Using rapid reviews to strengthen health policy and systems and progress towards universal health coverage

Etienne V Langlois,1 Sharon E Straus,2,3 Jesmin Antony,3 Valerie J King,4 Andrea C Tricco3,5

As many countries are developing policies addressing universal health coverage (UHC) and the Sustainable Development Goals, there is increasing demand for relevant and contextualised evidence to inform health policy and systems decision-making.3 Policy-makers and health systems managers require valid evidence to support time-sensitive decisions regarding the coverage, quality, efficiency and equity of health systems. There are several health system challenges for which decision-makers require timely evidence, including integrated service delivery models, effective health financing schemes and equitable access to quality health systems interventions (table 1). Progressing towards UHC requires evidence to address a range of questions including the effectiveness of health systems interventions and policies, how and in what settings these interventions work, their cost-effectiveness, as well as the legal, ethical and societal implications of implementing these interventions.2,3

Systematic reviews and other types of knowledge synthesis are a powerful and scientifically sound approach to collate and analyse health systems evidence.4,5 Knowledge synthesis is increasingly being used to inform health policy and systems decision-making globally.2 However, the time and cost to produce a systematic review is often a barrier to its use in strategic decision-making.6,7

Rapid reviews have emerged as an efficient solution to support health policy-making and health systems strengthening by providing high-quality evidence in a timely and cost-effective manner.6,8 They are a type of knowledge synthesis in which the steps of the systematic review are methodologically tailored (eg, streamlined or accelerated) to the knowledge user’s needs, producing relevant evidence in a shorter timeframe.5 Currently, there is no consensus on the timeline that would qualify a review as being ‘rapid’,10 but it has been suggested that most rapid reviews are conducted within 12 weeks.11 In times of emergency such as an emerging disease outbreak, rapid reviews can provide key evidence to make crucial decisions about health systems responses.12,13 Expediting knowledge synthesis is also essential for health systems strengthening in routine situations in which informed decisions are needed to enhance population health.8

The Rapid Reviews to Strengthen Health Policy and Systems: a Practical Guide provides pragmatic guidance on how to conduct rapid reviews and support their use to inform health
and middle-income countries (LMICs). This open-access guide provides practical recommendations on different approaches and methods for expedited knowledge synthesis. The primary target audience includes researchers, decision-makers (eg, policy-makers, health systems managers and policy analysts), and commissioners and funders of reviews.

Rapid reviews often arise directly from requests by knowledge users, including policy-makers and other health system decision-makers. This demand-driven feature contributes to their usability to strengthen local health systems by directly responding to pressing policy issues. Rapid reviews typically provide evidence that has been contextualised to a specific health system setting in response to specific objectives, thus increasing their relevance and promoting their applicability for decision-making. Furthermore, there is increasing experience in establishing ‘rapid response services’ worldwide, including in LMICs, where researchers respond to queries from decision-makers through rapid evidence products. This is a promising avenue to support evidence-informed policy-making and health systems strengthening globally.

Given its emerging influence on policy, it is important to understand the methods involved; however, no methodological ‘one-size-fits-all’ approach exists to conduct rapid reviews. Depending on the need of decision-makers and the availability of resources, different mechanisms can be used to enhance the timeliness of reviews, and these mechanisms can be used independently or concurrently (table 2). Narrowing the scope of a review by limiting the number of questions, interventions and outcomes considered, for instance, is the most common way to address time constraints associated with conducting a rapid review. Other potential streamlined methods include limiting the literature search dates, language or number of electronic databases searched; using one reviewer to perform study selection, risk-of-bias assessment and data abstraction (with or without verification by another reviewer); and providing a descriptive summary of results according to the research question rather than a quantitative summary or formal qualitative analysis. Examples of automation of review steps include automated full-text screening based on machine-learning algorithms and some level of automated data extraction. However, there is little empirical evidence about the implications of innovative technologies on the validity of the review. For instance, some steps, like initial study screening, may be easier to automate than steps requiring more nuanced decisions, such as assessing risk of bias.

