Reviewer's report

Title: Disease burden of herpes zoster in Sweden - predominance in the elderly and in women- a register based study

Version: 2 Date: 26 August 2013

Reviewer: Julian Wei Tze Tang

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Major Compulsory Revisions

1) It wasn’t clear to me whether each HZ incident was counted as ‘1’ independent incident - regardless of multiple times a year. It may not matter if it does because each event will include treatment and hospitalisation - so from this point of view, using prescription data may not matter. See also point 5) below.

2) Is the predominance of females with HZ just because they tend to live longer and HZ incidence is much higher in the very old? I note the increasing trend starting as young as 50 yrs in females > male patient HZ incidence, but some comment about this may be useful as the are not entirely independent variables

3) some patients may tolerate HZ without treatment or hospital admission, others may want one or the other - the authors do mention this as sex-related health-seeking behavioural differences, but can they assess the impact of these differences in behaviour on their final results? If Swedish men are more stoical and do not see the Dr in clinic or go to hospital or take acyclovir, this may skew their results significantly - making their conclusions about women being more vulnerable to HZ (VZV reactivation). Can they also offer some immunological reasons for this - if the difference is so large, some possible causes are worth discussing.

4) What about all the comorbidities (e.g. pre-existing renal, liver, cardiac, pulmonary disease, endocrine disease) in these patients? There is no mention of these anywhere in the manuscript, as these do have an impact on whether VZV reactivates - or do they? This would be an interesting sub-analysis. Do otherwise healthy individuals - or at least those with fewer co-existing illness - reactivate VZV less frequently and less severely? Maybe these patients do not present to healthcare services for either prescriptions or hospitalisations? So they are an invisible healthcare burden - or maybe they just don't reactivate VZV? Can the authors extract and include these other comorbidities from the pharmacy and hospitalisation?

5) Is it worth stratifying the patients by frequency of reactivation of VZV, i.e. HZ incidence event per year - so there will be a small group that reactivate 2-3 times a year vs jus once a year, etc. This may show some interesting trends in those with varying numbers of comorbidities - and therefore feed usefully into recommendations for HZ vaccination prioritisation for certain high-risk elderly
groups.

Minor Essential Revisions

There are a few typos in the text that should be corrected in the revision, e.g. Figure 3 ‘Totalt’ is mis-spelt along the x-axis.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**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'