \$30k for their kidney, with the



price fluctuating depending on the buyer and sellers' country of origin, while frantic buyers can spend up to \$500k.



**Figure 2.** The figure depicts the varying prices of the kidney depending on location. The graph expresses the complicated and ever changing financial factors of illicit organ trade, specifically regarding the kidney—the most expensive organ on the market.

Contrary to popular belief, illegal organ trade is not a business that strictly involve unauthorized individuals and organizations operating to illicit organs. Licensed healthcare professionals are often heavily involved in the dealing process. Doctors play for both sides of the team though, either acting as allies for illegal brokers or being used unwillingly to complete the organ transactions. Multiple sources depict doctors harvesting organs, especially kidneys, against patients own will. Human trafficking is largely a reason behind the coercive nature of organ harvesting, usually forcibly extracting organs from impoverished, kidnapped individuals for their wealthy patrons. Known as laborers, these individuals were lured into being trafficked with the promise of economic stability only to be paid, at most, \$2,500 for an organ that would sell for up to \$50,000.

Many countries also find healthcare professionals harvesting organs against their own patients

will; for example, China's prison system is a notorious source of illegal organ harvesting, by global standards that is. Giving up organs willingly has also become an infamous type of trade worldwide. In the US, despite the selling of organs being a federal offense, many individuals are still willing to sell their organs to escape the clutches of poverty. Selling organs as a method of economic relief comes hand in hand with those seeking to purchase organs illegally out of desperation. In China, organ tourism continues to hold the country captive. A kidney broker in China advertises the selling of organs openly, announcing "Donate a kidney, buy a new iPad!" with a noted compensation of up to \$4,000; and this story is not uncommon. In Indonesia, kidney prices can retail up to as little as \$5,860 for an individual desperate enough to escape poverty, even if temporarily. By examining the collective costs of kidneys globally, quick conclusions can be drawn that the prices fall into irrationally expensive categories.

## Conclusion

Despite the scarcity of official reports regarding the finances of global organ trade, there is no doubt in mind that the illicit market is a multi-millionaire dollar industry. The complexity of the industry and its questionable legality leave many gaps within the finances. Reports are only able to estimate what organs cost when the selling and purchasing of the organs fall out of the framework of the law. The finances involved in illicit organ trade available to the public remain sparse and insufficient—something unfathomable to the common eye. The market still remains shrouded in complications that are difficult to decipher, particularly when it comes to legality and economics. Overall, there is no conclusive report concerning illicit organ trade globally, but it can be deduced that the global organ trade market is an exorbitant industry.

## References

- Budiani-Saberi, D. A. and Delmonico, F. L. (2008), Organ Trafficking and Transplant Tourism: A Commentary on the Global Realities. *American Journal of Transplantation*, 8: 925–929. doi:10.1111/j.1600-6143.2008.02200.x
- Cartwright, Emily. 2002. "Your Money or Your Life: The Kidney Trade." CBS News. CBS Interactive.

- Chan, Casey. 2012. "Here's How Much Body Parts Cost on the Black Market." Gizmodo. gizmodo.com. April 22. <https://gizmodo.com/5904129/heres-how-much-body-parts-cost-on-the-black-market>.
- Griffiths, James. 2016. "Report: China is still harvesting organs from prisoners." CNN. Cable News Network. June 24. <http://www.cnn.com/2016/06/23/asia/china-organ-harvesting/index.html>.
- NA. 2011. Organ Trafficking: Can the Smuggling of Human Organs be Stopped. Volume 5, Number 14. First Name Last of editor if necessary. Pages 341-366. NA: CQ Press
- Nelson, Tara. 2008. Illegal organ trade. *Global News Transcripts*, Feb 03, 2008.<http://du.idm.oclc.org/login?url=https://search-proquest.com/du.idm.oclc.org/docview/190170182?accountid=14608> (accessed November).
- Roger Lee Mendoza; Price deflation and the underground organ economy in the Philippines, *Journal of Public Health*, Volume 33, Issue 1, 1 March 2011, Pages 101–107, <https://doi->
- Wilkinson, Stephen, "The Sale of Human Organs", *The Stanford Encyclopedia of Philosophy* (Winter2016 Edition), Edward N. Zalta (ed.),<<https://plato.stanford.edu/archives/win2016/entries/organs-sale/>>.
- Xinhua. 2016. "Chinese organ donation on the rise." Xinhua Net. April 1. [http://news.xinhuanet.com/english/2016-04/01/c\\_1352443312.htm](http://news.xinhuanet.com/english/2016-04/01/c_1352443312.htm)

