

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Quality Indicators for Clinical Care of Patients with Hypertension: Scoping Review Protocol
<b>AUTHORS</b>	Djasri, Hanevi; Laras, Sekar; Utarini, Adi

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Khara Sauro University of Calgary, Canada
<b>REVIEW RETURNED</b>	23-Nov-2018

<b>GENERAL COMMENTS</b>	<p>Thank you for giving me the opportunity to review this study protocol. This protocol outlines the detailed methods for conducting a scoping review to identify quality indicators for the care of those with hypertension. This is an exceptionally well-written manuscript. The manuscript provides a clear description of the scoping review, in accordance with the appropriate reporting guidelines and methods documents for scoping reviews. The results of this study will be an essential step in developing quality indicators for the diagnosis and management of hypertension, which is a large burden on the healthcare system.</p> <p>The only one minor revision is to include the dates the study will be conducted (i.e. the time period during which the search strategy will capture).</p>
-------------------------	---

<b>REVIEWER</b>	Dr. Kirsten Smits Radboudumc, Nijmegen, the Netherlands
<b>REVIEW RETURNED</b>	04-Dec-2018

<b>GENERAL COMMENTS</b>	<p>This is a protocol describing the need and the methods for a scoping review to assess what quality indicators exist to assess quality of care in patients with hypertension. Although the methods seem to fit the research question, I do have some concerns.</p> <p>1. Overall, I think that the written English should be improved before publication. The reasoning in the introduction for the need of this review can be improved. In addition, throughout the manuscript there are some sentences that repeat the message of the previous sentence and there are some grammatical mistakes in singular/plural words and past/present tense.</p> <p>2. On page 5, line 48 it is mentioned that both methods are used in the review. This seem to refer to the statement about the development of indicators (line 47/48). It is not clear to me how you will be using consensus methods and guidelines in the scoping review.</p> <p>3. No dates have been mentioned in the protocol. Please clarify when the study will be performed (or is performed).</p>
-------------------------	--

	4. With regards to your search strategy, I would propose to add some terms. This includes terms related to "Performance" or "Performance indicators", "Structure indicators", "Process indicator". Please explain why these terms were excluded from the search strategy.
--	---

## VERSION 1 – AUTHOR RESPONSE

### Reviewers' Comments to Author:

Reviewer: 1

Reviewer Name: Khara Sauro

Institution and Country: University of Calgary, Canada

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

Thank you for giving me the opportunity to review this study protocol. This protocol outlines the detailed methods for conducting a scoping review to identify quality indicators for the care of those with hypertension. This is an exceptionally well-written manuscript. The manuscript provides a clear description of the scoping review, in accordance with the appropriate reporting guidelines and methods documents for scoping reviews. The results of this study will be an essential step in developing quality indicators for the diagnosis and management of hypertension, which is a large burden on the healthcare system.

Our response: We really appreciate the reviewer's positive comments and suggestions to improve the quality of our manuscript.

The only one minor revision is to include the dates the study will be conducted (i.e. the time period during which the search strategy will capture).

Our response: Thank you for reminding us. A similar concern was also given by the editor. We intend to do the review once the study protocol manuscript has been accepted by BMJ online and we hope that we would receive the decision to publish the study protocol in May.

Therefore, in the revised manuscript (on page 3), we have added a 'study status' section in the revised manuscript to explain that data collection for the scoping review will include publications up to May, 2019 and the analysis will start on June, 2019.

Reviewer: 2

Reviewer Name: Dr. Kirsten Smits

Institution and Country: Radboud UMC, Nijmegen, the Netherlands

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

This is a protocol describing the need and the methods for a scoping review to assess what quality indicators exist to assess quality of care in patients with hypertension. Although the methods seem to fit the research question, I do have some concerns.

1. Overall, I think that the written English should be improved before publication. The reasoning in the introduction for the need of this review can be improved. In addition, throughout the manuscript there are some sentences that repeat the message of the previous sentence and there are some grammatical mistakes in singular/plural words and past/present tense.

