Reviewer's report

Title: Utilization of rehabilitation services for inpatient with cancer in Taiwan: A descriptive analysis from National Health Insurance database.

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Reviewer: Yu-Chun Chen

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This is an interesting study described the utilization pattern of rehabilitation services during cancer patients’ hospitalization. The strength of this study is the use of a nationwide database to investigate a less discussed topic on use of rehabilitation during ones’ cancer treatment course which might be sometimes neglected during the acute treatment phases. Although the limitations of the database precluded the investigators from performing more sophisticated analysis, this study demonstrated the underutilized rehabilitation service during hospitalization among cancer patients in Taiwan. However, there are few points that need the authors’ clarification to strengthen their arguments.

1. In the conclusion part of the abstract, ‘the utilization of rehabilitation services by cancer patients was relative low’ is not clear. Is it lower than that in other countries or than that among non-cancer admissions?

2. It seems this study mixed ‘cases’ with ‘admissions’. A case is usually referred as a patient not an admission. The DD file of NHIRD is an admission-based sampling dataset instead of a patient-based sampling dataset. For the most parts of this study, ‘cases’ or ‘patients’ are actually ‘admissions’. The data processing part in methods and presentation of results needs further clarification.

3. In page 7, the first paragraph, the statement ‘a trend of an increasing number of inpatients diagnosed with cancer ….’ needs further clarification. A patient with many admissions during the study period may have more than one record in the dataset. Patients with more admissions are prone to have more weights than other patients. The increase of admissions with cancer diagnosis may be resulted from the increase of admission by every cancer patients but the increase of the number of patients with cancer.

4. In page 8, ‘The average medical expenditure for cancer patients was higher …’ needs further clarification. The number looks like the average expenditure of admissions with cancer diagnosis but cancer patients.

5. In page 8, the statement ‘High rehabilitation utilization was noted for rehabilaition, orthopedics, neurology, …. regardless of whether or not patients had cancer’ is not clear. Do you mean these departments had higher utilization rates for rehabilitation service in admission than other departments?

6. If the detailed records of rehabilitation services are available, does it make
sense to explore the distributions of modalities of rehabilitation services such as physical therapy, occupational therapy, communication therapy and psychosocial rehabilitation treatments vary by departments? If such records are not available, please leave it in the limitation part.

7. Please give proper notation for Figure 1. I suppose Plastic should be ‘Plastic Surgery’ and Surgery should be ‘General Surgery’ and please add notation for the Y-axis.

8. In page 9, line 8 of the first paragraph in the discussion. The statement ‘This correlates with the growing population of patients with cancer’ looks too straight. The previous analysis didn’t give any clue in increase of the number of cancer patients or any test in the correlation between the number of cancer patient and the utilization rates.

9. In page 9, the meaning of the second paragraph is not clear. Do you suggest any relationship between utilization rates and the average rehabilitation fee? This paragraph reads like a part of results rather than discussion. Please give more explanation for this interesting finding.

10. In page 11, four departments including orthopedics, neurology, rehabilitation and neurosurgery had high utilization rates in admissions with cancer diagnosis. However, five departments with high utilization rates were indicated in page 8. For the department of plastic surgery, the utilization rate for rehabilitation in cancer admissions is much lower than that in non-cancer admission. In Taiwan, as the plastic surgeons are also allowed to request physical therapies, is there any explanation for this? For the last sentence, please give more references for the explanation.

11. In page 11, the second paragraph. Does the increasing utilization trend noted in the department of family medicine (hospice-care unit) only or also in other department (such as department of ENT and thoracic surgery)? The author may consider moving this interesting finding in the results section and leave more discussion on the findings here.

12. In page 12, some arguments in the conclusion are too straight. The author may consider using ‘inpatient rehabilitation service was underutilized among cancer patients’ instead of the statement ‘However, rehabilitation interventions for cancer patients are still overlooked and underutilized…’. The study does clearly demonstrate the underutilized rehabilitation service among hospitalizations with cancer diagnosis. However, the patients did not use inpatient rehabilitation service may still use rehabilitation service in the outpatient sector. As the dataset limited the further analysis, the author may consider using a more conservative conclusion. Moreover, we cannot tell if an interdisciplinary team, as the last sentence suggested, increases the utilization rate for rehabilitation unless the association had been explored in this study.

13. The author may consider consulting English editing service to check their manuscript.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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