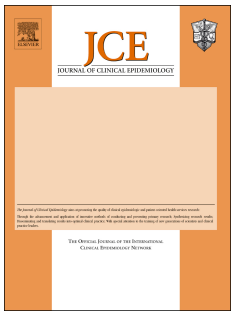

Article:
Pandor, A. orcid.org/0000-0003-2552-5260, Kaltenthaler, E., Martyn-St James, M. et al. (6 more authors) (2019) Delphi consensus reached to produce a decision tool for SelecTing Approaches forRapid Reviews (STARR). Journal of Clinical Epidemiology, 114. pp. 22-29. ISSN 0895-4356

https://doi.org/10.1016/j.jclinepi.2019.06.005

Accepted Manuscript



Delphi consensus reached to produce a decision tool for SelecTing Approaches for Rapid Reviews (STARR)

Abdullah Pandor, Eva Kaltenthaler, Marrissa Martyn-St James, Ruth Wong, Katy Cooper, Munya Dimairo, Alicia O'Cathain, Fiona Campbell, Andrew Booth

PII: S0895-4356(18)31098-9

DOI: https://doi.org/10.1016/j.jclinepi.2019.06.005

Reference: JCE 9917

To appear in: *Journal of Clinical Epidemiology*

Received Date: 14 December 2018

Revised Date: 18 April 2019

Accepted Date: 4 June 2019

Please cite this article as: Pandor A, Kaltenthaler E, Martyn-St James M, Wong R, Cooper K, Dimairo M, O'Cathain A, Campbell F, Booth A, Delphi consensus reached to produce a decision tool for SelecTing Approaches for Rapid Reviews (STARR), *Journal of Clinical Epidemiology* (2019), doi: https://doi.org/10.1016/j.jclinepi.2019.06.005.

