
Article:
Campbell, F. orcid.org/0000-0002-4141-8863, Weeks, L., Booth, A. et al. (2 more authors) (2019) A scoping review found increasing examples of rapid qualitative evidence syntheses and no methodological guidance. Journal of Clinical Epidemiology, 115. pp. 160-171. ISSN 0895-4356

https://doi.org/10.1016/j.jclinepi.2019.05.032

A Scoping Review Found Increasing Examples of Rapid Qualitative Evidence Syntheses and no Methodological Guidance

Fiona Campbell[1], Laura Weeks[2], Andrew Booth[1], David Kaunelis[2], Andrea Smith[2]

[1] School of Health & Related Research (ScHARR), University of Sheffield, Regent Court, 30 Regent Street, Sheffield, United Kingdom S1 4DA

f.campbell@sheffield.ac.uk

a.booth@sheffield.ac.uk

[2] Canadian Agency for Drugs and Technologies in Health. 600-865, Ottawa ON K1S5S8. Canada

lauraw@cadth.ca

andreas@cadth.ca

davidk@cadth.ca

Corresponding Author: Fiona Campbell, Research Fellow, Health Economics & Decision Science, School of Health & Related Research (ScHARR), University of Sheffield, Regent Court, 30 Regent Street, Sheffield, United Kingdom S1 4DA

Tel: (+44) (0)114 222 0767

E-mail: f.campbell@sheffield.ac.uk

ORCiD: 0000-0002-4141-8863

Declarations of interest: none

CRediT author statement:

Fiona Campbell: Conceptualization, Methodology, Validation, Formal Analysis, Investigation, Writing, Visualization, Supervision, Project Administration, Funding Acquisition **Laura Weeks**: Conceptualization, Methodology, Validation, Formal Analysis, Investigation, Writing – Review & Editing, Visualization, Supervision, Project Administration **Andrew Booth:** Conceptualization, Methodology, Validation, Writing – Review & Editing, Supervision, Project Administration **David Kaunelis**: Acquisition of Data, Writing **Andrea Smith:** Validation, Formal Analysis, Investigation, Writing – Review & Editing

Abstract

Objectives: To identify existing methodological guidance for the conduct of rapid qualitative evidence syntheses, and examples of rapid qualitative evidence syntheses to describe the methods used.

Study Design and Setting: We conducted a systematic scoping review. We searched MEDLINE, CINAHL, grey literature, including PROSPERO, with no date limits and solicited examples through experts and researchers in the field.

Results: We found no methodological guidance to direct the conduct of rapid qualitative evidence synthesis, and 15 examples including 13 completed reviews and two protocols. Diverse methods to abbreviate the review process were followed, which largely mirror methods developed for rapid reviews of clinical effects. Abbreviated search strategies, including date and language restrictions, were common, as was the use of a single reviewer for screening, data extraction and quality appraisal. Descriptive approaches to synthesis, such as thematic synthesis, were more common than interpretive approaches, such as meta-ethnography.

Conclusion: There is a need to develop and explore methods for the synthesis of qualitative research that balance the need for rapidity with rigour. In the meantime, providing details on the methods used, shortcuts made, and the implications of such methodological choices, together with collective sharing of innovations, becomes more important under increased time constraints.

Keywords: rapid reviews, qualitative evidence synthesis, review methods, scoping review

Running Title: A Scoping Review Found Increasing Examples of Rapid Qualitative Evidence Syntheses and no Methodological Guidance

What is New?

See attached HIGHLIGHTS, which include a suggested typographical edit from one reviewer.

Role of funding source: ScHARR methods support grant, University of Sheffield funded Fiona Campbell's time to undertake this research. They had no involvement in the design, conduct, analysis or findings of the research.

1. Background

The past decade has witnessed the proliferation of methodological literature on, and examples of, Qualitative Systematic Reviews or Qualitative Evidence Synthesis (QES). QES is an umbrella term that refers to the methods used to search, select and analyse findings from a set of primary qualitative research studies that relate to a specific topic or focus in order to arrive at new or enhanced understanding about the phenomenon under study (1).

Multiple factors have stimulated recent interest in the synthesis of qualitative studies. First, decision makers are recognizing the potential usefulness of, and distinctive contribution of, qualitative research. Qualitative evidence enables insights into the contexts that shape the use of, and therefore the effectiveness of complex interventions, and helps to understand the acceptability and feasibility of interventions, the value of outcomes to health service users and the impact of interventions on equity and human rights (2, 3). Within health technology assessment (HTA), this interest in qualitative research reflects a policy imperative to ensure that the needs, preferences and experiences of patients are central to decisions on technologies, treatments or service redesign (4). Further, a QES can inform, enhance, extend or supplement reviews addressing intervention effectiveness (1). As the influence of the evidence based practice agenda increases, so too comes the need for rigorous evidence synthesis of existing research, including qualitative research (5).

A key issue relates to the extent to which QES represent a recognizable variant of the systematic review, as opposed to being of their own kind. A systematic review of the literature (published and unpublished) follows explicit, transparent and reproducible methods to address a clearly formulated, and traditionally clinically focused, research question (1). Systematic reviews that follow rigorous and transparent methods and include high-quality primary studies are regarded as optimal sources of research evidence to address clinical and health policy questions. Accordingly, systematic review methods are increasingly applied or modified to answer questions using other types of evidence, including qualitative research. While many synthesis methods are common across different types of evidence, fundamentally different aims and assumptions underpin synthesis of qualitative research, quantitative research or mixed research types.

The rigour of systematic review standards requires that they typically take between six months and two years or more to complete (6). To address this challenge, methods to expedite the process are increasing(7) and rapid reviews are increasingly common; recognising that policy makers cannot always afford to wait for findings from a systematic review (8). While estimates vary, rapid reviews may be conducted within as little as eight weeks, potentially saving about 75% of the time from a

typical systematic review timeline(9). Notwithstanding substantial time savings, this shorter timeline requires either extensive resource use or, more commonly, limitations in scope and/or compromises in rigour.

