Reviewer’s report

Title: The Epidemiology of VZV Infection in Italy

Version: 2 Date: 1 April 2008

Reviewer: Andrew Vyse

Reviewer’s report:

This is an interesting paper presenting some valuable data. I have 6 main comments, four of which I think it very important that the authors consider and address:

Minor essential revisions:

# The authors should discuss the strengths and weaknesses of each of the data sets used.
# The regional differences seem particularly pronounced using the incidence data but much less so with the antibody prevalence data - this should be discussed. For example, might this perhaps be reflecting the quality of the data sets used rather than indicating important geographical differences in the epidemiology of VZV in Italy?
# The authors need to carry out a multivariable analysis (e.g. logistic regression) that includes age group, gender and region (and year of sample collection for the antibody prevalence data) as independent variables. This will be particularly useful for exploring more thoroughly any geographical effect on the epidemiology of VZV. (I would be surprised if region remained a significant factor for the antibody prevalence data after a multivariable analysis).
# 95% confidence intervals need to be put around all key estimates presented.

Discretionary Revisions:

# The age stratified antibody prevalence graphs are very similar for both the 1996 and 2004 data. This invites some comment about how the epidemiology of VZV may or may not have changed since the end of the 20th century.
# The author’s present antibody prevalence data from 2 separate time points (1996 and 2004). More could be made of this valuable feature of these data. For example, assuming both sample collections to be comparable, when stratifying by common birth cohorts sera from 2004 represents an additional 8 years of opportunity for exposure to VZV compared to sera collected in 1996. Therefore prevalence using 2004 sera should be higher or at least remain the same (but not be lower) than prevalence in the same birth cohort using samples collected in 1996. This characteristic could be used to estimate an incidence to complement the other incidence data presented.

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.

**Declaration of competing interests:**

I declare that I have no competing interests