EVIDENCE BRIEFS FOR KNOWLEDGE TRANSFER AND EXCHANGE

EVIDENCE BRIEFS AS A MECHANISM FOR KNOWLEDGE TRANSFER AND EXCHANGE: ASSESSING VIEWS ABOUT, EXPERIENCES WITH, AND INFLUENCES OF POLICY-RELEVANT RESEARCH SYNTHESES IN LOW- AND MIDDLE-INCOME COUNTRIES

By

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Abstract

Evidence briefs are an innovative and promising approach to synthesizing the best available research evidence to support evidence-informed health policymaking in low- and middle-income countries. Unfortunately, despite their increased use, little work has been undertaken to understand how the contexts in which briefs are prepared and the issues that they address influence the ways in which policymakers and stakeholders view them. Furthermore, there have been few efforts to determine whether and how evidence briefs influence the policy processes related to the priority policy issues for which they are prepared. This thesis begins to address these issues through four manuscripts that use a range of methods and approaches to develop a deeper understanding of briefs and their use, as well as the ways in which they can be evaluated in low- and middle-income countries. Taken together the chapters present: 1) the development of a theoretical framework through a systematic review that highlights how factors related to contexts and issues can influence policymakers' and stakeholders' views about evidence briefs and their design features; 2) results from a survey conducted across six countries that provide insights into how policymakers, stakeholders and researchers who have read evidence briefs view them and their design features; 3) an approach to operationalizing factors related to contexts and issues as variables for use in quantitative analyses of evidence briefs; and 4) four case studies that explain how evidence briefs prepared for priority policy issues in low- and middle-income countries influenced the policy processes related to these issues. These chapters constitute substantive, methodological and disciplinary

contributions to the field of health systems research, and in particular about how to support its use in efforts to strengthen health systems. They also support the continued use and evaluation of evidence briefs in efforts to strengthen health systems in low- and middle-income countries.

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Preface

This thesis presents four original scientific contributions (chapters 2-5), along with introductory and concluding chapters (chapters 1 and 6). Chapter 2 has been published in *The Milbank Quarterly*, and Chapter 3 is in press at *The Bulletin of the World Health Organization*, who hold copyright for each of these chapters, respectively. Written permission has been provided to McMaster University to reprint these articles as part of this thesis.

Each of the chapters in this thesis is co-authored and I am the lead author for each. Details of specific contributions are provided in the preface to each individual chapter. Overall, I conceived of each chapter with my supervisor (Dr. John N. Lavis) and with inputs from members of my supervisory committee (Dr. Julia Abelson and Dr. Parminder Raina). I completed all data collection and analysis for chapters 2, and 5. For Chapters 3 and 4, the KTPE Study Team administered the surveys that were conducted in Burkina Faso, Cameroon, Ethiopia, Nigeria, Uganda and Zambia, while I collected additional data for Chapter 4. I completed all analysis for Chapters 3 and 4. Finally, I drafted all chapters and each co-author provided comments and suggestions that were incorporated into revisions.

Introduction

From the time the *World Report on Knowledge for Better Health* was published in 2004 (1), there has been a growing interest in supporting the use of research evidence as a core component of efforts to strengthen health systems in low-and middle-income countries (LMICs) (2-8). However, the best available research is not routinely mobilized to inform health system policy decisions, despite its potential for strengthening the range of governance, financial and delivery arrangements that can be adopted by policymakers to get cost-effective programs, services and drugs to those who need them (1;6). As scholarship in the field of health systems research has evolved, more focus has been placed on efforts to support the use of research evidence in the policymaking process, and many challenges that constrain the translation of research evidence into health policy making processes have been identified.

The first (often taken as given) challenge, stems from the fact that the policy process is complex and research evidence is only one of several factors that compete for the attention of policymakers (1;6;9). In particular, the policy process is shaped by institutions, interests, ideas (including research evidence), and external events, so research can only be considered one input among many (10-18). Second, research evidence is not easy to use, and the ways in which results are packaged and presented often appear to be unhelpful for the types of decisions policymakers face (19;20). Additional barriers include a mutual mistrust that often exists between policymakers and researchers, and policymakers' tendency

to place little value on research evidence as an input into policy decisions (6;19;20).

Current understanding about which strategies are optimally suited to overcome these challenges is still in its early stages of development. However, two systematic reviews have found three factors emerging with some consistency that increase the likelihood of policymakers' use of research evidence (21;22). First, higher levels of interaction between researchers and policymakers can increase the likelihood of research use. Second, the timing or timeliness of the evidence being presented with respect to a high priority policy issue is associated with increased research use. Third and finally, the likelihood of use is increased when available evidence accords with the beliefs, values, interests or political goals, and strategies of politicians, civil servants and stakeholders.

In an attempt to overcome commonly cited challenges, while building on the identified factors that appear to increase the likelihood of research use, several mechanisms are being developed, implemented and evaluated across a number of LMICs. One such mechanism is a novel type of research synthesis, commonly referred to as an "evidence brief" (and sometimes "policy brief"), which mobilizes the best available global research evidence (e.g. systematic reviews) and local evidence (including local single studies) in order to clarify the problem(s) associated with priority health systems policy issues, describe what's known about options for addressing it, and identify important implementation considerations (23;24). As a knowledge translation mechanism, evidence briefs are promising for the following reasons:

1) they can address the need for research evidence to be available in a timely manner because they can be produced in days or weeks, rather than the months and years it often takes to conduct a traditional systematic review or single study, while reducing time spent on searching for single studies by drawing primarily on the full spectrum of synthesized research evidence;

2) they can allow individuals to more readily identify how the evidence accords with their values, beliefs, interests , or political goals and strategies by clearly defining the policy problem, outlining in detail some potential policy options to address the problem, and identifying implementation considerations;

3) they are increasingly being used as an input into deliberative dialogues (sometimes called policy or stakeholder dialogues) which promote greater levels of interaction between policymakers, stakeholders and researchers; and

4) they package evidence in ways that are more relevant to policymakers, because evidence briefs synthesize diverse forms of research evidence in a way that is likely to be more relevant to policymakers (because they start with a priority policy issue and then address the problem underlying it, options for addressing it and implementation considerations) (24;25).

Given this promise, evidence briefs are one of the core activities being pursued by a number of "knowledge translation platforms" (KTPs) including the WHO-sponsored Evidence-Informed Policy Networks (EVIPNet) across Africa, the Americas, Asia and the eastern Mediterranean (26;27). Although the briefs being prepared share some or all of the most commonly found characteristics outlined in Box 1, variations in design features are expected to evolve as practical experience drives how particular formats are matched to specific contexts and to different policy issues(24;27).

Box 1: Commonly shared characteristics found in the evidence briefs produced by KT platforms in low- and middle-income countries

- the brief describes the context for the issue being addressed;
- the brief describes different features of the problem, including (where possible) how it affects particular groups;
- the brief describes several options for addressing the problem;
- the brief describes what is known, based on synthesized research evidence, about each of the options and where there are gaps in what is known;
- the brief describes key implementation considerations;
- the brief employs systematic and transparent methods to identify, select, and assess synthesized research evidence;
- the brief takes quality considerations into account when discussing the research evidence;
- the brief takes local applicability considerations into account when discussing the research evidence;
- the brief takes equity considerations into account when discussing the research evidence;
- the brief does not conclude with particular recommendations;
- the brief employs a graded-entry format (i.e., a list of key messages and a full report);
- the brief includes a reference list for those who wanted to read more about a particular systematic review or research study; and
- the brief is subjected to a review by at least one policymaker, at least one stakeholders, and at least one researcher (called a "merit" review process to distinguish it from "peer" review, which would typically only involve researchers in the review).

Although these design and content features have been outlined as ideal components of evidence briefs (24), very little theoretical, empirical or formal evaluative work has been undertaken to establish whether and how the contexts

in which briefs are prepared and the issues that they address influence health system policymakers', stakeholders' and researchers views about them. This is a particularly challenging gap, given the fact that contextual and issue-related factors are likely to play an important role in the ways evidence briefs are perceived by policymakers and stakeholders in a variety of contexts and for a range of issues. The extent of what is known about whether and how evidence briefs prepared for priority policy issues influence the policy process is similarly inadequate, despite a few isolated success stories based on practical experience using the briefs—such as the influence of Burkina Faso's evidence brief on scaling up artemisinin based combination therapy in securing support from the Global Fund to fight AIDS, Tuberculosis and Malaria(23). This is also a challenging gap, given that evaluations of briefs rely on appropriate expectations of impact among those preparing and reading evidence briefs, which are linked to a deeper understanding about how they influence the policy process.

This thesis begins to address these gaps through four original scientific contributions that employ a mix of methodological approaches. The work aims to provide a better understanding about how the contexts in which evidence briefs are prepared and the issues that they address affect policymakers', stakeholders' and researchers' views about and experience with them in LMICs. Additionally, it seeks to understand whether and how evidence briefs prepared for priority policy issues influence the policy processes they seek to inform. Specifically, in Chapter 2 I inductively develop a theoretical framework using the critical interpretive synthesis (CIS) approach to systematic review in order to explain how health

system policymakers' and stakeholders' views about evidence briefs overall, as well as about their particular content and design features are likely to be influenced by the contexts in which they are prepared and the issues that they address. The approach combines elements of a traditional systematic review with inductive analysis and purposive sampling to define what is meant by contextual and issue-related factors, explain how they can emerge as influences on policymakers' and stakeholders' views about evidence briefs, and highlight the mechanisms through which they shape these views.

Chapter 3 presents a survey of policymakers, stakeholders and researchers who have read evidence briefs and attended deliberative dialogues in LMICs. As a whole this study seeks to determine how briefs and dialogues are viewed overall as well as how their features are viewed. It also attempts to determine whether those who have read briefs and attended a deliberative dialogue intend to act on what they learned. However, it is the elements of the paper focused on the evaluation of evidence briefs that are the major contribution of this chapter to the thesis. In particular, the approaches that are developed for sampling and surveying 304 policymakers, stakeholders and researchers from six African countries who have read evidence briefs as an input into deliberative dialogues that are presented, as well as the lessons learned about how briefs are viewed by their audiences LMICs serve as important background for Chapter 4.

Expanding on the results of Chapter 3, Chapter 4 takes some first steps towards developing a better understanding of how the contextual and issue-related factors identified in Chapter 2 can be operationalized as variables for use in

quantitative analyses. In particular, an approach to operationalizing these variables using existing data sources is presented, and an initial attempt to use some of the variables to predict outcomes in regressions to explain variation in views about evidence briefs and their features is undertaken.

Chapter 5 consists of multiple case studies conducted to determine whether and how briefs prepared in different contexts and for different issues influence the policy processes related to the policy issues for which they were prepared. In this chapter, two cases from each of Uganda and Zambia were studied. Drawing on interviews with health system policymakers, stakeholders and researchers, the media, policy documents and research literature, comprehensive accounts of the evolution of each policy process over time are presented. Furthermore, the ways in which evidence briefs influenced the policy process in each case are explored, and a framework for conceptualizing this influence is presented.

As a whole, the studies presented in these chapters constitute some initial steps forward in an important area of health systems research by providing substantive, methodological and disciplinary contributions to the study of efforts that aim to support evidence-informed policy. Substantively, this work contributes a new theoretical framework that provides a more detailed approach to considering how contextual and issue-related factors might influence the use of evidence briefs in efforts to support the use of research evidence in health systems policymaking. The cross-sectional surveys offer some of the first insights into how policymakers, stakeholders and researchers in LMICs who have read

evidence briefs view them, as well as their different design and content features, and about how these vary depending on the contexts in which a brief is prepared and the issues that it addresses. Additionally, the case studies provide some of the first windows into how evidence briefs influence the policy processes associated with the issues for which they are prepared.

Methodologically, the original contributions presented across chapters 2-5 of this thesis each develop and present a unique approach for pursuing a range of research questions related to the evaluation of evidence briefs—and mechanisms to support evidence-informed policy more broadly. The critical interpretive synthesis presents an approach for the development of a theoretical framework through a systematic literature review in a nascent area of study, where the available literature is sparse, not particularly rigorous and methodologically diverse. The cross-sectional studies discussed in Chapters 3 and 4 offer an approach to surveying those who have read evidence briefs, and to operationalizing contextual and issue-related factors as quantitative variables, while highlighting some of the challenges in doing so. The case studies illustrate both the utility of theoretical frameworks when developing rich accounts of policy processes in LMICs, and also present a new framework for analyzing the influence of evidence briefs (and other related mechanism) on the policy process.

The work presented in Chapters 2-5 also constitutes disciplinary contributions to the field of health systems research and the study of mechanisms developed to support the use of research evidence in the policy process. Specifically, these studies have taken some important initial steps towards

incorporating the core concepts from the fields of political science and policy analysis into the study of evidence briefs. Additionally, the concepts have been presented in a way that will enable those studying any of the other mechanisms currently being utilized to support knowledge translation efforts in health systems, and health system policymaking processes more generally to draw from to inform their own work. As such, the application of insights taken from these fields to a new domain represents an important contribution to the discipline of health systems research.

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How contexts and issues influence the use of policy-relevant research syntheses: A Critical Interpretive Synthesis*

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Preface

The paper presented in this chapter is (at the time of writing) in press at *The Milbank Quarterly*. It addresses an important theoretical gap in the literature focused on evidence briefs, and more generally on the study of mechanisms to support the use of research evidence in health system policymaking. The work presented in this chapter serves as both an attempt to define what is meant by "contexts" and "issues" in efforts to support the use of research evidence in policymaking, and an effort to establish a theoretical framework that can be applied by those involved with the preparation, use or evaluation of evidence briefs to think through how these factors can influence their use. In adopting a relatively novel approach to the systematic review of the research literature and providing an in-depth description of the methods, it also provides some guidance to those who are considering pursuing related work.

I was responsible for conceiving of the focus and design of the study with my supervisor (Dr. John N. Lavis), and for completing all data collection, analysis and interpretation. Dr. Lavis also contributed to the analysis during ongoing iterative cycles of interpretation and synthesis that led to the development of the final theoretical model. I drafted the chapter, and both Dr. Lavis and Dr. Abelson provided comments and suggestions that were incorporated into revisions.

Abstract

Context: Evidence briefs have emerged as a promising approach to synthesizing the best available research evidence for health system policymakers and stakeholders. An evidence brief may draw on systematic reviews and many other types of policy-relevant information, including local data and studies, to describe a problem, options for addressing it, and key implementation considerations. We conducted a systematic review to examine the ways in which context- and issue-related factors influence the perceived usefulness of evidence briefs among their intended users.

Methods: We used a critical interpretive synthesis approach to review both empirical and nonempirical literature and to develop a model that explains how context and issues influence policymakers' and stakeholders' views of the utility of evidence briefs prepared for priority policy issues. We used a "compass" question to create a detailed search strategy and conducted electronic searches in CINAHL, EMBASE, HealthSTAR, IPSA, MEDLINE, OAIster (gray literature), ProQuest A&I Theses, ProQuest (Sociological Abstracts, Applied Social Sciences Index and Abstracts, Worldwide Political Science Abstracts, International Bibliography of Social Sciences, PAIS, Political Science), PsychInfo, Web of Science, and WilsonWeb (Social Science Abstracts). Finally, we used a grounded and interpretive analytic approach to synthesize the results.

Findings: Of the 4,461 papers retrieved, 3,908 were excluded and 553 were assessed for "relevance," with 137 included in the initial sample of papers to be analyzed and an additional 23 purposively sampled to fill conceptual gaps.

Several themes emerged: 1) many established types of "evidence" are viewed as useful content in an evidence brief, along with several promising formatting features; 2) contextual factors, particularly the institutions, interests, and values of a given context, can influence views of evidence briefs; 3) whether an issue is polarizing and whether it is salient (or not) and familiar (or not) to actors in the policy arena can influence views of evidence briefs prepared for that issue; 4) influential factors can emerge in several ways (as context driven, issue driven, or a result of issue-context resonance); 5) these factors work through two primary pathways, affecting either the users or the producers of briefs; and (6) these factors influence views of evidence briefs through a variety of mechanisms.

Conclusions: Those persons funding and preparing evidence briefs need to consider a variety of context- and issue-related factors when deciding how to make them most useful in policymaking.

A consensus is emerging that efforts to strengthen health systems need to be informed by the best available research evidence in both high- and low-income settings (1-8). However, there is an undesirable gap between what is known from research evidence and the policies pursued by health policymakers and stakeholders, which cannot be explained by the influence alone of the many political factors that compete for their attention. The existence of this "know-do" gap suggests that many of the findings from high-quality health research are not mobilized in efforts to improve health systems and population health.

Despite the call for an increased use of research evidence in policymaking worldwide, several barriers constrain the use of research evidence in health policymaking processes. The first (often taken as given) challenge is that the policy process is complex and that research evidence is only one of several factors competing for policymakers' attention, along with institutional constraints, interest-group pressure, values, and "external" events (1;9;10). Second, research evidence is not easy to use, and the ways in which results are packaged and presented often are unhelpful for the types of decisions that policymakers face and the settings in which they work (11;11;12). Additional barriers that have been acknowledged in the literature include the mutual mistrust that often exists between policymakers and researchers, and policymakers' tendency to place little value on research evidence as an input into policy decisions (10-12).

One way of overcoming some of these barriers is a type of policy-relevant research synthesis commonly referred to as "evidence briefs" (or, sometimes, "policy briefs"). These syntheses differ from other knowledge synthesis products

in that they begin by identifying a priority policy issue, rather than starting with the research evidence. They then work backward to mobilize the full range of synthesized research (e.g., systematic reviews) and local evidence (e.g., local program evaluations) to help policymakers and those who support them understand and systematically think through: 1) the problem underlying the priority policy issue; 2) the potential options available for addressing the issue; and 3) the factors that need to be considered when implementing the options (13;14). Recent examples are an evidence brief written to inform a deliberative dialogue on task shifting for maternal and child health in Uganda (15), and a brief written to inform a deliberative dialogue on strengthening primary health care in Canada (16).

Evidence briefs are viewed as a promising approach because they build on the factors found in two systematic reviews to increase the likelihood that research evidence will be used by policymakers. First, they address the need for timeliness, because briefs can be prepared in days or weeks rather than in the months or years it takes to produce single studies or reviews. Second, they provide a basis for facilitating interactions among researchers, policymakers, and stakeholders, particularly when used as an input into deliberative dialogues, and third, they promote the consideration about how values, beliefs, and political goals accord with the best available research evidence (4;14;17). Furthermore, they package research evidence in a way that both showcases its relevance to policymakers and is easy to use, thereby overcoming the fact that research evidence is generally not presented in a manner that achieves this (4;11;12;14;18).

Although other review-derived synthesis products tailored for use by policymakers are currently being developed and tested (19), the types of content that should be included in briefs or the ways in which they should be formatted so they are optimally suited to the needs of their intended audiences have not been explored (14). Furthermore, despite the availability of theoretical frameworks that can help explain the broad application of knowledge translation efforts (20-24), or assess knowledge translation efforts on a country level (10), a theoretical foundation that can inform inquiries focused on specific knowledge translation mechanisms has not been created. In particular, almost nothing is known about whether and how the ways in which evidence briefs are designed, the types of information that they contain, the contexts in which they are prepared, and the issue(s) that they address will influence how useful these syntheses are likely to be in supporting the use of research evidence by policymakers and stakeholders (13;14). The paucity of evidence to inform the development of particular strategies to encourage evidence-informed policymaking, such as evidence briefs, is a serious deficiency in evidence-informed health policy (7;25).

Given the lack of theoretical development to explain evidence briefs' role in translating knowledge, we need focused and systematic efforts to gain insights into how their intended users' views about different content and design features may be affected by various contextual and issue-related factors (14). This deeper understanding could help tailor future evidence briefs so that they may achieve their intended results. It also could serve as the theoretical touchstone for empirical studies in understanding the influence of briefs in policy processes, as

well as informing decisions about whether to scale up their preparation. Using a systematic review of the literature, this article tries to fill these conceptual gaps and to offer a theoretical framework identifying important context- and issue-related variables and explaining how they are likely to influence policymakers' and stakeholders' views of briefs.

Methods

We considered several approaches to systematically reviewing the heterogeneous literature that can help inform questions related to policymaking (18;26;27). Because of the lack of available literature specifically on evidence briefs, we knew that our primary objective could not be a synthesis of what is currently known about whether, how, and why they work as a mechanism for knowledge translation. This in turn prompted us to adopt the critical interpretive synthesis (CIS) approach to qualitative systematic review, as it is ideally suited to deal with a heterogeneous body of literature that is not amenable to the application of traditional systematic review methods(26;28-31;31). The core objective of the CIS approach is the development of a theoretical framework based on insights and interpretation drawn from relevant sources, not just those that meet particular design or quality criteria. This is a strength of the method that is useful when the question addressed is likely to draw on literature that is not particularly well developed or focused, as is the case with much of the literature on mechanisms to support the use of research evidence in policymaking, especially evidence briefs (7;14;28;32).

In designing the review, we used a two-pronged approach that would complement a systematic literature review with purposive sampling and inductive analysis. First, we employed a very explicit and structured approach—not unlike traditional systematic review methodology—to search the indexed literature electronically. Second, we borrowed the inductive methods often associated with qualitative research designs to ensure that our final sample of included papers was theoretically rich and relevant to the question posed. These methodological approaches were integrated 1) while compiling the keywords used in the search strategies, 2) while narrowing the search results to a manageable size, 3) while purposively sampling documents for inclusion in the analysis from the pool of retrieved and potentially relevant documents generated by electronic searches, 4) while analyzing them, and 5) while carrying out additional purposive sampling concurrently during the analysis to fill conceptual gaps in our initial sample of literature.

We adopted a "compass" question to underpin the design and conduct of the review (28;32): "How do the contexts in which evidence briefs are prepared, and the issues that they address, influence policymakers' and stakeholders' views of their content and design features?" As the compass question suggests, the main purpose of the synthesis was to explain *how* context- and issue-related factors may influence their intended audience's views of evidence briefs when prepared in a particular context and for a particular issue. However, the precise meaning of these factors and *what* they refer to is often only vaguely described in the literature. For example, "historical, cultural, health services, system, and

resource" factors, "political, ideological and economic factors," as well as networks can influence the pathway of evidence in policy (33). Moreover, these factors are seldom sorted into meaningful analytic categories. Accordingly, in addition to explaining the *how*, we also defined more precisely *what* context- and issue-related factors were of interest. The investigative team's training background (primarily in the fields of health services and policy research, health policy analysis, and political science) shaped this approach. In particular, we sought a clear framing of these factors by drawing on concepts related to political context—including a range of institutional (and historical), interest-group, and idea-related factors well established in political science literature—while remaining open to other factors that emerged as important contributions during the analysis. Finally, we note that consistent with an interpretive synthesis method, the strategy outlined next aimed for the relevance, rather than the comprehensiveness, of the included papers.

Electronic searches

Using the compass question and relying on prior knowledge of the topic addressed by the review, we constructed a table of Boolean-linked keywords and their synonyms and then tested several search strategies. After adjusting some elements of these strategies, we searched the following electronic databases: CINAHL, EMBASE, HealthSTAR, IPSA, MEDLINE, OAIster (gray literature), ProQuest A&I Theses, ProQuest (Sociological Abstracts, Applied Social Sciences Index and Abstracts, Worldwide Political Science Abstracts, International

Bibliography of Social Sciences, PAIS, Political Science), PsychInfo, Web of Science, and WilsonWeb (Social Science Abstracts). We wanted to use a similar search string for each database based on the strings developed in the pilot testing but found that with each search interface, we needed to make small adjustments to ensure that the formatting was optimized for the database functionality. We carried out our searches between October and November 2011 (although additional papers were purposively sampled in 2012 to fill conceptual gaps throughout the stages of analysis). The details of each search string we used are in a supplementary appendix that is available on request.

Article selection

Excluding irrelevant articles. We created an explicit set of exclusion criteria in order to remove any retrieved articles, based on the title and abstract, that were obviously not relevant to the purpose of our study. Among them were papers that did not provide insights into the political, economic, and social contexts in which policymaking takes place, the policymaking process and the factors that influence it, and the nature of the issues addressed in the policymaking process.

First, we excluded those articles focusing on patients, including papers on shared decision making, facilitation of patient decision making, patient choice, and education of patients about their care. Second, we excluded those with a clinical focus, such as papers on evidence-based medicine; clinical practice guidelines; clinical programs or interventions; implementation of clinical practice

guidelines; influences on clinical decision making; epidemiology; burden of disease; ethical dimensions of treatment or health services programs; primary/single studies or cost-effectiveness analyses evaluating health care services; and frameworks for analyzing the content, implementation, uptake, and impacts of health care services. Third, we excluded papers on public health programs and services unless they pertained to the policymaking processes related to public health programs and services. This included papers detailing the strategies that could be used to address the social determinants of health and population-based health promotion or disease prevention strategies. Finally and fourth, we excluded papers that assessed the effectiveness of policy options or approaches to their monitoring and evaluation. These were papers on the effects of options, on the methodology for developing policy-relevant indicators, on performance measurement and on using evaluation data or performance indicators to inform policy decisions (but if the papers discussed how these types of information could be translated to decision makers, we did consider them).

Purposive sampling and inclusion of relevant papers. All records remaining after the exclusion phase were deemed "potentially relevant," and the principal investigator (Kaelan A. Moat) read each title and abstract in the pool of papers. We constructed a schema to select relevant papers from this pool through purposive sampling, as opposed to a predefined list of inclusion criteria to identify an exhaustive inventory, which Moat discussed at length with another member of the study team (John N. Lavis). During several more assessments of the titles and abstracts deemed "potentially relevant," we revised this schema. Once the method

was established, we read titles, abstracts, and full-text papers in order to identify and purposively sample from the pool of "potentially relevant" papers those that were most relevant and likely to offer important conceptual insights that would help us answer our research question. The sampling schema helped ensure that this stage was as transparent as possible while acknowledging the necessity of interpretation during the process (a cornerstone of the CIS methodology). Two guidelines served as broad grounding principles in this approach: 1) a paper had to provide clear insights into the political, economic, and social contexts in which policymaking takes place, the policymaking process and the factors that influence it, or the nature of the issues addressed in the policymaking process; and 2) a paper had to contribute concepts that helped answer the compass question underpinning our study. Similar to a grounded theory approach (34), additional stages of purposive sampling of papers other than those returned through electronic searches proceeded in tandem with data analysis in order to fill conceptual gaps and tie themes together as they emerged during the interpretive synthesis. The investigative team's training background and knowledge of relevant sources, in addition to input from colleagues working in the same field, helped us identify additional papers in these sampling stages and also in the final selection of papers.

Data analysis and synthesis

We read all the included papers in full and prepared a one- to two-paragraph summary of each. We also put into a standardized form the citations

and data related to the year published, the disciplines from which the papers came, and the methods employed. Our data analysis proceeded in five stages. First, we noted recurring concepts that helped contribute to an understanding of how context- and issue-related factors might influence views about an evidence brief (e.g., descriptions of political contestation and division), and we used high-level categories of these concepts to group key points found in the summaries (e.g., "polarization"). Next, we developed "synthetic constructs" for each category by interpreting the underlying evidence found in the included papers (e.g., polarization as a representation of heterogeneous views of an issue). We used the constant comparative method throughout our analysis to ensure that the emerging synthetic constructs were grounded in the data. This consisted of comparing the emerging synthetic constructs and the data at various levels of abstraction (including the original summaries prepared for each paper and memos prepared during coding stages).We then critiqued the emerging synthetic constructs as a whole in light of the included literature to identify conceptual gaps in the available evidence in relation to the compass question. Third, we continued our purposive sampling of additional papers that were not retrieved in electronic searches (described earlier), in order to fill the gaps identified in the previous analytic stages. Similar to grounded theory analysis, this continued in tandem with analysis until theoretical saturation was reached (34;35). Fourth, we integrated the emerging synthetic constructs and themes to form a "synthesizing argument" as an interpretive theoretical model to explain how context and issues may influence how policymakers and stakeholders perceive the various design

and content features of an evidence brief. Finally, we cross-validated the emerging synthesizing argument, as well as each synthetic construct, at various stages throughout the analysis. We did this through ongoing consultation with other members of the investigative team, through discussions of core concepts emerging in the study with other researchers engaged in work on health policymaking, and by searching for both confirmatory and disconfirmatory data in the sampled documents.

Results

Search results and article selection

We retrieved 4,461 documents through electronic searches, from which we excluded 3,908 after reading the titles and abstracts. We deemed the remaining 553 as "potentially relevant," and we read each title, abstract, and, when necessary, the full text to determine the relevance of the sources and to construct our purposive sampling schema. We selected 137 documents according to our schema to include in our final analysis. After more stages of purposive sampling that proceeded in tandem with data analysis, we added twenty-three more documents (see figure 1). The majority (73%) of documents selected from electronic search results were published after 2004, whereas the majority of those included during additional stages of purposive sampling (which typically were "classic" papers in relevant fields) were published before 2000. Of the empirical studies, the most common designs were case descriptions (which the authors defined as describing a policy case or decision-making process that did not clearly

employ a particular methodological approach) and single case studies. Table 1 provides an overview of the characteristics of included studies. The full list of included studies is available on request.

Policy-relevant research evidence versus policy-relevant evidence

Our analysis soon showed that in the policymaking process, research evidence is difficult to separate from other types of information that may be considered "evidence" by policymakers and stakeholders. This tension has been highlighted in other studies and has led scholars to recommend integrating research evidence and other policy-relevant evidence in a way that does not prioritize one over the other but offers them as complementary inputs into the policymaking process (18;20;36-38). To address this challenge, we adopted the more holistic term "policy-relevant information," so that both the information derived from research evidence (e.g., systematic reviews) and the information derived from other sources that might be conceived of as "evidence" in the context of policymaking could be considered together. This fits well with the purpose of evidence briefs as we defined them in our study, which are meant to combine various types of research evidence (mainly from systematic reviews) and other types of evidence (such as local health system indicators) in a way that is relevant to the policy process. Overall, this approach allowed us to focus on interpreting the themes that emerged from the included papers in a way that helped address our primary objective—to determine how the context in which an evidence brief is prepared, and the issues that it addresses, may influence

policymakers' and stakeholders' views of its content and design features—rather than debating about what constitutes "evidence" in the context of policymaking. The types and sources of research evidence (systematic reviews in particular) that can be consulted to provide a range of policy-relevant information for those preparing evidence briefs have been provided elsewhere (3;39-41), so will not be discussed here.

Conceptualizing what is meant by "context" and "issues"

Context is often thought to be essential to determining what types of information policymakers and stakeholders consider relevant to policy (36;37). Context can also dictate the "realm of the possible" when developing knowledge translation strategies to inform policymaking (20). The specific characteristics of policy issues also are important to determining the ways in which stakeholders and policymakers view research evidence as an input in the policy process. Different issues, for example, can result in very different reactions by the public and those involved in the policymaking process and, as a result, may either lead to or halt any related political activity (20;42). Taken together, both the context in which a brief is produced and the issues that it addresses have implications for the types of policy-relevant information (content) that will be viewed as useful, along with the preferred presentation of this content (formatting). They can also influence policymakers' and stakeholders' views of a particular evidence brief as a whole and its usefulness as an input in the policymaking process.

As we explained earlier, the term "context" and its associated variables are often only vaguely defined in the literature focused on the role of evidence in the policy process (33). Our analysis found that a traditional political science framework provides three very useful categories of contextual variables (often referred to as the "3i's") that can be found in a given political setting and can influence the policymaking process: institutions, interests, and ideas (43-45). Institutions include factors such as government structures (e.g., whether policy is made in a unitary or a federal state) and the legacies of past policies that may shape the policy process by creating incentives and giving some political actors access to more or fewer resources than others, and by creating policy networks that can determine who has access to the policy process (46;47). The interests category captures the characteristics of political actors (e.g., traits of interest groups, civil society, and legislators), whether they win or lose as a result of a given policy, and by how much (48;49). Ideas include the societal values that characterize a particular policy arena, and the knowledge that actors in that arena have (e.g., values about what ought to be or beliefs about what is) (50). The framework also considers what are often referred to as "external events," such as economic downturns or the outbreak of a disease pandemic. We adopted these concepts as they emerged as the most useful in shaping our ongoing analysis, and they were essential to identifying contextual factors that could influence the intended users' views of an evidence brief.

Conversely, the characteristics of issues are related to a separate set of factors that are intricately linked to how a given issue can shape the policy

arena by whether it is polarizing, salient, or familiar (20;51). First, certain issues can be inherently polarizing—that is, they cause fragmentation in the positions held by various interests represented in the policy process (20). This can pit actors against one another in policy debates and divide the public. Specifically, low issue polarization refers to situations in which actors engaged in the policy process have similar preferences and ideas about the way the problem underlying the issue has been framed, about the priorities that need to be addressed, and the criteria against which potential solutions should be assessed (20). In contrast, as the consensus on these key components diminishes, issue polarization increases (20).

Second, issue salience can help determine how various policy actors perceive the importance of an issue. High-salience issues are those perceived to be top priorities in the policy arena by those involved with, or likely to be affected by, a decision about the issue, including members of the public (20;42;52). They are more likely to engage large numbers of interested stakeholders and to be covered more extensively by the media (42;52). Issues are more likely to be of high salience if they affect many people or if they threaten the status quo (53).

In contrast, low-salience issues in the policy arena receive little public attention and no media attention, involve fewer high-profile policy actors, and are often seen by the actors in the policy arena as the "nitty gritty," less urgent, and lower-priority issues (42). Finally, whether the policymakers and stakeholders are familiar with policy issues matters, as some issues can gain prominence on the agenda while others fall off (54;55). As this process of agenda setting proceeds,

some issues may recur because they are common to the government's policy agenda, making them more familiar to the policymakers and stakeholders engaged in the policy process, when compared with other issues. This level of familiarity can also influence the type of information desired by the policymakers and stakeholders engaged in the policy process (51). Because both these approaches provided fruitful avenues for exploring and, ultimately, determining how context and issues influence how policymakers and stakeholders view an evidence brief as an input in the policy process, we draw on them extensively in the remainder of this article.

Understanding how context and issues influence views of evidence briefs for policy

Figure 2 provides an overview of the concepts that emerged from our analysis and represents how contexts and issues may influence policymakers' and stakeholders' views of an evidence brief. Factors related to the contexts in which a particular brief is prepared and the issues that it addresses were found to emerge in three ways, as context-driven, issue-context resonance, or issue-driven factors. They also were found to influence both the producers and the users of a brief, to manifest as several types of specific factors (e.g., institutions, interests, and ideas for context-related factors, and polarization, salience, and familiarity for issue-related factors), and to influence views of an evidence brief through a number of mechanisms (e.g., by creating complexity for producers or capacity among users of a brief). These mechanisms may produce different views of evidence briefs

among their intended users, particularly of the types of policy-relevant information they contain and the formats in which this information is presented.

One noteworthy theme that emerged during the early stages of the analysis is that much of the current work on synthesizing policy-relevant information to support health policy decision making is determining (often normatively) what information should be provided to policymakers and what formats should be used to present this information. This is captured at the bottom of figure 2 and is presented as two groups of features (i.e., content and formatting). First, the specific types of information, or content, that are important to making policy decisions (i.e., policy-relevant information) and should be included in a synthesis serving as an input in the policy process are regularly discussed. For example, clearly stated objectives, a description of the policy problem, and options to address the problem are content that should be included. Second, the formats in which this content should be presented to policymakers and stakeholders to maximize its usefulness are commonly suggested, along with using lay language and presenting content in ways that make it easy to skim. The items in these two thematic categories are relatively consistent with the characteristics commonly found across countries in evidence briefs (13-15;56). They are summarized in table 2. Interestingly, the most frequently discussed feature in the reviewed literature is the inclusion of a comprehensive and detailed description of the underlying policy problem related to the policy issue being addressed (3;18;38;57-66), suggesting its relative importance to efforts to synthesize policy-relevant information to support policymakers and stakeholders. As our analysis

suggested and the corresponding model illustrates, despite the preoccupation in the literature with suggestions for content and formatting, such prescriptions are only one element of the larger picture. Often these features are presented without considering how the views of them may be influenced by the first three-quarters of figure 2 and are therefore promoted as a "one-size-fits-all" approach that will help support the use of evidence in health policymaking, regardless of the contexts in which they are prepared and the issues that they address. Determining how contexts and issues may influence views of these features served as the main driver of our study and constitutes the bulk of what is presented in figure 2. It is these aspects of the model that will ultimately determine views of the various features of an evidence brief, and thus they need to be considered before we can understand how the different content and formatting features discussed earlier will be perceived by the intended users of an evidence brief. Next we discuss how these factors emerge, what the specific factors are, and what their pathways of influence are, as well as the mechanisms by which these factors influence views of an evidence brief prepared in a particular context and focused on a particular policy issue.

How factors emerge from context and issues to shape views of evidence briefs

As noted in the previous section, the factors identified as influential in determining stakeholders' and policymakers' views of evidence briefs emerged in three different ways: 1) as context-driven factors, 2) as issue-driven factors, and 3) as issue-context resonance factors.

Context-driven factors are the relatively stable (in the short term) attributes of the policy context—in particular, the attributes of the existing institutions, interests, and ideas—that may influence how an evidence brief is viewed, independently of the issue's characteristics. For example, the prevailing values (which are one type of "ideas") in a polity may help create a climate that supports the use of research evidence in general, and evidence briefs in particular, in policymaking, regardless of the nature of the policy issue considered (10). For this reason, we conceived context-driven factors as having context-dependent origins. That is, these factors are independent of the issue.

We conceived the second and third categories of factors as having issue-dependent origins, which are dynamic in that the characteristics of priority policy issues are responsible for defining the factors that are influential in determining policymakers' and stakeholders' views of an evidence brief. In other words, they are dependent on the nature of the emerging policy issues and cannot be determined without first considering the issue's specific attributes.

The first type of issue-dependent factor is what we will refer to as an "issue-driven factor." These factors influence the policy process according to whether they are polarizing issues, whether they are salient, and how familiar they are to relevant policymakers, stakeholders, and the public (20;67). For example, a controversial issue like abortion may polarize the public and the policy community, be highly salient when it does emerge as a priority, and, as a result, change these actors' views of how useful an evidence brief about the issue is as an input in the policy process.