Methods for the development of rapid reviews are evolving to address risks of bias, reporting guidelines and decisions about appropriate rapid review processes. Given fundamental differences between clinical studies and qualitative studies, it is unclear whether methods used to rapidly synthesise results from the former apply equally to the syntheses of the latter. With nineteen documented approaches to synthesising qualitative research (10) it is challenging to identify where best to target abbreviated or accelerated qualitative synthesis processes (11). For example, risk of bias, or quality, is conceived differently and 'short-cuts' may present different threats to rapid QES. Similarly, a rapid QES may require demonstrably different processes of synthesis. We have identified a need to understand the extent to which generic rapid review methods translate to rapid QES, and any consequences for rigour. A prerequisite step is to map existing guidance and how reviewers adapt methods to acknowledge the twin needs associated with rapid evidence synthesis of qualitative evidence.

2. OBJECTIVES

Our objectives were to:

1. Identify existing methodological guidance for the conduct of rapid QES; and
2. Identify examples of rapid QES and describe the methods used.

3. METHODS

A systematic scoping review approach was chosen to collate, catalogue and describe the state of knowledge for rapid QES methodology(12). The review protocol lies outside the scope of PROSPERO registration, as it does not address health outcomes, and is available from the authors upon request.

3.1. Criteria for considering studies and methodological papers for review

To address our first objective, we sought to identify and include papers that describe methods, or offer guidance, for the conduct of rapid QES. This includes papers describing rapid review approaches to synthesis of any type of qualitative study, or of studies of an unspecified type, but excludes papers explicitly describing synthesis of quantitative or mixed methods study designs. To address our second objective, we sought to identify examples of QES that incorporate abbreviated or accelerated approaches within restricted timelines. We focused on syntheses that address a

health care intervention or health condition, and we excluded evidence for non-health care topics. During citation screening, we further refined our pre-specified inclusion criteria such that examples of rapid QES were required to fulfil three criteria for inclusion. First, authors should explicitly identify their study as "rapid" or otherwise provide evidence that the review was expedited using "shortcuts". For example, reports where the systematic review process was modified to facilitate efficiency or time savings, such as use of text mining, were eligible even where a review was not described as "rapid". Second, evidence of systematisation (e.g. in identifying data sources or assessing study quality) was required. Finally, a review should positively indicate that it only included qualitative primary studies (i.e. excluding mixed methods reviews).

3.2.Identification of papers

A peer-reviewed literature search was conducted using MEDLINE via Ovid and CINAHL via EBSCO. The search strategy was developed using Medical Subject Headings (MeSH) and keywords related to "rapid reviews" and "qualitative" research. The search strategy for MEDLINE is provided in Appendix A. The MEDLINE strategy was run on March 31, 2017 and was adapted for use in CINAHL on April 11, 2017. Update searches of both databases were run on March 13, 2018. Grey literature was identified from relevant databases or websites of HTA agencies listed in the Grey Matters checklist (https://www.cadth.ca/grey-matters). A focused Google Scholar search was performed using Publish or Perish™ software(13) for permutations of rapid with qualitative synthesis or review. The PROSPERO international prospective register of systematic reviews (https://www.crd.york.ac.uk/prospero/) was searched using broad keywords (e.g. qualitative and rapid, abbreviated or brief) to identify relevant protocols. Follow up searching for publications relating to PROSPERO protocols was undertaken in PubMed, Google and Google Scholar. Studies from the grey literature were identified through contact and consultation with experts. The reference list of all eligible studies was examined to identify potentially relevant guidance for the conduct of rapid QES, or examples of rapid QES.

3.3.Selection of papers

Titles and abstracts of all records obtained from the search were independently double screened. Four reviewers (LW, AB, FC, AS) undertook citation screening and all citations were independently assessed by two reviewers. All disagreements were discussed as a team, until consensus was reached. Full text copies of all potentially includable articles were retrieved, and assessed by two independent reviewers for eligibility against pre-specified inclusion and exclusion criteria. Again, any differences were resolved through team discussion.

3.4.Data extraction and management

Structured data extraction forms were developed and piloted for both review questions. Data from included reviews were extracted by a single reviewer (FC or AS) and verified by a second reviewer (LW). Discrepancies were resolved through discussion. Descriptive data included: author name, review aims or objectives, setting of research, and date of publication. In addition, we extracted the following for the respective types of eligible papers:

Methodological papers: nomenclature used to characterise the review method (e.g., rapid, abbreviated), time-frames, purpose, disciplinary background of the authors, approach used to develop guidance and details of the guidance, organised around a Search; AppraisaL; Synthesis; Analysis (SALSA) framework(14). Additionally, the form documented how review methods had been adapted for publication, and whether methods were specific to a particular type of research synthesis, whether they explicitly included qualitative synthesis, and specific mentions of any types of QES.

Examples of rapid qualitative evidence syntheses: methods used to abbreviate or accelerate topic identification, research question refinement, searching, study selection, data extraction, data synthesis, quality appraisal, report production or dissemination were documented. Additionally, we noted explicit motivations for the review and its rapid nature, the review question, the timeline and any explicit statement of limitations or resulting implications for review quality.

Given limited methodological reporting uncovered during data extraction, we invited the contact author of each included article to clarify extracted data items and email additional details for their inclusion.

3.5.Data synthesis

Extracted data were categorized and frequencies calculated for important characteristics of included studies and their methods. Our goal was to fully describe methodological guidance and methods used within published examples of rapid QES.

4. RESULTS

2,765 citations were identified through database and grey literature searching. Of these, the full-text of 138 were reviewed, and 15 were determined as eligible. A PRISMA diagram is included as Figure 1. Notably, we only identified examples of rapid QES; no methodological guidance for rapid QES was found. We were able to contact authors of eleven of the 15 reviews to clarify methodological and procedural details, which are further elaborated below and summarized in Table 1 and Figure 2. We

have used RETREAT criteria (Review questions –Epistemology-Time/Timescale-Resources-Expertise-Audience and purpose-Type of data) (10) to provide a framework for our findings (Table 1) These seven considerations have been identified as those which determine the choice of qualitative evidence synthesis methods and therefore provide an appropriate framework for describing the methods used in the identified rapid QES included in this scoping review.

