**5/7/2020**

We want to express our deep appreciations for your prompt review and valuable comments during this difficult time of pandemic, we have taken them into considerations and make the following major revisions:

1. During this revision, we utilized a professional language service to go over the revised manuscript, mainly working on the language/grammatical problems.
2. We replaced some of the key words based on the reviewing comments.
3. We conducted another round of literature review, and we added three related articles published in JMIR as literature review as well as in the reference list.
4. We moved the acronyms’ list as appendix after the reference list, and edit the list to follow JMIR’s format requirements.
5. We reviewed all tables in this paper and made appropriate format adjustment based on this format requirement.
6. We revised the end of the introduction with a clear statement of the aim of study.
7. We inserted a summary of main findings at the beginning of the discussion section.
8. We added the p-values and their comparisons. Based on the three p-values, the model results are highly correlated with the three datasets, thus, confirmed the validity of the model. The specific discussions regarding p-values were added in the model output section of the context.

The specific responses to editor and reviewers are discussed as following:   
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EDITORIAL COMMENTS (Decision: B)  
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Common formatting / editorial problems (see also Instructions for Authors!):  
  
A. ( ) all in-text references must be numbers in square brackets like this [1]. Do not use the author-year system. Do not use round brackets. Do not use superscript.

- We checked all the in-text references, and they are in the required format. Hence, no reference changes have been made at this point.

B. ( ) JMIR journals do not use footnotes or endnotes (except for tables). If you have footnotes, please delete them or incorporate them into the text

-We checked all the footnotes and endnotes, and they are in the required format. Hence, no changes have been made at this point.

C. ( ) URLs must be cited as references

-Thanks for your comments, we changed the two URLs to the same format as for other references/citations.

D. ( ) For original articles and protocols, please make sure the title is in line with our guidelines for titles ("Issue or Intervention in Demographic/Disease/Condition: Method/Study Design"). <https://jmir.zendesk.com/hc/en-us/articles/115002943791-What-are-JMIR-s-guidelines-for-article-titles->

-Thanks for your suggestions. Our current title, “An Evaluation Model of COVID-19 Control and Prevention: *Effectiveness Analysis Based on Immigration Population Data in China*”, was finalized during the last submission.

-According to the JMIR guide, our title falls under the category of **Descriptive title**, and it is in with the guidance regarding "Issue or Intervention in Demographic/Disease/Condition: Method/Study Design,"

E. ( ) please list only one corresponding author with full address, including phone, fax, and email address.

-We have provided the required contact information for the corresponding author.

F. ( ) Major headings for ALL original papers must be Introduction - Methods - Results - Discussion. A "Results" section also must be present in protocols; see <https://jmir.zendesk.com/hc/en-us/articles/115000520391>

-Thanks for your suggestion, our heading followed the required format. Also, we are conducting secondary data analysis, so the protocol or proposals do not apply to our “Results” section.

G. ( ) Please add subheadings under Introduction/Methods/Results/Discussion (if you use WinWord, apply the style "Heading 2" to IMRD headings, and the styles "Heading 3" to subsequent subheadings). DO NOT USE italics or bold keywords or sentences in paragraphs in lieu of subheadings / sub-subheadings.

-Thanks for your suggestions, in the last revision, we followed suggestions to delete subheadings; so we utilized the APA style for subheading formats in the last revision.

-In this revision, we followed the IMRD headings’ requirements.

H. ( ) You must have more than one subheading in each section, otherwise please remove the subheading

-In our current sections, they either had no subheadings, or they had multiple subheadings. Hence, no changes have been made at this point.

I. ( ) Your subheadings in the methods section should usually mirror the subheadings in the results section (i.e. for each result type there must be an explanation in the methods on how these results were obtained).

-In the March 9th submission, we have made changes to address the issues that had been raised in Professor Sanchez’s email on March 6th. Professor Sanchez mentioned that: “The methods are not presented in a uniform way that allows alignment between the methods used and the results presented” in email sent on March 6th.

- We addressed this concern on our March 9th submission to align between the methods and the results sections. Hence, no changes have been made at this point.

J. ( ) Please check our Instructions for Authors on how P-values should be reported: <https://support.jmir.org/hc/en-us/articles/360000002012-How-should-P-values-be-reported->.

- In this revision, we added the model output results of “OFFSET+WINDOW” in Table 2, and the corresponding p-values were generated for results from Tables 3, 4, and 5.

K. ( ) If you want to include a multimedia appendix, please insert a reference ("Multimedia Appendix 1: [caption]") with a caption in the manuscript (before "References"), but make sure to also upload the Appendix as a supplementary file. Each appendix must be uploaded as a separate file.

-After checking through all graphs, there is a file in HTML format with data drawn through python code for all model outputs across the country, with graphs and tables of the raw data. This HTML file has been uploaded before, however, due to the limited space of the paper, we only included graphs that presenting regions and representing dates.

L. ( ) End your introduction with a clear statement of what the aim of this paper or study is, or what the hypotheses are.

