

# Qualitative Metasynthesis Cyberseminar

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July 13, 2023

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# CHERP

CENTER FOR HEALTH EQUITY  
RESEARCH AND PROMOTION



# Penn

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# Terminology

“Qualitative metasynthesis” =  
“Qualitative Evidence  
Synthesis” =  
“Qualitative research  
synthesis”

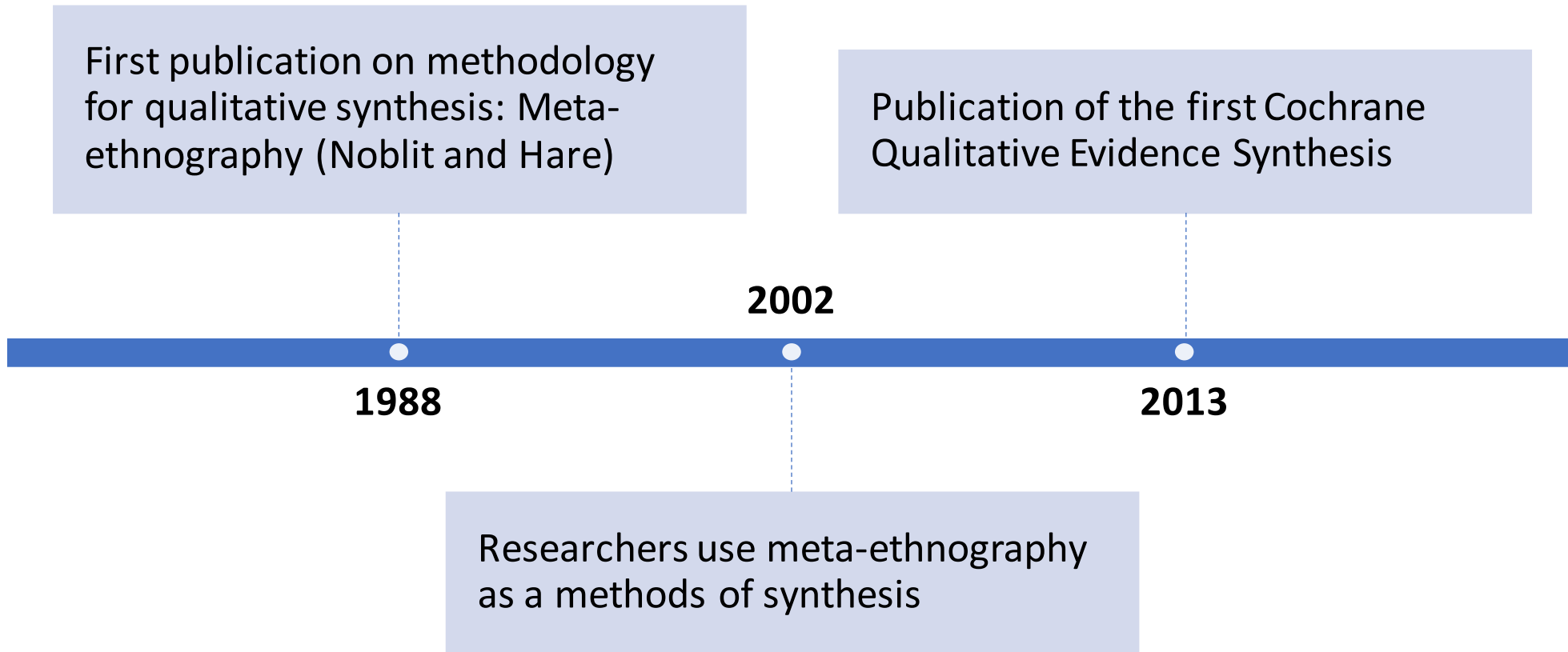


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## Background

- Interest and use of qualitative research has increased
- Little is known about collective bodies of qualitative research in certain areas
- Lack of knowledge about how to integrate or synthesize findings across qualitative studies
- Qualitative studies are isolated and rarely used to contribute to practical knowledge, they do not play a significant role in the movement toward evidence-based medicine
- Deepen our understanding of evidence-based practices

# The timeline



An ancient Buddhist parable details the attempts of several blind men to describe an elephant. On feeling the trunk, one proclaims it to be rather like a snake; while another, on feeling the ear, explains it is more like a fan; yet another, upon touching the legs, describes the beast as tree-like, and so on. Each makes valid and relevant claims in relation to the elephant but only when the findings of all contributors are combined does a clear image of the animal emerge.

(Ireland 1997 from Finlayson 2008)



# Qualitative metasynthesis

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“The bringing together of findings on a chosen theme, the results of which should in conceptual terms, be greater than the sum of its parts”

(Campbell et al 2003)



# Why use a qualitative metasynthesis?

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- Synthesizing a collective body of qualitative/ethnographic research to identify common themes; provides insight not available in a single study
- Evaluative explorations that can give an understanding of overall effectiveness of an intervention
- Not just studying effectiveness, but also to identify broader patterns and context
- Moving from knowledge generation to knowledge application



# What is a qualitative metasynthesis?

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Selecting qualitative studies on a specific body of knowledge

---

Translating those findings into one interpretation offering a richer, more complete understanding of the phenomenon

---

A complex, systematic and in-depth analysis and interpretation

---

To generate newly synthesized theories that are transferrable beyond the studies from which they originate

