PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	PUSHING CHRONIC CARE FORWARD IN ABU DHABI BY IDENTIFYING PRIORITIES AND ADDRESSING BARRIERS: A MODIFIED DELPHI TECHNIQUE
AUTHORS	Paulo, Marília; Loney, Tom; Lapão, Luis

VERSION 1 – REVIEW

REVIEWER	Yugo Shibagaki St. Marianna University School of Medicine, Kanagawa, Japan
REVIEW RETURNED	08-Nov-2017

GENERAL COMMENTS	Paulo et al. conducted a modified Delphi study to search the priority areas and barriers for development of the CCM in UAE. Although the study was well conducted and I do not have any major concerns regarding the contents of the study, the contents of the study was important in UAE but they are not necessarily able to be extrapolated for the rest of the countries, thus not suitable for the publication in BMJ Open, in which the contents should be global concerns. Discussion were the review of the priority areas or barriers but not discussed how these are extrapolated or applied to other articles. Authors should focus the discussion on how the results of the study can be extrapolated to other areas or countries, or on how the methods of the study can be applied to other relevant studies.

REVIEWER	Samer Hamidi Hamdan Bin Mohammed Smart Univeristy, United Arab Emirates
REVIEW RETURNED	17-Dec-2017

GENERAL COMMENTS	Usually, the major statistics used in Delphi studies are measures of central tendency (means, median, and mode) and level of dispersion (standard deviation and inter-quartile range) in order to present information concerning the collective judgments of respondents. The use of percentage measures is inadequate. In the literature, the use of median score, based on Likert-type scale, is strongly favored.

REVIEWER	Erik Koornneef Erasmus University School of Health Policy & Management, Erasmus University, Rotterdam, The Netherlands
REVIEW RETURNED	24-Dec-2017

GENERAL COMMENTS	Under Strengths and limitations, the last point (The United Arab Emirates has a very international population, as well as the healthcare workers, which turns the health system of Abu Dhabi

unique and internationally well positioned). The authors need to elaborate on this: how does this make the UAE international 'well positioned'. What does this mean?

In my opinion, the research question can not be fully answered by this study design because the little is known about these "health systems' experts'. They appear to be quite a homogeneous group, all from the same area and almost all working in the public sector. By the way if there were 20 experts who participated, why do 93.3% of them work in the public sector? If 19 out of 20 worked in the public sector the percentage would be 95%.

The context (UAE) should be explained further as the Vision 2021 is a national strategy but the study is conducted in one of the seven Emirates, the authors should explain this limitation further.

The authors need to describe how they came to a purposeful sample and why they classified this group of participants as "health system experts". It appears that they are considered "experts" because of their experience, not because of their leadership roles or knowledge of health systems. A further breakdown of the key characteristics of the participants would be helpful.

It is not clear whether the research received ethic approval and whether the participants consented to participate.

The authors need to elaborate on a number of key points in the Introduction: First if all, why is the Chronic Care Model important in the Abu Dhabi (UAE) context - have any studies been conducted that identify CCM as a care model that needs to be used in Abu Dhabi or is there any policy document that refers to CCM. Secondly, the link between CCM and health outcomes is not clear. Statement such as "increasing evidence has shown that changes in, at least. four of the six categories of the CCM led to clear advances in health outcomes" is very broad and needs to be quantified. Thirdly, this study is really an explorative study into perceptions of frontline healthcare workers on the priorities areas and barriers for the introduction of a new model of care. The references need to reflect this and contextualise the study by describing the Abu Dhabi healthcare context.

The discussion is quite long, too broad and descriptive. Statements such as "The aim of any health system is to have higher awareness and more proactive participation of the managers" or "This paper addresses one of the UAE's Vision 2021 agenda aims which is to achieve a world- class healthcare system" are too broad and not specific enough. Is this really the aim of any health system? The authors discuss the findings by comparing the UAE findings to other, similar studies. This is not particularly helpful as, in my opinion, the participants may not be comparable. The priorities and barriers are not necessarily representative views of healthcare experts in Abu Dhabi. In my opinion, the discussion should describe the role that CCM could play in transforming the Abu Dhabi healthcare system and how the findings from this study could help formulate and develop a healthcare strategy that supports the achievement of Vision 2021, in particular when it comes to addressing chronic care needs. The methodology (Delphi technique) is unique and the authors should reflect on its merits and wider roll out in the Discussion part.

	Public health data should be included in the Introduction - in particular the prevalence of chronic diseases in Abu Dhabi and the efforts made to date to address the public health concerns.

