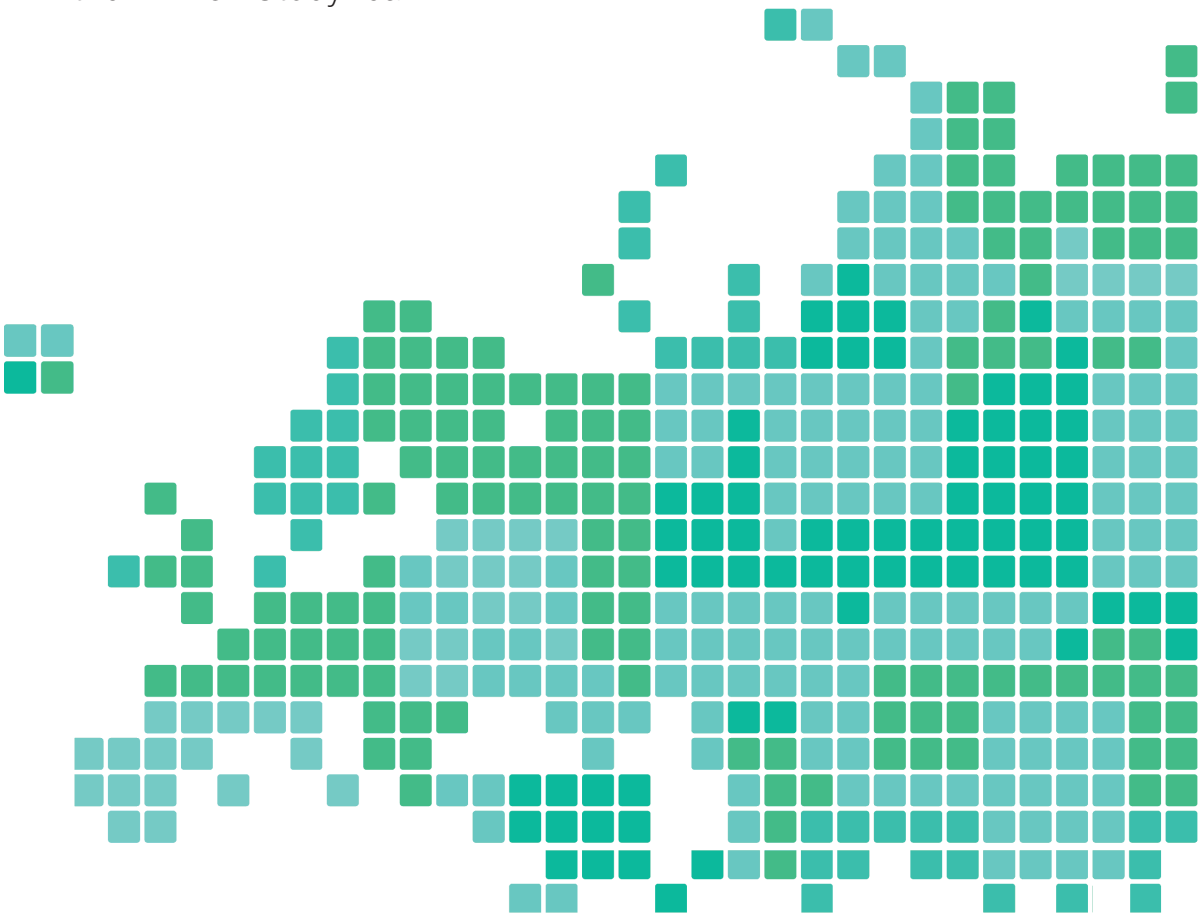
Bridging the worlds of research and policy in European health systems

36
Observatory Studies Series

Edited by
John N Lavis,
Cristina Catallo and
the BRIDGE Study Team



European Observatory on Health Systems and Policies
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BRIDGE knowledge for health

SEVENTH FRAMEWORK PROGRAMME

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The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health systems in Europe. It brings together a wide range of policy-makers, academics and practitioners to analyse trends in health reform, drawing on experience from across Europe to illuminate policy issues.

The European Observatory on Health Systems and Policies is a partnership, hosted by the WHO Regional Office for Europe, which includes the Governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Sweden, the United Kingdom and the Veneto Region of Italy; the European Commission; the World Bank; UNCAM (French National Union of Health Insurance Funds); the London School of Economics and Political Science; and the London School of Hygiene & Tropical Medicine.

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BRIDGE	Scoping study of approaches to **B**rokering knowledge and **R**esearch **I**nformation to support the **D**evelopment and **G**overnance of health systems in **E**urope
CEMPH	Centre for the Economics of Mental and Physical Health (England)
CNPT	National Committee for the Prevention of Smoking (Spain)
CSR	comprehensive spending review (England)
EFTA	European Free Trade Association
FAD	Avedis Donabedian Foundation (Spain)
FPS	Federal Public Services for Health, Food Chain Safety and Environment (Belgium)
GDP	gross domestic product
GP	general practitioner
HELFO	Norwegian Health Economics Administration
Helse Nord RHF	Northern Norway Regional Health Authority
Helse Sør-Øst	South-Eastern Norway Regional Health Authority
HTA	health technology assessment
IPH	Federal Scientific Institute of Public Health (Belgium)
KCE	Belgian Health Care Knowledge Centre
MAB	maximum billing (Belgium)
NIHDI	National Institute of Health and Disability Insurance (Belgium)
NIHR	National Institute for Health Research (England)
NGO	nongovernmental organization
NHS	National Health Service (England)
NOKC	Norwegian Knowledge Centre for the Health Services
NSF	national service framework (England)
OECD	Organisation for Economic Co-operation and Development
OSE	Observatory of European Health (Spain)
PSSRU	Personal Social Services Research Unit (England)
SDO	Service Delivery and Organisation [Programme] (England)
SESPAS	Spanish Society of Public Health and Health Administration
SHC	Superior Health Council (Belgium)
SNS	Spanish national health system

Bridging the worlds of research and policy in European health systems

Chapter 1

Introduction: knowledge brokering

John N Lavis, Cristina Catallo and the BRIDGE Study Team

European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Conflict of interest

The authors declare that they have no commercial interests relevant to this chapter. The funder played no role in the design or execution of the BRIDGE study or in the writing of the chapter.

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Introduction

BRIDGE (Scoping study of approaches to **B**rokering knowledge and **R**esearch **I**nformation to support the **D**evelopment and **G**overnance of health systems in **E**urope) was a two-year project that studied knowledge brokering for health policy-making during 2009–2011. Led by the European Observatory on Health Systems and Policies, the purpose of the study was to map current knowledge-brokering practices in Europe; describe them in the context of what we know and what we do not know about knowledge brokering; and disseminate the findings to different audiences through various events and publications. This book is one of those publications.

Three scenarios motivated the BRIDGE study and the writing of this book.

1. Policy-makers are faced daily with making decisions and need access to good-quality health systems information. Stakeholders may seek to influence health policy as well as make decisions in their own spheres of responsibility. Both groups want information products that they can easily understand and that are clearly based on systematically conducted and transparently reported research. And researchers want to know how to communicate their findings effectively so that decision-makers can make use of the best available health systems information.

2. Policy-makers, stakeholders and knowledge brokers (including researchers) all have a great deal they can learn from one another. As noted in scenario 1, policy-makers need access to good-quality health systems information that they can apply to a local issue. And stakeholders may seek to influence health policy as well as make decisions in their own spheres of responsibility. Knowledge brokers need information about policy priorities and the policy context in order to produce, package and share health systems information that will be genuinely useful to decision-makers.

3. Knowledge-brokering organizations need to match form to function when designing organizational models that will best support well-informed health systems decision-making. Their functions can include a range of information-packaging mechanisms (such as policy briefs) and interactive knowledge-sharing mechanisms (such as policy dialogues), as well as activities that are not knowledge brokering per se (such as the collection and analysis of health systems information). Maintaining a good grasp of the relevant policy-making context and matching knowledge-brokering mechanisms to this context should be considered a key function for any knowledge-brokering organization.

Dramatic differences in the policy-making context within and across European countries complicated the BRIDGE study and the writing of this book. Context

can mean a range of elements in the national, regional (e.g. European) or subnational policy-making environment, including policy-making institutions and processes; stakeholder capacities and opportunities for engagement; and research institutions and their activities and outputs. Consider the same three scenarios again.

1. A skilled knowledge-brokering organization will recognize that it needs to use information products that fit its policy-making context. For example, a knowledge-brokering organization will likely have a much easier time writing in language understandable to policy-makers and stakeholders if there is centralized decision support within government; both high capacity for policy analysis within the civil service, and a low turnover rate within the civil service; and a high degree of coordination within stakeholder groups and a high capacity for policy analysis within stakeholder groups. In such circumstances, the knowledge-brokering organization is writing for a small, sophisticated readership. Alternatively, a knowledge-brokering organization will spend a great deal more time and resources to write in language understandable to policy-makers and stakeholders if those groups are very heterogeneous in terms of their understanding of the issues. This is because decision support is decentralized within government; stakeholders are poorly coordinated; capacity for policy analysis is low among both groups; and most of the civil servants are new to the domain.
2. A skilled knowledge-brokering organization will recognize that it needs to use interactive knowledge-sharing mechanisms that fit its policy-making context. For example, a knowledge-brokering organization will likely have a much easier time proactively identifying optimal participants for an interactive knowledge-sharing event if the organization is based in a unitary state with centralized decision-making authority and single-party government, and where stakeholders have a formal role in policy-making and a high degree of coordination within stakeholder groups. In such circumstances, the knowledge-brokering organization is dealing with a small number of easy-to-identify individuals. Alternatively, a knowledge-brokering organization will spend a great deal more time and resources to identify optimal participants if the policy-makers are spread across units of a federation, branches of government and political parties, and if stakeholders are poorly coordinated.
3. An organizational model that works well for one organization using a particular set of knowledge-brokering mechanisms in a particular policy-making context may not be appropriate for another organization using different mechanisms in a different context. For example, a knowledge-brokering organization will likely have a much easier time establishing

functional linkages with a policy-making organization if it is dealing with a unitary state with centralized decision-making authority, a single-party government, and centralized decision support from a high-capacity civil service with a low turnover rate. The organization can focus on linking with a small number of civil servants. Alternatively, a knowledge-brokering organization will spend a great deal more time and resources to develop and maintain functional linkages with the large number of politicians, political staffers and civil servants the organization will need to engage if it is dealing with a federal state with decentralized decision-making authority within each constituent unit of the federation, and a coalition government that brings together many political parties, who in turn drive decision support within government.

Purpose and organization of the book

The purpose of this book, and the accompanying BRIDGE summaries and policy briefs, is to spark innovation and encourage debate about the ways in which:

- information is prepared and packaged for policy-makers and stakeholders as one component of a broader knowledge-brokering approach (we call this **information-packaging mechanisms**);
- policy-makers, stakeholders and knowledge brokers can, by working together, engage with health systems information so as to increase the likelihood that it will be understood and used (we call this **interactive knowledge-sharing mechanisms**); and
- knowledge-brokering organizations organize themselves in order to increase the likelihood that health systems information will be understood and used by policy-makers and stakeholders (we call this **organizational models for knowledge brokering**).

Current thinking about knowledge brokering is largely driven by anecdotal information; this document presents real-world insights from research on knowledge brokering, primarily from Europe but drawing on global experience as well.

The book and accompanying products are intended not only for knowledge brokers whose work is dedicated to this role, but also funders, researchers, policy-makers and stakeholders, all of whom can help to steer knowledge brokering by helping to set expectations for this work. While we strive to avoid jargon, a shared understanding of key terminology is important so we define a number of key terms and concepts in Appendix A. We return to these definitions as needed throughout the book.

In Part I of the book we describe knowledge brokering from different vantage points.

- Chapter 2 describes a way to approach knowledge brokering and presents what we have come to call the BRIDGE framework and three sets of criteria – for information-packaging mechanisms, for interactive knowledge-sharing mechanisms, and for organizational models for knowledge brokering.
- Chapter 3 describes what past research tells us about knowledge brokering. We present a systematic review of the factors that influence the use of health systems information in policy-making, as well as a scoping review of the research literature on information-packaging mechanisms, interactive knowledge-sharing mechanisms, and organizational models for knowledge brokering.
- Chapter 4 describes the knowledge-brokering mechanisms and models currently being used in Europe. We present the results of website reviews of 404 organizations that we considered and in-depth website reviews of 163 knowledge-brokering organizations that met our eligibility criteria in the 31 countries of the European Union (EU) and the European Free Trade Association (EFTA).
- Chapter 5 describes experiences with matching knowledge brokering to national and regional contexts, and presents the results of site visits with 28 knowledge-brokering organizations.

Each of the chapters in Part I of the book is preceded by a list of key messages and follows a common format, which includes:

- a brief description of the methods we used
- the key findings
- the strengths and weaknesses of our approach
- lessons learned.

In Part II of the book we describe knowledge brokering in action. We present multi-method case studies of how knowledge-brokering mechanisms and models intersect with national policy-making processes in each of four countries:

- Belgium, where a distinguishing feature is its collaborative policy-making process (Chapter 6);
- England, where the knowledge-brokering landscape is remarkably crowded and distinguished by short policy cycles (Chapter 7);
- Norway, where knowledge-brokering organizations are bringing rigour and transparency to policy inputs (Chapter 8); and

- Spain, where knowledge-brokering organizations have been doing an interesting job of matching brokering mechanisms to policy processes (Chapter 9).

Each of the chapters in Part II of the book is also preceded by a list of key messages and follows a common format:

- a brief description of the national context for knowledge brokering, drawing on the BRIDGE framework described in Chapter 2;
- a brief description of knowledge-brokering mechanisms and models in use in the country, drawing on the BRIDGE framework and criteria as well as the website reviews described in Chapter 4;
- a profile of selected knowledge-brokering organizations in the country, again drawing on the BRIDGE framework and criteria as well as the site visits described in Chapter 5;
- case studies of the intersections of knowledge-brokering mechanisms and models with two or three national policy-making processes, again drawing on the BRIDGE framework and criteria as well as documentary analyses and elite interviews (interviews with the individuals most familiar with the knowledge-brokering mechanisms and models and with the policy-makers, stakeholders and researchers involved in the policy-making processes); and
- lessons learned.

We conclude the book with reflections about next steps for knowledge brokering in Europe, which echo issues taken up in the companion products described below.

Companion products

To accompany the book, we have prepared five companion products. Three of these products are policy summaries.

1. Policy Summary 7 – *Communicating clearly: enhancing information-packaging mechanisms to support knowledge brokering in European health systems* (Lavis, Catallo, Permanand et al., 2013) examines information-packaging mechanisms, the focus of scenario 1 above.
2. Policy Summary 8 – *Learning from one another: enriching interactive knowledge-sharing mechanisms to support knowledge brokering in European health systems* (Lavis, Catallo, Jessani et al., 2013) examines interactive knowledge-sharing mechanisms, the focus of scenario 2 above.
3. Policy Summary 9 – *Matching form to function: designing organizational models to support knowledge brokering in European health systems* (Lavis, Jessani

et al., 2013) examines organizational models for knowledge brokering, the focus of scenario 3 above.

Two related policy briefs complement the policy summaries.

1. Policy Brief 16 – *How can knowledge brokering be better supported across European health systems?* (Lavis, Permanand et al., 2013a) which addresses the lack of support for knowledge brokering in European health systems.
2. Policy Brief 17 – *How can knowledge brokering be advanced in a country's health system?* (Lavis, Permanand et al., 2013b) addresses the lack of attention given to what to do next to advance knowledge brokering in the health systems of many European countries.

Both of these policy briefs present various options for addressing the problems identified in the BRIDGE study and are designed to inform policy dialogues at either the national level or the European level.

Given their closely linked subjects, the BRIDGE summaries and policy briefs inevitably overlap with one another and with the book, and readers will notice some common content. For example, some information products feed into interactive knowledge-sharing activities and both depend on effective organizational models.

Bridging research and policy

We hope that this book and its companion products will help to optimize the delivery of health care to European citizens by giving health system policy-makers, stakeholders and researchers a better understanding of knowledge brokering and its implications for the organization and management of health information systems. BRIDGE focused on approaches to brokering knowledge to support the development and governance of European health systems. We hope that it will support improvements to existing practice by:

- encouraging those involved in knowledge brokering, both in Europe and in other regions, to describe and assess their mechanisms and organizational models for knowledge brokering; and
- encouraging researchers to undertake further comparative research in this area.

BRIDGE's contribution requires a European (rather than a national or local) approach because supporting further comparative research on knowledge brokering will enable Member States of the EU and EFTA to learn from one another about the ways in which new and existing knowledge can be transferred into policy. It was only by looking across all European countries and beyond

that BRIDGE could gain the necessary comparative leverage to examine both nationally focused and European-focused organizational models for knowledge brokering. Such efforts would be in keeping with initiatives taken at the EU level to share best practices in various fields. They would also be consistent with the open method of coordination, which was declared applicable to the field of health in 2001 and which calls for mutual support of national health policy-making across Europe through the sharing of knowledge and experience, and through benchmarking.

To learn more about the BRIDGE study and other BRIDGE products, please see the BRIDGE webpages on the website of the European Observatory on Health Systems and Policies.

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Lavis JN, Catallo C, Permanand G, Zierler A, BRIDGE Study Team (2013). Communicating clearly: enhancing information-packaging mechanisms to support knowledge brokering in European health systems. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies (Policy Summary 7, BRIDGE Series; http://www.euro.who.int/__data/assets/pdf_file/0005/195233/Obs-Policy-Summary-7,-Communicating-clearly.pdf, accessed 19 March 2014).

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Series; http://www.euro.who.int/__data/assets/pdf_file/0004/195232/Obs-Policy-Brief-17,-How-can-knowledge-brokering-be-advanced-in-a-countrys-health-system.pdf, accessed 19 March 2014).

Lavis JN, Permanand G, Catallo C, BRIDGE Study Team (2013b). How can knowledge brokering be advanced in a country's health system? Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies (Policy Brief No 17, BRIDGE Series; http://www.euro.who.int/__data/assets/pdf_file/0004/195232/Obs-Policy-Brief-17,-How-can-knowledge-brokering-be-advanced-in-a-countrys-health-system.pdf, accessed 19 March 2014).

Bridging the worlds of research and policy in European health systems

Chapter 2

A way to approach knowledge brokering: the BRIDGE framework and criteria

John N Lavis, Govin Permanand and the BRIDGE Study Team

European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Conflict of interest

The authors declare that they have no commercial interests relevant to this chapter. The funder played no role in the development of the BRIDGE framework and criteria or in the writing of the chapter.

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Key messages

Developing a framework and criteria for knowledge brokering

- Using an iterative process, the study team:
  - drafted a framework and sets of criteria based on a systematic review and a scoping review;
  - prepared a workbook describing the framework and criteria and circulated it to policy-makers, stakeholders and researchers invited to participate in a 1.5-day policy dialogue about knowledge brokering;
  - organized the dialogue to elicit feedback on the framework and criteria, captured the insights from the deliberations in a written report, and reflected as a study team on the implications of the insights;
  - revised the framework and criteria based on the dialogue;
  - used the revised framework and criteria to assess knowledge-brokering mechanisms and models being used by 163 organizations in 31 countries and, in more detail, by 28 organizations that were visited; and
  - finalized the framework and criteria based on the team's experience with applying them.

Findings from the iterative development process

- The final version of the framework for knowledge brokering has three levels: (i) the national policy-making context; (ii) the European policy-making context; and (iii) the global context. The part of the framework that addresses the national policy-making context has three components: (i) policy-making institutions and processes; (ii) stakeholder opportunities and capacities for engagement; and (iii) research institutions, activities and outputs. As a result of the dialogue, the descriptions of the attributes of this context are more concrete and more clearly situated on a spectrum from an attribute that simplifies the work of knowledge brokers to an attribute that makes it more challenging. Knowledge brokering is represented in the framework by bidirectional arrows between these components, with health systems information still being a focus but with interest group pressure, public opinion and the values of the governing party identified as being at play as well.
- The BRIDGE criteria to assess knowledge-brokering mechanisms and models evolved in subtle ways over time. One notable evolution was the greater attention given to being explicit (six mentions) or transparent (one mention). A second evolution was the more nuanced descriptions of

how comprehensively mechanisms address the many features of an issue and how policy-makers and stakeholders are involved in the governance of knowledge-brokering organizations. The final set of criteria include 11 for information-packaging mechanisms (two more than originally), 11 for interactive knowledge-sharing mechanisms (one more than originally), and nine for organizational models (one less than originally).

Strengths and weaknesses of the approach

- Using three complementary inputs – (i) a review of existing research; (ii) deliberations among policy-makers, stakeholders and researchers; and (iii) a practical application – proved to be a highly robust way to develop a framework and criteria. The other strengths of our approach include our use of a workbook to engage policy-makers and stakeholders and our use of at least two individuals in each step of applying and revising the framework and criteria.
- A downside of our approach is that we have not examined the capacity of the framework to explain relationships (e.g. between features of a national policy-making context and the choice of knowledge-brokering mechanisms) or the validity and reliability of the criteria. Another weakness of our approach is that we did not convene a follow-up policy dialogue to elicit feedback on the revised framework and criteria.

Lessons learned

- The existing research literature about knowledge brokering contains many think pieces and a number of empirical studies that highlight factors that need to be taken into account when improving knowledge-brokering mechanisms and models; there is no published research on the effectiveness of particular mechanisms and models.
- Ideas differ about what constitutes a national policy-making context. Policy-makers, stakeholders and researchers find it difficult to engage with a framework that does not present clear contrasts in how attributes are described.
- Criteria for assessing knowledge-brokering mechanisms and models, rather than being prescriptive, need to prompt reflection in light of the realities of national policy-making processes.

A way to approach knowledge brokering

Much of the talk and writing about knowledge brokering is driven by anecdote, and one of our aims with the BRIDGE study was to move beyond this. We wanted to identify a way to approach knowledge brokering so that we could be certain that we were doing justice to the complexity of the activity while also bringing some order to discussions about it. We also wanted to develop criteria for assessing knowledge-brokering mechanisms and models to spur both dialogue about different approaches and evaluations of these approaches. In other words we wanted to get readers thinking about their experiences with knowledge brokering; the extent to which these experiences are context-specific, or the extent to which they may be generalizable to other contexts (and why); and how their experiences can help us to improve upon our current understanding of knowledge brokering.

Two key questions motivated the iterative development of the framework and criteria.

1. From the perspective of policy-makers and stakeholders in a given national policy-making context, how can one match particular knowledge-brokering mechanisms and organizational models for knowledge brokering to that context considering its features and those of the European policy-making context and the larger global context in which it is located?

   To think about this question more concretely, imagine that you are the head of a major national research organization in a small country and you want to enhance your organization's impact on policy-making. You need to decide which mechanisms to prioritize and which organizational model to adopt for your organization given the nature of your country's policy-making context and what else is already going on within Europe and globally.

2. From the perspective of those studying knowledge brokering, which knowledge-brokering mechanisms and organizational models for knowledge brokering show promise in which types of national policy-making contexts and (given economies of scale and other considerations) at the European and global levels?

   In other words, imagine that you are advising about the establishment of a new strategic direction for the European Commission's investments in research and knowledge brokering. You need to craft an approach that capitalizes on existing global resources (and avoids supporting unnecessary duplication). Your approach needs to identify the key mechanisms that are most efficiently organized at the European level and appropriate organizational models to support these mechanisms. Moreover, the approach needs to send clear signals about the nature of the mechanisms and models

that the Commission would be prepared to support in different types of national policy-making contexts. It also needs to create opportunities for innovative approaches to be tried and evaluated on a large scale.

The choice of knowledge-brokering mechanisms and organizational models for knowledge brokering is likely to be very different in a policy-making context such as that of the United Kingdom of Great Britain and Northern Ireland – where English (the language of most health systems information) is the dominant language, turnover within the civil service is not linked to elections, many policy-relevant systematic reviews are produced each year, and a free media spurs stakeholder engagement in policy-making – than in policy-making contexts that share none of these features.

Research objective

The objective of this sub-study within the broader BRIDGE study was originally worded: "to develop a framework to organize the ways – concepts, mechanisms and organizational models – in which new and existing knowledge can be transferred into policy initiatives, mechanisms and practices." However, we came to realize over the life of the project that this phrasing continued to perpetuate the one-way communication that is so frequently lamented in the knowledge-brokering literature. A more constructive framing of our research objective is that we sought to develop a framework to approach knowledge brokering and criteria to assess knowledge-brokering mechanisms and models informed by this framework.

Our focus in this chapter is more on developing an organizing framework and criteria for knowledge brokering than on using it to interrogate the research literature on knowledge brokering (the focus of Chapter 3); to appreciate the current breadth of mechanisms and models in use (Chapter 4); to understand how these mechanisms and models work in particular contexts (Chapter 5); or to understand how they intersect with national policy-making processes (Chapters 6–9). While this book presents the framework and criteria before describing how we used them, in fact the framework was iteratively developed as we undertook the research described in these chapters. We describe this process of iterative development in the next section.

Developing a framework and criteria for knowledge brokering

To address our research objective, we used an iterative process to develop a framework and criteria for knowledge brokering. As a study team, we:

- drafted a framework and sets of criteria based on a systematic review and a scoping review (see Chapter 3) and also based on a preliminary meeting

in October 2009 with project team members and select members of the project advisory board;

- prepared a workbook describing the framework and criteria and circulated it to policy-makers, stakeholders and researchers invited to participate in a 1.5-day policy dialogue about knowledge brokering;
- organized a policy dialogue in July 2010 to elicit feedback on the framework and criteria, captured the insights from the deliberations in a written report, and reflected as a study team on the implications of the insights;
- revised the framework and criteria based on the dialogue;
- used the revised framework and criteria to assess knowledge-brokering mechanisms and models being used by 163 organizations in 31 countries (see Chapter 4) and, in more detail, to assess 28 organizations that were the focus of site visits in the autumn of 2010 (see Chapter 5); and
- finalized the framework and criteria based on our experience with applying them in late 2010 and early 2011 (this included creating the three BRIDGE policy summaries and two BRIDGE policy briefs[1]). At least two, and sometimes up to five, individuals were involved in each step of applying and revising the framework and criteria.

Findings from the iterative development process

We present the BRIDGE framework for knowledge brokering in Fig. 2.1. The framework has five key elements:

1. health systems information
2. knowledge brokering
3. national policy-making context
4. European policy-making context
5. global context.

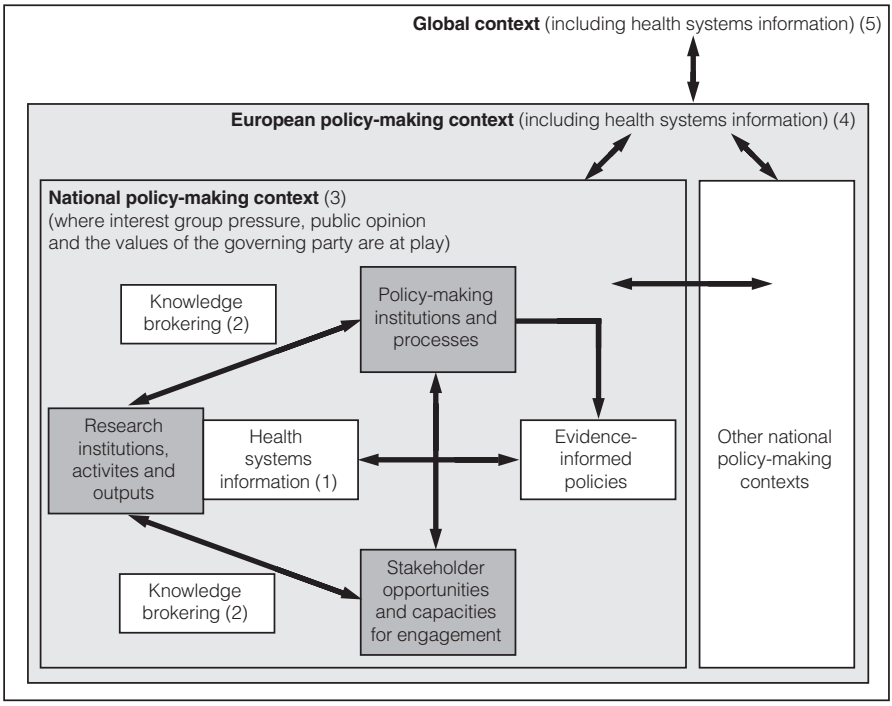
We describe each of these elements in turn below.

1. Health systems information

We put health systems information at the heart of the framework because the BRIDGE study asks, in part, how can knowledge brokering better support the use of health systems information as one input to the policy-making process? We do not consider it to be the only influence, or even always a key influence,

1 Available on the BRIDGE webpages of the European Observatory on Health Systems and Policies website (http://www.euro.who.int/en/about-us/partners/observatory/bridge-series, accessed 19 March 2014).

Fig. 2.1 BRIDGE framework for knowledge brokering



Note: key framework elements are numbered to facilitate references to them in the text. Shaded boxes indicate key components of the national policy-making context. Arrows represent knowledge-brokering activities.

on policy-making. Good health systems depend, among other things, on well-informed policy-making by governments and decision-making by a range of stakeholders. By **health systems information** we mean both data (on performance and outcomes, among other topics) and research evidence (about policy and programme options to improve performance or achieve better outcomes, among other topics). We consider **data** to be facts and statistics collected together for reference or analysis, and we consider **research evidence** to be the results of a systematic study of materials and sources in order to establish facts and reach new conclusions. The results can take the form of conceptual frameworks, primary research studies, and systematic reviews, amongst others. These definitions and others used in this chapter are summarized and their sources referenced in the glossary (Appendix A).

Health systems policy-making by governments and decision-making by a range of stakeholders require many types of health systems information (Table 2.1). For some types of policy questions, the health systems information may best come from within the national policy-making context – for example, data about indicators to establish the magnitude of a problem or research evidence about the cost effectiveness of policy and programme options to address the problem.

Table 2.1 Links between policy questions and the types of health systems information needed

Step in the policy-making process	Examples of the types of policy questions that may be asked	Examples of the types of health systems information needed to answer the policy question
Clarifying a problem	Features of problem from a systems perspective	
	Indicators to establish the magnitude of a problem and measure progress in addressing it.	Data (from within the policy-making context).
	Comparisons to establish the magnitude of a problem and measure progress in addressing it.	Research evidence produced using administrative data or survey research methods (from both within and beyond the policy-making context).
	Alternative ways of framing a problem to motivate and involve different groups.	Research evidence produced using qualitative research methods (from within and beyond the policy-making context).
Framing policy and programme options	Options under discussion or that have been tried elsewhere.	
	Benefits likely to be achieved with each option.	Research evidence produced using experimental (or quasi-experimental) methods.
	Harms likely to arise with each option.	Research evidence produced using experimental (or quasi-experimental) and observational methods.
	Local costs and cost effectiveness of each option.	Data about costs (from within the policy-making context). Research evidence produced using economic evaluation methods (from within and beyond the policy-making context).
	Adaptations to an option that might alter its benefits, harms and costs.	Research evidence produced using qualitative research methods (from within and beyond the policy-making context).
	Stakeholders' views and experiences that might influence the acceptability of an option and its benefits, harms and costs.	Research evidence produced using qualitative research methods (from within the policy-making context).
Implementing a policy or programme option	Potential barriers to the successful implementation of the policy at the patient/citizen, health worker, organizational and system levels.	Research evidence produced using qualitative research methods (from within the policy-making context).
	Benefits, harms and costs of strategies to address identified barriers.	See rows 2–4 under 'Framing policy and programme options' above.

Source: adapted from Lavis, 2009.

However, for other types of policy questions, the data and research evidence may best come from both within and beyond the policy-making context – for example, comparative data about health system performance or research evidence about the likely benefits and harms of different policy and programme options for addressing a health system problem.

2. Knowledge brokering

We defined **knowledge brokering** as the use of information-packaging mechanisms and/or interactive knowledge-sharing mechanisms to bridge policy-makers' (and stakeholders') contexts and researchers' contexts, in order to address four possible reasons for the disjuncture between information and action: (i) health systems information is not communicated effectively; (ii) health systems information is not available when policy-makers and stakeholders need it and in a form that they can use; (iii) policy-makers and stakeholders lack the capacity to find and use health systems information efficiently and (in some countries) lack mechanisms to prompt them to use health systems information in policy-making; and (iv) policy-makers and stakeholders lack opportunities to discuss system challenges with researchers.

In turn, we defined **information-packaging mechanisms** as information products in a variety of media that are focused (at least in part) on health systems information and that are intended to support policy-making. The outputs can take the form of policy briefs, issue notes, research summaries, policy dialogue reports, research reports, presentations, audio podcasts, video podcasts, videos, blogs, impact summaries, newsletters, annual reports, and cartoons and other visual media, among others. We present the 11 BRIDGE criteria to assess information-packaging mechanisms in the first column of Table 2.2. In an early version of this set of BRIDGE criteria we identified mechanisms that stem from systematic reviews and/or from meetings with policy-makers and other stakeholders as being more innovative. In the final version of the criteria, we did not use innovative and instead captured these sources in the following two criteria:

- draws on synthesized global research evidence that has been assessed for its quality and local applicability, as well as local data and studies; and
- incorporates the tacit knowledge, views and experiences of policy-makers and stakeholders that have been collected in a systematic way and reported in a transparent fashion.

Similarly, in an early version of the criteria, we identified mechanisms that focus on at least two of three aspects of an issue – a problem or policy objective, policy and programme options, and implementation considerations – as being more innovative. The final version of this criterion reads as follows:

- addresses the many features of an issue, including the underlying problem(s)/objective(s), options for addressing/achieving it, and key implementation considerations (and, if only some features are addressed, acknowledges the importance of the others).

Table 2.2 BRIDGE criteria to assess knowledge-brokering mechanisms and models

Information-packaging mechanism	Interactive knowledge-sharing mechanism	Organizational model for knowledge brokering
What it covers 1. Addresses a topical/relevant issue from the perspective of policy-makers and stakeholders with an explicit process for determining topicality/relevance (e.g. periodic priority-setting process, rapid-response service). 2. Addresses the many features of an issue, including the underlying problem(s)/objective(s), options for addressing/achieving it, and key implementation considerations (and if only some features are addressed, acknowledges the importance of the others). **What it includes** 3. Draws on synthesized global research evidence that has been assessed for its quality and local applicability, as well as local data and studies. 4. Incorporates the tacit knowledge, views and experiences of policy-makers and stakeholders that have been collected in a systematic way and reported in a transparent fashion. **For whom it is targeted** 5. Targets policy-makers and stakeholders with an explicit statement about them being a key audience (not just a policy implications section). 6. Engages policy-makers and stakeholders (not just researchers) in reviewing the product's relevance and clarity.	**What it covers** 1. Addresses a topical/relevant issue from the perspective of policy-makers and stakeholders with an explicit process for determining topicality/relevance (e.g. periodic priority-setting process, rapid-response service). 2. Addresses the many features of an issue, including the underlying problem(s)/objective(s), options for addressing/achieving it, and key implementation considerations (and if only some features are addressed, acknowledges the importance of the others). **What it includes** 3. Focuses (at least in part) on the tacit knowledge, views and experiences of policy-makers and stakeholders. 4. Considers (at least in part) a body of health systems information on a defined topic (e.g. policy brief informed by systematic reviews and local data/studies). **How it is targeted** 5. Targets policy-makers and stakeholders with an explicit statement that they are a key category of participant (not just researchers). 6. Timed to relate explicitly to a policy-making process or to requests from policy-makers.	**How it is governed** 1. Gives policy-makers, stakeholders and researchers an explicit role in its governance and ensures they exercise their role with transparency and objectivity. 2. Includes and enforces rules that ensure independence in how health systems information is produced, packaged and shared and that address conflicts of interest. **How it is managed and staffed** 3. Grants the director the authority needed to ensure the accountability of the entire organization to its knowledge-brokering mandate. 4. Ensures an appropriate size, mix, and capacity of staff with knowledge-brokering responsibilities. **How its resources are obtained and allocated** 5. Ensures an appropriate size of budget and an appropriate mix of funding sources for knowledge-brokering activities (e.g. contributions from regional and national policy-making authorities, competitively tendered awards, and an endowment). 6. Has an explicit approach to prioritizing knowledge-brokering activities and accepting commissions or requests from policy-makers and stakeholders.

Table 2.2 contd.

Information-packaging mechanism	Interactive knowledge-sharing mechanism	Organizational model for knowledge brokering
How it is packaged 7. Organized in a way that facilitates the identification of decision-relevant information, such as the benefits, harms and costs of policy/programme options 8. Written in language understandable to policy-makers and stakeholders. 9. Prepared in a format that is readily appreciated by policy-makers and stakeholders, such as a graded-entry format. **How its use is supported** 10. Contextualized through online commentaries or briefings provided by policy-makers and stakeholders. 11. Brought to attention of target audiences through e-mail alerts/listservs.	**How it is organized** 7. Involves the proactive identification of optimal participants (and possibly a closed list of invitees), in-person interactions or at least real-time online interactions, and a rule about whether and how comments can be attributed. 8. Involves the pre-circulation of information products to participants. 9. Offers all participants the potential to contribute equally to the discussion or at least opportunities for policy-makers and stakeholders to comment on or ask questions of an expert (not just listen to a presentation by an expert). **How its use is supported** 10. Captures insights through the creation of products based on the knowledge-sharing interactions (e.g. reports on the key insights from policy dialogues and training workshops, summaries of discussion from online forums). 11. Brings these products to the attention of target audiences through e-mail alerts/listservs.	**How it collaborates** 7. Is located within another organization or network that supports its knowledge-brokering activities. 8. Collaborates with other knowledge-brokering organizations in its knowledge-brokering activities. 9. Establishes functional linkages with policy-making and stakeholder organizations (e.g. rapid-response functions, exchange programmes and other mechanisms to support responsive relations).

We defined **interactive knowledge-sharing mechanisms** as mediating interactions that are focused (at least in part) on health systems information and that are intended to support policy-making. The interactions can take the form of policy dialogues, personalized briefings, training workshops, online briefings or webinars, online discussion forums, formalized networks, informal discussions, and presentations. We present the 11 BRIDGE criteria to assess interactive knowledge-sharing mechanisms in the second column of Table 2.2. We made some changes to these criteria that parallel those already described for information-packaging mechanisms. As well, in an early version of this set of BRIDGE criteria, we identified mechanisms that involve a dialogue in which each participant has the potential to contribute equally to the discussion as being more innovative. In the final version of the criteria, we used the following language instead:

- offers all participants the potential to contribute equally to the discussion or at least opportunities for policy-makers and stakeholders to comment on or ask questions of an expert (and not just listen to a presentation by an expert).

We had also originally identified mechanisms that involved in-person interactions and online synchronous interaction as being more innovative, but the final version of this criterion embeds the value of interactivity within a broader grouping of features:

- involves the proactive identification of optimal participants (and possibly a closed list of invitees), in-person interactions or at least real-time online interactions, and a rule about whether and how comments can be attributed.

Lastly, we defined **organizational models for knowledge brokering** as the features of organizations that are focused, at least in part, on health systems information and that are intended to support policy-making. These features can relate to the role of policy-makers and stakeholders in governance; rules that ensure independence and address conflicts of interest; authority to ensure accountability to a knowledge-brokering mandate; size, mix and capacity of staff with knowledge-brokering responsibilities; size of budget and mix of funding sources for knowledge brokering; approach to prioritizing activities and accepting commissions/requests; location within another organization or network; collaboration with other organizations; and functional linkages with policy-making and stakeholder organizations. We present the nine BRIDGE criteria to assess organizational models for knowledge brokering in the third column of Table 2.2. Early versions of this set of BRIDGE criteria did not involve the identification of innovative design features because the research literature and policy dialogue indicated to us that innovativeness in organizational models is closely tied to the national policy-making context (even more than it is for information-packaging and interactive knowledge-sharing

mechanisms) and the whole thrust of the criteria is to assess the fit between design features and the policy-making context. We did drop one criterion, namely the official status of an organization (e.g. private for-profit, private not-for-profit or public organization), because we concluded that the implications of this status are likely to be felt through the other criteria.

3. National policy-making context

We consider that a national policy-making context can be located at the intersection of:

- policy-making institutions and processes
- stakeholder opportunities and capacities for engagement
- research institutions, activities and outputs.

In each of these domains, and more generally, there are particular features of the national policy-making context that can be important to knowledge brokering. These attributes are outlined in Table 2.3.

Based on input received at the policy dialogue about the need to simplify the presentation of these features, we treat each one in an either–or way (a versus b). Of course, the reality is quite different. Policy-making processes may have elements of decision support driven by both the civil service and political parties. To highlight ways in which each of these features might help or hinder knowledge brokering, we present the either–or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

The three BRIDGE policy summaries describe how these features of the national policy-making context could influence the choice (and possibly the effectiveness) of knowledge-brokering mechanisms and models (Lavis, Catallo, Jessani et al., 2013; Lavis, Catallo, Permanand et al., 2013; Lavis, Jessani et al. 2013). As one example, a knowledge-brokering organization in England likely has an easier time establishing functional linkages with policy-makers given that the country is a unitary state with infrequent turnover of government and with centralized authority for making strategic decisions. On the other hand, the knowledge-brokering organization may be challenged by the crowded landscape for knowledge brokering in England, particularly the dynamic mix of players involved in decision support (civil service, political parties, politically affiliated think tanks, independent organizations and university-based research units) and a robust news media that brings attention to health and social care systems information from within and outside the country.