4.1.Description of included rapid reviews

Thirteen reviews (n=12) (15-26)and two protocols (n=2)(27, 28) were included. Two were published in 2018(22, 29), seven in 2017(17-19, 21, 24, 25, 28), three in 2016(15, 16, 27), two in 2015(20, 23) and one in 2010(26). Seven reviews were conducted in Canada (all by the Canadian Agency for Drugs and Technologies in Health (CADTH) (15-19, 21, 24), six in the United Kingdom(20, 25, 26, 28, 29), one in the United States(22) and one in Australia (23). Four were published in a scientific journal(20, 22, 26, 29) while 11 (including the two PROSPERO records) were identified from the grey literature (11, 15-19, 21, 23-25, 28). Ten were explicitly identified as a "rapid review" (20-29), while five used the terminology "rapid response" (15-19).

4.2.Timelines and reasons for rapidity

Most reviews did not state why rapid methods were used. One review identified timeline or budgetary issues as a reason for rapidity(22), and one review stated a need to narrow the focus with no further rationale(20). Nine reviews were commissioned by a specific agency or institution (15-19, 21, 23, 24,25), with no reason given for the use of rapid methods, and four did not indicate why the review was undertaken or why rapid methods were used (24-29). For the ten reviews for which we could determine timelines, five reviews were conducted in less than one month (15, 16, 18-20), and five took between three and six- months (17, 21, 22, 24, 28). For the remainder the timeline was unclear.

4.3.Research questions addressed

Research questions commonly concerned the perspectives and experiences of patients and their families undergoing particular interventions or diagnostic tests. Most of the included reviews sought to understand expectations around the outcomes of interventions and which outcomes mattered most to patients. Reviews also sought to explore patient perspectives on the acceptability of interventions and barriers and facilitators to uptake. One review(26) explored help seeking behaviour, and another examined methods to engage patients on-line in guideline development (22).

4.4.Rapid methods to search for and identify eligible studies

Strategies to search for relevant literature varied across included reviews. Reviewers searched or planned to search three (n=4 rapid reviews)(19, 20, 25, 27), four (n=2 rapid reviews)(22, 28), five (n=2) (16, 21), six (n=4)(15, 17, 18, 24) or seven and more (n=3)(23, 26, 27) electronic databases, with 21 unique databases being searched across included reviews. Searched databases included: MEDLINE (n=13), PsycInfo (n=9), CINAHL (n=9), PubMed (n=8), The Cochrane Library (n=5), University of York Centre for Reviews and Dissemination (CRD) databases (n=5), Embase (n=4), Web of Science (n=3), ASSIA (n=2), Scopus (n=2), Medline (n=1), TRIP database (n=1), Science Direct (n=1), EBSCO (n=1), SwetsWise (n=1), JSTOR (n=1), Informit (n=1), JBI Database of Systematic Reviews and Implementation Reports (n=1), Ovid Nursing Fulltext Plus (n=1), Social Policy and Practice (n=1), and Web of Knowledge (n=1). Two reviews (21, 25) only undertook electronic database searching while the remainder also searched grey literature (n=9) (15-20, 24-26), hand searched specific journals (n=2)(25, 26, 30), searched reference lists (n=3)(20, 27, 28), and contacted experts (n=1)(22). Five reviews limited the number of returned citations: four limited the number of years searched and used language limits (15-18), and one review limited by country(26). Ten reviews mentioned involvement of an information specialist or medical librarian to develop and execute the search strategy,(15-19, 21, 22, 24, 26, 27) while the remainder did not.

Of the thirteen completed reviews, three included less than ten studies(15, 24, 26), seven included between 11-20 studies (16, 18-21, 25, 28), one included between 21-30 studies (17), one included between 31-40 (23) studies, and one included more than 40 studies (22).

4.5.Rapid methods for screening, data extraction and quality appraisal

Most reviews used a single reviewer for title and abstract screening (n=10) (15, 16, 18, 19, 21, 22, 24, 25, 27, 28) and/or full-text screening (n=9) (15, 16, 18, 19, 21, 22, 24, 27, 28). Two reviews used two independent reviewers for both title and abstract screening and full-text screening(17, 23), while one review used a single reviewer for title and abstract screening, and two independent reviewers for full-text screening (25). A further review used partial verification, with a primary reviewer screening titles, abstracts and full-text, involving a second reviewer to clarify uncertainties(20). Two reports omitted details and we were unable to verify the title and abstract or full-text screening processes with review authors (26, 29). See Table 2 for further details.

Similarly, a single reviewer was most commonly used for data extraction (n=11) (15-22, 24, 27, 29) and quality appraisal (n=8)(15-21, 24) with one using two independent reviewers (22). In two reviews (n=2)(25, 28), a single reviewer extracted data and conducted quality appraisal, while a second reviewer verified either all or a random sample of extractions and assessments. Three

reviews(22, 26, 29) did not employ quality appraisal. One report did not include any information on data extraction (26), and three (16, 23, 27) did not include any information on how, or whether, quality appraisal was completed. Eleven of the 12 reviews (15-21, 23-25, 27, 28) for which quality appraisal was undertaken used the Critical Appraisal Skills Programme (CASP) Qualitative Checklist tool(31, 32) and one review (20), used a published framework to guide quality appraisal. While methodological literature was cited within all 13 reviews (and none of the protocols), none made reference to any methodological guidance or framework specific to the conduct of rapid QES. Instead, references to methodological literature specific to standard QES or the conduct of rapid reviews in general were used, for example Sandelowski & Barroso (2003)(33), Melia (2010)(34), Petticrew & Roberts (2006)(35).

4.6.Rapid methods for data synthesis

Methods of synthesis included narrative summary (n=8)(15-20, 26, 27) with themes from the included papers aggregated within the rapid QES. Four reviews (21, 22, 24, 25) used thematic analysis, two reported using framework synthesis(28, 29) and one (23, 30) described a meta-narrative approach. Where the synthesis approach was not reported, we assessed the output from the synthesis to make a determination (15-19, 26). Five reviews (15, 23, 25-27) did not describe any methods used to improve rigour. In four (20, 22, 24, 29), team members examined preliminary results to validate the interpretation of study findings. In another five (16-19, 21) memos and annotation were used to enhance rigour in the coding process. Methodological literature, where cited, referred to the methods for the particular synthesis approach used, with no reference to how it might be applied in a rapid context.

