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Risk perception among healthcare professionals working in emergency care in remote locations: a scoping review protocol

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ABSTRACT

Introduction Providing healthcare in emergency services is a multifaceted challenge that demands prompt approaches. Ensuring safety and efficacy becomes even more challenging in 'remote locations', referring to geographical areas located far from urban centres or densely populated regions, often characterised by insufficient access to services, infrastructure and communication channels. Despite the pivotal role of healthcare professionals' skills and knowledge in risk management in these contexts, academic literature has largely overlooked this aspect. Thus, addressing healthcare professionals' perceptions of risks within remote areas is crucial for informed decision-making and improved service administration.

Methods and analysis This scoping review protocol adopts the methodology outlined by the Joanna Briggs Institute. The objective is to delineate the current scientific evidence regarding the perception of both direct and indirect risks associated with healthcare practice in remote emergency settings. Employing the Population, Concept, and Context dimensions, inclusion criteria were established for each dimension: Population—nurses or other healthcare professionals with overlapping roles; Concept—perception of risk; Context—remote community or site and emergency care. The search will encompass the Scopus, PubMed, LILACS, Cochrane, CINAHL and Web of Science databases. A specific time frame for the selection of articles was not delimited. Observational, quantitative, qualitative studies and reviews will be eligible for inclusion if they meet the predetermined criteria. Two reviewers will undertake the document review process. Eligible documents may be in English or Portuguese, and only those subjected to peer review will be considered for inclusion.

Ethics and dissemination Ethical approval will not be necessary for this study as it entails a scoping review based on previously published evidence. The findings from the scoping review will be disseminated through scientific conferences and published in academic journals.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This protocol establishes a structured framework to identify research on healthcare professionals' perceptions of risk in emergency care within remote settings.
⇒ By including a wide range of healthcare professionals (nurses, physicians, paramedics, emergency medical technicians, rescuers), the study aims to mitigate biases related to occupational titles, enhancing the inclusivity of findings.
⇒ The review uses comprehensive databases and includes both English and Portuguese publications, which enhances the study's breadth across geographical and linguistic contexts.
⇒ No date restriction is applied in the literature search, allowing for a thorough historical perspective on risk perceptions.
⇒ Limitations include a focus on published peer-reviewed studies, which may exclude relevant, non-indexed sources that also address healthcare risk perceptions in remote settings.

INTRODUCTION

Risk-based thinking, defined as the capacity to identify risks and take appropriate actions to mitigate them, thereby preventing non-conforming outcomes, is crucial, especially in healthcare settings due to increasing compliance with standards and regulations pertaining to safety and quality.[1 2]

Previous evidence in healthcare risk and safety has highlighted that despite being exposed to numerous risks or risk factors, healthcare professionals often tend to overlook, underestimate or remain uninformed about them.[3–6] Concerns about patient safety and risk assessment, including occupational risks, have intensified in recent years.[7 8] The relevant risks encompass occupational and biological factors as the most pertinent, alongside physical and psychosocial ones, those regarding patients (eg, delayed access to advanced care or specialised services due to geographical isolation), professionals themselves (eg, exposure to environmental hazards, potential lack of immediate backup and psychological stress from high-stakes, isolated decision-making)

and other operational risks (eg, limited resource availability that undermine timely, effective response and increase the likelihood of adverse outcomes). Safety culture is essential to transform practices and behaviours and is becoming a key element in the training of healthcare professionals.[9 10]

Perceptions refer to individuals' interpretations, understandings or awareness of something based on their senses, experiences, beliefs and cognitive processes. They involve how individuals interpret and make sense of the world around them, including their thoughts, feelings and attitudes toward various phenomena, events or situations. Perceptions can vary greatly among individuals and can influence their behaviours, decision-making processes and interactions with others and their environment. In essence, perceptions shape how individuals view and respond to the world around them.

Risk perception depends on various factors, including individuals' positions in particular contexts, the frequency of risk exposure (whether daily or sporadic), learnt experiences, the roles they assume, cultural influences, personality traits, personal characteristics and environmental pressures. The trained and consciously perceived risk by professionals assists them in adjusting practices and behaviours, ultimately optimising the quality of care.[11] Therefore, healthcare professionals' perception of inherent risks in these environments is crucial, as it facilitates the management and prevention of situations that may lead to accidents or exacerbate patients' health conditions.

