Reviewer's report

Title: Impact of a modified claims ascertainment period on Liu comorbidity index scores in chronic dialysis initiates

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Reviewer: Matthew Abramowitz

Reviewer's report:

Rigler and colleagues’ paper focuses on modifying the Liu comorbidity index to reduce survivor bias and increase follow-up time after the baseline comorbidity ascertainment period in incident dialysis patients. This is a nicely written paper that will be of value to health services researchers. I have several comments:

Major Compulsory Revisions:
1. Although mentioned by the authors as a limitation, the applicability of their modified Liu index only to patients with Medicare coverage in place at the time of dialysis initiation is an important caveat to their work. As they point out, this excludes 42% of incident dialysis patients. For research questions that focus on these Medicare-eligible patients, this is not an issue. However, an investigator whose question is not necessarily limited to this subgroup must decide whether the benefits of the modified Liu index outweigh the downside of limiting the study population to Medicare-eligible incident patients. Is there any data examining the differences in comorbidity and comorbidity indices (such as the Liu index) between Medicare-eligible and non-eligible incident dialysis patients that could help guide this decision?

2. The authors should clarify the time period used for comorbidity ascertainment in each column of Table 1. Is all data from the 0-90 day time period? Or, for example, do the data for those surviving <270 days come from 0-90 (as in the modified Liu index) and #270 day survivors come from 91-270 (as in the original Liu index)? If all data is from days 0-90, it would be helpful to have another table, focused on the #270 day survivors, that details the comorbidity data obtained using the 0-90 vs. 91-270 time periods. This would provide greater insight into the differences between the 2 indices, in addition to the scores that are already provided in Table 1.

Minor Essential Revisions:
1. In Table 1, the p-value for the Home Dialysis comparison is missing.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.