Table 1: Characteristics of Example Rapid Qualitative Evidence Syntheses

(separate Word document)

5. Discussion

Through this scoping review we aimed to identify and describe methodological guidance for the rapid conduct of QES, as well as the methods used, or planned, within published examples. We sought to examine the extent to which current guidance and practice offers a methodological evidence base to facilitate common expectations and methods for a rapid QES process.

We did not identify any guidance specific to rapid QES, although we identified 15 examples of rapid QES, including 13 reports of completed reviews(15-26, 29) and two protocols(27, 28). Examples were planned or undertaken and published in the past eight years, many being published as grey literature in online databases and websites. Over half were undertaken as specific commissions to guide decision making in health policy(15-19, 21, 23, 24).

Our team initially assumed that published rapid QES were more prevalent than established by this scoping review. Published reviews retrieved through our literature search commonly used both quantitative and qualitative studies within a rapid "mixed method review", which were not eligible for this review. It is possible that these reviews sought to address multiple aspects of decision support rather than a single issue or perspective(36). Similarly, when asked for published examples, experts did not explicitly identify or report the use of methods to abbreviate or accelerate the review process in the examples they identified. Markers of rapidity may have been withheld in order to increase the likelihood of publication, or a rapid QES may have subsequently been upgraded to a full synthesis before publication. As a consequence, the actual prevalence of published rapid QES remains unclear, with the sample identified for this review likely underrepresenting actual numbers. Given what appears to be an increase in the incidence of rapid QES in recent years, and an associated demand for such evidence to support decision making, there is a clear need to develop methodological and reporting guidance that reflects the nature of qualitative inquiry and preserves its iterative, inductive and interpretive qualities.

Where reported, the included reviews were conducted within less than six months. To meet these short time frames, reviewers employed methods to increase the speed and efficiency of the review process. Our results suggest that QES review teams are largely borrowing rapid methods from the wider rapid review community; for example, by imposing date limitations on the search and including only papers published in English. While grey literature was commonly searched, search methods did not typically extend to more time consuming activities such as hand searching journals or approaching experts. Interestingly, the number of databases searched seems to suggest that searches were not typically limited to one, or few, databases. It is possible that qualitative search

results may be less plentiful, hence requiring more extensive searching to locate, or experienced teams of reviewers may include information specialists familiar with, and with access to, multiple databases. It is established that qualitative research is less readily located within biomedical journal databases(37) and so compromises in the number of databases may risk missing relevant studies. Perhaps accordingly, researchers engaged in QES seem to share with clinical reviewers a concern with being comprehensive and not "missing" eligible studies.

Quality appraisal was omitted or not reported in approximately one-third of identified examples, mirroring a review of classic rapid review methods which suggests that quality appraisal was omitted or not reported in 24% of examples (38). Given the debates within the broader QES community regarding methods for, and the importance of, quality appraisal(34) it is surprising that this step was not more commonly omitted.

While mirroring methods used for the rapid review of evidence of intervention effects may offer a reasonable starting point for a QES, it remains unclear which short cuts, if any, are appropriate and which require further examination. For example, does the increased error rate of single reviewer citation screening and data extraction (39), translate to qualitative data and, if so, what are the implications of errors in qualitative data extraction? Typically, in qualitative analysis, data collection, coding and interpretation concentrate on reflection and discussion within the team and engaging with other literatures, as opposed to identifying, counting and correcting errors. The effects of having a limited opportunity for reflection and discussion cannot be quantified in a QES. However, we can hypothesise that limited reflection and discussion will lead to a superficial analysis, with the potential loss of additional insights and interpretations.

Booth et al (2018)(10) itemise how nineteen QES methodologies divide into aggregative approaches that aim to describe the findings of the primary studies, or interpretive approaches that aim to develop a new conceptual understanding or 'theory'(40). Similarly, Thomas et al (2017) (41) suggest that methods of synthesis lie on a continuum from mostly unchanged (aggregating categories or findings within 'thematic summaries') to mostly emergent (de novo analysis and conceptual ordering as for 'meta-ethnography'). The predominance of aggregative synthesis within rapid QES, as identified through this scoping review, contrasts with extensive use of interpretative approaches within full QES, where meta-ethnography is at least as common as thematic approaches(42). Aggregative approaches are similarly more common in rapid quantitative reviews with 78% of rapid reviews using narrative or descriptive summary and meta-analysis occurring less commonly(43).

Incomplete description of individual methods or approaches of synthesis, and gaps in the empirical base that underpins them, have been targeted for a potential research agenda, (10)and this extends to rapid QES. We identified several examples where authors omitted methodological details (e.g. the number of reviewers used or the approach to critical appraisal). While authors were forthcoming about their methodological approach once we contacted them for further details, it is unclear if this omission sought to mask the rapid nature of the review to optimise subsequent publication, if it reflected publication space restrictions, or if it was due to the absence of reporting standards. The absence of quality assurance procedures is particularly important for emergent rapid QES, if implications for "short cuts" are to be acknowledged and reported to help users to use and interpret the findings. Typically, quality assurance for evidence synthesis centres on:

1. Guidance for conducting the review
2. Guidance for reporting the review (reporting standards)
3. Guidance or checklists for assessing the quality of the completed review

To what extent is rapid QES ready for such developments? Guidance for conducting a review often relies on audits of existing studies in identifying current accepted practice; in providing an initial audit this paper is limited by the relative scarcity of published examples and an uncritical acceptance of rapid review methods developed for questions of interventions effects. The development of reporting standards(44) should follow accepted procedures including a systematic literature review, a Delphi process and a consensus meeting. Generally, reporting standards for qualitative syntheses are immature; standards have been produced for meta-ethnographies(45) and realist syntheses(46) but generic standards for QES fall short of full scientific development(47). Rigorous guidance for the conduct and reporting of a full QES process is required before we can translate or reinterpret these within a rapid review context. Checklists for quality appraisal require similar developmental processes to reporting standards and a framework for development has been proposed (48).

Concern has been expressed at "superficial" QES approaches that privilege technical procedures over fidelity to the qualitative paradigm(49). Qualitative researchers, and those involved in QES from outside the pragmatic HTA and decision-support community, may resist the notion of rapid QES. However, this concern must be balanced with acknowledgement that, within limited time- or resource- envelopes, 'something may be better than nothing'. A good evidence synthesis for policy will consider many types and sources of evidence (50); collating and synthesising evidence to inform decision making in health care requires information from diverse sources. Factors that influence

uptake, acceptability and effectiveness of interventions and services are best identified by gathering the perspectives of those who receive and/or deliver services; why would a policy maker not wish to access a synthesis of qualitative studies that captures, with empirical rigour, perspectives of service users. Notwithstanding potential discomfort associated with the lack of consensual guidance, the need to produce qualitative analyses in rapid time to meet decision makers' needs remains persistent.

