



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	Ms_BJMCS_20180
Title of the Manuscript:	Analytical model for childhood pneumonia, a case study of Kenya
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments	The paper describes a mathematical model of childhood pneumonia in Kenya. The authors present a literature review including a few pneumonia models that have been proposed before, none considering all the same aspects that the authors studied. A sound mathematical analysis of the model is given, describing the reproduction number in different scenarios. They also show the conditions to local and global stability of a disease free equilibrium point and of a endemic equilibrium point. They conclude the paper with practical recommendations to the Government of Kenya in order to reduce the burden of childhood pneumonia. The authors show a good introduction to the burden of pneumonia. However, as a scientific paper the main goals of the study should be better described on this section. Regarding the references, the authors could mention more papers on mathematical modelling of pneumonia to better inform the reader. For example on the first paragraph they mention that "most of the developed mathematical models concentrate on bacterial pneumonia". That sentence would be better with some references. Moreover, to clarify the reader it would be interesting to explain in the beginning of the section 3. (Model development) the reasons to choose this approach of	



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	modelling and the tools that were used. For example, for affinity or previous work or cite references of other works that indicate that this is a good approach for this type of problem. The authors should explain the difficulties to model this problem and why no data was shown. Did the authors implement and run the model? Which values they used for parameters? Are they available? Even if there is not a possibility of validation of the results quantitatively it would be interesting to see theoretical results. Or at least a justification of why it was not presented in this paper.	
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Minor REVISION comments	I have minor comments on the writing. Throughout all the text there are words that were not separated. It makes the text difficult to read, so it would be important to make sure there are no missing spaces on the final version. A few suggestions regarding the writing: On the second sentence of the abstract, I suggest replacing “my knowledge” for “our knowledge”. The 7th paragraph of the introduction, seems redundant, I suggest cutting it off. On the 6th paragraph of literature review, I suggest replacing “my” for “our”. Also, the following paragraph starts with “The research study...”. I suggest replacing the beginning of the sentence with “This research study involved a mathematical modeling approach where the children under five years old...”. The authors should mention on the model development section that there is an appendix with the description of the variables and parameters of the model and definition of terms. On page 13 the last paragraph seems to be missing articles: “...(Rc) is the average number of...” On subsection 4.7 Theorem 5, it seems to be missing the work stable: “The DFE is globally stable wherever...”	
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	On subsection 5.1, first sentence: "if all points in the neighborhood of the equilibrium point..." second sentence: " An equilibrium point..."	
<u>Optional/General</u> comments		

Reviewer Details:

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