As the timing, number and degree of streamlined methods used can vary from one rapid review to the next, researchers are encouraged to be transparent about their methodological choices and involve decision-makers to make sure the resulting evidence fits its intended purpose. Clear reporting of methods is also encouraged because the validity of different rapid review methods is unknown. Only a few empirical studies have compared the findings of rapid reviews and systematic reviews on the same topic, and their results are inconclusive, leaving questions about the level of bias that may be introduced by using streamlined methods. Therefore, the impact of methodological decisions on the quality of rapid review results should be considered and strategies to increase rigour employed when feasible.

Table 1 Examples of health system challenges and relevant rapid reviews

| Health system challenge | Evidence need example | Rapid review |
|-------------------------|-----------------------|--------------|
| Person-centred and integrated service delivery | Prevention and management of mental health disorders in primary healthcare | Rapid review on the aspects of primary health care that are effective in preventing, recognising and managing mental health issues across the lifespan, the people for whom these interventions work, in what circumstances and for what reasons |
| Access to and use of healthcare services in LMICs | Demand-side policies and interventions for maternal and neonatal health in LMICs | Rapid review of the impact of demand-side intervention on use of services and health outcomes for mothers and neonates |
| Equitable access to medicines and other healthcare interventions | Integration of e-mental health interventions in health systems | Rapid review of the evidence on digital interventions for mental health (including their applications, strengths and limitations) in relation to integration in healthcare systems |

LMIC, low-income and middle-income country.

Table 2 Mechanisms to enhance the timeliness of reviews

| Mechanism | Description |
|-----------|-------------|
| Narrowing the scope | Limiting the number of populations, interventions and outcomes considered |
| Parallelisation of tasks | Increasing the intensity of work on review processes where multiple reviewers simultaneously complete review steps, for example, eligibility screening, data abstraction and risk-of-bias assessment |
| Using review shortcuts | One or more systematic review steps may be reduced or omitted |
| Automating review steps | Developing, adapting and using new technologies to fast-track the standard systematic review steps, for example, screening or data abstraction |
The quality and efficiency of rapid reviews can be improved during the study selection, data abstraction and quality assessment phases of a review. Clearly defined inclusion/exclusion criteria, explanation and elaboration materials that provide relevant examples, as well as training and calibration exercises to ensure a standard process is used across the review team are examples of ways to increase rigour. In addition, the support of experienced reviewers, content experts and authors of the studies included in the rapid review are highly recommended.

Some methods are better suited to balancing the urgency of rapid reviews with the need for precision. An approach recommended when beginning a rapid review of health policy and systems research is to first scope the literature (ie, develop a broad question and map the existing evidence) and then select a focus (ie, refine/narrow the review question). Next, a health policy and systems framework should be identified to study complex questions based on targeted questions or existing theories. Moreover, collaboration across disciplines and areas of expertise is valuable to a rapid review and can enhance the review process.

In addition, engaging policy-makers and health systems managers in rapid reviews may increase the relevance and applicability of the reviews to the decision-making process. Rapid reviews can be considered fit-for-purpose research outputs of an iterative process between knowledge users and producers. There are many ways in which researchers can engage decision-makers, such as at the question or protocol stage or at the end of project stage, where they can help frame key messages and disseminate results. Furthermore, engagement can take place at multiple steps of the rapid review process, which is a form of integrated knowledge translation whereby the knowledge users co-produce evidence along with the research team.

Although engagement with policy-makers or health systems managers throughout the rapid review is encouraged, such extensive involvement necessitates additional time and resources and the availability of decision-makers. As such, the level of engagement should be meaningful, yet tailored to available resources, and will depend on the objectives of engagement, points in the review process when engagement is necessary, and the modes of engagement available (eg, in-person, telephone, webinars).

An increasing number of rapid reviews are being produced and used in LMICs to support decision-making, but progress has been slow mainly due to a lack of political, economic and scientific support. Rapid review production and impact are limited because of the wide variation in their definitions, methods and applicability; the poor understanding and acceptability; and insufficient resources in LMICs to produce and sustain them. Approaches to help overcome these challenges include a focus on addressing methodological concerns with both researchers and knowledge users; mobilising and sustaining human, financial and other resources; and raising the profile of rapid reviews in these countries. Experienced, permanent staff with the right skill mix, including systematic reviewers, information specialists, methodologists, stakeholder engagement and content experts, are essential to foster the conduct of rapid reviews. Supportive systems, structures and resources also need to be developed and mobilised to share the knowledge that arises from producing these reviews in LMICs.