Our response: Thank you for the suggestions. To improve the language, the manuscript has been checked by a professional language editing service prior to submission. For this revised version, we have asked them to check the language once more. Regarding the introduction session, we have now strengthened the relevance of reviewing the indicators by adding the evidence of poor quality in delivering care for patients with hypertension at different types of health care facilities. We have also removed unnecessary repetitions in the Introduction section.

Previously the second and third paragraph were written as follows (on page 4, Introduction Section):

Hypertension is one of the main risks of CVD; it plays a major role in the occurrence of other cardiovascular diseases such as stroke, heart disease, and kidney failure. Therefore, hypertension should be detected early and managed well through appropriate education and medication.

Hypertension accounts for 51% of deaths from stroke and 45% of deaths from heart disease (4). The prevalence of hypertension at age older than 25 years is about 35% in Southeast Asia (4,10). This increase is due to population growth, population aging, and behavioral risk factors such as unhealthy diet, alcohol use, smoking, lack of physical activity, being overweight and exposure to persistent stress (4,11).

A number of studies have shown that although various cardiovascular disease management strategies, including for hypertension, show promising results, there is a lack of agreement on methods of evaluating disease management related to economic evaluation and clinical outcomes (12). Evaluation of service quality is critical in the measurement of effective coverage, that is, to measure how many people with hypertension have received health insurance, use health services and obtain expected results. The quality of clinical care needs to be well assessed to measure the effective coverage of people with hypertension in UHC.

Now we have modified the second and third paragraphs into one paragraph (on page 4, Introduction Section):

Hypertension is one of the main risks of CVD and plays a major role in the occurrence of other comorbidities such as stroke, heart disease, and kidney failure that entail costly interventions. Accordingly, hypertension should be detected early and managed well through appropriate education and medication. Although a number of studies have shown that various CVD management strategies, including for hypertension, show promising results, there is a lack of agreement on methods of evaluating disease management related to economic evaluation and clinical outcomes (2). Several studies also found that the quality of care for hypertension was suboptimal (10-12). The quality of clinical care needs to be well assessed to measure the effective coverage of people with hypertension in UHC. This measurement should include how many people with hypertension have received health insurance, used health services and obtained expected results.

2. On page 5, line 48 it is mentioned that both methods are used in the review. This seem to refer to the statement about the development of indicators (line 47/48). It is not clear to me how you will be using consensus methods and guidelines in the scoping review.

Our response: Thank you for addressing this issue. We would like to clarify that both consensus of experts (15) and clinical guidelines (16) have been used to develop quality indicators and these two methods begin with a literature review. Therefore, in the next paragraph we explained that a scoping review was widely used for the literature review on the development of clinical indicators, but had never been done for the quality indicator of hypertension.

Previously in two last paragraphs was stated as follows (page 4, Introduction section):

Measuring effective coverage requires indicators that are relevant, valid, reliable and applicable (13). Many government associations and professional bodies in the world have developed quality indicators for different regions to improve service quality and detect suboptimal care in structure, process or outcome (14). The development of quality indicators for hypertension can be based on the consensus of experts (15) and clinical guidelines (16). Both methods were used in this review.

A scoping review is commonly used in the literature review stage for the preparation of clinical service indicators (17,18,19,20). However, this method of review has not been applied in the development of quality indicators for the clinical care of patients with hypertension. Through a scoping review, multiple sources, both research and non-research (such as guidelines from professional associations) can be drawn on to produce greater conceptual clarity (21).

We have now modified into (page 4, Introduction section):

Measuring effective coverage requires indicators that are relevant, valid, reliable and applicable (13). Many government associations and professional bodies in the world have developed quality indicators for different regions to improve service quality and detect suboptimal care in structure, process or

outcome (14). The development of quality indicators for hypertension can be based on the consensus of experts (15) and clinical guidelines (16). Both methods require literature review as an initial stage. A scoping review is commonly used in the literature review stage for the preparation of clinical service indicators (17,18,19,20). However, this method of review has not been applied in the development of quality indicators for the clinical care of patients with hypertension. Through a scoping review, multiple sources, both research and non-research (such as guidelines from professional associations) can be consolidated to produce greater conceptual clarity (21).

