

Evidence Synthesis Taxonomy Initiative

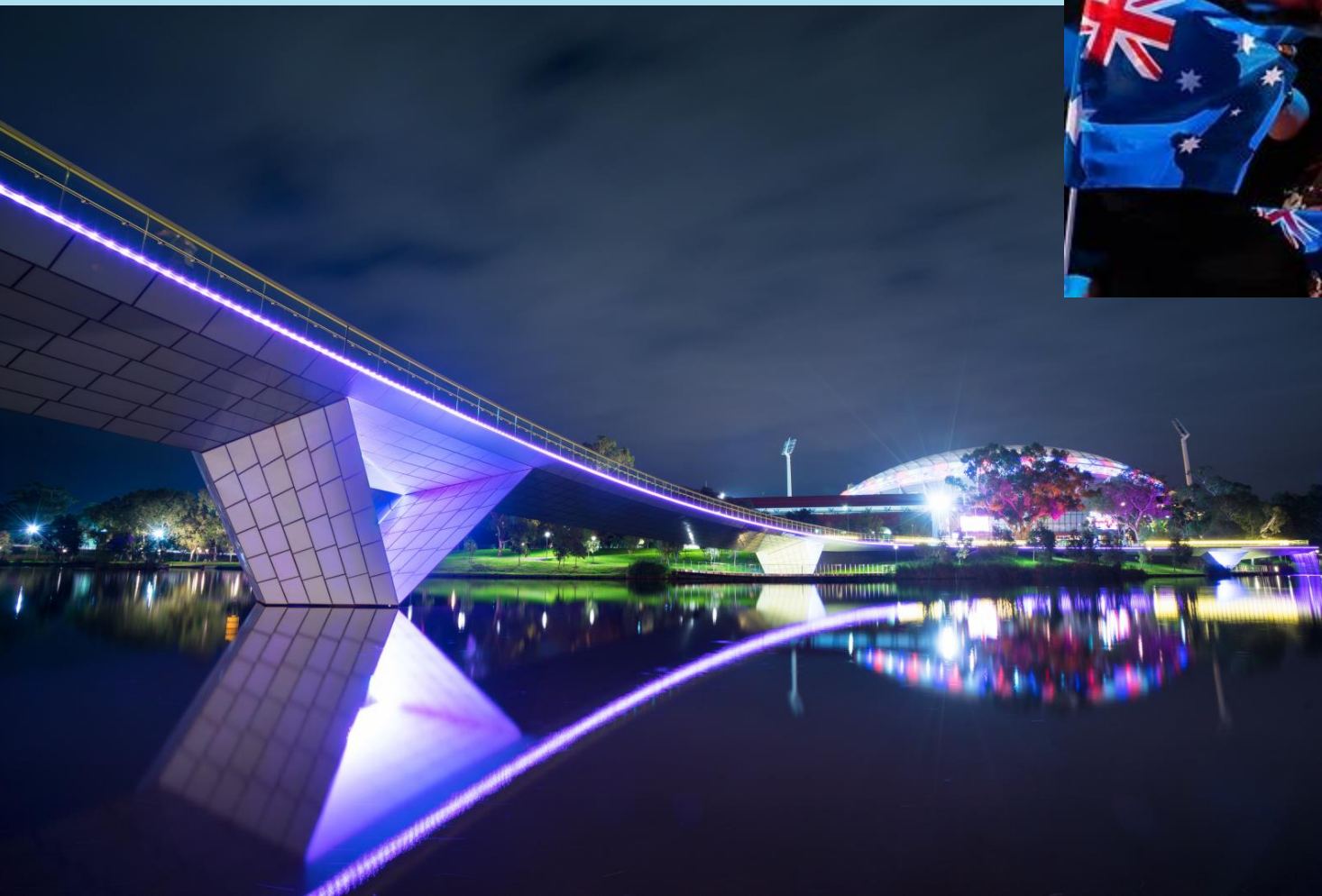
Zachary Munn, European Cochrane Groups Webinar 2026

EVIDENCE SYNTHESIS TAXONOMY INITIATIVE

Supporting researchers to conduct the right review, for the right reasons, with the right methods

We acknowledge and pay our respects to the Kaurna people,
the traditional custodians whose ancestral lands we gather on.

We acknowledge the deep feelings of attachment and relationship of the
Kaurna people to country and we respect and value their past, present
and ongoing connection to the land and cultural beliefs.



Conflicts of Interests/Disclosures/Overview



Director HESRI, School of Public Health

ADELAIDE

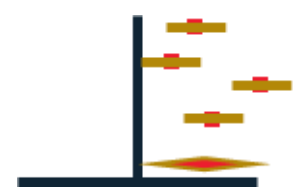


CENTRE

GRADE Centre Director and Working Group Member



Past-Chair Guidelines International Network (GIN)



Funding for Systematic Reviews and Guidelines



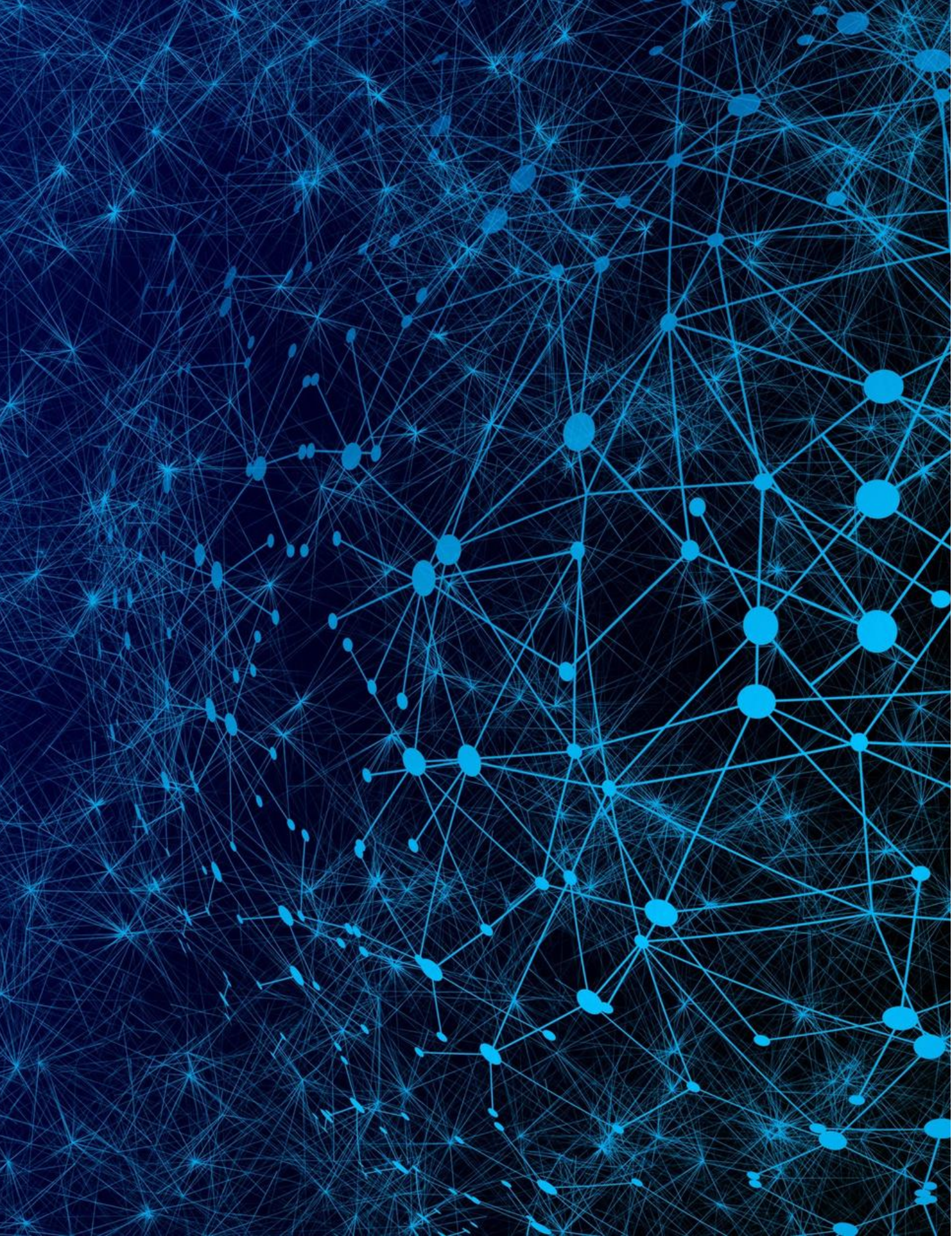
Head of Evidence Synthesis Taxonomy Initiative



Lead, Australian MND Guideline



Involved in many Methodology Groups/Networks



Agenda

Introduction/overview of Evidence Synthesis

Evidence Synthesis Taxonomy Initiative

Scoping review of previous work

The taxonomy

Update and future plans

Questions and Discussion

What is Evidence Synthesis?

Evidence synthesis is the interpretation of individual studies within the context of global knowledge for a given topic. These syntheses provide a rigorous and transparent knowledge base for translating research in decisions. As such, evidence syntheses can be thought of as the basic unit of knowledge used in tools such a policy brief or clinical practice guideline.

In other words, evidence syntheses are the “evidence-base” in evidence-based policy, or evidence-based medicine etc. Essential to all evidence syntheses is the use of explicit and transparent methodology in the formation of the questions they address. The transparent methodology encompasses how studies are identified, selected, appraised, analyzed, and the strength of the evidence assessed to answer the questioned posed.

(Evidence Synthesis International)

”

**What types of
evidence
synthesis are
you familiar
with?**

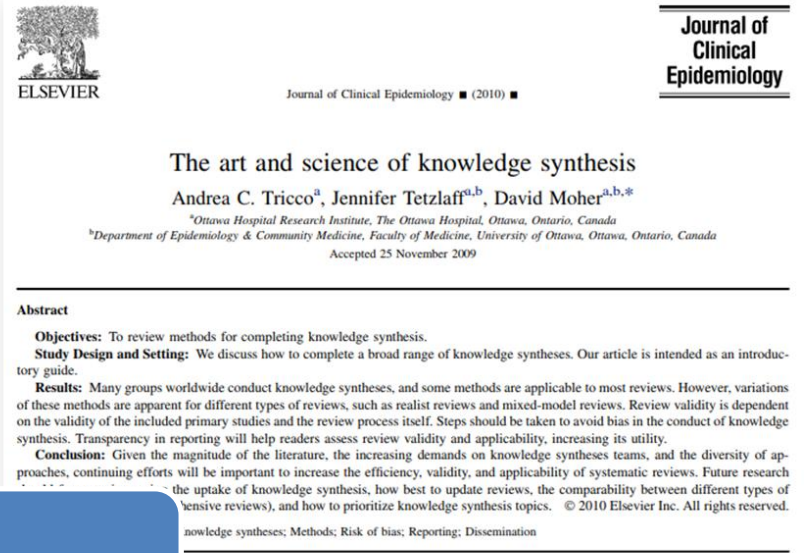




What types of evidence synthesis are you familiar with?

[illegible]

Types of evidence synthesis



Systematic reviews

Mixed methods reviews

Qualitative evidence synthesis

Rapid reviews

Realist synthesis

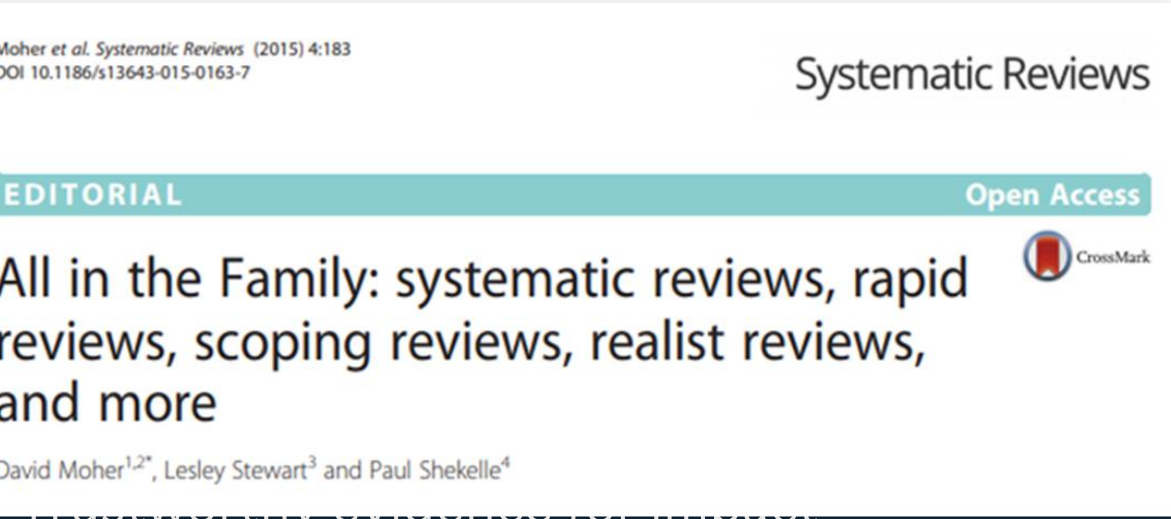
Umbrella/Overviews Reviews

Evidence (gap) maps

Scoping reviews

....and more!

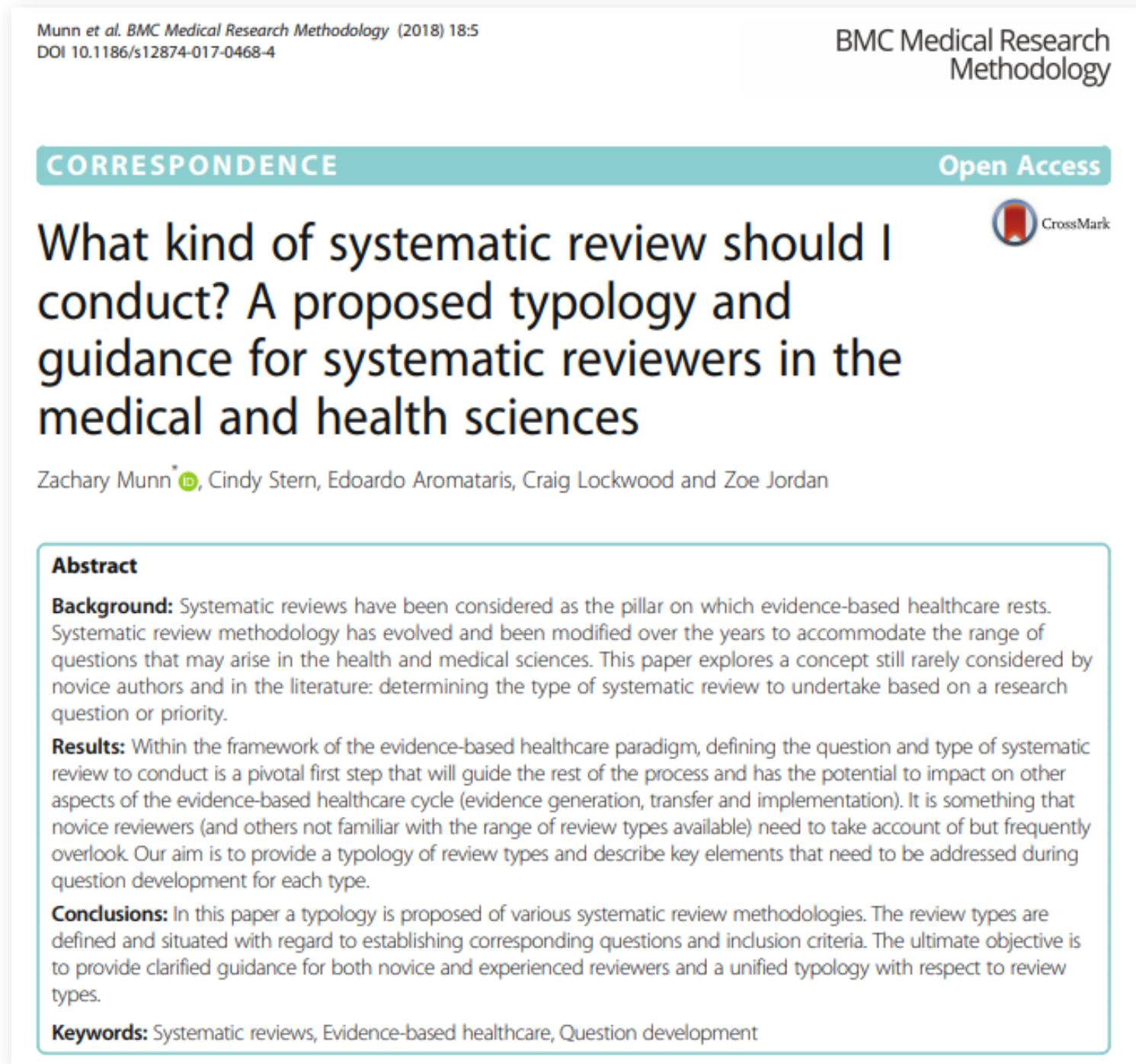
Clarifying differences between review designs and methods



Recommendations and Impact

Types of Systematic Reviews

1. Interventions/Effectiveness
 2. Qualitative/Experiences
 3. Costs/Economic Evaluations
 4. Prevalence or Incidence
 5. Diagnostic Test Accuracy
 6. Etiology and Risk
 7. Policy/Opinion
 8. Measurement properties
 9. Prognostic
 10. Methodological
 11. Preferences and values
 12. Animal/bench studies
- ...and more!