We acknowledge some limitations in the methods we have used, which may have an impact on the comprehensiveness of our findings. These include not describing all of the characteristics of the reviews and the review teams. We were not able to describe where review teams may have expedited the review process by parallel working. We also were not able to examine aspects that would offer insights into methods used, such as the expertise of the review team or their epistemology. We also did not hear back from all authors so some data is missing.

Given this limited evidence base we exhort the review community to share further examples of rapid QES, to describe methods used in their production and produce empirical data to support their use. In the long-term, we hope to offer a catalyst for a group or network of academic and policy researchers interested in rapid QES methods. Review methodologies for rapid realist syntheses, rapid evidence assessments and evidence briefings have been developed within the time-sensitive context of decision support, technology assessment and policy appraisal. A robust case for the value of the rapid QES remains to be articulated. Recent guidance(10, 51, 52) and editorials(53) on QES in general, hint at the potential for progress. However, enabling guidance for rapid QES is required.

The use of timely syntheses in policy making requires both rigour and transparency. Undertaking a QES 'rapidly' requires that producers and users alike aim to recognise the potential limitations of the approach and what these mean for the credibility, trustworthiness and transferability of the outputs. Time taken is often traded against depth of analysis. Commissioners and policy makers must be aware of these limitations so that, where feasible and appropriate, a full QES can be undertaken.

Abbreviations

HTA	Health Technology Assessment
QES	Qualitative Evidence Synthesis
PRISMA	Preferred Reporting items for Systematic Reviews and Meta-Analyses

Appendix A: MEDLINE Literature Search Strategy

Database: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Search originally run on: March 31, 2017; updated on: March 13, 2018

Line #	Search strategy
1	((Rapid or pragmatic or mini or targeted or focused or quick or quicker or fast or faster or brief or speed or accelerate or accelerated or accelerating or compress or compressed or compressing or expedite or expedited or expediting or streamline or streamlined or streamlining or abbreviated or preliminary or scanning or mapping or map or bare bones or stage one or superficial or incomplete) adj3 (systematic or evidence or data or knowledge) adj3 (review or reviews or assessment* or synthesis or syntheses or appraisal*)).ti,ab,kf.
2	((Rapid or pragmatic or mini or targeted or focused or quick or quicker or fast or faster or brief or speed or accelerate or accelerated or accelerating or compress or compressed or compressing or expedite or expedited or expediting or streamline or streamlined or streamlining or abbreviated or preliminary or scanning or mapping or map or bare bones or stage one or superficial or incomplete) adj (review or reviews or health technology or HTA or HTAs or technology assessment* or evidence assessment* or synthesis or syntheses or metasynthesis or metasyntheses)).ti,ab,kf.
3	(evidence map* or systematic map*).ti,ab,kf.
4	or/1-3
5	(Rapid or pragmatic or mini or targeted or focused or quick or quicker or fast or faster or brief or speed or accelerate or accelerated or accelerating or compress or compressed or compressing or expedite or expedited or expediting or streamline or streamlined or streamlining or abbreviated or preliminary or scanning or mapping or map or bare bones or stage one or superficial or incomplete).ti,kf.
6	*Review Literature as Topic/
7	*Technology Assessment, Biomedical/
8	exp *Health Services Research/
9	*Evidence-Based Medicine/
10	or/6-9
11	5 and 10
12	4 or 11
13	exp Empirical Research/ or Interview/ or Interviews as Topic/ or Personal Narratives/ or

Focus Groups/ or Narration/ or Nursing Methodology Research/

14 qualitative.ti,ab,kf,jn.

15 (theme* or thematic).ti,ab,kf.

16 ethnological research.ti,ab,kf.

17 ethnograph*.ti,ab,kf.

18 ethnonursing.ti,ab,kf.

19 phenomenol*.ti,ab,kf.

20 (grounded adj (theor* or study or studies or research or analys?s)).ti,ab,kf.

21 (life stor* or women* stor*).ti,ab,kf.

22 (emic or etic or hermeneutic* or heuristic* or semiotic*).ti,ab,kf.

23 (data adj1 saturat$).ti,ab,kf.

24 participant observ*.ti,ab,kf.

25 (social construct* or postmodern* or post-structural* or poststructural* or post-modern* or feminis*).ti,ab,kf.

26 (action research or cooperative inquir* or co-operative inquir*).ti,ab,kf.

27 (humanistic or existential or experiential or paradigm*).ti,ab,kf.

28 (field adj (study or studies or research)).ti,ab,kf.

29 human science.ti,ab,kf.

30 biographical method*.ti,ab,kf.

31 theoretical sampl*.ti,ab,kf.

32 ((purpos* adj4 sampl*) or (focus adj group*)).ti,ab,kf.

33 (open-ended or narrative* or textual or texts or semi-structured).ti,ab,kf.

34 (life-world or conversation analys?s or personal experience* or theoretical saturation).ti,ab,kf.

35 ((lived or life) adj experience*).ti,ab,kf.

36 cluster sampl*.ti,ab,kf.

37 observational method*.ti,ab,kf.

38 content analysis.ti,ab,kf.

39 (constant adj (comparative or comparison)).ti,ab,kf.

40 ((discourse* or discurs*) adj3 analys?s).ti,ab,kf.

41 narrative analys?s.ti,ab,kf.

42 (heidegger* or colaizzi* or spiegelberg* or merleau* or husserl* or foucault* or ricoeur or glaser*).ti,ab,kf.

43 (van adj manen*).ti,ab,kf.

44 (van adj kaam*).ti,ab,kf.

45 (corbin* adj2 strauss*).ti,ab,kf.

46 Interview/

47 interview*.ti,ab,kf.