Finally, issue-context resonance factors emerge at the intersection between an issue's characteristics and its context. In particular, they refer to contextual factors (institutions, interests, and ideas) that become important considerations as a result of the characteristics of the policy issue addressed, which also makes them issue dependent. Framed in another way, these factors emerge as a result of contextual resonance with attributes of a policy issue. For example, given the constitutional rules about jurisdictional authority (an institutional feature), a policy issue may implicate two levels of government in the policy process, whereas the characteristics of another issue could mean that only one level of government (or no level of government) is involved in decisions about that issue. Similarly, an issue may imply the involvement of a broad array of interests. In contrast, other issues may relegate policy decision-making involvement to a few actors in closed policy networks, in which they are insulated from the rest of the policy arena and have greater access to (and influence over) the decision-making process.

Our analysis also identified two major pathways through which these factors might influence policymakers' and stakeholders' views of an evidence brief. First, factors may influence views about the content, formatting, and usefulness of an evidence brief by modifying the producers' ability to craft documents that will be useful to those reading them. Second, factors may influence views of evidence briefs through their users. In particular, factors that emerge as a result of the context in which a brief is prepared and the issue that it addresses may define the types of content desired by those engaged in the policy

process, or the formats that these actors are most likely to find useful. Next we use these concepts to organize our discussion of the various factors found to influence views of evidence briefs, as well as the specific mechanisms for such influence.

The mechanisms through which factors influence views of evidence briefs

Table 3 summarizes the specific context-driven, issue-driven, and issue-context resonance factors that we found in our analysis as likely influences on views of an evidence brief. The specific mechanisms through which they can affect views of evidence briefs, to which we return later, are also mapped onto each set of factors. They influence both the producers and the users through seven distinct mechanisms, by 1) establishing producer capacity, 2) creating complexity in the policy arena, 3) establishing user capacity, 4) establishing normative and/or cultural expectations, 5) imparting trust between the producers and the users of evidence briefs, 6) creating a demand for information that promotes confidence in evidence briefs, and 7) creating a demand for information that can be used by policymakers and stakeholders in instrumental ways. Next, we discuss and provide illustrative examples from the results of our analysis of the types of mechanisms through which these context-driven, issue-driven, and issue-context-resonance factors may influence views of an evidence brief.

Hypothesized mechanisms: Producer influences. Context-driven, issue-driven, and issue-context resonance factors all were found to influence the producers in ways that affect users' views of evidence briefs because they either

affect the capacity of those preparing them to produce useful documents or they increase the complexity of the policy arena in ways that would make it more difficult to prepare a useful evidence brief.

The first mechanism—the establishment of producer capacity—results from factors that influence producers by either reducing or enhancing their ability to prepare a brief in a way that will be useful for their intended audiences. For example, institutionalized interactions between producers and potential users (a context-driven institutional factor), or past experience as a policymaker (a context-driven interest factor), can help promote a better understanding of the policy process among those preparing the brief and, as a result, will increase their capacity to assess and appropriately respond to the information needs of those engaged in the policy process (42;53;58;63;68-78). Presumably, the resulting effect of this mechanism would be to improve policymakers' and stakeholders' views of the usefulness of the evidence brief as a whole.

The second mechanism that can influence views of a brief through the producer pathway is the creation of complexity in the policy arena by a contextual or issue factor. This mechanism emerges as a result of factors that influence producers by creating a more (or less) heterogeneous policy arena, or a more (or less) complex institutional framework, in which the likelihood of preparing a useful evidence brief that meets diverse needs and targets the information and formatting appropriately is reduced (or enhanced). For example, context-driven institutional factors, such as high rates of turnover in government, may continually change the target audience for evidence briefs (51;77). This increasing

complexity of the policy arena makes it more difficult for those preparing a brief to tailor it to the preferences of their intended audience. Similar complexity may result from the emergence of issue-driven factors such as high polarization and of issue-context resonance factors such as the need to consider policy actors at multiple levels of government for a given issue—both of which may complicate the policy arena by making it more heterogeneous and thus more difficult to prepare evidence briefs that meet the demands of all potential users (20;51;60;71;79;80).

One interesting aspect of these mechanisms is that they seem to be able to influence views of a brief *overall*, rather than views of particular content and formatting features. This contrasts with the more nuanced effects that influence views through the demand side, to which we now turn.

Hypothesized mechanisms: User influences. Our analysis suggested that context-driven, issue-driven, and issue-context resonance factors can also affect the target audiences or users in ways that will influence their views of an evidence brief, and they do so through the following mechanisms: 1) the establishment of user capacity to engage with policy-relevant information, 2) the establishment of normative rules and/or cultural expectations that influence the types of policy-relevant information demanded by users, 3) the creation of a demand for confidence-instilling information, 4) the imparting of trust between the users and the producers of an evidence brief, and 5) the creation of a demand for information that can be used instrumentally, based on an identified practical need for a particular type of policy-relevant information.

The first identified mechanism is through the establishment of user capacity, which results from factors that influence users by either reducing or enhancing the ability of those reading briefs to utilize the policy-relevant information presented to them. For example, past experience/training in research can ensure that those reading an evidence brief are comfortable reading and digesting policy-relevant information that includes research evidence (a context-driven interest factor) (51;66;70-72;81-90). The resulting influence might be that as a result of their capacity to understand it, those reading a brief view the research evidence as particularly helpful.

The second important mechanism through which factors may affect users' views of briefs is establishing normative rules or cultural expectations that influence the types of information that are expected inputs in the policymaking process. For example, the promotion of an evidence-based approach to policy development by powerful interests engaged in a particular issue may create expectations by all actors that evidence briefs should be consulted (an issue-context resonance interest factor) (71;91;92). The creation of a demand for information that instills confidence is the third mechanism through which factors may influence views of evidence briefs, and it emerges as the result of factors that influence users by increasing or decreasing the perceived need for information that helps establish confidence in the validity, rigor, and trustworthiness of an evidence brief. For example, when issues are polarizing and thus more likely to create situations in which evidence briefs are used to support an argument, users want reassurance that the evidence and messages provided in the brief have little

chance of being discredited or found questionable as grounds for a particular position in a debate (an issue-driven polarization factor) (20;93;94).

The fourth mechanism that can influence users' views of evidence briefs results from factors that increase trust between the producers and the users of evidence briefs, minimizing the users' demand for information that justifies confidence in the validity, rigor, and trustworthiness of an evidence brief while increasing the likelihood that explicit action-oriented messages are viewed as helpful. For example, when interactions are ongoing and institutionalized, trust can develop between those preparing and those reading briefs, obviating the need for information that promotes confidence in the source and increasing the expectation that clear, action-oriented decision support is provided (a context-driven institutional factor) (4;12;23;38;57-60;62;68;74;76;78;83;84;87;93;95-108). Although related, this mechanism differs from the third mechanism (the creation of a need for confidence-instilling information), in that it is linked to trust in the producers of briefs themselves, which then spurs (or depresses) the demand for specific content such as recommendations (when producers are trusted) or information about the methods used (when producers are not trusted as much). In contrast, the need for confidence-instilling information is more directly linked to the ways in which factors in the policy arena shape the demand for content, regardless of the level of trust (e.g., the need to have confidence in the information if engaged in debate).

The fifth and final mechanism that affects users is the creation of a demand for information that can be used instrumentally. This mechanism is the

result of the emergence of factors that stimulate the need for information that serves a pragmatic or instrumental purpose in light of the specific characteristics of a given policy process. For example, unfamiliar issues create a demand for information that helps those reading a brief understand the problem underlying the issue (an issue-driven familiarity factor) (23;51;54;55;82;109;110). As a result, views of content that highlights the various aspects of the policy problem addressed by the evidence brief are likely to be more favorable.

Discussion

This study and the resulting theoretical insights that have emerged and are summarized in figure 2 are an important first step in understanding how factors related to the political context and the characteristics of policy issues may influence how the intended audience of a particular strategy to support the use of research evidence in policymaking—in this case, preparing evidence briefs—may view them as an input in the policy process. These factors were found to emerge in different ways, as context-dependent, as issue-dependent, and as a result of issue-context resonance. They also were found to work through various mechanisms that influence both the producers of evidence briefs (by establishing producer capacity and creating complexity in the policy arena) and the users (by establishing user capacity and normative/cultural expectations, by creating demand for confidence-instilling information, by imparting trust between users and producers, and by creating demand for instrumentally useful information). As our analysis suggests, these factors, as well as the mechanisms through which

they work, can affect policymakers' and stakeholders' views of an evidence brief overall, as well as its particular content and formatting features.

While we based the methodology used in this study on a relatively new approach to systematic review that required us to remain flexible, we believe that our adoption of a two-pronged strategy—in which a structured and systematic electronic search was complemented by inductive, iterative, and purposive sampling—enabled us to be rigorous and transparent while overcoming some of the inherent difficulties in approaching a broad question that had only sparse and heterogeneous sources of literature from which to draw. Our strategy also ensured that we were able to answer the question with the available literature. Indeed, the fact that "case description" was the most frequently utilized study design in the included empirical papers that we retrieved using electronic searches suggests that some of the traditional methods of systematic review would have excluded some of the most important sources for gaining insights that helped address this study's question. Furthermore, our additional purposive sampling of key sources that helped fill conceptual gaps and tie together the themes that emerged during the analysis was an additional strength of this approach. In particular, many of the sources retrieved electronically were recently published, whereas some of the more seminal political science papers that helped bridge conceptual gaps were published before 2000 and were not retrieved from the electronic searches. When the goal of a synthesis or review is interpretive rather than summative, this additional step is an especially important one, as it enables those undertaking the

analysis to present a more logical and cohesive theoretical argument that has identified and overcome any obvious gaps.

Despite the merits of this approach, some challenges need to be highlighted. First, our electronic searches sought literature related to health and health care policy, rather than policy in general, as the uniqueness of health care issues and policymaking (e.g., when compared with pension reform) seemed to warrant attention. Nevertheless, the literature unrelated to health issues could have been useful as well (although our purposive sample did draw mainly from the policy analysis and political science literature that is not focused on health per se). Second, we had difficulty utilizing the structured and explicit approaches to searching and article selection that are commonly associated with traditional systematic review methodology—mainly during the inclusion/exclusion phase. Specifically, our aim to prioritize the relevance of a paper over the specific design or quality criteria for inclusion led to the need for extensive discussions by the research team about inclusions and exclusions. For example, while the relevance of a particular paper often seemed obvious to the principal investigator (Kaelan A. Moat), who selected the bulk of studies and did most of the purposive sampling from the initial pool of potentially relevant papers, what was relevant versus not relevant could be quite ambiguous and vary depending on each investigator's own understanding of the study's purpose, as reflected in the compass question. The only way to overcome this was extensive discussion until we reached a mutual and compatible understanding, which extended the process of article selection. Finally, the additional stages of purposive sampling, as well as

the analysis and interpretation of results, were likely influenced and framed by the investigative team's training in health services and policy research, health policy analysis, and political science. Thus, the results may well speak mainly to those who also work in these disciplines, and the additional stages of purposive sampling thus may have overlooked some relevant sources of literature from disciplines that were less familiar to the team. Accordingly, we may have overlooked some contextual and issue-related factors in this study, along with some mechanisms that affect users' views of evidence briefs.

On the whole, the theoretical propositions developed here are just a first attempt to understand a very complex field of inquiry. Nevertheless, the results of our study carry with them several implications. First, they provide important insights for those supporting the use of research evidence, particularly the producers of evidence briefs. The results can be used in the preparation of briefs because they highlight important considerations that need to be acknowledged and incorporated when working in the complex process of policymaking. Second, the results may also enable potential users to consider how various factors shape their own views of evidence briefs and help them communicate their preferences for policy-relevant information to those preparing briefs as a way to optimize efforts to support the use of research evidence in policymaking. Third, the results serve as a point of departure for researchers undertaking empirical work that focuses on the ways in which contextual factors and the characteristics of policy issues affect the influences and views of evidence briefs and other strategies for supporting the use of research evidence in policymaking processes. Finally, this

study can be seen as an attempt to advance the theoretical and conceptual conversation regarding political context, as well as issue characteristics, by those who are both studying and/or engaged in ways to support the use of research evidence in health policymaking. At present, conceptual and empirical gaps in our understanding about these factors still exist, even though research evidence is only one potential input in complex policy processes.

Figure 1: QUORUM flow chart of the inclusion/exclusion process

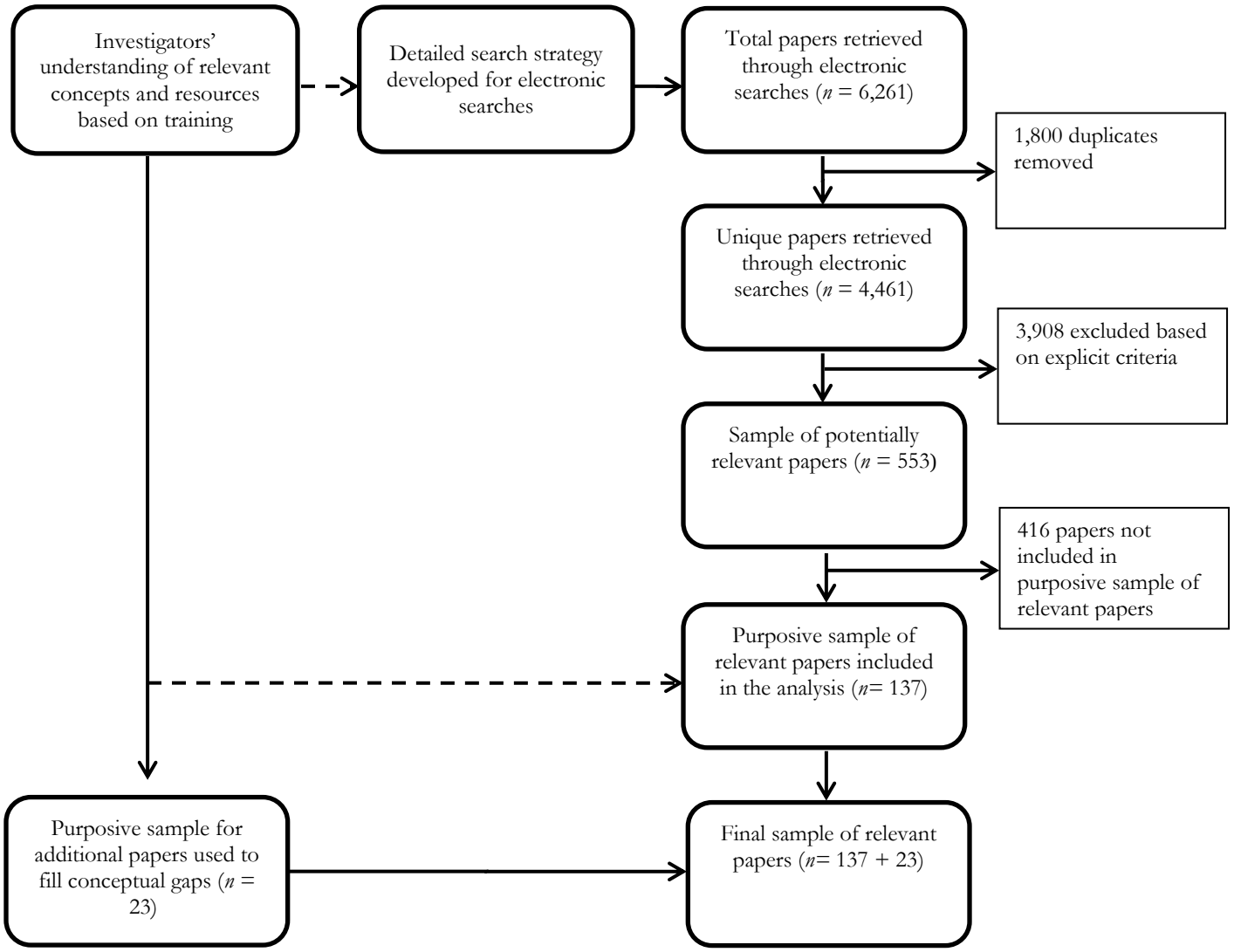

Table 1: Characteristics of included studies retrieved in searches and with additional purposive sampling

Characteristic		Number		Percentage of Total
		Searches	Purposive	
Year published	Before 2000	12	17	18.1
	2000–2004	24	3	16.9
	2005	14	0	8.8
	2006	11	1	7.5
	2007	12	0	7.5
	2008	12	0	7.5
	2009	20	0	12.5
	2010	21	1	13.8
	2011	11	0	6.9
	2012	0	1	0.6
Discipline	Health policy Health services and policy research/ health economics	104	4	67.5
	Population health policy research	13	0	8.1
	Social policy/public administration/political science	16	19	21.9
	International development	4	0	2.5
Empirical versus conceptual	Empirical studies	98	7[a]	65.6
	Conceptual papers and opinion pieces	39	16[a]	34.4
Study designs (empirical papers)	Case description	42	0	40.0%
	Case study (single)	17	1	17.1%
	Key informant interviews and/or focus groups	9	0	8.6%
	Mixed/multiple methods	9	0	8.6%
	Survey	7	0	6.7%
	Case study (multiple)	6	6	11.4%
	Systematic review	3	0	2.9%
	Narrative review	3	0	2.9%
	Document analysis	2	0	2.9%

Note: [a]Distinguishing between conceptual and empirical was less meaningful for the papers that were purposively sampled to fill conceptual gaps, as all of them were sampled because it was known by members of the research team that they had

important theoretical concepts to offer. Papers sampled purposively and coded above as “empirical” are those that rely primarily on a clearly defined policy case or cases to develop, illustrate, and support their theoretical arguments.

Figure 2: How issues and contexts create factors that influence views of evidence briefs.

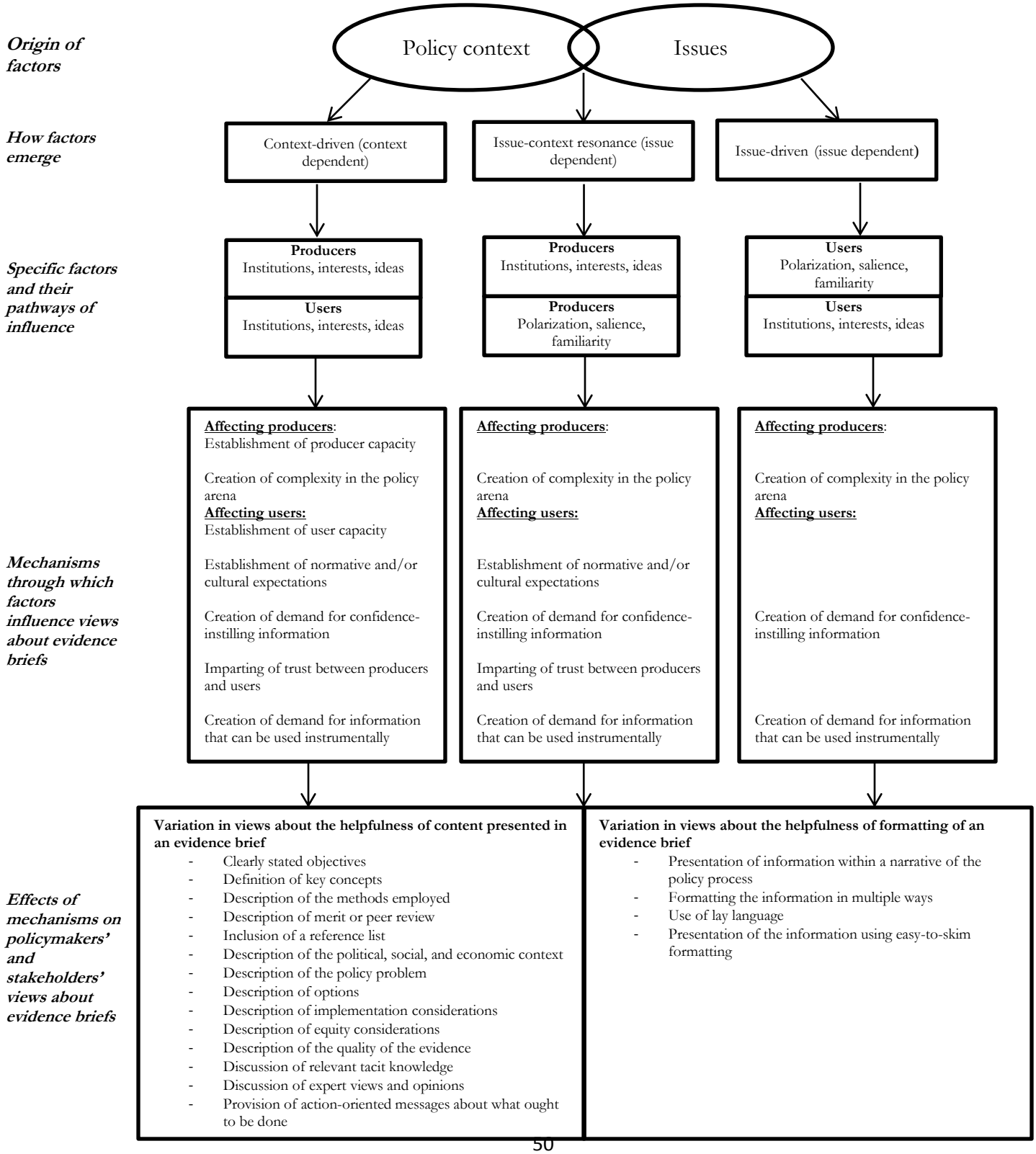

Table 2: Content and formatting features to be considered when preparing evidence briefs for policy

Features		Sources Discussing These Themes
Content	1. Clearly stated objectives	(19;62)
	2. Explanation/definition of key concepts related to the content included in the evidence brief	(19)
	3. Description of the methods employed to prepare the evidence brief	(10;38;63;87;111-119)
	4. Description of whether the evidence brief has been subjected to peer/merit review	(14;115;120)
	5. Inclusion of a reference list	(19)
	6. Description of the political, social, and economic context in relation to the research evidence addressing various aspects of the policy issue	(40;60;66;72;76;83;86;94;110;121-123)
	7. Description of the policy problem related to the issue addressed by the evidence brief	(3;18;38;57-66)
	8. Description of several viable options that can address the problem, along with what is known, based on research evidence about each option (including benefits/harms, costs/cost-effectiveness/technical feasibility/budget workability)	(3;4;18;20;31;38;41;57;58;62-65;68;71;73;78;82;83;91;95;97;100;112;112;120;121;124;125)
	9. Description of key implementation considerations related to the options	(3;12;31;36;37;53;65;66;78;111;116)
	10. Description of equity considerations as well as the perceived positive or	(41;64;74;86;112;125-127)

	negative impact that options may have on various members of society	
	11. Description of the quality of the research evidence related to the various aspects of the policy issue and highlighting any uncertainty associated with the research evidence	(4;18;23;38;41;58;68;70;72;85;107;111;115;118-120;128-134)
	12. Discussion about stakeholders' relevant tacit knowledge about the various aspects of the policy issue	(62;100;122)
	13. Discussion about the views held by those considered to be experts on the various aspects of the policy issue	(53;62;64;65;87;95;103;109;111;120;127;134-137)
	14. Provision of action-oriented messages about what course of action might be taken in light of the information presented in the evidence brief	(19;58;62-64;66;67;73;91;126;129;134)
Format	15. Presentation of information within a narrative of the policy process	(60;66;72;76;83;85;110;123;132;138)
	16. Formatting the information in multiple ways (e.g., graded entry, electronic/hard copies)	(4;19;38;57;62;63;87;139)
	17. Use of lay language	(4;19;57;58;70;74;78;87;100;115;126;129)
	18. Use of easy-to-skim formatting, enabling quick identification of headings and key words	(58;86)

Table 3: List of factors and examples found in the synthesis, along with the mechanisms through which they affect policymakers' and stakeholders' views of evidence briefs

Context-Driven			
Pathway of Influence	**Type of Factor**	**Example**	**Mechanisms of Influence**
Producers	Institutions	• Formal/institutionalized interactions between producers and users of briefs (versus no formal/institutionalized interactions) • High frequency of government turnover (versus low frequency of government turnover)	Establishment of producer capacity Creation of complexity in the policy arena
	Interests	• High levels of civil freedom (versus low levels of civil freedom) • Producers of briefs have training/past experience in policymaking (versus no training / past experience in policymaking) • Producers of briefs have training in communications (versus no training in communications) • Producers of briefs are multidisciplinary (versus focused on a particular discipline)	Establishment of producer capacity Creation of complexity in the policy arena
Users	Institutions	• Institutional/organizational incentives exist to promote the use of research evidence in policy processes (versus institutional/organizational incentives don't exist) • Universal publicly financed health system (versus fragmented sources of health system financing) • Institutionalized research units in government (versus no institutionalized research units in government) • Formal/institutionalized interactions between producers and users of briefs (versus no formal/institutionalized interactions) • Interactions facilitated by actors who are intermediaries (versus not facilitated by intermediaries) • High frequency of government turnover (versus low frequency of government turnover)[a] • Bureaucracy characterized by specialists (versus generalists)	Establishment of normative and/or cultural expectations Imparting of trust between producers and users Establishment of user capacity Creation of demand for confidence-instilling information
	Interests	• Producers of briefs perceived as credible sources of policy-relevant information (versus not perceived as credible sources) • Producers of briefs perceived as biased interest (versus perceived as unbiased intermediaries) • High levels of civil freedom (versus low levels of civil freedom) • Users of briefs have past training/experience as a researcher (versus no past training / experience as a researcher) • Users of briefs have roles focused on policy making at the subnational or local level of the health system (versus focused on the national level of the health system)	Imparting of trust between producers and users Creation of demand for confidence-instilling information Establishment of normative and/or cultural expectations Establishment of user capacity Creation of demand for information that can be used instrumentally
	Ideas	• Cultural values place emphasis on use of research evidence as an input into policymaking (versus no emphasis on use of research evidence) • Cultural values place emphasis on equality and social	Establishment of normative and/or cultural expectations

		collectivism (versus no emphasis on equality and social collectivism)	
Issue-Driven			
Pathway of Influence	**Category of Factors**	**Example of Factors**	**Mechanisms of Influence**
Producers	Polarization	• Issue is highly polarizing (versus not polarizing)	Creation of complexity in the policy arena
	Salience	• Issue is highly salient (versus not salient)	Creation of complexity in the policy arena
	Familiarity	• Issue is new (versus familiar)	Creation of complexity in the policy arena
Users	Polarization	• Issue is highly polarizing (versus not polarizing)	Creation of demand for confidence-instilling information Creation of demand for information that can be used instrumentally
	Salience	• Issue is highly salient (versus not salient)	Creation of demand for confidence-instilling information Creation of demand for information that can be used instrumentally
	Familiarity	• Issue is new (versus familiar)[b]	Creation of demand for information that can be used instrumentally
Issue-Context Resonance			
Pathway of Influence	**Category of Factors**	**Example of Factors**	**Mechanisms of Influence**
Producers	Institutions	• Issue implies diffuse decision-making authority (versus concentrated decision making authority) • Issue implies involvement of many levels of government (versus few levels of government) • Issue implies involvement of a broad array of actors who compete to have their positions considered by decision makers (versus few actors with exclusive access to and influence over decision makers)	Creation of complexity in the policy arena
	Interests	• Issue motivates many interests to mobilize (versus few interests to mobilize)	Creation of complexity in the policy arena
	Ideas	• High levels of uncertainty in research evidence related to the issue (versus low uncertainty)	Creation of complexity in the policy arena
Users	Institutions	• Issue implies involvement of many levels of government (versus few levels of government) • Issue implies involvement of a broad array of actors who compete to have their positions considered by decision makers (versus few actors with exclusive access to and influence over decision makers))[c]	Creation of demand for confidence-instilling information Imparting of trust between producers and users Creation of demand for information that can be used instrumentally
	Interests	• Issue motivates many interests to mobilize (versus few interests to mobilize)	Creation of demand for information that can be used instrumentally Creation of demand for confidence-instilling information
	Ideas	• High levels of uncertainty in research evidence related	Creation of demand for

		to the issue (versus low uncertainty)	information that can be used instrumentally

Notes:[a]In this instance, the low frequency of government turnover (rather than high frequency) is associated with the mechanism that emerged in the analysis. In particular, a lower frequency of government turnover could serve to establish (and maintain) user capacity as well as create an atmosphere more amenable to the development of trusted relationships between users and producers.

[b]Our analysis found that new issues would create a demand for information that can be used instrumentally and, in particular, information that can be used to understand the problem underlying the policy issue. However, it is conceivable that familiar issues would also create a demand for information that could be used instrumentally to help find new solutions to familiar problems (which would make this factor work in the opposite direction with respect to this mechanism as well). Our analysis, however, did not find the latter to be the case.

[c]In this instance, the relationship between the type of network that the issue implies would be involved in the policy process and the influence that this has on the users of briefs is more nuanced than when considered as an influence on producers of briefs. In particular, a network characterized by a broad array of actors that compete to have their positions considered by decision makers could create demand for confidence-instilling information and for information that can be used instrumentally, whereas an exclusive network may impart trust (depending on the dynamics within the network).

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Assessing views about and intentions to act on evidence briefs and deliberative dialogues across a range of countries, issues and groups*

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Preface

The paper presented in this chapter is (at the time of writing) accepted for publication at the *Bulletin of the World Health Organization.* It addresses an important empirical gap in that it is one of the first attempts to survey policymakers, stakeholders and researchers who have read evidence briefs prepared for priority policy issues in low- and middle-income countries. As such it provides some of the earliest insights into how the target audiences of evidence briefs view them overall, as well as their content and design features. It also represents an important step forward in the methods for evaluating evidence briefs and other mechanisms that support the use of research evidence in the policy process—particularly with respect to identifying an appropriate sample. Some elements of this paper focused on the evaluation of deliberative dialogues which, while not directly related to the work pursued in this thesis, are similarly informative. However, it is the elements of the paper focused on the evaluation of evidence briefs, particularly the descriptive statistics, that I consider to be the contribution of this chapter to my thesis (and important background to the analysis presented in Chapter 4).

I was responsible for conceiving of and designing this study along with my supervisor (Dr. John N. Lavis). The KTPE Study Team was responsible for executing the sampling approach and administering questionnaires. With assistance from Dr. Sarah Clancy, I managed and prepared the data for analysis. I also performed all analyses (with Dr. John N. Lavis acting as a second rater during assessments of briefs' features). I drafted the chapter. All of the other co-

authors provided comments and suggestions on various drafts of the paper that were incorporated into revisions.

Abstract

Objectives: The establishment of knowledge-translation platforms, such as EVIPNet, in many LMICs has spurred the development of two novel inter-related strategies – evidence briefs and deliberative dialogues – to support the use of research evidence in policymaking. While these strategies hold promise, little is known about whether they are viewed positively across countries, health system issues and target groups or achieve measurable outcomes. Drawing on the theory of planned behaviour, we developed an approach to evaluating briefs and dialogues that can also be applied to comparative studies of other similar strategies to support evidence-informed policymaking.

Methods: All deliberative dialogue participants in Burkina Faso, Cameroon, Ethiopia, Nigeria, Uganda and Zambia were surveyed about a pre-circulated evidence brief before the start of the dialogue and about the dialogue itself at the end of the dialogue. Descriptive statistics were used to profile assessments of each key feature of the brief and dialogue, each of the brief and the dialogue as a whole, and respondents' intentions to act on what they had learned. Regression models were used to examine associations between respondent characteristics and their assessments.

Results: Three hundred and four respondents completed the survey about evidence briefs (57% response rate) and 303 respondents completed the survey about deliberative dialogues (57% response rate). Respondents viewed the evidence briefs and deliberative dialogues, as well as each of their features, very favourably, regardless of country, issue or group. 'Not concluding with

recommendations' emerged as the least helpful feature of briefs from the perspective of all respondents taken together and 'not aiming for consensus' emerged as the least helpful feature of dialogues from the perspective of policymakers and stakeholders. Respondents reported strong intentions to act on what they had learned, however, those who didn't provide a role category were less positive about whether they perceived themselves to have the behavioural control to act.

Discussion: Evidence briefs and deliberative dialogues appeared to be highly regarded and to lead to an intention to act. Greater effort needs to be directed either to explaining the rationale for select design features or adapting them to meet expectations, and to applying the same evaluative approach across a broader range of countries and health system issues and to other strategies.

Introduction

The past decade has seen a growing interest in identifying the most promising ways to ensure that policy decisions aimed at strengthening health systems in low-and middle-income countries (LMICs) are informed by the best available research evidence (1-4). As a result, several knowledge translation (KT) platforms, including the WHO-sponsored Evidence-Informed Policy Networks (EVIPNet), have been established in countries across Africa, the Americas, Asia, and the eastern Mediterranean (5-7). Currently nearly all KT platforms are focusing their efforts, at least in part, on two distinct but inter-related strategies: the preparation of evidence briefs for policy (8), and the convening of deliberative dialogues that use those briefs as a primary input (6).

Evidence briefs for policy are a relatively new form of research synthesis which start with the identification of a priority policy issue within a particular health system, and then mobilize the best available global research evidence (e.g. systematic reviews) and local evidence and studies in order to clarify the problem(s) associated with the issue, describe what's known about the options available for addressing the problem(s), and identify key implementation considerations for the options. Additionally, they can be prepared in a timely manner (weeks or months), which is one factor found to increase the likelihood that research evidence will be used as an input into policymaking (9;10). This approach is quite novel compared to user-friendly summaries of reviews or single studies, which are summaries of one particular review or study and which often

do not put the review or study in the context of what it means for a particular health system.

Deliberative dialogues, with evidence briefs used as an input, facilitate interactions among the range of health system policymakers, health system stakeholders (defined in this study as administrators in health districts, institutions and NGOs, members of professional associations, and leaders from civil society, and referred to hereafter as 'stakeholders'), and researchers—which is a second factor found to increase the likelihood of research use in policymaking (9;10). They also provide an opportunity to consider the best available global and local research evidence alongside the tacit knowledge of key health system actors that are involved in or likely to be affected by a decision related to the issue, and to put evidence and tacit knowledge in the context of other influences on the policy process such as country-specific institutional constraints, interest group pressure, values, and external factors (e.g. economic crises).

Taken together, briefs and dialogues address the majority of barriers found to hinder the greater use of research evidence (i.e. research isn't highly valued, relevant or easy to use), while building on factors found to increase the likelihood that research will be used to inform policy decisions (e.g., timeliness and interactions) (6;9-13). Despite the promise shown in formative evaluations of these strategies and some of their common features, all of which are presented in Tables 1 and 2 (e.g., graded entry formats in briefs, and adherence to the "Chatham House Rule" in dialogues) (14), there have been no systematic attempts to determine how their different design and content features, influence

how useful these syntheses are in supporting the use of research evidence by policymakers and stakeholders (15-18). There have also been few attempts to develop an evaluative approach that can be applied across a range of countries, health system issues and groups and that includes an appropriate and tractable outcome measure.

To address this gap we developed and administered two surveys across a range of issues and countries—one for evidence briefs and one for deliberative dialogues—to assess whether health system policymakers, stakeholders and researchers in LMICs view these KT strategies as helpful. Drawing on the theory of planned behavior, we also sought to understand respondents' intentions to act on the research evidence contained in the evidence brief and discussed at the deliberative dialogue and their assessment of factors that may influence whether and how they can act on this evidence (i.e., their personal attitudes, subject norms in their professional life , and perceived behavioural control) (19;20). This approach was adopted in light of the difficulties faced when trying to measure impacts on the policymaking process, which is a very time-consuming undertaking given the complexity of factors that shape the policy process, confidentiality concerns and other considerations. While the theory was originally developed in the context of individual behaviours, it has been used successfully in the context of professional behaviour (where physicians, for example, are functioning in an agency relationship with their patients) (21;22), and has shown promise in the context of the behaviours of those involved in the policymaking process (albeit with slightly lower-than-optimal inter-rater

reliability when data are collected immediately following a dialogue, presumably because participants are particularly motivated at that time) (23).

Methods

Study participants

We conducted surveys as part of a larger 5-year project (the KTPE study) that is evaluating the activities, outputs, and outcomes of KT platforms from 44 low-and middle-income countries that have established (or have indicated their intent to establish) a KT platform (6). We surveyed all policymakers, stakeholders and researchers who had read an evidence brief prepared by their local KT platform, or attended a deliberative dialogue for which the prepared brief served as an input (6). Dialogue participants were identified by each KT platform country team through a stakeholder mapping exercise, which identified all of those policymakers, stakeholders and researchers who are likely to be involved in or affected by decisions made during the policy process surrounding the issue focused on in the evidence brief and by researchers studying the issue. As a result, it was (conceptually) the policy process itself that determined the policymakers, stakeholders and researchers who received an invitation to the dialogue, the evidence brief, and the survey about the evidence brief. All participants in the dialogue received the survey about the deliberative dialogue.

Development and administration of the questionnaires

The questionnaires were designed as an element of the KTPE study's formative evaluation of evidence briefs and deliberative dialogues. Each questionnaire is divided into either three or four sections, with the first section asking how helpful each of the features were and the second section asking how well the brief/dialogue achieved its intended purpose. The 'dialogue' survey included a third section that contained 15 items based on theory of planned behaviour constructs (19), and the final section in both questionnaires included questions about respondents' professional experiences. Both questionnaires were designed using results from pilot work undertaken by the KTPE study investigators, a review of the literature, and feedback from a three-day workshop with two representatives from teams from east Africa, Kyrgyz Republic and Vietnam. The questionnaire about briefs was also refined to improve face validity using feedback from a workshop that brought together all KT platform teams from Africa (24), and the theory of planned behaviour portion of the questionnaire was subjected to a reliability assessment (23). Questionnaires were translated into French for use in countries in which English was not widely spoken. All survey instruments as well as detailed descriptions about their development can be accessed online at http://www.researchtopolicy.org/KTPEs/KTPE-overview.

Dialogue invitees were mailed a package containing a letter of invitation to participate in the dialogue, a copy of the evidence brief, information about the study and a copy of the questionnaire about the evidence brief (6). Participants were asked to return the completed questionnaire prior to arriving at the dialogue in a pre-stamped envelope. Those who had not completed a survey prior to arrival

at the dialogue were asked to complete a survey and hand it in at registration for the dialogue before it commenced. Dialogue participants were handed a copy of the questionnaire about the dialogue at the end of the deliberative dialogue and asked to complete and return it immediately prior to their departure. Completed surveys were collected by country teams, and sent to the KTPE study team located at McMaster University where the results were compiled and survey data were entered into a database.

