Reviewer's report

Title: Early Prediction of Acquiring Acute Kidney Injury for Older Inpatients Using Most Effective Laboratory Test Results

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Reviewer: Quan Zou

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In this study, the authors used two types of data: the last value and the trend of the sequence for each laboratory test, which is helpful for the identification of acute kidney injury. The identification of acute kidney injury is very meaningful, and the author's consideration of the problems from the two types of data is also unique, but this article still has many shortcomings.

1. Sentence problem: Starting from line 42 on page 8 and ending on line 7 on page 9, there is a repeated explanation of the same problem. This problem also exists between line 42 on page 14 and line 30 on page 15. Please check the errors carefully and correct them.

2. In line 52 on page 10, the author mentions "We consider two ratios for these two parts, i.e. 8:2 and 5:5.". After reading the full text, I still cannot understand why such a division is made, and what is the significance of such a division?

3. There are many ways to express similarity. Why do the authors choose the difference between the two to express the similarity between the target inpatient and other inpatients?

4. At the end of page 15, there is such a sentence "Finally, we classify the inpatient to be positive if there exist one (laboratory test, type) pair which classify the inpatient to be positive.". From the context, I still cannot understand the conclusion. Can the author explain in detail what this conclusion is based on?

5. In the "Comparison of existing works" section on page 16, did the author use the same data set for comparison experiments? If not, this part of the experiment is meaningless, and you need to add corresponding experiments to illustrate the superiority of this model.
6. There is such a sentence at the beginning of page 8: we call an encounter and an inpatient hereafter interchangeably. Please explain the sentence in detail.

7. In this study, authors generated 8 data sets, However, Table 3 only shows the experimental results of a set of balanced data. So, which set of data is this?

**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.

Not relevant to this manuscript

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

Acceptable

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