Reviewer’s report

Title: Estimating the total prevalence and incidence of End-Stage Kidney Disease among Aboriginal and non-Aboriginal populations in the Northern Territory of Australia, using multiple data sources

Version: 0 Date: 17 May 2017

Reviewer: Susan M Samuel

Reviewer's report:

The premise of this article is that the estimate of the prevalence and incidence of ESKD based on renal registry data may underestimate the true burden of ESRD in the community. They adapt the capture-recapture methods used in ecological studies to this epidemiological study. The primary aim of the study is to estimate the total prevalence and incidence of ESRD in Northern Territory Aboriginal and non-Aboriginal populations, and to examine the demographic characteristics of ESKD cases and the proportion of case who did not receive RRT.

Data sources used are appropriate for the study (NT Hospital Separations Dataset, Primary Care Information System [primarily Aboriginal], ANZDATA, NT Registry of Births, Deaths, Marriages).

Comments:

1. Were the ESRD codes used to identify cases from these datasets previously evaluated for case ascertainment (formal or informal validation)? Provide some more detail in the case definition section, in addition to citation 10.

2. It would be good to provide some information regarding the context of health insurance and access to services in Northern Territory, in particular for Aboriginal and highlight any differences between Non-Aboriginals.

3. As a general question, is the term Aboriginal still in use in Australia. Canada has moved to using the term Indigenous. This is a minor point to clarify.

4. The capture re-capture methods can be described in more detail in the methods section. It says the 'incidence was calculate using all new diagnoses recorded in any of the data sources during 2013'....'ESKD cases in death registration data who died during 2013 but not found in the other three clinical datasets were included in the incidence model.' However, no details are given regarding how 'the capture recapture' methods were carried out using all the datasets. The results of how many of the patients were found between all the datasets or in
single datasets will be interesting (proportion picked up by one dataset, and proportion found in additional datasets etc).

5. Following from this, what is the definition of diagnosed (known) cases and similarly the definition of unknown cases.

6. How was the proportion of 'underdiagnosis' and 'underestimation' calculated. These should be clearly described in the methods section.

7. For the discussion, it is best to give a headline summary of your study results in the first paragraph. Then compare and contrast with other studies in the subsequent paragraphs.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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