Subsets: Types of Prognostic reviews

- Four types:
 - Overall prognosis
 - Prognostic factors
 - Prognostic models
 - Treatment selection factors/models



Trusted evidence.
Informed decisions.
Better health.

Cochrane Database of Systematic Reviews

EDITORIAL

Implementing systematic reviews of prognosis studies in Cochrane

Karel GM Moons, Lotty Hooft, Katrina Williams, Jill A Hayden, Johanna AAG Damen, Richard D Riley

Cochrane Database of Systematic Reviews 2018;(10):ED000129 <https://doi.org/10.1002/14651858.ED000129>

Publication date: 11 October 2018

Over the last 30 years Cochrane has strived to advance the importance of conducting systematic reviews of therapeutic strategies, diagnostic tests, and risk factors. Now, the Cochrane community embarks on systematic reviews of prognosis studies in the *Cochrane Database of Systematic Reviews*.

Prognosis research has escalated in the last two decades. Today, frequently echoed terms are 'personalized medicine', 'precision medicine', or 'risk-based medicine', often used as synonyms. Almost all healthcare research programmes, medical journals, and even private companies (such as Google, IBM, and Philips) adopt these terms, across all medical domains and settings. Personalized or precision medicine does not just address effectiveness of treatments or preventive strategies, but rather addresses how to use an individual's prognostic information to make personally tailored choices about the best suited treatment or preventive management. Likely due to this worldwide focus on personalized or precision medicine, studies on prognostic and predictive factors (markers) and models have become abundant in the medical literature. Consequently, Cochrane needs to respond to this and produce systematic reviews that summarize the huge amount of data and evidence emerging from these primary prognosis studies, to enable stakeholders to make appropriate healthcare decisions.

The Prognosis Methods Group (methods.cochrane.org/prognosis), with funding support from Cochrane (Methods Innovation Fund and Strategic Methods Fund) and supportive academic institutions, has dedicated time and resources to the development and testing of novel methods and tools for the design, conduct, quantitative synthesis, interpretation, and reporting of systematic reviews of prognosis studies. This work includes strategies and tools for defining the review question, the PICOTS (population; index prognostic factor or model; comparative factor or model; outcomes to be predicted; timing of the prediction horizon and of the moment of prognosis; setting), search strategies, data extraction, critical appraisal, risk of bias assessment, quantitative synthesis, interpretation, reporting, and grading the certainty of summarized evidence, which can all be found on the Prognosis Methods Group

website.^[1]

For specific implementation within Cochrane the Prognosis Methods Group has developed review proposal and protocol writing templates, which provide detailed guidance.^[2] Review templates will follow soon. All the Group's methods and tools will support systematic reviews of the four main types of prognosis research: ^{[3][4][5][6]}

1. Overall prognosis: studies aimed at quantifying the (overall) incidence of certain outcomes (e.g. comorbidity, complication, death, quality of life), occurring in a certain time period (hours, days, weeks, months, years, lifetime) in individuals within a certain health state (e.g. diagnosed with a certain disease, undergoing some type of surgery, being pregnant, or simply being a healthy citizen in the general population).
2. Prognostic factors: studies aimed at investigating which factors predict (the occurrence of) certain outcomes occurring in a certain time period in individuals within a certain health state. Ideally, these studies address the independent prognostic ability of a factor, i.e. (multivariably) adjusted for other prognostic factors, rather than the univariable association of a prognostic factor.
3. Prognostic models: studies aimed at developing, validating, and adjusting (e.g. extending) multivariable prognostic models that include multiple prognostic factors combined, and are to be used for making predictions in individuals.
4. Treatment selection factors/models: studies aimed at investigating which factors or combination of factors (models) are predictive for the outcome or effects of some treatments and not for the outcome or effects of other treatments.

The Prognosis Methods Group will develop guidance for the conduct of systematic reviews for all these four types of prognosis studies. To date, development of methodological guidance has focused mostly on types 2 and 3, although most guidance aimed at these types can also be applied directly to systematic reviews of types 1 and 4, as we indicate in the review proposal and protocol templates.^[2]

The Group also provides training for Cochrane Review authors and

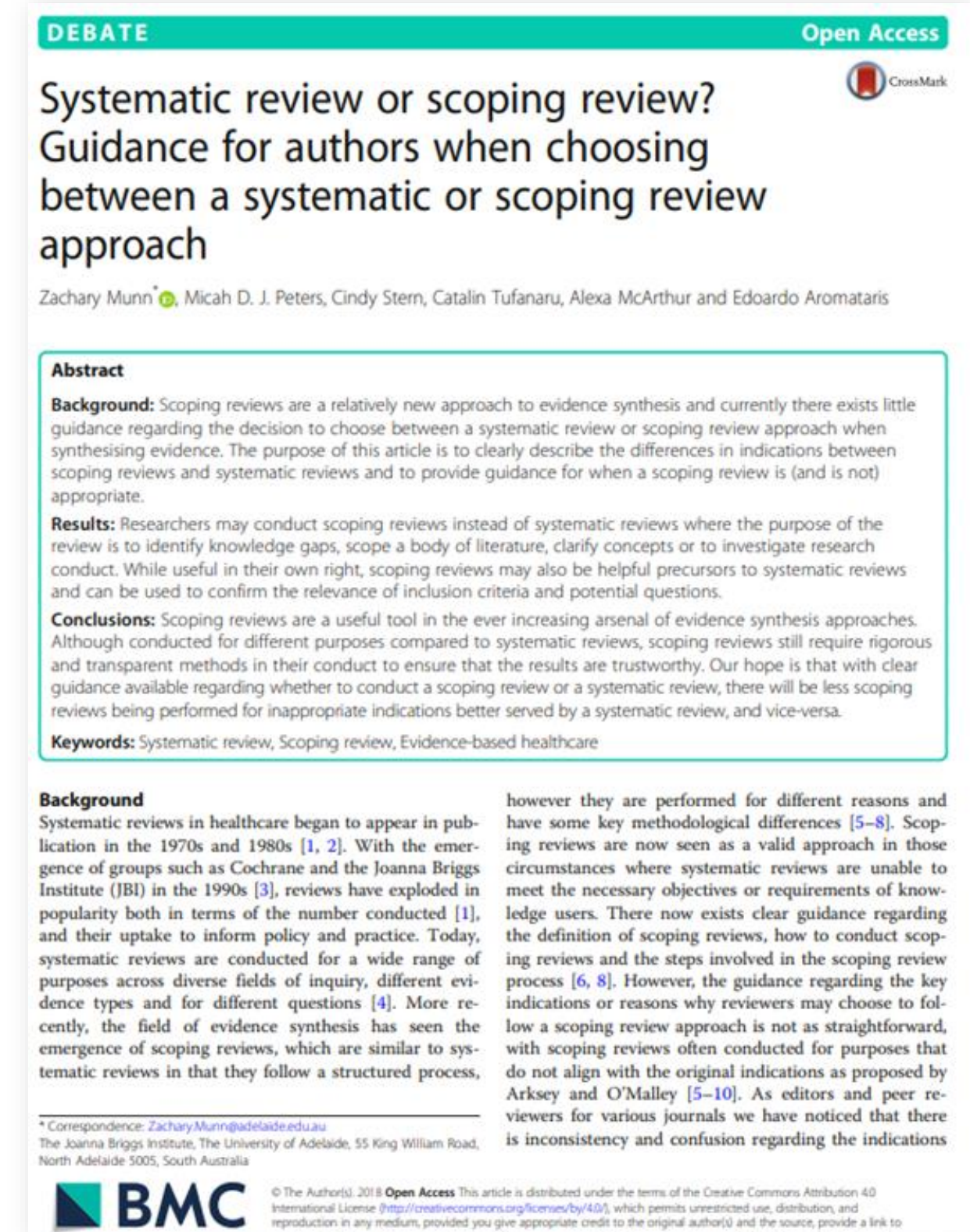
Implementing systematic reviews of prognosis studies in Cochrane (Editorial)
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Subsets: Types(?) of Scoping Reviews

Broadly, scoping reviews are conducted:

- to identify the types of available evidence in a given field;
- to clarify key concepts/definitions in the literature;
- to examine how research is conducted on a certain topic or field;
- to identify key characteristics or factors related to a concept;
- as a precursor to a systematic review;
- to identify and analyze knowledge gaps.



Previous work



Review Article

Meeting the review family and associated information needs

Anthea Sutton*, Mark Clowes, Louise Prentice
School of Health and Related Research (SchARR), The University of Sheffield, Sheffield, UK

Abstract

Background and objectives: The last decade has seen a proliferation of reviews for advancing understanding and decision-making in the range of methodological approaches and definitions and search requirements beyond those used to characterise health-related reviews by type and information retrieval based on the available guidance. **Methods:** A list of review types was generated based on their common features. Guidance on information searching, PUBMED, MEDLINE and Google Scholar was produced for organisations. **Results:** Forty-eight review types were identified, revealing increasing specification of methods for information retrieval with many review types lacking explicit requirements. **Conclusions:** Defining review types and utilising familiarising themselves with a range of review types, information specialists will be better equipped to meet the needs of their clients.

Keywords: information retrieval; information science; systematic reviews; synthesis; evidence-based practice

Keywords: information retrieval; information science

Key Messages

- Use consistent terminology when referring to reviews, distinguishing between review types within the literature.
- Information specialists should be familiar with a range of review types and methods to enhance their role with the review process.
- Where generic methods are not appropriate, specific methods should be used.

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DOI: 10.1111/j.1471-1842.2009.00848.x

Review Article

A typology of reviews: an analysis of 14 review types and associated methodologies

Maria J. Grant* & Andrew Booth†, *Salford Centre for Nursing, Midwifery and Collaborative Research (SCNMCR), University of Salford, Salford, UK, †School of Health and Related Research (SchARR), University of Sheffield, Sheffield, UK

Abstract

Background and objectives: The expansion of evidence-based practice across sectors has led to an increasing variety of review types. However, the diversity of terminology used means that the full potential of these review types may be lost amongst a confusion of indistinct and misapplied terms. The objective of this study is to provide descriptive insight into the most common types of reviews, with illustrative examples from health and health information domains. **Methods:** Following scoping searches, an examination was made of the vocabulary associated with the literature of review and synthesis (literary warrant). A simple analytical framework—Search, Appraisal, Synthesis and Analysis (SALSA)—was used to examine the main review types. **Results:** Fourteen review types and associated methodologies were analysed against the SALSA framework, illustrating the inputs and processes of each review type. A description of the key characteristics is given, together with perceived strengths and weaknesses. A limited number of review types are currently utilized within the health information domain. **Conclusions:** Few review types possess prescribed and explicit methodologies and many fall short of being mutually exclusive. Notwithstanding such limitations, this typology provides a valuable reference point for those commissioning, conducting, supporting or interpreting reviews, both within health information and health care.

Keywords: evidence-based practice; health care; information systems; research synthesis; systematic reviews; typology

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DOI: 10.1111/ger.12439

INVITED REVIEW

A typology of systematic reviews for synthesising evidence on health care

Michael I. MacEntee

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Abstract

Objectives: The objectives of this paper are to (a) Review published references to systematic reviews; (b) offer a typology of systematic reviews for synthesising evidence on health care; and (c) summarise the guides for designing, reporting and appraising the reviews.

Background: Systematic reviews play a role in finding, synthesising, transferring and implementing evidence for healthcare policy, practice guidelines and allocation of health resources. They have been particularly successful in confirming or synthesising evidence for health care by meta-analysing aggregated data from multiple randomised controlled trials. However, concerns about the limitations of evidence from controlled trials have prompted interest in other review methods capable of locating and appraising evidence from more diverse, and possibly more realistic, healthcare situations.

Methods: An iterative citation-tracking process with Google Search and grey literature identified 204 papers on previous typologies and methods of systematic reviews.

Results and Conclusions: There are six types of systematic reviews: narrative; meta-analysis; scoping; qualitative; umbrella; and realist. Each type has distinct objectives, characteristics and attributes, but with much overlapping of methods and guides. Sensitivity to the need for qualitative evidence on complex human responses to ill-health and health care has broadened the objectives and methods of health-related systematic reviews to find, appraise and synthesise useful evidence for practice guidelines, healthcare policy and allocation of health resources.

KEYWORDS

evidence-based practice, health care, information systems, research synthesis, systematic reviews, typology

1 | BACKGROUND

Clark¹ reports that “tens of thousands of controlled trials [of health and social interventions] are published annually” and in August 2018 according to the World Health Organization’s International Clinical Trials Registry Platform more than 120 000 trials [were] open to recruitment. Clearly efficient and methodologically rigorous systems are needed to access, organise and assess this vast array of potentially useful information.²

Searching the literature systematically can summarise evidence, synthesise new ideas and identify gaps in knowledge for healthcare policy, practice guidelines and allocation of health resources.^{2–4} Social and medical scientists in the 1970s used meta-analyses to aggregate statistical data from multiple sources of comparable studies for evidence relating to cardiovascular diseases, cancers and childbirth.^{5,6} Consequently, several national review centres emerged, notably the National Health Service Centre for Reviews and Dissemination and the Cochrane Centre in the United Kingdom, the

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COMMENTARY

Open Access

Clarifying differences between review designs and methods

David Gough*, James Thomas and Sandy Oliver

Abstract

This paper argues that the current proliferation of types of systematic reviews creates challenges for the terminology for describing such reviews. Terminology is necessary for planning, describing, appraising, and using reviews, building infrastructure to enable the conduct and use of reviews, and for further developing review methodology. There is insufficient consensus on terminology for a typology of reviews to be produced and any such attempt is likely to be limited by the overlapping nature of the dimensions along which reviews vary. It is therefore proposed that the most useful strategy for the field is to develop terminology for the main dimensions of variation. Three such main dimensions are proposed: (1) aims and approaches (including what the review is aiming to achieve, the theoretical and ideological assumptions, and the use of theory and logics of aggregation and configuration in synthesis); (2) structure and components (including the types of studies included, the types of questions, the detail with which questions are addressed, and the types of outcomes); and (3) breadth and depth and the questions, the detail with which questions are addressed, and the types of outcomes. The paper then provides an overarching synthesis of these dimensions to a more overarching system of terminology.