Table 2.3 Attributes of the national policy-making context that can influence knowledge brokering

Policy-making institutions and processes	
• Unitary versus federal state. • Centralized versus distributed authority for making decisions about priority problems, policy/programme options, and implementation strategies. • Single-party versus coalition government. • Infrequent versus frequent turnover of the governing party/coalition and its leadership.	• Civil service versus political party influence over decision support within government. • Centralized versus decentralized decision support within government. • High versus low capacity for policy analysis within the civil service. • Low versus high turnover within the civil service. • Significant versus limited resources to commission supports outside the civil service.
Research institutions, activities and outputs	**Stakeholder opportunities and capacities for engagement**
• Small versus large number of strong research institutions involved in the production, packaging and sharing of health systems information. • Large versus small scale of research institutions. • Explicit versus implicit mandate for, and resource commitment to, knowledge-brokering (not just research) activities and outputs.	• Formal, significant versus informal, limited role of stakeholders in policy-making. • High versus low degree of coordination within stakeholder groups. • High versus low autonomy of stakeholder groups from government and from narrow interests within their own memberships. • High versus low capacity for policy analysis within stakeholder groups. • Significant versus limited resources to commission supports outside the groups.
General features of the national policy-making context	
• English (the language of most health systems information) is versus is not spoken in addition to local languages. • Small (everyone knows each other) versus large size of the population. • High versus low rates of Internet use. • High versus low capacity of local news media for objective reporting.	

Note: to highlight ways in which each of these features might help or hinder knowledge brokering, we present the either/or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

One domain that we continually struggled with was where to situate the general public within the national policy-making context. In the current framework, the public implicitly or explicitly appears in three places:

1. in the overarching policy-making dynamic where public opinion is at play (as well as interest group pressure and the values of the governing party);
2. as a stakeholder group that may have a formal and significant role in policy-making (such as through citizen councils) or an informal and limited role;
3. as a diverse collection of publics who are influenced by the local news media's capacity for objective reporting.

Regardless of where public opinion comes into play, health systems information can inform the general public.

4. European policy-making context

Many of the features of a national policy-making context have analogues at the level of the European policy-making context, and these in turn may influence the choice of mechanisms and organizational models for knowledge brokering both at the national level (for nationally focused knowledge-brokering organizations) and at the European level (for European-focused organizations). For example, the number of regional research institutions similar to the European Observatory on Health Systems and Policies may influence the choice of knowledge-brokering mechanisms within Europe. For instance, there may be little reason to replicate the comparative work being done by the Observatory to identify challenges in health system performance and to convene policy dialogues that bring influential European thinkers and doers together to discuss how to address a challenge in health system performance.

The nature of the relations within and across European subregions may also influence the choice of knowledge-brokering mechanisms. National policy-making contexts that have competitive or adversarial relationships with other national policy-making contexts may not make use of (or may not want to be seen as making use of) mechanisms and models used by their competitors and adversaries. On the other hand, some national policy-making contexts may draw heavily on innovations and policies tried elsewhere and may actively support the diffusion of innovations and policy transfer.

5. Global context

The key features of the global context are concentrated within the domain of research outputs. The existence, visibility and use of one-stop shops may influence the choice of knowledge-brokering mechanisms and organizational models for knowledge brokering both at the national level and at the European level. For example, there may be little reason to replicate:

- **PubMed**[2]
  – a database featuring validated search strategies to locate the types of primary research studies that may assist with placing a problem in comparative perspective or with framing a problem in different ways;
- **Cochrane Library**[3]
  – a collection of databases that contain systematic reviews addressing questions about the effectiveness of drugs and clinical programmes and services, as well as economic evaluations addressing questions about cost effectiveness;

2 PubMed [online database]. In: National Center for Biotechnology Information [website]. Bethesda, MD: US National Library of Medicine; 2014 (http://www.ncbi.nlm.nih.gov/pubmed, accessed 19 March 2014).

3 Cochrane Library [online database]. Oxford: The Cochrane Collaboration; 2014 (http://www.thecochranelibrary.com/view/0/index.html, accessed 19 March 2014).

- **Health Evidence**[4]
  – a database of systematic reviews addressing questions about the effectiveness of public/population health programmes and services; and
- **Health Systems Evidence**[5]
  – a database of systematic reviews and other types of research products (e.g. evidence briefs for policy, overviews of systematic reviews, protocols for systematic review, registered titles for systematic reviews, economic evaluations) addressing a broad range of questions about governance and financial and delivery arrangements within health systems, and about implementation strategies that can support change in health systems, as well as descriptions of both health system reforms and entire health systems.

Other important features of the international context include the role of knowledge communities (such as health technology assessors who have a shared set of beliefs that transcend national boundaries) and of international agreements (such as international health regulations that are binding on national governments).

BRIDGE framework and criteria

The final version of the BRIDGE framework for knowledge brokering still has three levels: (i) the national policy-making context; (ii) the European policy-making context; and (iii) the global context. The part of the framework that addresses the national policy-making context still has three components (shown as shaded boxes in Fig. 2.1): (i) policy-making institutions and processes; (ii) stakeholder opportunities and capacities for engagement; and (iii) research institutions, activities and outputs. However, following the iterative development process, the descriptions of the attributes of this context are more concrete and more clearly situated on a spectrum from an attribute that simplifies the landscape for knowledge-brokering organizations to an attribute that complicates it. Knowledge brokering is still represented in the framework by bidirectional arrows between these components, with health systems information still being a focus but with interest group pressure, public opinion and the values of the governing party also identified as being at play.

While the outcome shown in the BRIDGE framework is evidence-informed policies, we also iteratively developed a simple categorization scheme for measures of success in addressing the four possible explanations for the disjuncture between information and action described earlier in this chapter.

4 Health-evidence.org [online database]. Hamilton, Ontario: McMaster University; 2014 (http://www.healthevidence.org/, accessed 19 March 2014).

5 Health Systems Evidence [online database]. Hamilton, Ontario: McMaster University; 2014 (http://www.mcmasterhealthforum.org/hse/, accessed 19 March 2014).

These indicators include:

- greater use of information-packaging or knowledge-sharing mechanisms that hold promise (i.e. process measures);

- greater instrumental or conceptual use of health systems information in policy-making processes and, arguably, fewer political uses of health systems information (i.e. intermediate outcome measures), where an instrumental use involves using the information to solve a particular problem at hand; a conceptual use involves using the information to think in new ways about a problem, options and implementation considerations; and a political use involves using the information to justify a decision made for other reasons;
- better decisions within and about health systems (i.e. also intermediate outcome measures); and
- improved health (i.e. final outcome measures), although attribution challenges make this very difficult to assess, and it may be impossible to prove that a given information-packaging or knowledge-sharing mechanism had an explicit impact on a given policy decision.

The final version of the BRIDGE criteria consists of 11 criteria for assessing information-packaging mechanisms (two more than originally); 11 criteria for assessing interactive knowledge-sharing mechanisms (one more than originally); and nine criteria for assessing organizational models for knowledge brokering (one less than originally). Following the iterative development process, greater attention has been given to being explicit (six mentions) or transparent (one mention). Also, more nuance has been given to descriptions of how comprehensively mechanisms address the many features of an issue and how policy-makers and stakeholders are involved in governance of knowledge-brokering organizations.

Strengths and weaknesses of the approach

Use of three complementary inputs – (i) the existing research literature; (ii) deliberations among policy-makers, stakeholders and researchers; and (iii) a practical application – proved to be a highly robust way to develop a framework and criteria. The research literature ensured that we stood on the shoulders of those who had studied knowledge brokering before us. The policy dialogue forced us to recognize the tremendous variation in national policy-making contexts and the need to convey concepts in language as straightforward as possible. The application of the criteria led us to increase the precision of our wording so that the criteria could be applied consistently. We applied the

criteria in our website reviews (described in Chapter 4), site visits (described in Chapter 5), and national case studies (described in Chapters 6–9), as well as in our writing of the BRIDGE summaries (Lavis, Catallo, Jessani et al., 2013; Lavis, Catallo, Permanand et al., 2013; Lavis, Jessani et al., 2013).

The other strengths of our approach include:

- using a workbook to engage policy-makers, stakeholders and researchers in a deliberation informed, but not constrained, by everything we had learned to that point; and
- using at least two, and sometimes up to five, individuals in each step of applying and revising the framework and criteria.

The downside of our approach is that we have not examined the explanatory capacity of the framework or the validity and reliability of the criteria. We took a preliminary step towards the former by developing a set of hypotheses about relationships between the features of a national policy-making context and the choice of particular mechanisms and models. We used three criteria to begin to identify those contextual factors warranting further examination.

1. Plausible hypotheses can be articulated about relationships between these variables, including that the contextual factor(s) could explain choices between:
    - local (versus external) knowledge-brokering mechanisms;
    - information-packaging (versus interactive knowledge-sharing) mechanisms;
    - interactive knowledge-sharing mechanisms that engage (versus do not engage) stakeholders; and
    - organizational models that place mechanisms within (versus outside) policy-making institutions.
2. Comparable data exist across countries.
3. Economy-of-scale considerations are taken into account.

We identified a number of plausible hypotheses, which are available in the workbook that was prepared for the policy dialogue. However, we did not have the data that would have allowed us to examine these hypotheses.

Another weakness of our approach is that we did not convene a follow-up policy dialogue to elicit feedback on the revised framework and criteria. Instead, we used the resources we had available to convene a second dialogue that focused on applying the framework and criteria to the question: how can knowledge brokering be better supported across European health systems?

Lessons learned

Several key lessons emerged from the iterative development of the framework and criteria.

- The existing research literature about knowledge brokering (described in Chapter 3) contains a great many think pieces and a number of empirical studies that highlight factors that need to be taken into account when improving knowledge-brokering mechanisms and models; there is no published research on the effectiveness of particular mechanisms and models.
- Ideas differ about what constitutes a national policy-making context. Policy-makers, stakeholders and researchers find it difficult to engage with a framework that does not present clear contrasts in how attributes are described.
- Criteria for assessing knowledge-brokering mechanisms and models are most useful when they prompt reflection in light of the realities of national policy-making processes, rather than prescribing a one-size-fits-all approach. This is a case we make in each of the BRIDGE summaries.

As tools for reflection, the BRIDGE framework and criteria can be used by:

- funding agencies within a country (and at the European level) to examine whether they are creating the right incentives or requirements for researchers to produce and share health systems information, and for knowledge-brokering organizations to design an operational model appropriate to their contexts;
- knowledge brokers and researchers to assess their knowledge-brokering mechanisms and models; and
- policy-makers and stakeholders within a country (and at the European level) to review (and more clearly communicate) the expectations they currently set for knowledge-brokering mechanisms and models.

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Bridging the worlds of research and policy in European health systems

Chapter 4

Knowledge-brokering mechanisms and models used in Europe: website reviews in 31 countries

Cristina Catallo, John N Lavis and the BRIDGE Study Team

European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Conflict of interest

The authors declare that they have no commercial interests relevant to this chapter. Several authors hold affiliations with one or more of the organizations that are included in the analyses described in the chapter; however, members of the BRIDGE study team who do not hold these affiliations were involved in the coding and analysis of the data. The funder played no role in the research that informed the writing of this chapter.

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Key messages

Using websites to find and describe knowledge-brokering organizations

- The study team:
  - recruited country correspondents in each of 31 countries who then identified potentially eligible knowledge-brokering organizations, used explicit criteria to assess the eligibility of these organizations, and used a data-collection tool to extract data about their knowledge-brokering mechanisms and models from eligible organizations' websites;
  - identified validators for the eligibility assessments who then reviewed the list of included organizations and the list of organizations that were carefully considered and found to meet some, but not all, of our eligibility criteria;
  - described the organizations according to their geographical focus, scale of operation and target audience, and whether they provided at least some description of their organizational model; and
  - described the knowledge-brokering mechanisms according to their type and, for each organization, the design features of its most innovative mechanism.

Findings from the website reviews

- Of the 404 knowledge-brokering organizations based in Europe that were carefully considered for inclusion in the BRIDGE study, 163 met our eligibility criteria.
- The organizations were much more likely to make information products available on their websites than to describe interactive knowledge-sharing mechanisms. More traditional mechanisms (such as reports and presentations) were more likely than innovative ones to be profiled on their websites.
- Many of the more innovative information products targeted policy-makers specifically (n=123) and were written in accessible language (n=104), but very few were based on a systematic review (n=33) or were accompanied by online commentaries or briefings about the product by target audience representatives (n=6).
- Many of the innovative interactive knowledge-sharing mechanisms targeted policy-makers (n=91) as well as other stakeholders who will be involved in, or affected by, decisions (n=106); a fair proportion of them were timed

to relate explicitly to a policy-making process or to requests from policy-makers (n=45); but most involved presentation by an expert (n=74) and few involved true dialogue (n=27).

- Eligible organizations typically provided some (but often very limited) description of their organizational models on their websites (n=144); far fewer described their approaches to monitoring and evaluation (n=41).

Strengths and weaknesses of the approach

- Working with country correspondents and extracting data from websites proved to be a highly efficient way to identify and characterize knowledge-brokering organizations in Europe. The other strengths of this approach include our use of explicit eligibility criteria, a data-collection tool, validators, and at least two individuals for each step of the process.
- A downside of our approach is that websites may not tell the whole story. Another weakness of our approach is that some data-collection requests had a subjective dimension that made it difficult to ensure that criteria were applied consistently, particularly when websites were in languages not spoken by members of the central coordination team.

Lessons learned

- There are a large number of knowledge-brokering organizations active in Europe, and they could be helpfully supported to become a community of organizations that learn from one another.
- Some innovative knowledge-brokering mechanisms are in use, but they are not widely profiled on organizations' websites and perhaps not widely used.
- Knowledge-brokering organizations tend not to describe their organizational models in any detail on their websites, despite how helpful this information could be to policy-makers and stakeholders who wish to assess whether they are built for purpose.

Knowledge-brokering mechanisms and models used in Europe

Good health systems depend on well-informed policy-making by governments and decision-making by a range of stakeholders. By **health systems information**, we mean data (on performance and outcomes, among other topics) and research evidence (about policy and programme options to improve performance or achieve better outcomes, among other topics). We consider **data** to be facts and statistics collected together for reference or analysis, and we consider **research evidence** to be the results of a systematic investigation into materials and sources in order to establish facts and reach new conclusions. The results can take the form of conceptual frameworks, primary research studies, and systematic reviews, among others.

Policy-makers are the government officials who will be directly involved in decision-making as part of a policy-making process, either as decision-makers themselves (notably politicians) or as advisers working in close proximity to these decision-makers (notably political staffers and civil servants). S**takeholders** are the individuals and groups who will be involved in or affected by a policy-making process (i.e. who have an interest in it), but not those government officials who will be directly involved in decision-making. They can be drawn from industry, professional associations, and patient groups, among others.

We have defined **knowledge brokering** as the use of information-packaging mechanisms and/or interactive knowledge-sharing mechanisms to bridge policy-makers' (and stakeholders') contexts and researchers' contexts. Knowledge brokering addresses the four possible reasons for the disjuncture between information and action: (i) health systems information is not communicated effectively; (ii) health systems information is not available when policy-makers and stakeholders need it, and in a form that they can use; (iii) policy-makers and stakeholders lack the capacity to find and use health systems information efficiently and (in some countries) lack mechanisms to prompt them to use health systems information in policy-making; and (iv) policy-makers and stakeholders lack opportunities to discuss system challenges with researchers.

In turn, we have defined **information-packaging mechanisms** as information products in a variety of media that are focused (at least in part) on health systems information and that are intended to support policy-making. The outputs can take the form of policy briefs, issue notes, research summaries, policy dialogue reports, research reports, presentations, audio podcasts, video podcasts, videos, blogs, impact summaries, newsletters, annual reports, and cartoons and other visual media, among others. And we have defined **interactive knowledge-sharing mechanisms** as mediating interactions that are focused (at least in

part) on health systems information and that are intended to support policy-making. The interactions can take the form of policy dialogues, personalized briefings, training workshops, online briefings or webinars, online discussion forums, formalized networks, informal discussions, and presentations.

Knowledge-brokering oganizations must organize themselves to undertake their work effectively and efficiently. We have defined **organizational models for knowledge brokering** as the features of organizations that are focused (at least in part) on health systems information and that are intended to support policy-making. These features can relate to the role of policy-makers and stakeholders in governance; rules that ensure independence and address conflicts of interest; authority to ensure accountablity to a knowledge-brokering mandate; size, mix and capacity of staff with knowledge-brokering responsibilities; size of budget and mix of funding sources for knowledge brokering; approach to prioritizing activities and accepting commissions/requests; location within another organization or network; collaboration with other organizations; and functional linkages with policy-making and stakeholder organizations.

These definitions, which are critical to an understanding of what we did here and why, are listed and referenced in Appendix A.

Research objective

The objective of this substudy within the broader BRIDGE study was to identify knowledge-brokering organizations operating within and across Member States of the European Union (EU) and the European Free Trade Association (EFTA) and to examine the knowledge-brokering mechanisms (specifically, information-packaging and interactive knowledge-sharing mechanisms) and organizational models that they use. Our focus in this chapter is more on appreciating the current breadth of mechanisms and models in use than on understanding how these mechanisms and models work in particular contexts (the focus of Chapter 5) or how they intersect with national policy-making processes (the focus of Chapters 6–9).

In one respect, we are creating a baseline for one of the measures of success for knowledge brokering that are described in Chapter 2 – namely, greater use of knowledge-brokering mechanisms that hold promise, a type of process measure. However, as we also discuss in Chapter 2, the choice and impact of any given mechanism or model will depend on attributes of the national (or European) policy-making context in which the organization is working. We also describe these attributes in Chapter 2. What we identify as promising, therefore, will one day need to be evaluated in different contexts to see whether and where this promise is borne out. For now, we focus on who is doing what.

Using websites to find and describe knowledge-brokering organizations

To address our research objective, we conducted website reviews in all 31 countries that are members of the EU or the EFTA. We identified country correspondents for each of the 31 countries and supported their:

- identification of potentially eligible knowledge-brokering organizations;
- use of explicit criteria to assess the eligibility of these organizations (criteria are provided in Appendix B); and
- use of a data-collection tool to extract data from eligible organizations' websites about the knowledge-brokering mechanisms and models that they use (Appendix C).

We also identified validators for the eligibility assessments and supported their review of the list of included organizations and the list of organizations that were carefully considered and found to meet some, but not all, of our eligibility criteria. A list of country correspondents for the website reviews and validators for the eligibility assessments is provided in Appendix D.

Country correspondents were encouraged to review the following types of websites in order to identify potentially eligible knowledge-brokering organizations:

- networks operating with the country, subregion or region
- governments
- intermediary organizations, such as the national knowledge centres in Belgium and Norway
- independent research organizations
- universities.

They were also encouraged to contact colleagues to assist with identifying potentially eligible organizations.

Our eligibility criteria focused on knowledge-brokering organizations that:

- fund, conduct or disseminate research;
- focus (at least in part) on governance, financial and delivery arrangements within health systems;
- identify policy-makers as being among the target audiences for their research;
- function as semi-autonomous or autonomous organizations;

- put all (or almost all) products in the public domain (whether or not there is a small charge) in order to advance the public interest;
- add value beyond the simple collection and collation of data; and
- target EU or EFTA Member States, groupings of these Member States or those constituent units of these Member States that are above the level of municipalities (e.g. provinces, counties).

The eligibility criteria meant that we did not include knowledge-brokering organizations that focus primarily on taking political positions or solely on clinical or public health issues (e.g. health technology assessment agencies), or organizations that primarily collect and collate data or that do not consider European policy-makers to be a target audience. We also excluded organizations that do not put most of their products in the public domain. The specific types of organizations that were excluded in our substudy as a result of these criteria are described in Appendix B. We noted repeatedly in our interactions with country correspondents and validators that the eligibility assessment was not an accreditation-type activity or a pronouncement about who does good work, but rather an effort to identify organizations that met explicit criteria.

The data-collection tool covered five domains:

1. the organization itself, including whether it is operating at the pan-European, cross-national, national or subnational level; the scale at which it is operating; and its target audiences;
2. each of the organization's information-packaging mechanisms, including the preparation, packaging and supports for its use;
3. each of the organization's interactive knowledge-sharing mechanisms, including the preparation, organization and supports for its use;
4. any descriptions of the organizational model used by the organization; and
5. any descriptions of the approach to monitoring and evaluation used by the organization.

Most of the country correspondents completed their eligibility assessments and website reviews between September 2009 and March 2010, with the remainder completing this work in late 2010 or early 2011. The validators reviewed all eligibility assessments in late 2010 or early 2011, and we updated the list of eligible (and carefully considered but excluded) organizations at that time. However, we did not update the data that we had extracted from eligible organizations' websites.

One and sometimes two members of the BRIDGE study team independently assessed all eligibility decisions and conducted checks on all extracted data.

Differences were resolved by consensus and in discussion with the country correspondents and validators. Three individuals entered the coded data into Microsoft Excel, including two individuals who were not members of the BRIDGE study team and who always entered or checked data independently of the BRIDGE study team member. In so doing they:

- coded each organization according to its geographical focus, its scale of operation and target audience, and whether it provided at least some description of its organizational model; and
- coded the knowledge-brokering mechanisms according to their type and, for each organization, the design features of its most innovative type of mechanism.

One member of the BRIDGE study team conducted descriptive statistical analyses of the mechanisms and models in use, both overall and by geographical focus. When reporting on the design features of an organization's most innovative type of knowledge-brokering mechanism, we counted all products or activities of that type. For example, if an organization published two series of research reports, and these were its most innovative information product, we counted each series as a separate product.

For geographical focus, we grouped countries into four subregions (recognizing that the countries in each grouping may share some geographical, historical, political or cultural features but also that they can be quite heterogeneous).

1. Ten eastern European countries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia).
2. Ten western European countries (Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland).
3. Six Mediterranean countries (Cyprus, Greece, Italy, Malta, Portugal and Spain).
4. Five Nordic countries (Denmark, Finland, Iceland, Norway and Sweden).

For type of mechanism, we used the BRIDGE criteria (described in Chapter 2) to code information-packaging and interactive knowledge-sharing mechanisms as traditional (fewer criteria met) and innovative (more criteria met). As described in more detail in BRIDGE Policy Summary 7 (Lavis, Catallo, Permanand et al., 2013), we considered traditional information products to include:

- books;
- reports, excluding reports of systematic reviews (this category includes what were called commissioned reports, research reports, technical reports

and working papers, as well as health policy studies, health sector reviews, indicator/country profiles, and policy papers);

- journal articles, excluding articles about systematic reviews;
- systematic reviews;
- presentations;
- newsletters (this category includes what were called bulletins, listservs and newsletters); and
- annual reports.

We considered more innovative information products to include:

- summaries of reports, excluding reports of systematic reviews (this category includes media releases);
- summaries of journal articles, excluding articles about systematic reviews;
- summaries of systematic reviews;
- summary statements;
- compendiums of summaries;
- issue notes (this category includes what were called issue briefs, memos, and other products that start with a policy issue but do not address the full breadth of problem, options and implementation considerations);
- policy briefs (this category includes products that address the full breadth of problem, options and implementation considerations);
- policy dialogue reports;
- interactive databases; and
- visual or multimedia information products (this category includes videos, such as those that organizations post on YouTube, as well as cartoons, podcasts, and TV/radio advertisements).

As described in more detail in BRIDGE Policy Summary 8 (Lavis, Catallo, Jesssani et al., 2013), we considered traditional interactive knowledge-sharing mechanisms to include:

- presentations to an audience that includes policy-makers and stakeholders (category includes presentations at conferences, meetings, seminars and other forums);
- informal discussions with policy-makers and stakeholders;
- networks to oversee a research programme or project (category includes

working groups, network meetings and research exchanges if they are focused primarily on a research programme or project and not a policy issue); and

- online discussion forums with restricted access (category includes intranet sites and member-only websites).

We considered more innovative interactive knowledge-sharing mechanisms to include:

- government working groups (category includes working groups and national support teams if they are focused on a policy issue and not a research programme or project and if this focus is a long-term engagement);
- online discussion forums with open access (category includes blogs, Facebook, Twitter and other online discussion forums that do not restrict access);
- online briefings and webinars;
- training workshops (category includes workshops where the focus is on developing policy-makers' and stakeholders' capacity to find and use health systems information);
- personalized briefings (category includes more formalized face-to-face briefings, including what were called policy briefings, personalized seminars, and policy consultations, and one-off briefings by national support teams); and
- policy dialogues (category includes face-to-face events that address the full breadth of problem, options and implementation considerations).

Findings from the website reviews

Of the 404 knowledge-brokering organizations based in Europe that were carefully considered for inclusion in this BRIDGE substudy, 163 met our eligibility criteria, of which:

- 62 worked in one of the 10 western European countries;
- 28 worked in one of the six Mediterranean countries;
- 27 worked in one of the 10 eastern European countries;
- 24 worked in one of the five Nordic countries;
- 17 had a Europe-wide focus;
- 4 had a global focus; and
- 1 had a cross-national focus (Table 4.1).

Table 4.1 Number of knowledge-brokering organizations, by scale of operation and target audience

Organization type	All	Scale of operation				Target audiences					Other target audiences[14]	
		Small[5]	Inter-mediate	Large[6]	Not available[7]	National and subnational policy-makers		International policy-makers		International agencies/NGOs	Health system managers[13]	Other
						Politicians[8]	Civil servants[9]	Politicians[10]	Staff[11]	Advisers and consultants[12]		
Global-level organizations	4	1	0	2	1	4	4	4	4	3	2	0
European-focused organizations	17	6	5	3	3	16	16	16	13	12	4	7
Intra-European or cross-national organizations	1	0	0	0	1	1	1	1	1	1	0	0
National organizations												
eastern European countries[1]	27	10	11	4	2	25	25	10	15	15	20	12
western European countries[2]	62	16	21	19	6	60	59	33	31	24	47	15
Mediterranean countries[3]	28	6	14	3	5	24	27	8	13	13	27	7
Nordic countries[4]	24	4	9	9	2	21	20	6	1	2	6	4
All organizations	**163**	**43**	**60**	**40**	**20**	**151**	**152**	**78**	**78**	**70**	**106**	**45**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

[5] <10 staff and <30 published outputs per year.

[6] >100 staff and >300 published outputs per year.

[7] The scale of operation could not be assessed from the information provided on the organization's website.

[8] National and subnational policy-makers – politicians include ministers of health or finance, among others, who take the major health policy decisions.

[9] National and subnational policy-makers – civil servants include civil servants in health, finance, and other relevant ministries who draft position papers and legislation, oversee reforms and have a significant influence on the decisions of politicians and parliaments.

[10] International policy-makers – politicians include members of pan-European bodies, such as the European Parliament, who play an increasing role in shaping economic policy at a pan-European level.

[11] International policy-makers – staff include staff of pan-regional or global bodies, such as the European Commission or World Bank, who directly or indirectly affect policy-making in countries.

[12] International agencies/nongovernmental organizations (NGOs) – advisers and consultants on health-care reform include individuals who have a direct impact on decisions, particularly when supporting the national policy-makers of central and eastern Europe.

[13] Health system managers include senior managers with hands-on responsibility for the running of health-care providers, purchasing authorities, sickness funds and other institutions.

[14] To be eligible for inclusion in the study, an organization's target audiences had to include one of the aforementioned groups and not health system managers exclusively.

The organizations were more commonly of intermediate size (n=60) than small (n=43) or large (n=40) in size; and more likely to target national and subnational policy-makers than international policy-makers and advisers. We provide in Appendix E a list of included organizations as well as those that were carefully considered and found to meet some, but not all, of our criteria.

Organizations used a variety of traditional and innovative information-packaging mechanisms (Table 4.2). Traditional types of information products that were commonly available on the websites of knowledge-brokering organizations included:

- reports (n=235), particularly for organizations based in western Europe (n=88)
- newsletters (n=64)
- journal articles (n=32).

Innovative types of information products were also made available, although less frequently:

- summaries of reports (n=27)
- issue notes (n=23)
- videos (n=10).

Other innovative types of products were used much less frequently.

We examined the most innovative type of information product made available by each organization and found the following characteristics (Tables 4.3 and 4.4):

- a large majority of the information products targeted policy-makers explicitly (n=123);
- the largest proportion were based on a research project (n=98), the smallest proportion were based on a systematic review (n=33);
- the largest proportion focused on a problem or policy objective (n=107), the smallest proportion focused on implementation considerations (n=77);
- relatively few were reviewed by members of the target audience before publication (n=25);
- a fair proportion used language clearly intended to be accessible for their target audiences (n=104).
- few were accompanied by online commentaries or briefings about the product by target audience representatives (n=6).

Table 4.2 Number of information-packaging mechanisms used by knowledge-brokering organizations, by type

Organization type	Traditional types of information products							Innovative types of information products									
	Books	Reports (excluding systematic reviews)	Journal articles (excluding systematic reviews)	Systematic reviews	Presentations	Newsletters	Annual reports	Summaries of reports (excluding reviews)	Summaries of journal articles (excluding reviews)	Summaries of systematic reviews	Summary statements	Compendiums of summaries	Issue notes	Policy briefs	Policy dialogue reports	Interactive databases	Visual or multimedia (e.g. videos)
Global-level organizations (n=4)	0	10	0	0	0	3	0	2	0	0	1	0	2	0	0	1	1
European-focused organizations (n=17)	2	44	3	0	0	7	7	5	2	1	0	0	4	3	0	4	1
Intra-European or cross-national organizations (n=1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
National organizations																	
eastern European countries (n=27)[1]	2	34	1	0	9	7	10	4	0	0	0	0	7	1	1	0	2
western European countries (n=62)[2]	12	88	17	1	0	36	9	15	0	0	0	1	10	3	0	1	4
Mediterranean countries (n=28)[3]	4	29	9	1	0	3	2	1	0	0	0	0	0	0	0	0	0
Nordic countries (n=24)[4]	1	30	2	2	3	8	1	0	0	0	0	0	0	1	0	1	2
All organizations (n=163)	**21**	**235**	**32**	**4**	**12**	**64**	**29**	**27**	**2**	**1**	**1**	**1**	**23**	**8**	**1**	**8**	**10**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

Table 4.3 Characteristics of innovative* information-packaging mechanisms used by knowledge-brokering organizations (part 1)

Organization type	Targets policy-makers as a key audience (criterion 5)	Origin/source					Primary focus			Reviewed before publication by members of the target audience (criterion 6)
		Research project (i.e. primary research)	Systematic review (part of criterion 3)	Meeting with policy-makers or other stakeholders	Collation of research-related products and activities	Issue raised by policy-makers	Problem or policy objective (part of criterion 2)	Options for addressing a problem or achieving a policy objective (part of criterion 2)	Implementation considerations (part of criterion 2)	
Global-level organizations (n=4)	3	2	0	1	2	2	3	3	1	2
European-focused organizations (n=17)	13	8	1	3	6	7	12	8	6	1
Intra-European or cross-national organizations (n=1)	0	1	0	0	0	0	1	1	1	0
National organizations										
eastern European countries (n=27)[1]	21	20	5	9	6	16	19	14	8	6
western European countries (n=62)[2]	51	48	21	19	34	33	50	42	38	10
Mediterranean countries (n=28)[3]	22	7	5	4	20	9	10	15	14	4
Nordic countries (n=24)[4]	13	12	1	0	7	5	12	12	9	2
All organizations (n=163)	**123**	**98**	**33**	**36**	**75**	**72**	**107**	**95**	**77**	**25**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

* Innovative was defined as meeting the greatest number of BRIDGE criteria for information-packaging mechanisms.

Table 4.4 Characteristics of innovative* information-packaging mechanisms used by knowledge-brokering organizations (part 2)

Organization type	Packaging			Supporting wider use	
	Uses language that is clearly designed to be accessible (criterion 8)	Follows a graded-entry format with key messages, possibly an executive summary and a full report (criterion 9)	Highlights decision-relevant information explicitly (e.g. benefits, harms and costs of options) (criterion 7)	Accompanied by online commentaries or briefings about the product by target audience representatives (criterion 10)	Option to sign up for e-mail alert/listserv when new products are posted online (criterion 11)
Global-level organizations (n=4)	4	2	2	0	1
European-focused organizations (n=17)	10	9	4	0	6
Intra-European or cross-national organizations (n=1)	1	1	0	0	1
National organizations					
eastern European countries (n=27)[1]	20	15	15	2	4
western European countries (n=62)[2]	42	37	32	3	28
Mediterranean countries (n=28)[3]	18	19	15	1	6
Nordic countries (n=24)[4]	9	5	4	0	6
All organizations (n=163)	**104**	**88**	**72**	**6**	**52**

Notes:
[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).
[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).
[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).
[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).
* Innovative was defined as meeting the greatest number of BRIDGE criteria for information-packaging mechanisms.

Compared to information-packaging mechanisms, fewer interactive knowledge-sharing mechanisms were profiled on the websites of knowledge-brokering organizations in Europe (Table 4.5). Presentations were by far the most common traditional mechanism (n=131), others were used much less frequently:

- networks to oversee a research programme or project (n=9)
- informal discussions with policy-makers and stakeholders (n=4).

A variety of more innovative types of interactive knowledge-sharing mechanisms were identified, some of which were used more commonly than some traditional mechanisms:

- training workshops (n=30)
- personalized briefings (n=26)
- online discussion forums (n=11).

Looking closer at the most innovative interactive knowledge-sharing mechanism from each organization, we found the following characteristics (Tables 4.6, 4.7, 4.8):

- a large majority targeted policy-makers explicitly (n=91) or other stakeholders who would be involved in, or affected by, decisions (n=106);
- very few were based on a systematic review (n=14);
- roughly equal numbers focused on a problem or policy objective (n=70), options (n=75) or implementation considerations (n=62);
- a fair proportion were timed to relate explicitly to a policy-making process or to requests from policy-makers (n=45);
- most involved a presentation by an expert (n=74), few involved true dialogue (n=27);
- most involved in-person interactions (n=80);
- few captured the insights from the interactions in the form of products that could be circulated (n=33).

Eligible organizations typically provided some (but often very limited) description of their organizational models on their websites (n=144); far fewer described their approaches to monitoring and evaluation (n=41) (Table 4.9). Because the extracted data are so sparse and difficult to compare across organizations we have chosen not to present any further detail about organizational models in this chapter, but leave this to other parts of this book, most notably – Chapter 5 which describes our site visits, and Chapters 6–9 which present our case studies.

Table 4.5 Number of interactive knowledge-sharing mechanisms used by knowledge-brokering organizations, by type

Organization type	Traditional types of interactive knowledge-sharing mechanisms				Innovative types of interactive knowledge-sharing mechanisms					
	Presentations to an audience that includes policy-makers and stakeholders	Informal discussions with policy-makers and stakeholders	Networks to oversee a research programme or project	Online discussion forums with restricted access	Government working groups	Online discussion forums with open access	Online briefings or webinars	Training workshops	Personalized briefings	Policy dialogues
Global-level organizations (n=4)	o	0	0	2	0	2	0	0	0	0
European-focused organizations (n=17)	9	0	1	1	0	2	0	1	4	1
Intra-European or cross-national organizations (n=1)	9	0	1	0	0	0	0	0	0	0
National organizations										
eastern European countries (n=27)[1]	20	1	0	0	0	1	0	9	6	4
western European countries (n=62)[2]	68	1	3	0	4	6	1	3	13	0
Mediterranean countries (n=28)[3]	20	1	4	0	0	0	0	12	1	1
Nordic countries (n=24)[4]	14	1	0	0	2	0	0	5	2	1
All organizations (n=163)	**131**	**4**	**8**	**3**	**6**	**11**	**1**	**30**	**26**	**7**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

Table 4.6 Characteristics of innovative* interactive knowledge-sharing mechanisms used by knowledge-brokering organizations (part 1)

Organization type	Key target audience		Origin/source						Primary focus		
	Policy-makers (criterion 5)	Other stakeholders who will be involved in, or affected by, decisions	Research agenda setting	Research project (i.e. primary research)	Systematic review (part of criterion 4)	Collation of research-related products or activities	Issue raised by policy-makers	Training needs identified by policy-makers	Problem or policy objective (part of criterion 2)	Options for addressing a problem or achieving a policy objective (part of criterion 2)	Implementation considerations (part of criterion 2)
Global-level organizations (n=4)	2	3	0	0	0	0	2	0	2	2	1
European-focused organizations (n=17)	7	6	3	2	0	3	4	2	2	4	3
Intra-European or cross-national organizations (n=1)	1	1	1	0	0	0	0	0	1	1	1
National organizations											
eastern European countries (n=27)1	13	17	10	9	2	6	11	9	13	12	7
western European countries (n=62)2	43	47	47	26	9	30	27	11	33	34	31
Mediterranean countries (n=28)3	17	20	6	5	2	6	10	8	11	15	12
Nordic countries (n=24)4	8	12	5	7	1	6	6	5	8	7	7
All organizations (n=163)	**91**	**106**	**72**	**49**	**14**	**51**	**60**	**35**	**70**	**75**	**62**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

* Innovative was defined as meeting the greatest number of BRIDGE criteria for interactive knowledge-sharing mechanisms.

Table 4.7 Characteristics of innovative* interactive knowledge-sharing mechanisms used by knowledge-brokering organizations (part 2)

Organization type	Timing relates explicitly to a policy-making process or to requests from policy-makers (criterion 6)	Preparation			Format			
		Closed list of invitees (part of criterion 7)	Pre-circulation of products (criterion 8)	Rule about whether and how comments can be attributed (part of criterion 7)	Presentation by an expert	Questions and answers targeted at an expert	Policy-maker commentaries on an expert's input (part of criterion 9)	Dialogue where each participant has the potential to contribute equally to the discussion (part of criterion 9)
Global-level organizations (n=4)	1	2	1	0	1	1	1	0
European-focused organizations (n=17)	2	5	0	0	5	2	2	3
Intra-European or cross-national organizations (n=1)	0	1	0	0	0	0	0	0
National organizations								
eastern European countries (n=27)[1]	11	5	1	0	15	14	3	1
western European countries (n=62)[2]	16	16	2	4	31	23	16	14
Mediterranean countries (n=28)[3]	12	6	1	3	11	10	4	6
Nordic countries (n=24)[4]	3	2	2	0	11	7	4	3
All organizations (n=163)	**45**	**37**	**7**	**7**	**74**	**57**	**30**	**27**

Notes:

[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).

[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).

[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).

[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

* Innovative was defined as meeting the greatest number of BRIDGE criteria for interactive knowledge-sharing mechanisms.

Table 4.8 Characteristics of innovative* interactive knowledge-sharing mechanisms used by knowledge-brokering organizations (part 3)

Organization type	Nature of interactions			Supporting wider use	
	In-person interactions (part of criterion 7)	Online synchronous (real-time) interactions (part of criterion 7)	Online but asynchronous interactions	Products produced based on the interactions (criterion 10)	Option to sign up for e-mail alert/listserv when new interaction-related products are posted online (criterion 11)
Global-level organizations (n=4)	0	0	2	0	0
European-focused organizations (n=17)	6	0	3	3	1
Intra-European or cross-national organizations (n=1)	1	0	1	0	0
National organizations					
eastern European countries (n=27)1	11	0	2	2	0
western European countries (n=62)2	36	1	3	23	16
Mediterranean countries (n=28)3	19	0	2	4	3
Nordic countries (n=24)4	7	2	2	1	0
All organizations (n=163)	**80**	**3**	**15**	**33**	**20**

Notes:
1 Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).
2 Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).
3 Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).
4 Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).
* Innovative was defined as meeting the greatest number of BRIDGE criteria for interactive knowledge-sharing mechanisms.

Table 4.9 Number of knowledge-brokering organizations providing key description on their websites

Organization type	Organizations providing at least some description of their organizational models	Organizations providing at least some description of their approaches to monitoring and evaluation
Global-level organizations (n=4)	4	3
European-focused organizations (n=17)	15	6
Intra-European or cross-national organizations (n=1)	1	1
National organizations		
eastern European countries (n=27)[1]	21	11
western European countries (n=62)[2]	58	10
Mediterranean countries (n=28)[3]	26	1
Nordic countries (n=24)s[4]	19	9
All organizations (n=163)	**144**	**41**

Notes
[1] Eastern European countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (n=10).
[2] Western European countries include Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Netherlands, Switzerland and United Kingdom of Great Britain and Northern Ireland (n=10).
[3] Mediterranean countries include Cyprus, Greece, Italy, Malta, Portugal and Spain (n=6).
[4] Nordic countries include Denmark, Finland, Iceland, Norway and Sweden (n=5).

Strengths and weaknesses of the approach

Working with country correspondents and extracting data from websites proved to be a highly efficient way to identify knowledge-brokering organizations operating within and across Member States of the EU and the EFTA and to examine their knowledge-brokering mechanisms and organizational models (although operational information was less available).

The other strengths of our approach include:

- using explicit criteria to assess the eligibility of these organizations
- using a data-collection tool to extract data from eligible organizations' websites
- involving validators for the eligibility assessments, and
- involving at least two individuals in each step of the process of eligibility assessment, data extraction and data coding.

A downside of our approach is that websites may not tell the whole story. While it would be very unlikely today for a knowledge-brokering organization not to have a website or to profile its information products there (even if only a list of products, such as journal articles where copyright issues may be involved), there may be more interactive knowledge-sharing mechanisms in use than

are described on websites. Certainly every organization has an organizational model even if it chooses not to describe the model on its website.

The other weaknesses of our approach include:

- uneven background knowledge among our country correspondents about knowledge-brokering concepts, such as familiarity with systematic reviews;
- some eligibility criteria that were difficult to operationalize, such as whether the organization functions as a semi-autonomous/autonomous organization;
- some data-collection requests that had a significant subjective dimension, such as whether an information product uses language clearly designed to be accessible; and
- data collection that required a degree of generalization across examples in a series, such as whether an information product uses systematic reviews as a source.

The subjective dimension of some data elements made it difficult to ensure that criteria were applied consistently, particularly when websites were in languages not spoken by members of the central coordination team.

Complementary approaches to data collection are needed to better understand the full range of knowledge-brokering mechanisms and organizational models being used across Europe. This is a subject we turn to in later chapters.

Lessons learned

The key lessons learned from the website reviews include the following.

- There are a large number of knowledge-brokering organizations active in Europe, and they could be helpfully supported to become a community of organizations that learn from one another.
- Innovative knowledge-brokering mechanisms are in use, but they are not widely profiled on organizations' websites and perhaps not widely used.
- Knowledge-brokering organizations tend not to describe their organizational models in any detail on their websites, despite how helpful this information could be to policy-makers and stakeholders who wish to assess whether they are designed for the purpose of knowledge brokering.

