Reviewer’s report

Title: Nationwide prevalence of human papillomavirus infection in 37 cities in China

Version: 1  Date: 20 January 2015

Reviewer: Chih-Jung Chen

Reviewer’s report:

Major Compulsory Revisions

Want et al. surveyed the prevalence of type-specific HPV infections in the female population aged 15 to 60 years in China in 2012. Subjects at young age (15-19 years) had the highest prevalence of high-risk HPV infections in this investigation. The dominant HPV types were type 16, 52, 58 (high risk type) and type 6, 11 (low risk types). The authors concluded that the HPV infections in China have increased to a level of HPV-heavy-burden zone and the prevalence rates varied significantly among subjects of different ages and residing regions. The data provided by the study should have been valuable estimates of HPV infections in Chinese people; however, some critical information was missing in the description of study design, which prevents an unbiased interpretation of the data. The analysis and presentation of the data were not adequate, either. The detailed comments are as follows.

1. page 6, Ethics statement, line 136-140. It appeared that the samples used in the current study were residual samples that were collected for other purpose but not for HPV detection. If this was the case, what was the primary purpose when the samples were collected from the subjects? And how was it possible to obtain the inform consent from each individual (120,772 subjects) for this HPV detection survey using residual samples?

2. Page 6, Study population. The unclear description of the study population was the major problem of this study. The subjects were enrolled in ‘population- or employee-based screening programs’ in 37 cities. What were these subjects originally screened for? How many subjects were in the population-based screening and how many were in the employee-based screening? How were the ‘population-based’ screening conducted? The HPV infection rates can vary substantially in different populations and a detailed description of the study subjects is necessary for readers to understand which population was represented in this study.

3. Information in Figure 1 can be organized by few lines. The figure can be omitted to save space.

4. Two tests (HCII and Tellgenplex HPV DNA test) were used in the current study. What were the sensitivity and specificity of the two tests? The two tests are designed to detect different number of HPV types, which indicates that detection rates can be different with the two tests. It was therefore not adequate
to compare the HPV detection rate in different population respectively using two different methods. I will suggest the authors analyze the data separately according to the detection methods.

5. The analysis should be based on the cities but not the geographic regions. It may be more informative if the infection rates can be correlated to the economic condition or healthcare systems in different cities.

Minor Essential Revisions

1. Page 7, line 153-156, the subjects ‘were sexually active and no history of cervical treatment before screening. The exclusion criteria …or treatment for cervical cancer’. Were they excluded from taking part in the screening program or from this HPV survey?

2. The age range should be clearly stated. For instance, 15-19, 20-29, 30-39, etc.

3. page 9, line 222, As depicted in Figure 2, hrHPV infection was likely relevant…What did the ‘likely’ mean?

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.