

RAPID REVIEWS
TO STRENGTHEN
HEALTH POLICY
AND SYSTEMS:
**A PRACTICAL
GUIDE**

EDITED BY:

ANDREA C. TRICCO
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SHARON E. STRAUS



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Rapid reviews to strengthen health policy and systems: a practical guide / Andrea C. Tricco, Etienne V. Langlois and Sharon E. Straus, editors

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PREFACE

As the global health community is pushing for ambitious reforms towards universal health coverage and health equity in the era of Sustainable Development Goals (SDGs), there is increasing demand for relevant, contextualized evidence to strengthen health policy and systems.

Governments worldwide increasingly recognize the need for knowledge synthesis to inform health policymaking and health systems decision-making in routine, as well as emergency contexts. Rapid reviews are an efficient solution to support health policy and systems decision-making by providing high-quality evidence in a timely and cost-effective manner.

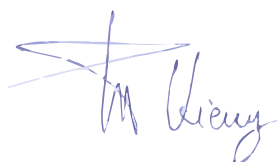
Rapid reviews are also increasingly recognized as an optimal approach to generate the necessary contextualized knowledge relevant to different health systems settings, thus promoting their applicability for decision-making. Rapid reviews often stem directly from requests by end-users, including policymakers and health system decision-makers. This demand-driven feature also contributes to their usability to strengthen local health systems and respond to pressing policy decisions.

Furthermore, there is increasing experience globally in establishing “rapid response services,” whereby researchers respond to queries from policy-makers or health systems managers through rapid evidence products. This is a promising avenue to support evidence-informed policy-making globally.

Yet, there is a paucity of guidance on the conduct, contextualization, and use of rapid reviews, particularly in relation to complex health policy and systems evidence. There is also a need for capacity strengthening in low- and middle-income countries in the field of evidence synthesis and rapid reviews more specifically.

Rapid Reviews to Strengthen Health Policy and Systems: a Practical Guide aims to address this gap by providing guidance on how to conduct rapid reviews and support their use to inform health policy and systems decisions. The guide also aims to provide practical recommendations on the conduct of rapid reviews to facilitate their use in decision-making. At the same time, key challenges in fast-tracking knowledge synthesis processes and applying them to complex issues pertaining to health policy-making and health system strengthening are described.

This Practical Guide was developed as a global public good of relevance to both the research and policy communities. I anticipate it will provide useful guidance to support knowledge synthesis and evidence-informed policy- and decision-making worldwide.



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EXECUTIVE SUMMARY

Health systems worldwide face increasingly complex challenges that require the generation and synthesis of knowledge in limited amounts of time. Policy-makers require valid evidence to support time-sensitive decisions regarding the coverage, quality, efficiency and equity of health systems. Systematic reviews and other types of evidence syntheses are increasingly employed to inform policy-making and produce guidance for health systems. However, the time and cost to produce a systematic review is often a barrier to its use in health policy and systems decision-making.

Rapid reviews have emerged as a useful approach to provide actionable and relevant evidence in a timely and cost-effective manner. Rapid reviews are a type of knowledge synthesis for which the steps of the systematic review are streamlined or accelerated to produce evidence in a shortened timeframe. In a range of circumstances, there is value in accelerating the review process and fast-tracking knowledge synthesis for pressing policy and systems decisions. In times of emergency and crisis for instance, rapid reviews can provide strategic evidence to make crucial decisions about health systems response. Expediting evidence synthesis is also essential for health systems strengthening beyond emergencies, in different routine situations in which policy-makers and managers need to make informed decisions about health systems.

Rapid Reviews to Strengthen Health Policy and Systems: A Practical Guide offers a rationale for the conduct and uptake of rapid reviews to support health policy and systems decisions. The publication provides guidance on how to plan, conduct, and promote the use of rapid reviews to strengthen health policy and systems. The Guide explores different approaches and methods for expedited synthesis of health policy and systems research, and highlights key challenges for this emerging field, including its application in low- and middle-income countries. This publication does not provide a one-size-fits-all approach to rapid reviews of health systems evidence, but rather a reflection on their usefulness, and key insights into applied methods to swiftly conduct knowledge syntheses and foster their use in policy and practice.

Chapter 1: The need for rapid reviews to inform health policy and systems provides the rationale for the emerging use of rapid reviews for health policy-making and health systems strengthening. This chapter presents the rapid review approach and its application in the field of health policy and systems research. Some of the methods introduced to enhance the timeliness of reviews include knowledge synthesis shortcuts, automation and intensification of review steps, as well as practical considerations to expedite reviews. We also acknowledge the challenges and limitations in developing and using rapid reviews to strengthen complex health policy and systems.

Chapter 2: Performing rapid reviews is the first of three chapters on how to conduct rapid reviews of health policy and systems research. This chapter presents an overview of methods used to streamline the systematic review process at various stages, from searching the literature to synthesizing the results. As the methods used can vary from one review to the next, we emphasize the transparency of methodological choices and encourage constant collaboration with stakeholders to ensure the review fulfills its intended purpose.

Chapter 3: Improving quality and efficiency in selecting, abstracting, and appraising studies for rapid reviews provides recommendations on how to maintain the scientific rigor of these three steps of the review process, while using streamlined approaches to increase efficiency. Some of the strategies highlighted include the use of well-defined eligibility criteria, explanation and elaboration forms, training and calibration exercises, and the involvement of content experts and experienced reviewers.

Chapter 4: Selecting rapid review methods for complex questions related to health policy and system improvements describes how to select effective streamlined methods for rapid reviews by considering how the project will be managed, the scale and scope of the work to be completed, and the existing knowledge available. Strategies to conduct rapid reviews are provided, such as using a two-stage process of first scoping the literature, then selecting a focus; use of a transdisciplinary team to speed and enhance the review; use of a framework to organize the concept under study; as well as conducting a search for existing reviews to allow reviewers to summarize and integrate the review findings, resynthesize primary studies, or update the search and reanalyse one or more of the systematic reviews.

Chapter 5: Engaging policy-makers and health systems managers in the conduct of rapid reviews expands on the importance of facilitating an effective partnership between researchers and decision-makers. This chapter discusses the importance of involving policy-makers and health systems managers in the rapid review process to increase relevance and applicability. We present potential points and levels of stakeholder engagement, to be tailored to each review.

Chapter 6: Fostering the conduct and use of rapid reviews of health policy and systems research in low- and middle-income countries outlines the specific challenges of conducting rapid reviews in low- and middle-income countries, while highlighting the need to develop supportive systems and structures to overcome these challenges. Strategies described to ensure rapid reviews are utilized to their full potential include addressing methodological concerns, mobilizing sustainable resources, and raising the profile of rapid reviews in these countries.

Chapter 7: Reporting and disseminating rapid review findings focuses on knowledge translation and dissemination of rapid reviews. This chapter describes how to report findings of health policy and systems reviews by prioritizing the practical needs of the knowledge user, and recommends the use of reporting guidelines when developing rapid review reports. To assist the reader in the development of a dissemination plan, a checklist of essential questions is provided.

Chapter 8: Improving the uptake of rapid reviews identifies barriers to the use of rapid reviews, and suggests several methods to help facilitate increased uptake by decision-makers. Although rapid reviews can be helpful, policy-makers do not always use rapid review evidence to inform their decisions. This chapter suggests that promotion of the validity and usefulness of rapid reviews, improved formatting of evidence reports, and the development of connections with health systems managers and policy-makers can help promote the uptake and use of rapid reviews.

As a whole, the chapters of this Guide can be used to inform both researchers and policy-makers on the utility of rapid reviews to support health policy and systems decisions. The Guide also identifies key priorities for additional research on the conduct and application of rapid reviews for health policy and systems. This strategic research agenda includes, but is not limited to: robustness and transparency of rapid reviews methods; potential risk of biases introduced by rapid review methods; rapid synthesis and analysis of complex health policies and health systems interventions and reforms; external validity and context-sensitivity as applied to rapid reviews and the broader field of health systems research synthesis; and good practices in strengthening individual and institutional capacities for the generation and use of rapid reviews, especially in low- and middle-income countries.

I PUBLICATION PROCESS

Authors with expertise in each of the chapter subject areas were approached and selected by the editors to contribute to the Guide. Lead authors then selected co-authors to assist them with the development of content and the presentation of their respective chapters. Each chapter was drafted by the authors and underwent 4 rounds of revisions by the editors, scientific advisory board, copy-editors, and peer reviewers.

The Guide management committee was comprised of the three editors along with two of the lead authors Rhona Mijumbi-Deve and Sandy Oliver, who participated in the early development of the protocol and Guide outline.

We invited individuals with expertise in evidence synthesis and health policy and systems research to join our independent scientific advisory board. Daniel Phillips, Tomas Pantoja, and Suzanne Kiwanuka provided suggestions for chapter authors, comments on the annotated outline of the chapters, and high-level feedback on the fully drafted chapters.

All chapters were then sent for medical copy-editing to Peggy Robinson (medical writer) and Reid Robson (medical editor) who proofread the chapters for consistency and clarity, overlap in content and adherence to the WHO publication style guide.

An international group of peer reviewers were approached based on their experience and interest in the areas of rapid reviews and health policy and systems research. Each chapter was reviewed by two peer reviewers, who independently provided feedback for the authors to consider. The authors provided a point-by-point response to each reviewer comment and incorporated appropriate changes.

The project manager, Jesmin Antony, developed a plan for the Guide, managed overall timelines and communication, and drafted the chapter objectives and other relevant documents to inform the development of the Guide. The project manager and editorial support team (Huda Ashoor, Melissa Courvoisier, and Susan Le) coordinated the review of chapters with the lead authors, management committee, scientific advisory board, copy-editors and peer reviewers, and conducted a review of all chapters.

I TARGET AUDIENCE

Rapid Reviews to Strengthen Health Policy and Systems: A Practical Guide will appeal to those interested in learning how to plan, conduct or promote the use of rapid reviews to strengthen health policy and systems. As such, the intended audiences include researchers, decision-makers (e.g. policy-makers and health systems managers), knowledge brokers, journal editors and peer reviewers, as well as commissioners, funders and agencies supporting the use of rapid reviews.

For researchers, the Guide provides practical guidance on how to conduct rapid reviews; as such, its use can help to build capacity among junior and intermediate reviewers. Decision-makers will gain a broad understanding of rapid reviews and how they can better collaborate with the researchers conducting the reviews. Journal editors and peer reviewers can use our Guide to determine whether authors of rapid reviews of health policy and systems research submitted for publication have used appropriate, streamlined methods. Finally, commissioning and funding agencies can use the Guide as a reference providing information on rapid reviews, health policy systems research, and the conduct of research in low- and middle-income countries.

ACRONYMS

AHPSR: Alliance for Health Policy and Systems Research

AUB: American University of Beirut

COM-B: capability, opportunity, motivation, and behaviour model

EQUATOR: Enhancing the QUALity and Transparency Of health Research) Network

GRADE: Grading of Recommendations, Assessment, Development and Evaluation

HPSR: Health Policy and Systems Research

IECS: Institute for Clinical Effectiveness and Health Policy

K2P: Knowledge to Policy Center

KSG: Knowledge Synthesis Group

LMIC: Low- and middle-income countries

MakCHS: School of Medicine and School of Public Health, Makerere University College of Health Sciences

NICE: UK's National Institute for Health and Care Excellence

OHRI: Ottawa Hospital Research Institute

PICO: Population, Intervention, Comparator, and Outcome

PRESS: Peer Review of Electronic Search Strategies

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement

PRISMA-P: Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols

RCT: Randomized controlled trial

SPARK: Center for Systematic Reviews on Health Policy and Systems Research

StaRI: Standards for Reporting Implementation Studies

SUMARI: System for the Unified Management, Assessment and Review of Information

SURE: Supporting the Use of Research Evidence project

TB: Tuberculosis

TRASI: Tool for Recording and Accounting for Stakeholder Involvement in Systematic Reviews

WHO: World Health Organization

NAVIGATION MAP

	CHAPTER	Researchers
1	The need for rapid reviews to inform health policy and systems <u>Objectives:</u> Presents the rapid review approach and its application for health policy-making and health systems strengthening	<ul style="list-style-type: none"> • p.3 to 5 • p.10 to 15
2	Performing rapid reviews <u>Objectives:</u> Describes different methods that can be used for rapid reviews of health policy and systems research	<ul style="list-style-type: none"> • p.23 to 34
3	Improving quality and efficiency in selecting, abstracting, and appraising studies for rapid reviews <u>Objectives:</u> Outlines how to tailor study selection, data abstraction, and risk of bias appraisal for rapid reviews	<ul style="list-style-type: none"> • p.41 to 50
4	Selecting rapid review methods for complex questions related to health policy and system improvements <u>Objectives:</u> Provides strategic decisions for the conduct of rapid reviews of health policy and systems research	<ul style="list-style-type: none"> • p.57 to 67
5	Engaging policy-makers and health systems managers in the conduct of rapid reviews <u>Objectives:</u> Discusses the importance of involving policy-makers and health systems managers in the rapid review process	<ul style="list-style-type: none"> • p.73 to 78
6	Fostering the conduct and use of rapid reviews of health policy and systems research in low- and middle-income countries <u>Objectives:</u> Describes challenges and strategies to increase the use of rapid reviews in low- and middle-income countries	<ul style="list-style-type: none"> • p.85 to 92
7	Reporting and disseminating rapid review findings <u>Objectives:</u> Explains how to optimize the reporting of rapid reviews and disseminate findings	<ul style="list-style-type: none"> • p.97 to 105
8	Improving the uptake of rapid reviews <u>Objectives:</u> Presents barriers to the use of rapid reviews and methods to facilitate increased uptake by policy-makers and health systems managers	<ul style="list-style-type: none"> • p.111 to 116

These are the pages the editors deemed most relevant to each target audience. However, other pages might also be relevant, depending on the reader's interest.

MOST RELEVANT PAGES FOR THE GUIDE'S TARGET AUDIENCES:

Decision-makers (policy-makers and health care managers)	Knowledge brokers	Journal editors/ peer reviewers	Commissioners/ funders of rapid reviews	People/groups/ agencies supporting rapid reviews
<ul style="list-style-type: none"> • p.3 to 9 • p.15 	<ul style="list-style-type: none"> • p.3 to 9 • p.15 	<ul style="list-style-type: none"> • p.3 to 5 • p.10 • p.12 to 15 	<ul style="list-style-type: none"> • p.3 to 9 • p.15 	<ul style="list-style-type: none"> • p.3 to 5 • p.10 • p.15
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1

THE NEED FOR RAPID REVIEWS TO INFORM HEALTH POLICY AND SYSTEMS

Etienne V. Langlois, Sharon E. Straus,
Rhona Mijumbi-Deve, Simon Lewin, Andrea C. Tricco

| KEY POINTS

- Policy-makers often need and request evidence to plan, develop, and implement health policies in a timely fashion.
- Systematic reviews are increasingly used to inform policy decisions and produce guidance for health systems, yet the production of systematic reviews is often protracted and misaligned with decision timelines.
- Rapid reviews are a useful approach to swiftly provide actionable and relevant evidence to make informed decisions about health systems in routine as well as emergency contexts.
- Rapid reviews are generated through a transparent, scientific, and reproducible method that respects the key principles of knowledge synthesis.
- Policy-makers and health systems managers require rapid reviews that address a range of issues, including the effectiveness of health systems interventions and policies, how and in what settings these interventions work, and their cost-effectiveness.
- Various methods exist to expedite the conduct of reviews to inform health policy and systems decisions; the main challenge lies in accelerating review methods while maintaining robustness and transparency.
- The complexity of health systems decision-making is both an important challenge and a key opportunity for developing the field of rapid reviews of health policy and systems evidence.

1.1 INTRODUCTION

Riad Teriaqi, a bag-maker by trade, has lost track of the number of doors he has knocked on. This is Mr Teriaqi's eighth house-to-house polio immunization campaign since Syria's 2013 outbreak, which left 35 children paralysed. Polio was thought to have been eradicated in Syria, where cases had not been reported for almost two decades. Volunteers like Riad are the backbone of Syria's efforts to prevent another outbreak, but after years of civil war and with over 11 million people displaced, the challenge is daunting (1).

The conflicts in Syria, and those like it, create the potential for the rapid spread of communicable diseases because of the resultant breakdown in critical infrastructure including water and sanitation systems, scale of population displacement, loss of trained healthcare workers, equipment shortages and overall reduced health system functionality. To support health interventions in complex emergencies like Syria, there is a need to understand evolving health systems challenges, for instance the disruption of communicable disease surveillance and control measures. Understanding these challenges requires in turn the generation and synthesis of context-sensitive knowledge, often in limited time frames.

This is the case not only in war-torn settings, like Syria, but in conflict-free health systems settings worldwide, as these systems become increasingly complex. Policy-makers require valid evidence to support time-sensitive decisions regarding the coverage, quality, efficiency, and equity of health systems.

Systematic reviews and other types of knowledge syntheses are increasingly employed to inform policy decisions and to produce guidance for health systems (2-4). Yet conducting systematic

reviews takes an average of 12–24 months (5), and this protracted timeline is often misaligned with policy- and decision-making cycles. Lack of timeliness in the production of reviews therefore remains a strong barrier to the use of knowledge synthesis in health policy-making (6).

Rapid reviews have emerged as a useful approach to provide actionable and relevant evidence in a timely and cost-effective manner (5). For the purpose of this Guide, we define a rapid review as a type of knowledge synthesis in which systematic review processes are accelerated and methods are streamlined to complete the review more quickly than is the case for typical systematic reviews (7). Rapid reviews take an average of 5–12 weeks to complete, thus providing

evidence within a shorter time frame required for some health policy and systems decisions (5).

Rapid reviews are common in health technology assessment, clinical care, and comparative effectiveness research, and they are also increasingly used in health policy-making and the development of health programmes globally (7, 8). In a range of circumstances, there is value in accelerating the review process and fast-tracking knowledge synthesis for pressing policy and systems decisions.

In times of emergency and crisis, for instance, rapid reviews can provide strategic evidence to allow crucial decisions to be made about health systems responses. Emerging disease outbreaks are examples of such public health emergencies in which health systems are pressured for a rapid response. In these circumstances, decision-makers may be confronted with an absence of reviews on specific health policy challenges, or existing reviews may lack context specificity to inform health system decisions (9).

As such, timely reviews are of the utmost importance to inform health policy and systems recommendations, including rapid advice

Timely reviews are of the utmost importance to inform health policy and systems recommendations, including rapid advice guidelines.

guidelines (10, 11). Supporting the health system in Syria in the context of conflict and mass displacement is a case in point, whereby a rapid review was conducted to describe trends in major communicable diseases, assess the infectious disease surveillance and response systems,

and provide policy guidance on disease control in this conflict-afflicted setting (Box 1.1) (12). Rapid reviews such as this can also be useful for identifying evidence gaps and areas where primary research should be targeted (13).

BOX 1.1. Case example: Rapid review to understand communicable disease surveillance and control in conflict-affected Syria

Since the start of the war in 2011, systematic surveillance systems in Syria have been dysfunctional. The mass mobilization and displacement of individuals compound the issue by making it difficult to collect accurate and timely data when they are needed most. Nonetheless, if diseases like polio are to be contained in Syria, and the wider theatre to which millions of people have fled, the technical challenges to communicable disease prevention and control must be understood.

Failures and fragmentation of communicable disease surveillance systems have been identified as important challenges to outbreak and infectious disease management by the Syria Public Health Network, a collaboration of researchers and practitioners established to address various aspects of the health response to the Syria crisis. Through consultations focusing on the health system responses to the crisis in Syria and surrounding countries, the Network identified a critical need for up-to-date and context-sensitive evidence on communicable diseases prevention and control measures in the country.

To address this knowledge gap and inform realistic recommendations, Ismail and colleagues (12) performed a rapid review with the objective of describing trends in major communicable diseases during the on-going conflict in Syria, and the challenges to disease surveillance and control in the context of dynamic, large-scale population displacement, unplanned mass gatherings, and disruption to critical infrastructure. The review focused on the published peer-reviewed and grey literature, supported by secondary analysis of monitoring data from two disease early warning systems currently operational in Syria, focusing on three diseases: tuberculosis (TB), measles, and polio.

The rapid review was completed in seven weeks, and numerous means were used to accelerate the research process, including:

- using a clearly defined conceptual framework to guide the review, in this case the WHO framework for assessing capacity for implementation of the International Health Regulations at the national level;
- limiting the time period for the literature searches from 2005 to 2015, and restricting the grey literature search to specific agencies working on communicable disease surveillance and control in Syria. These institutions were identified through an expert consultation managed by members of the Syria Public Health Network;
- deploying a large review team with varied skill sets, enabling parallelization of review tasks.

BOX 1.1. Case example: Rapid review to understand communicable disease surveillance and control in conflict-affected Syria (continued)

The rapid review provided the current landscape of surveillance mechanisms, an understanding of preparedness and response capacity, an analysis of coverage through immunization programmes, and an understanding of current gaps and challenges in infectious disease management. For tuberculosis, disruption of all aspects of the control programme, including prevention, case finding, diagnosis, and management, has led to an increase in cases among displaced populations. The review also identified the lack of information on the health status of prisoners in Syria as a particular concern for the spread of TB, building on previous evidence of high incidence of the disease in incarcerated populations. In addition, the rapid review findings highlighted that few of the public health facilities still functional in Syria have the capacity to perform the specialized tests required to confirm communicable disease cases.

In this context, Ismail and colleagues (12) identify the need for innovative approaches to ensure that early case detection, treatment initiation, contact tracing, and follow-up is implemented, which in turn would contribute to reducing the risk of treatment interruption and subsequent drug resistance. The review also stresses the need to develop basic or mobile laboratory capabilities linked with the surveillance mechanisms, to increase the accuracy and timeliness of case identification.

This is an apt example of the role of rapid reviews in synthesizing key information to assess needs and pave the way for strategic health system intervention in times of crisis.

Source: Ismail et al., 2016 (12)

Expediting research synthesis is also essential for health systems strengthening beyond emergencies, in various routine situations in which policy-makers and managers need to make informed decisions about health systems quickly. For instance, rapid reviews may be useful where policy-makers have given a department of health a very short time frame in which to identify policy options in relation to a topical health systems issue, such as developing strategies to expand health insurance or to scale up the implementation of a key health intervention. Rapid reviews are also considered a cost-saving strategy for health system decision-makers and other commissioners faced with limited resources. Rapid reviews are thus emerging as an efficient approach to generating the necessary context-sensitive knowledge needed to inform decisions on health systems questions (14), thus promoting their applicability for decision-making. The usefulness of contextualized rapid reviews is supported by previous experience showing that the relevance

and context specificity of research is a strong determinant of its uptake by policy-makers and other health systems decision-makers (6).

1.2 THE RAPID REVIEW APPROACH

Rapid reviews have been described as falling “within the family” of systematic reviews, as their methodology was established to provide a transparent, scientific method that is detailed and reported in advance and that will be reproducible by others (15). Rapid reviews are intended to respect the key principles of knowledge synthesis, including a clear statement of review objectives, predefinition of eligibility criteria, assessment of the validity of findings (e.g. through assessing risk of bias), and systematic presentation and synthesis of results. The term “rapid review” incorporates an array of products that vary greatly in their purpose, methodological rigour, comprehensiveness, resources used, transparency, and time spent for their production (10, 16). This wide spectrum

of products reflects differences in how agencies and stakeholders commissioning and producing knowledge syntheses define the review topic, select streamlined methods, and customize the timeline, reporting, and dissemination of reviews (7).

This Guide focuses mainly on the swift generation of new knowledge through rapid reviews, or what Hartling and colleagues (16) call “true” rapid reviews, i.e. those that use reduced or accelerated forms of systematic review methodology. As such,

our Guide does not directly address the production of rapid evidence, policy briefs, or other policy-friendly summaries of research. Guidance to support these latter types of outputs has been developed by the Supporting the Use of Research Evidence (SURE) project, including the SURE Guides for Preparing and Using Evidence-Based Policy Briefs (17). Table 1.1 categorizes the various types of rapid evidence summaries, to highlight our conception of rapid reviews and how they differ from other rapid response products.

TABLE 1.1. Categorization of rapid evidence products, according to extent of knowledge synthesis

Category	Description
Inventories	Inventories only list the evidence that is available on a given topic. There is no attempt to appraise, summarize or synthesize the evidence for further use, nor is there an attempt to present conclusions or recommendations to the knowledge user.
Rapid response briefs	Rapid response briefs present a summary of the best available evidence in a synthesized and contextualized manner, in direct response to a decision-maker’s question. They are knowledge translation products created through formal methods to synthesize and appraise the evidence. They do not generate new knowledge but use findings that are already available, especially from existing systematic reviews.
Rapid reviews	Rapid reviews represent a knowledge generation strategy. They synthesize findings and assess the validity of research evidence using “abbreviated” systematic review methods, modifying these methods to generate evidence in a short time.

