PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Recognition and response to life-threatening situations among women with perinatal mental illness: A qualitative study
AUTHORS	Easter, Abigail; Howard, Louise; Sandall, Jane

VERSION 1 - REVIEW

REVIEWER	Arabella Scantlebury Newcastle University, England
REVIEW RETURNED	13-Sep-2018

GENERAL COMMENTS	Thank you for inviting me to review the manuscript, it was a pleasure to read and it was good to see some well conducted qualitative research on such an important topic area. I have made a couple of suggestions, which I feel will make the manuscript even stronger. Abstract: a very minor point but the names of themes in the results section do not need to be capitalised. Methods: Design: The decision to use qualitative methods to explore this topic is appropriate, but I am not convinced by the justification that has been provided. I am not clear why the lack of empirical evidence would warrant a qualitative design only? I think it would be appropriate to say that given the lack of evidence an exploratory qualitative study was chosen. I also think it would be good to point out here that it is widely acknowledged that patient safety incidents and in particular near misses are often under-reported or not reported. Therefore choosing to use qualitative methods to explore this issue is appropriate and allows you to unpick the complexities surrounding the issue and barriers etc. Participants and setting: It would be helpful to say somewhere how many services were contacted and provide a bit more detail about the healthcare settings they represent. I appreciate this may be deliberately vague to maintain anonymity. However, at the moment I have no real sense of how many services/individuals were contacted. For instance, when you say a national sample does that mean you contacted all NHS secondary care organisation's midwifery departments individually. Or did you purposively choose a selection of services to represent England. This could be cleared up by adding more clarity around the sampling frame (see below). However it may also be because at the moment you state e.g. psychiatry, psychology, midwifery, obstetrics and health visiting are they merely examples or an exhaustive list? Further detail on sampling is needed. At the moment the authors state that purposeful and convenience sampling were both used. Having read this section I would presume that a convenience sample based on responses to direct emails and social media

	were used in the first instance and then participants were purposively sampled within that, but this is not clear? Can you elaborate on which characteristics were used to purposively sample? P.5 line 34 please amend to 'and it was felt that no new themes were emerging and data saturation was reached.' Data analysis: The authors state that inductive coding was used. However, the authors state that text relating to barriers to detection, response and escalation of potential life-threatening psychiatric events….were extracted.' This description implies data were coded using apriori themes derived from the research question and so a mixture of inductive and deductive coding was used? Either is fine, but the description does not seem to match the label of inductive coding at the moment. p. 6 lines 18-27 is one long sentence. Please could this be broken up to help readability. p. 6 Is there a word missing between 'HCP and teams' on lines 25-26. The authors state that data analysis and interpretation were informed by 'systems theories of healthcare' and the three delays model.' However, neither theory is explained and neither is referred to again in the manuscript. If the analysis has a theoretical underpinning this is great however this needs to be elaborated on, otherwise it feels tokenistic and is unclear to what extent it was used. If this is the case, there needs to be an explanation of each theory in order for the reader to understand how they influenced data analysis. I would suggest a separate section perhaps called theoretical underpinnings in the methods section which introduces the two theories. In the analysis section there then needs to be a clearer explanation of how the theories were used. For instance were the theories used to inform topic guides, code the data or was the data coded inductively first and then themes mapped onto the theory? I also think the theory if it has been used to inform analysis should be mentioned again in the discussion when placing findings in the context of existing literature. Patient and public involvement This feels tokenistic at present. Can you elaborate as to how the feedback from the PPI members was used to inform your analysis? Results I would be interested to know from which sources participants were recruited from. This would help others who are interested in using social media as a method of recruitment to know how successful it was as a method. Equally it would be good to know the geographical region that participants were based as the authors had a national sampling frame and the grade/years experience of participants. Line 35 page 8 'acted as a key barrier' please add to what. I think somewhere you may need to explicitly state what you mean when you refer to primary HCP. Fluctuations in mental health: should this read at risk of 'a' life-threatening event before it occurred. Medication reluctance: line 17 'was also a factor' affecting what. Page 14 line 5, should this read 'in the postpartum period'? Line 23 page 14, the tense of the paragraph starting 'psychiatrists describe' is written in the present tense please change to past. Discussion: See above comments relating to discussing theory.