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Bridging the worlds of research and policy in European health systems

Chapter 6

Knowledge brokering in Belgium: feeding the process of collaborative policy-making

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Conflict of interest
The author declares that he has no commercial interests relevant to this chapter. The author was affiliated with one of the organizations that is described in the chapter at the time that the research was being conducted; however, members of the BRIDGE study team who do not hold this affiliation reviewed this description and suggested any necessary modifications to it. The funder played no role in the selection and study of the policy-making processes profiled in the chapter or in the writing of the chapter.

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Key messages

Key attributes of the national context for knowledge brokering in Belgium

- Belgium is a federal state with frequent turnover of its coalition governments and with distributed authority for making decisions, which means that knowledge-brokering organizations place significant emphasis on building relationships with large numbers of people.
- Health system stakeholders have a formal, significant role in policy-making and they exercise this role with a high degree of coordination within their ranks, which means that they are a significant focus for any knowledge-brokering organization.
- A small number of dedicated health-care research institutions are engaged in knowledge brokering although only one – the Belgian Health Care Knowledge Centre (KCE) – has an explicit mandate to do so.
- The relatively small group of people involved in policy-making generally do not speak English so key documents need to be prepared in Dutch and French.

Knowledge brokering mechanisms and models in use

- While 10 Belgian knowledge-brokering organizations were carefully considered for inclusion in the BRIDGE study, only three met our eligibility criteria.
- The three organizations tended to use fairly traditional information-packaging mechanisms and interactive knowledge-sharing mechanisms. Some of the more innovative mechanisms involve the targeting of policy-makers, a graded-entry format for information products, and some degree of timing in relation to policy-making processes or to requests from policy-makers.
- The three organizations tended not to provide much description of their organizational model or their approach to monitoring and evaluation on their websites.

Spotlight on a selected knowledge-brokering organization

- The KCE gives policy-makers and stakeholders a governance role and actively seeks their input in the planning and execution of its research projects to ensure its products are relevant for policy-making. KCE has developed a clear separation between the scientific aspects of its reports

and the recommendations that also reflect the contributions of the diverse members of its governing board.

Examples of intersections with policy-making processes

- Two cases studies illustrate how a knowledge-brokering organization such as KCE has influenced policy-making by:
  - responding to a question of immediate interest to policy-makers and stakeholders, namely whether to modify the maximum-billing system, a key social protective feature in Belgium; and
  - developing a general approach to a health systems policy issue, namely how to measure health system performance.
- Each case study documents the mixed use of information-packaging mechanisms and interactive knowledge-sharing mechanisms and aspects of the organizational model for knowledge brokering.

Lessons learned

- A combination of an explicit mandate for, and resources devoted to, both research and knowledge brokering – as well as recognition that knowledge brokering requires a change in culture, not just structure – can create opportunities for leadership in the field of knowledge brokering.
- Legitimacy within the policy-maker/stakeholder community can be traced to an organization's reputation for challenging policy-makers and stakeholders constructively with the best available health systems information and to its ability to produce timely, relevant work.
- There are benefits to using a mix of information-packaging mechanisms and interactive knowledge-sharing mechanisms within an organizational model for knowledge brokering that supports the development of trust and co-ownership of the work.
- A project orientation (i.e. decision support on mutually agreed, specific questions) may need to be complemented by a cross-cutting orientation (i.e. knowledge support on ad hoc and broader questions).

Knowledge brokering in Belgium

In this chapter I describe the role of health systems information and knowledge brokering in the Belgian health system policy context, with a particular focus on the KCE. Created in 2002 and operational since 2003, the KCE is a federal public agency with an explicit mission to support evidence-informed health policy-making. After a brief introduction to the Belgian health policy landscape and the role of different federal agencies, I describe the role and working practices of KCE and describe two case studies of its intersections with Belgian policy-making processes.

Data were collected through interviews, document analysis and website research. The author was also involved in KCE from its early start-up period through 2011 and draws on that experience. The information provided here reflects the KCE up to autumn 2010.

National context for knowledge brokering

Belgium is a federal state with three levels of government operating above the local level: (i) the federal government; (ii) three regions (geographical); and (iii) three communities (language groups: Dutch, French and German). Health policy is a responsibility shared among all three levels.[1] While Belgium has been going through a process of decentralization, a number of the core competencies related to health-care services remain at the federal level, although regions are becoming very important players too. The federal authorities are responsible for the regulation and financing of Belgium's compulsory health insurance system; the determination of minimum standards for the running of hospital services; the financing of hospitals and large medical care units; legislation covering professional qualifications; and the registration of pharmaceuticals and their price control. This chapter focuses on knowledge brokering at the federal policy-making level.

The policy-making processes at the federal level incorporate the tacit knowledge and experiences of policy-makers, stakeholders and scientific experts. Stakeholders are institutionally embedded in a wide range of deliberative and consultative bodies, particularly in the Federal Public Services for Health, Food Chain Safety and Environment (FPS) and the National Institute of Health and Disability Insurance (NIHDI) (Gerkens & Merkur, 2010). Stakeholder participation typically means consultation but ranges up to co-decision-making. Although these bodies cannot be seen as knowledge brokers, they play an important role informally through the sharing of field expertise and

1 Local governments – provinces and municipalities – have some additional, less important responsibilities related to health policy.

experience-based knowledge. Moreover, many of the stakeholders have engaged professional staff and developed organizational units dedicated to providing their representatives in these bodies with background knowledge and technical support. These staff members serve as internal knowledge brokers with a mission entirely focused on the interests of the stakeholders who employ them.

Key attributes of the policy-making context in Belgium

Table 6.1 presents some of the key attributes of the Belgian policy-making context for knowledge brokering, including those listed below.

- Belgium is a federal state with frequent turnover of its coalition governments and with distributed authority for making decisions, which means that

Table 6.1 Attributes of the Belgian policy-making context that can influence knowledge brokering

Potential attributes (from the BRIDGE framework, Table 2.3)	**Key attributes in Belgium**
Salient features of policy-making institutions and processes	
• Unitary versus federal state	• Federal state
• Centralized versus distributed authority for making decisions about priority problems, policy/programme options, and implementation strategies	• Distributed authority
• Single-party versus coalition government	• Coalition government
• Infrequent versus frequent turnover of the governing party/coalition and its leadership	• Frequent turnover
• Civil service versus political party influence over decision support within government	• Political party and stakeholder influence
• Centralized versus decentralized decision support within government	• Decentralized decision support
• High versus low capacity for policy analysis within the civil service	• Average capacity for policy analysis
• Low versus high turnover rate within the civil service	• Low turnover within civil service
• Significant versus limited resources to commission supports outside the civil service	• Limited resources for supports
Salient features of stakeholder opportunities and capacities for engagement	
• Formal, significant versus informal, limited role of stakeholders in policy-making	• Formal, significant role
• High versus low degree of coordination within stakeholder groups	• High degree of coordination
• High versus low autonomy of stakeholder groups from government and from narrow interests within their own memberships	• High autonomy of stakeholder groups
• High versus low capacity for policy analysis within stakeholder groups	• High capacity for policy analysis
• Significant versus limited resources to commission supports outside the groups	• Limited resources for supports

Table 6.1 contd

Potential attributes (from the BRIDGE framework, Table 2.3)	Key attributes in Belgium
Salient features of research institutions, activities and outputs	
• Small versus large number of strong research institutions involved in the production, packaging and sharing of health systems information	• Small number of institutions
• Large versus small scale of research institutions	• Small-to-medium scale of research institutions
• Explicit versus implicit mandate for, and resource commitment to, knowledge-brokering (not just research) activities and outputs	• Primarily implicit mandate (except for KCE, described in this chapter)
General features of the national policy-making context	
• English (the language of most health systems information) is versus is not spoken in addition to local languages	• English not widely spoken so executive summaries of reports always prepared in Dutch and French
• Small (everyone knows each other) versus large size of the population	• Small population
• High versus low rates of Internet use	• High Internet use
• High versus low capacity of local news media for objective reporting	• Medium capacity of news media

Note: to highlight ways in which each of these features might help or hinder knowledge brokering, we present the either/or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

knowledge-brokering organizations place significant emphasis on building relationships with large numbers of people.

- Health system stakeholders have a formal, significant role in policy-making and they exercise this role with a high degree of coordination within their ranks, which means that they are a significant focus for any knowledge-brokering organization.
- A small number of dedicated health-care research institutions are engaged in knowledge brokering although only one (KCE) has an explicit mandate to do so.
- The relatively small group of people involved in policy-making generally do not speak English so key documents need to be prepared in Dutch and French.

Knowledge brokering mechanisms and models in use

Historically, a number of institutions, such as the Superior Health Council (SHC) created in 1849 and the Federal Scientific Institute of Public Health (IPH), have played a role in bridging science and policy-making in the Belgian health systems context. However, none had an explicit mandate to engage

in knowledge brokering. Moreover, research to support the policy-making process has often been commissioned by the FPS or NIHDI on an ad hoc basis, with longer-term and larger-scale research almost non-existent at the federal level. Indeed, until the beginning of the 2000s, the main providers of support for evidence-informed policy-making were academic research units and independent research agencies even though these groups typically had limited capacity in health systems research. In 2010 the federal audit agency (*Cour des comptes*/*Rekenhof*) concluded that the supports for evidence-informed policy-making provided by five public agencies (FPS, IPH, KCE, NIHDI, and SHC) lacked a structured and coordinated approach (Court of Audit, 2010).

Table 6.2 summarizes some common characteristics of the knowledge-brokering mechanisms used in Belgium. The organizations use fairly traditional

Table 6.2 Knowledge-brokering mechanisms and models used in Belgium

Potential characteristics (from the BRIDGE criteria, Table 2.2)	**Common characteristics in Belgium**
Information-packaging mechanisms used	
• Traditional versus innovative types of information products used	• Most are traditional
• Innovative products draw on systematic reviews (part of criterion 3)	• Some draw on reviews
• Innovative products target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative products reviewed before publication by target audience (criterion 6)	
• Innovative products highlight decision-relevant information (criterion 7)	• Some highlight key information
• Innovative products use language designed to be accessible (criterion 8)	• Some written in accessible language
• Innovative products follow a graded-entry format (criterion 9)	• Some follow a graded-entry format
• Innovative products accompanied by online commentaries (criterion 10)	
• Innovative products brought to attention by e-mail (criterion 11)	
Interactive knowledge-sharing mechanisms used	
• Traditional versus innovative types of knowledge-sharing mechanisms used	• Most are traditional
• Innovative mechanisms draw on systematic reviews (part of criterion 4)	
• Innovative mechanisms target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative mechanisms timed to relate to policy-making or requests (criterion 6)	• Some are timed for policy-making
• Innovative mechanisms involve pre-circulated products (criterion 8)	
• Innovative mechanisms involve the creation of new products (criterion 10)	
• Innovative mechanisms involve the announcement of new products (criterion 11)	

information-packaging mechanisms and interactive knowledge-sharing mechanisms. Some of the more innovative mechanisms target policy-makers specifically, follow a graded-entry format (for information products), and are timed to relate to policy-making processes or to requests from policy-makers. Organizations do not provide much description of their organizational model or their approach to monitoring and evaluation on their websites, except for KCE which is described in detail below.

Spotlight on a selected knowledge-brokering organization

The KCE is an independent, federally mandated organization whose core mission is to be an interface between health systems information and health policy. Funded by the federal government through reallocations from the health ministries (FPS and NIHDI), KCE began operating in 2003 with explicit, legislated obligations:

- to support evidence-based health policy-making by developing research of practical relevance in health care;
- to formulate policy recommendations for each project (but not to be involved in policy decision-making or implementation of recommendations); and
- to establish formal and informal linkages with policy-makers and stakeholder organizations at a variety of levels.

KCE undertakes activities in the domains of clinical practice, health technology assessment and health services research. In this chapter the focus is on KCE's knowledge-brokering activities related to health services research, which is called health systems information for consistency with other chapters.

KCE is required by law to perform studies for, at minimum, the NIHDI, FPS and ministers of health – the main users of health systems information. But the agency works with a wide range of health-care stakeholders and considers them all to be potential target audiences: government (ministers and senior civil servants); health-care providers and institutions; patients and the general public; insurance institutions and companies; the pharmaceutical industry and health technology manufacturers; and international organizations.

Between 2004 and March 2011, the agency published 151 reports, including 43 in the area of health systems information exploring issues related to mental health care, rehabilitation services, legal questions, human resources, financing, and reimbursement for vulnerable patient groups, among many other topics. Reflecting its broad spectrum of work and commitment to scientific rigour, KCE has about 50 employees (about 40 full-time equivalent), many with a PhD, including in-house experts with qualifications in medicine, biomedical

sciences, nursing, economics, statistics and sociology. For many projects, an entire study or parts of it may be subcontracted to external scientific teams who work under the supervision of KCE staff and according to the agency's procedures. Every report undergoes an external scientific review.

Information-packaging mechanisms

KCE uses a variety of information-packaging mechanisms. Here we briefly describe four tools the organization uses to communicate health systems information: (i) research reports with executive summaries; (ii) press releases; (iii) annual reports; and (iv) the website and electronic subscriptions. All are publically available on KCE's website. In addition to these formal knowledge-brokering products, KCE produces material for a scientific audience, such as journal articles and conference presentations.

Research reports with executive summaries

All KCE reports draw on synthesized global research evidence that has been assessed by scientific experts for its quality. In most cases, these reports incorporate the tacit knowledge, views and experiences of policy-makers and stakeholders, usually to determine the scope of the study and to reflect on implementation issues in the local context.

Each KCE research report is written using a graded-entry format: an executive summary with recommendations, followed by the core scientific report. This format provides a clear separation between the scientific aspects of its reports and the recommendations that reflect the contributions of the diverse members of its governing board.[2] The organization also uses editorial guidelines for clear writing (e.g. key messages for each section summarized in bold) and a standardized template for the presentation of research methods and discussion of the findings.

Theoretically, these reports aim to reach a broad audience of scientists, policy-makers, stakeholders and the public, but experience has shown that only experts and scientists working in the study area are likely to read the core report. Policy-makers especially appreciate the executive summary and the use of key messages in the core report, as it enables them to quickly scan the more detailed scientific information. Besides not having time to read all the details, they have expressed concern that essential findings might get lost in vast amounts of text. At the same time, policy-makers stress the importance of having the full scientific report to give legitimacy to the executive summary. The core report helps to build trust in the research organization, demonstrating the rigour and transparency of the research process. It also helps to support informed debate by providing details underpinning the analysis and conclusions of the research.

2 KCE's executive summaries of its reports are featured in the first BRIDGE summary (Lavis, Catallo, Permanand et al., 2013) as an example of an innovative type of information-packaging mechanism.

Belgium's multilingual environment presents an ongoing challenge for knowledge-brokering organizations. KCE decided after its first year of operation to use English for the core scientific reports and to produce the executive summaries in Dutch and/or French, as well as (for most reports) English. The decision to write the core reports in English was primarily based on two reasons: (i) the practical problems (time and cost) related to writing reports in a mixed use of Dutch and French; and (ii) a growing awareness that KCE's research was relevant internationally as well as locally. Using English also opened more opportunities to select external expert reviewers to validate the reports. The language of the research reports, along with their writing style and length, is a matter of ongoing debate for KCE and users of the reports, as the organization seeks to understand the best ways to reach policy-makers and stakeholders with clearly synthesized and clearly presented health systems information.

Press releases

One of the ways that KCE's research reports are publicized is through press releases, which play an important role in the knowledge-brokering process. The resulting media coverage has provided good public visibility for KCE's activities. A number of factors likely contribute to the success of this information-packaging mechanism for KCE. Press releases are written collaboratively by a dedicated KCE staff member with experience in science communication, the in-house experts and senior managers. They are produced in both Dutch and French and in a layman's style that is easy for journalists to understand and use.

Annual reports

Each spring KCE publishes an annual report in Dutch and French, containing short summaries of the research reports published during the past year, along with the documentation of organizational activities and finances typical of corporate annual reports. Although the annual reports are not formally a knowledge-brokering tool, they support knowledge brokering by fostering public debate in the media on health systems issues and by promoting KCE both as a resource for information and as an agency for addressing health policy research questions.

Website and electronic subscriptions

KCE's website has parallel Dutch and French pages (and less-detailed English pages) providing free access to electronic versions of all KCE reports. The website also contains information on past, current and upcoming projects; organizational structure; and methodological procedures. An important feature of the website is the ability of users to subscribe to e-mail alerts and RSS feeds to receive automated announcements about new reports and events from KCE. At the time of the research being conducted for this chapter, a review to update and improve the website was ongoing.

Interactive knowledge-sharing mechanisms

KCE involves stakeholders to develop and share health systems information, using a number of interactive mechanisms before, during and after research projects. Here we look at KCE's interactive mechanisms in four areas: (i) collaboration on the yearly research programme; (ii) consultation in preparing project proposals; (iii) expert meetings (in the course of research projects); and (iv) open seminars (skill-building for stakeholders, not tied to a specific project).

In addition to these interactions, KCE maintains regular contact – at least once every three months – with the main federal policy-makers, through board meetings (where policy-makers are represented) and meetings with ministers or senior civil servants. These contacts are not related to specific projects but serve to keep KCE and its stakeholders mutually informed about policy issues and research activities.

Collaboration on yearly research programme

Every year, KCE's yearly programme of work is developed collaboratively with its core audience of federal policy-makers (NIHDI, FPS and the ministers of health). Senior KCE managers meet with key representatives of policy-making institutions to seek input on their needs and priorities for research. Other stakeholder groups may also be proactively consulted. Meanwhile, KCE launches an annual call for preliminary proposals for policy-relevant research. The call is open to the general public: anyone with an interest in health care can propose topics for study.

A variety of formal and informal interactions throughout this process help to identify the policy relevance and priority of research questions proposed, and the feasibility of conducting a study to answer them, so that topics unlikely to make it into the work programme can be weeded out early, saving people the work of submitting a preliminary proposal. KCE staff assess the proposals received for fit within the organization's mandate, methodological feasibility and organizational resources (workload, budget and staff time). Based on this preparatory work, KCE's board of directors decides on the final yearly work programme.

A five-year assessment of this open approach to soliciting research topics showed that, although it is viewed as an asset, there was concern that topics submitted by the general public, patient organizations, professional groups and universities were less likely to be selected compared to those from government. Another issue identified was the ability of some stakeholders (including some of the core policy-makers) to prepare a successful proposal, a challenge that illustrates the importance of capacity building among all partners involved in knowledge brokering. Stakeholders have requested that KCE provide more

concrete feedback when their proposals are not selected so that they can better understand the scientific requirements and improve their applications.

Consultation in preparing project proposals

Interactive knowledge-sharing continues into the next phase of project development. After the board has determined the next year's work programme, KCE staff are expected to interact with stakeholders that submitted the proposals selected, as well as other agencies that would potentially be dealing with the issues at the heart of upcoming research. This allows KCE to gain insight into the question – what is at stake? – for the policy community in the issue to be studied. It also provides opportunities for researchers and policy-makers to fine-tune mutual expectations, and generally contributes to the usability of the final report. In practice, however, this informal process varies depending on the staff member responsible, as it comes on top of the regular project work of KCE staff and is not separately resourced in terms of staff time.

Expert meetings

KCE defines experts as people knowledgeable in a particular health-care domain. They can be scientists, public servants, policy-makers, and other stakeholders. Throughout the execution of research projects, KCE uses expert meetings to mobilize people with experienced-based knowledge to discuss the scope, research questions, methods and preliminary findings. The objective of expert meetings is to get a critical reflection on scientific soundness and policy relevance *during* the research process.

KCE aims to include at least three expert meetings, on average, for each project and has developed a database of approximately 1500 experts and their key competencies (for all of KCE's areas of work) who can be consulted. In some cases, lay people are also invited. In practice the number, timing and purpose of expert meetings will vary, and they can play very different roles depending on the project. For some projects the meetings are used to fine-tune the scope of the research; for others, expert meetings are mainly used to discuss technical research issues. For reports on health systems quality or performance, expert meetings have also been used to test the acceptability and policy relevance of proposed indicators.

Open seminars

KCE developed a series of interactive opportunities called open seminars to help build capacity for evidence-based health care and policy-making among its stakeholder community. Seminars were designed for small groups of external participants to learn about research methodology, aspects of the health-care system and other topics. The number of open seminars has declined dramatically over the years, mainly because of resource considerations, and they are now

used primarily to disseminate and discuss content or methodological matters concerning individual reports.

Organizational model for knowledge brokering

KCE's organizational model was designed to help realize its mission as a research organization and as a knowledge broker for health policy-making, creating a unique agency in the Belgian health-care system. This section briefly describes some key features of that model: the organization's independence and transparency; the role of the board; and the multidisciplinary staff.

Independence and transparency

To guarantee freedom from political or stakeholder pressure, KCE was created as an independent public organization. Despite some initial opposition (some stakeholders had argued for research and knowledge-brokering units within existing agencies), this characteristic has proven to be one of the pillars of KCE's ability to ensure that a broad spectrum of perspectives and issues are put on the policy-making agenda in Belgium.

KCE's legal structure gives policy-makers and stakeholders an explicit governance role (described below) but with clear rules that protect the organization's independence in how health systems information is produced, packaged and shared. KCE also has clear rules about declaring conflicts of interest and strategies to address any conflicts that may arise. Conflict-of-interest rules apply to all levels of the organization, from board members to staff, and include subcontracted research teams and invited experts.

Full public transparency about the organization's activities is required, and information about all of KCE's detailed methodological procedures (such as how research topics are selected, how literature searches are conducted and stakeholders consulted) are publicly available on its website. These working procedures have proven to be an asset in building credibility for a relatively young organization and ensuring consistency and high quality in its work. At this stage, everyone involved seems to understand that the methodological procedures are meant to be a framework, not a straightjacket, and that a certain flexibility is necessary. A challenge over time may be to maintain a balance between realizing the mission of the organization, which requires a creative, problem-oriented approach, and the need for rigorous, transparent working procedures, which carries the risk of bureaucratization.

Role of the board

By law, KCE board members represent key stakeholders in health policy-making in Belgium. The board includes members appointed by the government

ministries and federal agencies responsible for health care and health insurance, as well as representatives from the national parliament, the hospital sector and various health-care professions. Embedding the contribution of different stakeholders in an institutional structure is fairly typical of Belgium's broader policy landscape, so KCE is not unique in this way.

In addition to strategic governance, KCE board members are actively involved in the organization's work. They regularly discuss the content of research reports at board meetings; they must endorse reports before they are published; and they are particularly involved in the development and approval of the executive summaries and recommendations. Board members also play a knowledge-brokering role in that they are expected to serve as a bridge between KCE and the organizations they represent. Similarly, the involvement of stakeholders on the board ensures that KCE research staff remain aware of the concerns and interests of policy-makers. Despite occasional tensions regarding recommendations or phrasing of executive summaries, the governance model has, on balance, proven its value.

Multidisciplinary staff

KCE's independent legal status allows the organization to use salary scales that facilitate the recruitment of highly qualified staff. From the start, the staff have included a mix of people with academic/research backgrounds and people with a professional background in public service, and that multidisciplinary make-up is reflected in each project team. Regardless of their individual backgrounds and roles in the organization, all staff are expected to develop competencies in networking with stakeholders, policy-makers, experts and scientists and in integrating these perspectives in their work. That said, one staff member is dedicated to developing a knowledge-management system in order to, for example, identify individuals nationally and internationally with expertise in particular topics and approach them with targeted requests for assistance.

Case studies of intersections with policy-making processes

We present two case studies, both from KCE, illustrating how health systems information has intersected with the policy-making process. These are by no means the only examples of KCE supporting evidence-informed policy-making processes because every KCE project follows a similar approach and many have had significant policy impact. The first case study describes the process of responding to a question that was of immediate interest to policy-makers and stakeholders: whether to modify Belgium's long-standing maximum-billing system. The second illustrates a general approach to a health systems policy issue: how to measure health system performance. Each case study documents the

mixed use of information-packaging mechanisms and interactive knowledge-sharing mechanisms and aspects of the organizational model for knowledge brokering, as well as their overall influence. A more fine-grained assessment than was possible in these brief case studies would be needed to answer questions such as whether some brokering-mechanisms are more influential than others and in which stage of the project interactive knowledge-sharing mechanisms are most influential – such stages might include preparing, setting the scope and selecting operational questions; conceptualizing key issues; selecting and discussing secondary evidence; deciding whether to use primary data collection or existing data; describing results and drawing conclusions; discussing the project's limitations; and formulating recommendations.

Case study 1. Modifying the maximum-billing system

Background

Belgium has a tradition of combining social protection measures for insured citizens (in this case, by mandating, regulating and subsidizing health insurance) with measures to reduce moral hazard (in this case, by requiring them to pay some charges out of pocket). In 1963 a system of preferential tariffs was introduced which provided higher reimbursement levels to certain patients (orphaned children, pensioners, people with disabilities, widows/widowers). Co-payments increased considerably in November 1993, and the following year the government augmented the preferential tariff system with a ceiling on the total amount of out-of-pocket charges to be paid by specific groups. Eight years later, in 2002, this ceiling was effectively lowered through what came to be known as the maximum billing (MAB) system. As out-of-pocket charges continued to increase over the following years, the MAB ceiling was further lowered, resulting in ever-increasing global costs for the health insurance system. Policy-makers and stakeholders began to ask whether it would be possible to offer the same level of social protection at a lower cost to society. They asked KCE to undertake an evaluation of the effects of the MAB system on the use of health-care services (Schokkaert et al., 2008a, 2008b).

Knowledge brokering

The evaluation was undertaken with interactive knowledge-sharing built into each step of the process. Extensive interactions took place between KCE researchers and representatives of NIHDI and the sickness funds, particularly to discuss the scope of the problem to be addressed. Policy-makers, stakeholders and researchers agreed that the scope would be limited to questions about the effectiveness of the MAB as a social-protection mechanism, particularly in relation to impacts on the behaviour of patients and providers. This meant examining the impacts of the existing MAB (an ex-post approach) and predicting

the likely impacts of change in MAB design (an ex-ante design). They also agreed that the scope would not include the more fundamental question about the desirability of the Belgian health insurance system becoming more selective or more universal, which was seen as a question of a philosophical or political nature that could not be answered by an empirical evaluation.

Interactions also took place about whether and how to combine data from two databases (one capturing health-care expenditures and the other documenting incomes) for a representative sample of the population. While approval to combine the data needed to come from senior decision-makers, methodological discussions also had to take place between KCE researchers and the more technical representatives of policy-making bodies and stakeholder groups.

The evaluation report pointed out the key strengths of the MAB system and made a number of recommendations about its organization; current inefficiencies of the MAB system; and administrative inconsistencies within the broader health insurance system. The report had a direct, immediate influence on the policy-making process in Belgium, particularly in relation to the MAB system. It formed the basis for the policy decision to maintain the MAB system with some technical changes, while causing policy-makers to reflect on the social protection of vulnerable groups. The report also had an indirect, long-term impact on requests by NIHDI and the sickness funds for research about the effectiveness of social protection mechanisms. Subsequent studies have looked at such issues as drug-reimbursement systems; lump-sum subsidies for chronic illness care; regulation of co-payments and co-insurance; and the operation of an additional safety net for extraordinary medical expenses: the Special Solidarity Fund.

Case study 2. A first step towards measuring health system performance

Background

In contrast to several neighbouring countries, Belgium has no organized approach to health system performance measurement. In 2008, the Tallinn Charter committed Member States of the WHO European Region to be accountable for health system performance. The agreement created some political pressure to act, and KCE was asked by several federal government ministries to guide a conceptual and methodological reflection on creating a performance measurement system for the Belgian health system. KCE was particularly well placed to do so because in its early years the organization had prepared an inventory of existing data-registration systems. This inventory could be used as a stepping stone towards performance indicators (Vlayen et al., 2011).

Knowledge brokering

As with the evaluation of the MAB system, this exploratory research was undertaken with interactive knowledge-sharing built into each step of the process. KCE researchers shared conceptual and methodological insights drawn from the research literature and an analysis of existing performance measurement systems (both within Belgium and internationally); and policy-makers and stakeholders shared their tacit knowledge, views and experiences through a variety of face-to-face meetings, as well as through surveys.

The goal of KCE researchers was to develop a robust conceptual framework within which dimensions of performance and related indicators could be identified for both health systems and the determinants of health. Their work was informed by a survey of the potential users of a performance measurement system, which included politicians and civil servants from the federal and regional levels and representatives from the sickness funds, nongovernmental associations, health professional associations, and scientific institutions. While the survey had methodological limitations, it yielded important information and initiated the process of reflection by policy-makers and stakeholders. Periodic discussions with an advisory group also helped to inform the research (similar to KCE expert meetings described above, but on a much larger scale.) These discussions were also designed to build commitment among stakeholders to the idea of a performance measurement system and proved very useful in identifying commonalities and divergences in people's visions of such a system. The advisory group meetings covered a wide territory of questions: who would use the performance measurement system and to pursue which goals (e.g. internal accountability, external description, international comparison)? What principles should it follow (e.g. should it assess the health system broadly or, more narrowly, the health-care system? Should it focus on particular dimensions, such as efficiency and equity, or be more integrative? What specific indicators should comprise it?

Having settled on a performance assessment model that would include health care as well as the broader determinants of health, KCE researchers solicited input from the advisory group on a long list of 47 primary and eight secondary performance indicators, which was eventually reduced to 18 primary and five secondary performance indicators covering the dimensions of accessibility, appropriateness and safety, effectiveness, efficiency, continuity and sustainability. A patient-centredness dimension had also been identified but no indicators were selected for it. KCE researchers then piloted these indicators, developed through a combined scientific and participatory process, to identify gaps and issues with reliability and validity in the health systems information currently available in Belgium.

The main achievement of the reflection process and the resulting report (prepared and publicized using KCE's customary information-packaging mechanisms) was that they focused the attention of many health system policy-makers and stakeholders (at least for a while) on the need to develop and use a performance measurement system. Some health authorities and organizations made a commitment to undertake a range of activities (from passive to active) related to performance measurement, including dissemination of the report, internal discussion, identification of research priorities and formulation of policy recommendations. At this stage, however, it is unclear to what extent health system performance measurement will be taken up seriously on the health policy agenda overall, although it does appear that further actions will be taken and that KCE's report will be used as important input to those actions.

Lessons learned

Having a clear mandate for both research and knowledge brokering

KCE's explicit mandate to conduct both research and knowledge brokering (combined with resources devoted to each) make it a unique organization in Belgium, well-positioned to provide leadership in supporting evidence-informed healthy policy. KCE's mandate and model demonstrate some of the key features for knowledge-brokering organizations highlighted in the BRIDGE criteria. However, in putting a dual mandate into practice, an organization will confront questions about how to set priorities for the allocation of resources to research and knowledge brokering. Scientists can find it difficult to develop the knowledge and skills needed to be an effective knowledge broker and to execute a knowledge-brokering role while also working to attain high standards and productivity in their research. While all scientific staff are currently expected to engage in knowledge brokering, KCE has learned that a good researcher does not necessarily have what is needed to be a good knowledge broker, particularly the knowledge of the policy context and the interpersonal skills necessary to participate in interactions with policy-makers and stakeholders before, during and after writing a report. Concrete changes to how the organization functions had not yet been made during the period covered by this chapter.

Recognizing that knowledge brokering requires a change in culture, not just structure

The creation of the KCE as an organization independent of existing government and stakeholder organizations (e.g. ministries and sickness funds) launched a new type of player in the field – an organization with the space to think creatively about how to support evidence-informed policy-making through rigorous research and knowledge brokering. As a result, KCE attracted young, highly

committed, well-trained staff interested in developing new ways of doing things. Many have come to recognize that knowledge brokering is not solely an issue of organizational structure but also an issue of professional and organizational culture. They acknowledge the need for a continued willingness to reflect on the organization's identity; to learn about how to balance scientific rigour and practical relevance; and to adapt (as individuals and as an organization) as the policy context evolves – and they see these challenges as being not only resource intensive but also key to KCE's future.

Developing and maintaining legitimacy

Several of the people interviewed identified the critical need for a knowledge-brokering organization to develop and maintain legitimacy in its national policy context. For KCE, legitimacy has meant the ability to build and continue a reputation for timely, relevant work that challenges policy-makers and stakeholders constructively with the best available health systems information.

In its short history KCE has set the standard in Belgium for the use of evidence to build health systems information and for collaborating closely with policy-makers and stakeholders while always maintaining its independence. In a domain with little competition, the organization was able to settle in as a niche player and has been lauded for its scientific rigour; systematic and transparent procedures; and highly qualified, multidisciplinary staff. The organization is now being asked to demonstrate and, through knowledge brokering, enhance the health impacts of the resources it spends on research. A few interviewees warned that KCE's reputation could be at risk under these pressures, particularly in the domain of health systems information where the methodologies available and the evidence needed to demonstrate impact are less clear cut and the issues are more likely to be political in nature, compared to KCE's other domains of work such as clinical practices guidelines or health technology assessment. The major critique of KCE currently is that the organization primarily supports the political agenda of ministers in health care, whereas a much broader pool of policy-makers and stakeholders would also like to be supported.

Being timely and relevant presents a particular set of challenges. While KCE does typically respond to questions quickly, policy-makers' timelines are sometimes too short to allow high-quality research. In addition, reports may be delayed for justifiable methodological reasons (or, less justifiably, for planning reasons), although there have been cases of policy-makers being willing to wait for a KCE report before making a decision with major budgetary impact. As for relevance, an impact assessment of KCE's first five years of operation found that its reports in the area of health systems information were judged somewhat less positively in terms of the feasibility and usefulness of their recommendations

compared to projects in other areas. This finding may be attributable to fundamental differences between these domains, such as differences in the scope of the research questions being asked (specific versus broad) and in the nature of the findings generated (practical and immediately applicable versus more conceptual and reflexive) – differences that most policy-makers and stakeholders recognize and accept.

Using a mix of knowledge-brokering mechanisms

KCE has come to appreciate the benefits of using a mix of information-packaging mechanisms and interactive knowledge-sharing mechanisms within an organizational model for knowledge brokering that supports the development of trust among policy-makers, stakeholders and researchers. Common to all mechanisms is an effort to address topical, relevant issues from the perspective of policy-makers and stakeholders and to target the full range of audiences likely to be involved in, or affected by, decision-making on the issue. One key benefit is the sense that emerges of co-ownership of the work, which one policy-maker interviewed cited as important to ensure that reports will have impact. Although co-ownership brings with it the additional challenge that a small number of policy-makers and stakeholders may seek to influence the outcome to better suit their interests, it is a valuable (though resource-intensive) element of knowledge-brokering. Co-ownership requires that all parties have had the opportunity to learn about one another's views and experiences, and that these perspectives are integrated into the work.

Balancing a project orientation with more general knowledge support

KCE has primarily a project orientation – a focus on decision support on mutually agreed, specific questions. This has led some policy-makers and stakeholders to push for a complementary cross-cutting orientation – what might be termed knowledge support on broader and more ad hoc questions (one interviewee called it "a helicopter view"). At present KCE does not have a systematic approach to integrating knowledge across report topics or to respond to questions in areas where it has not produced a report. Instead, it relies on the personal views of individual KCE experts to answer cross-cutting questions. Some policy-makers, stakeholders and researchers have suggested that KCE consider developing communities of practice in defined areas of health systems information as one possible response to this need.

Conclusions

Experience with knowledge brokering in Belgium suggests that it is possible to feed the process of collaborative policy-making in ways that develop trust

and support co-ownership of the work while retaining the organization's independence. KCE's dual mandate for research and knowledge brokering, and the mix of knowledge-brokering mechanisms it uses, are key factors in this process and illustrate the value of a number of the BRIDGE criteria. However, KCE remains a young, still-developing organization which has shown itself able to continue to learn from its experiences; adapt to rapidly changing policy contexts; and respond to new developments in the fields of generating evidence and supporting evidence-informed policy-making.

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Bridging the worlds of research and policy in European health systems

Chapter 7

Knowledge brokering in England: adding value in crowded landscapes and short policy cycles

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Key messages

Key attributes of the national context for knowledge brokering in England

- England is a unitary state with infrequent turnover of government and with centralized authority for making strategic decisions, but with decision support coming from a dynamic mix of civil service, political parties and affiliated think tanks, independent organizations and university-based research units.
- Health and social care system stakeholders have an informal role in policy-making and are not a target audience on a par with policy-makers for most of the knowledge-brokering organizations studied here.
- A large number of strong research institutions are engaged in knowledge brokering and typically have both the mandate and resources for the work.
- A robust news media can bring attention to health and social care systems information from within and outside the country.

Knowledge brokering mechanisms and models in use

- Fifty knowledge-brokering organizations based in England were carefully considered for inclusion in the BRIDGE study. Twenty met our eligibility criteria, the largest number for any of the 31 countries involved in the study.
- The organizations tended to use innovative information-packaging mechanisms and interactive knowledge-sharing mechanisms.
    - Many of the more innovative information products target policy-makers specifically, are written in accessible language and are brought to attention through e-mails and listservs.
    - Many of the innovative interactive knowledge-sharing mechanisms target policy-makers specifically and are timed to relate to policy-making processes or to requests from policy-makers.
- On their websites, the 20 organizations tended not to provide much description of their organizational models or their approaches to monitoring and evaluation.

Spotlight on selected knowledge-brokering organizations

- The King's Fund is a charitable foundation that serves as a resource to policy-makers and provides impartial analysis on health and social care system developments. A large financial endowment gives the organization

independence from government and considerable flexibility to set its own agenda. The organization has been consistently innovative in both its information products and its interactive knowledge-sharing mechanisms.

- The Personal Social Services Research Unit (PSSRU) is an organization with 38 years of government support for its work; nodes at three universities; and a focus on both producing and supporting the use of a range of health and social care systems research. Its interactive knowledge-sharing mechanisms are more likely to engage civil servants and, while less publicly visible than The King's Fund, it has been similarly influential.

Examples of intersections with policy-making processes

- Two case studies illustrate how knowledge-brokering organizations such as The King's Fund and PSSRU have influenced policy-making that sought to develop:
  - policy for the future funding of long-term care, and
  - a comprehensive mental health policy for England.

Lessons learned

- Face-to-face dialogue (backed by peer-reviewed research evidence) and a professional, non-political civil service appear to be important, particularly in the context of an increasingly crowded policy landscape marked by the continued rise of think tanks.
- Innovation in information packaging and interactive knowledge sharing has often been led by knowledge brokers based outside of universities, rather than by university-based knowledge brokers.
- While there is still a limited use of systematic reviews to support evidence-informed policy-making, a strong culture of evaluation provides fertile ground for knowledge brokering.

Knowledge brokering in England

This chapter focuses on the role and influence that information can have in the health and social care policy-making landscape in England. It combines documentary analysis and interviews with a small number of policy-makers, knowledge brokers and other stakeholders, to understand the arena within which knowledge may or may not be brokered, before turning to two examples where health and social care system information has had some influence on policy and practice. Unless otherwise noted, the information about the activities of organizations highlighted in this chapter, as well as the structure of the health and social care system, reflects the situation as of early 2011.

National context for knowledge brokering

With a population of nearly 52 million in 2009 and (for the United Kingdom of Great Britain and Northern Ireland as a whole) a gross domestic product (GDP) per capita of US$ 35 100 in 2010, England benefits from a substantial capacity in health services research based in universities, the National Health Service (NHS) and nongovernmental organizations (NGOs). England has a long-standing tradition of publishing government-sponsored research, irrespective of the findings, and of independence between researchers and government. Over the last two decades, the health sector has placed significant emphasis on evidence-informed policy and practice. The National Health Service Research and Development Programme, in place since 1991, supports the UK Cochrane Centre and provides a considerable amount of public-sector funding to support independent, university-based health services research. This programme has included some focus on implementation issues, for instance through the National Institute for Health Research (NIHR) Service Delivery and Organisation Programme (SDO) (now merged into the new NIHR Health Services and Delivery Research Programme.[1] Inputs into policy-making have come from many sources including independent, university-based research units under the Department of Health's Policy Research Programme.[2] In England, unlike many other European countries, evaluation of pilot initiatives is often a precursor to scaling up services. Independent, expert-led scientific advisory committees can also have a significant input into the policy-making process.

Most strategic health policy decisions in England are made through the Department of Health and the British parliament. Local authorities have scope

1 Health Services and Delivery Research (HS&DR) Programme (2014). In: National Institute for Health Research [website]. Southampton (http://www.nets cc.ac.uk/hsdr, accessed 1 April 2014).

2 Policy Research Programme (2014). In Department of Health [website]. London (http://prp.dh.gov.uk, accessed 1 April 2014).

for determining aspects of health and social care policy, as well as for issues concerning the implementation of national-level policy guidance.[3]

The non-political permanent civil service plays an important role in supporting the policy-making process, and many policy-research organizations establish strong relationships with the civil service, despite the turnover among civil servants. Good links between the policy-making process and researchers can be maintained regardless of the composition of government or a change in ministers or political advisers. Many opportunities exist for direct dialogue between senior civil servants and researchers, and there appears to be a culture of trust whereby, when confidentiality is needed, discussions are held under the Chatham House Rule or other agreements on privacy. The civil service has placed some focus on improving capacity for conducting and interpreting evaluations, as well as on the funding of training courses and the production of guidance, with particular emphasis on promoting the value of systematic reviews (HM Treasury, 2007a).