# What a qualitative metasynthesis is not....

- Not an assimilated literature review
- Not a secondary analysis (not dealing with raw data)
- Not a meta-analysis (not to determine cause-and-effect)

Erwin 2011



# Many Methods Exist

<u>Method</u>	<u>Purpose</u>	<u>Sample</u>	<u>Data Analysis</u>
<b>Meta-ethnography</b>	To create new holistic interpretation	Topically related research reports	Usually thematic analysis
<b>Meta-study</b>	Analyze theories, methods, findings	Representative sample	Coding, categorizing
<b>Cochrane</b>	Enhance/extend results of meta-analysis	Related qualitative research reports	Emergent, depends
<b>Theory-generating</b>	Generate theory	Theoretical sampling	Coding, categorizing
<b>Qualitative research synthesis</b>	Develop or reinterpret a model	Purposeful	Thematic analysis

# Conducting a Metasynthesis (Steps)

1. Before you start – constitution of a research group
2. Define the Question
3. Protocol development / registration
4. Study selection / sampling
5. Assessing the quality of the studies (CASP)
6. Extracting and methods of synthesis
7. Determining the confidence in the findings (CERQual)

(Lachal 2017; Flemming 2021)





# 1. Before you start – constitution of the team

- Must work in collaboration with researchers from diverse backgrounds
- A collaborative approach improves quality and rigor
- Team should include qualitative methodologists
- Need to choose an approach and research question that is adapted to the expertise of the group



## 2. Define the research question

- Qualitative metasyntheses usually ask how and why questions
- Question should be broad enough, but manageable
- Can be helpful to think of the question as an “anchor” or as a “compass”

# A framework for Question formulation (Flemming 2021)

<b>PerSPE(C)TiF Term</b>	<b><i>Scoping Review Definition</i></b>
<b>Perspective</b>	From the perspective of those who are homeless or vulnerably housed, or who help provide palliative care for those who are homeless or vulnerably housed.
<b>Setting</b>	UK homeless and vulnerably housed population requiring specialist palliative care input.
<b>Phenomenon/ Problem</b>	What do we understand about palliative care provision?
<b>Environment</b>	Both inside and outside of existing services.
<b>(Optional Comparison)</b>	(Nil fixed comparator)
<b>Time/timing</b>	In the time period when palliative care and support could be beneficial.
<b>Findings</b>	With relevance to researchers, policy makers, and clinicians.



### 3. Protocol Development / Registration

- Clarify the procedures / identify difficulties
- Protocols generally include:
  1. The researchers affiliated with the project
  2. The research question and rationale
  3. Inclusion and exclusion criteria
  4. Databases (and other sources) to be searched
  5. Search strategy
  6. Proposed methodology for data extraction and analysis
  7. Proposed time frame for the study
- PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols)



# Protocol Registration

- Pre-registering protocols ahead of time can reduce bias
- Pre-registration can reduce duplications of research
- Where to register your protocol:
  - PROSPERO
  - Research Registry - Systematic Reviews/Meta-Analysis
  - International Platform of Registered Systematic Review and Meta-analysis Protocols
  - Open Science Framework - Inclusive Systematic Review Registration Form





## 4. Study selection / Sampling

- Variety of sampling methods (exhaustive, purposeful, theoretical)
- Consider discipline
- Establish key words as a team
- Work with a librarian
- It can be tricky to identify qualitative studies



## 5. Assessing the quality of the studies

- Contentious; A 2019 review found over 100 appraisal tools for evaluating qualitative studies
- There is an expectation from journals that an assessment is done and that it is included in the manuscript
- Need to justify chosen approach
- identify methodological strengths and limitations of the primary studies included in the synthesis ie an appraisal of “rigor.”

A hand is shown drawing the text '100%' on a dark chalkboard with white chalk. The drawing is partially obscured by a white, torn-paper-like graphic on the right side of the image.

100%

## Critical Appraisal Skills Program (CASP)

- 10 questions
- 3 sections:
  - Are the results of the study valid?
  - What are the results?
  - Will the results help locally?
- Can produce an overall quality score for each study
- The score will be used later to assess confidence in the findings of the metasynthesis

## 6. Extracting and Synthesis

- Extraction is a 2-step process:
  - formal data about each study: the number and type of participants in each study, its location, and the method of data collection and of analysis.
  - “Findings” in the form of quotes from participants, author interpretations, themes and sub-themes, new theory or observational excerpts
- Extraction and analysis are iterative
- Export into data analysis software (e.g. NVivo)

