The Ethics of the Global Kidney Exchange Program

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Introduction

Every year millions of people die of kidney failure—many while on a waiting list for a kidney (1). In high-income countries (HICs) the main obstacle to kidney replacement is shortage of organs for transplants from either living or dead donors. In low- and medium-income countries (LMICs) the main barrier is inability to pay for the procedure.

In the US, the annualized cost of hemodialysis is approximately three times the annualized cost of a kidney transplant (2). A kidney transplant is the most cost-effective treatment available for patients who would otherwise require long-term hemodialysis. Patients who receive a transplant also experience an increased quality-of-life (3).

Rees and colleagues have proposed a Global Kidney Exchange (GKE) program that could make more transplantations possible in both HICs and LMICs (4). GKE matches donor-recipient pairs across high, medium and low income countries. The starting point is a HIC recipient who is unable to find a matching HIC donor, but does have a donor (for example, a spouse) with a different blood type who is willing to donate to someone else, provided that a suitable donor is willing to donate to the HIC recipient. The LMIC pair may have matching blood types, but are unable to afford the medical expenses. When they join the program, GKE pays for the surgery and funds a $50,000 escrow account for follow-up care. The sum may, in future, be increased, if that proves necessary to provide "support for the recipient's immunosuppression for the life of the graft and the long-term follow-up of the donor."(5)

GKE doesn't cover lost wages. This was similar to other organ exchange programs in the US until on July 10, 2019, President Trump signed an executive order that lost wages and other costs will be provided for living U.S. kidney donors (6). At the time of writing, it is too soon to know whether GKE will be able to provide such benefits for those involved in the exchange.

The LMIC donor's donation of a kidney will make possible a chain of donations, at the end of which recipients from both HICs and LMICs receive a kidney, and donors from both HICs and LMICs give a kidney. HICs can afford to pay the medical expenses of the LMIC pairs because they save money on hemodialysis, and in LMICs the follow-up medical care is comparatively cheap. For the first trial of this program, all the medical expenses of the LMIC pair were paid by the Alliance

for Paired Donation. If the GKE program were to be adopted by the US health system, the health insurance provider of the patient in the HIC would pay for both pairs' transplantations and immunosuppression treatments (4).

Concerns have been expressed that GKE might undermine the development of transplant resources in LMICs (7). On the contrary, Rees and colleagues say GKE assists the development of LMIC transplantation structures by paying for local evaluation of the patient before transplantation and local care, including immunosuppression (5). Should there be more than one suitable donor/ recipient pair available from a LMIC, the selection would be made in accordance with practices of the medical institution in that country and on the basis of equal consideration for the interests of donors and recipients whether they are in HICs or LMICs. Allocating risk and benefit amongst donors and recipients is a complex exercise in distributive justice. It will require allocating benefits and burdens fairly across and within HIC and LMIC countries.

Given the close and continuous collaboration between the LMIC and HIC healthcare facilities for the GKE program, patients who return to the LMIC for post-op care receive healthcare assistance that is at least as good as, and possibly significantly better than, they would have received, had they had been able to afford a transplant in their own country.

Nevertheless, given the differences in health care facilities in HICs and LMICs, Rees et al. acknowledge that "It is likely that developing-world patients who undergo kidney transplantation in the United States, but who return home for the remainder of their first postoperative year, will not achieve the same 1-year patient and graft survival rates that are achieved for patients in the United States." (4) This likely situation is, of course, the result of differences in health care resources between LMICs and HICs. We hope that progress in LMICs will, in time, enable those countries to provide health care at the same high standard as HICs. We do not, however, regard the existing differences as grounds for rejecting GKE. Given the inability of GKE transplant recipients from LMICs to afford a transplant, the program clearly leaves them much better off than they would otherwise have been. Rejecting it would harm them (and recipients in HICs) and benefit no one. Perhaps for this reason, the American Society of Transplant Surgeons (ASTS) has expressed its support for the GKE program (9).

