Reviewer's report

Title: Differential immune responses in individuals after the 2009 pandemic influenza infection and after vaccination with the pandemic influenza vaccine: A prospective study in Sweden

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Reviewer: Zoltan Vajo

Reviewer's report:

In general, this is an important topic. The strengths of the manuscript are the large number of subjects and the use of SRH. The methods are appropriate. A potential weakness is that the elderly, and even more so, pediatric patients are under represented.

Minor Essential Revisions:
Introduction:
line 9: change 'as' to 'than'

Methods:
Why is it specified that Swedish residents received the GSK vaccine? Were there non-Swedish residents? Were there other vaccines used?

Major Compulsory Revisions:
Discussion:
The sentence ‘Flu vaccines are mainly composed of surface membrane glycoproteins’ in too general. The vaccine the authors studied is a split virus vaccine, however, there are many different vaccine types, such as subunit or whole virus vaccines and even LAIV. The discussion in this entire paragraph only applies to split virus vaccines.
The first paragraph of the discussion about ILI is not entirely supported by the findings.
The H5N1 findings are unexpected and deserve at least some discussion. Similarly, the significant differences in corona and rhinovirus infections would need more discussion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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'