



**SDI Review Form 1.6**

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| Journal Name:            | <b><u>British Journal of Mathematics &amp; Computer Science</u></b>    |
| Manuscript Number:       | <b>Ms_BJMCS_20180</b>                                                  |
| Title of the Manuscript: | <b>Analytical model for childhood pneumonia, a case study of Kenya</b> |
| Type of the Article      | <b>Original Research Paper</b>                                         |

**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:

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**PART 1: Review Comments**

|                                     | Reviewer's comment                                                                                                                                                                                                                                                                                                                                                                                                                      | Author's comment (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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compulsory</b> REVISION comments | <p>the title of the paper misrepresents the contents: there are no Kenya-specific attributes within.</p> <p>Also, many symbols are not defined (for example: lambda on pg 7, asterisks on page 27 and beyond, setting tau 1 and tau2 = 0 but including them in the equation on page 14...), making most of the manuscript highly difficult to read and understand.</p> <p>It's hard for me to see how this manuscript can be fixed.</p> | <p>➤ The following are the Kenya-specific attributes within the model;</p> <ul style="list-style-type: none"> <li>• Kenya Health information system (available online) data classifies treated pneumonia cases as outpatient and inpatient, in our model they are represented as mildly treated and chronically treated respectively.</li> <li>• Isolation of different types of pneumonia is not carried out in Kenyan hospitals, the dynamics of pneumonia can only be developed with assumption all of them exist in population but with different virulence levels that is general model with chronic and mild infectious pneumonia subclasses.</li> <li>• The Kenya health system and UNICEF maintain age structured data on pneumonia hence it is possible to extract data of the under five years children. Numerical results will be in publication two.</li> <li>• Pneumococcal vaccines and</li> </ul> |



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|                                  |  | <p>Haemophilus type b vaccines are already in place, the model consider a vaccinated subclass.</p> <p>➤ The control reproduction number is the most import epidemiologic threshold of this study and setting <b>tau 1 and tau2 = 0</b> help us to determine the effects of treatment to the dynamics of pneumonia. However <b>tau 1 and tau2 = 0 are not used in the subsequent model analysis.</b></p> <p>➤ Reduction of number of systems and/or parameters (variables) gives rise to new attributes/parameters, this change is symbolised by introducing or adding extra asterisks.</p> |
| <b>Minor</b> REVISION comments   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Optional/General</b> comments |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |