



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Mathematics & Computer Science</u>
Manuscript Number:	2013_BJMCS_4682
Title of the Manuscript:	ANALYSIS AND MODELLING OF PREVALENCE OF HEPATITIS B USING DIFFERENTIAL EQUATIONS: A CASE STUDY OF THE TANO NORTH DISTRICT
Type of the Article	Research paper

General guideline for Peer Review process is available in this link:

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

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: 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	General/specific comments: The subject of this manuscript is interesting; however, the overall presentation is so bad. The title reads analysis before modeling, I think the authors needs to set up the model and then analyze it. So the title should read: Modeling and Analysis... or simply MODELLING HEPATITIS B PREVALENCE IN THE TANO NORTH DISTRICT, GHANA Throughout the text, the authors assumes readers are aware of where Tano North District is located, I guess it is Ghana. There are no references used in the manuscript. Are the parameter values estimated from real data, if yes, describe the method used for these estimations. "The main goal is to use existing clinical hepatitis B data from the biostatistics department of the Tano North district health directorate to formulate a mathematical model to understand the dynamics in the Tano North district and assist decision makers to formulate the best ideas to prevent, control and eradicate the disease" I did not see the data only assumption "Assuming the number of susceptible in the population is 10 and there is no vaccinated individual..." What do you mean by "The simulation gives us these graphs." What is the method used to carry out the sensitivity analysis? There is no new mathematics. I suggest the authors involve medical/epidemiology experts in Hep B to draft a real research question of interest to a larger community. What is new in here? The authors should clearly state the novelty of their paper so that readers will understand why it was important to have this published. In a nutshell, what do we lose if this manuscript is not	



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	published? One can go on and on with specific comments which are too numerous to list here. There are various Hepatitis B models out there, using the simple SIR-type model to estimate prevalence is weak. The present manuscript does not add anything that we did not know to the existing methodology and literature. I suggest the authors to do a google search of “mathematical model of Hepatitis B” and read the papers related to the topic, and also try to write using the style (grammar, syntax & semantics see http://link.springer.com/article/10.1007%2Fs10096-009-0821-6# and http://www.plosone.org/article/info:doi/10.1371/journal.pone.0012512) The manuscript needs a complete overhaul. I strongly recommend rejection of this manuscript in its present form.	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		

Note: Anonymous Reviewer