POLICY SUMMARY 8 (BRIDGE SERIES)

Learning from one another: Enriching interactive knowledge-sharing mechanisms to support knowledge brokering in European health systems

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Key messages

What's the problem?

- Health system policy-makers, stakeholders and knowledge brokers (including researchers) can learn a great deal from one another by working together. However, most existing knowledge-sharing mechanisms rely on traditional one-way communication with minimal dialogue between expert and audience.

What are the building blocks of interactive knowledge-sharing mechanisms?

- To engage policy-makers, stakeholders and knowledge brokers in meaningful ways, genuinely interactive knowledge sharing will make health systems information easier to understand and use, contextualize the information for a given jurisdiction, and incorporate the input of those who will be involved in or affected by decisions.
- The BRIDGE criteria can be used to assess an existing or planned knowledge-sharing mechanism.
  - What it covers: Does it address a topical/relevant issue from the perspective of policy-makers and stakeholders? Does it cover the many features of the issue (underlying problems or objectives for action, policy and/or programme options, and key implementation considerations)?
  - What it includes: Does it incorporate the tacit knowledge, views and experiences of policy-makers and stakeholders? Does it consider a body of health systems information on a defined topic?
  - How it's targeted: Does it explicitly describe policy-makers and stakeholders as key participants? Is it timed to relate to a policy-making process or to requests from policy-makers?
  - How it's organized: Are optimal participants proactively identified, invited and engaged in in-person or at least real-time online interactions? Are key information products pre-circulated? Does each participant have the potential to contribute equally to the discussion and are there explicit rules about whether and how comments can be attributed?
  - How its use is supported: Are insights captured through the creation of products based on the knowledge-sharing interactions? Are these insights publicly shared and brought to the attention of target audiences through e-mail alerts/listservs?

What are five innovative examples of interactive knowledge-sharing mechanisms?

- To encourage others to adopt or adapt more interactive ways of sharing knowledge on health policy issues, we provide innovative examples from organizations using each of the following mechanisms:
  - online discussion forum: offers policy-makers and stakeholders an opportunity to interact (but not in real time) with researchers and knowledge brokers;
  - online briefing or webinar: involves a web-based presentation by a researcher or knowledge broker where policy-makers and stakeholders can interact in real time about issues raised in the presentation;
  - training workshop: aims to help policy-makers and stakeholders enhance their skills in finding and using health systems information;
  - personalized briefing: provides policy-makers and stakeholders with a formal in-person presentation and discussion of health systems information on an issue that they have prioritized and framed; and
  - policy dialogue: convenes policy-makers, stakeholders and researchers to deliberate about a policy issue, and is ideally informed by a pre-circulated brief and organized to allow for a full airing of participants' tacit knowledge and real-world views and experiences.

What are the next steps for interactive knowledge-sharing mechanisms in Europe?

- Possible next steps include:
  - support for documentation of approaches and lessons learned through experimentation with interactive knowledge-sharing mechanisms;
  - support for adoption/adaptation of interactive knowledge-sharing mechanisms so that meaningful exchanges among those who produce and use health systems information become routine;
  - further innovation as defined by criteria in Box 5; and
  - ongoing evaluation to assess current and new mechanisms.
- Funders, knowledge brokers, policy-makers and stakeholders can all contribute to these next steps.

Summary

Policy-makers, stakeholders and knowledge brokers (including researchers) all have a great deal they can learn from one another. Policy-makers need access to good-quality health systems information that they can apply to a local issue. Stakeholders may seek to influence health policy as well as make decisions in their own spheres of responsibilities. 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.

The purpose of this BRIDGE summary is to encourage debate and innovation about the ways in which 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. 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.

This summary is intended not only for knowledge brokers whose work is dedicated to this role, but also for funders, researchers, policy-makers and stakeholders, all of whom can help to steer knowledge brokering by setting 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 Box 1.

Policy-makers need different kinds of health systems information in order to make well-informed decisions. For example, health systems information may:

- describe a problem or policy objective;
- present policy options to address the problem or achieve the policy objective; and/or
- identify implementation considerations (barriers, and strategies to address them, that may be encountered at the level of patients/citizens, providers, managers and policy-makers when addressing the policy problem or achieving the policy objective).

