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Trends in renal dialysis in Queensland, 1999/2000-2007/2008

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Chronic kidney disease (CKD) refers to all conditions of the kidney, lasting at least three months, where a person has had evidence of kidney damage and/or reduced kidney function, regardless of the specific diagnosis of disease or condition causing the disease¹. Five stages of CKD are defined and patients with end-stage kidney disease (ESKD) or stage 5 require renal replacement therapy: regular dialysis or a kidney transplant. Of the two main types of dialysis, peritoneal and haemodialysis, haemodialysis accounts for most hospitalisations due to the specialised equipment required.

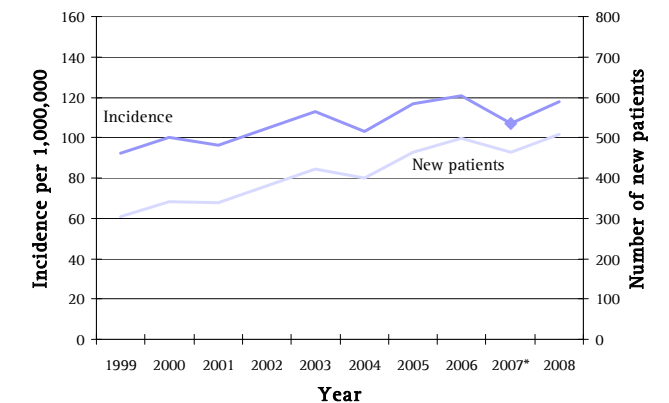
The prevalence of ESKD in Queensland can be determined using data from the Australian and New Zealand Dialysis and Transplant Registry (ANZDATA)²⁻⁶. The incidence and prevalence of treated CKD in the community will be underestimated, as not everyone with ESKD will be eligible for, or take up renal replacement therapy.

In Queensland, the number of new patients for renal replacement therapy increased from 305 in 1999 to 508 in 2008 (Figure 1). The age-standardised incidence rate followed a similar trend, reaching a maximum of 121 per 1,000,000 in 2006 before falling slightly to 118 per 1,000,000 in 2008.

Episodes of dialysis[‡] in Queensland hospitals were analysed using the Queensland Hospital Admitted Patient Data Collection (QHAPDC) from 1999/2000 to 2007/2008. Dialysis episodes increased by 9.0% per year (95% CI 8.9-9.1) from 91,375 to 181,378. While there were more episodes in public hospitals than private, the rate of increase was greater in private hospitals (Figure 2). Haemodialysis accounted for the majority of hospitalised dialysis episodes and accounted for most of the increase in the total (Figure 3). The increase in the number of dialysis episodes was accompanied by an increase in cost. The estimated inpatient cost of dialysis in public facilities (Diagnosis Related Group (DRG) L61Z[§]) rose from \$39.1m in 2003/2004 (\$44.4m inflation adjusted to 2008 dollars) to \$58.6m in 2007/2008.

Queensland experienced an overall increase of 67% in the number of new patients for renal replacement therapy in the ten years to 2008. There was a real increase of 32% in the estimated inpatient cost for dialysis episodes in public facilities (DRG L61Z) from 2003/2004 to 2007/2008, compared with a 29% increase in the number of episodes in public facilities (DRG L61Z) in the same period.

Figure 1. Trend in incidence of treated end-stage kidney disease in Queensland, 1999-2008



* 2007 number of new patients has been updated⁶; incidence (*) has not. Note: Incidence is age-standardised to the 2001 Australian population. Source: Queensland Health analysis of ANZDATA Registry data⁷.

Figure 2. Dialysis episodes in Queensland, by facility type, 1999/2000-2007/2008

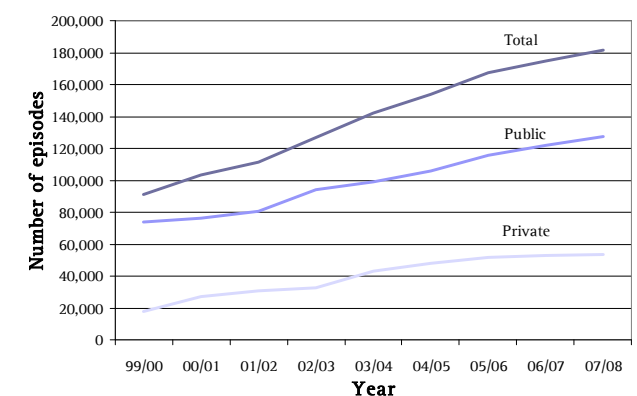
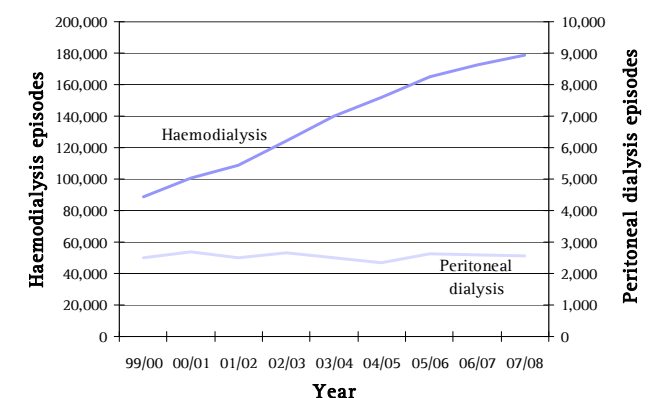


Figure 3. Dialysis episodes in Queensland, by dialysis type, 1999/2000-2007/2008



Source: Queensland Hospital Admitted Patient Data Collection

References

1. An overview of chronic kidney disease in Australia. Canberra: Australian Institute of Health and Welfare, 2009.
2. Appendices I and II. *ANZDATA Registry Report 2005*. Adelaide, South Australia: Australian and New Zealand Dialysis and Transplant Registry, 2005.
3. Appendices I and II. *ANZDATA Registry Report 2006*. Adelaide, South Australia: Australian and New Zealand Dialysis and Transplant Registry, 2006.
4. Appendices I and II. *ANZDATA Registry Report 2007*. Adelaide, South Australia: Australian and New Zealand Dialysis and Transplant Registry, 2007.
5. Appendices I and II. *ANZDATA Registry Report 2008*. Adelaide, South Australia: Australian and New Zealand Dialysis and Transplant Registry, 2008.
6. Appendix I. *ANZDATA Registry Report 2009*. Adelaide, South Australia: Australian and New Zealand Dialysis and Transplant Registry, 2009.

[†] The data reported here have been supplied by the Australia and New Zealand Dialysis and Transplant Registry. The interpretation and reporting of these data are the responsibility of the Editors and in no way should be seen as an official policy or interpretation of the Australia and New Zealand Dialysis and Transplant Registry.

^{*} Episodes of dialysis were extracted where the principal diagnosis, other diagnosis or procedure ICD-10-AM code was for dialysis.

[§] Cost was estimated for episodes in public hospitals where the diagnosis related group (DRG) classification was L61Z (admit for renal dialysis). In 2003/2004 and 2007/2008, approximately 96% of the dialysis episodes extracted in public facilities had this DRG classification.