Author’s response to reviews

Title: A nationwide survey on neonatal medical resources in mainland China: current status and future challenges

Authors:

Qiuping Li (zhjhospital@163.com)
Tao Han (hant8316@163.com)
Yanping Zhang (yp1106@163.com)
Qian Zhang (zhangqian1228@163.com)
Xiangyong Kong (sdkongxy@126.com)
Yonghui Yang (yonghuiyang@163.com)
Zhichun Feng (bzfengzc@yahoo.com)

Version: 3 Date: 05 Sep 2019

Author’s response to reviews:

Dear Helen Roberton and Darren Byrne,

Thank you for your letter and for the reviewers’ comments concerning our manuscript entitled “A nationwide survey on neonatal medical resources in mainland China: current status and future challenges” (BPED-D-18-00711R2). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have try our best to made correction which we hope meet with approval. Revised portion are marked in color in the paper. The main corrections in the paper and the responds to the reviewer’s comments are as flowing:

Responds to the reviewer’s comments:

Reviewer reports:

John Colin Partridge, MD, MPH (Reviewer 1): Quiping Li and co-authors have extensively revised their manuscript, and overall their revisions have significantly improved the paper. Despite their having contacted professionals with regard to grammar and wording, a large number of edits are still required. Unfortunately, the authors do not have more recent comparison data that would make the paper much stronger. They have added details from 2008
in an attempt to make their out-of-date survey results demonstrate changes over time and be more relevant to current neonatal services in China.

Response: Thank you very much for your valuable advice.

Specific edits:

Abstract:

Line 35: Suggest "Lack of equipment" rather than "equipment insufficiency"

Line 37: Suggest "surveyed rather than "investigated"

Line 50 and 52→ Line 7 next page: Suggest "the capacity to provide …"

Line 11: Suggest "well organized or well distributed" instead of "balanced"

Response: All above has been revised according to your suggestion.

Background:

Page 12. Line 39: "…rate has declined significantly…"

Page 12, line 44: delete "as"

Page 12, line 50: suggest deleting "corresponding survey"

Page 13, line 10: "and explore directions for future development of neonatal intensive care"

Response: All above has been revised according to your suggestion.

Methods:

Page 13, line 33: suggest "intensive care capacities" rather than "treatment quality" [this paper do not review the quality of NICU care provided.]

Page 13, line 48 and following: "investigated departments" would be better phrased as "departments surveyed" 24: "…two surveys were largely comparable."

Page 14, line 28-33: What is the comparison being made? [The increases and decreases described are not clear.]

Response: All above has been revised according to your suggestion.
Results:

Page 16, line 13 and following: suggest "surfactant administration" rather than "surfactant replacement"

Page 16, line 43: suggest "provide" or "access" rather than "avail"

Page 16, line 45: Rephrase sub-title. Suggest "Outcomes of preterm infants". Can the authors provide much more details on outcomes?

Page 17, line 43: "were more widely available in 2012 than in 2008."

Response: All above has been revised according to your suggestion.

Discussion:

Page 17, line 48: delete the word "current"

Response: It has been revised according to your suggestion.

Page 17, line 48: "neonatal departments"

Response: It has been revised according to your suggestion.

Page 19, line 18: The word "classification" is confusing. Do the authors mean "organization" or "coordinated approach to neonatal intensive care"?

Response: Yes. Classification mainly mean the level of NICU. In the united states, level of NICU is clearly defined and help to organize the resources for newborn care within a regionalized system of perinatal care. We added a citation to illustrate this definition in discussion section.

Page 19, lines 41 - 50: The two sentences as written conflict with each other, or are confusing as to reference point for sentence #2.

Response: we have re-phrased the two sentences.

Page 20, line 31: "…heighten the risks of …"

Page 20, line 44: "phototherapy…"
Page 21, line 12: Suggest "expanding access to" rather than "popularization"

Page 21, line 31: Suggest "when the proportion of hospitals that could perform newborn transport was significantly higher than in 2008."

Page 22, line 44: suggest "intensive care" rather than "positive treatment"

Page 22, line 48: delete "the"

Page 22, line 50: The authors provide no information for their assumption that there is a negative attitude. A reference and re-phrasing would help make this point.

Page 23, line 20: suggest "efficiently" rather than "rationally"

Page 23, line 24: The authors reflect on a problem of ineffective use of NICU beds because transports do not occur to and out of nICUs. The sentence could be re-phrased to add detail to "transport problem".

Response: All above has been revised according to your suggestion.

[1]

Conclusions:

Page 23, line 49: suggest "improve" or "develop" rather than "perfect".

Response: It has been revised according to your suggestion.

(Reviewer 4): "PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)

No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are minor issues
EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?