Emergency nurses provide care to individuals in critical and unexpected situations that require immediate intervention, including traumas, cardiovascular emergencies, respiratory crises, poisonings and other scenarios that demand urgent evaluation and intervention. They are trained to work in high-pressure environments and under unfavourable conditions. These professionals must be prepared to deal with unpredictable situations and take proactive measures to ensure both their safety and that of their patients.[12] Depending on countries, other healthcare professionals may also participate in responding to medical emergencies, including doctors, paramedics, emergency technicians and rescuers. While our primary focus is on nurses, given their presence in all emergency scenarios from prehospital care to intensive care, we also extend our research to other mentioned professionals, as they are likely to encounter similar challenges in emergencies and share or complement nurses' risk perceptions.

The term 'remote location' denotes a geographical area or locality that is distant from urban centres or densely populated areas. These areas are typically characterised by limited access to services, infrastructure and, in some instances, communication channels.[13–16] Physical distance and geographical accessibility can pose significant challenges to healthcare delivery, especially in the context of medical emergencies resulting from accidents or sudden illness. Providing healthcare in remote locations during such emergencies requires strategic, efficient and prompt approaches to ensure individuals have access to appropriate care.

The scoping review is widely regarded as the most effective approach for mapping knowledge about a specific subject, particularly when it is not well-established. It serves to identify knowledge gaps, clarify concepts or explore the scope of a particular area of research. Additionally, a scoping review can be employed as a preparatory step for a systematic review or to confirm the relevance of a specific study.[17 18]

The aim of this scoping review is to map the existing scientific evidence concerning the perception of direct and indirect risks associated with healthcare practice in remote emergency settings.

METHODS AND ANALYSIS

This scoping review protocol adopts the methodology outlined by the Joanna Briggs Institute.[19] Accordingly, the protocol is expected to outline the criteria that the reviewers intend to use to include and exclude sources of evidence, as well as to determine the relevance of data and the methods for its extraction and presentation.

The search will be conducted in the PubMed,[20] Scopus,[21] Cochrane,[22] CINAHL,[23] Web of Science[24] and LILACS[25] databases. The criteria underlying this selection were specificity, comprehensiveness and accessibility. In this set, we compile databases specific to the healthcare field (PubMed, Cochrane, CINAHL and LILACS). Additionally, we include others that, while not as healthcare-specific, encompass a wide range of disciplines and may contain works relevant to healthcare, such as Web of Science and Scopus. Together, these six databases offer a comprehensive view of the subject under analysis due to their extensive coverage, both geographically and across various disciplines. No date restriction has been applied to ensure a comprehensive scope of literature, allowing the inclusion of studies that may contain relevant historical data on risk perceptions.

Research question

The research questions underpinning this study are as follows: What are the risk perceptions among healthcare professionals in remote emergency care regarding patients, professionals themselves and services? How do these professionals manage and mitigate identified risks within these settings?

Employing the Population, Concept, and Context (PCC)[26] dimensions, inclusion criteria were established for each dimension: Population—healthcare professionals providing emergency care, with a primary focus on nurses while including other professionals with similar roles; Concept—perception of risk; Context—remote community or site and emergency care.

Eligibility criteria

Following the PCC dimensions, inclusion criteria were defined for each of them: the Population consists of

Table 1 Inclusion and exclusion criteria in PCC dimensions

	Inclusion criteria	Exclusion criteria
Population	Nurses or other professionals with overlapping professional content providing emergency care (physicians, paramedics, emergency technicians and rescuers).	Other professionals with content significantly different from emergency care.
Concept	Perception, observation, evaluation or risk management.	Benefit-risk Relative risk
Context	Remote locations (far from civilisation, distant from urban centres and difficult to access). Oil platforms will be included. Emergency care.	Any context that does not meet one of the inclusion criteria.

nurses or other healthcare professionals with overlapping professional roles (given the variations across countries where certain activities in emergency departments are carried out by physicians, paramedics, emergency technicians and rescuers); the Concept under consideration is the perception of risk, and the Context is emergency care in remote locations.

Selected articles must address mainly nurses, with the potential inclusion of other healthcare professionals with overlapping roles. Consequently, the analysed theme must pertain to the perception or assessment of one or more risks arising exclusively from their activities in remote locations.