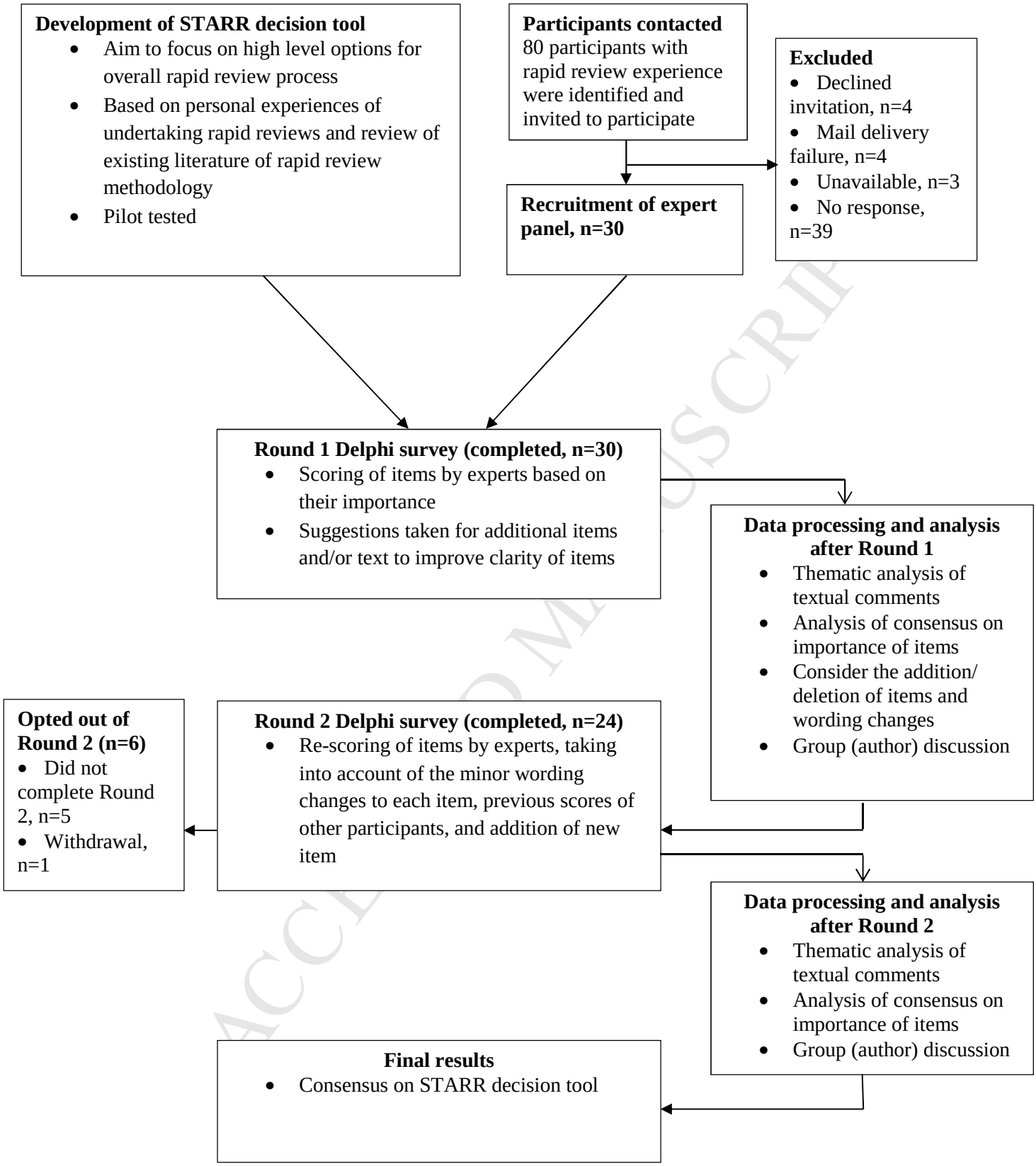


Figure 1: Summary of the Delphi process

Delphi consensus reached to produce a decision tool for SelecTing Approaches for Rapid Reviews (STARR)

Abdullah Pandor[1]*, Eva Kaltenthaler[1], Marrissa Martyn-St James[1], Ruth Wong[1], Katy Cooper[1], Munya Dimairo[1], Alicia O'Cathain[1], Fiona Campbell[1], Andrew Booth[1]

[1] School of Health and Related Research, University of Sheffield, Sheffield, S1 4DA, UK

*Corresponding author:
Tel: (+44) (0)114 222 0778
Fax: (+44) (0)114 222 0749
Email: a.pandor@sheffield.ac.uk

ABSTRACT

OBJECTIVES:

There are many rapid review methods; however, there is little pragmatic guidance on which methods to select. This study aimed to reach consensus among international rapid review experts outlining areas to consider when selecting approaches for rapid reviews.

STUDY DESIGN AND SETTING:

A two-round modified online Delphi survey was conducted between May and July 2018. Participants were asked to rank the importance of a predefined list of 19 items. A consensus definition of at least 70% agreement for each item was decided *a priori*.

RESULTS:

Thirty experts from ten countries participated in Round 1 and 24 in Round 2. During Round 1, consensus was reached on all items. One additional item on quality assessment was suggested by respondents and comments suggested wording changes to improve clarity and understanding of the tool. Respondents in the second round indicated a high level of importance and all 20 items achieved consensus. These items addressed interaction with commissioners, scoping and searching the evidence-base, data extraction and synthesis methods, and reporting of rapid review methods.

CONCLUSIONS:

International consensus was reached to produce the STARR decision tool for planning rapid reviews and will lead to improved shared understanding between review teams and review commissioners.

KEYWORDS:

Rapid Review, Delphi, Survey, Systematic Review, Consensus,

RUNNING TITLE:

SelecTing Approaches for Rapid Reviews (STARR): An international Delphi consensus study

WORD COUNT: 3082

What is new?

This article presents STARR, a new consensus-driven decision tool for selecting approaches for rapid reviews.

Key findings

- Through the Delphi approach, consensus among 24 international rapid review experts was reached to produce the STARR decision tool. The tool comprises 20 items across four key domains: interaction with rapid review commissioners (the person or group requesting the rapid review), scoping and searching the evidence base, data extraction and synthesis methods, and reporting of rapid review methods.
- The adoption of the STARR decision tool will help facilitate the planning of rapid reviews and improve shared understanding between review teams and review commissioners.

What this study adds to what was known

- This research provides a decision tool to support reviewers and commissioners in making decisions on which rapid review approaches to use**.**

What is the implication and what should change now

- STARR provides a useful template to structure decision making when selecting rapid review approaches, especially to those undertaking rapid reviews in health technology assessment (HTA).
- The robustness and practicality of this tool will need to be evaluated in the future.

