

A retrospective study of the characteristics and outcomes of dialysis-requiring acute kidney injury among adults in an acute dialysis unit

Australian Health Review reported the study in 2019

JT Hughes, SW Majoni, F Barzi, TM.Harris, S Signal, G Lowah, J Kapojos, A Abeyaratne, M Sundaram, P Goldrick, SL Jones, R McFarlane, LT. Campbell, D Stephens and Alan Cass. Incident haemodialysis and outcomes in the Top End of Australia Australian Health Review, 2019, 44(2) 234–240. <https://doi.org/10.1071/AH18230> (Open Access).

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Incident haemodialysis and outcomes in the Top End of Australia

This research occurred during 2014-2020, by a team of clinicians and scientists from Top End Health Service and Menzies School of Health Research.

We reported answers to important questions about adults who had a first haemodialysis treatment during 2011-2012:

- Did people start dialysis to help pre-existing chronic kidney disease, or because another illness caused new kidney damage?
- Was emergency hospital care also needed?
- Was the first dialysis in the hospital dialysis ward or the intensive care unit?
- How many days were people in hospital?
- How many people needed life-long dialysis?
- How many people were alive 3 years later?

Our research team:

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Supporting our team with research skills:

Clinical research training was provided for

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Data sponsors

- Northern Territory Department of Health
- NT Data Warehouse
- Top End Health Service
- Territory Pathology
- ANZICS Database
- ANZDATA
- Northern Territory Register of Deaths

Our study helped answer questions for families and health staff

We wanted information from the Top End, to share with patients, family members and communities, and for this information to help health care leaders think about future planning of health services for people starting haemodialysis.

We shared this information with leaders from primary health care, hospital care and intensive care.

What did we learn?

What is known about the topic? Acute kidney injury (AKI) is a risk factor for chronic kidney disease (CKD). The Northern Territory has the highest national incidence rates of dialysis-dependent end-stage kidney disease but has no audit tool describing outcomes of dialysis-requiring AKI.

What does this paper add? We audited all incident haemodialysis (iHD) and showed 25.6% mortality within the first 90 days, and 45.5% overall mortality at 3 years. AKI in people with pre-existing CKD caused 47.1% of iHD.

What are the implications for practitioners? Health service planning and community health may benefit from AKI prevention strategies and the implementation of sustainable and permanent linkages with the datasets used to monitor prospective incident haemodialysis.

This information is from Australian Health Review Publication. You can access the full paper here: <https://doi.org/10.1071/AH18230>

Ethics protocols

The study was approved by the NT Department of Health and Menzies School of Health Research (HREC 2014-2174). Clinical and data governance procedures were used in the study processes.

In September 2020, we advised the Human Research Ethics Committee, the study was now completed, as the research question has been answered, published and shared.

The study data has been securely and confidentially archived. The data is scheduled for deletion five years after the publication of the main findings, which will be early 2024.

This study was recognised nationally

A Cass & JT Hughes. Acute kidney injury in Indigenous Australians: an unrecognised priority for action. *Med J Aust* 2019; 211 (1): 14-15.

<https://doi.org/10.5694/mja2.50232>

Australian Institute of Health and Welfare 2020. Profiles of Aboriginal and Torres Strait Islander people with kidney disease. Cat. no. IHW 229. Canberra:

AIHW. <https://www.aihw.gov.au/reports/indigenous-australians/profiles-of-aboriginal-and-tsi-people-with-kidney/contents/summary>

Thank you...

We shared the study results with patients who need dialysis in the Top End, with clinicians, and have given lectures and tutorials to other health services staff. We thank the Heather Hall, secretariat for *Top End NT Renal Patient Advisory and Advocacy Committee*, who gave support for the study to begin in 2014.