

Quick but Not Dirty: Rapid Evidence Assessments as a Decision Support Tool in Social Policy

Gavin Butler, MBA, Stuart Deaton, MA, James Hodgkinson, PhD
Elizabeth Holmes, MPhil, and Sally Marshall, MA

Introduction

The demand for “evidence” to inform social policy decisions is now widespread. Its prominence within the United Kingdom emerged in 1997 with the election of the Labour government, and the government’s use of principles derived from “new public management,” with its emphasis on monitoring and control (Walker, 2000).

In 1999, the U.K. government called for “better use of evidence and research in policy making” (Cabinet Office, 1999, p. 16). It also set out the sources of evidence that policy makers should use, including expert knowledge, existing domestic and international research, existing statistics, and stakeholder consultation (Cabinet Office, 1999). Additionally, as Solesbury (2001) pointed out, “Most research effort is expended on new primary research and yet, on virtually any topic you can name, there is a vast body of past research that may have some continuing value” (p. 5).

This article describes a new approach to harnessing robust research evidence for policy makers in a more focused and timely way than many other secondary research methods, namely the Rapid Evidence Assessment (REA). REA orders and filters research evidence in a similar way to a systematic review. However, systematic reviews require considerable effort and time. REAs are more likely to meet the time constraints of decision makers at national or local levels.

This article describes the background to the first two REAs conducted and introduces the methodology. It then considers the case study examples in detail. The first is focused on the development of the methodology, and the second considers research utility and how REAs can be used with a policy and practitioner audience. The article concludes by discussing challenges and future implications for the REA approach.

Background to REAs

Good practice in conducting research requires one to first determine the extent of existing evidence relevant to the research question. Traditionally, the researcher conducts a narrative or literature review to search the evidence. In a literature review, reviewers typically seek to collate relevant studies and draw conclusions from them (Macdonald, 2003). However, there are limitations to this approach. Principally, literature reviews are susceptible to selection or publication biases, or both. Furthermore, they are often opportunistic in that they review only literature and evidence that is readily available to the researcher. Finally, limiting searches to the English language and relying on a single method for searching can also bias the results (Macdonald, 2003).

Given the limitations of literature reviews, researchers have developed new techniques in this attempt to address some of the issues. Systematic reviews of existing literature are increasingly being used as a valid and reliable means of harnessing research evidence. This type of review differs from a literature review by

- Being more systematic and rigorous in the ways in which they search and find existing evidence.
- Having explicit and transparent criteria for appraising the quality of existing research evidence, especially identifying and controlling for different types of bias in existing studies.
- Having explicit ways of establishing the comparability (or incomparability) of different studies and, thereby, of combining and establishing a cumulative effect of what the existing evidence is telling us (Davies, 2003, p. 4).

REA orders and filters research evidence in a similar way to a systematic review. However, systematic reviews require considerable effort and time. REAs are more likely to meet the time constraints of decision makers at national or local levels.

Systematic reviews involve a methodical, rigorous, and exhaustive search of all the relevant literature. Searches are conducted of both electronic and print sources. Relevant “grey literature” (i.e., unpublished studies or works in progress) is identified and hand searches are conducted when necessary. This approach helps to remove the problems of bias associated with traditional literature reviews. The search criteria

used in undertaking a systematic review, and the criteria by which the literature is appraised and interpreted, are clearly defined and recorded. This leads to greater transparency and allows future studies to be added to the review, enabling an interactive and cumulative body of sound evidence to be developed on a subject area.

But undertaking a systematic review takes time, typically at least 6 to 12 months. Users of research and evaluation evidence often need quicker access to what the existing evidence can tell them. Consequently, Rapid Evidence Assessments (REAs) have been developed for use in public policy research and evaluation. REAs are based on the principles of a systematic review. The functions of an REA are to

- Search the electronic and print literature as comprehensively as possible within the constraints of a policy or practice timetable.
- Collate descriptive outlines of the available evidence on a topic.
- Critically appraise the evidence (including an economic appraisal).

cont'd on page 8

- Sift out studies of poor quality.
- Provide an overview of what the evidence is saying (Davies, 2003, pp.18-19).

Like systematic reviews, REAs are based on comprehensive electronic searches of appropriate databases and some searching of print materials, but to complete an REA in a shorter time frame, researchers make some concessions. As a result, exhaustive database searching, hand searching of journals and textbooks, and searching of “grey” literature are not immediately undertaken. This shortened time frame is essential for policy makers to meet deadlines but does introduce some publication bias. However, searching may be continued beyond the time available for an REA until a comprehensive search of the available research literature has been completed and a full-blown systematic review is achieved.