Source: Adapted from Hartling et al., 2015 (16)

1.3 THE NEED TO SWIFTLY INFORM HEALTH POLICY AND SYSTEMS DECISIONS

Rapid reviews are garnering interest, as governments worldwide recognize the need for this type of evidence to inform health

policy-making and strategies for health systems strengthening (18). Syntheses of research can support policy-makers by providing state-of-the-art knowledge and actionable evidence at numerous steps in the policy-making process (3, 19). Rapid reviews can inform health policy-making in a number of ways, as shown in in Table

1.2. Such evidence can be combined with local evidence on modifying factors, values, and the availability of resources to make judgements about the anticipated benefits, harms, and costs of policy options in a particular context, thereby informing health policy decisions (2). As such, rapid reviews are increasingly recognized as a

strategic approach to address a range of barriers to the uptake of research evidence. These barriers go beyond timeliness and include the engagement of decision-makers, incentives for demand-driven research, and the relevance of scientific findings to local health systems (6).

TABLE 1.2. Rapid reviews to support health policy-making

Policy step	Description	Example of rapid review
Priority-setting	Identifying and conceptualizing priority issues for the policy agenda (20)	Rapid review of the evidence on prevention and control of vector-borne diseases in urban areas of low- and middle-income countries, with a view to informing policy priorities (21)
Policy formulation	Assessing options to develop policies. Here, policy-makers can make the most of rapid reviews that focus on different questions, including but not limited to rapid reviews of effectiveness to identify the benefits and harms of policy options, and rapid reviews of economic evaluations to explore the cost-effectiveness of different policy interventions (19)	Rapid review of international models of primary care provision and primary care policies (22)
Policy Implementation	Mobilizing resources by governments and implementers. At this stage, informative rapid reviews could include qualitative evidence syntheses to assess factors influencing the implementation and scalability of a policy (19)	Rapid review of barriers to and facilitators of the implementation of e-health systems in rural communities (23)

Experience from developing rapid response mechanisms in low-income settings shows that policy-makers have evidence requests that need to be addressed within relatively short time frames, including requests for evidence about health systems arrangements, such as delivery of services and governance (24). In these circumstances, rapid reviews that synthesize knowledge on the effectiveness, implementation, and efficiency of health policy and systems

interventions can be useful in providing decision-makers with key evidence to strengthen the performance of health systems or reform their core elements (e.g. human resources or financing). Table 1.3 presents examples of rapid reviews that have been conducted to inform policy and systems decisions. Rapid reviews can also be used to scope existing health policy and systems evidence and to identify gaps that might require additional research (13).

TABLE 1.3. Examples of rapid reviews for health policy and systems^a

Health system challenge	Population	Concept	Context
Prevention and control of vector-borne diseases (21)	Urban population	Rapid review of scoping and systematic reviews to examine the evidence on urban health interventions for prevention and control of vector-borne diseases	Limited to cities and urban areas in LMICs; socioeconomic contexts vulnerable to vector-borne diseases
Integration of e-mental health interventions in health systems (25)	Patients receiving mental health services	Rapid review of the evidence on digital interventions for mental health (including their applications, strengths, and limitations) in relation to integration in health-care systems	No geographical limitations; special focus on geographically hard-to-reach populations and socioeconomic barriers to mental health services accessibility
Physician payment schemes in cancer care (26)	Health-care providers in oncology	Rapid review to explore the impact of physician payment methods on system costs, quality of care, and health outcomes, with a specific focus on cancer control	No geographical limitations; focus on specialist health-care systems (in oncology) facing rising population incidence of cancer and increasing health system costs
Prevention and management of mental health disorders in primary health care (14)	General population (adults, children) with mental health disorders	Rapid review on the aspects of primary care that are effective in preventing, recognizing, and managing mental health issues across the lifespan: the people for whom these interventions work, in what circumstances, and for what reasons	Focus on socioeconomic determinants, including poverty and unemployment; specific challenges of young and elderly patients, as well as those with post-traumatic stress disorder
Demand-side policies and interventions for maternal and neonatal health in LMICs (27)	Women and newborn populations in LMIC settings	Rapid review of the impact of demand-side intervention on utilization of services and health outcomes for mothers and neonates	LMIC contexts of high maternal and early neonatal mortality, low perceived quality of health-care services, direct and indirect costs, discrimination (religious, political, ethnic), and dearth of information about maternal and neonatal health services

LMIC, low- and middle-income countries.

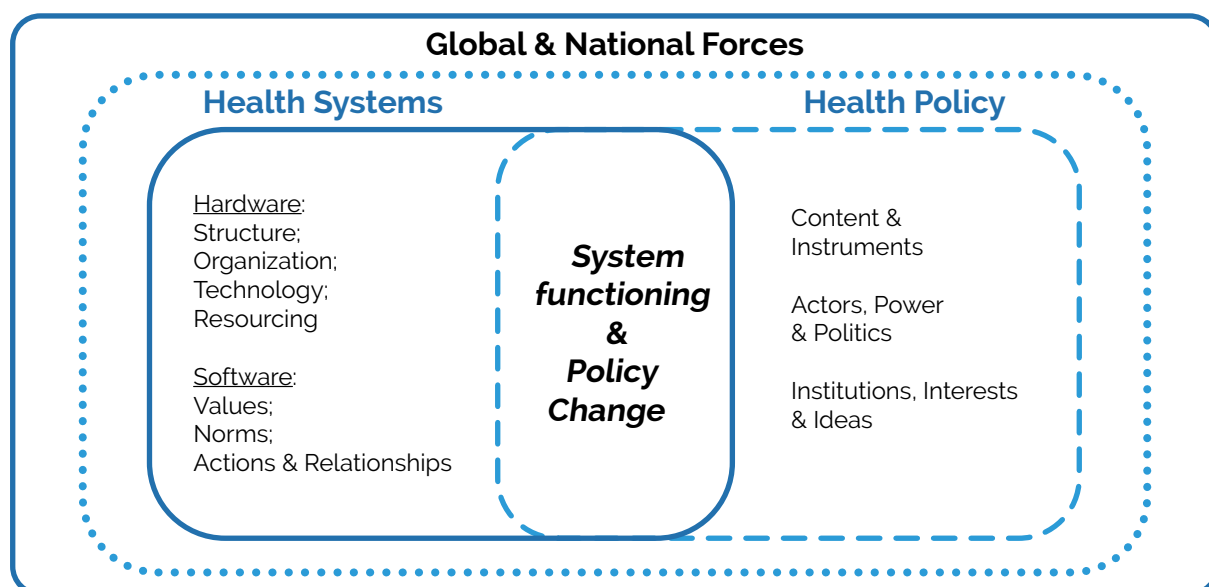
^a Reported using the Population, Concept and Context approach (28). With this approach, “concept” refers to interventions, phenomena of interest, and outcomes, and “context” refers to external and internal influences such as geographical location and cultural factors, as well as health policy and systems determinants.

1.4 HEALTH POLICY AND SYSTEMS RESEARCH

Health policy and systems research is a multidisciplinary field studying how various stakeholders, institutions, and interests interact in policy development and implementation processes, in order to contribute to policy outcomes (29, 30). Empirically, health systems research addresses the building blocks of health systems: governance, information, financing, service delivery, human resources, and medicines and technologies, as well as their interlinkages and influences on health systems performance, responsiveness, and people-centredness (31). While the building blocks framework provides a simplified approach, health systems are in reality more complex and comprehensive by nature, and their functioning is intertwined with health

policy-making (32, 33). As such, the science of health policy and systems research addresses the multiple interactions and synergies between health policies and systems, reflecting the fact that systems dynamics directly inform policy-making, and vice versa (Figure 1.1). Health policy and systems research recognizes that health systems are constituted by the “hardware” components or building blocks, as much as the “software” consisting of interests, values, norms and power dynamics (32). The field of health policy and systems research also recognizes that the health system encompasses both the suppliers of policy, services, and interventions, and the communities and households intended to benefit from them who, as citizens, also play important roles in policy change (31). The scope of health policy and systems research is further described in Box 1.2.

FIGURE 1.1. Interface of health policy and systems research



Source: Gilson, 2012 (32)

Reproduced with permission from World Health Organization (2012)

BOX 1.2. Scope of health policy and systems research

Health policy and systems research encompasses research on the policies, organizations, programmes, and people that make up health systems, as well as the interactions among these elements and the socioeconomic influences over decision-making practices within a health system. The ultimate goal of health policy and systems research is to generate knowledge that will enable societies to strengthen health systems and achieve health goals. Health policy and systems research is concerned with the system-level factors and forces that cut across actions dedicated to tackling particular health problems, as well as those that underpin and shape the performance of health programmes. Health policy and systems research does not address clinical management of patients or basic scientific research (e.g. research into cell or molecular structures). Health policy and systems research is characterized by the type of problems that it addresses, rather than by any particular disciplinary underpinnings. As such, most health policy and systems research is multidisciplinary by nature.

Sources: Gilson, 2012 (32); Alliance for Health Policy and Systems Research, 2007 (30)

1.5 WAYS TO EXPEDITE REVIEWS ON HEALTH POLICY AND SYSTEMS RESEARCH

There is no consensus to date on the timeline that would qualify a review as “rapid” (34), but it has been suggested that most rapid reviews are conducted within 12 weeks (35). In addition to timeliness, rapid reviews vary in their purpose and format and in the methods used for knowledge synthesis (7). This variation is related in part to the novelty of rapid review methods (including lack of agreement on optimal methods) as well as the tailoring of the timing and scope of reviews to decision-makers’ needs (7). Various methods are available to expedite the conduct of reviews informing health policy and systems. However, no methodological “one-size-fits-all” approach exists to support rapid reviews. Rapid reviews are produced for decision-makers working in an array of health system settings, in response to different objectives, under different time constraints, and with different financial and human resources available. As such, rapid reviews can be considered as fit-for-purpose research outputs of an iterative process between knowledge users (such as policy-makers and health systems managers) and rapid review producers (10). Various mechanisms exist to enhance the timeliness of reviews, and these mechanisms can be used independently or concurrently:

- increasing the intensity of work on review processes, by intensifying the efforts of multiple reviewers to simultaneously complete review steps (i.e. parallelization of tasks), e.g. eligibility screening, data abstraction, and risk-of-bias assessment;
- using review shortcuts, whereby one or more systematic review steps may be reduced or omitted;
- automating review steps, by developing, adapting, and using new technologies to fast-track the standard systematic review steps, e.g. screening or data abstraction (10).

Chapters 2 and 3 of this Guide provide further information on various approaches to streamline review processes. In addition, rapid reviews may need to draw on a range of synthesis methods, as policy-makers and health systems managers often ask questions that go beyond the effectiveness of policies and programmes, including “how and in what settings programmes work” and “how to promote the implementation or scale-up of effective strategies”. Qualitative evidence or mixed-methods syntheses may be needed to understand factors affecting the implementation, scalability, and sustainability of health programmes (36). Consequently, there is a broad spectrum of rapid review methods and outputs applicable to health policy and systems research (37), including rapid realist review

(Box 1.3) (14). A realist review is a synthesis of a wide range of evidence that seeks to identify underlying causal mechanisms and explore how they work under what conditions,

answering the question “What works for whom under what circumstances?” rather than only “What works?” (38).

BOX 1.3. Case example: Use of a rapid realist review to assess integration of mental health care into primary care

Primary care systems have a crucial role to play in ensuring continuity of care for vulnerable populations, including individuals with mental health disorders. As the point of entry into health-care systems, it is imperative that primary care functions effectively in the recognition and management of mental health disorders, as well as engaging in preventive interventions. With survey results revealing one of the highest levels of mental illness in the world (14), and with the accompanying challenges for primary care, Northern Ireland embarked on an initiative to modernize and improve law, policy, and services for mental health and intellectual disabilities.

As background, the Department of Health, Social Services and Public Safety commissioned a set of reviews of the evidence related to health promotion and protection for those affected by mental health disorders. One of these syntheses, completed by Bunting and colleagues (14), was a rapid realist review, undertaken to understand how well mental health programmes and services were integrated into primary care in the country, why interventions worked (or did not work), for whom, and under what conditions. The authors’ choice to use a rapid realist review was strategic, as this approach aims to create a deeper understanding of why and how something works, and the underlying pathways of the implementation and effectiveness of an intervention. A realist review aids in this type of analysis by emphasizing the importance of context and the interactions of interventions with the health system. As such, this rapid review on primary care services considered the levels of need, risk factors, and profile of service use in the population, as well as important contextual factors that affect and interact with these phenomena.

To accelerate the review process, the authors used a variety of shortcuts, including a limited rather than exhaustive range of search terms, restriction of the search for grey literature to key websites, and only considering studies published since 2000. By using a rapid realist approach, they were able to produce, in a timely manner, context-relevant evidence for primary care integration, including support for the development of collaborative care models for managing mental health disorders in primary care. Beyond its implications for practice and policy, the rapid review also identified gaps for further research, including a lack of knowledge of factors that would facilitate collaboration between service providers and users with regard to treatment decisions.

Sources: Bunting et al., 2011 (14); Pawson, 2006 (38); Rycroft-Malone et al., 2012 (39)

1.6 CHALLENGES IN RAPID REVIEWS FOR HEALTH POLICY AND SYSTEMS

It is crucial to remember that conducting rapid reviews poses specific challenges in relation to

the robustness and transparency of the review methods (40). Those conducting rapid reviews relevant to health policy and systems research thus need to strike a balance between “abbreviating” or “accelerating” systematic review methods and maintaining the methodological rigour and

transparency of typical reviews. The quantity of studies retrieved and the quality of the evidence might pose important challenges that review teams must address in order to reduce the risk of bias and ensure the validity of review findings. Chapters 2 and 3 of this Guide offer practical insights to tackle these issues.

Reviews of health policy and systems research are characterized by complexity in health systems settings and heterogeneity in policy-making processes. In addition, many reviews in the field concern complex interventions, including comprehensive health policies and programmes or health systems reforms. Assessing and understanding this complexity presents an important challenge and a potential caveat to the swift conduct of health policy and systems research reviews. For instance, reviews of health systems interventions might be challenged by the time required to conceptualize, appraise, and make sense of heterogeneous and manifold evidence.

Then again, rapid reviews can be useful in studying the complexity of health systems per se, helping to make sense of underlying frameworks and health systems underpinnings. One example is a rapid review conducted on the evidence for successful and sustainable large-scale changes in complex health systems (41), which aimed to understand the enablers of and barriers to systems change and the frameworks to guide the change process. Another example is a rapid review conducted to appraise effective strategies for reducing complex health inequalities in priority public health conditions (42). As they are mostly tailored to the needs of end-users, rapid reviews are also a valuable approach to study context-sensitive evidence and generate knowledge that is relevant to complex decision-making in local health systems.

1.7 PRACTICAL CONSIDERATIONS TO EXPEDITE REVIEWS

Rapid reviews are often commissioned by policy-makers themselves, and it is important to establish from the outset a clear and realistic mandate and time frame for completion of the synthesis. As such, there should be continuing dialogue

between those requesting and those producing reviews to address key elements of rapid reviews of health policy and systems research.

> 1.7.1 Scope of the synthesis

Health policy and systems challenges are often framed by policy-makers and other decision-makers as broad questions, which might not be amenable to rapid review. This is a key challenge, as policy issues as expressed by policy-makers often need to be refined and translated into a “reviewable” research question. Defining the scope of the review question is therefore an important step and requires a dialogue between policy-makers and researchers.

> 1.7.2 Type of review

Policy and systems decisions require different types of review, based on the nature of the evidence requested:

- rapid scoping reviews to understand and map out existing health policies and programmes. Once such example is a rapid scoping review conducted to understand medical malpractice policies in obstetrics (R. Cardoso, unpublished data, 2017), as described in Box 1.4;
- rapid effectiveness reviews to understand whether a health system intervention works, including its intended and unintended effects (e.g. rapid review of the effectiveness of interventions to improve the health of or health-care utilization by homeless people (43) or rapid mixed methods reviews to assess how health systems interventions work, or how to sustain or expand interventions);
- rapid overviews of systematic reviews to synthesize recent evidence relevant to health policy and systems, with the overviews providing a “map” of the policy questions addressed by systematic reviews and the insights derived from them (19) (e.g. rapid overview of knowledge syntheses on the benefits and costs of nursing and midwifery, both within the health-care system and wider society (44)).

BOX 1.4. Rapid scoping review of medical malpractice policies













To inform recommendations and guidance documents in various fields of global health, the World Health Organization (WHO) often supports the generation and update of systematic reviews on key policy-relevant challenges. For instance, there is general agreement that the current medical malpractice systems are becoming costly and inefficient, with litigation costs ranging from 2.4% to 10% of health-care spending in some settings. In addition, litigation can also have positive effects, if it results in improvements in policies and practices in areas such as pregnancy and childbirth. To better understand the problem, WHO supported the conduct of a rapid scoping review of worldwide policies on medical malpractice in obstetrics, and the short-term and long-term consequences of these policies, taking into account the presence of multiple stakeholders, including patients, clinicians, health systems managers, and policy-makers (R. Cardoso, unpublished data, 2017).

Purposes of a scoping review:

Scoping reviews are used to map the concepts underpinning a research area and the main sources and types of evidence available (45). Scoping reviews can be used to develop a research agenda by identifying gaps in the literature where future primary studies are required, as well as areas that may require a systematic review. Scoping reviews can also be used to identify the implications of policy or practice recommendations.

The rapid scoping review was performed by a team at the Li Ka Shing Knowledge Institute, St. Michael's Hospital (Toronto, Canada), who aimed to identify studies evaluating the effectiveness of medical malpractice models, as well as frameworks and policies available to improve litigation-related outcomes in obstetrics. To produce the review in a timely manner, Cardoso and colleagues (R. Cardoso, unpublished data, 2017), used two strategies to accelerate the scoping review process. The first strategy entailed intensifying the research by working with nine reviewers to conduct the screening and data abstraction phases in duplicate (Figure 1.2).

Figure 1.2. Intensifying the scoping review process

Review stage	Number of reviewers	Time (weeks)
 ALL LEVELS OF SCREENING	9 	
 DATA ABSTRACTION	9 	
 SYNTHESIZING FINDINGS	3 	
 REPORT WRITING	3 	

BOX 1.4. Rapid scoping review of medical malpractice policies (continued)

The second strategy entailed simplifying some components of the scoping review process. While all types of study designs and reviews evaluating or comparing different policies were included, the publication date was limited from 2004 to 2015 and the rapid review was restricted to published documents written in English. References lists of relevant studies were not scanned and the review team did not contact authors for further potentially relevant studies.

Several initiatives for improving the medical malpractice litigation system were identified, including no-fault approaches, i.e. medical injuries compensated without proof of fault; policy initiatives related to patient safety; communication and resolution, i.e. mutual agreement between physicians and patients outside the court setting to resolve the dispute and achieve fair compensation; caps on compensation and attorney fees, i.e. models to limit the amount of non-economic or punitive damages that may be awarded for a case; and alternative payment system and liabilities, i.e. strategies that reduce the burden of liability pressure and financial burden of claims payment. The results of the review were requested by the government of South Africa with the aim to implement policies to improve litigation in obstetrics.

Source: (R. Cardoso, unpublished data, 2017)

> 1.7.3 Stakeholders

As with many types of review, rapid reviews have a variety of stakeholders, the parties who will engage in, benefit from or be affected by the process of a faster review. These stakeholders must be kept in mind during the rapid review process. The main knowledge user stakeholders are the policy- and decision-makers who will benefit from easy access to evidence to aid a decision-making process (Box 1.5). In fact, most often, it is requests by decision-makers that prompt researchers and research institutions to generate rapid reviews addressing health policy and systems questions. The process

might then be facilitated by knowledge brokers, who are increasingly focusing on rapid reviews to answer such questions (46). Other stakeholders include research funders, who might be interested in rapid reviews as a way to improve the impact of knowledge generation. Finally, rapid reviews might be useful to other agents whose activities pertain to health systems strengthening, including nongovernmental and multilateral organizations, media, patients' associations and communities. Processes underpinning the interaction and collaboration of stakeholders who demand, conduct and use rapid reviews are explored in Chapters 5 and 8 of this Guide.

BOX 1.5. Health policy and systems decision-makers

For the purpose of this Guide, we define three categories of decision-makers:

- *policy-makers*: individuals at some level of government or decision-making institution, including but not limited to international organizations, non-governmental agencies or professional associations, who have responsibility for making recommendations to others. Policy-makers who use evidence from rapid reviews may be elected or nonelected individuals, depending on the context;
- *health systems managers*: individuals in a managerial or supervisory role in a health system with management or supervisory mandates, including implementers and public health officials;
- *policy analysts*: individuals (nonelected) at some level of government or decision-making institution, responsible for analysing data and informing decisions and recommendations.

Source: Adapted from Tricco et al., 2016 (47)

> 1.7.4 Timeliness

A timeline should also be developed and agreed upon, to ensure realistic expectations from policy-makers or commissioners of reviews. This aspect is particularly important given that the time needed to produce rapid reviews varies greatly, and the time available may influence the methods used to streamline review processes. A key challenge faced by rapid review producers is how to meet the time-sensitive needs of decision-makers while upholding methodological robustness and ensuring the validity of review findings.

1.8 CONCLUSION

Rapid reviews are an efficient method to provide policy-makers and health system stakeholders with relevant and state-of-the-art evidence on health policy and systems challenges. Rapid

reviews also have great potential to address emerging needs for contextualised evidence to inform pressing health system decisions, as exemplified by the prevention and control of communicable diseases in Syria. However, low- and middle-income countries face important barriers related to the limited capacity and resources of individuals, teams, organisations, and knowledge systems to support the production and use of rapid reviews. Swiftly reviewing evidence relevant to health policy and systems also poses challenges related to the complex and diverse knowledge at stake. At the same time, this complexity is a key opportunity for developing the field of rapid reviews of health policy and systems research. The following chapters offer guidance on addressing these challenges and adopting methodologically sound approaches to conducting and using rapid reviews in evidence-informed policy-making and health system strengthening.

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2

PERFORMING RAPID REVIEWS

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KEY POINTS

- Early and continuing engagement with the research requester is essential for focusing the rapid review and ensuring that it is appropriate to the needs of stakeholders. The protocol serves as the starting point for the review, although methodological decisions for rapid reviews are often iterative, involving the stakeholder, and any changes to the protocol should also be reflected in the final report.
- Methods can be streamlined at all stages of the review process, from search to synthesis, by limiting the search in terms of dates and language; limiting the number of electronic databases searched; using one reviewer to perform study selection, risk-of-bias assessment, and data abstraction (often with verification by another reviewer); and using a narrative synthesis rather than a quantitative summary.
- Researchers need to make transparent methodological choices, informed by stakeholder input, to ensure that the evidence review is fit for its intended purpose. It is not yet clear how these choices can bias a review, so transparency is essential.
- Information technologies can assist researchers in the conduct of rapid reviews by making various steps in the process more efficient.

2.1 INTRODUCTION

Health policy-makers and other stakeholders need evidence to inform their decisions. However, their decision time frames are often short, and they may have other resource constraints, including financial ones (1-4). Rapid reviews are increasingly being used and are increasingly influential in the health policy and system arena (2, 5, 6). A recent needs assessment (7) showed that policy-makers want evidence reviews to have the following characteristics:

- responsive—answering the right question
- timely—completed in days to weeks rather than months or years
- credible—accurate and reproducible

To date, a standardized or commonly agreed upon set of methods for conducting rapid reviews does not exist (1, 6, 8-10), unlike the situation for systematic reviews (11, 12). However, a minimum set of standards is being developed by the Cochrane Rapid Reviews Methods Group (1), and other researchers have proposed methods and approaches to guide rapid reviews (4, 10, 13-17).

This chapter gives an overview of potential ways to streamline systematic review methods to produce a rapid review, while maintaining a synthesis process that is sufficiently rigorous to support health policy-making. We also detail additional or expanded methods items gathered from the growing body of research on rapid review processes. Options for common methods choices, summarized from descriptions and evaluations of rapid review products and

programmes, are displayed in Table 2.1, along with key considerations for each methodological step.

As much as policy-makers may desire faster and more efficient information syntheses, there is a need for more research to understand whether rapid reviews can inform policy in the same way as do systematic reviews. Only a few empirical studies have compared the findings of rapid reviews and systematic reviews on the same topic, and their results are conflicting and inconclusive, leaving questions about the level of bias that may be introduced into the results of a review with use of a rapid review method (2, 8, 18, 19). At this point, the consequences of various streamlining choices for the validity of conclusions from a rapid review are uncertain, so transparent documentation of the methods used is critical.

Researchers need to make transparent methodological choices, informed by stakeholder input.

Readers should also consult Chapter 4 of this Guide, which focuses on methods for rapid reviews of more complex questions in health policy and systems research.