# Declaration of the Vatican on Organ Trafficking and Transplant

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## Widespread Organ Trafficking

The scarcity of organs in the world, especially kidneys, has created a major crisis internationally. The lack of kidneys and the expenses that come with transplants, has led many desperate people to participate in the black market. The numbers are astounding- “In 2014, 4,761 patients died while waiting for a kidney transplant. Another, 3,668 people became too sick to receive a kidney transplant.” (National Kidney Foundation, 2017). The Declaration of Istanbul first addressed the need for improvements in organ transplantation and the need to eradicate organ trafficking. The Declaration of Istanbul is indispensable to the foundation of the Vatican’s declaration. Vatican builds upon the Declaration of Istanbul’s outline of what organ trafficking is, by recognizing its validity and concern for the impoverished that are affected by organ tourism. The Vatican responded to the Declaration of Istanbul by providing specific approaches to organ trafficking.

## The Vatican’s Response to Organ Trafficking

The Vatican issued a statement to address the issue with organ trafficking overall, “Trafficking in human beings for the purpose of organ removal and organ trafficking are contrary to the United Nations General Assembly 2030 Agenda for Sustainable Development as an issue of human rights and social justice because the poor are exploited for their organs and yet not able to receive a transplant if they suffer organ failure.”

## Recognizing Organ Trafficking as a Prevalent Issue

It is important that an issue is recognized as a significant impact to global human rights before it can be addressed. “One, that all nations and all cultures recognize human trafficking for the purpose of organ removal and organ trafficking, which include the use of organs from executed prisoners and payments to donors or the next of kin of deceased donors, as crimes that should be

condemned worldwide and legally prosecuted at the national and international level. And two, that religious leaders encourage ethical organ donation and condemn human trafficking for the purpose of organ removal and organ trafficking”. Without the support of religious leaders and significant figureheads overall, the strive to end the black market selling of organs would eventually fall. Many people especially venerate these religious figures, so their contribution to ending organ trafficking radiates immensely for the typical person and thus, creates a movement that connects different ends of the social spectrum.

## **Working to End Organ Trafficking**

Once the issue of black market organ trafficking has been recognized by state nations as a crime to humanity and a violation of human rights, the next step in improving this crisis is outlined in this statement by the Vatican:

“3. That nations provide the resources to achieve self-sufficiency in organ donation at a national level—with regional cooperation as appropriate—by reducing the need for transplants through preventive measures and improving access to national transplant programs in an ethical and regulated manner.

4. That governments establish a legal framework that provides an explicit basis for the prevention and prosecution of transplant related crimes, and protects the victims, regardless of the location where the crimes may have been committed, for example by becoming a Party to the Council of Europe Convention against Organ Trafficking.

5. That healthcare professionals perform an ethical and medical review of donors and recipients that takes account of their short- and long-term outcomes.

6. That governments establish registries of all organ procurement and transplants performed within their jurisdiction as well as all transplants involving their citizens and residents performed in another jurisdiction, and share appropriate data with international databanks.

7. That governments develop a legal framework for healthcare and other professionals to communicate information about suspected cases of transplant-related crimes, while respecting their professional obligations to patients.

8. That responsible authorities, with the support of the justice system, investigate transplants that are suspected of involving a crime committed within their jurisdiction or committed by their citizens or residents in another jurisdiction.

9. That responsible authorities, insurance providers, and charities not cover the costs of transplant procedures that involve human trafficking for the purpose of organ removal or organ trafficking.