In addition to these criteria, other related factors will be considered (see table 1 for the specific inclusion and exclusion criteria for each criterion).

Types of sources

All studies addressing the theme will be considered. Quantitative and qualitative studies and all types of reviews will be considered if they meet the inclusion criteria.

Patient and public involvement

Patients or the public were not involved in the design, conduct or reporting of this scoping review. This aligns with the study's focus on healthcare professionals' perspectives on risk perception in emergency care.

Study timeline

The scoping review is planned to commence in January 2025 and is expected to conclude by May 2025.

Search strategy

The search strategy aims to locate the best descriptors to reach the maximum number of studies related to the questions posed in this scoping review.

Step 1

The definition of the strategy began with a preliminary free search of articles in PubMed, searching titles, abstracts and keywords for expressions or terms related to the topic. One of the objectives was to identify terms classified as MeSH[27] (Medical Subject Headings) from the start, corresponding to a system for indexing and organising topics and concepts related to health and medicine. Thus, using different combinations such as 'nurses and risk perception', 'nurses and risk perception and isolated areas' and 'nurses and risk perception and rural areas', we identified MeSH terms such as "Nurses*," "Perception," "rural population," "rural health," "nursing*," "rural nursing," "social perception*," "nurses," "community nurses," "rural areas," "rural health care" and "rural communities." In these articles, we isolated other terms and expressions not classified with MeSH terms, which we designated as free terms, including "risk perception," "perception of risk factors," "rural western," "geographically isolated," "rural and remote areas of Australia," "rurality" and "rural and remote health-care." A search on Google Scholar with the expressions "emergency nurses" and "risk assessment" and "remote areas" allowed us to identify the new expression "emergency preparedness."

Step 2

In a subsequent phase, relevant terms in Portuguese were identified, and a search was performed in the DeCS[28] (Health Sciences Descriptors) database to identify the most suitable English equivalents for the databases we intend to search.

This search is summarised in table 2.

Step 3

In this phase, we categorised the terms resulting from the free article search and English descriptors in the DeCS database. Subsequently, we conducted a comprehensive search in the MeSH database. For each term or expression identified, we verified its status as a MeSH term and extracted its definition and associated entry terms. During this search, we validated the free expressions (enclosed in quotation marks and lacking assigned definitions).

Organising the results within the Population (P), Concept (C) and Context (C) framework, we present the findings in the table provided in online supplemental appendix 1. Following a meticulous analysis of each expression and its corresponding definition and in accordance with the scoping review's objective, we formulated the following synthesis:

Population (P)—("nurs*" OR "physician*" OR "paramedi*" OR "First responders" OR "First responder" OR "Advanced EMT" OR "Advanced EMTs" OR "EMT-Paramedic" OR "EMT-Paramedics" OR "medical technician*" OR "medicine Technician*")

Table 2 Correspondence between terms in Portuguese and English translation in the DeCS database

Free expressions/words in Portuguese	English translation in DeCS database
Enfermeiros	Nurses
Enfermeiros de emergência	Not translated
Enfermagem de emergência	Emergency nursing
Médicos Médicos de emergência Serviços de emergência Serviços Médicos de Emergência Auxiliares de Emergência	Physicians Emergency medical services Emergency medical technicians
Profissionais de emergência	Emergency responders
Profissionais de emergência médica	No results
emergência pré-hospitalar	Emergency medical services
Paramédicos	Paramedics
Percepção de risco	No results
Medição de risco	Risk assessment
Risco	Risk; risk factor; risk assessment; risk management; safety management; risk-taking
Remoto	Telemonitoring, teleworking
Locais remotos	No results
Área Remota Zona remota Zonas de Difícil Acesso	Remote areas
Enfermagem de Áreas Remotas	No results
Medicina de Áreas Remotas	Wilderness; wilderness medicine

Concept (C)—("Risk perception" OR "Risk Assessment" OR "Risk Assessments" OR "Risk Analyses" OR "Risk Analysis" OR "Risk Behavior" OR "Risk Behaviors" OR "Risk Management" OR "Risks Management" OR "Safety Management" OR "Safety culture" OR "Safety Cultures" OR "Hazard Management" OR "Hazards Management" OR "Hazard Control" OR "Hazard Controls" OR "Hazard Surveillance" OR "Program Hazard Surveillance Programs" OR "Operational risk")