1. INTRODUCTION

Rapid reviews are of increasing importance within evidence synthesis and health technology assessment (HTA) due to the need for timely evidence to underpin the assessment of new technologies [1]. Financial constraints have also contributed to the increase in rapid reviews. Rapid reviews streamline traditional systematic review methods in order to synthesise evidence within a shortened timeframe [1]. Broad approaches to speeding up the systematic review process include: a) adapting review processes, b) multiple reviewers working on the review in parallel and c) using new technologies and automation [2]. In this paper, we focus on adapting review processes.

There is no single accepted definition or standard approach for undertaking rapid reviews [2-5], although many methods for expediting review processes have been suggested [6]. A recent framework from the Oxford Centre for Evidence Based Medicine [7] suggests the following modifications to full systematic review methods: limiting the search strategy (e.g. sources, date and language); updating existing reviews; double-checking only a random sample for study selection and data extraction; using rapid or simple quality assessment tools; and limiting the synthesis methods. An international survey and Delphi study of rapid review experts [8] identified very similar modifications. Some studies have also compared rapid and systematic reviews; however, there is variation in findings in terms of whether and how rapid review methods impact on the results [7] [9] [10] [11].

Rapid review approaches therefore need to be adaptable and chosen to fit the needs of the review, each of which may have different challenges. Our recent paper outlined four important areas to consider when selecting rapid review methods [12]: interaction with commissioners (the person or group requesting the rapid review), scoping and searching the evidence base, data extraction and synthesis methods, and reporting of rapid review methods. Collaboration between those producing rapid reviews and commissioners is crucial to ensure that the needs of commissioners are met and limitations associated with the chosen methods are understood. Interaction with review commissioners is an iterative process throughout the planning and conduct of the review. Hartling et al. [3] note that rapid reviews rely on a close relationship with the end user to meet decision-making needs. Scoping work to understand the evidence base is important to ensure that the planned methods are feasible within the timescales available. This can also inform discussions with commissioners to further refine the review scope and methods. Data extraction and synthesis approaches can then be refined depending on the nature of the evidence and which elements are most important. Finally, clear reporting of the specific rapid review methods used, and their possible limitations is important for transparency [1].

Preliminary work by the authors has resulted in the development of the STARR (SelecTing Approaches for Rapid Reviews) decision tool to help reviewers select the most appropriate rapid

review approach [12]. To develop the tool, existing literature on rapid review methodology was reviewed and three case studies were examined (chosen because they had distinctly different evidence bases requiring different approaches to rapid review). The various approaches used (including reasons, strengths and weaknesses) were analysed and alternatives suggested. A set of key issues to consider when planning rapid reviews was developed from this analysis, forming the basis of the STARR decision tool. A full description of the methods used can be found in Kaltenthaler et al. [12, 13]. The aim of the tool is to outline broad high-level options for the overall rapid review process rather than specifying detailed methods. The STARR tool has already been applied and informal feedback from users [14] supports its potential to benefit those undertaking rapid reviews. The purpose of this study was to reach consensus among international rapid review experts to ensure the tool is fit for purpose and includes all relevant information for selecting a rapid review approach.

2. METHODS

2.1. The modified Delphi consensus approach

The Delphi method is a technique designed to elicit expert opinion to form a consensus from a group of experts, with key features being both anonymity and an iterative process [15, 16]. Anonymity allows for all opinions to be heard without peer pressure and/or conformity to a dominant view (bandwagon effect), which are often present within group-based discussions [17, 18]. Furthermore, the iterative or 'rounds-based' process involves repetitive administration of a series of questionnaires leading to a convergence of consensus opinion [15]. A modified version of this technique was adopted in this study. The questionnaire itself was originally developed via a consultative process (informed by previous rapid review experience and a review of existing literature on rapid review methodology) and framed around the decision tool developed by Kaltenthaler et al. [12]. Therefore, the initial step in the standard Delphi process to identify the items for inclusion was not considered to be relevant.

Before embarking on the online survey, the face validity of the questionnaire was pilot tested by seven independent researchers with expertise in rapid reviews from the University of Liverpool and the University of Sheffield. These researchers were not involved in the development of the decision tool. Based on the feedback received, some minor wording changes were made to the STARR tool (version 1) to improve clarity.

Rapid review experts were asked to complete an online survey, which was administered using Delphi Manager® software, developed by the COMET Initiative (http://www.comet-initiative.org/delphimanager/). All data were anonymised to maintain participant confidentiality. The study ethics was approved by the Research Ethics Committee of the School of Health and Related Research (ScHARR) at the University of Sheffield (ref: 017096). Further details of the protocol can be found at https://www.sheffield.ac.uk/scharr/sections/heds/sys_rev/rapid.