10. That healthcare professional organizations involved in transplantation promote among their members awareness of, and compliance with, legal instruments and international guidelines against organ trafficking and human trafficking for the purpose of organ removal.

11. That the World Health Organization, the Council of Europe, United Nations agencies, including the United Nations Office on Drugs and Crime, and other international bodies cooperate in enabling a comprehensive collection of information on transplant-related crimes, to yield a clearer understanding of their nature and scope and of the organization of the criminal networks involved”. There is a definite need for an organ transplant system that does not exploit the impoverished and lead to dangerous medical practices through the black market.”

It is crucial to see the complete list of the Vatican’s declaration to demonstrate how large a network of contributors must be to make a difference in this crisis of organ trafficking. The contribution

for an improved future in organ transplantation goes beyond government frameworks, but must also involve healthcare workers and the everyday citizen that contributes to healthcare legislation.

## China's Role in the Declaration

One of the biggest controversies of the summit in the Vatican was China's presence despite its strong connection to organ trafficking. As mentioned in an article from February of 2017 in AsiaNews.It, "Huang tried to reassure the international medical community that China is "mending its ways " after harvesting organs from death row prisoners without even their consent, a programme Huang said ended in 2015". Huang's colleague, Dr. Haibo Wang had to explain that though there is a crisis in China regarding black market organs and the exploitation of prisoners on death row by the harvesting of their organs, China's voice at the summit echoes a nation-state that desperately wants and needs to change its enforcement of safe organ transplantations to protect human rights. Despite China's intentions in eradicating the use of the black market for organs, many disagreed with representatives of China being present there. For example, Doctors Against Forced Organ Harvesting were especially distressed with China's attendance that they stated China was compromising the conference entirely and even lead to a lengthy case report to justify the group: International Coalition to End Organ Pillaging in China.



**Figure 1.** The Vatican (Carlo Marron 2017).

## Conclusions

With any humanitarian crisis, the issue must first be defined. The Declaration of Istanbul accurately defines what organ trafficking means and how it can be addressed. In response, the Vatican describes the numerous responsibilities of not only what governments should be doing to eradicate organ trafficking, but how society as a whole can contribute. The biggest offender overall of black market organ trafficking, China, was unfortunately not met with welcoming spirits in the conference despite its obvious want for an improved organ transplantation system. In the end, the Declaration of the Vatican is pushing for an international collaboration to end the act of organ trafficking (and that includes China).

## References

Martin, Dominique. "VATICAN JUDGES' SUMMIT ON HUMAN TRAFFICKING AND ORGANIZED CRIME. FINAL DECLARATION." Vatican Judges' Summit on Human Trafficking and Organized Crime. Final Declaration. 2014. <http://www.declarationofistanbul.org/resources/policy-documents/671-vatican-judges%E2%80%99-summit-on-human-trafficking-and-organized-crime-final-declaration>.

"Vatican organ trafficking summit issues statement." Vatican Radio. September 02, 2017. [http://en.radiovaticana.va/news/2017/02/09/vatican\\_organ\\_trafficking\\_summit\\_issues\\_statement/1291387](http://en.radiovaticana.va/news/2017/02/09/vatican_organ_trafficking_summit_issues_statement/1291387).

AsiaNews.it. "VATICAN – CHINA As Vatican defends China over organ trafficking, Huang Jiefu says he plays no diplomatic role." VATICAN – CHINA. February 08, 2017. <http://www.asianews.it/news-en/As-Vatican-defends-China-over-organ-trafficking,-Huang-Jiefu-says-he-plays-no-diplomatic-role-39881.html>.

"Organ Donation and Transplantation Statistics." The National Kidney Foundation. January 11, 2016. <https://www.kidney.org/news/newsroom/factsheets/Organ-Donation-and-Transplantation-Stats>.