Context (C)—("rural" OR "remote" OR "isolated" OR "wilderness" OR "offshore") AND ("emergency" OR "emergencies")

This synthesis aims to simplify each dimension to enhance the clarity of the expression. We experimented with the use of a common word for various expressions and tested truncations (*) for this purpose. For example, expressions like "rural health," "rural areas," "rural population," among others, were replaced by the keyword "rural." Similarly, truncations (*) were used: descriptors such as "nurse," "nurses" and "nursing," for instance, were replaced by the search term "nurs*." This process took into account the behaviour of the databases. For emergency-related expressions, it was necessary to keep the variants "emergency" and "emergencies" in full to avoid obtaining numerous results where the word "emergence" appears, which is generally not related to the study's object.

For expressions within the Concept dimension, it was found that these simplifications would result in retrieving too many unwanted results, such as those related to risk-benefit or epidemiological risk studies. It was decided to retain complete search expressions in this field, such as "risk assessment" or "risk management." The use of quotation marks in the search serves two purposes: first, it ensures the integrity of expressions composed of more than one word; second, it prevents the search for orthographically similar terms, which some databases default to, for all isolated words. For example, in the PubMed database, a search without quotes for the word emergency would also include documents containing the word "emergence", whereas using "emergency" eliminates this behaviour.

Additionally, we opted to include the descriptors associated with emergencies in the context to retrieve works involving any of the professionals in our population within the context of emergencies in remote locations.

Study/source of evidence selection

To reach at the PCC synthesis, in addition to using Boolean operators (AND and OR), we also employed other techniques for a more efficient search, such as truncations (*) and the use of quotation marks. It is noteworthy that the Boolean phrase had to be adjusted due to the use of truncations and quotation marks in two out of the six databases, namely, LILACS and Cochrane. As an example, in Cochrane base, the use of truncation in expressions implies the removal of quotation marks and placing the term 'NEXT' between the words. They also state that isolated words with truncation reduce the efficiency of the search, in case of LILACS does not accept truncations.

In the preliminary search on the databases, we predefined that the search would be conducted only in the fields of title, abstract and keywords and selecting only peer-reviewed literature. A search strategy for selected databases is summarised in table 3.

All studies resulting from this research will be collected in the bibliographic software Rayyan.[29] In the initial phase, duplicates will be identified and removed, as well as works published as clinical trials, conference proceedings, communications at scientific events and those without available abstracts.

The titles and abstracts of the selected studies will be independently assessed by two reviewers, who will apply the inclusion and exclusion criteria. For potentially relevant studies, the full text will be obtained whenever possible.

Reasons for excluding full texts that do not meet the inclusion criteria will be recorded and reported in the

