

National Healthcare Agreement: PI 03-Incidence of end-stage kidney disease, 2012 QS

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Identifying and definitional attributes

Metadata item type:	Data Quality Statement
METEOR identifier:	500962
Registration status:	Health , Retired 14/01/2015

Data quality

Data quality statement summary:

- This indicator estimates the incidence of end-stage kidney disease (ESKD) from linked mortality and Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) data. It does not include people with ESKD who were not on the ANZDATA Registry and did not die in the reference period.
- The coding list used to estimate ESKD from mortality data is conservative.
- For disaggregation by State and Territory and Indigenous status, data have been reported for four aggregated years to ensure statistical validity. Reporting one year's data would mean that smaller states could not be reported.
- For disaggregation by remoteness and socioeconomic status (SEIFA), data have been reported for three aggregated years to ensure statistical validity whilst using data collected as close the census year as possible. Reporting on years too far removed from a census year for remoteness and SEIFA decreases the data's validity.

Institutional environment: The AIHW has calculated this indicator.

The AIHW linked data from the ANZDATA Registry, the National Death Index (NDI) and National Mortality Database (NMD) to calculate the numerator.

Completed ANZDATA records were supplied to the AIHW by ANZDATA.

Mortality data were provided by the Australian Bureau of Statistics (ABS) to the AIHW.

The NDI is a national compilation of data on all deaths occurring in Australia. Data are supplied to the AIHW by Registrars of Births, Deaths and Marriages (RBDM) from each State and Territory and this results in a database which contains all deaths occurring in Australia since 1980.

Timeliness: The reference period of the total Australian population is 2007. This is the most recent year for which mortality data are available to the AIHW.

Due to small numbers, four years of data (2004, 2005, 2006 and 2007) were combined to provide estimates for the State and Territory and Indigenous disaggregations.

Three years of data (2005, 2006 and 2007) were combined to provide estimates by remoteness and Socio-Economic Indexed for Areas (SEIFA) quintiles, to manage issues with small numbers whilst keeping as close to the census year as possible. Reporting on years too far removed from a census year for remoteness and SEIFA decreases the data's validity.

Accessibility: Aggregate ANZDATA reports are available free at their website www.anzdata.org.au.

The AIHW provides a variety of products that draw upon the NMD including online data cubes and reports.

Linked data are subject to regulations governing research ethics and are not available publically.

Interpretability:

Information on how ANZDATA data are collected can be found at www.anzdata.org.au.

Information on the NMD can be found on the AIHW website and information on the ICD-10 on the World Health Organization's website.

The AIHW has recently released a comprehensive report on this indicator.

AIHW 2011. *End-stage kidney disease in Australia: total incidence 2003-2007*. Cat. no. PHE 143. Canberra: AIHW.

Relevance:

This is an interim indicator. The total indicator requires linkage to hospital data to count people with ESKD who were not on the ANZDATA Registry and did not die in the reference period.

ANZDATA is a register of all people in Australia receiving dialysis or kidney transplant (where the intention to treat is long term) to survive — that is, people with treated ESKD — and therefore is highly relevant to this indicator. We are confident that we have good counts of treated cases. Treated cases are grouped by state of first treatment. The AIHW is not involved in collecting and validating the data however, ANZDATA report that they employ checks for validity on data received and query possible errors with the renal units who provide the data (ANZDATA 2009).

Mortality data are of high quality, however it is not certain that all untreated cases have been counted because it is possible that some cases have not been included when people die of an unrelated cause or do not have ESKD recorded on their death certificates, even though it contributed to their death (*Li et al.* 2003).

Data are reported by the State or Territory that delivered treatment (for treated cases) and by the State or Territory of registration of death (for untreated cases). The numerator includes people who received treatment or whose death was registered in one jurisdiction, but who reside(d) in another. These cross-border flows are particularly relevant in interpreting ACT data.

Mortality data have incomplete Indigenous identification rates, therefore care should be taken when interpreting the data. Only states where identification is considered to be accurate enough for reporting are included in the estimate (NSW, QLD, SA and NT) — see ABS 2011.