	I think it is worth adding some commentary on the issues with mental health screening in the perinatal period and perhaps linking to NICE and the need for guidance here. The following report may also be a useful reference: Littlewood E., Ali, S., Dyson, L., Keding, A., Ansell, P., Bailey, D., et al. Identifying perinatal depression with case-finding instruments: a mixed-methods study (BaBY PaNDA – Born and Bred in Yorkshire PeriNatal Deptression Diagnostic Accuracy). Healt Services and Delivery Research. 2018. 6(6) This includes interviews with staff and HPs to discuss facilitators and barriers to screening and patient views on screening tools acceptability. P. 16 line 16 should this read given the sensitive nature of the topic as opposed to sensitivity. Also please change to future research should be co-designed with women. To address the 'so what' question I think it would be helpful to place your key practice and research implications/suggestions in a box. Clear directions for future primary research would be beneficial.

REVIEWER	Nicole Reilly School of Nursing & Midwifery and Research Centre for Generational Health and Ageing, University of Newcastle, Australia
REVIEW RETURNED	31-Oct-2018

GENERAL COMMENTS	Thank you for this well-written and insightful paper. The authors have provided a unique contribution to the literature by using a near miss approach to monitoring psychiatric maternal morbidity. These rich qualitative interviews have identified a number of important barriers to the detection, response and escalation of care of these mental health-related life-threatening events, which will be of great value to clinicians and management teams working across a range of healthcare disciplines. The Methods and Results were clearly presented and led logically to the Discussion and Conclusion. The limitations of the study were also adequately addressed. I have no suggestions for improvement, and thank the authors again for this important work.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1

Thank you for inviting me to review the manuscript, it was a pleasure to read and it was good to see some well conducted qualitative research on such an important topic area. I have made a couple of suggestions, which I feel will make the manuscript even stronger.

We would like to thank the reviewer for their positive feedback on our study and detailed suggestions for improvement, which we address individually below.

1. Abstract: a very minor point but the names of themes in the results section do not need to be capitalised.

We have amended the theme titles in the abstract and main text to lower case.

2. Design: The decision to use qualitative methods to explore this topic is appropriate, but I am not convinced by the justification that has been provided. I am not clear why the lack of empirical evidence would warrant a qualitative design only? I think it would be appropriate to say that given the lack of evidence an exploratory qualitative study was chosen. I also think it would be good to point out here that it is widely acknowledged that patient safety incidents and in particular near misses are often under-reported or not reported. Therefore choosing to use qualitative methods to explore this issue is appropriate and allows you to unpick the complexities surrounding the issue and barriers etc.

We agree the justification for our approach could me expressed more clearly. We have amended the design section of the manuscript to reflect the reviewer's suggestion, which now reads as follows:

"Given the absence of prior research into psychiatric maternal near miss events, an exploratory qualitative study, utilising in-depth semi-structured interviews with healthcare professionals (HCP), was adopted. Patient safety incidence, such as near miss events, are often under-reported therefore qualitative methodology may also be useful to explore in-depth the potential complexity of the barriers surrounding detection and response to maternal near miss events."

(page 5, para 1, lines 3-8)

3. Participants and setting: It would be helpful to say somewhere how many services were contacted and provide a bit more detail about the healthcare settings they represent. I appreciate this may be deliberately vague to maintain anonymity. However, at the moment I have no real sense of how many services/individuals were contacted. For instance, when you say a national sample does that mean you contacted all NHS secondary care organisation's midwifery departments individually. Or did you purposively choose a selection of services to represent England. This could be cleared up by adding more clarity around the sampling frame (see below). However it may also be because at the moment you state e.g. psychiatry, psychology, midwifery, obstetrics and health visiting are they merely examples or an exhaustive list?

Given the sampling procedures adopted (described further below and amended in the paper), it is not possible to accurately specify how many services were contacted as there was no way of the research team monitoring the number of individuals or services that were reached by social media advertisements, independent mailing lists or newsletters. Participants were contacted directly rather than through services.

The healthcare disciplines listed included all possible participant groups, which as such has been amended in the manuscript to the following:

"Purposeful and convenience sampling were used to recruit a national sample of HCP from five different healthcare disciplines (i.e. Psychiatry, Psychology, Midwifery, Obstetrics, and Health Visiting), across three healthcare settings (i.e. inpatient, outpatient and community teams)."

(page 5, para 3, lines 12-14)

4. Further detail on sampling is needed. At the moment the authors' state that purposeful and convenience sampling were both used. Having read this section I would presume that a convenience sample based on responses to direct emails and social media were used in the first instance and then participants were purposively sampled within that, but this is not clear? Can you elaborate on which characteristics were used to purposively sample?