Knowledge-sharing mechanisms can help to make sense of one or more of these kinds of health systems information. They can also point out gaps in the information that's available for decision-making.

Empirical research has identified that researchers and policy-makers operate in two different worlds with researchers often not understanding policy-maker needs and policy-makers often not able to readily find and use many sources of health systems information (Lomas, 2007). Effective knowledge brokering can bridge that gap, particularly when it involves truly interactive knowledge-sharing opportunities.

Box 1: Key concepts and definitions used in this BRIDGE summary

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. (European Observatory on Health Systems and Policies)

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). (BRIDGE)

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

Data – Facts and statistics collected together for reference or analysis. (Oxford Dictionaries)

Research evidence – The results of a systematic study of materials and sources in order to establish facts and reach new conclusions. The results could take the form of conceptual frameworks, primary research studies and systematic reviews, among others. (Adapted from Oxford Dictionaries; BRIDGE)

Knowledge brokering – Use of information-packaging mechanisms and/or interactive knowledge-sharing mechanisms to bridge policy-makers' and researchers' contexts. Knowledge brokering addresses the four possible explanations for the disjuncture between information and action (which are described in Box 3). (BRIDGE)

Knowledge broker – An individual or organization that engages in knowledge brokering. We distinguish between dedicated knowledge brokers (whose work is focused on intermediating between health systems information producers and users) and researchers (who produce health systems information but also have a role in disseminating and supporting its use among various groups). (Adapted from Canadian Foundation for Healthcare Improvement; BRIDGE)

Interactive knowledge-sharing mechanisms – Mediating interactions that are focused at least in part on health systems information and that are intended to support policymaking. 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. (BRIDGE)

A full glossary of key concepts and definitions used in the BRIDGE study is available in the full BRIDGE volume (Lavis & Catallo, 2013) and the BRIDGE web pages of the European Observatory on Health Systems and Policies web site.

However, most existing knowledge-sharing mechanisms rely on traditional, one-way communication methods (Lavis & Catallo, 2013). They may be interactive in the sense that presenters and audiences are together in person or online, but not truly interactive in the sense that information is shared in a manner that actively engages the intended audience. Traditional approaches often result in missed opportunities for policy-makers and stakeholders to contribute to discussions with researchers; for knowledge brokers to gain a deeper understanding of policy-makers' needs; and for all parties together to work out the details of a policy problem, identify missing but needed information, and consider possible responses.

Compounding the problem, many current knowledge-sharing mechanisms are designed to convey a generic message to a generic context (e.g., presentations with a 'policy implications' slide). Few are designed to encourage policy-makers and stakeholders to work through what the health systems information means for their local policy context and for their particular role.

In this BRIDGE summary you will find practical lessons learned about how to enrich interactive knowledge-sharing mechanisms to support knowledge brokering in European health systems. We review possible reasons why policy-making audiences may not be engaging actively with information being shared, and we present criteria for assessing the utility of knowledge-sharing mechanisms – criteria that can serve as a guide to more interactive communication. We also describe examples of good practice in Europe and elsewhere that we hope will inspire you to explore more interactive methods of engaging with policy-makers, and we suggest potential next steps for enhancing such approaches in Europe.

This is one of three BRIDGE summaries; the other two are:

- BRIDGE Summary 1: Communicating Clearly, which examines information-packaging mechanisms (Lavis, Catallo et al., 2013); and
- BRIDGE Summary 3: Matching Form to Function, which examines organizational models for knowledge brokering (Lavis, Jessani et al., 2013).

Given their closely linked subjects (e.g., some information products feed into interactive knowledge-sharing activities and both depend on effective organizational models), the summaries inevitably overlap and you will notice some common content.

Two related policy briefs complement the BRIDGE summaries. One policy brief examines how knowledge brokering can be advanced in a country's health system (Lavis, Permanand, Catallo, BRIDGE study team, 2013). A second policy brief examines more broadly how knowledge brokering can be better supported across European health systems (Lavis, Permanand,

Catallo et al., 2013). Both policy briefs present various options for addressing the problems identified in the BRIDGE study.