For rapid reviews to be valuable to stakeholders, review findings should be reported clearly and communicated in a way that fits the practical need and context of knowledge users. To produce tailored rapid review reports and guidelines, a plan can be developed early in the rapid review process and should involve the direct input of the primary knowledge users. Despite steps taken to disseminate clear and relevant rapid review products, not all decision-makers will use them to inform their decisions. Some of the barriers to uptake include the belief that the results of a rapid review are not valid, a lack of understanding of how to identify and access relevant rapid reviews, and a lack of skills to assess or interpret rapid reviews. In contrast, some of the facilitators include establishing collaborations between researchers and policy-makers or health systems managers, providing education about the validity of rapid reviews, and providing training on how to identify rapid reviews and interpret their findings.

In addition, when preparing a rapid review report for decision-makers, researchers can present the content of the report in a user-friendly manner, use a one-page plain-language summary and provide simple one-page tables to facilitate uptake. However, many of these strategies have not been evaluated in comparative studies. As such, the strategies that producers use to increase the uptake of rapid reviews should be tailored to available resources and the needs of decision-makers.

Expedited knowledge synthesis of health policy and systems research comes with several challenges. For instance, reviews of health systems reforms often involve a variety of interventions, policies and health systems settings. The time it takes to assess and understand this complex evidence poses a challenge to the swift conduct of rapid reviews. Another challenge facing rapid review stakeholders is maintaining methodological rigour while simplifying or omitting components of the traditional review process. In order to find a balance between timeliness and rigour, future research is needed on the accuracy, comprehensiveness and potential risk of bias associated with using rapid review methods. Further priorities in the field also include enhancing coordination in rapid review production, improving the reporting of methods and findings, as well as supporting institutional capacity to generate and use rapid reviews.

Nevertheless, rapid reviews are increasingly recognised as an important component of the evidence-informed approach to decision-making. We believe that the recommendations put forth in the Practical Guide will be useful in the planning, commissioning and conduct of
policy-relevant reviews, with a view of fostering the use of context-sensitive evidence to strengthen local health systems and support policies aiming to advance UHC.

Acknowledgements We would like to thank Susan Le for compiling and formatting table 2 and Krystle Amog for formatting the paper.

Collaborators Susan Le; Krystle Amog.

Contributors EVL drafted the first version of the manuscript. JA summarised the content of the Practical Guide’s chapters. ACT and SES reviewed the paper critically for important intellectual content. ACT, EVL and SES are co-editors of the Rapid Reviews to Strengthen Health Policy and Systems: a Practical Guide. VJK is the lead author of the guide’s chapter on ‘Performing rapid reviews’. All authors read and approved the final manuscript.

Funding The Practical Guide was funded by the Alliance for Health Policy and Systems Research, an international partnership hosted by WHO, with support from the Norwegian Government Agency for Development Cooperation (Norad), the Swedish International Development Cooperation Agency (Sida) and the UK Department for International Development (DFID). ACT is funded by a Tier 2 Canada Research Chair and SES is funded by a Tier 1 Canada Research Chair.

Competing interests The authors of this paper are editors of the Rapid Reviews to Strengthen Health Policy and Systems: a Practical Guide.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement No additional data are available.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/