Keywords: Aggregation configuration, Synthesis, Methods, Scoping reviews, Synthesis

Background

Research studies vary in many of research questions they are asked, the types of questions being asked, the types of perspectives underlying these research methods that they employ, whether they are a form of research; they are ideological perspectives underlying the way of bringing together what research literature using explicit methods [1]. Systematic methods of review have been developed particularly for questions about the impact of interventions; these are studies which use experimental designs; the logic of systematic methodology can be applied to all areas of research; therefore reviews; particularly in terms of their methodologies

some of the important conceptual and practical differences between different types of systematic review. It does not aim to provide an overall taxonomy of all types of reviews; the rate of development of new approaches to reviewing is too fast and the overlap of approaches too great for that to be helpful. Instead, the paper argues that, for the present at least, it is more useful to identify the key dimensions on which reviews differ and to examine the multitude of different combinations of those dimensions. The paper also does not aim to describe all of the myriad actual and potential differences between reviews; this would be a task too large even for a book let alone a paper. The focus instead is on three major types of dimensions of difference. The first dimension is the aims and approaches of

COMMENTARY

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Evidence Synthesis International (ESI): Position Statement



David Gough^{1*} , Phil Davies², Gro Jamtvedt³, Etienne Langlois⁴, Julia Littell⁵, Tamara Lotfi⁶, Edoardo Masset⁷, Tracy Merlin⁸, Andrew S. Pullin⁹, Merel Ritskes-Hoitinga¹⁰, John-Arne Røttingen¹¹, Emily Sena¹², Ruth Stewart¹³, David Tovey¹⁴, Howard White¹⁵, Jennifer Yost¹⁶, Hans Lund¹⁷ and Jeremy Grimshaw¹⁸

Abstract

This paper is the initial Position Statement of Evidence Synthesis International, a new partnership of organizations that produce, support and use evidence synthesis around the world. The paper (i) argues for the importance of synthesis as a research exercise to clarify what is known from research evidence to inform policy, practice and personal decision making; (ii) discusses core issues for research synthesis such as the role of research evidence in decision making, the role of perspectives, participation and democracy in research and synthesis as a core component of evidence ecosystems; (iii) argues for 9 core principles for ESI on the nature and role of research synthesis; and (iv) lists the 5 main goals of ESI as a coordinating partnership for promoting and enabling the production and use of research synthesis.

Introduction

Evidence synthesis uses formal explicit rigorous methods to bring together the findings of studies already completed and to provide an account of the totality of what is known from that pre-existing research. Evidence synthesis clarifies what is known and not known about a research question. It uses research methods to provide a statement about an evidence base. It is therefore a crucial step in the use of research findings in personal and public decision making.

Evidence Synthesis International (ESI) is a new partnership of individual and umbrella organizations that produce, support and use evidence synthesis around the world. Our scope is broad, spanning education to human health, and environmental management to international development. We provide a global hub where evidence synthesis organizations meet to build and share capacities, resources and guidance, and enhance and advocate for the synthesis and use of research evidence in policy

and practice decision making in all areas of human enterprise.

ESI was established following an initial exploratory meeting held alongside the HTAi (Health Technology Assessment International) annual meeting in Oslo in June 2015 and formally launched at the What Works Global Summit in London in September 2016. A foundational activity of the partnership was to develop a position statement on the shared principles and aims of ESI. This paper provides a background statement on the nature of evidence synthesis and a position statement on ESI's principles and main areas of work. The ESI website [1] provides information on membership and governance of the initiative. The background issues and the position statement and ESI's work will develop over time as it responds to developments in evidence synthesis and its use across the world.

Background

Evidence synthesis

Research can be defined as critical social enquiry for public use [2]. Research evidence is one of many factors

4. Methodology: procedural, methodological and technical development of synthesis methods

4.1 To develop and share standards and terminology to help guide, monitor and raise expectations for quality and relevance of procedures and methods for evidence synthesis and use.

The development of joint methodological standards and terminology may reduce some duplication of effort whilst still allowing plurality in methods and perspectives and the scope for further innovation and development. Some standards may be shared whilst others may be specific to the topic, sector, stakeholder or perspective.

4.2 To develop and share fit-for-purpose procedures, methods and tools that allow for diversity in purpose and execution and development within the shared principles of evidence synthesis and use.

The joint development of evidence synthesis methods may reduce duplication of effort whilst still allowing plurality and the scope for further innovation and methodological development. Evidence synthesis and use is a relatively new area of research and has developed most for examining evidence on the impact of interventions in health. As further questions, topics and perspectives from a wider group of stakeholders are addressed, new methods and approaches will continue to develop within a culture that encourages innovation and freedom to

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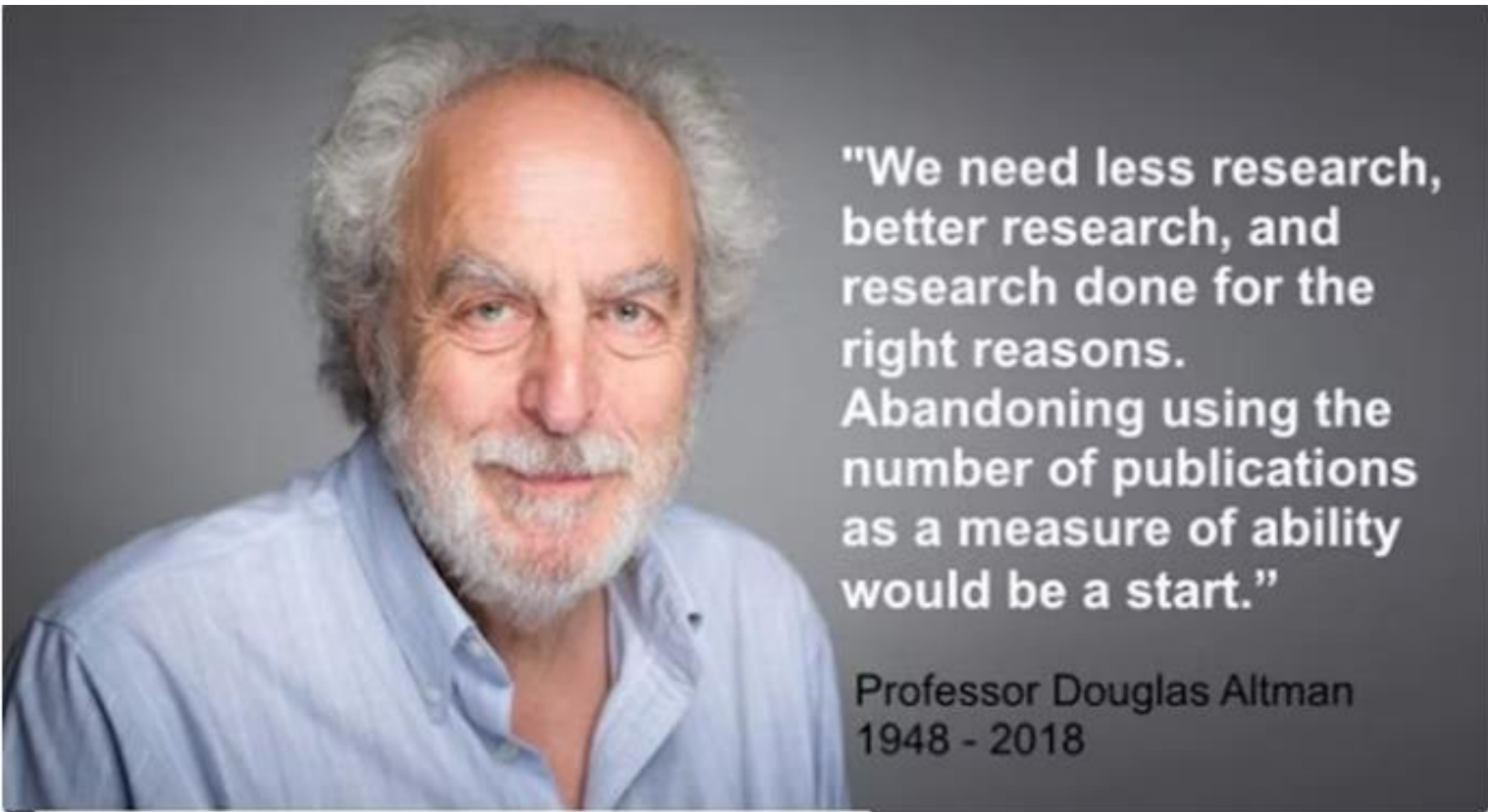


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Issues and Challenges in Evidence Synthesis

1. Approximately 80 reviews a day
2. Duplication/Redundant reviews
3. Poor quality/poorly reported
4. No impact in practice
5. Incorrect approach/methods for the question

(Hoffman 2021, Møller 2018, Ioannidis 2016, Page 2016, Munn 2018)



Professor Douglas Altman
1948 - 2018

Doug Altman. Photo courtesy of NDORMS, University of Oxford.

BMJ

LONDON, SATURDAY 29 JANUARY 1994

The scandal of poor medical research

We need less research, better research, and research done for the right reasons

What should we think about a doctor who uses the wrong treatment, either wilfully or through ignorance, or who uses the right treatment wrongly (such as by giving the wrong dose of a drug)? Most people would agree that such behaviour was unprofessional, arguably unethical, and certainly unacceptable.

ethics that excludes scientific issues. Consequently, poor or useless studies pass such review even though they can reasonably be considered to be unethical.⁹

The effects of the pressure to publish may be seen most clearly in the increase in scientific fraud,¹⁰ much of which is relatively minor and is likely to escape detection. There is

EBM opinion and debate

OPEN ACCESS

The Pandora's Box of Evidence Synthesis and the case for a living Evidence Synthesis Taxonomy

Zachary Munn ,¹ Danielle Pollock,¹ Timothy Hugh Barker,¹ Jennifer Stone,¹ Cindy Stern,¹ Edoardo Aromataris,¹ Holger J Schünemann,^{2,3} Barbara Clyne,⁴ Hanan Khalil,⁵ Reem A Mustafa,⁶ Christina Godfrey,⁷ Andrew Booth ,⁸ Andrea C Tricco,^{9,10} Alan Pearson¹

10.1136/bmjebm-2022-112065

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Check for updates

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Introduction

Have we, as an evidence-based health community, opened the Pandora's box of evidence synthesis? There now exists a plethora of overlapping evidence synthesis approaches and duplicate, redundant and poor-quality reviews.¹⁻⁴ After years of advocating for the need for systematic reviews of the evidence, there is a risk that this message been disseminated too widely and has been misinterpreted in this process. We have reached a point where in some fields more reviews exist than clinical trials, where same topic reviews are being conducted in parallel, and evidence syntheses possess limited utility for decision-making because of their poor quality or poor reporting. To paraphrase the late Douglas Altman,⁵ it is possible we are now at a stage where we need less reviews, better reviews and reviews done for the right reason—as opposed to the current state of mass production (approximately 80 reviews per day).⁶

How have we arrived at this point - and is it a point of no return? One obvious reason is that over time, systematic review methods (and evidence synthesis more broadly) have become increasingly demanding, complex and multifaceted. This evolution in review methods has caused, and continues to cause, great confusion for both novice and experienced synthesizers of evidence.⁷⁻¹⁰ For example, confusion persists between scoping reviews and systematic reviews and the correct application of these approaches to evidence synthesis. This, in turn, results in scoping reviews assessing the effects of interventions when they are neither intended nor equipped to do so.¹¹ This confusion is evident with other evidence synthesis methodologies, including scoping reviews and mapping reviews, where further guidance may be needed to help with the appropriate choice of methodologies.¹² Indeed, it has already been argued that the current proliferation of review types is creating challenges for the terminology for describing such reviews, creating fundamental issues for evidence synthesizers.⁷ Although the utility of an encompassing toolkit for evidence synthesis to assist in answering an array of complex and multifaceted questions is to be welcomed, the resultant confusion (and complexity) associated with this expansion cannot be overlooked. With

supervisors encouraging increasing numbers of novice researchers to undertake systematic reviews (fuelled by the misplaced idea of a quick or easy publication that requires little [if any] infrastructure support [or ethics approval] or as a requirement of doctorate studies or grant applications), and funders and frameworks rightly promoting interventional research be developed based on the evidence, we are likely to encounter further proliferation of misplaced, misconducted and redundant evidence synthesis projects.¹³

We are concerned about this current state of affairs within the field of evidence synthesis, but believe we have not yet reached the point of no return. As such, this article discusses some of the pitfalls associated with an ever-expanding toolkit for evidence synthesis (likened to the opening of Pandora's Box) and discuss potential solutions for improving the cohesiveness of evidence synthesis.

Confusion regarding the many evidence synthesis approaches

Within the family of systematic reviews there are different approaches, including reviews addressing interventions, prognosis, test accuracy, values and other overarching types of systematic reviews.¹⁴ Despite the usefulness of these systematic reviews to synthesise research, circumstances persist where they are unwieldy or not the tool of choice to meet the requirements of knowledge users.¹⁴⁻¹⁸ This recognition has led to many alternative approaches to evidence synthesis, including realist reviews, scoping reviews, umbrella reviews, concept analyses and others.^{2-16, 17} In addition, numerous methods have been proposed for the synthesis of qualitative research,¹⁸⁻¹⁹ including thematic synthesis, realist synthesis, content analysis, meta-ethnography and meta-aggregation.²⁰⁻²⁹ These developments have expanded the array of methods to conduct evidence syntheses as described in the literature.