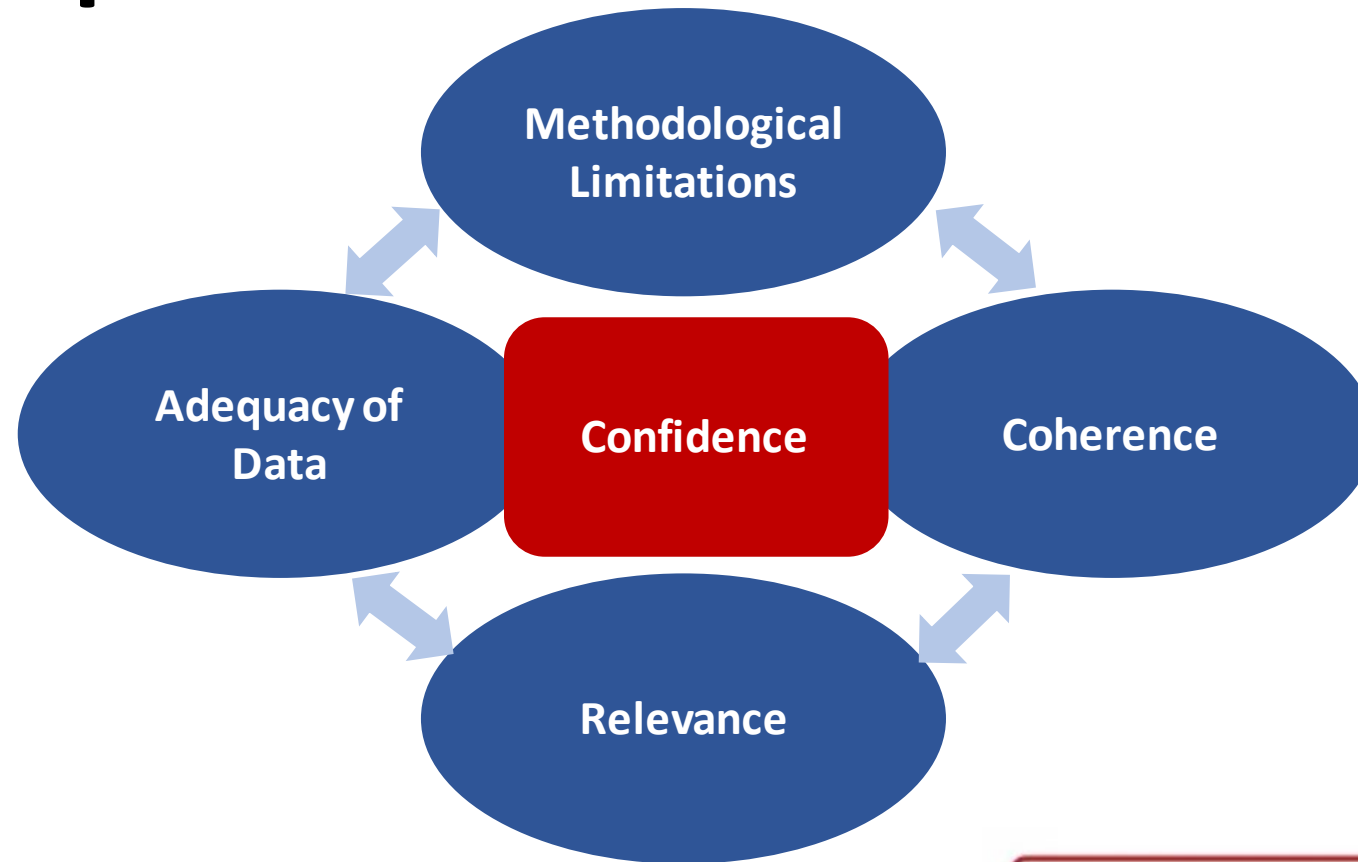


## 7. Confidence in the findings

- GRADE-CERQual is an approach for assessing how much confidence to place in the findings of a qualitative metasynthesis.
- The overall assessment of confidence (high, moderate, low, very low) is made on the basis of an assessment of four components
- Similar to other assessment tools, but intended for findings of systematic reviews from qualitative studies

**GRADE** CERQual

# Four components



**GRADE** CERQual

# Four components

Component	Definition
Methodological limitations	The extent to which there are problems in the design or conduct of the primary studies that contributed evidence to a review finding
Relevance	The extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question
Coherence	The extent to which the review finding is well grounded in data from the contributing primary studies and provides a convincing explanation for the patterns found in these data
Adequacy of data	An overall determination of the degree of richness and quantity of data supporting a review finding



# Confidence Levels

Level	Definition
High confidence	It is highly likely that the review finding is a reasonable representation of the phenomenon of interest
Moderate confidence	It is likely that the review finding is a reasonable representation of the phenomenon of interest
Low confidence	It is possible that the review finding is a reasonable representation of the phenomenon of interest
Very low confidence	It is not clear whether the review finding is a reasonable representation of the phenomenon of interest.

**GRADE CERQual**

# Template table



	<b>Methodological Limitations</b>	<b>Relevance</b>	<b>Coherence</b>	<b>Adequacy of the data</b>	<b>Overall confidence</b>
Finding 1	Notes...	Notes...	Notes...	Notes...	Very low, low, moderate or high
Finding 2	Notes...	Notes...	Notes...	Notes...	Very low, low, moderate or high
Finding 3	Notes...	Notes...	Notes...	Notes...	Very low, low, moderate or high
Finding 4	Notes...	Notes...	Notes...	Notes...	Very low, low, moderate or high
Finding 5	Notes...	Notes...	Notes...	Notes...	Very low, low, moderate or high

# There's an app for that!

(<https://isoq.epistemonikos.org/>)

**GRADE CERQual** interactive Summary of Qualitative Findings

[About](#) [Browse](#) [Help](#) [Login](#)



**iSoQ** Version 1.0

*An online tool for applying the GRADE-CERQual approach to findings of a qualitative evidence synthesis*

- Learn more about iSoQ
- Browse
- Watch a short video

A real-life  
example...



