PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The Role, Structure and Effects of Medical Tourism in Africa: A Systematic Scoping Review Protocol
AUTHORS	Mogaka, John; Tsoka-Gwegweni, Joyce; Mupara, Lucia; Mashamba-Thompson, Tivani

VERSION 1 - REVIEW

REVIEWER	Neil Lunt University of York UK
REVIEW RETURNED	30-Jun-2016

GENERAL COMMENTS	A focus on Africa within the medical travel/medical tourism field is certainly an important one and coverage of the south and south-south exchanges is part of a potential rebalancing of the said literature. I offer some comments about terminology and focus: - It would be useful to clarify the focus of 'Africa'. Does this mainly (or solely) refer to South Africa? What about Kenya? Does it also include countries of Northern Africa – particularly Tunisia for example – where an earlier focus on cosmetic treatment is now joined by treatment of patients travelling from neighbouring Libya as a result of health system collapse in that country. - Is the focus on 'medical tourism' (and perhaps by implication an emphasis on high end, travel from out of region) likely to miss south-south cross-border exchanges. It would appear (eg work of Crush and others) that regional flows are important. Is this also to be captured within the study? - What is the likely amount of empirical work that exists that directly relates to Africa? Is this likely to be relatively small? There may be vast amounts of medical tourism literature but how much will be relevant for Africa (and what parts? What will be the process by which non-African but relevant studies will inform discussion? How will relevance be determined (Page 9: exclusion criteria)? - Page 2. "*Medical tourism is likely to be a solution to many economical healthcare problems in Africa*". What is the basis for making this statement? If much healthcare treatment is high-end and delivered by private providers how will this contribute to a public health agenda for example? - Page 4 lines16-17. Do references 6-8 support the point

	about medical travel? - Page 5 lines 47-8. Can medical tourism be understood in its entirety in Africa? Perhaps there are a small number of medical tourisms? - Page 14. Lines 22-24 '*Many African countries are competing for the global medical tourism dollar*'. The reference is from 2006. Is this still the case or was there a significant amount of rhetoric?

REVIEWER	Johanna Hanefeld London School of Hygiene and Tropical Medicine
REVIEW RETURNED	07-Jul-2016

GENERAL COMMENTS	This is a very interesting topic and I agree worthy of a scoping review, but the present protocol is not clearly enough defined a) in terms of the requests it seeks to explore and b) in terms of the search strategies. In addition, your review is based on several hypothesis which are highly contested in the literature, so you would have to explore possible benefits versus challenges in a more nuanced way. I also wonder if Africa as a unit may be too big to draw conclusions from in a meaningful way. What are you seeking to identify - in terms of features, I think some of the categories are right but you miss other obvious areas such as health systems and the effects of medical travel. These are arguably the more interesting and the more contested areas where a review would be of greater interest. In sum, I think you should pursue this, but would urge you to reconsider this work based on a more thorough review of the literature to inform your framing. I would be very happy to help in this if this was helpful

VERSION 1 – AUTHOR RESPONSE

REVIEWER 1 (Neil Lunt)

Comment: A focus on Africa within the medical travel/medical tourism field is certainly an important one and coverage of the south and south-south exchanges is part of a potential rebalancing of the said literature.

Response: Thank you for your kind words about our paper. We are delighted to hear that you think our work has potential of rebalancing literature on medical tourism, given the present skew in favour of the North-North and North-South axis. In the following sections, we provide a point-on-point responses to each of your points and suggestions. We are grateful for the time and energy you expended on our behalf.

Comment: - It would be useful to clarify the focus of 'Africa'. Does this mainly (or solely) refer to South Africa? What about Kenya? Does it also include countries of Northern Africa – particularly Tunisia for example – where an earlier focus on cosmetic treatment is now joined by treatment of patients

travelling from neighbouring Libya as a result of health system collapse in that country.

Response: We did not intend for our focus to be implicit and speculative. In response to your query, we have now included a section detailing our focus: stating that we are focusing on the African continent as a whole, but subdividing it into North, West, Central, East and Southern Africa. We have used the approach adopted by the UN and AU. The section on the study focus (context) as Africa is now explicitly stated in the last paragraph of the introduction.
Arguably, North Africa is culturally different from the rest of Africa. But given that medical tourism transcends cultural boundaries, besides an overwhelming evidence that many patients from the rest of Africa cross over to North Africa for medical care, we deemed it necessary to have our focus as the entire African continent.

