Reviewer's report

Title: Varicella susceptibility and transmission dynamics in Slovenia

Version: 1 Date: 30 April 2010

Reviewer: Niel Hens

Reviewer's report:

In summary:

The authors present the results of a cross-sectional serological study on varicella in Slovenia using the appropriate statistical techniques. I only have a few comments to make:

Major Comulsory Revisions: None

Minor Essential Revisions:

The paper doesn't present the continuous antibody levels and their distribution. Since the seroprevalence is a tri/dichotimized version of these levels, it would be informative to have a more thorough look at the levels themselves.

p6: Can the authors explain the rationale behind the classification of the equivocals? Were the non-classified equivocals deleted?

p7: Please clarify how using residual samples affects interpretation of the results of this analysis.

p8: The authors have used two parameterizations for their piecewise constant force of infection model. Why did they select these agegroups? Since the force of infection reflects mixing behaviour, can the authors relate their findings to the educational system in Slovenia?

p8: How did the authors calculate their goodness of fit statistic? These values seem particularly small. Some further details are needed.

p9: Please present a 95% confidence interval for the peak force of infection.

p12: I believe that the authors' claim on a varicella vaccination campaign is too short-sighted. What about its negative herd immunity (likely increase in zoster incidence)?

Figure 1: please include the piecewise constant forces of infection (with prevalence estimates) in this graph.

Discretionary Revisions: none

Level of interest: An article of limited interest
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests