



## Haemodialysis outcomes of remote Kimberley origin Aboriginal and Torres Strait Islander patients



### Why was this study done?

End-stage kidney disease among Aboriginal and Torres Strait Islander people in remote areas of Australia is huge. When people's kidney's fail, they need dialysis treatment, or a kidney transplant to stay alive, this is known as renal replacement therapy (RRT). There is not much written about Aboriginal and Torres Strait Islander people on dialysis. The information that has been published, shows that these people have a poorer outcome when compared to non-Indigenous people in Australia. People from the Kimberley who are on haemodialysis can have their treatment at the Aboriginal community controlled Kimberley Satellite Dialysis Centre (KSDC) in Broome and / or attend dialysis centres in Perth.

One of the aims of this study was to identify the Aboriginal and Torres Strait Islander people from the Kimberley who received RRT. Out of these, we picked those who were on haemodialysis (HD) during the five year period of 1<sup>st</sup> January 2003 to the 31<sup>st</sup> December 2007. Our other aim was to compare this group with four other groups of HD patients in the same five year period. Three of the groups were Aboriginal and Torres Strait Islander patients on HD who live in 1) the NT, 2) other parts of WA, and 3) other parts of Australia. The final group was Australian non-Indigenous HD patients. We compared all five groups' HD treatment outcomes and death rates to see if the Kimberley Aboriginal and Torres Strait Islander group had different outcomes to the rest of the groups.

### How was this study done?

With the help of health workers from KSDC and Royal Perth Hospital we identified Aboriginal and Torres Strait Islander patients who originally came from the Kimberley region. The Australia and New Zealand Dialysis and Transplant Registry (ANZDATA), which collects information about each person receiving RRT in Australia and New Zealand, provided us with the following information about each group (no names were provided): treatment outcomes, other medical problems they had, how many saw a doctor very late in their kidney disease, how old they were when they got end stage kidney disease, how many had died, and whether they were male or female.

### Findings

What we found about Kimberley Aboriginal and Torres Strait Islander patients was:

- That during this 5 year period 77 Kimberley origin patients commenced RRT. This rate of kidney disease in the Kimberley is huge, and can be described as, if you had a group of one million people, out of that group 1249 of them would start RRT (1249 per million of population), which is similar to the NT where there was 1215 per million Aboriginal and Torres Strait Islander people starting RRT. This is a lot when you compare it to the non-Indigenous rate of 94 per million of population.
- That 70% of this group received HD treatment, 70% of which was provided in the Kimberley (KSDC, Home HD, community HD).
- That showing up to dialysis at KSDC was excellent: 96% of the 27 414 planned HD treatment sessions at KSDC were attended.

### HD treatment outcomes & deaths of Kimberley patients compared to others showed:

- That Aboriginal and Torres Strait Islander patients from all groups were more likely to be younger, female, and have more other medical problems (eg diabetes) reported when they started RRT, than the non-Indigenous HD patients.
- That Kimberley origin Aboriginal and Torres Strait Islander HD patients adhered to best practice (CARI) guidelines as well as the other groups.
- That Kimberley origin Aboriginal and Torres Strait Islander HD patients had significantly lower death rates than all groups outside WA. When we compared the death rate of the Kimberley group with the non-Indigenous group the ratio was 0.53, which means the Kimberley group had around only half the deaths of the non-Indigenous group. Our data shows that we can be 95% confident that the death rate of Kimberley Aboriginal and Torres Strait Islander patients on HD was significantly lower compared to non-Indigenous HD patients.
- However, to take into account the differences in demographics of the five groups the data needs to be adjusted. For example, we would expect that a group of younger people would have a lower chance of death than a group of older people. After adjusting for age, gender, other medical conditions, and late referral to a doctor, we found that there was no statistical differences in death rates between the Kimberley group and other groups.
- This is the first study showing similar treatment outcomes and death rates for Aboriginal and Torres Strait Islander people entirely from a remote area of Australia and non-Indigenous Australians receiving HD treatment.

### What does this mean?

- KSDC delivers the majority of HD treatments to Aboriginal and Torres Strait Islander people from the Kimberley.
- KSDC provides culturally safe treatment that is close to home in which people are happy to attend.
- That a dialysis unit managed by an Aboriginal community control health service in a remote location and in partnership with good tertiary care, can result in health outcomes similar to those of non-Indigenous patients and also improve quality of life.
- That while waiting for improved kidney disease prevention to reduce the numbers of patients requiring dialysis, good quality care in culturally appropriate settings is essential.
- That culturally safe dialysis services in rural and remote areas of Australia needs to expand in order to provide equitable care to the growing number of Aboriginal and Torres Strait Islander people with end stage kidney disease requiring RRT.

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This study was a joint project between the Kimberley Aboriginal Medical Services Council, The Rural Clinical School of Western Australia, ANZDATA and Royal Perth Hospital.

A report on this study has been published by the Medical Journal of Australia: Marley JV, Dent HK, Wearne M, Fitzclarence C, Nelson C, Siu K, Warr K, and Atkinson D. Haemodialysis outcomes of remote Kimberley origin Aboriginal and Torres Strait Islander patients. Med J Aust 2010; 193:516-520 [http://www.mja.com.au/public/issues/193\\_09\\_011110/contents\\_011110.html](http://www.mja.com.au/public/issues/193_09_011110/contents_011110.html).

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