2.2. Participant recruitment

Experts were identified using a purposive sampling strategy. 'Expert' in this study was defined as any individual who had published a rapid review, as first/senior author in an English language peer reviewed journal since 2014 or had been involved in the development of rapid review methods. An initial list of individuals was identified through searches of electronic databases (e.g. Cochrane Library [including the HTA database], Scopus) and contacting key organisations undertaking rapid reviews (e.g. Cochrane Rapid Reviews Group and Health Technology Assessment international). We aimed to include authors from as many countries as possible. Email addresses were collected from personal contact lists and publicly available sources (e.g. organisational websites). All emails were personalised to individuals and all contacts were assured confidentiality of their responses, with the aim of encouraging participation and openness. There is no agreed method to statistically calculate a sample size for Delphi studies and no criteria against which a sample size choice could be judged [19, 20]. Thus, to ensure a response rate of around 30 participants, we aimed to invite at least 60 participants to participate in the survey. Informed consent was obtained from all participants during online registration for the survey, by providing participant information and requesting that participants indicate consent by clicking on the consent box. All participants were given the opportunity to withdraw from the study at any time.

2.3. Data collection and analysis

The survey was planned *a priori* to be conducted across a maximum of three rounds, and that a third round would be omitted in the event of consensus following the second round. All participants who had a verified email address not affiliated with the University of Sheffield were provided the following via email: participant information sheet, STARR decision tool (version 1), a link to the survey and study webpage (if further information was required). Non-responders or those failing to complete each round were sent a minimum of three email reminders, at one week intervals, per survey round. Data collection (quantitative rating score and qualitative feedback) took place between May 2018 and July 2018.

2.3.1. Round 1

The first round questionnaire consisted of two parts. In the first part, participants were asked to provide information on baseline characteristics (e.g. demographic data including gender, location, and experience of producing rapid reviews or involvement in rapid reviews methods work). In the second part, participants were provided with the STARR decision tool (version 1) and were asked to rate the importance of a predefined list of 19 items across four domains: (1) interaction with commissioners (2) understanding the evidence base (3) data extraction and synthesis methods and (4) reporting of rapid review methods, and a general question on the usefulness of the tool to help in the selection of

rapid review approaches. Importance of each item was rated on a scale of 1 (not important) to 9 (critically important) or unable to score. Item rating scores were descriptively analysed and used to investigate the distribution of scores in each round. Free text comment boxes at the end of each question also allowed participants to provide any additional comments; add, delete or modify items and/or provide suggestive terminology, words or phrases for the tool. This free text information was analysed through simple thematic analysis [21] and the results were used to refine the STARR decision tool for Round 2.

2.3.2. Round 2

After the first round of the survey, the STARR decision tool was edited (minor wording changes agreed by the study authors through discussion following the thematic analysis) and based on comments from experts, one new additional item relating to study quality assessment was included in the Round 2 questionnaire. All participants who participated in the first round were provided with a results package that included the overall panel frequency distribution for each item and their individual ratings. Participants were asked to reflect and rescore the importance of each item again having been shown the views of the other participants. A free text box was again available for comments after each item, if required.

All responses were collected in the Delphi Manager® software for initial tabulation and analysis. Subsequent outputs were produced in Microsoft Excel®. Descriptive statistics were calculated and used to investigate the distribution of scores. As there is no universal agreement on the level of predetermined measures of consensus [20] an initial consensus level was defined *a priori* and was considered achieved if there was at least 70% agreement on each item (i.e. at least 70% of participants scored 7 or above on the 9-point Likert scale). Where a participant did not provide a score, this value was recorded as missing and no imputation of missing values was conducted. **Figure 1** represents a summary of the Delphi process.