-Thanks for your suggestions, we revised the end of the introduction with a clear statement of the aim of study.

M. ( ) Start your discussion with a short summary of what the main finding(s) of this study was/were.

-Thanks for your suggestions, we have added a summary of main findings at the beginning of the discussion section.

N. ( ) Shorten the paper. Some of the material/tables/formulas can be moved to a Multimedia Appendix

- There is no excessive material/tables/formulas in the current article, and more model-related data is already in an attached HTML file, so there are no changes.

O. ( ) Abstract must be structured (Background-Objectives-Methods-Results-Conclusions). A "Results" section also must be present in protocols, see <https://jmir.zendesk.com/hc/en-us/articles/115000520391>

-Thanks for your suggestion, our heading followed the required format. Also, we are conducting secondary data analysis, so the protocol or proposals do not apply to our “Results” section.  
  
P. ( ) Please include more quantitative results in the abstract (sample size, P-values, odds ratios with confidence intervals, etc.).

- As mentioned above, in this revision, we added the model output results of “OFFSET+WINDOW” in Table 2, and the corresponding p-values were generated for results from Tables 3, 4, and 5.

-The p-value of the correlation coefficient between the model data and the R0 data was between 0.025 and 0.01. Compared to the hundreds of NEW or millions Immigration Population, we have decided that the uncertain sample size to be 6 (6 regions compared with R0).

-We also added the sample size of 10,304 from the online survey based on three Northeastern providences in China.

-Regarding the dataset, due to the limit of space, we have added the following discussion in the context instead of the abstract.

- The input data of the model is NEW and POPULATION, the NEW is the number of new diagnoses per day from each REGION, whereas the POPULATION is the number of population movements between places, is the data given by Baidu migration, can represent the relative size of population movements across China, but not the absolute number, the absolute number must be at least tens of thousands per day, our model only needs relative size to achieve the same results as the absolute number.

Q. ( ) Please clean up your references, following our instructions for authors: <https://support.jmir.org/hc/en-us/articles/115001333067-How-should-references-be-formatted-Which-journal-style-should-I-choose-when-using-Endnote-etc->. If you can, provide Medline-links or PMIDs in the format PMID:1234567

-Thanks for this suggestions, we have checked our reference, following this instruction regarding reference format.

R. ( ) For all results for which you provide a relative result (percentage), you should also provide the absolute number, e.g. "132 out of 264 participants (50%) said that...". If n is less than 100, do not use decimal points in your percentages. Otherwise, do not use more than one decimal place.

- Thanks for your suggestion. The percentage digits in Table 3 have been adjusted to be one digit after the decimal point.

S. ( ) Do not number your headings.

-Thanks for your suggestion, we checked the heading’s format and made proper revisions during the last resubmission. Hence, no changes have been made at this point.

T. ( ) Tables should appear in the main manuscript file where they should appear in the final manuscript (rather than being at the end of the manuscript or in a separate file). Figures should remain (during the review process) in the main file but must also be uploaded under "supplementary files". After acceptance, figures should be removed from the main manuscript and the figure/caption entered online (as metadata for the supplementary file) will be used; thus, please fill in this section carefully.

- After the revision, all tables and figures are included in the context of the manuscript. We have uploaded all figures, and we marked them as required; we also uploaded all tables in the two formats of image version and excel version.

U. ( ) Cite more scholarly references - more pertinent/related articles published in JMIR journals and elsewhere in the past 2-3 years should be cited - use <http://www.jmir.org/search>.

-We conducted another round of literature review, and we added three related articles published in JMIR as literature review as well as in the reference list.

V. ( ) Remove ALL field codes before submitting an electronic manuscript. Field codes are used in Microsoft Word if you use bibliographic software to create your references. Before re-submitting your revised manuscript, open your document in Word, select Tools -- Endnote (or Reference Manager) -- Remove Field Codes, and save the manuscript under a new name. Then, resubmit that version.

-Thanks for your suggestion, we did not use the “filed codes” or bibliographic software during the last resubmission. Hence, no changes have been made at this point.

W. ( ) Avoid author-invented abbreviations and acronyms.

- Thanks for your comments, we have provided all explanations /spell-out for all acronyms in the attached acronyms’ list.

X. ( ) For RCTs only: Starting in 2008, JPH will routinely publish trial identifiers in the abstract. Please add the trial registration number to the ABSTRACT in the meta data form, after the section "Conclusions: ..." (e.g. "Registration: Clinicaltrials.gov NCT00102401, <http://clinicaltrials.gov/ct2/show/NCT00102401>)  
If for any reason the trial was not registered, please provide an explanation (e.g. in the methods section and/or a cover letter to the editor).

-This study does not include a clinical trial, it is mainly secondary data analysis. Hence it is not applied to this paper.