VERSION 1 – AUTHOR RESPONSE

Comments & Answers
Reviewer 1
Paulo et al. conducted a modified Delphi study to search the priority areas and barriers for development of the CCM in UAE. Although the study was well conducted and I do not have any major concerns regarding the contents of the study, the contents of the study was important in UAE but they are not necessarily able to be extrapolated for the rest of the countries, thus not suitable for the publication in BMJ Open, in which the contents should be global concerns.
- We thank Reviewer 1 for the time taken to review our manuscript. We feel that our paper would be of interest to the readership of BMJ Open as it discusses some health system issues that are unique to the UAE and others that are challenging the health systems of countries globally. In view of Reviewer 1's comments,
we have add some considerations regarding the importance of this study to other regions facing similar challenges concerning primary care reform.

Discussion were the review of the priority areas or barriers but not discussed how these are extrapolated or applied to other articles. Authors should focus the discussion on how the results of the study can be extrapolated to other areas or countries, or on how the methods of the study can be applied to other relevant studies.
- Reviewer 1 makes a valid comment about the integration of the Discussion section. As such, we have improved the discussion making it more straight forward with some internal and external recommendations.
Page 11,12, Discussion section

Reviewer 2
Usually, the major statistics used in Delphi studies are measures of central tendency (means, median, and mode) and level of dispersion (standard deviation and inter-quartile range) in order to present information concerning the collective judgments of respondents. The use of percentage measures is inadequate. In the literature, the use of median score, based on Likert-type scale, is strongly favoured.
- We thank Reviewer 2 for the time taken to review our paper and for their comment regarding the presentation of the Delphi study results. The cut-offs used to reduce the lists of priorities and barriers were based on the proportion of experts that selected or ranked this sub-component above a pre-specified criteria. We feel that the presentation of percentages is appropriate and meaningful for the reader compared to the median score on a three-point Likert scale.

Reviewer 3
Strengths and limitations, the last point (The United Arab Emirates has a very international population, as well as the healthcare workers, which turns the health system of Abu Dhabi unique and internationally well positioned). The authors need to elaborate on this: how does this make the UAE international 'well positioned'. What does this mean?
- We thank Reviewer 3 for the time taken to review our paper and provide us with detailed feedback. In view of this comment, we realized that the was not a strength or limitation.
Page 2, Strengths and Limitations section

In my opinion, the research question can not be fully answered by this study design because the little is known about these "health systems' experts'. They appear to be quite a homogeneous group, all

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from the same area and almost all working in the public sector. By the way if there were 20 experts who participated, why do 93.3% of them work in the public sector? If 19 out of 20 worked in the public sector the percentage would be 95%.
- We thank Reviewer 3 for their comment. Following review of the Results section, we have identified a typographical error in the numbers presented: the percentage of public workers was 70% (14 out of 20). In addition, we have included the operational definition used for an 'Expert' in our study.
Page 6, Expert panel section

The context (UAE) should be explained further as the Vision 2021 is a national strategy but the study is conducted in one of the seven Emirates, the authors should explain this limitation further.
- We thank Reviewer 3 for this thought-provoking comment. Consequently, we have amended the third paragraph of the introduction to provide a context of Abu Dhabi emirate and the country in terms of population, health and goals.
Page 5, Introduction section

The authors need to describe how they came to a purposeful sample and why they classified this group of participants as "health system experts". It appears that they are considered "experts" because of their experience, not because of their leadership roles or knowledge of health systems. A further breakdown of the key characteristics of the participants would be helpful.
- Reviewer 3 raises an interesting point about the definition of an 'expert' in a Delphi study. Therefore, we have inserted a sentence outlining our operational definition of an expert. According to Weinstein, an expert has "the capacity to provide strong justification for a range of propositions in a domain". Unfortunately, we are not able to provide further breakdown on participant characteristics as we have presented the variables that we collected during the study.
Page 6, Expert panel section

It is not clear whether the research received ethic approval and whether the participants consented to participate.
- We thank Reviewer 3 for identifying our mistake and we have included a sentence explaining that the study received ethical approval and that the participants consent to participate in the study.
Page 6, Prevention of bias section

The authors need to elaborate on a number of key points in the Introduction: First if all, why is the Chronic Care Model important in the Abu Dhabi (UAE) context - have any studies been conducted that identify CCM as a care model that needs to be used in Abu Dhabi or is there any policy document that refers to CCM.   We thank Reviewer 3 for their insightful comment.
- We have included a paragraph about the context of Abu Dhabi and its population demographics and chronic diseases. At the end we state that 'these are the first papers addressing the CCM in the emirate of Abu Dhabi'. As far as we know, our research group is the first to use the CCM as a framework to assess the health system of Abu Dhabi.
Page 4, Introduction section

The authors need to elaborate on a number of key points in the Introduction: Secondly, the link between CCM and health outcomes is not clear. Statement such as "increasing evidence has shown that changes in, at least. four of the six categories of the CCM led to clear advances in health outcomes" is very broad and needs to be quantified.
- We thank Reviewer 3 for their comment. We have included the early evidence suggesting a relationship between the CCM implementation and improved health outcomes. In addition, we have re-written the sentence to improve comprehension.

