

Peer Review Report

Review Report on Analysis of the economic burden of chronic kidney disease with 2 comorbidities among patients in Xuzhou, China

Original Article, Int J Public Health

Reviewer: Jaroslav Rosenberger

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EVALUATION

Q 1 Please summarize the main findings of the study.

This manuscript analyse the economic burden of CKD with comorbidities in a large Chinese electronic medical record database. The authors identified 29660 cases with CKD and calculated the costs related to treatment of CKD and its comorbidities.

Q 2 Please highlight the limitations and strengths.

The major strenght of the manuscript is a large sample of patients with CKD including data regarding comorbidity and costs.

The major limitation is the analysis regarding comorbidity instead of CKD groups.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Dear editor and authors!

I have read the manuscript 1607000 with great interest as it contains important information from a large cohort of patients. Data are very valuable. I have several comments regarding methodology of the study and I think addressing them might improve clarity and validity of the study.

1. Introduction (and Discussion). I suggest to refer to KDIGO 2024 CKD guideline as this is the most relevant international source.
2. Methods, inclusion & exclusion criteria. Exclusion criteria are not clear. Were patients after kidney transplantation included?
3. Methods. You have decided to categorize your patients according comorbidity. This is an unusual approach, as the majority of studies in this field stratify their sample according CKD stage. From your methods section it is clear you have the information about GFR and therefore it is possible to categorize your patients into "standard" CKD stages (even if you merge some categories, like CKD 1+2, CKD3a+b, CKD 4, CKD5 non dialysis, CKD5 HD, CKD5 PD, transplant recipients).
4. Statistics. I doubt that your data are normaly distributed. I expect that in majority of data you should use medians and not averages.
5. Results. Clarity of this part is ... very bad. Plase, change the structure, do not repeat information you have in tables.
6. Results. I miss general description of the sample. What is the prevalence of CKD in your sample? What is the prevalence of different CKD stages? Primary CKD diagnosis are usually described – you only mention two groups and no real data are shown (this is important – e. g. glomerulonephritis even in early phase of CKD often requires (expensive) immunossuppressive drugs while hypertension only cheap antihypertensives.
7. Results. Dialysis patients should be analysed separately as the cost of dialysis is extremely high compared to anything else. Please, state clearly, what is a cost of hemodialysis procedure and peritoneal dialysis (either each procedure or weekly or monthly – depending on the situation in China).

8. If kidney transplantation recipients are included in the sample, state their number. Please, separate them from other non-dialysis patients. There are different costs for the first year as it contains operation including hospitalisation and induction immunosuppression. All subsequent years are cheaper.

9. Results and Discussion. You mention two primary diagnosis – glomerulonephritis (GN) and diabetic kidney disease (DKN). I am confused with your results – at some places it seems you have more GN while at the others you have more DKD. In "western" countries like Europe and US there is tendency for having more and more DKN and hypertension kidney diseases while incidence of GN is decreasing in time. This should be clarified in the Results section and properly discussed (in Discussion section).

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

yes

Q 5 Are the keywords appropriate?

yes

Q 6 Is the English language of sufficient quality?

The language needs significant improvements.

Q 7 Is the quality of the figures and tables satisfactory?

No.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Partly

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.