# Kidney Transplants in Mexico

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## Introduction

As of 2017 there are 13,254 people waiting for a kidney transplant in Mexico (Centro Nacional Trasplantes, 2017). This number has been increasing for the past few years and it's important to take into account since Mexico is a third world country. There is an organization called "Ley General de Salud" that establishes the different health services and how they manage their transplant work. Moreover, lack of funding in Mexico's hospitals has led to severe consequences like the shortage of financial resources, health professionals, and equipment. As well as the lack of universal access to renal therapies. However, an idea that was discussed was the solution of using pre-diabetic donors because it's difficult to find donors who are healthy and willing to donate. Moreover, health care professional's perspectives are taken into consideration on how organ transplantation looks like in Mexico. These thoughts relate to whether living-related donation are better than cadaveric donations. Thus, kidney transplants are affected by these problems which makes it harder for people to be able to undergo a kidney transplant.

Under the "Ley General de Salud" of Mexico, every person is in charge of their own body which means they are able to donate all their organs or some of their organs according to the law on transplants. However, underage children are not able to undergo transplants unless it has to deal with bone marrow, then they would also need consent from the parent or guardian. In addition, those who are mentally disabled are not able to donate, even after they pass away their organs cannot be used. Women who are pregnant are also not able to donate unless they are in a situation where their life or their child's life is at risk (Ley General de Salud, 2005). Those who are able to donate have to be compatible to the recipient, have to be in the correct state to give an organ that will not harm the recipient or donor, and must be given information on the risks and consequences of what can happen during the process (Ley General de Salud, 2005). If for some reason the donor does not want to donate an organ, they can easily decline this act without any consequences (Ley General de Salud, 2005). Furthermore, there is also a "Reglamento Ley" and an organization called CENATRA that implies more of these rules and how organ transplantation works in Mexico.

## The Effects of the Lack of Money in Health Care Institutions

Studies have also proven that there are problems in Mexico that result from the lack of funds. Health care professionals do not get paid as much money in Mexico, which limits the number of doctors, surgeons, nurses, and others that help carry out these procedures. In the

interviews that were conducted, most of the people said, “transplant surgery is extremely stressful and tiring. Anyone who does not have at least two or three transplant groups will be unable to maintain a healthy program. Eventually you wear out. The time when we were on continuous call, we ended up very exhausted and we were saying, ‘My God, I thought (transplants) were a blessing, but in the end it was hell...’” (Hernández-Ibarra et al., 2017). In order for organ transplants to be able to follow through, there needs to be a large group of health care professionals ready to go into surgery. This lack of funds has also caused a shortage in financial resources and equipment. There isn’t enough money to buy beds for patients or the tools for a transplant to be able to work. There was a story told where this lack of money caused an unhealthy experience for a patient. A healthcare professional said, “it’s very difficult to find a (hospital) bed ... Our kidney donor came in on Monday at nine-thirty, and didn’t get a bed until six in the morning the next day. In other words, she had to sleep sitting up. So, the infrastructure shortage is too much for us, there is nowhere to put the patients.” (Hernández-Ibarra et al., 2017). Since Mexico is an underdeveloped country, money is a huge barrier for people to be able to accomplish certain things. In this occasion, money has led to harsh consequences for the hospital and the care that it gives to its community.

## **Difficulty Obtaining Renal Therapy**

This same study has also shown that these different states in Mexico relate to the lack of universal access to renal therapies (Hernández-Ibarra et al., 2017). In underdeveloped countries, it is hard to gain access to health care because of the lack of money. For example, there was a study shown on Mexico’s health problems relating to renal therapy and dialysis. The study said, “Treatment for end-stage renal disease (377 patients per million population) is determined by the individual's access to resources such as private medical care (approximately 3%) and public sources” (Manzano and Campos, 2006). This provides evidence that not having access to resources is a problem for people to be able to make their health a first priority. If people aren’t aware of treatment for renal therapy or the medical care that is provided, it limits people to be able to get medical care. The study has also proven that the reason for this is because a large portion of the population lives in poverty though it has the twelfth largest economy in the world (Manzano and Campos, 2006). This cause of poverty leads to access being rough for citizens in Mexico to be able to obtain resources.