Comment: - Is the focus on 'medical tourism' (and perhaps by implication an emphasis on high end, travel from out of region) likely to miss south-south cross-border exchanges. It would appear (e g work of Crush and others) that regional flows are important. Is this also to be captured within the study?

Response: Our statements to the effect that we are focusing on medical tourism into, out of and intra-Africa might have been more ambiguous than intended, and we have adjusted in the revised manuscript to be clearer. We have added a statement more explicitly stating that we are focusing on all the three directional flows of medical tourism so as to capture evidence on North-South and South-South medical tourism exchanges. But we have been careful not to capture cross-border 'forced' medical travel which might include "medical refugees" in need of care on humanitarian grounds, from neighbouring countries. This is not the scope of this study.

Comment: What is the likely amount of empirical work that exists that directly relates to Africa? Is this likely to be relatively small?

Response: As stated in the strengths and limitations section of our study, to the best of our knowledge there is limited scientific study on medical tourism in Africa and its effect on healthcare systems. While this may be a possible limitation in terms of the amount of data for this scoping review, it may be an important finding of this study and a basis for calling for more research in this area. We are, therefore, curious to find out the answer to this question through our study findings.

Comment: There may be vast amounts of medical tourism literature but how much will be relevant for Africa (and what parts? What will be the process by which non-African but relevant studies will inform discussion? How will relevance be determined (Page 9: exclusion criteria)?

Response: In the revision, the exclusion criteria have been modified in an attempt to accommodate this concern. There indeed exists literature on medical tourism that is global in outlook. Non-African but relevant medical tourism studies, even though not exclusively tailored to focus on Africa per se, will be included to advise discussion of the study findings. Relevance will be informed as progressive familiarity with literature is gained

Comment: - Page 2. "Medical tourism is likely to be a solution to many economical healthcare problems in Africa." What is the basis for making this statement? If much healthcare treatment is high-end and delivered by private providers how will this contribute to a public health agenda for example?

Response: Preliminary evidence consulted suggest that if the medical tourism industry is properly managed through appropriate policies, financial resources so gained could be used to supplement local public health systems. MT services are generally provided by the private sector. Whereas private health care providers have little incentive to consider population-based services, the public at

large must be served through public health interventions focused on the health needs of the entire population or population groups. Therefore, there is need to properly co-ordinate these two sectors for the good of all.

Comment: - Page 4 lines16-17. Do references 6-8 support the point about medical travel?

Response: The referred to section has subsequently been eliminated in the revised manuscript.

Comment: - Page 5 lines 47-8. Can medical tourism be understood in its entirety in Africa? Perhaps there are a small number of medical tourisms?

Response: The statement has been revised to read ‘This does not allow MT in Africa to be understood well’ instead of the previous ‘This does not allow MT in Africa to be understood in its entirety’.

Comment: - Page 14. Lines 22-24 ‘Many African countries are competing for the global medical tourism dollar’. The reference is from 2006. Is this still the case or was there a significant amount of rhetoric?

Response: Since we included just one reference, in the revised manuscript we have added two more references, some authored as late as 2014.These sources indicate that even though there might have been a significant amount of rhetoric around the fact that medical tourism is economically attractive, medical tourism is still, regrettably, dominated by a marketing hype that seems to affirm this earlier held rhetoric. This hype is, unfortunately, picked up by many African governments because of lack of scientific evidence to the contrary, a point underscored in this paper.

REVIEWER 1 (Johanna Hanefeld)

Comment: This is a very interesting topic and I agree worthy of a scoping review.

Response: Thank you for your kind words about our topic, echoed by Reviewer 1. We are delighted to hear that you agree that our topic is worthy of a scoping review. Thank you for all of your detailed comments and suggestions. We found them quite useful as we approached our revision. We proceed to respond to your specific comments below. However, as noted earlier, your comments and suggestions were so fundamental we had to revise entire protocol sections to accommodate them. This indicates the extent of our agreement with your suggestions.

Comment: …but the present protocol is not clearly enough defined a) in terms of the requests it seeks to explore and b) in terms of the search strategies.

