Reviewer's report

Title: The association of HPV-16 seropositivity and natural immunity to reinfection: insights from compartmental models

Version: 4 Date: 14 December 2012

Reviewer: Mark Jit

Reviewer's report:

No essential revisions needed.

I am happy with the authors' responses to my comments.

I do think that it is still debatable whether the simplifications made (eg. ignoring sexual activity in under 15s and age dependency of clearance due to the natural history of cervical lesions being more complex than represented here) are justified. However, the simplifications are acknowledged and the conclusions couched in sufficiently careful terms to reflect this uncertainty.

Ideally there would be some work to validate the model choices eg. by comparing results to those from more complex versions of the models. The paper as it stands raises interesting and important issues and hopefully will spark further investigation of the implications of seroreactivity and its use in transmission models of HPV.

Level of interest: An article of importance in its field

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.