Summary
Health policymakers in the United States and elsewhere are increasingly interested in making evidence-based policy decisions, but require assistance navigating the large volume of material in peer-reviewed and grey literature. This trend has led many organizations to identify methods for producing high-quality evidence reviews faster than traditional systematic reviews to accommodate policymakers' timeframes. After examining several existing rapid evidence review program models and the insights of experienced evidence reviewers, we find that there are methodological and organizational strategies that may help organizations produce rapid reviews that are high quality, timely, and relevant to policymakers' decisions.

Introduction
Health services and policy research (HSR) is meant to be useful to policy and practice. In recent years, policymakers and health systems leaders have become increasingly interested in making evidence-based policy decisions. One way to help policymakers understand and benefit from large bodies of HSR is through the use of systematic reviews of evidence. Systematic reviews (SRs) use explicit and pre-specified methods to identify, select, critically appraise, and analyze data from research studies relevant to a particular research question. Organizations such as the Cochrane and Campbell Collaborations, among others, have created programs to produce high-quality, objective, and policy-relevant systematic reviews. For example, over a 10-year period, the Robert Wood Johnson Foundation’s Synthesis Project summarized what was known about various health policy topics, weighed the strength of research findings, identified gaps in knowledge, and emphasized the policy implications of key findings. Organizations have also developed methodological guidelines to help others conduct high-quality SRs to inform policymaking.

Organizations using these SR methods produce comprehensive, relevant, and defensible results, but often require significant time and other resources to complete them. Research has documented the challenges for those seeking to use SRs to inform time-sensitive policy decisions. In response, organizations in the United States and elsewhere have developed programs and methods for rapid evidence reviews (RERs). As part of an effort to develop a rapid review capability to support the Robert Wood Johnson Foundation’s commitment to building a Culture of Health, this brief examines what defines RERs, different approaches to conducting them, and the implications of applying RERs to health and social policies. In addition, the brief describes several examples of RER programs in the United States and elsewhere.

Genesis of this brief:
This brief is part of AcademyHealth’s Rapid Evidence Review project, an initiative supported by the Robert Wood Johnson Foundation to pilot alternative approaches to quickly, efficiently, but rigorously synthesize and communicate evidence to inform public and private decision-making. During 2015, AcademyHealth reviewed how others in the United States and beyond have approached this task. This brief summarizes the results of that effort.
What are “Rapid Evidence Reviews”?

RERs are efforts to assess and synthesize evidence in less time than traditional or “full” SRs. There is no single, definitive terminology or definition of this capacity (see Box 1). While SRs provide comprehensive examinations of the evidence base and are often reviewer-driven, RERs emphasize efficiency and responsiveness to the needs of policymakers or other stakeholders. In some cases, such decision makers directly commission them. In health policy, RERs can inform government policy or clinical practice, influence decisions about insurance coverage and reimbursement, advise about the structure and delivery of care in health systems, and offer guidance on implementation of new care models or system changes.

Because the precise needs of health policymakers vary, RERs employ a broad spectrum of streamlined secondary research methodologies. Boxes 2 through 5 below provide examples of RER programs designed to inform policy in the United States and elsewhere, illustrating methods RERs employ to achieve efficiency and responsiveness:

- **RERs encompass a wide range of timeframes.** RERs can take anywhere from a few business days to a year to complete. The time required may reflect the time and resources available to do the work, the information needed by a decision maker, or the date of an impending policy decision. The timeframe chosen has implications for what a reviewer can credibly produce.

- **RERs employ a variety of strategies to accelerate the review process.** Reviewers may expedite administrative processes, dedicate more staff and resources to conduct a full SR in a shorter timeframe, form specialized teams skilled at conducting RERs, narrow or target the review’s focus to be more manageable, and/or modify or eliminate traditional SR steps.

- **The end products generated by rapid review processes vary.** RERs may produce reference lists, annotated bibliographies, summaries of abstracts or summaries of key findings from the evidence, evidence overviews without policy recommendations, or meta-analyses, or even comprehensive reviews like SRs.