Response:
a) We have substantially revised parts of the paper to provide more clarity on the requests our study seeks to explore. We have added an objective not included hitherto, (study question number (iii)).

b) We deemed it appropriate to use a scoping review framework, which, unlike systematic review or meta-synthesis, is used to map the literature. In our opinion, most of the evidence on medical tourism in Africa is emergent and multi-disciplinary in nature, hence the critical necessity of a scoping review to map the range and extent of this evidence. A scoping review’s search strategy is often an iterative process, and the detailed search strategy is usually documented in the analysis and final write up of the full review. In response to your concern therefore, this fact has been alluded to in the revised manuscript search strategy section.

Comment: In addition, your review is based on several hypotheses which are highly contested in the literature, so you would have to explore possible benefits versus challenges in a more nuanced way. I also wonder if Africa as a unit may be too big to draw conclusions from in a meaningful way.

Response: In the revised manuscript, we avoided the more contested hypotheses and reframed our study focus to reflect a more nuanced benefits verses challenges outlook of medical tourism in Africa. Furthermore, since this is not an empirical study, choosing Africa as our focal point will not be too big to draw conclusions from as we will be looking at what is already published on medical tourism as it relates to healthcare systems in Africa as a continent. We anticipate our study will reveal significant insights on the three medical tourism flows in Africa: medical tourism from, into and intra-Africa. Currently, not much is known about medical tourism in Africa as a continent. In South Africa, for instance, literature has indicated the significance of intra-regional (African) medical tourism, but much as the existence of medical tourism in the country is acknowledged, details about the industry are not well known: regional source countries, preferred procedures, role players etc. In addition, evidence indicate that while literature on medical tourism is generally growing, it is mostly focused either on individual case studies, individual countries or specific aspects of medical tourism. This study will therefore map some of these literature and draw conclusions based on and as applicable to the African continent and its healthcare systems

Comment: What are you seeking to identify - in terms of features, I think some of the categories are right but you miss other obvious areas such as health systems and the effects of medical travel. These are arguably the more interesting and the more contested areas where a review would be of greater interest.

Response: We fully agree with this suggestion. Consequently, we have substantially revised parts of the paper to provide more clarity and reflect these areas of interest. Notably, at the introduction section of the protocol we have included a section that specifically refers to medical tourism and healthcare systems in Africa. Furthermore, we have included a corresponding objective, (study question number (iii)). The inclusion of this objective will direct our study focus to address the more contested and more interesting issues of medical tourism and healthcare systems in Africa.

Comment: In sum, I think you should pursue this, but would urge you to reconsider this work based on a more thorough review of the literature to inform your framing

Response: Thank you for encouraging us to pursue this work. As we discussed in our response to your previous point, we have revised the manuscript based on some more literature.

Comment: I would be very happy to help in this if this was helpful

Response: Thank you very much for your offer to help. And yes, we welcome any help offered. The proposed study is aimed at informing a forthcoming comprehensive study including collecting primary empirical data. We will definitely consider inviting you to be part of the team in the forthcoming bigger study.

VERSION 2 – REVIEW

REVIEWER	Neil Lunt University of York UK
REVIEW RETURNED	24-Aug-2016

GENERAL COMMENTS	This is a worthwhile paper and project and it is important that the African context be reviewed and the literature re-balanced. The MS

	is well written and interesting. I humbly offer a few additional reflections for the authors to consider as they push the Manuscript towards publication. 1/ Clarify the elective/non-elective distinction. Is it only cosmetic that is elective? Many of the items that are listed as non-elective would be categorised as such in other health systems. 2/ revisit the abstract to ensure it reflects the balance of discussion in the paper. The abstract appears very pro-MT whereas the paper itself is more balanced. Can it be substantiated that "Evidence suggests, if resources generated though medical tourism are even-handedly sued in strengthening local healthcare systems, medical tourism can significantly impact health care provision". (lines 9-13). Where is the evidence? Also lines 53-54 3/ check for typos e.g. proof TO prove 4/ reporting results - do take care in reporting of pricing data. These are often not easily comparative and often what they include/exclude not always clear. They are also typically industry-led and subject to hyperbole. 5/ "Evidence where medical care provision to medical tourists is not explicitly differentiated from the day to day provision of health care offered to the general public" But if the services are being used by incoming medical tourists why would you exclude them? Clarify. 6/ page 14 "uncommon" - perhaps change to "non-routine" 7/ page 14 "Globally, MT is growing at a high rate, including in Africa 12, 41, 42..." These references are from 2004 and 2007. Can this point really be substantiated? If so, I am not sure the references will do it. 8/ ref 47. This is an infomercial/ trade source rather than peer-reviewed academic journal.