48 or/13-47

49 12 and 48

50 (meta ethnography or meta ethnographic or meta synthes?s or meta narrative* or narrative synthes?s or meta stud* or meta method* or meta triangulation or CERQUAL or CONQUAL or thematic synthes?s or framework synthes?s or realist review* or realist synthes?s or qualitative systematic review* or qualitative evidence synthes?s or critical interpretive synthes?s).ti,ab,kf.

51 (synthes?s adj3 qualitative).ti,ab,kf.

52 ((literature search* or systematic review* or quality assessment* or critical appraisal*) and (qualitative research or qualitative literature or qualitative stud*)).ti,ab,kf.

53 (Noblit and Hare).ti,ab,kf.

54 or/50-53

55 (Rapid or pragmatic or mini or targeted or focused or quick or quicker or fast or faster or brief or speed or accelerate or accelerated or accelerating or compress or compressed or compressing or expedite or expedited or expediting or streamline or streamlined or streamlining or abbreviated or preliminary or scanning or mapping or map or bare bones or stage one or superficial or incomplete).ti,kf.

56 (Rapid or pragmatic or mini or targeted or focused or quick or quicker or fast or faster or brief or speed or accelerate or accelerated or accelerating or compress or compressed or compressing or expedite or expedited or expediting or streamline or streamlined or streamlining or abbreviated or preliminary or scanning or mapping or map or bare bones or stage one or superficial or incomplete).ab. /freq=2