### Approaches to Making Rapid Reviews Rapid

Methods for conducting RERs are commonly adapted or modified from standard SR methods. Modifications to SR methods can make RERs more efficient or responsive, but they carry tradeoffs. Because policymakers often commission RERs to respond to a specific policy issue, these policymakers’ needs are a guiding focus of the reviews themselves. In some cases, a policymaker’s deadline for making a decision determines what is possible. This must be balanced against the risks of making a wrong decision.

Reviewers commonly choose among several strategies for conducting an RER that reflect the particular context and resource constraints.

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**Box 1: Terminology Used to Describe the Rapid Review of Evidence**

The words used to describe rapid reviews of evidence vary. Here we present several examples from the published academic literature along with explanations of the rationale behind each choice of terminology.

<table>
<thead>
<tr>
<th>Term</th>
<th>Source</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Brief review</td>
<td>Abrami et al, 2010</td>
<td>Emphasizes that timeframe and scope, rather than timeframe alone, distinguish these reviews from comprehensive reviews.</td>
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<tr>
<td>Rapid review</td>
<td>Polisena et al, 2015</td>
<td>Describes evidence syntheses that streamline systematic review methods to achieve shorter turnaround than required for full systematic reviews.</td>
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<tr>
<td>Evidence summary</td>
<td>Khangura et al, 2012</td>
<td>Adopted by Ontario Hospital Research Institute’s Knowledge to Action program to describe their explicit process after a lack of agreement about methodology underlying “rapid reviews” caused some to question the validity of products using that term.</td>
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<tr>
<td>Rapid evidence assessment</td>
<td>Thomas, et al, 2013</td>
<td>Describes processes that speed up systematic reviews “to dovetail more closely with policy and practice decision-making timescales.” Authors see “rapid evidence assessment” as synonymous with “rapid review” and “brief review.”</td>
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<tr>
<td>Rapid syntheses</td>
<td>Wilson MG et al, 2014</td>
<td>Distinguished from rapid systematic reviews and rapid realist reviews in that: (1) they are not comprehensive systematic reviews completed in a condensed timeline; (2) questions can take many forms and relate to problems, options, or implementation considerations rather than the effects of a single option; and (3) evidence reviewed can include systematic reviews and other evidence, rather than just single studies.</td>
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These strategies may focus on the review’s relevance rather than its speed, and reviewers may cut out or shorten steps that are not necessary to meet requestor’s needs. McMaster University’s Rapid Response program offers requestors a variety of different approaches and products to choose from (see Box 2).

To meet time and resource constraints, RER programs can:

- **Use specialized review teams to mobilize and complete RERs quickly.** Review teams who have prior experience conducting SRs and/or RERs can more easily respond to requests for evidence reviews on short notice than teams who need to train or recruit additional staff. Having review staff knowledgeable in the topic area of a proposed RER may also be helpful. This approach requires an organization to already employ reviewers with the necessary skills and experience.

- **Restrict evidence searches to particular contexts, geographic areas, or other settings relevant to the requestor’s circumstances.** This way, it is possible to reduce the amount of evidence reviewers need to evaluate for inclusion. The approach limits a review’s generalizability, but it saves time.

- **Focus review topics to facilitate more efficient reviews.** RERs with narrowly focused topics may not require the location or analysis of as much evidence as reviews with broader topics. One strategy used to focus a review topic is to narrowly define the search terms used to identify relevant data. The tradeoff is that reviews of narrow topics may identify less evidence of relevance or provide less generalizable conclusions than broader and more comprehensive reviews. Overly narrow topics or search terms may even result in reviews that do not locate relevant studies.

- **Conduct selective evidence searches to speed up a review.** After deciding upon the question or topic and relevant search terms, reviewers must decide where to search for evidence (e.g., which bibliographic databases) and criteria for what types of studies to include in the review. Rather than including comprehensive literature searches, RERs may involve searching only a small number of relevant databases, or only include previous systematic reviews, or studies with specific study designs, languages, or years of publication. Restricted searches may identify fewer irrelevant studies than comprehensive searches, but may also miss important evidence.

- **Conduct selective data extraction to make RERs more efficient.** After selecting which studies to include in a review, RER reviewers need to extract data from them. This process entails collecting and recording study results and features or characteristics such as research design, and sample size. RER reviewers may decide a priori to extract less data from each study. Again, selective data extraction may miss relevant information.