Analysis

Two investigators independently coded and then reconciled the features of each evidence brief (based on a review of electronic copies of each brief) and the features of each dialogue (based on a review of the electronic copies of the dialogue summary and/or report to funders that described the process). We followed up with core members of each KT platform team to confirm our findings. We calculated the response rate as the percentage of dialogue participants who completed each of the two questionnaires. We calculated detailed descriptive statistics (using MS Excel) to examine respondents' assessments of evidence briefs, deliberative dialogues, and their features along with the distribution of these ratings across different types of respondents. We conducted ordinary least squares (OLS) regressions (using IBM SPSS 19) to explore associations between respondents' professional characteristics and their overall assessment of both briefs and dialogues, as well as their assessment of

some key characteristics of these activities found to have the most variation in ratings of their helpfulness.

Respondents' self-identified roles from the questionnaires were not mutually exclusive, so for the regressions we transformed the data in order to create four groups or "role categories": policymaker, stakeholder, researcher and other. Respondents were coded as a policymaker if they chose "policymaker" for at least one of their current roles. Respondents were coded as a stakeholder if they chose "stakeholder" as one of their current roles, without also self-identifying as a "policymaker". Those who identified themselves as a "researcher"—and neither as a "policymaker" or a "stakeholder"—were coded as researchers, and those who self-identified as "other" exclusively were grouped into the other category. The logic behind this grouping hierarchy is related to the belief that those identifying as a policymaker as one of their current roles, regardless of their other roles, would likely believe that they are in fact more integrated into the decision making process when compared to other policy stakeholders, researchers and "others" who do not identify this way. The same logic applied when comparing stakeholders with researchers (where the former trumps the latter role). Number of years in current role was entered as a continuous variable into the models, and past experience/training in other roles was entered as a binary variable with 1 indicating "yes" and 0 indicating a "no". Respondents with missing data were omitted from the corresponding regression. We performed simple t-tests to compare groups using variables that could not be included in our regression analyses because of multicollinearity.

Results

Since the beginning of the KTPE study, 304 evaluations of evidence briefs, and 303 evaluations of deliberative dialogues, have been completed by respondents from six countries for eighteen different priority issues (with asterisks denoting issues for which only the evidence briefs prepared were evaluated):

1) Burkina Faso
    a. Implementing strategies for the reduction of maternal mortality
2) Cameroon
    a. Scaling up community-based health insurance*
    b. Scaling up malaria-control interventions
    c. Improving governance for health district development
    d. Retaining health workers in rural areas
    e. Optimizing the use of antenatal clinics
    f. Improving the reception and management of patients in accident and emergency departments of national and regional hospitals in Cameroon
    g. Improving the affordability of accident and emergency departments of national and regional hospitals in Cameroon.
3) Ethiopia

   a. Developing human resource capacity for implementing malaria elimination measures
   b. Preventing postpartum hemorrhage

4) Nigeria

   a. Strengthening health systems 1
   b. Strengthening health systems 2

5) Uganda

   a. Task shifting to optimize the roles of health workers to improve the delivery of maternal and child healthcare
   b. Increasing access to skilled birth attendance
   c. Improving palliative care in Uganda

6) Zambia.

   a. Strengthening the health system for mental health
   b. Preventing postpartum hemorrhage
   c. Retaining human resources for health

The response rate for the survey about evidence briefs was 57% (304 individuals completed the questionnaire of the 530 that read a pre-circulated evidence brief and attended a dialogue), and the response rate for the survey about

deliberative dialogues was 57% (303 respondents of the same 530). Cameroon had the largest number of respondents for the evidence briefs (n=99), followed by Uganda (n=66) and Zambia (n=46). For deliberative dialogues, the largest number of respondents were from Cameroon (n=77) followed by Uganda (n=69) and Nigeria (n= 48 respondents). In all countries, the most frequently self-identified role on the survey about evidence briefs was policymaker (49%) followed by stakeholder (24%), researcher (8%), and "other" (5%). Forty five respondents (15%) did not provide a role category. The most frequently self-identified role on the dialogues survey was also policymakers (49%), followed by stakeholders (23%), researchers (10%), other (4%), with 43 (14%) not providing an answer (see online appendix Table 1 for full results).

With respect to the design features of evidence briefs listed in Table 1, all briefs included in this study: 1) contained a description of the context for the issue being addressed; 2) contained a description of the different features of the problem; 3) contained a description of options for addressing the problem; 4) employed a graded entry format (e.g. a list of key messages and a full report); and 5) included a reference list for those who wanted to read more. However, only 52%% explicitly took quality considerations into account or were subjected to a merit review, and only 62% explicitly took local applicability into account when discussing the research evidence. With respect to the dialogues evaluated in this study, all design features listed in Table 2 were included in all convened dialogues, except for providing an opportunity to discuss who might do what differently (which was a feature of only 50% of the dialogues) and not aiming for

consensus (which was a feature of 95% of the dialogues). Full results are available in online appendix Table 2.

On average, all of the features of evidence briefs were viewed very favourably by all respondents (see Table 1).Not concluding with recommendations had a lower average rating than all other characteristics among policymakers, stakeholders, researchers, and those in the "other" category. Respondents in the "other" category often rated particular features of evidence briefs lower than those who provided a specific role category. Similarly, all of the features of the deliberative dialogues were generally viewed favourably by all groups of respondents (see Table 2). However, not aiming for consensus was rated lower than other features among policymakers and stakeholders. Those who did not provide a role category tended to rate all dialogue features lower than respondents in other role categories. Finally, respondents reported strong intentions to use research evidence of the type that was discussed at the deliberative dialogue, positive attitudes towards research evidence of the type discussed at the dialogue, and subjective norms in their professional life that were conducive to using research evidence of the type that was discussed at the dialogue (Table 3)—although those who didn't provide a role category, in particular, perceived their behavioural control to do so less optimistically than did other groups.

While we attempted to include all respondent characteristics into our models, we had to exclude past experience or training (either as a policymaker, or a researcher) due to multicollinearity. Self-identifying as "other" emerged as a

significant predictor (p=0.028) of lower ratings, by an average of 1.25 points, of not concluding with recommendations in briefs (Table 4). Our t-tests found a significant difference among policymakers, stakeholders and others with training or experience as a researcher with those who don't have similar experience in their assessments of how useful not aiming for consensus in a dialogue was (p=0.015). Specifically, those without experience as a researcher viewed the fact that dialogues did not aim for consensus as less useful, on average, than those with experience. We found no other significant differences between these groups in their assessments of briefs or dialogues.

Discussion

Our evaluation has shown that evidence briefs and deliberative dialogues—two novel approaches to supporting the use of research evidence in policymaking—are very well received regardless of the countries in which they are used, the health system issues that they address, or the group of actors that is surveyed. Respondents tended to view the evidence briefs and deliberative dialogues, as well as each of their features, very favourably, which supports the recommendations in the research literature. (16;17;25-29) 'Not concluding with recommendations' emerged as the least helpful feature of briefs from the perspective of all respondents taken together and 'not aiming for consensus' emerged as the least helpful feature of dialogues from the perspective of policymakers .It is not clear whether this reflects a communication challenge (i.e., the KT platform teams are not communicating in their briefs and at their

dialogues the rationale for these design decisions) or true variations in preferences. The rationale for not concluding with recommendations is that developing recommendations requires the authors of the brief to impose their values and preferences on readers, whereas it is the dialogue participants' values which matter much more. The rationale for not aiming for consensus is that most dialogue participants cannot commit their organization to a course of action without building support within their organization.

Additionally, the policymakers, stakeholders and researchers who have read an evidence brief as an input into a deliberative dialogue all reported strong intentions to act on the information gleaned from this process However, those who did not report a role category were less positive about whether they perceived themselves to have the behavioural control to do so. It is difficult to explain why this is the case among those not reporting a role category, but it is possible that they viewed their perceived behavioural control less optimistically because they are aware of the many competing factors that characterize the political process—such as the institutions, interests and ideas that exist within particular contexts— that can influence their ability to use research, but that are beyond their control. Role category and years in current position were not significant predictors of views about briefs, dialogues, and their features.

This study has three strengths. First, it is one of the first attempts to develop a better understanding about how two novel strategies to support the use of research evidence in policymaking are viewed by their target audiences in LMICs and whether the strategies lead them to want to act on what they learned.

Second, it represents a first attempt to apply the same evaluation approach across countries, issues and groups, and to measure an appropriate outcome (intention to act) that is tractable when evaluating these types of efforts across countries, issues and respondent groups. This approach offers the potential for future comparisons across more countries and issues for broader application in the field of supporting evidence-informed policymaking. Third, we have attempted to include data from every individual that has read a brief and/or attended a dialogue of the type discussed in this study, making our sample as representative as possible.

There are also two weaknesses that should be acknowledged. First, our regression models were constrained by small sample sizes given that we only utilized a first wave of data, response rates were less than optimal, and data for specific questions were sometimes missing. Second, we only operationalized explanatory factors related to individual respondent characteristics, despite the influence on these same outcomes that factors related to the characteristics of the context (which can vary in terms of the institutions, interests and ideas that influence the policy process) as well as the policy issues (e.g. whether it is salient or polarizing) may have. Nevertheless, this study provides useful insights for those seeking to inform policymaking (by highlighting the key design features of evidence briefs and dialogues and the few that warrant particular attention in terms of employing them or communicating the rationale for them), as well as for those seeking to evaluate such strategies across countries, issues and groups.

Table 1: Mean and standard deviation of ratings of evidence briefs, by respondent category

Focus of assessment	Ratings on a seven-point Likert scale (1=very unhelpful to 7=very helpful)											
	All respondents		Policymaker		Stakeholder		Researcher		Other		No role provided	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Overall assessment	6.3	0.8	6.3	0.7	6.2	1.0	6.2	0.8	6.5	0.5	5.9	1.0
Design features of evidence briefs												
Described the context for the issue being addressed	6.4	1.1	6.5	0.9	6.4	1.3	6.5	1.0	6.2	1.4	6.4	1.0
Described different features of the problem, including (where possible) how it affects particular groups	6.3	1.1	6.4	0.9	6.2	1.2	6.3	1.1	5.8	1.2	6.0	1.1
Described options for addressing the problem	6.2	1.0	6.3	0.9	6.1	1.1	6.1	0.9	5.9	1.4	6.0	1.1
Described what is known, based on synthesized research evidence, about each of the options and where there are gaps in what is known	6.1	1.0	6.2	0.9	6.1	1.2	6.0	1.1	5.8	0.9	6.0	0.9
Described key implementation considerations	6.2	1.0	6.3	1.0	6.1	1.1	6.4	0.9	5.9	1.3	6.2	0.8

	Employed systematic and transparent methods to identify, select, and assess synthesized research evidence	6.1	1.0	6.0	2.9	6.1	2.4	6.3	2.2	6.1	2.2	6.2	2.4
	Took quality considerations into account when discussing the research evidence	6.0	1.1	6.0	3.1	5.9	2.9	6.3	2.8	5.8	2.2	6.2	1.8
	Took local applicability considerations into account when discussing the research evidence	6.2	1.0	6.2	1.0	6.2	1.0	6.4	0.8	5.8	1.6	6.3	0.8
	Took equity considerations into account when discussing the research evidence	6.2	1.1	6.1	3.0	6.1	2.5	6.5	1.5	5.5	2.7	6.5	0.6
	Did not conclude with particular recommendations	5.5	1.6	5.3	2.7	5.8	2.1	5.9	1.8	4.6	2.2	5.6	1.1
	Employed a graded-entry format (e.g., a list of key messages and a full report)	6.3	1.1	6.3	1.1	6.2	1.0	6.6	0.7	6.0	1.5	6.4	0.7
	Included a reference list for those who wanted to read more about a particular systematic review or research study	6.4	1.2	6.5	1.0	6.3	1.2	6.4	1.4	6.1	1.7	6.1	1.7
	Was subjected to a review by at least one policymaker, at least one stakeholder, and at least one researcher (called a "merit" review process to distinguish it from "peer" review, which would typically only involve researchers in the review)	6.3	1.0	6.4	3.3	6.1	3.2	6.6	3.4	6.4	2.7	6.4	2.9

Table 2: Mean and standard deviation of ratings of deliberative dialogues, by respondent category

Focus of assessment items	Ratings on a seven-point Likert scale (1=very unhelpful to 7=very helpful)											
	All respondents		Policymaker		Stakeholder		Researcher		Other		No role provided	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Overall assessment	6.4	0.8	6.4	1.5	6.3	2.3	6.4	1.6	6.5	0.7	6.3	1.9
Design features commonly found in deliberative dialogues												
Addressed a high-priority policy issue	6.6	0.9	6.7	1.5	6.6	2.4	6.7	1.6	6.8	0.5	6.1	2.0
Provided an opportunity to discuss different features of the problem, including (where possible) how it affects particular groups	6.5	1.0	6.5	1.5	6.6	2.4	6.5	1.8	6.5	0.5	6.2	1.9
Provided an opportunity to discuss options for addressing the problem	6.2	1.1	6.3	1.6	6.2	2.4	6.3	1.8	6.3	0.7	6.1	1.9
Provided an opportunity to discuss key implementation considerations	6.3	0.9	6.4	1.5	6.3	2.3	6.6	1.6	6.3	0.6	5.9	1.9
Provided an opportunity to discuss who might do what differently	6.2	1.1	6.3	1.5	6.2	2.3	6.2	1.8	5.9	1.6	5.8	1.9

	Was informed by a pre-circulated evidence brief	6.3	1.0	6.4	1.7	6.3	2.4	6.4	1.6	6.5	0.7	5.9	2.1
	Was informed by discussion about the full range of factors that can inform how to approach a problem, possible options for addressing it, and key implementation considerations	6.3	1.0	6.4	1.6	6.3	2.4	6.3	1.6	6.0	1.3	5.9	2.0
	Brought together many parties who could be involved in or affected by future decisions related to the issue	6.4	0.9	6.5	1.6	6.4	2.4	6.6	2.0	6.3	0.8	6.0	2.1
	Aimed for fair representation among policymakers, stakeholders, and researchers	6.4	0.9	6.5	1.6	6.4	2.4	6.4	1.5	6.3	0.9	5.9	2.0
	Engaged a facilitator to assist with deliberations	6.5	1.0	6.5	1.0	6.4	1.1	6.5	1.1	6.6	0.5	6.3	1.4
	Allowed for frank, off-the-record deliberations by following the Chatham House Rule	6.3	1.1	6.3	1.2	6.3	1.3	6.7	0.8	6.9	0.3	6.1	1.3
	Did not aim for consensus in the dialogue	5.9	1.4	5.7	1.5	6.1	1.3	6.2	1.8	6.1	1.0	5.9	1.6

Table 3: Mean ratings of theory of planned behavior constructs

Focus of assessment		Ratings on seven-point Likert scale that vary by question									
		Policymaker		Stakeholder		Researcher		Other		No role provided	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Behavioural intentions	I expect to use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7)	6.3	0.6	6.2	0.8	6.2	1.3	6.1	0.5	5.8	1.1
	I want to use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7)	6.4	0.6	6.1	0.8	6.2	0.9	6.1	0.7	6.0	1.4
	I intend to use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7)	6.3	0.8	6.1	0.8	6.2	1.0	6.2	1.9	6.1	1.4
Attitudes - Mean of four items assessing whether using research evidence of the type discussed at the deliberative dialogue is viewed as: • Harmful (1)/very beneficial (7) • Very bad (1)/very good (7) • Very unpleasant (1)/very pleasant (7) • Very unhelpful (1)/very helpful (7)		6.6	0.7	6.5	0.8	6.5	0.8	6.6	2.4	6.3	1.1
Subjective norms - Mean of four items: • Most people who are important to me in my professional life think that…I should definitely not (1)/I should definitely (7)…use research evidence of the type that was discussed at the deliberative dialogue		6.2	1.4	6.3	1.9	5.9	1.5	6.2	1.1	6.3	1.9

• It is expected of me that I use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7) • I feel under social pressure to use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7) • People who are important to me in my professional life want me to use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7)										
Perceived behavioural control – Mean of four items: • I am confident that I could use research evidence of the type that was discussed at the deliberative dialogue: strongly disagree (1)/strongly agree (7) • For me to use research evidence of the type that was discussed at the deliberative dialogue is: very difficult (1)/very easy(7) • The decision to use research evidence of the type that was discussed at the deliberative dialogue is beyond my control: strongly disagree (1)/strongly agree (7) • Whether I use research evidence of the type that was discussed at the deliberative dialogue is entirely up to me: strongly disagree (1)/strongly agree (7)	6.2	1.8	6.1	1.8	6.1	1.8	6.3	1.7	5.5	1.7

Table 4: Results from regression analyses

Factors that may explain assessments of briefs and dialogues		β coefficients associated with factors			
		Evidence briefs		Deliberative dialogues	
		Overall (R^2= 0.020)	Did not conclude with particular recommendations (R^2=0.069)	Overall (R^2=0.004)	Did not aim for consensus in the dialogue (R^2=0.025)
Role category*	Policymaker	0.233	-0.602	-0.024	-0.513
	Stakeholder	0.165	0.129	-0.074	-0.059
	Other	0.410	**-1.255****	0.056	-0.374
Years in current position (continuous)		0.013	0.029	0.006	-0.007

*Note: We created three dummy variables, one for each of policymaker, stakeholder, and other, using researcher as the reference category

**Denotes significance at α=0.05

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Online Appendix Table 1: Number of individuals who completed surveys about evidence briefs and deliberative dialogues, by country topic and self-reported respondent category

Country	Evidence brief topic	Number who completed the evidence brief evaluation						Deliberative dialogue topic	Number who completed the deliberative dialogue evaluation					
		All	Policymaker	Stakeholders	Researcher	Other	No role provided		All	Policymaker	Stakeholder	Researcher	Other	No role provided
Burkina Faso	Implementing strategies for the reduction of maternal mortality	19/42	11	6	0	2	0	Implementing strategies for the reduction of maternal mortality	19/42	13	1	1	3	1
Cameroon	Scaling up community-based health insurance	24/27	3	4	0	2	15	N/A	-	-	-	-	-	-
	Scaling up malaria control interventions	18/30	5	5	2	1	5	Scaling up malaria control interventions	16/30	6	4	4	0	2
	Improving governance for health district development	12/24	6	2	1	1	2	Improving governance for health district development	11/24	6	0	1	1	3
	Retaining health workers in rural areas	11/12	5	2	0	0	4	Retaining health workers in rural areas	7/12	5	2	0	0	0
	Optimizing the use of antenatal clinics	13/17	8	3	2	0	0	Optimizing the use of antenatal clinics	14/17	7	4	3	0	0

	Improving care and management in the home emergency services of national and regional hospitals in Cameroon	13/42	2	2	0	3	6	Improving care and management in the home emergency services of national and regional hospitals in Cameroon	13/42	5	1	0	3	4
	Improving the affordability of home emergency services (UAS) in the national and regional hospitals	8/42	3	1	0	1	3	Improve the affordability of home emergency services (UAS) in the national and regional hospitals	16/42	4	2	0	1	9
Ethiopia	Developing human resource capacity for implementing malaria elimination measures	11/13	4	3	3	0	1	Developing human resource capacity for implementing malaria elimination measures	12/13	4	3	3	0	2
	Preventing postpartum hemorrhage	20/26	8	6	4	1	1	Preventing postpartum hemorrhage	16/26	6	6	3	1	0
Nigeria	Strengthening health systems 1	25/43	22	3	0	0	0	Strengthening health systems 1	25/43	23	0	1	0	1
	Strengthening health systems 2	18/40	15	2	1	0	0	Strengthening health systems 2	23/40	16	7	0	0	0

Uganda	Task shifting to optimize the roles of health workers to improve the delivery of maternal and child healthcare	26/31	13	6	3	1	3	Task shifting to optimize the roles of health workers to improve the delivery of maternal and child healthcare	26/31	10	6	4	1	5
	Increasing access to skilled birth attendance	23/40	12	5	2	1	3	Increasing access to skilled birth attendance	23/40	11	4	2	1	5
	Palliative care	17/44	8	7	2	0	0	Palliative care	20/44	8	8	3	0	1
Zambia	Strengthening the health system for mental health	23/29	14	5	2	1	1	Strengthening the health system for mental health	23/29	14	5	2	1	1
	Preventing postpartum hemorrhage	13/26	7	4	2	0	0	Preventing postpartum hemorrhage	13/26	4	2	2	0	5
	Retaining human resources for health	10/16	3	6	0	0	1	Retaining human resources for health	8/16	1	5	0	0	2
TOTAL		**304/530**	**149**	**72**	**24**	**14**	**45**		**303/530**	**149**	**69**	**30**	**12**	**43**

Online Appendix Table 2: Frequency of content and formatting features in the evidence briefs and deliberative dialogues included in the evaluation

Potential features of evidence briefs	Percentage of assessed briefs with feature	Potential features of deliberative dialogues	Percentage of assessed dialogues with feature
Described the context for the issue being addressed	100%	Addressed a high-priority policy issue	100%
Described different features of the problem	100%	Provided an opportunity to discuss different features of the problem, including (where possible) how it affects particular groups	100%
Described options for addressing the problem	100%	Provided an opportunity to discuss options for addressing the problem	100%
Described what is known, based on synthesized research evidence, about each of the options and where there are gaps in what is known	71%	Provided an opportunity to discuss key implementation considerations	100%
Described key implementation considerations	71%	Provided an opportunity to discuss who might do what differently	50%
Employed systematic and transparent methods to identify, select, and assess synthesized research evidence	67%	Was informed by a pre-circulated evidence brief	100%
Took quality considerations into account when discussing the research evidence	52%	Was informed by discussion about the full range of factors that can inform how to approach a problem, possible options for addressing it, and key implementation considerations	100%
Took local applicability considerations into account when discussing the research evidence	62%	Brought together many parties who could be involved in or affected by future decisions related to the issue	100%
Took equity considerations into account when discussing the research evidence	71%	Aimed for fair representation among policymakers, stakeholders, and researchers	100%
Did not conclude with particular recommendations	67%	Engaged a facilitator to assist with deliberations	100%

Employed a graded-entry format (e.g., a list of key messages and a full report)	71%	Allowed for frank, off-the-record deliberations by following the Chatham House Rule	100%
Included a reference list for those who wanted to read more about a particular systematic review or research study	100%	Did not aim for consensus in the dialogue	95%
Was subjected to a review by at least one policymaker, at least one stakeholder, and at least one researcher (called a "merit" review process to distinguish it from "peer" review, which would typically only involve researchers in the review)	100%		

Assessing how contexts and issues affect views about evidence briefs for policy: A cross-sectional survey of policymakers, stakeholders and researchers from six African countries

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Preface

The paper presented in this chapter builds on the work presented in Chapters 2 and 3. Specifically, it presents the development of an approach to operationalizing the contextual and issue-related factors identified in Chapter 2 as variables for use in quantitative analyses, and uses them to analyze survey data collected as part of evaluations of evidence briefs across six countries (the descriptive statistics for which are presented in Chapter 3). As such, it serves as a step towards the development of more nuanced approaches to quantitative analyses of views about evidence briefs, which will serve to promote a deeper empirical understanding of how contextual and issue-related factors influence views about evidence briefs. It may also inform the evaluation of how these factors influence views about other mechanisms to support the use of research evidence in policymaking.

I was responsible for conceiving of and designing this study along with my supervisor (Dr. John N. Lavis). The KTPE Study Team was responsible for executing the sampling approach and administering questionnaires, while I developed the approaches to operationalizing new contextual and issue-related variables with inputs from my supervisor. I operationalized new variables and prepared the data for analysis. I performed all analyses with the input of Dr. Parminder Raina, and drafted the chapter. My supervisor (Dr. John N. Lavis) and Dr. Parminder Raina provided comments and suggestions, which were incorporated into revisions.

Abstract

Objectives: In parallel with the emerging consensus about the importance of health systems research and its role in strengthening health systems in LMICs, there has been a growing interest in efforts to support the use of research evidence in the policymaking process. Several knowledge translation (KT) platforms, including EVIPNet, are focusing on preparing evidence briefs for policy to inform deliberative dialogues. While evidence briefs show promise, little is known about how contextual and issue-related factors influence policymakers' and stakeholders' views about evidence briefs overall, their content, or design features.

Methods: All deliberative dialogue participants in Burkina Faso, Cameroon, Ethiopia, Nigeria, Uganda and Zambia were surveyed about a pre-circulated evidence brief before the start of the dialogue. An approach was developed to operationalize as quantitative variables the contextual and issue-related factors identified in related theoretical work that were deemed "feasible" based on existing data. Regression models were used to examine associations between contextual and issue-related variables and respondent characteristics on the one hand, and assessments of evidence briefs on the other.

Results: Three hundred and four respondents completed the survey about evidence briefs (57% response rate). Of the 25 contextual and issue-related factors that were considered, eight were operationalized and considered feasible to include in analyses, nine were operationalized with limitations, and 8 were deemed infeasible without collecting additional data. Country and the number of

evidence briefs prepared in the country were each found to be significant predictors of views about briefs in six of nine regression models. Lack of variation in five of eight operationalized variables resulted in their removal from models, and none of the included contextual and issue-related variables emerged as significant predictors of views about evidence briefs.

Discussion: Given the significant associations observed between country variables and views about evidence briefs there is reason to believe that contextual factors do have a relationship with views about briefs. However, given the challenges encountered in this study, more work that focuses on approaches to operationalizing contextual and issue-related factors for inclusion in quantitative analysis is encouraged.

Introduction

In parallel with the emerging consensus about the importance of health systems research and its role in strengthening health systems in low-and middle-income countries (LMICs), there has been a growing interest in efforts to support the use of research evidence in health systems policymaking (1-6). As a result, several knowledge translation (KT) platforms, including the WHO-sponsored Evidence-Informed Policy Networks (EVIPNet), have been established in countries across Africa, the Americas, Asia, and the eastern Mediterranean (7-9). Currently, nearly all KT platforms are focusing their efforts on the preparation of evidence briefs for priority policy issues (10), which serve as inputs into deliberative dialogues about these same issues (11;12).

Evidence briefs are a relatively new form of research synthesis which start with the identification of a priority policy issue within a particular health system, and then mobilize the best available global research evidence (e.g. systematic reviews) and local evidence and studies in order to clarify the problem(s) associated with the issue, describe what's known about the options available for addressing the problem(s), and identify key implementation considerations for the options. This approach is quite novel compared to user-friendly summaries of reviews or single studies, which are summaries of one particular review or study and which often do not put the review or study in the context of what it means for a particular health system. Importantly, evidence briefs can be prepared in a timely manner (weeks or months), which is one factor found to increase the likelihood that research evidence will be used as an input into policymaking

(13;14). Furthermore, when used as inputs into deliberative dialogues, evidence briefs can also help to facilitate interactions among the range of health system policymakers, health system stakeholders (i.e. administrators in health districts, institutions and NGOs, members of professional associations, and leaders from civil society), and researchers—which is another factor that is consistently found to increase the likelihood of research use in policymaking (13;14).

Taken together, briefs and dialogues address the majority of barriers found to hinder the greater use of research evidence (i.e. research isn't highly valued, relevant or easy to use), while building on factors found to increase the likelihood that research will be used to inform policy decisions (e.g., timeliness and interactions) (9;13-17). Early formative evaluations of evidence briefs and the features that are commonly found in them such as graded entry formatting and the decision to not conclude with particular recommendations showed broad support for these features (18).

Recent attempts have been made to determine the ways in which the design and content features of evidence briefs are viewed by the policymakers and stakeholders for whom they are prepared (12). However, no attempts have been made to develop an approach for operationalizing the range of contextual (i.e. institutions, interests and ideas) and issue-related (i.e. polarization, salience and familiarity) factors identified as having a potential influence on the way evidence briefs are viewed in different contexts and for different issues for use in quantitative analysis (19). Pursing work in these two areas is an important step in understanding the use of evidence briefs in LMICs, where briefs are being

prepared for a policymakers and stakeholders in several countries where the contexts vary and for different policy issues.

To address these gaps, this study built on a larger evaluation of KT platforms in 44 LMICS which developed and administered a formative evaluation survey about evidence briefs to a number of policymakers, stakeholders and researchers across a range of countries who have read them (9). The goals were to: 1) develop an approach to operationalizing the context- and issue-related factors that have recently been conceptualized as influences on views about evidence briefs into quantitative variables (19); and 2) use the operationalized context- and issue-related variables in quantitative analyses as a way to explain variation in views about evidence briefs and their common features.

Methods

Study participants

We conducted surveys as part of a larger 5-year project (the KTPE study) that is evaluating the activities, outputs, outcomes and impacts of KT platforms from 44 LMICs that have established (or have indicated their intent to establish) a KT platform (9). We surveyed all policymakers, stakeholders and researchers who had read an evidence brief prepared by their local KT platform as a result of having participated in a deliberative dialogue for which the evidence brief served as a primary input (20). Dialogue participants were identified by each KT platform country team through a stakeholder mapping exercise, which identified all of those policymakers, stakeholders and researchers who are likely to be

involved in or affected by decisions made during the policy process surrounding the issue focused on in the evidence brief and by researchers studying the issue. As a result, it was (conceptually) the policy process itself that determined the policymakers, stakeholders and researchers who received an invitation to the dialogue, the evidence brief, and the survey about the evidence brief. All participants at the dialogue received the survey about the evidence briefs prior to the beginning of the dialogue (12).

Development and administration of the questionnaires

The questionnaire was designed as an element of the KTPE study's formative evaluation of evidence briefs, and is divided into either three sections: the first section asks how helpful each of the features were; the second section asks how well the brief achieved its intended purpose; and the final section includes questions about respondents' professional experiences. The questionnaire was developed using results from pilot work undertaken by the KTPE study investigators, a review of the literature, and feedback from a three-day workshop with two representatives from teams from east Africa, Kyrgyz Republic and Vietnam. The questionnaire was also refined to improve face validity using feedback from a workshop that brought together all KT platform teams from Africa (20). Questionnaires were translated into French for use in countries in which English was not widely spoken. The survey instrument, as well as detailed descriptions about its development can be accessed online at http://www.researchtopolicy.org/KTPEs/KTPE-overview.

Dialogue invitees were mailed a package containing a letter of invitation to participate in the dialogue, a copy of the evidence brief, information about the study and a copy of the questionnaire about the evidence brief (20). Participants were asked to return the completed questionnaire prior to arriving at the dialogue in a pre-stamped envelope. Those who did not complete a survey prior to arriving at the dialogue were asked to complete a survey and hand it in at registration before the dialogue commenced. Completed surveys were collected by country teams, and sent to the KTPE study team located at McMaster University where the survey data were entered into a database.

Operationalizing context- and issue-related factors as quantitative variables for inclusion in regression models

The full range of contextual and issue-related factors that have been identified and conceptualized in related theoretical work as having influences on views about evidence briefs and their features were considered for operationalization into quantitative variables and inclusion in the analysis (19). The principal investigator (KAM) and JNL first discussed how each factor could most appropriately be represented as a quantitative variable (e.g. as a continuous measure vs. a binary measure), and determined whether it was potentially feasible to do so without collecting additional primary data. Those factors that were deemed not feasible at this point were omitted from subsequent stages of operationalization. Second, KAM consulted a range of possible sources of secondary data available that could be used to operationalize each factor that was

deemed potentially feasible as a quantitative variable, and proceeded to operationalize each variable. Third, variables for which existing data were especially limited and as such could not be operationalized with confidence were omitted from inclusion in the analysis. Fourth, the context- and issue-related variables that were successfully operationalized were included and coded into the original survey dataset for inclusion as explanatory variables in the analysis. A list the variables that were deemed eligible for inclusion in the analysis, as well details about how it was operationalized as a quantitative measure (including data sources) is provided in Appendix 1. Appendix 2 provides a table that lists the variables that were operationalized but not included in the analysis given limitations in existing data (along with their hypothesized influences on views about briefs, the approach taken to operationalize each, data sources, and the major limitations of each approach). Appendix 3 provides a table that includes the list of the factors that could not be operationalized as quantitative variables without collecting additional data (as well as the hypothesized influences they have on views about evidence briefs and the major challenges in operationalizing these variables). Table 1 provides an overview of the twenty-five context- and issue-related factors that were considered, and their inclusion in this study based on the approach outlined above.

Analysis

Survey response rates were calculated as a percentage of dialogue participants who completed the briefs questionnaire. We calculated detailed

descriptive statistics (using MS Excel) to examine respondents' assessments of evidence briefs and their features along with the distribution of these ratings across different types of respondents (12). We then conducted ordinary least squares (OLS) regressions (using IBM SPSS 19) to test associations between views about briefs and their features, and the context- and issue-related factors that were operationalized as quantitative variables. Regression analyses were only undertaken on questionnaire items for which there were hypothesized relationships between the operationalized context- and issue-related factors shown in Table 1 and described in Appendix 1, and views about briefs and their features. Factors associated with the characteristics of survey respondents that were collected using the questionnaire (e.g. years in current role and role category), the number of briefs prepared in each jurisdiction, as well as country-level dummy variables were adjusted for in each model.

Respondents' self-identified roles from the questionnaires were not mutually exclusive, so for the regressions we transformed the data in order to create four groups or "role categories": policymaker, stakeholder, researcher and other. The approach taken to transform the data is described in detail in a related publication that analyzed the same survey data (12). Dummy variables were created for "policymaker", "stakeholder", and "other", with "researcher" serving as the reference category in each model. Number of years in current role was entered as a continuous variable, and the evidence brief number in each jurisdiction was entered as an ordinal variable into each model (e.g. 1 was associated with the first brief prepared in that jurisdiction, 2 was associated with

the second, and so on). Respondents with missing data were omitted from the corresponding regressions.

Results

Since the beginning of the KTPE study, 304 evaluations of evidence briefs have been completed by respondents from six countries (Burkina Faso, Cameroon, Ethiopia, Nigeria, Uganda, Zambia) for eighteen different priority issues. The response rate was 57% (304 individuals completed the questionnaire of the 530 that read a pre-circulated evidence brief and attended a dialogue). Cameroon had the largest number of respondents for the evidence briefs (n=99), followed by Uganda (n=66) and Zambia (n=46). In all countries, the most frequently self-identified role on the survey about evidence briefs was policymaker (49%) followed by stakeholder (24%), researcher (8%), and "other" (5%). Forty five respondents (15%) did not provide a role category. Additional details about each issue addressed by the briefs included in the study as well as full details of survey respondents across countries and issues are provided in a related publication based on the same survey (12).

Of the 25 contextual and issue-related factors that were considered for operationalization and inclusion as independent variables in our regression analyses, only eight were operationalized and feasible to include, nine were operationalized but not included given limitations in existing data, and 8 were deemed infeasible to operationalize and include without collecting additional primary data (See Table 1). For the eight factors that were operationalized and

deemed feasible for inclusion in our analysis, efforts were made to test hypothesized relationships using regression models between them and the nine dependent variables for which a hypothesized relationship existed, which included: 1) evidence briefs' ability to achieve their intended purpose overall; 2) including a description of the problem; 3) including a description of options to address the problem; 4) employing systematic and transparent methods to identify, select, and assess synthesized research evidence; 5) taking quality considerations into account when discussing the research evidence; 6) taking equity considerations into account when discussing the research evidence; 7) not concluding with particular recommendations; 8) including a reference list; and 9) being subjected to a merit review. Appendix 1 provides full details of the hypothesized relationships between each operationalized and included context- and issue-related factor and the survey outcome measure(s) of interest.

The results of our regressions are provided in Table 2. We found that 13 country dummy variables were significant predictors of views about briefs, across six of our models (and was highly significant at $p<0.010$ in many cases). The negative coefficients suggest that when compared with the reference country (Burkina Faso), views about briefs and their features are often lower in the other countries included in this study. Evidence brief number also emerged as a significant explanatory variable in six models, with the positive coefficient suggesting that ratings on a number of particular features of evidence briefs improve with each subsequent brief prepared in a particular country. Specifically, this was the case for describing the problem ($\beta=0.161$, $p=0.005$), describing

options (β=0.123, p=0.043), employing systematic and transparent methods (β=0.224, p=0.002), taking quality into account (β=0.269, p=0.001), taking equity into account (β=0.167, p=0.028), and including a reference list (β=0.193, p=0.018). Self-identifying as "other" also emerged as a significant predictor of lower average ratings of discussing the problem (β= -0.688, p= 0.036), taking quality into account (β= - 0.857, p=0.035), and taking equity considerations into account (β=-1.193, p=0.005). Number of years in current role was a significant predictor of slightly higher average ratings of briefs overall (β=0.018, p=0.028).

Importantly, Table 2 also shows that very few of our regression models included any of the eight operationalized variables that we initially perceived to be feasible for inclusion as explanatory variables. This was related to the fact that when operationalized using the approaches outlined in Appendix 1, the majority of our context- and issue-related variables did not vary within countries across the briefs evaluated, and few varied across countries. As such many were, in fact, country-level constants (which we confirmed by observing disaggregated data). This was particularly problematic for those that were operationalized as categorical measures, which resulted in many of them failing to measure something unique compared to our country-level dummy variables. This complicated our attempts to build models using the following five variables in particular: 1) formal/institutionalized interactions between producers and users of briefs; 2) high frequency of government turnover vs. low frequency of government turnover; 3) producers of briefs (i.e. KT platforms) are multi-disciplinary vs. focused on a particular discipline; 4) issue is unfamiliar vs.

familiar; 5) issue implies involvement of many levels of government vs. few levels of government. The context- and issue-related variables that were included in our models (civil liberties, issue salience, interests motivated) did not emerge as significant predictors in any of the models in which they were included to test hypothesized relationships.

Discussion

The results of this study complement our earlier efforts to asses views about and experiences with evidence briefs, which found that briefs and their features are generally well received regardless of the countries in which they are used, the health system issues that they address, or the group of actors that is surveyed (12). Building on these findings, this study found that the country-level variables entered into our models emerged as significant predictors (and often as highly significant). We take this to suggest that evidence briefs and their features are, in fact, viewed quite differently (although still generally positively) by actors depending on the contexts in which they are prepared despite the observed positive views about briefs across countries. Additionally, our results suggest that as the number of briefs prepared in a particular country increases, a number of their features are more positively received. While this variable was entered into our models as a control, the results do align with the notion of establishing user capacity to engage with briefs, perhaps through a process of learning about what to expect from briefs or how the information is relevant to the policy process. This mechanism of influence is outlined in the theoretical work upon which this

study stands (19), and future analyses may consider using "number of briefs" as way to operationalize a new context-driven "ideas" factor that has not previously been considered.

