

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The impact of COVID-19 on the the digital divide: A rapid review
AUTHORS	Litchfield, Ian; Shukla, David; Greenfield, Sheila

VERSION 1 – REVIEW

REVIEWER	Nuno Martins IPCA and ID+, School of Design
REVIEW RETURNED	27-May-2021

GENERAL COMMENTS	<p>The study presented in this paper is highly relevant. The adoption of digital communication tools in the Health area is a subject that generates much discussion and is highly complex. The tendency is the growing recognition of its importance. However, this paper reinforces the identified problem of asymmetries among the population. Asymmetries are high, mainly affecting the most vulnerable groups in social, cultural, economic and literacy terms. The analysis presented in this paper reinforces that there is still a lot to be done to make digital media effectively relevant to society at large. To evaluate the importance of digital media only through a set of population niches is to have a distorted view of reality. And this paper makes an important contribution to that clarification.</p> <p>The paper is well structured, with a very clear presentation of the methodologies and the process developed, as well as its limitations. The only recommendation is that the conclusions chapter should be a little more developed.</p>
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REVIEWER	Sonu Bhaskar South Western Sydney Local Health District, Liverpool Hospital, Department of Neurology & Neurophysiology
REVIEW RETURNED	07-Jun-2021

GENERAL COMMENTS	<p>This study on the digital divide during the first wave of the pandemic from Litchfield et al is a well-conceived, timely and well-written piece. The authors highlight the systemic disparities in elderly and ethnic minorities.</p> <p>Thank you for your invitation to review this work. I have a few suggestions/comments that I would invite authors to reflect upon;</p> <ol style="list-style-type: none">1. In the abstract/conclusion, please consider adding "During the early phase of COVID-19 pandemic, in the developed world, familiar difficulties in utilisation..." Since this review was focussed on the developed world and on the early phase of the pandemic.2. Introduction (Page 4/Lines 32-39): Not just communities, discrepancies exist across geographics and specialities. Suggest adding briefly this to the statement. (See https://pubmed.ncbi.nlm.nih.gov/33178656/, https://pubmed.ncbi.nlm.nih.gov/33014958/)3. Page 4, Lines 56-59, please revise the sentence and provide an
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	<p>appropriate reference.</p> <p>4. Minor change: Page 5: Lines 57-59: Please remove space after "(PRISMA)" and add space before "to"</p> <p>5. Page 6: Inclusion criteria: Lines 39-42: After "within the developed world, please add "..., during the early phase of the pandemic, "</p> <p>6. Authors have expanded on the framework initially developed by Ai-Chi Loh et al, therefore suggest removing "developed a novel framework" from the manuscript.</p> <p>7. Page 9: Lines 21-23: Please specify which vulnerable patients?</p> <p>8. In the Methods, it is suggested to include a definition of what defined "Developed world" - according to world bank definition etc?</p> <p>9. Page 13: Lines 41-43: Please cite the two studies discussed in the first statement.</p> <p>10. Page 15-16: Strengths and Weakness: Please add further discussion on that this study only analysed studies during the early phase of the pandemic. Secondly, no quantitative synthesis was performed - consistent with the limitations of narrative/rapid review. Also, only limited studies were of high quality and quality (methodological and risk of bias) assessment of individual studies were not performed.</p> <p>11. Page 17: Lines 49-54 suggest also adding other relevant calls: https://pubmed.ncbi.nlm.nih.gov/33810572/, https://pubmed.ncbi.nlm.nih.gov/33343410/</p> <p>12. Page 18: Lines 43-45: In addition to face-time technologies, other platforms such as online blogs for psychiatric patients have also been deployed and shown benefit in the vulnerable populations (see the work by Lehner et al from Germany https://pubmed.ncbi.nlm.nih.gov/33425836/). Suggest adding a brief discussion on this.</p> <p>13. In the Conclusion, please specify that these findings are to be interpreted in the context of the developed world.</p>
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REVIEWER	K Cooper Robert Gordon University, School of Health Sciences
REVIEW RETURNED	07-Jun-2021

GENERAL COMMENTS	<p>Thank you for the opportunity to review this topical and interesting rapid review.</p> <p>This is a really important subject area and pulling together the research to date will be useful for a number of stakeholders.</p> <p>I particularly liked the use of the Framework for interpreting the digital divide.</p> <p>I think a few areas of the manuscript could be enhanced:</p> <p>1. Page 4, line 50 - not clear what "this" is being referred to</p> <p>2. As there is no single agreed methodology for a rapid review, there needs to be a short section that describes & justifies what methods were used and what made this a rapid review (e.g. the limited number of databases searched?) other than it being done quickly</p> <p>3. For transparency and for readers to assess the likelihood of papers being missed, I would recommend a full, detailed search strategy for each of the 3 databases searched presented as an Appendix</p> <p>4. Page 15/16 strengths & weaknesses - this section needs further consideration of the limitatrions of a rapid review - i.e. limited databases searched, no appraisal of methodological quality etc & what this means for recommendations that can be made from the review</p> <p>Minor comments</p> <p>Page 4, line 56 - word missing in sentence</p> <p>Needs consistent use of COVID-19 throughout manuscript</p>
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Page 10 - line 28 - "ethical" should be ethnic I presume Page 19, line 12 - don;t think SES has been previously defined - also done with ED earlier in manuscript