Convenience sampling was used through social media and mailing lists with the aim to reach a national sample of participants. Purposeful sampling was then used to identify and contact directly relevant health care professionals in geographical regions or professional backgrounds that were not represented by the initial convenience sampling strategy. We have revised this section to ensure that the sampling procedures are clearer. This paragraph was amended to:

“Two main recruitment methods were utilised. First, convenience sampling was used to identify potential participants via direct emails to professional mailing lists and promotion of the study to professional groups via social media (i.e. Twitter and Facebook). Second, purposeful sampling (based on healthcare discipline and setting, and geographical location in the UK) was adopted to identify and directly email potential participants that were not represented in the first round of sampling.”

(page 5, para 4, lines 16-20)

5. P.5 line 34 please amend to ‘and it was felt that no new themes were emerging and data saturation was reached.’

We have amended this to reflect the reviewers’ comments. (page 6, para 1, line 3)

6. Data analysis: The authors state that inductive coding was used. However, the authors state that text relating to barriers to detection, response and escalation of potential life threatening psychiatric events….were extracted.’ This description implies data were coded using apriori themes derived from the research question and so a mixture of inductive and deductive coding was used? Either is fine, but the description does not seem to match the label of inductive coding at the moment.

Thank-you for your comment. In the first stage of the coding process we extracted data that was related to the research question for coding and removed any irrelevant sections of the transcripts. A priori themes were not derived during initial coding and the codes presented were data driven. However data analysis and interpretation was guided by the research question and existing theory (see response to reviewer one’s point 9 below). We agree that this involved an integration of inductive and deductive approach to coding and therefore have amended this section to more accurately reflect this and provide clarity of the methods used, i.e.

“Two main recruitment methods were utilised. First, convenience sampling was used to identify potential participants via direct emails to professional mailing lists and promotion of the study to professional groups via social media (i.e. Twitter and Facebook). Second, purposeful sampling (based on healthcare discipline and setting, and geographical location in the UK) was adopted to identify and directly email potential participants that were not represented in the first round of sampling.”

(page 5, para 4, lines 16-20)

7. p. 6 lines 18-27 is one long sentence. Please could this be broken up to help readability.

Thank-you we have amended this paragraph to improve readability.

8. p. 6 Is there a word missing between ‘HCP and teams’ on lines 25-26.

This sentence has been amended for clarification (page 7, para 4, line 21)

9. The authors state that data analysis and interpretation were informed by ‘systems theories of healthcare’ and the three delays model.’ However, neither theory is explained and neither is referred to again in the manuscript. If the analysis has a theoretical underpinning this is great however this needs to be elaborated on, otherwise it feels tokenistic and is unclear to what extent it was used. If this is the case, there needs to be an explanation of each theory in order for the reader to understand how they influenced data analysis. I would suggest a separate section perhaps called theoretical underpinnings in the methods section which introduces the two theories. In the analysis section there then needs to be a clearer explanation of how the theories were used. For instance were the theories used to inform topic guides, code the data or was the data coded inductively first and then themes mapped onto the theory? I also think the theory if it has been used to inform analysis should be mentioned again in the discussion when placing findings in the context of existing literature.

Thank-you for this comment, we agree with the reviewer that this is an important point that requires clarification and we have therefore added further text to strengthen out explanations.

In the methods section we have added a sub-section 'Theoretical Underpinnings' and have provided the following description of the two key theories used to guide data collection, analysis and interpretation and how these were applied. (page 7, para 1-4, lines 1-21)

We have added clarification to the discussion to refer back to the use of these theories to guide out data analysis and interpretation. (page 19, para 2, lines 3-4)

"Theoretical Underpinnings

Data analysis and interpretation was informed by Systems Theories of healthcare,(10) and the 'Three Delays Model'.(11, 12)

General systems theory, views healthcare practices within the context of a complex and interacting system. It asserts that individuals (e.g. patients, families, healthcare professionals) do not act in isolation; and therefore can only be understood by exploring the healthcare system as a whole and how different levels of the system interact. Factors that contribute to the healthcare system have been conceptualised as the interplay between three fundamental levels: micro (e.g. individual patients and healthcare professionals and their interactions), meso (e.g. the organisational context) and macro (e.g. wider healthcare systems and political context).

The three delays model was originally proposed to help facilitate understanding of the factors that prevent or delay women from accessing safe maternity care. Delays are proposed to occur at three key points: 1) delay in seeking care; 2) delay in reaching care, and 3) delay in receiving care once at an appropriate healthcare facility. The model has been used in a variety of international settings to help understand healthcare factors relating to maternal and perinatal mortality, and implement targeted changes in healthcare systems.