TABLE 2.1. Common methods, approaches, and key considerations for the steps in a rapid review

Review step	Commonly employed methods and approaches	Key considerations
Needs assessment, topic selection, and topic refinement	<p>Most use standard intake processes, involving the requester, to refine the topic, obtain clarity on purpose(s), and determine whether rapid review is a suitable method</p> <p>Total production timeline generally 1 to 4 months</p>	<p>Work with requester to ascertain intended purpose, scope and timeline, and ensure the proposed approach fits the intended purpose</p> <p>A preliminary literature search can help to inform conversations with requester and to scope the review</p> <p>Map the mandate to timeline and deliverables</p>
Protocol development	<p>A protocol is commonly prepared, serving as a point of reference to avoid (or document) deviations, but is usually not formally registered</p> <p>Producers typically use a PICO format and develop key questions iteratively with requesters</p>	<p>Consider registering the protocol with PROSPERO (20) and include “rapid review” or a similar term in the title</p> <p>Use PRISMA (21) reporting items to guide protocol development and review reporting, and to track the overall process and information flow</p>
Literature search	<p>Many rapid reviews are based on searches of the PubMed/MEDLINE, Cochrane Library, and Embase databases</p> <p>Most entail a search of two or more databases, with common limits being date, language (generally English only), and study design; geographical limits may be used to enhance applicability</p> <p>Some level of grey literature searching is common, but contact with authors is uncommon</p>	<p>Tailor the selection of literature databases to the topic. Addition of a grey literature search depends on the topic, purpose, and timeline</p> <p>Use a staged search to first identify existing systematic reviews, then studies with other designs that will provide the most rigorous evidence to answer the question</p> <p>Peer review of the search strategy, using a tool such as the PRESS checklist can help to optimize the search strategy (22)</p>

Review step	Commonly employed methods and approaches	Key considerations
Screening and study selection	Approaches are highly variable, with about half of rapid reviews using a single reviewer, with or without verification by a second reviewer	<p>Choose the approach for study screening and selection according to requirements of the review and resources available</p> <p>In lieu of dual screening and selection, reasonable approaches involve using a single experienced reviewer for application of inclusion criteria and two reviewers for application of exclusion criteria, or using one person for screening with verification of a subset of records by another</p>
Data extraction	Approaches vary, but data extraction by a single reviewer, with or without verification, is the most common method	<p>Similar to the situation for screening, the number of independent reviewers varies, but a reasonable approach is to use a single reviewer to extract data, with a second reviewer checking at least a 10% random sample of extractions for accuracy. Use of dual performance or checking may be needed more for extraction of quantitative results than for extraction of descriptive study information</p> <p>Limit extraction to key study characteristics and outcomes</p>
Risk-of-bias assessment	For most rapid reviews, some risk-of-bias or quality assessment of included studies is conducted by a single reviewer, with or without verification	<p>The choice of appraisal instrument varies, with both standard and customized approaches in use</p> <p>An approach similar to that for data extraction can be used (i.e. single reviewer, with verification by a second reviewer)</p>
Knowledge synthesis	<p>Narrative summaries are common, with meta-analysis performed only infrequently</p> <p>Final reports often include implications, recommendations for policy, and discussion of research limitations</p>	<p>An iterative approach to the synthesis process can involve post hoc protocol adjustments</p> <p>The quality of the body of evidence and the strength of any recommendations can be assessed using an approach such as the GRADE system (23)</p> <p>The limitations of the review should be discussed and cautious conclusions provided</p>

Review step	Commonly employed methods and approaches	Key considerations
Report production and dissemination	Peer review is common, but is often performed internally Reports are often disseminated beyond the original requester, but are infrequently published in the peer-reviewed literature	Software tools can help to automate and track review steps Standardization of processes and templates aids in production of the report and enhances transparency of the review

GRADE, Grading of Recommendations Assessment, Development and Evaluation; PICO, population, intervention, comparator, outcome; PRESS, Peer Review of Electronic Search Strategies; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses

2.2 NEEDS ASSESSMENT, TOPIC SELECTION, AND TOPIC REFINEMENT

Rapid reviews are typically conducted at the request of a particular decision-maker, who has a key role in posing the question, setting the parameters of the review, and defining the timeline (24). The most common strategy for completing a rapid review within a limited time frame is to narrow its scope. This can be accomplished by limiting the number of questions, interventions, and outcomes considered in the review (18, 19). Early and continuing engagement of the requester and any other relevant stakeholders, in order to understand their needs, the intended use of the review, and the expected timeline and deliverables, is critical (4, 14, 19, 24). Policy-makers and other requesters may have vaguely defined questions or unrealistic expectations about what any type of review can accomplish. A probing needs assessment is therefore the critical first step in any knowledge synthesis approach, with the goals of determining the scope of the request and the intended purpose for the completed review, and also obtaining a commitment for collaboration over the duration of the project (14, 15). Once the request and its context are understood, researchers should fully develop the question(s), including any needed refinement with the requester or other stakeholders, before starting the project. This process can be iterative and may require multiple contacts between the reviewers and the requester to ensure that the final rapid review is fit for its intended purpose. In situations where a definitive review might be needed (e.g. for a problem that is likely to persist), it may be useful to discuss with the

requester the possibility of conducting a full systematic review, either in parallel or serially with the rapid review.

2.3 PROTOCOL DEVELOPMENT

A research protocol clearly lays out the scope of the review, including the research questions and the approaches that will be used to conduct the review. Most reviewers use the PICO format (population, intervention, comparator, outcome), with some adding elements for time frame, setting, and study design. The PICO elements help to define the research questions, and the initial development of questions can point to needed changes in the PICO elements. For some types of research questions or data, other framework variations may be used, although the PICO framework can generally be adapted. Health services and policy research questions may call for more complex frameworks and readers are referred to Chapter 4 of this Guide for more information. This initial approach assists both researchers and knowledge users to know what is planned and enables documentation of any protocol deviations; however, the customized and iterative nature of rapid reviews means that some flexibility may be required. Some rapid review producers include the concept of methods adjustment in the protocol itself (25, 26). However, changes made beyond the protocol stage, as well as the rationale for making them, must be transparent and documented in the final report.

PROSPERO (20), the international prospective register of systematic reviews, accepts registration of protocols that include at least one clinically or patient-relevant outcome. Researchers are advised

to include “rapid review” or another similar term in the registered title, as this will assist tracking the use, validity, and value of rapid reviews (1). More generally, registration helps to decrease research waste and allows both requesters and review authors to avoid duplication. Currently, most rapid review producers report using a protocol, but few register their protocols (18).

2.4 LITERATURE SEARCH

Multiple authors have conducted inventories of the characteristics of and methods used for rapid reviews, including the broad categories of literature search, study selection, data extraction, and synthesis steps (9, 18, 19, 27).

PRISMA standards call for documentation of the full search strategy for at least one electronic database (21). Most published rapid reviews search two or more databases, with PubMed, Embase, and the Cochrane Library mentioned frequently (9, 18, 27). Rapid reviews often streamline systematic review methods by limiting the search by date, language, geographical area, or study design, and some rapid reviews search only for existing systematic reviews (9, 18, 19, 27). Other rapid reviews use a layered searching approach, identifying existing systematic reviews and then updating them with a summary of more recent eligible primary studies (9, 18, 19). Searching the reference lists of eligible studies (sometimes known as the “snowballing” technique) and searching the grey literature (i.e. reports that are difficult to locate or unpublished) are done in about half of published rapid reviews, and may be essential for certain topics (9, 18, 19, 27). However, rapid reviews seldom report contact with authors and other experts to identify additional unpublished studies (9, 18, 19, 27). One study found that peer review of the search strategy, using a tool such as the PRESS (Peer Review of Electronic Search Strategies) checklist (22) was reported in 38% of rapid reviews, but that it was usually performed internally rather than by external peer reviewers (18).

2.5 SCREENING AND STUDY SELECTION

Methodological standards for systematic reviews generally require independent screening of citations and abstracts by at least two reviewers to arrive at a set of potentially eligible references, which are in turn subjected to dual review in full-text format to arrive at a final inclusion set. Rapid reviews often streamline this process, with up to 40% using a single reviewer at each stage (9, 18, 19, 27). Some rapid reviews report verification of a sample of the articles by a second reviewer or, occasionally, the use of two reviewers (9, 18, 27). We recommend that dual screening be used to minimize the risk of selection bias through inappropriate exclusion of relevant studies (26).

2.6 DATA EXTRACTION

As for screening and study selection, the number of independent reviewers who extract study data for a rapid review can vary. The most common approach is single-reviewer extraction (41%), although another 25% report verification of a sample by a second reviewer and nearly as many use dual extraction (18). Data abstraction generally includes PICO elements, although data abstraction was often limited by the scope of the review, and authors were contacted for missing data very infrequently (18).

2.7 RISK-OF-BIAS ASSESSMENT

Risk-of-bias assessment, sometimes called critical appraisal or methodological quality appraisal, examines the quality of the methods employed for each included study and is a standard element of systematic reviews (11). The vast majority of rapid review producers perform critical appraisal or do it selectively (9). Similar to the situation for other steps, some rapid reviews report the use of a single assessor with verification of a sample of study assessments by another assessor (27). There is no consensus as to which risk-of-bias assessment tools to use, although most reviews use study design-specific instruments intended for assessing internal validity (9, 18). When the

purpose of the review is to scope the available literature, rather than to evaluate specific effects, this step may not be needed.

2.8 KNOWLEDGE SYNTHESIS

Nearly all rapid review producers conduct narrative knowledge syntheses, but a few perform meta-analysis or economic analysis (9, 18). Narrative syntheses may be limited to a basic descriptive summary of studies, but should not resort to “vote counting” (or simply tallying up the number of studies with results that do and do not support the intervention), an approach that can be misleading (12). If meta-analyses with combined estimates of effect are not available, reviewers should be cautious in concluding that there is a lack of effect; in this situation, there may simply be a lack of evidence or a lack of statistical power to detect an effect. When possible, a narrative synthesis should report the results of included studies and should discuss the reasons for differences among studies, such as heterogeneity of the PICO elements, study design, or methodological quality. Most rapid reviews present conclusions, recommendations, or implications for policy as another component of the synthesis, underlining the role of rapid reviews in the development of health policies (18, 19). Multiple experts also recommend that rapid reviews should clearly describe and discuss the potential limitations arising from methodological choices (6, 18, 19). The Grading of Recommendations Assessment, Development and Evaluation (GRADE) system is used by many systematic review producers to rate the certainty of the evidence about health outcomes (23). Guideline developers, and others who make recommendations or policy decisions, use GRADE to rate the strength of recommendations based on that evidence. Rapid review authors can also employ GRADE to rate the certainty of synthesized evidence and develop policy implications for decision-makers. However, the GRADE system works best for interventions that have been subject to trials and where there is at least one meta-analysis with a single estimate of effect.

2.9 REPORT PRODUCTION AND DISSEMINATION

Standard templates for each stage of the review, from protocol development to report production can assist the review team to perform each step efficiently. Use of a report template, with minimum methodological standards, reporting requirements, and/or standard report sections, can assist the producer in streamlining production of the report and can also enhance transparency (9, 14, 19, 24). An extension of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement has not yet been created for rapid reviews, although one is under development and has been registered with the EQUATOR Network ((28); A. Stevens, personal communication, 2017). Nonetheless, the PRISMA checklist can serve as a reporting template to increase the transparency of rapid reviews (5, 24, 29).

Research about review formatting and presentation is now being conducted, but it is likely that the forms employed will need to be adapted to the individual requester and stakeholder audiences (26). Khangura and colleagues (14) present a figure showing formatted sections of a sample report, and many other rapid review producers have examples of reports online that can serve as formatting samples. Most rapid review producers conduct some form of peer review for the resulting reports, but such review is often internal and may include feedback from the requester (18). Most rapid review producers disseminate their reports beyond the requester, but dissemination varies by the sensitivity or proprietary nature of the product (9, 18). When reports are disseminated, it is common for them to be posted online, for example, at an organizational website (9, 18). Chapter 7 of this manual contains more information on the reporting and dissemination of rapid reviews.

2.10 OPERATIONAL CONSIDERATIONS

Evaluations and descriptions of research programmes that produce rapid reviews typically

include some helpful pragmatic and operational considerations for undertaking a rapid review or developing a rapid review programme (4, 13, 14, 16, 19, 24, 30, 31). Highly experienced, permanent staff with the right skill mix, including systematic reviewers, information specialists, methodologists, and content experts (15, 19, 24, 27), are essential. It is time-consuming to assemble staff on a per-project basis, so the presence of an existing team (which may only do rapid reviews or may also do systematic reviews or other research) allows projects to get off to a quick start. The existence of a dedicated team also creates the potential to build relationships with requesters and to cultivate mutual trust. Staff with experience conducting systematic reviews will be familiar with standard methods and may be alert to any needed protocol changes as the review proceeds (27). The rapid review team must understand the methodological implications of decisions taken, and must convey these implications to the requesters, to allow them to understand the caveats and potential limitations. Continuing relationships and longer-term contracting with requesters, to allow for a quick start and “good faith” initiation of work before a contract is in place, can speed the early development stages (16, 24). It is important for rapid review producers to confirm that the choices they make to streamline the review are acceptable to the requester. Whether it is a decision to limit the scope to a single intervention or outcome, restrict the literature search to existing systematic reviews, or forgo

a meta-analysis, the knowledge user must be aware of the implications of streamlining decisions (13, 16, 19). Some programmes also emphasize the need for follow-up with review requesters, both to develop the relationship and to continuously improve knowledge products (14, 31).

2.11 INFORMATION TECHNOLOGY FOR RAPID REVIEWS

Another method of conducting reviews rapidly involves the use of information technologies (19, 32, 33). Essentially all reviews make use of information technology, by virtue of the electronic database searching that is employed to locate relevant studies. A time-consuming step in any review involves finding and screening citations. Basic reference management software can be used for multiple tasks in a review, such as downloading references from a search engine, finding full-text articles, removing duplicate references, tracking references, and documenting citations in the review. Some authors create custom fields to track dual reviewer selection or quality assessment. However, other technologies can help to make the review process even more efficient. While not an exhaustive inventory, the remainder of this section outlines the various types of technologies, where they fit in the review production process, and how readers can find more information about them. Table 2.2 summarizes common software tools for tasks such as screening, data extraction, and synthesis.

TABLE 2.2. Information technology for rapid reviews

Product name (cost)	Characteristics
Abstrackr, OpenMeta[Analyst] (34) (open source, freely available)	Suite of products on the website of the Brown University School of Public Health Abstrackr is a semi-automated citation screening software program OpenMeta[Analyst] is software for performing meta-analysis of continuous, binary, or diagnostic test accuracy data

Product name (cost)	Characteristics
Covidence (35) (first review free; subscription required for subsequent reviews)	Primary screening and data-extraction tool for Cochrane authors Full text can be highlighted and linked to prepare a risk-of-bias table Data can be exported into various analytic packages
DistillerSR (36) (purchase of licence required)	Tool for citation import and tracking for inclusion and exclusion Customizable data-extraction tables Data can be exported into various analytic packages
EPPI-Reviewer (37) (available to Cochrane authors free of charge; subscription fee for others)	Supports development of all types of systematic reviews, including complex reviews Includes reference management, screening, data extraction, and risk-of-bias assessment Contains quantitative and qualitative analysis functions. Allows coding of text and generation of keywords
GRADEpro GDT (38) (freely available)	Software for generating evidence profiles and summary-of-findings tables for systematic reviews and supporting development of guideline recommendations
Rayyan (39) (freely available, web-based, including mobile applications)	Software for semi-automated screening titles and abstracts
Review Manager (RevMan) (40) (purchase of licence required for non-Cochrane review use)	Contains Cochrane review template, including tables of study characteristics, comparisons, charts for risk-of-bias assessment, and templates for graphical display of results Integrates meta-analysis software
System for the Unified Management, Assessment and Review of Information (SUMARI) (41) (free, but registration required)	Suite of modules for systematic reviews produced by the Joanna Briggs Institute and available to systematic review researchers. Includes tools for data extraction and critical appraisal for multiple study designs Can import and manage citations

The SR ToolBox is a searchable, web-based catalogue of systematic review support tools (42). Researchers can search for tools that use, for example, text-mining or machine-learning to support various stages of a review. The catalogue is searchable for tools that are available for free or for purchase (33, 43).

Tsafnat and colleagues (32) reviewed the research tasks involved in systematic reviews and the automation potential of each step, along with research gaps. They identified the potential for automation to improve the speed and accuracy of several review steps. Of note, automated full-text screening (based on machine-learning algorithms) and some level of automated data

extraction are currently possible and improving rapidly (32, 33). However, as is the case for rapid reviews themselves, there is little empirical evidence about the implications of innovative technologies for review validity (33). For example, some steps, like study screening, may be easier to automate than the more nuanced decisions involved in assessing risk of bias. Tsertsvadze and colleagues (33) recognized the application of innovative technologies, including machine-learning approaches, as having the potential to speed the review process and reduce costs, but at some risk of increasing the risk of bias. These are the same benefits and risks associated with streamlining systematic review methods, and both may be heightened with a combination of these two approaches (33).

2.12 SUGGESTED APPROACHES TO RAPID REVIEWS

The previous sections have summarized the numerous approaches to conducting rapid reviews and the programmes that use them. Similarly, Abrami and colleagues (13) summarized several methods of conducting rapid reviews and developed a brief review checklist of considerations and recommendations, which may serve as a useful parallel to Table 2.1 in this chapter. Boxes 2.1 and 2.2 present some practical examples from research centres in Lebanon and Canada that perform rapid reviews and how they are working to support policy decisions in their regions.

BOX 2.1. The Center for Systematic Reviews on Health Policy and Systems Research (SPARK) rapid review programme to support health policy in the Eastern Mediterranean region

The Center for Systematic Reviews on Health Policy and Systems Research (SPARK) was established in 2013 at the American University of Beirut in Lebanon through funding from the Alliance for Health Policy and Systems Research at the World Health Organization (WHO). The Center produces systematic reviews responding to health policy and systems priorities, and builds capacity to conduct systematic reviews at the individual, team, institutional, and national levels. It also developed and conducted initial validation of the SPARK tool for prioritizing questions for systematic reviews in health policy and systems research, along with a user manual.

Building on these successes, the Center further established a rapid response service to address requests from health policy-makers and stakeholders at the national and Eastern Mediterranean region levels. The service builds on processes for managing demand, conducting rapid reviews, and delivering rapid response products. It also takes advantage of its close collaboration with the Knowledge to Policy (K2P) Center, a WHO Collaborating Center for Evidence-Informed Policy and Practice. SPARK has collaborated with K2P to rapidly inform key policy decisions in Lebanon, such as those related to antibiotic resistance and to implementing the salt fluoridation and iodization law.

The SPARK Center and K2P were invited to support and contribute to the Lancet-American University of Beirut Commission on Syria: Health in Conflict (44). The Commission aims to raise the profile of the Syrian crisis in global health and to mobilize a stronger international response through its work. SPARK has already conducted a rapid scoping review to inform the Commission's first policy paper, addressing policies to protect and support health-care workers in the setting of armed conflict zones (45). The centres will build both experience and expertise as they respond to the requests of policy-makers in Lebanon and the region.

BOX 2.2. Rapid production of evidence summaries at the Ottawa Hospital Research Institute using an 8-step approach

The Knowledge Synthesis Group (KSG) at the Ottawa Hospital Research Institute is an academic group that works closely with a variety of decision-makers to provide timely, evidence-based answers to help direct policy, implementation, and practice decisions. In 2012, the KSG outlined a formal approach to conducting rapid evidence summaries (14), a process that emphasizes incorporating “off-the-shelf” evidence such as existing systematic reviews, and then including primary studies if warranted. This rapid review approach evolved iteratively over time, and is based upon widely accepted systematic review standards. Khangura and colleagues described the development of the KSG’s approach as they produced 11 evidence summaries (14), including one on the timing of elective repeat Cesarean birth.

Importantly, the KSG approach involves continuing engagement with decision-makers to ensure that the project scope is defined appropriately, which in turn ensures that the research questions posed will generate useful answers. Therefore, the KSG engages with end-users from the beginning, making certain that they have a clear understanding of the rapid review process, managing their expectations, and conveying the limitations of this approach. Built into this process is an internal assessment as to the suitability of the rapid review approach for each question under consideration. Further topic refinement and protocol development is undertaken using a PICO (population, intervention, comparator, outcome) framework to focus the review on what will meet the requester’s needs and to ensure that the project will be manageable within a condensed time frame of 4–16 weeks. End-users are also engaged throughout the process of conducting the rapid review to answer questions and to be involved in decision-making, should post hoc changes be needed in light of the nature and volume of evidence. To accommodate the information needs of various requesters, the KSG employs a rapid review approach that is tailored across the various stages of conducting the review to best meet the specific needs of the end-users (25). For example, the KSG researchers may conduct a meta-analysis if it is needed, or they may elect to consider all published literature, regardless of study design, for narrow questions where there is a lack of high-quality studies.

A “one-size-fits-all” approach may not be suitable to cover the variety of topics and requester needs put forward. Watt and colleagues (6) observed nearly a decade ago that “It may not be possible to validate methodological strategies for conducting rapid reviews and apply them to every subject. Rather, each topic must be evaluated by thorough scoping, and appropriate methodology defined.” Thomas, Newman, & Oliver (4) noted that it may be more difficult to apply rapid approaches to questions of social policy than to technology assessment, in part because of the complexity of the topics, underlying studies, and uses of these reviews. The application of mixed methods, such as key informant interviews, stakeholder surveys, primary data, and policy analysis, may be required for questions with a paucity of published

literature and those involving complex subjects (4). However, rapid review producers should remain aware that streamlined methods may not be appropriate for all questions, settings, or stakeholder needs, and they should be honest with requesters about what can and cannot be accomplished within the timelines and resources available (16). For example, a rapid review would likely be inappropriate as the foundation for a national guideline on cancer treatment due to be launched three years in the future.

Tricco and colleagues (10) conducted an international survey of rapid review producers, using a modified Delphi ranking to solicit opinions about the feasibility, timeliness, comprehensiveness, and risk of bias of six different rapid review

approaches. Ranked best in terms of both risk of bias and feasibility was Approach 1, which included published literature only, based on a search of one or more electronic databases, limited in terms of both date and language. With this approach, study screening is conducted by a single reviewer, while both data extraction and risk-of-bias assessment involve a single reviewer with verification by a second reviewer. Other approaches were ranked best in terms of timeliness and comprehensiveness (10), representing trade-offs that review producers and knowledge users may want to consider. Table 3.1 in Chapter 3 gives details about the

various approaches ranked in this survey. Although the survey report was based on expert opinion (10), it did not provide empirical evidence about the implications of each streamlined approach. However, in the absence of empirical evidence, it may serve as a resource for rapid review producers looking to optimize one of these review characteristics.

Given that empirical evidence regarding the implications of methodological decisions for rapid reviews is not yet available, we have developed interim guidance for those conducting rapid reviews (Box 2.3).

BOX 2.3. Interim guidance for the conduct of rapid reviews

- Engage with the review requester early and throughout the review process to understand needs and expectations, and collaborate with the requester in making decisions about how to approach the review.
- Use a team experienced in doing systematic reviews to conduct the rapid review.
- Develop a protocol, including PICO (population, intervention, comparator, and outcome) elements, key questions, and the planned approach, to guide the review and to track any changes that are made as the review progresses (and their rationale). Protocol registration is strongly encouraged.
- Search at least two electronic databases for most topics; use a targeted grey literature search if the topic is not well addressed in published articles.
- If timeline and resources allow, use two reviewers for study selection.
- Perform data extraction and risk-of-bias assessment using one researcher; if time and resources allow, a sample of articles should be checked by a second one.
- Consider the use of innovative technologies that can help to make particular review steps more efficient.
- In conducting the knowledge synthesis, include both a typical results component (with description of included studies, their results, reasons for any differences in results across studies, and the quality of the evidence from those studies, perhaps with GRADE (Grading of Recommendations Assessment, Development and Evaluation) rating for the overall quality of evidence) and a discussion component describing limitations of the evidence and the review, overall conclusions, recommendations, and implications for policy- and decision-makers.
- When possible, obtain peer review, and use feedback from the requester and other stakeholders to inform and improve future knowledge synthesis.
- Consult with the requester about the best report format and presentation that will support the use of the review and subsequent decision-making.

2.13 CONCLUSION

This chapter has summarized the rapid review methods that can be used to balance timeliness and resource constraints with a rigorous knowledge synthesis process to inform health

policy-making. Interim guidance suggestions are outlined in Box 2.3. The keys to success are early and continuing engagement, careful streamlining of decisions for each review step, and transparency of these decisions through a clearly written protocol and report.

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3

IMPROVING QUALITY AND EFFICIENCY IN SELECTING, ABSTRACTING, AND APPRAISING STUDIES FOR RAPID REVIEWS

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KEY POINTS

- A consensus-based approach to rapid review conduct is highlighted, including streamlined methods for literature search (i.e. search more than one database for published studies only, use date and language search limits where appropriate), study selection (i.e. conducted by one reviewer), data abstraction (i.e. one reviewer abstracts, another verifies), and quality assessment (i.e. one reviewer assesses, another verifies). The evidence-base supporting streamlined methods is limited and evolving, and we need further evidence to define robust approaches.
- Rapid review teams should consider including content experts (e.g. in health policy and systems research) and experienced reviewers (e.g. in study selection, data abstraction, and quality assessment) to increase review rigour and expedite the review process.
- Eligibility criteria should be well-defined; stated using clear, unambiguous language; and applied consistently.
- Screening, abstracting, and assessing forms, including explanation and elaboration documents that define concepts and terms, ideally with examples, should be used to support reviewers in study selection, data abstraction, and quality assessment.
- Procedures and material should be pilot-tested by the team prior to conducting study selection, data abstraction, and quality assessment.
- Training should be provided to all reviewers at the beginning of the review and during the review to deal with issues that need to be reiterated for consistency purposes.
- Authors of the studies included in the rapid review should be consulted to gather further information on methods conduct, if time allows.

