

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Conditionally positive: a qualitative study of public perceptions about using health data for artificial intelligence research
<b>AUTHORS</b>	McCradden, Melissa; Sarker, Tasmie; Paprica, P. Alison

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Melissa Baysari The University of Sydney, Australia
<b>REVIEW RETURNED</b>	22-May-2020

<b>GENERAL COMMENTS</b>	<p>Overall, a very well written and interesting paper. Clear rationale and nice discussion.</p> <p>Just a few suggestions to improve clarity:</p> <ol style="list-style-type: none"><li>1. Why were observations behind a one-way mirror needed? this seems quite unusual to me (as not usability testing or something of this nature), why couldn't researchers be present in groups? do you think this impacted participant responses? i.e. made participants more uncomfortable not knowing who was observing and what they were doing?</li><li>2. Under Participants, there is a typo: should be chose NOT to attend.</li><li>3. The reason for stratification of participants by income is not clear. The authors explain that this was to create an environment where participants were comfortable, but was income discussed? How did people know of others' income?</li></ol>
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<b>REVIEWER</b>	Amanda Terry The University of Western Ontario, Canada
<b>REVIEW RETURNED</b>	22-Jun-2020

<b>GENERAL COMMENTS</b>	<p>This is an important and timely study. As the application of AI tools continues to progress, it is increasingly critical that we understand the views of the broader public and patients about the uses of AI and health data. This study contributes to the knowledge base on this topic. This is a well designed and conducted study that explores the views of members of the general public regarding the use of health data in AI research. This is a complex question which required the participants to reflect on the nature of AI, the nature of health data, and the nature of research all together. The challenge of this task is reflected in the findings, where the participants focused more on the AI applications or tools that would be produced by the research rather than the use of health data for AI research itself. The authors have noted this briefly in</p>
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	<p>the manuscript however, the paper would be further strengthened by a more comprehensive discussion of this aspect of the research in light of the stated objective of the study. Additional points which would help clarify minor aspects of the manuscript for the reader include:</p> <ul style="list-style-type: none"> <li>- Pg. 8 consider removing quantitative language e.g. "significant correlations" since this is a qualitative study</li> <li>- Pg. 8 explain what Canadian Market Research is and how potential participants are recruited to this organization</li> <li>- Pg. 9 explain Edelman</li> <li>- Pg. 9 add a link to the RIVA training organization</li> <li>- In the strengths and limitations consider removing the wording about generalizability since this concept does not apply to qualitative studies</li> </ul> <p>Finally, since the participants raised points regarding health information privacy, adding content to the discussion about this topic as well as some key references would help to reflect this finding.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name

Melissa Baysari

Institution and Country

The University of Sydney, Australia

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

Overall, a very well written and interesting paper. Clear rationale and nice discussion.

Thank you for this comment.

Just a few suggestions to improve clarity:

1. Why were observations behind a one-way mirror needed? this seems quite unusual to me (as not usability testing or something of this nature), why couldn't researchers be present in groups? do you think this impacted participant responses? i.e. made participants more uncomfortable not knowing who was observing and what they were doing?

In our experience, the main benefit of having the research team behind a one-way mirror is that it allows the research team members to discuss participant comments and interactions in real-time without distracting or interrupting participant discussions. Text has been added to the Methods section about this advantage. We notified participants in advance that discussions would be observed behind a one-way mirror and did not see evidence that participants were made uncomfortable by the one-way mirror.

2. Under Participants, there is a typo: should be chose NOT to attend.

This has been corrected.

3. The reason for stratification of participants by income is not clear. The authors explain that this was to create an environment where participants were comfortable, but was income discussed? How did people know of others' income?

The income of participants was not disclosed to other participants or discussed. Text has been added to clarify what information was shared about and between participants. In Ontario, and Canada as a whole, there is a strong relationship between health and income and many other well-documented inequities related to the social determinants of health. Our main motivation behind the focus group structure was to create environments where participants would not feel inhibited from contributing to the dialogue, either because the groups were too large or because of real or perceived power imbalances.

Reviewer: 2

Reviewer Name

Amanda Terry

Institution and Country

The University of Western Ontario, Canada

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

This is an important and timely study. As the application of AI tools continues to progress, it is increasingly critical that we understand the views of the broader public and patients about the uses of AI and health data. This study contributes to the knowledge base on this topic. This is a well designed and conducted study that explores the views of members of the general public regarding the use of health data in AI research. This is a complex question which required the participants to reflect on the nature of AI, the nature of health data, and the nature of research all together. The challenge of this task is reflected in the findings, where the participants focused more on the AI applications or tools that would be produced by the research rather than the use of health data for AI research itself. The authors have noted this briefly in the manuscript however, the paper would be further strengthened by a more comprehensive discussion of this aspect of the research in light of the stated objective of the study.

We agree with the reviewer that the question is complex, in part because this study and other studies have shown that support for data-intensive health research depends on the perceived longer-term benefits of the products of the research. Based on this study we cannot completely separate support for use of data in health AI research from support for the perceived future benefits of health AI applications developed by the research, but we have re-organised the quotations and discussion of results to separate participant views on data usage in research from participant views on health AI applications to the extent that was possible.

Additional points which would help clarify minor aspects of the manuscript for the reader include:

- Pg. 8 consider removing quantitative language e.g. "significant correlations" since this is a qualitative study

We have removed language as per the reviewer's suggestion.

- Pg. 8 explain what Canadian Market Research is and how potential participants are recruited to this organization

The following text has been added. Participants were contacted by the Canadian subsidiary of Edelman (a communications company that conducts market research) drawing from a database of individuals who had signed up to participate in research studies which was established by Canada Market Research (a company that provides market research services and field service support).

- Pg. 9 explain Edelman

The following text has been added. Participants were contacted by the Canadian subsidiary of Edelman (a communications company that conducts market research) drawing from a database of individuals who had signed up to participate in research studies which was established by Canada Market Research (a company that provides market research services and field service support).

- Pg. 9 add a link to the RIVA training organization

RIVA is a market research training organisation. Edelman provided the information about the facilitator being RIVA trained as one indication that the person was a qualified facilitator. On reflection, we believe that naming RIVA in the manuscript might be interpreted as an endorsement of RIVA as a training organisation. Since that is not our intent, we have removed the reference to RIVA.

- In the strengths and limitations consider removing the wording about generalizability since this concept does not apply to qualitative studies

We have removed language as per the reviewer's suggestion.

Finally, since the participants raised points regarding health information privacy, adding content to the discussion about this topic as well as some key references would help to reflect this finding.

We agree with this suggestion. Two new quotations related to privacy have been added. No new references have been added because privacy was already identified as a concern in the cited literature.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Melissa Baysari The University of Sydney, Australia
<b>REVIEW RETURNED</b>	04-Sep-2020

<b>GENERAL COMMENTS</b>	The authors have addressed all reviewer comments. The paper reads well and presents a very interesting study. No additional comments from me.
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<b>REVIEWER</b>	Amanda Terry The University of Western Ontario, Canada
<b>REVIEW RETURNED</b>	04-Sep-2020

<b>GENERAL COMMENTS</b>	The authors have addressed the comments I provided in my review. I have no further comments. All the best with your continued work in this area!
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