Although the differentiation of evidence synthesis types has made it possible to ensure that methods are tailored to particular questions, one pitfall has been the emergence of other (perhaps less useful and/or rigorous approaches. These include (among others) the numerous sets of products collectively referred to as 'rapid' reviews

“To paraphrase the late Douglas Altman, is it possible we are now at the stage where we need less reviews, better reviews and reviews done for the right reason- as opposed to the current state of mass production”

Health Evidence Synthesis, Recommendations and Impact

Trustworthy evidence for impact

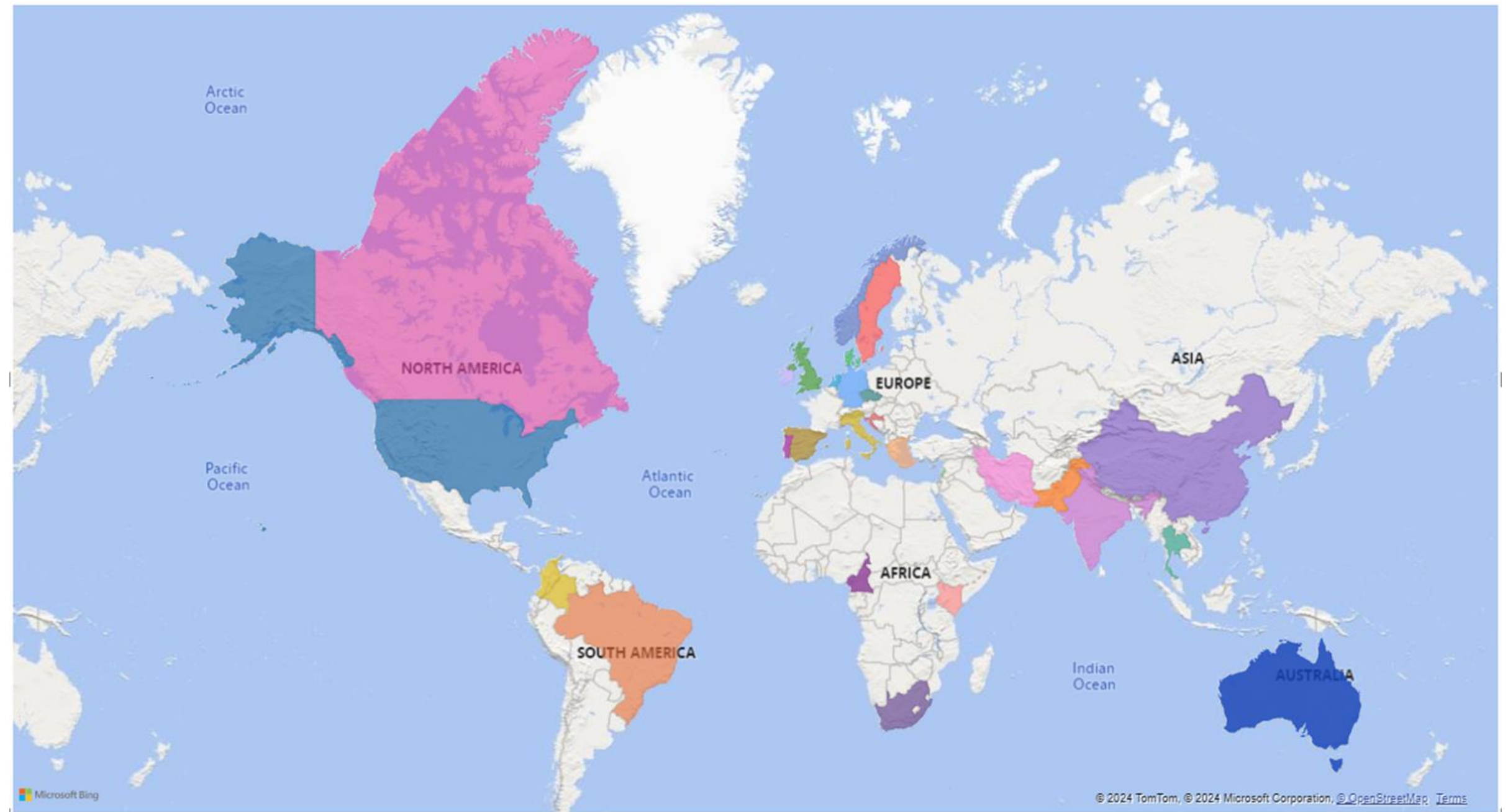
Adelaide University

Premise

- 1. Evidence synthesis has seen an explosion in methods and approaches**
- 2. There are many low quality and redundant evidence synthesis projects**
- 3. There is confusion regarding the different approaches and no standard classification scheme that is continuously updated and internationally agreed**
- 4. We hope to build an evidence synthesis taxonomy that is a living repository and compendium identifying different approaches, methods and guidance**

Governance

180+ members in the ESTI Advisory Board



Health Evidence Synthesis, Recommendations and Impact

Trustworthy evidence for impact

The Dark Side of Rapid Reviews: A Retreat From Systematic Approaches and the Need for Clear Expectations and Reporting

Zachary Munn, PhD; Danielle Pollock, PhD; Timothy Hugh Barker, PhD; Jennifer Stone, PhD; Cindy Stern, PhD; Edoardo Aromataris, PhD; Alan Pearson, PhD; Sharon Straus, MD, MSc; Hanan Khalil, PhD; Reem A. Mustafa, MD, MPH, PhD; Andrea C. Tricco, PhD; and Holger J. Schünemann, MD, PhD

Systematic reviews require substantial time, resources, and energy from author teams, taking anywhere from 6 months to 2 years to complete, with an average development time of 67.3 weeks (1). "Rapid reviews" have been proposed to shorten the completion time frame of a systematic review. During the COVID-19 pandemic, approximately 3000 rapid reviews were published (2). The benefits and utility of rapid reviews that abbreviate, omit, or simplify traditional systematic review methods to address knowledge users' (patients and public partners, health care providers, funders, and policymakers) needs in a timely fashion are discussed elsewhere (3). In this paper, we aim to highlight some risks and concerns associated with rapid reviews that do not follow a systematic approach or involve relevant knowledge users—and to reflect on the frequently overlooked "dark side" of rapid reviews.

RAPID, RESTRICTED, OR PARTIAL REVIEWS?

Rapid reviews have been defined as "a form of knowledge synthesis that accelerates the process of conducting a traditional systematic review through streamlining or omitting a variety of methods to produce evidence in a resource-efficient manner" (4). This definition highlights both streamlining or omission, thereby missing an opportunity to clarify and distinguish between systematic and rapid reviews. Streamlining (which we define as making a process more efficient) systematic review methods, such as through the use of automation, support software, or efficient workflows informed by process evaluations, is not a feature unique to rapid reviews, with exemplars of full systematic reviews conducted in shorter time frames (without omitting steps or methods) being available (5–7). In fact, all systematic reviewers should carefully consider their workflows to determine how they can streamline their processes without sacrificing rigor. There are precedents where systematic reviews have been completed in a short time frame by appropriately skilled teams with dedicated time and appropriate technology (5). For example, early in the COVID-19 pandemic, a large and trained research team produced 3 systematic reviews following Cochrane methods, with an assessment of certainty using Grading of Recommendations Assessment, Development and Evaluation (GRADE) and complex meta-analysis in 2 weeks (6, 7), an approach the authors labeled "urgent systematic reviews."

The label "rapid reviews" can be a misnomer (8), as some rapid approaches sacrifice rigor and can take substantial time to conduct, and full systematic reviews can be completed over short time frames without omitting

standard steps. As such, perhaps the clearest way to distinguish rapid reviews is through their omission of processes, or as a "systematic review with shortcuts" or a "partial" or "restricted" review (8). In addition, removing the issue of timing from the labeling of evidence synthesis products will also resolve any confusion regarding products labeled "rapid systematic review," which are full systematic review products conducted over a short time frame. Including timing to describe the methodology makes little sense, because any author is unlikely to refer to their review as a "slow systematic review."

If the most accurate definition of rapid reviews is that of a systematic review with shortcuts or a restricted review characterized by omissions and divergence from traditional systematic review methods, we must be clear on the standards and expectations for systematic reviews that are nonnegotiable because the opportunities for modifications are seemingly endless. As no clear thresholds distinguish what is currently called a "rapid" versus "systematic" review, we suggest that the quality and rigor of evidence synthesis is better described as a spectrum, from nonsystematic products to full systematic reviews that meet and go beyond the most stringent standards. Authors should transparently report their methods and ensure knowledge users can assess the quality or risk of bias of the review with validated instruments—which will help distinguish between high- or low-quality reviews (regardless of their rapidity) and where they sit on the methodological spectrum of reviews.

RAPID REVIEWS AND FUNDING REVIEWS

Adding to this dilemma is the changing landscape in evidence synthesis funding, whereby funders and decision-makers are increasingly asking for more while providing less, seemingly indifferent or unaware of the complexities of evidence synthesis nor the potential dangers of rushed and abbreviated approaches, such as divergent results between rapid and systematic reviews (9). Without evidence synthesis organizations (such as JBI, Cochrane, and the Campbell Collaboration) or consortiums (such as Evidence Synthesis International) continuing to highlight and lobby for trustworthy evidence, we fear we will return to a time where the value of systematic approaches to evidence synthesis are overlooked in favor of quick and dirty literature searches, which are often all that can be achieved with reduced funding.

The problem of decreased funding for trustworthy evidence syntheses can be addressed in several ways. First, leading evidence synthesis organizations need to raise awareness among funders of the importance of



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For numbered affiliations see end of article.

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The Pandora's Box of Evidence Synthesis and the case for a living Evidence Synthesis Taxonomy

Zachary Munn ,¹ Danielle Pollock,¹ Timothy Hugh Barker,¹ Jennifer Stone,¹ Cindy Stern,¹ Edoardo Aromataris,¹ Holger J Schünemann,^{2,3} Barbara Clyne,⁴ Hanan Khalil,⁵ Reem A Mustafa,⁶ Christina Godfrey,⁷ Andrew Booth ,⁸ Andrea C Tricco,^{9,10} Alan Pearson¹

Introduction

Have we, as an evidence-based health community, opened the Pandora's box of evidence synthesis? There now exists a plethora of overlapping evidence synthesis approaches and duplicate, redundant and poor-quality reviews.^{1–4} After years of advocating for the need for systematic reviews of the evidence, there is a risk that this message been disseminated too widely and has been misinterpreted in this process. We have reached a point where in some fields more reviews exist than clinical trials, where same topic reviews are being conducted in parallel, and evidence syntheses possess limited utility for decision-making because of their poor quality or poor reporting. To paraphrase the late Douglas Altman,⁵ it is possible we are now at a stage where we need less reviews, better reviews and reviews done for the right reason—as opposed to the current state of mass production (approximately 80 reviews per day).⁶

How have we arrived at this point – and is it a point of no return? One obvious reason is that over time, systematic review methods (and evidence synthesis more broadly) have become increasingly demanding, complex and multifaceted. This evolution in review methods has caused, and continues to cause, great confusion for both novice and experienced synthesisers of evidence.^{7–10} For example, confusion persists between scoping reviews and systematic reviews and the correct application of these approaches to evidence synthesis. This, in turn, results in scoping reviews assessing the effects of interventions when they are neither intended nor equipped to do so.¹¹ This confusion is evident with other evidence synthesis methodologies, including scoping reviews and mapping reviews, where further guidance may be needed to help with the appropriate choice of methodologies.¹² Indeed, it has already been argued that the current proliferation of review types is creating challenges for the terminology for describing such reviews, creating fundamental issues for evidence synthesisers.⁷ Although the utility of an encompassing toolkit for evidence synthesis to assist in answering an array of complex and multifaceted questions is to be welcomed, the resultant confusion (and complexity) associated with this expansion cannot be overlooked. With

supervisors encouraging increasing numbers of novice researchers to undertake systematic reviews (fuelled by the misplaced idea of a quick or easy publication that requires little [if any] infrastructure support [or ethics approval] or as a requirement of doctorate studies or grant applications), and funders and frameworks rightly promoting interventional research be developed based on the evidence, we are likely to encounter further proliferation of misplaced, misconducted and redundant evidence synthesis projects.¹³

We are concerned about this current state of affairs within the field of evidence synthesis, but believe we have not yet reached the point of no return. As such, this article discusses some of the pitfalls associated with an ever-expanding toolkit for evidence synthesis (likened to the opening of Pandora's Box) and discuss potential solutions for improving the cohesiveness of evidence synthesis.

Confusion regarding the many evidence synthesis approaches

Within the family of systematic reviews there are different approaches, including reviews addressing interventions, prognosis, test accuracy, values and other overarching types of systematic reviews.¹⁴ Despite the usefulness of these systematic reviews to synthesise research, circumstances persist where they are unwieldy or not the tool of choice to meet the requirements of knowledge users.^{14–16} This recognition has led to many alternative approaches to evidence synthesis, including realist reviews, scoping reviews, umbrella reviews, concept analyses and others.^{7–10, 17} In addition, numerous methods have been proposed for the synthesis of qualitative research,^{18, 19} including thematic synthesis, realist synthesis, content analysis, meta-ethnography and meta-aggregation.^{14–20} These developments have expanded the array of methods to conduct evidence syntheses as described in the literature.

Although the differentiation of evidence synthesis types has made it possible to ensure that methods are tailored to particular questions, one pitfall has been the emergence of other (perhaps) less useful and/or rigorous approaches. These include (among others) the numerous sets of products collectively referred to as "rapid" reviews

This article was published at Annals.org on 27 December 2022.

Publications

SCOPING REVIEW PROTOCOL

Investigating different typologies for the synthesis of evidence: a scoping review protocol

Zachary Munn¹ • Danielle Pollock¹ • Carrie Price² • Edoardo Aromataris¹ • Cindy Stern¹ • Jennifer C. Stone¹ • Timothy Hugh Barker¹ • Christina M. Godfrey³ • Barbara Clyne⁴ • Andrew Booth⁵ • Andrea C. Tricco^{3,6,7} • Zoe Jordan¹

¹ JBI, Faculty of Health and Medical Sciences, The University of Adelaide, Adelaide, SA, Australia, ² Albert S. Cook Library, Towson University, Towson, MD, USA, ³ Queen's Collaboration for Health Care Quality: A JBI Centre of Excellence, Queen's University Kingston, ON, Canada, ⁴ Department of General Practice, RCSI University of Medicine and Health Sciences, Dublin, Ireland, ⁵ School of Health and Related Research (SchARR), University of Sheffield, Sheffield, UK, ⁶ Li Ka Shing Knowledge Institute of St. Michael's Hospital, Unity Health Toronto, Toronto, ON, Canada, and ⁷ Epidemiology Division and Institute of Health Management, Policy, and Evaluation, Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada

ABSTRACT

Objective: The objective of this scoping review is to identify evidence synthesis types and previously proposed classification systems, typologies, or taxonomies that have guided evidence synthesis.

Introduction: Evidence synthesis is a constantly evolving field. There is now a plethora of evidence synthesis approaches used across many different disciplines. Historically, there have been numerous attempts to organize the types and methods of evidence synthesis in the form of classification systems, typologies, or taxonomies. This scoping review will seek to identify all the available classification systems, typologies, or taxonomies; how they were developed; their characteristics; and the types of evidence syntheses included within them.

Inclusion criteria: This scoping review will include discussion papers, commentaries, books, editorials, manuals, handbooks, and guidance from major organizations that describe multiple approaches to evidence synthesis in any discipline.

Methods: The Evidence Synthesis Taxonomy Initiative will support this scoping review. The search strategy will aim to locate both published and unpublished documents utilizing a three-step search strategy. An exploratory search of MEDLINE has identified keywords and MeSH terms. A second search of MEDLINE, Embase, CINAHL with Full Text, ERIC, Scopus, Compendex, and JSTOR will be conducted. The websites of relevant evidence synthesis organizations will be searched. Identified documents will be independently screened, selected, and extracted by two researchers, and the data will be presented in tables and summarized descriptively.

Details of this review project are available at: Open Science Framework <https://osf.io/qwc27>

Keywords: evidence synthesis; knowledge synthesis; literature reviews; scoping reviews; systematic reviews

JBI Evid Synth 2023; 21(3):592–600.



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Over 1000 terms have been used to describe evidence synthesis: a scoping review

Danielle Pollock ,¹ Sabira Hasanoff ,¹ Timothy Hugh Barker,¹ Barbara Clyne ,² Andrea C Tricco,^{3,4,5} Andrew Booth ,⁶ Christina Godfrey,³ Hanan Khalil,⁷ Romy Menghao Jia,⁸ Petek-Eylul Taneri,^{9,10} KM Saif-Ur-Rahman ,^{9,10} Tom Conway,^{9,10} Menelaos Konstantinidis,^{4,11} Catherine Stratton,^{4,12} Deborah Edwards,¹³ Lyndsay Alexander,¹⁴ Judith Carrier ,¹³ Nahal Habibi,^{15,16} Marco Zaccagnini,¹⁷ Cindy Stern,⁸ Chelsea Valenzuela,⁸ Carrie Price ,¹⁸ Jennifer C Stone,⁸ Edoardo Aromataris,⁸ Zoe Jordan,⁸ Mafalda Dias,¹ Grace McBride,¹ Raju Kanukula,¹ Holger J Schuenemann ,¹⁹ Reem A Mustafa,^{20,21} Alan Pearson,⁸ Miloslav Klugar,^{22,23} Maria Ximena Rojas,²⁴ Pablo Alonso-Coello,^{25,26,27} Paul Whaley,^{28,29} Miranda Langendam,^{30,31} Tracy Merlin,³² Sharon Straus,³³ Sandeep Moola,³⁴ Brian S Alper,³⁵ Zachary Munn ¹

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Abstract

Objective To inform the development of an evidence synthesis taxonomy, we aimed to identify and examine all classification systems, typologies or taxonomies that have been proposed for evidence synthesis methods. **Design** Scoping review. **Methods** This review followed JBI (previously Joanna Briggs Institute) scoping review methodology and was reported according to PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews). Resources that investigated typologies, taxonomies, classification systems and compendia for evidence synthesis within any field were eligible for inclusion. A comprehensive search across MEDLINE (Ovid), Embase (OVID), CINAHL with Full-Text (EBSCO), ERIC (EBSCO), Scopus, Compendex (Elsevier) and JSTOR was performed on 28 April 2022. This was supplemented by citation searching of key articles, contact with experts, targeted searching of organisational websites and additional grey literature searching. Documents were extracted by one reviewer and extractions verified by another reviewer. Data were analysed using frequency counts and a basic qualitative content analysis approach. Results are presented using bar charts, word clouds and narrative summary. **Results** There were 15 634 titles and abstracts screened, and 703 full texts assessed for eligibility. Ultimately, 446 documents were included, and 49 formal classification systems

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ There is a plethora of evidence synthesis types available to respond to the needs of policymakers, legislators and decision-makers across various disciplines.
- ⇒ The academic community has made many attempts to organise evidence synthesis through static classification systems which have not been able to respond to the methodological advances and approaches in the field.
- ⇒ The vast amount of evidence synthesis terms could be creating confusion for those that conduct and use evidence synthesis.