3.1 INTRODUCTION

Deciding which methods to streamline when conducting a review rapidly is challenging for several reasons. First, typical systematic reviews can provide valid and reliable results when conducted according to standard guidance (1), but deviations from the standard may leave the review open to bias and errors. Box 3.1 illustrates standard methods and best practices that contribute to the validity and reliability of systematic review findings, notwithstanding considerations for time, resources, and costs. Second, alterations of or deviations from standard systematic review methods can be made at multiple points in the review process, leading to numerous rapid review approaches. However, few of these deviations are used consistently in the literature, and the methods for many rapid reviews are poorly reported (2); thus, there is currently no single best approach.

Table 3.1 displays rapid review approaches identified by an international survey of diverse stakeholders, ordered according to preferences in trade-off considerations between feasibility, timeliness,

comprehensiveness, and risk of bias (3). As can be seen, typical approaches involve abbreviation



































We suggest careful consideration to which steps are streamlined, factors affecting streamlined decisions, and potential consequences in terms of validity of the review results and efficiency of the review process.





































of any or all methods for literature search, study selection, data abstraction, and quality assessment. Only limited data are available to inform trade-offs in streamlined methods and the downstream consequences on review findings.

BOX 3.1. Generally accepted standards for study selection, data abstraction, and quality assessment for systematic reviews

- Use two or more reviewers, working independently, to screen and select studies (4-6). Define in advance the process for resolving discrepancies (5).
- Train screeners using written documentation (4). Test and retest screeners to improve accuracy and consistency in study selection (4).
- Use two or more reviewers, working independently, to extract quantitative and other critical data from each study (4-6). For other types of data, one reviewer could extract the data, and the second reviewer could then independently check for accuracy and completeness (4-6). Define in advance the process for resolving discrepancies (4, 5).
- Use two or more people, working independently, to apply the risk-of-bias or quality assessment tool to each included study. Define in advance the process for resolving disagreements (5-7). Pilot the risk-of-bias or quality assessment tool (6). If resources are limited, priority should be given to assessment of the key sources of bias (6).

TABLE 3.1. Consensus-ranking^a of rapid review approaches relative to systematic review approach

Rapid review approach	Feasibility	Timeliness	Comprehensiveness	Quality Assessment
<p>APPROACH 1:</p> <ul style="list-style-type: none"> • Literature search: >1 database, published only • Search limit: both date and language • Study selection: one reviewer • Data abstraction: one person abstracts, other verifies • Risk-of-bias assessment: one person assesses, other verifies 	  	  	  	  
<p>APPROACH 2:</p> <ul style="list-style-type: none"> • Literature search: updating the literature search of a previous review, published only • Search limit: none • Study selection: one reviewer • Data abstraction: one reviewer • Risk-of-bias assessment: not performed 	  	  	  	  
<p>APPROACH 3:</p> <ul style="list-style-type: none"> • Literature search: >1 database, grey literature • Search limit: both date and language • Study selection: one reviewer • Data abstraction: one reviewer • Risk-of-bias assessment: not performed 	  	  	  	  

Rapid review approach	Feasibility	Timeliness	Comprehensiveness	Quality Assessment
APPROACH 4: Literature search: >1 database, grey literature Search limit: either date or language Study selection: one reviewer Data abstraction: one reviewer Risk-of-bias assessment: not performed	  	  	  	  
APPROACH 5: Literature search: >1 database, grey literature Search limit: date Study selection: one reviewer Data abstraction: one reviewer Risk-of-bias assessment: one reviewer	  	  	  	  
APPROACH 6: Literature search: >1 database, grey literature Search limit: both date and language Study selection: two independent reviewers Data abstraction: one reviewer Risk-of-bias assessment: not performed	  	  	  	  

^a More smiley faces indicate stronger preference (higher ranking) by the Delphi panel of international stakeholders. Colours are used to emphasize the number of smiley faces but otherwise, have no differential values.

Source: This study included an international survey of rapid review producers and modified Delphi to solicit experiences with and perceptions of rapid reviews from stakeholders, including researchers, policy-makers, industry, journal editors, and health-care providers. Results were derived from 40 rapid review producers responding to the survey and 113 stakeholders participated in the Delphi panel. Adapted with permission from Tricco et al., 2016 (3)

In this chapter, we present methods for selecting, abstracting, and assessing studies for rapid reviews of health policy and systems interventions (Box .2). We also present factors affecting validity and reliability (Box 3.2). Finally, we describe the impact of using streamlined methods on the

results and conclusions, as well as the related workload (A. Tricco, unpublished data, 2016). Note that methods for limiting the literature search are not discussed here as they often depend on review topics.

BOX 3.2. Evidence supporting decisions regarding streamlined methods for rapid reviews

Study selection

- Single-reviewer screening of titles/abstracts missed on average 8%–20% of eligible studies (8, 9) but substantially reduced screening time (by about 60%), relative to screening by two reviewers (10).
- Decisions regarding study selection should not be based on study results, and eligibility criteria should be well defined; stated with clear, unambiguous language; and applied consistently (11, 12).
- Errors and inconsistencies in application of study eligibility criteria are common (13).
- The review team should include members with different levels of content expertise and should include members with study screening experience to expedite screening of titles/abstracts (8, 13, 14). A lack of relevant information in titles/abstracts contributes to discrepancies between screeners (15, 16).

Data abstraction

- Compared with dual data abstraction, single abstraction with verification resulted in more errors (a relative increase of 22%) but saved time (a relative saving of 36%) (17). However, the errors did not cause major changes in the effect estimates.
- Variation in the reporting of study results (especially variation due to selective reporting) commonly contributes to discrepancies in data abstraction (18, 19).
- Use of experienced abstractors can expedite the process (20, 21).
- In general, continuous outcome data involving specific summary measures such as means and standard deviations are prone to errors during data abstraction, with the potential to significantly alter the overall impression of the effectiveness of clinical, health policy and systems interventions (22, 23).

Study quality assessment

- Quality assessment can be influenced by characteristics of the included studies (24, 25). Training and piloting of assessment forms, explanation/elaboration documents, and related material specific to each review is important.
- The “unclear” option in quality assessment is often applied because of inadequate reporting of methodological details in study reports. Reviewers may be able to reduce this frequency by supplementing published reports with information collected directly from study authors (26, 27).
- Discrepancies in quality assessment are mainly due to differing interpretation of assessment tools, rather than to differing information found in the study reports (24).
- Discrepancies in quality assessment are common, regardless of the level of experience of the quality appraisers (28).

3.2 STUDY SELECTION

> 3.2.1 Methods for study selection

Once articles have been identified from a literature search, reviewers must decide which of these studies meet the eligibility criteria. Such decisions may involve judgement, prior opinion, subjectivity, inconsistency, and random errors (11). Currently, the most effective means of reducing discrepancies in study selection is to have two or more reviewers, working independently, to select studies for inclusion (Box 3.1). Reviewer disagreement is common in title/abstract screening (10%–20%) (14) and the use of two or more reviewers here, and during full-text screening, provides an opportunity to discuss the reasons for disagreement and clarify the discrepancy. This is especially relevant to reviews on health policy and systems research, which are generally more complex and

challenging than reviews of other topics, such as biomedical interventions.

The first five rapid review approaches listed in Table 3.1 involve the use of one reviewer in study selection, instead of two. This substantially reduces screening time and resources, but increases the chance of missing eligible studies. For example, single screening of titles/abstracts missed on average 8%–20% more eligible studies relative to dual screening, but the impact of the missed eligible studies on the review results and conclusions were unclear (8, 9). Even systematic reviews that were conducted using rigorous methods (e.g. using two reviewers) ended up missing some eligible studies, although the validity of the review findings was not compromised, suggesting that it is essential to capture the key studies, with some tolerance for a low frequency of missed eligible studies, as outlined in Box 3.3.

BOX 3.3. Reproducibility of systematic reviews

With one exception, no prospective studies have evaluated the reproducibility of systematic reviews. One study assessed the reproducibility of systematic reviews evaluating the association between endometrial cancer and food, nutrition, and physical activity (1). The reviews were conducted independently by two centres, on two continents, with the same instructions (e.g. peer-reviewed protocol, using two reviewers) and the same resources. The two reviews identified a total of 310 relevant studies. Due to a combination of reasons (related to eligibility criteria, literature searches, and study selection), the first review missed 12% of relevant studies, and the second review missed 34%. However, despite differences in study inclusion, the overall conclusions were comparable. The results suggest that rapid reviews might be completed with evidence from key studies rather than with exhaustive evidence from all studies, which consumes substantially more time and resources.

> 3.2.2 Factors affecting the accuracy and reliability of study selection

Study eligibility criteria should be well-defined; stated using clear, unambiguous language; and applied consistently (11, 12). Mistakes in assessing study eligibility can lead to inclusion of ineligible studies and exclusion of eligible studies (11). This issue is more common than expected; indeed, one estimate suggests that 10% of systematic reviews contain discrepancies relative to the truly eligible studies (12). Defining the eligibility criteria for reviews in

health policy and systems research is generally challenging because the criteria often involves the specification of real-world populations of patients with multiple comorbidity, complex interventions with multiple components, contextual factors affecting the intervention implementation, and multiple outcomes. An explanation and elaboration document can help support reviewers with study selection, especially with respect to defining concepts and terms used in questions related to the eligibility criteria, and to illustrate them with examples. Training should be provided

to all reviewers at the beginning of the review and during the review to deal with issues that need to be re-iterated for consistency purposes. A decision log is useful to document key decisions made during study selection (and other steps of the review process) so that the same criteria (or rules and nuances in their interpretation) are applied consistently. Finally, decisions regarding study selection should not be based on study results; in particular, studies should not be excluded solely because they have negative findings (11, 12).

The composition of the review team can affect the accuracy and reliability of study selection. Rapid review teams with content experts (e.g. in health policy and systems research) and experienced reviewers (e.g. in screening, data abstraction, and methodological quality appraisal) can increase review rigour and expedite the review process (8, 13, 14). Graduate students may screen titles and abstracts more consistently than content experts (14). However, content experts may be better able to discern truly irrelevant abstracts quickly (13). Although the least experienced screener may produce more consistent selection than more experienced screeners, the average screening time is substantially longer for inexperienced screeners (8). For reviews of health policy and systems research, including content experts can expedite screening tasks if they are experienced reviewers. Conversely, including policy-makers as members on the rapid review team may increase the amount of time required for screening if they are inexperienced reviewers, but may help to identify truly irrelevant abstracts more quickly. Importantly, policy-makers and content experts contribute multiple perspectives to the review team as well as to the review.

Lack of relevant information in titles/abstracts can also affect accuracy and reliability of study selection (15, 16). For example, screening only article titles resulted in a slightly higher number of discrepancies compared with screening both titles and abstracts (although this did not lead to greater exclusion of eligible studies) (15). It is also challenging to screen citations with titles only, or with abstracts that are not structured (e.g. sections for background, methods, results,

conclusions), or that are missing information required for eligibility assessment (16). These challenges suggest that if screening is conducted by one reviewer, the review team should pilot screening forms and related explanation and elaboration documents. This may help identify potential discrepancies related to lack of information in titles/abstracts and inform how to handle these decisions consistently during screening.

Various tools exist to facilitate screening, record the flow of records during the review, and allow multiple reviewers to simultaneously screen the same set of studies. For example, a web-based platform facilitated workflow and improved screening accuracy relative to a paper-based tool and a tool based on reference management software (29). However, the average screening times were not considerably different between the three modalities (29). Alternatively, the development of text-mining methods for study selection is active and promising. Text-mining tools that prioritize the order in which potentially relevant records are screened are considered safe for use in “live” reviews (30). This, for example, involves using an initial set of screened records to develop a regression model (e.g. based upon a bag of keywords) to predict the probability of a record being the eligible one, and order the records according to their eligibility potential for priority screening. In addition, progress has been made in the use of text-mining tools as a “second screener” (30). Interested readers are referred to excellent sources available elsewhere (10, 30).

3.3 DATA ABSTRACTION

> 3.3.1 Methods for data abstraction

In Table 3.1, the consensus-based Approach 1 for rapid reviews uses one reviewer for data abstraction and another to verify the data abstracted (i.e. single abstraction with verification). Compared with dual abstraction (i.e. conducted by two reviewers, working independently), single abstraction with verification saved time (a relative saving of 36%), but resulted in more errors (a relative increase of 22%) (17). However, the errors did not substantially affect the conclusion of the review (17). For rapid

reviews of health policy and systems research that do not consider meta-analysis to synthesize outcome data, the use of a single abstractor could be reasonable, with a verifier for the data that are important to decision-makers (4). Dual abstraction remains essential for abstracting data that are used in quantitative or mixed methods syntheses, such as data related to the effectiveness of interventions (31). Computer-assisted single abstraction with verification has been proposed and is undergoing evaluation in a randomized controlled trial against dual abstraction and single abstraction with verification (32).

> 3.3.2 Factors affecting the accuracy and reliability of data abstraction

Reviewers should be aware that selective reporting of results in one or more of the included studies may affect data abstraction (18). For example, researchers might have measured various outcomes in the study, but reported only those that were statistically significant. Selective reporting could also occur when there is the possibility of selecting from multiple effectiveness measures, multiple time points when the outcomes were measured, and multiple analyses using different statistical methods, among others. In the absence of clear guidance, the abstractor could selectively or arbitrarily include outcome measures when there are multiple options. Reviewers should pre-specify the required data items in advance, and engage stakeholders, including clinicians, decision-makers, content experts, patients, and caregivers to help prioritize which outcomes are most important and relevant (33). Reviewers should also use data abstraction forms and supporting explanation and elaboration documents to ensure consistency in handling variation in the reporting and selection of study results.

The team should also consider training of reviewers and piloting of data abstraction forms and supporting documents. It should be anticipated that reviews in health policy and systems research potentially involve large variation in the reporting of included studies, as they are generally more complex than reviews of clinical topics. As such,

more time should be allocated for data abstraction for these reviews.

Data abstraction errors (i.e. incorrect abstraction) may be more common than expected; one estimate suggested that errors were present in 20 of 34 reviews (although the errors did not affect the conclusions) (21). Discrepancies can occur regardless of the level of experience of the data abstractors. Experienced abstractors generally take less time to complete data abstraction; in particular, abstractors experienced in the content area of the review (e.g. researchers or policy analysts working for the commissioning institution) can expedite data abstraction. The review team might also consider including members with less experience, such as graduate students, to improve the capacity to meet tight deadlines. However, abstracted data from experienced abstractors are likely more consistent than respective data abstracted by graduate students (23).

Continuous data, which are summarized in the form of means and standard deviations, are more prone to abstraction errors than dichotomous data, which are summarized as categories (e.g. use or non-use of health services). Such errors can substantially affect assessment of the intervention effects, especially when the study data are synthesized quantitatively (23, 34). Care should be exercised in handling this type of data, even if the data are simply displayed in summary tables, for example, to avoid simple but serious errors such as mistakenly displaying the means and standard deviations of the intervention group for the control group and vice versa (34). The review team should consider dual abstraction for continuous data, with involvement of or consultation with experienced review methodologists. This approach is particularly suitable for rapid reviews of health policy and systems research, which can include important continuous outcomes, such as patient and policy-maker preferences, functional measures, health-related quality-of-life measures, performance measures, quality indicators, resource utilization, costs, and cost-effectiveness measures.

Various tools are available to facilitate data abstraction, especially tools facilitating source

verification (comparing the abstracted data against the original study reports). For example, the use of dual displays from the same desktop or laptop computer has been shown to reduce the average data abstraction time by 24 minutes per study, relative to single display (35). This difference is possibly due to the reduction in time required for switching between or scrolling within computer displays during data abstraction and verification. Readers interested in data abstraction tools are referred to a survey of available tools (36), a systematic review of automation tools (37), and a step-by-step tutorial on data abstraction (38).

3.4 ASSESSMENT OF THE METHODOLOGICAL QUALITY OF INCLUDED STUDIES

> 3.4.1 Methods

Quality assessment refers to the assessment of the risk of bias in included studies (e.g. the risk that the study may overestimate or underestimate the true intervention effect), as well as the critical appraisal of included studies (e.g. an investigation of the extent to which study authors conducted their research to the highest possible standards) (5). Approach 1 for rapid reviews recommends that one reviewer assesses study quality and another verifies the assessment (Table 3.1). Among the six approaches considered for rapid reviews in Table 3.1, only one other approach includes quality assessment, while the remaining four approaches omit quality assessment altogether. There is a need for further research to understand the reliability of single assessment with verification relative to dual assessment.

> 3.4.2 Factors affecting the reliability of methodological quality assessment

Quality assessment can be influenced by a study's characteristics (24, 25). For example, more consistent quality assessments have been observed in the assessment of 1) performance bias, with studies having objective outcomes rather than subjective outcomes; 2) selection bias and performance bias, with studies designed

for comparative effectiveness evaluation rather than studies with other designs; and 3) selective reporting bias, with effectiveness evaluation studies rather than studies evaluating other hypotheses such as testing causal associations (24). In rapid reviews of health policy and systems research, a multitude of objective and subjective outcomes are common, and reviewers should therefore expect more discrepancies in quality assessments among the assessors, compared to other types of reviews, such as those with a clinical focus. Training and piloting of assessment forms, explanation and elaboration documents, and related material specific to each review will be important.

Often the "unclear" response is applied in quality assessment because of inadequate reporting of methodological details in study reports (24). The reliability of quality assessment may increase when published reports are supplemented with additional information collected from study authors (26). Also, studies that are assessed as low quality can sometimes be re-assessed as higher quality when methodological clarification is obtained from the study investigators (27). As such, there may be value in contacting authors of studies with missing methods information to clarify details pertaining to quality assessment, provided this is feasible with the time and resources available.

Discrepancies in quality assessment are mainly due to differing interpretation of the items on the quality assessment tools, rather than being due to different information identified in the study reports (24). This problem can be addressed through training for reviewers and additional guidance from the tool developers. Even among reviewers experienced with such tools, between-rater agreement generally ranges from poor to fair in studies evaluating the reliability of quality assessment (24, 27).

Discrepancies in quality assessment are common, regardless of the level of experience of the assessors (28). For example, between-rater agreement was good for quality assessment of epidemiological studies by graduate students who were trained to follow an assessment manual (39),

yet the agreement between graduate students was poor with the Jadad quality assessment scale for randomized trials, and ranged from poor to fair with the Newcastle–Ottawa scale for cohort and case–control studies (28).

3.5 ALLOCATING RESOURCES FOR SELECTING, ABSTRACTING, AND ASSESSING STUDIES

Only limited data are available to inform how much resources are required for the planning and conduct of systematic reviews and rapid reviews. Using one reviewer to screen titles/abstracts substantially reduces the average screening time

(by up to 60%), relative to using two reviewers (10). Data abstraction by one reviewer (with independent verification) substantially reduces data abstraction time (a relative reduction of 36%), compared with data abstraction by two reviewers (17). It would take 30 minutes per study for quality assessment, on average, and about 10 minutes per study to discuss and resolve discrepancies (25). On average, it would take between 1000 and 2000 hours to complete a well-conducted review including meta-analysis, depending on the number of titles/abstracts retrieved (40). Box 3.4 illustrates the implementation of a rapid review where much less time was available, and a quick turnaround was required.

BOX 3.4. Example of methodological decisions to allow a review to be conducted rapidly

- The ABC Research Unit is currently at full capacity, managing nearly a dozen systematic reviews on a variety of topics, with an average 6–12 month timeline and 1000–2000 person-hours of staff time per review. ABC has just received a request from the World Health Organization (WHO) South African office for a review to evaluate the effectiveness of medical malpractice policies in reducing obstetrics litigation.
- The WHO needs the review within 6 weeks to formulate initial recommendations on policy reform, which will affect multiple levels of the South African health system. The organization has provided a limited budget. Processes will have to be streamlined if ABC is to meet the deadline with limited capacity and budget, but how?
- ABC’s first move is to form a review team with two experienced reviewers and four graduate students. ABC knows that while the students will help maximize the budget, quality results can still be achieved, provided experienced reviewers are on the team. They also enlist three content experts (an obstetrician, an obstetrics care nurse, and a lawyer with experience in obstetrics-related litigation), who will be able to quickly identify ineligible studies and speed up the process of data abstraction.
- ABC will use Approach 1 to conduct the rapid review. The team is ready to go.

3.6 OTHER CONSIDERATIONS

We have discussed methods for selecting, abstracting, and assessing studies for rapid reviews in health policy and systems research. In suggesting streamlined methods to support timely decision-making, we have assumed that the review’s objectives and related research questions are well-defined in advance. However, some of the key points suggested at the beginning

of the chapter may not be relevant to qualitative reviews, where the initial research questions may be modified with emerging evidence as the review progresses (see Chapter 4). Also, an efficient way to meet tight timelines is to engage decision-makers throughout the review process, especially in scoping the review objectives and research questions to ensure that the end results are useful and fit the purposes of the decision-makers (see Chapter 5).

3.7 CONCLUSION

Rapid reviews of health policy and systems research may present more challenges than systematic reviews of clinical topics. Careful consideration should be given to which steps are streamlined, factors affecting streamlined decisions, and potential consequences in terms of validity of the review results and efficiency of the review process. It will be particularly important to ensure that reviewers accurately and reliably interpret study eligibility criteria, have clear rules for study selection, and are supported with pilot forms and explanation and elaboration documents for study selection, data abstraction, and quality

assessment. Rapid review teams should include both content experts and other reviewers to provide multiple perspectives to the review process, and if feasible, include experienced screeners, abstractors, and assessors to expedite the process. Two independent abstractors should be considered to collect continuous data that are pivotal to decision-making. Training should be provided to all reviewers at the beginning of the review and during the review to deal with issues that need to be reiterated for consistency purposes. Consensus-based approaches for rapid reviews are provided in Table 3.1, with rankings obtained from a study that engaged international stakeholders in rapid reviews.

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4

SELECTING RAPID REVIEW METHODS FOR COMPLEX QUESTIONS RELATED TO HEALTH POLICY AND SYSTEM IMPROVEMENTS

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KEY POINTS

- A two-stage process of first scoping the literature, then selecting a focus, is an effective approach for conducting health policy and systems reviews under time pressure.
- The complexity of health policy and systems research requires transdisciplinary collaboration, which can, if managed well, speed and enhance a review.
- Initializing a rapid review requires a framework from which to organize the concept under study, based on a set of focused questions or an existing framework (either borrowed or customized) which either remains unchanged – static – or is allowed to evolve as knowledge accumulates from the search.
- Using a static framework may speed a review, but this benefit must be balanced against the risk of missing the significance of a theme that emerges from the literature.
- In areas already covered extensively by existing systematic reviews, a search identifying existing reviews may allow reviewers to simply summarize and integrate the review findings, resynthesize the primary studies, or update the search and reanalyse one or more of the systematic reviews.

4.1 INTRODUCTION

A growing literature addresses methods to accelerate or streamline the operational steps of systematic reviewing (searching, screening, data extraction, and appraisal). These methods (addressed in Chapters 2 and 3) are typically applied in discussion with stakeholders to maximize relevance to their needs, and usually adopt a narrow focus and/or PICO framework (1-3). However, a PICO framework has limited utility for exploring the complexities that arise from 'variations within populations or interventions,

Some methods are better suited to reviewing rapidly, needing to balance the urgency of rapid reviews with the precision of full systematic reviews.

or about the mechanisms of action or causal pathways thought to mediate outcomes, other contextual factors that might similarly moderate outcomes, or how and when these mechanisms and elements interact' (4). Developing and testing theories to explain these complexities requires configuring diverse qualitative, quantitative, and mixed methods studies, not only aggregating findings from similar quantitative designs (5).

In this chapter, we consider the options for synthesizing knowledge about broad issues quickly by building on prior work and employing frameworks to span complex areas. We offer several examples to illustrate the types of strategic methodological choices that are required (and the relationship between these decisions and organizational context) for conducting rapid reviews to inform complex questions related to health policy and system improvements.

4.2 STRATEGIC DECISIONS FOR RAPID REVIEW

The choice of methods for delivering rapid reviews is intertwined with decisions about how to manage projects, the amount of work to be done, and the knowledge already available.

> 4.2.1 Project management choices

Reviewing can be accelerated by increasing the size of the team without expanding the scope of the work. However, large teams require more effort for coordination and a shared understanding of the key concepts. Table 4.1 illustrates these trade-offs by comparing two rapid reviews of similar scales and topics: medical malpractice policies (6) and no-fault compensation schemes (7). The first of these was completed in 12 weeks: 4 weeks of clarifying the focus and expectations of the policy-makers was followed by an 8-week period during which the bulk of the work was completed by a coordinated team of nine reviewers working with standardized procedures to briefly describe policies, models, and frameworks from different countries. The second of these rapid reviews, despite its narrower focus, took nearly twice as long. In this case, a period of 5 months allowed a team of less than half the size to complete a more configurative, theory-building review, investigating the potential mechanisms and contexts that would influence the policy outcomes. The more interpretive nature of this second review was readily achieved by a smaller team, but necessarily took longer. The scoping review of malpractice, which presented findings as thematic summaries, required fewer staff days over fewer months than the more complex but narrower review leading to theory generation. Tables 4.1 and 4.2 consider in more detail such decisions about what work is to be done, and how.