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Nuno Martins, IPCA and ID+

Comments to the Author:

The study presented in this paper is highly relevant. The adoption of digital communication tools in the Health area is a subject that generates much discussion and is highly complex. The tendency is the growing recognition of its importance. However, this paper reinforces the identified problem of asymmetries among the population. Asymmetries are high, mainly affecting the most vulnerable groups in social, cultural, economic and literacy terms.

The analysis presented in this paper reinforces that there is still a lot to be done to make digital media effectively relevant to society at large. To evaluate the importance of digital media only through a set of population niches is to have a distorted view of reality. And this paper makes an important contribution to that clarification.

The paper is well structured, with a very clear presentation of the methodologies and the process developed, as well as its limitations.

Thank you

The only recommendation is that the conclusions chapter should be a little more developed.

Reviewer: 2

Dr. Sonu Bhaskar, South Western Sydney Local Health District, Ingham Institute

Comments to the Author:

This study on the digital divide during the first wave of the pandemic from Litchfield et al is a well-conceived, timely and well-written piece. The authors highlight the systemic disparities in elderly and ethnic minorities.

Thank you

Thank you for your invitation to review this work. I have a few suggestions/comments that I would invite authors to reflect upon;

1. In the abstract/conclusion, please consider adding "During the early phase of COVID-19 pandemic, in the developed world, familiar difficulties in utilisation..." Since this review was focussed on the developed world and on the early phase of the pandemic.

Thank you for the suggestion, following your advice the text now reads,

"During the early phase of the COVID-19 pandemic, in the developed world, familiar difficulties..."

2. Introduction (Page 4/Lines 32-39): Not just communities, discrepancies exist across geographics and specialities. Suggest adding briefly this to the statement. (See

<https://pubmed.ncbi.nlm.nih.gov/33178656/>,

<https://pubmed.ncbi.nlm.nih.gov/33014958/>)

Thank you for bringing these important publications to our attention. The text now reads,

“However persistent discrepancies exist across geographies and between communities in how they access and utilise digital technologies, differences compounded by the growing sophistication in the functionality of devices and connectivity (16-18).”

3. Page 4, Lines 56-59, please revise the sentence and provide an appropriate reference.

Thank you. The sentence has now been revised and reads,

“Despite acknowledged inequities in digital access and utilisation, measures introduced to reduce infection rates following the onset of the COVID- 19 pandemic in spring 2020, led to an acceleration of the reliance on digital health technologies both in Europe and the United States of America (19-22)”

4. Minor change: Page 5: Lines 57-59: Please remove space after "(PRISMA)" and add space before "to"

Thank you, now amended as advised.

5. Page 6: Inclusion criteria: Lines 39-42: After "within the developed world, please add "..., during the early phase of the pandemic, "

Thank you. This has now been clarified in the text which reads,

“The focus of our work was the provision of care within the developed world during the early phase of the pandemic to ensure relevance for policymakers, commissioners...”

6. Authors have expanded on the framework initially developed by Ai-Chi Loh et al, therefore suggest removing "developed a novel framework" from the manuscript.

Thank you. We have now changed the wording throughout to reflect your advice and referred to the framework as being “informed by ...” or “based on...”

7. Page 9: Lines 21-23: Please specify which vulnerable patients?

We are referring to vulnerable as the phrase defined by Hughes et al and classified by National Health Service England (23). The text now reads,

“One study looked at Digital Access; set in UK primary care it explored internet connectivity amongst vulnerable patients (including those that have received an organ transplant, are undertaking immunotherapy or a course of radiotherapy for lung cancer) (11, 23).”

8. In the Methods, it is suggested to include a definition of what defined "Developed world" - according to World Bank definition etc?

Thank you for the notification, we have now include the text,

"The focus of our work was the provision of care within the developed world (i.e. one which is predominantly industrialized and more economically developed with a higher individual income) (24)"

9. Page 13: Lines 41-43: Please cite the two studies discussed in the first statement.

Thank you, the text now reads...

"Two studies used routinely collected electronic health data, though were conducted independently of each other at two different sites in New York (United States) (25, 26). The first used data gathered from patients at New York University Hospital collected over a 6-week period to determine whether they had received their COVID-19 diagnosis at an office visit or via video consultation."

10. Page 15-16: Strengths and Weakness: Please add further discussion on that this study only analysed studies during the early phase of the pandemic.