About the BRIDGE study

BRIDGE (which stands for 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 don't know about knowledge brokering, and disseminate the findings to different audiences through various events and publications.

In preparing this BRIDGE summary we drew on a framework that we developed and modified over the life of the study, a systematic review of the research literature on what influences the use of health systems information in policy-making, a scoping review of knowledge-brokering mechanisms and models, an assessment of 398 potential knowledge-brokering organizations across 31 countries (the 27 European Union member states and 4 European Free Trade Association member states) and a web site review of 163 organizations deemed eligible (4 of which are global organizations and 17 European-focused), site visits for 28 organizations, and case studies in 4 countries. Our inclusion criteria for the web site review (and hence for the site visits and case studies) 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 target audiences other than policy-makers within Europe. We did not include organizations that do not put most of their products in the public domain. (Please see the Appendix for additional detail on our inclusion criteria.)

Our discussion of knowledge-brokering organizations and their products and activities reflects the information available during 2009–2011, when we were collecting data for the study. We acknowledge that the organizations have continued to evolve and we encourage readers to explore the web site links provided in this summary.

To learn more about the BRIDGE study, our methods and findings, and other BRIDGE products, please see the full BRIDGE volume (Lavis & Catallo, 2013) and the BRIDGE web pages of the European Observatory on Health Systems and Policies web site.

Context

Policy-making within and about health systems occurs at European, national and sub-national levels. Decisions are being made every day across Europe about a range of issues, all of which can be informed by health systems information (European Commission, 2008). For example, policy-makers and stakeholders may be grappling with:

- which risk factor, disease or condition to focus on (e.g., cancer, cystic fibrosis);
- which programmes, services and drugs to offer/fund/cover (e.g., to address obesity);
- which governance arrangements (e.g., to establish accountabilities), financial arrangements (e.g., to fund long-term care) and delivery arrangements (e.g., to foster teamwork) can help to get the right mix of programmes, services and drugs to those who need them and more generally to organize prevention, care and support; and
- which implementation strategies will best support behaviour change at the level of citizens or patients (e.g., self-management supports), providers (e.g., performance measurement and feedback) and organizations (e.g., boundary-spanning individuals whose significant social ties both inside and outside the organization enable them to link the organization externally) (Fretheim et al., 2009; Greenhalgh et al., 2004).

Europe has countless statistical agencies, research units and other organizations producing and disseminating health systems information. The information being produced and disseminated by these organizations addresses many of the challenges being faced in health systems and appears, superficially at least, highly topical. So why do we continually hear that health systems information is not being used as frequently or optimally as it could be, even by the international agencies that aim to support policy-making at the country level? (Hoffman, Lavis & Bennett, 2009; Oxman, Lavis & Fretheim, 2007)

One reason is that health systems information is just one of many factors that can influence policy-making processes (Lavis & Catallo, 2013). Institutions, interests, ideas and external forces also play a significant part in decision-making. For example, when we consider institutional factors that influence policy we might think of government structures (e.g., federal or decentralized versus unitary and central government), government policy legacies (e.g., health insurance legislation), and policy networks (e.g., executive council-appointed committees that involve key stakeholders). Interests can include interest groups per se (e.g., medical associations) as well as elected officials, civil servants (in some jurisdictions), and researchers (in some instances) who might also be advocating for particular decisions. Ideas can include knowledge or beliefs

about 'what is' (e.g., health systems information) and views about 'what ought to be' (e.g., values). Finally, external forces can include the release of major reports (e.g., European Commission reports or national commission and enquiry reports), political change (e.g., elections or cabinet shuffles), economic change (e.g., recession), technological change (e.g., new imaging technology), new diseases (e.g., severe acute respiratory syndrome), and media coverage (e.g., hospital waiting times).