Unfortunately, in trying to tease out the influences of the particular contextual and issue-related factors of interest in this study, we found that operationalizing the variables that have been hypothesized to influence users' views of evidence briefs as quantitative variables is particularly challenging with existing data. For those that were operationalized with available data, it was clear that the approaches employed in this study resulted in measures that lacked the variation required to estimate parameters of interest in our models. This may stem from a flawed approach to operationalization, which will require re-conceptualization and the development of different approaches to measuring contextual and issue-related variables in future work. It may also signal the need for more evidence briefs to be evaluated from a wider range of contexts (only six countries were included in this study) and that address a wider range of issues (18 different issues were addressed in the briefs included, but many had similar characteristics). This may enhance the chances of variation in these variables as measured here. Nevertheless, the results of this study do provide support for continuing efforts to understand the influence of contextual factors on the use of evidence briefs.

This study has three main strengths. First, it represents the first attempt to develop an approach to operationalizing a range of contextual and issue-related factors as quantitative variables for use in efforts to evaluate evidence briefs. This

approach can also be used as a starting point for evaluating a range of mechanisms to support evidence-informed policymaking in LMICs more broadly, such as deliberative dialogues and rapid response services. Second, it represents the first attempt to model the influence of these variables on views about evidence briefs and their features among their intended audience. Third, it provides empirical support for speculation that contextual factors matter in determining how the intended users of evidence briefs view them (19), and the role of context in shaping efforts to support the use of research evidence in policymaking more broadly (21;22).

There are also three weaknesses that should be acknowledged. First, given that our attempt to operationalize contextual and issue-related variables was (to our knowledge) a first, many of the approaches adopted and outlined in Appendices 1-3 were not able to build on established methods. Instead, the team (and in particular KAM and JNL) relied mainly on discussion and consultations to develop the approaches that were adopted. Second, our regression models did not include many of the variables that we set out to test at the outset of this study, and as a result were theoretically incomplete. Third, sample size was low, partly because some countries did not include particular features of interest in their briefs (and as such there was missing data from countries on several outcomes). Rather than provide answers about how contextual and issue-related factors influence policymakers', stakeholders' and researchers' views about evidence briefs in LMICs, this study has generated many more questions—particularly with relation to how to approach the quantification of these factors for use analyzing

survey data. However, given the lack of existing work in this area, we view the results here as a positive step forward. The approaches developed and challenges encountered when using them are a useful starting point for future efforts in the field.

Table 1: Context and issue variables identified in critical interpretive synthesis and their inclusion in this study

Factor category		Construct	Operationalized and considered feasible to include	Operationalized but not considered feasible given limitations with existing data	Could not be operationalized without collecting additional primary data
Context-driven	Institutions	Formal/institutionalized interactions between producers and users of briefs vs. no interactions	✓		
		High frequency of government turnover vs. low frequency of government turnover	✓		
		Universal publicly financed health care system vs. fragmented sources of financing		✓	
		Institutionalized research units within government vs. no institutionalized research units		✓	
		Interactions facilitated by actors who are intermediaries vs. not facilitated by intermediaries		✓	
		Bureaucracy characterized by generalists vs. specialists		✓	
		Institutional/organizational incentives exist to promote the use of research evidence in the policy process vs. no incentives			✓
	Interests	High vs. low levels of civil freedom	✓		
		Producers of briefs (i.e KT platforms) have training/past experience in policymaking vs. no training/past experience in policymaking		✓	
		Producers of briefs (i.e. KT platforms) have training in communications (and in particular in KT) vs. no training in communications		✓	
		Producers of briefs (i.e. KT platforms) are multi-disciplinary vs. focused on a particular discipline	✓		

		Users of briefs have past training/experience as a researcher vs. no training as a researcher if policymaker/stakeholder/other (and experience as a policymaker if researcher/stakeholder/other)		✓	
		Producers of briefs perceived as credible sources of policy-relevant information vs. not viewed as credible source			✓
		Producers of briefs perceived as unbiased intermediaries vs. viewed as biased			✓
		Users of briefs have roles focused on health policymaking at the national level vs. local level			✓
	Ideas	Cultural values place emphasis on use of research evidence as an input into policymaking processes vs. do not place emphasis on the use of research evidence		✓	
		Cultural values place emphasis on equality and social collectivism vs. individualism		✓	
Issue-driven	Polarization	Issue is highly polarizing vs. not polarizing			✓
	Salience	Issue is highly salient vs. not salient	✓		
	Familiarity	Issue is unfamiliar vs. issue is familiar	✓		
Issue-context resonance	Institutions	Issue implies involvement of many levels of government vs. few levels of government	✓		
		Issue implies diffuse vs. concentrated decision making authority			✓
		Issue implies involvement of actors in clientele pluralist vs. pressure pluralist networks			✓
	Interests	Issue motivates many vs. few interests to mobilize	✓		
	Ideas	High levels of uncertainty in research evidence related to the issue vs. low uncertainty			✓

Table 2: Results from regression analyses

Factors hypothesized to explain assessments of briefs and dialogues		β coefficients associated with factors hypothesized to influence ratings of evidence briefs' and their features								
		Overall	Described the problem	Described options	Employed systematic and transparent methods	Took quality into account	Took equity considerations into account	Did not conclude with recommendations	Included a reference list	Was subjected to a merit review
Country (Burkina Faso as reference category)	Cameroon	**-1.216*** **	**-0.708** **	**-0.805** **	**-0.980*** **	-0.706	0.115	-0.167	-0.661	0.040
	Ethiopia	**-0.760*** **	**-0.739** **	-0.536	**-0.953*** **	**-0.970*** **	0.208	0.598	**-1.127*** **	-0.156
	Nigeria	**-1.266*** **	-0.031	-0.142	Missing	Missing	Missing	Missing	0.137	Missing
	Uganda	1.396	**-0.616** **	**-0.807*** **	-0.478	**-0.736** **	Excluded	0.144	-0.343	-0.111
	Zambia	3.000	-0.173	-0.473	-0.365	Missing	0.422	0.147	0.061	-0.223
Role category*	Policymaker	0.181	-0.046	0.196	-0.309	-0.346	-0.349	-0.499	0.154	-0.544
	Stakeholder	0.681	-0.073	0.139	-0.307	-0.427	-0.359	0.221	0.062	-0.537
	Other	0.255	**-0.688** **	-0.217	-0.335	**-0.857** **	**-1.193*** **	-1.111	-0.229	-0.451
Years in current position (continuous)		**0.018** **	0.017	0.008	0.022	0.022	0.021	0.030	0.024	0.007
Policy brief number		0.074	**0.161*** **	**0.123** **	**0.224*** **	**0.269*** **	**0.167** **	0.127	**0.193** **	0.004
High vs. low levels of civil freedom		-1.167								

Issue is highly salient vs. not salient	0.004			-0.013	0.029	-0.010		0.019	-0.031
Issue motivates many vs. few interests to mobilize	Excluded								

*Dummy categories prepared with "researcher" role category used as reference group; **Indicates significance at $\alpha<0.05$ level; ***Indicates significance at $\alpha<0.010$ level

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APPENDIX

Appendix 1: Context and issue variables operationalized and identified as feasible to include in the analysis

Construct measured	Influences producers or users	Type of variable	Level of coding	Mean or frequency of measure	Data source(s)	How variable is operationalized	Hypotheses tested	Limitations of approach to operationalization
Formal/institutionalized interactions between producers and users of briefs vs. no interactions	Both	Binary (Yes = 1, No = 0)	Brief	6/18 (33%) briefs prepared with formal/institutionalized interactions	KTPE platform profile data, evidence briefs prepared by KT platforms	"Yes" if (one or more of the following): -Producers (KTP) are embedded within a department/body within government -There is an official MoU/written agreement between KTP and potential users "No" if: -No clearly formalized relationship between KTP and potential users (e.g. ad hoc	If institutionalized interactions exist between producers and users: - Rating of briefs overall increase due to the establishment of both producer capacity and user capacity - Ratings of ' not concluding with recommendations', ' methods', 'subject to merit review',	Only captures "formal" (i.e. visible) interactions between producers and select groups of users (i.e. government policymakers) rather than the full range of potential users—despite the fact that a wider range of users were surveyed. Absence of explicit agreement or management structures stated in platform profiles may not be accurate representation of a lack of a formal interaction.

						relationships formed to develop briefs)	'reference list' decrease due to imparting of trust between producers and users	
High frequency of government turnover vs. low frequency of government turnover	Both	Continuous	Brief	0.33 (average number of leadership turnover in 5 years leading up to brief evaluation)	African Elections Database http://africanelections.tripod.com/	Count number of times leadership turnover has occurred in at least one major check/veto (e.g. change in majority in a legislative assembly or at the level of the executive) in the 5 years leading up to the evaluation of the evidence brief.	As frequency of government turnover increases: - Ratings of briefs overall decrease due to creation of complexity in the policy arena (affects producers), and reduction in user capacity - Ratings of 'methods', 'merit review',	Only captures high-level government turnover such as the legislature or executive, and does not capture turnover of civil servants working at lower levels in the ministry—which may be more important in terms of fostering relationships between producers and users. Only fully appropriate if the "users" refers to government policymakers, specifically (it conceptualizes turnover with respect to only one potential "user" in our surveys). Based on this approach, turnover was only observed in 1 country included in the study (Zambia). Alternative measure not included: -For each [C_inst_turnlead count], assess whether there has also been a major change in political orientation among the leading political party (e.g. change from conservative

							'reference list' increase given need for information that establishes rigor in absence of trust - Rating scores of 'not concluding with recommendations' increases given absence of trust	to liberal government). Count number of times this has occurred in five years leading up to the preparation of brief. This measures ideological turnover, and is dependent on leadership turnover
High vs. low levels of civil freedom	Both	Continuous	Brief level	4.88 (average civil liberty score across briefs assessed)	Democracy Index indicator V (Civil liberties) http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=Democracy_Index_Final_Dec_2011.pdf&mode=wp	Civil liberties score measured using a scaled of 1-10, and is a composite of a variety of associated indices, which include freedom to engage in politics, freedom of speech and freedom of	As levels of civil freedom increase: - Ratings of briefs overall decrease, given the creation of complexity in the policy	All of the measures considered (see below) capture slightly different aspects of the construct "civil liberties" , however, the approach adopted draws from many sources including the Freedom House scores to derive its composite. As such it is perhaps the most comprehensive measure because it includes some of the other sources that could potentially be used to operationalize this variable (see below). Alternative measures operationalized for this construct, but not used: -Civil liberties measured using a scale of 1-7, where 7 is less civil liberty within a country,

						assembly.	arena - Ratings of 'equity considerations' increase given the establishment of normative /cultural expectations among users	and 1is more. This number is inverted to make more sense intuitively (where 7 becomes a higher civil liberty score). The score is calculated from 15 questions that address four themes: 1) the freedom of expression and belief; 2) associational and organizational right; 3) rule of law; 4) personal autonomy and individual rights. Source: http://www.freedomhouse.org/report/freedom-world-2012/methodology - Same scale and source as above, but calculated using 10 questions that address three themes: 1) electoral process; 2) political pluralism and participation; and 3)functioning of government Source: http://www.freedomhouse.org/report/freedom-world-2012/methodology -World Bank freedom of speech indicator. Narrowly focused on freedom of speech, not as comprehensive as other measures. Source: http://info.worldbank.org/governance/wgi/sc_country.asp -EIU Democracy Index aggregate score that is much broader than only focusing on civil liberties and freedom, and too broad to be considered a representation of this construct.

								Source: http://www.eiu.com/Handlers/WhitepaperHandler.ashx?fi=Democracy_Index_Final_Dec_2011.pdf&mode=wp
Producers of briefs (i.e. KT platforms) are multi-disciplinary vs. focused on a particular discipline	Producers	Categorical (Binary yes/no)	Brief level	8/18 (44%) of briefs were prepared by multidisciplinary teams	KTPE platform profile data, evidence briefs prepared by KT platforms, personal communication with members of KT platforms	"Yes" if: -Members of KTP team that prepared the brief had a variety of training backgrounds or roles (e.g. one sociologist, one political scientist and one epidemiologist). "No" if: -Members of KTP team that prepared the brief have similar training backgrounds or roles	If producers of briefs are multidisciplinary: - Ratings of briefs overall increase, given the establishment of producer capacity	This approach may not capture instances in which authors have a multi-disciplinary background that isn't reflected in their current roles or credentials, and relies on feedback from individuals involved with the preparation of a brief, which may not yield the most objective measures.
Issue is highly salient vs. not salient	Both	Continuous	Brief level	2.09 (the average salience score for issues addressed in briefs)	Lexis Nexis Academic database (national newspapers), based on method developed by	Count number of times an issue was explicitly mentioned in the title of a	If issue is highly salient: - Ratings of briefs	Using the terms from the title did not always emerge to be the most appropriate way to get at the "issue" addressed by the brief, and this also made it difficult when reading titles of returned newspaper articles. For example, in Uganda, a brief was prepared that focused on

					Epstein and Sagel (2000).	news article published in a major national newspaper in the country, within six months leading up to and including the date of the dialogue and brief evaluation. -Use of Lexis Nexis database to search most important national newspapers (determined by consulting with country team members). -Keywords derived from the title of the evidence brief to ensure a consistent approach was used for each country (i.e. no interpretation of the topic addressed was used to broaden or narrow the	overall decrease, given the creation of complexity in the policy arena (although may increase given creation of demand for information that can be used instrumentally, which are the briefs themselves in this case) - Ratings of information about 'methods', 'merit review', 'reference list', and 'quality' increase, given demand	task-shifting to improve maternal and child health, and this generated results that were related to MDGs in the country, but weren't always directly relevant. Additionally, although skilled birth attendance (issue addressed in Uganda's second brief) is also about improving maternal and child health, key words derived from the title wouldn't capture this, unless "maternal and child health" was inferred as the issue addressed. Overall, the optimal balance between how specific and focused to make searches vs. how to keep a standardized approach across countries was difficult to determine. The approach taken, at minimum, ensures that each country media search was approached using consistent methodology. This method is based on the work of political scientists (Epstein and Sagal, 2000) that only measured front page stories in one newspaper in one country that covered Supreme Court cases. While the approach outlined here is allows more nuanced coding, it is not as easily standardized, given the variation in sources across countries.

						search). For countries that had "compound" issues (e.g. task shifting and maternal health) both terms were used in the search. -Total number of counts divided by the number of newspaper sources included in the search to ensure standardization across countries.	for confidence instilling information	
Issue is unfamiliar vs. issue is familiar	Both	Binary (Yes = 1, No = 0)	Brief level	1/18 (5.6%) of briefs addressed an unfamiliar issue	Evidence briefs prepared by KT platforms, government health sector strategic documents, reports	"Yes" if: -Issue did not appear in annual health sector strategy documents or other important government reports within 5 years leading up to evaluation of evidence brief -In absence of	If issue is unfamiliar: - Ratings of briefs overall decrease, given creation of complexity in the policy arena - Ratings of	Government documents not always available publicly, which makes it difficult to determine whether an issue is really familiar/unfamiliar (overcome by consulting background sections of briefs). Relying on background sections of briefs may not be an optimal source of information about whether an issue is familiar, given different authors will choose to include different information in their briefs. Most issues that were addressed by briefs in

						publicly available health sector strategy, consult background section of evidence briefs to determine history of the issue in the country (often explicitly stated as to whether the issue is novel, or if it has been the focus of efforts for longer periods of time). "No" if: -Issue appeared in health sector strategy documents/important government reports within the 5 years leading up to the evaluation, or for which the issue was indicated as a	'description of problem' increase given demand for information that can be used instrumentally - Ratings of 'description of options' decrease, given reduced demand for information that can be used instrumentally (about options)	this study could be considered at least somewhat familiar, which is likely the result of KTP teams choosing "priority issues" to serve as the focus—which are often issues that have been on the agenda for some time. The only exception was mental health in Zambia…which was unfamiliar because it had rarely, if ever, been discussed in the country for years.

						familiar focal area in the country within the background of the brief (which is the case for most of the issues addressed in briefs included in this study).		
Issue implies involvement of many levels of government vs. few levels of government	Both	Binary (Many levels = 1, One level = 0)	Brief level	11/17 (64.7%) of briefs assessed implied involvement of many levels of government	Participant lists from dialogues convened for issues related to each brief included in this study.	"Yes" if: -Those that attended the dialogue (which, presumably represents actors that are involved in or likely to be affected by decisions about the issue addressed in the brief) represented organizations that work at more than one administrative level in the country (e.g. national, regional and municipal).	If many levels of government: - Ratings of brief overall decrease given creation of complexity in the policy arena	Because the issue addressed, and options covered in each brief have not progressed through the actual policy development process in most cases, it is difficult to determine how many levels are, in reality, likely to be involved in future action on the issue. It may only be possible to determine this retrospectively.

						"No" if: -Those that attended the dialogue represent organizations that work at only one administrative level in the country (i.e. national only). -International organizations counted as "national" rather than a separate level, as their engagement in country-level policy development (as opposed to supporting program implementation) is most often aligned with the national level		
Issue motivates many vs. few interests to	Both	Continuous (with more meanin	Brief level	15.8 (average number of interests mobilized for issues addressed by briefs)	Participant lists and/or dialogue reports from dialogues convened for issues related to	Number of unique organizations /interests represented	If many interests motivated: - Ratings of	Based on the assumption that those in attendance at the deliberative dialogue are an accurate representation of the number of interests that are motivated to mobilize and

mobilize		g more interests)			each brief included in this study.	by attendees at the deliberative dialogue convened for the prepared brief -Observers not included in counts -MPs were viewed as representing their own political party (which constituted one organization)	brief overall decrease given creation of complexity in the policy arena - Ratings of "equity considerations" increase given creation of normative /cultural expectations among users	engage in the policy issue. This approach may underestimate the number of interests that actually mobilize around the issue, as it doesn't include those that were invited but could not attend, and does not include potential interests that will mobilize, but that have been overlooked and not invited to the dialogue. As with issue implies many (vs. few) levels, may only be possible to determine retrospectively

Appendix 2: Context and issue variables operationalized but not included in the analysis due to limitations with existing data

Construct measured	Influences producers or users	Type of variable	Level of coding	Data source(s)	How variable is operationalized	Hypotheses tested	Limitations of approach to operationalization
Institutionalized research units within government vs. no institutionalized research units	Users	Binary (Yes = 1, No = 2)	Country level	KTPE platform profile data (supplemented with information from government websites and reports as necessary).	"Yes" if: -Health research organizations are established within the country, either in the Ministry of Health, or in another government department. "No" if: -Health research organizations exist, but are autonomous from government (e.g. UNRHO in Uganda) -No national health research organization exists in the country (e.g. Zambia)	If health research organization embedded: - Ratings of brief overall increase given establishment of user capacity and (possibly), creation of normative/cultural expectations	Data not available in KTPE platform profile, and supplemental sources are not reliable sources of this information. As such, no objective way to operationalize this variable. Only likely to be applicable to one set of users (policymakers in government) as an influence on views about research evidence and briefs (i.e. other users that work outside of government, but are surveyed, will not be affected by this variable, but this distinction is not allowed with this approach).

							This approach eliminates the possibility that organizations supported by the government would be considered equally as important as those institutionalized within government.
Interactions facilitated by actors who are intermediaries vs. not facilitated by intermediaries	Users	Categorical (binary yes/no)	Country level	KTPE platform profile data	"Yes" if: -KTP have as members of their core administrative/management team members that aren't likely to be aligned with, or embedded within the organizations that could be considered potential end users of briefs (e.g. REACH Uganda) "No" if: -Platforms, or members of platforms are aligned with, or embedded within the organizations that could be considered potential end users of briefs (e.g. Burkina Faso within the MoH and Ethiopia within a directorate of the MoH).	If interactions facilitated by intermediaries: - Ratings of brief overall increase given imparting of trust between producers and users -	Platform profiles may not capture actual perceptions held about whether a KTP within the country can be considered an "intermediary" among the policymakers, stakeholders and researchers who have answered the questionnaire. Measures the construct using the same criterion as but in an opposite sense (producers embedded within a potential user organization). As such, these two variables will be perfectly negatively correlated and can't both be used. This variable has been

							dropped due to these limitations.
Universal publicly financed health care system vs. fragmented sources of financing	Users	Continuous	Brief/country level	World Health Organization's National Health Accounts Data http://www.who.int/nha/en/	-Average percentage of total health expenditure (THE) that is public in the 5 years leading up to evaluation of the brief.	Higher percentage of public spending on health care as a proportion of THE: - Ratings about information related to costs and cost-effectiveness increase given normative and cultural expectation and/or increase demand for information that can be used instrumentally	Data are only available for up to 2010, meaning that briefs evaluated in 2011/12 needed to use 2010 data. An alternative variable was calculated so that a consistent approach was used across all countries, and calculated the average of public health spending for all countries leading up to and including 2010 (not much difference in estimates was observed).
Producers of briefs (i.e KT platforms) have training/past experience in policymaking vs. no training/past experience in policymaking	Producers	Categorical (binary yes/no)	Brief level	KTPE platform profile data, evidence briefs prepared by KT platforms, personal communication with members of KT platforms	"Yes" if: -At least one member of KTP that prepare brief have experience as a policymaker. -Policymaker defined as someone who is either: 1) An elected official, political staff or civil	If producers have experience as a policymaker - Ratings of briefs overall increase	Difficult to determine consistently across evidence briefs prepared. Not all information

					servant in government; 2) A manager in a district/region; 3)A manager in a health care institution; 4)A manager in a non-governmental organization. All others coded as "No".	given establishment of producer capacity	provided in KTPE platform profiles, and extensive manual follow-up required for most producers means that this variable is not operationalized in a way that is practical.
Producers of briefs (i.e. KT platforms) have training in communications (and in particular in KT) vs. no training in communications	Producers	Categorical (binary yes/no)	Brief level	KTPE platform profile data as well as participants lists from SURE/EVIPNet trainings	"Yes" if: -At least one members of KTP that prepared brief have had training in communications/KT. All others coded as "No".	If producers have training in KT/communications: - Ratings of briefs overall increase given establishment of producer capacity	All countries included in KTPE study had KTP core team members that were responsible for writing a brief attend EVIPNet/SURE workshops on how to prepare evidence briefs. As such, there is no variation among producers with respect to this variable, and it cannot be measured.
Users of briefs have past training/experience as a researcher vs. no training as a researcher if policymaker/stakeholder/other (and experience as a policymaker if researcher/stakeholder/ot	Users	Categorical (binary yes/no) interaction with role	Individual level	KTPE evidence brief formative evaluations	"Yes" if: -Answered "yes" on KTPE briefs evaluation survey	If users have training as researchers: - Ratings of briefs overall increase	Not available for all users, and data is not consistent in our database.

her)		code			"No" if: -Answered "no" on KTPE briefs evaluation survey	given establishment of user capacity	
Bureaucracy characterized by generalists vs. specialists	Users	Continuous	Country level	http://info.worldbank.org/governance/wgi/index.asp Still not entirely clear how to operationalize this in a valid way.	For each country, use the percentile ranking for the World Bank governance indicator variable "Government effectiveness" for the year that corresponds with the date the brief was evaluated.	If bureaucracy generalized by specialists: - Ratings of briefs overall increase given establishment of user capacity	This is a broad indicator that is a composite of many sources, capturing: perception of the quality of public services, quality of the civil service, the degree of its independence from political pressures and the quality of policy formulation. As such, this can only be considered a distant proxy (at best) for whether the bureaucracy is characterized by specialists in health care rather than generalists and is not an entirely appropriate measure for this construct. While "government effectiveness" may be an interested variable to consider, it does not link conceptually to any of the factors of

							interest in this study in an logical way, and as such has to be left out of the analysis. Data not available for 2012, so data from 2011 has to be used for any briefs evaluated in this year.
Cultural values place emphasis on use of research evidence as an input into policymaking processes vs. do not place emphasis on the use of research evidence	Users	Continuous	Country level	World Values Survey http://www.worldvaluessurvey.org/index_html	-Using scores for each country along the dimension of "Traditional vs. Secular-rational" (one of two dimensions that explain more than 70 percent of the cross-national variance in a factor analysis of 10 indicators measured in the world values survey), transform scores from -2.5 to 2.5 to a score from 0-5, where the higher the score, the more "secular-rational" that society is. -Assumed that the more secular-rational a society is, the less likely that its values are anchored on religion and traditional family values, and therefore more likely to view scientific evidence as a key input into policy decisions in society.	If cultural values research: - Ratings of briefs overall increase given establishment of normative/cultural expectations	There is a lack of indicators tapping into this very specific take on societal values. This variable is only a proxy (at best) and not entirely convincing as a representation of the construct. Consistent data are not available for all countries for all years that the survey has been administered, and there are no data for Cameroon for any of the years (and would be omitted form models that include this variable), and Cameroon

							respondents make up a large proportion of the study sample.
Cultural values place emphasis on equality and social collectivism vs. individualism	Users	Continuous	Country level	Afrobarometer http://www.afrobarometer.org/	-Question 55 on the most recent 2009 Afrobarometer survey asks whether: 1) respondents would prefer to vote for a candidate that could deliver goods and services to *their own community*; or 2) whether they would vote for a candidate that would make policies to benefit *everyone in the country*. The percentage of respondents surveyed in each country that answered "strongly agree" or "agree" to statement 2 was used as a measure of how strong an emphasis there is within society towards collectivism (vs. individualism). Actual items on survey can be found in appendix).	If cultural values place emphasis on social collectivism: - Ratings of "equity considerations" increase given establishment of normative/cultural expectations	This measure is not a perfect representation of the construct, which would be better captured with item E066 on the World Values Survey (which assesses respondents' perceptions about whether society should aim to be competitive or egalitarian). However, World Values Survey data are not available for any countries in this study for this item. The operationalized measure used is the only viable alternative found that includes at least partial data for countries included in this study. However, data are missing for Cameroon and Ethiopia, which taken together

							constitute a large proportion of the study sample.

Appendix 3: Context and issue variable that could not be operationalized without collecting new primary data

Construct measured	Influences producers or users	Hypotheses tested	Challenges encountered when attempting to operationalize
Institutional /organizational incentives exist to promote the use of research evidence in the policy process vs. no incentives	Users	If institutional/organizational incentives exist: - Ratings of briefs given establishment of normative/cultural expectations	Very difficult to operationalize as it would require intimate knowledge of governmental procedures and policy development processes and/or individual organizational (outside of government) procedures and policy development processes, as well as changes in these over time.
Producers of briefs perceived as credible sources of policy-relevant information vs. not viewed as credible source	Users	If producers perceived as credible sources of policy-relevant information: - Ratings of briefs overall increase given imparting trust	Very difficult to operationalize in an objective way, as it requires various policymakers', stakeholders' and researchers' personal views about the KTP.
Producers of briefs perceived as unbiased intermediaries vs. viewed as biased	Users	If producers perceived as unbiased: - Ratings of briefs overall increase given imparting trust	Same challenges as above.
Users of briefs have roles focused on health policymaking at the national level vs. local level	Users	If users of briefs have roles focused on national level: - Ratings of "drawing on syntheses" increases given demand for information that can be used instrumentally	Very difficult to operationalize based on individual data availability (most respondents did not clearly answer this question on the questionnaire, making it very difficult to use this variable).
Issue is highly polarizing vs. not	Both	If issue is highly polarizing: - Ratings of briefs overall decrease, given creation of	Very difficult to operationalize in the context of this study, and there is not much data available that taps into this construct. While some work has been done by Huber (2006) and Esteban (1994, 2008), much of this focuses on macro-level societal polarization rather than

polarizing		complexity - Ratings of "methods", "merit review" and "reference list" increase given creation of demand for confidence instilling information	issue-specific polarization and relies heavily on polling data. Work has been undertaken to determine other types of polarization in society, for example by the team that runs the Database of Political Institutions, although this too is general polarization within society and among political parties (and not a measure that is influenced by particular isseus): http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html One option considered was to use a modified Delphi approach to ask those dealing with the issues in countries whether a particular issue could be considered "polarizing". However, country team members consulted about the modified Delphi approach (from Uganda and Cameroon) are unconvinced that this approach will get accurate assessments of whether the issue was polarizing or not. Given that many of the briefs were prepared and evaluated months ago, recall would negatively bias responses. Country team members also noted that most people will consider all issues "polarizing" and will conceptualize the construct very differently in different contexts. Furthermore, it would be difficult to get consistent and sustained responses over email from potential respondents in each country, for each brief. Note that there are 18 briefs that are included in the survey, and assuming we surveyed 3 people for each issue, this approach would require at least 54 different responses in each wave of the Delphi (as well as the many more that would need to be approached given anticipated low response rates). Fractionalization in society (which could be used as a proxy for the potential for polarization) was also considered, however the current source of this data (http://www.anderson.ucla.edu/faculty_pages/romain.wacziarg/papersum.html) does not include the countries included in this study.
Issue implies diffuse vs. concentrated decision making	Producers	If issue implies concentrated decision making authority: - Ratings of briefs overall increase given reduction of complexity in the policy	This variable is likely closely related to institutional levels and there are no intuitive approaches to using any available data to determine whether those engaged in policy decisions are concentrated or diffuse. This may only be possible to assess retrospectively using policy analysis.

authority		arena	
Issue implies involvement of actors in clientele pluralist vs. pressure pluralist networks	Both	If issue implies actors in pressure pluralist: - Ratings of briefs overall decrease given creation of complexity - Ratings of "methods", "merit review", "reference list" increase given demand for confidence instilling information	See above
High levels of uncertainty in research evidence related to the issue vs. low uncertainty	Both	If high levels of uncertainty - Ratings of briefs overall decrease given increase complexity in the policy arena	Most briefs included do not explicitly discuss the quality of the available evidence, and only a handful of them use GRADE or AMSTAR to rate the quality of reviews included in the brief. As such, there is no consistent way to determine "uncertainty" within the briefs.

Understanding the influence of evidence briefs in health policy making in Uganda and Zambia: A multiple case study

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Preface

The paper presented in this chapter represents (to my knowledge) the first attempt to determine whether and how evidence briefs prepared for priority policy issues in low- and middle- income countries influence the policy process. The case study method that I employed lends itself to the development of rich, detailed accounts of the policy process across the four cases studied (two in each of Uganda and Zambia), which can also be viewed as a contribution that will enable those working with these issues in the countries included, and in low- and middle-income countries more broadly, to view them through a unique lens. More importantly, it presents a novel approach to conceptualizing how evidence briefs influence policymaking, providing insights that can be used to inform the preparation of briefs and their evaluation in the future.

I conceived of the study with my supervisor (Dr. John N. Lavis), with input from my supervisory committee. I was responsible for all data collection and analysis, and for drafting the paper. All co-authors provided detailed comments and suggestions, which were incorporated in revised versions of the paper.

Abstract

Background and objective: Evidence briefs for policy are a relatively new form of research synthesis that are viewed as promising in efforts to support the use of research evidence. They can address the need for research to be available in a timely manner, and in ways that are more relevant to the policymakers and stakeholders they intend to inform. Despite the increased production of evidence briefs—particularly among those in the World Health Organization's Evidence Informed Policy Networks (EVIPNet)—very little is known about whether or how these syntheses influence the policy process when prepared for a priority policy issue, or their potential to do so in future. In light of the need to better understand evidence briefs and their influence on the policy process, this study aimed to qualitatively assess whether and how evidence briefs prepared for priority policy issues have influenced (or not influenced) policymaking processes in different contexts and for different issues.

Methods: A multiple case study design was adopted to pursue the study's objective. We defined our cases as "the policy process related to the issue for which an evidence brief has been prepared". A total of four cases were sampled from Uganda and Zambia (two cases sampled from each country). The two cases from Uganda were skilled birth attendance and task-shifting for maternal and child health, and from Zambia the cases were health human resources retention and strengthening the mental health system. Multiple data sources were collected including: key informant interviews, media, published literature, policy documents, archival records and grey literature. The analysis proceeded in two

stages. Stage 1 adopted Kingdon's agenda-setting framework and the "3i's" framework to provide comprehensive accounts of the factors that shaped policy processes related to each case. Stage 2 built on the understanding developed in Stage 1 to explain how evidence briefs prepared within each of the cases studied influenced (or did not influence) the policy process. Two potential pathways of influence were considered: a longitudinal influence on the "3i's" that will influence policy outcomes in the future, and a cross-sectional interaction with existing political factors in the "3i's" that results in outcomes that are more proximate.

Results: In 2 of 4 cases, the policy issue had a long-standing position on the governmental agenda, and in 3 of the 4 cases no policy decisions were made related to the issue (a "no go" decision) as a result of the influence of institutional, interest-related, ideational, and external factors. In the one case where a "go" decision was observed (health human resources in Zambia), these same factors facilitated policy development. In three of the four cases evidence briefs influenced "ideas" through a longitudinal pathway by initiating potential shifts in the way actors perceived various aspects of the policy issue. In one case (health human resources), the evidence briefs influenced the policy process through a cross-sectional interaction with existing ideas and institutions, resulting in an incremental policy change. Issue characteristics, such as whether an issue is familiar or not, emerged as an important determinant in explaining the nature of the influences of evidence briefs. Factors in the political context were associated with evidence briefs' influence through the longitudinal pathway.

Discussion and conclusions: We have provided a comprehensive account of four policy process in two countries, as well as detailed explanations of how evidence briefs prepared to inform these processes influenced them. This study represents a first in the field, and it is important that future work is undertaken to adapt our approach as well as expand on the findings presented here. Our results may also assist those preparing evidence briefs to think through the factors that shape the policy process they are working within, as well as provide some guidance as to how to monitor the influence of their efforts.

Background

There has been an emerging consensus that efforts to strengthen health systems in low-and middle-income countries (LMICs) need to be informed by the best available research evidence (1-5). However, there currently exists a gap between what is known from research evidence, and the policies pursued by health system policymakers. The existence of this "know-do" gap suggests that many of the findings from high quality health research are not mobilized in efforts improve health systems and population health, despite their potential to support the strengthening of health care delivery and systems (2;6). Furthermore there is a lack of systematic mechanisms that support the use of health research in policymaking, which stands in the way of realizing the potential benefits of research findings (2). However, regardless of how important the lack of systematic mechanisms is in explaining the "know-do" gap, the fact that the policy process is rarely linear or completely "rational" in a political sense suggests that the influence of key political facilitators and constraints—namely those associated with institutions, interests, ideas and external events—must also be better understood in the context of evidence-informed policy-making. Given the significant health challenges faced by, and the scarcity of available resources in low- and middle-income countries, this better understanding is an essential component of strengthening the mechanisms that can support the use of the best available evidence in health policy-making, resulting in better-informed decisions that have the potential to impact the lives of millions

Largely in response to these challenges, several low- and middle-income countries have established "knowledge translation platforms" (KTPs). Currently, there are forty-one countries distributed across Africa, the Americas, Asia and the Eastern Mediterranean that host (or have signalled their intent to host) KTPs either through the World Health Organization-sponsored Evidence-Informed Policy Networks (EVIPNet) or a similar entity(7-9;9). While the specific characteristics of these KT platforms vary, all employ systematic, multi-faceted and (hopefully) synergistic efforts that attempt to overcome the commonly cited barriers that hinder the greater use of research evidence: it's not highly valued, it's not relevant and it's not easy to use(10;11). The efforts of KT platforms also build on the fact that the timeliness of research, interactions between researchers and policymakers, and accordance between the messages arising from research and policymakers' values, beliefs, interests and political goals consistently emerge as factors that increase the likelihood that research will be used in the policy process(12;13). At present, nearly all KT platforms are focusing their efforts on two distinct but inter-related strategies that, taken together, address the majority of these issues—the preparation of evidence briefs for policy(14), and the convening of deliberative dialogues that use the prepared briefs as a primary input(9).

Evidence briefs for policy are a relatively new form of research synthesis that start with the identification of a priority policy issue within a particular health system, and then mobilize the best available global research evidence from systematic reviews, as well as from local evidence and studies in order to provide

an understanding of the problem(s) underlying the issue, describe what's known about potential options for addressing the problem(s), and outline factors that will need to be considered during implementation of these options (14;15). They are viewed as promising because they can address the need for research evidence to be available in a timely manner (they can be prepared in days and weeks rather than months and years), they package research evidence in ways that are more relevant to policymakers, and they enable individuals to more readily identify how the evidence accords (or does not accord) with their values beliefs, interests or political goals (15). When used as an input into deliberative dialogues, evidence briefs are also core components of a mechanism that promotes interactions among policymakers, stakeholders and researchers, while facilitating the integration of other important policy-relevant information such as beliefs, values and tacit knowledge with the best available research evidence(16;17). Evidence briefs are unique when compared to user-friendly summaries of reviews or single studies which, although also focused on supporting the use of research evidence in the policy process, often do not put the review or study in the context of what they mean for a particular health system alongside all of the other reviews or studies relevant to the issue at hand.

Until now, those preparing evidence briefs in LMICs have proceeded in an ad hoc or "learning by doing" manner(14), and variations in commonly found design features (see Table 10) are expected to evolve as practical experience drives how particular formats are matched to specific contexts and for different policy issues (9;15). For instance, the use of graded entry (i.e. one page of key

messages, a three page executive summary, followed by a full report) and the provision of decision relevant information (i.e. the benefits, harms and costs of potential options) have been identified as particularly promising components that should be considered as features of evidence briefs (15;18-20). While recent evaluations have shown that evidence briefs and their features are well received by their intended users in a number of contexts and for a variety of issues (21)very little is known about whether or how evidence briefs, on the whole, influence the policy process when prepared for a priority policy issue. Encouragingly, there have been a few isolated stories of influence based on practical experience using the briefs—such as the influence of Burkina Faso's evidence brief on scaling up artemisinin based combination therapy in securing support from the Global Fund to fight AIDS, Tuberculosis and Malaria (Lavis & Panisset, 2010)—which indicate that evidence briefs and their influence provide a fruitful area of study.

In light of the need for a better understanding of evidence briefs and their influence on the policy process, this study aimed to answer two questions: Whether and how have evidence briefs prepared for priority policy issues influenced (or not influenced) policymaking processes in different contexts and for different issues. Following these questions, the main objective of this study was to qualitatively assess the processes through which evidence briefs have either influenced (or not influenced) the policy processes surrounding the policy issues they were developed to address, as well as the factors underlying these processes and their related outcomes. In particular these were studied for policy

issues where both the issues addressed and the contexts in which the briefs were produced vary.