These theories were used to help structure the topic guide and help facilitate exploration of potential barriers at different levels of the healthcare system (e.g. mico, meso and macro) and within a women's care pathway. To draw out the complexity relating to the number of healthcare professionals and disciplines involved in a women's perinatal mental healthcare the analysis focused on desalinating differing perceptions between HCP."

10. Patient and public involvement. This feels tokenistic at present. Can you elaborate as to how the feedback from the PPI members was used to inform your analysis?

Discussions with members of the PPI group helped to refine the labels assigned to codes and themes to improve the clarity and meaningfulness of the findings to a wider non-academic or clinical audience, as well and the language used within the manuscript to describe the themes. In addition the PPI group have informed the further research section of the manuscript and helped to develop a protocol for a qualitative study with women and family members. The following sentence has been added to provide further details

"Discussions held with the PPI group helped to refine the labels assigned to codes and themes, and their descriptions as presented in this manuscript. In addition, they have helped to identify areas for future research studies to further understanding of the support needs of women and families."

(page 8, para 2, line 6-9)

11. Results: I would be interested to know from which sources participants were recruited from. This would help others who are interested in using social media as a method of recruitment to know how successful it was as a method. Equally it would be good to know the geographical region that

participants were based as the authors had a national sampling frame and the grade/years experience of participants.

We have added a paragraph to include details of the geographical region participants were recruited from and the method of recruitment e.g.

“A total of 15 HCP participated in the current study: 5 psychiatrists, 5 midwives, 2 health visitors, 1 General Practitioner, 1 psychologist and 1 obstetrician. Participants were recruited from the following regions: East of England (n=3), London (n=4), North East England (n=2) South East England (n=1), South West England (n-1), the West Midlands (n=2), Yorkshire and Humber (n=1), Wales (n=1). Five participants were recruited via social media, four responded to mailing lists and six were purposefully recruited via direct email.” (page 9, para 1, line 3-8.)

We have not added this to table 1 as the information could be potentially identifiable when not aggregated.

12. Line 35 page 8 ‘acted as a key barrier’ please add to what. I think somewhere you may need to explicitly state what you mean when you refer to primary HCP.

We have added clarification of this sentence e.g.

“…acted as a key barrier to identifying the level of mental health assessment or treatment a women needed.” (page 10, para 3, lines 15-16)

We have also added a description of what is meant by primary HCP when used in the first instance.

“…that primary HCP (i.e. midwives, health visitors and general practitioners)” (page, para, line).

13. Fluctuations in mental health: should this read at risk of ‘a’ life-threatening event before it occurred.

Thank-you we have amended this typo. (page 10, para 3, lines 18-19).

14. Medication reluctance: line 17 ‘was also a factor’ affecting what.

We have added further clarification to this sentence, e.g.

“…that affected the type of treatment women received for mental illness during pregnancy or during early motherhood.” (page 15, para 3, lines 9-10).

15. Page 14 line 5, should this read ‘in the postpartum period’?

Thank-you, we have amended this.

16. Line 23 page 14, the tense of the paragraph starting ‘psychiatrists describe’ is written in the present tense please change to past.

Thank-you, we have amended this.

17. Discussion: See above comments relating to discussing theory. I think it is worth adding some commentary on the issues with mental health screening in the perinatal period and perhaps linking to NICE and the need for guidance here. The following report may also be a useful reference: Littlewood E., Ali, S., Dyson, L., Keding, A., Ansell, P., Bailey, D., et al. Identifying perinatal depression with case-finding instruments: a mixed-methods study (BaBY PaNDA – Born and Bred in Yorkshire PeriNatal Deptression Diagnostic Accuracy). Health Services and Delivery Research. 2018. 6(6) This includes interviews with staff and HPs to discuss facilitators and barriers to screening and patient views on screening tools acceptability.

We have added the following paragraph to the discussion to address the issues around identification of perinatal mental illness using case-findings instruments and relevant references.

“Clinical guidelines in the UK recommend the use of two questions (‘the Whooley questions’) to aid identification of depression and other mental illnesses during pregnancy and the early postnatal period. Several previous studies have highlighted barriers to implementing these assessments in practice, such as time constraints and lack of training and knowledge about perinatal mental health. This study suggests that the implementation of routine questions to identify mental illness be more complex within the current healthcare system. For example, lack of on-going assessment of women’s mental health throughout the perinatal period reduced the ability to identify significant changes in symptom presentation. Furthermore, challenges in interpreting responses to the questions arose from a lack of continuity of care and unclear thresholds and pathways of referral, which created uncertainty among healthcare professionals about the appropriate treatment response.”

(Page 17, para 3, lines 16-24 and Page 18, para 1, lines 1-2)

18. P. 16 line 16 should this read given the sensitive nature of the topic as opposed to sensitivity. Also please change to future research should be co-designed with women.