All REAs carry the caveat that their conclusions may be subject to revision when more systematic and comprehensive reviews of the evidence base have been completed. This is consistent with the important principle that systematic reviews are only as good as their most recent updating and revision (Davies, 2003).

Introduction to the Methodology

The exact approach undertaken in an REA will depend on the research question, but certain key steps need to be followed whatever the subject. Important steps include

- Formulating the policy issue into a clear research question.
- Developing a search strategy and establishing inclusion criteria for identifying relevant articles.
- Assessing the methodological quality and relevance of the identified articles. Articles are sifted using specified selection criteria. The two case studies described in this article both employed a scoring system, based on the Maryland Scale (Sherman et al., 1997), and a quality assessment tool, developed by the authors of the first REA (Deaton et al., 2004).
- Synthesizing the evidence across the different studies. Evidence may be synthesized in a number of ways, and it is necessary to adopt an approach most suitable for a particular review. One approach, for example, may be to undertake a meta-analysis,¹ in which evidence from the studies is combined and summarized statistically. However, this will be more problematic where outcome measures in studies are very different, or where the interventions covered by the studies are very different.
- Disseminating the messages. As REAs are aimed at practitioner and policy-maker audiences, it is important to consider what messages to disseminate to them and how to do this.

Using this approach ensures that the process is transparent with clearly defined appraisal criteria, thus differentiating the REA process from a traditional literature review.

Case Studies

Although the following case studies illustrate very different aspects of the REA process, the methodology used within both studies was almost identical. Case study one describes the first REA undertaken and focuses on the development and implementation of the methodology. Case study two focuses on research utility and shows how the REA methodology has been used to produce research that is relevant and timely to policy makers and practitioners.

Case Study One – Effectiveness of Drug Treatment Within a Criminal Justice System, Deaton et al. (2004)

The roll-out of the Drug Interventions Programme in England and Wales in 2003/4 highlighted the need for further evidence on the efficacy of drug treatment for offenders within criminal justice settings. In an attempt to address this evidence gap, the Drugs and Alcohol Research program within the U.K. Home Office conducted an assessment of existing studies in this field at the end of 2003. The primary purpose was to provide policy customers with an evidence base to inform the further development of policies aimed at drug-using offenders. The aim was to complete the review in 12 weeks.

The research question posed was How effective is drug treatment for individuals in the criminal justice system in terms of reducing their drug misuse and reducing their drug-related offending?

As the primary aim of the assessment was to determine the effectiveness of drug treatment, researchers agreed that the assessment should consider evidence only from studies conducted using robust quasi-experimental designs. Time and resource constraints meant that a full systematic review could not be conducted. In consultation with Cabinet Office colleagues, their search team derived a plan to conduct an REA. As far as

we were aware, this was the first time such an exercise had been attempted, so the searching, sifting, and reviewing of protocols were developed by the research team.

Search terms were devised, refined, and tested by the primary research team in cooperation with Home Office library staff, and relevant databases were subsequently searched. To cut down on the time and resources required for the abstract sift and for the assessment itself, researchers restricted analysis to post-1980 studies from all databases. In total, almost 3,000 abstracts were elicited.

The abstracts were initially sifted on the basis of (a) relevance to the research question and (b) whether the paper presented a primary study examining the effectiveness of an intervention. Researchers identified a total of 238 papers during the abstract sift stage and received 198 papers in the time available (due to time constraints, an arbitrary cut-off point was set). Of the 198 papers received, only 120 were reports of primary studies. Literature reviews were also acquired to provide further background information for the assessment and to gauge whether the studies we had found were broadly representative of the literature in this field.

Using this approach ensures that the process is transparent with clearly defined appraisal criteria, thus differentiating the REA process from a traditional literature review.

The 120 primary studies were then reviewed to determine whether they were (a) relevant to the research question and (b) methodologically sound. Once a study had been acknowledged as relevant, an initial assessment of the methodology was carried out based on the “Maryland Scale,” devised by Sherman et al. (1998). Only those studies with a robust comparison group design were considered for inclusion in the assessment. Sherman and colleagues argued that only these studies can provide strong evidence of causality, and hence effectiveness. The group identified for further assessment a total of 64 relevant studies based upon the Maryland Scale assessment criteria.

