

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Surveying and Mapping Breast Cancer Services in Ghana: A Cross-Sectional Pilot Study in the Eastern Region
AUTHORS	Moustafa, Moustafa; Mali, Meghan; Lopez-Verdugo, Fidel; Sanyang, Ousman; Nellerroe, Jonathan; Price, Raymond; Manortey, Stephen; Biritwum-Nyarko, Alberta; Ofei, Irina; Sorensen, Justin; Goldsmith, Alison; Brownson, Kirstyn; Kumah, Augustine; Sutherland, Edward

VERSION 1 – REVIEW

REVIEWER	Paul Brassard McGill University Health Center, Medicine
REVIEW RETURNED	04-May-2021

GENERAL COMMENTS	<p>This is an interesting study looking into the geographical access of primary screening/treatment services for breast cancer in Ghana. It is generally well written, methodology is clear, results section adequate, and discussion sticks to the facts. There is a good limitations section.</p> <p>I have a few points that may help the manuscript</p> <p>1- Are there any official guidelines for breast cancer screening/treatment in Ghana or Sub Sahara Africa? Please state so as it would help in defining the level of care expected in Ghana.</p> <p>2- I was surprised to see that 100% of hospitals responded fully to the survey (completeness). Could you explain why?</p> <p>3- Would level of services a function of the type of hospital? i.e. state vs private vs faith based) as hypothetical resource allocation /implementation may vary according to hospital type. In other words, are gaps observed hospital type dependent?</p> <p>4- Just a general comment, modifying level of services without taking into account all the other potential impacting factors on access may be practical from a logistic point of view but may not be as fruitful as predicted.</p>
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REVIEWER	Samuel Cumber University of Gothenburg Sahlgrenska Academy
REVIEW RETURNED	01-Jul-2021

GENERAL COMMENTS	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;"><i>Aspect</i></th> <th style="text-align: center;"><i>Comment</i></th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;">Surveying and Mapping Breast Cancer Services in Ghana: A Cross-Sectional Pilot Study in the Eastern</td> </tr> </tbody> </table>	<i>Aspect</i>	<i>Comment</i>	Surveying and Mapping Breast Cancer Services in Ghana: A Cross-Sectional Pilot Study in the Eastern	
<i>Aspect</i>	<i>Comment</i>				
Surveying and Mapping Breast Cancer Services in Ghana: A Cross-Sectional Pilot Study in the Eastern					

Region	
Abstract page 3	<p><i>The abstract is highly disorganized. Check the flow from the journal website</i></p> <p><i>-use the flow Background, Objective, method, Results and conclusion for your abstract.</i></p> <p><i>-The research design, participant, setting, isn't a separate part of the abstract put under method.</i></p> <p><i>-state the period of the research in the abstract</i></p> <p><i>-Use past tense in your abstract</i></p> <p><i>-When giving percentages mention values inside brackets, sometimes it's your abstract that prompts reading and the figures gives an exact measure of intensity of the problem</i></p> <p><i>-Abstract lacks key words</i></p>
Introduction page 5	<p><i>-Improve introduction to global burden, Sub-saharan Africa and</i></p>

		<p><i>national.</i></p> <p><i>- Introduction is too less informative improve</i></p>	
	<p>Methodology page 5 line 33</p>	<p><i>Organised and add the following components</i></p> <p><i>The study area/setting</i></p> <p><i>Study design</i></p> <p><i>Study Population</i></p> <p><i>Inclusion</i></p> <p><i>exclusion</i></p> <hr/> <p><i>Page 5, line49</i></p> <p><i>Use past tense and mention the study design</i></p> <p><i>Page 8, table should be named above</i></p> <p><i>page 10 , line 10 Ethical clearance</i></p> <p><i>Grammatical error don't say "reviewed with "</i></p>	
	<p>Results</p>	<p><i>-create a table to demonstrate sociodemographic data</i></p> <p><i>Give numbers of hospitals reviewed and corresponding</i></p>	

