

# Reviewer-1

I found the article to be interesting, of value; but also incomplete.

The word “Stochastic” is not common – I wouldn’t use that word in the title. My recommendation would be to think of a similar title that entices readers. Call it “Explanatory modeling” or “Predictive modeling” or some alternative that appeals more to public health professionals that are not disease/mathematics experts.

Second paragraph: “Results show that even when the basic reproduction number , timely interventions of control measures.....” Seems like an incomplete idea, that something is missing.

I think the language is sufficient, but could be enhanced considerably by more explanatory remarks. The journal appeals to many in the Public Health field, not just disease specialists.

There’s a 2.2 Results section and a 3.3 Results section – I don’t understand these. I believe there should be a Discussion section, also Limitations, and a Significance section (why does it matter? Why is it important?). Most manuscripts have an Introduction, Methods, Results, Discussion, Limitations, Significance, Conclusions sections with some variance. I think the manuscript should conform to these sections to improve readability and coherence.

Incomplete idea in the abstract; missing definitions. Page 3 for example, “Here,,,” “Similarly,,,” “The compartments, ,” Page 4 ...COVID 19 pandemic data in Brazil (,,,,,, and ). Finish the idea. Author shouldn’t submit a manuscript that isn’t complete or with data missing. This isn’t ready for publication. It should be ready for publication when author submits. Table 1 is missing the Parameter in the first column (I’m assuming something should be there?) These issues should be corrected, the manuscript completed, and then re-reviewed and graded again.