There are many competing domestic sources of information that can potentially inform the policy-making process, and these organizations are largely based in London. In contrast, the involvement of external knowledge brokers from elsewhere in the European Union (EU) and beyond remains limited. While university-based research units can play a significant role, a number of political and non-political think tanks and foundations also work on health and social care policy. They emphasize direct dialogue with policy-makers and frequently organize face-to-face discussions in addition to producing tailored reports. Professional bodies, such as the British Medical Association, NHS Confederation, and the royal colleges for general practitioners, physicians, psychiatrists and nurses, are also engaged in the policy-making process, producing position papers and representing the interests of their members at national and local levels. In addition, politically oriented think tanks in England are often vehicles for floating controversial ideas for reform that cannot be considered directly by government (although these organizations were not the focus of the BRIDGE study). Politically neutral, issue-specific not-for-profit organizations such as Age UK, the British Heart Foundation, and Mind (a mental health NGO), also conduct policy-related campaigns and seek to have input into the policy-making process.

Key attributes of the policy-making context in England

Table 7.1 summarizes some of the key attributes of the national policy-making context in England, with a particular focus on those that influence knowledge brokering, including those listed below.

3 In the rest of the United Kingdom of Great Britain and Northern Ireland, most health policy matters are the responsibility of the devolved administrations of Scotland, Wales and Northern Ireland.

Table 7.1 Attributes of the policy-making context in England that can influence knowledge brokering

Potential attributes (from the BRIDGE framework, Table 2.2)	**Key attributes in England**
Salient features of policy-making institutions and processes	
• Unitary versus federal state	• Unitary state
• Centralized versus distributed authority for making decisions about priority problems, policy/programme options, and implementation strategies	• Centralized authority for strategy but distributed authority for operations
• Single-party versus coalition government	• Typically single-party government
• Infrequent versus frequent turnover of the governing party/coalition and its leadership	• Infrequent turnover
• Civil service versus political party influence over decision support within government	• Mix of civil service and political party influence
• Centralized versus decentralized decision support within government	• Mix of centralized and decentralized decision support
• High versus low capacity for policy analysis within the civil service	• High capacity
• Low versus high turnover rate within the civil service	• Low turnover
• Significant versus limited resources to commission supports outside the civil service	• Significant commissioning resources
Salient features of stakeholder opportunities and capacities for engagement	
• Formal, significant versus informal, limited role of stakeholders in policy-making	• Informal, limited role
• High versus low degree of coordination within stakeholder groups	• Relatively low (through trade bodies)
• High versus low autonomy of stakeholder groups from government and from narrow interests within their own memberships	• Low for NHS bodies and some government-funded organizations
• High versus low capacity for policy analysis within stakeholder groups	• High capacity
• Significant versus limited resources to commission supports outside the groups	• Significant resources
Salient features of research institutions, activities and outputs	
• Small versus large number of strong research institutions involved in the production, packaging and sharing of health and social care systems information	• Large number
• Large versus small scale of research institutions	• Large scale
• Explicit versus implicit mandate for, and resource commitment to, knowledge-brokering (not just research) activities and outputs	• Explicit mandate and resources for brokering
General features of the national policy-making context	
• English (the language of most health and social care systems information) is versus is not spoken in addition to local languages	• English the dominant language
• Small (everyone knows each other) versus large size of the population	• Large population
• High versus low rates of Internet use	• High rates of Internet use
• High versus low capacity of local news media for objective reporting	• High capacity of news media

Note: to highlight ways in which each of these features might help or hinder knowledge brokering, we present the either/or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

- England is a unitary state with infrequent turnover of government and centralized authority for strategic decisions, as well as decision support from a mix of a high-capacity, low-turnover civil service; political parties and affiliated think tanks; and a range of externally commissioned organizations, all of which provides a highly dynamic environment for knowledge-brokering organizations.
- Health and social care system stakeholders have an informal role in policy-making and are not a target audience on a par with policy-makers for most knowledge-brokering organizations.
- A large number of strong research institutions are engaged in knowledge brokering (two are described in this chapter) and typically have both the mandate and resources for this work.
- A robust news media can create significant impact by giving attention to key documents from within and outside the country.

Knowledge brokering mechanisms and models in use

Nearly all of the organizations in England analysed through the BRIDGE study focus their efforts primarily on targeting policy-makers and, in particular, those senior civil servants responsible for helping to draft national policy in a variety of areas (some of those senior civil servants may themselves be academics on secondment to government). Despite much emphasis in England on using an evidence-informed approach to policy-making, only a minority of organizations appear to make use of systematic reviews in developing their information products. The use of systematic reviews on the effectiveness of specific technologies and other health-care interventions is a critical element of much research generated for policy-makers in England. But when it comes to research on governance, financial and delivery arrangements within health and social care systems, use of systematic reviews remains the exception rather than the rule. Moreover, reports produced for policy-makers may have little documentation of methods for identifying the information contained in these reports. One important exception has been the work of the NIHR SDO Programme, where systematic reviews were the principal methodology used by university groups and others in successfully answering specific calls for proposals.

As reported for other countries analysed in the BRIDGE study, knowledge-brokering organizations in England still rely heavily on traditional methods of information packaging, including lengthy reports that are not tailored for a policy-making audience (Catallo et al., 2012). However, our review of websites shows that more than three quarters of the English organizations surveyed are producing shorter, tailored documents such as evidence summaries. Sometimes

they are being produced consistently alongside other outputs, but in many cases they are produced on an ad hoc basis. Increasingly, organizations seem to be using a graded-entry approach for their products. Only a small number of organizations appear to have done work triggered through discussions with, or requests from, policy-makers; instead, most outputs are linked to primary research or narrative (non-systematic) reviews. New mechanisms for conveying information are emerging, including new electronic media (e.g. for interactive online seminars), as well as videos, blogs and podcasts. These techniques appear most developed in larger-scale organizations with substantial communications teams (e.g. The King's Fund).

A number of the organizations that we identified rely more heavily on interpersonal dialogue with civil servants, ministers and other stakeholders than on producing evidence summaries and other tailored documentation. Such links are an important factor in facilitating knowledge exchange (Catallo & Lavis, 2014; Lavis et al., 2005; Lavis, Boyko et al., 2009; Lavis, Permanand et al., 2009; Lavis et al., 2003; Nutley et al., 2007). For instance, the PSSRU is a university-based organization that has fostered strong links and a sense of mutual trust with civil servants, having received long-term funding as part of the Department of Health's Policy Research Programme to produce relevant research largely in the areas of social and long-term care and mental health. Another key observation is that the most developed and multifaceted approaches to interactive knowledge exchange in England are concentrated not in traditional academic research units but in organizations that have made influencing the policy process their raison d'etre; examples include The Kings Fund, the (now defunct) NHS Confederation's Service Delivery and Organisation Network, the Nuffield Trust and the Social Care Institute for Excellence (SCIE). These organizations host various types of face-to-face discussions, both open and closed, that bring together researchers and policy-makers not only to discuss specific policy research but also, in many cases, to help determine future priorities for health policy research. Again, such meetings can also be used to build links and trust with policy-makers (Lavis et al., 2013).

Non-university-based organizations appear more likely to focus their information-packaging outputs and interactive knowledge-sharing events on issues of high policy relevance, whereas university-based knowledge brokers often work over a longer time frame. A good example of this would be discussions about the government's plans for reform of the NHS, where think tanks such as Civitas, The King's Fund, NHS Confederation, Nuffield Trust and Policy Exchange sought to rapidly produce research outputs to inform the debate. However, as the case studies in this chapter make clear, experts from university-based research units may collaborate in producing these research

outputs. Timeliness is a key factor in the uptake of research evidence by policy-makers (Lavis et al., 2003; Catallo & Lavis, 2014; Innvaer et al., 2002; Nutley et al., 2007).

While 50 knowledge-brokering organizations in England were carefully considered for inclusion in the BRIDGE study, 20 met our eligibility criteria (Catallo et al., 2012). These organizations tended to use innovative information-packaging mechanisms and interactive knowledge-sharing mechanisms (Table 7.2). Many of the more innovative information products target policy-makers specifically; are written in accessible language; and are brought to target audiences' attention through e-mails and listservs. Some draw on systematic reviews (although less frequently for health and social care system issues than for clinical issues); follow a graded-entry format; and are accompanied by online

Table 7.2 Knowledge-brokering mechanisms used in England

Potential characteristics (from the BRIDGE criteria, Table 2.2)	**Common characteristics in England**
Information-packaging mechanisms used	
• Traditional versus innovative types of information products used	• Many are innovative
• Innovative products draw on systematic reviews (part of criterion 3)	• Some draw on reviews
• Innovative products target policy-makers as a key audience (criterion 5)	• Many target policy-makers
• Innovative products reviewed before publication by target audience (criterion 6)	
• Innovative products highlight decision-relevant information (criterion 7)	
• Innovative products use language designed to be accessible (criterion 8)	• Many written in accessible language
• Innovative products follow a graded-entry format (criterion 9)	• Some follow a graded-entry format
• Innovative products accompanied by online commentaries (criterion 10)	• Some with commentaries
• Innovative products brought to attention by e-mail (criterion 11)	• Many with e-mail alerts
Interactive knowledge-sharing mechanisms used	
• Traditional versus innovative types of knowledge-sharing mechanisms used	• Many are innovative
• Innovative mechanisms draw on systematic reviews (part of criterion 4)	
• Innovative mechanisms target policy-makers as a key audience (criterion 5)	• Many target policy-makers
• Innovative mechanisms timed to relate to policy-making or requests (criterion 6)	• Many are timed for policy-making
• Innovative mechanisms involve pre-circulated products (criterion 8)	
• Innovative mechanisms involve the creation of new products (criterion 10)	• Some audio and video products
• Innovative mechanisms involve the announcement of new products (criterion 11)	

commentaries by policy-makers and stakeholders. In our review of innovative interactive knowledge-sharing mechanisms, we found many that target policy-makers specifically and are timed to relate to policy-making processes or to requests from policy-makers. Most of the 20 organizations provided some description of their organizational models on their websites (although this tended to be limited), but few described their approaches to monitoring and evaluation.

Spotlight on selected knowledge-brokering organizations

After looking at specific cases where knowledge-brokering organizations have interacted with health policy-makers, we highlight the work of two institutions.

The King's Fund

Founded in 1897, The King's Fund is a major knowledge broker for health policy issues in England. This independent charitable body strives:

> to be the most influential, independent source of health care policy ideas and analysis in England … The Fund's ambition is that its policy and research activity will have a growing and measurable impact on both policy-makers and service providers. The Fund will continue to create ideas and insight through its own research, evaluation, inquiry, analysis and reflection. The Fund will also seek to build on the constant exchange of experience and expertise focusing on key areas of interest. (The King's Fund, 2010)

It is partly financed by legacy funding and other investment assets totalling £118 million in 2009. Approximately 50% of funding is generated from activities (e.g. conference fees, training courses, hiring out venues to third parties, fees from some products); this share of the total budget is expected to increase in future years.

The King's Fund makes use of a wide range of information-packaging mechanisms, including policy reports, parliamentary briefs, short analytical pieces, audio and video commentaries, Twitter feeds, and written responses to government consultations and parliamentary select committee inquiries, as well as press, TV and radio contributions. It has an experienced and substantive communications team; the previous chief executive had been the BBC's chief health correspondent. The King's Fund is active in its use of interactive knowledge-sharing mechanisms, including traditional open seminars and presentations, as well as breakfast and evening meetings bringing together policy-makers, practitioners and researchers. Some are invitation-only events and operate under the Chatham House Rule to protect confidentiality. In addition, so-called leadership events are targeted specifically at senior personnel

within the health and social care system. Politically neutral, The King's Fund explicitly aims to engage regularly with policy-makers from all three major political parties and hosts events at the annual national political party conferences.

PSSRU

This university-based research unit is engaged in health and social care systems research with a focus on social and long-term care and on services for people with mental health needs. PSSRU was established at the University of Kent in 1974 and today has branches at the London School of Economics and Political Science (LSE) and the University of Manchester. The unit conducts a range of primary research and economic modelling and is partially supported by long-term grant funding from the Department of Health to provide policy-relevant research, including funding for rapid-response actions to meet policy-makers' requests. Systematic reviews have not been a prominent feature of its work. A main activity has been interaction with policy-makers at both national and local levels, and to a lesser extent across relevant sectors such as education, housing, and criminal justice.

PSSRU also engages with policy-makers at an international level (EU and beyond), particularly in the area of international mental health policy; although not as frequent, these activities are still a significant part of its work. PSSRU has benefited from well-established links and frequent informal contacts with senior civil servants and other policy-makers. Historically, these links and contacts have meant that there has been less of a demand to focus on tailoring information-packaging approaches to reach policy-making audiences, as PSSRU has always had ample opportunities to discuss detailed technical reports with policy-makers on an informal face-to-face basis. The organization is also active in face-to-face discussions and workshops, and collaborates actively with other knowledge-brokering organizations, including the Centre for Mental Health, Joseph Rowntree Foundation, The King's Fund, and NHS Confederation.

Case studies of intersections with policy-making processes

We provide two examples of how knowledge-brokering organizations have intersected with the policy-making process in England: in framing models for funding long-term health and social care for older people, and in the development of an evidence-informed national mental health strategy. The case studies are based on interviews with a small number of individuals working in research and policy-making, and we also draw from our analysis of relevant documentation and media coverage.

Case study 1. Framing policy options for the future funding of long-term care

Context and background

For more than a decade, policy-makers have struggled to reform the funding of long-term care in a way that would be acceptable to the general public, feasible to implement and financially sustainable. In England, public funding for long-term (non-medical) care services is means-tested: individuals with assets above £23 250 are not entitled to any financial assistance. Nonetheless, a shortfall of £6 billion in government funding for long-term care is projected by 2026 (HM Government, 2008). Drawing on the BRIDGE framework and criteria for knowledge brokering (see Chapter 2), we looked at the role played by knowledge-brokering organizations, most notably The King's Fund and PSSRU, in packaging and sharing information with policy-makers on alternative potential options for long-term care funding. The case study illustrates that efforts to engage with policy-makers may need to be sustained over a considerable period of time to reflect changes in the political landscape and economic pressures.

Preparing the report: Securing good care for older people (2005–2006)

In 2002 a health policy review, *Securing our future health*, led by Derek Wanless and published by the Treasury (the British finance ministry), was influential in making a case for increased future health-care spending (Wanless, 2002). The report recommended a similar examination of long-term care funding, but no government review was commissioned. The King's Fund, which is able to draw on legacy income to support policy initiatives, was in a position to commission an independent review, and approached Derek Wanless to chair it. To involve established experts on long-term care financing, The King's Fund paid for a twelve-month secondment of two experts from PSSRU: José-Luis Fernández and Julien Forder.

The subsequent report, *Securing good care for older people* (Wanless et al., 2006), presented a number of policy options and concluded that a partnership model of funding, with contributions from the state and individuals, would be the fairest and most cost-effective option. Like many King's Fund information products, it was packaged using a graded-entry format and minimal technical jargon. Other information-packaging mechanisms were used to help maximize visibility of the report's core messages, including briefing documents that targeted policy-makers and parliamentarians as key audiences.

Interactive knowledge-sharing mechanisms also played an important role. Informal and formal consultations, breakfast meetings and briefings were held with civil servants; politicians of different parties; and other key stakeholders, including groups representing older people, insurers and service providers.

Knowledge sharing was an iterative process: some meetings were set by The King's Fund, while others were in response to requests from policy-makers and political parties.

Creating impact for the report (2006)

The organizational structure of The King's Fund, with its emphasis on communication and media capabilities, was identified in interviews as helping to enhance the impact of *Securing good care for older people*. For example, a well-publicized launch event benefited from The King's Fund's good links with key print media journalists. Also instrumental were the King's Fund's ongoing relationships with national and local politicians, civil servants, and service commissioners and providers. The report was welcomed by different stakeholders from both research and policy perspectives. Age Concern, at the time the major NGO representing older people, considered it to be "groundbreaking," while the Association of Directors of Adult Social Services (the people responsible at the local level for managing social and long-term care) referred to the partnership funding model as "an elegant solution" to long-term care funding. Winner of the 2007 prize for best think-tank report, the publication was a catalyst for the Department of Health to conduct its own review, with then Health Minister Liam Byrne citing the report as a reason for a "once-in-a-decade chance to undertake a fundamental review of social care costs" (The King's Fund, 2007).

Timing was also important. Other organizations were reaching similar conclusions. For instance, one major NGO (the Joseph Rowntree Foundation) commissioned research from several university groups, including PSSRU. The Foundation published a briefing paper for policy-makers and a cost analysis of five different policy options (Hirsch, 2006b; Hirsch, 2006a); other papers highlighted international approaches to long-term care funding (Glendinning et al., 2004; Johnstone, 2005).

Building on the report (2007)

The Treasury decided to look at long-term care funding as part of the government's comprehensive spending review (CSR) in 2007. The links that knowledge brokering had forged with civil servants and politicians during the preparation of The King's Fund report led to two of the authors – Fernández and Forder, both from PSSRU – being seconded to the Treasury to work on the CSR. This development illustrates how external, non-political experts have multiple opportunities to engage with high-level policy-makers in England. When published, the CSR contained a commitment to bring forward proposals for the reform of long-term care and explicitly acknowledged work from key knowledge-brokering organizations: "recent reports from Derek Wanless for

The King's Fund, the Joseph Rowntree Foundation and others have made important contributions to the growing debate around the need for change to the care and support system for older people" (HM Treasury, 2007b).

Consulting with the public and developing legislation (2008–2010)

Following the CSR conclusions, it was at a King's Fund breakfast meeting involving policy-makers, service providers and researchers that the Prime Minister, Gordon Brown, chose to launch a debate on the future funding of care and support (The King's Fund, 2008). This reflects the perception of The King's Fund as an honest broker for health policy issues. The King's Fund also sought to stimulate public debate through a coalition called Caring Choices, in which 15 stakeholder organizations collaborated to raise awareness and conduct public consultation on funding options for long-term care.

Representatives of the target policy-making audience were also involved in the generation of further research evidence. An economist from the Department of Health was seconded to PSSRU to collaborate on an analysis of the longitudinal and distributional implications of alternative long-term care funding arrangements (Forder & Fernandez, 2009). This work was timed to be available to be cited in the government's consultative green paper on long-term care funding options (HM Government, 2009a) and subsequent parliamentary debates and reports, although it used technical language and lacked a graded-entry format. An inquiry on social care by the Parliamentary Health Select Committee in 2010 noted that "underpinning the Green Paper is analysis by [PSSRU's] Forder and Fernández (2009) which is referred to in the Green Paper itself and in the Regulatory Impact Assessment" (House of Commons Health Committee, 2010). Fernández also acted as a principal adviser to this committee, with other experts from PSSRU and The King's Fund submitting oral evidence. Another example of how The King's Fund targeted policy information for key stakeholders was its publication of a short parliamentary briefing paper on the options contained in the green paper (The King's Fund, 2009a).

The King's Fund and PSSRU also collaborated further on an update of the 2006 Wanless report, *Securing good care for more people: options for reform* (Humphries, Forder & Fernández, 2010). The lead author had previously been a senior civil servant at the Department of Health: first as director of the Health and Social Care Change Agent Team and then as chief executive of the Care Services Improvement Partnership. The new publication, with a graded-entry format (unlike *Securing our future health*), was timed to influence the development of the government's proposals for reform and, indeed, it was cited in the white paper setting out plans for a national care service (HM Government, 2010a).

Funding long-term care under a coalition government (May 2010 onwards)

The proposed model for a national care service contained many of the elements recommended by The King's Fund/PSSRU collaboration, but a change of government prevented the plan from being implemented. Instead the government set up a new independent Commission on Funding of Care Support. PSSRU's visibility and good links with policy-makers meant that it was again commissioned to provide expert policy advice and economic analysis to the Commission, while The King's Fund prepared briefing materials and organized debates to feed into the Commission process, thereby continuing both organizations' long-term commitments to supporting evidence-informed policy-making on this issue.

Postscript

A new white paper on long-term care funding published in July 2012 again cited much of the past work from PSSRU and The King's Fund (HM Government, 2012). And in January 2013 the government announced the introduction of a new partnership model of long-term care funding in line with past recommendations of the Commission and past King's Fund/PSSRU research (Department of Health, 2013).

Case study 2. Informing the development of a comprehensive mental health policy for England

Context and background

This case study focuses on the role of economic information in the development of a new mental health policy in England to replace the 1999 national service framework (NSF) for mental health (Department of Health, 1999). We looked at the role played by different knowledge-brokering organizations, most notably PSSRU. Drawing on the BRIDGE framework and criteria for knowledge brokering (see Chapter 2), the case study illustrates that regular opportunities to interact with policy-makers both formally and informally can be effective in facilitating their use of health systems information.

It is important to note that the original NSF had helped to create the conditions for research to play a greater role in informing future policy-making. As part of the NSF, a national director for mental health research and development was created to head a new research hub – the National Institute for Mental Health in England (NIMHE). This organization was intended to drive improvements in both the quality of research commissioned and its relevance to national mental health priorities (Clark & Chilvers, 2005). The organization and its functions continued – albeit under different names (Care Services Improvement Partnership; National Mental Health Development Unit) – for the rest of the decade.

NIMHE and its successor organizations strengthened opportunities for engagement with the research community, including secondments of researchers to government. These organizations also fostered dialogue between researchers, policy-makers and practitioners, bringing key individuals together for one-day meetings and thereby stimulating informal face-to-face discussions on policy options. One focus for such dialogue was the economic analysis of mental health, a domain in which significant research effort was concentrated in a small number of London-based university groups, including PSSRU and the closely affiliated Centre for the Economics of Mental Health (now renamed the Centre for the Economics of Mental and Physical Health – CEMPH) at the Institute of Psychiatry. These groups had previously tended to focus on academic-style information-packaging formats, so the face-to-face dialogue with policy-focused users of their information was an important development. Another influential knowledge-brokering organization focusing on the economics of mental health also became involved: the Centre for Mental Health, a not-for-profit research organization also based in London. Because its funding comes largely from one benefactor, it did not face any pressure to publish in journals and instead focused more on innovative knowledge-brokering mechanisms tailored for policy-makers. The centre produced a range of free reports and briefing papers setting out policy options, and also sponsored public presentations and invitation-only events.

Importance of the value-for-money argument in New horizons (2009)

Extensive consultation with stakeholders is a key feature in the development of most policy documents in England. In the case of preparing the ground for *New horizons* (the Labour government's new mental health policy), a series of discussion and debate events were held around the country, including seven focus groups and consultations with the research community. Written responses were also invited. These consultations highlighted a need for more concrete evidence on the cost effectiveness of potential actions (The King's Fund, 2009b).

This increased awareness of economic arguments might also have been influenced by successful efforts to improve access to psychological therapies. For example, the Centre for Economic Performance at the LSE had produced *The depression report: a new deal for depression and anxiety disorders*, which indicated that the costs of investing in psychological therapies could be offset by avoided costs of depression (Centre for Economic Performance Mental Health Policy Group, 2006). Publication of the report as a free supplement in a national Sunday newspaper – *The Observer* – meant that it reached many policy-makers and stakeholders. It was accompanied by a lead editorial in the paper, which stated that: "there may not be many policies that deliver happiness for all, but

there are some that alleviate misery for many. This report identifies one such policy. The government must act on it" (The Observer, 2006). The impact of this report was undoubtedly strengthened by the profile of its main author – Lord Richard Layard had previously advised the Prime Minister's Strategy Unit on mental health and, as a peer in the House of Lords, was able to speak on the subject in parliamentary debates. The economic evidence in the report and Layard's good links to government were critical in the government piloting increased access to psychological therapies.

The King's Fund also collaborated with PSSRU to highlight the costs of poor mental health as a timely contribution to the public debate on a new mental health policy. Their report, *Paying the price* (McCrone et al., 2008) benefited from considerable attention in the national media on its launch.[4] One civil servant we interviewed stated, "Everybody knew about *Paying the price* – even if they didn't read it, they knew the headlines." This report was also referred to on several occasions in parliamentary debates and in ministers' written answers.[5] Other activities by The King's Fund, such as off-the-record seminars and dinners, provided space for key individuals to discuss mental health issues informally and make connections from different perspectives. Elsewhere, PSSRU and the Mental Health Network of the NHS Confederation collaborated to run seminars and produced a briefing paper to highlight the importance of obtaining value for money in relation to mental health policy (Royal College of Psychiatrists, 2009).

Evidence on the benefits of early treatment of psychosis also appears to have been influential in raising the demand for economic information (Clark, 2008). PSSRU and the CEMPH produced a series of academic reports and journal articles suggesting that early intervention was highly cost effective (McCrone, Craig et al., 2010; Valmaggia et al., 2009; McCrone, Park & Knapp, 2010; McCrone, Knapp & Dhanasiri, 2009). The results of this work were presented to the Department of Health in informal meetings on several occasions. Subsequently, in the lead-up to the publication of *New horizons*, this economic information on early intervention was cited by the National Director for Mental Health as the "jewel in the crown of the NHS mental health reform because firstly service users like it, secondly people get better and thirdly it saves money" (LSE Enterprise, 2010). When *New horizons* was eventually published, it drew on this growing evidence base in health economics and highlighted several areas where promising evidence of value for money could be found (HM Government, 2009b).

4 For example – Mental health bill "will spiral." BBC News Channel [website]. 27 May 2008 (http://news.bbc.co.uk/1/hi/health/7422354.stm, accessed 26 March 2014).

5 Members of Parliament often request written answers from the government to obtain detailed information about policies and activities.

Economics at the centre of policy: No health without mental health (2011)

As in our first case study, a change of government again intervened. Within nine months of taking office in May 2010, the coalition government published its own mental health policy, *No health without mental health* (Department of Health, 2011a), to supersede *New horizons*. There was little formal external consultation as much of the evidence base had been collected for *New horizons*; moreover, most civil servants involved in developing the new policy had also worked on the previous one. Additional evidence came from a new, detailed literature review undertaken internally. Drawing on data from systematic reviews by the Cochrane Collaboration and others, that review strengthened the case for more focus on promotion of mental health and prevention of mental disorders (HM Government, 2010b).

However, *New horizons* was found to be poor on implementation. Greater detail on the economic case for action would be needed to justify more investment in promotion and prevention, given an economic climate in which the NHS was seeking £20 billion in efficiency savings over four years (McDaid & Knapp, 2010; Royal College of Psychiatrists, 2009). The visibility of existing value-for-money arguments in *New horizons*, building on the early intervention for psychosis work, also helped to increase demand within government for information on the broader economic case for promotion and prevention. The previous government had invited PSSRU, in conjunction with CEMPH and the Centre for Mental Health, to prepare a report on the economic case for mental health promotion and prevention of mental disorders. This work continued for the new government. The analysis was informed by previously published systematic reviews and was communicated through extensive, iterative, confidential dialogue, as well as presentation of preliminary results to civil servants, from both the Department of Health and other relevant government departments.

The resulting 47-page report, published by PSSRU, consisted of a summary plus two-page briefings on each of the economic models constructed for 15 different interventions, as well as a table showing return on investment to health and other sectors. It was cited 12 times in the government's economic impact analysis of *No health without mental health* (Department of Health, 2011b), and the final PSSRU report was also published by the Department of Health (Knapp et al., 2011). Furthermore, the PSSRU report was mentioned in a parliamentary written answer by the minister responsible for mental health: Paul Burstow (Burstow, 2011). He was also quoted at the release of the report, saying that it "makes a powerful economic case for that investment [in mental health] … [Service commissioners] should take a careful look at this study and use it to commission better mental health services" (Centre for

Mental Health, 2011). Based on the positive returns on investment projected in the economic analysis, the government announced further expanded investment in psychological therapies, citing the report to justify the greater focus on promotion of mental health and well-being in the government's new mental health strategy, as well as in the development of a new national suicide prevention strategy.

Lessons learned

Importance of face-to-face discussions backed by peer-reviewed evidence

The two case studies examined here suggest that some types of knowledge-brokering mechanisms are important in supporting evidence-informed policy-making in England. The English context provides a number of different environments for face-to-face discussions among politicians, senior civil servants, researchers and other stakeholders. There are also opportunities for researchers and policy-makers to build personal relationships, especially for those based in or around London. Closed deliberations fostering lengthy and frank discussion can be particularly influential. While information-packaging mechanisms are important in helping to convey information in a format appropriate and accessible to a policy-making audience, their influence appears to be outweighed, initially at least, by the immediate impact of presentations, conferences and informal discussions. In addition, we were told that senior civil servants, many of whom have an academic background, sometimes extract the main messages of academic reports for ministerial briefings.

On the other hand, interviews with policy-makers indicated that strong presentations had, in some cases, led to the implementation of actions despite a poor evidence base. Although government may convene or support events to increase awareness of the available research evidence – as happened around the publication of the *Magenta book* by the Treasury (HM Treasury, 2007a) – many career civil servants have limited ability to assess the quality of research or interpret findings. One individual said that they may have a basic knowledge of the hierarchy of evidence, but little beyond that. These limitations have, in turn, increased the importance to policy-makers of being able to refer not only to short, ad hoc evidence-informed documents, but also ideally to peer-reviewed journal articles containing the research findings. Policy-makers place significant emphasis on links with peer-reviewed documents – the lack of peer review reduces the chances they will use research findings. However, endorsement by an independent academic or stakeholder advisory group is an alternative approach that has been used to lend credibility to a report's findings.

Importance of a professional, non-political civil service

The professional, non-political nature of England's civil service allows for continuity in connections between knowledge brokers and policy-makers across changes in government. This continuity can be seen in the case of mental health policy after the change in government in 2010. Similarly, despite a pause in the reform of funding for long-term care, knowledge brokers at the forefront of initiatives to inform policy-making during the Labour government continue to be involved in the most recent commission on the issue. In an English context, this continuity is aided by the links that knowledge brokers try to maintain with all major political parties through formal and informal face-to-face briefing events, parliamentary briefings, seminars, and events held during party conferences.

Increasingly crowded policy landscape coupled with the continued rise of think tanks

While policy-makers told us they value face-to-face discussions backed by peer-reviewed research, some researchers felt that it was becoming increasingly difficult for them to interact with policy-makers. The knowledge-production capacity and policy landscapes in which researchers operate are both becoming more crowded. One individual stated that the relationship with government, while still good, was not as close as it had been 20 or 30 years earlier, with civil servants and politicians now interacting with a much greater number of individuals and organizations. "Then it would have been possible to have a chat with the Department of Health head of policy, but the relationships are different now: we know them, we talk to them, but it is a different sort of relationship." There was acknowledgement, however, that "internationally the position of a researcher here is much better than in any other country that I know." Even though the landscape is more crowded, policy-makers appear to have very limited contact with knowledge brokers from outside the United Kingdom, although evidence from international studies is cited.

Another informant working in a knowledge-brokering organization felt that university-based researchers are much further down the influence chain today compared to other groups. As noted, many senior civil servants are themselves researchers. In addition, think tanks and NGOs that seek to influence the policy-making process are not burdened by the need to produce academic outputs or engage in teaching. They are more likely to be able to respond quickly to issues, and their whole reason for being is to continuously foster good links with government. Where they lack specific expertise, think tanks often collaborate with academics, as well as individuals with a recent history of working in a relevant national or local policy-making context.

Limited attention paid to information packaging by university-based knowledge brokers

Many university-based knowledge brokers who have good links with policy-makers – for instance, due to long-standing contracts with central government – may traditionally have invested little in information-packaging mechanisms beyond traditional lengthy reports. This is now beginning to change with the increasing recognition of the importance of accessible, targeted information to support the policy-making process. For example, the new national system for assessing the quality of research at United Kingdom universities will include an analysis of policy impact (HEFCE, 2011).

Innovation led by non-university-based knowledge brokers

Most innovation in information packaging and interactive knowledge sharing appears to be undertaken by non-university-based research organizations and think tanks, which have to operate in a time-critical fashion to maximize their policy relevance. It is perhaps not a coincidence that innovation is also seen in organizations with significant capacity for public relations and media engagement, as the media in England can be very influential. Academic research units in England simply do not have access to the same level of communication resources and media expertise, but they may collaborate with think tanks that have these specialist skills to increase the influence of their work. Our case study on long-term care is a good example of this, with The King's Fund being able to facilitate substantive discussions with a range of stakeholders and policy-makers in a very timely fashion. This also opened up future opportunities for PSSRU academics to link into the policy-making process.

Still-limited use of systematic reviews for evidence-informed policy-making

Use of systematic reviews to inform policy decisions is not yet as common as might be expected. Most of the organizations we examined do not conduct or search for systematic reviews as standard practice to inform their work. Literature reviews are undertaken, but the methods are rarely reported. The systematic reviews that are undertaken are typically demand driven; for example the NIHR has commissioned systematic reviews through its former SDO Programme. To some extent, this lack of emphasis on conducting or commissioning systematic reviews might be explained by the short time periods in which policy decisions are made. Our case study on mental health policy clearly illustrated that governments must often take a pragmatic approach to evidence-informed policy-making, making use of the best available research evidence rather than the best possible evidence.

Culture of evaluation

England has experienced significant investment in capacity to undertake primary evaluation over the last 20 years and, regardless of who is in government, there is a culture of seeking to use evidence to inform policy-making. As one contributor stated, England has "a tradition of evaluation and piloting that doesn't go on in other countries. It shows a willingness to listen – all political parties work on the same basis – let's see what works – with twists … [This] is not found elsewhere, e.g. Italy and Spain where the systems are much more political or even in France where they are only now opening up to international evidence."

Conclusions

Experience with knowledge brokering in England demonstrates that it is possible to add value within crowded policy landscapes and short policy cycles. The frequent opportunities for face-to-face, often informal and/or confidential discussions, supported by peer-reviewed research evidence, are key factors in this process. These factors are aided by continuity in the policy landscape provided by a non-political and relatively stable professional civil service. However, as the number of knowledge-brokering organizations continues to grow – and think tanks (who may not use peer-reviewed research evidence) gain greater prominence – it will be ever more important for universities, as traditional purveyors of health and social care systems information, to become much more innovative in how they package information and how they share that knowledge interactively with policy stakeholders. In doing so, there is much that academic research groups can learn about communication and engagement from the diverse field of knowledge brokers operating in England.

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Bridging the worlds of research and policy in European health systems

Chapter 8

Knowledge brokering in Norway: bringing rigour and transparency to policy inputs

Govin Permanand, Anne Karin Lindahl, John-Arne Røttingen

European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Conflict of interest

The authors declare that they have no commercial interests relevant to this chapter. Two authors are (AKL) or were (JAR) affiliated with one of the organizations described in the chapter; however, members of the BRIDGE study team who do not hold these affiliations reviewed this description and suggested any necessary modifications to it. The funder played no role in the selection and study of the policy-making processes profiled in the chapter or in the writing of the chapter.

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Key messages

Key attributes of the national context for knowledge brokering in Norway

- Norway is a unitary state with centralized authority for making decisions; centralized decision support; and infrequent turnover in its governing party/coalition and its civil service, all of which provides a clear, stable audience for knowledge-brokering organizations.
- The country is home to a small population of 5 million; technical and government staff collaborate closely; and international collaboration makes it possible for key documents from outside the country to have a significant impact within it.

Knowledge brokering mechanisms and models in use

- While 16 Norwegian knowledge-brokering organizations were carefully considered for inclusion in the BRIDGE study, 10 met our eligibility criteria.
- The organizations tended to use fairly traditional information-packaging mechanisms and interactive knowledge-sharing mechanisms. Some of the more innovative mechanisms involve:
  - policy briefs
  - deliberative dialogues, and
  - workshops on guideline development.
- The 10 organizations tended not to provide much description of their organizational models or their approaches to monitoring and evaluation on their websites.

Spotlight on a selected knowledge-brokering organization

- The Norwegian Knowledge Centre for the Health Services (*Nasjonalt kunnskapssenter for helsetjenesten*, NOKC) is an independent organization set up to improve the knowledge base for professional decision-making in health services and policy in Norway.
  - NOKC is actively involved in networks that support its knowledge-brokering activities, both within and outside Norway.
  - NOKC has established and cultivates functional linkages with policy-making and stakeholder organizations.

- Despite having the Directorate of Health as its official superordinate body, NOKC's bylaws establish its professional independence and transparent governance which help to ensure its impartiality in meeting the needs of its diverse clients, including policy-makers, provider organizations and professional organizations.

Examples of intersections with policy-making processes

- Two case studies provide particularly interesting examples of how NOKC can influence, and has influenced, policy-making:
  - centralizing the delivery of selected specialized procedures, and
  - coordinating care for people with chronic conditions.

Lessons learned

- Norway has a limited number of knowledge-brokering organizations actively engaged in preparing information products and organizing interactive knowledge-sharing opportunities.
- Yet, the national context is conducive to knowledge brokering given the stability of the system and open lines of communication between researchers and policy-makers and with the public.
- Where NOKC, as the main health knowledge-brokering organization in the country, has been successful in informing policy-making, this success has been as a result of the organization's:
  - proximity to the policy-making process, both by design and through the active work of senior management, while retaining its independence from political agendas and interest groups;
  - active involvement in international (European and global) networks, which has contributed to the development of capacity and competence and the opportunity to use information products developed elsewhere; and
  - ability to synthesize research evidence in a systematic, transparent and timely manner (primarily through systematic reviews and health technology assessments) and to deliver the syntheses in formats required by the target audience.

Knowledge brokering in Norway

This chapter focuses on the role and influence that information can, and has, played in the health policy-making landscape in Norway. It combines document analysis with interviews with a small number of policy-makers, knowledge brokers and researchers, to better understand the arena within which knowledge may or may not be brokered. It then focuses on two examples where commissioned research evidence from a dedicated national knowledge-brokering organization has had some influence on policy and practice in Norway. Unless otherwise indicated, the information about the organizations highlighted in this chapter reflects the situation as of 2011.

National context for knowledge brokering

Norway is a parliamentary monarchy with a population of 5 million and an estimated gross domestic product (GDP) per capita of US$ 52 400 (Statistics Norway, 2012). The national-level government comprises a prime minister and 18 ministers; the country is divided into 19 counties and 429 municipalities.

Norway makes considerable investment in education and research (both nationally and internationally) and enjoys an enviable record for spending on health care. In 2009, for instance, Norway had the second highest per capita spending on health care among Organisation for Economic Co-operation and Development (OECD) countries although, as a percentage of GDP, it spent roughly the same as the OECD median (9.6% versus 9.5%) (Lindahl & Squires, 2011).

Norwegian health system in brief profile

The Norwegian health system is founded on the principles of universal and equal access, decentralization and free choice of provider. All residents are covered by the National Insurance Scheme (*Folketrygden*), which is managed by the Norwegian Health Economics Administration (*Helseøkonomiforvaltningen*, HELFO), and residents are invited to choose their general practitioner (GP) from a list (with some 99% of Norwegians having chosen to do so). GPs act as gatekeepers for specialized care. These principles are aimed at ensuring equal access for all residents irrespective of their ability to pay or their place of residence. The latter point is a noteworthy one given both the geographical size of the country and the distances and terrains involved, which often pose challenges regarding timely and accessible care. The system is financed through tax revenues, as well as income-related employee and employer contributions and out-of-pocket payments (co-payments). Private medical insurance is limited but expanding.

While health-care policy is controlled centrally, the delivery of care is decentralized. Local authorities at the municipal level organize and co-finance primary health-care services according to local demand. These services include GP care, emergency first aid, physiotherapy services, nursing services and nursing homes. Dental care is run at the county level. The central government has overall managerial and financial responsibility for the acute care (hospital) sector, while the country's four regional health authorities control the delivery of specialty services through 21 local hospital trusts and five trusts providing pharmaceutical services and ambulance services, each of which is an independent legal body. Most hospitals in Norway are public hospitals, funded and owned by the state. Only a small number of hospitals are privately owned, and most of these privately owned hospitals are funded by government.

Beginning in 2001 and 2002, a series of major changes in the structure of the Norwegian health system has created reforms in three key areas: (i) primary care (the rostering of GPs' patient populations); (ii) acute care (transfer of hospital ownership from counties to the national government and devolution of decision-making authority to the five, later four, regional health enterprises); and (iii) national authority (merger of existing national bodies into a smaller number and the restructuring of their functions). The hospital reform facilitated the centralization of services within the four regions. The first case study in this chapter describes how information was used to support decision-making about centralization in the country's largest region.

More recently, in 2009, the Minister of Health proposed a reform focused on care coordination (known as *Coordination reform: proper treatment – at the right place and right time*) to enhance prevention, integrate care and strengthen health care in the municipalities (Norwegian Ministry of Health and Care Services, 2008). The proposed reform also addressed three other domains. First, the reform aimed to curb the rapid growth in hospital expenditures and to direct more investment toward primary care. As an indication of the challenges being faced, the proportion of physicians working as GPs had fallen dramatically in the preceding 15 years. Second, the reform introduced financial incentives for municipalities to lower rates of hospitalization. For instance, 20% of diagnosis-related group (DRG) payments for inpatients would now be charged to the municipalities. Third, the reform sought to strengthen health information systems and specifically to establish a new national, state-owned company, the Norwegian Health Network, to develop and operate information technology infrastructure for the health-care sector. Implementation of the coordination reform began on 1 January 2012, with many elements of the original proposal intact. The second case study in this chapter describes how NOKC's work on the coordination of care for chronic disease management informed the

government's plans. Elements of NOKC's work can be seen in documents related to the reform, even if they were not cited explicitly.

A greater focus on quality improvement and priority setting in the health-care sector is another feature of recent health-care reform in Norway. In 2007 the current government established the Norwegian Council for Quality Improvement and Priority Setting in Health[1] and a set of priority-setting guidelines has been created to guide referrals to secondary care. The government also recently issued a white paper on quality of care and patient safety (Ministry of Health and Care Services, 2013a).

Key attributes of the policy-making context in Norway

Norway exemplifies the principles of consultative political processes and encourages civic engagement. Site-visit interviews indicated that the general culture of transparency and flat (non-hierarchical) structures, where discussion and debate are considered healthy, is mirrored by a scientific culture that places a high value on rigour and transparency. Norwegian is the predominant language and Norwegians have a high level of English literacy.

Internet usage and social media penetration is high in Norway (both in personal life and in the workplace), and freedom of expression is a given and is supported by an open and engaged media. Research culture is strong in the country, and health systems and services research in particular has grown dramatically in recent years (Velasco Garrido, Hansen & Busse, 2011).

