Reviewer's report

Title: Increased seroprevalence of IgG-class antibodies against cytomegalovirus, parvovirus B19, and varicella-zoster virus in women working in child day care

Version: 2 Date: 11 April 2012

Reviewer: Jennifer S. Albrecht

Reviewer's report:

This review is based upon the author's response to a previous review. The authors have addressed the revisions that were suggested with the exception of the second major revision.

"The data from the general female population was collected using frequency stratification. Turks and Moroccans were oversampled. This stratification must be accounted for in the analysis so that the sampled population is representative of the target population. If the authors have done so, they should indicate this in the methods."

In their response, the authors acknowledge that the comparison group is not representative of the Amsterdam general population of women. However, when reading the study introduction and methods, they appear to be using this group as a representation of the general Amsterdam population. Therefore, this issue need to be addressed.

The authors appear to have controlled for country of origin in the analysis. However, this is not the same as taking the frequency stratification into account. Typically, this would be done using weights equal to the inverse probability of being sampled. If the authors are going to use these data as the comparison group for their study without accounting for the sampling method, then they should use it in all cases. For example, when comparing the seroprevalence of B19V among DCW, an odds ratio was reported based on the comparison group. However, when reporting the seroprevalence of CMV among DCW, an odds ratio based only on women of European origin in the comparison group was reported. The same comparison group should be used for all comparisons made in the study, regardless of whether or not it results in significant results.

I recommend either using weights in the analysis to obtain the correct racial frequency distribution of the general population, or reporting only those odds ratios that are based on the comparison group that was defined in the study and in Table 1

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

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