Further assessment was carried out using an ad hoc quality assessment tool (QAT), devised specifically for this project. The QAT was based on a combination of more detailed coding protocol prepared by Sherman et al. plus criteria established by Home Office research colleagues for a previously conducted systematic review. Each study was marked according to its methodology in four key areas: sampling, bias, data collection, and data analysis. Each element was rated as one of the following: 1 (good), 2 (average), 3 (weak) or 5 (unable to determine from the paper). The scores for each component were then added together to provide an overall rating for the study. Those studies with the lowest scores were considered the most methodologically robust.

To develop and refine the QAT, the six members of the review team each reviewed the same three studies. They then compared individual assessments and reached a consensus on any discrepancies in scores. This process had the dual effect of refining the QAT guidance and ensuring a greater degree of consistency among reviewers of the papers. In total, the reviewers chose 50 studies as methodologically sound enough for consideration in the review. Most studies included in the review focussed on evaluations of the effectiveness of drug courts, therapeutic communities, or aftercare provision. The available evidence on therapeutic communities and aftercare suggested they have a positive impact on reducing drug use and offending. However, results were more equivocal regarding the effectiveness of drug courts.

The team then prepared a narrative review of those fifty studies. To make the report more useful to policy makers, they next drew out and presented in summary form the seven key themes running through the narrative review. This is a slightly different approach to most systematic reviews, which focus primarily on whether interventions do or do not work but fail to address the question of why or why not. The report also set out appropriate caveats concerning the fact that this was not a full-blown systematic review. Therefore, policy makers could make an informed decision based on the relative strength of the available evidence.

The REA was completed at the end of January 2004, and the findings helped to support policies within the Drug Interventions program that was presented to the U.K. Treasury as part of the 2004 Spending Review. Since the completion of the REA, the initial find-

ings have been built upon with quarterly updates of new evidence on the effectiveness of drug treatment interventions in criminal justice settings (however, it must be noted that no systematic updating of the REA has taken place to date).

Case Study Two: Evidence-Based Approaches to Reducing Gang Violence, Butler et al. (2004)

In January 2003, two young women were killed in Birmingham, England, in shootings that formed part of an ongoing conflict between two criminal gangs in the city. As well as criminal investigations, the City Council, West Midlands Police Service, and other statutory and voluntary sector partners formed an interagency group to combine and enhance efforts to reduce gang violence in the city. This group, which came to be known as Birmingham Reducing Gang Violence (BRGV), tasked the Regional Government Office² with advising on research and evaluation, particularly about “what works” to steer a course through conflicting options and proposals.

Although the researchers obtained a range of literature reviews and other papers on gang violence, these sources were dominated by sociological explanations of cause and risk factors, or unsystematic accounts of program evaluations without an explicit methodology.

There was no readily available resource on effective approaches to reduction or prevention.

BRGV is a multiagency, multidisciplinary group made up of operational and strategic police officers; local authority regeneration and delivery managers; the head of the city’s youth service; representatives from education, training, and employment agencies; schools; and youth offending services. BRGV also represents a number of different professions, and the individuals and agencies have a range of experi-

ences and expectations in relation to research.

The Regional Government Office proposed the REA methodology to BRGV. The virtues of an REA were that it had a transparent methodology and could provide a means to focus on evidence of effectiveness, while taking significantly less time to complete than a full systematic review. Partner agencies in Birmingham also responded positively to the term “rapid.”

This REA was undertaken by a team of four staff, all based in the Regional Government Office. Three of the members were professional researchers with the Home Office’s Regional Research Team, and the fourth managed youth and street crime policy and programs. The team held a range of skills and experiences, including research methodology, project management, and policy development.

The research question What is effective in preventing or reducing young people’s involvement in gang and gun related activity, as victims or offenders? was framed in consultation with BRGV, who helped prepare a list of relevant terms to inform the search strategy.

At times, research can seem remote from frontline practice and policy decision making. The timeliness and rapid approach of REAs combined with practitioner involvement clearly provide a mechanism through which robust evidence can be presented and disseminated in a way that is policy-friendly.

The task of searching a consensus list of social science databases was given to an information management specialist at the Centre for Evidence-Based Policy and Practice at Queen Mary University, London. This resulted in the identification of 311 abstracts. The literature was reviewed by pairs of research team members, a filter was applied, and 93 papers were ordered via the Home Office library, with 69 being received in time to be considered for the review.³ Those papers were reviewed using the QAT (Deaton et al., 2004), leaving six papers for inclusion in the REA. Researchers then analyzed these papers for theories of change (what was the underlying hypothesis?) and critical mechanisms (what were the most important elements of the programs and policies?). Emergent themes were discussed and analyzed.