#### OPEN ACCESS

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# Stakeholder perceptions of lethal means safety counseling: A qualitative systematic review

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**Introduction:** Lethal means safety counseling (LMSC) is an evidence-based suicide prevention intervention during which providers encourage patients

# Motivation for Metasynthesis

- Lethal means counseling is an evidence-based intervention
- It is underutilized in practice
- What individual and contextual factors impact implementation?
- Goal to understand stakeholder perspectives of intervention



# Step 1: Forming a research group



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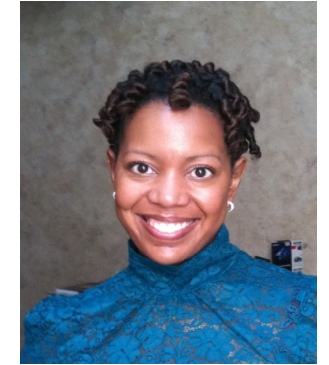
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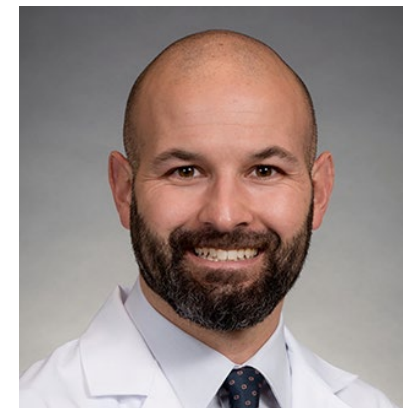
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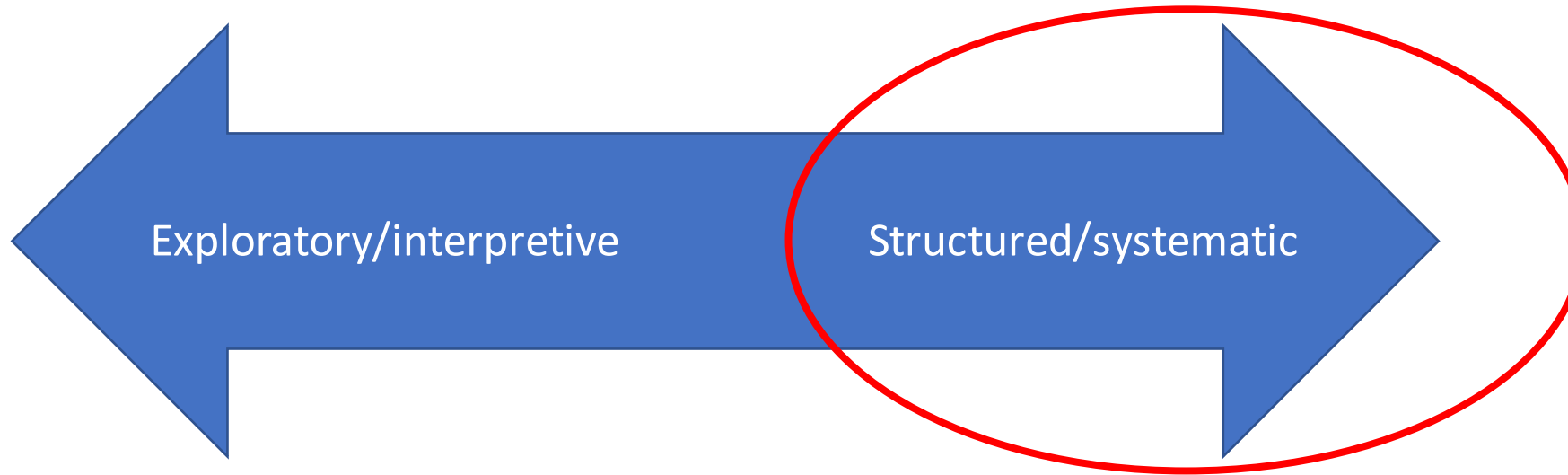
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## Step 2: Defining the question

1. Stakeholders' perspectives on LMC
    - Barriers and facilitators
    - Role of intervention characteristics
    - Role of contextual factors on acceptability and feasibility
  2. Differences based on group and setting
  3. Implications for informing LMC implementation and research
- 



- Qualitative research synthesis/meta-study
  - All available papers
  - Coding characteristics
  - Thematic analysis



# Step 3: Developing a protocol

## Stakeholders' Perceptions of Lethal Means Counseling: A Qualitative Meta-Analysis

*Gabriela Khazanov, Shimrit Keddem, Katelin Hoskins, Joseph Simonetti, Sara Landes, Brooke Dorsey Holliman, Karoline Myhre, Sarah Sullivan, Emily Mitchell*

To enable PROSPERO to focus on COVID-19 submissions, this registration record has undergone basic automated checks for eligibility and is published exactly as submitted. PROSPERO has never provided peer review, and usual checking by the PROSPERO team does not endorse content. Therefore, automatically published records should be treated as any other PROSPERO registration. Further detail is provided [here](#).

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### Review question

What are stakeholders' perceptions of the barriers and facilitators to providers discussing with patients their access to lethal means?