Table 3 Summary of search strategy in selected databases

Source	Search	Observations
PubMed	Boolean phrase (PCC) ((“nurs*” OR “physician*” OR “paramedi*” OR “First responders” OR “First responder” OR “Advanced EMT” OR “Advanced EMTs” OR “EMT-Paramedic” OR “EMT-Paramedics” OR “medical technician*” OR “medicine Technician*“) AND (“Risk perception” OR “Risk Assessment” OR “Risk Assessments” OR “Risk Analyses” OR “Risk Analysis” OR “Risk Behavior” OR “Risk Behaviors” OR “Risk Management” OR “Risks Management” OR “Safety Management” OR “Safety culture” OR “Safety Cultures” OR “Hazard Management” OR “Hazards Management” OR “Hazard Control” OR “Hazard Controls” OR “Hazard Surveillance” OR “Program Hazard Surveillance Programs” OR “Operational risk”) AND ((“rural” OR “remote” OR “isolated” OR “wilderness” OR “offshore”) AND (“emergency” OR “emergencies”))) Search option: title and abstract	
Web of Science	Boolean phrase (see PCC—same as PubMed) Search option: title, abstract and keywords	
Scopus	Boolean phrase (see PCC—same as PubMed) Search option: title, abstract and keywords	
Cochrane Library	Phrase adjusted to the database’s specifics: ((Nurses OR Nurse OR Nursing OR physician OR physicians OR “Paramedical personnel” OR Paramedic OR “First responders” OR “First responder” OR “Advanced EMT” OR “Advanced EMTs” OR “EMT-Paramedic” OR “EMT-Paramedics” OR medical NEXT technician* OR medicine NEXT Technician*) AND (“Risk perception” OR “Risk Assessment” OR “Risk Assessments” OR “Risk Analyses” OR “Risk Analysis” OR “Risk Behavior” OR “Risk Behaviors” OR “Risk Management” OR “Risks Management” OR “Safety Management” OR “Safety culture” OR “Safety Cultures” OR “Hazard Management” OR “Hazards Management” OR “Hazard Control” OR “Hazard Controls” OR “Hazard Surveillance” OR “Program Hazard Surveillance Programs” OR “Operational risk”) AND ((“rural” OR “remote” OR “isolated” OR “wilderness” OR “offshore”) AND (“emergency” OR “emergencies”))) Search option: title, abstract and keywords	The use of truncation in expressions requires the removal of quotation marks and the insertion of the term NEXT between words. They also indicate that isolated words with truncation reduce the search efficiency.
LILACS	Phrase adjusted to the database’s specifics ((Nurses OR Nurse OR Nursing OR physician OR physicians OR “Paramedical personnel” OR Paramedic OR “First responders” OR “First responder” OR “Advanced EMT” OR “Advanced EMTs” OR “EMT-Paramedic” OR “EMT-Paramedics” OR “medical technician” OR “medical technicians” OR “medicine Technician” OR “medicine Technicians”) AND (“Risk perception” OR “Risk Assessment” OR “Risk Assessments” OR “Risk Analyses” OR “Risk Analysis” OR “Risk Behavior” OR “Risk Behaviors” OR “Risk Management” OR “Risks Management” OR “Safety Management” OR “Safety culture” OR “Safety Cultures” OR “Hazard Management” OR “Hazards Management” OR “Hazard Control” OR “Hazard Controls” OR “Hazard Surveillance” OR “Program Hazard Surveillance Programs” OR “Operational risk”) AND ((“rural” OR “remote” OR “isolated” OR “wilderness” OR “offshore”) AND (“emergency” OR “emergencies”)))	Does not accept truncation. Conducting a search without truncation does not yield any results when associated with the context.
CINAHL	Boolean phrase (see PCC—same as PubMed) Search option: subject; peer-reviewed	

PCC, Population, Concept, and Context.

scoping review. Any discrepancies that arise between the reviewers at each stage of the selection process will be resolved through a third reviewer. The results of the search and the study inclusion process will be fully reported in the final document and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review[30] flow diagram.

Data extraction

The data extracted by the reviewers should include details, particularly about the population, concept, context, study methods and the main conclusions relevant to the review question(s). The structure used by the reviewers for data extraction will be provided as an annex. The preliminary version of the data extraction tool will be modified and reviewed as needed during the data extraction process from each included source. We will disclose the details of any revisions made. Contacting the authors of the articles to obtain missing and deemed relevant information is considered a possibility.

Analysis and presentation of data

The presentation of evidence from this scoping review will result in a narrative summary and corresponding

graphical representations. The synthesis will involve describing how the results relate to the questions that led us to this review, as well as the objectives we set for ourselves. Key steps include as follows:

- Data extraction and categorisation: Extracted data will be categorised by PCC dimensions to address specific research questions on risk perceptions.
- Narrative synthesis: The data will be organised thematically to identify major patterns and knowledge gaps, offering insights into how various risk factors are perceived by healthcare professionals.
- Graphical representation: Visual tools, such as thematic maps or frequency tables, will be used to provide a concise overview of identified evidence clusters and the frequency of specific risk perceptions.
- Iterative refinement: The initial synthesis will be refined through consultations with domain experts to ensure clarity and comprehensiveness in the final presentation.

The final form of presenting this data will be determined by the input of those involved in this work to ensure the best possible exposition and detail.

ETHICS AND DISSEMINATION

Since this study is a scoping review, it involves a secondary analysis of published literature and does not require ethical approval. The results will be disseminated through relevant scientific conferences and submitted for publication in peer-reviewed journals. Additional efforts to reach healthcare practitioners and stakeholders in emergency care will be pursued to maximise the practical application of findings.

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Competing interests None declared.