REFERENCES

1. World Health Organization. International bank for reconstruction and development / The World Bank. Healthy systems for universal health coverage—a joint vision for healthy lives. Geneva, 2017.
2. Bosch-Capblanch X, Lavis JN, Lewin S, et al. Guidance for evidence-informed policies about health systems: rationale for and challenges of guidance development. PLoS Med 2012;9:e1001185.
3. Lavis JN. How can we support the use of systematic reviews in policymaking? PLoS Med 2009;6:e1000141.
4. Oxman AD, Lavis JN, Lewin S, et al. Support tools for evidence-informed health policymaking (STP) 1: what is evidence-informed policymaking? Health Res Policy Syst 2009;7 Suppl 1(Suppl 1).
5. Tricco AC, Zarin W, Ghasssemi M, et al. Same family, different species: methodological conduct and quality varies according to purpose for five types of knowledge synthesis. J Clin Epidemiol 2018;96:133–42.
6. Tricco AC, Antony J, Zarin W, et al. A scoping review of rapid review methods. BMC Med 2015;13:224.
7. Oliver K, Innavar S, Lorenz T, et al. A systematic review of barriers to and facilitators of the use of evidence by policymakers. BMC Health Serv Res 2014;14:2.
8. Polisena J, Garrity C, Karmel C, et al. Rapid review programs to support health care and policy decision making: a descriptive analysis of processes and methods. Syst Rev 2015;4:26.
9. Tricco AC, Langlois EV, Straus SE. Rapid reviews to strengthen health policy and systems: a practical guide. Geneva: World Health Organization, 2017.
10. Khangura S, Konnyu K, Cushman R, et al. Evidence summaries: the evolution of a rapid review approach. Syst Rev 2012;1:10.
11. Tricco AC, Zarin W, Antony J, et al. An international survey and modified Delphi approach revealed numerous rapid review methods. J Clin Epidemiol 2016;70:61–7.
12. Tsertsavdzse A, Chen YF, Moher D, et al. How to conduct systematic reviews more expeditiously? Syst Rev 2015;4:160.
13. World Health Organization. WHO Handbook for Guideline Development. 2nd edn. Geneva, Switzerland: World Health Organization, 2014.
14. Mijumbi RM, Oxman AD, Panisset U, et al. Feasibility of a rapid review response mechanism to meet policymakers’ urgent needs for research evidence about health systems in a low income country: a case study. Implementation Science 2014;9:114.
15. Tsafnat G, Glazsiou P, Chong K, et al. Systematic review automation technologies. Syst Rev 2013;2:74.
16. Haby MM, Chapman E, Clark R, et al. What are the best methodologies for rapid reviews of the research evidence for evidence-informed decision making in health policy and practice: a rapid review. Health Res Policy Syst 2016;14:83.
17. Abravitch A, Atkinson MM, Attia A, et al. Methods for developing evidence reviews in short periods of time: a scoping review. PLoS One 2016;11:e0165903.
18. Reynen E, Robson R, Ivory J, et al. A retrospective comparison of systematic reviews with some-topic rapid reviews. J Clin Epidemiol 2018;96:23–34.
19. Robson RC, Pham B, Hwee J, et al. Few studies exist examining methods for selecting studies, abstracting data, and appraising quality in a systematic review. J Clin Epidemiol 2019.
20. Booth A, Carroll C. How to build up the actionable knowledge base: the role of ‘best fit’ frameworks? Syst Rev 2013;2:10.
21. De Silva MJ, Breuer E, Lee L, et al. Theory of change: a theory-driven approach to enhance the Medical Research Council’s framework for complex interventions. Trials 2014;15:267.
22. Tricco AC, Zarin W, Rios P, et al. Engaging policy-makers, health system managers, and policy analysts in the knowledge synthesis process: a scoping review. Implement Sci 2018;13:31.
23. Mijumbi RM, Oxman AD, Panisset U, et al. Feasibility of a rapid response mechanism to meet policymakers’ urgent needs for research evidence about health systems in a low income country: a case study. Implement Sci 2014;9:114.
24. Featherstone RM, Dryden DM, Foisy M, et al. Advancing knowledge of rapid reviews: an analysis of results, conclusions and recommendations from published review articles examining rapid reviews. Syst Rev 2015;4:50.
25. Kelly SE. Deconstructing rapid reviews: an exploration of knowledge, traits and attitudes [Doctoral dissertation]. University of Ottawa, 2015.
26. Tricco AC, Cardoso R, Thomas SM, et al. Barriers and facilitators to uptake of systematic reviews by policy makers and health care managers: a scoping review. Implement Sci 2016;11:4.
27. Bunting B, Burton E, Ferry F. Rapid review of mental health in primary care. What aspects of primary care are effective in the prevention, recognition and management of mental health issues across the lifespan; for whom do they work, in what circumstances and why?. Ulster, UK: University of Ulster and HSC Public Health Agency, 2017.
28. Hurst TE, Semrau K, Patna M, et al. Demand-side interventions for maternal care: evidence of more use, not better outcomes. BMC Pregnancy Childbirth 2015;15.
29. Lai S, Adair CE. E-mental health: a rapid review of the literature. Psychiatr Serv 2014;65:24–32.