Y. ( ) For RCTs: Please report the trial in accordance with the CONSORT checklist. JPH is now pilot-testing a CONSORT-EHEALTH checklist - please download the checklist from <http://www.jmir.org/ojs/public/journals/1/CONSORT-EHEALTH-v1-6.pdf> . We then need you to fill in the electronic version at <http://tinyurl.com/consort-ehealth-v1-6> with quotes from your (revised) paper (if you wish to comment on the importance of the items from the checklist for reporting, please also rate each item on a scale between 1-5). BEFORE you press submit, please generate a pdf of the form with your responses and upload this file as a supplementary file entitled CONSORT-EHEALTH V1.6. We may publish the checklist as a multimedia appendix.  
A CONSORT-flow diagram and an attrition diagram are also strongly recommended (as figures).  
For further information see   
Eysenbach G, CONSORT-EHEALTH Group  
CONSORT-EHEALTH: Improving and Standardizing Evaluation Reports of Web-based and Mobile Health Interventions  
J Med Internet Res 2011;13(4):e126  
URL: <http://www.jmir.org/2011/4/e126/>  
(please use this reference to cite the checklist)

-This study does not include a clinical trial, it is mainly secondary data analysis. Hence it is not applied to this paper.

Z. ( ) For online surveys only: Please report the online survey in accordance with the CHERRIES checklist.

-We have double-checked the information regarding the online survey, and provided as much information as possible based on the Cherries checklist, including the sample size, response, etc.

AA. ( ) Tables must be designed in line with Instructions for Authors. (<https://support.jmir.org/hc/en-us/articles/115004167607-How-should-tables-be-formatted-)> - do NOT use a soft line break within a table cell to separate different categories/subcategories. For each category, create a new table row.  
DO NOT USE LANDSCAPE FOR TABLES OR SMALLER FONTS. WE WILL TYPESET TABLES IN NORMAL FONT AND IN PORTRAIT ORIENTATION. TABLES WITH TOO MANY COLUMNS WILL HAVE VERY NARROW COLUMNS AND LOOK SQUEEZED.  
FOOTNOTES FOR TABLES must always be a-z (superscript). Do not use symbols such as \* or \*\*

-Thanks for your suggestions. We have carefully reviewed all tables in this paper and made appropriate format adjustment based on this format requirement.

AB. ( ) Please also upload each of your final figures (e.g. 1-2 screenshots of the intervention) as supplementary files (hi-resolution png or jpg files with minimal compression). DO NOT upload .doc files with line art or other file formats. Please name your files so that it becomes clear what revision the figure refers to, e.g. fig1\_rev20090130.png. Enter the caption (which will appear underneath the figure) online, omitting the figure label ("Figure 1"), as this will be added automatically. Remove figure label and captions from the image file, if present. Note that for the final publication, the caption will be pulled from the metadata, NOT the caption provided in the manuscript.

-After the revision, all tables and figures are included in the context of the manuscript. We have uploaded all figures, and we marked them as required; we also uploaded all tables in the two formats of image version and excel version.

AC. ( ) The paper may not be strong enough or is out of scope for the journal it was submitted to. Please let us know on revision if you would agree to a manuscript transfer to a sister journal and which journal you prefer (List of partner journals: <https://jmir.zendesk.com/hc/en-us/articles/115001442707>)

-Thanks for your comments. However, at this point, we only refer to publish our paper in the JMIR, we do not prefer the sister journals.

### Further Editorial / Peer-reviewer Comments:  
  
  
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Reviewer W:  
General comments  
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Thank you for removing Data Mining from the key word list.    
  
This time, however, you added "big data analysis" to the key word list. This is highly misleading. There is no study of big data in the submitted paper. Nor big data analytics - note the term - has been applied.

-Thanks for your suggestions, we have deleted the unnecessary key words and added “incoming immigration population", and "new diagnoses per day.”

Specific comments  
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Major comments  
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1. "mathematical modeling" in key words is too broad. Please specify what models you propose or use.

-Thanks for your suggestions, we have deleted the “mathematical modeling.”

-The parameters of this model, OFFSET and WINDOW, are commonly used in time series analysis. Specifically, we defined the calculation of risk, and processed RISK into PROCESSED RISK, using “OFFSET and WINDOW” of the time series. Therefore, we named this model as "Epidemic Risk Time Series Model."

2. "The Chinese Government has been emphasizing on the analysis of big data, ..." - what this declaration has to do with the submitted paper?

-We appreciate your question. This discussion is emphasized from the health policy or public policy’s perspective. That is to say, the Chinese government is using the “big data” as one of the disease surveillance strategy.

3. sometimes you use "immigration" and "migration" interchangeably. However, these two are different phenomena. Please clarify.

-Thanks for your suggestions, we have worked through the whole context and changed all "migration" or "incoming migration" to "immigration".  
  
4. I would like to see a meaningful comparison with other models. At this point such comparison is absent.

-Thanks for your suggestions. After revision, we have added the p-values and their comparisons. Based on the three p-values, the model results are highly correlated with the three datasets, thus, confirmed the validity of the model. The specific discussions regarding p-values were added in the model output section of the context.