The authors need to elaborate on a number of key points in the Introduction: Thirdly, this study is really an explorative study into perceptions of frontline healthcare workers on the priorities areas and

barriers for the introduction of a new model of care. The references need to reflect this and contextualise the study by describing the Abu Dhabi healthcare context.
- Reviewer 3 makes a valid comment about the Introduction and we have included additional information with references that we feel provides more context on the UAE and Abu Dhabi.
Page 5, Introduction section

The discussion is quite long, too broad and descriptive. Statements such as "The aim of any health system is to have higher awareness and more proactive participation of the managers" or "This paper addresses one of the UAE's Vision 2021 agenda aims which is to achieve a world- class healthcare system" are too broad and not specific enough. Is this really the aim of any health system? The authors discuss the findings by comparing the UAE findings to other, similar studies. This is not particularly helpful as, in my opinion, the participants may not be comparable. The priorities and barriers are not necessarily representative views of healthcare experts in Abu Dhabi. In my opinion, the discussion should describe the role that CCM could play in transforming the Abu Dhabi healthcare system and how the findings from this study could help formulate and develop a healthcare strategy that supports the achievement of Vision 2021, in particular when it comes to addressing chronic care needs. The methodology (Delphi technique) is unique and the authors should reflect on its merits and wider roll out in the Discussion part.
- In view of Reviewer 3's comments, we have improved the discussion making it more straight forward with some internal and external recommendations.
Page 11,12, Discussion section

Public health data should be included in the Introduction - in particular the prevalence of chronic diseases in Abu Dhabi and the efforts made to date to address the public health concerns.
- We thank Reviewer 3 for their suggestion and we have included a paragraph about the context of Abu Dhabi and its population specificities including chronic diseases.
Page 4, Introduction section

VERSION 2 – REVIEW

REVIEWER	Yugo Shibagaki St Marianna University, Japan
REVIEW RETURNED	31-Jan-2018

GENERAL COMMENTS	Authors have responded enough to reviewers' questions/suggestions including mine. I have no further comments before its publication.

REVIEWER	Erik Koornneef Erasmus School of Health Policy and Management, Erasmus University Rotterdam, The Netherlands
REVIEW RETURNED	16-Feb-2018

GENERAL COMMENTS	Page three - "The UAE and emirate of Abu Dhabi ..... a disproportion of gender. This doesn't make sense. Please expand. The linkage between CCM and the UAE National Agenda has not been explained, Is CCM the model behind the National Agenda? Are there any reports that link CCM to the Vision 2021? Page 4, line 24/25, typo: and we are used the CCM I appreciate the additional context provided regarding the 'experts'. However, in this case the expertise is derived from the direct

	engagement with patients, rather than a leadership, policy or oversight roles. Perhaps the authors could expand to include a breakdown of the job titles/designation of the participants.

VERSION 2 – AUTHOR RESPONSE

Comments
Answers
Reviewer 3

Page three - "The UAE and emirate of Abu Dhabi ..... a disproportion of gender. This doesn't make sense. Please expand.
- We thank Reviewer 3 for the time taken to review our paper and provide us with detailed feedback. We explained this disproportion of gender is "due to the mass recruitment of males employed in the industrial and construction sector. However, there is an equal sex ratio between UAE nationals"
Page 3, Introduction section

The linkage between CCM and the UAE National Agenda has not been explained, Is CCM the model behind the National Agenda? Are there any reports that link CCM to the Vision 2021?
- We thank Reviewer 3 for their comment. We made clearer that we are merely suggesting that the CCM "framework may be useful to help the UAE achieve a world class health system as one of the key strategic goals of the UAE Vision 2021 National Agenda." This point is also highlighted in the 'Conclusions' section of the abstract.
Page 4, Introduction section

Page 4, line 24/25, typo: and we are used the CCM
- We thank Reviewer 3 for identifying this error.
Page 4, Introduction section

I appreciate the additional context provided regarding the 'experts'. However, in this case the expertise is derived from the direct engagement with patients, rather than a leadership, policy or oversight roles. Perhaps the authors could expand to include a breakdown of the job titles/designation of the participants.
- We thank Reviewer for their comments. We have included one sentence in the Limitations stating that our paper utilised a sample of expert 'frontline healthcare workers' and did not include executive leaders and/or policy makers.
Page 12, Limitations section