TABLE 4.1. Scoping of medical malpractice policies in obstetrics

Tasks ^a	Team members	Months								
		1			2			3		
Negotiating scope	5 ^b	█	█	█						
Developing protocol	4 ^b	█	█	█						
Developing conceptual framework	3			█			█	█		
Searching for studies	2				█	█	█			
Screening outputs: 3,004	9				█	█	█			
Coding/extracting data	9							█	█	
Synthesizing findings: 43 studies	3									
Writing report	3								█ ^c	█

^a Bold indicates tasks performed by senior staff. / ^b Including commissioner and topic expert. / ^c Draft report submitted.

TABLE 4.2 Theory generation for no-fault compensation schemes

Tasks ^a	Team members	Months									
		1	2	3	4	5					
Negotiating scope	6 ^b	█	█	█							
Developing protocol	8 ^b	█	█	█	█	█					
Developing conceptual framework	3	█	█	█							
Searching for studies	2				█	█	█				
Screening outputs: 2,170	3				█	█	█				
Coding/extracting data	2							█	█		
Synthesizing findings: 44 papers	2										
Writing report.	3									█ ^c	

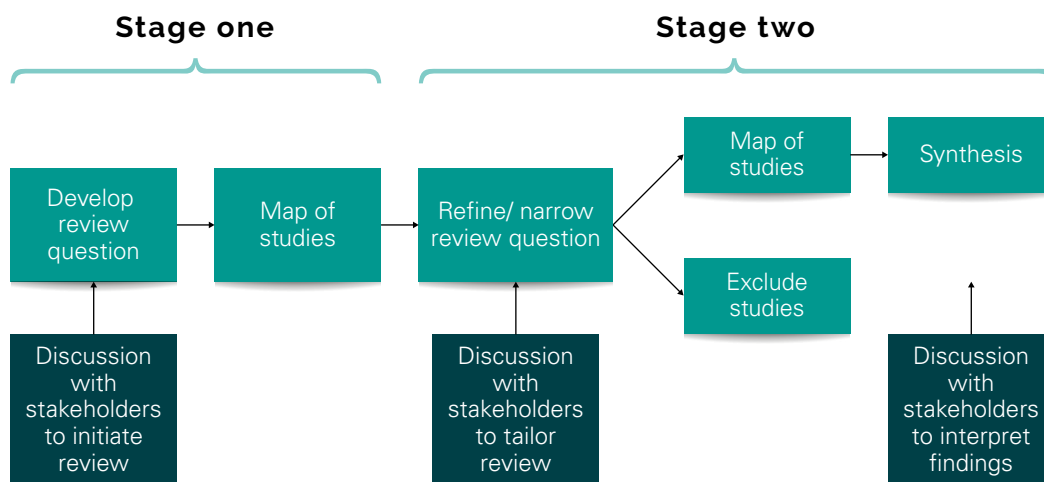
^a Bold indicates tasks performed by senior staff. / ^b Including three policy staff members and a knowledge broker. / ^c Draft report submitted.

> 4.2.2 Choosing the scale and focus of a rapid review: the two-stage process

The scale of a rapid review – the amount of work involved – is not always obvious in advance, particularly for complex questions related to health policy and system improvements. It will depend on the amount of literature available addressing different aspects of the policy or system, how easy it is to find, its quality, and the depth of analysis required. This uncertainty argues for starting a review with informal scoping or a descriptive map, followed by decisions about the review’s substantive focus and the choice

of analytic methods appropriate for the literature available (5). Such two-stage rapid reviews are increasingly common and particularly well-suited to broad policy questions (8). These reviews provide an explicit point in the process for an evidence-informed decision about the final focus of the review. The first stage identifies studies relevant to an often-broad review question and maps the studies according to their substantive focus. This mapping then forms the basis for one or more reviews in the second stage, where the studies considered most likely to produce useful evidence are appraised and synthesized (see Figure 4.1).

FIGURE 4.1. Two-stage review conducted in discussion with stakeholders



For example, in a rapid review undertaken to support decision-making on community-based provision of diagnostic testing, reviewers first surveyed and mapped the relevant evidence as identified from a search of the MEDLINE database (9). This map then informed the choice of three priority areas for in-depth analysis (logistics of provision, ways of providing ultrasound services, diagnostic pathways for breathlessness), each of which was followed by a more extensive database search. Throughout this process, the review focused on studies considered to be of highest relevance to health systems.

From the perspective of managing a review, a two-stage process affords several opportunities

and efficiencies. Rather than necessarily providing a polished final text mapping the literature, the aim of the first stage is to provide an empirical basis for targeting the areas most likely to yield informative results under time pressure. By first conducting a targeted search of one database, this approach provides a “snapshot” of evidence that can be subsequently supplemented with a refined search in additional databases. Lastly, it provides an auditable basis for “follow-up” of different areas that may not be immediate priorities, but that could be of interest either to researchers or to policy-makers at a later time. Table 4.3 describes options for rapidly conducting the first stage.

TABLE 4.3. Accelerating the early work in a two-stage review^a

Time available	Method	Interim product
2 hours	Automated clustering of terms	List of frequently occurring terms
1 day	Automated clustering of terms, then manual organization	List of frequently occurring concepts
2 days	Coding of random sample of titles and abstracts	Description of the focus and methods of existing research
2 weeks	Coding of titles and abstracts, with adjustment of depth of detailed coding according to number of studies	Approximate map of the focus and methods of existing research
2 months	Coding of full reports, with adjustment of depth of detailed coding according to number of studies	Accurate map of the focus and methods of existing research

^a Recent advances in information technology can support automated clustering of similar studies (10). Clustering of terms can be used to speed early description (i.e. mapping) of the literature before a decision is made on where to focus most of the reviewing effort. The times outlined here offer rules of thumb for various methods.

Two-stage reviewing can also inform the depth (or detail) of synthesis. This is illustrated by a review conducted to suit the timetable of Guidance Committees of the UK’s National Institute for Health and Care Excellence (NICE) (elsewhere, commonly known as Guideline Development Groups). As the views of those using social-care services were considered important for this review, the initial map produced in the scoping exercise took into account key study characteristics, such as population and setting, and highlighted those studies with titles and abstracts that indicated the likelihood of “rich” data or findings (i.e. titles with terms indicating qualitative data collection such as “face-to-face interview” or terms indicating qualitative analysis methods such as “grounded theory” rather than “survey”). The Guideline Development Group was thus able to select the substantive focus and methodological approach of greatest interest before the review team, work within the accepted guidance (11), select and appraise the relevant studies (in terms of internal and external

validity), and report the findings. Focusing on the studies with richer findings resulted in a narrow but more in-depth synthesis to better suit the ethos of qualitative research (12).

Finally, the two-stage reviewing process also allows informed discussions with stakeholders to reveal their priority issues and commonly held definitions, policy options and constraints, and other contextual factors (see Chapter 5 for more on stakeholder involvement).

> 4.2.3 Transdisciplinary working

Urgent, real-world problems requiring rapid reviews rarely align neatly within single academic disciplines or policy sectors. Addressing their complexities frequently requires not only efficiency in applying review methods but also skills in working across boundaries to draw on knowledge from different stakeholder networks or bodies of literature, to see connections between their different ways of thinking, and to access and

make use of their different knowledge resources. These are hallmarks of current approaches to transdisciplinary research (13).

Multiple stakeholders are essential both to membership of Guideline Development Groups and to extensive, well-defined consultation processes during the development of review protocols (14). Making good use of their input is easier with the help of individuals who “wear multiple hats” or knowledge brokers skilled in navigating the policy–research interface (15). For instance, a clinician with policy experience, a social scientist with knowledge brokering experience, and two laboratory scientists were able to prepare, within 2 weeks, an evidence-based policy brief to inform the implementation of screening new-born babies in Pakistan for congenital hypothyroidism (16). Such rapid “evidence checks” are also routinely prepared by the Sax Institute with the help of a knowledge broker (17). Tacit knowledge for informing the

review process is also valuable to complement or interpret the findings. For instance, review findings are presented to NICE Guidance Committees alongside testimony from expert witnesses who may come from government and policy, research, practice, individual patients, people using services, carers, or the community and voluntary sector (18).

However, hearing from the various stakeholders is only the first step. Understanding their evidence needs and working with them to define the concepts and frameworks that will underpin the reviews, in terms that can be readily understood and agreed upon, are important boundary spanning skills. Figure 4.2 illustrates how consulting stakeholders informs methodological options and consequently the choice of rapid product to be delivered. This is a key element of framework synthesis, a method that is particularly suitable for rapid reviews spanning disciplines or sectors (19).

FIGURE 4.2. Diagram showing how stakeholder input influences methodological choices

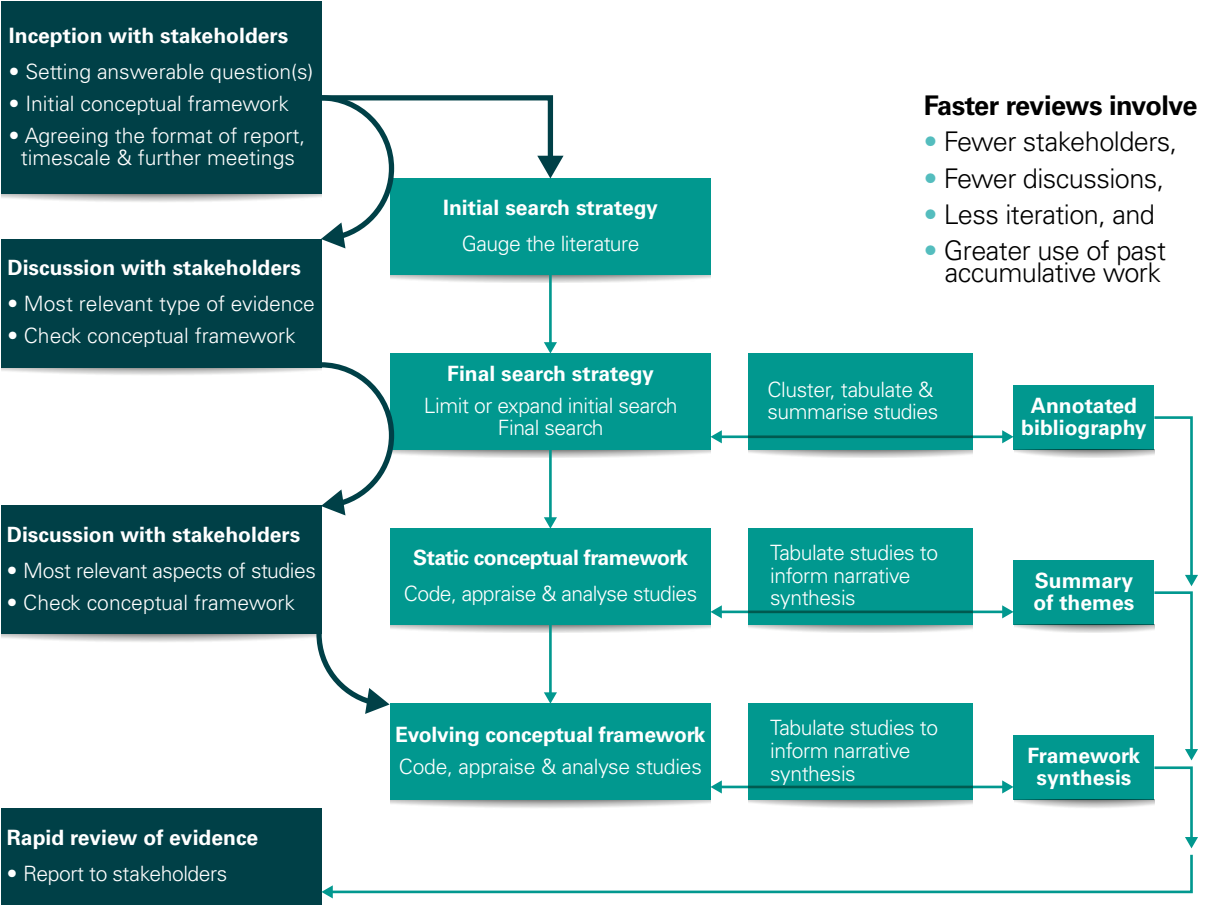


Figure 4.2 illustrates the stakeholder touch points that inform methodological decisions and the final rapid review product (see boxes at left side of figure): at inception, to agree on key concepts and initial assumptions about how concepts are related, and principles about the evidence required to test these assumptions (the conceptual framework); after the initial search, to gauge the scale and depth of the literature; and, optionally, after the final search and description of the literature in terms of the initial conceptual framework. As shown here, a discussion of evidence needs (at inception) and evaluation of the scale and depth of the literature available (after the initial search) are sufficient to prepare an annotated bibliography or a summary of themes; however, a framework synthesis requires follow-up discussion in light of characteristics of the studies identified.

> 4.2.4 Methodological choices

4.2.4.1 Evaluability assessment

Evidence-informed policy development requires clarifying the problem to be addressed, establishing possible policy and programmatic options to address the problem, and deriving testable assumptions about whether and how the proposed options will work. Together, these judgements constitute an evaluability assessment (i.e. determination of readiness for programme evaluation), which is a long-standing criterion for judging what type of evaluation should be undertaken (e.g. acceptability or feasibility of an intervention, a pilot of measures, and research procedures or controlled trial) (20).

The same principles apply to judging the suitability of the available literature for policy evaluation. Reviews of effectiveness are typically preceded by scoping the scale of literature available to ascertain whether sufficient (randomized) controlled trials exist to make a review worth the effort. In contrast, an evaluability assessment involves gauging the maturity of the literature to determine what review focus is likely to be most fruitful. Quick judgements about the literature's suitability for review have been made

by inspecting titles and abstracts, and discussing past research efforts (but not findings) with stakeholders, then choosing the substantive and methodological focus, as well as level of detail, appropriate to the literature and time available. For example, in the two-stage review on community-based provision of diagnostic testing mentioned above, the initial MEDLINE search helped to establish the evaluability of priority areas (9).

4.2.4.2 Selecting the review methodology

Some synthesis methods that are both detailed and iterative appear inherently unsuitable for working rapidly. For example, line-by-line thematic coding, where coding refers to the systematic application of markers, words or short phrases which represent and summarise key features of studies included in a review, is the basis of thematic synthesis (5) and collaborative interpretation of concepts, which is used for meta-ethnography (21) and critical interpretive synthesis (5), render these methods meticulous but time-consuming and hence likely unsuitable for rapid reviews.

Reviewing is fastest if consensus about key concepts achieved at the stage of shaping the question can be maintained unchanged throughout the synthesis. This is typical of effectiveness reviews addressing clinical practice where the population, intervention, comparison, and outcomes as 'PICO' framework are all pre-defined. This type of structured synthesis, for time-sensitive policy questions, typically satisfies decision-makers who are facing pressing health system issues (as opposed to a thematic analysis, which could take much more time).

However, static frameworks limit what can be learned from the literature, especially where themes or questions are not clear from the beginning, or the search identifies other important themes or definitions of key concepts. "Framework synthesis" allows for new themes to emerge from the literature and for these to influence the framing of the review. Examples of static and evolving frameworks are described in Box 4.1.

BOX 4.1. Approaches to framing a rapid review

A framework is to a literature review as a wooden frame is to a new house. The frame of a house provides the living blueprint from which workers will construct the building, in terms of the rooms, their sizes, and eventual overall look. Similarly, the framework for a rapid review provides a structure for reviewers to follow: the “rooms” are the topics relevant to the stakeholder’s request, and their size indicates the amount of literature or the topic’s importance. Just as similar houses can have different layouts, reviews can have different frameworks to address questions in different ways.

Three approaches for framing rapid reviews are described here, starting with the fastest and least sophisticated synthesis:

Focused questions and sub-questions: A focused question and sub-questions are developed in discussion with the stakeholders, to guide a targeted, rapid search of the most relevant evidence. A structured synthesis of findings from the included studies is then prepared, using tables to map and summarize the literature according to the themes or domains of interest that have been identified in advance with the original stakeholders.

Static thematic frameworks: Formal but rapid synthesis can be achieved by applying existing frameworks reflecting acknowledged theory, policy, or practice. For example, the Tanahashi framework for evaluation of health systems, which focuses on availability, accessibility, acceptability, and effectiveness, was applied in a review of reviews (22). Alternatively, reviewing health systems often lends itself to clustering evidence according to its country of origin, another thematic framework. This approach was feasible for collating the international legal literature about medical malpractice within 10 weeks (6), and for addressing the integration of oral-health services in health systems within 6 weeks (23). Similarly, in another review, established legislative and policy frameworks have proved useful to meet the timetables of the National Institute for Health and Care Excellence (NICE) Guidance Committee (24). A widely-recognized framework for social determinants of health underpinned a rapid equity analysis (25). Classifications for complex organizations were used to frame some of the evidence about accountable care organizations (26).

Evolving frameworks: An initial framework may be borrowed from existing theories considered a “best fit” (27) as a starting point for synthesis, or constructed in discussions between the review team and review stakeholders to align with their prior knowledge and values (19). Typically, a “best fit” approach is taken when a review addresses a question that matches a well-developed literature within an academic discipline, where existing theories are more readily available. In contrast, frameworks are typically constructed when review questions are transdisciplinary so that existing frameworks spanning the whole literature are unlikely to exist. The framework can then evolve during the course of the review, in light of concepts emerging from the literature and further discussion with stakeholders. This is framework synthesis. It is an adaptation of framework analysis (28), used to analyse primary data, and the method has the advantage of transparency, which supports discussion with stakeholders for maintaining relevance and teamwork for speed of the review. Nevertheless, even a few iterative steps to enhance the framework could significantly extend the time required for completing the review.

4.2.4.3 Undertaking a systematic review of reviews

In areas that have been extensively covered by previous systematic reviews, a search that

targets the existing reviews can prove a helpful starting point. After relevant systematic reviews have been identified, reviewers can take one of several paths (see Box 4.2).

BOX 4.2. Sources of prior systematic evidence and their application in a rapid review

The time for reviewing activity can be reduced by drawing on prior systematic analysis in the following ways:

Review-level synthesis: The least time-consuming approach restricts synthesis to the review level, meaning the results of the reviews themselves are of interest, but their component studies are not examined. The review-level synthesis, sometimes called an overview, describes and integrates the review findings regarding quality and strength of the evidence for different intervention strategies, frequently without further statistical analysis. For example, reviewers interested in surveying the evidence on how inequity occurs in public health interventions focused only on systematic reviews that discussed differential health effects by socioeconomic status (29).

Reanalysis of primary studies from systematic reviews: Questions related to complex interventions can be informed by a set of reviews where the individual reviews address different intervention components, for instance a series of rapid overviews revealed core components of effective support for patient self-management and a parallel rapid review of implementation studies revealed the requirement for a whole systems approach to implementation at the level of individual patients, practitioners, and organizations (30). Systematic reviews of systematic reviews also offer a shortcut to a coherent set of studies identified systematically by prior reviewers, and then available for analyses not previously reported. Similarly, an equity analysis of the impacts of population-based physical activity interventions was feasible in a compressed time frame because it used existing systematic reviews (and their included studies) that were found in a specialist register of publications related to “active living” (29). The reviewers then applied their own inclusion criteria to the primary studies from each of the relevant reviews, and used an equity framework to reanalyse the findings from the relevant studies.

Updates of systematic reviews: Existing systematic reviews can be supplemented by updating the literature searches. For example, one group undertook a rapid review to inform ongoing UK Department of Health decision-making on how to increase rates of generic prescribing. They located 10 reviews, gleaned their individual studies and studies from “top-up” searches to cover intervention types that were not adequately addressed in the original reviews before the final analysis (31).

BOX 4.2. Sources of prior systematic evidence and their application in a rapid review (continued)

Systematic evidence as source for primary studies: Existing systematic reviews addressing broad questions can provide a shortcut to finding relevant primary studies for a rapid review with a narrower or overlapping question. However, because of how the authors of the existing systematic reviews framed their work, a little lateral thinking may be required to identify relevant reviews. For instance, a systematic review about education and peace-building, which focused on envisaged solutions (32), included primary studies relevant to policy interest elsewhere focused on pressing problems of 'problematic masculinities' expressed as violence, aggression, and discriminatory gender norms. Similarly, systematic reviews prepared for World Health Organization (WHO) guidance on shifting responsibilities for tasks between different cadres in existing programmes (33) included evidence that later proved useful for developing and implementing a new programme (16).

Multilevel uses of existing reviews: In reviews seeking to answer multiple related questions, a multilevel synthesis strategy combining the above methods can be developed to provide reliable knowledge (34). For example, in a rapid evidence synthesis to support delivery of emergency mental health treatment, reviewers worked with stakeholders to develop a pathway of mental health crisis interventions. They then systematically sought evidence for key interventions at each point in the pathway, according to a hierarchy of evidence sources: first, relevant, empirically supported guidance; second, overviews of reviews; third, systematic reviews; and fourth (where no relevant evidence synthesis existed and gaps were identified by the service user group), primary studies identified through database searches (35).

Because health systems cross academic disciplines, the methodological approaches and standards of available reviews may vary. As such, applying the same review-selection standards across disciplines may exclude valuable learning. This drawback became apparent during the conduct of a rapid review about committee structures and processes for making collective decisions about technical issues, such as clinical, legal or financial recommendations (36). Although the review was commissioned to inform how decisions would be made within the health sector, relevant evidence was available from social psychology and business administration, as well as health services research. If methodological conventions from health services research had been applied, the review would have excluded most business administration evidence because the search strategies were reported in less detail, and offered little new learning to the health sector.

> 4.2.5 Rapid reviews as a social and methodological enterprise

Rapid reviews, which are typically produced in response to a specific need, are first shaped by strategic decisions about the amount of work to be done (team size and timescale), the scale and focus of the work. The team's research knowledge and skills need to suit the available literature and appropriate synthesis methods, and be supplemented by interpersonal skills for knowledge brokering. Thus, management and methodological decisions are interlinked throughout the review with analytical and interpersonal tasks.

Typical management and methodological options for reviewing systematically within time limits are described in Table 4.4, along with a range of possible products. Key distinctions between

the products are listing or clustering the findings reported in systematic reviews that address specific questions (when time is more restricted), and applying static or evolving frameworks

to synthesize evidence from reviews and/or primary studies (when time is less restricted). The pathways for preparing these products are illustrated in Table 4.4.

TABLE 4.4. Outline of what a rapid review can achieve, according to three different time frames (days, weeks, months)

Options for rapid review and what can be done in the available time ^a			
Purpose	Project management	Building on prior work	Synthesis methods
Informing internal policy discussions, management decisions, within days	<p>One or two reviewers sharing the task</p> <p>Quick iterations between review team and policy team to compare evidence needed with evidence identified</p>	<p>Search for and within existing syntheses (reviews, evidence-gap maps, evidence-informed guidance)</p> <p>Search databases presenting evidence-quality standards or judgements (e.g. DoPHER^b, Health Systems Evidence, Cochrane, Campbell, 3ie^c)</p>	<p>Cluster and tabulate systematic reviews identified to create an annotated bibliography, a stand-alone product for rapid responses, or an interim text to focus discussion with stakeholders for rapid reviews before analysing across the set of studies to generate new knowledge</p> <p>Prepare summary tables outlining key findings from systematic reviews, quality appraisal of systematic reviews (e.g. for those indexed on Health Systems Evidence database, which provides appraisals for all reviews that it contains), countries where studies were conducted (e.g. for systematic reviews found on Health Systems Evidence database)(35)</p>
Informing public debates, within weeks	<p>Small core team to allow collective interpretation before and after review, with policy customer and within team</p> <p>Large review team to apply standardized procedures</p>	<p>As above, and search within specialist topic sources</p> <p>Reanalyse existing systematic reviews to address new questions</p>	<p>Apply a static framework to analyse across a set of studies with summary tables and a summary of themes (e.g. a rapid review of malpractice frameworks and models)(6)</p>

Options for rapid review and what can be done in the available time^a

Informing urgent policy decisions, within months	Small review team to allow collective interpretation and iteration, with policy customer and within team	As above, and perform Boolean searches of bibliographic databases (balancing sensitivity and specificity to suit the time available)	Apply an evolving framework to synthesize findings to suit evidence needs and the extent and maturity of the literature (a framework synthesis)
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^a For each option, the tasks listed are those that can be performed in the time available, and the products achievable are highlighted in bold text. /

^b Database of promoting health effectiveness reviews. / ^c International Initiative for Impact Evaluation.