		<p><i>percentage(eg 33 of 34 hospitals were reviewed making a percentage of</i></p> <p><i>-there is a mixture of numbers spelled in word , you are adviced to use numbers as it is easier to capture than wordings</i></p> <p>-page 11 line 23</p> <p><i>Thirteen hospitals (avoid wording numbers , write 13 and include the percentage representation.</i></p> <p><i>Page 11 line 23</i></p> <p><i>Label table above and create good scientific table with 3lines</i></p>	
	<p>Limitations</p>	<p>-“ our novel survey tool is not validated” the statement isn’t appropriate use past tense</p> <p>-Put the limitations in point form</p>	
	<p>Conclusion</p>	<p>-Use past tense</p>	

		<p><i>-do not use numbers in your conclusion</i></p> <p><i>Conclusions are derived from your results</i></p>
	General others	<p><i>Through out the work there are slight grammatical errors and a mix-up with tenses</i></p> <ul style="list-style-type: none"> - <i>Recommend all others to read and go through the suggested corrections</i> - <i>Present results in form of bar chats, histograms for better comprehension..</i>

VERSION 1 – AUTHOR RESPONSE

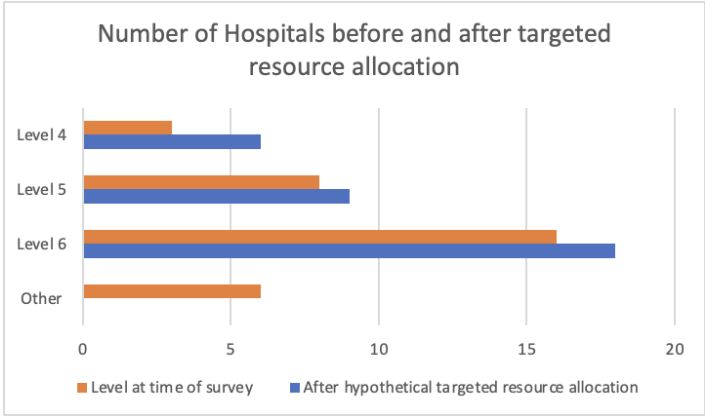
Reviewer	Comment	Response
1	<p>Comments to the Author:</p> <p>This is an interesting study looking into the geographical access of primary screening/treatment services for breast cancer in Ghana. It is generally well written, methodology is clear, results section adequate, and discussion sticks to the facts. There is a good limitations section.</p>	<p>Thank you very much for your comments. We hope our responses included below adequately address your questions and concerns regarding the study.</p>

1	Are there any official guidelines for breast cancer screening/treatment in Ghana or Sub Sahara Africa? Please state so as it would help in defining the level of care expected in Ghana.	The only country specific guidelines available are on pages 655-656 of the Ministry of Health's "Standard Treatment Guidelines" published in 2017. This document provides specific recommendations for screening, but is very broad in regards to treatment recommendations. The guidelines state that treatment options including surgery, chemotherapy, immunotherapy, radiotherapy, hormonal therapy, and palliative care should be considered based on tumor and patient characteristics. It is expected that all of these treatment modalities should be available in the country. The introduction of the manuscript has been revised to include this information in the 2nd paragraph.
1	I was surprised to see that 100% of hospitals responded fully to the survey (completeness). Could you explain why?	We were able to obtain complete responses to the surveys due to the surveys being conducted in person by our research assistants. If there were any sections in the survey the respondent was not familiar with, the research assistant was able to follow up to complete that question or section after the respondent had time to acquire the information from the appropriate person at the hospital. This explanation has been added to the "Survey Administration" subsection within Methods.
1	Would level of services a function of the type of hospital? i.e. state vs private vs faith based) as hypothetical resource allocation /implementation may vary according to hospital type. In other words, are gaps observed hospital type dependent?	<p>The level of services may in fact be a function of the type of hospital (regional, district, etc) because that classification system is hierarchical. The Eastern Region does not have a tertiary teaching hospital, so the regional hospital should be the most equipped referral hospital in the region. Hospital ownership (government, private, etc) however, does not necessarily help inform what services will be available.</p> <p>In order to address this in the manuscript, the following revisions have been made:</p> <ul style="list-style-type: none"> • The last sentence in the 2nd paragraph of the revised introduction lists hospital types in order of where the highest level of care would be expected to the lowest: "tertiary teaching hospitals followed by regional hospitals, municipal hospitals, then district hospitals." • Table 2 has been revised to include hospital type and hospital ownership. • The following sentence has been added to the 2nd to last paragraph in the results section: "The regional hospital, which is the main referral center in the region was categorized as Level 4, but the municipal hospital was categorized as Other (Table 2)."
1	Just a general comment, modifying level of services without taking into account all the other potential impacting factors on access may be practical from a logistic point of view but may not be as	Thank you for this insightful comment; we agree with your concern that increasing services alone may not improve access to care due to many other factors that impact accessibility. We attempted to highlight the multifactorial nature of access to care and barriers specific to Ghana in the discussion section, but revised the limitations section to include a sentence directly addressing this concern as follows: "Additionally, because of these other barriers in access to care, the proposed hypothetical targeted resource allocation may not lead to improved access or utilization of care if other factors are not

