**Author’s response to reviews**

**Title:** Characterization of clinical patterns of dengue patients using an unsupervised machine learning approach

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**Version: 2 Date: 09 Jul 2019**

**Author’s response to reviews:**

July 7, 2019

Dear Editor,

Thank you for considering our manuscript, “Characterization of clinical patterns of dengue patients using an unsupervised machine learning approach”, as potentially acceptable for publication in BMC Infectious Diseases.

We are grateful to the reviewers for their thoughtful comments and suggestions. We have made every attempt to address their concerns.

We remain very excited by the opportunity to publish this work in BMC Infectious Diseases, in which we use a new approach to overcome the drawbacks in analyze a complex data as dengue clinical profile. For this, we used Random Forest and Self-Organizing Maps to visualize possible natural groups associated with clinical natural patterns in dengue confirmed cases.

We look forward to your response.

Sincerely,

Gleicy M. Hair, PhD
Technical Comments:

Editor Comments:

1. Please address the comments provided by Reviewer 1. These can be found below.

We addressed each point as described below.

2. Please clarify whether any administrative permissions were required to access the raw data. If so, please state who granted permission in the “Ethics approval and consent to participate” section.

The only permission required to analyze these data was consented by the Institution/hospitals IRBs. We described it in the “Ethics approval and consent to participate” section.

3. Please clarify your statement on the Availability of Data and Materials. We strongly encourage all authors to share their raw data. However, if data cannot be shared publicly for patient confidentiality reasons we ask that you state the following "The datasets generated and/or analysed during the current study are not publicly available due [REASON WHY DATA ARE NOT PUBLIC] but are available from the corresponding author on reasonable request.”

We clarified this point in the “Availability of Data and Materials” section.

4. Please remove the funding information from the Acknowledgements and include it in the Funding section instead. If you have no further acknowledgements please put “Not Applicable” in the Acknowledgements section.

We modified it as requested.

5. At this stage, please upload your manuscript as a single, final, clean version that does not contain any tracked changes, comments, highlights, strikethroughs or text in different colours. All relevant tables/figures/additional files should also be clean versions. Figures (and additional files) should remain uploaded as separate files.

Sure. Thank you!
Reviewer reports:

Review comments to Authors

After revising the manuscript looks better and has significant data. The objective of the study is very clear, the approach applied is appropriate, statistical analyses is suitable. The interpretation is reasonable, and the current version is technically sound.

We are grateful for your many positive comments and recognition of the potential of our work. We have made every attempt to address the concerns listed below.

ADDITIONAL REQUESTS/SUGGESTIONS:

- Last but not least is related to language issues. The paper requires profound language editing.

We hired a language editing service before the first submission but after many alterations made throughout the revision process, some new issues may have been inserted. We asked for a proofreading from a fluent person last two days to make sure it has suitable language with no mistakes. We also made sure that each of the issues listed below were fixed, except for neighborhood to "neighbourhood" because it seems to be different spelling between the American and British English.

Some of the noticed issues are listed below:

L57: add "an" before other > Done.
L74: add "The" before clinical > Done.
L75: add "to: after in > Done.
L79: correct spell of Radom to "Random" > Done.
L98: delete "a" before data > Done.
L103: add "with" after along > This line was edited.
L106: add "a" before direct > Done.
L109: add "the" before random Forest > Done.
L114: correct spell of neighborhood to "neighbourhood" through whole text > We kept the first option.
L131: delete in add "on" > Done.