4.3 CONCLUSION

In this chapter, we have argued why some methods are better suited than others to reviewing rapidly, acknowledging a tension between speedy work for urgent decisions and the methodological diversity and precision that full systematic reviews offer. The concept of “methods” has been interpreted broadly here to include project management and evidence-informed deliberation for shaping

reviews, as well as making methodological decisions. Lastly, we have considered specific organizational contexts that can support the production of rapid reviews. Generally, reviews that are done quickly involve fewer stakeholders, less discussion, less iteration, and greater use of prior accumulative work. When time allows, increased discussion with stakeholders and greater iteration draw out appreciable learning from the literature.

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5

ENGAGING POLICY-MAKERS AND HEALTH SYSTEMS MANAGERS IN THE CONDUCT OF RAPID REVIEWS

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KEY POINTS

- Engaging policy-makers and health systems managers in rapid reviews increases the relevance and applicability of the reviews to decision-making processes, yet it is time- and resource-intensive.
- There are many ways in which the producers of rapid reviews can engage policy-makers or health systems managers ranging from ad hoc engagement to involvement throughout the entire review process.
- Engagement with policy-makers or health systems managers throughout the review is encouraged, yet such extensive involvement necessitates additional time and resources.
- The level of engagement should be meaningful, yet tailored to available resources, and will depend on the objectives of engagement, the points at which engagement occurs in the review process, and the methods used for engagement.
- Conceptual frameworks are available to provide a structure and mechanism to facilitate engagement.

5.1 INTRODUCTION

Health-care researchers traditionally have had little engagement with the decision-makers who could implement their research findings. The questions that researchers posed were purely academic (i.e. curiosity-driven), and only rarely were decision-makers involved in developing those questions. This culture has led to significant research waste (1) and slow implementation of research findings (2). The field of health policy and systems research (3) has advocated a shift in this culture to promote more efficient uptake of research results by decision-makers.

In situations where urgent or timely decisions are required, rapid reviews are often commissioned by: governments, health-system stakeholders, international organizations, and civil society. In these contexts, close collaboration between the decision-maker and the producer of the rapid review is essential to ensure that results are relevant and workable, which should enhance evidence uptake. Such collaboration is particularly important for decision-makers who act at the

policy or systems level because their decisions may influence a large proportion of the population. However, researchers often do not know how to engage with decision-makers.

Decision-maker engagement can be defined as “an iterative process of actively soliciting the knowledge, experience, judgement, and values of individuals selected to represent a broad range of direct interests in a particular issue, for the dual purposes of: creating a shared understanding [and] making relevant, transparent, and effective decisions” (4). We consider decision-maker engagement to include

The level of engagement should be meaningful, yet tailored to available resources.

opportunities for decision-makers, specifically policy-makers and health systems managers (5) for the purpose of this chapter, to interact in a meaningful way with the process for, or results of, a rapid review. This chapter also covers the objectives of engagement (i.e. desired outcomes of engagement), points and processes, supportive structures and mechanisms, as well as benefits and challenges.

5.2 OBJECTIVES OF ENGAGEMENT

Among the various objectives for engaging policy-makers and health systems managers in rapid reviews are the following:

- ✎ to establish a research agenda (6, 7);
- ✎ to prioritize indicators (8, 9);
- ✎ to establish learning materials to be included in a curriculum (10, 11);
- ✎ to develop a framework (12, 13);
- ✎ to establish clinical, policy, or system recommendations (14, 15);
- ✎ to develop a tool kit to support evidence use (16);
- ✎ to finalize knowledge translation and uptake strategies (17, 18);
- ✎ to aid decision-makers in their decision-making processes (19, 20).

The objectives for engagement help to determine the points in the rapid review process when engagement will occur.

5.3 POINTS OF ENGAGEMENT

When policy-makers and health systems managers are involved throughout the review process,

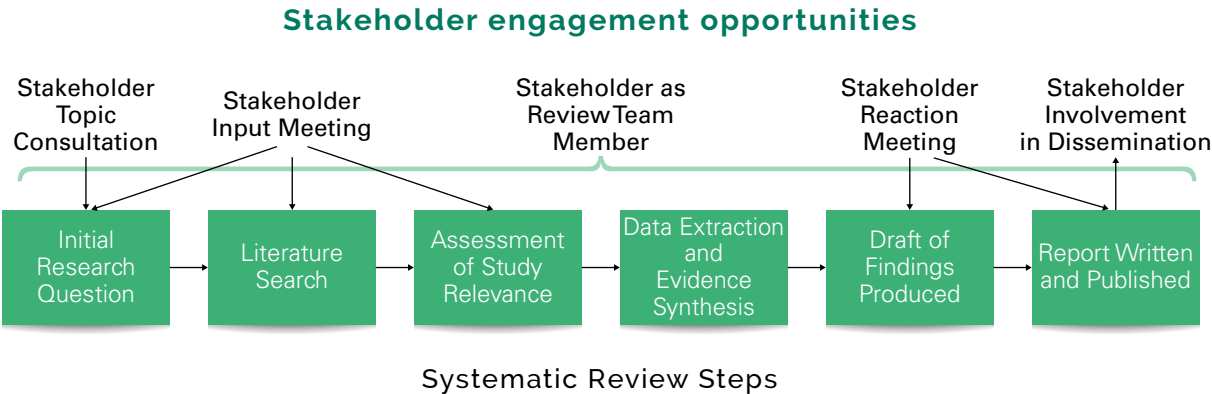
they can participate in numerous steps during the rapid review process (21), at the initiation or planning phase, during the review conduct, and at the end of the review, as outlined below.

Engagement opportunities

AT THE INITIATION AND PLANNING OF THE REVIEW	DURING CONDUCT OF THE REVIEW	AT THE END OF THE REVIEW
<ul style="list-style-type: none"> • selecting review topics; • defining the research question; • developing or reviewing the protocol; • providing input about key terms to include in the literature search; and/or • setting or providing input into the eligibility criteria. 	<ul style="list-style-type: none"> • selecting studies, whether by screening studies for inclusion or providing input about whether specific studies meet eligibility criteria; • abstracting data, whether identifying data elements for abstraction or participating in the data abstraction itself; • providing input into data analysis or synthesis of results; • interpreting results; and/or • drafting or reviewing the resulting report. 	<ul style="list-style-type: none"> • developing key messages and other knowledge translation activities.

A practical example of an integrated approach covering all phases of the review process is presented in Figure 5.1 (22).

FIGURE 5.1. A practical example of an integrated approach to engage policy-makers and health systems managers throughout the review process



This figure shows how stakeholders can be involved at all steps of the systematic review process.

Source: Keown et al., 2008 (22)

Reproduced with permission from Wolters Kluwer Health, Inc. (2017)

Alternatively, policy-makers or health systems managers may be involved in a single step of the process. In one review to assess the effectiveness of self-management for chronic conditions, experts were consulted using a modified Delphi (or agreement-building) method to identify keywords for “self-management” and “chronic condition,” before beginning the search (23). Saan and colleagues (23) provide a tool, TRASI (Tool for Recording and Accounting for Stakeholder Involvement in Systematic Reviews) (23) for recording stakeholder involvement in development of the literature search for this review.

5.4 PROCESSES OF ENGAGEMENT

A range of engagement methods can be used to engage decision-makers in rapid reviews.

The process of engagement, as well as its frequency and intensity, will depend on the objective of engagement, the points at which engagement occurs, the engagement methods, and the time and resources available (Figure 5.2). Engagement methods can include workshops, policy dialogues, team work, surveys, interviews, and modified Delphi approaches. These engagement activities can take place involving various modes, such as teleconferences, videoconferences, in-person meetings, and e-mail exchanges between researchers and decision-makers to obtain feedback at one or more specific points of the review process. Some of these engagement methods are highlighted in the examples provided in Table 5.1 and Table 5.2.

FIGURE 5.2. Frequency and Intensity of Engagement



TABLE 5.1. Case examples of decision-maker engagement in rapid review programmes

Aspect of engagement	Pineault et al. (24)	Hayden et al. (19)	Khangura et al. (20)
Type of decision-makers involved	Decision-makers Academics Clinicians	Policy-makers Clinicians Health-care managers	Health-care managers
Type of engagement	Workshops Videoconferences Feedback on the report Delphi survey	Workshops	Feedback on the question and proposal Feedback on the report Knowledge transfer activities
Challenges to engagement	Difficulties incorporating expert opinions and decision-makers' viewpoints	Not reported	Not reported
Benefits of engagement	Not reported	Opportunities to interact with decision-makers, leading to established relationships Opportunities for capacity-building of decision-makers Led to subsequent collaborations	Established relationships between researchers and decision-makers Led to subsequent collaborations
Outcomes of engagement	Not reported	Survey on decision-maker satisfaction	Not reported

TABLE 5.2. Case examples of various levels of engagement for systematic reviews of health policy and systems research

Aspect of engagement	Odendaal (25)	Akl et al. (EA. Akl, unpublished data, 2016)	Pantoja (26)
Type of decision-makers involved	Policy-makers Academics Clinicians	Policy-makers Academics	Policy-makers Academics
Type of engagement	Workshops Electronic surveys to prioritize review topics Local and international presentations Embedding a policy-maker into the review team	Modules to prioritize review topics Workshops Modified Delphi survey Priority-setting tool for health policy and systems research reviews	Interviews Electronic surveys Priority-setting reviews based on topics most pertinent to policy-makers
Challenges to engagement	Not reported	Not reported	Difficulties balancing stakeholder opinions at different levels (e.g. local versus national) Difficulties converting a policy question to a research question

5.5 ONGOING ENGAGEMENT OF DECISION-MAKERS

Where sufficient time and money are available and the objective of engagement is to aid policy-makers or health systems managers in their decision-making, researchers can select from a range of engagement methods and modes to maintain ongoing partnership and communication during the review process. To help facilitate future engagement, at the end of the rapid review, policy-makers or health systems managers can be asked, through surveys and interviews, if they were satisfied with the product and if the results were helpful and how future products

can be improved. A combination of engagement methods such as teleconferences or in-person meetings, surveys or interviews, and workshops or webinars can facilitate ongoing engagement and improve the level of engagement with policy-makers or health systems managers for future rapid reviews. Over time, it is hoped that positive relationships built on trust and mutual respect will develop (19, 20). Engagement can also be fostered through other supportive structures and mechanisms, as described in the following section.

5.6 SUPPORTIVE STRUCTURES AND MECHANISMS FOR ENGAGEMENT IN RAPID REVIEWS

A conceptual framework or model, characterizing the engagement process, can be a useful guide for researchers seeking to involve policy-makers and health systems managers in rapid reviews. One example is the framework for effective engagement in comparative effectiveness research (4). This framework covers the following aspects of engagement: inputs (e.g. professional or patient experience and values), quantitative methods for combining inputs (e.g. Delphi survey), qualitative methods (e.g. facilitated workshops), outputs (e.g. decisions made by the decision-maker group, such as study design) and outcomes regarding the engagement process (e.g. decision-maker trust), and the comparative effectiveness research itself (e.g. useful evidence for a decision). In addition, this framework can be employed to tease out what would be expected from the engagement, and what methods will be useful for enabling engagement for a particular rapid review.

Researchers may also wish to consider using the conceptual framework of Oliver and Dickson (27), which provides models and mechanisms for engaging policy-makers in systematic reviews of health policy and systems research, to guide the level of engagement for rapid reviews. This framework includes components, such as obtaining policy-maker input, building relationships, and increasing policy-maker awareness and skills. Mechanisms to facilitate engagement described by these authors include obtaining stable funding so that researchers can address policy-makers' queries, providing training and support to foster constructive iterative engagement, and having a team including members with previous experience in a decision-making role or who have long-term experience working with decision-makers.

5.7 BENEFITS AND CHALLENGES OF ENGAGEMENT

It has been observed that policy-maker and health systems manager engagement increases

the relevance of research, decreases research waste, and enhances both mutual learning and the transparency of research (28). In the context of reviews, perceived benefits include more comprehensive literature searches, more rigorous review findings, and greater clarity of the review results (22). Another benefit is establishing positive relationships between researchers and policy-makers or health systems managers, which could lead to subsequent collaborations (19, 20). Policy-makers or health systems managers who are engaged in reviews report increases in their own feelings of appreciation, the relevance and utility of the review results, their interest in sharing the review findings with colleagues, and a greater understanding of the review findings (22). Engaging policy-makers or health systems managers may improve the relevance of the review questions, transparency of the review procedures, and usefulness of the results. As well, it is anticipated that engagement of policy-makers or health systems managers increases uptake of the review's results, with the greatest uptake occurring with engagement of multiple decision-making organizations (29). More information on how to improve the uptake of rapid reviews is provided in Chapter 8.

Engaging policy-makers and health systems managers in reviews can also lead to several challenges. For example, decision-maker engagement is time- and resource-intensive and may lead to less rigorous review findings (22). Difficulty in finding a policy-maker or health systems manager who is willing to participate as a review team member has occurred (22). Moreover, even if a policy-maker or health systems manager agrees to participate, findings of the review could contradict what they believe, creating conflict (22). Another challenge lies in creating demand for reviews to inform decision-making and managing expectations of the policy-maker or health systems manager about what questions the review is capable of answering (29). Matching the research question posed by the decision-maker with the way in which the literature is structured has sometimes proven difficult (29). Furthermore, it can be challenging to incorporate policy-makers' or health systems

managers' perspectives when interpreting the review findings (24). As well, there may be a perception that the engagement of policy-makers or health systems managers is purely tokenistic. It can also be challenging to balance input from multiple policy-makers or health systems managers and conflicts of competing interests must be managed carefully, particularly in countries where governance and accountability remain important challenges.

5.8 CONCLUSION

Although engagement with policy-makers or health systems managers can be challenging, experience in health policy and systems research shows that early, active, and continuing engagement is imperative for evidence-informed health policy-making (30). Adequate availability of time and

financial resources are required to implement meaningful engagement at multiple points in the review process. Ideally, researchers should seek stable funding and establish a relationship with the commissioner of the rapid review(s). Face-to-face contact is often not possible, but there are a variety of effective processes that can enable communication and build trust, including webinars, teleconferences, and email communication. The application of several of these processes and structures can be seen in the example in Box 5.1, where researchers conducted a rapid review for a national regulatory agency. Conceptual frameworks are available, and provide a structure and mechanism to facilitate this process. Researchers should ensure that the level of engagement is fit for purpose and tailored to existing resources, while ensuring that the engagement itself is meaningful.

BOX 5.1. Conducting a rapid review with maximal engagement in mind

As a producer of rapid reviews, you have been contacted by a national regulatory agency (Health Canada) to conduct a rapid review with a 5-month timeline. The agency is thinking about creating a social media platform to detect adverse drug reactions, and needs information on which platforms are currently available and the reliability of data obtained from social media sources (21). The new platform will be used to monitor adverse drug reactions for the entire Canadian population and to make important policy decisions. You believe that engaging the policy-makers from Health Canada who commissioned the review will help to ensure that the review is relevant to their needs. However, you are unsure how to proceed.

You use the conceptual framework of Oliver and Dickson (27) to guide engagement. Stable funding was secured from the Canadian government and training and support is provided to the policy-makers from Health Canada. You hold teleconferences at the beginning of the study to scope the review question and finalize the protocol. You obtain approval for your protocol, and enter into an agreement with Health Canada that the review will be completed within a 5-month time frame and that monthly updates on progress will be provided. You invite Health Canada to participate in pilot tests for screening and data abstraction. At month 4, you host a webinar to share preliminary results and get the agency's input on key messages. At month 5, you submit the review report, and organize another webinar to gain the agency's input on interpretation of results and knowledge uptake strategies. With substantial guidance from policy-makers from Health Canada, the report is highly relevant and provides them with recommendations that can be implemented.

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6

FOSTERING THE CONDUCT AND USE OF RAPID REVIEWS OF HEALTH POLICY AND SYSTEMS RESEARCH IN LOW- AND MIDDLE-INCOME COUNTRIES

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KEY POINTS

- Although there is some momentum in the use of rapid reviews for decision-making processes in low- and middle-income countries (LMICs), experience with this form of evidence summary remains limited in these settings.
- Several challenges impede optimal production and use of rapid reviews, including wide variation in their definition, methods, and applicability; inadequacy of resources; and poor acceptability among academics who may not believe their results.
- To ensure that the full potential of rapid reviews is achieved in LMICs, there is a need to mobilize and sustain adequate resources. Furthermore, review producers need to address the methodological concerns associated with these reviews.
- Rapid review producers and knowledge users alike need to set up structures and systems supportive of rapid reviews and also need to improve the sharing of knowledge that arises from producing and using these reviews.

6.1 INTRODUCTION

The conduct and use of rapid reviews are gaining momentum in low- and middle-income countries (LMICs). There has been a slow start because many LMICs lack supportive political, economic, and scientific institutions and procedures. These gaps make it challenging for researchers to conduct, and decision-makers to use, rapid reviews to inform health policy-making and health system strengthening in these settings. However, the challenges have not deterred those who recognize the potential benefits of

Supportive systems, structures and resources need to be developed to foster conducting rapid reviews in low- and middle-income countries.

rapid reviews from engaging with rapid reviews and seeking ways to improve the use of such reviews to inform their decisions. It is therefore important for research producers, knowledge brokers, and entrepreneurs to look at ways of making rapid reviews more available, useful, and usable in LMIC systems. To accomplish these goals, stakeholders and knowledge users need to consider the lessons that have been learned so far about rapid reviews in their own and other health systems, identifying both good practices and the challenges that must be addressed to optimize the process. This chapter harnesses lessons learned from conducting rapid reviews relevant to health system settings in LMICs and identifies strategies for overcoming challenges and fostering the conduct and use of policy-relevant rapid reviews of health policy and systems research.

6.2 THE POTENTIAL FOR RAPID REVIEWS IN LMICS

To emphasize the rationale for improving the production and application of rapid reviews in

LMICs, this section highlights their potential use in these settings.

Rapid reviews are often considered in light of decision-making by policy-makers, among other types of decision-makers. Much as their longer counterparts – systematic reviews – and other types of research are viewed mainly as academic or scholarly products, rapid reviews and other rapid knowledge syntheses are viewed as products meant to support policy- and decision-making processes that result in evidence-informed policy and practice approaches (1-5).

Academics and decision-makers have noted a variety of potential uses for rapid products, including their use interimly to inform further investigation of a given topical issue (or to define the need for such investigation), guideline development on very focused topics, and policy decisions needed on quick turnaround (2). In these and other circumstances, it is thought that rapid review products may be more relevant within some specific health systems than in others; that is, they are specific to both the context and the organization (6).

However, researchers are cautioned that there may also be situations where rapid reviews are inappropriate, even if the circumstances outlined above are in place. For example, where the evidence will feed into development of broad (e.g. international and some national) guidelines, a rapid review may not be appropriate (2). Therefore, although they have unique value, especially for decision-making, rapid reviews complement, but do not replace, other sources of evidence for decisions.

Aside from providing timely and relevant evidence for decisions, rapid reviews may improve the clarity and accessibility of research evidence for decision-makers (4). Furthermore, for many policy- and decision-making institutions, rapid reviews have increased the uptake of evidence to inform time-sensitive, system-level decision-making (7). In several cases, decision-makers have valued the responsiveness of the rapid review process and have perceived it as being a credible source of unbiased, evidence-based information supporting advice for policy-making

bodies (8). In addition, rapid reviews have been valuable to and influential on policy decision-making, informing high-impact health system decisions, providing guidance, and resulting in implementation of recommendations, all of which can, in turn, save substantial resources (3).

A retrospective survey, assessing among other things users' perspectives on how and when they used rapid reviews, found that rapid reviews have influenced and inspired partnerships and plans to modernize current practices (7). Insights from the rapid response service at the Center for Systematic Reviews on Health Policy and Systems Research (SPARK) in Lebanon allude to the same conclusion, whereby partnerships have been formed with government authorities and other key stakeholders to address pertinent problems, including the region's refugee crisis. Thus, as can be seen through their widespread application in high-income countries and through demonstrated success in developing countries like Lebanon and Syria, rapid reviews have enormous potential in LMICs. However, LMIC settings present considerable challenges for the establishment of rapid reviews.

6.3 CHALLENGES OF CONDUCTING AND USING RAPID REVIEWS IN LMICS

As noted earlier in this Guide (Chapter 1), the profile of rapid reviews has been rising partly because of a push for more evidence-informed decision-making to reduce waste, increase equity, and strengthen health systems. The conduct of rapid reviews is now emerging as a strategy to overcome various barriers that decision-makers experience in accessing and using high-quality, relevant evidence when they need it (9, 10).

> 6.3.1 Variation in methods for and application of rapid reviews

The methods of rapid review production and use vary greatly. In addition, there is a significant lack of transparency and inadequate reporting of the processes used for rapid reviews (11). Although there may be variants in the definition of a rapid review, this type of evidence summary is typically understood to be a synthesis of the

quality of and findings from pertinent evidence, that is conducted over a short period, using various methods to accelerate the knowledge-synthesis process. This rapid approach involves abbreviating the process by tailoring conventional systematic review methods towards the most rigorous methods that the delivery time frame allows, although (as noted in Chapters 2 and 3) there is no agreement on which aspects should be abbreviated (12, 13). Overall, the focus is on two important aspects that are reflected in the term "rapid review": the time frame for completion and the extent of synthesis of the evidence therein (12). However, academics and policy managers in LMICs have very little experience with rapid reviews and have noted the variations in methods and the poor transparency in their reporting).

Variation is seen not only in the definition of and methods used to conduct rapid reviews, but also in their application (14).

> 6.3.2 Poor acceptance by stakeholders

With no standardized definition, methods, or application, and their general variation away from conventional systematic reviews (which are considered to have high quality because of their rigorous methods), rapid reviews have not been readily accepted by some stakeholders, especially those in academia, despite their acknowledged benefits. Evidence suggests that rapid reviews are generally viewed as "quick and dirty," and there are often major concerns about the reliability of their results (15). Although existing comparative evidence has shown that similar conclusions are derived from rapid reviews and systematic reviews, the lack of evidence comparing potential bias in these two approaches to knowledge synthesis is still a cause for concern for many in the field (6).

> 6.3.3 Low capacity to conduct and use rapid reviews in LMICs

The call for and need to conduct and use rapid reviews may be growing steadily, but the capacity to do so is still very limited internationally, especially in LMICs. Very few centres and

institutions in LMICs are conducting rapid reviews, and even among those that are performing this type of knowledge synthesis, only a few have documented their work sufficiently to allow for

identification of lessons and challenges. Table 6.1 lists several centres in LMICs that are known to be doing rapid reviews.

TABLE 6.1. Institutions in low- and middle-income countries that are involved in preparation of rapid reviews

Country	Institution
Argentina	Institute for Clinical Effectiveness and Health Policy (IECS)
Ethiopia	Ethiopia Evidence-Based Health Care Centre, Jimma University
Lebanon	Center for Systematic Reviews on Health Policy and Systems Research (SPARK), American University of Beirut (AUB)
South Africa	Cochrane South Africa South African Medical Research Council, Health Systems Unit
Uganda	School of Medicine and School of Public Health, Makerere University College of Health Sciences (MakCHS)

Even within these centres in LMICs, there is a paucity of capacity to conduct and use knowledge syntheses, let alone specialized knowledge syntheses like rapid reviews. The number of institutions with the necessary structures and skilled personnel to carry out these specialized syntheses is small but growing, in a bid to meet the potential demand from policy- and decision-makers. Yet very few users of rapid reviews are conversant with their production and how to use them for decision-making.

> 6.3.4 Absence of appropriate structures and systems

Even in places where rapid review products have been attempted or availed, few decision-making processes offer structures or an environment suitable for absorbing evidence of any kind, let alone rapid reviews. As such, LMIC centres need more support and development to maximize the potential benefits of research products from rapid review (5). This capacity development would enhance the motivation to conduct or demand such products in LMIC settings.

6.4 STRATEGIES TO IMPROVE THE CONDUCT AND USE OF RAPID REVIEWS IN LMICS

> 6.4.1 Raise the profile of rapid reviews in LMICs

Rapid reviews are increasingly seen as being of importance within a variety of settings that face constraints of not only time but also resources (16). The profile of rapid reviews needs to be raised in LMICs to create demand and motivation, and to ensure the necessary resources are made available for their production and use. A higher profile and closer engagement with decision-makers can also ensure that the reviews produced meet stakeholders' needs, which will in turn mean a greater likelihood that these products will be used.

The profile of rapid reviews might be enhanced through increased and broader communication about what a rapid review is (and is not) and through sharing of knowledge about successes and potential benefits. There needs to be deliberate advocacy for this type of review, through

champions and opinion leaders. Such advocacy efforts should be aimed at both producers and users of rapid reviews, encouraging the former to develop the skills for and interest in conducting reviews, and encouraging the latter to make use of them and even to get involved in the review process to the extent possible.

In addition, funders have a critical role in raising the profile of and capacity for rapid reviews. Aside from supporting the development of skills, funders may become involved in building and supporting networks and collaborations, in experience-sharing, and in contributing to the understanding of different contexts (e.g. economic and political). These efforts at various organizational and administrative levels will increase not only the conduct and use of rapid reviews, but also the use of evidence more generally and therefore the making of evidence-informed health decisions. Further discussion of how to increase the uptake of rapid reviews can be found in Chapter 8.