	fruitful as predicted.	addressed.”
2	<p>Abstract</p> <p>The abstract is highly disorganized. Check the flow from the journal website</p> <p>-use the flow Background, Objective, method, Results and conclusion for your abstract.</p> <p>-The research design, participant, setting, isn't a separate part of the abstract put under method.</p> <p>-state the period of the research in the abstract</p> <p>-Use past tense in your abstract</p> <p>-When giving percentages mention values inside brackets, sometimes it's your abstract that prompts reading and the figures gives an exact measure of intensity of the problem</p> <p>-Abstract lacks key words</p>	<p>Thank you for this feedback. The organization of the abstract follows the recommended outline described under the section “Original Research” on BMJ Open’s Author submission guideline’s page https://bmjopen.bmj.com/pages/authors/#submission_guidelines</p> <p>Recent abstracts of publications in BMJ Open follow this format with examples available at the following links: https://bmjopen.bmj.com/content/11/8/e054032 https://bmjopen.bmj.com/content/11/8/e045495 https://bmjopen.bmj.com/content/11/8/e049815</p> <p>We provided an alternate abstract with the more standard flow of “background, objective, methods, results, and conclusions” per your recommendation below this table for consideration of either option by the medical editor.</p> <p>The following additional revisions have been made to both versions of the abstract:</p> <ul style="list-style-type: none"> - The period of the research is now included (March 2020 through May 2020) - All tenses have been revised to be past tense as appropriate. - All values included in the abstract are now reported with the absolute number followed by the percent in parentheses. - Keywords as selected through BMJ Open’s submission portal have now been added at the end of the abstract for ease in reference.
2	<p>Introduction page 5</p> <p>-Improve introduction to global burden, Sub-saharan Africa and national.</p> <p>- Introduction is too</p>	<p>We appreciate this insight and have revised the introduction to include more details. The following information has been added:</p> <ul style="list-style-type: none"> ● Specific numbers detailing breast cancer burden in Ghana ● The recent launch of WHO’s Global Breast Cancer Initiative, which demonstrates that the need for improvement of breast cancer care globally is being recognized ● Background economic information about the country of

	less informative improve	Ghana and an overview of the healthcare system in the country
2	Methodology page 5 line 33 Organised and add the following components The study area/setting Study design Study Population Inclusion exclusion	The first paragraph of the methods section has been revised and is now separated into the following sections: "Study Design and Setting," "Inclusion Criteria," and "Exclusion Criteria."
2	Methodology Page 5, line49 Use past tense and mention the study design	The tense used in the methodology section has been revised to past tense. The study design is mentioned in the first sentence of the methods section.
2	Page 8 Table should be named above	"Table 1" has been added to the top of the table.
2	Page 10 , line 10 Ethical clearance Grammatical error don't say "reviewed with "	The sentence has been revised to the following: "The study was reviewed and approved by the Ethical Review Committee of the GHS..."
2	Results -create a table to demonstrate sociodemographic data	From our experience, sociodemographic data refers to variables such as age, sex, race, ethnicity, socioeconomic status, marital status, employment status, etc., and is frequently presented as the "Table 1" in cohort, case-control, and randomized clinical trials. Because our study surveyed hospitals, rather than individuals, we do not have any traditional sociodemographic data to present. For the data on personnel employed at the hospital, we did not collect any additional information beyond the quantity of individuals employed. We apologize if we are misunderstanding your request. Please provide us with additional clarification on what information you would like to see included in a table if you are still concerned that a sociodemographic table should be included. We did

