Reviewer’s report

Title: Adherence to antihypertensive medication in Russia: a scoping review of studies on levels, determinants and intervention strategies published between 2000 and 2017

Version: 0 Date: 07 Jul 2019

Reviewer: Sara Malo-Fumanal

Reviewer's report:

General aspects:

The objective of the manuscript was to present the results obtained through a systematic review of literature on adherence to antihypertensive therapy in Russia. This results of interest given that none similar review has been previously published. However, there exist some points that should be modified and/or clarified:

- This review aimed at synthetizing literature on adherence in the Russian population(s), but why only studies published in Russian language were included? There is not related English language literature? Or did you choose the language filter in searches conducted in Embase and Medline? This should be clarified and the reasons explained because unless they are lacking, studies published in English language should be included.

- The identified and selected studies assessed adherence by means of standard/bespoken questionnaires or pill count. However, electronic medical records/ pharmacy claims data are becoming a widespread and valid source of information when measuring and assessing adherence. Did you exclude them or none of the studies found used them? Is this because electronic records are not available in Russian health care facilities? Or maybe because they are not used with research purposes? Or maybe these are not published? In any case, it should be mentioned, explaining the possible impact on the results obtained. On the other hand, the fact that most of the results, and therefore conclusions, obtained were based on self-reported methods for assessing adherence, it should be emphasized in the abstract.

Additionally, the results presented in the abstract regarding factors associated with adherence were not totally consistent among the different studies, so opposing and similar results should be differenced and mentioned.
Introduction:

The comment corresponding to reference 5 (unlike reference 4) refers to a study performed in a population different than the Russian one, what should be explained.

You mention that an evaluation of quality of studies included was performed. Are you referring to assessment of generalizability to the overall population and of sources of funding studies? It does not correspond to the quality evaluation usually performed in systematic reviews, so it should be clarified.

Methods:

Which are the differences between eLIBRARY.ru and Central Scientific Medical Library? A practical and clear explanation on them should be provided.

With respect to the search strategies:

1. Did the inclusion of hypertensives* OR hypertones* OR hypotensive* OR hypotensive* provide any study of interest? What does "Parameters: search in the results of the previous query" mean?

2. Why the repetitive terms "compliance" and "noncompliance", "compliant" and "noncompliant", etc. were included? The search strategy used does not seem efficient. Please, explain any possible reason, if exist.

3. What does ": ca" mean?

4. Does this strategy correspond to two different strategies (the second one would start after "Russia")? If yes, please separate them.

Data extracted:

Sample size and disability are not sociodemographic characteristics.

Among intervention characteristics, the type of information delivered in the intervention group or the specific actions performed should be specified.

Point 12 (variables used to explain adherence) is a summary of the previous ones? Is it repeated?

Point 15 presents an informal measure of quality in the studies calculating adherence, but not regarding the studies analysing the effectiveness of an intervention. Why?
Performing a formal meta-analyses was not among the study objectives, so this statement should be included as a limitation, not as a part of the Methods section.

Results:

It was not possible to obtain some abstracts of the studies selected, what probably provoked a bias. Could you mention if this fact is usual in other research fields or if it is more prevalent in some fields such as those involving drug therapies. Possible reasons?

Results from prospective observational studies and clinical trials transformed into cross-sectional data (only baseline data available) should be classified and interpreted as such.

In general, all the synthetized information presented in the Results section is disorganized and unclear. This section should be restructured and different blocks of contents or topics (e.g. adherence measurement, factors related, type of interventions, effectiveness of interventions …) put into order.

How could be explained that "the highest rates of adherence were found in post-marketing studies"?

The term "initial adherence" is used several times over the manuscript. Did you difference it from "adherence"? Be careful with not exchanging them since they are not the same.

You mention in a detailed manner the factors associated with adherence, but not the factors not associated. Please, include it.

You explain that one study showed no association between adherence and eligibility for the Medicines Assistance Scheme. Was it ignored in the results presented in the abstract?

How could be explained that giving a free first package of antihypertensive drug improves adherence. Causes? Implications?

When interpreting results from clinical trials, please explain if they were blinded, randomized and/or controlled.

Discussion:

In light of the low-quality studies found and lack of standards, some measures and practical actions should be proposed (e.g. a central repository of studies published in regional medical journals). Why did you recognize "concerns about reporting in many of the papers obtained"?

Why reference 41 was not included? It is not clear.
Discussion of results is also disorganized and needs to be clearly structured.

You mention that there is a "need to use objective indicators of adherence" and "internationally accepted measures". You should base your arguments into the ABC project, developed with this aim. Also, the Emerge guidelines have been recently published in order to solve the lack of standard methods to assess adherence.

Finally, the two first sentences in the Conclusions section seem to be opposing, since if you cannot measure adherence with an objective method, you cannot state it as a serious problem in Russia. Please, rewrite the idea.

In the table with characteristics of included studies, categories of HT grade should be defined.

What does "there are no basic data of adherence" mean? Please, do not describe a 12 months follow-up period as a long one because this is the minimum and usual length.

In the flow chart figure, the number of finally eligible studies classified by type (design) should be specified.

**Level of interest**

Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

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No

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