

Reply to the reviewers

Reviewer # 1

This is a very interesting paper. Authors have comprehensively discussed clinical research during COVID-19. It can provide high-quality timely critical diagnostic and therapeutic information. Authors also emphasized the importance of collaborative work. Preventative and interventional measures are suggested to be prioritized. In this paper, authors also mention the development of vaccines and emphasized the well-funded randomized controlled trials. Medical research can not be completed without funding. It is also very important to describe funding support in this paper. Please cite the newly publication.----- Jia H, Wu M. Sustained research fund and dedicated research center for preparing next pandemic .Precision Clinical Medicine, pbaa012, <https://doi.org/10.1093/pcmedi/pbaa012>

Thank you for the comments and suggestions. A new section in paragraph number two of the introduction is added and the reference is quoted: “Most of the medical research allocated resources and funding tend to happen during the disease outbreak. Unfortunately lack of continuation of funding once the outbreak is over has led to disruption of many clinical trials assessing preventative, diagnostic, and therapeutic strategies.[2]

Hongpeng Jia, Min Wu, Sustained research fund and dedicated research center for preparing next pandemic, *Precision Clinical Medicine*, , pbaa012, [DOI 10.1093/pcmedi/pbaa012]

Reviewer # 2

1. A well written overview addressing the conduct of SARS-CoV-2 related research and the impact of the current pandemic on medical research. 2. Authors incorporated lessons learnt from past outbreaks such as the West Africa Ebola Virus and SARS. 3. It would be insightful if the authors could share the various challenges to medical research within their institutions, particularly those significantly impacted by the current pandemic. 4. Consider a short discussion on related animal and cell-line research and research activities such as collection of biological specimens and cell-line maintenance affected by the current pandemic, to add breadth to the manuscript.

Thank you for the comments and suggestions. A new paragraph is added before the conclusion and seven new references were added to support this paragraph.

Clinical trials involving cell lines and animals

Laboratory based research such as life-saving vaccines and therapies, particularly against the new coronavirus must continue. Cell lines research are essential for the production of vaccines, as are testing drug metabolism, cytotoxicity and antibody production during a pandemic.[32-34] Maintenance of cell lines requires uninterrupted examination of cell morphology and periodic change of medium.[35] This kind of maintenance could be affected during COVID-19 pandemic due to reduction of research laboratory staff and interruption in supply chains.

Currently, millions of animals are used in research laboratories around the globe. [36] Indeed, animals need to be looked after, and breeding lines must be kept intact. However, in some laboratories the work force has been reduced with researchers asked to stay away from their laboratories to minimize their risk of exposure to SARS-COV-2. These understandable measures have nonetheless affected the care and wellbeing of experimental animals. Some researchers were even asked to dispose of animals while others had to interrupt their research in a way that will likely require the use of another animals once back to work.[37]

To minimize the impact of COVID-19 on laboratory-based research, researchers should follow local institutions' safety regulations. Many laboratory-based research institutions have established new regulation to ensure safety of investigators and continuity of work.[38] Some of these new regulations include reducing laboratory workforce to those conducting essential work, establishing a system of reporting symptoms and signs suggestive of COVID-19, working in small groups and keeping a distance of at least two meters between staff while also implementing working shifts.

Company editor in chief

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, the author(s) must add a table/figure to the manuscript.

Thank you for the comments and suggestions. A Figure titled "Figure 1 Challenges to conduct research during pandemics" was added at the end of the manuscript.