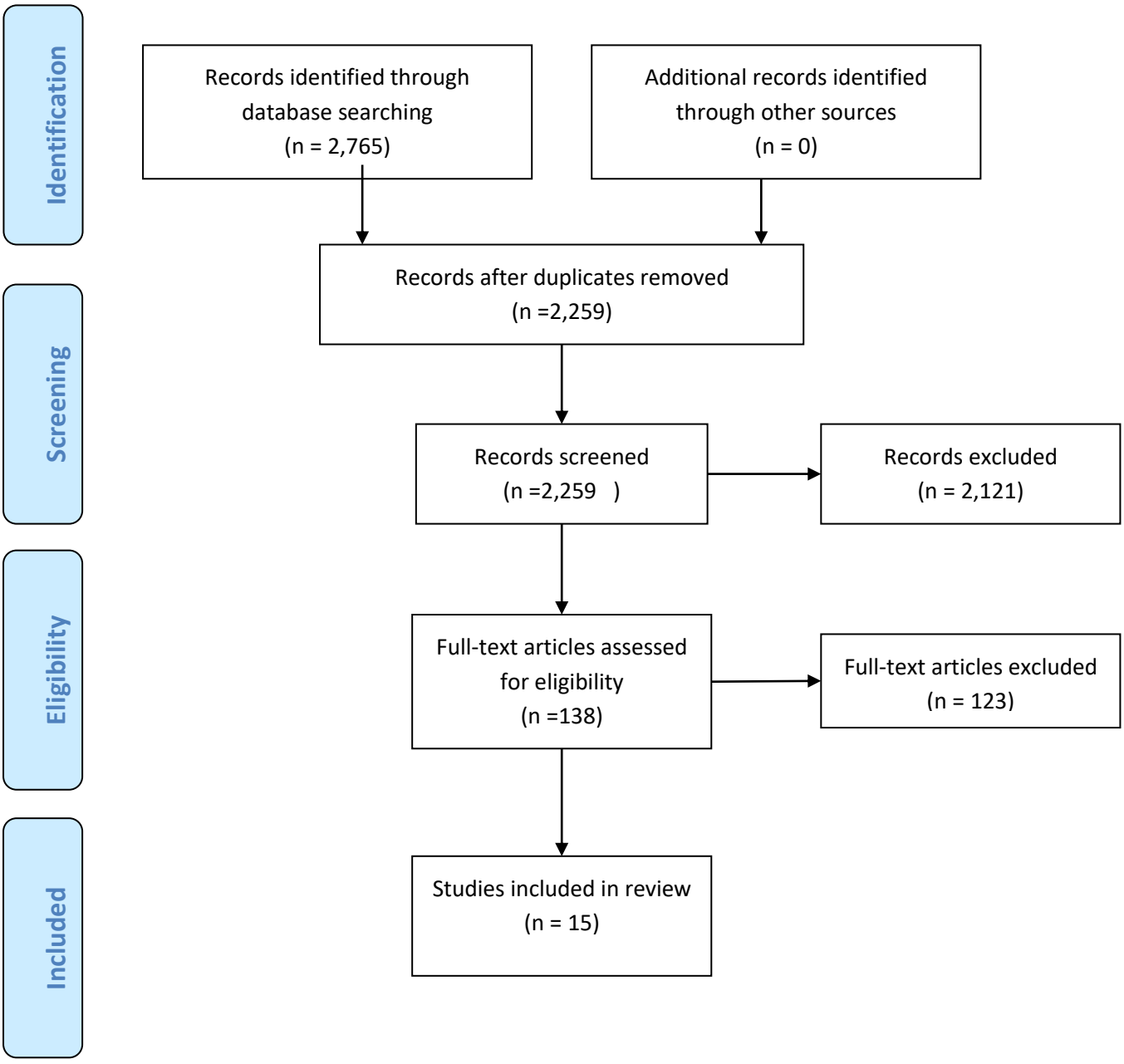
57 55 or 56

58 54 and 57

59 49 or 58

60 remove duplicates from 59

Figure 1: Flow of Studies through the Scoping Review



REFERENCES

1. Noyes J, Popay J., Pearson A., Hannes K., Booth A. on behalf of teh Cochrane QUalitative Research Methods Group. Qualitative research and Cochrane reviews. In: Higgins JPT. GS, editor. Cochrane Handbook for Systematic Reviews of Interventions: The cochrane Collaboration and John Wiley & Sons Ltd.; 2008. p. 571-87. https://doi.org/10.1002/9780470712184.ch20
2. Lewin S, Glenton C. Are we entering a new era for qualitative research? Using qualitative evidence to support guidance and guideline development by the World Health Organization. International journal for equity in health. 2018;17(1):126. https://doi.org/10.1186/s12939-018-0841-x
3. Petticrew M, Rehfuess E, Noyes J, Higgins JP, Mayhew A, Pantoja T, et al. Synthesizing evidence on complex interventions: how meta-analytical, qualitative, and mixed-method approaches can contribute. Journal of clinical epidemiology. 2013;66(11):1230-43. https://doi.org/10.1016/j.jclinepi.2013.06.005
4. Facey KM, Hansen HP. Patient-focused HTAs. International journal of technology assessment in health care. 2011;27(4):273-4. https://doi.org/10.1017/s0266462311000572
5. Thorne S. The role of qualitative research within an evidence-based context: Can metasynthesis be the answer? International Journal of Nursing Studies. 2009;46(4):569-75. https://doi.org/10.1016/j.ijnurstu.2008.05.001
6. Khangura S, Konnyu K, Cushman R, Grimshaw J, Moher D. Evidence summaries: the evolution of a rapid review approach. Systematic reviews. 2012;1(1):10. https://doi.org/10.1186/2046-4053-1-10
7. Kaltenthaler E, Cooper K, Pandor A, James MM-S, Chatters R, Wong R. The use of rapid review methods in health technology assessments: 3 case studies. BMC medical research methodology. 2016;16(1):108. https://doi.org/10.1186/s12874-016-0216-1
8. Head BW. Reconsidering evidence-based policy: Key issues and challenges. Policy & Society, 2010, 29 (2), 77-94. https://doi.org/10.1016/j.polsoc.2010.03.001
9. Schünemann HJ, Moja L. Reviews: rapid! rapid! rapid!… and systematic. Systematic Reviews, 2015, 4(1); https://doi.org/10.1186/2046-4053-4-4.
10. Booth A, Noyes J, Flemming K, Gerhardus A, Wahlster P, van der Wilt GJ, et al. Structured methodology review identified seven (RETREAT) criteria for selecting qualitative evidence synthesis approaches. Journal of clinical epidemiology. 2018;99:41-52. https://doi.org/10.1016/j.jclinepi.2018.03.003
11. Tsertsvadze A, Chen Y-F, Moher D, Sutcliffe P, McCarthy N. How to conduct systematic reviews more expeditiously? Systematic reviews. 2015;4(1):160. https://doi.org/10.1186/s13643-015-0147-7
12. James KL. RN, Haddaway NR. A methodology for systematic mapping in environmental sciences. Environmental Evidence. 2016;5:7(26 April). https://doi.org/10.1186/s13750-016-0059-6
13. Harzing AW. Publish or Perish. 2007. https://harzing.com/resources/publish-or-perish
14. Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. Health Information & Libraries Journal. 2009;26(2):91-108. https://doi.org/10.1111/j.1471-1842.2009.00848.x
15. (CADTH) CAfDaTiH. Patient Perspectives and Experiences Regarding Colorectal Surgery and Indocyanine Green Angiography: A Review of Patient Perspectives. Ottawa, Canada: CADTH; 2016. https://cadth.ca/sites/default/files/pdf/htis/2018/RC0834%20Colorectal%20Surgery%20PPE%20Final.pdf

16. (CADTH) CAfDaTiH. The meaning and impact of the benefits and harms of total hip replacement: a review of patient and caregiver experiences and perspectives. Ottawa, Canada: CADTH; 2016. https://cadth.ca/sites/default/files/pdf/htis/2017/RC0796%20Hip%20Implants%20PPE%20Final.pdf
17. (CADTH) CAfDaTiH. Treatments for insomnia: review of patient experiences and preferences. Ottawa, Canada 2017. https://cadth.ca/sites/default/files/pdf/htis/2017/RD0039-OP0527%20Insomnia%20PPE%20Final.pdf
18. (CADTH) CAfDaTiH. Deep brain stimulation and levodopa-carbidopa intestinal gel as interventions for advanced Parkinson disease: a review of the qualitative patient perspectives and experiences literature.Ottawa, Canada 2017. https://cadth.ca/sites/default/files/pdf/htis/2018/RC0914%20PPE%20for%20PD%20final.pdf
19. (CADTH) CAfDaTiH. Health care practitioner hand hygiene practices and health care associated infections: a review of the qualitative patient perspectives and experiences literature. Ottawa, Canada . 2017. CADTH rapid response report: summary with critical appraisal. https://cadth.ca/sites/default/files/pdf/htis/2018/RC0914%20PPE%20for%20PD%20final.pdf
20. Curtis-Tyler K, Arai L, Stephenson T, Roberts H. What makes for a 'good' or 'bad' paediatric diabetes service from the viewpoint of children, young people, carers and clinicians? A synthesis of qualitative findings. Archives of Disease in Childhood. 2015;100(9):826-33. https://doi.org/10.1136/archdischild-2014-307517
21. Dejean, D. Patient perspectives and experiences review. In: Proton beam therapy for the treatment of cancer in children and adults: a health technology assessment. . Ottawa, Canada: Canadian Agency for Drugs and Technologies in Health (CADTH); 2017 Aug 2017. https://cadth.ca/sites/default/files/pdf/HT0017_PBT_Report.pdf
22. Grant S, Hazlewood GS, Peay HL, Lucas A, Coulter I, Fink A, et al. Practical Considerations for Using Online Methods to Engage Patients in Guideline Development. The Patient-Patient-Centered Outcomes Research. 2018;11(2):155-66. https://doi.org/10.1007/s40271-017-0280-6
23. Harrison R, Walton M, Manias E. Patients' experiences in Australian hospitals: an Evidence Check rapid review brokered by the Sax Institute (www.saxinstitute.org.au) for the Australian Commission on Safety and Quality in Health Care. Sax Institute; 2015
24. Herrington E, Manogaran M. Patient perspectives and experiences. In: Optimal strategies for the diagnosis of acute pulmonary embolism: a health technology assessment. Canadian Agency for Drugs and Technologies in Health (CADTH); 2018 Jan 2018. https://cadth.ca/sites/default/files/pdf/OP0528_Imaging_for_PE_Report_Final.pdf
25. Parretti HM, Hughes CA, Jones LL. 'The rollercoaster of follow-up care' after bariatric surgery: a rapid review and qualitative synthesis. Obes Rev. 2019 Jan;20(1):88-107. https://doi.org/10.1111/obr.12764
26. Fox C. Evidence summary: what do we know from qualitative research about people's care-seeking about oral health? British Dental Journal. 2010;209(5). https://doi.org/10.1038/sj.bdj.2010.796
27. Fulton R, Kroll T, Witham M. Barriers and facilitators to medication adherence in heart failure patients, a rapid review of qualitative evidence [Internet]. PROSPERO. 2016. Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016038948
28. Uwamahoro NS, Rowlands G, Thomson R. Perceptions of HIV infected young people and key stakeholders regarding adolescent/youth-friendly health services in Africa: a rapid review and framework synthesis using the COM-B model of the Behaviour Change Wheel. [Internet]. PROSPERO. 2017. Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42017074132. .
29. Stickley T, Wright N, Slade M. The art of recovery: outcomes from participatory arts activities for people using mental health services. Journal of Mental Health. 2018: 27(4), 1-7. https://doi.org/10.1080/09638237.2018.1437609