Ethical Objections

Despite this, GKE has met with opposition on ethical grounds. Before examining the objections, let us remind ourselves what is at stake. Many people die or suffer significantly while waiting for a transplant, even in HICs. This is especially likely to be the case in LMICs, when patients who cannot obtain a transplant are also unlikely to have access to dialysis, so that being prevented from obtaining a kidney is probably a death sentence. Ethical objections to a program that will save people's lives and reduce suffering have to meet a very high bar (10). We should not accept an objection rejecting the program unless we are confident not only that it makes a valid point, but that the point it makes is so significant that it outweighs the importance of saving lives.

1) *Organ-selling:* The Council of Europe's committee on Organ Transplantation said: "In exchange for making a kidney available, they [highly vulnerable patients] receive substantial payment in kind, in the form of the cost of a procedure and medical therapy. This would seem consistent with the definition of trafficking in human organs." (8) A similar view has been expressed by a group known as The Declaration of Istanbul Custodian Group. The Declaration of Istanbul is a widely-accepted statement of opposition to Organ Trafficking and Transplant Tourism, accepted at a 2008 international summit meeting. The Custodian Group, a self-appointed smaller group has issued a statement acknowledging that GKE "may initially seem appealing," but adding that "since it promises to help people in LMICs gain access to health care, it effectively conditions access to care on organ selling." (11)

This argument is invalid. It is true that with GKE access to transplantation is conditional on having an associated donor, but that is true of all kidney exchange programs, domestic or global, and no one has suggested that all such exchanges amount to selling. They are not selling because no money is paid for the kidney. That is also true of GKE. The only money involved is restricted to operating costs, immunosuppression and other post-operative care to recipients. Whereas the outcome of organ trafficking is that recipients from HICs receive the kidney they need, and donors from LMICs receive money, the outcome of GKE is that recipients from HICs *and* LMICs receive the kidney they need, as well as long-term medical assistance following the surgery. The motivation of all donors involved in the GKE, whether in HICs or LMICs, is not financial gain, but altruistic: to help a loved one to survive kidney failure.

These differences show that GKE cannot be equated, ethically, with organ selling.

2) *Exploitation*. *The Statement of The Declaration of Istanbul Custodian Group* claims: "Exploitation occurs when someone takes advantage of a vulnerability in another person for their own benefit, creating a disparity in the benefits gained by the two parties." (11) But GKE involves no such disparity. The program offers the same major benefit to *all* its selected recipients. Arguably, the benefits are even greater for patients from LMICs, who not only get the organ they otherwise would not be able to receive, and without which they would likely die (because they are unlikely to have access to dialysis) but also get the additional benefit of free follow-up care.

Exploitation may also be said to occur when A makes B an offer that is clearly unfair, knowing that B will still accept the offer because of some background injustice that weakens her bargaining position. Suppose I know that Alysha, who grows crops on her family's small plot of land in Malawi, cannot afford antibiotics that will save her child's life. As a citizen of an affluent country, I have no problem in obtaining the antibiotics, so I offer to give them to her, on condition that she gives me one of her kidneys. Arguably, even without any disparity in benefits, there is exploitation here because I have taken unfair advantage of the unjust situation in which I can buy antibiotics, but Alysha cannot. But the GKE, far from unfairly exploiting such background injustice, eliminates the injustice of lack of access to medical care for the LMIC pair. GKE is an eminently fair solution to this injustice.

3) *Coercion*. Some critics of GKE have suggested that, given the poverty in which many people in LMICs live, the decision to enter the program could be the result of external pressure and coercion: "Patients in need of a transplant and not able to access it due to financial and other reasons are highly vulnerable" (8) and therefore "lacking other options, poor prospective transplant recipients and their donors from LMICs may feel compelled to participate in the program." (11)

GKE, however, "does not induce a donation, but merely removes a barrier to donation for a willing donor." (4) The LMIC pair involved in the exchange have already sought to proceed with the donation, but are unable to do so because they lack economic resources.