3. RESULTS

3.1. Description of participants and response rates

A total of 80 individuals who had published a rapid review or had been involved in the development of rapid reviews methods were invited to participate in the survey. Thirty (37.5%) of the invited participants from 11 different countries (mainly UK, Canada and Australia) completed Round 1 and 24 of these also completed Round 2. The majority (70.0%) of survey participants were based in academic institutions, had previously been involved in undertaking systematic reviews (93.3%) and/or rapid reviews (90.0%). A summary of the participants' characteristics is provided in **Table 1.**

3.2. Round 1

In Round 1, participant responses showed a high level of perceived importance and all 19 items (100%) achieved >70% consensus. No consensus had been reached on a general question (not part of the STARR decision tool) that assessed the importance of the tool to help select rapid review approaches. One additional item relating to quality assessment of studies in a rapid review was suggested by four participants in this round. The majority of comments from participants suggested minor wording changes to improve clarity and understanding of the STARR decision tool (**Appendix A**). After detailed discussion, the Delphi survey was amended to include 20 items and the STARR decision tool was revised (**Appendix B**). As the STARR decision tool aims to outline high level approaches to the rapid review process, comments related to defining detailed review methods were not incorporated within the tool. **Table 2** shows the ratings of the modified Delphi consensus for each item of the STARR decision tool.

3.3. Round 2

In Round 2, participant responses indicated an even higher degree of importance for each item compared with Round 1 and all 20 items (100%) achieved >70% consensus (**Table 2**). Although consensus had improved from 60% to 67% for the general item from Round 1, overall comments were positive about the STARR decision tool and no additional suggestions were made for improving the tool. As consensus had been reached for all but one item after Round 2 and to avoid survey fatigue [16], a third round was deemed unnecessary. A final version of the STARR consensus tool (version 2) is provided in **Appendix C.**

4. DISCUSSION

To the best of our knowledge, we have produced the first consensus-driven STARR decision tool using experts from a wide geographical location to aid review authors in planning and selecting approaches when conducting a rapid review. This knowledge translation tool will also improve a shared understanding between both review teams and review commissioners to negotiate a rapid review approach.

A key strength of the study is that the STARR decision tool was generated through a rigorous, iterative consensus process, showing it is widely supported by a panel of leading international rapid review experts (to facilitate the use of the tool, an accompanying user's guide is provided in **Appendix D**). The initial development step in the standard Delphi process was modified in that the content of the Delphi questionnaire in Round 1 was informed by previous rapid review experience and a review of existing literature on rapid review methodology and therefore focused on pragmatic issues that required consensus. Whilst this approach could bias the responses or limit the available options, this process can be considered more efficient and less time consuming than traditional Delphi

approaches [16]. In addition, participants were able to provide feedback in the free text boxes provided, which helped improve the decision tool for Round 2. Finally, as noted by Grant et al. [22], pre-specifying definitions of consensus is important in ensuring robustness of the Delphi studies. Our Delphi analysis pre-specified the criteria proposed by Diamond et al. [23] in that we clearly stated our objective (to validate the STARR decision tool to reflect the consensus view of experts) and specified in advance how participants would be selected and how consensus would be defined *a priori* (at least 70% of participants scoring between 7 and 9 on each item).

Our study has some limitations. The consensus level of at least 70% was not reached on a general question, which assessed the importance of the tool to help select rapid review approaches. Although this question was not part of the STARR decision tool, most experts (67% consensus agreement) perceived the tool to be important in aiding the selection of rapid review approaches. Further iterations may have resulted in additional modifications to the decision tool but due to the time consuming Delphi process, limited resources, and to avoid survey fatigue [16], a third round was deemed unnecessary (this was planned *a priori*).We aim to obtain feedback on the tool through our website (https://www.sheffield.ac.uk/scharr/sections/heds/sys_rev/rapid) and subsequent workshops. In addition, we did not include a consensus conference meeting or online discussion among participants as part of our modified Delphi approach. Whilst this may have prevented the participants from providing direct feedback in a group setting, anonymity was preserved, thus minimising the bandwagon effect [17, 18]. Recruitment and response biases may also have been present, with those recruited and participating being those most committed and positive about rapid reviews. In addition, three participants who had no experience of undertaking rapid reviews participated (probably cascaded inadvertently by an original contact) in the Delphi survey. However, due to the need to ensure confidentiality, it was not feasible to exclude these participants from the survey. In this study, a response rate of 37.5% (30/80 participants) was achieved in Round 1 and 30.0% (24/80 participants) in Round 2. Although, there is no universal agreement or definition of small or large samples sizes for Delphi studies, the majority of Delphi studies have used between 15 and 20 respondents and the expertise of the panel is considered to be more important than sample size [15, 24, 25]. Finally, some participants did not complete all sections of the Delphi survey. As a result, calculation of response rates was based on the number of responses received for each item and not the number of participants contacted.