> 6.4.2 Address methodological concerns

When this Guide was in preparation, we found no evidence to suggest that rapid reviews should not be conducted or that they are misleading because of their methods or for other reasons (4). However, some institutions and researchers have become aware of a lack of confidence that absence of a standardized procedure inspires in their academic peers and in many potential knowledge users. Several academics have examined the different methods used in rapid reviews; in addition to identifying various levels of quality of these methods, they have noted the lack of methodological reporting (4). These deficiencies make it difficult to aggregate the disparate rapid review methods into a common one. Hence, there is a pressing call, from some academic peers and users of the evidence, for more transparency from producers of rapid reviews in laying out methods and operating procedures (5, 14, 17). Ongoing development of reporting standards aims at addressing this challenge, to facilitate the equity and credibility accorded to them (14, 18).

Conversely, some users of rapid reviews appreciate the uniqueness of the various methods of producing rapid reviews. Indeed, as noted in section 6.2, rapid review approaches may be described as context- and/or organization-specific (6). Furthermore, these methods are seen as “flexible and pragmatic,” aiming to balance the objectivity and rigour required of rapid reviews within the limited time frames in which they must be produced (19). This flexibility is what leads to great variation across products with regard to duration and depth of analysis. This variation allows rapid reviews to be specifically tailored to address targeted policy questions, which has led, in turn, to emphasis on methods involving strategies to improve transparency, instead of attempts to harmonize variant methods. Indeed, some evidence producers encourage a diversity of methods (5). They acknowledge that although one consistent methodological approach may not be optimal or appropriate, it is important to provide detailed descriptions of the chosen methods and to discuss their implications in terms of potential bias (20).

Where methods are harmonized, or there is an attempt to get some basic elements common across producers, researchers in LMICs could establish some core principles of evidence-based synthesis. These principles should apply to rapid reviews as well, in order to minimize bias to the extent possible (21) but also to give guidance as new capacity is built for and around different rapid review methods. (One should note that these core principles would change and evolve as stakeholders gain more experience with these rapid reviews). Users of rapid reviews have provided indications of such basic tenets, expressing a strong preference for the following review methods and characteristics: strength of evidence assessments, quality rating of studies, use of evidence tables, and use of summary tables of results and conclusions (2). Furthermore, reviewers could take the additional steps of having subject and methodological expertise on their review teams, highlighting the limitations of the approaches taken, and communicating regularly with knowledge users, other team members, and experts (22). Users and producers alike have indicated that the type of analysis/synthesis and

the quality/strength of evidence are significantly important for decision-making and that the most acceptable trade-offs to increase reviewer efficiencies were in limiting the literature search and performing single screening of abstracts and full texts for relevance (2). Whatever approach producers opt for, especially when cutting short conventional processes used for systematic reviews, they should consider shortcuts that are unlikely to affect the quality or risk of bias of the review (4). These could include limiting the scope of the review, limiting data extraction to key characteristics and results, and restricting the study types included in the review.

In their quest to understand rapid reviews and, in turn, to make them understandable, producers could also consider and highlight that a rapid review may be a “living” and evolving document, one that can be updated or augmented in the future. As such, the protocol and resulting report can be updated as more evidence becomes available and as more input is obtained from stakeholders, especially given that rapid reviews must be considered in light of other pieces of evidence that are available not only to producers but also to users.

Acknowledging the limited experience that many LMIC settings have with rapid reviews, further research from these countries is encouraged, to understand how rapid reviews fit within existing methods of knowledge synthesis and to explore conduct and reporting guidelines specific to rapid reviews. In addition, research to document and understand variations in methodology will be important in addressing concerns about the methods used in rapid reviews.

> 6.4.3 Increase human, financial, and other resources

Rapid reviews in LMICs are hindered by the severe limitations on resources available to produce and use them. There is a need to improve the number of rapid review experts and to increase their skill to do this work. Some essential skills have been identified, including content expertise, information specialization, expertise in systematic

review methodology, experience in conducting reviews, and experience in knowledge use (23). In addition, there is a need for sustained investment of financial and other resources to support the conduct of rapid reviews and to continue building capacity. Centres that are already established to do other types of research syntheses, such as systematic reviews, may build on what is already available, because it is sometimes feasible for systematic processes to be expedited if additional resources are made available (13). In other words, with more resources, longer processes like those of conventional systematic reviews can be shortened.

Those with experience in producing rapid reviews for decision-makers (24) have acknowledged that because there may not be much lead time before the knowledge user needs the rapid review findings, maintaining a highly skilled staff (or being able to mobilize staff members quickly) is critical to organizational readiness to produce rapid reviews. In addition, having few and/or narrow and focused questions (e.g. related to emerging technologies, single interventions, specific populations, single systems pillars like health services delivery, operational efficiency, or quality improvement) was deemed necessary, as was restricting the scope of practice for the rapid review programme itself, considering the implications for financial and human resources (25).

Many of the centres currently conducting rapid reviews lack continuing funding, and currently conduct projects that are specifically funded by donors or through seed funding. However, these establishments subsequently face sustainability challenges. In addition to encouraging health systems authorities to invest in dedicated rapid review centres, existing centres may consider a “user-pays” model in which the review commissioner pays the costs incurred in producing the rapid review (26). Such a model would require formal evaluation of the work and its impact, so as to demonstrate its benefits to the system and to provide a basis for advocating for funds and other resources in the future.

> 6.4.4 Provide supportive systems and structures

The provision of certain supportive systems and structures would facilitate the conduct and use of rapid reviews in LMICs. Such systems and structures provide a conducive environment for researchers, academics, and evidence entrepreneurs to conduct and promote rapid reviews as a beneficial form of evidence synthesis. In addition, these rapid review promoters would be able to build capacity for their conduct and use. Furthermore, such structures and systems may support users of the rapid review products in their quest to find, understand, and use the rapid reviews. A few of these structures and systems are discussed below.

6.4.4.1 Decision-making systems and structures

In many LMICs, it is not obligatory to use evidence in making decisions, and doing so may even be looked upon as an extra and burdensome step for the decision-maker. Indeed, the barriers that decision-makers face while attempting to use evidence for decision-making are widely documented (9, 10). With no structures for accountability to the public about the use of evidence for decisions, the default position of some decision-makers may be to shun evidence and the process of incorporating it into their decisions. Rapid reviews aim to support decision-making; therefore, there is need for systems and structures enabling their conduct, with strategies incorporated to facilitate uptake of the resulting reviews (26). For example, when policy- and decision-makers put into place policies related to the use of research and other evidence for decisions, they may enable the use of such evidence and may ensure that rapid reviews are valued, sought, commissioned, considered, and used in decision-making.

6.4.4.2 Peer acceptance in the academic community

One of the greatest barriers to the advancement of rapid reviews has been strong scepticism from

some academics (15). This viewpoint may hinder the search for ways to improve methods for and application of the practice and must therefore be addressed. The main concern about rapid reviews that academics have expressed is the relation between time and quality. The question continually recurs as to whether the limited time available allows for appropriate methods and therefore results in a rapid review of sufficient quality (15). Furthermore, the frequent absence of information about methods represents a missing link in judging the quality of the work (11). The transparency of methods and the provision of sufficient information are important, not only to knowledge users but also to academic peers. Researchers desire to make their own judgements on the potential value and quality of rapid review products, and information that aids in these assessments will go a long way towards dispelling the scepticism with which rapid reviews are viewed.

In their bid to understand rapid reviews, systematic reviewers have often labelled or categorized these products as being “quick and dirty” relative to other categories of research or knowledge generation (15). The term “quick and dirty” carries the connotation that any review done quickly must have been done sloppily. However, this is not the case. Furthermore, rapid reviews should ideally be measured against what they are intended to do and how they are intended to be done, rather than being assessed in relation to other research methods (see also descriptions of timelines and steps for rapid reviews in Chapter 2). There is a need to clearly dissociate rapid reviews from this comparative category and label them rightfully for what they are: quick, timely, and relevant.

In addition to improving transparency in terms of methods, research producers and knowledge brokers need to improve knowledge and sensitivity among their peers concerning what rapid reviews are and what benefits they have over other sources of knowledge and evidence and other types of research. Producers of rapid reviews may take for granted that others have a clear understanding of these products, but such is often

not the case. There is also a need to emphasize that rapid reviews are complementary to (not replacements for) other evidence sources and to highlight when they may be more appropriate than other methods.

[6.4.4.3 Scholarly recognition of rapid reviews](#)

Another role of academia and its peers is that of recognizing and attaching value to rapid reviews as contributing to academic achievement. A lot of the work that goes into policy-maker engagement and achievement of high-impact decisions, policies, and practice goes unrecognized. There is a need for academia to develop a system whereby work, like that done on rapid reviews, is valued as a scholarly endeavor and accorded status in faculty review processes. For example, beyond the need for academic institutions to promote, not castigate, rapid review methods, the institutions would ensure that rapid review production could lead to faster advancement or promotion on the academic research track, thus providing further motivation for those who conduct rapid reviews. In addition, academics involved in producing rapid reviews should be encouraged to publish them, even those developed in response to a policy- or decision-making process. Currently, few rapid reviews are published, yet publication is a recognized (and often rewarded) step of academic achievement.

[6.4.4.4 Knowledge translation for evidence uptake](#)

Aside from systems for the actual production and use of rapid reviews, arrangements are needed to ensure appropriate interaction between producers and users. Several academics have pointed out that the production of rapid reviews alone is not enough to ensure they will be taken up by users (26). For example, a system is needed to ensure that the topics addressed are relevant to current policy decision-making processes. Furthermore, processes are needed to inform policy-makers about the existence of rapid reviews already produced, to allow them

to have input on the production of new reviews, and to enable them to make use of rapid review products. Such systems and structures constitute knowledge translation strategies, and may include stakeholder meetings or workshops; preparation of summaries, executive summaries, or evidence summaries; and use of social media and webinars (25). Chapter 5 of this Guide provides further guidance on engaging policy-makers and other end-users.

In several LMICs, rapid response services for knowledge translation have been shown to be feasible (3) and are now being scaled up. These services have been set up in academic settings, in ministries of health, and as semi-autonomous government entities. The variable implications of these different settings relate to access to the policy process, availability of personnel to support different parts of the production process, and political influence (27, 28). Preliminary findings from lessons compiled by rapid response services in three African countries reveal the strengths and weaknesses of various types of host institutions (27, 28). For example, having an academic institution as the host of a rapid response service provides easy access to research through institutional subscriptions, as well as easy access to support from other researchers; a neutral or unbiased view of the policy questions is assumed of this setting. The downsides to this approach are that academia is often looked upon with “suspicion” by knowledge users (on the assumption that academic researchers will be promoting the institution’s own research) and that it has limited access to current decisions in the policy-making world. Yet these services are ideal, in that they provide an enabling environment to improve the use of rapid reviews, linking the policy world to rapid review producers, increasing the demand for rapid reviews, and in turn increasing the motivation of producers. Their presence may relieve the burden of knowledge translation from the users or the producers, who are often not as well-equipped or as skilled as knowledge brokers or entrepreneurs.

> 6.4.5 Ensure documentation and knowledge-sharing

Documentation of the practices, experiences, and lessons of emerging groups doing rapid reviews in LMICs is important. These records will allow for growth through constructive critique. They will also provide examples that others can replicate, adapt, and build upon. Indeed, some academics have called for more rapid reviews to be published in the peer-reviewed literature (20), an ideal form of documentation that allows wide dissemination to academic audiences. Other forms of dissemination to reach a wide range of stakeholders are also important; for example, targeted webinars and meetings.

6.5 CONCLUSION

Rapid reviews represent a growing support for policy- and decision-making processes in LMICs, yet more systematic fostering of their conduct and use is needed. Although the limited experience of LMICs with rapid reviews is now growing, challenges to the conduct and use of such reviews have been noted, including methodological challenges; a paucity of human, financial, and other resources to produce and use these reviews; and a lack of structures to enable their optimal uptake. To improve the production and use of rapid reviews, researchers and users will need to not only build capacity and mobilize resources, but also develop supportive arrangements in both academia and policy settings, raising the profile of these reviews and sharing the knowledge they generate.

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7

REPORTING AND DISSEMINATING RAPID REVIEW FINDINGS

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KEY POINTS

- Knowledge users should be identified and engaged early and throughout the rapid review process.
- Approaches to reporting and dissemination should be discussed with the primary knowledge user as early as the protocol stage.
- Rapid reviews should prioritize the practical needs of the primary knowledge user over traditional or academic approaches to dissemination, with tailoring of the message and approach to the needs of knowledge users.
- Relevant reporting guidelines should be used in the development of rapid review reports, to ensure comprehensive and transparent documentation of the rapid review process.

7.1 INTRODUCTION

> 7.1.1 Goals of research reporting and dissemination

Once the data collection, analysis, and interpretation stages of a review are finished, there is still much work to be accomplished before the review can be considered complete.

For research to be valuable, it must be reported clearly and transparently. Clear reporting of evidence syntheses, including rapid reviews, enables uptake and appropriate use of research findings across a variety of knowledge users, including policy-makers and health systems managers (1). Although approaches to rapid reviews for health policy and systems research may vary, the considerations for reporting and disseminating findings apply to all. Given the methodological tailoring of rapid reviews, which helps to expedite the review timeline, it is important that reporting reflect protocol-driven decisions, processes, and findings (see section 7.2).

Dissemination involves communicating research results for a specific audience, with the goal of maximizing both uptake and impact (2). Dissemination activities and tools should be customized for each review through consideration of the significance of the findings, dissemination

goals, target audiences, and anticipated impact or influence of the rapid review (Section 7.3). This chapter outlines how to report findings from a rapid review of health policy and systems research, and discusses options for dissemination to the appropriate knowledge users.

7.2 GUIDANCE AND METHODS FOR REPORTING RAPID REVIEWS

> 7.2.1 Core principles of reporting knowledge syntheses

Rapid reviews are an important and useful tool for knowledge users; however, insufficient reporting can potentially reduce the utility of a knowledge synthesis product if the knowledge users do not have enough information to evaluate the strengths and weaknesses of the synthesis process and/or the results (3). Regardless of the aim of methods used for a rapid review, maintaining research integrity depends upon a few core principles to guide the processes of conducting the review and preparing its report (4). In particular, knowledge users are interested in both the findings of the review and its methods. Similar to other knowledge synthesis approaches, authors must take care to limit reporting bias, by having the protocol (and any amendments) on hand as the report is written (5, 6). In general, authors of a rapid review should follow these core principles:

FIGURE 7.1 Core principles of rapid reviews

WORK FROM A PROTOCOL and use it to guide the conduct and reporting of the review;

ACCURATELY AND TRANSPARENTLY DOCUMENT all steps and judgements in the review process (such as: “Did the rapid review team make any methodological concessions to answer the research question[s] within available resources?”) (7, 8);

USE CLEAR LANGUAGE that will be understandable to knowledge users. Write at a level that someone without a university degree can understand, and avoid the use of jargon or technical terms, except where such terms are essential. Be mindful of technical terminology or terms that may have a slightly different definition in the review setting than in everyday usage (e.g. blinding, control, practice) (9, 10);

PROVIDE ENOUGH DETAIL about the methods that a knowledgeable reader could reproduce the review;

SUMMARIZE THE METHODOLOGICAL STRENGTHS AND WEAKNESSES using language designed to help non-experts interpret and judge the value of the review (11).

If these basic principles are not followed, the knowledge user may lack adequate information to determine the reliability or validity of the review as a guide to decision-making.

[7.2.1.1 Special considerations for rapid reviews of health policy and systems research](#)

Health policy and systems research often involves the assessment of complex interventions. Rapid reviews in this area may describe multifaceted or context-specific interventions that may be investigated through a variety of study designs (e.g. controlled before-and-after, interrupted time series, qualitative, or nonrandomized studies). This complexity, and any difficulties encountered during the review process as a result, should be carefully described in the research report, keeping in mind that a wide variety of stakeholders may be interested in the results.

As with any knowledge synthesis, reporting for rapid reviews of health policy and systems research should be as comprehensive as possible within the time frame for review completion. In particular, it is important that any methodological tailoring during the conduct of the review be noted in the methods section. In addition, it may help to describe the differences between a rapid review and the content of a more comprehensive review, to frame the limitations and to emphasize caution around interpretation (8). We suggest that this material be provided in the discussion/interpretation section of the rapid review report, which should include a description of the review limitations. Authors of rapid reviews should also provide a disclaimer section in the executive summary, as part of the discussion, or as a note on the cover page, to highlight these limitations and any perceived impact on the findings of the review.

[7.2.1.2 Consideration of knowledge users' needs](#)

Rapid reviews are frequently commissioned by a knowledge user to inform a specific decision. These individuals are likely to be an integral part of the research process, from defining the scope and setting the research question to finalizing the results. As such, they should also be included in the reporting process. Understanding the

reporting requirements of the knowledge user is essential, and one size does not fit all when it comes to rapid reviews. We suggest discussing how findings will be reported early in the review process, so that the needs of knowledge users may be considered. For example, knowledge users may require that their institutional or organizational reporting template be used, may want authors to apply an existing report format (e.g. the 1:3:25 format (10)), or may have additional requirements beyond the traditional research findings report (e.g. a slide deck or policy brief). It could be helpful to provide knowledge users with a template commonly used to report rapid reviews, and ask if any information should be added to the template. Time spent discussing the report in advance of its completion will help to limit the time required for subsequent revisions.

It may also be useful to send a summary of preliminary findings to the knowledge users and suggest a meeting or telephone call to discuss. Their input may then be used to inform the final report. Above all, the report should be tailored to the needs of the knowledge users, while balancing timelines and available resources. Reporting should balance comprehensive accounting of the research process and findings with what is sufficient to meet the requirements of the knowledge users (and/or other stakeholders if important) (12).

> 7.2.2 Reporting guidelines and checklists

Reporting guidelines exist to ensure that research reports contain enough information about the work to make it usable, appraisable, and replicable. In short, the guidelines aim to fix (or prevent) deficiencies common to research reporting by setting a minimum standard or template that should be applied when reporting a review. The Enhancing the QUALity and Transparency Of health Research (EQUATOR) Network provides a comprehensive searchable database of research reporting guidelines and links to other appropriate resources (13).

Research has shown that reporting of the rapid review approach and tailoring of the methodology is often inadequate (1, 14, 15). A detailed assessment of the reporting quality of published rapid reviews, using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement, also found the reporting to be of poor quality across the included rapid reviews (1). These assessments found that key decisions in the review process and conduct are often presented with insufficient detail or omitted completely.

Guidance documents and checklists (such as the PRISMA Statement) are available through the EQUATOR Network, to inform the reporting of various knowledge synthesis approaches, but to date there is only one tool that provides any guidance specific to rapid reviews: a checklist developed by Abrami and colleagues (8). Their checklist reminds authors to provide explanations in key decision areas, and recommends reporting of the research question, inclusion criteria, search strategies, inter-rater agreement (if applicable during study identification, calculation of effects, and/or coding of study features), outcome extraction, study features, analysis, interpretation and implications, cautions and limitations, and conclusions. However, the checklist omits several key areas that are worth noting: use of a protocol, inclusion of a structured abstract, explicit identification of the report as a rapid review, internal or external peer review of the review, and critical appraisal of the information included in the review and the types of information sought (e.g. reviews, quantitative or qualitative studies, or other types of research).

To ensure that reporting is complete and transparent, future exploration of reporting (and conduct) guidelines specific to rapid reviews is warranted. Certain other guidelines and checklists are relevant to rapid reviews, although they focus on the reporting of systematic reviews, such as PRISMA (4, 5). The PRISMA Statement is specifically aimed at systematic reviews and meta-analyses of health care interventions, yet many of its checklist items are relevant to the rapid review approach. An extension to the PRISMA statement (called PRISMA-P) endeavours

to facilitate the reporting of review protocols, which also may be useful to rapid review authors when developing their protocol (16). Other similar organization-specific guidance is available (e.g. manual of the Joanna Briggs Institute (17)). In addition, individual groups or organizations may have internal reporting guidelines or standards. It may be helpful for review authors to check the websites of rapid review producers to see examples of templates and key features (15, 18).

An extension to the PRISMA reporting guideline specific to rapid reviews is currently under development ((13); A. Stevens, personal communication, 2017). As there is not yet a published protocol or research plan, it remains unclear how the PRISMA extension for rapid reviews will address the variety of approaches used or whether it will provide guidance specific to health policy and systems reviews.

Notably, there have been gaps in the reporting of some essential items. For example, many rapid reviews fail to mention the use of a protocol (14), which conflicts with a report that over 90% of organizations producing rapid reviews use a protocol (15). Reporting is often brief or truncated, and methods may be reported in documentation separate from the rapid review report itself. Other items noted in the literature as being poorly reported are the study screening and data collection processes, definitions of study eligibility, methods of assessing risk of bias in or across studies, processes used for syntheses, and limitations in the review process (1).

The PRISMA checklist provides a starting point for items to be included in a rapid review report (with certain adjustments specific to the context, such as having the title identify the study as a rapid review, rather than a systematic review). However, it may be more helpful to use the reporting items listed in Table 7.1, which encompass some of the PRISMA items but are tailored specifically to rapid reviews. These items may be more or less applicable, depending on the rapid review approach used (19).

TABLE 7.1. Suggested minimum reporting items for rapid reviews of health policy and systems research

Category	Items to consider
Protocol	<p>Was a protocol used?</p> <p>If so, was the protocol made public, published in a journal, and/or registered (if so, provide reference and/or registration number, or link to protocol)?</p>
Overall scope	<p>Was the scope limited in any way?</p> <p>Were there a limited number of research or policy questions?</p> <p>Were the research questions of limited type (e.g. effectiveness only, specific populations)?</p> <p>Was the number of included studies limited?</p>
Comprehensiveness	<p>Was the search strategy limited in any way (e.g. number of databases, grey literature, date, setting, language)?</p> <p>Were there limits on the types of study designs included (e.g. existing systematic reviews, randomized controlled trials)?</p> <p>Was textual analysis limited (e.g. no full-text review and/or limits on the number of items extracted)?</p>
Rigour and quality control	<p>Was the process of dual study selection or dual data extraction modified or omitted?</p> <p>Was the internal or external review of the final research report limited or omitted?</p>
Synthesis	<p>Was the assessment of risk of bias or quality of evidence limited or omitted?</p> <p>Was qualitative or quantitative analysis limited or omitted?</p>
Other	<p>When making statements about the findings of the rapid review, were the conclusions simplified or omitted?</p> <p>Is it appropriate to provide a disclaimer and/or limitations section in context with your findings?</p>

7.3 DISSEMINATION OF REVIEW FINDINGS

Dissemination involves the communication and distribution of rapid review findings to specific target audiences, across or within settings, and the

tailoring of the knowledge to make it usable to the intended stakeholders (2). Typical dissemination and communication activities undertaken by researchers are described below.

Before starting the dissemination process, consider the following basic questions:

- What is the review authors' goal?
 - Is it dissemination only? For example, is the goal simply to share review results with other researchers? Funders? Policy-makers? Members of the public?
 - Is it uptake (i.e. implementation)? For example, is the goal for the review findings to inform or influence decision-making?

If the goal is dissemination only, it is important to identify the targets of the research. These could include researchers, the general public, practitioners or policy-makers. Next, authors must decide upon the dissemination strategy. This may include presentations at meetings, publications in peer reviewed journals, or creation of policy briefs or media releases. Review authors also need to consider how to engage with policy-makers and other types of decision-makers to share their research results.

If the goal is to influence decision-making, information needs or requests of the primary knowledge user will guide dissemination and implementation activities. Although the dissemination strategy should focus on meeting these needs in the context requested by the primary knowledge user, review authors may also consider that if one knowledge user has asked a question, it is likely of concern to others in the same or similar circumstances. As such, review authors could focus dissemination on the needs of just the primary knowledge user or they could also contextualize findings for a broader audience of interested knowledge users. Discussion of implementation efforts is beyond the scope of this chapter and we refer readers to other resources for further information (2).

The answers to these simple questions will form the basis of the research dissemination strategy and will help frame the scope of the plan (Box 7.1) (2). Another key factor to consider

is the significance of the research findings and how generalizable or remarkable they may be to intended knowledge users.

> 7.3.1 Overview of available research dissemination frameworks

The aim of a dissemination framework is to assist with conceptualizing or organizing research dissemination and implementation activities. An in-depth discussion of frameworks for research dissemination and implementation is outside the scope of this chapter. However, it is worth noting that many different frameworks are available. Some are broad, whereas others are more specific to their particular purpose; all have benefits and limitations. Some of the more common frameworks that could be used to develop a dissemination and implementation process for a rapid review are the Knowledge-to-Action Cycle, the Ottawa Model of Research Use, and the COM-B (capability, opportunity, motivation, and behaviour) model (2). It is also important to evaluate dissemination and implementation activities. For detailed descriptions of applying dissemination frameworks and evaluating dissemination and implementation activities, we refer readers to other resources, compiled in the book Knowledge Translation in Health Care (2).