It is also noteworthy that knowledge transfer is a stated objective in the higher education sector, albeit with reference primarily to technology. The Employees' Inventions Act and the Universities and Colleges Act of 2003 specifically calls for harnessing the results of research to benefit society, and a common law for state and private education institutions stipulates that their three main objectives include education, research and "community contact" (which is interpreted as meaning the sharing of research findings) (Øverland, 2011).

Table 8.1 presents some of the key attributes of the national policy-making context in Norway, with a particular focus on those that influence knowledge brokering, including those listed below.

- Norway is a unitary state with centralized authority for making decisions; centralized decision support; and infrequent turnover in its governing party/coalition and its civil service, all of which provides a clear, stable audience for knowledge-brokering organizations.

1 Now the Norwegian Council for Quality Improvement and Priority Setting in Health Care (see http://www.kvalitetogprioritering.no/r% C3%A5det/mandat?language=english, accessed 27 March 2014).

Table 8.1 Attributes of the policy-making context in Norway that can influence knowledge brokering

Potential attributes (from the BRIDGE framework, Table 2.3)	**Key attributes in Norway**
Salient features of policy-making institutions and processes	
• Unitary versus federal state	• Unitary state
• Centralized versus distributed authority for making decisions about priority problems, policy/programme options, and implementation strategies	• Centralized authority
• Single-party versus coalition government	• Single party (minority) or coalition as was the case during the study period
• Infrequent versus frequent turnover of the governing party/coalition and its leadership	• Infrequent turnover
• Civil service versus political party influence over decision support within government	• Civil service influence
• Centralized versus decentralized decision support within government	• Centralized decision support
• High versus low capacity for policy analysis within the civil service	
• Low versus high turnover rate within the civil service	
• Significant versus limited resources to commission supports outside the civil service	• Sufficient resources, and now an increased focus on the use of evidence in numerous areas, not just health care
Salient features of stakeholder opportunities and capacities for engagement	
• Formal, significant versus informal, limited role of stakeholders in policy-making	• Informal role
• High versus low degree of coordination within stakeholder groups	
• High versus low autonomy of stakeholder groups from government and from narrow interests within their own memberships	• High autonomy
• High versus low capacity for policy analysis within stakeholder groups	• Adequate capacity
• Significant versus limited resources to commission supports outside the groups	
Salient features of research institutions, activities and outputs	
• Small versus large number of strong research institutions involved in the production, packaging and sharing of health systems information	• Small to medium number
• Large versus small scale of research institutions	• Medium
• Explicit versus implicit mandate for, and resource commitment to, knowledge-brokering (not just research) activities and outputs	• Implicit
General features of national policy-making context	
• English (the language of most health systems information) is versus is not spoken in addition to local languages	• English widely spoken
• Small (everyone knows each other) versus large size of the population	• Small population
• High versus low rates of Internet use	• High
• High versus low capacity of local news media for objective reporting	• High

Note: to highlight ways in which each of these features might help or hinder knowledge brokering, we present the either/or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

- Health system stakeholders have an informal role in policy-making and are not a target audience on a par with policy-makers for any knowledge-brokering organization seeking to inform the policy-making process.
- A small to medium number of strong research institutions are engaged in knowledge brokering, one of which is described in this chapter.
- The country is home to a small population of 5 million; technical and government staff collaborate closely; and international collaboration makes it possible for key documents from outside the country to have a significant impact within it (particularly if embedded in synthesis products such as systematic reviews).

Knowledge-brokering mechanisms and models in use

While 16 Norwegian knowledge-brokering organizations were carefully considered for inclusion in the BRIDGE study, 10 met our eligibility criteria. These organizations varied somewhat in size but most represented medium-sized scales of operation. They all tended to use fairly traditional information-packaging mechanisms and interactive knowledge-sharing mechanisms, reflecting the demand for such types of product by their main target audiences, namely national and subnational politicians and civil servants (Table 8.2). Some of the more innovative mechanisms involve policy briefs, deliberative dialogues, and workshops on guideline development, all of which are undertaken by the knowledge-brokering organization selected for this chapter's case studies. The 10 organizations tended not to provide much description of their organizational models or their approaches to monitoring and evaluation on their websites.

Spotlight on a selected knowledge-brokering organization

NOKC

The NOKC is a scientifically, politically and administratively independent body that was set up in 2004 in response to a perceived need to strengthen the knowledge base for professional decision-making in health services in Norway. Three distinct entities were merged to create NOKC: (i) the national health technology assessment agency; (ii) a health services research foundation; and (iii) the former division of knowledge management in the Directorate of Health and Social Affairs (now the Directorate of Health and hereafter called the Directorate). The Directorate in turn is a semi-independent unit that provides analytical support to the Ministry of Health and Care Services (hereafter, the Ministry) and formerly also to the Ministry of Labour and Social Affairs.

Table 8.2 Knowledge-brokering mechanisms used in Norway

Potential characteristics (from the BRIDGE criteria, Table 2.2)	**Common characteristics in Norway**
Information-packaging mechanisms used	
• Traditional versus innovative types of information products	• Traditional
• Innovative products draw on systematic reviews (part of criterion 3)	• Some draw on reviews
• Innovative products target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative products reviewed before publication by target audience (criterion 6)	
• Innovative products highlight decision-relevant information (criterion 7)	
• Innovative products use language designed to be accessible (criterion 8)	• Some designed to be accessible
• Innovative products follow a graded-entry format (criterion 9)	• Some follow a graded-entry format
• Innovative products accompanied by online commentaries (criterion 10)	
• Innovative products brought to attention by e-mail (criterion 11)	• Many with e-mail alerts
Interactive knowledge-sharing mechanisms used	
• Traditional versus innovative types of knowledge-sharing mechanisms used	• Traditional
• Innovative mechanisms draw on systematic reviews (part of criterion 4)	• Limited
• Innovative mechanisms target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative mechanisms timed to relate to policy-making or requests (criterion 6)	• Some are timed for policy-making
• Innovative mechanisms involve pre-circulated products (criterion 8)	
• Innovative mechanisms involve the creation of new products (criterion 10)	
• Innovative mechanisms involve the announcement of new products (criterion 11)	

NOKC manages its own work but is formally an agency under the Directorate, which has general governance and supervision functions but does not instruct NOKC on individual projects. The Directorate and NOKC jointly develop an annual agreement outlining the latter's broad responsibilities and areas of work. NOKC receives direct commissions for work from the Directorate, and considers requests from the public and stakeholders within the health system, including other governmental organizations, regional health authorities, and provider and professional organizations (it does not take on paid assignments from for-profit enterprises). While independent politically and administratively, NOKC enjoys three types of relationships with the Ministry: (i) governance (through the Directorate); (ii) commissioning (the Ministry can make a request to NOKC to undertake a specific project); and (iii) advisory (the Ministry seeks specific topic expertise from NOKC as needed).

To date, NOKC has focused primarily on clinical issues and some public health questions, reflecting both its primary target audiences of clinicians and managers in the primary and acute care sectors and the high degree of local decision-making. However, recently it has also addressed health system concerns. Of the questions (topics of work) received for consideration by NOKC, around 20% to 25% are now related to health systems and services, and the organization now has 10 to 15 staff members with expertise in this area. NOKC has initiated a series of health systems policy briefs, one of the innovative types of information-packaging mechanisms highlighted in the first BRIDGE summary (Lavis, Catallo, Permanand et al., 2013). Indeed, one such policy brief, on the coordination of care for patients with chronic conditions (Oxman et al., 2008), is featured below as a case study of NOKC's intersection with policy-making. NOKC also conducts training workshops on evidence-informed policy-making, one of the innovative types of interactive knowledge-sharing mechanisms featured in the second BRIDGE Summary (Lavis, Catallo, Jessani et al., 2013).

In terms of its other outputs, NOKC places a significant emphasis on systematic reviews. These reviews support its mandate to serve the health services through promoting quality and improving patient safety (by, in this case, interpreting and disseminating research findings). NOKC is also the national and sole health technology assessment (HTA) agency in Norway, although hospitals will often undertake their own mini HTAs as a form of local decision support. NOKC is exploring ways to help facilitate the preparation of these mini HTAs.

With many of these reports, NOKC targets policy-makers only as a secondary audience. Its primary target audience is decision-makers in regional health authorities, specifically those who run specialty services, as well as leaders and clinicians in primary and acute care settings. However, some reports are specifically prepared to inform national polices related to clinical guidelines, reimbursement of health professionals, and hospital payment. The reports are externally reviewed both by other scientists and by clinicians and decision-makers interested in the particular topic being addressed. Reports may be updated, often by request, as new research findings become available, but this is not a standard undertaking. In view of the organization's knowledge-brokering aims, NOKC's communications unit (which includes a dedicated journalist among its staff) will often write a plain-language summary and sometimes write short pieces for NOKC's online newsletter. Discussions with the Directorate continue regarding how to make the information more accessible to patients and the general public.

NOKC's rigorous assessment of research evidence, and its application of that evidence to key policy issues, have established it as a key resource for decision-

making. As a result, NOKC has been able to become an active part of policy circles and debates on national and regional policy (as reflected in the two case studies below). Additionally, NOKC's process of inviting decision-makers to submit requests for systematic reviews on specific topics (with submissions reviewed on a yearly basis and discussed with a broad group of organizations to identify priorities) helps to ensure that its services are actively sought (as was the case with the centralization case described below). The emerging use of deliberative dialogues, either after the publication of a review (e.g. rehabilitation for breast cancer patients) or prior to publication (e.g. exposure to mercury), is an innovative way of obtaining policy-making buy-in and has proven successful, even if such dialogues are not yet standard practice. Primarily through its systematic reviews, NOKC has also embedded itself into international networks and is well regarded outside Norway. This standing has, in turn, given NOKC the credibility to engage in informal interactions with policy-makers and stakeholders and thereby ensure its involvement in domestic decision-making.

NOKC's role has expanded over the years as Norway has increasingly recognized that health policy-making needs to be better informed by research evidence. The Directorate supports evidence-informed policy-making as a priority and sees NOKC as having not just a major, but perhaps the key, role to play in this area. At the same time, interviews with senior staff at NOKC suggest that the organization is unsure that it is having the hoped-for impact on decision-making within the Directorate and Ministry. This is in part due to the organization's continued predominant focus on clinical issues and may also be due to its lack of staff dedicated to health system knowledge-brokering, despite the growing interest in carrying out this role. Nevertheless, while it may be traditional in some respects and innovative in others, NOKC – like most of the organizations studied in the BRIDGE project – is strengthening its knowledge-brokering work and is responding to the demands of its target audience.

In summary, NOKC can be seen as an independent body that meets some, but not all, of the BRIDGE criteria for knowledge-brokering organizations (Chapter 2). On the one hand, NOKC:

- gives policy-makers and some (if not all) stakeholders an explicit role in its governance and ensures they exercise their role with transparency and objectivity;[2]
- has, and enforces, rules that ensure independence and address conflicts of interest;

2 This is complicated by the Directorate being not only one of the NOKC's many policy clients but also the body to which it reports, whereas the Ministry and the broader set of organizations reporting to the Ministry (including the Directorate, regional health authorities and the Norwegian Medicines Agency) are the true clients that NOKC really serves in its policy-oriented work.

- grants its director general the authority needed to ensure accountability to its knowledge-brokering mandate;
- is actively involved in networks that support its knowledge-brokering activities, including the Campbell Collaboration; Cochrane Collaboration; European Network for Health Technology Assessment (EUnetHTA); Guidelines International Network (G-I-N); Health Technology Assessment International (HTAi); and the International Network of Agencies for Health Technology Assessment (INAHTA) (and in some cases hosts their secretariats);
- collaborates with other knowledge-brokering organizations, both within the country and internationally; and
- establishes functional linkages with policy-making and stakeholder organizations.

On the other hand, NOKC:

- does not ensure an appropriate size, mix and capacity of staff with knowledge-brokering responsibilities relative to its scale (the majority of staff being researchers and clinicians, a smaller number serving as administrators, and very few working as dedicated knowledge brokers on health systems and policy issues);
- does not ensure an appropriately diversified budget for knowledge brokering, with nearly complete budgetary dependence on the Norwegian government; and
- does not have an explicit approach to prioritizing knowledge brokering in general or urgent requests for knowledge syntheses in particular (the most frequent type of request), although it does have a formal process for making non-urgent requests for knowledge syntheses.

However, the organization's staff indicated during our site visit that they see dependence on a single government as a strength rather than a limitation, because it ensures government buy-in. At the same time, NOKC's rules about independence and conflict of interest are robust and prevent political interference in its work. The staff viewed this arrangement as preferable to having a number of different funders who may intentionally or unintentionally use project funding as a lever to skew knowledge-brokering priorities or influence the approaches used.

Case studies of intersections with policy-making processes

This section describes two examples of how NOKC and its work have intersected with the policy-making process. This work was related to centralizing the delivery of selected specialized procedures (undertaken in 2007) and coordinating care for people with chronic conditions (undertaken in 2008). The case studies are based on interviews with a small number of actors who collectively have a broad range of policy-making and research experience.

Case study 1. Centralizing the delivery of selected procedures

Background and context

In 2007, following a merger of two regional health authorities, the new South-Eastern Norway Regional Health Authority (Helse Sør-Øst)[3] approached NOKC to undertake a series of seven so-called rapid reviews about patient volume and quality of care (i.e. outcomes) related to cancer surgeries and selected vascular surgeries. This request came through NOKC's question-submission process mentioned above. The reviews were expected to inform the process of deciding which hospitals in the amalgamated region should be responsible for delivering which procedures. For example, two large university hospitals in Oslo, both of which had teaching responsibilities at the tertiary care level, provided the same full suite of procedures. At more local levels, several small hospitals were each performing small numbers of the same advanced procedures. For cancer surgeries, these concerns had been discussed for some time, both in this region and in other parts of the country.

The specific procedures and topics covered in the rapid reviews (all written in Norwegian with English summaries) were:

- patient volume and quality of care for the treatment of stroke or intracranial aneurysm (Thürmer et al., 2009);
- patient volume and quality of care for the treatment of abdominal aortic aneurysm (Norderhaug, Krogstad, Lindahl et al., 2009);
- patient volume and quality of care for the treatment of carotid stenosis (Norderhaug, Krogstad, Jensen et al., 2009);
- hospital or surgeon volume and quality of care for gastric cancer (Norderhaug & Thürmer 2009a);
- hospital or surgeon volume and quality of care for prostate cancer (Norderhaug & Thürmer 2009b);

3 Helse Sør-Øst [website]. About us. (http://www.helse-sorost.no/omoss/english/Sider/page.aspx, accessed 27 March 2014).

- patient volume and quality of care for colon cancer surgery (Norderhaug, Thürmer, Jensen 2009);
- patient volume and quality of care for liver cancer surgery (Norderhaug & Thürmer 2009c).

In considering the request to NOKC for these reviews, it is important to note that the process of centralization has been a long-standing issue for many Norwegian organizations. The country's geography and low population density have dictated the need for some degree of centralization in the delivery of specialty services. In 1993, before the then five regional health authorities were established, the Directorate prepared a comprehensive report containing a thorough data and literature review, which showed that there were a sufficient number of hospitals providing low volumes of selected services to warrant increased centralization of many specialty services (Kvinnsland et al., 1993). This was particularly the case for cancer treatment, an area with a long tradition in Norway of exploring centralization opportunities. At the time it was generally perceived as unsustainable for some hospitals to be undertaking only one or two procedures of a particular type per year, a position that was later supported by an HTA report published in 2001 by one of the precursor organizations to NOKC (Teisberg et al., 2001). The report, which was widely cited and not seen as controversial, called for centralizing the delivery of cancer treatment in particular. Then, in 2005, following the establishment of NOKC itself, the Northern Norway Regional Health Authority (Helse Nord RHF) asked NOKC for a report on childbirth services in hospitals. The report made the case for increased centralization in this area as well, but this was opposed by the national health minister at the time (Myrhaug & Norderhaug, 2005).

In approaching NOKC to conduct this series of rapid reviews, Helse Sør-Øst stressed that its interest was in ensuring equity in access to quality specialty services and improving patient experiences and outcomes. Helse Sør-Øst made the case that medical advances in specialty services provide the opportunity for greater efficiency and quality in hospital settings, particularly as more patients could be treated as outpatients and day patients. Additionally, it pointed to better knowledge management; improved health technologies, including e-health; and improvements to professional practice as elements that would help to ensure more equitable treatment and, importantly, improve predictability around hospital stays and bed use. In its strategic plan for 2009–2020, Helse Sør-Øst called for:

> better coordination both within the specialist health service and not least between the municipal health service and the specialist health service. Better coordination will especially benefit the chronically ill, elderly and patients

with mental disorders and substance abuse problems. Sustainable development involves continuous development of fields together with more efficient use of space, where capacity is adjusted to the need in the catchment area (Helse Sør-Øst, 2008).

Conducting the rapid reviews

Before the work began, NOKC carried out detailed discussions of work plans with the health authority commissioning the work, with lengthy interactions and debates to define the terms, scope and process. NOKC also worked with national cancer experts to determine a quality-assessment scale (which had been initially proposed in the 2001 HTA report mentioned above).

The rapid reviews were conducted in 2007. Each review followed a strict protocol and search strategy, drew on considerable input from clinical experts and took about two months to conduct. The reason for the relatively quick turnaround time was that the centralization issue (both in general and for cancer in particular) was relatively well understood; the literature was, in large part, already known (including the potential confounders and the like); and the search strategies were essentially in place and could be easily adapted or replicated. After the reviews were completed, the commissioning health authority was given two to four weeks to comment (depending on the review), although in all cases no comments were received.

While the reports all supported the case for increased centralization, and this was indeed what was decided for the most part, the narrowness of the question posed (the relationship between volume and outcomes for each procedure of interest) led some hospital administrators to reject the findings of the two vascular surgery reports. In this instance, they argued that an equally salient question was whether vascular surgery was a key competence required in every hospital given that other patients may require the services of a vascular surgeon on an urgent basis. The result was some centralization in the Oslo region, with one hospital assuming responsibility for aortic aneurysms and another handling carotid stenosis, but several smaller hospitals in other regions retained vascular surgery even if only a few surgeries were performed each year.

The role of geography and local interests in these discussions at policy, professional and patient levels cannot be understated. Stakeholders had competing interests on a range of issues. For instance, many physicians expressed a preference to be in, or close to, bigger cities while others were happy practising in more remote and less busy hospitals. Some hospital administrators were concerned about finances and the efficiency gains that can accrue through the closure of low-volume facilities, while others were concerned about the potential for losing specialists to other cities. Politicians and the civil servants supporting them

needed to be attentive to these different voices and to how they can influence public opinion.

Impact of the rapid reviews

The reviews had a major impact in pointing to the many hospitals providing low volumes of specialty services (and by extension, according to the research literature, suboptimal outcomes), thereby allowing policy-makers to argue that centralization would have clear benefits. Additionally, as a follow-up to the seven reviews, the directorate agreed to develop cancer treatment guidelines (Ministry of Health and Care Services, 2006). The guidelines contributed to the further centralization of cancer services, although there is still uncertainty whether the centralization will be extended to include skin, colon, liver and prostate cancer services as well.

As a final point, it is important to note that, despite NOKC's role, the process of centralizing select procedures was already underway and, arguably, the decision had already been taken. Nevertheless the NOKC reports had a legitimizing role, providing a formal evidence base that helped to accelerate and communicate the rationale for the process.

Case study 2. Coordinating care for people with chronic conditions

Background and context

In 2008 a new red-green coalition government took office, and in 2009 the new health minister introduced the so-called coordination reform mentioned above. The explicit aim was to improve the country's health services through better coordination across different levels of care and among different providers within each level. A 2003 expert committee report had called for greater cooperation between primary and secondary care within regions, but the recommendations were not acted upon. A similar initiative in 2005 was also not pursued (NOU, 2005). The 2009 reform represented a more hands-on role for central government – through new legislation, administrative and structural reform, and the use of financial incentives – thereby effectively doing away with the cooperation-promoting approach that had characterized previous efforts (Romøren, Torjesen & Landmark, 2011). As noted earlier, the new reform took effect on 1 January 2012.

While the coordination reform was a broad initiative with system-wide repercussions, NOKC's work centred on the issue of coordinating care for people with chronic conditions. This focus was spurred by the recognition that an estimated 1 million Norwegians were living with chronic conditions (Sanne, 2008) and that this had significant implications for current and future health-care costs, quality of life and other outcomes. People living with chronic disease

are typically regular, intense users of the health system who have to negotiate the interface between primary and secondary care as part of their routine care-seeking behaviours. Consequently, chronic disease management was seen as a barometer of how the entire system is functioning.

Innovative approaches: a policy brief and a deliberative dialogue

The Ministry commissioned NOKC to conduct this work over a very short time frame so that it could inform a forthcoming white paper on the 2009 reform. It was agreed that the research synthesis should be prepared as a policy brief, with an examination of the problem, options for addressing it, and key implementation considerations (Oxman et al., 2008), to inform a deliberative dialogue in which key policy-makers, stakeholders and researchers could work through these issues. The research team – comprising research staff with clinical, health system and guideline development expertise – had just two weeks to produce an initial draft and another two weeks to finalize it based on feedback received by content experts. The deliberative dialogue was scheduled for two weeks after the policy brief was finalized, by which time the Minister was expected back from a period of travel. Timing and timeliness were therefore crucial.

The Minister requested both a closed meeting (the deliberative dialogue) and, later, a larger and more public meeting to engage other stakeholders. Nine international experts from a range of disciplines – including individuals with clinical, quality of care, health system and policy expertise – were invited to attend the deliberative dialogue, along with Norwegian policy-makers and some Norwegian researchers. As part of the dialogue, expert were asked to summarize their reactions to the brief with respect to their areas of expertise.

The commissioning of NOKC to summarize research evidence as an input to the reform process was an atypical occurrence at the time. Traditionally, official reports produced by selected experts were the primary external input into such a process. These official reports generally did not offer any type of systematic synthesis of the evidence, tending instead to outline personal views about steps to be undertaken and strategies to be pursued. The unusual and innovative choice to commission a policy brief had been spurred by an active effort on the part of the NOKC Director General to promote this approach in a meeting with the Directorate and the Ministry. This was an (ultimately successful) attempt to showcase NOKC's ability to be an active knowledge broker addressing key policy issues in the Norwegian context.

Assessing the impact

The policy brief was undoubtedly an innovative information-packaging product for NOKC, but how much did it influence the reform? While this is difficult

to ascertain, one of the brief's authors expressed the view that it probably did not directly change or inform the reform, but may have somewhat influenced the thinking. At the same time, senior management at NOKC reported that elements of the report appeared to have made their way into various Ministry documents and speeches, although without reference to either the policy brief or NOKC itself in these materials. This reinforces the fact noted by numerous commentators and scholars that it is difficult to demonstrate the contribution of a particular information-packaging or interactive knowledge-sharing approach on a particular policy decision.

One researcher described NOKC's involvement in developing the policy brief as a "convergence of circumstances," including:

- a new red-green labour coalition government that was open to new ways of doing things;
- a new health minister who had no health-care background but who was looking to have an impact from a management perspective (to demonstrate that his government was addressing long-standing challenges in the health system);
- at that time NOKC was actively looking to take on a project such as this to inform policy;
- senior management at NOKC had developed closer formal and informal links with national level policy- and decision-makers; and
- a team of four researchers were in a position to essentially drop everything to take on this work within a very short time frame.

This confluence of elements clearly reflects the three main factors identified in the BRIDGE systematic review (see Chapter 3) as key for information to be used in policy-making.

1. Interactions between researchers and policy-makers: in this case, NOKC had relationships with, and direct access to, senior-level policy-makers.
2. Timing/timeliness of the information being made available or accessible: the Minister of Health had a deadline in order to feed into a policy process, and NOKC was able both to produce an innovative information-packaging product (the policy brief) and to make use of an innovative knowledge-sharing mechanism (the deliberative dialogue with local policy-makers and external experts).
3. An accordance between the available information and the prevailing thinking: coordination of care had been a long-standing issue in Norway and (with the Government's explicit aims of improving the patient experience

and reducing health-care costs) chronic disease management was a clear choice of topic area.

Additionally, the fact that NOKC was commissioned to produce a rigorous evidence synthesis on a tight deadline, and its success in doing so, indicates both the standing it enjoyed (including its proximity to the policy process) and the strides it had taken in its first few years (including building a reputation as a first point of call and as an organization that produces quality material of relevance to policy-making and policy-makers' requirements).

The NOKC policy brief has been referenced in the European literature for its topicality and the quality of the evidence review (e.g. Shaw, Rosen & Rumbold, 2011) and in wider knowledge-brokering circles for its systematic and transparent approach and innovative format (e.g. Lavis, Permanand et al., 2009). In particular, the policy brief demonstrates several features of innovative information-packaging mechanisms, according to the BRIDGE criteria: it emphasizes systematic reviews (and pursues a quality-of-evidence approach in its choice of research evidence); it uses a graded-entry format; and it delineates the policy problem, options for addressing it (in this case, delivery, financial and governance arrangements) and implementation considerations.

With NOKC now hosting the secretariat for the National Council for Quality Improvement and Priority Setting in Health Care, other knowledge-brokering mechanisms are being pursued in the area of chronic disease and coordination of care, such as one-page summaries of research evidence written in accessible format (e.g. on patients requiring long-term mechanical ventilation) (Wang, Ringard & Høymork, 2012). As well, senior staff at NOKC have indicated an interest in pursuing the policy brief format on a wider scale, possibly by developing a dedicated knowledge-brokering arm to the organization's work, though it remains to be seen whether demand is sufficient to warrant such a resource commitment.

Lessons learned

Norway has a limited number of knowledge-brokering organizations actively engaged in preparing information products and organizing interactive knowledge-sharing opportunities. Yet the national context is conducive to knowledge brokering, given the stability of the system and open lines of communication between researchers and policy-makers and with the public.

NOKC, the main health knowledge-brokering organization in the country, was externally evaluated in 2007 using a process that included interviews with many stakeholders (Sosial- og helsedirektoratet, 2007). The evaluation focused largely on NOKC's role in fostering evidence-based practice and less on its

role in supporting evidence-informed policy-making. The evaluators concluded that NOKC's products were of high quality and that its legitimacy had grown, and they underscored the importance of independence and scientific rigour. However, they also noted that being too closely involved in informing health policy through, for instance, the National Council for Quality Improvement and Priority Setting in Health Care, may threaten its credibility with clinical audiences. This is a balancing act for a centre that, on the one hand, needs support from clinical leaders to foster improvements in clinical practice and, on the other hand, informs clinical policies that may challenge clinical groups. The evaluation concluded that NOKC had established itself internationally and with good networks that are crucial for delivering on its mandate.

Where NOKC has been successful in informing policy-making, this success has been as a result of the organization's:

- proximity to the policy-making process, both by design and through the active work of senior management, while retaining its independence from political agendas and interest groups;
- active involvement in international (European and global) networks, which has contributed to the development of capacity and competence and the opportunity to use information products developed elsewhere; and
- ability to synthesize research evidence in a systematic, transparent and timely manner (primarily systematic reviews and HTAs) and to deliver the syntheses in formats required by the target audience.

That said, the attribution of policy impact to the work of a knowledge-brokering organization such as NOKC remains difficult to substantiate since there is no tradition of citing sources used in policy documents and in parliamentary decisions in Norway. It has been easier to identify NOKC's impact on decisions relevant to clinical practice due to the direct use of systematic reviews and HTAs in informing clinical guidelines and clinical payments/reimbursements.

However, awareness of the utility of more explicitly using research evidence to address health policy and system issues seems to be growing in Norway, and NOKC has facilitated this thinking within and outside the health sector. A recent white paper tasked the Norwegian Institute of Public Health with informing policy decisions about public health through the use of systematic reviews (Ministry of Health and Care Services, 2013b). Moreover, the Ministry of Research and Education has established a Knowledge Centre for Education, and NOKC has acted on an interim basis as host for Knowledge Centre functions in the field of welfare services. These developments were most likely spurred by the successful experiences with NOKC and constitute another way of measuring the impact of the centre. A broader mix of knowledge-brokering

institutions will also help to sustain a culture and a system of knowledge brokering informed by research evidence.

Conclusions

The establishment and evolution of NOKC in Norway has been notable for its efforts to bring rigour and transparency to policy inputs. To achieve impact, the approaches used to synthesize and present research evidence to policy-makers need to be systematic, transparent and timely. NOKC's example has inspired the development of new institutional capacities for knowledge brokering both within and outside the health sector in Norway. The NOKC experience suggests that knowledge-brokering institutions can be close to the policy-making process and political powers, but must at the same time be assured independence to function well and maintain the necessary legitimacy. The experience also suggests that such institutions are likely to be more productive and produce work of higher quality if they are well rooted in international networks.

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Bridging the worlds of research and policy in European health systems

Chapter 9

Knowledge brokering in Spain: matching brokering mechanisms to policy processes

Constantino Sakellarides, José R Repullo, Wendy Wisbaum

European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Key messages

Key attributes of the national context for knowledge brokering in Spain

- Spain is a federal state with frequent turnover of its governments (and, typically along with them, the senior ranks of the civil service) and markedly decentralized authority for making decisions, which provides a constantly changing audience for knowledge-brokering organizations to target, particularly if they are focused at both national and subnational levels.
- Health system stakeholders have an informal role in policy-making and are not a target audience on a par with policy-makers for most organizations included in the BRIDGE study.
- A small to medium number of strong research institutions are engaged in research; however, their mandate for knowledge brokering is often implicit and their resources limited.
- Language differences often mean that documents from outside Spain have little direct impact.

Knowledge brokering mechanisms and models in use

- Twelve Spanish knowledge-brokering organizations were included in the BRIDGE study.
- The organizations tended to use fairly traditional information-packaging mechanisms and interactive knowledge-sharing mechanisms. Some of the more innovative information products target policy-makers explicitly and are written in a language designed to be accessible to them (and to stakeholders). Also, some are timed to relate to policy-making processes or to requests from policy-makers.
- On their websites, the 12 organizations did not provide much description of their organizational models or their approaches to monitoring and evaluation.

Spotlight on selected knowledge-brokering organizations

- Three knowledge-brokering organizations are in some respects unique in their engagement in knowledge brokering, although each has quite specific areas of focus and target audiences:

  1. Avedis Donabedian Foundation (*La Fundación Avedis Donabedian*, FAD);

2. Spanish Society of Public Health and Health Administration (*La Sociedad Española de Salud Pública y Administración Sanitaria*, SESPAS); and
3. Observatory of European Health (*Observatorio de Salud en Europa*, OSE), Andalusian School of Public Health.

Examples of intersections with policy-making processes

- Three case studies were chosen to illustrate how knowledge-brokering organizations such as FAD, SESPAS and OSE influence policy-making. The case studies describe:
  - improving the performance of health and social care organizations at the regional level
  - developing anti-tobacco policies at the national level, and
  - addressing cross-border health care at the European level.
- Interactive knowledge sharing over long periods of time proved quite important in the first and second cases, but not in the third. However, the interactions were collaborative in the first case and highly confrontational and tactically planned in the second.

Lessons learned

- Experience with knowledge brokering in Spain demonstrates that it is necessary to match brokering mechanisms to policy processes. For example, what made a difference in improving the performance of health and social care organizations at the regional level (a formal, participatory interactive knowledge-sharing mechanism) is very different from what made a difference in developing anti-tobacco policies at the national level (an array of informal, reactive knowledge-sharing mechanisms that tried to dominate or marginalize groups pursuing narrow material interests).
- However, as the economic pressures grow for Spanish governments to do less, it will be important for those interested in knowledge brokering to ask whether there is a need for more, or differently sized, knowledge-brokering organizations than currently exist in the country. The time may be right for national and regional discussions about what knowledge-brokering mechanisms and models will best serve Spain in the years ahead.

Knowledge brokering in Spain

This chapter focuses on the role and influence that health systems information can have, and has had, in the health policy-making landscape in Spain. It draws on documentary analysis and interviews with a small number of policy-makers, stakeholders and knowledge brokers to understand the national context for knowledge brokering and the mechanisms and models in use (both in general and in three selected organizations in particular). The chapter also provides three examples of intersections between knowledge-brokering organizations and policy-making processes and identifies lessons learned. Our discussion of knowledge-brokering organizations and their products and activities in this chapter reflects the information available during 2009–2010, when we were collecting data for the study.

National context for knowledge brokering

Spain, a country of approximately 47 million people, has a central government, parliament and public administration along with 17 highly decentralized regions (formally called autonomous communities), each with its own government, parliament and public administration and many with unique political, economic, social, cultural and linguistic identities. Spain is typically governed by a single political party at the national level. At the regional level, coalition governments can occur but tend to be the exception. Castilian Spanish is the common language in Spain, but other languages are also spoken in some Spanish regions, particularly in the Balearic Islands, Basque Country, Catalonia, Galicia and Valencia regions. In recent years, English has become more widely used as a working language. In 2008, the country spent 8.7% of gross domestic product (GDP) on health (Global Health Observatory, 2011). Below, we describe major developments in Spain's health system in the last three decades (García-Armesto et al., 2010).

During the 1980s, the evolution of the health system was strongly influenced by two main developments: (i) political decentralization (i.e. the establishment of regional autonomy), including the devolution of health services organization and management to a first group of regional governments (Andalusia, Basque Country, Catalonia, Galicia and Navarra); and (ii) adoption of the General Health Act in 1986, which established the Spanish national health system (SNS) and transitioned the health system from a limited social security model to a universal, tax-financed model. In the same period, two important changes took place in the area of health systems information in Spain: (i) health-related scientific societies were established and expanded; and (ii) teaching and research institutions devoted to public health and health management (*salud*

publica y administration sanitaria) were developed, operating under the auspices of regional governments or with their support.

In the 1990s, policy-makers and stakeholders in the Spanish health system turned their attention to regulatory enhancements, managerial innovations and cost containment. The change in focus, which was reflected in the *April report* (Committee on Review and Evaluation of the National Health System, 1991), was likely precipitated by the expansion of (and emerging criticisms about) the SNS in the preceding decade and the harsh economic climate of the early 1990s. Two related developments appeared in the health systems information landscape in 1995: (i) creation of a national agency for health technology assessment (HTA) – focused primarily on cost effectiveness – which led to the establishment of similar regional agencies; and (ii) creation of a national agency for pharmaceutical drugs (focused primarily on effectiveness, safety and innovation). Also, in 1993, the SESPAS began preparing a biennial report about key issues facing the Spanish health system.

The 2000s were characterized by the completion of the decentralization process and the establishment of the mechanisms needed to regulate the health system aspects of a federal Spain. Decentralization was achieved in 2002 and 2003 mainly by dismantling the National Institute of Health (*Instituto Nacional de la Salud*, INSALUD), which had been responsible for administering health-care services delivered under the terms of Spain's social security system, and transferring its responsibilities to the regional level and then formalizing the terms of this arrangement in the Cohesion and Quality Act. The Act's key contributions were to reinforce the role of Spain's inter-regional council of the SNS, to create an agency for health-care quality and to create a national information institute. The latter has played a key role in health information management (and, by extension, in knowledge brokering) through its datasets (e.g. SNS-eligible individuals, hospitalizations); information systems (e.g. SNS primary care, SNS waiting list, regional); inventories (e.g. primary health-care centre and hospital catalogues); reports (e.g. *Health Barometer*); statistics (e.g. inpatient health-care facility characteristics, health indicators); and surveys (e.g. Spanish National Health Survey, Spanish component of a European health survey). Drawing on these resources, the national Ministry of Health publishes an annual report on health and health systems, with data presented nationally and for each of the 17 regions. Also, as of 2009, health and social policy have been brought together under a new ministry responsible for health and social services.

Key attributes of the policy-making context in Spain

Table 9.1 presents some of the key attributes of the Spanish policy-making context, with a particular focus on those that influence how knowledge brokering is undertaken in the country, including those listed below.

- Spain is a federal state with frequent turnover of its governments (and typically along with them, the senior ranks of the civil service) and with markedly decentralized authority for making decisions, which provides a constantly changing audience for knowledge-brokering organizations to target, particularly if they are focused at both national and regional levels.
- Health system stakeholders have an informal role in policy-making and are not a target audience on a par with policy-makers for most of the knowledge-brokering organizations included in the BRIDGE study.
- A small to medium number of strong research institutions are engaged in research; however, their mandate for knowledge brokering is often implicit and their resources limited (although the three organizations profiled in this chapter are each in some ways an exception to this pattern).
- Language differences often mean that documents from outside Spain have little direct impact.

Table 9.1 Attributes of the policy-making context in Spain that can influence knowledge brokering

Potential attributes (from the BRIDGE framework, Table 2.3)	**Key attributes in Spain**
Salient features of policy-making institutions and processes	
• Unitary versus federal state	• Federal state
• Centralized versus distributed authority for making decisions about priority problems, policy/programme options, and implementation strategies	• Decentralized authority
• Single-party versus coalition government	• Mostly single-party governments
• Infrequent versus frequent turnover of the governing party/coalition and its leadership	• Frequent turnover
• Civil service versus political party influence over decision support within government	• Political party influence
• Centralized versus decentralized decision support within government	• Variable (by region)
• High versus low capacity for policy analysis within the civil service	• Variable (by region)
• Low versus high turnover rate within the civil service	• High turnover rate (with elected government)
• Significant versus limited resources to commission supports outside the civil service	• Variable (by region)

Table 9.1 contd

Potential attributes (from the BRIDGE framework, Table 2.3)	Key attributes in Spain
Salient features of stakeholder opportunities and capacities for engagement	
• Formal, significant versus informal, limited role of stakeholders in policy-making	• Informal, limited role (although stakeholders have a formal opportunity to comment on legislation)
• High versus low degree of coordination within stakeholder groups	• Relatively low
• High versus low autonomy of stakeholder groups from government and from narrow interests within their own memberships	• Variable (by region)
• High versus low capacity for policy analysis within stakeholder groups	• Variable (by region)
• Significant versus limited resources to commission supports outside the groups	• Limited resources
Salient features of research institutions, activities and outputs	
• Small versus large number of strong research institutions involved in the production, packaging and sharing of health systems information	• Small to medium number
• Large versus small scale of research institutions	• Small to medium scale
• Explicit versus implicit mandate for and resource commitment to knowledge brokering (not just research) activities and outputs	• Implicit mandates and limited resources for brokering
General features of the national policy-making context	
• English (the language of most health systems information) is versus is not spoken in addition to local languages	• English is not widely spoken
• Small (everyone knows each other) versus large size of the population	• Variable (by region)
• High versus low rates of Internet use	• Medium to high rates of Internet use
• High versus low capacity of local news media for objective reporting	• High capacity of news media

Note: to highlight ways in which each of these features might help or hinder knowledge brokering, we present the either/or options such that the first option likely simplifies the landscape for a knowledge-brokering organization while the second one likely complicates it.

Knowledge brokering mechanisms and models in use

The need for scientific and technical inputs for decision-making in the Spanish health system has increased and evolved over the last 30 years, which has resulted in distinct waves of knowledge-brokering organizations appearing on the scene.

Knowledge-brokering organizations born in the 1980s

As noted above, a number of health-focused scientific societies were created and expanded rapidly in Spain in the 1980s, including the key examples listed below.

- A society of epidemiology was established in 1978 with 45 members. The society emerged out of the training programme in epidemiology at the National School of Public Health in Madrid, which itself had been established in 1924 and had merged with the national school of hospital management in 1986. The epidemiology society currently has about 1000 members.
- A society of family and community medicine (*Sociedad Española de Medicina de Familia y Communitaria*, semFYC) was created in 1982, largely through the mobilization of family and community medicine residents, and regional sections were established between 1984 and 1987. Current membership is around 20 000. Three other associations related to primary health care – a society of rural and general medicine (*Sociedad Española de Médicos de Atención Primaria*, SEMERGEN); a primary health-care network (*Red Española de Atención Primaria*, REAP); and an association of community nursing (*Asociación de Enfermería Comunitaria*, AEC) – were established after this period.
- An association for quality of care was established in 1984 by professionals from a broad range of academic disciplines and health professions. Several years later, in 1989, FAD was created, which formalized a research, training and knowledge-brokering role in the field of health and social care quality.
- An association of health economics was formally launched in 1985. Its membership was 848 in 2009, with about one third of members being health economists; one third physicians; and one third with other backgrounds.
- Finally, SESPAS, commonly called the society of societies, was established in 1985 as an umbrella for the growing number of health-focused associations and societies in the country.

These societies play important knowledge-brokering roles through the actions of their members –who work at many levels within the system and who periodically take on key policy-making positions – and by supporting their members to work collectively.

During the same decade, as also noted, a number of regional public health teaching and research institutions were also established, typically with the support of regional governments: in 1985, the Andalusian School of Public Health (*Escuela Andaluza de Salud Pública*, EASP); in 1988, the Madrid University Centre for Public Health (*Centro Universitario de Salud Pública*, CUSP; closed in 2004); in 1987, the Valencia Institute for Public Health (*Instituto Valenciano de Estudios de Salud Pública*, IVESP); and in 1994, the Catalonia Institute of Public Health (*Institut de Salut Pública de Catalunya*, ISP; closed in 2003).

In addition, the Institute of Health Carlos III – Spain's premier health research institution – was established in 1986 as an autonomous organization funded by the then ministry of health and consumer affairs. Since its creation, the Institute has cooperated closely with a number of research programmes within the SNS and played an important role in funding research in many fields (biomedical, bioengineering, clinical, epidemiology, pharmacology, health technology and health services), supporting the career development of researchers working in these domains and promoting research networks. The National School of Public Health is part of the Institute.