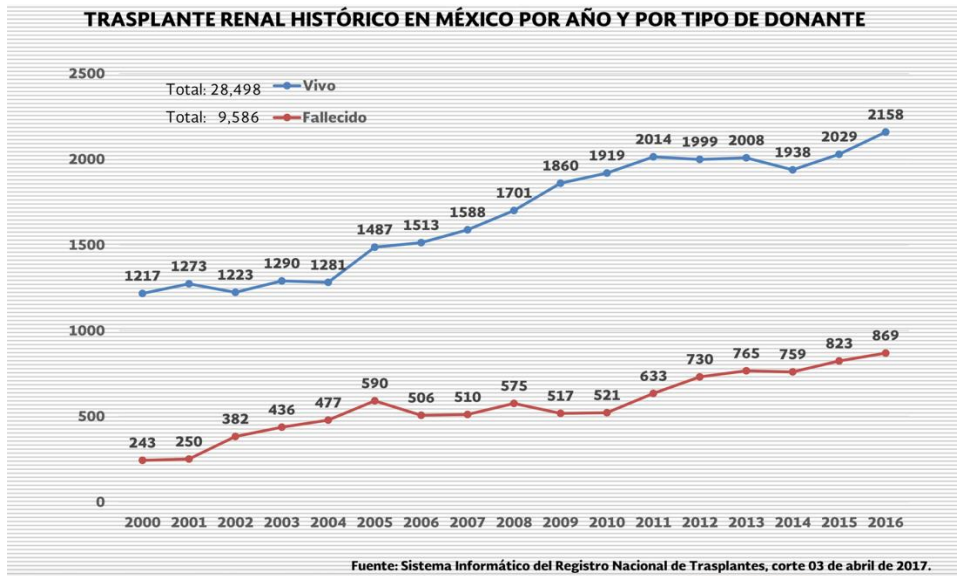
## **Diabetic Kidney Donors**

“The population of Mexico is estimated to be 123,278,559. Type 2 diabetes mellitus (T2DM) affects 6.4 million people, causing 40% of the cases of end-stage renal disease (ESRD)” (Hermosillo, 2014). According to Hermosillo, organ exchanges are limited due to cultural issues. On the other hand, the lack of control and guidance on organ donation leads to health care professionals selecting diabetic patients to be donors of kidneys (Hermosillo 4). Although Mexico does not exclude assistance from prediabetes organ donors, hospitals don’t have any other choice than to select them as donors because there

aren't enough donor candidates. Hermosillo and his colleagues state, "however, when using a kidney potentially damaged by prediabetes, neither the donor's nor the recipient's long-term health is usually considered" (Hermosillo 2014). Thus, in Mexico, health care professionals try to use prediabetes donors for those who are waiting for a kidney on the transplant list. This is done to decrease the number of people on the transplant waiting list, however, this solution is not right. Hermosillo mentions the right to health in this case because an individual's life should be considered not the fact that it gives the hospital less people to worry about for kidney organ transplants. Those who have diabetes should not be considered to be donors because their as ill as any other person.

## **Health Care Professionals Opinions on Organ Transplants**

There was a study done in seven Mexican states on health care professionals to find out more about organ transplantations, especially what they think about the kidney transplants. These states were Aguascalientes, Guanajuato, Jalisco, Nayarit, San Luis Potosí, Sonora and Zacatecas. After interviewing them, they noticed that most of them agreed on living related donation being more beneficial than cadaveric donation. Most of the health care professionals stated, "The advantages are obvious and have been reported in many studies. Recipients of an organ from a living related donor live 7 to 15 years longer and have fewer complications than those who receive a cadaveric organ. There are even advantages for the donor, because they have more contact with doctors and more frequent check-ups" (Hernández-Ibarra et al., 2016). However, this not only is advantageous for the recipients but also the living donors because they obtain the care that they need in order for them to not contract a disease or infection. Thus, there are less likely for complications or problems to occur and there are higher survival rates. This shows how health care professionals agree on helping their community in a way that will be beneficial for both sides of the spectrum.