Methods

We adopted a multiple case study design to address our objective (22). The case study method was chosen because it is optimally suited to answering questions that: 1) seek to answer "how" and "why"; 2) are interested in a phenomenon that is best studied within its own context because of the belief that this context is highly influential; and 3) do not have the option of manipulating the behaviour of those involved or the variables likely to be influential(22-24).

Defining and sampling the cases

The cases (i.e. unit of analysis) in this study were defined as "the policy processes related to a policy issue for which an evidence brief has been prepared". We first sought to fully understand all of the factors that influenced the policy processes studied, and then sought to determine whether and how the evidence brief prepared by the KT platform in that jurisdiction influenced the policy process under investigation. We used the term "policy process" to refer to any or all of the stages included in the "stages heuristic" model of the policy process, and each process was studied holistically (25);(26).

Four cases were sampled from two sites (countries), with two cases sampled from each site. The countries chosen as 'sites' were Uganda and Zambia, as they met the following pre-defined criteria: 1) each had a KT platform that was

operating for at least 1 year; 2) the KT platform within that country produced at least two evidence briefs as inputs into two deliberative dialogues for two different policy issues at the time of sampling; and 3) English was the official language of the country. This selection strategy was used as a way to ensure that there would be appropriate cases to sample, and that similar colonial heritage, economic situations, and health challenges existed in selected cases, allowing us to focus on the influence that different factors related to the policymaking process had on outcomes of interest (see Hacker, 1998 for an example). Other countries considered but that didn't meet this criteria at the time of sampling were Burkina Faso, Cameroon, Central African Republic, Ethiopia, and Nigeria. The two cases sampled in Uganda were the policy processes related to access to skilled birth attendance and task-shifting to improve maternal and child health. In Zambia, the policy processes related to health human resource retention strategies and strengthening the mental health system were sampled[*].

Data sources, sampling and recruitment

Data were collected from the following sources to develop comprehensive accounts for each of the cases under investigation: key informant interviews, media, published literature, policy documents, archival records, and grey literature related to each of the cases.

The process of sampling and recruiting key informants proceeded in several stages. First, the participant list of each deliberative dialogue convened

[*] Note that the issue of strengthening the mental health system in Zambia was defined broadly in the brief prepared for this case, as such the general reference to "strengthening the mental health system" is used throughout this study.

related to the sampled cases was used to generate a sampling frame of potential key informants. Those in the sampling frame included the range of policymakers and stakeholders that KT platform identified as being involved in or highly likely to be affected by decisions made about the priority policy issue, and who read the evidence brief and attended the deliberative dialogue about the issue. Next, purposive sampling that sought to achieve maximum variation was employed to ensure a range of key informants was sampled based on their position (i.e. a mix of policymakers, stakeholders and researchers). A combination of emailed invitation letters and follow up phone calls was used to recruit key informants (see Appendix 2 and 3 for templates used). Key informants were also asked in interviews to refer the investigator to other policymakers, stakeholders and researchers that might provide helpful insights about the case. These sampling stages proceeded alongside preliminary stages of analysis and once the principal investigator (KM) felt that no additional insights were emerging during interviews, additional sampling and recruitment stopped for that case. All interviews were semi-structured, face-to-face, and based on the interview guide included in Appendix 4 and conducted by the principal investigator (KM). All interviews were recorded using a digital audio recorder, and recordings were complemented with notes made during and immediately after each interview.

Data for the media analysis were obtained through electronic searches of the Lexis Nexis Database, and covered all years for which newspaper articles were indexed up to and including 2012. Searches were conducted using variations of keywords that were included in the title of each of the evidence briefs prepared

for the sampled cases (e.g. “task shifting” or “task shift”), and all major newspapers in the country that were archived in Lexis Nexis were searched for all archived years (although, for both countries this was only 2010 to the present). All retrieved articles were exported as text into Microsoft Word documents. A literature search was conducted in PubMed for published articles that were relevant to each case using variations of keywords that were included in the title of each of the evidence briefs prepared. Finally, policy documents, archival records and grey literature (e.g. reports) that were related to each case were identified and obtained through ongoing stages of purposive sampling that were underpinned by referrals from key informants, through hand searches of the reference lists of the evidence briefs prepared for each case, through hand searches of government and intergovernmental organization websites, through Google searches, and through themes emerging during various stages of the analysis. Details of the approach to sampling and search strategies utilized related to these sources are included in Appendix 5. All collected data were transferred to NVivo 10 qualitative analysis software, which was used to organize the case study database and to undertake coding and analysis. Each interview audio file was listened to several times and transcribed into a detailed summary that incorporated notes taken for that interview using Microsoft Word, and all other data sources (i.e. newspaper articles, policy documents, and literature) were converted to either a PDF or Word so that they were in a useful textual format.

Data analysis stage 1: Developing a comprehensive understanding of the many factors that influenced the policy processes studied in Uganda and Zambia

Data analysis was approached in two separate but inter-related stages. In the first stage, the policy process related to each case was analyzed as a whole in order to develop an understanding of the historical and contextual factors that explain whether and how the issue has risen to the policy agenda in the country, and also to highlight factors that explain how and why a particular policy decision was (or wasn't) made in the country related to that issue. Given the complexity of the policy process and the relatively narrow focus that this study has on one particular input into this process (i.e. evidence briefs), this stage was a necessary analytic first step in addressing the study's objective of determining evidence briefs' influence on this process. This is because a comprehensive understanding that takes the many *other* influential factors into account is the only way to effectively tease out any of the nuanced influences that an evidence brief may have had on its own. This stage of the analysis was informed by, and organized according to, two particular theoretical frameworks. These frameworks were adopted to ensure that we could develop an understanding of the policy process in a way that could be reported in a compelling (and logical) way. This was particularly important given the extensive data that were collected.

The first framework adopted was Kingdon's agenda-setting framework, often referred to as the "three streams", which provided a useful approach to explain how and why the priority issues that underlie each case in this study became issues that policymakers were paying attention to, or making decisions about in each of the four cases (27). This framework posits that the government's agenda is influenced by three streams: problems, policies and politics. The

problem stream includes factors such as high profile focusing events, feedback from programs and policies, and indicators that can signal a problem exists. The policies stream is characterized by an ongoing cycle of discussion and policy development in which policy options are constantly floated among policymakers, stakeholders and researchers, and recombined in ways that make them feasible solutions to problems that exist. In the politics stream, changes in the balance of organized political forces, as well as important political events (such as election cycles) can also be influential in determining agendas. Issues can rise to the governmental agenda—that is, the list of issues that are receiving attention at any given point in time—as a result of events in either the problems or politics stream. Events in these two streams can also open windows of opportunity within which issues can be pushed higher on the agenda. In the event that either of these factors open a window of opportunity, a willing policy actor or group of actors (i.e. a policy 'entrepreneur') may be motivated enough to couple the problems and politics streams with a viable set of solutions and push the issue higher onto the decision agenda in the country. Issues on the decision agenda include those that are up for an active decision, at which point they can either progress to the stage of policy development and adoption, or be constrained by factors that reduce the prospects for policy reform and result in "no go" decisions.

The second framework adopted helps to explain why and how policy decisions are (or are not) made within a particular context by focusing on three groups of influential factors which are often referred to as the "3is": institutions, interests and ideas (28-30). Institutions include factors such as government

structures (e.g. whether policymaking happens within a unitary or federal state), the legacies of past policies which can shape the policy process by creating incentives and giving particular political actors access to more or less resources than others, and also by creating particular policy networks that can determine who has access to and power within the policy process (31;32). The interests category captures the characteristics of political actors (e.g. traits of interest groups, civil society and legislators), and helps to explain whether they win or lose as a result of a given policy and by how much (33;34). Ideas include things such as the societal values that characterize a particular policy arena (e.g. beliefs about what ought to be), as well as research evidence and/or tacit knowledge about a particular policy issue (e.g. knowledge about what is)(28;35). The framework also takes into consideration what are often referred to as "external events", which include events such as economic downturns, or the outbreak of a disease pandemic.

Using these two frameworks as guides, a "pattern matching" analytic technique was used, where empirically based patterns emerging from the data were compared against the patterns predicted by the guiding theoretical frameworks described above (22). This was achieved by first analyzing each data source separately in NVivo, and inductively coding them based on the themes emerging from each source (e.g. interviewees suggesting that physician specialists do not support task-shifting). Next, the elements of each framework were used to organize all codes that emerged from all data sources so that each coding category included all of the insights that emerged from the range of data sources used in

this study (e.g. interview data and published literature that highlight specialists' opposition to task-shifting were placed in the "interests" category of the "3i's" framework). Each group of codes was then compared with each other to identify whether an adequate level of understanding had been developed for each case. In the event that any aspects of a case seemed to be underdeveloped or unclear, the original data were revisited to try and develop a more complete understanding Finally, the coding structure was used to synthesize all data in the form of a written case (including a timeline of key events) and summary tables of the factors that were important in explaining each case.

Data analysis stage 2: Determining whether and how evidence briefs prepared for priority policy issues influenced the policy processes in each case

The second stage of the analysis sought to focus on whether and how evidence briefs prepared in each of the cases studied influenced the policy process. By developing a comprehensive understanding in stage 1 of the many influential factors *other than* briefs that influenced the policy process, it become more feasible to effectively tease out any of the nuanced influences that a specific evidence brief may have had on its own, as it provided a detailed picture of how each case unfolded over time.

In this stage, evidence briefs were considered to be one input into the policy process among many and, prior to analysis, members of the investigative team conceptualized the different pathways through which a brief might influence on the policy process. The process conceptual work was carried out

during a series of face-to-face meetings followed by a workshop to solicit feedback from experts before the second stage of analysis (May 2013). This conceptual development process yielded two potential pathways of influence (see Figures 1 and 2) that were used to guide the second stage of analysis.

The first pathway shown in Figure 1 is referred to as the "longitudinal" pathway. It conceives of evidence briefs as an intervention that, when prepared by a KT platform and used as an input into a deliberative dialogue, may influence one or more of the institutions, interests and ideas within the "3is" framework and thus influence the policy process by initiating changes in these factors over time. This influence is longitudinal in nature because a brief prepared for a given issue at T_1 and used as an input into a dialogue may provide information that sets in motion a series of shifts or changes to extant institutions (e.g. by initiating a shift in the structure of policy networks, including who has direct access to decision-making authority), interests (e.g. by influencing a shift in the positions held by interest groups about a particular issue) and ideas (e.g. by influencing a shift in the values and beliefs held by policy actors, or enlightening policy actors with new information about what is). These changes in the institutions, interests and ideas in a given context may then, in turn, determine the outcome of the policy process in the future (at T_n). These changes are gradual and cyclical rather than linear, and can shape political factors at T_n through ongoing feedback at multiple time points between $T_1$and T_n (31). While these influences on the policy process itself may not be immediately observable, they can help to inform the

development of hypotheses about how they might unfold in the future, given changes in the "3i's".

The second pathway is shown in Figure 2 and is referred to as the "cross-sectional" pathway. It positions an evidence brief as an intervention that, can influence outcomes of the policy process more directly by interacting with existing institutions, interests and ideas. In particular, evidence briefs that are prepared at T_1as research evidence constituting "ideas about what is", may interact with institutions (e.g. by providing clear solutions to an actor that has a privileged position in existing policy networks), interests (e.g. by providing information that helps to bolster the position held by a particular interest about a given issue while downplaying others), and ideas (e.g. by reinforcing policy actors' beliefs, values and knowledge about what is) to influence the policy process at T_1. The influence that these interactions have on the policy process are more likely to be proximate, and thus observable empirically within the bounds of a case study, given they interact with existing "3i's" factors to influence outcomes. While it is likely that these two pathways are not entirely mutually exclusive, we considered them separately in our analysis to ensure conceptual clarity and to allow for a manageable data analysis processl.

Stage 2 proceeded in multiple steps, beginning with memoing during initial data collection to develop a list of outcomes that were observed during data collection. This list was revised several times throughout data collection and analysis. Next, the case study database was analyzed and coded based on the emerging list of outcomes. Once the data were organized based on these outcomes

independent variables drawn from the "3is" framework and that appeared to play a role in determining that outcome were used to further assess and organize the data. Theoretical patterns were developed using the codes, and then tested against the data again to ensure rival explanations could not be developed. The data were revisited several times to confirm the findings. Finally, the results were considered in light of the accounts of the policy process developed in Stage 1, to ensure that both sets of results were complimentary and not conflicting .

Ethics approval was obtained from the McMaster University REB (Hamilton, Ontario), the Makerere University College of Health Sciences Ethics Review Board (Kampala, Uganda), and ERES Converge Ethics Review Board (Lusaka, Zambia) prior to data collection.

Results

Over the course of the study, 48 key informant interviews were conducted across the four cases, which included: 11 related to the issue of skilled birth attendance in Uganda; 15 related to the issue of task-shifting in Uganda; 10 related to the issue of health human resources in Zambia; and 12 related to the issue of strengthening the mental health system in Zambia[†]. A wide range of newspaper articles, policy documents and literature was also analyzed (the details of which are provided in Appendix 5). The insights drawn from these sources during the analysis enabled comprehensive accounts to be developed that highlighted the factors that were associated with each issue's position on the

[†] Note: Some individuals in Uganda and Zambia were interviewed as key informants for both cases sampled within the country

agenda, as well as the factors that determined whether and how policy choices were made related to each issue within each setting. They were also used to develop accounts of whether and how evidence briefs influenced each policy process sampled in the second stage of analysis.

Our analysis found that, in 2 of the 4 cases studied, the issue had held— and continues to hold— a steady position on the governmental agenda for many years. This was the case for skilled-birth attendance in Uganda, and health human resources in Zambia. While in the case of task-shifting in Uganda the problem underlying the issue was on the governmental agenda for many years due to its linkage with maternal and child health, it emerged as a solution relatively recently in the country. These cases all contrasted with the case of strengthening the mental health system in Zambia, where the issue was found to be one that has been neglected for decades, only having had a brief appearance on the governmental and decision agenda in recent years. Three of the four cases were also associated with "no go" decisions. That is, no discernible policy decisions were made once the issue was on the decision agenda. A "go" decision was only observed in one of the cases (human resources for health), and this consisted of three separate but related sub-decisions. There were several institutional, interest-related and ideational factors (as well as external events) identified to explain these observed outcomes, which are summarized in Table 1. In the remainder of this section, detailed accounts of the factors that influenced agendas and reduced the prospects for (or facilitated) the introduction of proposed policy solutions in each of the four cases are presented in turn. Tables 2-9 provide summaries of

these factors for each of the cases, as well as a timeline of key events related to each case.

Case #1: Ensuring access to skilled birth attendants as a solution to maternal and child health problems in Uganda

The issue of ensuring access to skilled birth attendants in Uganda is one that has been explicitly linked to, and embedded within, the rise and sustained focus in the country on improving outcomes related to maternal and child health (and in particular the high rates of maternal and child mortality). This issue first reached the governmental agenda in the country as an acute awareness of the problems related to maternal and child health began to take root in the mid and late 1980s. It was in 1985 that the World Health Organization published maternal mortality statistics for the first time, indicating that a half-million women were dying across the globe annually as a result of obstetrical complications during delivery (36). Given these numbers, international advocates from the research community began promoting a new vision that integrated the longstanding dominant focus on the health of children in LMICs with the health of mothers, and in 1987 the high-profile launch of the Safe Motherhood Initiative helped propel the problems associated with maternal and child health into the international health mainstream (36). At the same time, the Government of Uganda also began monitoring and reporting country-level statistics related to maternal and child health every five years through the introduction of the Demographic and Health Survey (37-44). These numbers also contributed to

highlighting the high maternal and child mortality rates in the country, which contributed to heightening and sustaining the problem on the governmental agenda in the years that followed.

As awareness of a problem grew in the late 80s and early 90s, two major transitions unfolded in the politics stream that helped provide the issue with the optimal political context within which to gain traction in Uganda. First among these key transitions in the politics stream was the increasing alignment of the positions taken by the World Bank, the World Health Organization, UNICEF, UNDP and UNFPA around the issue of maternal and child health. The shifting of these international interests initially became visible at the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women that was convened in Nairobi in 1985, which resulted in international consensus on the need to consider women in all policy domains. It also led to the establishment of the Safe Motherhood Inter-Agency Group in 1986, the body responsible for launching the Safe Motherhood Initiative a year later, and who remained an influential coalition of interests throughout the 1990s and early 2000s (45). Given the influence that these international actors (and in particular the World Bank) had on health policy development within Uganda during this period through imposed loan conditionalities, the alignment of influential international policy actors on a single issue meant that domestic policy processes would likely need to reflect these agreed upon priorities (46). The end of the civil war in Uganda, and the establishment of the National Resistance Movement (NRM) government led by President Yoweri Museveni in 1986 was the second

important transition to take place during this time, and it represented a critical juncture in the country. The new government replaced decades of political instability with a relatively stable transitional period that lasted until 1995, when the new constitution was developed and adopted. This latter confluence of events opened a window of opportunity within which problematic issues such as maternal and child health along with a set of appropriate solutions (which were often defined by external actors) could be pushed to the decision agenda in Uganda.

During the same period, several policies were discussed internationally and domestically within the confluence of problems and politics outlined above that provided options to couple with these other streams during this window of opportunity. Importantly, one of the core components of all of the policy solutions promoted was the need to ensure that women had access to skilled birth attendants at delivery. Access to trained and skilled attendants was touted as an important area of investment in the 1993 World Development Report (47), and was included in the "Mother Baby Package" which was launched in 1994 as a way to guide national-level implementation of the Safe Motherhood Initiative (48). It was during this time that important health sector stakeholders in Uganda including the Commissioner of Health Services worked together with the World Health Organization to couple problems and politics with the solutions promoted in the "Mother Baby Package"—which included ensuring access to skilled birth attendants—to push the issue to the decision agenda by holding a workshop in Uganda in late 1994(49). The result was the government of Uganda's domestic

commitment to and adaptation of the "Mother Baby Package" in 1995 as part of its National Poverty Eradication Action Plan, which adopted the title "National Strategic Plan for Safe Motherhood", and had an increase in deliveries with skilled attendants as one of its primary goals (49;50).

Within the context of Ugandan state building at the time, there were few institutional, interest-related or ideational factors that obstructed the process by which the new "National Strategic Plan for Safe Motherhood" would become a core strategy adopted by the Ministry to improve maternal and child health. In particular the nascent institutional structures which were still being developed in the early 1990s provided a flexible set of parameters that enabled this new policy framework to be introduced. Furthermore, support for the policy strategy by the range of influential international and domestic interests was clear during this time as outlined above, which further enabled this particular approach to be adopted at the time.

Since its initial rise to the decision agenda and adoption of Uganda's "National Strategic Plan for Safe Motherhood" in 1995, the issue of skilled birth attendance as a solution to maternal and child health problems has remained a core issue on the governmental agenda. This has been driven mainly by international and domestic publications which highlight indicators that signal a lack of progress made towards improving on poor maternal and child mortality and morbidity outcomes broadly (37-44;51-59), and on improving access to skilled birth attendants specifically (42-44;51;51;60;60;61;61). These factors have ensured that there has been a continuing awareness that problems related to

maternal and child health that were originally identified in the late 1980s and 1990s have not been solved in the country. For example, government documents that are published repeatedly show that births with skilled personnel have remained as low as 34% in the country for many years—a number which is considered a failure in light of the goal established in 1995 to improve this number to 50% (38-41;51;60;61). In addition to the reports and government documents that highlight these poor indicators, newspapers in the country are continually highlighting that at least 16 women are killed each day in the country during child birth—which has served to make the problem known among members of the public (62). This particular framing was often invoked by key informants in this study as well, with one stakeholder explaining how a particular narrative was used to present this number in a manner that people could relate to:

> *"...maybe the other reason is the issues on maternal health are so glaring. Having six women die, sixteen women die every day. Usually we use that analogy of the mini bus, whole mini bus, including the driver, all capsizing in a river every day…" (Stakeholder, International Organization).*

In addition to indicators within the problem stream, perceived policy and programmatic failures have contributed to sustaining the position of maternal and child health and lack of access to skilled birth attendance on the governmental agenda in Uganda. In particular there are three programmatic and policy failures which are often mentioned by health policy actors in the country. First, the government has continually been viewed as failing to retain skilled health workers in rural areas, which reduced the number of skilled workers available to provide care. Second, the decision to roll out the Enrolled Comprehensive Nurses training

program and reduce specialized midwifery training in 2003 has been viewed as a major source of failure. In particular, many have suggested that the emphasis this policy placed on ensuring the new cadre was positioned at lower levels of the health system to improve access to basic services around the country (60;61), resulted in a work force that lacks the fundamental specialty skills required to delivery core maternal and child health services. The training programs introduced have also been considered inappropriate given the realities in the communities they are meant to serve. One participant highlighted this factor during an interview:

> *"[The government's training policies] are not defining quality the way that the community defines it…[pregnant women] want you to receive them well, they want you to be very near, they want you to have open arms when they come to deliver, they don't want you to despise them…they want you to resolve the tension. So the TBAs call them names…personal pet names, they give them warm water, they give them black tea…they're nice. The way that they define the quality…that's why the TBA became such a big thing. Government and private sector have been 'competing' so to speak"* (*Stakeholder, Civil Society).*

Finally, the lack of a regulatory framework for private sector workers—namely traditional birth attendants (TBAs)—is also viewed as a core failure of the Ministry. Despite the increasing reliance on TBAs by women across the country, there are still no standards in place that dictate the minimum level of training nor the range of skills required among these or other private practitioners who assist women during deliveries. As a result, the quality and competency of TBAs across the country is not monitored, and although women may prefer to deliver with

them, deliveries with TBAs are not commensurate with the goal of access to "skilled attendants".

Events in the politics stream have also contributed to the sustained position of skilled birth attendance as a solution to maternal and child health on the governmental agenda in the country. In particular, international politics surrounding and related to the issue have persisted over time, which has solidified international and domestic political will related to improving maternal and child health and resulted in the further alignment of major interests. For instance, the Safe Motherhood Initiative continued to grow throughout the 1990s and early 2000s to become what is now known as the Partnership for Maternal Newborn and Child Health—a consortium of nearly 260 members representing influential stakeholders from the international community and from partner countries(45). Additionally, in 2000, the United Nations launched Millennium Development Goals 4 and 5, which focused on improving maternal and child health, encouraged global commitment to the cause and highlighted the need to ensure access to skilled attendants at birth. Additionally, regional meetings among members of the World Health Organization regional committee for Africa (such as that held in Brazzaville in 2004), and among the African Union at Summit meetings (e.g. 2005 in Botswana, 2009 in Ethiopia and 2010 in Uganda) confirmed African member states' commitment to the goals, while resulting in concrete political commitments towards the same as reflected in the development of regional strategies such as the Maputo Plan of Action (63).

In addition to the international events within the politics stream outlined above, politics within Uganda have also contributed to the sustained position of maternal and child health on the agenda, while continually highlighting the need for increased access to skilled attendants at birth. In particular, domestic media coverage regularly showcases President Museveni and the First Lady committing to making improvements in the country, and rhetorically linking this with the need to increase access to skilled birth attendants (64-66). Minsters of Health are also commonly profiled as champions of efforts to ensure progress on improving the situation (64-67). In all instances, representatives from the government are consistently portrayed as firmly establishing the issue of maternal and child health as a core policy priority, thereby reiterating the existence of political will to improve the situation within the country (68;69). Furthermore, the issue emerges as a regular fixture during election campaigns (70;71) and is regularly invoked as a core issue in budgetary debates by MPs, who often threaten to block parliamentary proceedings without additional resources earmarked for maternal and child health (72;73).

Given the extensive list of factors outlined in each of the problem and politics stream, the issue of access to skilled birth attendants is a constant on the governmental agenda in Uganda. Furthermore in the policies stream, international and domestic reports (42-44;51-61;74), research papers (75), and international conferences (36;63) have consistently served to promote discussion of policy options to ensure access to skilled birth attendants. One particularly important development was the promotion of the "Maputo Plan of Action" in

2006, which advocated the development of national roadmaps to roll out strategies to improve maternal and child health in Africa(63). Within this context of continued attention to the problem, associated political events and regular discussions about optimal policy options, the First Lady 'coupled the streams', and alongside representatives from the World Health Organization, publicly launched Uganda's "Roadmap to Accelerate the Reduction of Maternal and Neonatal Mortality and Morbidity" to push the issue onto the decision agenda again in 2009 (74).

However, despite the sustained position of the issue of skilled birth attendance on the governmental agenda in Uganda and its push to the decision agenda at this time, no clearly articulated policy decisions appear to have been made in the country specifically focused on ensuring better access to skilled birth attendants. Instead, there are ongoing commitments to ensuring access to skilled birth attendance occurring at regular interval in Uganda (68;76;77), without any real policy or programmatic developments that would serve to operationalized this in Uganda. And while there have been solutions proposed to address some of the perceived underlying causes of policy failures outlined above, many of these have failed to gain traction in the country as a result of the institutional factors, interests and external influences that exist.

One particular solution that is often proposed to address the problems associated with poor retention of workers in rural areas (which is linked to lack of access to skilled workers at delivery) is to focus on human resource retention strategies (51;61). However, these programs, which include such provisions as

increasing salaries and a range of other financial and non-financial incentives for health care workers, are constrained due to challenges related to the country's poor economic prospects (an external influence), which are often exacerbated by weaknesses in formal institutional capacity (an institutional barrier). In particular there are ongoing issues with suspected corruption in government ministries—a symptom of the fact that Uganda is still in a relatively early stage of developing its democratic institutions, rendering them more susceptible to such issues given capacity to stem such practices has yet to fully develop (78). This has resulted in both misappropriated funds, and donors withdrawing vital sources of program funding, which leaves the government with a budget that is not conducive to guaranteeing increases in health worker salaries and the provision of other incentives (79-81).

It is also proposed that a restructuring of training is necessary to overcome problems created by the Enrolled Comprehensive Nurses program in 2003, which would entail reintegrating specialty training in midwifery, as well as an increased amount of hands-on work that would function to ensure workers were trained with the needs of the community in mind. However, there are important institutional factors as a result of government structures in the country that prohibit this from happening. In particular the fact that training programs fall within the mandate of the Ministry of Education and not of the Ministry of Health creates a situation in which training reform would require coordination across at least two sectors. This separation of authority increases the complexity associated with the policy development process and creates a challenges for policy development.

Additionally, past policies have created a challenging political context within which to pursue this solution, due to the ways in which they have shaped the current balance of power among key interests. Specifically, the policy decision in the early 2000s to reduce the number of midwives in the country and redirect resources to the nursing profession has resulted in the reduced influence of their interests on the policy process, while increasing that of nurses—who were subsequently given their own directorate in the Ministry of Health after this decision was made. Any efforts to restructure current training programs towards more midwives would likely be met with opposition by a more politically influential nursing directorate, who may view this shift as the beginning of gradual reductions in what are already argued to be inadequate government allocations for their services.

Finally, it was suggested by some of the key informants in this study that there is a need to develop legislation to regulate and ensure appropriate skills among TBAs, who are providing services to many women in the country. However, this option is limited by the influence of dominant international interests who oppose deliveries with TBAs. In particular, the World Health Organization maintains a position against enabling TBAs for fear of worsening maternal and child health outcomes. As such, any regulation that acknowledges their role in the health sector, whether public or private, would likely be viewed as an affront to the World Health Organization's anti-TBA stance, and would not be in the best interest of the Ugandan government who require support from international organizations. For this reason, it is likely that there are also major

challenges to pushing forward legislation that explicitly serves to regulate TBAs in Uganda.

Overall, our analysis showed that despite its widespread support as a solution, its regular position on the governmental agenda and occasional rise to the decision agenda, no policy decisions have been made that are specifically targeted at increasing access to skilled birth attendants in Uganda. While there are options currently promoted to address some of the associated causes of poor progress, these have proven infeasible given institutional factors , the influence of powerful interests and poor economic prospects within the policy arena (see table 3). In particular, existing government structures create an institutional context that would require coordination across two ministries (the Ministry of Health and the Ministry of Education) if training programs were restructured in efforts to increase access to skilled birth attendants, which has made pursuing this type of reform challenging. Additionally, past policies have increased the influence of nurses vis a vis midwives in policy development processes in the country (another institutional factor), and nurses are not likely to support an expansion of midwives' responsibilities in maternal and child health programs despite the likely role midwives would have to play in ensuring access to skilled birth attendants (an interest-related factor). Furthermore influential international interests may have reason to oppose various regulatory measures if they involve acknowledging the role of traditional birth attendants. These challenges are compounded by Uganda's poor economic situation and recent funding withdrawals by important international donors. As such, it is likely that

deliberation among the many actors engaged in the policy development process related to this issue will continue until a set of options that are both technically feasible and politically viable emerge and consensus is reached.

Case #2: Task-shifting as a solution to problems associated with maternal and child health in Uganda

The idea of task-shifting—which can be defined as the "rational redistribution of tasks among health workforce teams with specific tasks moved from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make efficient use of the available human resources"(82)—also emerged as a potential solution within the context of the continuing problems related to maternal and child health in Uganda described above. As was the case with skilled birth attendance, continually highlighted problems ensured that the issue of maternal and child health was a staple on the governmental agenda in Uganda for years, and task-shifting also emerged as these problems were reported alongside the growing human resource crisis in the country (60;61;83). While the problems were established and widely known within the broader issue of maternal and child health, three key events—one of which was related to a new policy proposal in the policies stream that resulted in two subsequent political events—facilitated the rise of task-shifting onto the decision agenda as a potential solution in Uganda.

Prior to task-shifting being promoted as a policy solution in the context of maternal and child health problems, HIV/AIDs programs in many countries in

Africa (including Uganda) were using this approach to overcome human resources challenges with apparent success. These experiences culminated in an influential report published in 2008 by the WHO, alongside PEPFAR and UNAIDS, which outlined the achievements of the "treat, train, retain" strategy for ARV scale-up (originally introduced in 2006), and provided global recommendations for task-shifting (82;84). Given the success of this strategy in several countries, the guidelines published in the report promoted the approach for use within programs that aim to improve other areas of care, including maternal and child health, where a lack of trained health workers was also seen as a challenge (82). As a result, the policy of task-shifting became viewed as a legitimate and potentially feasible option for improving maternal and child health given both its success in other sectors and the support it found among several influential international interests (including WHO, PEPFAR, UNAIDS).

These key events in the policies stream resulted in two important developments within the politics stream that facilitated the rise of task-shifting to the governmental agenda as a solution to maternal and child health problems in the face of a human resource shortage. In particular, the alignment of interest in support of task-shifting unfolded rapidly in the weeks that followed the release of the WHO guidelines discussed above. First, the International Conference on Task-Shifting held in Ethiopia in January 2008 resulted in the Addis Ababa Declaration, which represented a commitment among member states in LMICs to prioritize human resource investments in line with the WHO task-shifting strategy (85). This high profile event signaled that there was significant momentum behind

the idea of task-shifting globally, and that member states were supported by important international interests. The second event was the 46th East, Central and Southern Africa (ECSA) Health Ministers' Conference the following month in Seychelles, where support for this strategy at the regional level was further solidified. It was during this meeting that the Minster of Health from Uganda, along with other ministers from the region, committed to improving maternal and child health through policies that include better guidelines and training for task-shifting by the year 2011. These two events not only served as a key forums in which interests became aligned on the issue regionally, it also served to pair the solution of task-shifting to the problem of maternal and child health which, as outlined above, was a constant governmental agenda item in Uganda.

In late 2009, a window of opportunity was opened to push the issue to the decision agenda in Uganda, when the 7th National Health Assembly was held with maternal and child health featured as one of the core themes discussed. While it isn't clear from the data analyzed in this study who among those in attendance championed the issue, members of the assembly 'coupled' ongoing problems related to maternal and child health with the solution of task-shifting, which resulted in its push onto the decision agenda. As such, a core resolution was passed to accelerate the strategy of task-shifting in the country(42).

However, despite the relatively rapid rise of task-shifting onto the decision agenda in Uganda, the influence of important regional and international interests fundamentally shaped how the policy process unfolded at the time, resulting in a failure to introduce any reforms in the country that would formally introduce task-

shifting as a strategy to improve maternal and child health. In particular, in November 2008, the ECSA Health Community College of Nurses met in Harare to discuss their apprehensions about task-shifting, stating that there was still much confusion about the approach within countries. Given the importance and influence of nurses in health systems in the region, and their potential role in task-shifting with respect to maternal and child health services, it is likely that this meeting served to stall hasty implementation of task-shifting policies in member countries. As an alternative, the College proposed that there was a need to undertake in-depth case studies of task-shifting to establish what is actually happening on the ground before making choices about what policy options ought to be pursued. The request to carefully consider what is meant by task-shifting in turn gained support from USAID who decided to fund a case study of task-shifting in Uganda—a country that many considered to be both supportive of the idea, and which had some successful experiences with task-shifting in HIV/AIDs programs. While the public position forwarded by the College was one that suggested a genuine interest in understanding more about task-shifting, the position could have also reflected the interest of nurses which would be threatened if ill-formulated task-shifting policies resulted in their expanded scopes of practice, without additional remuneration and support. In any case, the meeting in Harare had implications for the future of task-shifting in Uganda.

The influence that the position of the ECSA Health Community College of Nurses had (with financial support from USAID) on stalling any major reform in Uganda became clear during the operationalization of the resolution passed in the

7th National Health Assembly in 2009. Despite the original suggestion that there was a need to accelerate the strategy of task-shifting, the Ministry of Health eventually opted to adopt an approach that mirrored the suggestions forwarded by the ECSA Health Community College of Nurses the year before: 1) documentation of task-shifting initiatives, practices and their magnitude in Uganda; 2) drafting of a concept paper; and 3) consultations with stakeholders(42). These options were eventually taken up by the Ministry of Health and the human resources working group, but focused on generating more understanding and stimulating debate, rather than on pursuing concrete reform. As a result of this "no-go" decision, the issue of task-shifting retracted into a stage of discussion about the appropriateness of the approach, which led to its disappearance from the agenda. This is reflected by the fact that the issue was not mentioned in the Second National Health Policy published in 2010, less than a year after it was featured in the resolutions of the 7th National Health Assembly (86).

While the influence that the aforementioned interests had on stalling progression towards task-shifting reforms in Uganda in 2008 and 2009 is clear, there were (and still are) several other factors related to the institutions, interests and existing ideas in the country that likely served to reduce the prospects for accelerated task-shifting reform as well. First, the task-shifting approach as related to maternal and child health is often conceptualized with a component of additional training of human resources and a focus on developing better management and supervision. However, factors related to institutions—and in

particular the government structures in the country—make changes to the current training, recruitment and management regimen difficult. As was highlighted above within the case of skilled birth attendance, authority over the number of workers trained as well as the nature of this training resides within the Ministry of Education and not the Ministry of Health who have authority over health policy development in the country. Determining the appropriate balance of health worker positions in the sector is also subject to approval by the Ministry of Public Service and the Public Services Commission. After the passing of the *Local Government Act* in 1997, planning and supervision also involves several district administrative units which further complicate the decision-making context. As such, any proposed change to training and recruitment and management of lower cadre workers that may be promoted by policymakers at the Ministry of Health requires support from the range of administrative units within the health sector, as well as coordination and cooperation with other ministries—all of whom have their own priorities. As a result, the increased number of administrative layers required suggests that this aspect of task-shifting is unlikely to be adopted easily, which makes the option highly difficult to pursue in the Ugandan context.

A second aspect of the task-shifting option that is continually promoted is the development of more comprehensive legislation that can support expanded scopes of practice in Uganda. However, there is an array of influential professional interests beyond those mentioned earlier (namely nurses) that oppose task-shifting in general, which reduces the likelihood that the development of supporting regulatory legislation that facilitates task-shifting and expanded scopes

of practice for lower cadres of worker will be pursued. Physicians, and specialists in particular, oppose the idea of task-shifting, stating that they don't feel lower cadres of worker can do their jobs appropriately even with more training. In one interview, this sentiment was vehemently stated by a researcher who had been trained as a specialist physician:

> *"To expect a nurse to do caesarian section, you are just murdering the mothers, as far as I'm concerned"(Researcher trained as medical specialist)*

While this study did not uncover explicit proposals within task-shifting discussions to shift complicated obstetric surgical procedures to nurses in Uganda, this synecdotal sentiment (which was invoked regularly in interviews conducted within this study) likely reflects the interest specialist physicians have in maintaining control over the range of services that have traditionally fallen within their scope of practice. Nurses also oppose task-shifting for the same reason when lower-level workers are considered for their positions, and one participant in this study highlighted this as well:

> *"The barriers, of course…some of the people that want to protect their areas. Like if the doctors are not so pleased about letting clinic officers do surgery. That will take some time. The nurses, most of them are skeptical about other people injecting for family planning"(Stakeholder, Professional Association).*

Additionally, many of those interviewed in this study suggested that nurses, as well as other lower cadres of worker are likely to oppose task-shifting on the grounds that they will receive responsibility for additional work, but

without additional pay. This is particularly true in the context of Uganda, where the government continually struggles with ensuring current staff are adequately compensated(87).

Finally, there are also ideational factors that challenge the option of task-shifting more generally within the health sector in Uganda. Specifically, it came to light that those in the Ministry of Health are divided on whether they believe task-shifting is an optimal solution. Importantly, senior policymakers don't generally believe task-shifting is an appropriate long-term solution that can be employed to deal with maternal and child health problems in the country. As such, the likelihood that someone at any level in the Ministry will initiate a process for developing a cabinet proposal that can inform legislative reform is low. This is further complicated by the widely held belief that task-shifting is already happening in the country informally (83;88), and as a result the Ministry can take a hands-off approach and focus on other, more pressing issues.

The beliefs held by members of the public are also a potential barrier. In particular, there is a general expectation that certain cadres of health worker ought to deliver particular services (88). For example, women who require emergency obstetric care may not seek care from a clinical officer if they believe that only physicians can deliver this service. As such, the difficulties that would arise with the introduction of a new task-shifting policy due to prevailing public beliefs may result in the perception among policymakers in the Ministry that chances of this particular option achieving its goal are low. This factor reduces its attractiveness as a policy solution among those looking for tractable options that will result in

positive outcomes. Lastly, there is a perception among many researchers and policymakers that there is a lack of research evidence that clearly supports the option of task-shifting for maternal and child health, and particularly for obstetric care. This also reduces the likelihood that the development of legislation to support this option will be pursued.