- **Perform less extensive data analysis or synthesis to save time.** After extracting data from studies, SRs synthesize it into narrative and statistical conclusions about the body of evidence. RERs may include less extensive data analysis or synthesis than SRs. RERs may focus only on findings most relevant to policymakers’ needs. The tradeoff is that important observations or reflections on the quality of the evidence may be missed.

- **Automate parts of the process.** Advances in technology such as natural language processing and machine learning may offer opportunities to streamline the review process, particularly study selection, data extraction, although there is limited research on how well these tools can replicate the work human reviewers.

- **Use of fewer people to complete RER review steps.** To ensure comprehensiveness and accuracy, SRs generally have two or more individuals sequentially replicate important review procedures. RERs may save time by omitting these crosschecks. Alternatively, reviewers can work in parallel rather than sequentially, the tradeoff is an increased likelihood of errors.
Since 2006, the Sax Institute’s “Evidence Check” program has conducted on the same topics, despite their different methodologies. One study found that, even though employing two evidence screeners maximizes the inclusiveness of evidence searches, a single evidence screener is likely to identify the majority of relevant records, which may be sufficient for drawing valid conclusions. On the other hand, reviews that only search for evidence electronically may fail to identify up to half of all relevant research studies, highlighting the importance of seeking input from topical experts. In terms of the conclusions, one study found little difference between RERs and SRs conducted on the same topics, despite their different methodologies.

### Does Speeding Up a Review Affect the Results?
Recent research suggests that decisions RER reviewers make to speed up the results may not necessarily lead to lower-quality reviews. One study concluded that restricting literature searches to a small number of highly-relevant databases does not adversely impact a review. Another study found that, even though employing two evidence screeners maximizes the inclusiveness of evidence searches, a single evidence screener is likely to identify the majority of relevant records, which may be sufficient for drawing valid conclusions. On the other hand, reviews that only search for evidence electronically may fail to identify up to half of all relevant research studies, highlighting the importance of seeking input from topical experts. In terms of the conclusions, one study found little difference between RERs and SRs conducted on the same topics, despite their different methodologies.

### How Are RER Programs Organized?
Organizations interested in conducting RERs need to decide not only what methods to use, but also how to structure and implement the reviews. Existing RER programs suggest a number of different approaches to funding, staffing, and governance.

#### Funding:
Many RER programs rely primarily on ongoing government funding or external grants. Other programs charge requestors a fee for their commissioned reviews based on the complexity of the review and the expected difficulty of meeting requestors’ deadlines. While an ongoing grant may provide a more stable source of long-term funding, the size of such grants could limit the number of reviews a program can afford to produce each year. “User-pay” models may ensure that the demand for reviews does not outstrip the budget available to fund them, but such approaches may provide less predictable revenue streams that make it difficult to retain staff and cover fixed costs.

#### Staffing:
There are two approaches to staffing: Organizations can rely on their own staff (see Box 2, 4 and 5), or they can commission outside experts to conduct the review (see Box 3). The advantage of hiring one’s own staff is the accumulation of domain knowledge and reviewing skills in the organization, at the cost of having a larger payroll to meet. Organizations that commission outside experts often serve as “knowledge brokers,” helping the requesting agency formulate an appropriate question, matching the right reviewer to that question, and facilitating sufficient conversation between the reviewer and requester to assure the relevance of the final product. However, this method requires releasing some control over the product.

### Box 3: Producing Reviews through Knowledge Brokering: Sax Institute Evidence Checks

The Sax Institute (https://www.saxinstitute.org.au) is a non-profit, nonpartisan organization that works closely with both researchers and policymakers in Australia to promote the use of research evidence in health policy. Since 2006, the Sax Institute’s “Evidence Check” program has analyzed, summarized, and synthesized HSR evidence to produce more than 160 reviews at the request of government policymakers. Each review takes approximately three months to complete. Evidence Checks inform decisions about whether to adopt new policies and programs, and how to develop them. They can examine how programs or policies have been implemented in other places, whether specific programs are effective, and assess whether the evidence is reliable. Recent reviews have examined the effectiveness of public health interventions, maternal and neonatal outcomes following in vitro fertilization pregnancies, and how to improve antibiotic use in community settings.

