

Reviewer 1

Comments and Suggestions for Authors

Estimated Authors,

firstly, thank you for the opportunity to review your paper on a serosurvey among future healthcare workers from the university of Padua. The present paper is of clear interest and significance, but - in my opinion, several improvements are required before the eventual publication. More precisely:

We are grateful to the reviewer for the suggestion. Point by point:

1) please include a detailed table including demographic data of study participants (age, sex, number of doses received, etc); some of the data that may improve the understanding of your sample are (in fact) "not showed", and a preliminary table may be a possible option.

Reply: We modified Figure 2 (without gender breakdowns) and added Table 2 with the characteristics of the study population, including their geographic origin. The Table 1 of the original text has been removed.

2) Table 1 --> 5 are quite overcrowded and/or confusing and should be redesigned in order to improve the overall readability of their content. In particular, by dichotomizing Table 4 and Table 5 in two distinctive panels with a very different content may confuse your reader, particularly when dealing with the comparisons. In this regard...

Reply: We are grateful to the reviewer for the suggestion. Table 4 and 5 are now Table 2 and 3 and statistics are indicated in the legend then panel A and B have been removed.

3) ... please be aware of the multiple independent comparisons you performed, that without a post-hoc correction may have inflated the potential p values you reported. Have you considered, for example, a Bonferroni's correction?

Reply: Bonferroni's correction was applied.

4) In table 3, the equation reported above the single panels (e.g. antibody titre = $890.395835 + 134.501966 \text{ sex} + 0.211522 \text{ age 1st dose} + 0.078826 \text{ age 2nd dose} - 0.024407 \text{ time since the 2nd dose}$) may be somewhat misleading for the majority of readers and it not really informative; it may be removed.

Reply: All the tables have been removed and replaced by a single table (now Table 4).

5) In the discussion section, you "grazed" a significant issue, i.e. the potentially reduced seroprevalence of IgG among subjects who were vaccinated by means of combined formulations compared to monovalent vaccines. This is quite interesting, albeit disappointing in a Public Health perspective: therefore, you should discuss in further details how this issue, if confirmed, may impair vaccination campaigns and vaccination schedules in the workplaces.

Reply: It is clear that pharmaceutical companies have no economic interest in producing single vaccines, so it remains a mere academic conjecture, as indicated in the second paragraph of the conclusions.

6) in the discussion section, you have not reported on the "Veneto exception" regarding vaccination schedules; in fact, until recently, Veneto Region (where Padua resides) was a sort of "laboratory" for improving vaccination rates without mandate. How many of the students you included in your analyses were from Veneto region? It would be particularly interesting, as the falling vaccination rates for measles were among the reasons that promoted current vaccination policies.

Reply: “Veneto exception” started in 2007, then no students had been vaccinated under this exception. On the other hand exception regarded mandatory vaccination such as against poliomyelitis, tetanus, diphtheria and hepatitis B. Exception derived also by the large compliance versus non mandatory vaccination. In any case, the cases presented to us are among the cohorts involved in the project. Considerations are added in the text in this regard.

7) have you performed any assessment of Knowledge Attitudes Practices towards measles vaccination among the students you assessed?

Reply: Being a retrospective study based on data collected during health surveillance, no questionnaires were proposed to assess knowledge attitudes practices towards measles vaccination among the students. The same considerations were added in the discussion section at the end of the second paragraph.

Thank you for the considerable efforts to collect and summarize this extensive amount of data: I'm confident that the aforementioned requirement (and those from other reviewer as well) may be quite simply addressed and will eventually improve the overall quality of your very interesting study.