> 7.3.2 Engagement meetings and dialogue

Clear dialogue and continued engagement are essential to ensure that the needs of knowledge users are considered in the rapid review. Early engagement meetings between the review producer and the policy- and decision-makers who will use the findings of the rapid review are essential. This dialogue between the review producer and the primary knowledge users begins with agreement on the review topic, scope, and research question(s), but may also cover what methodological limitations or trade-offs they are willing to accept to expedite the synthesis process (20). It is important that this dialogue continues throughout the review process, and that the review authors and knowledge users maintain a close working relationship. The practical needs of

the knowledge users should also be prioritized when planning for reporting and dissemination activities, and discussions should be initiated early. The knowledge users may prefer summary-of-findings tables over lengthy narratives, or may be content with one approach for immediate results (e.g. a meeting or presentation), followed by a more comprehensive written record at a later date. Without a clear dialogue, these important details and opportunities for engagement may be lost.

> **7.3.3 Dissemination activities and tools**

Rapid reviews aim to inform fast-moving policy processes; as such, practical use of the findings by the knowledge users will likely take priority over academic publication or other broad dissemination approaches. Rapid review producers may also choose to disseminate research findings through publication in peer-reviewed journals, stakeholder meetings or workshops, online summaries and databases, social media posts, video summaries, or e-mail distribution (15). These activities may complement or be in addition to the specific needs of the policy- or decision-makers who requested the review, but their impact on the uptake of information can be limited (21, 22).

7.3.3.1 Publication of rapid reviews

Publishing articles is a traditional approach to knowledge translation. The “gold standard” of journal publishing is to publish in a peer-reviewed journal, namely, a journal that asks individuals in the research community (“peers”) to evaluate the article as a way of validating the research before publication. Authors can determine whether a journal is peer-reviewed by checking the journal’s instructions to authors and its editorial statement, typically found on the journal’s website. Authors should evaluate any web-based journal publication carefully to ensure that it is a valid journal and not from a “predatory publisher” (i.e. a company that exploits or defrauds authors and readers by promising reputable publishing platforms and then failing to meet its promises) (23).

7.3.3.2 Metrics

A variety of metrics can be used to measure the impact of published articles. Citation analysis is used to measure how often a work is cited. One example of a citation metric is the journal impact factor, published in the Web of Science’s Journal Citation Reports, which measures the impact of a journal through its citation by subsequent authors (24). Altmetrics are also important. These non-traditional metrics include citations and downloads to web-based scholarly articles, discussions on research blogs, media coverage, citations to public policy documents, and mentions on social networks such as Twitter or Facebook. The more hits from these sources, the higher the Altmetric score (25).

7.3.3.3 Scientific meetings and symposia

Disseminating research findings at scientific or professional meetings, conferences, and symposia is a way to reach large groups of knowledge users who may be interested in the research findings. There are a variety of ways to participate and present at meetings and symposia, including posters, oral presentations, and participation in panel discussions. If review authors plan to disseminate their research this way, it is important to prepare key messages that will be relevant to the target audience. Scientific meetings and symposia often have themes, or an organization may have a certain focus based on its particular goals. It is important to understand the audience and ensure that the meeting is the right place to target the knowledge users. Finally, review authors must consider who the most credible messenger is, and whether the authors are the right persons to deliver the message. For example, a policy-maker (who can place the evidence in context with their policy expertise) may be a better messenger than a researcher for a health systems audience.

BOX 7.1. Essential questions for developing a research dissemination plan

To help disseminate your research, answers to the following questions will form the basis of a plan:

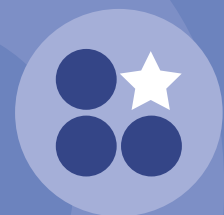
1 Why do you want to raise awareness of your research?

- To meet the urgent requirement of a knowledge user?
- To raise general awareness?
- To connect with other researchers?
- To generate national or international attention?
- To change policy or practice?
- To satisfy funders?



2 What is interesting about your findings? (in other words, “Why should anyone care?”)

- What is novel or different?
- Is it a large study?
- Are the results contrary to previous evidence?
- What is the relevance?
- Why now?
- Is it a hot topic?
- Is it seasonal?
- Does your review tap into popular trends?



3 How might you generate interest in your findings? Consider the following:

- Are you publishing in a journal?
- How does the journal generate awareness of papers?



4 Who will be interested? Consider the following audiences:

- General public
- Patients
- Health-care professionals
- Researchers
- Policy-makers, government
- Funders
- Corporations.



5 Should I tailor the message to my audience?

- How can you make your findings interesting to target audiences?
- What are your key messages?
- Do you need simpler messages for the general public?
- How do these differ from messages for policy-makers, researchers?



6 What tools can you use to communicate? What can be shared on social media?

- News releases
- Photos
- Infographics
- Video
- Podcasts
- Blogs.



7 Who can best help to deliver your messages?

- Different team members may be good for different platforms (e.g. television interviews, social media, blogging)
- Presenters can often be tailored to the audience (e.g. a policy-maker for health system audiences, a researcher for a large research meeting)
- A health system stakeholder may be able to talk about your research (e.g. a patient representative, a member of the public or a funding agency spokesperson).



8 How will you measure success?

- Number of reads or downloads
- Citation metrics
- Altmetrics.



Other tips

- Use plain language
- Avoid jargon, technical terms
- Develop a short summary of research findings
- Tell a story
- Provide context
- Don't overstate findings
- Inform your institution's communications team in case they can help disseminate your research.



Relevant reporting guidelines should be used in the development of rapid review reports, to ensure comprehensive and transparent documentation of the rapid review process.

7.3.3.4 Traditional media and social media

Traditional media and social media can be used to publicize research findings to patients and the general public, as well as to researchers, policy-makers, and other audiences (26). Traditional media include newspapers, radio, television, magazines, and online-only news sites. Social media encompass online and mobile tools, such as Facebook, Twitter, and Instagram, where users directly create, post, and share content. Both traditional media and social media can be part of a broader dissemination strategy. By allowing review authors to link to health system trends in the news, these resources may be especially useful when publishing the rapid review in a journal or presenting the results at conferences.

> 7.3.4 Special considerations for rapid reviews of health policy and systems research

Knowledge translation strategies are universally translatable to all forms of research, yet some considerations may be unique to rapid reviews

of health policy and systems research. Research into the dissemination of rapid reviews is limited. Two studies of rapid review producers (15, 18) identified variation in research dissemination approaches and tools. In some cases, public dissemination activities may be extremely limited. For example, organizations may choose to post a summary paragraph describing the research, without disseminating a full report (18). Most rapid review producers (about 70%) chose to disseminate their reports beyond the commissioning individual or body (15). In deciding the dissemination strategy, influencing factors that have been cited include the need for permission from the requester, legal implications or sensitivity of the topic, and type of approach used for the rapid review.

Although we have described some of the traditional methods for research dissemination here, rapid reviews of health policy and systems research may require specific dissemination strategies to reach their target audiences and maximize impact. Some alternative methods to consider are focus groups, public meetings, and open houses. If an advisory board is informing the rapid review process, its members may be able to suggest how to present findings in a way that will reach all potential knowledge users. If it is an expert group, the advisory board may also assist with directly disseminating the results of the rapid review to interested individuals or groups.

7.4 CONCLUSION

Although producers of rapid reviews have access to the same dissemination tools and channels as systematic reviews, they will need to prioritize the practical needs of the knowledge user over traditional or academic approaches to dissemination. A checklist of essential questions to assist researchers in the development of a dissemination plan is presented in Box 7.1.

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8

IMPROVING THE UPTAKE OF RAPID REVIEWS

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KEY POINTS

- Although rapid reviews can be helpful for health care decision-making, policy-makers and health systems managers do not always commission and use rapid reviews to inform their decisions.
- Barriers to the commissioning and use of rapid reviews include the belief that the results of rapid reviews are not useful or valid, a lack of understanding of how to identify and access relevant rapid reviews, a lack of skills to assess or interpret rapid reviews, and organizational resistance to applying new evidence.
- Researchers can facilitate the uptake of rapid reviews by developing partnerships with policy-makers or health systems managers, and by providing education about the validity and applicability of rapid review results, as well as how to identify rapid reviews, and assess and interpret findings.
- In terms of the content of a rapid review report, the following elements will promote uptake: a section on policy implications; a focus on the results and interpretation (with less emphasis on the methods); presenting a summary of the study results using a standardized format (e.g. summary-of-findings tables); targeting messages to key audiences; ensuring that the results are tailored to the knowledge user of the review; and consistent reporting of effect sizes (for quantitative reviews, such as those that include a meta-analysis or statistical combination of multiple studies).
- In terms of formatting a rapid review report, the following aspects will promote uptake: preparing a one-page plain-language summary (i.e. research brief) that includes key messages and the publication date (to indicate how recently the review was performed); using white space to break up dense text; and providing simple one-page tables.

8.1 INTRODUCTION

Knowledge synthesis products can help policy-makers or health systems managers make decisions, by summarizing all available evidence related to a particular question. According to some decision-makers one such product, the rapid review, is particularly helpful (1-3) because these reviews provide information in a timely manner (4). However, the use of evidence (including evidence provided in rapid reviews) to inform decision-making processes varies widely (5-7).

8.2 BARRIERS AND FACILITATORS TO THE UPTAKE OF RAPID REVIEWS

Decision-makers who work at the health policy and systems level face many challenges in incorporating evidence into decision-making. For example, these individuals often lack the time and skills to search for evidence when faced with time-sensitive situations, and may

Contextualizing review findings and focusing on results and interpretation from the lens of policy-makers or health system managers will improve uptake of rapid review findings.

not be aware of existing reviews or how to go about commissioning a review. Several other factors can also affect the uptake of rapid reviews. These can be thought of as factors that promote (i.e. facilitators) or hinder (i.e. barriers) uptake. Factors from the policy-maker or health systems manager perspective can be classified as attitudes, knowledge, skills, and behaviours, whereas factors from the rapid review producer perspective can be classified as skills and behaviours (Box 8.1) (8, 9).

BOX 8.1. Barriers and facilitators to the uptake of rapid reviews for health care decision-making

Barriers:

- belief that results of rapid reviews are not useful or valid;
- lack of understanding about how to identify and access relevant rapid reviews;
- inability to assess or interpret rapid reviews;
- organizational resistance to implementing new evidence;
- lack of understanding about what evidence is required and how it can be used to influence and constitute policy.



BOX 8.1. Barriers and facilitators to the uptake of rapid reviews for health care decision-making (continued)

Facilitators:

- belief in the validity and applicability of rapid review results;
- awareness of the importance of rapid reviews;
- skills in finding, appraising, and interpreting rapid reviews;
- collaboration between policy-makers and the researchers who produce rapid reviews;
- trust in the rapid review producer;
- embedding of policy-makers into the rapid review team;
- use of rapid response services;
- involvement of policy-makers in prioritizing rapid review topics;
- conducting workshops on how to identify rapid reviews and appraise their quality;
- forecasting when a decision will potentially be made by a policy-maker or health systems manager;
- contextualizing the review findings that are specific to the policy-maker's current situation.



> 8.2.1 Attitudes

Positive attitudes towards rapid reviews and the belief that rapid reviews are useful will increase the uptake of results by policy-makers or health systems managers. All types of knowledge syntheses, including rapid reviews and systematic reviews, can be done with varying levels of quality. Specifically related to rapid reviews, producers must answer the time-sensitive needs of decision-makers, and simultaneously ensure that the scientific imperative of methodological rigour is satisfied (10). Acknowledging this, and being aware that the trustworthiness of a rapid review depends on the methods used and how transparently methods are reported, will facilitate uptake (11). In addition, uptake will increase when policy-makers or health systems managers trust the researchers who conducted the rapid review, either because the researcher has worked with the policy-maker or health systems manager previously or because the researcher (or the researcher's institution or research group) has a good reputation (12).

Attitudinal barriers to the uptake of rapid reviews include the perception that reviews dictate decisions, thereby removing the policy-makers'

or health systems managers' freedom to make the decision they desire; the belief that reviews assessing the effects of a policy or programme cannot be used to determine causality; and mistrust of the results or disagreement with the authors' interpretation. As well, the belief that a systematic review is the gold standard, and that a rapid review should be used only under exceptional circumstances, will hinder the uptake of rapid reviews (11).

> 8.2.2 Knowledge

Policy-makers' or health systems managers' awareness that reviews are more useful for decision-making than primary studies is a facilitator to uptake. In addition, knowing the types of situations where rapid reviews are the most useful will increase uptake. Such situations include those requiring urgent policy and health systems decisions, those requiring policy decisions at the local level, and those involving updates of previous reviews or guidelines or simply getting a sense of the current literature (12). Knowing that the rapid review is just one of several types of information used in decision-making will also promote uptake (12). In contrast, a lack of awareness of how to locate rapid reviews and

a lack of knowledge regarding their importance are barriers.

> 8.2.3 Skills

Training policy-makers or health systems managers to search the literature and appraise the quality of rapid reviews (7), and training rapid review producers on how to contextualize the evidence to meet decision-makers' needs will also increase uptake.

> 8.2.4 Behaviours

Collaborations and strong relationships between researchers and policy-makers or health systems managers will facilitate the uptake of rapid reviews (12). There are numerous examples of "rapid response services," whereby researchers respond to queries from policy-makers or health systems managers through rapid reviews (13-16) that have provided significant utility to their recipients (4). These rapid response services increase the relevance of rapid reviews, and facilitate the interpretation of rapid reviews by way of the collaborative relationships that have been established (12). Providing policy-makers or health systems managers with timely access to relevant rapid reviews when decisions need to be made in a context where trust has been established between the rapid review producer and the policy-maker or manager facilitates uptake.

Creating demand for rapid reviews by policy-makers or health systems managers facilitates the uptake of rapid reviews (17). This can be done in a variety of ways, such as educating policy-makers to recognize the value and use of rapid reviews, undertaking priority-setting activities to identify rapid review topics (E. Akl, unpublished data, 2016; (18)), conducting workshops on how to identify rapid reviews and appraise their quality, forecasting when a decision will potentially be made by a policy-maker or health systems manager (i.e. identifying an "opportunity window"), or embedding policy-makers or health

systems managers as members of the rapid review team so they can participate in various steps of the review process (13-16). For example, the Canadian Agency for Drugs and Technologies in Health embeds Liaison Officers in each province to engage on an ongoing basis with policy-makers, clinicians, and other stakeholders, which may increase uptake of evidence from research, including rapid reviews (19). Chapter 5 provides guidance on approaches to engage policy-makers or health systems managers in the rapid review process.

In contrast, behavioural barriers to the uptake of rapid reviews by policy-makers or health systems managers include resistance at the organizational level to applying the rapid review results. Other barriers include contradictory findings across reviews on the same topic, difficulty locating key messages in a review, lack of time, and lack of availability of relevant rapid reviews.

8.3 CONSIDERATIONS IN WRITING THE RAPID REVIEW REPORT

The way in which researchers present the results of a rapid review can increase uptake (Box 8.2) (8, 12, 20). For example, including a section on policy implications promotes uptake. A focus on the results and interpretation, with less emphasis on the methods, also promotes uptake. A concise summary of the study results in standardized form (e.g. summary-of-findings tables) and consistent reporting of effect sizes (for quantitative reviews, such as those that include a meta-analysis or statistical combination of multiple studies) will also facilitate uptake of results. Furthermore, presenting the evidence in standardized tabular format and describing the strength of the evidence (i.e. methodological quality) will promote uptake (12). Finally, targeting messages to different knowledge user audiences is also effective. More information on how to prepare the report is provided in Chapter 7.

BOX 8.2. Methods to increase the uptake of rapid reviews

Content

- focus on reporting and interpreting the results;
- frame the evidence in terms of policy implications;
- ensure consistency in the reporting of effect sizes of interventions;
- contextualize the findings of the rapid review that are specific to the policy-makers' and health systems managers' current situation;
- target key messages to each key audience.



Format

- use ample white space with bullet points and simple tables;
- include a key messages section at the beginning;
- include a section on policy implications;
- focus on the results of the review and their interpretation, with less emphasis on the methods;
- include a one-page plain language research brief with the key messages, publication date, and logo of the funding agency.



The format of the review can also be pertinent to uptake. For example, a one-page plain language summary that lists key messages and states the publication date (to indicate how recently the review was performed) is helpful to knowledge users (Box 8.2) (8). Avoiding dense text through the judicious use of white space and providing simple one-page tables can also improve uptake. As well, contextualizing the review findings that are specific to the policy-maker's current situation facilitates uptake, through methods such as the SUPPORT summaries of systematic reviews, which provides information pertaining to who

the summary is intended for (21). Figure 8.1 provides an example of a one-page summary with effective use of white space, for a rapid review conducted for the World Health Organization. As well, it may be helpful to develop different review formats for different types of policy decision-makers (22). Additional information on the format for the rapid review is available in Chapter 7, including other knowledge products that could be provided to the decision-makers that are based on the review results.

FIGURE 8.1. Research brief: Rapid scoping review of medical malpractice policies/ models/frameworks

Research Brief



St. Michael's
Inspired Care.
Inspiring Science.

Rapid Scoping Review of Medical Malpractice Policies/ Models/Frameworks

Summary

The medical community and health systems are facing a malpractice crisis with increasing litigation costs. We conducted a rapid scoping review to identify medical malpractice policies and programs found to reduce legal damages. Despite the enormous costs associated with medical malpractice litigations, very few papers described such models. Most of the literature is from the United States, which is likely because of the large number of medical malpractice claims that occur per year. None of the included papers originated from low to middle income economy countries. Most reports were informal discussion papers without formal evaluation. Favourable outcomes have been reported for no-fault compensation of severe birth-related injuries, patient safety programs and apology laws.

Implications

A number of medical malpractice models for reducing litigation costs were identified. However, many were reported without a systematic evaluation of programs and outcomes. Only 10 formal evaluations were identified. Further research in this area is warranted.

Reference: Cardoso R, Zarin W, Nincic V, et al. Rapid Scoping Review of Medical Malpractice Policies in Obstetrics. World Health Organization; 2015.

Available from: [World Health Organization](#)

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What is the current situation?

- Litigation costs can range from 2.4% to 10% of health care spending.
- The clinical specialty of obstetrics is under particular scrutiny for paying amongst the highest litigation rates.

What is the objective?

To complete a rapid scoping review to map the available evidence regarding medical malpractice models/frameworks/policies to control damages in obstetrical procedures across all countries.

How was the review conducted?

- Five-stage rapid scoping review framework was followed: 1) identifying the research question, 2) identifying relevant studies, 3) selecting studies, 4) charting the data, and 5) synthesizing and reporting the results.
- MEDLINE, EMBASE, LexisNexis Academic, Legal Scholarship Network, Justis, LegalTrac, QuickLaw and HeinOnline were searched for publications in English from 2004 until June of 2015.
- All levels of screening and data collection were done in duplicate.

What did the review find?

- Forty-three articles were included. The majority (n=31) of the reports were focused on the United States.
- A number of initiatives were reported: (1) no-fault compensation system for defined medical injuries, (2) safety program and practice guidelines for reduction and mitigation of medical risks and errors, (3) specialized courts and alternative claim resolution for handling medical malpractice claims using a non-judicial system, (4) communication and resolution strategies to reach a mutual agreement on dispute and fair compensation outside the court-room; (5) caps on compensation and attorney fees, (6) alternative payment system and liabilities to reduce the burden of liability pressure and financial burden of claims payment (7) limitations on litigation to control the type and amount of medical malpractice claims entering the system, and (8) multi-component models that include to a combination of the aforementioned strategies.
- No-fault systems for severe birth-related injury in Florida and Virginia were reported to reduce tort premiums, apology laws as a communication and resolution strategy were found to decrease compensation payments, and many of the patient safety and practice guidelines reduced medical errors and malpractice claims. Caps on compensation and attorney fees had inconclusive results.

Funded by the World Health Organization



Source: Cardoso et al., 2015 (26)

8.4 CONCLUSION

There are many ways in which producers of rapid reviews can enhance the uptake of results, such as:

fostering collaborations with policy-makers and conducting workshops on how to identify reviews and appraise their quality;

forecasting when a decision will potentially be made (i.e. identifying an “opportunity window”) and providing the review in time for decision-making;

creating demand for rapid reviews and establishing rapid response services whereby researchers respond to queries posed by policy-makers or health systems managers;

conducting priority-setting activities related to selection of topics for rapid reviews and embedding policy-makers on the rapid review team; working with policy-makers and managers during preparation of the review to ensure that it will be relevant to their decision-making;

helping policy-makers and health systems managers to tease out the differences in contradictory results across rapid reviews.

When writing the report of a rapid review, authors can implement several strategies in terms of formatting and presentation of results to promote uptake. The bulk of the report should focus on the results and interpretation, with less emphasis on the methods. However, the methods should be transparently reported and the use of a methods appendix may provide interested readers with the methodological details required. A section on policy implications should be included. Use of plain language, avoidance of dense text through judicious use of white space, and targeting of messages for key audiences may increase uptake. As well, contextualizing the review findings that are specific to the policy-maker’s current situation will improve uptake (23), in addition to an effective knowledge translation strategy. Box 8.3 gives an example of a rapid review applying several of these strategies.

BOX 8.3. Conducting a rapid review with maximum uptake in mind

You lead a small research team, supporting a non-government organization responsible for providing health services during natural disasters. Your country has just been hit by an earthquake, and the Red Cross has asked your organization to coordinate efforts at the national level. Your director wants you to make sure the best-known approach is used, and time is of the essence. With much effort, your team has established evidence-informed decision-making as the norm in the organization, but this has always been for decisions with enough lead time to conduct a full systematic review. How can you locate and synthesize what you need in such a short time, while maintaining a systematic approach?

Luckily you have spent time developing a strong relationship with the leader who will coordinate the relief efforts, and you know this will speed up your review. You engage her right away, and include two people from her team as members of the review team. Not only will they ensure the right questions are asked, and that the results will be relevant, but they will also work with your team at every step of the review. They provide a welcome resource, and more importantly, these knowledge users will be able to provide input into the rapid review process, which you know will be essential to ensure the final product is on target, and on time.

BOX 8.3. Conducting a rapid review with maximum uptake in mind (continued)

You restrict your search to just two literature databases (PubMed and Embase), and identify three reviews relevant to your research question. Your primary interest is in models of coordination between entities funding or delivering health services in humanitarian crises in a low-income country. One of these reviews is particularly helpful, and describes five models for coordination between entities, whether during a crisis or afterwards (24):

- cluster approach: uses a framework of agreed objectives between agencies to avoid resource gaps;
- the 4Ws (“Who is Where, When, doing What”) mapping tool: focuses on mental health; coordinates responsibilities across agencies;
- sphere project: provides guidance to humanitarian responders in all sectors (not limited to health);
- the 5×5 model: focuses on mental health; provides five skills and implementation rules;
- model of information coordination: uses internet and ship-to-shore teleconferences to liaise between agencies.

Since none of the models have been rigorously tested, you decide to go with the cluster approach, which was the most commonly used model reported in the literature. You and a member from your colleague’s team, who participated in the review, write a brief report with a one-page summary, a judicious use of white space, and a focus more on results and implications, than on the methods applied. Your colleague then works closely with the Red Cross to implement a plan of action to fund and deliver health services during this humanitarian crisis.

Some of these recommendations will be easier to apply than others. One approach that is within researchers’ control is trying to create demand for rapid reviews by identifying opportunities to respond to the questions posed by policy-makers or health systems managers. As well, it should be feasible to work closely with policy-makers before the project begins, to ensure that the resulting review will be relevant. In addition, tailoring key messages to specific stakeholders is typically an easy task.

Other recommendations will be more challenging to implement. For example, it takes years to establish trusting relationships between researchers and policy-makers or health systems managers. This is especially given that there is a high turn-over of policy-makers and health systems managers in their workforce. It also takes

substantial effort to inform policy-makers or health systems managers about the value of reviews, and this process must highlight that reviews are not meant to rigidly dictate decisions. Rather, a rapid review is a tool that can be used to inform the decision-making process, with other types of evidence (including experiences, preferences, and values) also influencing the decision. In some cases, a primary study that is specific to the context of the policy-maker or health system manager may be preferred over a rapid review, especially if the primary study was not included in the review, because of specific contextual factors that are not relevant in other settings. Programmes that allow rapid reviews to be conducted alongside primary studies (25) will likely advance the uptake and relevance of rapid reviews for health policy and systems decision-making.

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RAPID REVIEWS TO STRENGTHEN HEALTH POLICY AND SYSTEMS: **A PRACTICAL GUIDE**

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Policy-makers require valid evidence to support time-sensitive decisions regarding the coverage, quality, efficiency, and equity of health systems. Systematic reviews and other types of evidence syntheses are increasingly employed to inform policy-making and produce guidance for health systems. However, the time and cost to produce a systematic review is often a barrier to its use in decision-making. Rapid reviews are a timely, and affordable approach that can provide actionable and relevant evidence to strengthen health policy and systems. This Practical Guide explores different approaches and methods for expedited synthesis of health policy and systems research, and provides guidance on how to plan, conduct, and promote the use of rapid reviews, while highlighting key challenges including their application in low- and middle-income countries. Our proposed solutions will help provide policy-makers and health systems managers with strategic evidence to make crucial decisions about health systems' response in emergency situations, as well as in routine decision-making.