A defining element of the Sax Institute’s Evidence Check program is the use of “knowledge brokering” to facilitate reviews. Sax Institute staff function as intermediaries—“knowledge brokers”—between requesting policymakers and the external health researchers who conduct the reviews. The knowledge broker works with requestors to clarify their issues of concern into researchable topics and questions. Once the requestors and broker agree on review questions and scope, Sax Institute staff recruit reviewers with appropriate expertise from the organization’s network of public health and HSR member organizations. Interested reviewers submit expressions of interest to the Sax Institute and the requester selects their preferred team. The reviewers spend one month collecting and evaluating research evidence and producing a draft report. Requestors review the draft report for two weeks and provide feedback, which reviewers incorporate into the final Evidence Check report. To confirm that all parties are satisfied with their experiences and final products, Sax Institute staff interview requestors and reviewers six months and twelve months after the report is completed. Both reviewers and policymakers have found the knowledge brokering process valuable for producing rigorous and relevant reviews to inform decisions.

### Box 4: Dissemination Strategies for Informing Clinical Practice: The Department of Veterans Affairs’ (VA) Responsive Innovation Evidence Review (RIER) Program

In 2011, a Southern California Veterans Affairs (VA) program known as the Veterans Assessment and Improvement Laboratory – Patient Aligned Care Team initiative (VAIL-PACT) created the Responsive Innovation Evidence Review (RIER) project, a rapid evidence review program intended to help design evidence-based quality improvement (QI) programs for primary care delivered by the VA. An Evidence Review Workgroup consisting of VA and external researchers from the Southern California Evidence-based Practice Center (EPC), a professional reference librarian, and a project assistant with clinical experience conducted the reviews. During the first 16 months of the project, 13 RIERs were completed, each taking between two and six weeks to complete.

Each RIER addresses a problem, a set of questions, and specific innovations chosen by QI teams. RIERs presented their findings in six, 15-page evidence overviews designed to be accessible and understandable to a broad clinical audience. In addition to delivering finished reports to requestors, the review team presented many reports at a “project collaborative” attended by VA providers, including quality councils, workgroups, and other innovation teams interested in the RIER service. Online surveys of those who read the reviews suggested that RIERs were useful to quality improvement professionals, and many respondents expressed interest in requesting an RIER in the future.
Challenges for RERs to Inform Social Policy

The literature examining the impact of RER approaches has focused on reviews of clinical interventions or health technologies. They have focused less on policies related to the organization and financing of care or the social determinants of health, which may include a broad range of social science and social policy research. Some RER programs, such as University College London's EPPI-Centre (see Box 5), have specialized in social policy reviews. Their experience highlights several unique challenges such RERs face compared to those performed on clinical topics.

- **Evidence reviews covering social issues or social science research are often less generalizable than clinical or biomedical reviews.** Many social issues are inseparable from specific social, political, or geographic contexts, making it difficult to generalize their conclusions. In contrast, clinical research questions often address physiological phenomena or biomedical impacts, which can more easily be generalized to broader populations or alternate contexts.

- **The scope of evidence for social policy reviews may be hard to define.** Social policies often target multifaceted problems and include diverse portfolios of interventions, rather than specific policies or procedures.

- **Social policy research is difficult to search.** Biomedical research is usually found in a small number of well-indexed databases such as PubMed. However, social policy research tends to be dispersed over many databases, often poorly-indexed, and may include large amounts of unpublished "grey" literature.

- **Social policy research is more heterogeneous than biomedical research.** While randomized controlled trials are common in clinical research, social policy research may adopt many different qualitative, observational, experimental, and quasi-experimental designs. This diversity of approaches to social policy research makes it more difficult to combine evidence across studies.