No - there are minor issues

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?

Maybe - with major revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The authors have done an extensive revision based on the reviewer's comments. I have here carefully looked at both the responses to the earlier reviewer's comments and added my comments and suggestions in order to improve the quality of the manuscript further.

The study topic is important in the field of child health, but the manuscript still needs a lot of improvements before it can be considered further.

Response: Thank you for your valuable advice. We have tried our best to revise the paper.

REQUESTED REVISIONS:

Major revision

Abstract:

The study aim says that this study assess resources available for the care of sick newborns, but it is not clear what kind of resources the authors are looking at?
Response: We are looking at the medical resources including the number of beds for newborns, doctor/bed ratio, nurse/bed ratio, the number of major medical equipment for newborn care, therapeutic modalities available, whether to carry out neonatal transportation, the number of newborns discharged from hospital in 2011, the outcomes of premature infants, etc. Limited by the length of the abstract, we explained it in the method.

The methods lack information on whom the questionnaire was sent, total sample size and the analytical strategy used to answer their research aim. It is not clear to me how the facilities, technologies and treatment quality are measured and whether these can be measured quantitatively.

Response: Thank you for your valuable suggestion. This is not a random sampling survey. Most of the hospitals included in this survey are tertiary hospitals with higher level of neonatal department in their provinces. The questionnaires were sent to the members of CNA by e-mail. All the data we investigated were provided by CNA members. Limited by the length of the abstract, we explained it in the method.

In the results, is the author talking about medical equipment or other equipment should be made clearer?

Response: It has been revised according to your suggestion.

Background:

In the second sentence, please also provide which country has the largest number of births if China is the second-largest and the reference.

Response: It has been revised according to your suggestion. We added a reference.

The fourth sentence, "….neonatal mortality rate ….33.1% in 1991…." may be wrong, I suppose it is 33 deaths per 1000 live births and so on. Please check!

Response: Yes, You are right. It has been revised according to your suggestion.

The background clearly lacks the rationale for e.g. what was the developmental status of medical resources in earlier years, in which aspect of medical resources the authors are interested in and what possible impact of these resources on overall neonatal survival?

The study aim sounds like a qualitative which is hard to answer quantitatively.
Response: This section is indeed poorly organized, and we have revised it. I hope there has been some improvement.

Methods:

It is not clear if the survey was conducted on the selected 150 hospitals out of how many hospitals, whether the hospitals are local, regional or primary or tertiary? What was the sampling strategy for selecting these hospitals? I can see that some details are provided in the results, but the methods also need some basic information on these.

Response: We have tried our best to make changes according to your suggestion. Unfortunately, this is not a random sampling survey. We just included the unit of CNA member in the investigation. CNA is an authoritative academic organization for the newborn care in China. Most of the hospitals where CNA members are located are tertiary hospitals with very good neonatal departments in the locality.

Please clarify if the questionnaire was distributed to the parents of the neonates who were discharged from 150 hospitals through the members of CAN.

Response: No, We only sent the questionnaire to the CNA members.

Authors should provide more details on what were information was collected through a questionnaire survey and how each of those measured?

Response: We have provide more detail in methods section.

In statistical analysis, the authors stated that they conducted univariate and bivariate analyses to describe the response obtained regarding the distribution of neonatal critical care facilities, physicians resources …., but it is not known how each of them was defined/measured?

Response: In this study, only some very simple statistical methods have been used and have been introduced in the chapter of statistical methods. We are not sure what more detailed information is needed.

Results:

Results are mostly written well. The full form of the abbreviation used in the tables should be provided as under table note.

Response: According to the format requirements of the magazine, we provided abbreviations at the end of the article.
The technological developmental part (what defined development in technology) is not very clear to me in the results, although this has been a primary focus in the study aim.

Response: We mainly investigated the development of various neonatal treatment technologies in different hospitals and showed them through descriptions and charts.

Discussion:

Overall, the discussion is written well, but still, some critical inputs on the main findings in the context of known results from earlier research are needed. Currently, the discussion is simply the description of their results. For e.g. for doctor/bed, nurse/bed ratio, what is optimal if there is any standard?

Response: We hope to find some standards for NICU staff, but unfortunately we have not found them.

Please provide the strengths of your study not only the limitations. I suggest that the strengths and limitations of the study should be provided before the conclusion.

Response: Thank you very much. Although our survey is not a perfect study, we still hope it can provides some useful references for understanding the current development of neonatal care in China. This has already been mentioned in the beginning of the discussion.

I greatly appreciate both your help and that of the referees concerning improvement to this paper. I hope that the revised manuscript is now suitable for publication.

Best wishes,

Zhichun Feng