30. Dennis SM, Harris M, Lloyd J, Davies GP, Faruqi N, Zwar N. Do people with existing chronic conditions benefit from telephone coaching? A rapid review. Australian Health Review. 2013;37(3):381-8. https://doi.org/10.1071/ah13005
31. Qualitative Checklist [Internet]. Oxford Centre for Triple Value Healthcare Ltd [cited 8/11/2018]. Available from: https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf.
32. Majid U, Vanstone M. Appraising qualitative research for evidence syntheses: a compendium of quality appraisal tools. Qualitative health research. 2018, 28 (13), 2115-2131. https://doi.org/10.1177/1049732318785358.
33. Sandelowski M, Barroso JJNr. Creating metasummaries of qualitative findings. Nursing Research 2003;52(4):226-33. https://doi.org/10.1097/00006199-200307000-00004
34. Melia KM. Recognizing quality in qualitative research. In: Bourgeault I, De Vries R, Dingwall R, editors. SAGE handbook of qualitative methods in health research. Thousand Oaks (CA): SAGE; 2010. Chapter 28. p. 559-74. https://doi.org/10.4135/9781446268247.n29
35. Petticrew M, Roberts H. Systematic reviews in the social sciences: A practical guide: John Wiley & Sons; 2008. https://doi.org/10.1002/9780470754887
36. Pope C, Mays N, Popay J. Synthesising qualitative and quantitative health evidence: A guide to methods: A guide to methods: McGraw-Hill Education (UK); 2007.
37. DeJean D, Giacomini M, Simeonov D, Smith A. Finding qualitative research evidence for health technology assessment. Qualitative health research. 2016;26(10):1307-17. https://doi.org/10.1177/1049732316644429
38. Harker J, Kleijnen J. What is a rapid review? A methodological exploration of rapid reviews in Health Technology Assessments. International Journal of Evidence-Based Healthcare. 2012;10(4):397-410. https://doi.org/10.1111/j.1744-1609.2012.00290.x
39. Buscemi N, Hartling L, Vandermeer B, Tjosvold L, Klassen TP. Single data extraction generated more errors than double data extraction in systematic reviews. Journal of clinical epidemiology. 2006;59(7):697-703. https://doi.org/10.1016/j.jclinepi.2005.11.010
40. Toye F, Seers K, Allcock N, Briggs M, Carr E, Barker K. Meta-ethnography 25 years on: challenges and insights for synthesising a large number of qualitative studies. BMC medical research methodology. 2014;14(1):80. https://doi.org/10.1186/1471-2288-14-80
41. Thomas J. OM-EA, Kneale D., Shemilt I. Synthesis Methods for Combining and Configuring Textual or Mixed Methods Data. In: Gough D. OS, Thomas J. , editor. An Introduction to Systematic Reviews. 2nd ed. london: Sage; 2017.
42. Dalton J, Booth A, Noyes J, Sowden AJ. Potential value of systematic reviews of qualitative evidence in informing user-centered health and social care: findings from a descriptive overview. Journal of clinical epidemiology. 2017;88:37-46. https://doi.org/10.1016/j.jclinepi.2017.04.020
43. Tricco AC, Antony J, Zarin W, Strifler L, Ghassemi M, Ivory J, et al. A scoping review of rapid review methods. BMC medicine. 2015;13(1):224. https://doi.org/10.1186/s12916-015-0465-6
44. Moher D, Schulz KF, Simera I, Altman DG. Guidance for developers of health research reporting guidelines. PLoS medicine. 2010;7(2):e1000217. https://doi.org/10.1371/journal.pmed.1000217
45. France, E.F., Cunningham, M., Ring, N., Uny, I., Duncan, E.A., Jepson, R.G., Maxwell, M., Roberts, R.J., Turley, R.L., Booth, A. and Britten, N.. Improving reporting of meta-ethnography: the eMERGe reporting guidance. BMC medical research methodology, 2019, 19(1), p.25. https://doi.org/10.1186/s12874-018-0600-0
46. Wong G, Greenhalgh T, Westhorp G, Buckingham J, Pawson R. RAMESES publication standards: meta-narrative reviews. BMC Med. 2013;11(1):20. https://doi.org/10.1186/1741-7015-11-20
47. Tong A, Flemming K, McInnes E, Oliver S, Craig J. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. BMC medical research methodology. 2012;12(1):181. https://doi.org/10.1186/1471-2288-12-181

48. Whiting P, Wolff R, Mallett S, Simera I, Savović J. A proposed framework for developing quality assessment tools. Systematic reviews. 2017;6(1):204. https://doi.org/10.1186/s13643-017-0604-6
49. Thorne S. Metasynthetic Madness:What Kind of Monster Have We Created? Qualitative Health Research. 2017;27(1):3-12. https://doi.org/10.1177/1049732316679370
50. Donnelly CA. BI, Campbell P., Craig C.., Vallance P., Walport M., Whitty C.J.M., Woods E., Wormald C. Four principles for synthesizing evidence. Nature. 2018;558(20 June).
51. Glenton C, Lewin S, Norris S. Using evidence from qualitative research to develop WHO guidelines (Chapter 15). World Health Organization Handbook for Guideline Development 2nd ed Geneva: WHO. 2016.
52. Booth A, Noyes J, Flemming K, Gerhardus A, Wahlster P, van der Wilt GJ, et al. Guidance on choosing qualitative evidence synthesis methods for use in health technology assessments of complex interventions. Integrate-HTA2016.
53. Carroll C. Qualitative evidence synthesis to improve implementation of clinical guidelines. BMJ. 2017;356:j80. https://doi.org/10.1136/bmj.j80