ANZDATA Registry Indigenous identification is based on self-identification in hospital records. However it is believed that Indigenous identification in the Registry is more complete than in general hospital data (*Cass et al.* 2001).

For remoteness and SEIFA allocations, different geographic variables are used to allocate persons to categories. For those records sourced from the ANZDATA Registry data, postcode at entry is used as a proxy for postal area to concord to 2006 Statistical Local Areas (SLAs) and then to remoteness and SEIFA categories. For records based on NMD data, SLA of usual residence is used to concord to 2006 SLAs (where necessary) and then to remoteness and SEIFA categories.

ABS 2011. *Deaths, Australia Nov 2010*. ABS Cat. no. 3302.0 Canberra: ABS.

ANZDATA 2009. Adelaide: Australian and New Zealand Dialysis and Transplant Registry. Viewed 14 September 2010, www.anzdata.org.au/v1/data_collection.html#validation.

Cass A, Cunningham J, Wang Z & Hoy W 2001. *Regional variation in the incidence of end-stage renal disease in Indigenous Australians*. Medical Journal of Australia 175:24–7.

Li SQ, Cass A & Cunningham J 2003. *Cause of death in patients with end-stage renal disease: assessing concordance of death certificates with registry reports*. Australian and New Zealand Journal of Public Health 27:419–24.

Accuracy: Each data source used in the construction of this indicator has broad population coverage and local data-checking and validation processes.

Reporting of ESKD incidence, including untreated cases, greatly increases the accuracy of the estimate compared to estimates only including treated cases.

Confidence intervals were calculated to assess differences between states and territories, males and females, Indigenous and non-Indigenous populations, remoteness areas and SEIFA quintiles.

The count of untreated cases is likely to have missed some cases and included other non-cases due to coding issues. On balance, it appears likely that this is an undercount, as indicated by 56 per cent of ANZDATA cases incident in the reference period 2003-2007 who died in the same period having no mention of ESKD as defined in this indicator on their death certificate.

Linkage of ANZDATA to the NDI and then the NMD found some discrepancies between the data sources:

- For matched records, data items found on both the ANZDATA and NMD may be different. Where there was a discrepancy the ANZDATA data was used.

Caution should be exercised in interpreting differences across remoteness and SEIFA categories.

- First, for ANZDATA records, postcode at entry (used for categorisation) may not be indicative in all cases of usual residence. People could, for example, move to access treatment, or give a different address for postal reasons to where they live. This is not a problem for NMD records as the data item used for categorisation is based on usual residence.
- Second, for ANZDATA and NMD data the need to transform SLA-level or postcode-level data using concordances (in both the numerator and denominator) can lead to inaccuracies. However, a sensitivity analysis was conducted to test if there was any difference in categorisation for those ANZDATA records that linked to mortality records and died in the same year. Using SLA from the mortality records resulted in little difference to the rates for SEIFA and Australian Standard Geographical Classification (ASGC) categorisations.
- Third, for all data where postcode or SLA is not valid or available, data are excluded from the analysis. Transformation based on concordances also resulted in a small number of records being excluded due to rounding. In all 0.1 per cent of records in the remoteness analysis and 0.5 per cent of records in the SEIFA analysis were excluded.

Coherence: The information presented for this indicator is calculated using the same methodology as data published in the *National Healthcare Agreement: baseline performance report 2008-09*. The national and State and Territory estimates can be meaningfully compared across reference periods. The Indigenous estimates cannot be compared across reference periods.

Previous estimates of ESKD incidence only included treated cases.

Source and reference attributes

Submitting organisation: Australian Institute of Health and Welfare

Relational attributes

Related metadata references: Supersedes [National Healthcare Agreement: PI 03-Incidence of end-stage kidney disease, 2011 QS](#)
[Health](#), Superseded 04/12/2012

Indicators linked to this Data Quality statement: [National Healthcare Agreement: PI 03-Incidence of end-stage kidney disease, 2012](#)
[Health](#), Retired 25/06/2013