		revise Table 2 to include additional information regarding the hospital type and ownership status.
2	Results -Give numbers of hospitals reviewed and corresponding percentage(eg 33 of 34 hospitals were reviewed making a percentage of	The first sentence has been revised to include a percentage as follows: "Thirty-three out of the 34 hospitals (97%) in the Eastern Region were surveyed."
2	Results -there is a mixture of numbers spelled in word , you are advised to use numbers as it is easier to capture than wordings . -Thirteen hospitals (avoid wording numbers , write 13 and include the percentage representation.	The manuscript has been revised so all numbers are consistently presented as numerals per your suggestion. The one exception is when a number starts a sentence. From our experience, a numeral should not be used at the beginning of a sentence. An example of a recent publication in BMJ Open where numbers that start a sentence are spelled out is available at this link: https://bmjopen.bmj.com/content/11/8/e051345 .
2	Page 11 line 23 Label table above and create good scientific table with 3lines	Table 2 has been revised to include a title at the top and formatted so there are no lines between the rows. As mentioned above, additional information has also been added to Table 2 to provide more detailed information on what hospitals are providing services.
2	Limitations -" our novel survey tool is not validated" the statement isn't appropriate use past tense -Put the limitations in point form	The second sentence in the limitations section has been revised as follows: "...our novel survey tool has not been validated." In regards to the suggestion that we format the limitations section in point form, we reviewed numerous recent original research papers published in BMJ Open and were unable to identify a limitations section formatted in this way. We opted to keep this section in paragraph form in order to maintain consistency with other BMJ Open publications.

2	<p>Conclusion</p> <ul style="list-style-type: none"> -Use past tense -do not use numbers in your conclusion <p>Conclusions are derived from your results</p>	<p>The conclusion has been revised to ensure the consistent use of past tense as appropriate. We were unable to identify any use of numbers in the conclusion, but we removed the 2nd and 3rd sentences to ensure that results were not being restated in the conclusion section.</p>															
2	<p>General others</p> <p>Through out the work there are slight grammatical errors and a mix-up with tenses</p> <ul style="list-style-type: none"> - Recommend all others to read and go through the suggested corrections - Present results in form of bar chats, histograms for better comprehension. 	<p>Thank you very much for your careful review of our paper. Tenses throughout have been revised to ensure consistency and the use of past tense when appropriate. We worked collaboratively to address your comments and concerns. We appreciate your contribution to bettering our work. In regards to your final comment, we are limited by the figure/table limit of the journal (BMJ Open), which is 5. We worked on a few styles of charts to potentially replace Table 2, and an example is included below. Ultimately our research team was of the view that the revised table included in this re-submission was able to more fully represent the data.</p>  <table border="1"> <caption>Number of Hospitals before and after targeted resource allocation</caption> <thead> <tr> <th>Category</th> <th>Level at time of survey</th> <th>After hypothetical targeted resource allocation</th> </tr> </thead> <tbody> <tr> <td>Level 4</td> <td>3</td> <td>6</td> </tr> <tr> <td>Level 5</td> <td>8</td> <td>9</td> </tr> <tr> <td>Level 6</td> <td>16</td> <td>18</td> </tr> <tr> <td>Other</td> <td>6</td> <td>0</td> </tr> </tbody> </table>	Category	Level at time of survey	After hypothetical targeted resource allocation	Level 4	3	6	Level 5	8	9	Level 6	16	18	Other	6	0
Category	Level at time of survey	After hypothetical targeted resource allocation															
Level 4	3	6															
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Other	6	0															

VERSION 2 – REVIEW

REVIEWER	Paul Brassard McGill University Health Center, Medicine
REVIEW RETURNED	14-Sep-2021
GENERAL COMMENTS	Adequate response to my comments