SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	**2013_BJMCS_7883**
Title of the Manuscript:	**Vaccination Dynamics of Chickenpox in Agona West Municipality, Ghana**

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	**Authors' response to final evaluator's comments**
1. **The model describes vaccination during the course of the disease, not prior to the disease outbreak. The question which this model might answer is what vaccination rate would control the disease, not what the total number of vaccinations needed.** 2. **In the model, vaccinated individuals are moved to the removed class and do not cause infections. Thus the model assumes that vaccination is perfectly effective, which is probably not true.** 3. **In the calculation of the reproduction number a factor N is omitted (it is left out of the term F), giving a reproduction number which is not dimensionless.** 4. **The reproduction number does not depend on the vaccination rate since vaccinated individuals do not contribute to the spread of disease.** 5. **The parameter values given can not be correct. The value given for the natural death rate implies a mean life span of 50 (no units given, suggesting that the units here are years. The value given for the latent period indicates a mean latent period of 28 (again, no units given, suggesting that the units here are days), but most estimates of the latent period are about 15 days. The recovery rate given implies a mean infectious period of about 70. Again, no units are given; most estimates of the infectious period are much less than 70 days. The point here is that parameters are used without specifying units, the units are different for different parameters, and some of the values are not correct.** 6. **A plausible model for this situation might assume a fraction of the population vaccinated before the disease outbreak and calculate a control reproduction number as a function of the vaccination fraction. Then one could calculate the vaccination fraction needed to bring the reproduction number down to 1. Such a calculation would be a routine exercise for students, and certainly not a research result.**	

Note: Anonymous Reviewer