The vulnerability of patients from LMICs in need of a kidney is not a peculiarity of GKE but is instead common to most kidney exchange programs. Patients are vulnerable because of their need for an organ, and are sometimes pressured by circumstances into accepting a higher-risk transplant rather than waiting for a more compatible donor (5). Indeed, coercion of family members to donate a live kidney is an ever-present potential problem in both HIC and LMIC countries, regardless of the nature of the live organ donation program. It is essential that any program extracting an organ from a living person ensure that consent is valid, that it is given by a competent person, informed of the risks and benefits and acting freely. People who want to donate their kidney to save a loved one experience a sense of pressure regardless of their financial situation. Granted, had the LMIC pair been rich, and of matching blood types, they would have had the option to continue dialysis indefinitely or have a transplant without an intermediary. Moreover, the pressure on donors and recipients in LMICs may be greater because the alternative is death, not dialysis. But that circumstance, which is beyond the power of the GKE program or, it seems, any global health program, to eliminate, means the benefit to them is also greater and we should not regard their life-saving choice as invalid.

4) *Commodification*. The European Committee on Organ Transplantation claims in its *Statement on The Global Kidney Exchange Concept* that GKE involves the commodification of donors from LMICs, because one criterion is "the usefulness of the donor from the LMIC for a recipient in the HIC, involving the minimum expense for the programme."(8)

In response, it has been pointed out that "[a]ll participants in KE are chosen because their donor's kidney, while unavailable to their chosen recipient, is 'useful' to the recipient of another pair. If there is no mutual benefit, no pair is chosen to participate in KE". (5)

It is relevant here that one pair is getting not only a kidney transplant (as in standard KE), but also coverage of their medical expenses. It is true that these pairs are chosen from countries where such medical expenses are comparatively cheap. The reason for this has nothing to do with an attempt to exploit, commodify or take advantage of one of the pairs involved, but rather with the feasibility of the program. As Rees and colleagues explain, "GKE is practicable, in part, because of the price differential between identical medications in the developing world and the United States." (4)

It might be thought that there are poor people in the U.S. without health insurance who should get priority over people in LMICs, but the higher costs of health care in the U.S. would either make such a scheme not feasible, or, at best, the funds available would not go as far, and so fewer lives would be saved. Indeed, fewer lives would be saved not only because the funds would not go as far in the U.S., but also because everyone in the U.S. with end-stage kidney disease is entitled to dialysis, irrespective of their insurance status.

If we accept that all human lives have equal value, this is sufficient justification for making the program global rather than national. The fact that GKE participants are matched not only according to biological compatibility, but also according to financial compatibility, does not mean that GKE entails a morally problematic higher degree of commodification than any other kidney exchange program.

One ethical issue not so far touched upon is what GKE can do for the poorest people in LMICs, who may be unable to pay for the medical treatment and support required to reach the point at which they are ready to travel to the HIC for transplantation. At present, it seems that GKE benefits people in LMICs who are poor, but not extremely poor. That is preferable to not benefiting anyone who is poor, but it would be better still if people in extreme poverty also had a chance to participate. Rees and colleagues are aware of this issue, and have suggested that funds should be made available to provide dialysis and other necessary medical treatment for patients with end-stage renal disease in LMICs who are candidates for participation in GKE, but are unable to pay for such treatment in their own country. (4) This could be an opportunity for a charitable organization to save lives at relatively little expense.

Conclusion

Lurking behind all the arguments against the GKE is the assumption that poor people are incapable of autonomous choices. So if they appear to choose to act in ways that benefit not only themselves, but people in HICs, they must have been coerced, exploited, or commodified. Given the history of relations between HICs and LMICs, these sentiments are partly understandable. They are a sufficient reason for providing safeguards in order to prevent harm to vulnerable people from LMICs. Rees and his colleagues have said that if GKE becomes more common, protocols will need to be developed for the medical evaluation of the donor and recipient, and to confirm that the donor paired with the patient in the LMIC is acting because of concern for the patient, and is not being

paid for the donation (4). But to take this way of thinking so far that it eliminates, for poor patients in LMICs, the possibility of obtaining a transplant—and therefore leaves them to die or suffer—would be a tragically ironic outcome of a desire to avoid disempowering poor people.

