Reviewer’s report

Title: Sulfonylurea Use and the Risk of Hospital Readmission in Patients with Type 2 Diabetes

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Reviewer: Toshio Iwakura

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Review of BEND-D-15-00064

Sulfonylurea Use and the Risk of Hospital Readmission in Patients with Type 2 Diabetes
By Pamela C. Heaton, Ph.D.; Vibha C.A. Desai, Ph.D.; Christina M.L. Kelton, Ph.D.; Swapnil N. Rajpathak, M.D., Dr.PH.

The largest component of medical expenditures for patients with diabetes is hospital inpatient care.

Many hospitalizations of patients with diabetes result from hypoglycemia due to SU.

The objective of this study is to compare the risk for diabetes-related hospital readmission in patients with type 2 diabetes treated with SU compared to those treated with AHAs.

Using a retrospective cohort analysis, the authors demonstrate that patients treated with SU compared to those not treated with SU experienced higher rates of readmission and higher readmission costs.

It's important to estimate relationships between SU use and risk of hospital readmission. Although the findings are of interest, this study still has some problems to be improved as indicated below.

My major comments are as follows.

1) Clinical information of patients treated with SU is not enough to compare the characteristics of patients. This study investigates the difference in the treatment of diabetes. So clinical information (such as blood glucose level, HbA1c, duration of diabetes, daily dose of an SU, number of hospitalizations etc) is required to understand the quality of treatment of diabetes.

   Table 2 shows Perceived health status. However, it's difficult to estimate glycemic control in patients treated with SU.

2) There are lots of reasons of hospitalization. So it's difficult to assess the effect of SU.

   Is hypoglycemia mainly associated with hospital admission?
It's better to describe the distribution of primary causes of hospitalization in this manuscript.

3) What kinds of patients take SU?

The authors should discuss such an issue to prevent hospital admission and reduce the costs.

Here are the minor comments.

1) Figure legend is lacking in this manuscript.

Figure and Table legends should be explained in more detail.

2) Please insert a p-value after `95% CI 0.93-1.52' (line 22, page 10).

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.

Yes

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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