These are factors that knowledge brokers cannot control, although a skilled knowledge broker will see that these factors may offer strategic opportunities as to when and how to introduce interactive knowledge sharing into policy-making processes. A skilled knowledge-brokering organization will recognize that it needs to use interactive knowledge-sharing mechanisms that fit its policy-making context. A national policy-making context can be considered to be located at the intersection of:

- policy-making institutions and processes;
- stakeholder opportunities and capacities for engagement; and
- 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 features are outlined in Box 2.

To simplify the presentation of these features, we treat each one in an 'either/or' way (a versus b). The reality, of course, is quite different. Policy-making processes may have elements of decision support driven centrally by the president's or prime minister's office and in a decentralized way within ministries. 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 is likely to simplify the landscape for a knowledge-brokering organization while the second one is likely to complicate it.

For example, a knowledge-brokering organization will probably 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.

Box 2: Attributes of the national policy-making context that can influence knowledge brokering

Salient features of **policy-making institutions and processes** could include:

- 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 leaders in it
- 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 rate within the civil service
- significant versus limited resources to commission support outside the civil service

Salient features of **stakeholder opportunities and capacities for engagement** could include:

- 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 support outside the groups

Salient features of **research institutions, activities and outputs** could include:

- small versus large numbers 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

In addition, **general features** of the national policy-making context could include:

- English (the language of most health systems information) is versus isn't 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

While we focus here on national policy-making contexts, the same points hold true at European and sub-national levels when a knowledge-brokering organization is focused at one of those levels. For example, an organization creating an interactive knowledge-sharing event to inform policy-making at the European Union (EU) level must consider the same features described in Box 2 but with a focus on EU policy-making institutions and processes and on stakeholders and research institutions operating at the EU level.

However, even knowledge-brokering organizations focused on national and sub-national levels need to respond to regional and global contexts. An organization's decision to adopt or adapt an interactive knowledge-sharing mechanism used elsewhere in the region, or to adapt, re-package or translate a series of information products prepared elsewhere in the region to be circulated in advance of the event, is likely to be influenced by the degree of local support for the diffusion of innovations and policy transfer and by how cooperative or competitive relations are between countries. This decision may also be influenced by the presence or absence of global networks (such as exist with health technology assessment agencies) that promote and support cross-national learning.

From the perspective of a knowledge-brokering organization, the central challenge is to find ways to match its interactive knowledge-sharing mechanisms to its national policy-making context given the specifics of that context, the European policy-making atmosphere in which it operates, and the global milieu in which it is located.

But even when we consider health systems information as just one of many inputs to decision-making, we must also recognize that policy-makers and stakeholders may not value health systems information and may see it as not relevant to the policy issues they face. In Box 3 we outline four broad challenges associated with brokering health systems information to support policy-making. This BRIDGE summary primarily focuses on challenge 4 and also on challenges 1 and 2 which can be addressed, at least in part, through interactive knowledge-sharing mechanisms. To foster discussion on the benefits of better knowledge brokering, we suggest in Box 4 what success might look like if interactive knowledge-sharing mechanisms were significantly enhanced across Europe.

Box 3: Challenges for knowledge brokering

Broadly speaking, knowledge brokering to support health systems policies faces four big challenges:

- Health systems information isn't communicated effectively (e.g., policy-makers and stakeholders hear 'noise' instead of 'music' coming from those producing health systems information) (i.e., wrong 'unit' of focus).
- Health systems information isn't available when policy-makers and stakeholders need it and in a form that they can use (i.e., wrong time and wrong packaging).
- 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.
- Policy-makers and stakeholders lack opportunities to discuss system challenges with researchers.

Box 4: Success measures for knowledge brokering

Measures of success in addressing these challenges could include:

- greater use of 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)
- better decisions within and about health systems
- improved health (although attribution challenges make this very difficult to assess; it may be impossible to prove that a given information-packaging or knowledge-sharing mechanism had an explicit impact on a given policy decision)

Problem

The overarching problem with most existing interactive knowledge-sharing mechanisms is that they rely on traditional one-way types of communication that employ passive dissemination strategies and are not designed, executed and followed up in a way that makes it easy for all parties to benefit from an opportunity to exchange information and perspectives. Through the BRIDGE study we documented the various types of knowledge-sharing mechanism being used by knowledge-brokering organizations in Europe. Drawing on our framework and systematic review (both are presented in the BRIDGE volume, Lavis & Catallo, 2013), we were able to describe a number of challenges with the most frequently used mechanisms, and we offer some possible explanations for these challenges.