Knowledge-brokering organizations born in the 1990s

In the 1990s, the creation of the National Agency for Health Technology Assessment (Agencia de Evaluación de Tecnologías Sanitarias, AETS) occurred around the same time as the founding of a number of similar regional agencies:

- Basque Office for Health Technology Assessment (*Servicio de Evaluación de Tecnologías Sanitarias*, Osteba) in 1992;
- Agency for Health Technology and Research Assessment of Catalonia (*Agència d'Informació, Avaluació i Qualitat en Salut*, AIAQS) in 1994 (originally under a different name); and
- Health Technology Assessment Agency of Andalusia (*Agencia de Evaluación de Tecnologías Sanitarias de Andalucía*, AETSA) in 1996.

Moreover, the focus on regulatory enhancements, managerial innovations and cost containment also led to the emergence of small but active groups based in universities and foundations, including the following examples.

- Centre for Research in Health and Economics (*Centre de Recerca en Economia i Salut*, CRES), created in 1996 in the Department of Economics and Business, University Pompeu Fabra, Barcelona.
- A health services research institute (*Fundación Instituto de Investigación en Servicios de Salud*, IISS) which was also founded in 1996 and which brought together a network of researchers with support from groups and institutions in Aragón, Catalonia and Valencia; and
- The Gaspar Casal Foundation (*Fundación Gaspar Casal*, FGC), a private sector foundation initially focused on HTA but more recently focused on health administration and health services research.

Knowledge-brokering organizations born in the 2000s

In addition to the creation of a national information institute, the first decade of the 21st century witnessed the emergence of patient-driven organizations

and problem-focused research networks. In late 2004, a Spanish patient forum (*Foro Español de Pacientes*) was established and is now a key contributor to public debates about health systems. In 2006, the Biomedical Research Centre's Network for Epidemiology and Public Health (*Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública*, CIBERESP) was created to bring together researchers, health professionals and policy-makers to address pressing public health problems, much as other networks in Spain brought together key stakeholders in their respective problem areas.

Over the decade, there has also been a clear trend toward the externalization of know-how, as experts have moved from the public service to private consulting firms and to the private sector more generally. This trend may be attributable to many factors, including the decentralization of authority to the regions (and the resulting weakened role for the national ministry of health and social services); a cultural bias against open lobbying (and the resulting demand by pharmaceutical, technology and other industry groups for intermediary organizations that can package and disseminate information that supports their products and services); and the growth in some regions of private financing for hospitals and other institutions (and the resulting roles created for large construction firms, private insurers and banks). This trend has not extended beyond the country's borders, however, perhaps in large part because of the fees charged by private consulting firms, which are prohibitive for most Spanish organizations.

Current state of knowledge brokering

Twelve knowledge-brokering organizations in Spain met our eligibility for inclusion in the BRIDGE study (see Chapter 2). These organizations tended to use fairly traditional information-packaging mechanisms and interactive knowledge-sharing mechanisms (Table 9.2). Some of the more innovative information products target policy-makers explicitly and are written in a language designed to be accessible to them and to stakeholders. Also, some are timed to relate to policy-making processes or to requests from policy-makers. On their websites the 12 organizations did not provide much description of their organizational models or their approaches to monitoring and evaluation.

Spotlight on selected knowledge-brokering organizations

After looking at specific cases where knowledge-brokering organizations have interacted with health policy-makers, we highlight the work of three organizations that are in some respects unique in their engagement in knowledge brokering, although each has quite specific areas of focus and target audiences.

Table 9.2 Knowledge-brokering mechanisms used in Spain

Potential characteristics (from the BRIDGE criteria, Table 2.2)	**Common characteristics in Spain**
Information-packaging mechanisms used	
• Traditional versus innovative types of information products used	• Most are traditional
• Innovative products draw on systematic reviews (part of criterion 3)	
• Innovative products target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative products reviewed before publication by target audience (criterion 6)	
• Innovative products highlight decision-relevant information (criterion 7)	
• Innovative products use language designed to be accessible (criterion 8)	• Some written in accessible language
• Innovative products follow a graded-entry format (criterion 9)	
• Innovative products accompanied by online commentaries (criterion 10)	
• Innovative products brought to attention by e-mail (criterion 11)	
Interactive knowledge-sharing mechanisms used	
• Traditional versus innovative types of knowledge-sharing mechanisms used	• Most are traditional
• Innovative mechanisms draw on systematic reviews (part of criterion 4)	
• Innovative mechanisms target policy-makers as a key audience (criterion 5)	• Some target policy-makers
• Innovative mechanisms timed to relate to policy-making or requests (criterion 6)	• Some are timed but most are not
• Innovative mechanisms involve pre-circulated products (criterion 8)	
• Innovative mechanisms involve the creation of new products (criterion 10)	
• Innovative mechanisms involve the announcement of new products (criterion 11)	

FAD

Stemming from the European and Spanish quality-of-care movement of the 1980s, FAD was established as a not-for-profit institution in 1989 and became a university institute in 2000. Its research, training and knowledge-brokering activities are centred around three domains: (i) effectiveness of quality-improvement methods (part of a European Commission framework programme); (ii) quality improvement in long-term care, mental health care and social care; and (iii) patient safety. Thus far, FAD has had its most significant impact in the areas of long-term care and patient safety.

FAD's mission is to be a forum for citizens, clinicians, managers, policy-makers and researchers to work together to improve quality of care in health and social services. It uses a number of interactive knowledge-sharing mechanisms to enable this collaboration. In particular, FAD convenes many meetings with

health and social care professionals to support the implementation of quality-improvement models. The institute also interacts with policy-makers to understand their needs related to quality improvement and to respond to their requests for specific types of support (briefings typically) in promoting quality of care in health and social services. FAD also prepares reports about particular quality issues and efforts that have been undertake to address them.

Spain's decentralized, federal nature influences FAD's work in at least two ways: (i) most work is commissioned by regional managers and policy-makers and requires region-specific reports and briefings; and (ii) much work needs to be repeated every four years within engaged regions because of the high turnover in the civil service after each regional election.

FAD's management board includes the presidents of scientific and management societies in the health and social care field, as well as individuals who have made major contributions to health services research in general and quality-improvement research in particular. An executive council, drawn from the management board, is actively involved on a more regular basis.

SESPAS

SESPAS was established in 1985 as a society of societies, with the aim of harnessing the collective talent and energy of the various health-focused scientific societies in the country. The current roster of societal memberships includes seven with a technical focus and four with a regional (i.e. geographical) focus. Since its creation, SESPAS has emphasized its role as a federation of these societies – with each speaking out individually – rather than as a single voice for them. It originally focused on promoting knowledge development and professional development in public health, and then added an advocacy role, but it is fairly new for the organization to be considered a knowledge broker. SESPAS carries out its knowledge-brokering role largely through the volunteer efforts of its individual members. These members now number about 4000, are drawn from diverse contexts (e.g. regional and national levels, academic and administrative institutions) and collectively bring a tremendous breadth and depth of expertise to discussions of pressing issues.

SESPAS facilitates a number of interactive knowledge-sharing mechanisms with policy-makers and stakeholders (e.g. publication-writing teams, interest-group meetings, working groups and conferences) and promotes its members' involvement in interactive knowledge-sharing mechanisms organized by others (e.g. broad social movements, regional and national committees, official working groups). As a national organization in a highly decentralized country with limited stakeholder engagement in policy-making, SESPAS's proactive role on

policy issues of regional and national interest, and its reactive role in piecemeal national policy-making processes, can stimulate its members to participate more actively in health and social policy-making. While its interactive knowledge-sharing mechanisms are not yet seen as part of a comprehensive and well-targeted strategy for knowledge brokering, there is considerable potential to evolve in that direction. SESPAS's principal information-packaging mechanism is its biennial report – *Informe SESPAS* – about key issues facing the Spanish health system.

SESPAS is a legally incorporated entity, independent of government, and governed by statutes that are modified or ratified by its membership.

OSE

The OSE was established in 2002 within the Andalusian School of Public Health, which (as noted previously) was itself created in 1984. The OSE's mission is to collect, analyse and disseminate information on European Union (EU) policies and programmes, as well as on other decisions relevant to health, in order to identify implications for the Andalusian health system and opportunities to participate in, take advantage of and influence health policy-making in Europe. It is effectively a knowledge-brokering organization on EU health issues in the region of Andalusia – Spain's largest region, comprising eight provinces and a population of about 8 million people. But the OSE's reach extends beyond Andalusia, as its materials are available free of charge to other regions as well as to other countries without the resources or capacity to support a similar effort.

The OSE uses a variety of information-packaging mechanisms, such as strategic reports, and one key interactive knowledge-sharing mechanism – the OSE forum, which targets policy-makers, health service managers, researchers and other stakeholders. The OSE has participated in a number of EU projects, either as coordinator or as a member of the research group. The OSE has a small technical staff and occasionally draws on the members of a network of outside experts, who may be asked to contribute to technical documents published in the OSE's Paper Series and who are sometimes compensated for their contributions. Some of the OSE's work is sponsored by national or regional health research funds, by the European Commission's Directorate General for Health and Consumers (DG Sanco) or, much less commonly, by other private sources.

While Andalusia has experienced a stable political environment and policy continuity over the last couple of decades, there is always a degree of turnover within the regional government and health administrations. Knowledge-brokering organizations such as the OSE, located outside government, can ensure that institutional memory is preserved during such periods of change.

Case studies of intersections with policy-making processes

Three case studies were chosen to illustrate how knowledge-brokering organizations such as FAD, SESPAS and the OSE influence policy-making. The case studies describe:

1. improving the performance of health and social care organizations at the regional level
2. developing anti-tobacco policies at the national level, and
3. addressing cross-border health care at the European level.

These case studies complement each other by providing different perspectives on health policy-making processes and on the way that knowledge-brokering organizations intersect with these processes. The case studies are based on interviews with a small number of individuals working in research and policy-making, and we also draw from our analysis of relevant documentation and media coverage.

Case study 1. Improving the performance of health and service care organizations

In Spain's regions, as in many countries with a purchaser/provider split,[1] public administrations and the private organizations that they fund to deliver care can face challenges in agreeing how to improve performance, particularly in sectors where many professional groups and provider organizations are involved. In an effort that began in the region of Catalonia and later was extended to Navarra and Valencia, FAD developed in partnership with each regional government a voluntary, participatory, consensus-based approach to improving the performance of private health and social care organizations (Hilarion et al., 2009). Organizations involved in care that complemented primary and hospital care were prioritized, namely: assisted living; care for elderly people in convalescent care, nursing home and palliative settings; and care for marginalized groups, including abused women, drug users, and people with mental illness or mental or physical disabilities.

Piloting the approach in Catalonia

Faced with a purchaser/provider split and a complex organizational environment on the private provider side, Catalonia's regional government established an agreement with FAD, on the basis of its track record, to collaboratively develop an approach to performance improvement based on the selection, use and

1 A separation between the purchasers of care (e.g. special health authorities) and the providers of care (e.g. hospitals).

analysis of performance indicators. The agreed approach incorporated four steps.

1. **Stakeholder engagement.** All organizations providing health or social care in the prioritized domains are formally invited by the public administration to participate in selecting and using performance indicators. The administration pays 80% of the costs of the quality improvement process and (to encourage a sense of ownership) the private organizations pay the remaining 20%.
2. **Indicator selection.** Informed by a literature review, participating organizations select (over the course of five to seven meetings) contextually appropriate indicators using standardized consensus methods. Context is interpreted broadly here and can include legislative, practical and timing considerations.
3. **External evaluation.** Well-trained external evaluators draw on a range of sources and rigorous evaluation methods and work with informed participants to undertake an external evaluation of each organization. The data sources include patient/client records, interviews with health professionals, direct observation and a select set of relevant documents. Before starting this work, the evaluators participate in a training programme and participating organizations are informed of the procedures that will be used.
4. **Reporting and discussion.** Two months after the fieldwork is completed, participating organizations each receive a personalized performance report and are engaged in discussions about ways to improve performance. At the same time, an additional report with anonymized league tables that permit benchmarking in relation to peers is released for public discussion. The reports and discussion have resulted in the achievement of higher levels of performance and more acceptable levels of performance variation.

Drawing lessons as the approach was implemented more broadly

After the successful pilot, FAD continued using the approach in Catalonia and also began using it in two other regions. Over the next eight years, FAD used the approach with 648 health and social care organizations (requiring the analysis of close to 70 000 individual records). FAD and its partners have drawn a number of lessons from this experience.

- The approach requires continuous improvement in order to address the many technical issues that inevitably arise as an initiative is scaled up. It also requires the support of FAD's quality-centred network that now exists across much of the country.

- The scaling up of the initiative can be attributed at least in part to the success of the initial pilot work. Its sustainability over time can be attributed to a convergence of views between FAD and the regional government on key issues, such as stakeholder engagement, which led to the establishment of advisory councils of providers for each performance-improvement project.
- FAD and its partners were required to develop and continually enhance their skills in interactive knowledge-sharing due to the long-term nature of the relationships between FAD and its many partners (in regional governments, private organizations and health professional groups) and the periodic requests for briefings or updates from other stakeholders (e.g. political parties in the regional parliament) and the media. FAD also periodically produced peer-reviewed publications about their work as a way of sharing lessons learned.
- FAD's responsiveness to emerging issues has also enabled it to meet the needs of its partners. Two examples illustrate this point. First, when a regional government raised the issue of whether participation by private organizations should be made mandatory, FAD pointed out that this would change the dynamics and feeling of ownership among participants and that the so-called softer, more complex approach of voluntary participation would helpfully complement the harder, simpler production-based agreements between a public funder and the private organizations it funds. Second, when some private organizations raised the concern that improving performance would increase costs, FAD conducted an analysis of the available data, prepared a report that showed that this had not been the case and disseminated the report among all stakeholders.

Case study 2. Developing anti-tobacco policies

Spain has had consistently higher rates of tobacco use than most other European countries for many years. In 2003, just before the time period of this case study, 28% of the Spanish population older than 16 years of age smoked on a daily basis (Ministry of Health, Social Services and Equality, 2003). Two years earlier, annual mortality due to smoking had peaked at 54 000 deaths (Banegas et al., 2005). Between 2004 and 2010, tobacco use began to decline, and the knowledge-brokering activity during those years is the focus of this case study (Fernández, Villalbí & Córdoba, 2006; Córdoba et al., 2006). Although a number of anti-tobacco legislative and regulatory changes – called Royal Decrees (RDs) – were introduced in the 1990s and early 2000s (RD 510/1992, RD 1185/1994, RD 1293/1999, RD 1079/2002), the main integrated piece of legislation was issued in 2005 (Law 28/2005) with the title of Health measures against smoking and regulating the sale, supply, consumption and advertising

of tobacco products. In 2011, another piece of legislation reinforced these earlier changes (Law 42/2010).

SESPAS, both directly and through its involvement as a founding member of the National Committee for the Prevention of Smoking (*Comité Nacional para la Prevención del Tabaquismo*, CNPT), played key knowledge-brokering roles in moving particular tobacco issues up the national government's agenda and in the resulting policy development processes. SESPAS's direct roles included supporting the work of a national coalition for smoking prevention; identifying and supporting members who could bring their expertise to bear on the issues at hand; and mediating discussions among different groups.

The CNPT, a nongovernmental organization established in 1995 with the aim of defining priorities for smoking prevention and influencing their adoption by policy-makers, also played key knowledge-brokering roles. It had evolved over a decade and a half from a small group of five organizations with limited understanding of knowledge brokering to a dynamic coalition of 40 organizations with significant expertise in knowledge brokering. Its early steps were quite tentative: the CNPT documented existing knowledge on tobacco and health into a white book that included 10 principles (decalogue) for tobacco prevention in Spain; it launched a webpage; and it initiated regular interactions with other similar European organizations. In later years the coalition took bolder steps: the CNPT participated very actively with Austria, Greece, Italy and Portugal in a EU-funded project on tobacco policies; published a book on tobacco prevention policies; organized training seminars for key stakeholders in the tobacco policy-making processes; improved its communication infrastructure and its ability to relate to the media; and expanded its expertise in other areas of tobacco control, such as aspects of fiscal policy, in collaboration with the Ministry of Finance.

Banning smoking in workplaces and enclosed public spaces and prohibiting tobacco advertising

Spain had witnessed the introduction of some anti-tobacco policies in the five years before the time period for the case study. For example, smoking was banned on public transportation; health warnings on tobacco products were introduced, as required by an EU directive; health professionals were educated about smoking cessation supports; and the WHO Framework Convention on Tobacco Control was adopted. But the country had also witnessed some failures, such as the failure to implement a proposed plan for the prevention and control of smoking because of the lack of consensus among regional governments on the specifics of financing tobacco-cessation pharmaceuticals. At the end of 2004, the Spanish government announced its intention to introduce legislation to ban smoking in workplaces. This set in motion a complex policy-making

process culminating a year later with the parliament's adoption of legislation (Law 28/2005) that banned smoking in workplaces and enclosed public spaces (except bars and restaurants) and also, perhaps more dramatically, prohibited tobacco advertising.

The 2005 legislation was a big step. Although smoking had not been allowed in cinemas and other enclosed public spaces for safety and public health reasons since the 1930s, this policy was not being followed. By the 1980s, both national and regional government regulations had banned smoking in health and teaching institutions and in workplaces where pregnant women would be. No prohibitions of tobacco advertising were yet in effect.

When the government announced its intention to act in late 2004, opponents of the proposed legislation immediately launched an organized resistance. Tobacco companies increased their marketing efforts and introduced new, low-cost tobacco brands. Groups funded by the tobacco industry (e.g. *Club de Fumadores por la Tolerancia)* argued for scaling back the legislative proposals. Individuals with and without visible ties to tobacco companies communicated their concerns through the media, trade unions and both consultative and decision-making bodies. For example, they questioned some of the negative effects of smoking on health and argued in favour of smokers' rights.

At critical times during the legislative process the CNPT wrote articles for the print media; produced radio and television messages; called press conferences to clarify particular issues related to the effects of tobacco and tobacco-control policies; mobilized health professionals; and interacted directly with policy-makers in parliament and government. One of the coalition's first articles by tobacco-control experts was published on 6 December 2004, very soon after the government announced its intent to legislate (Córdoba, 2004). By March 2005, more than 50 such articles had been printed in the Spanish media. The resulting legislation reflected the key messages put forward by the CNPT and achieved broad political consensus.

Banning smoking in bars and restaurants

Five years later, in 2010, the Spanish parliament extended the smoking ban to bars and restaurants. The policy-making process in 2010 had a number of similarities to the one in 2005 (e.g. the kinds of issues under consideration and the stakeholders involved), but there were also some important differences: Spain had experienced five years of tobacco-free workplaces and enclosed public spaces; countries such as Italy, Portugal and Turkey had passed more restrictive laws on tobacco than those in Spain; key stakeholders were better prepared than they had been in 2005; Spain was in the midst of an economic crisis, making the threats of decreased business and fewer jobs in the hospitality industry

more salient; and the legislative process was led by the Spanish parliament (specifically the Board of Health, Social Policy and Consumer Affairs of the Senate of Spain) rather than the executive arm of government.

The CNPT, again with the support of SESPAS, played an important role in arguing about the procedural advantage of having the parliament lead the legislative process – that it would shorten the consultation process. The CNPT, which by then had become recognized as a key stakeholder in the policy-making process, again supported this legislative initiative in many ways, drawing on the substantial experience in knowledge brokering that it had gained during the 2005 policy-making process. The lessons the coalition had learned included the following.

- The CNPT needed to embrace a broader range of scientific knowledge and, in particular, to expand its traditional biomedical knowledge base to include political science, social policy and other types of knowledge.
- The coalition had learned how to deal with internal tensions among its members, most of which arose because of differences of opinion about whether to push for slow, opportunistic or incremental (e.g. single issue) policy changes versus rapid, comprehensive or radical policy changes, with the compromise typically being to settle for less in difficult times (while continuing to press for more) and becoming more demanding in better times.
- The coalition had learned how to interact effectively with policy-makers and to keep open communication channels with policy-makers even when important disagreements arose over proposed policies.

By the end of the case-study period, the CNPT had grown into a highly effective knowledge-brokering organization. It had led a broad-based anti-tobacco coalition for 15 years; accommodated the high turnover in the political and administrative actors that it was seeking to influence; countered the opposition from well-resourced groups and organizations pursuing their economic interests; and achieved a steady string of policy changes that helped to achieve its objective of effective tobacco control.

Failing to achieve progress in one other area of anti-tobacco policy

In early 2009, a consensus report on health-care activities that could support smoking cessation in Spain was published (Camarelles et al., 2009). The report had been developed collaboratively over 18 months by technical representatives of national and regional governments and their counterparts from the scientific societies and professional organizations who were members of the CNPT. The report's main objective was to establish best practice for regional health

services. However, its recommendations were never widely taken up, in large part because regional governments could not agree on the specifics of financing smoking-cessation pharmaceuticals. A small number of influential professionals dissented about several key aspects of the recommendations and some pharmaceutical companies and professional groups pushed for a larger role for pharmaceutical products than the regional governments were prepared to support financially. The current situation is that some regions cover a broad range of smoking-cessation products, others employ a more selective approach and still others support only a very limited use of these products. While the coalition and, in particular, SESPAS were active in these debates, achieving consensus among 17 regions in the face of dissenting voices and lobbying by pharmaceutical companies proved too great a challenge to overcome. These two knowledge-brokering organizations achieved a great deal but they still have work to do.

Case study 3. Addressing cross-border health care

As the EU has grown and developed over the past 20 years, many health-care issues have arisen, one being how residents of one EU Member State seek health care in another. The European Commission proposed a directive on cross-border health care in 2008; however, a substantial number of objections to the directive were raised by Member States at the European Council. A revised directive on cross-border health care was passed by the European Council in 2011. This case study examines the role of knowledge brokering in policy-making – a role that turned out to be relatively insignificant – between the proposal of the first directive in 2008 and the passage of a revised directive in 2011.

The debates about the directive took place on two levels. First, EU Member States – each with unique political cultures, levels of economic development and health system arrangements – were concerned about the specifics of how patient mobility across Europe could affect both the financing and organization of health care in their respective health systems. Second, EU Member States were concerned about the general approach being used in policy-making about health and social care. Some preferred a minimalist approach (which in this case might involve simply formalizing the market for non-essential services); other Member States sought a common set of health policy principles and implementation tools. In many ways the revised directive represented a compromise on both of these levels.

Policy-making in the EU differs from policy-making in its Member States in a number of important respects, it: typically takes place over extended time periods;

is commonly characterized by behind-the-scenes negotiation processes among technical staff rather than highly visible battles among elected representatives; can be highly sensitive to changes in European Council presidencies, European Commission interest, EU Member State health policy leadership, and EU policy forum representatives (who often have limited power and visibility at both the EU and national levels); often does not involve, or even attract the attention of, sector-specific stakeholders operating at the national level within EU Member States; rarely attracts significant media attention in EU Member States; and its impacts are often not immediate within EU Member States. Many of these factors make it difficult for knowledge-brokering organizations operating within EU Member States to inform EU policy-making processes.

Seeking, but largely failing, to inform the policy-making process

Three features of this particular case enhanced the prospects for Spanish knowledge-brokering organizations to inform the policy-making process about cross-border health care. First, the OSE prepared, published, disseminated and promoted discussion about a report on the implications of the original 2008 directive (Carrillo Tirado & García-Sánchez 2008). Second, in 2009 the Spanish Ministry of Health funded a special issue of a journal on European health citizenship (Revista de Administración Sanitaria Siglo XXI, 2009). Third, Spain held the European Council presidency during a critical period in the first half of 2010 when this policy-making process reached a critical juncture (as was also the case in 2002 when the European Council called for a high-level process of reflection on patient mobility). The editors of the special issue noted that, while Spanish health system stakeholders and knowledge-brokering organizations tend to pay very little attention to EU policies, the directive on patient mobility created important opportunities for Spain in both the health-care and tourism sectors (Editorial team, 2009).

Of course, Spanish knowledge-brokering organizations were not the only ones who tried, or could have tried, to inform this policy-making process. Three European knowledge-brokering organizations also published reports to inform the process: (i) the European Observatory on Health Systems and Policies (Bertinato et al., 2005; Rosenmöller, McKee & Baeten, 2006; Wismar et al., 2011); (ii) the European Social Observatory (Baeten, Vanhecke & Coucheir, 2010); and (iii) LSE Health (Mossialos et al., 2010). The editors of one of these reports noted that, "We also believe that the transposition and implementation of a directive on cross-border health care in the Member States will benefit from an informed debate in the relevant countries" (Wismar et al., 2011).

Nevertheless, we found little indication that these knowledge-brokering organizations were successful in informing these debates. Moreover, almost

no description or analysis were available, either at the EU level or at Member State level, about EU Member States' views on the subject of cross-border care; the rationale for these views; or how these views were expressed, discussed and negotiated in the policy process. The relatively protected policy-making environment appeared to be at least one key reason for the limited role played by knowledge-brokering organizations.

Lessons learned

Several lessons emerged about matching brokering mechanisms to policy processes from a comparison of the three cases (Table 9.3).

- Information-packaging mechanisms, particularly reports, achieved the least impact in a complex policy context (case study 3).
- A formal, participatory interactive knowledge-sharing mechanism achieved impact in a policy context when there was a win–win logic among key groups with some shared interests (case study 1), whereas an array of informal, reactive knowledge-sharing mechanisms that tried to dominate or marginalize groups pursuing narrow material interests achieved impact when there was a win–lose logic among key groups with divergent interests (case study 2).
- An organizational model that involves a single knowledge-brokering organization establishing long-term functional linkages with policy-makers and stakeholders achieved impact when there was a win–win logic among key groups with some shared interests (case study 1), whereas an organizational model that involves a knowledge-brokering organization supporting a network of like-minded but weakly tied individuals and organizations that can respond in a timely way achieved impact when there was a win–lose logic among key groups with divergent interests (case study 2).

A closer look at each of the three cases reveals some additional lessons about knowledge-brokering mechanisms.

- In policy-making contexts characterized by purchaser/provider splits, interactive knowledge-sharing mechanisms that are voluntary, participatory and consensus-based (as is the one supported by FAD) may helpfully complement the more formal contracting that tends to capture most of the attention of policy-makers and stakeholders (case study 1).
- In policy-making contexts characterized by competition and adversity, interactive knowledge-sharing mechanisms may migrate over time from impartial, technical advisory opportunities to more overt advocacy roles

Table 9.3 Interaction between knowledge-brokering organizations and policy-making processes

Domain	Improving the performance of health and social care organizations at the regional level (case study 1)	Developing anti-tobacco policiesat the national level (case study 2)	Addressing cross-border health care at the European level (case study 3)
Policy context	• Single level of government involved (regional/ subnational) • Informal, limited role of stakeholders in policy-making • Explicit mandate for knowledge brokering at FAD • Win-win logic among key groups with some shared interests	• Single level of government involved for most aspects of the issue (national) • Informal but potentially significant role of stakeholders in policy-making • Explicit mandate for knowledge brokering at SESPAS and the CNPT • Win-lose logic among key groups with divergent interests	• Two levels of government involved (EU primarily and national secondarily) • Centralized (often hidden) authority for making decisions • Frequent turnover of leaders • Informal, limited role of national-level stakeholders in EU policy-making • Logic unclear given lack of window onto the negotiation process
Information-packaging mechanisms	• Reports address the many features of the issue • Reports target both policy-makers and stakeholders	• Reports address the topical features of the issue • Reports target policy-makers	• Reports address an issue that has not captured the attention of national policy-makers and stakeholders • Reports target policy-makers
Interactive knowledge-sharing mechanisms	• Formal four-step, voluntary, participatory and consensus-based mechanism (the single most important knowledge-brokering mechanism in use) • Mechanism addresses the many features of the issue, incorporates the views and experiences of stakeholders, and considers health systems information • Mechanism targets policy-makers through stable, long-term relationships	• An array of informal, reactive mechanisms (the most important knowledge-brokering mechanisms in use) • Mechanisms address the topical features of the issue and consider health systems information • Mechanisms target policy-makers and are timed to related to a policy-making process • Mechanisms offer stakeholders perceived to be acting in the public interest the opportunity to contribute to the discussion (but not those pursuing narrow, material interests)	• Mechanisms unclear given lack of window onto the negotiation process
Organizational model	• One knowledge-brokering organization establishes long-term functional linkages with policy-makers and stakeholders	• One knowledge-brokering organization supports a network of individuals and organizations that can respond in a timely way	• Organizational model unclear given lack of window onto the negotiation process
Monitoring and evaluation	• Implicit, based on the growth in demand for services and publication of review papers in peer-reviewed journals	• Implicit, based on wins on key issues in the policy-making process and publication of review papers in peer-reviewed journals	• Approach unclear given lack of window onto the negotiation process

that require a very different set of skills, such as monitoring and reacting rapidly to the behaviours of opponents, as the CNPT was forced to do (case study 2).

- In policy-making processes characterized by complex negotiations among a diverse array of policy-makers and stakeholders, the value of health systems information as one input into these negotiations may be lost altogether (case study 3).

And finally, beyond the specifics of our case studies, three additional observations about knowledge-brokering in Spain warrant mention.

1. Overall, relatively little attention is given to innovative knowledge-brokering mechanisms and models.
2. The way that information is packaged may need to vary depending on the nature and pace of the interactions taking place.
3. Spain's long history of the revolving door can be a powerful knowledge-brokering mechanism in its own right as experienced, knowledgeable people frequently move from academia into professional organizations and governments and from professional organizations and governments into academia, taking their skills and perspectives with them.

Conclusions

Experience with knowledge brokering in Spain demonstrates that it is necessary to match brokering mechanisms to policy processes. For example, what made a difference in improving the performance of health and social care organizations at the regional level (formal, participatory interactive knowledge-sharing mechanism) is very different from what made a difference in developing anti-tobacco policies at the national level (array of informal, reactive knowledge-sharing mechanisms that tried to dominate or marginalize groups pursuing narrow material interests). However, as the economic pressures grow for Spanish governments to do less, it will be important for those interested in knowledge brokering to ask whether there is a need for more, or differently sized, knowledge-brokering organizations than currently exist in the country. Small organizations like FAD and the OSE can do only so much with their limited resources. On the other hand, large scientific societies (and societies of societies such as SESPAS) are limited by the voluntary contributions of their members. The time may be right for national and regional discussions about what knowledge-brokering mechanisms and models will best serve Spain in the years ahead.

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Bridging the worlds of research and policy in European health systems

Chapter 10

Conclusion: next steps for knowledge brokering in Europe

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European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of the dynamics of health-care systems in Europe.

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Key messages

Using a multifaceted approach

- Key features of the study team's approach include:
  - using an iterative process to develop the BRIDGE framework for knowledge brokering and three sets of BRIDGE criteria (one set each for information-packaging mechanisms, interactive knowledge-sharing mechanisms, and organizational models for knowledge brokering);
  - updating a systematic review of the factors that influence the use of health systems information in policy-making (which included 124 eligible studies);
  - conducting website reviews of 404 potential knowledge-brokering organizations and then in-depth website reviews of the knowledge-brokering mechanisms and models being used by the 163 organizations that met our eligibility criteria in the 31 countries in Europe;
  - conducting site visits of 28 particularly interesting knowledge-brokering organizations to describe their experiences with matching knowledge brokering to national and regional contexts; and
  - undertaking multi-method case studies of how knowledge-brokering mechanisms and models intersect with national policy-making processes in each of four countries.

Findings and outputs from the BRIDGE study

- The BRIDGE framework and criteria (described in Chapter 2) can be used at the regional, national and subnational levels to explain knowledge brokering to those unfamiliar with it; to assess current mechanisms and models; and to identify opportunities to advance them. Two companion policy briefs can be used to support such reflection – one at the national level, the other at the European level.
- The systematic review (described in Chapter 3) identified the factors that need to be taken into account when advancing knowledge-brokering mechanisms and models.
- The website reviews (described in Chapter 4) identified the use of many traditional information products and interactive knowledge-sharing mechanisms, and many organizational models that were not well described, but many promising mechanisms and models as well.

- The site visits (described in Chapter 5) identified a common lack of reflection on, and programmatic orientation towards, knowledge brokering, even in many organizations using particularly interesting knowledge-brokering mechanisms and models.
- The case studies (described in Chapters 6–9) provide compelling stories that illustrate how knowledge-brokering mechanisms and models need to be matched to their local contexts.
- Three companion BRIDGE summaries draw on this rich material to encourage debate and innovation about information-packaging and knowledge-sharing mechanisms, as well as organizational models.

Strengths and weaknesses of the approach

- The key strength of our multifaceted approach is that the shortfalls in any one set of methods (e.g. website reviews, which did not yield much information about organizational models) were typically offset by the strengths of another set of methods (e.g. site visits and case studies). The key strength of our many complementary products is that they present our findings in different ways and for different target audiences. For example, policy-makers will likely be most interested in our policy briefs; knowledge-brokering organizations may be most interested in the BRIDGE summaries.
- The weaknesses of our approach are that we did not examine the explanatory capacity of the BRIDGE framework or the validity and reliability of the BRIDGE criteria, and that our eligibility criteria may have led us to miss some types of knowledge-brokering organizations.

Lessons learned: next steps for knowledge brokering in Europe

- Four possible next steps for funders, knowledge brokers, policy-makers and stakeholders include:
  - brokering knowledge about knowledge brokering (i.e. increasing awareness about concepts and tools, including the BRIDGE summaries) among policy-makers, stakeholders and researchers;
  - supporting the adoption/adaptation of promising information-packaging and interactive knowledge-sharing mechanisms and promising organizational models for knowledge brokering;
  - championing further innovation in knowledge-brokering mechanisms and models, using the BRIDGE criteria as a guide; and
  - evaluating current and new mechanisms and models.

Conclusions

We began this book by describing three scenarios that motivated the BRIDGE study.

1. Policy-makers are faced daily with making decisions and need access to good-quality health systems information. Stakeholders may seek to influence health policy as well as make decisions in their own spheres of responsibility. Both groups want information products that they can easily understand and that are clearly based on systematically conducted and transparently reported research. And researchers want to know how to communicate their findings effectively so that health systems policy-making can make use of the best available health systems information.

2. Policy-makers, stakeholders and knowledge brokers (including researchers) all have a great deal they can learn from one another. As noted in scenario 1, policy-makers need access to good-quality health systems information that they can apply to a local issue. And stakeholders may seek to influence health policy as well as make decisions in their own spheres of responsibility. Knowledge brokers need information about policy priorities and the policy context in order to produce, package and share health systems information that will be genuinely useful to decision-makers.

3. Knowledge-brokering organizations need to match form to function when designing organizational models that will best support well-informed health systems decision-making. Their functions can include a range of information-packaging mechanisms (such as policy briefs) and interactive knowledge-sharing mechanisms (such as policy dialogues), as well as activities that are not knowledge brokering per se (such as the collection and analysis of health systems information). Maintaining a good grasp of the relevant policy-making context and matching knowledge-brokering mechanisms to this context should be considered a key function for any knowledge-brokering organization.

We also noted at the beginning of the book that dramatic differences within and across European countries complicated the BRIDGE study, as well as the writing of this book. However, this complexity compelled us to craft a book (and a set of companion products) that could be used to:

- assess current knowledge-brokering mechanisms and models, both to reflect on what is going well and to identify what could be improved;
- identify promising mechanisms and models, as well as concrete examples of their uses in particular contexts;
- encourage the adoption or adaptation of these promising mechanisms and models and participation in their rigorous evaluation; and

- spark the creation of new mechanisms that meet some of the same or even different criteria.

What makes sense as a knowledge-brokering mechanism or model in one European country at one period of time will not necessarily make sense in another country or period of time. The field of knowledge brokering is young. We still have a great deal to learn.

Using a multifaceted approach

We used a multifaceted approach in the BRIDGE study, the key features of which include:

- using an iterative process to develop the BRIDGE framework for knowledge brokering and three sets of BRIDGE criteria (one set each for information-packaging mechanisms, interactive knowledge-sharing mechanisms, and organizational models for knowledge brokering);
- updating a systematic review of the factors that influence the use of health systems information in policy-making (which included 124 eligible studies, 41 of which were newly identified and assessed during the updating process);
- conducting website reviews of 404 potential knowledge-brokering organizations and then in-depth website reviews of the knowledge-brokering mechanisms and models being used by the 163 organizations that met our eligibility criteria in the 31 countries of the European Union (EU) and the European Free Trade Association (EFTA);
- conducting site visits of 28 particularly interesting knowledge-brokering organizations to describe their experiences with matching knowledge brokering to national and regional contexts; and
- undertaking multi-method case studies of how knowledge-brokering mechanisms and models intersect with national policy-making processes in each of four countries.

We believed at the outset of the BRIDGE study, and we continue to believe now, that the field of knowledge brokering will be advanced farther and faster with a multi-method approach to its study. Currently this field is at an early stage where research continues to serve some fundamental functions: defining key concepts and ways to approach knowledge brokering; identifying factors that seem to influence whether health systems information is being used and what might constitute promising mechanisms and models to address these factors; and describing what is being done in what contexts, with what influence, and why. In future the field will likely move to evaluations of the acceptability, use

and effectiveness of particular mechanisms and models in particular contexts and to a better understanding about how to match mechanisms and models to particular contexts. Hopefully, this evolution will coincide with ongoing growth in the size and capacity of the community of health policy and system researchers in European countries. The range of methods used in the BRIDGE study was quite new to many of our collaborators and consequently the study required a great deal of hands-on coordination.

Findings and outputs from the BRIDGE study

The key findings and outputs from the BRIDGE study include the following.

- The BRIDGE framework (described in Chapter 2) can be used at the regional, national and subnational levels to explain knowledge brokering to those unfamiliar with it.
- The three sets of BRIDGE criteria (also described in Chapter 2) can be used to assess current knowledge-brokering mechanisms and models and identify opportunities to advance them, also at the regional, national and subnational levels. The three sets of criteria are each explored further in a dedicated companion BRIDGE summary (Lavis, Catallo, Jessani et al., 2013; Lavis, Catallo, Permanand et al., 2013; Lavis, Jessani et al., 2013). Two companion policy briefs can be used to support such reflection – one at the national level (Lavis, Permanand et al., 2013a), the other at the European level (Lavis, Permanand et al., 2013b).
- The systematic review (described in Chapter 3) identified the factors that need to be taken into account when advancing knowledge-brokering mechanisms and models (namely ongoing linkages between policy-makers and researchers, and the timing/timeliness of the information being made available). The systematic review also suggested the need for primary research on the effectiveness of particular mechanisms and models.
- The website reviews (described in Chapter 4) identified the use of many traditional information products and interactive knowledge-sharing mechanisms, and many organizational models that were not well described, but also many promising mechanisms and models.
- The site visits (described in Chapter 5) identified a common lack of reflection on, and programmatic orientation towards, knowledge brokering, even in many organizations engaged in particularly interesting knowledge-brokering activities.
- The case studies (described in Chapters 6–9) illustrate how health systems information is just one input among many in policy-making processes

(institutional constraints, interest group pressure, values and external events also figure prominently). The case studies also provide compelling stories that illustrate how knowledge-brokering mechanisms and models can intersect with, and support, policy-making processes in the context of these many influences.

So is the glass half full or half empty? We see the glass as half full. First, we identified 163 knowledge-brokering organizations in 31 European countries (Appendix E). While the website reviews did not by any means constitute an accreditation-type activity, the organizations that met our eligibility criteria do appear to be functioning as knowledge-brokering entities. This nascent community of knowledge-brokering organizations has pioneered many promising information products, interactive knowledge-sharing mechanisms and organizational models. There is significant potential for shared learning. Second, we developed the BRIDGE framework and three sets of BRIDGE criteria to spur reflection among these organizations, as well as among policy-makers, stakeholders, researchers and research funding agencies. The BRIDGE summaries can aid these reflections, as can the two companion policy briefs. Third, we iteratively developed the BRIDGE framework and criteria by applying draft versions of them in our website reviews, site visits and case studies, and discussing draft versions with our target audiences at a workshop and a policy dialogue. The resulting descriptions provide, in some sense, a baseline against which progress can be measured.

Strengths and weaknesses of the approach

The key strength of our multifaceted approach is that the shortfalls of one set of methods were typically offset by the strengths of another set of methods. For example, the website reviews did not yield much information about organizational models for knowledge brokering, but the site visits yielded a great deal of information about organizational models and why particular features of these models emerged from, or made sense in, the local context. Moreover, our approach focused on different units of analysis in different phases of the study. For the website reviews, the unit of analysis was the organization; in the site visits, we examined both the country and the organization; and in the case studies, the policy-making process was the focal point. Also, the website reviews were designed to provide information about breadth of coverage (i.e. identifying and briefly describing the entire population of knowledge-brokering organizations in Europe), whereas the site visits and case studies told us about depth of coverage (i.e. understanding which knowledge-brokering mechanisms and models are used in what contexts, and why, and understanding how these mechanisms and models intersected with national policy-making processes).

The key strength of our many complementary products is that they present our findings in different ways and for different target audiences. For example, policy-makers at the national level will likely be most interested in our policy briefs about advancing knowledge brokering at that level; knowledge-brokering organizations will be most interested in the BRIDGE summaries.

One weakness of our approach is that we did not examine the explanatory capacity of the BRIDGE framework or the validity and reliability of the BRIDGE criteria. As we describe in Chapter 2, we began to identify hypotheses based on the BRIDGE framework, but we did not have the data to allow us to test these hypotheses. A second weakness of our approach is that our eligibility criteria may have led us to miss some types of knowledge-brokering organizations, particularly those located in government (e.g. strategy units, analytical support units) or in large academic institutions, because they did not meet our criterion about having some degree of autonomy (as reflected, for example, in having an external advisory council). A targeted review of these types of organizations, particularly those located in government, may yield additional promising knowledge-brokering mechanisms.

Lessons learned: next steps for knowledge brokering in Europe

Four possible next steps include:

1. brokering knowledge about knowledge brokering (i.e. increasing awareness about concepts and tools) among policy-makers, stakeholders and researchers;
2. supporting the adoption/adaptation of promising information-packaging and interactive knowledge-sharing mechanisms and promising organizational models for knowledge brokering;
3. championing further innovation in knowledge-brokering mechanisms and models, using the BRIDGE criteria as a guide; and
4. undertaking evaluation to assess current and new mechanisms and models.