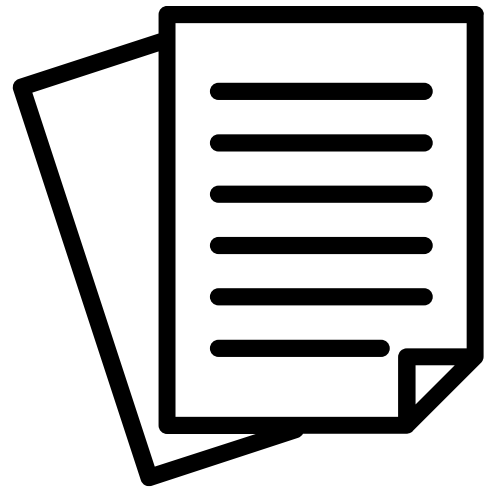
identified, with the remaining documents presenting structured lists, simple listings or general discussions. Included documents were mostly not field-specific (n=242) or aligned to clinical sciences (n=83); however, public health, education, information technology, law and engineering were also represented. Documents (n=148) mostly included two to three evidence synthesis types, while 22 documents mentioned over 20 types of evidence synthesis. We identified 1010 unique terms to describe a type of evidence synthesis; of these, 742 terms were only mentioned once. Facets that

Right Reviews

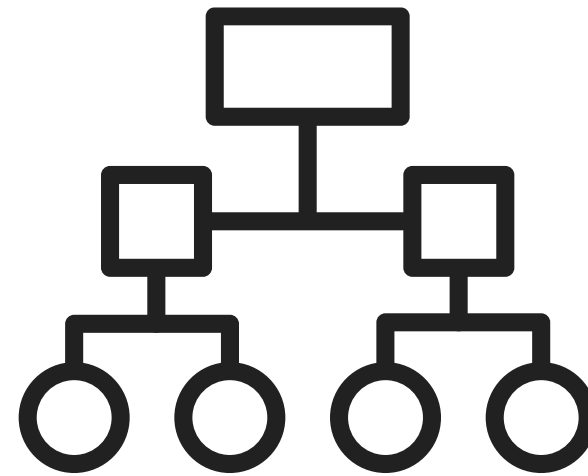
Right Reasons

Right Methods

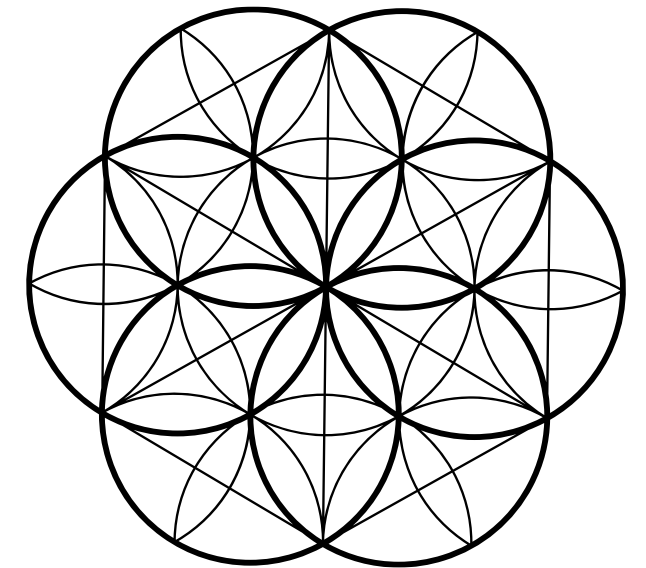
Progress



**Scoping
Review
Published**



**Taxonomy Structure
Finalised**



**Harmonisation

Ready to
launch**

An abstract network diagram with nodes and connections, rendered in blue, red, and yellow colors, set against a dark blue background. The nodes are represented by small circles, and the connections are thin lines. The overall shape is roughly circular, with a red curved edge at the bottom left.

The numerous typologies and taxonomies in evidence synthesis

Dr Danielle Pollock

@Daniellep89

Health Evidence Synthesis Recommendations and Impact, School of Public Health, Adelaide University

Our Research Questions

What typologies, taxonomies, and classification schemes or compendia have been proposed for evidence synthesis methods?

1. What evidence synthesis types/approaches have been described in typologies, taxonomies, and classification schemes or compendia discussing multiple evidence synthesis approaches?
2. What are the characteristics of these typologies, taxonomies, and classification systems or compendia approaches?
3. What are the facets against which evidence syntheses have been classified or distinguished from one another?
4. What are the methodological approaches to the development of these typologies, taxonomies, and classification systems?



@Daniellep89

Terms

1010 different evidence synthesis terms

The most common evidence synthesis types mentioned:

1. systematic review (346)
 2. scoping reviews (159)
 3. meta-analysis (124)
 4. rapid reviews (116)
 5. narrative reviews (116)
- 158 terms describing specific systematic review types i.e., systematic review of qualitative studies, or systematic reviews (mixed methods).
 - 742 terms only mentions once



How do we (or should we) distinguish between different types of evidence synthesis?



Which characteristics should be used to differentiate between evidence synthesis types?

How do we distinguish between different types of evidence synthesis?

15 common themes representing overarching dimensions to categorise or distinguish evidence synthesis types identified by our review team.

Review question and foci of interest	Resources and time, operations, operational concerns
Discipline/Field	Compatibility with heterogeneity
Perspective (neutral stance to polemic)	Methodological procedures
Coverage	Analytical techniques
Inclusion criteria/eligibility criteria/ data sources considered	Product/output
Review Purpose	Intended audience
Approaches	Intended impact or influence
Theoretical underpinnings/philosophy/ epistemology / paradigm	

This scoping review was a crucial stepping point in developing our evidence synthesis taxonomy

- Too many terms and a lack of clarity or consistency
- Limited knowledge user involvement
- Methodological approaches rarely described
- The need for harmonisation in evidence synthesis



OPEN ACCESS

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SPECTRAL Database

 Public Project



Wiki

The Evidence Synthesis Taxonomy Initiative (ESTI), including over 148 evidence synthesis experts from across the world, is aiming to create a living taxonomy of evidence synthesis types.

As part of this work, the ESTI recently completed a scoping review that identified existing terms used to categorise or distinguish between different evidence synthesis approaches (Investigating different typologies for the synthesis of evidence: a scoping review). These evidence synthesis approaches and related information have been made available in an Excel document titled the ESTI database of evidence synthesis types. Being an inventory of evidence synthesis types and their methods, this database will assist with future methodological work to determine which types are distinct evidence synthesis terms and to help guide decisions on the most appropriate type of evidence synthesis for specific fields.

Files Preview

SPECTRAL Database 

OSF Storage

 Download As Zip

Metadata



Contributors

[Danielle Pollock](#), [Zachary Munn](#), [Sabira Hasanoff](#)

Resource Type

No resource type

Description

The SPECTRAL Database

Date Created

Oct 1, 2024, 5:12 PM

Date Updated

Feb 4, 2025, 11:16 AM

Subjects

None

Tags

EVIDENCE SYNTHESIS

KNOWLEDGE SYNTHESIS

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
Frequency of evidence synthesis type	Name of evidence synthesis type		Hyperlink to tab for the evidence synthesis		Full name of evidence synthesis type, if abbreviated											
346	Systematic reviews		Systematic reviews													
159	Scoping reviews		Scoping reviews													
124	Meta analyses		Meta analyses													
116	rapid reviews		rapid reviews													
116	Narrative review		Narrative review													
97	Literature Reviews		Literature Reviews													
70	umbrella reviews		umbrella reviews													
63	Meta-ethnography		Meta-ethnography													
61	Integrative reviews		Integrative reviews													
57	realist reviews		realist reviews													
46	realist synthesis		realist synthesis													
36	Critical review		Critical review													
36	Meta-synthesis		Meta-synthesis													
29	Qualitative evidence synthesis		Qualitative evidence synthesis													
29	Overview of reviews		Overview of reviews													
28	mapping reviews		mapping reviews													
28	Qualitative Systematic reviews		Qualitative Systematic reviews													
27	Thematic synthesis		Thematic synthesis													
27	Narrative synthesis		Narrative synthesis													
27	Meta study		Meta study													
27	Crit interpretive synthesis		Crit interpretive synthesis		Critical interpretive synthesis											
26	Mixed methods reviews		Mixed methods reviews													
26	overview		overview													
25	reviews of reviews		reviews of reviews													
23	rapid evidence assessment		rapid evidence assessment													
22	meta-summaries		meta-summaries													
21	Qualitative reviews		Qualitative reviews													
21	Systematic literature reviews		Systematic literature reviews													
20	Traditional Reviews		Traditional Reviews													
19	meta-interpretation		meta-interpretation													
19	Systematic map		Systematic map													
19	Framework synthesis		Framework synthesis													
18	meta-reviews		meta-reviews													
18	State of the art reviews		State of the art reviews													
17	meta-narrative reviews		meta-narrative reviews													
17	Network Meta analysis		Network Meta analysis													
16	Living Systematic reviews		Living Systematic reviews													
16	meta-aggregation		meta-aggregation													
16	mixed studies review		mixed studies review													
16	traditional literature reviews		traditional literature reviews													
<	>	List of ES types	Systematic reviews	Scoping reviews	Meta analyses	Rapid reviews	Narrative review	Literature Reviews	Umbrella reviews	Meta-ethnography	Integrative reviews	Realist synthesis	Realist reviews	Criti	...	+

Taxonomy

Key points:

- Developed using a co-design approach with multiple workshops
- Informed by a large scoping review of previous classification systems
- Survey for feedback and approval of taxonomy and key data items





Taxonomy

Key points:

- Developed using a co-design approach with multiple workshops
- Informed by a large scoping review of previous classification systems
- **Survey for feedback and approval of taxonomy and key data items**

Health Evidence Synthesis, Recommendations and Impact

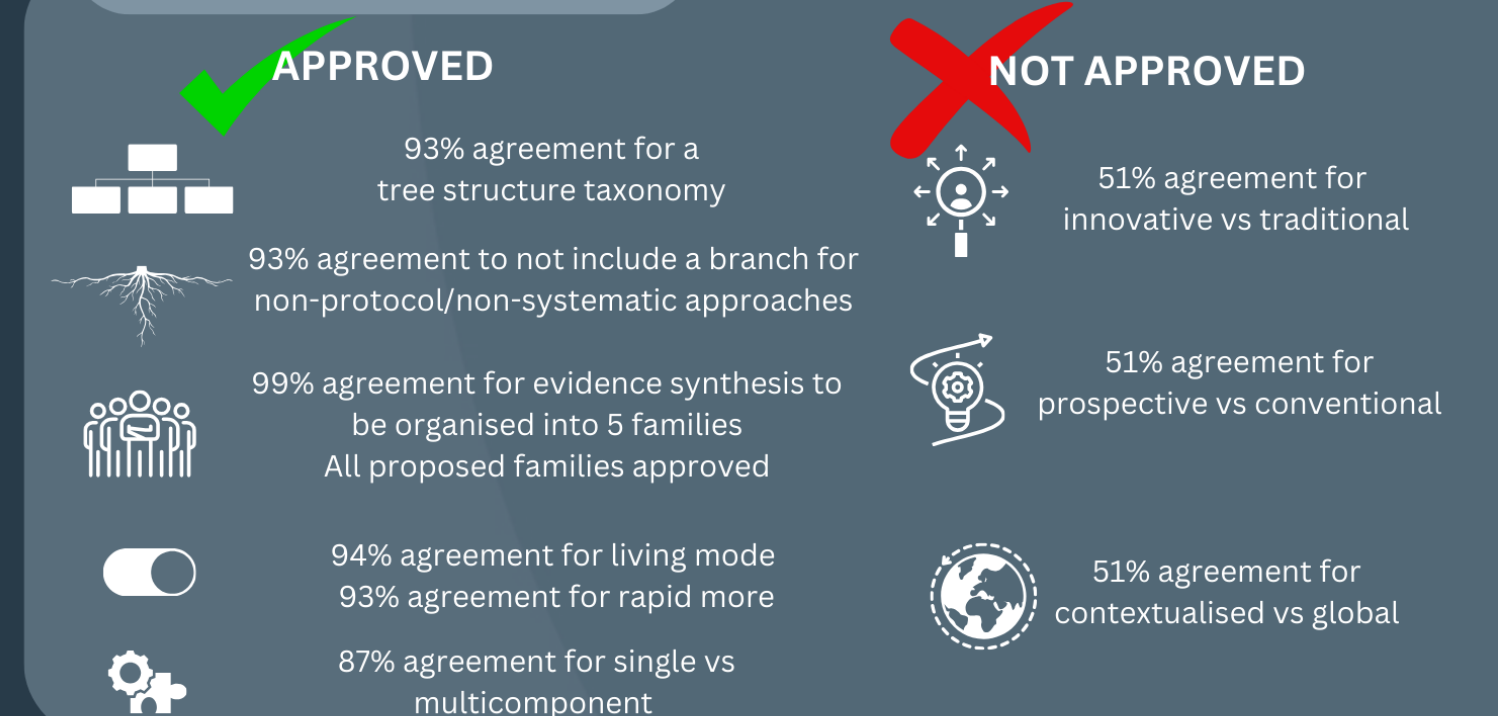
Trustworthy evidence for impact

EVIDENCE SYNTHESIS TAXONOMY INITIATIVE SURVEY RESULTS

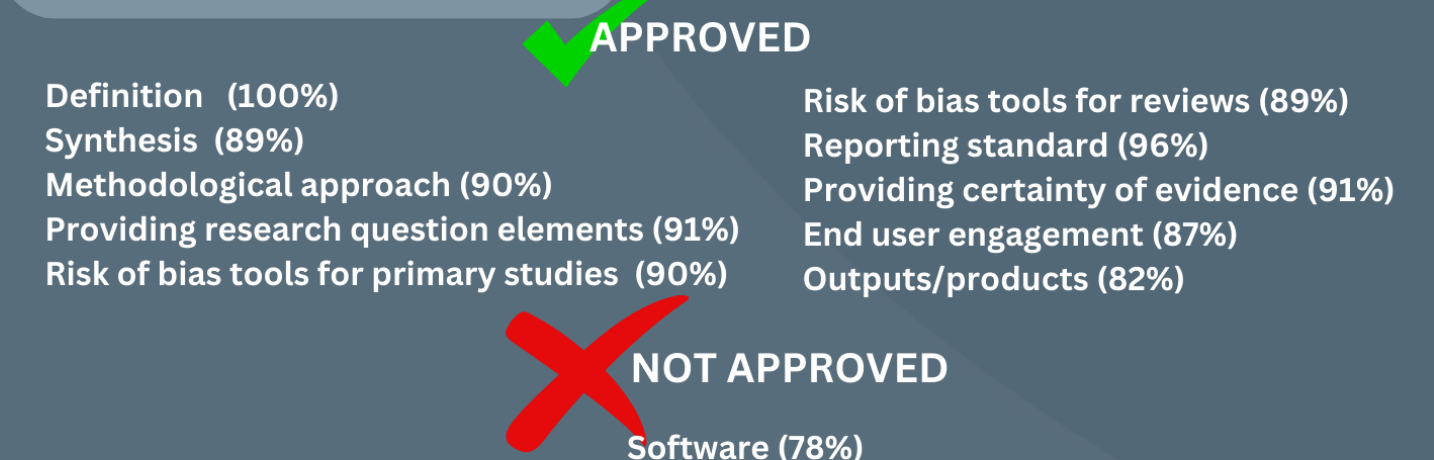
WHO PARTICIPATED?



