PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Frontline healthcare workers' experiences with personal protective equipment during the COVID-19 pandemic in the UK: a rapid qualitative appraisal
AUTHORS	Hoernke, Katarina; Djellouli, Nehla; Andrews, Lily; Lewis-Jackson, Sasha; Manby, Louisa; Martin, Sam; Vanderslott, Samantha; Vindrola-Padros, Cecilia

VERSION 1 – REVIEW

REVIEWER	Annette Peart Monash University, Australia
REVIEW RETURNED	29-Oct-2020

GENERAL COMMENTS	Please provide more detail regarding: the purposive nature of your sample, how your interview data was analysed, and how results were triangulated between the data sources. Please also provide a rationale for interviewing participants, when data could have also been obtained by free text as a survey. This detail may be in the broader study, but needs to be outlined here. Also, more information about how the themes were generated from the data (ie the process) would add credibility. What other aspects of rigour did you employ in this project?

REVIEWER	Prof Liz Halcomb University of Wollongong, Australia
REVIEW RETURNED	06-Nov-2020

GENERAL COMMENTS	This paper represents a good synthesis of the media, policy and HCW experiences of PPE in the UK. The authors should be commended on the rapid work undertaken to generate this synthesis. The limitations of the work are not clearly articulated. A few minor points to enhance the clarity of the paper and strengthen the international relevance are listed below; Page 6: International data also supports this and could be cited here to enhance broad applicability. Page 7: Some more detail about how these policies and media items were searched for and identified would help to provide clarity about the process. Perhaps Table 1 belongs here with a little more description. Page 9: Some of these roles are unclear for the international audience. It is not clear what is meant by saying that the infection prevention and control person was not a HCW.

	Page 9: What was the recruitment method for those outside hospitals. Given such low numbers outside hospitals why were these included rather than focussing on acute care? Page 10: Having this table positioned here removes the data from the text about the theme. Perhaps breaking this table up and presenting each theme near the text about that theme would achieve more clarity. Page 15: The demographic table does not show the spread of settings beyond acute / community. More detail may put these data in context. Page 16: Providing quotes in text could help the reader see where this statement came from. Page 19: Referring to the international literature again here would help support the global nature of the issues raised. Page 19: Conclusions about community based HCWs are a little hard to draw given the small number of HCWs interviewed. This should be noted and the international literature in this space used to support the conclusions.

REVIEWER	Dr Anna Williams University of Notre Dame Australia
REVIEW RETURNED	18-Nov-2020

GENERAL COMMENTS	This is an important and innovative study presenting information with international relevance. Specific Comments: * Design appropriate. Framework method appropriate analysis approach. * Methods: More details are required on methods of purposeful sampling and collection of demographic data. *Reviewing Table 2: there is a skew in participants (interview data) to Doctors working in a hospital setting - who represented the majority of participants. The numbers of other providers and engagement in sectors outside a hospital are very small. Justification for these small numbers and inclusion in the study might be important. There could be an argument to suggest that this study would be better to be sold as a study of PPE among Doctors in a hospital setting, rather than a broader study. Limitations of the study perhaps should highlight the sample strengths and weaknesses including this focus. It might also be important to clarify in the presentation of the results - where commonly it is stated that HCWs reported etc. if this is a doctor , nurse or other HCW and the sector from which the information relates? *From an international perspective it might be important to define some of the professional titles to particular professional groups. For example is Physician associate a sub-group of Doctor? Which professional group does a healthcare practitioner belong to? In addition, one service is listed under the heading role? * Sector (Table 2): Hospital is listed as secondary care. Does this mean that the hospital is a smaller district facility? Again internationally, this might needs some clarification as hospital might also be defined as tertiary care in different countries, depending on the services provided.

	*Ethnicity (Table 2): Please unpack/provide a definition for 'BAME' *Section Physical Effects - Line 55 - seems to be a repetitive statement regarding breaks and PPE use - the same information is presented at line 50 - 51 immediately above. * The presentation of the findings often presents the age and seniority of the health care workers associated with commentary around their concerns related to PPE. However, demographic questions as part of the study have not been presented as part of method or in accompanying tables? How and when and what information was collected? Overall, interesting and important study and associated findings.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

- Please provide more detail regarding: the purposive nature of your sample, how your interview data was analysed, and how results were triangulated between the data sources.