The first of these steps – brokering knowledge about knowledge brokering – is necessary because this nascent field is poorly understood or in many cases not even recognized as a field. Part of the problem is terminology. Very few people or organizations identify themselves as knowledge brokers. They may say that they provide policy support or that they engage in evidence synthesis and analysis, but they are unlikely to say that they are knowledge brokers. We need to raise awareness about knowledge-brokering concepts (such as those provided in Appendix A) and about knowledge-brokering tools (such as the BRIDGE summaries) among policy-makers, stakeholders and researchers. Even the concept of a systematic review was new to a great many of our collaborators.

We suggest the second of these steps – supporting the adoption/adaptation of promising mechanisms and models – because there are exciting things being done in many European contexts that warrant trying, or adapting locally, in other settings. In the BRIDGE summaries, we point to specific examples of information-packaging mechanisms, interactive knowledge-sharing mechanisms and organizational models that we identified as promising by applying the BRIDGE criteria. Some, such as preparing summaries of research studies, may translate easily from one setting to another. Others, such as organizing policy dialogues that engage policy-makers, stakeholders and researchers, may require significant adaptation to local policy-making contexts.

The third possible next step – championing further innovation in knowledge-brokering mechanisms and models, using the BRIDGE criteria as a guide – would be helpful because we should not be limited by what is already out there. The current array of promising mechanisms and models would not have come into existence had creative individuals not dared to try something new. Many of these promising mechanisms and models draw on only some BRIDGE criteria and only in particular combinations. Other innovative mechanisms and models could be designed using different combinations of the BRIDGE criteria or other criteria.

The fourth possible next step – undertaking evaluation to assess current and new mechanisms and models – is critical because there is a dearth of primary research on mechanisms and models. The evaluations could include formative evaluations whereby knowledge-brokering organizations create, adopt or adapt information products or interactive knowledge-sharing mechanisms; solicit feedback about them from policy-makers and stakeholders; monitor their use of the products; and continually improve them. Research could also take the form of summative evaluations, whereby knowledge-brokering organizations examine the impact that information products are having (Boyko et al., 2011). As well, research could helpfully address the individual, organizational and system-level factors that might be preventing the uptake of promising knowledge-brokering mechanisms and models. Insights from the field of psychology or organizational behaviour (e.g. diffusion of innovations) may be helpful here.

Funders, knowledge brokers, policy-makers and stakeholders can all contribute to these next steps.

- Funders can fund or directly undertake translation of information products; fund or create learning/sharing opportunities for knowledge-brokering organizations (e.g. conferences, workshops, mentoring and networking);

innovate in their own knowledge-brokering mechanisms and models; and fund both formative and summative evaluations.

- Knowledge-brokering organizations can contribute to translation activities (possibly through a distributed model such as the one used by EvidenceUpdates);[1] participate in learning/sharing opportunities; innovate in their own knowledge-brokering mechanisms and models; and participate in evaluations of information products.
- Researchers can assist these knowledge-brokering organizations by permitting their work to be the focus of information products and by participating in the creation of these information products and in interactive knowledge-sharing opportunities. A subset of researchers with particular interests in knowledge brokering could lead evaluations of information products and interactive knowledge-brokering mechanisms.
- Policy-makers can use learning/sharing opportunities to learn about what expectations to set for knowledge-brokering mechanisms; communicate their expectations about information products (including the need for translation), interactive knowledge-sharing mechanisms and organizational models; and participate in evaluations.

Additional thoughts about possible next steps can be found in the three BRIDGE summaries and the two BRIDGE policy briefs.

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Lavis JN, Permanand G, Catallo C, BRIDGE Study Team (2013b). How can knowledge brokering be advanced in a country's health system? Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies (Policy Brief No 17, BRIDGE Series; http://www.euro.who.int/__data/assets/pdf_file/0004/195232/Obs-Policy-Brief-17,-How-can-knowledge-brokering-be-advanced-in-a-countrys-health-system.pdf, accessed 19 March 2014).

Bridging the worlds of research and policy in European health systems

Appendix A

Glossary and list of online resources

Terms, definitions and sources

Capacity

The set of skills, structures and processes, as well as the organizational culture, that allows, encourages and rewards efforts to use health systems information in policy-making and that supports such efforts.

Source: Adapted from Canadian Health Services Research Foundation, 2014 (now called Canadian Foundation for Healthcare Improvement).[1]

Community of practice

The process of social learning that occurs when individuals who have a common interest in a health systems subject or problem collaborate to share ideas, find solutions and build innovations.

Source: Adapted from Scottish Government, 2005.[2]

Data

Facts and statistics collected together for reference or analysis.

Source: Oxford Dictionaries, 2014a.[3]

Dissemination

The process of extracting clear, simple and actionable messages or implications from health systems information; pinpointing key policy-maker or stakeholder audiences; identifying credible 'carriers' of the messages for these audiences; and delivering the messages in ways that are appropriate to the audiences being targeted and will encourage them to factor the messages or implications into their work.

Source: Adapted from Canadian Health Services Research Foundation, 2014 (now called Canadian Foundation for Healthcare Improvement).[1]

Health policy

A formal statement or procedure within institutions (notably government) that defines priorities and the parameters for action in response to health needs, available resources and other political pressures.

Source: European Observatory on Health Systems and Policies.

Health systems information

Data (on performance and outcomes, among other topics) and research evidence (about policy and programme options to improve performance or achieve better outcomes, among other topics).

Source: BRIDGE.[4]

Information-packaging mechanisms

Information products in a variety of media that are focused at least in part on health systems information and that are intended to support policy-making. The outputs can take the form of policy briefs, issue notes, research summaries, policy dialogue reports, research reports, presentations, audio podcasts, video podcasts, videos, blogs, impact summaries, newsletters, annual reports, and cartoons and other visual media, among others.

Source: BRIDGE.[4]

Interactive knowledge-sharing mechanisms

Mediating interactions that are focused at least in part on health systems information and that are intended to support policy-making. The interactions can take the form of policy dialogues, personalized briefings, training workshops, online briefings or webinars, online discussion forums, formalized networks, informal discussions, and presentations.

Source: BRIDGE.[4]

Knowledge broker

An individual or organization that engages in knowledge brokering. We distinguish between dedicated knowledge brokers (whose work is focused on intermediating between producers and users of health systems information) and researchers (who produce health systems information but also have a role in disseminating and supporting its use among various groups).

Source: Canadian Health Services Research Foundation, 2014 (now called Canadian Foundation for Healthcare Improvement);[1] BRIDGE.[4]

Knowledge brokering

The use of information-packaging mechanisms and/or interactive knowledge-

sharing mechanisms to bridge policy-makers' (and stakeholders') and researchers' contexts, and thereby address the four possible explanations for the disjuncture between information and action: (i) health systems information is not communicated effectively; (ii) health systems information is not available when policy-makers and stakeholders need it and in a form that they can use; (iii) policy-makers and stakeholders lack the capacity to find and use health systems information efficiently and (in some countries) lack mechanisms to prompt them to use health systems information in policy-making; and (iv) policy-makers and stakeholders lack opportunities to discuss system challenges with researchers.

Source: BRIDGE.[4]

Knowledge exchange

Collaborative problem-solving between researchers and policy-makers (or stakeholders) that happens through ongoing interaction, collaboration and exchange of ideas in the context of a specific research process, and that results in mutual learning.

Source: Adapted from Canadian Health Services Research Foundation, 2014 (now called Canadian Foundation for Healthcare Improvement).[1]

Organizational culture

In short, 'the way we do things around here'. An organization's culture is a mixture of its traditions, values, attitudes and behaviours.

Source: NHS Evidence, 2010.[5]

Organizational models for knowledge brokering

The features of organizations that are focused at least in part on health systems information and that are intended to support policy-making. These features can relate to the role of policy-makers and stakeholders in governance; rules that ensure independence and address conflicts of interest; authority to ensure accountablity to a knowledge-brokering mandate; size, mix and capacity of staff with knowledge-brokering responsibilities; size of budget and mix of funding sources for knowledge brokering; approach to prioritizing activities and accepting commissions/requests; location within another organization or network; collaboration with other organizations; and functional linkages with policy-making and stakeholder organizations.

Source: BRIDGE.[4]

Policy-makers

The government officials who will be directly involved in decision-making as part of a policy-making process, either as decision-makers themselves (notably

politicians) or as advisers working in close proximity to these decision-makers (notably political staffers and civil servants).

Source: BRIDGE.[4]

Research evidence

The results of a systematic study of materials and sources in order to establish facts and reach new conclusions. The results can take the form of conceptual frameworks, primary research studies, and systematic reviews, among other forms.

Source: Adapted from Oxford Dictionaries, 2014b[6]; BRIDGE.[4]

Stakeholders

The individuals and groups who will be involved in or affected by (i.e. who have an interest in) a policy-making process, not including government officials who will be directly involved in the decision-making. Stakeholders can come from industry, professional associations and patient groups, among others.

Source: BRIDGE;[4] adapted from European Observatory on Health Systems and Policies.

Tacit knowledge

The knowledge or know-how that people carry in their heads. Compared with explicit knowledge (such as published research evidence), tacit knowledge is more difficult to articulate or write down, and so it tends to be shared between people through discussion, stories and personal interactions. It includes skills, experiences, insight, intuition and judgement.

Source: NHS Evidence, 2010.[5]

Online resources

Canadian Best Practices Portal

- Portal for knowledge-brokering terms related to best practices in public health

  http://cbpp-pcpe.phac-aspc.gc.ca

European Observatory on Health Systems and Policies

- Glossary of knowledge-brokering and health systems terms

  (not available online at time of publication)

International Development Research Centre (IDRC)

- Knowledge-brokering toolkit

  http://network.idrc.ca/cfp/ev-133179-201-1-DO_TOPIC.html

- Knowledge-brokering theories, approaches and applications

  http://web.idrc.ca/es/ev-125826-201-1-DO_TOPIC.html

Knowledge Brokers' Forum

- Collaborative space to promote knowledge sharing and dissemination on knowledge brokering

  http://www.knowledgebrokersforum.org

Knowledge Translation+ (KT+)

- Evidence service focused on knowledge brokering

  http://plus.mcmaster.ca/kt/default.aspx

KT Clearinghouse (KTCH)

- Glossary of knowledge-brokering terms

  http://ktclearinghouse.ca/glossary

WhatisKT

- Wiki focused on knowledge brokering

  http://whatiskt.wikispaces.com.

NHS Evidence – knowledge management

- Glossary of knowledge-brokering terms

  http://collections.europarchive.org/tna/20100509080731/http:/www.library.nhs.uk/knowledgemanagement/Page.aspx?pagename=GLOSSARY.

Research Unit for Research Utilisation (RURU)

- Keywords related to knowledge brokering (but not definitions)

  (not available online at time of publication).

Scottish Government

- Background to knowledge brokering

  http://www.scotland.gov.uk/Publications/2005/09/2782919/29225.

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3 Oxford Dictionaries (2014a). Data. In: Oxforddictionaries.com [online]. Oxford: Oxford University Press (http://www.oxforddictionaries.com/definition/english/data?q=data, accessed 1 April 2014).

4 BRIDGE series. In: European Observatory on Health Systems and Policies [website]. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/en/about-us/partners/observatory/bridge-series, accessed 1 April 2014).

5. NHS Evidence (2010). Glossary of health knowledge management terms. In: Knowledge management [website]. London: National Institute for Health and Clinical Excellence (http://collections.europarchive.org/tna/20100509080731/http:/www.library.nhs.uk/knowledgemanagement/Page.aspx?pagename=GLOSSARY, accessed 1 April 2014).

6 Oxford Dictionaries (2014b). Research. In: Oxforddictionaries.com [online]. Oxford: Oxford University Press (http://www.oxforddictionaries.com/definition/english/research#m_en_gb 0703100, accessed 1 April 2014).

Appendix B

Inclusion criteria for knowledge-brokering organizations in the BRIDGE study

This is a copy-edited version of this study instrument, but no substantive changes have been made.

Knowledge-brokering organizations included in the BRIDGE study should have the following characteristics.

1. Fund, conduct or disseminate research
   - exclude lobby groups and think tanks that support political activities but do not employ systematic methods and do not report their methods and findings transparently.
2. Focus at least in part on governance, financial and delivery arrangements within health systems
   - exclude units that focus solely on *clinical* programmes, services or drugs (and other technologies) or on *public health* programmes and services, and not on how clinical or public health programmes and services are governed, financed/funded and delivered;
   - note this means that guideline-producing organizations and health technology assessment agencies, which are routinely studied, are not covered.
3. Identify policy-makers as being among the target audiences for their research
   - exclude units that focus solely on supporting the use of decision aids by patients, increasing the consumption of particular prescription drugs by patients, supporting the uptake of practice guidelines by clinicians, and improving the prescribing of particular drugs by clinicians.

4. Function as a semi-autonomous or autonomous organization
    - exclude university departments that do not have some independence, but include (for example) an institute with an external advisory council.
5. Put all (or almost all) of their products in the public domain (whether or not there is a small charge) in order to advance the public interest
    - exclude consulting firms that produce reports for clients in order to advance the clients' commercial interests but do not make the report publicly available;
    - also exclude government strategy units that advance the public interest but that do not make their reports publicly available.
6. Add value beyond the simple collection and collation of data, and
    - exclude statistical agencies that do not have a semi-autonomous unit that produces analytical reports based on the data collected or collated by the agency.
7. Target Member States of the European Union or European Free Trade Association, groupings of these states, or constituent units of these states above the level of municipality (e.g. provinces, counties):
    - exclude units serving only the needs of city councils (with the exception of Finland where health care is a municipal responsibility).

Appendix C

Data-collection tool for the website reviews

This is a copy-edited version of the original study instrument, but no substantive changes have been made.

1. Write **your name** (as the country correspondent completing this tool):

   _____

2. Circle the **number** corresponding to the country that you are covering:

#	Country	#	Country	#	Country
01	Austria	15	Latvia	28	Iceland*
02	Belgium	16	Lithuania	29	Liechtenstein*
03	Bulgaria	17	Luxembourg	30	Norway*
04	Cyprus	18	Malta	31	Switzerland*
05	Czech Republic	19	Netherlands	32	Global, European or cross-national focus
06	Denmark	20	Poland		
07	Estonia	21	Portugal		
08	Finland	22	Romania		
09	France	23	Slovakia		
10	Germany	24	Slovenia		
11	Greece	25	Spain		
12	Hungary	26	Sweden		
13	Ireland	27	United Kingdom		
14	Italy				

*Member States of the European Free Trade Association; others are states of the European Union.

3. Write the **name of the organization** that you are reviewing:

   _____

4. Describe the **level** at which it is operating (pan-European, cross-national, national, subnational):

   _____

5. Describe the **scale** at which it is operating and the basis for your assessment (e.g. small with <10 staff and <30 published outputs per year, versus large with >100 staff and >300 published outputs per year):

_____

6. Insert the **URL (website address)** that you are using to review the organization:

_____

Eligibility

7. Indicate which of the following types of policy-makers *in Europe* are identified as being among the organization's **target audiences**:

Target audiences	Tick if yes (and transcribe verbatim any descriptions, including seniority of target audiences)	Rank the order of priority assigned to target audiences, if described
National and subnational policy-makers – politicians (i.e. ministers of health or finance, among others, who take the major health-policy decisions)		
National and subnational policy-makers – civil servants in health, finance and other relevant ministries (i.e. civil servants who draft position papers and legislation, oversee reforms and have a significant influence on the decisions of politicians and parliaments)		e.g. 1 (primary audience)
International policy-makers – politicians (i.e. members of pan-European bodies such as the European Parliament who play an increasing role in shaping social and economic policy at a pan-European level)		
International agencies – staff (i.e. staff of pan-regional or global bodies such as the European Commission or World Bank who directly or indirectly affect policy-making in countries)		e.g. 2 (one of two secondary audiences of equal priority)
International agencies/NGOs – advisers and consultants on health-care reform (i.e. individuals who may have a direct impact on decisions, such as those who support national policy-makers in central and eastern Europe)		e.g. 2 (one of two secondary audiences of equal priority)

Please note that ticking one or more of these boxes is typically required for inclusion in the BRIDGE study. However, we will address other possibilities on a case-by-case basis. In such situations, please use the next item as an opportunity to introduce the rationale.

8. Indicate which of the following *other types* of policy-makers in Europe are identified as being among the organization's **target audiences**:

☐ **health system managers** (i.e. senior managers who take hands-on responsibility for the running of health-care services, purchasing authorities, sickness funds and other institutions);

☐ **other types of policy-makers** (e.g. medical associations in Germany), please specify:

_____

Please note that organizations targeting the general public, patients, clinicians or the media – but not also one of the groups described in items 7 and 8 – are not normally considered for inclusion in the BRIDGE study.

Information-packaging mechanisms

9. List **each type of information-packaging mechanism**[1] used by the organization (i.e. each type of product that can be downloaded from its website, sent upon request or subscribed to). Tick any applicable codes from the list next to the table. Write any applicable comments in the final column (add additional pages if necessary).

Mechanism	Preparation	Packaging	Supporting its wider use	Observations about its innovativeness or its impact
	1 ☐ 2a ☐ 2b ☐ 2c ☐ 2d ☐ 2e ☐ 3a ☐ 3b ☐ 3c ☐ 4 ☐	5 ☐ 6 ☐ 7 ☐	8 ☐ 9 ☐	
	1 ☐ 2a ☐ 2b ☐ 2c ☐ 2d ☐ 2e ☐ 3a ☐ 3b ☐ 3c ☐ 4 ☐	5 ☐ 6 ☐ 7 ☐	8 ☐ 9 ☐	
	1 ☐ 2a ☐ 2b ☐ 2c ☐ 2d ☐ 2e ☐ 3a ☐ 3b ☐ 3c ☐ 4 ☐	5 ☐ 6 ☐ 7 ☐	8 ☐ 9 ☐	

Preparation

1. Does it target (or appear to target) policy-makers as a key audience?
2. Does it stem from one or more of the following?
   a. research project (i.e. primary research);
   b. systematic review;
   c. meeting with policy-makers or stakeholders;
   d. collation of research-related products (e.g. a and b) or activities (e.g. c); or
   e. issue raised by policy-makers.
3. Does it focus primarily on one or more of the following?
   a. problem or policy objective;
   b. options for addressing a problem or achieving a policy objective; or
   c. implementation considerations.
4. Was it reviewed before publication by members of its target audience (i.e. not just by researchers)?

Packaging

5. Does it use language that is clearly designed to be accessible?
6. Does it follow a graded-entry format with key messages, possibly an executive summary, and a full report?
7. Does it highlight decision-relevant information explicitly (e.g. benefits, harms and costs of options)?

Supporting its wider use

8. Are online commentaries or briefings about the product provided by representatives of its target audiences?
9. Is there an option to sign up for an e-mail alert/listserv when new products are posted online?

1 Information products in a variety of media that are focused, at least in part, on health systems information and that are intended to support policy-making. The outputs can take the form of policy briefs, issue briefs, research summaries, policy dialogue reports, research reports, presentations, audio podcasts, video podcasts, videos, blogs, impact summaries, newsletters, annual reports, and cartoons and other visual media, among others.

Interactive knowledge-sharing mechanisms

10. List **each type of interactive knowledge-sharing mechanism**[2] used by the organization. Tick any applicable codes from the list next to the table. Write any applicable comments in the final column (add additional pages if necessary).

Mechanism	Preparation	Organization	Supporting its wider use	Observations about its innovativeness or its impact
	1 ☐ 2 ☐ 3a ☐ 3b ☐ 3c ☐ 3d ☐ 3e ☐ 3f ☐ 4a ☐ 4b ☐ 4c ☐	5 ☐ 6a ☐ 6b ☐ 6c ☐ 7a ☐ 7b ☐ 7c ☐ 7d ☐ 8a ☐8b ☐8c ☐	9 ☐ 10 ☐	
	1 ☐ 2 ☐ 3a ☐ 3b ☐ 3c ☐ 3d ☐ 3e ☐ 3f ☐ 4a ☐ 4b ☐ 4c ☐	5 ☐ 6a ☐ 6b ☐ 6c ☐ 7a ☐ 7b ☐ 7c ☐ 7d ☐ 8a ☐8b ☐8c ☐	9 ☐ 10 ☐	
	1 ☐ 2 ☐ 3a ☐ 3b ☐ 3c ☐ 3d ☐ 3e ☐ 3f ☐ 4a ☐ 4b ☐ 4c ☐	5 ☐ 6a ☐ 6b ☐ 6c ☐ 7a ☐ 7b ☐ 7c ☐ 7d ☐ 8a ☐8b ☐8c ☐	9 ☐ 10 ☐	
	1 ☐ 2 ☐ 3a ☐ 3b ☐ 3c ☐ 3d ☐ 3e ☐ 3f ☐ 4a ☐ 4b ☐ 4c ☐	5 ☐ 6a ☐ 6b ☐ 6c ☐ 7a ☐ 7b ☐ 7c ☐ 7d ☐ 8a ☐8b ☐8c ☐	9 ☐ 10 ☐	

Preparation
1. Does it target (or appear to target) policy-makers as a key audience?
2. Does it target stakeholders who will be involved in or affected by decisions that might be informed by the mechanism?
3. Does it stem from one or more of the following?
   a. research agenda setting;
   b. research project (i.e. primary research);
   c. systematic review;
   d. collation of research-related products (e.g. a and b) or activities (e.g. c);
   e. issue raised by policy-makers; or
   f. training need identified by policy-makers.
4. Does it focus primarily on one or more of the following?
   a. problem or policy objective;
   b. options for addressing a problem or achieving a policy objective; or
   c. implementation considerations.

Organization
5. Does the timing relate explicitly to a policy-making process or to requests from policy-makers?
6. Does it involve one or more of the following?
   a. closed list of invitees;
   b. pre-circulation of products described in question 9 above; or
   c. rules about whether and how comments can be attributed.
7. Does it involve one or more of the following?
   a. presentations by an expert;
   b. questions and answers targeted at an expert;
   c. policy-maker commentaries on an expert's input; or
   d. dialogue where each participant has the potential to contribute equally to the discussion.
8. Does it involve one or more of the following?
   a. in-person interactions;
   b. synchronous online interactions; or
   c. asynchronous online interactions.

Supporting its wider use
9. Are any products based on the interactions?
10. Is there an option to sign up for an e-mail alert/listserv when new interaction-related products are posted online?

2 Mediating interactions that are focused, at least in part, on health systems information and that are intended to support policy-making. The interactions can take the form of policy dialogues, personalized briefings, training workshops, online briefings or webinars, online discussion forums, formalized networks, informal discussions, and presentations.

Organizational model

11. Cut and paste (and translate if necessary) any available descriptions of the organizational model used by the organization, which can include:
    - role of policy-makers in its governance and management (e.g. located within government, director appointed by government, and staff paid by civil service grade; arms-length agency with an independent board comprised of policy-makers from several ministries and stakeholders such as insurance funds);
    - size, disciplinary mix, and knowledge translation expertise of staff;
    - size of budget and contributions of national and regional policy-making authorities to the budget;
    - approach to setting its agenda or annual programme of work (e.g. 30% directed by government, 70% set at the discretion of the director);
    - location within another organization (e.g. government or university) or network; and
    - use of rapid-response functions, exchange programmes and other efforts to support responsive relations between researchers and policy-makers.

Monitoring and evaluation

12. Cut and paste (and translate if necessary) any available descriptions of the approach to monitoring and evaluation used by the organization, which can include (but is not limited to):
    - media coverage
    - citation in policy documents, and
    - independent evaluations of impact on systems and policies.

Other

13. Indicate whether the organization is no longer active but has a publicly accessible (archived) website that permitted this assessment.

    ☐ inactive

Appendix D

Country correspondents for the website reviews and validators for the eligibility assessments

#	Country (or jurisdiction)	Country correspondent	Associate country correspondent	Validator
1	**Austria**	Maria Hofmarcher	Elisabeth Breyer	Manfred Huber
2	**Belgium**	Mark Leys		Lieven De Raedt
3	**Bulgaria**	Emilia Tontcheva	Nyulifer Jacub	Antoniya Dimova
4	**Cyprus**	Aris Sissouras	Charalampos Economou	Panos Pashardes
5	**Czech Republic**	Jan Šturma		None identified
6	**Denmark**	Peter Kjær		Allan Krasnik
7	**Estonia**	Jarno Habicht	Triinu Tikas	Ain Aaviksoo
8	**Finland**	Ilmo Keskimäki	Liina-Kaisa Tynkkynen	None identified
9	**France**	Karine Chevreul	Karen Brigham	Frédéric Bousquet
10	**Germany**	Reinhard Busse	Verena Gramse	Helmut Brand
11	**Greece**	Aris Sissouras	Charalampos Economou	Elias Mossialos
12	**Hungary**	Peter Gaal	Blanka Csilla Török	Zsofia Pusztai
13	**Ireland**	David McDaid		None identified
14	**Italy**	Giovanni Fattore	Alessandra Susi	Antonio Giulio De Belvis
15	**Latvia**	Aiga Rurane	Jolanta Skrule	Gunta Rozentāle
16	**Lithuania**	Romualdas Gurevicius	Lina Muleronkaitė	Robertas Petkevičius
17	**Luxembourg**	Mark Leys		None identified
18	**Malta**	Miriam Dalmas	Roberto Debono	Natasha Muscat and Neville Calleja
19	**Netherlands**	Ewout van Ginneken	Verena Gramse	Willemijn Schäfer
20	**Poland**	Barbara Niedzwiedzka	Ewa Dobrogowska-Schlebusch	Paulina Miśkiewicz
21	**Portugal**	Paulo Sousa	Paula Perdigão	Pedro Pita Barros
22	**Romania**	Victor Stefan Olsavszky		None identified
23	**Slovakia**	Darina Sedláková	Jana Potúčková	Peter Pažitný
24	**Slovenia**	Tit Albreht	Marjetka Jelenc	Marijan Ivanusa
25	**Spain**	José M Martín-Moreno	Meggan Harris	José Ramón Repullo Labrador
26	**Sweden**	Henrik Lundström	Jesper Olsson	Anders Anell

#	Country (or jurisdiction)	Country correspondent	Associate country correspondent	Validator
27	**United Kingdom**	David McDaid	Lucia Kossarova and Anna Sagan	Sean Boyle
28	**Iceland***	Sigurbjörg Sigurgeirsdóttir		None identified
29	**Liechtenstein***	Govin Permanand		None identified
30	**Norway***	John-Arne Røttingen	Kari Håvelsrud	Olav Valen Slåttebrekk
31	**Switzerland***	Gaudenz Silberschmidt	Markus Weber	Luca Crivelli
32	**Global, European or cross-national**	Cristina Catallo and Gabriele Pastorino		Nick Fahy

*Member States of the European Free Trade Association; others are states of the European Union.

Appendix E

Organizations included in the BRIDGE study and those carefully considered but excluded

#	Country (or jurisdiction)	Organization
European Union		
1	**Austria**	**Included** Department für Evidenzbasierte Medizin und Klinische Epidemiologie, Donau-Universität Krems/Department for Evidence-based Medicine and Clinical Epidemiology, Danube University Krems Gesundheit Österreich GmbH (GÖG)/Austrian Health Institute (GÖG) Institut für Gesundheitsplanung/Institute for Healthcare Planning Institut für Höhere Studien (IHS)/Institute for Advanced Studies (IHS) Joanneum Research/Joanneum Research, Institute of Medical Technologies and Health Management Ludwig Boltzmann Institute of Health Promotion Research (LBIHPR)/Ludwig Boltzmann Institute, Health Promotion Research (LBIHPR) Ludwig Boltzmann Institute of Health Technology Assessment (LBI-HTA)/Ludwig Boltzmann Institute, Health Technology Assessment (LBI-HTA) Österreichische Agentur für Gesundheit und Ernährungssicherheit (AGES)/Austrian Agency for Health and Food Safety (AGES) Österreichisches Institut für Wirtschaftsforschung (WIFO)/Austrian Institute of Economic Research (WIFO) Statistik Austria/Statistics Austria **Carefully considered and found to meet some but not all criteria** Arbeitskreis für Vorsorge und Sozialmedizin gemeinnützige BetriebsGmbH (AKS)/ Working Group for Preventive and Social Medicine (AKS) Institut für Pharmaökonomische Forschung/Institute for Pharmacoeconomic Research (IPF) Österreichisches Rotes Kreuz/Austrian Red Cross

#	Country (or jurisdiction)	Organization
2	**Belgium**	**Included** Federaal Kenniscentrum voor de Gezondheidszorg (KCE)/Centre fédéral d'expertise des soins de santé (KCE)/Belgian Health Care Knowledge Centre (KCE) Steunpunt Welzijn, Volksgezondheid en Gezin (SWVG)/Knowledge Centre for Welfare, Public Health and Family Wetenschappelijk Instituut Volksgezondheid (WIV)/Institut Scientifique de Santé Publique (ISP)/Scientific Institute of Public Health (WIV-ISP) **Carefully considered and found to meet some but not all criteria** Agence fédérale pour la sécurité de la chaîne alimentaire (AFSCA)/Federaal Agentschap voor de veiligheid van de voedselketen (FAVV)/Föderalagentur für die Sicherheit der Nahrungsmittelkette (FASNK)/Federal Agency for the Safety of the Food Chain (FASFC) Institut national d'assurance maladie (INAMI)/Rijksinstitut voor ziekte- en invaliditeitsverzekering (RIZIV)/National Institute for Health and Disability Insurance (NIHDI) Itinera Institute/Itinera Institute/Itinera Institute Observatoire de la santé et du social de Bruxelles-Capitale/Observatorium voor Gezondheid en Welzijn van Brussel-Hoofdstad/Brussels-Capital Health and Social Observatory Observatoire de la santé du Hainaut/Observatory for Health in Hainaut Observatoire franco-belge de la santé (OFBS)/Franco-Belge Observatory for Health Vlaams Agentschap voor Personen met een Handicap (VAPH)/Agence flamande pour les personnes handicapées (VAPH)/Flemish Agency for Disabled Persons (VAPH)
3	**Bulgaria**	**Included** Национален център по здравна и нформация/National Center of Public Health and_Analyses (NCPHA) Национален център по опазване на общественото здраве/National Centre of Public Health Protection **Carefully considered and found to meet some but not all criteria** Bulgarian Association of Nurses Bulgarian Dental Association Български лекарски съюз (Блс)/Bulgarian Medical Association Народно събрание на Република България/Healthcare Committee, National Assembly of the Republic of Bulgaria Национална здравноосигурителна каса/National Health Insurance Fund Ministry of Health, Bulgaria
4	**Cyprus**	**Included** Not applicable **Carefully considered and found to meet some but not all criteria** Ανοικτό Πανεπιστήμιο Κύπρου/Department of Health Management, Open University of Cyprus Υπουργειο Υγειασ Τησ Κυπριακησ Δημοκρατιασ/Health Monitoring Unit, Ministry of Health of Cyprus
5	**Czech Republic**	**Included** Evropské Centrum pro medicínskou informatiku, statistiku a epidemiologií (EruoISE centrum)/European Centre for Medical Informatics, Statistics and Epidemiology (EuroMISE Centre) Národní Referenční Centrum (NRC)/National Reference Centre (NRC) Občanské Sdružení Reforma Zdravotnictví - Forum.cz/HealthReform.cz Státní Zdravotní Ústav (SZU)/National Institute of Public Health (NIPH) Ústav zdravotnických informací a statistiky ČR (ÚZIS ČR)/Department of Analyses, Publication and External Collaboration, Institute of Health Information and Statistics of the Czech Republic (IHIS)

#	Country (or jurisdiction)	Organization
5	**Czech Republic** (contd)	**Carefully considered and found to meet some but not all criteria** Akademie věd České republiky/Academy of Sciences of the Czech Republic Centrum kardiovaskulární a transplantační chirurgie (CKTCH)/Center for Cardiovascular and Transplant Surgery České národní fórom pro eHealth (O ČNFeH)/Czech National Forum for eHealth Endokrinologický ústav (endo.cz)/Institute of Endocrinology Fórum pro Otevřené Zdravotnictví/Forum for Modern Health Care Institutu Klinické a Experimentální Medicíny (IKEM)/Institute for Clinical and Experimental Medicine Koalice pro zdraví/Coalition for Health Koordinační středisko transplantací (KST)/Czech Transplantations Coordinating Center (KST) Masarykův onkologický ústav/Masaryk Memorial Cancer Institute Svaz zdravotních pojišťoven (SZP ČR)/Association of Companies' Health Insurance Funds Technology Centre (AS-CR)
6	**Denmark**	**Included** Danish Institute of Governmental Research (AKF) Dansk Sundhedsinstitut (DSI)/Danish Institute for Health Services Research **Carefully considered and found to meet some but not all criteria** Center for Anvendt Sundhedstjenesteforskning og Teknologivurdering, Syddansk Universitet/Centre for Applied Health Services Research and Technology Assessment, University of Southern Denmark Centre for Health Management, Copenhagen Business School (CBS) Evidence in Research and Action Network (EIRA), Syddansk Universitet Forskningsenheden for Sundhedsøkonomi, Syddansk Universitet/Research Unit of Health Economics, University of Southern Denmark Kræftens Bekæmpelse/Danish Cancer Society Institut for Folkesundhedsvidenskab, Afdeling for Sundhedstjenesteforskning, Københavns Universitet/Section for Health Services Research, Department of Public Health, University of Copenhagen Statens Institut for Folkesundhed, Syddansk Universitet/Danish National Institute of Public Health (NIPH), University of Southern Denmark
7	**Estonia**	**Included** Poliitikauuringute Keskus PRAXIS/PRAXIS Center for Policy Studies Tervise Arengu Instituut (TAI)/National Institute for Health Development (NIHD) **Carefully considered and found to meet some but not all criteria** Eesti Haigekassa/Estonian Health Insurance Fund (EHIF) Ravimiamet/State Agency of Medicines (SAM) Sotsiaalvaldkonna uuringud ja analüüsid, Sotsiaalministeerium/Social Policy Information and Analysis Department, Estonian Ministry of Social Affairs (SPIAD) Tartu Ülikool tervishoiu instituut/Department of Public Health, Faculty of Medicine, Tartu University Tervisekaitseinspektsiooni/Health Protection Inspectorate (EHPI) Tervisevaldkonna uuringud ja analüüsid, Sotsiaalministeerium/Health Information and Analysis Department, Estonian Ministry of Social Affairs (HIAD)
8	**Finland**	**Included** Kunnat.net Kuntatiedon Keskus/Association of Finnish Local and Regional Authorities Suomen itsenäisyyden juhlarahasto (Sitra)/Finnish Innovation Fund (Sitra) Teknologian ja innovaatioiden kehittämiskeskus (TEKES)/Finnish Funding Agency for Technology and Innovation (TEKES) Terveyden ja hyvinvoinnin laitos (THL)/National Institute for Health and Welfare (THL) (merger of the National Research and Development Centre for Welfare and Health [STAKES] and the National Public Health Institute [KTL]) **Carefully considered and found to meet some but not all criteria** Not applicable

#	Country (or jurisdiction)	Organization
9	**France**	**Included** Centre de recherche médecine, sciences, santé, santé mentale, société (CERMES3)/Research Centre for Medicine, Science, Health, Mental Health and Society (CERMES3) Institut de recherche en santé publique (IReSP)/French Institute for Public Health Research (IReSP) Institut de recherche et documentation en économie de la santé (IRDES)/Institute for Research and Information in Health Economics (IRDES) Laboratoire d'économie et de gestion des organisations de santé, Université Paris-Dauphine (LEGOS)/Laboratory of Economics and Healthcare Management, University of Paris-Dauphine (LEGOS) Sciences economiques et sociales, systèmes de santé, sociétés, UMR 912 Inserm-IRD-Université Aix-Marseille/Economy & Social Sciences, Health Care Systems & Societies Unit 912 of Inserm, IRD, University of Aix-Marseille Unité de recherche clinique en économie de la santé d'Ile-de-France (URC Eco)/Paris Health Services and Health Economics Research Unit (URC Eco) **Carefully considered and found to meet some but not all criteria** Centre d'analyse stratégique (CAS), Gouvernment de France Chaire d'Economie et gestion des services de santé, Conservatoire national des arts et métiers (CNAM)/Chair of Economics and Management of Health Services, National Conservatory of Arts and Trades (CNAM) Département des sciences humaines, sociales et des comportements de santé (SHSC), École des Hautes Études en Santé Publique (EHESP)/Department of Human and Social Sciences and Health Behaviour, EHESP School of Public Health Direction de la recherche, des études, de l'évaluation et des statistiques (DREES), Ministère du Travail, de l'Emploi et de la Santé/Directorate of Research, Studies, Evaluation and Statistics (DREES), Ministry of Labour, Employment and Health Direction de la stratégie, des études et des statistiques (DSES), Caisse nationale de l'assurance maladie des travailleurs salariés (Cnamts)/Strategy, Research and Statistics Directorate (DSES), French National Health Insurance Fund for Salaried Workers (Cnamts) Haute autorité de santé (HAS)/National Health Authority (HAS) Haut conseil pour l'avenir de l'assurance maladie (HCAAM)/High Council for the Future of Health Insurance (HCAAM) Inspection générale des affaires sociales (IGAS)/General Inspectorate for Social Affairs Institut de la protection sociale européene (IPSE)/Institute of European Social Protection (IPSE) Institut de veille sanitaire (InVS)/French Institute for Public Health Surveillance (InVS) L'Observatoire national de la démographie des professions de santé (ONDPS), Ministère du travail, de l'emploi et de la santé
10	**Germany**	**Included** Bertelsmann Stiftung/Bertelsmann Foundation Fritz Beske Institut für Gesundheits-System-Forschung Kiel/Fritz Beske Institute for Health System Research Kiel Robert Koch Institut (RKI)/Robert Koch Institute Wissenschaftliches Institut der AOK (WIdO)/Scientific Institute of the AOK Wissenschaftszentrum Berlin für Sozialforschung (WZB)/Berlin Social Science Center (WZB) Zentrum für Sozialpolitik (ZeS), Universität Bremen/Centre for Social Policy Research (ZeS), University of Bremen **Carefully considered and found to meet some but not all criteria** Akademie für Ethik in der Medizin (AEM)/Academy for Ethics in Medicine (AEM) Ärztliches Zentrum für Qualität in der Medizin (ÄZQ)/Agency for Quality in Medicine (ÄZQ) Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit/Bavarian State Office for Health and Food Safety

#	Country (or jurisdiction)	Organization
10	**Germany** (contd)	**Carefully considered and found to meet some but not all criteria** Bundesministerium für Bildung und Forschung (BMBF)/Federal Ministry of Education and Research (BMBF) Das Deutsche Cochrane Zentrum (DCZ)/German Cochrane Center (GCC) Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie e.V. (GMDS)/German Society for Medical Computer Science, Biometry and Epidemiology Deutsche Gesellschaft für Public Health e.V. (DGPH)/German Society of Public Health Deutsche Gesellschaft für Sozialmedizin und Prävention e.V. (DGSMP) Deutsches Institut für Gesundheitsrecht (DIGR)/German Institute of Health Legislation (DIGR) Deutsches Institut für Medizinische Dokumentation und Information (DIMDI)/ German Institute of Medical Documentation and Information (DIMDI) Deutsches Netzwerk Evidenzbasierte Medizin-/German Network of Evidence-based Medicine Deutsche Verband für Gesundheitswissenchaften und Public Health e.V. (DVGPH)/ German Association for Health Sciences and Public Health (DVGPH) Europäisches Public Health Zentrum Nordrhein-Westfalen (EPHZ)/European Public Health Centre (EPHC) North Rhine-Westphalia (EPHZ) Evidence.de, University of Witten/Herdecke Forum Gesundheitspolitik Gesundheitsforschungsrat/Health Research Council Institute for Evidence Based Medicine (DIeM) Institut für Public Health und Pflegeforschung, Universität Bremen/Institute for Public Health and Nursing Research, Bremen University Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen (IQWiG)/Institute for Quality and Efficiency in Health Care (IQWIG) Koordinierungs zentren für Klinische Studien (KKS)/Coordinating Centres for Clinical Trials (KKS) Landesinstitut für Gesundheit und Arbeit des Landes Nordrhein-Westfalen (LIGA. NRW) Telematikplattform für medizinische Forschungsnetze e.V. (TMF)/Telematics Platform for medical research (TMF)
11	**Greece**	**Included** Εργαστηριο Οργάνωσης και Αξιολόγησης Υπηρεσιών Υγείας/Center for Health Services Management and Evaluation **Carefully considered and found to meet some but not all criteria** Εθνική Σχολή Δημόσιας Υγείας (ΕΣΔΥ)/National School of Public Health
12	**Hungary**	**Included** Egészség-gazdaságtani és Egészségügyi Technológiaelemzési Kutatóközpont (Corvinus)- /Health Economics and Technology Assessment Research Centre (Corvinus) Egészségpolitika és Egészség-Gazdaságtan Tanszék, Egészség-Gazdaságtani Kutatóközpont/Health Economics Research Centre, Faculty of Social Sciences, Eotvos Lorand University Egészségügyi Menedzserképzô Központ, Semmelweis Egyetem/Health Services Management Training Centre, Semmelweis University Egészségügyi Stratégiai Kutatóintézet/National Institute for Strategic Health Research Országos Egészégfejlesztési Intézet/National Institute for Health Development **Carefully considered and found to meet some but not all criteria** Állami Népegészegügyi és Tisztiorvosi Szolgálat (ÁNTSZ)/Hungarian National Public Health and Medical Officer Service (ÁNTSZ) Debreceni Egyetem Orvos- és Egészségtudományi Centrum Népegészségügyi Kar/ Faculty of Public Health, University of Debrecen Egészségügyi Minőségfejlesztési és Kórháztechnikai Intézet (EMKI)/Institute for Healthcare Quality Improvement and Hospital Engineering (EMKI)