The findings of this study will help authors to produce rapid reviews that are feasible within the timescales allowed, and that they are understandable, transparent and reproducible, fit for purpose and of high quality. Commissioners of reviews will also benefit from the use of the STARR decision tool to plan rapid reviews. Working with the reviewers who will undertake the rapid review, commissioners will develop a better understanding of the decisions that need to be made in order to

ensure that a review is timely, fit for purpose and remains within the resource constraints of the review. Although some of the terms in the STARR decision tool may be unfamiliar to commissioners, the reviewer can use the tool to act as a template to guide the commissioner through the review process.

Existing literature on rapid review methods tends to focus on various approaches and specific techniques for undertaking a rapid review. The STARR decision tool has a slightly different focus as it outlines broad high-level options for the overall rapid review process rather than specifying detailed methods. Our tool highlights the importance of interaction with review commissioners. This is vitally important to ensure that the review meets the required purpose and is feasible within the given timescales [3]. Our tool notes that interaction with commissioners is often an iterative process throughout the planning and conduct of a rapid review. The tool also covers understanding the evidence base, which is important when planning many aspects of the rapid review, including the scope, the final search methods, and the data extraction and synthesis methods. This understanding can help inform which of the more detailed rapid review methods to select. Finally, given the range of methods available [6], our tool is in agreement with other rapid review literature on the importance of reporting the rapid review methods used and their potential limitations [5].

In conclusion, this study presents the STARR decision tool for rapid reviews, based on a rigorously conducted Delphi study among international rapid review experts. The adoption of the STARR decision tool will help facilitate the planning of rapid reviews and improve shared understanding between review teams and review commissioners. The robustness and practicality of this tool will need to be evaluated in the future.

Acknowledgements

The authors would like to thank Delphi participants (who agreed to named acknowledgement): Alison Eastwood, Andrea Ryce, Andrea Tricco, Annie Topping, Antonella Negro, Chantelle Garritty, Clive Henn, Dennis Watson, Elaine Toomey, Gerlinde Pilkington, Ginny Brunton, Giorgina Piccoli, Jane Phillips, Julian Little, Kay Nolan, Lisa Jones, Lynn Monrouxe, Mark Harris, Mark Rodgers, Michelle Haby, Michelle Pollock, Paul Hunter, Peter Bragge, Sarah Kelly, Shannon Kelly, Siti Rizny, Susanna Maltoni, Tim Luckett and all remaining participants for their time, effort and expertise. The authors also extend their thanks to Rumona Dickson, Ruaraidh Hill, Sue Harnan and all other pilot testers of the Delphi survey.

Contributors

EK co-ordinated the study. All authors were responsible for conception and design of the study, obtaining funding, undertaking the survey and analysing and interpreting the data. AP, EK, MMSJ, RW and KC were responsible for the drafting of this paper, although all authors provided comments on the drafts and read and approved the final version. AP is the guarantor for the paper.

Declarations of interest

None

Funding

This work was funded by the School of Health and Related Research, University of Sheffield, UK

References

[1] Ganann R, Ciliska D, Thomas H. Expediting systematic reviews: methods and implications of rapid reviews. Implement Sci. 2010;5:56.

[2] Tsertsvadze A, Chen YF, Moher D, Sutcliffe P, McCarthy N. How to conduct systematic reviews more expeditiously? Syst Rev. 2015;4:160.

[3] Hartling L, Guise JM, Kato E, Anderson J, Belinson S, Berliner E, et al. A taxonomy of rapid reviews links report types and methods to specific decision-making contexts. J Clin Epidemiol. 2015;68:1451-62 e3.

[4] Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. The Cochrane Collaboration; 2011. Available from www.handbook.cochrane.org.

[5] Polisena J, Garritty C, Kamel C, Stevens A, Abou-Setta AM. Rapid review programs to support health care and policy decision making: a descriptive analysis of processes and methods. Syst Rev. 2015;4:26.

[6] Tricco AC, Antony J, Zarin W, Strifler L, Ghassemi M, Ivory J, et al. A scoping review of rapid review methods. BMC Med. 2015;13:224.

[7] Pluddemann A, Aronson JK, Onakpoya I, Heneghan C, Mahtani KR. Redefining rapid reviews: a flexible framework for restricted systematic reviews. BMJ Evid Based Med. 2018;23:201-203.