- ***Reply:*** On page 5-6 we have described data analysis processes, the use of framework analysis to facilitate triangulation and the application of the same analytical framework across all data sources to ensure findings were brought together and interpreted in relation to each other. We have clarified on Table 1 that all streams of data were analysed using the same analytical framework. We have added an appendix (Appendix 1) containing further details on our sampling strategy.

- Please also provide a rationale for interviewing participants, when data could have also been obtained by free text as a survey. This detail may be in the broader study, but needs to be outlined here.

- ***Reply***: we have outlined the benefits of using interviews on page 5 and expanded on the benefits of using interviews in this context as it allowed for in-depth discussions. We have elaborated on the use of our broad topic guide, which allowed participants to focus on aspects important to them and raise experiences related to PPE in a variety of contexts.

- Also, more information about how the themes were generated from the data (ie the process) would add credibility. What other aspects of rigour did you employ in this project?

- ***Reply***: we have included additional details on the processes used to ensure the credibility of the analysis on pages 5-6 and Table 1, including the cross-checking of codes and the use of member checking.

Reviewer: 2

* Please find additional comments from this reviewer in the attached file *

- This paper represents a good synthesis of the media, policy and HCW experiences of PPE in the UK. The authors should be commended on the rapid work undertaken to generate this

synthesis. The limitations of the work are not clearly articulated. A few minor points to enhance the clarity of the paper and strengthen the international relevance are listed below;

- ***Reply***: Many thanks for your appreciation of the rapid nature of our work. The limitations of our work have now been outlined in the discussion section (page 15).

- Page 6: International data also supports this and could be cited here to enhance broad applicability.

- ***Reply:*** On page 4 in the introduction we have now added two additional citations with international data to support the increased applicability of the statement as suggested.

- Page 7: Some more detail about how these policies and media items were searched for and identified would help to provide clarity about the process. Perhaps Table 1 belongs here with a little more description.

- ***Reply***: we have added additional detail on the search strategies used for these data sources in Table 1 and the full search strategies for the policy review, media analysis and social media analysis can be found in Appendix 3. (Please note we have changed this to Appendix 3 as we have now included an additional appendix mentioned earlier in the text which is now labelled Appendix 1). Table 1 has also been moved to the methods section under data collection as suggested.

- Page 9: Some of these roles are unclear for the international audience. It is not clear what is meant by saying that the infection prevention and control person was not a HCW.

- ***Reply***: we have clarified the terminology used to describe the roles of HCWs and reworded our description of the staff member of IPC as not frontline staff and occupying a management role (Table 2, page 7).

- Page 9: What was the recruitment method for those outside hospitals. Given such low numbers outside hospitals why were these included rather than focussing on acute care?

- ***Reply***: the HCWs identified as staff from primary care were staff who were redeployed to roles in secondary/tertiary care during the first wave of the pandemic. We have clarified this on Table 2 and added an additional appendix (Appendix 1) to clarify our sampling strategy.

- Page 10: Having this table positioned here removes the data from the text about the theme. Perhaps breaking this table up and presenting each theme near the text about that theme would achieve more clarity.

- ***Reply***: we agree that this would be a good idea, but the journal's limit on the number of tables and figures does not allow us to break up Table 3 in this way.

- Page 15: The demographic table does not show the spread of settings beyond acute / community. More detail may put these data in context.

- ***Reply:*** we have expanded the demographics table to include the spread of specialities. The terminology used in the text on page 12 and in the abstract now reflects these specialities of 'critical care and anaesthesia and emergency medicine' which are more applicable to an international audience.

- Page 16: Providing quotes in text could help the reader see where this statement came from.

- ***Reply***: we agree with this comment, but the journal's word limit unfortunately does not allow us to include the quotes in the text. Therefore, we included quotes in Table 3 (as this is not included in the word count).

- Page 19: Referring to the international literature again here would help support the global nature of the issues raised.

- ***Reply:*** we now have referred to more international literature here, citing two additional studies from the US and Italy (page 16).

