

Review of: "An Optimal Control for Ebola Virus Disease with a Convex Incidence Rate: Imputing from the Outbreak in Uganda"

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Potential competing interests: No potential competing interests to declare.

The paper you presented proposes a mathematical model for the optimal control of Ebola Virus Disease outbreaks, which is an intriguing approach, but it has some limitations and concerns that may be addressed before policymakers can use it to control Ebola Virus Disease outbreaks.

1. Generalization: The model is based on specific assumptions and data related to a particular outbreak, and it may not be applicable to other outbreaks with different parameters, such as different transmission rates, mortality rates, or treatment availability. Therefore, it is essential to validate the model's results with more data from different outbreaks to ensure its generalization.
2. Assumptions: The model assumes a convex incidence rate, which may not be realistic, and the accuracy of the model's results depends on the validity of the assumptions. Therefore, the authors need to provide a clear justification for the assumptions they made in the model.
3. Complexity: The mathematical model proposed is complex and may require advanced mathematical skills to understand and interpret its results. Therefore, it may not be accessible to a broader audience, including policymakers, public health officials, and the general public.
4. Cost-effectiveness: The paper's conclusions suggest that policymakers should focus on treatment and lock-down to combat the disease, but the model's cost-effectiveness analysis is based solely on the cost of the different control measures. The model does not consider the social, economic, and ethical implications of the different control measures, which are also essential factors in policymaking.
5. Practicality: The model may not be practical for disease-prone countries, where resources and infrastructure are limited, and the implementation of the proposed control measures may not be feasible. Therefore, policymakers need to consider the practicality and feasibility of the proposed control measures before implementing them.

I congratulate the authors on their very interesting paper, and they might want to address the limitations and concerns so that policymakers can easily use it to control Ebola Virus Disease outbreaks.