**Figure 1.** “The History of Renal Transplants in Mexico by Year and Type of Donor” This figure shows the number of transplants conducted in Mexico from the years of 2000-2016. The red line signifies the cadaveric donation while the blue line signifies the living donation. (Centro Nacional de Trasplantes, 2017).

## Conclusion

Considering this, we know how the organ transplants process works in Mexico and how the lack of money and resources has led to consequences for the health care professionals and the community. On the other hand, because Mexico is considered a third-world country, it is difficult to obtain medical attention and there are less donors available to those in need. In addition, different opinions from health care professionals have been read to give more insight into kidney transplants in Mexico and to inform what needs to change in organ transplantations to better serve those in need. Organ transplantation gives people the opportunity to live a healthy life, but without this resource available to patients in need, it is difficult for them to make their health a priority.

## References

- Centro Nacional de Trasplantes. 2017. “Estado Actual de Receptores, Donación y Trasplantes en Mexico 1<sup>ER</sup> Trimestre 2017.” Accessed Nov 05, 2017. [http://cenatra.salud.gob.mx/descargas/contenido/trasplante/informe\\_anual\\_2014.pdf](http://cenatra.salud.gob.mx/descargas/contenido/trasplante/informe_anual_2014.pdf)
- Cueto Manzano, Alfonso M., and Enrique Rojas-Campos. 2007. “Status of Renal Replacement Therapy and Peritoneal Dialysis in Mexico”. 27(2):142-148. Accessed Nov 09, 2017. <http://www.pdiconnect.com/content/27/2/142.short>
- Ferreira-Hermosillo, Aldo, Edith Valdez-Martínez, and Miguel Bedolla. 2014. “Ethical Issues Relating to Renal Transplantation from Prediabetic Living Donor.” *BMC Medical Ethics* 15:45. Accessed Nov 10. <https://doi.org/10.1186/1472-6939-15-45>
- Hernández-Ibarra, Luis Eduardo, Francisco J. Mercado-Martínez, and Anabel Martínez-Castañeda. 2017. “Organ donation and transplantation in Mexico. A transplantation health professionals’ perspective.” *Salud Pública de México* 59(1):53-58. Accessed Nov 05, 2017. <http://ref.scielo.org/99nx87>
- Secretaría de Salud Mexico. 2005. “Ley General de Salud.” Accessed Nov 10, 2017. [http://www.salud.gob.mx/unidades/cdi/legis/lgs/LEY\\_GENERAL\\_DE\\_SALUD.pdf](http://www.salud.gob.mx/unidades/cdi/legis/lgs/LEY_GENERAL_DE_SALUD.pdf)

# The Ethics of Live Organ Donation and Trade

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## Introduction

All over the world, there is a growing scarcity of organs which has led patients, doctors, friends, and family to seek alternative options for obtaining an organ. Sadly, many people die while on the waiting list for a transplant. Since we have not yet succeeded in creating organs from stem cells for the general population around the world, we have resorted to live kidney donation. This means we can legally donate an organ, under certain circumstances, to someone else in need. With the increasing need for organs and the lack of technical advancement in stem cell organs, doctors have turned to live donation and trade, which presents a number of ethical barriers. For example; how do we ensure that the donor is not being exploited or that they will be taken care of after the procedure?

## The Ethics of Live Donation

As a donor, one should not be subject to economic nor medical exploitation. The use of live donation creates many ethical concerns, one being the fact there is a live donor who should have the autonomy to make an educated decision. In theory, when making this decision one must choose whether they are maintaining the overall good, or if their action is detrimental to the overall good of both the donor and the recipient. In order to ensure that this happens, the donor must have the right to receive thorough information about the transplant. As stated in *Organ Donation: Opportunities for Action*, “the transplantation team and, ideally, an independent donor advocate team must make a judgment about the acceptability of the risk-benefit ratio for particular potential donors, who must also make their own assessment” (The National Academies of sciences engineering medicine 2006). Therefore, to make an ethically informed decision, the donor must have the right to information which would ideally be given by a special advocacy team for the donor. This argument is based on the fact that the benefit must outweigh the risk in the doctor's eyes in order for live donation to occur. This leads one to ask themselves what type of donors should be allowed in this process in order to ensure the motivation for donation? Ordinarily, it is the doctors and medical staff that should make sure each party is being fairly represented in the process for both non-directed and directed donation. In *The Ethics of Organ Donation by a Living Donor*, it states that “physicians are obligated to prevent people from