[8] Tricco AC, Zarin W, Antony J, Hutton B, Moher D, Sherifali D, et al. An international survey and modified Delphi approach revealed numerous rapid review methods. J Clin Epidemiol. 2016;70:61-7.

[9] Reynen E, Robson R, Ivory J, Hwee J, Straus SE, Pham B, et al. A retrospective comparison of systematic reviews with same-topic rapid reviews. J Clin Epidemiol. 2018;96:23-34.

[10] Taylor-Phillips S, Geppert J, Stinton C, Freeman K, Johnson S, Fraser H, et al. Comparison of a full systematic review versus rapid review approaches to assess a newborn screening test for tyrosinemia type 1. Res Synth Methods. 2017;8:475-84.

[11] Martyn-St James M, Cooper K, Kaltenthaler E. Methods for a rapid systematic review and metaanalysis in evaluating selective serotonin reuptake inhibitors for premature ejaculation. Evidence & Policy. 2017;13:517-38.

[12] Kaltenthaler E, Cooper K, Pandor A, Martyn-St James M, Chatters R, Wong R. The use of rapid review methods in health technology assessments: 3 case studies. BMC Med Res Methodol. 2016;16:108.

[13] Kaltenthaler E, Cooper K, Martyn-St James M, Pandor A, Wong R. From evidence to action - Rapid review methods for HTA (Workshop, WS23). Health Technology Assessment International (HTAi) Annual Meeting. Vancouver, Canada; 2018; https://www.xcdsystem.com/htai/program/TSmTaZQ/ (accessed 4 March 2019).

[14], Negro A, Camerlingo M, Maltoni S,Trimaglio F. Challenges of rapid reviews in HTA - Case study from an Italian region (Abstract PP097). Health Technology Assessment International (HTAi)

Annual Meeting. Rome, Italy; 2017 International Journal of Technology Assessment in Health Care. 2017; 33 (Special issue S1): 117-118..

[15] Hsu CC, Snadford BA. The Delphi technique: Making sense of consensus. Practical Assessment, Research and Evaluation. 2007;12:1-8.

[16] Keeney S, Hasson F, McKenna H. Consulting the oracle: ten lessons from using the Delphi technique in nursing research. J Adv Nurs. 2006;53:205-12.

[17] Asch SE. Studies of independence and conformity: 1. A minority of one against a unanimous majority. Psychological Monographs: General and Applied. 1956;70:1-70.

[18] Milgram S. Behavioral study of obedience. J Abnorm Psychol. 1963;67:371–8.

[19] Akins RB, Tolson H, Cole BR, . Stability of response characteristics of a Delphi panel: application of bootstrap data expansion. BMC Med Res Methodol. 2005;5:37.

[20] Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. J Adv Nurs. 2000;32:1008-15.

[21] Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3:77–101.

[22] Grant S, Booth M, Khodyakov D. Lack of preregistered analysis plans allows unacceptable data mining for and selective reporting of consensus in Delphi studies. J Clin Epidemiol. 2018;99:96-105.

[23] Diamond IR, Grant RC, Feldman BM, Pencharz PB, Ling SC, Moore AM, et al. Defining consensus: a systematic review recommends methodologic criteria for reporting of Delphi studies. J Clin Epidemiol. 2014;67:401-9.

[24] Murphy MK, Black NA, Lamping DL, McKee CM, Sanderson CF, Askham J, et al. Consensus development methods, and their use in clinical guideline development. Health Technol Assess. 1998;2:1-88.

[25] Okoli C, Pawlowski SD. The Delphi method as a research tool: an example, design considerations and applications. Information & Management. 2004;42:15-29.

Tables

Figure legends

Appendices

Participant characteristics	Count	
	Round 1 (N=30)	Round 2 (N=24)
Gender		
Male	8 (27%)	7 (29%)
Female	22 (73%)	17 (71%)
Organisation		
University or college	21 (70%)	18 (75%)
Government	4 (13%)	3 (13%)
Other	5 (17%)	3 (13%)
Country of employment		
Australia	5 (17%)	3 (13%)
Canada	6 (20%)	5 (21%)
France	1 (3%)	1 (4%)
Indonesia	1 (3%)	1 (4%)
Ireland	1 (3%)	1 (4%)
Italy	2 (7%)	2 (8%)
Mexico	1 (3%)	1 (4%)
South Africa	1 (3%)	1 (4%)
Taiwan	1 (3%)	0 (0%)
United Kingdom	10 (33%)	8 (33%)
USA	1 (3%)	1 (4%)
Experience in undertaking systematic reviews		
1-5 years	7 (23%)	5 (21%)
6-10 years	5 (17%)	4 (17%)
Over 10 years	16 (53%)	13 (54%)
Never	1 (3%)	1 (4%)
No response	1 (3%)	1 (4%)
Number of rapid reviews undertaken		
No rapid reviews	3 (10%)	2 (8%)
1-3 rapid reviews	11 (37%)	9 (38%)
4-7 rapid reviews	9 (30%)	7 (29%)
8 or more rapid reviews	7 (23%)	6 (25%)
Involvement in rapid review methods work	16 (53%)	16 (67%)