TAXONOMY

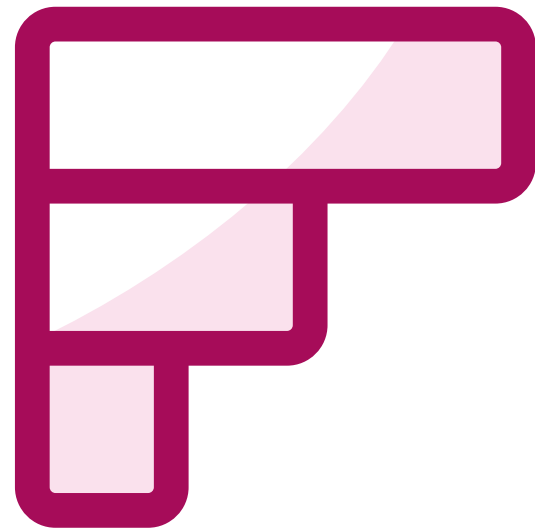


WIKI PLATFORM



What
properties are
most important
to prioritise
when
distinguishing
between
different types
of evidence
synthesis?





What properties are most important to prioritise when distinguishing between different types of evidence synthesis?

Our thoughts for distinguishing the families...

- ‘Review purpose’ and ‘Approaches’:
- Unit of inclusion (‘Inclusion criteria/eligibility criteria/data sources considered’):
- ‘Methodological procedures’ and ‘analytical techniques’

	Quantitative Reviews	Qualitative Evidence Synthesis	Mixed Methods Reviews	Review of Reviews	Big Picture Reviews
Purpose					
Purpose Class - Describe/ Descriptive (high level overview) - Understand/explore/Exploratory (possible generating a hypothesis or theory) - Explanatory/explain/Experimental (testing a theory or hypothesis)	Explanatory/explain/Experimental (testing a theory or hypothesis)	Understand/explore/Exploratory (possible generating a hypothesis or theory)	Understand/explore/Exploratory (possible generating a hypothesis or theory) Explanatory/explain/Experimental (testing a theory or hypothesis)	Describe/ Descriptive (high level overview)	Describe/ Descriptive (high level overview)
Approach to synthesis					
Synthesis class - More configurative - More aggregative	More aggregative	More configurative	More configurative More aggregative	More aggregative	More aggregative
Unit of inclusion					
Primary studies - Quantitative - Qualitative - Mixed methods	Primary studies Quantitative	Primary studies Qualitative	Primary studies - Quantitative - Qualitative - Mixed methods	Primary studies - Quantitative - Qualitative - Mixed methods	Primary studies - Quantitative - Qualitative - Mixed methods
Evidence synthesis			Non-empirical data	Evidence synthesis	Evidence synthesis
Non-empirical data					Non-empirical data
Methodological procedures					
Searching/Coverage - Comprehensive/exhaustive - Purposive/Selective	Comprehensive/exhaustive	Comprehensive/exhaustive Purposive/Selective	Comprehensive/exhaustive Purposive/Selective	Comprehensive/exhaustive	Comprehensive/exhaustive
Appraisal - Risk of bias/ critical appraisal - No risk of bias/critical appraisal	Risk of bias/ critical appraisal	Risk of bias/ critical appraisal	Risk of bias/ critical appraisal No risk of bias/critical appraisal	Risk of bias/ critical appraisal	No risk of bias/critical appraisal
Synthesis of findings/results/conclusions of included papers - Aim to formally synthesise findings/results of included studies - No formal synthesis of findings/results of included studies	Aim to formally synthesise findings/results of included studies	Aim to formally synthesise findings/results of included studies	Aim to formally synthesise findings/results of included studies No formal synthesis of findings/results of included studies	Aim to formally synthesise findings/results of included studies No formal synthesis of findings/results of included studies	No formal synthesis of findings/results of included studies
Analysis - Statistical analysis/synthesis (where possible) - Qualitative analysis/synthesis (where possible) <i>*We recognise that in any type of evidence synthesis there is an option to provide a narrative summary of results. As such it is not a helpful sub property to distinguish between evidence synthesis types</i>	Statistical analysis/synthesis (where possible)	Qualitative analysis/synthesis (where possible)	Statistical analysis/synthesis (where possible) Qualitative analysis/synthesis (where possible)	Statistical analysis/synthesis (where possible) Qualitative analysis/synthesis (where possible)	Statistical analysis/synthesis (where possible) Qualitative analysis/synthesis (where possible)
Examples of Evidence Synthesis Types in family	Systematic review of effectiveness; cost and economic review	Thematic synthesis, meta-aggregation	Mixed-methods reviews, realist reviews	Umbrella reviews, overviews,	Scoping reviews, evidence and gap maps

EVIDENCE SYNTHESIS TAXONOMY INITIATIVE

SURVEY RESULTS

WHO PARTICIPATED?

88



Participants

Academics, clinicians, decision-makers, evidence synthesisers, guideline developers, health technology assessors, information specialist, policymakers and more

23



Countries

Afghanistan, Australia, Canada, China, Germany, India, Iran, Ireland, Kenya, Mexico, Portugal, Tajikistan, US, UK, and more

18



Fields

Agriculture, biosciences, clinical sciences, education, environmental, health services research, law, public health, social sciences, veterinary medicine and more

72%



Participants

Had participated in over 11 or more evidence synthesis projects

TAXONOMY

APPROVED



93% agreement for a tree structure taxonomy



93% agreement to not include a branch for non-protocol/non-systematic approaches



99% agreement for evidence synthesis to be organised into 5 families
All proposed families approved



94% agreement for living mode
93% agreement for rapid more



87% agreement for single vs multicomponent



NOT APPROVED

51% agreement for innovative vs traditional



51% agreement for prospective vs conventional



51% agreement for contextualised vs global

WIKI PLATFORM

 **APPROVED**

Definition (100%)

Synthesis (89%)

Methodological approach (90%)

Providing research question elements (91%)

Risk of bias tools for primary studies (90%)

Risk of bias tools for reviews (89%)

Reporting standard (96%)

Providing certainty of evidence (91%)

End user engagement (87%)

Outputs/products (82%)

 **NOT APPROVED**

Software (78%)

Taxonomy

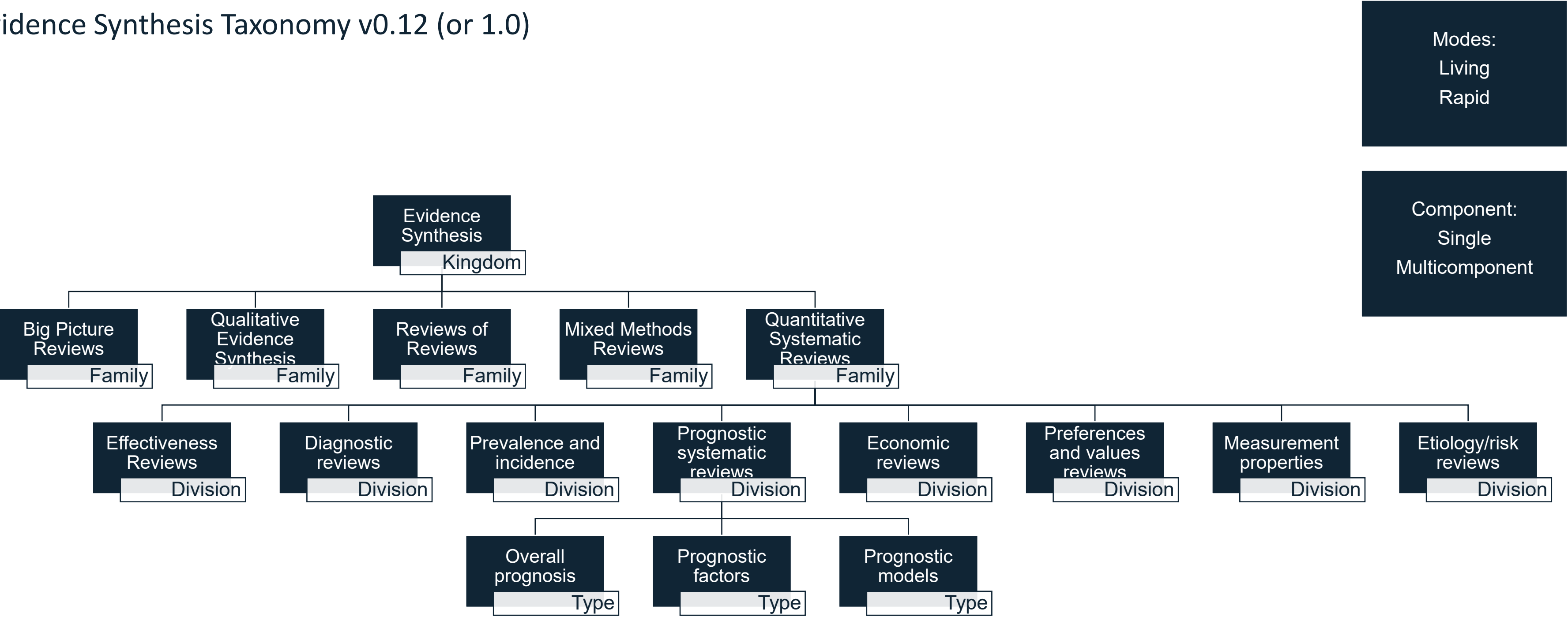
Second round survey results to approve the final structure for the taxonomy



97% Approval



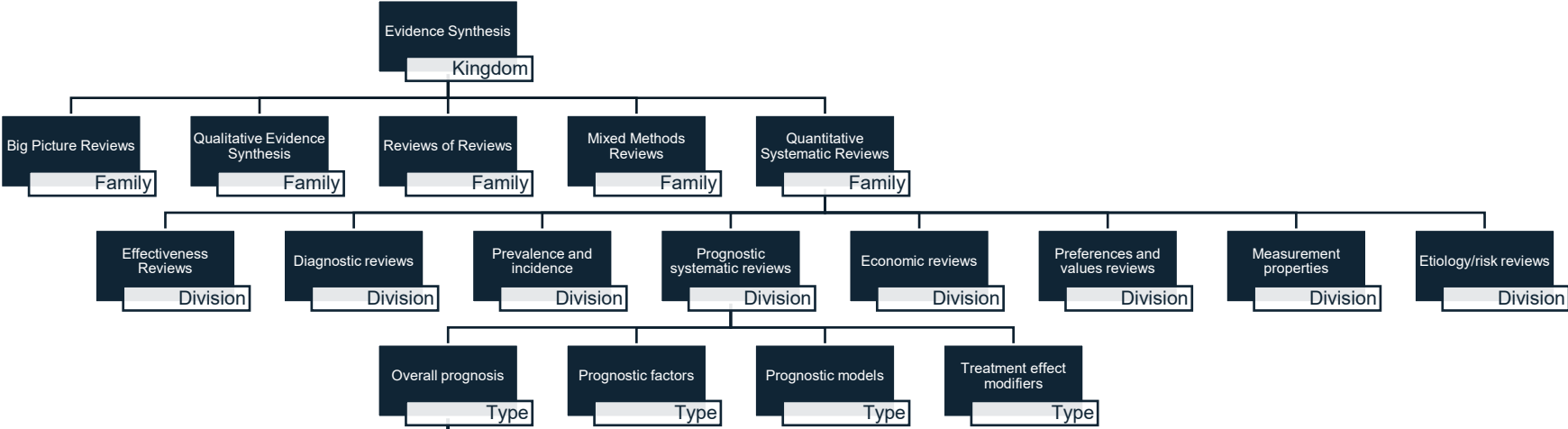
Evidence Synthesis Taxonomy v0.12 (or 1.0)



Evidence Synthesis Taxonomy v0.11

Modes:
Living
Rapid

Component:
Single
Multicomponent



Living wiki

KEY CONCEPTS IN CLINICAL EPIDEMIOLOGY

Overview of evidence synthesis types and modes

Barbara Nussbaumer-Streit^{a,*}, Andrew Booth^{b,c}, Chantelle Garritty^{d,e}, Candyce Hamel^{d,f},
Zachary Munn^g, Andrea C. Tricco^{h,i}, Danielle Pollock^g

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Accepted 2 September 2025; Published online 4 September 2025

Abstract

Background and Objectives: Evidence syntheses systematically compile and analyze information from multiple sources to support health-care decision-making. As many different types of questions need to be answered in health care, different evidence synthesis types have emerged. In this article, we introduce the most common types of evidence synthesis.

Study Design and Setting: We discuss the aims, key methodological features, and illustrative examples of different evidence synthesis types and modes, drawing on our work with the Evidence Synthesis Taxonomy Initiative (ESTI).

Results: Evidence synthesis types include systematic reviews, qualitative evidence syntheses, mixed methods reviews, overviews of reviews, and ‘big picture reviews’ (scoping reviews, mapping reviews, and evidence gap maps). Additionally, we focus on rapid and living reviews as modes and how they can be applied to different evidence synthesis types.

Conclusion: It is essential to understand the main types of evidence synthesis to choose the most suitable method for addressing a specific health-related question. © 2025 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Keywords: Review types; Evidence synthesis; Systematic review; Living review; Umbrella review; Overview of reviews; Scoping review; Mapping review; Qualitative evidence synthesis; Big picture review; Evidence gap map; Rapid review; Mixed methods review

Modes

In the taxonomy, we introduce the concept of ‘modes’ of evidence synthesis. We propose a definition of ‘mode’ as ‘a way or manner in which evidence synthesis is done.’ These modes of evidence synthesis are not unique types of evidence synthesis themselves, but rather a decision for authors to make in terms of how they conduct their evidence synthesis. The most prominent modes that we have identified being ‘living’ and ‘rapid.’ Our belief is that all evidence synthesis could be living (i.e. continuously updated), and all could be conducted as rapid evidence syntheses (i.e. reviews with abbreviations in methods or streamlined methods). An example might be a rapid diagnostic test accuracy review as opposed to a systematic review of diagnostic test accuracy, or a rapid evidence and gap map as opposed to an evidence and gap map. In this way, we avoid having to list vast amounts of review types within the taxonomy. Although we originally planned to provide alternatives to ‘living’ and ‘rapid’ (i.e. non-living, static, or non-rapid), it was suggested these alternatives are not helpful as labels. Instead, the mode concept can be viewed as a ‘tag’ or a ‘checkbox’ for a review.

Modes that have been discussed but were not approved include ‘contextualised vs global,’ ‘prospective vs conventional,’ innovative vs traditional’.

