



KIDNEY DISEASE IN RURAL AUSTRALIA

...good health and wellbeing in rural and remote Australia

It is estimated that one in three Australian adults is at increased risk of developing chronic kidney disease, and one in nine Australian adults has some sign of kidney disease. People living in remote and very remote areas of Australia have much higher rates of end-stage kidney disease than their metropolitan counterparts, particularly in younger age groups.



What is kidney disease?

Most people are born with two kidneys, each one about the size of an adult fist, bean-shaped and weighing around 150 grams. The kidneys are located at both sides of your backbone, just under the rib cage or above the small of your back, and are protected from injury by a large padding of fat, your lower ribs and several muscles. The kidneys continuously filter the bloodstream, clearing waste products and playing a vital role in controlling the body's level of water and various chemicals. They also produce certain essential hormones.

Chronic kidney disease (CKD) refers to all kidney conditions where a person has evidence of kidney damage and/or reduced kidney function, lasting at least three months, regardless of the specific diagnosis of disease or condition causing the disease. CKD may further deteriorate into

the otherwise inevitable deterioration in kidney function can be reduced by as much as 50 per cent, and may even be reversible.

The burden of kidney disease in Australia

CKD is typically asymptomatic, such that it is possible to lose up to 90 per cent of kidney function before symptoms appear. It is estimated that one in three Australian adults is at increased risk of developing CKD, and one in nine Australian adults has some sign of kidney disease. At the end of 2011 a total of 10,998 Australians were receiving dialysis, and according to the Australian Institute of Health and Welfare this figure is expected to increase 80 per cent by 2020.

The burden of kidney disease in rural Australia

People living in remote and very remote areas of Australia have much higher rates of ESKD than their metropolitan counterparts, particularly in younger age groups. Data from the Australian Institute of Health and Welfare shows that from 2003 to 2007 the age-standardised rate of ESKD in Remote (35.7 cases per 100,000 population) and Very Remote (81.1 cases per 100,000 population) areas was up to 4 times as high as the rate of ESKD in Major Cities (19.9 cases per 100,000 population).

Rural patients who plan to initiate renal replacement therapy face unique challenges that may ultimately affect outcomes. Dialysis may be required for up to five hours three times each week and those who initiate 'in-centre' or 'satellite haemodialysis' can face long travel times to attend dialysis sessions. Longer travel time to dialysis has been shown to be associated with increased mortality and a diminished quality of life. Transport options are often lacking which further complicates the relocation to larger centres

Adult Australians are at increased risk of CKD if they:

- are 60 years or older
- are of Aboriginal or Torres Strait Islander origin
- have diabetes
- have a family history of kidney disease
- have established heart problems (heart failure or past heart attack) and/or have had a stroke
- have high blood pressure
- are obese (Body mass index \geq 30)
- are a smoker

end-stage kidney disease (ESKD), when renal replacement therapy - dialysis or transplantation - is required to stay alive. However, if CKD is detected early, there is evidence that

for dialysis treatment. Home dialysis training facilities are typically located in metropolitan centres, making access difficult for rural and regional patients.

Once dialysis is initiated, people receiving dialysis in rural areas have poorer outcomes compared with their metropolitan counterparts. Data from the Australian and New Zealand Dialysis and Transplant Registry have demonstrated that survival of patients on dialysis is worse in rural and regional areas compared to the major cities. Similarly, rural and regional patients undertaking peritoneal dialysis at home have a greater risk of peritonitis-related complications and mortality compared to metropolitan patients.



Financial and personal burdens

Dialysis and transplantation facilities are typically located within significant population areas. The requirement to travel to access these services can cause social, emotional and cultural isolation as well as potential financial disadvantage.

Multiple schemes currently exist in Australia to assist with the accommodation needs of people from rural and regional areas who require access to renal replacement therapy. The transplant support group Transplant Australia helps fund accommodation for transplant recipients and their families/carers, and state government travel assistance schemes provide marginal levels of reimbursement. Most major hospitals offer subsidised accommodation located nearby, but such schemes are not universally available, and there is often high demand for places. A recent Australian study of live kidney donors reported significant financial concerns in relation to the testing, hospitalisation and surgery required for kidney transplantation.

Reducing the gap

Providing access to home dialysis (peritoneal dialysis or home haemodialysis), or improving access to dialysis units closer to home is pivotal to improving the health and quality of life outcomes for people with kidney disease in rural Australia. Peritoneal dialysis is already commonly used in rural areas, with good outcomes. Water quantity and quality and access to local training facilities may inhibit

uptake of home haemodialysis in some rural regions, but these obstacles can be overcome with appropriate planning and resourcing.

An alternative to travelling significant distances to a metropolitan renal unit for routine dialysis or transplantation clinical assessments is to allow these clinical reviews to be performed locally. Telemedicine (inc audio, video, and other telecommunications and electronic information processing technologies) has been demonstrated to be an effective way of undertaking case management meetings and investigations for people in rural and remote areas, and has the advantage of improving access to a multidisciplinary team.

Kidney Health Australia recognises the additional challenges faced by rural families living with kidney disease and has dedicated services and adapted programs to reduce this impact.

- For 'Kidney Kids' (children living with kidney disease) Kidney Health Australia covers the cost of flights and accommodation to attend the state-based 'Kidney Capers' activity programs and the national annual 'Kidney Kids Camp'.
- Western Australia's annual Adult Holiday Camp enables rural (and metropolitan) families to have a week of respite in a holiday setting.
- FAITH housing program provides accommodation for families who need to travel to Perth for living kidney transplants.
- KHIS (Kidney Health Information Service) is a free-call national service providing information and support to people living with or affected by kidney disease (1800 454 3639).
- A monthly 'Kidney Community' newsletter is posted to many rural families who do not have reliable internet access.
- Toll-free teleconferencing facilities are in place to ensure rural people can participate in our state-based advocacy-focused Consumer Committees.

For further information and advice about kidney disease please contact Kidney Health Australia's Kidney Health Information Service (free call) on 1800 454 3639 or visit www.kidney.org.au where you can also subscribe to the 'Kidney Community' newsletter.



Kidney Health Australia is a national health care charity with a vision 'to save and improve the lives of Australians affected by kidney disease'. As the national peak body, Kidney Health Australia promotes good kidney health through delivery of programs in education, advocacy, research and support.