**Box 5: Evidence-based Answers to Social Policy Questions: EPPI-Centre Systematic Reviews**

The Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre) (http://eppi.ioe.ac.uk/cms) located at the Social Science Research Unit of University College London's Institute of Education focuses on "informing policy and professional practice with sound evidence" in fields such as education, public health, and international health systems development. One way they pursue this goal is by conducting systematic reviews of public policy research evidence. Although no timeframe is specified for EPPI-Centre SRs, requestors’ needs and deadlines typically determine the duration of the research. Established in 1993 primarily to perform SRs for UK government agencies, the EPPI-Centre has widened its focus to include more international contexts and broadly generalizable knowledge through a relationship with the Alliance for Health Policy and Systems Research, housed at the World Health Organization. To date, the EPPI-Centre has conducted 190 evidence reviews.

To address some of the challenges of reviewing social policy evidence, the EPPI-Centre tailors SRs to the priorities of requesting policymakers. When decision makers request a review, EPPI-Centre staff help to articulate their needs along with "reviewable" questions. To keep their results relevant, the review team limits their evidence searches by topic, study methodology, date of publication, type of publication, and/or publication language. Then, as findings emerge, EPPI-Centre staff meet with requestors to find out which results matter to the review’s users. The review team uses this feedback to synthesize their findings into an approximately 25-page report, which includes a four-page executive summary and a one-page summary of main findings.

- **Transparency.** Transparent reporting makes reviews more reproducible and inspires greater trust in the results. Explicit descriptions of the steps taken in an RER and any caveats or limitations of the review make it easier for readers to interpret findings and decide how much confidence to place in the evidence. Additionally, broad dissemination of the program’s products and approach through publically-accessible websites, databases, mailing lists, and traditional and social media can also help create transparency and trust. Box 4 describes how the U.S. Department of Veterans’ Affairs’ Responsive Innovation Evidence Review (RIER) Program disseminates findings among stakeholders to improve the usefulness and impact of evidence reviews. However, transparency presents challenges for maintaining the confidentiality of politically-sensitive requests.

- **Governance:** The governance structure of a review program plays a role in ensuring that people can trust the objectivity and rigor of the program’s products. Approaches to ensuring such credibility include establishing a representative group of stakeholders to advise or govern the program, instituting mechanisms to identify and address potential conflicts of interest, maintaining transparency of the review process, and inviting external, objective experts to review the validity and objectivity of RERs.

**Conclusion**

Policymakers have looked for ways to review HSR evidence in a rigorous yet timely fashion in order to provide the best information to inform health policy decisions. RERs attempt to meet this need. Because RER results are usually less comprehensive than those from full SRs and often carry a greater degree of uncertainty, they are not simply an alternative to conducting an SR when funding and resources are limited. Simpler review methods can keep the amount of information reviewers need to process manageable, shortening the time needed to complete those steps. RERs involve tradeoffs for efficiency that limit either the generalizability of the results or the confidence readers can place in an RERs conclusions. However, the experience of existing RER programs suggests it is possible to tailor approaches to fit the particular topic, policy context, and time and resources available to produce insights that are both relevant and credible.
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Endnotes
1 AcademyHealth defines health services and policy research as the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. AcademyHealth. What is HSR - About Us - AcademyHealth [Internet]. Washington, D.C. 2015 [cited 29 September 2015]. Available from: http://www.academyhealth.org/About/content.cfm?ItemNumber=831&navItemNumber=514
8 Schone E, Brown R. Risk Adjustment: What is the current state of the art, and how can it be improved? [Internet]. The Robert Wood Johnson Foundation; 2013. Available from: http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf407046
12 Tricco A, Antony J, Strauss S. Systematic reviews vs. rapid reviews: what’s the difference? Presentation presented at CADTH Rapid Review Summit; 2015: Vancouver, BC.
24 Cochrane Canada. CCC introduction to rapid reviews, the different evidence, different synthesis series [Internet]. 2014 Available from: https://www.youtube.com/watch?v=egoNzTa_HE4.
26 Tovey D. Interviewed by: Gluck M, Hite J. 29 June 2015.
35 Hartling L, Guise JM, Kato E, et al. EPC methods: an exploration of methods and context for the production of rapid reviews [Internet]. Rockville (MD):
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36 Tricco A, Antony J, Strauss S. Systematic reviews vs. rapid reviews: what’s the difference? Presentation presented at CADTH Rapid Review Summit; 2015: Vancouver, BC.