In sum, despite the rapid rise of task-shifting to the decision agenda in Uganda in 2008 and 2009, the influence of interests, and in particular the ECSA Health Committee College of Nurses, appears to have resulted in the initial loss of momentum of the issue. Furthermore, the influence of existing institutions, interests (other than the College of Nurses mentioned above) and ideas in Uganda have also likely served to reduce support for task-shifting as a viable policy solution to improve maternal and child health (see table 5). Specifically, task-shifting policies in Uganda would require elements focused on training and human resources management, which implies the involvement and input from multiple ministries and various levels of government. These types of government structures make it much more difficult to pursue policy solutions. Interests such as the Ugandan medical association have been found to oppose task-shifting policies given the potential for them to lose elements of their practice, while lower cadres of health worker oppose any swift task-shifting initiatives to them for fear of being allocated more work without a similar increase in pay. Ideas, which include a general sentiment among members of the public that lower cadres may not be optimal for maternal and child health services, and among policymakers who don't wholly agree that task-shifting is an appropriate long-term solution have

also constrained the development of policies related to task-shifting. There is also a lack of ideas in the form of research evidence that supports the benefits of task-shifting, and a widespread notion that since task-shifting is already happening informally in the country, there is no need for a more formal policy.

In the face of these substantial challenges, it is perhaps no surprise that the option of task-shifting wasn't pursued further after its initial rise to the decision agenda in 2008 and 2009. The result is that there is currently no policy on task-shifting in Uganda, nor are there guidelines specific to the role it can play in improving maternal and child health services with respect to ensuring better antenatal and perinatal care (89). While the ministry has recently moved forward on shifting the delivery of injectable contraceptives to lower cadres of worker within family planning programs (90), no progress has occurred in the development of policies related to task-shifting for core services related to safe deliveries.

Case #3: Health human resource retention in Zambia

The policy process related to health human resource retention in Zambia has roots in the early years of the country's multi-party constitution. It was during this time, after years of what is often referred to as Zambia's implementation of African Socialism (91), that severe economic difficulties and the resultant political instability it brought led to the end of Kenneth Kaunda's "one-party state" and the introduction of multi-party elections. As was the case with many countries in Sub-Saharan Africa in the early 1990s, procuring much needed

international aid from the World Bank and International Monetary Fund to keep the economy afloat in the years that followed the establishment of the new government came with conditions. As such, the new administration, led by the President Frederick Chiluba introduced a range of structural adjustment policies, including the Health Sector Reform Program in 1992 and Public Service Reform Program in 1993. Both of these programs focused on retrenchment—and in particular on shrinking the number of employees on the government payroll. The urgency behind this strategy manifested itself in a hiring freeze coupled with voluntary separation packages that were offered to incentivize health workers to retire early.

These policies continued throughout the 1990s, and the number of health workers in the country was reduced dramatically as many left their posts without new workers hired to replace them. This coincided with the devastation inflicted as a result of the HIV/AIDS pandemic, which hit Zambia particularly hard. By the end of 2002, 16 per cent of the Zambian population was living with HIV, and HIV/AIDS had become the leading cause of death, responsible for killing nearly 750 000 in 2003 alone (92-94). As such, the shrinkage in the health workforce that was pursued through the structural adjustment policies of the early 1990s coincided with the unexpected loss of a large proportion of the workforce as a result of HIV/AIDs, which set in motion a health human resources problem that would become increasingly noticeable in the following years. This eventually spurred its rise to, and frequent position on, the governmental agenda in Zambia

during the mid and late 2000s, with two instances in which it was pushed to the decision agenda in the country.

Within the problem stream, the issue of human resources management first began to emerge as a challenge in 2000 with the release of the National Health Strategic Plan, in which the Ministry of Health outlined the need for more dedicated efforts to manage the health workforce (95). However, that a problem existed became much more apparent in the wake of a decision made by the new Zambian administration led by President Levy Mwanawasa, who introduced the rapid scale up of HAART programs to combat the devastation inflicted by HIV/AIDS in 2002—a decision which had the effect of re-distributing the already sparse healthcare workforce in the country towards HIV/AIDs programs, and away from other public healthcare services. By 2003, the shortage and poor distribution of health workers started to raise red flags to policymakers at the Ministry of Health and was brought to light in the Mid-Term Review of the National Health Strategic Plan, which recommended the establishment of a task force to develop an emergency rescue plan (96). The problem was reframed as a full-blown crisis in the country in 2005, when the Ministry of Health reported indicators in their National Health Strategic Plan 2006-2010(97), which helped to propel the issue to the governmental agenda by exposing a severe shortage of health workers in all areas of the system. In particular, the report showed that the health system was operating with less than 50% of the required workforce proposed in World Health Organization guidelines (97;98). The underlying causes posited were many, but four major ones were highlighted most often, including:

1) brain drain internally to other sectors, such as the private health sector, as well as externally to other countries in the region; 2) the attrition of health workers as a result of deaths (and in particular from the HIV/AIDs pandemic); 3) the negative consequences of the PRSP policies of the early 1990s which promoted resignations of the health workforce; and 4) an imbalance of workers in the urban (vs. rural) areas(98-100). These causes were popularized (if not entrenched) among various policy actors in the system, and this multifaceted conception of the problem and its causes remains now, with one participant in this study providing a particularly succinct account of the situation:

> *"If you compare the numbers that are getting out of the system and the numbers that are being pushed back into the system, the number of people leaving is much, much larger than the number of people who are joining the system. So it's attrition through brain drain, through HIV-AIDS, this is the number that is being drained…And I think issues of brain drain also includes people leaving the government and joining the private sector, and I think that's what drove policy makers to think, "how can we get our staff back," or "how can we retain the staff that are [leaving] the system."" (Researcher)*

As factors in the problem stream led to the issue being viewed as a major multifaceted challenge among various actors in the policy arena, several policy options to deal with the human resources situation in Zambia were simultaneously being discussed and considered. Most notably was the pilot project which became known as the "Zambian Health Worker Retention Scheme", an initiative of the Republic of Zambia and Dutch Government that was originally implemented in 2003 to remedy pending health human resources shortages that were expected once doctors from the Netherlands were withdrawn as part of a

planned exit (101). Although the scheme only focused on doctors, results from the pilot showed promise in its first two years, which helped to establish it as a potentially viable option in the country (101). During the same time, the government was in the process of developing a new human resources policy under the Medium Term Pay Reform, which was a draft by 2002, and then integrated into the reincarnation of the Public Sector Services Reform Program that was published as the "Government Strategy and action Plan for Public Service Management for Capacity Building for the Period of 2004-2008" in 2003(97). The strategy established the need for pay reforms and new salary structures, and sensitized those in the Central Bureau of Health, the Ministry of Health and the Cabinet Office about staffing reform needs in the health sector.

The issue initially made its way to the decision agenda in August 2005 under the leadership of President Mwanawasa who, in a window of opportunity created in the politics stream by the upcoming election year, directed the Ministry of Health to develop the Human Resources for Health Strategic Plan which would serve as the framework for addressing what was now conceptualized as a full-blown crisis over the following 10 years (98). The importance placed on this request by the President also likely contributed to the placement of the human resource crisis as the country's top priority in the National Health Strategic Plan, which was published within weeks of the human resources plan (97). While the long-term plan outlined in the new document indicated a comprehensive approach that would include improving conditions of service and management practices through a multi-faceted and multi-sectoral strategy, the options that were adopted

at this time were streamlined in the initial years of the program. The major focus at the outset was to get new payroll positions approved for doctors, nurses and clinical officers by the cabinet office. This would be followed by focused efforts to recruit and retain more workers in these categories, particularly in rural areas (98).

The decision made, and the particular approach adopted in 2005, did not face any factors related to existing institutions, interests or ideas that reduced the prospects for its adoption at the time. However there were some factors related to these aspects of the political context that helped to facilitate its adoption. First, with respect to institutions—and in particular the government structures in Zambia— the re-centralization of planning for health human resources as a result of the repeal of the 1995 *Health Services Act* concentrated authority over decisions related to the issue. This gave the Ministry of Health and the Central Bureau of Health (the latter of which is responsible for administration of the policies designed by the former) concentrated decision-making authority over recruiting, retention and remuneration of the health workforce, enabling the new strategic plan to be adopted and introduced without encountering any administrative barriers. Second, past policy decisions, and in particular the Public Service Reform Program from 1993, had resulted in several negative outcomes in Zambia's health system and coupled with the HIV/AIDs pandemic, led to the disintegration of the workforce in the country. At the time the new strategic plan was introduced, the years of hiring freezes and retrenchment were explicitly linked with many more harms than benefits in the minds of many policymakers in

the country, and its reversal was likely viewed as a necessity. As such, the option of increasing the number of government positions and developing a strategy to recruit and retain more workers was interpreted as being an optimal policy option to address the crisis.

The option was also supported by influential interests that make decisions related to the health system within relatively closed policy networks in the country (102). This included the Ministry of Health, as well as international actors such as the Dutch Government and the World Health Organization. In particular, the recruitment and retention of health workers had been a primary focus of the Dutch Government who had been working in the country for years alongside the Ministry of Health, and recently funded the Zambian Health Workers Retention Scheme pilot (101). Furthermore, addressing human resources shortages was gaining increasing traction internationally. During the time of this decision, the WHO was in the process of preparing the 2006 World Health Report "*Working Together for Health",* which drew on lessons from the Zambian situation, and in particular the policy options that were adopted to address the crisis (103). The options promoted in the strategy also appeased other important interests by initially focusing on the three most important cadres of health care professional in the country: doctors, nurses and clinical officers. This reduced any potential sources of conflict from those who are integral to health services delivery in the country. Lastly, ideas in the country about what is were supportive of the options adopted. In particular, the focus on recruitment and retention in the strategy developed by the Ministry of Health was seen to be firmly supported by the

results of the recently published review of the Zambian Health Workers Retention Scheme, which showed a significant increase in enrollment among the doctors targeted by the scheme in the pilot districts (101).

In the years that followed the introduction of the Human Resources for Health Strategic Plan, the issue of human resources retention remained firmly on the governmental agenda in Zambia. As could have been predicted at the time, one major reason for this was the fact that the issue was deemed the country's main priority in the National Health Strategic Plan that guided the country's health policy until 2010 (97). There were also major factors in the problems stream that were continually highlighted as a result of perceived programmatic failures in the years that followed the adoption of the strategic plan. In particular, findings from early evaluations of the Human Resources for Health Strategic Plan were released, with one report showing that the country would never achieve the goals set out in the strategy without increasing the number of graduates it was training domestically(104). Additionally, there was an increasing international awareness of the human resources crisis in Africa, which picked up momentum with the publication of the 2006 World Health Report and added to the international community's perceptions of human resource problems, serving as a backdrop for the issue as it unfolded in Zambia (103).

It was 2008 and 2009 that saw the issue emerge again onto the decision agenda, with several political events opening up a window of opportunity that resulted in decisions to accelerate the Human Resources for Health Strategy. In particular, the failing health and eventual death of President Mwanawasa during

mid-2008 forced an emergency election to name his successor. A politically charged campaign leading up to an October 2008 election followed, which featured health care as a key issue amid increasing public discontent with services. The public pressure to improve health care and the influence this had on election promises was highlighted by one participant from the Ministry of Health:

> "*I think outcry from, I think the public, the general public has been one of the key elements that has made government sit up. When we get, for example, elections coming up, health becomes one of the key issues" (Policymaker, Ministry of Health).*

It was during this confluence of political events and opening of a window of opportunity that the Ministry of Health under the leadership of Minister Sylvia Masebo proposed the National Training Plan. This policy took recommendations from several sources, including the report that established the need to increase training outputs (104), and announced the government's intentions to double the number of health workers graduating in the country by 2013 (105). A second major proposal to accelerate the human resources strategy through an expansion of the Zambian Health Workers' Retention Scheme was initiated in early 2009 by the newly elected President Rupiah Banda, during his address to the National Assembly. Having been Vice-President to the late Levy Mwanasawa, the newly elected executive decided to reiterate his government's emphasis on human resources for health by announcing the expansion of the scheme to other cadres of worker and to include additional incentives to support those working in rural areas —a policy solution that had been piloted two years prior (106). These solutions also mirrored many of the of the policy options discussed to address the human

resource crisis in Africa just months earlier at two high profile international conferences: The First Global Conference on Task-Shifting in Addis Ababa in January 2008 and the First Global Forum on Human Resources for Health held in Kampala in March of the same year. These events brought together policymakers, stakeholders and researchers from across the continent (including representatives from Zambia), and while no explicit linkage can be drawn from the solutions floated here with the options proposed and adopted in Zambia, it is likely that the solutions proposed to address the problem in both of the decisions outlined above were influenced to some extent by what was learned at these events.

At the time, the two solutions initiated did not face any factors related to the institutions, interests and ideas that reduced the prospect of being introduced. As they were essentially incremental changes to an existing framework established years earlier in the Human Resources for Health Strategic Plan (98), the same institutional, interest-related and ideational factors that facilitated the original adoption of the plan as laid out in 2005 worked to buttress these decisions as well. Furthermore, that the Human Resources for Health Strategic Plan that was introduced earlier and had been operational for nearly four years likely meant that administrative structures in the country were built up to facilitate and further support this policy over the years. This influence of past policies is also a plausible reason for the ease with which the decisions proposed by the Ministry and the President in 2008 and 2009 were easily adopted. As a result of these facilitating contextual factors, in March of 2009, the government launched what

was labeled as "Phase III" of the Zambian Health Worker Retention Scheme which effectively formalized these aforementioned decisions.

Since the decisions made in 2008/09, the issue of human resources remained on the governmental agenda as a result of ongoing factors in the problem stream. In particular, feedback from programs that were introduced to remedy the situation under the umbrella of the Health Human Resources Strategic Plan continues to signal that there has been less than optimal progress in improving the situation. *The Sixth National Development Plan*, for instance, suggested that Zambia continues to be in a crisis situation, and that only an additional 5000 frontline health workers were added to the system since 2005 (107). Furthermore, the *National Health Strategic Plan 2011-2015* reported that, despite improvements, the health sector was still only functioning with a mere 57% of the recommended health workers required (108). The problem is now being framed as a failure to implement the first phase of the Human Resources for Health Strategic Plan, which stemmed from inadequate funding and poor outputs from training institutions (109). Others have also suggested that there is poor capacity at the Ministry to manage human resources effectively in the first place: a problem which stemmed from years of restructuring through cycles of decentralization and recentralization, as well as the emphasis throughout the 1990s not on management of health workers, but on the down-sizing of the workforce (106). Problems have also been highlighted through feedback from the general public about the realities of the ongoing crisis:

> "*We live these things, we go to the hospital and there is no doctor. Where the doctor has left the country and has gone somewhere else…so it's not an issue of hearing it from someone, but its living them, living through these problems, we've seen them. We see them every day […] my wife, some two weeks ago had a very unfortunate thing where she had a miscarriage […] she went there at six o'clock, the only time she saw the doctor was [4pm]. What she was told was that the doctor had emergencies and the like, and for our situation is that we went through high costs where we paid more than the usual, and despite paying these costs the doctor was not there….and he was alone at a big hospital in [name of city anonymized]".(Stakeholder, Civil Society)*

These factors in the problem stream have also coincided with the continued development and promotion of new solutions such as the release of the second phase of the Human Resource for Health Strategic Plan in 2011, which has suggested that more emphasis ought to be placed on improving outputs from training institutions, in addition to maintaining increasing enrolment in the Zambian Health Workers Retention Scheme (109). Solutions have also been promoted by various members of the international community to overcome challenges with human resources, and this culminated in a new list of policy recommendations by the WHO that promoted a focus on policies that improved education and training, regulation, financial incentives, as well as non-financial incentives (110).

Events in the politics stream have also been ideally suited to helping open up windows of opportunity to facilitate another rise of the issue to the decision agenda, and action on the issue in Zambia. For instance, elections held in late 2011 ushered in a new government, led by President Michael Sata, who appointed Dr. Joseph Kasonde, former director of the Zambian Forum for Health Research

(ZAMFOHR), as the new Minister of Health. Furthermore, a scandal in the Ministry of Health which accused the Health Human Resource Officer Henry Kapoko of corruption has received a significant amount of media attention and resulted in the withdrawal of donor funds from the country (111-114). While there have been no explicit or major changes proposed to extant policies related to human resources for health in the country since these events, the current Minister has made several promises to improving key training institutions in the country (i.e. the University Teaching Hospital), and become much more vocal about the need to improve services rurally through the establishment of a stronger workforce and better facilities (115-117). This suggests that there may be yet another push pending for the issue at the hands of the Minister, which could result in additional decisions being taken on the issue in the near future.

Overall, the introduction of the Human Resources for Health National Strategic Plan in Zambia, the National Training Plan and the expansion of the Zambian Health Workers' Retention Scheme were all facilitated by existing institutions, interests and ideas. Specifically, the repeal of the National Health Services Act to recentralize human resources management (government structures) and the lessons learned from the introduction of the Public Services Reform Program in 1993 (policy legacies) created an institutional context that helped to push forward these policies. The administrative capacities that were created as a result of the initial introduction of the Human Resources for Health National Strategic Plan (policy legacies) also made it easier to introduce the National Training Plan and expand the Zambian Health Workers' Retention

Scheme in the years that followed. Additionally, influential interests both domestic and international that were in closed policy networks supported these programs, and the schemes benefitted the most influential cadres of worker in the country. Both of these interest-related factors helped support the "go" decisions observed in Zambia. Lastly, the results of pilot studies (ideas about what is) showed that elements of the Zambian Health Workers' Retention Scheme had positive outcomes, which also supported the introduction of these policies.

A continued emphasis on the problem, the constant influx of new solutions as well as the regular political events in Zambia have created a situation in which human resources is likely to stay on the governmental agenda in the mid and long term, and recent events in the politics stream suggest it may be pushed to the decision agenda again in the near future. Given the relatively hospitable climate created by the existing institutions, interests and ideas in Zambia within which to pursue reforms related to human resources, there is also potential for additional solutions to be adopted in the country.

Case #4: Strengthening the mental health system in Zambia

The development of the mental health system in Zambia has a long history that dates back to colonial times, when the British introduced the *Lunacy Ordinance* in 1927 to help formalize a system of psychiatric care by clearly allocating responsibility to the high court (118). In subsequent years leading up to independence in 1964, the country also saw the construction of two prison-like annexes to house the mentally ill in the late 1940s, and the passing of the *Mental*

Disorders Act in 1951 which replaced the *Lunacy Ordinance* (102;118). This legislation, which is still in place today, set out the framework for mental health care in the country and was a reflection of beliefs held about mental illness during the period. It framed those suffering with mental illness as being "mad" or "imbeciles", while focusing on the development of more institutions and the establishment of "observation centres" at district hospitals. In 1962, the country's main mental hospital complex—Chainama Hospital—was opened under the administration of the Brothers of St. John and the Franciscan Sisters of the Catholic Church in Lusaka, and the development of policy related to mental health was taken over by staff working there. This event also coincided with the expansion of training programs for mental health professionals, which continued through independence and until the economic crisis that emerged in the late 1970s. By this time, the country had become a "one-party state" and much of the decision making within the health system, including decisions related to mental health, had been recentralized to the Ministry of Health.

Despite the focus placed on mental health during colonial times through to the early years of independence, the issue slowly faded from view during the economic crisis and in the return to multi-party politics. The release of the 1993 World Development Report *Investing in Health* (47), shifted priorities further from mental health by promoting a focus on including in the Basic Health Care Package only those diseases that caused the biggest burden in terms of disability-adjusted life years (DALYs). Mental health ranked 17th, and as a result was pushed off the list of priorities during the implementation of structural adjustment

policies and Health Sector Reform Programs during the 1990s (118). This led to neglect of the mental health system as is reflected by its omission from key national policy documents released during this time (119), and resulted in rapid deterioration of the system (120). By the early 2000s, the mental health system was in a state of neglect in Zambia. Little to no investment had been made for over a decade, the government was funding services based on a system of grants, and only one staff person at the Ministry supported by a loose network of professionals at Chainama was responsible for mental health services in the entire country (118). While the issue of mental health in low- and middle-income countries had been discussed at the international level since the release of the World Health Report "*Mental Health: New Understanding, New Hope"* in 2001(121), there wasn't a widely perceived problem with the mental health system in Zambia before 2004. This was largely due to a lack of interest in the topic among policymakers and researchers since the introduction and prioritization of the Basic Health Care Package in the early 1990s, which resulted in little to no information being produced and disseminated about the status of mental health in the country (120).

In 2004-2005 the issue of strengthening the mental health system gained traction, when two important events in the problems stream signaled that existing policies and programs were largely inadequate, which pushed it to the governmental agenda in Zambia. The first such event was driven by Dr. John Mayeya from the Central Board of Health, along with several researchers working at the Chainama College of Health Sciences, who led a research project that

sought to prepare an overview of the mental health system in Zambia. The group published an article which highlighted that there was a critical shortage of trained staff in the country to deliver mental health services and that there was a very poor understanding about population need in general due to a lack of focused research (102;118;122). The article concluded that there was an urgent need to address the situation, and that the current policy and programmatic framework in Zambia for mental health was failing. The second event in the problem stream was the launch of the Mental Health and Poverty Project (MHaPP) in 2005, which was a 5-year international research initiative funded by the Department for International Development in the UK and led by researchers from the University of Cape Town and the University of Zambia (123;124). The project sought to develop, implement and evaluate mental health policy in poor countries, and included Zambia as a focal country (102;125-127). Working with members at the Ministry of Health and Central Bureau of Health, the MHaPP team undertook a comprehensive situation analysis in Zambia early in the project, which suggested that not only had the system deteriorated significantly, but that there were fundamental problems with the 1951 *Mental Health Disorders Act* that were creating additional problems (102). In particular, the studies that were pursued within the project led the group to argue that it was essential to develop new legislation in the country, as the original act was now outdated, derogatory, discriminative and perpetuated negative stereotypes that further hindered the appropriate delivery of services (128).

In addition to the influence that these research and evaluation projects had on framing the problem in Zambia while increasing its visibility among the research and policy community, there was a growing sense among the general public that mental health was a problem in the country as well, and that the system was failing. In particular, the belief that more people in need of treatment were ending up in the streets and posing a risk both to themselves and the community at large grew during this period. One participant explained the feeling held by many in the country, which was a sentiment discussed by nearly all of those who were interviewed in this study:

> *"On a daily basis, we are encountering situations that actually facilitate [mental health issues] to escalate in all of us. Also, that we have seen a number of mental patients on our streets, and that becomes worrisome, because if their conditions were managed, they couldn't have been found in the streets. But also, if the institution itself was big enough to accommodate all of them, they should never be on the street…It's obviously not a nice thing to see other people spend their nights in the cold on the streets, when some of us are sleeping in homes. And also that sometimes it gets out of hand when they become harmful to others. You know, some of them have to fight people on the road, and some of them have to assault people, and so that's obviously creates some form of insecurity for passers-by on the road. All road users have to be cautious about these people, so[…]It's a vital concern because then, the security is compromised for the community" (Stakeholder, Civil Society)*

The perceived problem with the mental health system in Zambia continued to take root alongside the development of several solutions in the policies stream that were promoted both internationally and domestically to strengthen mental health systems. First, since the publication of the 2001 World Health Report, the WHO had released several iterations of their *WHO Mental Health Policy and*

Service Guidance Package, which aimed to assist policymakers and planners to develop comprehensive policy frameworks using existing resources that would ensure mental health needs were met in countries (129). In 2005, their module on developing policies and programmes was updated to suggest ways to push forward mental health legislation, drawing on several examples from the processes pursued in countries across Africa (130). Within Zambia, the Mental Health Working Group—which consisted of actors within the Ministry of Health and stakeholders from civil society groups such as the Mental Health Association of Zambia (as well as many of those who had been engaged with the MHaPP project)—was established during the same period to discuss how to move ahead with mental health reform in the country.

As the result of an event in the politics stream in 2005, a window of opportunity opened amidst the increasing interest in the issue of strengthening mental health systems internationally as well as domestically within the government. In particular, the build-up to and pending release of the new National Health Strategic Plan that would guide health policy decisions in the country until 2010 was set for the end of the year. Given the growing awareness of a weak mental health system as a problem in Zambia among researchers and policymakers at the Ministry of Health, as well as ongoing support from international actors such as the WHO and DFiD for mental health reform, the lead-up to the release of the strategic plan provided optimal timing to push the issue onto the decision agenda. Taking advantage of this opening, those in the Mental Health Working group drafted a new *Mental Health Policy* that reiterated

the major problems that existed in Zambia and proposed comprehensive reforms that included many of the proposals that had been circulating in the community in recent years (131). Furthermore, members of the group lobbied extensively in favour of the new policy proposal (125) which helped push it to the decision agenda, gaining cabinet approval for inclusion in the NHSP 2006-2010 (120;126;127;131). However, despite the rise of strengthening the mental health system to the decision agenda in the country and its inclusion in the decision-making framework that guided Zambia's health policy development from 2006-2010, no action was taken to implement any new mental health policies and programs or introduce new legislation in these years (102;125). The comprehensive set of solutions that was outlined in the *Mental Health Policy 2005* failed to gain any traction as a result of the the institutional, interest-related and ideational factors that existed in Zambia during this time.

First, institutions, and in particular past policy decisions, fundamentally shaped how policymakers in government approach the prioritization of issues in the health sector. In particular, policy legacies resulting from the introduction of the burden of disease approach to prioritizing areas for policy and program development have shaped decision-makers in the country so that they anchor priorities to their observed burden on society. This has resulted in an institutionalized oversight of mental health within budgetary allocations, for which little data are available to suggest its burden in Zambia (118). The legacy of this prioritization framework still shapes policy decisions today, as HIV/AIDS, TB and malaria (for which the burden of disease are widely measured and

reported) are viewed as much more fitting areas in which to channel already limited health care budgets. Furthermore, one of the important knock-on effects of this decision was to reduce the importance placed on investing resources in the development of monitoring and evaluation systems that could be used to determine the status of the mental health system in the country. As a result, resources were drained from actors involved in mental health services, which has left almost no capacity to do this in the country today, and resulted in very poor prospects for the future development of better data to provide insights about the prevalence of mental illness in the country (102;118). This is a reality that is now understood by many working in the system, including one participant who explained the issue from the perspective of someone who delivers mental health services:

> *"..even when it comes to financial support or whatever support is given, they look at which is the most needed area. The needed area is that which causes deaths, and mental health does not. So, even financially, when you look at the budget of health, they may just give mental health 1% or, maybe now, 2% of the health budget. That is the support given to mental health. For those who are in the general hospitals, the psychiatric units, they are the worst hit. Because most of the manics, even when they make action plans and they make an action plan for mental health units. But when it comes to the distribution of money, the money that is meant for mental health, is pushed to the general side" (Stakeholder, Healthcare Professional)*

Secondly with respect to interests, the lack of investment in mental health policies and programs that was initiated by the policies introduced in the early 1990s also had the effect of channeling resources away from the departments in the Ministry of Health that manage mental health services in the country, and

away from civil society groups and professional organizations that can support these services. The result has been a weakening of the networks of health care professionals and organizations that support mental health services in the country relative to those that focus on other, higher profile, diseases. As such, the consolidation of widespread support for focusing on mental health as opposed to other diseases is now a difficult task, and has hindered the prospects for mental health system reform in Zambia—particularly given that other disease areas have a greater influence and presence within government ministries, as well as among the private sector (including NGOs) and in civil society.

The third major barrier to mental health system reform in Zambia is related to the ideas and beliefs held about mental illness, which don't lend themselves well to supporting the solutions proposed in the 2005 *Mental Health Policy*. Specifically, little is known or understood about mental illness in communities, and those who suffer from mental health problems are often seen as victims of evil spirits or witchcraft. As such, mental illness is viewed as a spiritual issue that is best addressed by religious and spiritual leaders, rather than a health care issue that ought to be addressed by the health care system in the same way that HIV/AIDs and TB are. There is also stigma attached the mental health in Zambia, which has led to the ongoing discrimination of both patients and providers (120;122;128;132-134). This entrenched belief system , has created an inhospitable atmosphere in the country for advancing any policies or programs focused on strengthening the mental health system, particularly because providers are more apprehensive about engaging in the provision of mental health services

(132). These sentiments were often brought up among key informants in this study, with one stakeholder highlighting the persistence of traditional beliefs in the community:

> *"...because like I said a lot of belief in the community they attribute mental to ancestral spirits for instance and so on. If the sensitization is not effective, they will just say it's one of those with things from the ancestral spirits" (Stakeholder, Civil Society).*

One of the researchers interviewed also explained how stigma affects the delivery of mental health services in the country:

> " *In addition to all those, the element of stigma, not only in families that are affected, not only in families that have a mental ill, but in also professionals. The moment they see that this is a mental illness, they're going to touch, we fail weekly. We're not even looking at other underlying problems like malaria, STDs. If it is not a condition of mental illness, it's referred immediately. So there's that element of stigma, not wanting to be attached to cases of mental illness. And as such, how do you expect people to acquire information regarding mental health?" (Researcher, University)*

Taken together, the institutional, interest-related and ideational factors outlined above help to explain why, despite the issue of strengthening the mental health system rising to the decision agenda in 2005 to be included in the National Health and Strategic Plan 2006-2010, policies to improve the mental health system in Zambia gained little traction (see table 9). In particular, the policy legacies created by the Health Sector Reform Programs in the early 1990s led to the reliance on burden of disease prioritization, the exclusion of mental health from the Basic Health Care Package, and reduced investments in the sector that reduced administrative capacities with respect to the mental health system. These

institutional factors have led to both the degradation of the system as well as the lack of adequate monitoring systems that can be used to justify investments in mental health systems strengthening efforts. Additionally, as a result of the lack of investment in the sector over the years, there are no interests in a position to advocate for and support policy development related to mental health systems strengthening in the country (an interest-related factor). Lastly, existing cultural beliefs that view mental illness as supernatural rather than biomedical, enduring stigma in the field of mental health and a lack of research evidence related to mental health in Zambia are all ideational factors that reduce the prospects for the introduction of policies that aim to strengthen the mental health system.

By the time the National Health and Strategic Plan 2011-2015 was published, strengthening the mental health system only featured as a component of the broader non-communicable disease strategy, without a dedicated section to highlight the ongoing challenges and potential solutions to improve the Zambian system (108). As such, until very recently, the issue was no longer a feature on the governmental agenda, and received little attention in the country. However, the new minister of health, Joseph Kasonde, has recently used his first year in office to push the issue forward again. In particular, he has highlighted the deterioration of the system in the national media (135), and has committed to rehabilitating parts of the system through increases in funding (136;137). Given these recent developments it is possible that the issue may become viewed as a more important priority in the near future, be pushed to the decision agenda and present another opportunity to introduce reforms outlined in the 2005 Mental Health Policy.

The influence of evidence briefs within the policy processes in Uganda and Zambia

On the whole, the briefs prepared within each of the cases were found to share many of the same characteristics although the briefs prepared in Uganda did not explicitly take local applicability into account and the briefs prepared in Zambia did not take quality into account—while one prepared in Zambia was not subjected to a merit review (see Table 10). We found that evidence briefs influenced the policy process through both pathways proposed in figures 1 and 2, although the most widely observed type of influence was the expansion of "ideas" about various aspects of the issues addressed which could influence the policy process longitudinally (observed in 3 of 4 cases). Only one brief was found to have a cross-sectional interaction with existing factors that initiated an observable change in the policy process (see Table 11). Despite some similarities, the nature and pathways of these influences differed as a result of the issues addressed and the contexts in which they were prepared. Below, we discuss the detailed results from each case in turn, and then consider how each of these sets of findings can inform our broader understanding of the influence of evidence briefs.

Case #1: The Influence of evidence briefs on the policy process related to skilled birth attendance in Uganda

In the case of skilled birth attendance, the evidence brief prepared appears to have influenced the policy process by enlightening policymakers, stakeholders and researchers through the provision of new ideas about "what is", with

particular emphasis on ideas about the options presented to improve upon problems in the country—an influence on the policy process through the longitudinal pathway as presented in Figure 1. This can be explained as a result of the particular characteristics of the policy issue as well as the context in which the brief was prepared. In particular, the fact that it was a familiar issue in the country, and that commonly promoted options had poor prospects for being introduced as a result of the extant institutions, interests and external factors helped to shape the nature of this influence.

As outlined in the previous section, the issue of skilled birth attendance has held a consistent position on the governmental agenda for many years, and as a result, it is one that can be considered familiar to policymakers and stakeholders in the country. Additionally, the political context related to this issue has resulted in little (if any) substantive reform in Uganda to address the situation for many years. As outlined earlier this appears to be at least partly due to the fact that some of the specific options discussed face institutional factors (as is the case with proposed options that focus on human resource management and training programs), as well as potential opposition from influential interests (as is the case with the proposal to introduce regulation focused on private health care providers and in particular TBAs) that reduce the prospects for reform. Furthermore, the current economic situation does not support these particular options, either. As such, it appears as though the options that have been discussed at present are neither fully politically or technically feasible.

Given these issue characteristics, and the surrounding political context, it might be expected that the policymakers, stakeholders and researchers in Uganda perceived the options presented (rather than other aspects of the evidence brief) as the most important and influential aspects of the evidence brief. The familiarity of the issue has resulted in a well-defined and agreed-upon conception of the problem related to skilled birth attendance, which was reflected in the consistency with which key informants described underlying features of the policy problem. As such, more information and further deliberation about the problem, while appreciated, didn't stand out as "influential" among those interviewed per se. In contrast, the lack of any particularly feasible options in light of existing political constraints, appears to have created an appetite among policymakers, stakeholders and researchers for information that can help provide insights about new options related to skilled birth attendance.

Case #2: The influence of evidence briefs on the policy process related to task-shifting in Uganda

In the case of task-shifting, the brief prepared also appears to have influenced the policy process through the longitudinal path, as an "ideas" factor that enlightened policymakers, stakeholders and researchers by expanding their understanding of "what is". However, in contrast to the issue of skilled birth attendance, the influence in this case was not primarily through enlightening about the options available to improve upon problems in the country, but on coming to grips with the problems underlying the issue of task-shifting in

Uganda. Again, it is the characteristics of the issue and political context related to the policy process that can help to explain this outcome.

The issue of task-shifting was not on the governmental agenda at the time the brief was prepared in 2010, and is unfamiliar compared to the issue of skilled birth attendance having only emerged in 2008 as a solution to maternal and child health problems (although maternal and child health had been considered a problem in the country for many years). Additionally, it is not supported by broad consensus among actors in the policy arena as a necessary strategy to improve maternal and child health. Given the divergent opinions about task-shifting that emerged in key informant interviews, the issue could also be considered one that is polarizing. In fact, there were policymakers, stakeholders and researchers who felt that task-shifting shouldn't be discussed at all, because the real underlying problems were related to poor human resource management and not a shortage of skilled staff. The political context also challenges the progression of the issue to later stages of policy development, as influential interest groups (i.e. nurses) oppose it, while institutional, interest-related and ideational factors reduced the likelihood that it can be pursued (see previous section for full details).

On the whole, the lack of familiarity and polarizing nature of the issue in Uganda can help to explain the influence observed in this case. Given the issue and context-related factors highlighted here, it makes sense that actors engaged in the decision-making process related to this issue would be more interested in considering information about the problem, when compared to other aspects of the brief (i.e. options or implementation). Divergent perceptions about which

options were appropriate in the Ugandan context emerged in this study, and one stakeholder felt as though the content of the brief focused on options completely missed the mark (and as such would not be considered influential in this respect). This likely helped to downplay the influence of this element of the brief as well, further enhancing the focus those who read the brief placed on information about problems.

In addition to these observed divergent influences, there were influences observed that were shared across both Ugandan cases. Specifically, key informants continually expressed their view that the brief, when used as an input into a deliberative dialogue, was a vital tool for initiating engagement with high-level decision-makers (and in particular MPS) about important policy issues. As such, the brief—when used as an input into a deliberative dialogue— appears to have been influential because it has the potential to initiate shifts in the traditional structure of policy networks in the country, which may influence future policy outcomes. Therefore, in both cases the brief and dialogue process may be considered an influence on institutions (policy networks) in the country in a longitudinal sense (i.e. through the longitudinal path presented in Figure 1). Contextual factors, and in particular the government structures in Uganda, may help to explain why key informants mentioned this influence. Specifically, the majority of MPs in the country are members of the NRM party who hold a majority in parliament and remain loyal to President Museveni. Given this position, it is important to have them engaged with the issues as the governing party must support policy developments made in the health sector. The

concentrated power held by members of the governing NRM party (and those in their network) is likely to be perceived as an exclusory factor among many other stakeholders. Therefore, convening a deliberative dialogue with an evidence brief as an input as a way to initiate interactions among a wider range of stakeholders that may not traditionally be members of this 'inner-circle' would challenge extant institutions in this context, resulting in a perception that this structure had been modified in the process.

Case #3: The Influence of evidence briefs on policy processes related to health human resource retention in Zambia

The evidence brief prepared for the issue of health human resource retention in Zambia had a unique influence on the policy process when compared to those studied in the other three cases. In particular, the brief influenced the process through cross-sectional interactions cross-sectional pathway presented in Figure 2) with existing ideas (knowledge about what is) and institutions (through established networks), which initiated an incremental adjustment to the way health workers' allowances are administered within the Zambian Health Workers' Retention Scheme. What is particularly interesting in this case, however, was that the option of pursuing the adjustment came to light because of the specific insights in the form of tacit knowledge from health workers that emerged during the deliberative dialogue—which were ideas about "what is" that are not included in the evidence brief itself. In particular, the participants at the dialogue highlighted that the remuneration mechanism that was utilized under the Zambian

Health Workers' Retention Scheme did not include additional pay on monthly pay stubs, which meant they had to be claimed separately. Health workers that were present reported this to be a major disincentive for many doctors, particularly in light of the fact that it complicated their finances. Some workers suggested that integrating the additional payments made through the scheme with routine payment was an option worth pursuing. One key informant that works closely with the Ministry of Health on human resource matters stated that shortly after the dialogue, this system was changed, and additional funds are now integrated into the pay stubs of health care workers on the scheme. This change was facilitated by the fact that several of those who read the brief and attended the dialogue were policymakers in the Ministry of Health (or worked closely with these policymakers), and who had direct access to decision-making authority about health human resources. As was brought to light in the first half of this paper when discussing the case of health human resources in Zambia, this facilitating network structure was also found to be instrumental in explaining the policy reforms that were introduced in the country related to health human resources retention. Overall, , the ideas (i.e. tacit knowledge about options available to overcome implementation problems) that came to light and were discussed interacted with this favourable network structure, which helped to support the direct application of these ideas and generate an incremental change in the system.