#	Country (or jurisdiction)	Organization
12	**Hungary** (contd)	**Carefully considered and found to meet some but not all criteria** Egészségügykutató Intézet (GKI-EKI)/Healthcare Research Institute (GKI-EKI) Orvos- és Kórháztechnikai Igazgatóságának tevékenysége/Directorate of Medical and Hospital Engineering
13	**Ireland**	**Included** Adelaide Hospital Society Centre for Behaviour and Health, UCD Geary Institute Economic and Social Research Institute (ESRI) **Carefully considered and found to meet some but not all criteria** Combat Poverty Agency Department of Health and Children Health Information and Quality Authority (HIQA) Health Insurance Authority Health Policy and Management, Trinity College Health Promotion Ireland Health Research Board Institute of Public Administration Institute of Public Health in Ireland Ireland–Northern Ireland–National Cancer Institute Irish Centre for Social Gerontology, NUI Galway Jesuit Centre for Faith and Justice Mental Health Commission National Centre for Pharmacoeconomics National Economic and Social Council National Institute for the Health Sciences National Office for Suicide Prevention Public Health and Primary Care, Trinity College Dublin UCD Centre for Insurance Studies
14	**Italy**	**Included** Agenzia Nazionale per i Servizi Sanitari Regionali (Age.Na.S)/National Agency for Regional Health Services (Age.Na.S) Agenzia Regionale per i Servizi Sanitari (ARESS)/Regional Agency for Health Services in Piemonte (ARESS) Agenzia Regionale Sanitaria/Regional Agency for Health Services in Marche Agenzia Sanitaria e Sociale Regionale (ASSR)/Regional Agency for Social and Health Services in Emilia-Romagna (ASSR-EM-ROM) Centro di Richerche sulla Gestione dell'Assistenza Sanitaria e Sociale (CERGAS), Università Bocconi/Centre for Research on Health and Social Care Management (CERGAS), Bocconi University Università degli Studi di Roma "Tor Vergata"/Centre for Economic and International Studies (CEIS), Faculty of Economics, University of Rome "Tor Vergata" Centro per la Valutazione dell'Efficacia dell'Assistenza Sanitaria/Centre for the Evaluation of the Effectiveness of Medical Care (CeVEAS) Laziosanità Agenzia di Sanità Pubblica/Agency of Public Health of Lazio Management e Sanità, Laboratorio di Ricerca e Formazione per il Management dei Servizi alla Salute, Università di Pisa/Research and Training Department, Laboratory for the Management of Health Services(MES), University of Pisa Osservatorio Nazionale sulla Salute nelle Regioni Italiane/National Observatory on Health Status in the Italian Regions **Carefully considered and found to meet some but not all criteria** Centro Cochrane Italiano (CCI)/Italian Cochrane Centre Federation of Health Care Services Organizations (FIASO) (website no longer available) Il Pensiero Scientifico Editore

#	Country (or jurisdiction)	Organization
15	**Latvia**	**Included** Not applicable
		Carefully considered and found to meet some but not all criteria Ārstu Biedrība/Physicians' Association of Latvia
		Centre of Health Economics (website no longer available)
		Papardes Zieds/Association for Family Planning and Sexual Health
		Rīgas Stradiņa Universitāte/Riga Stradina University
		Veselības Inspekcija, Lavitijas Republikas Veselības Ministrija/Health Inspectorate, Ministry of Health of the Republic of Latvia
		Veselības Statistikas un Medicīnas Tehnoloģiju (HSMTSA)/Health Statistics and Medical Technology State Agency (HSMTSA) (now part of the Centre of Health Economics)
16	**Lithuania**	**Included** Biomedicininių tyrimų institutas, Lietuvos sveikatos mokslų universitetas (formerly Kauno medicinos universiteto, KMU)/Institute for Biomedical Research, Laboratory of Preventive Medicine, Lithuanian University of Health Sciences (formerly Kaunas University of Medicine, KMU)
		Higienos institutas/Institute of Hygiene
		Klaipėdos universitetas/Institute of Research on Quality of Life, Faculty of Health Sciences, Klaipeda University
		Sveikatos ekonomikos centras/Health Economics Centre
		Carefully considered and found to meet some but not all criteria
		Klaipėdos universitetas/Faculty of Health Sciences, Klaipeda University
		Medicinos istorijos ir etikos skyrius, Vilniaus universiteto Medicinos fakultetas/Department of Medical History and Ethics, Medical Faculty of Vilnius University
		Valstybinė visuomenės sveikatos priežiūros tarnyba prie Sveikatos apsaugos ministerijos Visos teisės saugomos/National Public Health Research Centre, State Public Health Service, Ministry of Health
		Visuomenės sveikatos fakulteto, Kauno medicinos universitetas/Faculty of Public Health, Kaunas University of Medicine (KMU)
17	**Luxembourg**	**Included** Not applicable
		Carefully considered and found to meet some but not all criteria Centre de Recherche Public de la Santé/Centre for Health Studies, Public Health Research Centre
		Centre de Recherche Public de la Santé/Systems Analysis and Health Services Unit, Public Research Centre for Health
		Centre de Ressources des Technologies pour la Santé (CR SANTEC) Départements du CRP Henri Tudor/Resource Centre for Health-care Technologies, Public Research Centre Henry Tudor
18	**Malta**	**Included** Not applicable
		Carefully considered and found to meet some but not all criteria Institute of Health Care, University of Malta
		Malta Council for Science and Technology
		National Statistics Office (NSO)
19	**Netherlands**	**Included** Centraal Planbureau (CPB)/Bureau for Economic Policy Analysis (CPB)
		College voor Zorgverzekeringen (CVZ)/Health Care Insurance Board (CVZ)
		De Gezondheidsraad (GR)/Health Council of the Netherlands
		Kwaliteitsinstituut voor de Gezondheidszorg (CBO)/Institute for Health Care Improvement (CBO)
		Nederlands instituut voor onderzoek van de gezondheidszorg (NIVEL)/Netherlands Institute for Health Services Research (NIVEL)
		Organisatie voor gezondheidsonderzoek en zorginnavatie (ZonMw)/Organization for Health Research and Development (ZonMw)

#	Country (or jurisdiction)	Organization
19	**Netherlands** (contd)	**Included** Raad voor de Volksgezondheid & Zorg (RVZ)/Council for Public Health and Health Care (RVZ) Rijksinstituut voor Volksgezondheid en Milieu (RIVM)/National Institute for Public Health and the Environment (RIVM) Sociaal en Cultureel Planbureau (SCP)/Social Cultural Planning Office (SCP) Wetenschappelijk centrum voor zorg en welzijn, Universiteit van Tilburg/Scientific Center for Care and Welfare (Tranzo), Tilburg University **Carefully considered and found to meet some but not all criteria** Care and Public Health Research Institute (CAPHRI), University of Maastricht Department of Science, Technology, Health and Policy Studies (STeHPS), University of Twente Graduate School for Health Research (SHARE), Rijksuniversiteit Groningen/Graduate School for Health Research (SHARE), University Medical Centre Groningen Instituut Beleid & Management Gezondheidzorg (iBMG), Erasmus Universiteit Rotterdam/Institute of Health Policy and Management, Erasmus University of Rotterdam Institute for Research in Extramural Medicine (EMGO), VU University Medical Centre Institute of Mental Health and Addiction (Trimbos instituut)/Institute of Mental Health and Addiction (Trimbos) Julius Center, Universitair Medisch Centrum Utrecht/Julius Center, University Medical Centre Utrecht Kennis en advies voor maatschappelijke ontwikkeling (Movisie)/Netherlands Centre for Social Development (Movisie) Landelijk Expertisecentrum Verpleging & Verzorging (LEVV)/Centre for Excellence in Nursing (LEVV) Nationaal Instituut voor Gezondheidsbevordering en Ziektepreventie (NIGZ)/ Health Institute for Health Promotion and Disease Prevention (NIGZ) Nederlands Jeugdzorgprijzen (NJI)/Netherlands Youth Institute (NJI) Nederland Sociaal- Economische Raad (SER)/ Social and Economic Council of the Netherlands (SER) Nederlands Paramedisch Instituut (NPi)/Dutch Paramedic Institute (NPi) Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)/Netherlands Organization for Scientific Research (NWO) Nijmegen Centre for Evidence Based Practice (NCEBP), Radboud Universiteit/ Nijmegen Centre for Evidence Based Practice (NCEBP), Radboud University Prismant, Synzo Public Health and Primary Care, Leids Universitair Medisch Centrum/Department of Public Health and Primary Care, Leiden University Medical Centre Rob Giel Onderzoekcentrum, Universitair Medisch Centrum Groningen/Rob Giel Research Center, University Medical Centre Groningen Vilans/Vilans Wetenschappelijke Raad voor Het Regeringsbeleid (WRR)/Scientific Council for Government Policy (WRR)
20	**Poland**	**Included** Państwowa Agencja Rozwiązywania Problemów Alkoholowych (PARPA)/ State Agency for the Prevention of Alcohol-Related Problems (PARPA) Zakład-Centrum Monitorowania i Analiz Stanu Zdrowia Ludności, Narodowy Instytut Zdrowia Publicznego/Centre for Monitoring and Analyses of Population Health Status and Health Care System, National Institute of Public Health (NIZP) **Carefully considered and found to meet some but not all criteria** Agencja Oceny Technologii Medycznych (AOTM)/Agency for Health Technology Assessment (AOTM) Centrum Onkologii - Instytut im. Marii Skłodowskiej-Curie, Warsazawie (COI)/ Oncology Centre - Institute of Maria Skłodowska-Curie in Warsaw (COI) Centrum Systemów Informacyjnych Ochrony Zdrowia (CSIOZ)/Center for Health Information Systems (CSIOZ)

#	Country (or jurisdiction)	Organization
20	**Poland** (contd)	**Carefully considered and found to meet some but not all criteria** Department of Health Care Organization, Institute of Psychiatry and Neurology (IPIN) Instytut Matki i Dziecka (IMID)/Institute of Mother and Child (IMID) Instytut Medycyny Pracy im. prof. dra J. Nofera (IMP)/Noffer Institute of Occupational Medicine (IMP) Instytut Medycyny Wsi (IMW)/Institute of Agricultural Medicine (IMW)
21	**Portugal**	**Included** Alto Comissariado da Saúde/Office of the High Commissioner for Health Centro de Estudos e Investigacão em Saúde da Universidade de Coimbra/Center of Studies and Research in Health, University of Coimbra (CEISUC) Instituto Nacional de Saúde Doutor Ricardo Jorge/National Health Institute Doutor Ricardo Jorge Instituto Superior de Serviço Social do Porto/Investigation Centre in Social Services Sciences (CICSS) Observatório Português dos Sistemas de Saúde (OPSS)/Portuguese Observatory on Health Systems (OPSS) **Carefully considered and found to meet some but not all criteria** Associação Portuguesa para o Desenvolvimento Hospitalar (APDH)/Portuguese Association for Hospital Development (APDH) Autoridade Nacional do Medicamento e Produtos de Saúde (Infarmed)/National Authority of Medicines and Health Products (INFARMED) Entidade Reguladora da Saúde (ERS)/Health Regulation Authority (ERS) Escola Nacional de Sáude Pública (ENSP)/National School of Public Health (NSPH) Institute for Medicines and Pharmaceutical Services (iMED) Instituto Gulbenkian de Ciência/Gulbenkian Institute of Science Instituto Nacional de Estatística/National Institute of Statistics
22	**Romania**	**Included** Centrul pentru Politici şi Servicii de Sănătate (CPSS)/Center for Health Policies and Services (CPSS) **Carefully considered and found to meet some but not all criteria** Centrul National de Statistica Informatică/National Institute of Statistics (NIS) (website no longer available) Institutal National de Sanatate Publica/National Institute of Public Health (formerly National Centre for Organization and Provision of the Information and Informatics System in Health, CCSS) Institutes of Public Health • Institute of Public Health Bucharest (IPHB) • Institute of Public Health "Prof. Dr. Iuliu Moldovan" Cluj-Napoca (IPHCN) • Institute of Public Health Iaşi (IPHI) • Institute of Public Health Timisoara (IPHT) National School of Public Health and Management (NSPHM) (website no longer available) Romanian Angel Appeal (RAA)
23	**Slovakia**	**Included** Inštitút informatiky a štatistiky (INFOSTAT)/Institute of Informatics and Statistics (INFOSTAT) Národné centrum zdravotníckych informácií (NCZI)/National Health Information Center (NCZI) Stredoeurópsky inštitút pre zdravotnu politiku/Health Policy Institute (HPI) **Carefully considered and found to meet some but not all criteria** Agentúra na podporu výskumu a vývoja/Slovak Research and Development Agency Statistical Office of the Slovak Republic Úrad verejného zdravotníctva Slovenskej republiky/Public Health Institute of the Slovak Republic

#	Country (or jurisdiction)	Organization
24	**Slovenia**	**Included** Institut za ekonomske raziskave v zdravstvu (INERHC)/Institute of Economic Research in Health Care (INERHC) Inštitut za varovanje zdravja Republike Slovenije/National Institute of Public Health of the Republic of Slovenia Zavod za zdravstveno zavarovanje Slovenije (ZZZS)/Health Insurance Institute of Slovenia (ZZZS) **Carefully considered and found to meet some but not all criteria** Center za zdravje in razvoj Murska Sobota (CZR)/Centre for Health and Development Murska Sobota (CZR) Združenje zdravstvenih zavodov Slovenije (ZDRZZ)/Association of Health Institutions of Slovenia (ZDRZZ)
25	**Spain**	**Included** Agencia de Evaluación de Tecnologías Sanitarias (AETS)/Health Technology Assessment Agency (AETS) Agencia de Evaluación de Tecnologías Sanitarias de Andalucía (AETSA)/Agency for Health Technology Assessment in Andalusia (AETSA) Agència d'Informació, Avaluació i Qualitat en Salut (AIAQS)/Agency for Health Technology and Research Assessment of Catalonia (AATRM) Centre de Recerca en Economia, Salut (CRES), Departament d'Economia i Empresa, Universitat Pompeu Fabra/Centre for Research in Health and Economics (CRES), Department of Economics and Business, Pompeu Fabra University Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERSP)/ Biomedical Research Centre Network for Epidemiology and Public Health (CIBERESP) Observatorio de Salud en Europa, Escuela Andaluza de Salud Pública/Observatory of Health (OSE) at Andalusian School of Public Health (EASP) Foro Español de Pacientes/Spanish Patient Forum Fundación Gaspar Casal (FGC)/Gaspar Casal Foundation (FGC) Fundación Instituto de Investigación en Servicios de Salud (IISS)/Health Services Research Institute (IISS) Instituto Universitario Avedis Donabedian/Avedis Donabedian University Institute Servicio de Evaluación de Tecnologías Sanitarias (OSTEBA)/Basque Office for Health Technology Assessment (OSTEBA) Sociedad Española de Salud Pública y Administración Sanitaria (SESPAS)/Spanish Society of Public Health and Health Administration (SESPAS) **Carefully considered and found to meet some but not all criteria** Not applicable
26	**Sweden**	**Included** Centrum för utvärdering av medicinsk teknologi (CMT)/Center for Medical Technology Assessment (CMT) Forskningsrådet för arbetsliv och socialvetenskap (FAS)/Swedish Council for Working Life and Social Research Qulturum/Qulturum Socialstyrelsen/National Board of Health and Welfare Statens folkhälsoinstitut (SFI)/Swedish National Institute of Public Health (FHI) Vårdalstiftelsen/Vårdal Foundation **Carefully considered and found to meet some but not all criteria** Centre for Health Equity Studies, Stockholm University (CHESS) Kunskapscentrum för hälso-och sjukvården (SBU)/Swedish Council on Health Technology Assessment (SBU) Medical Management Centre (MMC), Karolinska Institute Svenska Reumatologi Register (SRR)/Swedish Rheumatology Registry (SRR) Swedish Research Council Uppsala Clinical Research Center (UCR) (website no longer available)

#	Country (or jurisdiction	Organization
27	**United Kingdom**	**Included** England • Audit Commission • Civitas – Institute for the Study of Civil Society • Healthcare Commission (now defunct) • Health Foundation • Health Services Management Centre, University of Birmingham • Institute for Public Policy Research • Joseph Rowntree Foundation • LSE Health • National Audit Office • National Institute for Health Research SDO • National Primary Care Research and Development Centre • NHS Confederation • Nuffield Trust • Personal Social Services Research Unit • Picker Institute Europe • Sainsbury Centre for Mental Health • Social Care Institute for Excellence • Social Market Foundation • The Kings Fund, London Scotland • Chief Scientist Office (CSO) Northern Ireland • Not applicable Wales • Not applicable **Carefully considered and found to meet some but not all criteria** England • Centre for Analysis of Social Exclusion (CASE) – LSE • Centre for Evidence Based Public Health Policy • Centre for Health Economics, University of York • Centre for Health Planning and Management, Keele University (website no longer available) • Centre for Innovation in Health Management, University of Leeds • Centre for Policy on Ageing • Centre for Public Policy and Health, University of Durham • Dr Foster • Health and Care Infrastructure Research and Innovation Centre • Health Economics Research Centre, University of Oxford • Health Economics Research Group, Brunel University • Imperial College Healthcare Management Group • Institute for Healthcare Management • Judge Business School (Cambridge University Health) • National Centre for Social Research • National Institute for Clinical Excellence (NICE) • National Institute for Health Research • National Institute for Mental Health in England • National Mental Health Development Unit • NHS Centre for Reviews and Dissemination • NHS Evidence • NHS Information Centre • NIHR HTA programme • Royal Colleges (many but counted as one) • Royal Society for the Arts • School of Health and Related Research (ScHARR), University of Sheffield • The Smith Institute • UCL International Institute for Society and Health • University of East Anglia, Health and Social Sciences • Wellcome Trust • York Health Economics Consortium Scotland • Not applicable

#	Country (or jurisdiction	Organization
27	**United Kingdom** (contd)	**Carefully considered and found to meet some but not all criteria** Northern Ireland • Not applicable Wales • Institute of Medical and Social Care Research IMSCaR, University of Bangor • Wales Centre for Health
European Free Trade Association		
28	**Iceland**	**Included** Institute of Economic Studies, University of Iceland Stofnun stjórnsýslufræða og stjórnmála/Institute of Public Administration and Politics **Carefully considered and found to meet some but not all criteria** Lýðheilsustöð/Public Health Institute of Iceland Research Institute for Pharmaceutical Outcomes and Policy (RIPOP), University of Iceland
29	**Liechtenstein**	**Included** Konjunkturforschungsstelle Liechtenstein (KOFL)/Liechtenstein Economic Research Centre **Carefully considered and found to meet some but not all criteria** Not applicable
30	**Norway**	**Included** Arbeidsforskningsinstituttet (AFI)/Work Research Institute (WRI) Helseøkonomi Bergen (HEB)/Health Economics Bergen (HEB) Helseøkonomisk Forskningsprogram ved Universitetet i Oslo (HERO)/Health Economics Research Programme at the University of Oslo (HERO) Helse Sør-Øst kompetansesenter for helsetjenesteforskning (HØKH) Nasjonalt Folkehelseinstitutt/Norwegian Institute of Public Health Nasjonalt Kunnskapssenter for Helsetjenesten (NOKC)/Norwegian Knowledge Centre for the Health Services (NOKC) Senter for Klinisk Dokumentasjon og Evaluering (SKDE)/Centre for Clinical Documentation and Evaluation (SKDE) SINTEF Teknologi og Samfunn/SINTEF Technology and Society Statistisk Sentralbyrå (SSB)/Statistics Norway (SSB) Stein Rokkan Senter for Flerfaglige Samfunnsstudier/Stein Rokkan Centre for Social Studies (Rokkan-UIB) **Carefully considered and found to meet some but not all criteria** Avdeling for helseledelse og helseøkonomi, Universitetet i Oslo (UiO)/Department of Health Management and Health Economics, University of Oslo Institutt for administrasjon og organisasjonsvitenskap, Universitetet i Bergen (UiB)/ Department of Administration and Organization Theory, University of Bergen (UiB) Institutt for samfunnsmedisin, Norges teknisk-naturvitenskapelige universitet (NTNU)/ Department of Public Health and General Practice, Norwegian University of Science and Technology (NTNU) Institutt for samfunnsmedisin, Universitetet i Tromsø (UiT)/Institute for Community Medicine, University of Tromso (UiT) Nasjonal kompetanseenhet for minoritetshelse (NAKMI)/Norwegian Centre for Minority Health Research (NAKMI) Norwegian School of Management(SFLOH)-BI) (includes the Center for Health Management Studies, which does not yet have a website)
31	**Switzerland**	**Included** Bundesamt für Gesundheit (BAG)/Office Fédéral de la Santé Publique (OFSP)/ Ufficio Federale della Sanità Pubblica (UFSP)/Swiss Federal Office of Public Health (FOPH) Bundesamt für Statistik/Office Fédéral de la Statistique/Ufficio Federale di Statistica/ Swiss Federal Statistical Office (FSO) Schweizerisches Gesundheitsobservatorium (Obsan)/Observatoire Suisse de la Santé (Obsan)/Osservatorio Svizzero della Salute (Obsan)/Swiss Health Observatory (Obsan)

#	Country (or jurisdiction	Organization
31	**Switzerland** (contd)	**Carefully considered and found to meet some but not all criteria** Horten-Zentrum für praxisorientierte Forschung und Wissenstransfer/Helmut Horten Foundation Institut d'Economie et de Management de la Santé (IEMS), Université de Lausanne/ Institute of Health Economics and Management, University of Lausanne Institute of Microeconomics and Economics of the Public Sector (MecoP), University of Lugano Schweizerisches Tropen-und Public Health-Institut (SwissTPH), Universität Basel/ Institut Tropical et de Santé Publique Suisse (SwissTPH), Université de Bâle/Swiss Tropical and Public Health Institute (SwissTPH), University of Basel Wintherthurer Institut für Gesundheitsökonomie, Zürcher Hochschule für Angewandte Wissenschaften (ZHAW)/School of Management and Law, Zurich University of Applied Sciences (ZHAW)
International		
32 (a)	**Global but with Europe-targeted initiatives** Please note that the names of global organizations appear in English because this is the main language of their websites.	**Included** Innocenti Research Centre, United Nations Children's Fund (UNICEF) International Social Security Association (ISSA) • ISSA European Network Organisation for Economic Co-operation and Development (OECD) World Bank • World Bank in Europe and Central Asia **Carefully considered and found to meet some but not all criteria** International Labour Organization (ILO) • Europe and Central Asia United Nations Children's Fund (UNICEF) • Central and Eastern Europe and the Commonwealth of Independent States United Nations Economic Commission for Europe (UNECE) World Medical Association
32 (b)	**European** Please note that the names of European organizations appear in English when this is the main language of their websites, and they appear in the original language when multiple languages are used on their websites.	**Included** EuroHealthNet European Centre for Social Welfare, Policy and Research European Commission (EC) • Employment, Social Affairs and Equal Opportunities • European Centre for Disease Prevention and Control • Public Health • Research Directorate-General European Foundation for the Improvement of Living and Working Conditions (Eurofound) European Health Management Association European Monitoring for Drugs and Drug Addiction European Observatory on Health Systems and Policies European Policy Centre Health Consumer Powerhouse Internationalen Netzwerks Gesundheitspolitik, Health Policy Monitor/International Network Health Policy and Reform, Health Policy Monitor Observatoire Social Européen/European Social Observatory Rand Europe World Health Organization Regional Office for Europe • Health Evidence Network • Regions for Health Network **Carefully considered and found to meet some but not all criteria** Association Internationale de la Mutualité Association of Schools of Public Health in the European Region Centre of Excellence in Finance

#	Country (or jurisdictio	Organization
32 (b)	**European** (contd)	**Carefully considered and found to meet some but not all criteria** Association Internationale de la Mutualité Association of Schools of Public Health in the European Region Centre of Excellence in Finance European Commission • DG Health and Consumer Protection • EUROSTAT • Public Health Systems2 (website no longer available) • Public Health Systems3 (website no longer available) European Consumer Organisation European Federation of Nurses Associations European Federation of Public Service Unions European Hospital and Healthcare Employer's Association European Hospital and Healthcare Federation European Public Health Association European Social Insurance Platform Geneva Health Forum Madariaga – College of Europe Foundation Standing Committee of European Doctors Stockholm Network World Health Organization Regional Office for Europe • European Health for All database
32 (c)	**Intra-European cross-national initiatives**	**Included** Northern Dimension Partnership in Public Health and Social Well-being **Carefully considered and found to meet some but not all criteria** British-Irish Council

Appendix F

Interview guide for the site visits

This is a copy-edited version of the original study instrument, but no substantive changes have been made.

Information-packaging mechanisms

1. Describe your organization's key **information-packaging mechanism(s)**, including:
   - whether a mechanism or combination of mechanisms is innovative and/or influential
   - why the mechanism(s) or combination of mechanisms is innovative and/or influential, and
   - how long and how extensively the mechanism(s) has been used.

   Provide representative examples that can be shared.

   Handout 1 – "Attributes of information-packaging mechanisms that may help to describe a particular mechanism or to explain why it is innovative and/or influential" – will be provided during the interview. (See Appendix G for all interview handouts)

   *Note that we consider **information-packaging mechanisms** to be information products in a variety of media that are focused, at least in part, on health systems information and that are intended to support policy-making. The outputs can take the form of policy briefs, issue briefs, research summaries, policy dialogue reports, research reports, presentations, audio podcasts, video podcasts, videos, blogs, impact summaries, newsletters, annual reports, and cartoons and other visual media, among others. By **health systems information** we mean data (on performance and outcomes, among other topics) and research evidence (about policy and programme options to improve performance or achieve better outcomes, among other topics).*

2. Describe other innovative and/or influential **information-packaging mechanisms** that are being used in the country or region your organization serves, including:
   - why each mechanism or combination of mechanisms is innovative and/or influential, and
   - how long and how extensively the mechanisms have been used.

   Provide representative examples that can be shared.

3. Describe whether and how features of the national, European and international **context influenced the choice and perceived effectiveness of a particular information-packaging mechanism or combination of mechanisms**. In thinking about perceived effectiveness, please consider the acceptability, use and impact of mechanisms (at the level of the organization and of the country or region your organization serves).

   Handout 2 – "Features of the national, European and international context that may have influenced the choice and perceived effectiveness of the mechanisms/model" – will be provided during the interview. The same handout will be used for a number of other questions about how context has influenced your organization and other similar organizations in the country or region your organization serves.

Interactive knowledge-sharing mechanisms

4. Describe your organization's key **interactive knowledge-sharing mechanism(s)**, including:
   - whether a mechanism or combination of mechanisms is innovative and/or influential
   - why the mechanisms or combination of mechanisms is innovative and/or influential, and
   - how long and how extensively the mechanism(s) has been used.

   Provide descriptions of representative mechanisms that can be shared.

   Handout 3 – "Attributes of interactive knowledge-sharing mechanisms that may help to describe a particular mechanism or to explain why it is innovative and/or influential" – will be provided during the interview.

*Note that we consider **interactive knowledge-sharing mechanisms** to be mediating interactions that are focused, at least in part, on health systems information and that are intended to support policy-making. The interactions can take the form of policy dialogues, personalized briefings, training workshops, online briefings or webinars, online discussion forums, formalized networks, informal discussions, and presentations.*

5. Describe other innovative and/or influential **interactive knowledge-sharing mechanisms** that are being used in the country or region your organization serves, including:
   - why each mechanism or combination of mechanisms is innovative and/or influential, and
   - how long and how extensively the mechanism(s) has been used.

   Provide descriptions of representative mechanisms that can be shared.

6. Describe whether and how features of the national, European and international **context influenced the choice and perceived effectiveness of a particular interactive knowledge-sharing mechanism or combination of mechanisms.** In thinking about perceived effectiveness, please consider the acceptability, use and impact of mechanisms (at the level of the organization and of the country or region your organization serves).

   See handout 2 as a prompt for this question and the next three questions.

All types of knowledge-brokering mechanisms

7. Describe whether and how features of the national, European and international **context influenced the relative balance between local and external knowledge-brokering mechanisms** (at the level of the organization and the country or region your organization serves). Please consider the influence in terms of both choice and perceived effectiveness (i.e. acceptability, use and impact of mechanisms).

8. Describe whether and how features of the national, European and international **context influenced the relative balance between information-packaging mechanisms and interactive knowledge-sharing mechanisms** (at the level of the organization and the country or region your organization serves). Please consider the influence in terms of both choice and perceived effectiveness (i.e. acceptability, use and impact of mechanisms).

9. Describe whether and how features of the national, European and international **context influenced the relative balance between interactive knowledge-sharing mechanisms that engage both policy-makers and stakeholders and mechanisms that engage policy-makers only** (at the level of the organization and the country or region your organization serves)**.** Please consider the influence in terms of both choice and perceived effectiveness (i.e. acceptability, use and impact of mechanisms).

Organizational model for knowledge brokering

10. Describe the features of your **organizational model** for knowledge brokering, including:
    - whether a feature or combination of features is innovative and/or influential
    - why the feature or combination of features is innovative and/or influential, and
    - how long the current organizational model has been used and why it was last changed.

    Provide descriptions of the organizational model that can be shared.

    Handout 4 – "Features of the organizational model currently in use" – will be provided during the interview. The handout lists features of organizational models for knowledge brokering that may help you to describe a particular feature or explain why it is innovative and/or influential.

*Note that we consider an **organizational model** to be the features of organizations that are focused, at least in part, on health systems information and that are intended to support policy-making. These features can relate to the role of policy-makers and stakeholders in governance; rules that ensure independence and address conflicts of interest; authority to ensure accountablity to a knowledge-brokering mandate; size, mix and capacity of staff with knowledge-brokering responsibilities; size of budget and mix of funding sources for knowledge brokering; approach to prioritizing activities and accepting commissions/requests; location within another organization or network; collaboration with other organizations; and functional linkages with policy-making and stakeholder organizations.*

11. Describe other innovative and/or influential **organizational models** that are being used in the country or region your organization serves, including:
    - why each organizational model is innovative and/or influential, and
    - how long and how extensively the organizational model has been used.

    Provide descriptions of each organizational model that can be shared.

12. Describe whether and how features of the national, European and international **context influenced the choice and perceived effectiveness of particular features of the organizational model or combination of features, and especially whether the organizational model places mechanisms within a policy-making institution or outside of it.** In thinking about perceived effectiveness, please consider the acceptability, use and impact of mechanisms (at the level of the organization and of the country or region your organization serves).

    See handout 2 as a prompt for this question.

Monitoring and evaluating knowledge brokering

13. Describe your organization's approach to **monitoring and evaluating knowledge brokering**, including:
    - whether a feature or combination of features is innovative and/or influential
    - why the feature or combination of features is innovative and/or influential, and
    - how long the current appraoch to monitoring and evaluation has been used and why it was last changed.

    Provide descriptions of the approach to monitoring and evaluation that can be shared, as well as any monitoring and evaluation reports (or findings from reports) that can be shared.

    Handout 5 – "Features of the approach to monitoring and evaluation currently in use" – will be provided during the interview. The handout lists features of approaches to the monitoring and evaluation of knowledge brokering that may help you to describe a particular feature or explain why it is innovative and/or influential.

14. Describe other innovative and/or influential approaches to **monitoring and evaluating knowledge brokering** that are being used in the country or region your organization serves, including:
    - why each approach is innovative and/or influential, and
    - how long and how extensively it has been used.

    Provide descriptions of each approach that can be shared.

15. Describe whether and how features of the national, European and international **context influenced the choice and perceived effectiveness of the approach to monitoring and evaluating knowledge brokering.** In thinking about perceived effectiveness, please consider the acceptability, use and impact of mechanisms (at the level of the organization and of the country or region your organization serves).

    See handout 2 as a prompt for this question.

Follow-up

16. Can you suggest **individuals** within your organization, or in other knowledge-brokering organizations, or key policy-makers and stakeholders, who might be able to provide additional insights on some or all of the questions asked in this interview?

Final checks

17. Interviewers, ensure that you have requested:
    - examples of information-packaging mechanisms
    - descriptions of interactive knowledge-sharing mechanisms
    - descriptions of the organizational model
    - descriptions of the monitoring and evaluation approach (and/or monitoring and evaluation reports), and
    - names (and contact information, if applicable) of others to be interviewed about the organization.

Preparing for the case studies * for use in Belgium, England, Norway and Spain only *****

18. To assist with the final phase of the study, describe at least **three policy processes** (ideally completed ones) with which your organization has intersected over the last five years. Please also consider other knowledge-brokering organizations in the country or region your organization serves and how they have intersected with the same policy processes. Some types of policy processes to consider are:
    - budget setting
    - post-election strategy development, and
    - reaction to political/external developments.

    Alternative ways of categorizing possible policy processes for consideration include:
    - functional categories (i.e. roles or services performed for society or the sector, such as governance arrangements, financial arrangements, delivery arrangements and programme content);
    - intentional categories (i.e. purposes, goals or objectives);
    - population-focused (i.e. actions and statements that benefit or harm particular groups); and
    - programmatic (i.e. part of a package of similar or related policies).

19. For each process, identify:
    - **key documents** that could help us to understand the process and what influenced it (including the role of your organization); and
    - **key individuals** who could help us to understand the process and what influenced it (including the role of your organization).
20. Identify one or more **individuals in the organization** who can help to locate these key documents and the contact information for key individuals.

Additional final checks for case study preparation

21. Interviewers, ensure that you have requested:
    - names (and contact information, if applicable) of others to be interviewed about the organization, and
    - for each policy process – key documents and contact information for key individuals.

Appendix G

Handouts for the site visits

This is a copy-edited version of the original study instrument, but no substantive changes have been made.

Handout 1 Attributes of information-packaging mechanisms that may help to describe a particular mechanism or to explain why it is innovative and/or influential

Attributes of information-packaging mechanisms	Innovative or influential attribute?
How the information is prepared	
Targets (or appears to target) policy-makers as a key audience	
Originates from a research project (i.e. primary research)	
Originates from a systematic review (i.e. a review of the research literature that takes steps to be systematic and transparent in identifying, selecting, appraising and synthesizing studies, as opposed to a narrative review in which it is not clear which databases were searched, what inclusion criteria were used, what data were extracted, etc.)	
Originates from a meeting with policy-makers or stakeholders	
Originates from collation of research-related products or activities	
Originates from an issue raised by policy-makers	
Focuses on a problem or policy objective	
Presents options for addressing a problem or achieving a policy objective	
Offers implementation considerations when addressing the policy problem or when achieving the policy objective	
Reviewed prior to publication by members of the target audience (i.e. not just researchers)	
Other – please describe (e.g. frequency, responsiveness):	
How the information is packaged	
Uses language that is clearly designed to be accessible for policy-makers (e.g. free of scientific jargon)	
Follows a graded-entry format (e.g. key messages, possibly an executive summary, and a full report)	
Highlights decision-relevant information explicitly (e.g. benefits, harms and costs of options)	
Other – please describe (e.g. many formats for the same information, produced by a team that includes a journalist):	
How wider use of the information is supported	
Online commentaries or briefings about the information product provided by representatives of its target audiences	
Option to sign up for an e-mail alert/listserv when new products are posted online	
Other – please describe (e.g. personalized briefings, deliberative dialogues):	

Handout 2 Features of the national, European and international **context that may have influenced the choice and perceived effectiveness of mechanism(s)/model**

Please consider the choice and perceived effectiveness (including acceptability, use and impact) of mechanisms/models at the level of the organization and the country/region the organization serves, for any of the following:

- a particular information-packaging mechanism or combination of mechanisms;
- a particular interactive knowledge-sharing mechanism or combination of mechanisms;
- the relative balance between local and external knowledge-brokering mechanisms;
- the relative balance between information-packaging mechanisms and interactive knowledge-sharing mechanisms;
- the relative balance between interactive knowledge-sharing mechanisms that engage both policy-makers and stakeholders and mechanisms that engage policy-makers only;
- particular features of the organizational model (or combination of features) currently in use (at the level of the organization and the country);
- whether the organizational model places mechanisms within a policy-making institution or outside of it; and
- particular features of the approach to monitoring and evaluation of knowledge brokering.

Features of the context	Influenced choiceeffectiveness of mechanism(s)/model?
General features of the national policy-making context	
Languages spoken (especially whether English is spoken, given that so much health systems information available globally is written in English)	
Openness, including the ease with which ideas and information are disseminated	
Size (e.g. population)	
Affluence (e.g. gross domestic product [GDP] per capita)	
Other – please describe:	
National policy-making institutions and processes	
Federal versus unitary state	
Single-party versus coalition government	
Turnover within the governing party/coalition	
Political party versus civil service influence over decision support within government	
Centralized versus decentralized decision support within government	
Turnover within the civil service	
Role of professional associations (e.g. medical associations) in policy-making	
Open versus closed policy networks	
Size of policy-making institutions (relative to the size of the policy-making context)	
Financial resources available to policy-making institutions (relative to the affluence of the policy-making context)	
Donor dependence of policy-making institutions	
Other – please describe:	
Nationally focused research institutions, activities and outputs	
Number of research institutions doing similar work	
Number of health system-focused systematic reviews produced in the last year by an author based in the policy-making context	
Other – please describe:	
Stakeholder capacities and opportunities for engagement	
Internet connectivity/usage	
Civil society engagement	
Stakeholder engagement	
Media freedom	
Other – please describe:	
European policy-making context	
Nature of relations within and across European subregions (competitive/adversarial or importer/exporter of innovations)	
Number of European-focused research institutions doing similar work	
Other – please describe:	
International context	
Existence, visibility and use of 'one-stop shops' for research evidence internationally	
Other – please describe:	

Handout 3 Attributes of **interactive knowledge-sharing mechanisms** that may help to describe a particular mechanism or to explain why it is innovative and/or influential

Attributes of interactive knowledge-sharing mechanisms	Innovative or influential attribute?
How interactive knowledge-sharing is focused	
Targets (or appears to target) policy-makers as a key audience	
Targets (or appears to target) stakeholders involved in, or affected by, decisions arising from the mechanism	
Originates from a research agenda-setting process	
Originates from a research project (i.e. primary research)	
Originates from a systematic review (i.e. review of the research literature that takes steps to be systematic and transparent in identifying, selecting, appraising and synthesizing studies, as opposed to a narrative review in which it is not clear which databases were searched, what inclusion criteria were used, what data were extracted, etc.)	
Originates from collation of research-related products or activities	
Originates from an issue raised by policy-makers	
Originates from a training need raised by policy-makers	
Focuses on a problem or policy objective	
Presents options for addressing a problem or achieving a policy objective	
Offers implementation considerations when addressing the policy problem or when achieving the policy objective	
Other – please describe (e.g. frequency, responsiveness):	
How interactive knowledge-sharing is organized	
Timed to relate explicitly to a policy-making process or to requests from policy-makers	
Involves closed list of invitees	
Involves pre-circulation of information products	
Includes rules about whether and how comments can be attributed	
Involves presentations by an expert	
Involves questions and answers targeted at an expert	
Involves policy-maker commentaries on an expert's input	
Involves a dialogue where each participant has the potential to contribute equally to the discussion	
Occurs through in-person interactions	
Occurs through synchronous online interactions	
Occurs through asynchronous online interactions	
Other – please describe:	
How wider use of the interactive knowledge-sharing outputs is supported	
Products created based on the knowledge-sharing interactions	
Option to sign up for an e-mail alert/listserv when new interaction-related products are posted online	
Other – please describe:	

Handout 4 Features of the **organizational model** currently in use

Features of the organizational model for knowledge brokering	Innovative or influential feature?
Role of policy-makers in organizational model's governance and management (e.g. located within government, director appointed by government, and staff paid by civil service grade; arms-length agency with independent board comprising policy-makers from several ministries and stakeholders such as insurance funds, and with a formal agreement with a policy-making body)	
Bylaws or other regulations that describe and secure independence	
Size, disciplinary mix, and knowledge translation expertise of staff	
Size of budget, contributions of national and regional policy-making authorities to the budget, and contributions of competitive peer-reviewed funds to the budget	
Approach to setting its agenda or annual programme of work (e.g. 30% directed by government and 70% set at the discretion of the director; formal prioritization process)	
Location within another organization (e.g. academic institution, scientific academy, foundation, think tank, disease-specific association, professional association, science and technology policy body, government, international agency) or network	
Use of rapid-response functions, exchange programmes, and other efforts to support responsive relations between researchers and policy-makers	
Public availability of its working procedures (e.g. approach to priority setting, data collection, analysis, review)	
Functions in more than one language	
Other – please describe:	

Handout 5 Features of the **approach to monitoring and evaluation** currently in use

Features of the approach to monitoring and evaluation of knowledge brokering	**Innovative or influential feature?**
Focus of the evaluation (e.g. packaging, knowledge sharing, organizational model):	
Nature of the evaluation (e.g. access/use, usefulness, impact):	
Sources of data for the evaluation (e.g. media coverage, citation in policy documents, independent evaluations of impact on systems and policies):	
Context for the evaluation (e.g. self-monitoring, internal evaluation, formal external evaluation):	
Efforts to attribute impacts to the organization and/or to specific mechanisms used by the organization:	
Other – please describe:	

Policy makers need to access up-to-date and high-quality health system information. Stakeholders may try to influence health policy as well as make decisions within their own area of work. Both groups want easily obtainable and clear evidence based on systematic and transparent research methods. Knowledge brokers (including researchers) want to know how to best communicate to decision-makers and need information about policy priorities in order to inform policy processes and share health system information effectively.

The purpose of this book is to spark innovation in knowledge brokering and to encourage debate on how information is prepared and how it will be understood and used. Part I looks at knowledge brokering from different vantage points and part II describes knowledge brokering in action.

It is hoped that this book will give health system policy-makers, stakeholders and researchers a clear understanding of knowledge brokering and its implications for the organization and management of knowledge-brokering initiatives.

This book results from a study on knowledge-brokering practices in Europe that was undertaken between 2009 and 2011, called BRIDGE (Scoping study of approaches to **B**rokering knowledge and **R**esearch **I**nformation to support the **D**evelopment and **G**overnance of health systems in **E**urope).

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