Author’s response to reviews

Title: Health related quality of life of dialysis patients in Malaysia: Haemodialysis versus Continuous Ambulatory Peritoneal Dialysis

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Author’s response to reviews:

We would like to thank the reviewer for attentive and thorough reading of this review article and for the constructive suggestions, which help to improve the quality of this manuscript. Our response follows:

Response to reviewer 1

1. On the page of methodology, line 51, total number of CAPD and HD should add up to 163 not 173 as written (90HD/73 CAPD). One sentence from conclusion page line 36-37 "a longitudinal study is obligatory to determine a causal relationship" this sentence is not true and would recommend deletion.

Reply: We apologise for the error and have made the necessary corrections. The total number of patients were 173 (90 HD and 83 CAPD).
2. Can the author comment on the difference in centre recruitment? Federal vs state especially in terms of care provided e.g. does the bigger centre provide more services to the patients like 24-hour on call etc.

It would be good to describe briefly the services rendered/available in the program for the PD patients, like home visits etc. reimbursement

Reply: There is no major difference between a state and federal hospital. They are both tertiary public hospitals with specialist facilities. The Ministry of Health is primarily responsible for the healthcare in Malaysia which has a dual-tiered system of services consisting of the public sector and the co-existing private sector. The term ‘federal hospital’ is used since this hospital is situated in one of the Federal territory in Malaysia.

Dialysis is financed through a mixed public-private model. Public financing is funded through the general taxation, with annual health budgets allocated by MOF to the MOH (Lim et al. 2010). Civil servants and their dependents would be reimbursed by the government through the Public Service Department (PSD). The government also provide financial assistance to eligible patients through a few other agencies including SOCSO, a social welfare insurance body that receives mandatory contributions from private-sector employees earning below RM4000 per month and the state-run Islamic social welfare organisations. These agencies would reimburse eligible patients for certain treatments and dialysis which included as a rehabilitation therapy. Within the private sector, individuals can purchase health insurance on voluntary basis, with variable premiums charged based on their health status and the level of coverage or covered by negotiated packages with Managed Care Organizations (MCOs) and private insurance companies or by out of pocket payment. In the MOH dialysis centres, the treatment is heavily subsidised by which patients imposed with a nominal fee (RM13) per HD session and RM100 per month for PD including free injections and other routine treatments.

We have added a brief paragraph on the reimbursement and financing.

3. The comorbidities appears to have been collected from patient self-reporting, I would strongly suggest using a standardised scoring like Charlson comorbidity index or other standardised index rather than from patient self-reporting or recollection
Reply: The co-morbidities were collected through patients’ medical records diagnosed by medical personnel. We did not perform Charlson comorbidity index scores which was not included in the methodology of this study.

4. In your discussion and comparison to reference 18 (Yang F et al), the scores on utility scoring were very different I believe 0.5-0.6 vs your cohort of 0.8 to 0.9 which is near normal function, though there is no difference between modalities. It would be interesting to discuss the vast variation of perception of QOL, esp in similar Asian cohort.

Reply: We have explained in the discussion that the major difference of utility score between this study and those in other studies were attributed to the mapping index used to calculate the scores. In this study, Malaysian Value set was used which generated higher utility values than the other studies. This was illustrated in the quality of life study among Indonesian cervical cancer patients by Endarti et al. that compared EQ-5D-3L index scores using Malaysian, Singaporean, Thai, and the UK value sets. There was significant difference among utility scores derived from the four value sets, among which the Malaysian value set yielded higher utility than the other three value sets.

Yang F et al. used a mapping (“crosswalk”) function (van Hout, Janssen et al. 2012) to reflect the values of the described health states to the general UK population.

We have also briefly explain that the ethnic and cultural composition might have contributed to the variation. Malaysia is composed of multi-racial and multi-ethnic population.

5. In Table 4, mean readings were shown but no SD value shown . The conversion of dialysis duration into categorical variable of 4 yrs, this duration was pick from my inference is to try to get the numbers even,

The problem is PD patients median time on dialysis usually around 48 months in best centres , I would assume that majority of the >4 yrs would be HD patients and there are studies that showed that QoL decline over time.
Reply: In the Table 4.1, it is shown that the mean dialysis duration (years), mean (SD) was 4.1 years for HD and 3.7 years for PD. We agree that majority of the patients in >4 years of dialysis were on HD. However, significant statistical difference was not found.

6. The comorbidities are not standardised and not defined and scored according the severity.

Reply: We have provided definitions for the co-morbidities.

7. The paper would be more impartial if there is comparison to other studies using the same ED-5D score

This study was conducted as part of the cost utility analysis of ESRD treatment in Malaysia: HD vs CAPD. To the authors’ knowledge, there is no other study conducted locally comparing HD and CAPD using EQ-5D questionnaire. As explained in the discussion, the use of different value sets to generate the utility scores make it difficult to compare directly in terms of the scores. However, we did outlined the factors affecting the quality of dialysis patients in relation to other studies. Results from this study has provided the utility index score to conduct the cost utility analysis.

Response to reviewer 2

Abstract

1. The authors mention health-related quality of life and the EQ-5D-3L questionnaire but in the scoring listed in the results, would be helpful to give some context or range of the score and whether high or low scores are better.

Reply: We have added a statement on the range of score in the methodology section.
Introduction

2. The second paragraph starting with ESRD -first two sentences are not necessary in a Nephrology journal.

Reply: The first two sentences of the second paragraph are removed and references are updated accordingly.

3. Fourth paragraph - should remove "it is believed"

Reply: ‘It is believed’ is removed.

4. Last paragraph - should be "aims" of the study. Should also put a comma after "CAPD patients.

Reply: This sentence is amended accordingly.

Methodology

5. In the statistical analysis, would give more information about the conversion of the utility score. Why are the scores converted, and what's the algorithm?

Reply: We have described that Malaysian tariff developed by Faridah Aryani et al. was used to convert the utility score (N3 Rescaled VAS scoring algorithm). The EQ-5D self-reported questionnaire comprises a visual analog scale (VAS) and an EQ-5D descriptive system. The VAS captures the respondent's self-rated health status on a graduated (0–100) scale, with higher scores for higher HRQOL. It provides a direct valuation of the respondent's current state of health. The descriptive system contains five dimensions of health; mobility, self-care, usual activities, pain/discomfort, and anxiety/depression which can be used as a health profile or converted into an index score representing a von Neumann-Morgenstern utility value for current health. This scoring algorithm is described in the reference provided (no.22, Faridah Aryani Md Yusof et al.)
Results

6. in 3.1, would say "in terms of Hepatitis B and Hepatitis c status"

Reply: We have amended this sentence accordingly.

7. In 3.5, would say "wheelchair bound status"

Reply: We have amended this sentence accordingly.

Discussion

8. 1. In the second paragraph, for the two prior studies you are referring to, would bring up how your study is different and/or more relevant, current, applicable, etc due to your metric of measurement. Right now it just looks like the prior studies are larger and maybe stronger

Reply: We have added a statement to indicate current study is different from the prior studies.

9. I would delete the sentence starting with "Nonetheless"

Reply: The word ‘nonetheless’ is removed.

10. I'm not sure if that is a typo but the word "vindicated" doesn't make sense in the second-to-last paragraph of discussion

Reply: The word ‘vindicated’ is removed and adjustments have been made.

11. To add to your limitations I would also mention the total sample size being relatively small compared to other similar studies, in addition to having just 5 hospitals as you noted

Reply: We have added a statement on the smaller sample size as compared to other studies.