Poverty does not necessarily make a person unable to choose to donate a kidney to a loved one, nor does it make someone incapable of weighing the pros and cons of an option like that offered by the GKE. Poverty does narrow down the options available to poor people, and often forces them to settle for an option that is not as good as a rich person would choose. That, however, is irrelevant to the ethics of GKE if that program provides a better option to patients in LMICs who need a kidney than any other option currently available to them.

We noted earlier that because implementing GKE will save lives, for an objection to provide sufficient grounds for rejecting the program, we would have to be confident not only that it is valid, but that it is of sufficient importance to outweigh the avoidable loss of life that will take place if GKE does not go ahead. We do not think any of the objections made by the European Committee on Organ Transplantation or in the *Statement of The Declaration of Istanbul Custodian Group* are even valid. They try to put GKE into a category of conduct – organ selling, exploitation, coercion, and commodification -- that is commonly regarded as wrong. In the standard meaning of these terms that properly carry moral opprobrium, the terms do not apply to GKE. If the terms are stretched so that GKE can be brought under them, then we doubt that these elasticated versions merit sufficient moral opprobrium. In our view, GKE promotes global justice and reduces the potential for people in need of kidneys in LMICs to be exploited. It would be tragic if such misguided objections were to prevent GKE from realizing its potential to reduce suffering and save the lives of rich and poor patients alike.

Contributors

FM contributed to the article with a literature review and part of the writing. JS and PS contributed to writing the article. All authors have seen and approved of the final text.

Declaration of interests
We declare no competing interests.

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References

1 Liyanage T, Ninomiya T, Jha V, et al. Worldwide access to treatment for end-stage kidney disease: a systematic review. *Lancet*. May 16, 2015;385(9981):1975–82. http://dx.doi.org/10.1016/S0140-6736(14)61601-9

2 Held PJ, McCormick F, Ojo A, Roberts JP. A cost-benefit analysis of government compensation of kidney donors. *Am J Transplant* 2016; 16: 877–885, as cited in: Rees MA, Dunn TB, Kuhr CS, et al. Kidney exchange to overcome financial barriers to kidney transplantation. *Am J Transplant.* 2017;17(3), pp.782-790

3 Tonelli M, Wiebe N, Knoll G, et al. Systematic review: kidney transplantation compared with dialysis in clinically relevant outcomes. *Am J Transplant*. 2011;11 (10), pp.2093-2109.

4 Rees MA, Dunn TB, Kuhr CS, et al. Kidney exchange to overcome financial barriers to kidney transplantation. *Am J Transplant.* 2017;17(3), pp.782-790.

5 Bozek DN, Dunn TB, Kuhr CS, et al . Complete Chain of the First Global Kidney Exchange Transplant and 3-yr Follow-up. *Eur Urol Focus*. 2018;4(2), pp.190-197.

6 "HHS Launches President Trump's 'Advancing American Kidney Health' Initiative," July 10, 2019, https://www.hhs.gov/about/news/2019/07/10/hhs-launches-president-trump-advancing-american-kidney-health-initiative.html (Accessed July 22, 2019).

7 Wiseman, A.C. and Gill, J.S., 2017. Financial incompatibility and paired kidney exchange: walking a tightrope or blazing a trail?. *Am J Transplant*, *17*(3), pp.597-598

8 Council of Europe, European Committee on Organ Transplantation (CD-P-TO), European Directorate for the Quality of Medicines and Health Care. Statement on the Global Kidney Exchange concept.2018, available at https://www.edqm.eu/sites/default/files/statement-transplantation-global-kidney-exchange-concept-april2018.pdf
(Accessed August 7, 2019)

9 American Society of Transplant Surgeons. ASTS Position on Global Kidney Exchanges. https://asts.org/about-asts/position-statements#.XLDquERKjBI. Published October 2017.

10 Janet Radcliffe Richards. The Ethics of Transplants: Why Careless Thought Costs Lives. Oxford University Press; 2012.

11 Statement of the Declaration of Istanbul Custodian Group concerning ethical objections of the proposed Global Kidney Exchange program. 2018 https://www.declarationofistanbul.org/resources/policy-documents/795-statement-of-the-declaration-ofistanbul-custodian-group-concerning-ethical-objections-tothe-proposed-global-kidney-exchange-program (Accessed August 7, 2019).