Systematic
Reviews

Qualitative
Evidence
Synthesis

Mixed
Methods
Reviews

Overviews
of Reviews

Big Picture
Reviews

Rapid review mode

Living review mode

Taxonomy – evidence synthesis types

Follow up survey to approve evidence synthesis types within families

Pragmatic approach and community/consensus driven

The primary distinguishing dimensions at the evidence synthesis type level tend to be the:

- Foci of the review or question focus
- Methodological procedures

Further work to truly tease out true differences or if they are generally the same review approach with different names

Approved terms and their place in the taxonomy

- Scoping reviews
- Evidence and gap maps
- Realist reviews
- Mixed methods reviews
- Umbrella review
- Overviews of reviews
- Meta-ethnography
- Thematic synthesis
- Meta-aggregation
- Best fit framework synthesis
- Systematic review of textual evidence
- Diagnostic test accuracy systematic review
- Measurement properties systematic review
- Systematic review of prognostic models
- Systematic review of prognostic factors
- Systematic review of exposures
- Systematic review of costs/economic evaluations
- Systematic review of aetiology and risk
- Systematic review of the effect of interventions
- Systematic review of animal studies

Not approved terms/more discussions needed and their place in the taxonomy

- Grounded theory
- Content analysis
- Qualitative interpretive synthesis
- Framework synthesis
- Systematic review of values and preferences
- Systematic review of harms
- Complex intervention systematic review
- Meta-analysis in genetic association studies
- Preclinical systematic review

[illegible]

Taxonomy

Presented as a wiki with standard elements for each review type

1. Evidence synthesis [Kingdom]
 - 1.1. Evidence synthesis Families [Family]
 - 1.1.1. Evidence synthesis types [Type]
 - 1.1.1.1. Evidence synthesis subtypes [Subtypes]
 - 1.1.1.1.1. Evidence Synthesis Type/Subtype Approaches [Approaches]
 - 1.1.1.1.1.1. Definition
 - 1.1.1.1.1.2. Different terms/names used to describe this review approach (i.e. also known as)
 - 1.1.1.1.1.3. Similar review types
 - 1.1.1.1.1.4. Registration options
 - 1.1.1.1.1.5. Indications for this review
 - 1.1.1.1.1.6. Synthesis techniques and analytical approaches
 - 1.1.1.1.1.7. Units of inclusion
 - 1.1.1.1.1.8. Searching methods
 - 1.1.1.1.1.9. Methodological guidance
 - 1.1.1.1.1.10. Research question elements
 - 1.1.1.1.1.11. Risk of bias/critical appraisal or assessment of methodological limitations for primary studies
 - 1.1.1.1.1.12. Risk of bias/critical appraisal or assessment of methodological limitations at the review level
 - 1.1.1.1.1.13. Reporting standard
 - 1.1.1.1.1.14. Certainty/confidence of evidence
 - 1.1.1.1.1.15. End user engagement
 - 1.1.1.1.1.16. Outputs/product
 - 1.1.1.1.1.17. Target audience and user needs

1. Evidence synthesis [Kingdom]
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 - 1.1.1.1.1.7. Units of inclusion
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 - 1.1.1.1.1.15. End user engagement
 - 1.1.1.1.1.16. Outputs/product
 - 1.1.1.1.1.17. Target audience and user needs

EVIDENCE SYNTHESIS TAXONOMY INITIATIVE

Supporting researchers to conduct the right review, for the
right reasons, with the right methods

Our initiative is developing a comprehensive evidence synthesis taxonomy to encourage and facilitate appropriate research synthesis to inform policy and practice.

[Evidence Synthesis Taxonomy Wiki](#)



ABOUT



RESOURCES



NEWS

Welcome to the Evidence Synthesis Taxonomy Wiki

A comprehensive resource to encourage and facilitate appropriate research synthesis to inform policy and practice



The Evidence Synthesis Taxonomy



About this Taxonomy



Contributors

Resources

Get Involved

The Evidence Synthesis Taxonomy

Search...

▼ The Evidence Synthesis Taxonomy

▼ Big Picture Reviews Family

- Scoping review
- Evidence and gap map

➤ Mixed Methods Reviews Family

➤ Overviews of Reviews Family

➤ Qualitative Evidence Synthesis Family

▼ Quantitative Systematic Reviews Family

- Diagnostic test accuracy systematic review
- Measurement properties systematic review
- Systematic review of prognostic models
- Systematic review of prognostic factors
- Systematic review of exposures
- Systematic review of cost/economic evaluations
- Systematic review of etiology and

The Evidence Synthesis Taxonomy



Created by Sabira Hasanoff

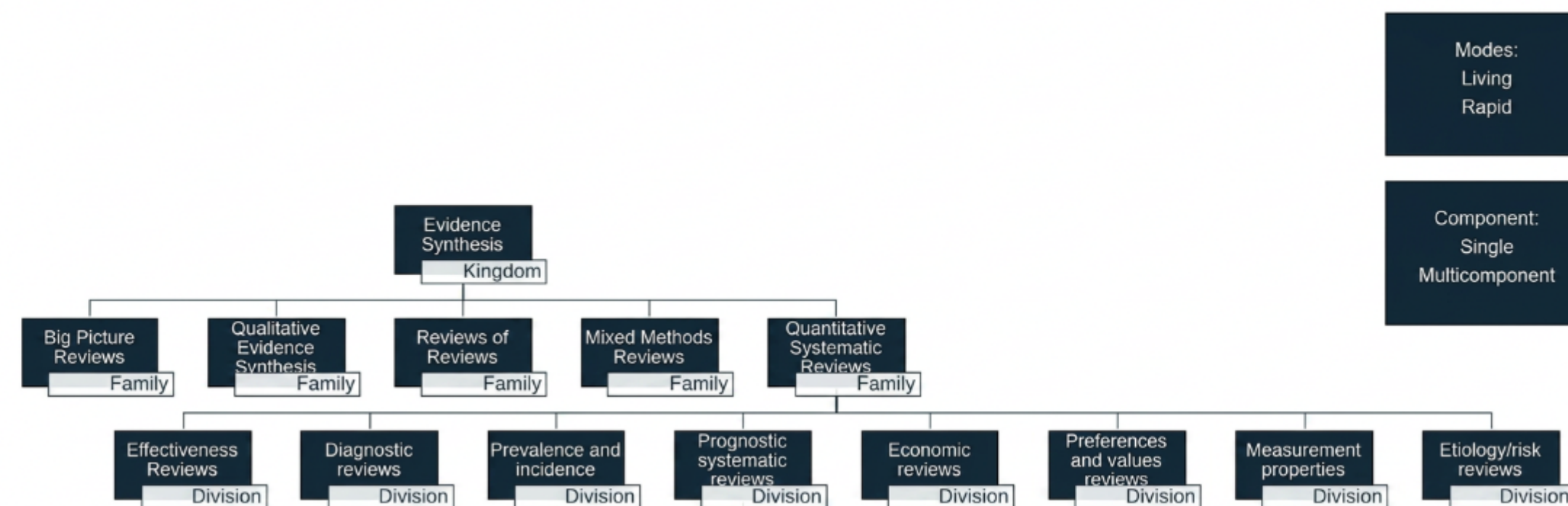
🕒 Last updated by Sabira Hasanoff 16 July, 2026 • 3 min read

How to cite: Munn Z, Pollock D, Hasanoff S, Clyne B, Tricco A, Booth A, Godfrey C for the Evidence Synthesis Taxonomy Initiative*, The Evidence Synthesis Taxonomy Initiative, 2025, [Evidence Synthesis Taxonomy | Evidence Synthesis Taxonomy](#)

*See contributors at [our team | Evidence Synthesis Taxonomy](#)

What is the Evidence Synthesis Taxonomy?

The Evidence Synthesis Taxonomy is a comprehensive taxonomy to encourage and facilitate appropriate research synthesis to inform policy and practice.



Evidence Synthesis Taxonomy

The Evidence Synthesis Taxonomy

Search...

▼ The Evidence Synthesis Taxonomy

▼ Big Picture Reviews Family

- Scoping review
- Evidence and gap map

➤ Mixed Methods Reviews Family

➤ Overviews of Reviews Family

➤ Qualitative Evidence Synthesis Family

▼ Quantitative Systematic Reviews Family

- Diagnostic test accuracy systematic review
- Measurement properties systematic review
- Systematic review of prognostic models
- Systematic review of prognostic factors
- Systematic review of exposures
- Systematic review of cost/economic evaluations
- Systematic review of etiology and risk
- Systematic review of the effect of interventions
- Incidence and prevalence systematic review

Quantitative Systematic Reviews Family



Created by Sabira Hasanoff
🕒 Last updated 17 July, 2026 • 2 min read

Definition

'A systematic review is defined as a robust, reproducible, structured critical synthesis of existing research.' ([Munn, 2018](#))

'It uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made' ([Lasserson, 2025](#))

The primary distinguishing dimensions at the review level are foci of the review or question focus.

Justification for classifying reviews together

The reviews we classify as 'Quantitative Systematic Reviews' are those that demonstrate the below properties according to our classification procedure:



'Review purpose' and 'Approaches'

Quantitative systematic reviews largely aim to aggregate information and to test a hypothesis. The goal is often to generate results or estimates that can underpin a recommendation, decision, policy, procedure or a model.



Unit of inclusion ('Inclusion criteria/eligibility criteria/data sources considered')

The unit of inclusion in quantitative systematic reviews are empirical studies collecting quantitative data.



'Methodological procedures' and 'analytical techniques'

Quantitative systematic reviews are those that are protocol driven, have systematic procedures in place for screening, selection, extraction and synthesis. Meta-analysis or other means of statistically synthesising the evidence are desired. Critical appraisal/risk of bias is seen as critical in these approaches.

Systematic review types:



[Diagnostic test accuracy systematic review](#)



[Measurement properties systematic review](#)



[Systematic review of prognostic models](#)

▼ The Evidence Synthesis Taxonomy

▼ Big Picture Reviews Family

- Scoping review
- Evidence and gap map

➤ Mixed Methods Reviews Family

➤ Overviews of Reviews Family

➤ Qualitative Evidence Synthesis Family

▼ Quantitative Systematic Reviews Family

- Diagnostic test accuracy systematic review
- Measurement properties systematic review
- Systematic review of prognostic models
- Systematic review of prognostic factors
- Systematic review of exposures
- Systematic review of cost/economic evaluations
- Systematic review of etiology and risk
- Systematic review of the effect of interventions
- Incidence and prevalence

Diagnostic test accuracy systematic review



Created by Sabira Hasanoff

🕒 Last updated 22 July, 2026 • 3 min read

Definition

“Systematic reviews of diagnostic test accuracy (DTA) summarize the evidence about test accuracy. Ideally, they also investigate why the results may vary among studies, compare the performance of alternative tests, and help the reader to put the evidence in a clinical context” ([Cochrane](#)).



Classification

Kingdom: *Evidence synthesis*

Family: *Quantitative Systematic Reviews Family*

Type: *Diagnostic test accuracy (DTA) systematic review*



Synonyms

Diagnostic test reviews; Diagnostic Accuracy Reviews; Diagnostic test accuracy reviews; Analytical accuracy; Diagnostic Systematic Reviews; Review of diagnostic test accuracy studies; Reviews of diagnostic test accuracy; Systematic reviews of clinical tests (Diagnostic test accuracy); Systematic reviews of diagnostic test accuracy studies; Systematic reviews on a diagnostic/differential diagnosis or screening; Systematic reviews of diagnostic evidence; Systematic reviews of diagnostic studies with network meta-analysis; Systematic reviews of diagnostic studies with meta-analysis; Systematic reviews of diagnostic test characteristics; Systematic reviews of diagnostic yield; Systematic reviews of evaluations of diagnostic and screening test; Systematic reviews (test accuracy)

Items

Dimension	Details
Methodological approaches	Cochrane Handbook for Systematic Reviews of Diagnostic Test Accuracy

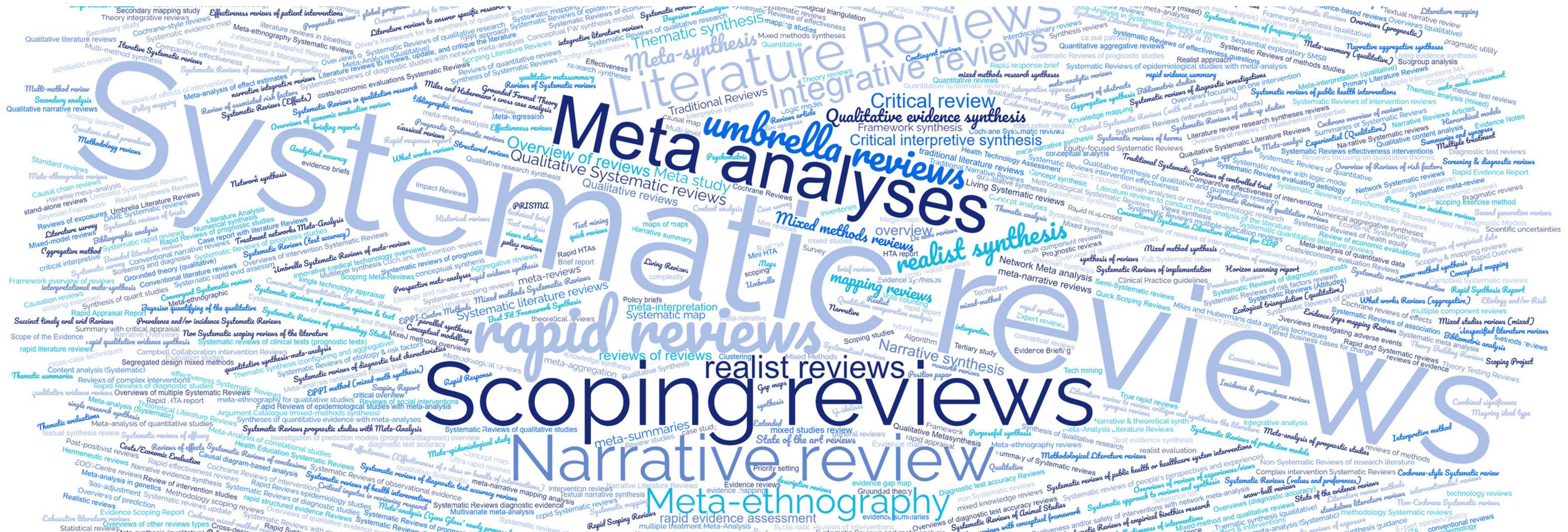
Governance

We are moving to a new governance structure :

- Evidence Synthesis Family Methods Groups and Mode groups
- Provide advice to ESTI Advisory Board on approvals
- Identify gaps for further methods work/development
- Assist with keeping ESTI up to date



Harmonisation



Health Evidence Synthesis, Recommendations and Impact

Trustworthy evidence for impact



Dr. Andrea C. Tricco She/Her · 1st
Professor specializing in Evidence synthesis and Evidence Medicine



ORIGINAL RESEARCH

An international modified Delphi process supported updating the web-based "right review" tool

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^fInstitute of Health Policy, Management, and Evaluation, Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

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ⁱSheffield Centre for Health and Related Research (SCHARR), University of Sheffield, Sheffield, UK

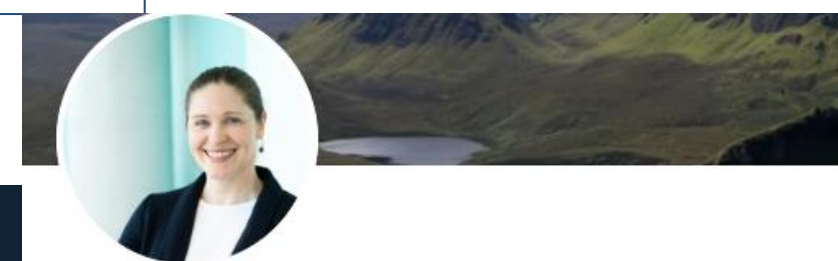
^jUniversity of Limerick, Limerick, Ireland