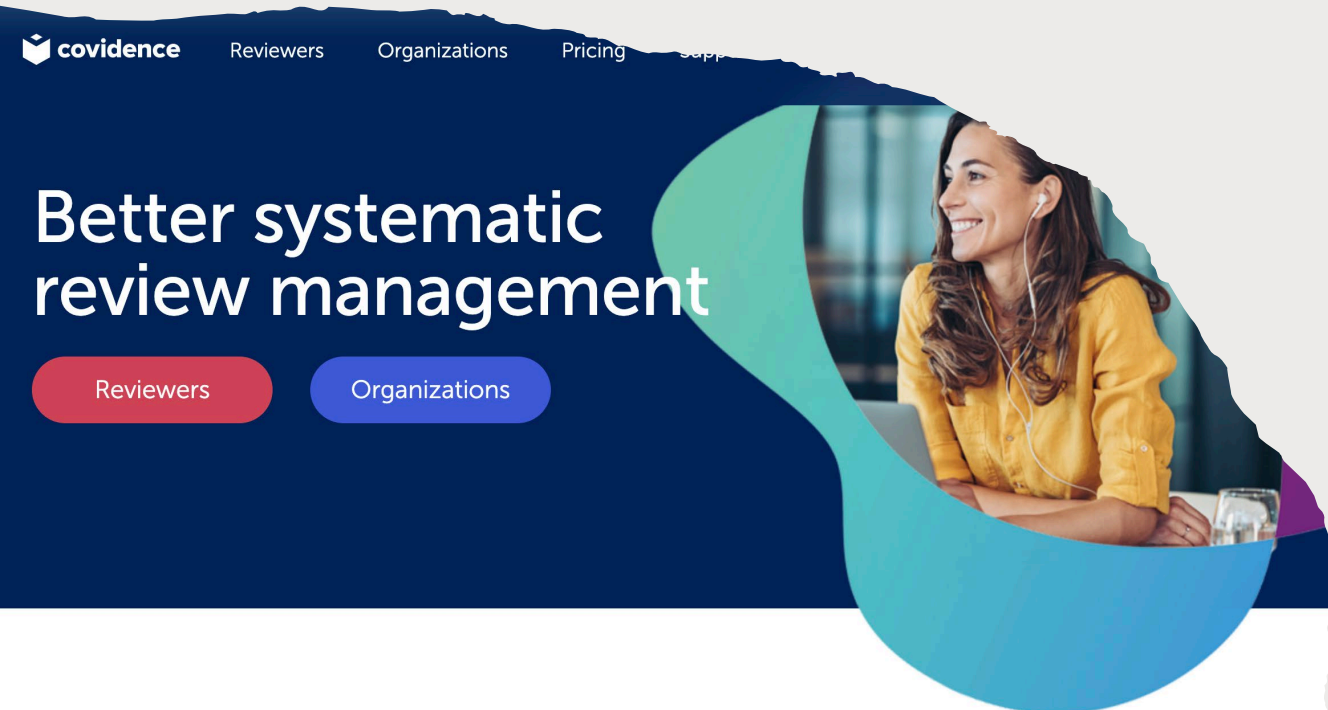
### Searches

We will search PubMed and PsycINFO in February 2021. On PubMed, we will restrict to English articles. On PsycINFO, we will restrict to English articles and exclude dissertations. Abstracts, title, and keywords will be searched. We will only include studies using qualitative methods.

We will include combinations of the following words/phrases: (lethal means OR means safety OR means

# Step 4: Study selection

1. Studies to include
  - What qualifies as qualitative?
2. Search terms – iterative process
3. Translating across databases
4. Inclusion & exclusion for (1) title/abstract and (2) full text searches
  - Only peer reviewed
5. Software!
  - Covidence if you're lucky, Rayyan if you aren't

A banner for the Covidence website. The background is dark blue with a white torn-paper effect on the right side. On the left, the text 'Better systematic review management' is written in white. Below this text are two buttons: a red one labeled 'Reviewers' and a blue one labeled 'Organizations'. On the right, a woman with long brown hair, wearing a yellow shirt and white earbuds, is smiling and looking to the right. She is sitting at a desk with a laptop and a glass of water. The banner also features a navigation menu at the top with links for 'Reviewers', 'Organizations', 'Pricing', and 'Support'.

**covidence** Reviewers Organizations Pricing Support

## Better systematic review management

Reviewers Organizations

See your systematic reviews like never before

## Object S1. Full search strings

Pubmed |

("lethal means"[TIAB] OR "means safety"[TIAB] OR "means counseling"[TIAB] OR "means restriction"[TIAB] OR firearm\*[TIAB] OR gun[TIAB] OR guns[TIAB] OR medication\*[TIAB] OR drug\*[TIAB] OR opiate\*[TIAB] OR benzodiazepine\*[TIAB] OR pill[TIAB] OR pills[TIAB] OR poison\*[TIAB])

AND

(Suicid\*[TIAB] OR safety[TIAB] OR injur\*[TIAB])

AND

("Qualitative Research"[MeSH] OR "Interviews as Topic"[MeSH] OR "Focus Groups"[MeSH] OR "Grounded Theory"[MeSH] OR "Nursing Methodology Research"[MESH] OR qualitative[TIAB] OR interview\*[TIAB] OR "focus group\*" [TIAB] OR "grounded theory"[TIAB] OR phenomenolog\*[TIAB])