The key findings identified the following approaches as effective in reducing gang violence:

- The coordination of gang reduction activity, using a multiagency, multimodal strategy specific to one city or locality.
- Civil injunctions, which are civil actions that prohibit named individuals from engaging in specific problematic activities within a clearly defined area.
- Peer mentoring, which involved young people ages 14 to 21 who would mentor children aged 7 to 13 through a program of 12 violence prevention lessons over an 18-month period.
- School-based learning, which involved uniformed police officers teaching students a 9-week gang prevention curriculum.

The findings were presented to BRGV as a comprehensive document that included a detailed account of the methodology. Along with the report, the team made available a one-page summary and presented the findings at local and national events.

The REA has influenced some policy decisions, but it is difficult to determine the relative influence the REA has had on subsequent events. It is clear that certain funding decisions have been made considering the REA report. The REA has also been used to validate the local use of new interventions, such as the use of civil injunctions to disrupt gang activity in the city.

In order to continue to promote evidence-based approaches to address gang violence, and the link between research and practice, the project team took the following steps:

- Forming a research subgroup with academic and practitioner input
- Ensuring that one member of the REA team attends every BRGV meeting
- Producing research updates for BRGV on relevant topics, such as definitions of gangs and summaries of recent primary research

- Advising the police and community groups on evaluation frameworks to generate U.K. evidence of effectiveness

User feedback has been generally positive. A survey by the REA team indicated that the message about targeting problematic behavior rather than gang affiliation was useful for the Prison Service, Learning and Skills Council, and especially, the police. Other agencies focussed on the REA's ability to help them make defensible decisions on prioritising resources. At least one respondent criticised the methodology, reflecting the "paradigm war," described by Tim Hope in McLaren (2002), between experimental criminologists and the "realistic evaluation" school. There have been comments about the fact that all the papers analyzed in the REA are primary studies from the United States, with attendant and understandable reservations about transferability. One outcome is that the REA has facilitated a range of debates about improving the evaluation of local programs to develop U.K. research evidence in reducing gang violence.

Given the known limitations of REAs, it is important that researchers are completely transparent about the process adopted and that stakeholders are made aware of the caveats. Systematic reviews are an established method for harnessing existing research evidence.

Practical Considerations

Managers and practitioners needing high-grade research evidence to inform a policy decision should consider whether an REA can address their needs. Practical elements to consider when commissioning such work would include

- Resources. An REA should take 6 to 12 weeks; therefore, it is important to be realistic about time commitments. Access to library resources and reference management systems to undertake the research also need consideration.
- Skills and knowledge. Those commissioned need to be familiar with research methodology and able to implement it. It is important that those reviewing papers for an evidence assessment have sufficient knowledge and experience in research methods to carry out the assessment.
- User involvement. The second case study in this article also shows that involving practitioners and policy makers in Rapid Evidence Assessment can be beneficial for all parties and increase ownership of the research findings.

Future Implications

These case studies demonstrate that REAs are an evolving approach with clear advantages for use within a policy and practice arena. The two REAs that have been completed to date have answered questions based on "effectiveness"; however, it is important to recognize that the methodology is not restricted to this type of question. Leading organizations specializing in systematic review work, such as the Evidence for Policy and Practice Information and Coordinating (EPPI) Centre, U.K., consider it perfectly possible to integrate a meta-analysis of data from controlled trials with a synthesis of findings from qualitative studies (Gough & Elbourne, 2002), and some systematic reviews have indeed managed this successfully (e.g., Thomas et al., 2004). We should track the develop-

ment of this methodology as it is applied to other questions. Precisely because the approach is developing, no standard methodology for REAs has yet been published. As the use of REAs increases, it will be important to have a standard REA methodology clearly set out so that the dilution of its focus and purpose can be avoided.

At times, research can seem remote from frontline practice and policy decision making. The timeliness and rapid approach of REAs combined with practitioner involvement clearly provide a mechanism through which robust evidence can be presented and disseminated in a way that is policy-friendly. Research utility is an area that generally warrants further investigation, and as a result, it is vital that the impact of this type of research on policy and practice is monitored.

