Reviewer's report

Title: Optimizing Strategies for Population-based Chlamydia Infection Screening among Young Women: An Age-Structured System Dynamics Approach

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Reviewer: Massimo GIULIANI

Reviewer's report:

Title of the manuscript:
Optimizing Strategies for population-based screening Chlamydia infection Among young women: an age ... by Teng Y et al.

The manuscript was based on the results derived from an evaluation study of different age-dependant screening strategies for Chlamydia trachomatis (CT) infection (diagnosed by NAATs) in the population of young women. The study using a mathematical models approach to assess cost-effectiveness of the different screening strategies, also in term of cost-saving for care the acute infection and sequelae.

The authors concludes that the best way described by the study models was a CT screening conducted around adolescents aged 16-18 yrs and repeated every 6-8 months.

The results are interesting, detailed and useful to enhance the knowledge about appropriateness of CT screening in different early ages.

The study is well written, well documented and the objectives of the study are well defined and achievable. The study methods were extensive and appropriate to the production of the data.

The choice of a model age-dependent for CT screening is interesting and tends to complete the knowledge about CT screening among young adults until now collected.

Minor Essential Revisions

Figure 1 does not add anything more to what is written in the Introduction section, and is based on a scheme clinically incomplete and inaccurate. Authors should not insert it.

Figures 2 and 3 are too complicated and would deserve to be better designed. They are really necessary? If absolute Yes, it is possible to predict their inclusion as “Additional Materials”.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests' below described.