

The shortage of kidneys for transplantation in Australia

Desperate people seek desperate remedies

The treatment alternatives available to Australians with endstage kidney failure are dialysis, transplantation or no active treatment. The last of these options allows kidney failure to progress spontaneously to uraemia and death. Over the past decade the number of Australians on dialysis has grown by 6% per annum, adding an additional \$25 million yearly to healthcare expenditure.¹ This growth is caused by both increasing numbers of people entering dialysis programs and a low rate of transplantation because of a shortage of donor kidneys. Kidney availability in Australia remains low and, if anything, is worsening, with only 6.8% of those on dialysis receiving transplants in 2002, compared with 11.7% a decade earlier.¹

Dialysis is the only initial treatment option for most patients with endstage kidney failure. Transplantation without prior dialysis is increasingly popular, but requires a live donor available at the right time; currently, only 3% of patients undergoing transplantation have not been on dialysis beforehand. Of those on dialysis, only 23% overall and 39% of those aged under 65 years are on the waiting list for a deceased-donor transplant.² Those not on the list are either not interested in undergoing transplantation, have medical barriers to safe transplantation, or are deemed too frail to tolerate the procedure and subsequent immunosuppression.

Both patients and healthcare professionals believe that transplantation, when feasible, is the preferred therapeutic option. The scientific justification for this belief appears well founded. In particular, there is strong evidence that patients who receive transplants have a significant survival advantage. The annual mortality rate of an age-matched population maintained by transplantation is reduced about 80% beyond the first year compared with those remaining on dialysis on the waiting list.³ The major difference is an up to 30-fold increase in relative risk of cardiovascular events and death experienced by those on long-term dialysis.⁴

In most Australian states, the average wait for a kidney from a deceased donor is about 4 years, and some patients wait much longer. The prospect of an extended wait on dialysis, as well as the possibility that a suitable kidney may never become available, drives some patients to consider more drastic options. One pathway that is illegal in Australia, but open to those able to afford it, is to travel overseas to purchase a kidney transplant. It is not known how often Australians are choosing this option. The report by Kennedy et al in this issue of the *Journal* (page 224) describes the outcomes for 16 Sydney-based patients who travelled overseas for kidney transplantation over the past 14 years. The risk of going down this path is evident, with an increased risk of serious infection being a major hazard.

The annual rate of deceased-donor kidney transplants in Australia for 2004 was a low 11 donors per million population.⁵

In 2003, the rate in Australia was 9.0 per million population, compared with 33.8 in Spain, 23.9 in Austria, 24.8 in Belgium, 18.3 in France and 22.1 in the United States.⁶ Thus, the rate of organ donation in this country is low compared with other developed countries, and remains so despite the publicity campaign promoting organ donation following the untimely death following a brain injury of Australian cricket icon David Hookes. One response to the shortage in deceased-donor organs has been an increase in live kidney donation, and the proportion of live donations in 2003 was 40% of total transplants. The source of live kidney donors, previously restricted to close blood relatives, has broadened in recent years to allow unrelated and poorly matched emotionally connected donors. In the past 12 months, there have been several kidney transplants from altruistic strangers donating to the pool of waiting dialysis patients (so-called non-directed donations). We can now add overseas commercial sources as another contributor to live kidney donation for Australian residents.

The real reasons for Australia's poor performance in deceased-donor organ procurement have not been fully established. Clearly, there is no lack of public support, which has exceeded 80% in repeated surveys over many years.⁷ One outstanding observation that has received little prominence and no systematic study is the high and internationally competitive organ donor rate achieved in South Australia. Over the last decade, South Australia has consistently doubled the rate in all other Australian states.⁵ A similar variation in performance is seen in the teaching hospitals in capital cities, with some having double the rate of others. This marked variation in the donation rates between states and hospitals points to the probability that the barriers to increased organ donation are within the hospital system.

The situation in Australia appears ripe for a collaborative approach, such as one reported from the United States that sought to "identify, learn, adapt, replicate and celebrate 'break-through' practices associated with higher donation rates".⁸ It is remarkable that Australia has been so slow to fully examine and take up systems that appear to work in some regions or hospitals.

Positive moves are being made. A special working group of the Australian Health Ministers' Council has recently made 11 recommendations for change in the arrangements and process for organ donation. The most fundamental recommendation is for intensive care staff to routinely interrogate the Australian Organ Donor Registry to ascertain the recorded intent of all suitable patients with severe brain injury after the first set of brain death tests. Relatives will then be informed of the intent recorded on the Registry and be asked only if they are aware of any change. Importantly, in this approach, the family will not need to be asked for consent.

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EDITORIALS

If Australia's organ donation rate could match that of its best-performing hospitals and states, the embarrassing situation driving dialysis patients to take the risks involved with travelling overseas for kidney transplantation would not exist. Much remains to be accomplished, but there are grounds for optimism in believing Australia's deceased-donor organ donation rate could double if the barriers existing in the hospital system could be removed.

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- 2 Chadban S. Transplant waiting list. ANZDATA Registry Report 2003. Adelaide: Australia and New Zealand Dialysis and Transplant Registry, 2003: 62-63.
- 3 McDonald SP, Russ GR. Survival of recipients of cadaveric kidney transplants compared with those receiving dialysis treatment in Australia and New Zealand 1991-2001. *Nephrol Dial Transplant* 2002; 17: 2212-2219.
- 4 Levey AS, Beto JA, Coronado BE, et al. Controlling the epidemic of cardiovascular disease in chronic renal disease. National Kidney Foundation Taskforce on Cardiovascular Disease. *Am J Kidney Dis* 1998; 32: 853-906.
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- 6 Council of Europe. International figures on organ donation and transplantation — 2003. Newsletter Transplant 2004; 9(1): 18-20. Available at: www.coe.int/T/E/Social_Cohesion/Health/TRANSPLANT%20NEWSLETTER%202004.pdf (accessed Jan 2004). www.anzdata.org.au/anzod/anzodwelcome.htm (accessed Jan 2005).
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- 8 US Dept of Health and Human Services – Division of Transplantation. The organ donation breakthrough collaborative: best practices final report. September 2003. Available at: www.organdonor.gov/bestpractice.htm (accessed Jan 2005). □