making potentially life-threatening sacrifices unless the chance of success is proportionately large” (Dr. Truog). The basis of the philosophy stems from the point that the benefits will outweigh the risks, and in this case, physicians are the ones responsible for educating the donors and patients. The two types of donors are non-directed donors, which are people that anonymously donate their organs, or directed donors, which are friends and family members that donate their organs to the patient. In the same article it stated that “transplantation teams have an obligation to assess potential donors in all these dimensions and prohibit donations that arouse serious concern.” (Dr. Truog)(Abecassis M, Adams M, Adams P, et al. Consensus statement on the live organ donor 2005). Therefore, regardless of the type of donor, we must make sure that the donors are actively a part of the transplantation process, meaning that they need to be presented with all of the information so that they can make an educated decision that is best for them. Universally, it seems like the biggest ethical objection is that the donors are not educated enough and that donors need to be involved in the transplantation process so that they can make an informed decision while retaining their autonomy.

## **Ethically Deciphering Organ Shortage and Donation**

The shortage of organs causes many people to die while on waiting lists every day, and we have an ethical obligation to do everything we can to provide them organs. In order to ethically supply organs to people, we must ensure that the process is just and fair to everyone. Vardit Ravitsky, Director of Ethics and Health at the Center for Research on Ethics, claims that “justice requires some rule or policy that ensures that the supply of donated organs is used wisely and that allocation is consistent with what donors and their families would wish” (Vardit Ravitsky 2009). Therefore, based on this definition of justice, policy makers have an obligation to protect the autonomy of the donor in all cases in order to make organ donation ethically appropriate and just. She then describes that “fairness demands that like cases be treated alike and that the allocation system be transparent so that all who wait know why some are selected and some are not” (Vardit Ravitsky, 2009). This allows the patients to be educated as well as the donor. These two parties must both be informed for the transplant to be ethically justified. Requiring the same care for similar cases also protects the patient from financial bias, meaning that a patient’s treatment will not be contingent upon their economic stature. In short “Increasing the supply of organs is, in the short run, the strongest ethical obligation we have toward those dying for want of a transplant. But it is very important not to violate donor rights and interests in pursuit of these organs” (Vardit Ravitsky 2009). In the meantime, we have deceased donation and protected donors that ethically support the idea of justice and fairness to supply recipients with organs.

## **Conclusions**

The lack of technical advancements in stem cells and the increasing need for organs worldwide, has forced doctors to resort to live donation, which births ethical dilemmas. Some of

the problems created from this are that the medical professionals are risking the life of a healthy donor by not thoroughly educating them or allowing them to make an informed choice regarding their donation. The doctors fail to provide the donor with an advocacy team, who would provide appropriate medical treatment and information to the donor. Patients also deserve their right to fairness by having like cases be treated the same and proper education about their placement on the waiting list. Both policy makers and doctors must follow the guidelines of justice and fairness in order for live donation to be ethical.

## References

Caplan, Arthur L. "Organ Transplantation: The Challenge of Scarcity." In *The Penn Center Guide to Bioethics*, by Vardit Ravitsky. Springer Publishing Company, 2009.

Truog, Robert D. 2005. "The Ethics of Organ Donation by Living Donors." *New England Journal of Medicine* 353 (5): 444–46.

Howard, Richard J., and Danielle L. Cornell. 2016. "Ethical Issues in Organ Procurement and Transplantation." *Bioethics - Medical, Ethical and Legal Perspectives*.

"Read "Organ Donation: Opportunities for Action" at NAP.Edu." 2017. *National Academies Press: OpenBook*.