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REFERENCES

1 Associação Portuguesa de Certificação (APCER). Sistemas de gestão da qualidade ISO 9001. 2015.
2 Instituto Português da Qualidade. Norma Portuguesa NP - Gestão do risco Linhas de orientação, ISO 31000. 2018.
3 Sjöberg L, Peterson M, Fromm J, *et al*. Neglected and overemphasized risks: the opinions of risk professionals. *J Risk Res* 2005;8:599–616.
4 Santos M, Almeida A. Principais riscos e fatores de risco ocupacionais dos cantoneiros, eventuais doenças profissionais e medidas de proteção recomendadas. *RPSO* 2016;I:S030–42.
5 Portela N, Cunha J, Oliveira S. Occupational risks among nursing professionals: integrative literature review. *Rev Ciênc Sab* 2015;1:81–5.
6 Porras-Povedano M, Santacruz-Hamer V, Oliva-Reina I. Percepción de riesgos laborales en profesionales de Enfermería de un centro sanitario. *Enferm Clín* 2014;24:191–5.
7 Donaldson L, Ricciardi W, Sheridan S. *Textbook of patient safety and clinical risk management*. Cham: Springer, 2021. Available: https://link.springer.com/10.1007/978-3-030-59403-9
8 Debelu D, Mengistu DA, Tolera ST, *et al*. Occupational-Related Injuries and Associated Risk Factors Among Healthcare Workers Working in Developing Countries: A Systematic Review. *Health Serv Res Manag Epidemiol* 2023;10:23333928231192834.
9 Cooke H. Theories of risk and safety: what is their relevance to nursing? *J Nurs Manag* 2009;17:256–64.
10 World Health Organization. Global Patient Safety Action Plan 2021-2030: Towards Eliminating Avoidable Harm in Health Care, Available: https://www.who.int/publications/i/item/9789240032705
11 Wachinger G, Renn O. Risk perception and natural hazards [CapHaz-Net WP 3 Report on Risk Perception], 2010. Available: https://www.researchgate.net/publication/228827276
12 Choi HS, Lee JE. Hospital Nurses' Willingness to Respond in a Disaster. *J Nurs Adm* 2021;51:81–8.
13 Hodge AJ, Miller EL, Dilts Skaggs MK. Nursing Self-perceptions of Emergency Preparedness at a Rural Hospital. *J Emerg Nurs* 2017;43:10–4.
14 World Health Organization. WHO guideline on health workforce development, attraction, recruitment and retention in rural and remote areas, 2021. Available: https://www.who.int/publications/i/item/9789240024229
15 Whiteing N, Barr J, Rossi DM. The practice of rural and remote nurses in Australia: A case study. *J Clin Nurs* 2022;31:1502–18.
16 Wressell JA, Rasmussen B, Driscoll A. Exploring the workplace violence risk profile for remote area nurses and the impact of organisational culture and risk management strategy. *Collegian* 2018;25:601–6.
17 Munn Z, Peters MDJ, Stern C, *et al*. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol* 2018;18:143.
18 Colquhoun HL, Levac D, O'Brien KK, *et al*. Scoping reviews: time for clarity in definition, methods, and reporting. *J Clin Epidemiol* 2014;67:1291–4.
19 Peters MDJ, Godfrey C, McInerney P, *et al*. Aromataris E. *JBI Manual for Evidence Synthesis JBI* 2020;Available from.
20 National library of medicine. n.d. Available: https://pubmed.ncbi.nlm.nih.gov/
21 SCOPUS, Available: https://www.scopus.com
22 Cochrane. n.d. Available: https://www.cochrane.org/about-us
23 EBSCO information services. n.d. Available: https://www.ebsco.com/pt/produtos/bases-de-dados/cinahl-database
24 Web of science. n.d. Available: https://www.webofscience.com/wos/woscc/advanced-search
25 Latin american and caribbean center on health sciences information. n.d. Available: https://lilacs.bvsalud.org/en/
26 Sousa L, Marques JM, Firmino CF, *et al*. Modelos de formulação da questão de investigação na Prática Baseada na Evidência, 2018. Available: http://repositorio-cientifico.essatla.pt/handle/20.500.12253/1287
27 National library of medicine. n.d. Available: https://www.ncbi.nlm.nih.gov/mesh
28 DeCS. n.d. Available: https://decs.bvsalud.org/
29 Ouzzani M, Hammady H, Fedorowicz Z, *et al*. Rayyan-a web and mobile app for systematic reviews. *Syst Rev* 2016;5:210.
30 Tricco AC, Lillie E, Zarin W, *et al*. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med* 2018;169:467–73.