VERSION 2 – AUTHOR RESPONSE

REVIEWER 1 (Neil Lunt) Comments:
Comment: This is a worthwhile paper and project and it is important that the African context be reviewed and the literature re-balanced. The MS is well written and interesting.
Response: Thank you for the kind words about our paper.
Comment: - Clarify the elective/non-elective distinction. Is it only cosmetic that is elective? Many of the items that are listed as non-elective would be categorised as such in other health systems
Response: In this paper, elective procedures have been taken to be the ones chosen (elected) by the patient or physician as advantageous to the patient but not urgent; beneficial but not absolutely essential at the time of diagnosis; not medically required but are for cosmetic or for aesthetic enhancements and deemed optional by both the patient and physician. On the other hand, since MT deals with non-emergency medical procedures, we have been careful not to equate our list of non-elective medical procedures to emergency medical care, care that is non-elective but performed when the patient's life or well-being is in immediate jeopardy, in response to urgent or critical situations such as trauma, cardiac events, poison episodes and brain injuries. Non-elective procedures have been taken as procedures performed on a patient that if left untreated, would threaten the life of the patient, fail to repair or improve a body function, increase the patient's pain, or prevent the diagnosis of a serious or painful medical condition. Depending on medical judgement, these treatments would be

considered vitally necessary and postponing or deciding against them may result in a patient's death or permanent impairment.
However, we agree with the fact that many of the items that are listed as non-elective would be categorized as elective in other health systems. Some elective and non-elective treatments take the same procedure, differentiated mainly by their cause or purpose. For instance, procedures such as cataract surgery, improve functional quality of life even though they are technically "optional" or elective procedures. In clarifying the distinction between elective and non-elective procedures, therefore, we have included a note for the readers that states that “The line between elective and non-elective procedures sometimes is thin. Some procedures might be either side depending on whether the procedure is meant to save or merely enhance life.”
Comment: - revisit the abstract to ensure it reflects the balance of discussion in the paper. The abstract appears very pro-MT whereas the paper itself is more balanced. Can it be substantiated that "Evidence suggests, if resources generated through medical tourism are even-handedly sued in strengthening local healthcare systems, medical tourism can significantly impact health care provision". (lines 9-13). Where is the evidence? Also lines 53-54
Response: We agree that the abstract appears very pro-MT. We have now revised the abstract, avoiding value-laden statements like the one pointed out in this comment, thereby giving the abstract a more balanced view. We take a more neutral stand by referring to both proponents and opponents of MT.
Comment: check for typos e.g. proof TO prove
Response: done
Comment: reporting results - do take care in reporting of pricing data. These are often not easily comparative and often what they include/exclude not always clear. They are also typically industry-led and subject to hyperbole.
Response: Thank you for the comment. We will take this into account when reporting on any pricing data.
Comment: - "Evidence where medical care provision to medical tourists is not explicitly differentiated from the day to day provision of health care offered to the general public" But if the services are being used by incoming medical tourists why would you exclude them? Clarify.
Response: This is an exclusion criterion that will be applied in the selection of literature. 'Exclusion' in this case is referring neither to the medical services offered to medical tourists nor local population; but to the published literature/research papers. Indeed, a service can be either be shared by both medical tourists and the local population (and most services are), or be used exclusively by medical tourists. But our target literature must specify in a way that the service it’s about is offered either exclusively or in part to medical tourists.
Comment: - page 14 "uncommon" - perhaps change to "non-routine"
Response: Done
Comment: - page 14 "Globally, MT is growing at a high rate, including in Africa 12, 41, 42..." These references are from 2004 and 2007. Can this point really be substantiated? If so, I am not sure the references will do it.
Response: The statement has been revised to read ‘Some literature suggest that MT has been growing globally’.
Comment: - ref 47. This is an infomercial/ trade source rather than peer-reviewed academic journal.
Response: The said citation (journal, I.M.T. Nigeria plans to block outbound medical tourism. IMTJ, 2016.) has been struck out.