Thank you, we have now included the text.

"We focussed on the early phase of the pandemic to understand the impact of the rapid changes to service delivery on those most vulnerable to the digital divide with the intention of producing timely findings that might inform service delivery in subsequent phases."

Secondly, no quantitative synthesis was performed - consistent with the limitations of narrative/rapid review.

Thank you we have now included the text,

"Our rapid review discovered only a small numbers of heterogeneous papers of limited geographic scope which precluded data synthesis and may have introduced a degree of bias."

Also, only limited studies were of high quality and quality (methodological and risk of bias) assessment of individual studies were not performed.

Thank you we have now acknowledged this in the text which reads,

"We did not formally assess the quality of the papers to facilitate the timeliness of the review process as with previous rapid reviews (14)"

11. Page 17: Lines 49-54 suggest also adding other relevant calls:

<https://pubmed.ncbi.nlm.nih.gov/33810572/>, <https://pubmed.ncbi.nlm.nih.gov/33343410/>)

Thank you, these have now been cited.

12. Page 18: Lines 43-45: In addition to face-time technologies, other platforms such as online blogs for psychiatric patients have also been deployed and shown benefit in the vulnerable populations (see the work by Lehner et al from Germany <https://pubmed.ncbi.nlm.nih.gov/33425836/>). Suggest adding a brief discussion on this.

Thank you, we have now included the line,

“(27) and related work found benefits from the introduction of an online blog tailored for psychiatric patients (28).”

13. In the Conclusion, please specify that these findings are to be interpreted in the context of the developed world.

Thank you, now clarified in the text which reads,

“The rapid incorporation of digital technologies into mainstream health care delivery due to the COVID pandemic was widely understood and accepted by patients in the developed world unwilling to breach social distancing advice.”

Reviewer: 3

Dr. K Cooper, Robert Gordon University

Comments to the Author:

Thank you for the opportunity to review this topical and interesting rapid review.

This is a really important subject area and pulling together the research to date will be useful for a number of stakeholders.

I particularly liked the use of the Framework for interpreting the digital divide.

Thank you

I think a few areas of the manuscript could be enhanced:

1. Page 4, line 50 - not clear what "this" is being referred to

Thank you, now clarified in the text,

“This rapid introduction led to concerns that the new digitally reliant models of healthcare delivery will disproportionately affect the health of disadvantaged communities (5, 29-31) such as ethnic minorities (32), rural populations (4), the elderly (33) and residents of care homes (34).”

2. As there is no single agreed methodology for a rapid review, there needs to be a short section that describes & justifies what methods were used and what made this a rapid review (e.g. the limited number of databases searched?) other than it being done quickly

Thank you for advice. We have now clarified this in the text under study design,

“Rapid reviews have previously been recommended by the WHO amongst others for their ability to provide timely and credible evidence for policymakers and practitioners in what is a dynamic and evolving public health crisis (35, 36). We have used many of the principles of a systematic review process; our search terms were clearly defined using Boolean principles and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) described the search (37). The inclusion and exclusion criteria were clearly defined and two reviewers agreed on the selection of the various papers (The search terms can be found in supplementary file 1). However the systematic review process was expedited by amending several steps i.e. drawing only on the major medical databases and forgoing a structured appraisal of the quality of selected studies in place of a transparent description of the characteristics of each within the results.“

3. For transparency and for readers to assess the likelihood of papers being missed, I would recommend a full, detailed search strategy for each of the 3 databases searched presented as an Appendix

Thank you now included as a supplementary file.

4. Page 15/16 strengths & weaknesses - this section needs further consideration of the limitations of a rapid review - i.e. limited databases searched, no appraisal of methodological quality etc & what this means for recommendations that can be made from the review

Thank you, we have now discussed this in the Strengths & weaknesses section and the text now reads,

“Our rapid review discovered only a small numbers of heterogeneous papers of limited geographic scope which precluded data synthesis and may have introduced a degree of bias. The lack of a theoretical underpinning in many of the papers limited generalisability (10) and that two of the studies relied on self-reported data (11, 12) raises familiar issues regards their reliability (13). However previous comparisons between systematic and rapid reviews have failed to find significant differences in the outcomes they report (14, 15) and all of our included studies offered valuable insight into how the digital divide was magnified by the changes to health delivery in the early stages of the pandemic.”

Minor comments

Page 4, line 56 - word missing in sentence

Thank you, line now reads

“Despite the acknowledged inequities in digital access and utilisation, measures introduced to reduce infection rates following the onset of the COVID- 19 pandemic...”

Needs consistent use of COVID-19 throughout manuscript

Thank you, now amended throughout.

Page 10 - line 28 - "ethical" should be ethnic I presume

Yes it should - thank you, now amended.

Page 19, line 12 – don't think SES has been previously defined - also done with ED earlier in manuscript

Thank you now amended.

Reference List

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