Name of journal: *World Journal of Transplantation*

ESPS Manuscript No: 16537

Dear editor,

We have now revised the manuscript based on the suggestions from the reviewers. Changes are marked in red in the manuscript. Responses to individual reviewers' comments are given below.

Reviewer 1

Comment: The manuscript describes the new kidney allocation system for deceased donor kidney transplantation, recently approved and implemented. The Authors outline the characteristics and the rationales of the previous allocation system, and evaluate pros and cons of both policies. Given the novelty of the topic and the clinical and social relevance of it, the paper deserves attention. The sections that appear more crucial are those dedicated to the possible limitations and unintended consequences of the new allocation scheme. It seems clear that in this regard, there is still ample space and the need for further research. The manuscript is no doubt interesting for clinicians, but it requires some language polishing. Sentences are often too long and need shortening. On page 9, line 4, there is a confusing typo ("many" should read "may"). Nonetheless, if the Authors simplify and review style and syntax, making the paper easier to read and clearer, it could be worth publishing.

Response: *We have clarified the typo error on page 9, line 4. We made an attempt to make the paper more simplified and easier to read.*

Reviewer 2

Comment: This is well-organized manuscript that explained about the purpose and the working system of the new kidney allocation scheme (KAS). In addition, the authors not only explained the benefit of the new KAS compared to old one through simulation program but also anticipated the unintended negative consequences.

Page 5 line 18 & 22 : please explain how to calculate KDPI and EPTS score with the numerous variables. And please add supplementary references concerning the advantages and validation of the KDPI and EPTS system.

Response: *We have now described the formulae used to calculate KDPI and EPTS in Table 1. The description of where the formula has been derived from is in Page 6, 1st paragraph. The KDPI is derived by utilizing the donor specific elements from the kidney donor risk index (KDRI) developed by Rao et al in 2009. KDRI was validated by applying the formula to first time transplant recipients from 1995 to 2005 in the national Scientific Registry of Transplant Recipients (SRTR) data base. The KDRI was considered to*

be a substantial improvement in interpreting the graft outcomes based on donor related factors as compared to the expanded criteria donor (ECD) and standard criteria donor (SCD) terminology. The EPTS score was developed by the SRTR upon request from the OPTN Kidney Transplantation Committee. For the sake of simplicity, the committee requested that the score only include the four factors described above. The formula was derived using a Cox proportional hazards model to quantify the associations between the four factors and patient survival after transplant. Relevant references added are 10 and 11.

Comment: Page 7 line 6: why did the candidate with blood type B have the longest wait times? Could you tell us the median waiting time for each blood type?

Response: *Please see page 7, last paragraph for details. The wait time for a potential recipient on the list is variable based on the geographic region and availability of organs. Traditionally blood types B and O candidates experienced the longest wait time in every region because blood type B is least common and blood type O kidneys are also given to other blood group recipients if there is a zero- HLA mismatch. Blood groups AB, A, O, and B have mean wait times of 2, 3, 5, and 6 years, respectively. Reference 12 added.*

Comment: Comment: And please explain what the A2 is and A2B blood type, and how the blood group B candidate can receive A2 and A2B blood type donor kidney.

Response: *Please see page 7 last paragraph and page 8 first 3 lines. A blood type comprises of A1 and non-A1 (A2) blood sub-types. A2 blood type may be less immunogenic as compared to A1. Studies have shown increased rate of transplantation with reduced waiting time along with similar graft and patient outcomes when A2 or A2B deceased donor kidneys were transplanted to wait-listed patients with B blood type when compared to B recipients of a B kidney. Reference 13 – 15 added.*

Comment: page 7 line 19: Is there any validation study for KPSAM simulation?

Response: *Please see page 8, second paragraph. KPSAM simulation program is routinely used by the OPTN committees to assess policy proposals. Reference 17 is added.*

Comment: Table 1 and 2: no vertical line and only 3 horizontal lines is used in medical articles.

Response: *Suggested changes are made in the tables.*

Comment: Table 1: An abbreviation is not used in title of table. Please write the full term of KAS.

Response: *Made the suggested change.*

Reviewer 3

No concerns