

Review Form 1.7

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_99046
Title of the Manuscript:	MODELLING DYNAMICS OF HPV AND CERVICAL CANCER INCORPORATING PROTECTION
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:

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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)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p>	<p>The manuscript is important in the scientific community as it presents an important problem in cervical cancer.</p> <p>The title is suitable.</p> <p>The abstract refers to the data collected, in the manuscript there is no data being referred to. The same abstract refers to a deterministic model being used without any indication how the data collected will be used in the model. If there was actual data, it would have been interesting to include it in this research. The abstract clearly indicates how the author(s) intends to analyse the model. The mistake which most such research make is their reference to the stability of the system with reference to R0 without explaining what this means to the laymen, this can be shown in the abstract. Remember that the World Health Organisation need to understand your research as well, if it is too mathematical and does not bring out what you intend to do in simple English language, it will not have impact. The abstract says it can be reduced if it is well done, how?</p> <p>Introduction The subsections are appropriate; the following need to be attended to in the subsections. There is need to revise the language and grammar in the Introduction. For example, the first sentence uses the word "course" instead of "cause". There are many other instances that need attention. The referencing in the Introduction is poorly presented. A very long paragraph is referenced at the end, it is not clear which sentences are attributed which references. This need to be corrected. References need to acknowledge the source of ideas. The last paragraph is not referenced, especially when the author(s) claim that there is no specific treatment of HPV, there should be a reference for this claim.</p> <p>The Model The model is well explained, variables and parameters clearly defined. Sometimes it is easy to place them in a tabular form to ensure that they are all defined. In the definition of alpha, you mention that most HPV patients recover, there is no source/reference. Here you can remove this statement and just define alpha. If you have a reference that suggest that alpha could be greater than any other competing parameter, this can be included as a mathematical condition with reference. The author(s) should improve the appearance of the compartmental model, its poorly presented. For example, we have a bigger box for the class C. Also be careful when you write the parameters in the diagram. We have λ being presented the same as μ, these two are not the same, include the variable here for example, μ_S, μ_{I_h} or μ_P</p> <p>The equations are well presented except that the last equation is numbered (2), revise equation numbering. On equation (5) you say when $\nu=1$, R_{0v} becomes..., you instead give an expression for R_{0v} which is not simplified, it is clear here that you just removed an expression in LaTeX but did not cancel the μ which still appears in the expression.</p> <p>Section 3 In this section, there is an expression after equation (7) for the det, this expression is poorly presented, it has $(-\mu-\nu)$, here you can factorise the negative sign and use it to flip the expression you wrote as R_0-1 to $1-R_0$ which now can clearly be seen that it would be >0 whenever $R_0 < 1$.</p>	

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<p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Section 5 The author(s) do not indicate what the endemic equilibrium is, its necessary to write them out in terms of R0.</p> <p>Section 7 The sensitivity analysis here is not explained, this is just an array of equations which are not defined. All the equations presented here do not show their contribution to this work.</p> <p>The work is correct but is not enough to explain what the author(s) want to communicate. Here we only see qualitative analysis. The analysis only shows the stability of the disease-free and endemic equilibria, no other conclusions can be drawn from this. The intervention mentioned has not been explored clearly. There is no graphical presentation to support the qualitative work. No actual data was incorporated in this study.</p> <p>Only 7 references are within 10 years, the author need to include many new references that are within the last ten years. There is a lot of similar work out there. 12 references are more than ten years old. More information is required on the following references [17],[9],[7],[4],[3] There must be consistency in the presentation of references.</p>	
<p><u>Minor</u> REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>No, needs revision</p>	
<p><u>Optional/General</u> comments</p>		

PART 2:

	<p>Reviewer's comment</p>	<p>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)</p>
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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