Given the known limitations of REAs, it is important that researchers are completely transparent about the process adopted and that stakeholders are made aware of the caveats. Systematic reviews are an established method for harnessing existing research evidence. REAs can be regarded as “interim” systematic reviews and have the potential to become a new method for applying research evidence to policy decisions, in an appropriate and rapid way that also effectively scopes the ground for a full systematic review.

Notes

¹Meta-analysis is a statistical method of combining and summarizing the results of studies that meet a minimum quality criteria.

²Regional Government Offices represent the central government departments within nine administrative districts or regions of England. They cover populations of about four to five million.

³A subsequent review of the papers omitted by the use of a fixed cut-off date revealed that only one of them would have been considered for the REA. However, this “project management bias,” like any other form of bias in research, is a challenge to the validity of the findings.

References

- Butler, G., Hodgkinson, J., Holmes, E., & Marshall, S. Evidence-based approaches to reducing gang violence: A rapid evidence assessment for Aston and Handsworth Operational Group. Unpublished manuscript.
- Cabinet Office. (1999). *Modernising government*. London: The Stationary Office.
- Davies, P. (2003). *The Magenta Book. Guidance notes for policy evaluation and analysis* (Chapter 2: What do we already know?) London: Cabinet Office.
- Deaton, S. Conducting an evidence assessment: Method and lessons learned. Unpublished manuscript.
- Deaton, S., O’Shea, J., Campbell, S., Lower, C., Owen, N., Roe, S., & Smith, N. The effectiveness of drug treatment within a criminal justice system: An assessment of the existing evidence. Unpublished manuscript.
- Gough, D., & Elbourne, D. (2002). Systematic research synthesis to inform policy, practice, and democratic debate. *Social Policy and Society*, 1(3), 225-236.
- Macdonald, G. (2003). *Using systematic reviews to improve social care*. London: Social Care Institute for Excellence.
- McLaren, V. (2002). Review of *Crime Prevention and Community Safety: New Directions*, edited by G. Hughes, E. McLaughlin and J. Muncie, Sage 2002, and *Crime Disorder and Community Safety: A New Agenda?* edited by R. Matthews and J. Pitts, Routledge 2001. *Vista*, 7(2), 179-182.
- Sherman, L., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P., & Bushway, S. (1997). *Preventing crime: What works, what doesn't, what's promising*. Washington, DC: U.S. Department of Justice.
- Solesbury, W. (2001). *Evidence-based policy: Whence it came and where it's going*. [Working Paper 1]. London: ESRC Centre for Evidence-Based Policy and Practice.
- Thomas, J., Harden, A., Oakley, A., Oliver, S., Sutcliffe, K., Rees, R. Brunton, G., & Kavanagh, J. (2004). Integrating qualitative research with trials in systematic reviews. *British Medical Journal*, 328, 1010-1012.
- Walker, R. (2000). Welfare policy: Tendering for evidence. In Davies, H.T.O., S. Nutley, & P. C. Smith (Eds.), *What works? Evidence-based policy and practice in public services* (pp. 141-167). Bristol, U.K.: Policy Press.

ABOUT THE AUTHORS

Since 2000, Gavin Butler, MBA, has worked in crime reduction consultancy and policy development. Currently, Butler works as part of the regional management team for the Home Office’s crime and drugs agenda in the Government Office for the West Midlands. Previously, Butler worked in children’s services social work, community development, and youth justice for 9 years.

James Hodgkinson, PhD, has worked in the West Midlands Home Office Regions and Wales Research Team, based in Government Office West Midlands, Birmingham, for nearly 3 years. This team works to help develop the understanding of patterns of crime in the region and to identify priority problems and areas, to support the performance monitoring and delivery of Crime and Disorder Reduction Partnerships, and to help disseminate and develop the “what works” evidence base.

Stuart Deaton, MA, has recently joined the Audit Commission as a Studies Researcher. Prior to this position, Deaton spent 18 months as Senior Research Officer in the Drugs Analysis and Research program within the U.K. Home Office and 3 years in the Fire Statistics and Research program within the Office of the Deputy Prime Minister.

Elizabeth Holmes, MPhil, has 10 years research experience in a variety of different fields, including central and local government, the health service, and the voluntary sector. She has worked for the past 3 years as a research officer on the regions and Wales Research team within the U.K. Home Office.

Sally Marshall, MA, has worked in the community safety field for 5 years, holding both policy and research related roles. She is currently the research officer on the Regions and Wales Research Team with the U.K. Home Office.