

## Peer Review File

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**Reviewer A:** This is an interesting report, however, the manuscript requires a close edit for language and content.

Specific comments:

**Comment 1:** Please change "Coronavirus infectious disease 2019 (COVID-19)" to "Coronavirus disease (COVID-19)".

**Reply 1:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 4, line 62; Page 6, line 90).

**Comment 2:** Please change "in the occurrence of these diseases" to "in the occurrence of these diseases in South Korea".

**Reply 2:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 4, line 63; Page 7, line 122).

**Comment 3:** "Paradoxically, these new behaviors have decreased the development of various ..." - how is this "paradoxical"? Wrong word choice here.

**Reply 3:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 6, line 101).

**Comment 4:** Please change "A total 6,857 patients" to "A total of 6,857 patients".

**Reply 4:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 10, line 163).

**Comment 5:** The data the authors present is very much preliminary, unadjusted, and does not account for temporal patterns, which makes it more suitable for a short report. For ease of comparison and standardization, it is customary to use rates per 100,000 population.

**Reply 5:** Thank you for your comment. We partially agree with you. Although, our manuscript could be suitable for a short report, we would like to stick with submission as an original article, because it is the first of the kind in the field and has originality. Regarding the unit of incidence rates, we have revised according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 10, line 177; Page 11, line 192; Page 11, line 208).

**Comment 6:** There are also issues associated with the use of electronic databases and ICD diagnosis codes for case identification. This and other study limitations should be mentioned.

**Reply 6:** Thank you for your comment. We agree with your comment and have added this part in the limitations.

**Changes in the text:** We have revised our text as advised (see Page 15, line 277-283).

**Comment 7:** What about the incidence of Kawasaki disease and multisystem inflammatory syndrome in children (MIS-C) associated with SARS-CoV-2 during the pandemic? In recent months, there have been increasing reports of a Kawasaki disease-like, multisystem inflammatory syndrome in children infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This has been termed ‘Paediatric Multisystem Inflammatory Syndrome temporally associated with SARS-CoV-2 (PIMS-TS)’, in the UK, or ‘Multisystem Inflammatory Syndrome in Children (MIS-C) associated with Coronavirus Disease 2019 (COVID-19)’, in the US, although debate is still ongoing regarding the temporal association and nature of these hyper-inflammatory syndromes. This should be mentioned (citation: [ncbi.nlm.nih.gov/pmc/articles/PMC7480253](https://ncbi.nlm.nih.gov/pmc/articles/PMC7480253)).

**Reply 7:** Thank you very much for your detailed comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 15, line 264-276).

**Comment 8:** The underlying data should be made publicly available. If this was not possible, please provide a reason why.

**Reply 8:** Thank you for your comment. We will make the underlying data publicly available.

**Changes in the text:** See the “Data Sharing Statement” file.

**Reviewer B:** Thank you for the opportunity to review the interesting manuscript. In this study, the authors investigated the trend of three diseases in the pre-and post-COVID-19 pandemic era. Some additional information is needed to improve your manuscript, and the comments/suggestions for revisions are below:

Major comments

**Comment 1:** Title “a retrospective cohort study”

This study is not a retrospective cohort study, please delete these words.

**Reply 1:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 1, line 3-4).

**Comment 2:** Method

Most readers are not familiar with the geographic information in south Korea. Please add the geographic information including the 16 hospitals using the map. Readers will

be easy to imagine and interpret the epidemiologic data.

**Reply 2:** Thank you for your comment. We have added a figure showing the geographic location of the 16 hospitals, according to your comment.

**Changes in the text:** We have revised our text as advised (see Figure 1).

**Comment 3:** Method & Results

The authors' description of “showing a significant decrease in 2020” (Line 185, 199, and 213) is not enough. Please describe the statistical method (ANOVA?) and clarify the comparison (“2020 vs 2019 vs 2018 vs 2017” or “2020 vs median/mean of 2017-2019”) in the method section.

**Reply 3:** Thank you for your comment. The Clopper–Pearson method was used to compare the fluctuations of the total annual occurrence rates between the years. We have stated this in the Methods section. Moreover, for better understanding of the readers, we additionally conducted logistic regression analysis to compare the odds ratio of each year with 2020 as the reference for each disease.

**Changes in the text:** We have revised our text as advised (see Page 10, line 175-180; Page 11, line 190-195; Page 11-12, line 206-211).

**Reviewer C:** It has been directed very well with minimal grammatic mistake. As well as, the study has been presented with a simple, understandable, and straight forward format. Here, I will give some advice to improve it.

**Comment 1:** In the introduction section it is better to mention a little bit more about these three diseases, their possible pathogenesis and the incidence rate of three diseases globally. In this way, every person who does not have any knowledge about these diseases could understand it.

**Reply 1:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 6-7, line 111-116).

**Comment 2:** In the result section, it is recommended to use charts and diagrams to illustrate the results as well.

**Reply 2:** Thank you for your comment. We have used figures to illustrate the results.

**Changes in the text:** We have revised our text as advised (see Figures 1-5).

**Comment 3:** In the discussion section, it is offeted to compare the results of other studies with your results.

**Reply 3:** Thank you for your comment. However, there is no study that has investigated the change in occurrence of infection related systemic diseases after the COVID-19 outbreak. This is the first study in to investigate this topic. We included some discussion regarding Multisystem Inflammatory Syndrome in Children (MIS-C) associated with Coronavirus Disease 2019 (COVID-19).

**Changes in the text:** We have revised our text as advised (see Page 15, line 264-267).

**Comment 4:** It is recommended to add a section " limitations and future perspectives" in order to represent the limitations of your study and your ideas for other researchers who are interested in doing research in this matter.

**Reply 4:** Thank you for your comment. We have revised the manuscript according to your comment.

**Changes in the text:** We have revised our text as advised (see Page 15-16, line 277-285).