**Reviewer's report**

**Title:** Factors Associated with Prolonged Length of Stay for Elective Hepatobiliary and Neurosurgery Patients: A Retrospective Medical Record Review

**Version:** 0 **Date:** 03 May 2017

**Reviewer:** Young-Taek Park

**Reviewer's report:**

Dear Authors,

This study is to investigate the risk factors associated with prolonged LOS for patients with elective hepatobiliary (HPB) and neurosurgery (NS). The study adopted a retrospective cross-sectional study design and selected group of patients with HPB and NS and looked into those risk factors. The manuscript has several meaningful study results. For an example, intra-operative factors critically impacted on prolonged LOS. However, this study has several drawbacks as a publishable manuscript as follows;

Major Compulsory Revisions

1. I think that the background section should be rewritten for several reasons; (1) The study purpose is being described at the beginning of the background section, (2) Some methodological explanations seem to be appeared in the background section as well (e.g., elective procedures), (3) You said that "our contribution is to the literature on surgical safety and quality of care that influence LOS [8-13]" By judging from several referenced articles you cited, I think that there are many studies on investigating factors affecting LOS, etc., which degrades the value of your study, etc. Overall, the structure of the background section does not fit well into the research article format. Please rewrite the whole part. This part should include the contents below in the following sequence;

   - What is prolonged LOS?
   - What are those negative effects of prolonged LOS? (Citing 2 or 3 references is not enough)
   - What studies have been so far? Specifically describe other study results. Simply listing risk factors would not be enough.
   - Why your study is important? If you say that your study differs from the others, then why does it differ? In this case, you should explain how other study did. Simply saying your study is focusing on the entire surgical pathways is not enough.
   - Put the purpose of your study at the end of the background section.
- What could your study give the research or policy implications? Put this part at the end of the background section.

2. You said that; your study differs from others because the other studies were about only partial perioperative pathways (PPP), but your study is about the entire surgical pathways (ESP). Are you sure that most of studies are regarding the partial perioperative pathways? If so, please describe examples of other studies which have adopting PPP. Please explain the difference between PPP and ESP?

3. There is no demographic information of the study subjects: HPB, NS. Please add table on it. It would be great if you could put type of healthcare services the patients received.

4. This study had several critical draw backs such as small sample size, subjective selection of the study subjects, etc. Authors simply described them in the discussion and conclusion sections. However, I think that they would not be enough. Describe them specifically how they could affect the study results.

5. Regarding the research method section, I think that they are too much concise. Can you add more detail description to the manuscript for readers?

6. This study is about the prolonged LOS. Please see the title. But the potential part of the manuscript is also about shorter LOS. These two subjects seem to make the result table be seen as complicated. Is there any way to present the study result simple? Please think about this issue and suggest your idea.

7. There are some possibilities of research result fabrication. You said that two persons extracted data. But there is not any explanation on how they selected study subjects. If you selected the study subject electively or subjectively, I don't think that the study results could be produced objectively. Please add manuscript on how they selected study subjects and what kind of guidelines they did use.
Minor Essential Revisions

8. There are too many independent variables without having its ways of measurement. Please explain all those variables with its measurement status.

9. You selected two groups of patients: HPB, NS. Is there any reason? Describe this reason in the manuscript.

Discretionary Revisions

10. In abstraction section, delete the first sentence: "this study is the first ever on …..center". This is bombastic expression. Who cares about the first trial? Please rewrite this part again with other good reasons for the importance of your study.

11. Please think about the way of expressing your study results. It is very hard to understand the tables. Current study results seem to be seen messy. For an example, do they need 95% CI? Why? There is p-value. Please select the core statistics.

12. Please think about the other way of statistical analysis. If you want to stick to the current method, please add manuscript on the advantages of the current method compared to the others.

13. Move IRB explanation section from "design and setting" to "data collection" section. Add IRB number in the manuscript.

These are all my comments. I know well that you guys are all experts on this area and I am just a reviewer. All my comments are for the improvement of your manuscript and I hope for your understanding. I hope to see your revised manuscript in the next round of review process. Good luck!
Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Unable to assess

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I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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