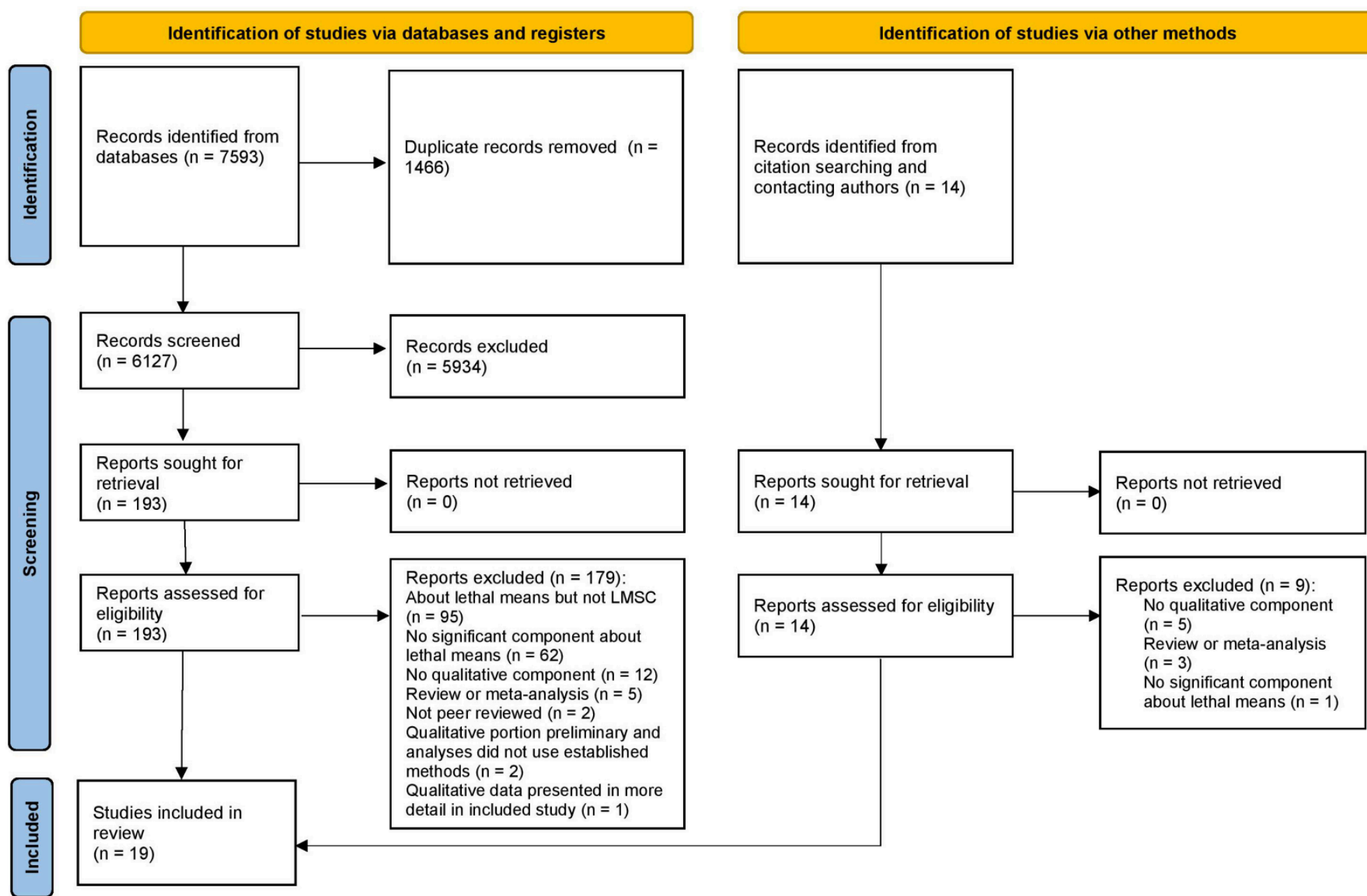
# Inclusion and exclusion criteria

## Title/abstract

- Qualitative methods
- Relevant content

## Full text

- Providers discussing with patients access to or storage of firearms and medications
- Any type of provider + anyone impacted by LMC
- No exclusions based on intent of LMC or demo/clinical characteristics
- Qualitative assessment and analysis



**FIGURE 1**  
 PRISMA flow diagram for study identification, screening, and inclusion.

Step 5:  
Assessing  
study quality

TABLE 2 Summary of study quality ratings by year of publication.

Paper	CASP ratings			COREQ ratings			
	Validity	Results	Value	Research team/Reflexivity (8 total)	Study design (15 total)	Analysis/Findings (9 total)	COREQ total (32 total)
Barkin et al. (22)	5 Yes 1 No	2 Yes 1 Can't tell	1 Yes	0	9	7	16
Slovak and Singer (50)	5 Yes 1 No	2 Yes 1 No	1 Yes	0	8	7	15
Walters et al. (51)	6 Yes	2 Yes 1 Can't tell	1 Yes	3	7	5	15
Benjamin Wolk et al. (45) <sup>a</sup>	5 Yes 1 No	3 Yes	1 Yes	5	11	7	23
Gorton et al. (40)	5 Yes 1 No	3 Yes	1 Yes	4	11	8	23
Jager-Hyman et al. (46) <sup>a</sup>	6 Yes	3 Yes	1 Yes	7	13	7	27
Pallin et al. (52) <sup>b</sup>	6 Yes	2 Yes 1 No	1 Yes	5	8	7	20
Wolf et al. (44)	4 Yes 2 No	2 Yes 1 No	1 Yes	0	10	3	13
Slovak et al. (53)	5 Yes 1 No	3 Yes	1 Yes	1	11	6	18
Aitken et al. (20)	4 Yes 2 No	1 Yes 1 No 1 Can't tell	1 Yes	3	8	7	18
Monteith et al. (54) <sup>c</sup>	6 Yes	3 Yes	1 Yes	2	8	7	17
Simonetti et al. (55) <sup>c</sup>	6 Yes	3 Yes	1 Yes	1	10	6	17
Dobscha et al. (47) <sup>d</sup>	5 Yes 1 No	2 Yes 1 No	1 Yes	3	10	8	21
Newell et al. (48) <sup>d</sup>	6 Yes	3 Yes	1 Yes	0	9	7	16
Hinnant et al.,(21)	5 Yes 1 No	2 Yes 1 No	1 Yes	0	9	8	17
Salhi et al. (41)	5 Yes 1 No	3 Yes	1 Yes	3	10	8	21
Richards et al. (49)	6 Yes	3 Yes	1 Yes	3	9	7	19
Siry et al. (42) <sup>b</sup>	6 Yes	2 Yes 1 Can't tell	1 Yes	2	9	9	20
Siry et al. (43) <sup>b</sup>	6 Yes	3 Yes	1 Yes	4	12	7	23

