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.

Report on Qeios article titled “An Optimal Control for Ebola Virus Disease with a Convex Incidence Rate: Imputing from the Outbreak in Uganda”

Fulgensia Kamugisha Mbabazi et al.

An optimal control model of the Ebola virus disease is developed and examined in this paper using a mathematical model with a convex incidence rate. An optimal control approach is assessed, with the goal of lowering the population’s infection rate and raising the proportion of patients who recover after receiving treatment. Three control measures: tracing of contacts, lock-down and treatment have been considered. The authors deduced that policymakers should concentrate on treatment and lockdown to combat the disease. Suggestions for authors:

• A professional proofreading revision is required to fix language flaws.

• Check the manuscript carefully for typos.

• The abstract does not quite convey the vibrancy of the findings and the depth of the main conclusions. The authors should please extend this somewhat for a better first impression. • Keywords need to be modified.

• Punctuation symbols in mathematical formulas should be added. •

The conclusion section should include the major findings. •

The authors should carefully revise the arrangement of the references according to the guidelines of the Journal.

• The writing organization is good but the writing style needs to be polished.

• What is the robustness of the proposed method?

• Write about the advantages of the suggested method over other existing methods? •

The originality of the paper needs to be stated clearly. It is of importance to have sufficient results to justify the novelty of a high-quality journal paper.

• The introduction is poor, for better representation of manuscript the following references, need to include in the manuscript: “On nonlinear dynamics of a fractional order monkeypox virus model, Chaos, Solitons Fractals, 2022, 164, 112716.”, “Numerical, Approximate Solutions, and Optimal Control on the Deathly Lassa Hemorrhagic Fever Disease in Pregnant Women. Journal of Function Spaces, 2021.”, “Investigating the dynamics of a novel fractional-order monkeypox epidemic model with optimal control, Alexandria Engineering Journal, Volume 73, 2023.”

• The Introduction should make a compelling case for why the study is useful along with a clear statement of its novelty or originality by providing relevant information and providing answers to basic questions such as: What is already known in the open literature? What is missing (i.e., research gaps)? What needs to be done, why and how? Clear statements of the novelty of the work should also appear briefly in the Abstract and Conclusions sections.