Thank-you, we have amended this text as suggested by the reviewer. (Page 19, para 1, line 1)

19. To address the ‘so what’ question I think it would be helpful to place your key practice and research implications/suggestions in a box. Clear directions for future primary research would be beneficial.

Thank-you for this helpful suggestion, we have added “Box 1” to the manuscript outlining key recommendations for practice. We have included within the manuscript that future primary research should focus on the experiences and needs of women and families, and the following text to the discussion:

“There are several clinical implications arising from this study, which emphasis the need for greater implementation of recommendations made by MBRRACE and the National Institute for Health and Care Excellence (NICE), see Box 1.”

(Page 19, para 3, lines16-18/Box 1)

Reviewer 2

Thank you for this well-written and insightful paper. The authors have provided a unique contribution to the literature by using a near miss approach to monitoring psychiatric maternal morbidity. These rich qualitative interviews have identified a number of important barriers to the detection, response and escalation of care of these mental health-related life-threatening events, which will be of great value to clinicians and management teams working across a range of healthcare disciplines. The Methods and Results were clearly presented and led logically to the Discussion and Conclusion. The limitations of the study were also adequately addressed. I have no suggestions for improvement, and thank the authors again for this important work.

We would like to thank reviewer 2 for their positive feedback on our study and manuscript.

In addition to responding to the reviewers’ comments outlined above, we have updated the text relating to the latest maternal deaths enquiry in the UK (published November 2018), as the findings have direct relevance to the present study.

(page 4, para 1, lines 4-9 and page 17, para 2, lines 8-10)

We look forward to your reply.

VERSION 2 – REVIEW

REVIEWER	Arabella Scantlebury University of York, England
REVIEW RETURNED	03-Jan-2019

GENERAL COMMENTS	Thank you for the revised manuscript. I just have a few final comments relating to the methods section. Abstract: • The sentence describing data analysis needs to be re-phrased to include deductive analysis and the use of theory. Methods: Data analysis: • Line 1 should read 'an' iterative process of… • I am concerned about a comment you have made in the author's response to decision let ter, where you say that: In the first stage of the coding process we extracted data that was related to the research question for coding and removed any irrelevant sections of the transcripts. A priori themes were not derived during initial coding and the codes presented were data driven. These two sentences seem contradictory. I am particularly concerned about the statement that 'irrelevant sections' were removed. This implies that anything that did not directly relate to your research questions/ a priori ideas were not analysed. However, whilst not 'directly' relevant this data may have been useful in a broader sense. This also implies that coding was not data driven?

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Thank you for the revised manuscript. I just have a few final comments relating to the methods section.

Abstract:

• The sentence describing data analysis needs to be re-phrased to include deductive analysis and the use of theory.

Thank-you for your suggestion, this has now been incorporated into the abstract page 2, para 5, lines 29-31.

Methods:

Data analysis:

• Line 1 should read 'an' iterative process of…

This typo has now been amended, page 6, para 3, line 115.

• I am concerned about a comment you have made in the author's response to decision letter, where you say that:

In the first stage of the coding process we extracted data that was related to the research question for coding and removed any irrelevant sections of the transcripts. A priori themes were not derived during initial coding and the codes presented were data driven.

These two sentences seem contradictory. I am particularly concerned about the statement that 'irrelevant sections' were removed. This implies that anything that did not directly relate to your research questions/ a priori ideas were not analysed. However, whilst not 'directly' relevant this data may have been useful in a broader sense. This also implies that coding was not data driven?

We thank the reviewer for highlighting this important point and would like to clarify that 'irrelevant sections' in the previous response refers to small sections of dialogue that were completely off topic from the present study. For example, in one interview a brief conversation about the weather and the traffic, which had been transcribed, was not coded. Another research participant was organising a training day on a related but different topic, and invited the interviewer to speak at this event. This was also removed prior to coding.

We would like to reassure the reviewer that the analysis was data driven and all dialogue relating to the study, within the broadest sense, was carefully considered and coded as described within the methods section of the paper. The text that was considered completely out of scope was minimal, and not coding these sections has not influenced the findings presented within the manuscript. As such, we have removed a sentence from the manuscript relating to extracting data from the transcripts to more accurately reflect the methods employed. Page 6, para 3, lines 117-119.

VERSION 3 – REVIEW

REVIEWER	Arabella Scantlebury University of York, United Kingdom
REVIEW RETURNED	11-Feb-2019

GENERAL COMMENTS	No further comments from me. The paper looks great!