^kQueen's Collaboration for Health Care Quality: A JBI Centre of Excellence, School of Nursing, Queen's University, Kingston, Ontario, Canada

^lKnowledge Translation Program, Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto, Toronto, Ontario, Canada

^mEpidemiology Division and Institute for Health, Management, and Evaluation, Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

Accepted 18 March 2024; Published online 24 March 2024



Barbara Clyne She/Her · 1st
Senior Lecturer and Interim Head of the Department of Public Health

Right Review

[Home](#)[About Us ▾](#)[Knowledge Synthesis Methods](#)[Glossary of Terms](#)[Testimonials](#)

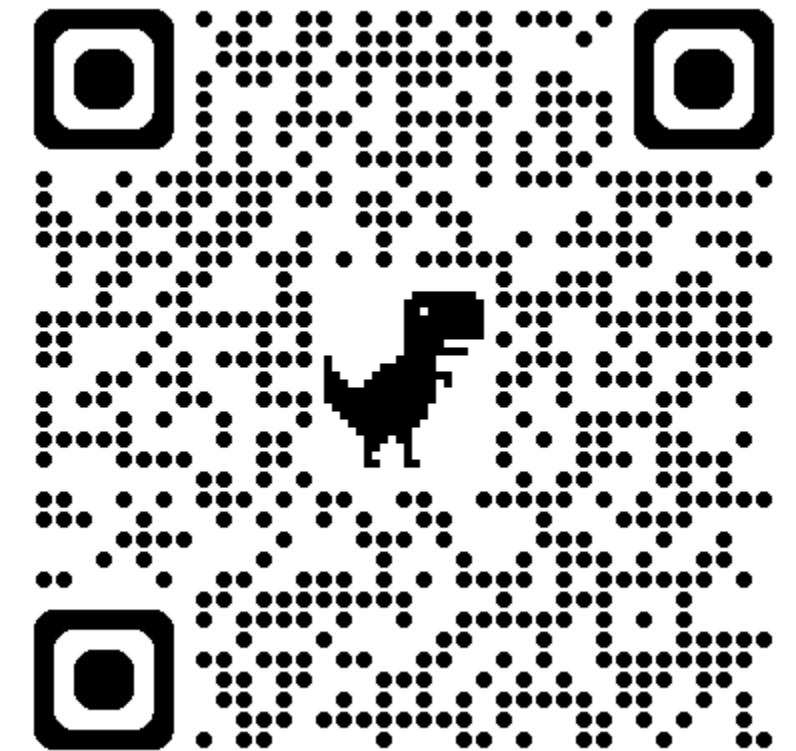
An exciting update is coming in 2024! More methods will be added including mixed methods. Stay tuned for more details!



Previously known as "What Review is Right for You?"

This tool is designed to provide guidance and supporting material to reviewers on methods for the conduct and reporting of knowledge synthesis.

Select the type of review:

[Quantitative](#)[Qualitative](#)

ESTI Phase 1 Achievements

- Secured funding for this work
- Published articles on need for a taxonomy and evidence synthesis methods
- Conducted the scoping review on previous work
- Established a large, international and cross field network of those interested in evidence synthesis
- Co-designed the taxonomy through multiple workshops, meetings and discussions
- Created a database of evidence synthesis types proposed previously (SPECTRAL)
- Completed a survey on the taxonomy structure and dimensions
- Completed a survey on populating the taxonomy with evidence synthesis types
- Completed version 1 of the taxonomy
- Finalise NHMRC report
- Created websites for the initiative and the taxonomy
- Created a new governance infrastructure for ESTI

ESTI Phase 1 – work to do

- Launch ESTI website and taxonomy
- Papers to finalise:
 - Introducing and overview of ESTI
 - Taxonomy development methods paper
 - Research notes paper on SPECTRAL

ESTI Phase 2 Goals

- Transition to a living mode
- Update, evaluate and continue populate the taxonomy
- Continue harmonisation of ES types
- Conduct methods work to address gaps in evidence synthesis
- Update the RightReview tool
- Collaborate with other groups/initiatives (PRISMATIC, SR Toolbox, TYPE-ME, LATITUDES etc...)
- Create/update a definition for evidence synthesis (?)



methods
research



About this initiative

Condensed version

Detailed typology (interactive figure)

Explore by approach

Explore by objective

References



TYPE-ME — Typology of Methods Research

Welcome to **TYPE-ME**, a living resource for methods researchers in health research and psychology. Start with the [condensed version](#), explore the [detailed typology](#), or read the [preprint](#).

What is methods research?



Why do we need TYPE-ME?



How does TYPE-ME organize methods research?



What can I use TYPE-ME for?



How did we develop TYPE-ME?



Stefan Schandelmaier MD PHD

[University of Basel](#), Switzerland

Verified email at unibas.ch

[research methods](#) [evidence-based medicine](#) [meta-research](#) [clinical epidemiology](#)
[medical statistics](#)



- About this initiative
- Condensed version
- Detailed typology (interactive figure)
- Explore by approach
 - A1 Theory-based methods research
 - A2 Simulation studies
 - A3 Experimental analyses of real datasets
 - A4 Reliability and agreement studies
 - A5 Methodological randomized studies
 - A6 Quantitative surveys
 - A7 Qualitative studies
 - A8 Consensus studies
 - A9 Reviews of applied or planned methods**
 - A10 Meta-epidemiological studies
 - A11 Scoping reviews of methods research
 - A12 Qualitative syntheses of methods research
 - A13 Quantitative syntheses of methods research
 - A14 Methodological case reports or case series
 - A15 Informal approaches
- Explore by objective
- References

Explore by approach > A9 Reviews of applied or planned methods

A9 Reviews of applied or planned methods

Terminology: methodological studies,^{1, 2} meta-research,³ research-on-research, systematic surveys, and scoping review, among many other terms used in practice,⁴ with little consensus.⁵

Definition and features

In reviews of applied or planned methods, researchers examine how other researchers implement methods in health research or which challenges they encounter. They systematically analyze studies or other applications of methods (such as guideline panels), using sources such as journal articles, trial registries, or preprints. Sampling strategies vary and may be random (to assess prevalence), purposeful (to focus on high-impact studies), stratified (to represent subgroups), matched (such as protocols with corresponding publications), or complete. Reviews of applied or planned methods may also be nested within systematic reviews of health research. Researchers extract data with pre-specified forms (for example, based on existing quality instruments) or use qualitative methods to derive categories. They typically use descriptive statistics to report outcomes such as prevalence of methodological features, appropriate use, or transparent reporting.

- A strength is that these studies reflect realistic practice, including human error.
- Challenges arise from sampling and reporting issues.

Boundaries with related types

Boundary with A10 meta-epidemiological studies. Both examine applied studies. A9 describes methodological practice, reporting, or quality; A10 examines whether methodological features relate to study results.

Similarities and differences between literature-based types:

Characteristic	Reviews of applied or planned methods	Meta-epidemiological studies	Scoping reviews of methods research	Qualitative syntheses of methods research	Quantitative syntheses of methods research
Typical objective	Assess methodological practice or quality	Assess impact of methodological characteristics on	Identify available methods or methods research	Synthesize findings of methods	Synthesize findings of methods

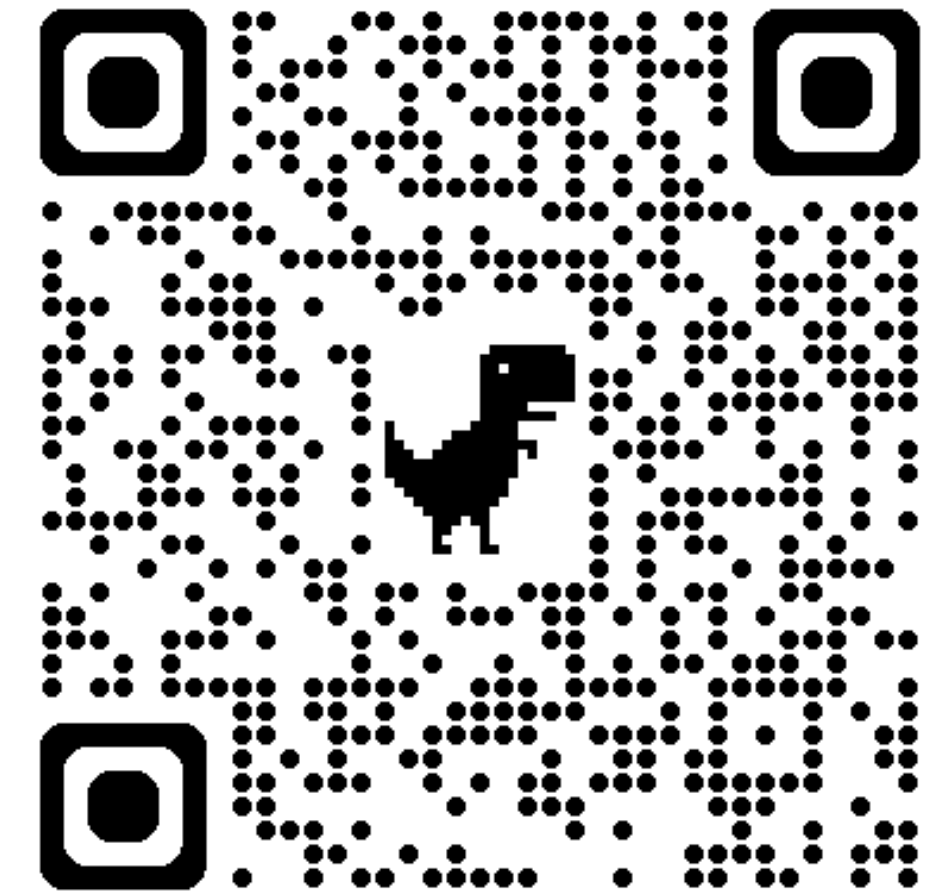
Right Reviews
Right Reasons
Right Methods

Thank you

Questions?

Get in touch!

Zachary.Munn@adelaide.edu.au



**JOIN
US!**



Health Evidence Synthesis, Recommendations and Impact

Trustworthy evidence for impact



GIN Guidelines
International
Network

SAVE THE DATE

Guidelines International Network
Annual Conference 2026

15th – 18th September

KLCC, Kuala Lumpur, Malaysia

Thank you!

Questions and Suggestions?

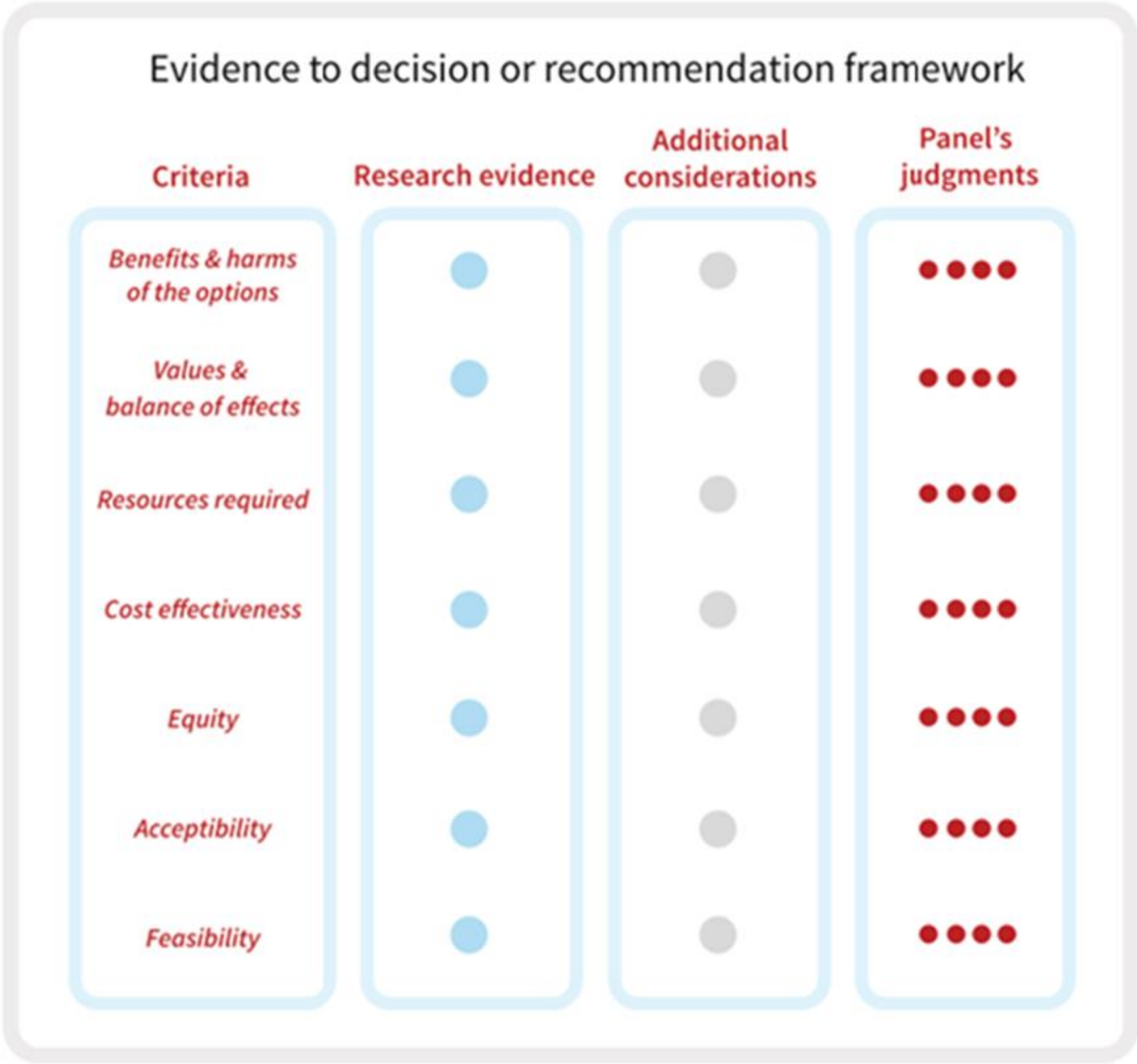
Contact:

Email: Zachary.Munn@Adelaide.edu

Relevance for guidelines?

Evidence to decision framework

- Inform panel members' judgements about the pros and cons of each option (intervention) that is considered
- Ensure that important factors that determine a recommendation (criteria) are considered
- Provide a concise summary of the best available research evidence to inform judgements about each criterion
- Help structure discussion and identify reasons for disagreements
- Make the basis for recommendations transparent to guideline users



How to populate Decision making criteria?

Priority of problem	Systematic reviews of disease burden (prevalence and incidence) Cross-sectional studies - Govt Data
Benefits and harms	Systematic reviews on effects of interventions/exposures
Values	Systematic reviews on values - Panel Surveys - Health utility studies - panel/ advisory groups
Resources/Cost-effectiveness	Systematic reviews (costs as an outcomes) – Systematic reviews of economic evaluations – simple evaluations – economic evaluations - panel/ advisory groups
Equity	Systematic reviews (equity focused) – cross-sectional studies – panel surveys/discussion - qual studies – primary studies - panel/ advisory groups
Acceptability	Qualitative evidence synthesis – systematic reviews – realist synthesis – mixed methods - surveys – qualitative studies - panel surveys/discussion
Feasibility	Qualitative evidence synthesis – systematic reviews – realist synthesis – mixed methods - surveys – qualitative studies - panel surveys/discussion
Planetary health	Systematic reviews (planetary health outcomes included)– surveys – qualitative studies - panel surveys/discussion