Physicians' perspectives about medical sources of information: protocol for an overview of systematic reviews

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Abstract

Introduction

Despite the growing availability of evidence and sources of information, it is not clear what are the physicians' preferences for filling gaps in their medical knowledge.

Objective

To summarize the available evidence about physicians' preferences and perceived barriers and facilitators about sources of information.

Methods

We will undertake an overview of systematic reviews according to PRISMA guidelines. We will search Epistemonikos from inception until March 2019. We will also search PROSPERO, and we will perform a forward citation search in Scopus. Inclusion criteria will consider systematic reviews (qualitative, quantitative, or mixed methods) focusing on physicians' preferences about sources of information, as well as perceived barriers and facilitators. Two authors will independently screen and select records for inclusion. We will appraise the quality of included systematic reviews using the Joanna Briggs Institute checklist, and the overlap of primary studies according to the corrected covered area formula. We will conduct a narrative synthesis of quantitative data and a thematic analysis of qualitative findings.

Discussion

We expect that our findings will contribute to improving the evidence-based general practice by identifying physicians' perspectives about different sources of medical information.

Main messages

- The explosive increase in recent decades in the amount of data and medical information make the process of searching for information a challenge for physicians.
- We propose a methodology that allows us to summarize the available evidence on physicians' preferences about how they search and which sources of information they use, in addition to perceived barriers and facilitators, for updating their knowledge and answering their clinical questions.
- One possible drawback of this protocol could be that the criteria for eligibility, especially regarding participants, are broad.

Background

Physicians raise many different clinical questions in their daily practice[1-5]. Despite an enormous increase in information and more accessibility to sources of information, only a limited number of these questions are eventually answered[4]. In part, this could be due to the amount of time required to search for information, and also could be due to the difficulties found in formulating an appropriate search question, in finding an optimal search strategy, or in interpreting the evidence found[6].

The explosive increase in the amount and flow of information, together with data from recent decades, represents an important professional challenge in making informed evidence-based decisions[7-9].

It has been acknowledged that there is an overriding need for evidence-based general practice, considering that presently there is a recognized gap between the best evidence and the clinical practice[10,11]. The concepts or instruments of evidence-based medicine are still fragmented for most clinicians; substantial gaps between evidence and clinical practice remain[12].

Closing the loop between new evidence and improved care, both through a culture of sharing evidence combined with advances in methods and technology/platforms for digitally structured data as knowledge translation, is today a hot topic that appears as a solution to increase the value of health care and reduce wasteful research[13].

In this context, knowing what sources of information are most used by physicians to answer their questions is fundamental[14]. Previous studies have reported the attitudes and perceived hurdles in the use of evidence-based medicine as a whole[15,16], but not the preferences for specific sources of information. Knowing the perspectives of physicians on these preferences could be the first step toward a future of developing training or teaching strategies of evidence-based clinical practice to physicians.

The present document is the protocol for an overview of systematic reviews that will aim to summarize physicians' preferences on how they search and which sources of information they choose to answer of their clinical questions from a wide variety of options, as well as the barriers and facilitators that could interfere in the process.

Methods

We will conduct a mixed-methods overview of systematic reviews, following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) 2009 checklist[17]. We will decide every methodological step according to the evidence map developed by Lunny et al[18,19]. We will use the SPIDER framework for structuring our research question and eligibility criteria[20].

Eligibility criteria

Sample (participants)

Physicians, regardless their medical experiences or specialties. We will consider eligible studies that include general practitioners, residents, and specialists of any clinical field. If the review includes other healthcare professionals and the data is not disaggregated, at least 60% of the primary studies must have been focused on physicians' preferences for it to be included.

Phenomenon of interest

Physicians' perspectives on sources of information and ways for physicians to actualize their medical knowledge.

Design

Systematic reviews. We will consider data and findings from systematic reviews, collected in their included primary studies through surveys, interviews, observation, or any non-experimental method. We will consider eligible systematic reviews that include only primary studies. We will exclude any type of literature review if it includes another type of research synthesis. Methodological quality of the systematic reviews will not be considered for eligibility purposes. We will consider only systematic reviews in English or Spanish.

Evaluation

Preferences of specific sources of medical information and ways for updating medical knowledge. In addition, perceived barriers and facilitators that could influence the usage of sources of information.

Research designs

To be included, systematic reviews may have either a qualitative, quantitative or mixed-methods approach to the phenomenon of interest.