Table 1: Characteristics of the Delphi survey participants in Round 1 and Round 2

Item / Dimension	Question	Consensus agreement [a]	
		Round 1	Round 2
General	How important is it to have a decision tool to help in the selection of rapid review approaches?	18/30 (60%)	16/24 (67%)
Interaction with commissioners			
1	How important is the section: Interaction with commissioners in the decision tool?	25/30 (83%)	23/24 (96%)
2	How important is the description of the section: Interaction with commissioners?	23/30 (77%)	22/24 (92%)
3	How important is the sub-section: Review focus?	29/30 (97%)	24/24 (100%)
4	How important is the sub-section: Restricting the scope?	28/30 (93%)	24/24 (100%)
5	How important is the sub-section: Breadth versus depth?	27/30 (90%)	24/24 (100%)
Understanding the evidence base			
6	How important is the section: Understanding the evidence base in the decision tool?	25/28 (89%)	23/24 (96%)
7	How important is the description of the section: Understanding the evidence base?	22/28 (79%)	23/24 (96%)
8	How important is the sub-section: Volume and type of evidence?	23/28 (82%)	21/23 (91%)
9	How important is the sub-section: Final review searches?	25/28 (89%)	21/23 (91%)
Data extraction and synthesis methods			
10	How important is the section: Data extraction and synthesis methods in the decision tool?	23/28 (82%)	22/23 (96%)
11	How important is the description of the section: Data extraction and synthesis methods?	20/28 (71%)	21/23 (91%)
12	How important is the sub-section: Existing systematic reviews?	20/28 (71%)	21/23 (91%)
13	How important is the sub-section: Most important outcomes?	23/28 (82%)	22/23 (96%)
14	How important is the sub-section: Quality assessment	N/A	19/23 (83%)
15	How important is the sub-section: Synthesis approach?	21/28 (75%)	21/23 (91%)
16	How important is the sub-section: Data presentation?	20/28 (71%)	22/23 (96%)
Reporting of rapid review methods			
17	How important is the section: Reporting of rapid review methods in the decision tool?	24/27 (89%)	23/23 (100%)
18	How important is the description of the section: Reporting of rapid review methods?	22/27 (81%)	22/23 (96%)
19	How important is the sub-section: Description of methods?	24/27 (89%)	22/23 (96%)
20	How important is the sub-section: Discussion of limitations?	24/27 (89%)	22/23 (96%)

N/A, not applicable

[a] Consensus achieved if there was at least 70% agreement across each item (i.e. at least 70% of participants scored 7 or above on the 9-point Likert scale which ranged from not important [scores 1 to 3], important but not critical [scores 4 to 6] to critically important [scores 7 to 9]).

Table 2: Modified Delphi questionnaire - Round 1 and Round 2 consensus results

HIGHLIGHTS

What is new?

This article presents STARR, a new consensus-driven decision tool for selecting approaches for rapid reviews.

Key findings

- Through the Delphi approach, consensus among 24 international rapid review experts was reached to produce the STARR decision tool. The tool comprises 20 items across four key domains: interaction with rapid review commissioners (the person or group requesting the rapid review), scoping and searching the evidence base, data extraction and synthesis methods, and reporting of rapid review methods.
- The adoption of the STARR decision tool will help facilitate the planning of rapid reviews and improve shared understanding between review teams and review commissioners.

What this study adds to what was known

- This research provides a decision tool to support reviewers and commissioners in making decisions on which rapid review approaches to use**.**

What is the implication and what should change now

- STARR provides a useful template to structure decision making when selecting rapid review approaches, especially to those undertaking rapid reviews in health technology assessment (HTA).
- The robustness and practicality of this tool will need to be evaluated in the future.