Author's response to reviews

Title: The Current Status of Chronic Kidney Disease in India: First Report of the Indian CKD Registry

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Author's response to reviews: see over
The authors are grateful to the reviewers for their detailed comments. Whereas we fully acknowledge that all reviewers have made a number of extremely valid points, we are also conscious that addressing all these points comprehensively is probably beyond the scope of this manuscript and make it very long. We have tried to incorporate most of the suggestions briefly at different points throughout the manuscript. In addition, we would humbly point out that several of these points have been addressed in greater detail in other papers which have been referenced in the manuscript at different places.

We are also conflicted by the suggestions of reviewer #1 to reduce the number of tables whereas reviewer #2 wants us to add more. We agree that the presentation can be done in several ways, and have left the tables unchanged.

**Reviewer # 1**

**Introduction**
- More details about the contribution of chronic disease towards morbidity and mortality in the country have been provided including the population burden of chronic kidney disease.
- More details of the organization of healthcare both community-based and hospital-based have been included in the discussion section.
- Information about health surveys in India as well as death reporting systems has been included. Information about population burden of non-communicable diseases from studies using verbal autopsies has been provided. It is not possible to determine the exact contribution of kidney disease as this has not been collected. There is a category of “genitourinary diseases” which has been mentioned.
- A vast majority of Indian population is not covered by any kind of health insurance. In theory, the public-sector healthcare is accessible to everyone but what it is grossly inadequate for specialized care including management of kidney disease. Public-sector hospitals are limited in number, grossly overcrowded and unable to provide care to everyone who needs it. This forces even the poor patients to go to private hospitals, which are pretty expensive. That is no organized system of referral of patients to secondary or tertiary care hospitals and patient seek medical care on their own. These facts have been mentioned.

**Material and methods**
- Definitions that were used to classify patients into different diagnostic categories has been provided in appendix 1.
- Information about how many datasets were received and how many duplicates were removed has been provided. The number of renal biopsies has also been mentioned.
- The total number of nephrology units in the country is not known. We have previously shown that the number of dialysis units varies from state to state according to the per capita income (Ref #). For example, the eastern part of the country has the smallest number of dialysis units per million population. This is disproportionate to the population of the region, therefore there is a distinct variation in the level of participation by region in the registry as shown in the table 1.
- The number of new cases has remained more or less stable from year to year. Data for 2010 is only till the month of September as mentioned in the methods. The number of cases had risen to over 13,500 by the end of the year but we have limited the analysis to end-September.
- As explained, we are unable to make any comment about the population burden of chronic
kidney disease or end-stage kidney disease since the registry penetration does not permit us to do this analysis.

Results

- The issue raised by the reviewer is valid but a detailed analysis of factors such as age, ethnicity, level of development, poverty in each region and its impact on disease has not been performed for any condition and the collected information does not allow us to do so for chronic kidney disease. This would form the subject of a separate paper, and has been mentioned in the limitation section.
- The reported categories of monthly family income were decided arbitrarily to differentiate the monthly income categories into low (<Rs 5,000), medium (5,000-20,000) and upper classes (>20,000). These are different from the government definitions, since they have been criticized as being unrealistic.
- We have limited our discussion about treatment for dialysis to stage V CKD.

Discussion

- We have clearly mentioned that this work does not provide any comprehensive population-based estimates of disease burden. However, it does provide a more representative account of the stage V CKD patients than would be available in ESRD registries.
- We have given greater details of the referral system and the how patients present for management of chronic kidney disease.
- The consistency of our data regarding the different causes of chronic kidney disease throughout the period of observation as well as across different regions makes us fairly confident about its representative nature. Moreover this data is also consistent with what has been reported from individual centers.

Reviewer #2

- We have mentioned the cross-sectional nature of the study both in the abstract and in the methods.
- Data about prevalence of chronic kidney disease in India and developed world have been provided.
- Locations of the study centers have been included in the figure.
- The study periods for each region were not different. As mentioned in the methods section, the CKD Registry group was created after making sure that all the regions were represented right from the inception.
- As mentioned above and in the manuscript, the data does not allow us to calculate the rate of incident CKD for general population either overall or for a specific region because the data is hospital based and the coverage is incomplete.
- All data is presented as mean and standard deviation as mentioned.
- Abbreviations in the table have been expanded in footnotes
- Recommendations for future research as suggested by the review would have been included.

Reviewer #3

- We agree with the author that most severe cases are overrepresented in the report as is evident from the greater proportion of stage V CJD patients. This is because of the hospital-based nature of the reporting. We also agreed that not all patients with advanced chronic kidney disease would require analysis immediately. However we have quoted other studies that show that the availability of dialysis to these patients falls short of requirement and is also relatively short-term.
• As mentioned above, the exact number of hospitals that provide care for patients with kidney disease is not known. However, the participating centers into most major nephrology units of the country including all public sector hospitals.
• We agree with the reviewer that focusing on areas with high coverage would provide important to the mission and allow us to calculate incidence and prevalence of security. This has been mentioned in the discussion.