Search strategy

We will search in the Epistemonikos database from inception until September 2019, using the filter for systematic reviews. Epistemonikos runs an updated search in nine different databases at once, including PubMed/MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, CINAHL, PsycINFO, LILACS, among others[21,22]. The search strategy is detailed in Appendix 1. We will retrieve all articles that cite the included systematic reviews in Scopus.

Selection of studies

Two authors will independently screen potentially eligible studies by title and abstract first. Any disagreement will be resolved by consensus. Then, two reviewers will assess the full text of potentially eligible reviews. In this stage, a third reviewer will resolve any disagreements. We will use Rayyan app for the screening process[23].

Data extraction

For each systematic review, two authors will independently extract and then contrast the following information: author, year of publication, objective, eligibility criteria, search strategy, number and references of included primary studies, risk of bias or quality appraisal tool used to assess primary studies, characteristics of the population included, findings/results regarding physicians' preferences about sources of information or medical education, barriers and facilitators perceived, and certainty of evidence of the results or findings.

Assessment of risk of bias of included reviews

Two authors will assess the quality of the included systematic reviews using the Joanna Briggs Institute tool[24]. Any disagreement will be resolved by consensus.

Assessment of overlap

To assess the overlap of primary studies within systematic reviews, one author will build a matrix of evidence with every included systematic review and its respective primary studies. A second author will cross-check this information. With this matrix, we will calculate the degree of overlap using the corrected covered area formula[25].

Data synthesis and analysis

To avoid double-counting, we will extract quantitative data and qualitative findings of primary studies as presented by each systematic review. In the scenario that two or more systematic reviews include the same primary study, we will merge the information given by those reviews. If it is not possible to extract specific data of single primary studies from the reviews, we plan to consider the synthesized findings and discuss this as a limitation later.

We will use thematic synthesis for summarizing qualitative findings[26,27]. In this stage, in order to develop descriptive themes first

and analytical themes later, we will code relevant second and third order constructs from the results and discussion sections of the included systematic reviews. We will summarize quantitative data with a narrative synthesis approach, presenting the results in tables or graphs. We will undertake a parallel-results convergent synthesis design, contrasting both qualitative and quantitative results in the discussion[28].

Assessment of certainty of evidence

We will not appraise the certainty of evidence of our findings, but we will report the assessment given by the authors of the included systematic reviews, if available.

Discussion

To our knowledge, this will be the first overview of systematic reviews addressing the preferences and perspectives about sources of medical information used by general practitioners, residents and specialists of any clinical field, and the barriers or facilitators to use or access them. A possible flaw for this protocol could be that the eligibility criteria, especially regarding the participants, are broad. Nevertheless, we think that this could help us better understand all the possible preferences related to the choice of information, and the possible heterogeneity in the findings could lead to a better discussion later.

A strength of our study is the mixed-methods overview design, a newer approach to broad evidence synthesis including systematic reviews with either qualitative, quantitative, or mixed methods. We hope our findings will contribute to making better evidence-based decisions by making explicit the physicians' preferences for different sources of medical information. This could be the first step to improve continuous education for medical professionals, and to ultimately enhance the translation of knowledge.

Notes

Appendix 1
Search strategy for Epistemonikos
(title:(Medic OR Medics OR Medicine OR Physician* OR Practitioner* OR Doctor OR Doctors OR Resident OR Residents OR Surgeon* OR Surgical OR Pediatric* OR Medical OR Healthcare professional*) OR abstract:(Medic OR Medics OR Medicine OR Physician* OR Practitioner* OR Doctor OR Doctors OR Resident OR Residents OR Surgeon* OR Surgical OR Pediatric* OR Medical OR Healthcare professional*)) AND (title:(Source* OR Resource* OR Information OR Knowledge OR Education*) OR abstract:(Source* OR Resource* OR Information OR Knowledge OR Education*))

Author contributions
All authors contributed to the development and design of the work, to the drafting or critical revision of the manuscript, and to the final approval of the version to be published.

Competing interests
The authors declare they have no actual or potential conflicts of interest regarding this study protocol.

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Ethics and dissemination
As this is a research based on previously published articles and considering we will not use data directly from the professionals, there is no need for ethics committee approval. We will publish our results in an ad hoc scientific journal.

Data sharing
The authors declare willingness to share data.

From the editors
The original version of this manuscript was submitted in Spanish. This English version was submitted by the authors and has been lightly copyedited by the Journal.

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