- Page 19: Conclusions about community based HCWs are a little hard to draw given the small number of HCWs interviewed. This should be noted and the international literature in this space used to support the conclusions.

- ***Reply***: we have removed the reference to community-based HCWs in this section.

Reviewer: 3

Comments to the Author

This is an important and innovative study presenting information with international relevance.

- ***Reply***: many thanks.

Specific Comments:

- Design appropriate. Framework method appropriate analysis approach.

- Methods: More details are required on methods of purposeful sampling and collection of demographic data.

- ***Reply***: we have added this information on page 5 and Table 2. We have added an additional appendix with details on our sampling strategy (Appendix 1).

- Reviewing Table 2: there is a skew in participants (interview data) to Doctors working in a hospital setting - who represented the majority of participants. The numbers of other providers and engagement in sectors outside a hospital are very small. Justification for these small numbers and inclusion in the study might be important. There could be an argument to suggest that this study would be better to be sold as a study of PPE among Doctors in a hospital setting, rather than a broader study. Limitations of the study perhaps should highlight the sample strengths and weaknesses including this focus. It might also be important to clarify in the presentation of the results - where commonly it is stated that HCWs reported etc. if this is a doctor , nurse or other HCW and the sector from which the information relates?

- ***Reply***: many thanks for this comment. Even though we used a sampling framework to guide data collection and seek representation of participants across multiple professional groups, our sample included a higher proportion of doctors. It is important to note that many of these doctors were redeployed during wave 1 of the pandemic and so they were not delivering care in the same way as in their original role. We have included this information in Table 2 and in an additional Appendix (Appendix 1) outlining our sampling strategy. We have also included the limitations of our sampling strategy in a limitation section in the discussion now (page 15). Table 3, in the column on illustrative interview quotes, also includes information on the professional role of staff member to the quote can be interpreted accordingly. When views and experiences varied by professional group, we have made this explicit in the text (pages 12, 13, 14).

- From an international perspective it might be important to define some of the professional titles to particular professional groups. For example, is Physician associate a sub-group of Doctor? Which professional group does a healthcare practitioner belong to? In addition, one service is listed under the heading role?

- ***Reply***: we have reworded the terms used to describe the roles of participants in Table 2 to make sure these are appropriate for an international audience. These have been updated accordingly in Table 3 as well.

- Sector (Table 2): Hospital is listed as secondary care. Does this mean that the hospital is a smaller district facility? Again internationally, this might needs some clarification as hospital might also be defined as tertiary care in different countries, depending on the services provided.

- ***Reply***: we have clarified the terminology in relation to hospitals in Table 2.

- Ethnicity (Table 2): Please unpack/provide a definition for 'BAME'

- ***Reply***: BAME is a term used in the UK to refer to individuals who self-identify as Black, Asian and from Minority Ethnic groups. We have clarified this and expanded this in Table 2. We have broken ‘BAME’ down into the ethnic groups in keeping with the terminology suggested for use by the UK government. The limitations of the BAME terminology have also been outlined in the new limitations section on page 17.

- Section Physical Effects - Line 55 - seems to be a repetitive statement regarding breaks and PPE use - the same information is presented at line 50 - 51 immediately above.

- ***Reply***: we have deleted this sentence to avoid repetition.

* The presentation of the findings often presents the age and seniority of the health care workers associated with commentary around their concerns related to PPE. However, demographic questions as part of the study have not been presented as part of method or in accompanying tables? How and when and what information was collected?

Overall, interesting and important study and associated findings.

- ***Reply:*** the demographics information was collected through interviews which is now described in data collection section under ‘Interviews’ on page 5. The Interview Topic Guide (Appendix 2) now includes the demographic questions asked to participants. Language related to seniority has been removed.

VERSION 2 – REVIEW

REVIEWER	Annette Peart Monash University Australia
REVIEW RETURNED	15-Dec-2020

GENERAL COMMENTS	Thank you for addressing my requests. The edits have added depth to the original manuscript.

REVIEWER	Dr Anna Williams University of Notre Dame Australia, Australia
REVIEW RETURNED	05-Jan-2021

GENERAL COMMENTS	Dear Authors This is an interesting study of international relevance related to the COVID-19 Pandemic. All concerns raised in my previous feedback have been satisfactorily addressed.