<sup>a-d</sup>Papers with the same superscript were part of the same larger study. Each paper presented unique qualitative data and no participants overlapped.

# Step 6 (the main event): Extracting & Analyzing

1

## **Code line by line**

- Inductive/deductive
- Codebook

2

## **Develop descriptive themes**

- Based on findings

3

## **Generate analytic themes**

- Going “beyond” findings
- E.g., barriers/facilitators

# Step 6: Our take!

1

## **Coded line by line**

- 2 authors + 1 reviewer
- Broad, descriptive codes (e.g., patient-identified barriers)

2

## **Coded into detailed subthemes**

- 3 authors
- E.g., patients feeling judged by provider

3

## **Generated analytic themes**

- E.g., acceptability depends on understanding rationale; comfort with provider

4

## **Assigned subthemes to CFIR domain**

- E.g., Outer setting, Inner setting



TABLE 1 Study characteristics by year of publication.

Paper	Stakeholder groups	Context	Type of lethal mean	Assessments	Sample size	% Female	Race (% minority)	Qualitative approach
Barkin et al. (22)	Pediatricians, community leaders, and parents	Los Angeles community. Explored doctors' roles in preventing youth injury during well-child visits.	Firearms	Interviews	26	58%	81%	Identification of themes/pile sort technique: no other info
Slovak and Singer (50)	Adolescent mental health clinicians	Rural Midwestern USA. Explored how clinicians assess for suicide risk and counsel parents on risks of firearms.	Firearms	Focus groups	24	63%	8%	Constant comparison method, inductive
Walters et al. (51)	VA facility leaders, mental health clinicians, mental health patients who currently or previously owned guns, and family members	Midwestern VA Medical Center. Explored stakeholder perceptions of firearm safety and interventions to delay firearm access.	Firearms	Focus groups and interviews	60	Patients: 0%. Family: 75%. Clinicians: 64%	NR	Iterative group process: no other info
Benjamin Wolk et al. (45) <sup>a</sup>	Parents, physicians, nurses, nurse practitioners, leaders of clinics, third-party payers, and members of national credentialing bodies	Midwestern and Southern health systems. Explored stakeholders' needs related to implementing a firearm safety intervention in pediatric primary care.	Firearms	Interviews	58	53%	26%	Integrated analysis approach, deductive and inductive (grounded theory)

TABLE 3 Summary of findings by analytic themes and subthemes, organized by CFIR domains.


Analytic themes and subthemes	Included studies	CERQual ratings for themes and exemplar/representative quotations for subthemes
<p><b>Theme 1:</b> The importance of firearms to owners' identities and perceptions of ownership as a value and right lead to perceived cultural tensions between patients and providers and hesitancy to discuss firearms.</p>	(20, 21, 42, 44–52, 54, 55)	<p><b>High confidence:</b> 14 papers with no or very minor concerns about methodological limitations, coherence, adequacy, and relevance. All settings and stakeholder groups were represented.</p>
<p><b>Characteristics of Individuals/Patient Barriers:</b> Belief that firearm ownership is a protected and private right, which influences perspectives on whether providers should discuss firearms. Disclosing ownership may lead to losing one's firearms or being tracked on a government registry.</p>	(21, 44–50, 52, 54)	<p><i>When you just see it on this form, and you don't know what they're going to do about how you answer this form, for someone who is concerned about the government infringing on their rights, it gives you the feeling of, 'Maybe I should just answer no' [Richards et al. (49)].</i></p>
<p>Patients can feel judged by healthcare providers when being asked about firearms.</p>	(20, 21, 45–47, 54)	<p><i>I remember just the general shock at providers when they're like 'Do you own firearms?' and I said, 'yeah.' And they go 'Oh my god,' and they start looking at me weird where they'd scoot over across the room, so their behaviors, their reactions are just something that need to be worked on [Dobscha et al. (47)].</i></p>
<p><b>Characteristics of Individuals/Provider Barriers:</b> Providers can be reluctant to discuss firearms due to cultural and political tensions, including fears of offending patients and their own biases about firearms.</p>	(21, 44, 45, 51)	<p><i>I don't want to offend a family asking the question and having them not listen to me. I try to be very careful on how [. . .] I introduce the subject and try to keep my focus on keeping kids safe. [. . .] there's a lot of rhetoric out there. It can be challenging [Hinnant et al. (21)].</i></p>

# 7 Analytic Themes

The importance of firearms to owners' identities and perceptions of ownership as a protected and private right lead to perceived cultural tensions between patients and providers and hesitancy to discuss firearms.



The acceptability of LMC, and especially asking about access, depends on understanding its rationale and context and feeling comfortable with the provider.