As with the other cases discussed thus far, the characteristics of the policy issue addressed in the evidence brief, as well as the extant contextual factors can

help to explain this particular influence. At the time the brief was prepared and dialogue convened, health human resource retention was an issue that was a constant on the governmental agenda (mostly as a result of poor indicators and perceived programmatic failures), and it was also frequently pushed to the decision agenda. As such, it was an issue that was very familiar among those who read the brief and attended the dialogue. Given the familiarity of the issue among the various policy actors in Zambia, the majority of the policymakers, stakeholders and researchers engaged with the issue had a general agreement about the problems that underpinned the human resource crisis in Zambia, and were interested in discussing options. However, in the context of perceived policy and program failures, the opportunity to consider implementation problems associated with the current options being pursued in the country by engaging with other stakeholders was also seen as vital. Specifically, the need to reconsider traditional options was reflected by some key informants who felt that the options discussed in the brief were not appropriate given realities on the ground. This perceived need to discuss options, combined with a sentiment among some that the more traditional options discussed in the brief weren't adequate solutions may help to explain the appetite for insights drawn from the tacit knowledge of health workers during the dialogue, rather than the information contained in the brief.

Furthermore, as has been outlined earlier in this paper, the case of human resource retention in Zambia differed from the others studied in that there were at least three clear decisions made related to improving health human resources retention in the years prior to the brief that resulted in the introduction of key

reforms—namely the Zambian Health Workers Retention Scheme and its subsequent expansion, and the National Training Program. These decisions were all facilitated by the political context, and were easily introduced into the system given existing institutions, support from influential interests and alignment with dominant ideas at the time. Given this supportive decision-making environment, the ability of those at the dialogue within privileged policy networks to pursue change informed by the insights about new options drawn from the tacit knowledge of the health workers in attendance was enhanced, which is a likely explanation as to why the observed influence occurred through a cross-sectional interaction pathway

Case #4: The influence of evidence briefs on the policy process related to the issue of strengthening the mental health system in Zambia

Similar to the cases in Uganda, the brief prepared for the issue of mental health in Zambia influenced the policy process primarily by influencing ideas about "what is" among those who read the brief and attended the dialogue (influencing ideas through the longitudinal path presented in Figure 1). In particular, the brief was found to enlighten those who read it by expanding awareness of the underlying problems related to the mental health system in Zambia, which was similar to the influence observed in the case of task-shifting in Uganda. Among those who regularly work in and engage with the issue of strengthening the mental health system (e.g. mental health care professionals and researchers), it also appeared to be enlightening with respect to thinking through

policy options as well, much like the influence observed in the case of skilled birth attendance in Uganda.

As with the other cases, the characteristics of the policy issue addressed in the brief are particularly helpful to consider when explaining these observed influences. At the time the brief was prepared and the dialogue convened, the issue was not a priority in the country, and had not been on the governmental or decision agenda (or even widely discussed) for years. As such, the issue was one that wasn't familiar to many of those who read the brief and attended the dialogue, and many key informants confirmed this to be the case. As a result, the unfamiliar nature of the issue likely created the need for background information as well as a deeper understanding of the problem among those for which it was not very familiar. This helps to explain why the perception that the brief's primary influence was that it enlightened those who read it by providing a deeper understanding of the problem. Finally, because the details underlying the problem were new, it was unlikely that many of those who read the brief and attended the dialogue would have felt prepared to readily consider the options presented. This was also reflected in our findings which, as highlighted previously, resulted in only those who regularly work in mental health care in Zambia finding the information presented about options in the evidence brief to be influential in their thinking.

Similar to the cases studied in Uganda, there were some commonalities observed in both of the Zambian cases. In particular, the election of a new government in 2011 resulted in the appointment of the executive director of

ZAMFOHR, Dr. Joseph Kasonde, to the position of Minister of Health. This has shifted the structure of policy networks in the country, and provided an individual who was directly involved in the preparation of both briefs with direct institutionalized access to, and authority over, health policy decision-making. As a result of this heightened access, it may be hypothesized that there is now an increased likelihood that information highlighted in the evidence briefs prepared in both cases can influence the policy process. Our analysis suggested that this may be unfolding now. Since Dr. Kasonde's appointment, he has been vocal about the problems underlying the issues discussed in both briefs he was involved with, and appears to be pushing for reforms to address these problems publicly (116;117;135;136). While this might be expected for an issue that is a perennial fixture on the governmental agenda and a frequent consideration on the decision agenda (the case with human resources for health), it is quite an important development in the case of strengthening the mental health system—an issue which has been all but forgotten in Zambia in recent years. While major decisions have yet to unfold (although there have been commitments made and some funds promised), and it was not verified with the Minister of Health himself in this study, it is possible that his recent actions represent an influence of the evidence brief on the policy process through a cross-sectional path—an interaction with institutions (policy networks) that is in turn influencing the policy process. However, at the time of writing, this influence is not a certainty given the lack of observed change and is therefore not represented in Table 11.

Influences of evidence briefs across cases in Uganda and Zambia

The results outlined above suggest that many of the observed influences of evidence briefs are dependent on a complex interplay between the characteristics of the issues addressed in briefs, as well as the political contexts in which they are prepared. In all cases studied, evidence briefs prepared for priority policy issues either directly influenced or interacted with "ideas about what is". Interestingly, the path through which a brief influences the policy process (i.e. whether through the longitudinal or cross sectional paths presented in Figures 1 and 2) appears to be related to the extent to which extant institutions, interests and ideas reduced the prospects for policy development related to that issue. For the three cases in which a political climate exists within which it is challenging to pursue policy reforms (as outlined in the previous section), the influence of briefs occurred through the longitudinal pathway, that is, they influenced a particular factor (e.g. ideas about "what is" or institutions) which may influence the policy process in the long term as a result. In contrast, the case of human resources for health was characterized by a political climate that appeared amenable to adjustments related to the issue as a result of having to compete with few contextual factors in the decision-making process (and as evidenced through recent policy decisions related to the issue). In this case, the brief appears to have influenced the policy process through a cross-sectional pathway, by interacting with extant institutions and ideas that were supportive of change, resulting in a small but observable policy change within the policy process.

Alternatively, factors related to issue characteristics helped to explain the nature of briefs' influence. In cases where the issue addressed by the brief was familiar (e.g. skilled birth attendants and human resources for health), the influences appear to have been mostly related to the policy options considered. In contrast, those issues that were unfamiliar (e.g. task-shifting and strengthening the mental health system), were associated with influences on how policymakers and stakeholders understand policy problems associated with that issue.

In addition to the nuanced variations observed in the influences exerted by briefs focused on different policy issues and in different contexts, there were two important similarities among all four of the cases. First, a recurring theme among a significant portion of those who read the brief and attended the dialogue felt as though there was a need for a much more explicit focus on providing recommendations about which options ought to be adopted to address the problem discussed, and this was particularly the case among policymakers. Although it didn't emerge as a distinct theme among those interviewed in this study, this frustration may stem from policymakers' action-oriented nature in general, and the resulting preference for messages that can be used to directly support a decision. Second, most key informants believed that there was a need for more follow-up after the brief was prepared and the dialogue convened in order to continually push the issue forward and generate sufficient awareness and political will to initiate change. Overall, these sentiments may reflect a misunderstanding between those preparing and those who are the intended audiences of evidence briefs about their intent and expected outcomes, although the data did not provide

explicit support for this hypothesis. Given that these findings emerged in all cases, it may indicate that those preparing briefs and convening dialogues need to be more explicit about the rationale for not including particular features (i.e. recommendations), and about the purpose of evidence briefs.

Discussion and conclusions

Overall, the four cases studied provide interesting insights into the factors that have contributed to shaping the policy processes related to the issues of skilled birth attendance and task-shifting in Uganda, as well as human resources for health and mental health in Zambia. In particular, the analysis helped to highlight the importance of factors in the problems, policies and politics streams when attempting to explain the reasons behind (and timing of) the rise of issues to the governmental and decision agenda in each country. Furthermore, the role that existing institutions, interests, ideas and external factors play in contributing to whether policies are made and proposed solutions are introduced for issues on the decision agenda is telling. In three of the four cases studied (skilled birth attendance, task-shifting and mental health), these factors (referred to in this study as the "3i's") reduced the prospects for policy reform, and resulted in "no go" decisions—that is they stopped the progression of the policy process and resulted no policy solutions being adopted. In the case of health human resources in Zambia, however, factors within these same categories helped to facilitate, rather than constrain, the development of policies which resulted in clear "go" decisions on multiple occasions.

Understanding the factors that influenced agendas and reduced the prospects for adopting proposed solutions (or acted as facilitators) provided an essential foundation for pursuing the question of whether and how evidence briefs prepared to address the policy issues related to each of the cases studied influenced the policy process. We found that evidence briefs' influences on the policy process are nuanced and challenging to identify. However, approaching the analysis with the understanding that evidence briefs may influence the factors that shape the policy process longitudinally (that is, influencing and changing institutions, interests and ideas in a way that will shape the policy process in the future), or engage in cross-sectional interactions with existing institutions, interests and ideas to shape the policy process in a way that is immediately observable, was a useful lens. We found that the political context was associated with the pathway of influence the briefs in this study appeared to work through. In particular, issues that were associated with many institutional, interest-related and ideational factors that reduced the prospects for policy reform influenced the policy process through a longitudinal path. In contrast briefs prepared for issues associated with factors that facilitated the adoption of policy reforms were found to interact with existing institutions, interests and ideas to initiate change through cross-sectional interactions.

In three of the four cases studied, briefs influenced "ideas about what is" through the longitudinal pathway by initiating potential shifts in the ways policy actors associated with the process perceived various aspects of the issue. The nature of these influences was related to the characteristics of the policy issue

addressed, and issue familiarity emerged as a factor that shaped whether ideas about policy problems were influenced, or ideas about the options available to address existing policy problems. In one case (human resources for health) an observable, albeit minor, change was initiated as a result of the evidence briefs' cross-sectional interactions with existing ideas and institutions through the pathway presented in Figure 2, and the familiarity of the issue also helped to shape the nature of this influence.

These findings help to address current gaps in the literature, where nearly no empirical work has been undertaken to determine whether and how evidence briefs (or other particular knowledge translation strategies) influence the policy process. Literature exists to inform the development of evidence briefs (15), to explain their purpose and utility in low-and middle income countries (14), and to explain, at a theoretical level, their place within the range of efforts to support the use of research in the policy process (6). Additionally, recent work has been undertaken to explain the factors associated with research use (or non-use) in health policy processes in Uganda (138;139), as well as the considerations that need to be made when choosing the organizational characteristics that will facilitate knowledge translation efforts (including evidence briefs) in Zambia (140). However, this study represents the first (to our knowledge) focused attempt to identify and explain the influences that evidence briefs prepared for priority issues have on the policy processes in which they prepared. Ultimately, this constitutes a positive first step in understanding how a very specific mechanism designed to support the use of research in the policy process actually influences

the policy process, and can provide insights as to whether and how to scale up their use in broader efforts to strengthen health systems through evidence-informed policy processes.

This study had three major strengths. First, studying multiple cases is often positioned as a way to strengthen case studies and create more compelling accounts, because it enables cross-case analysis, thereby helping to increase the confidence in results and enhance the generalizability of findings at the theoretical level when applied to other cases (22;141). As such, the study design adopted is better suited towards informing the understanding of the potential influences of evidence briefs in other jurisdictions, making it useful for those who are undertaking similar activities. Second, multiple data sources were used to develop each case, which helps to ensure insights drawn could be confirmed (or disconfirmed), and that there were opportunities to triangulate the results as they emerged. Finally, the use of a robust set of theoretical frameworks to examine various aspects of the political process and organize our results helped to ensure we were providing detailed, comprehensive and cohesive accounts of the policy processes and influence of evidence briefs in all cases.

This study also had three limitations. First, while we envisioned sampling cases based on maximum variation with respect to issues, the two cases in Uganda sampled were both related to maternal and child health given practical limitations. Nevertheless, after undertaking the analysis and organizing the results, we believe our issues were different enough from each other to ensure we had ample opportunity to undertake extensive across-case comparisons and answer our

research questions (22;142). Second, our reliance on the Lexis Nexis database for collecting media data resulted in limited access to sources in both Uganda and Zambia. At the time searches were run, the indexed newspapers in both countries only included archived articles from 2010 onwards. As such, despite our best efforts to draw on multiple data sources to develop comprehensive assessments of each case, there may have been some details missed as a result of our limited access to media. Finally, given that many of the key informants interviewed were either mid- or high-level decision-makers with very busy schedules, it was a challenge securing sufficient time for interviews with all of those sampled. As a result, in some cases it wasn't possible to extensively probe those who were interviewed and get as much information as was desired.

In undertaking these case studies, we have provided a comprehensive account of four policy processes related to policy issues in two countries, and presented a detailed explanation about how evidence briefs prepared for these issues influenced these policy processes. Amidst the increasing emphasis on preparing briefs in many low-and middle-income countries (14), this work represents a first in the field, and is optimally suited to providing others with a reproducible approach to answering similar questions in other jurisdictions. It is important that similar case studies are pursued for a broader range of issues in a number of countries, so that the understanding developed in this study is expanded upon. It is also important that future work adopts an approach similar to that used in this study as a way to further refine and optimize the methodology. The provision of a clear justification for adopting alternative designs in pursuing

similar questions would also be a useful contribution to the field. Finally, the results presented here may be useful to those who are preparing briefs in efforts to support the use of evidence in the policy process (such as those working in EVIPNet Knowledge Translation Platforms), because it provides details of the factors that can shape the policy processes they are working within, as well as those that may determine whether and how their evidence briefs will influence these processes. It also provides a useful set of factors that may be used to inform the design of evaluations of evidence briefs, particularly when their influence on the policy process is viewed as important.

Figure 1: Evidence briefs' longitudinal pathway of influence on the policy process

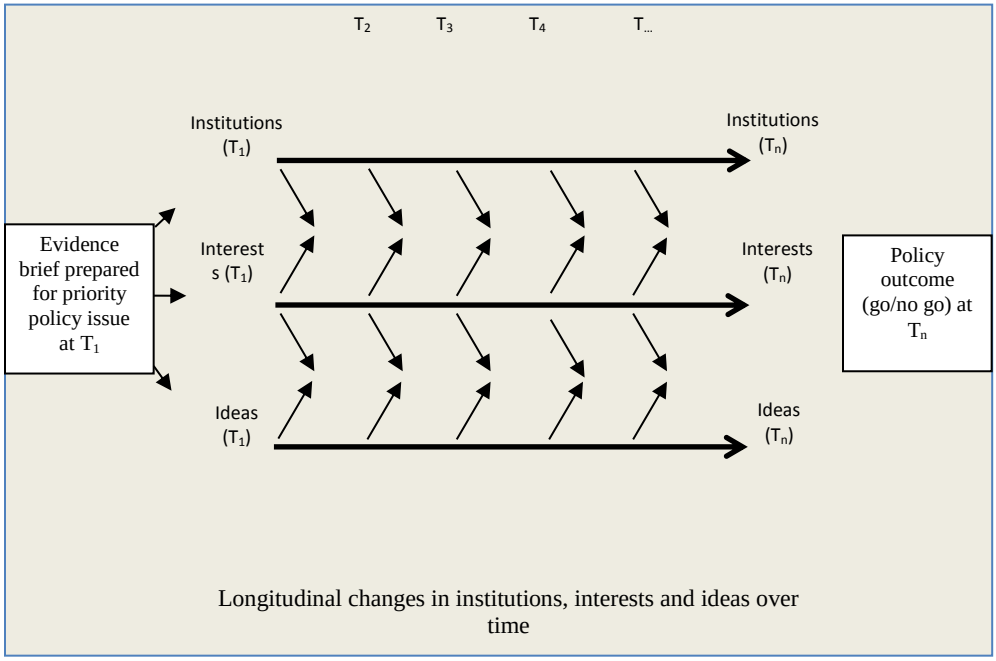

Figure 2: Evidence briefs' cross-sectional pathway of influence on the policy process

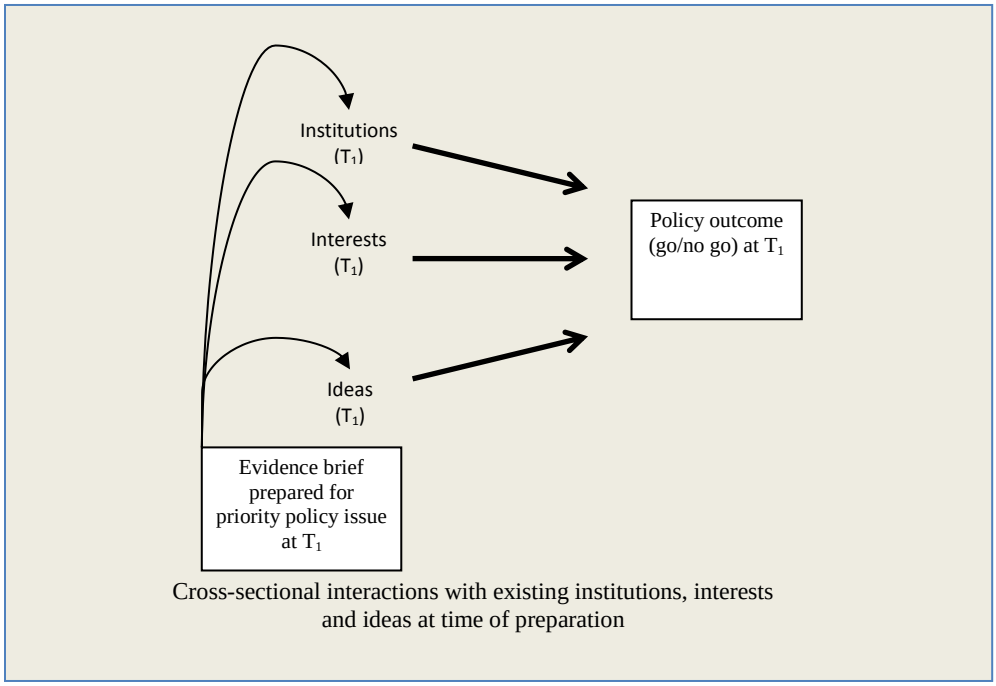

Table 1: Summary of factors found to influence the policy process and result in "no go" policy decisions across each of the cases studied

Factors that can reduce the prospects of introducing proposed policy solutions		Factors found to reduce the prospects of introducing proposed solutions across each of the cases studied			
		Uganda		Zambia	
		Skilled birth attendance ("no go")	Task-shifting ("no go")	Human resources for health ("go")	Mental health ("no go")
Institutions	Government structures	✓	✓		
	Policy legacies	✓			✓
Interests	Powerful interests	✓	✓		✓
Ideas	Beliefs and values		✓		✓
	Knowledge about what is		✓		✓
External events	Socio-economic issues, disease outbreaks, violent conflicts etc.	✓			

Table 2: Timeline of key events related to the overarching issue of maternal and child health and skilled birth attendants in Uganda

Year	Key events related to the case of skilled birth attendants in Uganda
1985	• WHO publishes maternal mortality statistics for the first time • International advocates from the research community promote the need to focus on maternal health • World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, convened in Nairobi with participation by Uganda representatives
1986	• Civil war ends in Uganda, Yoweri Museveni becomes President and the National Resistance Movement becomes the governing party • Safe Motherhood Inter-Agency Group established
1987	• Safe Motherhood Initiative launched • Structural adjustment policies adopted by President Museveni and the National Resistance Movement party, and implementation begins in Uganda
1988	• Government of Uganda begins regular monitoring and publishing of indicators related to maternal and child health in the Demographic and Health Survey 1988/1989
1993	• World Bank publishes World Development Report "Investing in Health" which identifies the importance of investing in maternal and child health programs
1994	• Safe Motherhood Initiative publishes the "Mother Baby Package" • Workshop held in Uganda in which Ugandan Commissioner of Health Services commits to adapting the "Mother Baby Package" for implementation • Ensuring access to skilled birth attendants included as a core component of the "Mother Baby Package"
1995	• Uganda adopts a new constitution • National Strategic Plan for Safe Motherhood launched, which sets goal of increasing deliveries attended by skilled attendants from 38 to 50%
1999	• Uganda's First National Health Policy introduced to guide the health sector until 2009, emphasizes the need for improvement on maternal and child health
2000	• Uganda publishes Health Sector Strategic Plan 2000/01-2004/05, reaffirms maternal and child health as a priority in the country and that ensuring access to skilled birth attendants is essential • UN launches the MDGs, goals 4 and 5 focus primarily on improvements in maternal and child health, with access to skilled birth attendants as a core strategy promoted to achieve the goals
2003	• Enrolled Comprehensive Nurse training program introduced, replacing registered nurse and midwifery programs
2004	• WHO Regional Committee for Africa meet in Brazzaville, and establishes regional commitment for MDGs 4 and 5, develops the "Roadmap for Accelerating the Attainment of MDGs 4 and 5", and promotes ensuring access to skilled birth attendants as a core strategy of improving maternal and child health in Africa • Safe Motherhood Initiative expands to include more international stakeholders, re-branded as the Partnership for Safe Motherhood and Newborn Health
2005	• Uganda publishes Health Sector Strategic Plan 2005/06-2009/10, reaffirms commitment to maternal and child health and access to skilled birth attendants as a priority in the country • Partnership for Safe Motherhood and Newborn Health expands to include more than 260 international stakeholders, and becomes known as the Partnership for Maternal, Newborn and Child Health • African Union Summit held in Gabarone, Botswana, results in regional ministers of health adopting the "Continental Policy Framework on Sexual and Reproductive Health and Rights" to push forward Safe Motherhood in countries
2006	• Maputo Plan of Action adopted by African ministers of health to operationalize the "Continental Policy Framework on Sexual and Reproductive Health and Rights"
2008	• First Lady Museveni launches Uganda's "Roadmap to Accelerate the Reduction of Maternal and Neonatal Mortality and Morbidity", ensuring access to skilled birth attendants included as a core component
2009	• 4th Session of the African Union Conference of Ministers in Ethiopia launches the "Campaign on Accelerated Reduction of Maternal Mortality in Africa"
2010	• Uganda publishes the Second National Health Policy, and Health Sector Strategic Plan 2010/11-2014/15, both of

	which reaffirm that interventions to improve maternal and child health are key priorities to be included in the minimum health care package, and that access to skilled birth attendants is essential. • 15th Assembly of Heads of State and Government of the African Union held in Kampala with focus on maternal and child health • MDG report on accelerating progress on maternal and child health suggests goals 4 and 5 will not be met in Uganda
2011	• UNRHO/REACH prepares evidence brief on access to skilled birth attendants, and convenes deliberative dialogue

Table 3: Factors that influenced agendas and reduced the prospects for introducing proposed solutions related to skilled birth attendants in Uganda

Agendas / decisions	Factors
Governmental agenda	**Problems** • World Health Organization publishes international maternal mortality statistics for the first time (1985), Government of Uganda begins monitoring and reporting country-level maternal and child health statistics (1988), both indicating high rates of maternal and child deaths • High profile launch of the Safe Motherhood Initiative helps propel problems associated with maternal and child to the international health mainstream (1987)
Decision agenda	**Problems** • High maternal mortality rates regularly reported in international and domestic policy documents, and government reports consistently show poor progress on ensuring access to skilled attendants at birth in Uganda (1995-present). • Existing programs and policies perceived as failures in improving access to skilled birth attendants as a result of poor human resources retention policies, introduction of the Enrolled Comprehensive Nurses program, and lack of regulation (1995-present) • Media coverage highlights the poor progress being made on maternal and child health, framing high maternal mortality rates in a way that resonates with the public* **Policies** • World Development Report promotes investing in maternal and child health, states that access to skilled birth attendants is an important component of strategies that ought to be adopted (1993) • "Mother Baby Package" launched to guide national implementation of the Safe Motherhood Initiative, also proposes the need to develop strategies to ensure access to skilled birth attendants (1994) • Uganda develops the "National Strategic Plan for Safe Motherhood", with an increase in deliveries with skilled attendants set as a primary goal (1995) • International and domestic reports, research articles and conferences provide ongoing fora for discussing options to ensure access to skilled birth attendants (1995-present) • Uganda launches of the "Roadmap to Accelerate the Reduction of Maternal and Neonatal Mortality and Morbidity", with a focus on ensuring access to skilled birth attendants (2008) • **Politics** • Establishment of the Safe Motherhood Inter-Agency Group, a high-profile influential coalition of interests focused on promoting progress on maternal and child health (1986) • End of Ugandan civil war, and the establishment of the National Resistance Movement led by President Yoweri Museveni as the governing party, leads to transitional period of state-building that lasts until the introduction of the new constitutions and creates optimal climate for policy development and the adoption of new initiatives including new maternal and child health strategies (1986-1995) • Increasing alignment of position taken among influential international actors related to maternal and child health problems and ensuring access to skilled birth attendants, which led to the establishment of the Partnership for Maternal, Newborn and Child Health (1985-2004) • Launch of the Millennium Development Goals 4 & 5, focused on maternal and child health, and highlighting the need for improved access to skilled birth attendants (2000) • Regional meetings held among members of the World Health Organization Regional Committee for Africa and among members of the African Union continually re-establish commitments to improving maternal and child health through better access to skilled birth attendants (2004-2010)
Policy choice	**"No go" decision as a result of several factors:** **Institutions – government structures** • Restructuring training programs to increase the number of (and thus access to) skilled birth attendants requires coordination across the Ministry of Health and the Ministry of Education **Institutions – past policies**

	• Decision to increase nurse training and phase out midwife specialty training in early 2000s increased resources accrued by nurses and reduced funding channeled to midwives, leading to a disproportionate influence by nurses over policy decisions • Decision to create a directorate of nursing in the Ministry of Health institutionalizes the influence of nurses in the policy process **Interests** • Nurses may oppose the reintroduction of midwifery training (a cadre that is viewed as important in efforts to increase access to skilled birth attendants) if they feel as though it could jeopardize their own roles in the health care system, • Midwives have little influence over the policy decisions and may have difficulty advocating their own interests • Influential international interests may not support the development of regulation that indirectly approves deliveries by traditional birth attendants, one strategy viewed as potentially useful in increasing the skill set of this cadre in an effort to increase access to skilled birth attendants **External events – economic problems** • Uganda continues to struggle with poor growth and high inflation **External events – donors withdrawing funds** • As a result of suspected misappropriation of funds, several key donors including the UK government have withdrawn funding from Uganda, exacerbating current economic difficulties

*Note: Data availability was limited for media coverage in the country prior to 2010, and as such it could not be determined conclusively when the stream of coverage around these issues began.

Table 4: Timeline of key events related to the overarching issue of maternal and child health and task-shifting in Uganda

Year	Key events related to the case of task-shifting in Uganda
1993	• Public sector hiring freeze introduced as part of structural adjustment policies and Health Sector Reform Programs
1997	• *Local Government Act* passed, devolving human resource management to districts
2000	• Uganda publishes Health Sector Strategic Plan 2000/01-2004/05, which highlights poor progress towards improving maternal and child health, and human resource shortage and reinstates health worker recruitment is needed • UN launches the MDGs, goals 4 and 5 focus primarily on improvements in maternal and child health which ensures sustained attention is given to the issue
2005	• Uganda publishes Health Sector Strategic Plan II 2005/06-2009/10, reiterating both the maternal and child health problems and human resource problems, promotes the need to train, retain and recruit in light of the growing health human resource shortages
2006	• WHO introduces "Treat, train, retain" strategy, which advocates task-shifting as a solution to overcome human resource shortages in the HIV/AIDS sector
2008	• WHO publishes global task-shifting global guidelines, which promotes task-shifting as a potential solution for other challenges in health systems including maternal and child health • International Conference on Task-Shifting held in Ethiopia, resulting in the Addis Ababa Declaration • ECSA Health Ministers' Conference held in Seychelles, results in commitments among ministers of health to improve maternal and child health through policies that include better implementation of task-shifting guidelines by 2011 • First Global Forum on Human Resources for Health held in Kampala, ensures sustained focus in the country on human resource shortages and the potential for task-shifting as a solution • ECSA College of Nurses convene meeting in Harare to highlight nurses' apprehensions about task-shifting • ECSA HC secretariat launches study of task-shifting in Uganda with support from USAID
2009	• 7th National Health Assembly suggests task-shifting should be accelerated as a component of the country's human resources strategy to improve maternal and child health
2010	• MDG report highlights task-shifting as one option to achieve maternal and child health goals • Health human resources working group undertakes a situational analysis of task-shifting in Uganda and submits their position paper to senior officials in the Ministry of Health
2011	• UNRHO/REACH prepares evidence brief on access to skilled birth attendants, and convenes deliberative dialogue

Table 5: Factors that influenced agendas and reduced the prospects for introducing proposed solutions related to task-shifting in Uganda

Agendas / decisions	Factors
Governmental agenda	**Problems** • Published reports continually highlight poor progress towards improving maternal and child health problems, as well as health human resource shortages in Uganda (1995-present)
Decision agenda	**Problems** • Same as for governmental agenda **Policies** • Task-shifting used successfully in HIV/AIDs programs to scale up access to ARV, leads to the introduction of the WHO "treat, train, retain" strategy, seen as a viable option to improve maternal and child health services (2006) • Global recommendations for task-shifting published, suggesting the approach can be used in other areas of care—including maternal and child health (2008) • 7th National Health Assembly promotes the acceleration of task-shifting in Uganda (2009) **Politics** • International interests align in support of task-shifting as a potential policy option, signaled by the International Conference on Task-Shifting in Ethiopia which led to the Addis Ababa Declaration (2008) • Health ministers at the 46th East, Central and Southern Africa Health Ministers' Conference commit to improving maternal and child health through policies that include better implementation of guidelines on task-shifting by 2011 in light of policies promoted by the World Health Organization in their task-shifting global recommendations (2008) • 7th National Health Assembly in Uganda convened to discuss progress on maternal and child health, including task-shifting, opens window of opportunity (2009)
Policy choice	**"No go" as a result of several factors** **Institutions – government structures** • Multiple ministries, levels of government and administrative units required to make decisions related to training and human resources management in the health sector to support task-shifting. **Interests** • ECSA Health Community College of Nurses convene a meeting to discuss apprehensions about task-shifting, results in the college proposing an in-depth study to establish what is happening on the ground rather than the development of a task-shifting policy • USAID supports position of nurses, and funds task-shifting case studies in Uganda. • Introducing legislation to expand scopes of practice of lower cadres opposed by professional associations set to lose authority over services they are responsible for traditionally • Lower cadres oppose changes that result in more work, without additional pay **Ideas – what ought to be** • Members of the public not comfortable with lower cadres of work delivering maternal and child health services • Policymakers divided on whether they think task-shifting is an appropriate long term solution **Ideas – what is** • Lack of research evidence available to suggest benefits of task-shifting • Believed that task-shifting is happening informally already

Table 6: Timeline of key events related to the issue of health human resource retention in Zambia

Year	Events
1964-1990	• After independence, Zambia's first president Kenneth Kaunda introduces African Socialism and a one-party state run by the UNIP, which results in a rapid growth of the civil service and the number of public sector employees • Economic crisis in Zambia begins after global copper prices crash in the late 1970s and early 1980, inflation in food prices lead to riots and political instability in 1990, which set the stage for a change in government and new reforms
1991	• Multi party constitution adopted in Zambia, presidential election results in Frederick Chiluba and the Movement for Multi-party Democracy party forming the government, opening the door for reforms • World Bank and International Monetary Fund provide loans to help Zambia cope with economic crisis on the condition that the size of the civil service and public sector are reduced, sets in motion a reduction in the health workforce
1992	• Structural adjustment policies introduced, including the Health Sector Reform Program
1993	• Public Service Reform Program introduced, resulting in decentralization, public sector hiring freeze and introduction of health workforce voluntary separation packages
1995	• *National Health Services Act* introduced to formalize decentralized administrative structures
2000	• National Health Strategic Plan 2001-2005 published, Ministry of Health states that more concentrated efforts are required to manage the health workforce
2001	• Levy Mwanawasa elected as president, Movement for Multi-party Democracy government stays in power
2002	• Zambian Government adopts the WHO 3 by 5 HAART initiative, shifting many human resources for health to HIV/AIDs sector
2003	• Mid-Term Review of the National Health Strategic Plan 2001-2005 recommends the establishment of a task force to develop an emergency rescue plan for the growing human resources problem • Zambian Health Worker Retention Scheme introduced as a pilot program supported by the Ministry of Health and the Dutch Government • Public Sector Services Reform Program renewed under the "Government Strategy and Action Plan for Public Service Management for Capacity Building for the Period of 2004-2008",
2005	• National Health Strategic Plan 2006-2010 released, highlighting severe shortage in health human resources in the country and declaring it a crisis, establishes health human resources as a top priority in Zambia • National Health Services Act repealed by the legislature, recentralizing authority over key health human resource decisions • President Levy Mwanawasa directs the Ministry of Health to develop and introduce the **Human Resources for Health Strategic Plan** to guide decision-making related to the human resources crisis for the next ten years
2006	• President Levy Mwanawasa re-elected, Movement for Multi-party Democracy government stays in power, ensuring focus on health human resource crisis is sustained • World Health Organization publishes World Health Report "Working Together for Health" which raises international profile of health human resources crisis
2008	• President Levy Mwanawasa dies, creating political uncertainty and potential window for reforms • Rupiah Banda becomes president after October elections, Movement for Multi-party Democracy government stays in power and stays the course in the health sector • Addis Ababa Conference on Task-Shifting held in Ethiopia to discuss solutions to the human resources crisis in Africa, ensuring it is a top issue in countries around the continent (including Zambia) • First Global Forum on Human Resources for Health held in Kampala, contributes to sustained focus in Africa on health human resources crisis • Ministry of Health introduces the National Training Program to begin the process of training more health professionals
2009	• President Rupiah Banda announces the expansion of the Zambian Health Worker Retention Scheme to other cadres of worker, Phase III of the scheme launched shortly thereafter

2011	• National Health Strategic Plan 2011-2015 published, outlines ongoing challenges with respect to human resources in the health sector and promotes retention strategies • Human Resource for Health Strategic Plan 2011-2015 published, expanding on first stages of the program to include additional retention strategies • Sixth National Development Plan published, highlighting human resource crisis in the health sector in Zambia while reiterating the need for improvements in the sector • Michael Sata wins Presidential elections, new PF government established creating opportunity for reforms • ZAMFOHR prepares evidence brief on human resources for health and convenes deliberative dialogue • Dr. Joseph Kasonde, Director of ZAMFOHR becomes Minister of Health
2012	• Newly appointed Minister Kasonde commits to improving training, retention and human resources management

Table 7: Factors that influenced agendas and facilitated the introduction of policies related to health human resource retention in Zambia

Agendas / decisions	Factors
Governmental agenda	**Problems** • Mid-Term Review of the National Health Strategic Plan published, showing that there are health human resources shortages in Zambia (2003) • National Health Strategic Plan released, highlights that only 50% of required posts are filled in the country and a crisis is declared (2005) o Causes for the crisis are outlined and include: brain drain; attrition of workers; negative consequence of past policies from the 1990s; and imbalance in urban vs. rural areas. • Increasing focus on the health human resources crisis in Africa at the international level, culminating in the publication of the 2006 World Health Report which focused on health human resources (2006) • Report released suggests that the country will not achieve goals set out in the Human Resources for Health Strategic Plan without increasing the number of graduates trained domestically (2008) • Ongoing assessments of policies adopted to address the human resources crisis in Zambia suggest that little or no progress is being made to improve the situation (2008-2010) • Feedback from the general public about poor services as a result of the lack of human resources working in the health system. (ongoing) • Sixth National Development Plan and National health Strategic Plan 2011-2015 published and highlight problems related to human resources for health persist in Zambia, problem framed as a failure to implement first phase of the Human Resources for Health Strategic Plan (2010-11)
Decision agenda	**Problems** • Same as for governmental agenda **Policies** • The Zambian Health Workers Retention Scheme pilot project implemented in 2003 with support from the Dutch Government showed promise in retaining doctors to posts in the country through the use of incentives and hardship allowances (2003) • Salary structures and pay reforms proposed as part of the Public Sector Services Reform Program (2003) • Report about progress made in the Human Resources for Health Strategic Plan suggests increasing number of graduates in the country in order to achieve goals (2008) • Human Resources for Health Strategic Plan 2011-2015 published and pushes for increased training (2010) • World Health Organization publishes policy recommendations on improving retention of health workers (2010) **Politics** • Upcoming election year and pending release of the National Health Strategic Plan 2006-2011 which guides health policy decisions for 5 years(2005) • Death of President Levy Mwanawasa and resulting presidential election in 2008 which resulted in Rupiah Banda becoming President and the continuation of policies introduced under Mwanawasa—including human resources retention strategies (2008) • Election of new Patriotic Front government, with President Michael Sata taking power, opens opportunity for new policies (2011) • Ministry of Health scandal involving Health Human Resources officer Henry Kapoko raises profile of human resources crisis in the country again (2011)
Policy choice (s)	**Introduction of the Human Resources for Health National Strategic Plan** **Institutions – government structures** • The National Health Services Act 1995 repealed leading to recentralization and the concentration of decision-making authority related to health human resources in Zambia, making possible the central government's decision to develop and introduce the Human Resources or Health National Strategic plan under President Mwanawasa **Institutions – policy legacies** • Public Services Reform Program implemented in 1993 focused on hiring freezes and retrenchment viewed by policymakers as having created many human resources problems in the health sector, helping

	to make the case for more positions to be created and efforts to increase recruitment and retention **Interests** • Influential actors in closed policymaking networks from the international community as well as those from the Zambian Ministry of Health and Central Bureau of Health support the idea of increasing recruitment of health workers and the implementation of retention schemes • Focus of retention schemes initially focus on doctors, nurses and clinical officers in the country, the most influential cadres of worker in the health system ensuring support for the policy was generated among these actors **Ideas – what is** • Results from the Zambian Health Worker Retention Scheme show that certain incentive programs, such as the hardship allowance for working in rural areas, can increase enrolment and retention of doctors. **National Training Plan and expansion of the Zambian Health Worker Retention Scheme facilitated by the same institutional, interest-related and ideational factors, as well as the administrative structures built up to implement the original Human Resources for Health Strategic Plan.**

