Reviewer’s report

Title: Nosocomial transmission of chickenpox and varicella zoster virus seroprevalence rate amongst healthcare workers in a teaching hospital in China

Version: 1 Date: 24 Apr 2019

Reviewer: Angela Bechini

Reviewer's report:

The authors entitled the manuscript 'Time for a change', but they did not provide an overview on the policy for preventing VZV transmission in hospital setting in the period before their two studies: the retrospective study on VZV cases in nosocomial outbreaks investigation and the cross-sectional seroprevalence study for VZV antibodies in HCWs of a teaching hospital in Mainland China.

Abstract: In the background section the double use of the term "however" is redundant. Please delete one of the two 'however'.

Background:
- line 24 pag. 3. I suggest to change "VZV antibody" with "VZV antibodies".

Results:

Results of the two studies are well described. I suggest only a change in one sentence.
- line 7-8 pag 6. Since in a hospital health policy, prevention strategies and other health system based interventions are provided by Health Direction, I suggest the authors to change 'hospital administrations' with 'hospital health direction'.
Discussion:

- line 22-25 pag 10. I suggest to simplify the whole sentence: 'Airborne transmission from an index case with varicella to susceptible children has been demonstrated by several studies'.

- line 35-39 pag 10. The authors referred to studies reporting different level of seronegative prevalence but they did not specify in which setting the seroprevalence was registered. Moreover, they did not specify if those seroprevalence level were found in the general population or in hospital setting or between HCWs of different countries? Please, clarify.

- line 59 pag 10 and line 1-9 pag 11. In the discussion section the authors reported an estimate of 'the great economic impact' of nosocomial VZV infection, but in the result section or in the aim of the study, economic impact assessment has never been mentioned. I mean that an assessment of the cost - effectiveness of the screening for VZV antibodies was sincerely off topic even in the discussion section because it was not included in the aims of the study and the methodology for the calculation of the cost related to nosocomial VZV outbreaks was not described in the materials and method section. I suggest the authors to add into the aims of the study the economic evaluation and to include it into the methods and results sections, too.

- line 44-46 pag 11. Regarding the eventual selection bias derived from the HCWs refusals to participate for the serologic screening, some more details should be added. Did the HCWs refusing serologic screening have particular characteristics? Are they representative of a particular typology of professionals or hospital department or ward? Are they different from the participating professionals?

Please, clarify.

Moreover, the manuscript will benefit from a more extensive literature search for the discussion section on the topic of VZV prevention in hospital setting. Are some other examples of VZV nosocomial transmission reported in the international literature? Please add some more studies to be compared to the results of the current study.

Conclusion:

Line 12-26. The authors did not deal with how the implementation of serologic screening for VZV antibodies and subsequent vaccination of seronegative subjects should be performed. This recommendation should be a matter of health policy and a health system based intervention to be adopted not only in case of new hires but even in case of HCWs already working in hospital setting.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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