Cultural competency is important for discussing firearms; training providers on firearms, firearm culture, and risk for suicide can improve their competence and confidence in providing LMC.

## Outer Setting

- People have a right to own and use firearms
- Firearms have value
- There is a cultural divide about firearms
- Safety and protection are important to firearm owners

## Inner Setting

- Acceptability of LMSC depends on the context in which it is provided
- Healthcare leaders have concerns about provider time and infrastructure for storing firearms

## Characteristics of Individuals

### **Patients**

#### **BARRIERS**

- Firearm ownership private / protected
- Feeling judged by providers
- Firearm risks are low
- Safety devices flawed and costly
- Suicide is inevitable

#### **FACILITATORS**

- Understanding LMSC rationale
- Involving trusted family / friends

### **Providers**

#### **BARRIERS**

- Cultural and political tensions
- Time constraints
- Lack of control over system / outcomes
- Lack of firearm expertise

#### **FACILITATORS**

- Integrating LMSC into clinic practices
- Training and supporting materials

### **Family/Friends**

#### **BARRIERS**

- Family members' safety concerns

## Intervention Characteristics

### **Lethal Means Safety Counseling Facilitators**

#### **FRAMING**

- Showing cultural competency
- Nonjudgmental and respectful

#### **DELIVERY PREFERENCES**

- Trusted provider
- Provider with firearm experience/values

#### **COMPONENTS: CENTRAL**

1. Contextualizing and providing a rationale for LMSC
2. Asking about access (or not)
3. Recommending storage options

#### **COMPONENTS: OPTIONAL**

- Providing / subsidizing storage devices
- Potential additions (written information; decision tools, referrals)

#### **ADAPTATION**

- Adapting LMSC based on patients' experiences and backgrounds

## Process of Implementation

- Partnering with firearm advocacy groups may aid implementation

# Step 7: Determining confidence in findings

**Table S8. CERQual (Confidence in the Evidence from Reviews of Qualitative Research) Evidence Profile**

Review finding	Methodological limitations	Coherence	Adequacy of data	Relevance
<p><b>Theme 1 (14 papers):</b> The importance of firearms to owners' identities and perceptions of ownership as a protected and private right lead to cultural tensions between patients and providers that decreases their willingness to discuss firearms.</p>	<p>No or very minor concerns. Only 2/14 papers had more than minor methodological limitations.</p>	<p>No or very minor concerns. Patients and providers explicitly discussed rights/values related to firearms, perceived cultural tensions, and how these factors decreased their willingness to discuss firearms.</p>	<p>No or very minor concerns.</p>	<p>No or very minor concerns. 11 papers with direct relevance, 2 with partial relevance, and 1 with indirect relevance. All types of settings and stakeholder groups were represented.</p>
<p><b>Theme 2 (16 papers):</b> The acceptability of LMSC, and especially asking about access, depends on understanding its rationale and context and feeling comfortable with the provider delivering it.</p>	<p>No or very minor concerns. Only 2/16 papers had more than minor methodological limitations.</p>	<p>No or very minor concerns. Stakeholders agreed that the acceptability of LMSC depends on the contextual factors noted.</p>	<p>No or very minor concerns.</p>	<p>No or very minor concerns. 12 papers with direct relevance, 3 with partial relevance, and 1 with indirect relevance. All types of settings and stakeholder groups were represented.</p>

# Manuscript writing

**Table S1.** ENTREQ (Enhancing transparency in reporting the synthesis of qualitative research) checklist

No. Item	Guide Questions/Description	Where Reported
1. Aim	State the research question the synthesis addresses	Page 3
2. Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. metaethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	Page 5
3. Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until theoretical saturation is achieved).	Page 4
4. Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	Page 4
5. Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psychINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar), hand searching, reference lists) and when the searches were conducted; provide the rationale for using the data sources.	Page 4

**Table S2.** PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) checklist

Section and Topic	Item #	Checklist item	Location where item is reported
<b>TITLE</b>			
Title	1	Identify the report as a systematic review.	Title
<b>ABSTRACT</b>			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Abstract
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Page 3 (Intro)
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Page 3 (Intro)
<b>METHODS</b>			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Page 4 (Inclusion/Exclusion)
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Page 4 (Search Strategy)
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Page 4 (Search Strategy); Object S1

# Putting it all Together

Key decisions points	
1. Forming a research group	<ul style="list-style-type: none"><li>• Diversity</li><li>• Methodological and content expertise</li><li>• Manpower</li></ul>
2. Defining the question	<ul style="list-style-type: none"><li>• Determining scope</li><li>• Determining level of structure</li><li>• The Why and How</li></ul>
3. Protocol development/registration	<ul style="list-style-type: none"><li>• Where to register depending on type of review</li><li>• Specific with some flexibility</li></ul>
4. Study selection / sampling	<ul style="list-style-type: none"><li>• Databases to search and search terms</li><li>• Other methods of finding relevant papers</li><li>• Inclusions/exclusion criteria</li><li>• Software</li></ul>
5. Assessing study quality	<ul style="list-style-type: none"><li>• Selecting tool</li><li>• Double coding/reconciling discrepancies</li></ul>
6. Extracting and analysis	<ul style="list-style-type: none"><li>• Method + adaptations</li><li>• Software, codebook, reliability</li></ul>
7. Determining confidence in findings	<ul style="list-style-type: none"><li>• Approach</li><li>• Which findings, reliability, incorporating into analysis</li></ul>



Thank you (and  
Godspeed)!



# Resources

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