3. No dates have been mentioned in the protocol. Please clarify when the study will be performed (or is performed).

Our response: Thank you for reminding us. We intend to do the review once the study protocol manuscript has been accepted by BMJ online and we hope that we would receive the decision to publish the study protocol in May.

Therefore, in the revised manuscript (on page 3), we have added a 'study status' section in the revised manuscript to explain that data collection for the scoping review will include publications up to May, 2019 and the analysis will start on June, 2019.

4. With regards to your search strategy, I would propose to add some terms. This includes terms related to "Performance" or "Performance indicators", "Structure indicators", "Process indicator". Please explain why these terms were excluded from the search strategy.

Our response: Thank you for suggesting the terms. The reason why we excluded the above terms was that when we piloted the search strategy with those terms, it did not give additional results. However, we agreed that those terms should to be added and we have incorporated the suggested terms in the revised manuscript.

On page 6, table 2, Keywords for Scopus, previously it was written:

- Hypertension
- High blood pressure
- High blood pressures
- Hypertensive
- Quality indicator
- Quality measure
- Quality assessment
- Clinical indicator
- Effectiveness indicator
- Outcome indicator

Currently, we have added the search terms as the following (on page 6, table 2, Keywords for Scopus):

- Hypertension
- High blood pressure
- High blood pressures
- Hypertensive
- Quality indicator
- Quality measure
- Quality assessment
- Clinical indicator
- Effectiveness indicator
- Outcome indicator
- Performance indicator
- Structure indicator
- Process indicator

We have also included the terms in the detailed search strategy on the supplementary file.

## VERSION 2 – REVIEW

<b>REVIEWER</b>	Dr. Kirsten Smits Radboudumc, Nijmegen, the Netherlands
<b>REVIEW RETURNED</b>	23-Apr-2019

<b>GENERAL COMMENTS</b>	<p>This revision of the study protocol 'Quality Indicators for Clinical Care of Patients with Hypertension: Scoping Review Protocol' is a major improvement from the previous version. The protocol is written in clear English and all necessary aspects are well described. I think this review can contribute a lot to the knowledge about quality indicators for hypertension.</p> <p>I only have two minor concerns which are mainly on final touches:</p> <ol style="list-style-type: none"> <li>1. The tables may be presented more consistent in terms of lay-out as well as design of the tables.</li> <li>2. The references in the reference list are incomplete (2, 4, 6, 9, 14) or inconsistent (8, 10, 12, 15-20, 23-24). Please choose one style of presenting journal articles.</li> </ol> <p>I wish the authors good luck in conducting this scoping review.</p>
-------------------------	--

## VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 2

Reviewer Name: Dr. Kirsten Smits

Institution and Country: Radboudumc, Nijmegen, the Netherlands

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

This revision of the study protocol 'Quality Indicators for Clinical Care of Patients with Hypertension: Scoping Review Protocol' is a major improvement from the previous version. The protocol is written in clear English and all necessary aspects are well described. I think this review can contribute a lot to the knowledge about quality indicators for hypertension.

Thank you, we really appreciate the reviewer's comments and suggestions to improve the quality of our manuscript

I only have two minor concerns which are mainly on final touches:

1. The tables may be presented more consistent in terms of lay-out as well as design of the tables.
2. The references in the reference list are incomplete (2, 4, 6, 9, 14) or inconsistent (8, 10, 12, 15-20, 23-24). Please choose one style of presenting journal articles.

Our response: Thank you for reminding us, we have rearranged the tables, and completed the references list and also wrote them consistently based on the BMJ Open reference style.

I wish the authors good luck in conducting this scoping review.

Thank you again, we really hope so.