Table 8: Timeline of key events related to strengthening the mental health system in Zambia

Year	Event
1951	• Mental Disorders Act passed, establishing the policy framework for mental health in Zambia
1962	• Chainama Hospital Complex opened under the administration of the Brothers of St. John and the Franciscan sisters of the Catholic Church creating the main infrastructure for mental health in Zambia
1964-1974	• Zambia becomes a one-party state, MoH assumes primary responsibility for mental health policy development in the country, but does not introduce any significant reforms
1993	• World Development Report "Investing in Health" released, promoting estimates of the global burden of disease as a way to prioritize diseases that require investment as part of the Basic Health Care Package—mental health ranked as 17th and not viewed as a priority
2001	• World Health Organization publishes 2001 World Health Report "Mental Health: New Understanding, New Hope" which initiates the growth of interest in mental health in Sub-Saharan Africa
2004	• Dr. John Mayeya and colleagues from Chainama College of Health Sciences publishe an overview of the mental health system in Zambia, highlighting core deficiencies and challenges
2005	• Mental Health and Poverty Project launched in Zambia, focused on determining how best to reform the mental health systems in several countries • WHO publishes an updated Mental Health Policy and Service Guidance Package module that seeks to assist and inform the development of national mental health policies • Mental Health Working Group established in Zambia to work on drafting a new Mental Health Policy
2006	• National Health Strategic Plan 2006-2010 published, highlights the goal of introducing new mental health legislation in Zambia.
2011	• ZAMFOHR prepares evidence brief on mental health systems and convenes deliberative policy dialogue • Dr. Joseph Kasonde, Director of ZAMFOHR becomes Minister of Health
2012	• Minister Kasonde publicly highlights problems in the mental health system, and commits to increased funding for mental health in Zambia

Table 9: Factors that influenced agendas and reduced the prospects for introducing proposed solutions related to strengthening mental health systems in Zambia

Agendas / decisions	Factors
Governmental agenda	**Problems** • Dr. John Mayeya and colleagues publish an overview of Zambia's mental health system, which highlights the deterioration of the system, including the shortage of staffing, and lack of knowledge about the burden of disease and needs of the population (2004) • Mental Health and Poverty Project finds that there are fundamental problems in the mental health system in Zambia related to outdated legislation and poor policy development, which has reinforced the stigma and discrimination surrounding mental illness in the country (2005) • Perceptions among the public that the mental health system is failing in the country, due to encounters with individuals suffering from a mental illness in communities who are without treatment (ongoing)
Decision agenda	**Problems** • Same as for the governmental agenda **Policies** • Several iterations of the *WHO Mental Health Policy and Service Guidance Package* published, as well as an updated version of the module that aimed to guide national policymakers through the process of developing national mental health policies (2003) • The Mental Health Working Group which includes members from the Ministry of Health Mental Health Unit, the Mental Health Association of Zambia and other stakeholder develop a draft for the new Mental Health Policy (2005) **Politics** • Build up to the release of the National Health Strategic Plan to guide policy development in the country for the period of 2006-2010 creates opportunities for new health reforms (2005) • Mental Health Working Group lobbies in favour of the new Mental Health Policy (2005)
Policy choice	**"No go" as a result of several factors** **Institutions – policy legacies** • Structural adjustment policies and Health Sector Reform Programs in the early 1990s emphasized the use of burden of disease estimates to prioritize interventions to be included in the country's Basic Health Care Package, shaping which diseases received most attention in Zambia, excluding mental health • The categorical exclusion of mental health from the Basic Health Care Package reduced resources channeled to this issue, which has resulted in deterioration of administrative capacities related to mental health policy planning and implementation in Zambia, in addition to an inadequate monitoring and evaluation system that can be used to justify the need for investments in mental health **Interests** • Lack of funding channeled to the mental health sector has led to a weakening of government units and civil society networks focused on mental health vis a vis other disease areas who compete for scarce resources. **Ideas – what ought to be** • Many deeply rooted cultural beliefs associate illness with the supernatural rather than the biomedical. • Stigma attached to mental health is related to ongoing discrimination and oversight of providers and patients, and an inhospitable culture within which to promote mental health policies and programs. **Ideas – what is** • Little is known or understood about mental illness in Zambia,

Table 10: Common features found in evidence briefs produced by KT platforms in low- and middle-income countries, and their inclusion in briefs prepared in each case

Features commonly found in evidence briefs	Features found in briefs prepared in each of the cases studied			
	Uganda		Zambia	
	Skilled birth attendance	Task-shifting	Human resources for health	Mental health
Describes context	✓	✓	✓	✓
Describes different features of the problem	✓	✓	✓	✓
Describes several options for addressing the problem	✓	✓	✓	✓
Describes what is known (from synthesized research evidence) about each of the options	✓	✓	✓	✓
Describes key implementation consideration	✓	✓	✓	✓
Employs systematic and transparent methods	✓	✓	✓	✓
Takes quality considerations into account	✓	✓		
Takes local applicability into account			✓	✓
Takes equity considerations into account	✓	✓	✓	✓
Does not conclude with recommendations	✓	✓	✓	✓
Employs graded entry formatting	✓	✓	✓	✓
Includes a reference list	✓	✓	✓	✓
Subjected to a merit review	✓	✓	✓	

Table 11: Evidence briefs' influence on policy processes across four cases

Potential influences of evidence briefs on the policy process		Factors influenced across four cases			
		Uganda		Zambia	
		Skilled birth attendance ("no go") • Familiar issue • Political factors reduce the prospects for proposed solutions	**Task-shifting ("no go")** • Relatively unfamiliar and polarizing issue • Political factors reduce the prospects for proposed solutions	**Human resources for health ("go")** • Familiar issue • Political factors facilitate introducti on of solutions	**Mental health ("no go")** • Unfamiliar issue • Political factors reduce the prospects for proposed solutions
Longitudinal pathway of influence	Institutions - Government structures - Policy legacies and policy networks	✓	✓		
	Interests				
	Ideas - Beliefs and values - Knowledge about "what is"	✓	✓		✓
Cross-sectional interactions pathway of influence	Institutions - Government structures - Policy legacies and policy networks			✓	
	Interests				
	Ideas - Beliefs and values - Knowledge about "what is"			✓	

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Appendix

Appendix 1: Invitation letter/information sheet and consent form

[Insert logo of hosting organization]

Title of study:	Evidence briefs as a mechanism for knowledge translation and exchange: Assessing the influence of policy-relevant research syntheses in low- and middle-income countries.
Principal investigator:	Kaelan A. Moat, MSc PhD (Candidate)
Co-investigator(s)/supervisors:	Dr. John N. Lavis, MD, PhD Dr. Nelson Sewankambo, MD, MSc
Funding sponsor:	International Development Research Centre (IDRC) International Research Chair in Evidence-Informed Health Policies and Systems

[Insert date]

Dear Sir/Madame,

You are being invited to participate in a research study to support and inform the work of [insert name of KT platform]. For general background about this study, we have attached a project summary that outlines our study objectives and methods. Specifically you are being invited to participate in an interview about a health systems policymaking process in which you were involved or with which you are familiar. Your involvement would mean participating in a 45-minute (approximately) semi-structured telephone or in-person interview to be scheduled at your convenience. During the interview, we will ask you questions about a particular policymaking process: how the policy issue first appeared on the government's radar, how the policy issue came to be seen as something the government needed to take action on, how the policymaking process unfolded, and how the implementation process unfolded. We will focus in particular on whether and

how each phase of the process involved particular information inputs (including health research evidence summaries) and interactions with stakeholders and experts (including researchers and knowledge-translation specialists). You may find it helpful to review the relevant policy file(s) prior to the interview, however, we recognize that this is not always possible.

Your participation in this research study is voluntary. You may refuse to participate in the research study and you may choose to withdraw from the study at any time. The benefit to you of participating in the research study is that you can help [insert name of KT platform] improve its efforts to support the use of health research evidence in health systems policymaking.

Your interview and any information provided in the form of documents that are not in the public domain will be treated as confidential. Interviews will be audio-recorded and transcribed and personal identifiers will be assigned to each digital file and transcript by research staff. The primary investigator will ensure that the transcript and any confidential documents are kept in a locked cabinet, the digital files containing the audio-recording and transcript are stored on a security protected computer, and the digital files, transcript and confidential documents are destroyed 10 years after the last publication of our findings.

Your anonymity as a research study participant will be safeguarded. We will ensure that the list of study participants and their participant numbers will be stored in a different locked cabinet or security protected computer from those where the digital files, transcripts and confidential documents are stored. Confidential information will not be reported in a way that could identify either individual respondents or individual departments. We will make the summary of our findings publicly available for use by others interested in improving their efforts to support the use of research evidence in health systems policymaking.

Thank you for your valuable contribution to our research study. If you have questions or would like additional information, please do not hesitate to contact us. If you have any questions regarding your rights as a research participant you may contact the Office of the Chair of the Hamilton Health Sciences / Faculty of Health Sciences Research Ethics Board at +1 905 521 2100 extension 42013.

Sincerely

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Appendix 2: Telephone script for follow up to email invitation

1. PI: Hello [insert formal salutation of the potential interviewee], my name is Kaelan Moat, a Doctoral Candidate working with [insert name of local contact person/investigator supporting the field placement] at [insert name of local organization/KT platform which is facilitating the field placement]. How are you today?

2. PI: Is this a convenient time for you to chat for a few minutes about a research study I am pursuing in collaboration with [insert name of local organization/KT platform which is facilitating field placement]?

    a. If yes: OK. A week ago, I sent you a letter/email outlining a study I'm involved with related to the work of [insert name of local organization/KT platform which is facilitating the field placement] which seeks to support your work by making research evidence more easily available and understood for the purposes of policymaking. Did you happen to receive this letter/email?

        i. If yes

            PI: Have you had a chance to read over the letter/email?

            - If yes

                PI: OK. This call is a follow-up to that letter to determine whether you'd be willing to participate in a 30-45 minute interview conducted by myself related to the study outlined in the letter/email. Would you be interested in participating? If you'd like I can give you some time to review the letter and study outline before you make a decision, and then call you back at another time that is convenient for you (book interview or follow up as necessary).

                If not interested
                PI: Thank you for your time.

            - If no

                PI: No problem. Do you have a few minutes now for me to briefly explain to you the contents of the letter?

                - If yes (briefly explain purpose of the study, and outline the request)

                    - PI: Would you be interested in participating? If you'd like I can give you

some time to review the letter and study outline before you make a decision, and then call you back at another time that is convenient for you (book interview or follow up as necessary)

- If not interested

PI: Thank you for your time.

-

- If no

- PI: Is there a better time or way to contact you about this? (follow up with preferred method).

ii. If no

PI: No problem. Do you have a few minutes now for me to briefly explain to you the contents of the letter?

- If yes (briefly explain purpose of the study, and outline the request)

- PI: Would you be interested in participating? If you'd like I can give you some time to review the letter and study outline before you make a decision, and then call you back at another time that is convenient for you (book interview or follow up as necessary)

- If not interested

- PI: Thank you for your time.

- If no

PI: Is there a better time or way to contact you about this? (follow up with preferred method)

b. If no: I'm sorry to interrupt you. Is there a better time or way to contact you about this? (follow up with preferred method).

Appendix 3: Interview guide

Interview Guide
Interview Guide: Understanding whether, how, and why policy briefs influence the policy processes related to priority policy issues for which they are prepared.

*A description of the study will have been presented during recruitment phase. Ethical issues will be addressed prior to the first question. Interviews will be recorded on a digital audio device, and transcribed into

- ✓ Denotes probes

Date:
Time:
Place:
Interviewer:
Interviewee:
Position of Interviewee:

Questions

Do you have any questions before proceeding with the interview?

- Could you describe, in general, your experience related to the [priority policy issue as outlined in the evidence brief]?

- Based on your understanding of the issue, how did it come to the attention of stakeholders and policymakers ? How did it become a priority issue?

- What types of information or evidence helped to place this issue on the agenda?

- Can you describe your understanding of the problem related to this issue?
  - ✓ Less than ideal state of affairs measured against some normative standard
  - ✓ Comparisons with other jurisdictions
  - ✓ Feedback from current programs or policies

- What (if any) were the types of factors in the policymaking context that have been major influences on how this problem has come to be defined?

  - ✓ Institutional factors

  - ✓ Interest groups, other stakeholders

  - ✓ Ideas

- ✓ External events

- What types of information or evidence helped you come to a better understanding of the policy problem related to this issue?
- Could you describe some of the options that, in your opinion, might be considered to deal with the problem we just discussed?
- What (if any) were the types of factors in the policymaking context that have been major influences on how you understand which options might be considered?
  - ✓ Institutional factors
  - ✓ Interest groups, other stakeholders
  - ✓ Ideas
  - ✓ External events
- To your knowledge, is there any evidence that either supports or dismisses the viability of these options?
  - ✓ Probes related to options identified in previous question
- What kinds of information or evidence helped you to understand any of these options?
- Could you describe any potential considerations that might be warranted before pursuing implementation of any of the options discussed?
- What (if any) were the types of factors in the policymaking context that have been major influences on how you understand which implementation considerations are warranted before implementing the options discussed?
  - ✓ Institutional factors
  - ✓ Interest groups, other stakeholders
  - ✓ Ideas

- ✓ External events

- What kinds of information or evidence helped you to understand these implementation considerations?

- Were you aware of the evidence brief prepared by [KT platform name] related to this issue?
  - If yes:
    - Did the evidence brief influence your understanding of the problem underlying this policy issue? If yes (no) how and why?
    - Did the evidence brief influence your understanding of the options available to address the policy problem? If yes (no) how and why?
    - Did the evidence brief influence your understanding of the implementation considerations that could be made when pursuing these options? If yes (no) how and why?

Appendix 4: Details related to data collection and sampling for media, published literature and policy documents

Case	Data source	Search terms and date of search	Documents selected for inclusion	Additional details
1) Uganda-Skilled Birth Attendance	Newspaper articles– Lexis Nexis database • Newspapers searched include: The Monitor, The Independent and New Vision	Terms: "Skilled Birth Attendance" OR "Skilled Birth Attendants" Date: March 4 2013	6 (of 6 individual articles retrieved)	Lexis Nexis only archives Ugandan newspaper articles from 2010 onwards Given the low number of results, an additional search for articles related to maternal and child health more broadly was also conducted, which retrieved 332 individual articles that were used to complement these results.
	Published literature – PubMed	Terms: " maternal" AND "Child" AND "Health" AND "Uganda" (skilled birth attendants/attendance yielded too few results). Date: January 15 2013	12 (of 154 studies retrieved)	All retrieved documents were exported into Reference Manager, titles and abstracts were read, and articles were included if they: 1) Described elements of the policymaking process related to the training of health personnel in the context of ensuring access to skilled birth attendance for maternal and child health in Uganda 2) Described how maternal and child health services are organized and delivered in Uganda as well as the events that led to these arrangements (to provide background and history of the issue) 3) Described the views of health care providers and/or users in Uganda with respect to maternal and child health services. Twenty eight documents of the 154 retrieved were identified through title and abstract screening, although 16 could not be accessed.
	Policy documents, archival records and gray literature	Identified through: 1) Key informant interviews and published literature 2) Hand searches of reference lists 3) Google searches	32	Of the documents included related to the case of skilled birth attendants: 1) 12 were related to the issue of skilled birth attendance only; and 2) 20 were related to the broader issue of maternal and child health, and were included for both cases studied in Uganda
2) Uganda-Task Shifting	Newspaper articles – Lexis Nexis database	Terms: "task shifting" OR "task-shifting" OR "task	2 (of 2 articles	Lexis Nexis only archives Ugandan newspaper articles from 2010 onwards

	• Newspapers searched include: The Monitor, The Independent and New Vision	shift" OR "task-shift" Date: March 4 2013	retrieved)	Given the low number of results, an additional search for articles related to maternal and child health more broadly was also conducted, which retrieved 332 individual articles that were used to complement these results.
	Published literature - PubMed	Terms: "Task shifting" AND "Uganda" Date: January 16 2013	12 (of 15 studies retrieved)	All retrieved documents were exported into Reference Manager, titles and abstracts were read, and articles were included if they: 1) Described elements of the policymaking process related to task-shifting as it relates to maternal and child health in Uganda 2) Described how maternal and child health services are organized and delivered in Uganda as well as the events that led to these arrangements (to provide background and history of the issue) 3) Described the views of health care providers and/or users in Uganda with respect to maternal and child health services
	Policy documents, archival records and gray literature	Identified through: 1) Key informant interviews and published literature 2) Hand searches of reference lists 3) Google searches	31	Of the documents sampled related to the case of task-shifting: 1) 11 were related to the issue of skilled birth attendance only; and 2) 20 were related to the broader issue of maternal and child health, and were sampled for both cases studied in Uganda
3) Zambia-Human Resources	Newspaper articles – Lexis Nexis database • Newspapers searched: The Times of Zambia	Terms: "human resource* AND health" Date: March 3 2013	96 (of 96 articles retrieved)	Lexis Nexis only archives one Zambian newspaper, and only archives articles from 2010 onwards All 96 retrieved articles were included in the first stages of analysis in NVivo, although only the most relevant articles were kept in later stages after ongoing cycles of coding and analysis (and particularly those that were used to highlight aspects of the policy process that were found to be important in the analysis)
	Published literature - PubMed	Terms: "human resource*" AND "Zambia" Date: January 15 2013	12 (of 57 studies retrieved)	All 57 retrieved documents were exported into Reference Manager, titles and abstracts were read, and articles were included if they: 1) Described elements of the policymaking process related to the issue of human resources for health in Zambia 2) Described how human resources are organized, and managed

				in the health sector in Zambia, as well as the events that have led to these arrangements (to provide background and history of the issue)
	Policy documents archival records and gray literature	Identified through: 1) Key informant interviews and published literature 2) Hand searches of reference lists 3) Google searches	23	Of the documents sampled related to the case of task-shifting: 1) 9 were related to the issue of human resources retention only; and 2) 14 were sampled for both cases because they contained information that was used to inform both cases (e.g. national health strategic plans that describe the health policy framework in the country)
4) Zambia-Mental Health	Newspaper articles – Lexis Nexis database	Terms: "mental health" Date: March 3 2013	16 (of 16 articles retrieved)	Lexis Nexis only archives one Zambian newspaper, and only archives articles from 2010 onwards All 16 retrieved articles were included in the first stages of analysis in NVivo, although only the most relevant articles were kept in later stages after ongoing cycles of coding and analysis (and particularly those that were used to highlight aspects of the policy process that were found to be important in the analysis). Several retrieved articles only made brief mention of mental health (i.e. in one sentence) but weren't useful in developing an understanding of the policy process related to the mental health system in Zambia.
	Published literature - PubMed	Terms: "mental health" AND "Zambia"	15 (of 43 studies retrieved)	All retrieved documents were exported into Reference Manager, titles and abstracts were read, and articles were included if they: 1) Described elements of the policymaking process related to the issue of mental health in Zambia 2) Described how the mental health system in Zambia is organized, how mental health services are delivered and/or about the events that led to these arrangements (to provide background and history about the issue)
	Policy documents, archival records and gray literature	Identified through: 1) Key informant interviews and published literature 2) Hand searches of	23	Of the documents included related to the case of task-shifting: 1) 9 were related to the issue of mental health only; and 2) 14 were sampled for both cases because they contained information that was used to inform both cases (e.g. National Health Strategic Plans that describe the health policy framework in the country)

		reference lists 3) Google searches		

Conclusion

The four studies presented in Chapters 2-5 of this thesis contribute towards the development of a better understanding of the use evidence briefs in LMICs. Collectively they provide some of the first insights about the ways in which evidence briefs are viewed by the policymakers, stakeholders and researchers that read them, and how they influence policy processes related to the priority issues they are prepared to inform. This chapter presents details of the conclusions that can be drawn from each study, as well as the thesis as a whole through four sections. The first section highlights the principal findings of each of the studies presented in Chapters 2-5. Second, the major substantive, methodological and disciplinary contributions of each chapter are discussed. Third, the strengths and limitations of the thesis as a whole, as well as those related to each individual study are considered. Fourth and finally, the implications that this work has for future research are presented.

Principal findings

The four original scientific contributions presented in this thesis each represent some important first steps towards a better understanding of evidence briefs as an effort to support the use of research evidence in health systems policymaking, particularly in LMICs. Chapter 2 presented a systematic review that used the critical interpretive synthesis approach to develop a framework explaining how contextual and issue-related factors can influence views about evidence briefs among the policymakers and stakeholders for whom they are

prepared. Drawing on 160 relevant papers identified through electronic database searches (n=137) and additional purposive sampling (n=23), the framework conceptualizes contextual factors as being the institutions, interests and ideas within a political context, and issue-related factors as being related to whether an issue is polarizing (or not polarizing), salient (or not salient), or familiar (or not familiar). It also highlights that: 1) contextual factors can be purely context-driven in the sense that they emerge as influential institutional, interest-related or ideational factors independent of the nature of the issue addressed by a brief: 2) contextual factors can also emerge as a result of issue-context resonance, whereby characteristics of the policy issue addressed in a brief resonate with particular institutional, interest-related or ideational factors, which may then result in their influence on the use of evidence briefs (i.e. they are contextual factors that are primarily issue-driven); and 3) issue-related factors are issue-driven, meaning that whether an issue is polarizing, salient or familiar is dependent on the characteristics of the policy issue addressed by an evidence brief. These factors can influence views about briefs by working through several mechanisms that affect both the producers and intended users of evidence briefs. Mechanisms that affect producers of briefs include the establishment of producer capacity, and the creation of complexity in the policy arena. Mechanisms affecting users of briefs include the establishment of user capacity, the creation of normative or cultural expectations, the creation of demand for confidence-instilling information, the imparting of trust between producers and users, and the creation of demand for information that can be used instrumentally.

Chapter 3 presented an approach to sampling and surveying policymakers, stakeholders and researchers who have read evidence briefs as an input into deliberative dialogues in order to assess their views about them. Data were collected from 304 individuals from six African countries (Burkina Faso, Cameroon, Ethiopia, Nigeria, Uganda, Zambia). In general, briefs and their features were found to be viewed positively by those who read them, although not concluding with recommendations consistently emerged as the lowest rated feature among all respondents.

Chapter 4 built on the contextual and issue-related factors identified in Chapter 2 by attempting to operationalize them as quantitative variables and use those that were successfully operationalized (n=8) in regression analyses on survey data collected as part of a larger evaluation. Using Chapter 3 as important background information (particularly the descriptive statistics about evidence briefs that were generated in this analysis), the newly operationalized variables were entered into models in an effort to explain variation in ratings of evidence briefs and their features on the collected survey data. Significant statistical challenges were encountered in attempts at including country-specific contextual and issue-related variables in regressions given a lack of variation in the parameters across briefs and across countries. However, the final models suggest that differences between countries are indeed associated with differences in ratings of evidence briefs and their features. The results also suggest a positive relationship between the number of briefs prepared in a particular jurisdiction, and

how they are received. In particular, as the number of briefs prepared in a particular jurisdiction increases, so do ratings of some of their design features.

Chapter 5 presented a multiple case-study that explored whether and how evidence briefs prepared for a number of health system issues influenced four policy processes studied in Uganda and Zambia (two cases were sampled from each country). For this work, 48 key informant interviews with health system policymakers and stakeholders were conducted in Kampala (Uganda) and Lusaka (Zambia), along with a media and documentary analysis. Core frameworks from the literature on agenda setting, institutionalism, interest-group politics as well concepts derived from the scholarship of the role of ideas in the policy process (1-8), were used to develop and present comprehensive accounts of the policy process for each of the cases. The study found that both "go" decisions (observed in one case) and "no go" policy decisions (observed in three cases) can be explained as a result of the influence of unique combinations of institutional, interest-related, ideational and external factors within each country. It also found that evidence briefs can influence the policy processes related to the issues they address through two distinct pathways: 1) by interacting with extant political factors to shape policy outcomes in a cross-sectional manner; or 2) by influencing these factors longitudinally to shape future policy outcomes. Influences through these pathways can also be explained as a result of existing institutions, interests, ideas, as well as characteristics of the policy issues (and in particular whether the issue was familiar or not).

Study contributions

Taken together, the four original scientific contributions presented in this thesis begin to address some important gaps in understanding evidence briefs as a mechanism to support the use of research evidence in health systems policymaking in LMICs. While work has been undertaken to detail the process of preparing evidence briefs (9), and evidence briefs themselves have been published as peer-reviewed articles (10;11), heretofore, there has been little theoretical or empirical work undertaken to understand their use in efforts to support evidence-informed health systems. Additionally, very little is understood about how contextual and issue-related factors may influence the use of evidence briefs, despite the fact that evidence briefs prepared to inform policy issues—and research evidence more generally—must compete with many other institutional, interest-related, ideational and external factors that shape the policy process. Also, there are few, if any, rigorous investigations undertaken to determine whether and how evidence briefs prepared for priority policy issues influence the policy process related to these issues. These gaps are representative of a broader lack of scholarship that focuses on the specific mechanisms (or interventions) underpinning efforts to support the use of evidence in policymaking and about how contexts and issues affect such mechanisms, which suggest the need for more focused work in the field as a whole (12). The work presented in this thesis consists of substantive contributions that provide a better theoretical and empirical understanding of evidence briefs and their use, methodological contributions providing a range of approaches that can be adopted by others for developing a

better understanding of evidence briefs (and other mechanisms used to support the use of evidence in health systems policymaking), as well as disciplinary contributions.

Substantive contributions

Substantively, Chapter 2 presents a new theoretical framework that: 1) provides a useful approach to conceptualizing both contextual factors and issue-related factors in efforts to support the use of research evidence in the policy process; 2) defines a range of specific contextual and issue-related factors that can influence how evidence briefs are viewed by health system policymakers and stakeholders, as well as the ways in which they emerge in different contexts and for different issues; 3) explains how these factors can influence views about briefs through seven discrete mechanisms that influence the producers and users of evidence briefs; and 4) provides some illustrative examples about how these relationships may unfold in practice. This framework may be useful for those involved in the preparation of briefs, as it provides them with a list of factors that can be considered for the contexts in which they work and the issues they are addressing. It may also assist in explaining how these factors can influence the way their target audience views the various features they include in the brief. As such, it can assist those preparing briefs in thinking through how they might tailor their evidence briefs for different contexts and issues. It may also be helpful for policymakers, stakeholders and researchers who use ore are considering using briefs (or who request a brief about a priority policy issue they are working

through) to consider how the contexts in which they work and the issues that they deal with influence their own preferences for particular content and design features. This may enable them to communicate these preferences more clearly to those preparing briefs, thereby providing information that can be used to improve them. The factors and mechanisms outlined in Chapter 2 also provide researchers with a clearly defined set of factors and their influence on the use of evidence briefs that can be used to drive empirical work, and in particular evaluations of the use of evidence briefs in the real world.

Chapter 3 also provides a substantive contribution to our understanding of the use of evidence briefs in LMICs. By eliciting the views of policymakers, stakeholders and researchers who have read briefs across a range of unique country contexts and for a variety of issues, we have developed insights into how briefs and their features are viewed by their intended audiences. Specifically, we found that there is broad support for the features that are most commonly found in evidence briefs being prepared in LMICs, as ratings for all of the items was generally high. The only notable exception was not concluding with recommendations. As outlined in Chapter 3, this may reflect either a true preference for the inclusion of explicit recommendations in evidence briefs, or a miscommunication between those preparing briefs and those reading them about the aims and intentions of them. Regardless, this broad support suggests that the current approach to the preparation of evidence briefs is appreciated among policymakers, stakeholders and researchers in LMICs, but that there may be a need to discuss further the intended purpose and appropriateness of particular

design decisions. In analyzing the same data but with new variables, Chapter 4 provided some empirical evidence to support assertions that contexts (as represented broadly by country-level dummy variables in our models) do in fact influence how the policymakers, stakeholders and researchers reading evidence briefs view them and their features.

Chapter 5 provides a comprehensive account of four policy processes (two in each of Uganda and Zambia), as well as detailed explanations of how evidence briefs prepared to inform these processes influenced them. In doing so, it highlights some particularly influential factors that exist within each context and for each issue, and also explains how these factors have led to specific policy outcomes over time. These detailed accounts could prove useful for those who are engaged with these issues in Uganda and Zambia and wish to consider how these factors might influence their own work—particularly if they are involved in or likely to be affected by decisions related to skilled birth attendance and task-shifting for maternal and child health in Uganda, or for human resources retention and mental health systems strengthening in Zambia. Furthermore, it provides those preparing briefs in LMICs, and particularly for those working in similar contexts on similar policy issues with an example of how their work may influence the policy process.

Methodological contributions

Chapters 2-5 also contribute to the development of methodological approaches for undertaking work focused on evidence briefs in particular, and

efforts to support the use of research evidence in health systems policymaking more generally. Chapter 2 adopts the critical interpretive synthesis approach to systematically reviewing the literature—a method ideally suited to questions where the literature is sparse, not particularly well-defined or rigorous. As such, it aligns well with many questions focused on specific mechanisms for supporting evidence-informed health policy. While past studies that have adopted this approach are helpful illustrations of the method (13;14), Chapter 2 of this thesis provides a particularly detailed account of the interplay between traditional systematic review methodology, purposive sampling and inductive analysis in the development of theory. The integration of these approaches, although traditionally separated from one another, proved to be important aspect of the work. As such, this chapter provides a clear methodological approach for future scholars undertaking similar work in the future.

Chapter 3 presents one of the first attempts to survey policymakers, stakeholders and researchers who have read evidence briefs before attending a deliberative dialogue in LMICs. The approach to sampling was unique in that it utilized stakeholder mapping and knowledge of the policy process to determine the policymakers, stakeholders and researchers who are likely to be involved in or affected by decisions related to the priority policy issue addressed by the evidence brief. This process was a new approach to build the study sampling frame—which consisted of the policymakers, stakeholders and researchers that were invited to attend the deliberative dialogue, read the evidence brief prepared to inform the dialogue and surveyed about the evidence brief they read. Chapter 4, on the other

hand, builds on these approaches and provides a first attempt to operationalize contextual and issue-related factors as quantitative variables for use in analyzing survey data, while highlighting some of the major challenges in doing so.

Finally, in drawing on core political science frameworks to develop detailed accounts of policy processes in both Uganda and Zambia, Chapter 5 illustrates how to apply these particular theoretical frameworks in policy analyses in LMICs. In doing so, it also showcases their utility as a qualitative research tool that can be adopted to study health policy processes. Chapter 5 also provides a new conceptualization of how evidence briefs can influence the policy process while taking important institutional, interest-related and ideational factors into account. As such, this chapter establishes an approach for undertaking similar analyses in future evaluations of evidence briefs or of other related mechanisms.

Contributions to the field

The original scientific studies that make up this thesis also contribute to the field of health systems research, and more generally to the ways in which efforts to support the use of research evidence in policymaking are studied. The integration of approaches from a number of disciplines—most notably from the fields of health services research, political science, policy analysis, and knowledge translation—represent important developments. Specifically, the study designs utilized in Chapters 2-4, and arguably the case-study approach developed by Robert Yin and adopted in Chapter 5 (15), are all based on approaches commonly used in the field of health services research, while the theoretical

frameworks underpinning each constitute a combination of insights from the political science and policy analysis fields, as well as the field of knowledge translation. This integration provides approaches to inquiry that can yield insights that are more comprehensive, robust and compelling than any single discipline could on its own.

Strengths and limitations

Taken together, the studies in this thesis have several strengths. First, they focus on evidence briefs, a novel approach to synthesizing research evidence in efforts to support the use of research evidence in health systems policymaking. While interest in such mechanisms in LMICs has increased in recent years with the establishment EVIPNet (10;16;17), there is a lack of research on the topic. As a result, this thesis can be considered an important contribution to the literature.

A second strength is the practical relevance of the work pursued in each of the studies. Given the growing emphasis on ensuring the best available research evidence is mobilized to strengthen health systems in LMICs (18), and the increase in the number of countries with teams preparing evidence briefs, the additional understanding that each of the chapters contributes has come at an important juncture in the development of these strategies. In particular, the results of each study are positioned well to feed into decisions about how to prepare evidence briefs, implement them and evaluate them in future.

The third major strength is the range of methods employed across the four studies. All of the methods used constitute a first for studying evidence briefs.

They also represent new approaches that can be used for studying other mechanisms to support evidence-informed policy more broadly. For example, the methods adopted in Chapters 2-4 could be extended to the study of deliberative dialogues (19), and in particular as a way to determine how contextual and issue-related factors influence their use. Furthermore, the methods employed in Chapter 5 could be used to guide in-depth case studies of whether and how deliberative dialogues influence the policy process. Additionally, the use of multiple methods to address related questions provided this thesis as a whole with a greater depth and breadth of understanding.

The fourth strength of this thesis is the integration of approaches and concepts from a range of disciplines. This multi-disciplinary approach has provided a detailed and comprehensive understanding of the factors that can influence the use of evidence briefs, as well as the ways in which briefs can influence the policy process. Drawing on insights from a variety of domains provided a number of approaches with which to address the questions pursued in this thesis, and as such ensured that the way each study was designed drew from the most appropriate of the available approaches. Given the nature of the topic covered in this thesis, relying on one discipline alone would not have provided such an opportunity to ensure such appropriate designs were available.

There are also some limitations in this thesis as a whole. First, given that this field of inquiry is relatively young and undeveloped, some decisions about study design and procedure were often made without having a particularly relevant example from the literature to build on. For example, the approach to

sampling and survey administration used in studies 3 and 4 is a first (to my knowledge), and was developed given the practicalities of how evidence briefs are being prepared and used in LMICs. Also, many of the contextual and issue-related factors defined in Chapter 2 had never been operationalized as quantitative variables, which meant that creative approaches had to be developed for doing so in Chapter 4. However, these necessary choices may also constitute important methodological innovations that can be refined in future work.

The second limitation is that this thesis is focused entirely on evidence briefs, despite the range of other important and complementary efforts that are currently being pursued in LMICs to support evidence-informed policy. As such, the work may appear to consider evidence briefs too narrowly as a stand-alone mechanism even though they should be considered elements of a broader range of efforts that can be pursued, and particularly in combination with deliberative dialogues (20). Nevertheless (and as outlined earlier) each of the studies uses methods and presents findings that are directly applicable to other related mechanisms and can be used to inform inquiry related to other mechanisms such as deliberative dialogues.

Lastly, some limitations related to some of the individual chapters should be acknowledged. First, the focus on the health care literature in the electronic searches conducted in Chapter 2 could have left out important concepts from other fields. Some of this is likely to have been mitigated through additional purposive sampling stages, which drew on the political science and public administration literatures among others, but it is unlikely that the included

literature is entirely comprehensive with respect to the full range of relevant concepts. Nevertheless, the goal of the review was relevance, rather than comprehensiveness so omissions are likely a natural consequence of the methodology chosen. Second, many of the context- and issue-related variables identified in Chapter 2 either could not be operationalized as quantitative variables, or did not vary across briefs and countries when operationalized. As such, some factors that were of theoretical interest were not included in the regressions undertaken in Chapter 4. Third, the nature of the key informants who were interviewed to inform the case studies in Chapter 5 made it difficult in some instances to get in-depth information about the policy issues discussed. In particular, many of the busy high-level policymakers could only spare 15-30 minutes for an interview, making it difficult to follow up on responses or set up a second interview to confirm interpretations. Regardless, interviewing several informants for each case and garnering insights from a number of other data sources helped to ensure comprehensive, trustworthy and rigorous accounts were developed.

Future research

Given the results of each of the studies pursued in this thesis, some important areas for future research have emerged. First, there is a need for additional evaluations of evidence briefs that use similar approaches employed in this thesis, but that are undertaken in a broader range of contexts and for more issues. This will add more variation than could be captured in the studies of this

thesis alone, and will provide the opportunity to derive more robust insights about the ways in which contexts and issues influence views about briefs and/or their influence on the policy process. These same approaches may also be used to evaluate the range of other innovative knowledge translation mechanisms currently being utilized in LMICs to support evidence-informed health policymaking. In addition to evidence briefs, many knowledge translation platforms including those supported by EVIPNet are conducting priority-setting exercise and convening deliberative dialogues that use evidence briefs as a primary input. More recently, the development of rapid response services and online repositories of research to facilitate "one-stop shopping" has also been on the rise. The literature remains sparse with respect to efforts that focus on any of these specific mechanisms, and as such presents an important opportunity for the development of the field. Future evaluations should aim to contribute to our understanding of what types of influence each mechanism could be expected to have if successfully implemented in different contexts and for different issues, which could then inform choices about how to appropriately measure outcomes in evaluations that aim to determine "what works". The case studies presented in Chapter 5 of this thesis present a preliminary attempt at defining whether and how evidence briefs influence the policy processes they are prepared to inform, and may be used as a point of departure for such investigations.

Second, theoretical studies should be pursued to address questions about how contextual and issue-related factors may influence the use of other mechanisms currently being pursued in LMICs to support the use of evidence in

health policymaking. Given the importance of contextual and issue-related factors found in this thesis, it is clear that other mechanisms would benefit from understanding the influence these factors may have on them as well. Research that aims to gain additional theoretical insights from other relevant fields in order to revise or strengthen the framework presented in Chapter 2 would also be welcome. This could be used to expand on the existing framework and provide additional insights not currently considered.

Third and finally, approaches for operationalizing context- and issue-related factors as quantitative variables need to be refined. As work in the field continues evolve, investigators will increasingly require access to more sophisticated datasets that can be used to answer what is sure to be a growing list of more nuanced questions.

Overall, the work in this thesis has provided some important insights about the use of evidence briefs in LMICs. Importantly, the findings suggest that they are appreciated by their intended audiences, and that they can influence the policy process in a number of ways. The four original studies also paint a more nuanced picture than was previously available about the ways in which a number of factors related to the political contexts in which an evidence brief is prepared and the issue that it addresses influence their use in LMICs. While it is clear that there is still much work to be done in developing a more complete understanding about evidence briefs, this thesis has helped to set the stage for their greater use in LMICs given their widespread support. It also provides insights that can be utilized to support a more nuanced approach to the use of evidence briefs in

LMICs that takes into account the many factors that can influence health system policymaking. Ideally, this will help embolden those engaged in the preparation of evidence briefs and other related mechanisms in efforts to support the use of research evidence in the policy process, and contribute to stronger health systems across the globe.

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