WHO SHOULD TRAVEL IN KIDNEY EXCHANGE PROGRAMS -THE DONOR OR THE ORGAN?

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There is an increasing gap worldwide between the demand for and supply of kidneys for transplantation, and Canada is no exception. (1) In most North American and European countries, cadaveric donation has proven insufficient to meet the demand for kidneys, so other measures have been implemented to alleviate this shortage, such as extending criteria for deceased donor organs, procuring organs after cardiac death, expanding the circle of living donors to include altruistic donors, and developing exchange programmes for living incompatible donor-recipient pairs. In this latter case (the focus of this commentary), two donor-recipients pairs are linked, where donor 1 cannot donate directly to recipient 1 but can donate to recipient 2, and donor 2 can donate to recipient 1. Variations on this exchange include "domino" or chain exchanges involving more than two pairs. (2)

Interest in this type of living organ donation is growing, and some authors have estimated that such exchanges could result in 1000 to 2000 additional renal transplants performed annually in the US. (3) In Canada, there were no exchange programmes until 2009, when the Canadian Blood Services launched the Living Paired Exchange Donor Registry; the first domino exchange in Canada took place in June 2009. (4) Three Canadian provinces (Alberta, Ontario and British Colombia) are now part of a pilot project, and Québec is expected to soon join. To date, donors participating in the pilot project have travelled to the recipient's transplant center. But before expanding this programme to all Canadian provinces, it is necessary to answer the following question: should we be "shipping" the donor or the kidney?

Traditionally, most exchanges programmes have involved the donor travelling to the recipient's transplant center in order to reduce cold ischemia time, one of the reasons

evoked for the better long term outcomes of living as compared with cadaveric renal transplantation. However, recent US studies of chain kidney transplantation that involved shipping organs via commercial airlines showed positive medical outcomes for the recipient, despite the longer cold ischemia time. (5, 6)

There are some important advantages of shipping the kidney, instead of the donor. First, since the two incompatible pairs are in different hospitals, it is easier to maintain anonymity by shipping the organs. A study conducted in Netherlands showed that anonymity was an essential condition for potential incompatible pairs to participate in exchange programmes. (7) Second, by shipping the kidney to the recipient's transplantation centre, the donor stays in a familiar setting, surrounded by family and friends, thus receiving support that is essential throughout the donation and transplantation process. (8)

When Québec joins the Living Paired Exchange Donor Registry, language will also become an issue; 79% of the Québec population speaks French whereas English is the predominant language in the rest of Canada. (9) So, if a unilingual French speaking donor were to travel to a recipient's transplant center outside of Québec, there might not be transplant professionals there able to speak French, potentially compromising the quality of the transplant experience. Some US studies have shown that having a limited knowledge of English was associated with dissatisfaction of medical care, longer hospital stays and increased risk of medical errors. (10)

In emergency care contexts where time may be pressing, a lack of linguistic competency on the part of health professionals, while unfortunate, can be ethically justified based on principles of beneficence and duty to rescue. Living kidney donation,

however, is not such an emergency situation and thus the language abilities of health care providers may become more ethically important. In kidney exchange programs, a healthy volunteer agrees to donate a kidney to a stranger in order that a loved one can in turn receive a kidney; this donation is a gift that likely involves a range of interests or values, including an interest in the health of the loved one in need, a desire to act altruistically, to contribute to a more caring society, etc. (11) Thus ensuring that donors are cared for in their own language when possible – i.e., by staying in their home province – can be an important means for transplant professionals to acknowledge the magnitude of the donor's gift, and also to facilitate and encourage participation in exchange programmes.

One should also not underestimate the importance of the trust relationship established between the donor and the transplant professionals that develops during living organ donor assessment. Deciding to donate an organ to a stranger, even when the result will be an organ made available for a loved one, is still an emotionally and psychologically difficult decision for many, and one that requires a supportive clinical environment. This does not mean that other transplant centres will not offer professional and supportive care. But when one considers that a transplantation team will be responsible for the long term and follow on care of the living organ donor, there is even more reason for the donor to remain in their home province with a team that they know and trust. A final argument in favour of shipping the organ instead of the donor relates to travel costs. In Québec, there is currently no reimbursement programme for living organ donors' travel and living expenses. So if a Québec donor were to travel to Calgary, for example, to participate in an exchange programme, it is likely that they would also have to bear the financial costs of the donation. If the Québec donor travels to British

Colombia or Manitoba, however, they will be reimbursed through the Living Organ Donor Reimbursement Programme of the Kidney Foundation of Canada; unfortunately, this programme has not yet been applied to all provinces. (12) So it may simply be more cost-effective – both for the public health care system and donors – to ship the organ instead of the donor.

Conclusion

The first domino exchanges in Canada involved the donor travelling to the recipient's transplant center, and to date, there have been no reports of adverse events or dissatisfaction related to the donor's travel. These results are similar to those in three countries – Netherlands, United States and South Korea – that have the most experience with exchanges programmes, although these countries do not have the linguistic or bilingual particularities of Canada. When Québec joins the Living Donor Paired Exchange Registry, it will be important to reconsider current practices. There are probably more advantages for the living organ donor to stay in their home province, be cared for at a transplant centre by a team they know and trust, and be close to their loved one-recipient, family and friends. Nonetheless, it is reasonable to think that some potential living organ donors will not be bothered by having to travel to another province in order to reduce cold ischemia time and maximise transplantation outcomes. Thus while we favour shipping the organ instead of the donor, the two options should still be offered to the potential living organ donors participating in exchange programmes. And if the potential donor chooses to travel, we believe that the transplantation community should ensure that travels expenses are reimbursed.