Few commonly used knowledge-sharing mechanisms are genuinely interactive

In the BRIDGE study we found that the knowledge-sharing mechanisms most commonly used in Europe included (in order of frequency):

- presentations of health systems information to an audience that includes policy-makers and stakeholders, such as at a conference;
- informal discussions with policy-makers and stakeholders; and
- networks established to oversee a research programme or project related to a policy issue.

Training workshops are also commonly used; however (according to descriptions available on organization web sites), they appear to be focused typically on more generic skills and not on finding and using health systems information.

We recognize that this list does not capture more informal interactive forms of knowledge sharing, such as e-mail exchanges between researchers and policy-makers. Furthermore, sensitivities around some of the discussions and their implications on health systems decision-making may preclude public sharing of some deliberations. In addition, we note that these three approaches may involve information products such as policy briefs that provide a foundation for discussion of the policy issue and policy dialogue reports that describe the insights derived from a policy dialogue; please see BRIDGE Summary 1 for a discussion of information-packaging mechanisms.

The common mechanisms share a number of challenges

Various features of knowledge-sharing mechanisms can limit their usefulness for policy-makers and stakeholders and indeed sometimes even for knowledge brokers themselves. This can occur when the knowledge-sharing mechanism:

- does not involve the proactive identification of optimal participants, pre-circulation of information products to participants, and a rule about whether and how comments can be attributed;
- does not involve a dialogue where each participant has the potential to contribute equally to the discussion or at least opportunities for policy-makers and stakeholders to comment or ask questions of an expert (and not just listen to a presentation by an expert);
- does not involve in-person interactions or at least online interactions in real time; and
- is not supported through the publication of products that capture insights from the interactions and an option for participants to sign up for an e-mail alert/listserv that will notify them when new, related products are posted online.

In addition, an interactive knowledge-sharing mechanism may have limited utility if, like many commonly used information-packaging mechanisms (as discussed in BRIDGE Summary 1), it:

- does not target a policy-maker and stakeholder audience;
- focuses on the output of a single research project and not on a body of health systems information on a defined topic or without putting the single output in the context of a body of health systems information (e.g., systematic review);
- focuses on either a problem or a policy objective, or on options for addressing a problem or achieving a policy objective, or on key implementation considerations related to the policy options, but not on all three of them or without acknowledging the importance of the other two;
- does not originate from an issue raised by policy-makers and stakeholders;
- is not timed to relate explicitly to a policy-making process or to requests from policy-makers.

These challenges may share common roots

There are a number of possible explanations for the challenges outlined above:

- Funding agencies may be creating the wrong incentives or requirements for researchers to share health systems information. For example, funding criteria may emphasize the production and dissemination of information products rather than encouraging interaction between the producers and users of the information. Or, funding criteria may reward interactions only in the context of research projects and/or presentations by experts rather than in the context of issues identified by policy-makers and stakeholders and the real-world timelines in which they must respond to the issues.
- Researchers may lack knowledge about promising interactive mechanisms for knowledge sharing and/or capacity and support to execute them.
- Knowledge brokers may be tasked with many roles (e.g., meeting planner, presenter, workshop facilitator, listserv moderator, outreach worker and customer relations manager) and may not have time to learn about or execute promising mechanisms.
- Policy-makers and stakeholders may lack knowledge about promising mechanisms and/or capacity to request them. Additionally, the organizational culture that they work in may not support engaging in external discussions about potentially sensitive policy issues.

In considering these challenges, it can be helpful to understand that policy-making and research are two domains with different goals and incentives, despite their common interest in improving health systems.

- Policy-makers (and health system managers) ideally use data generated by health systems to inform which problems they focus on, which options they choose to address key problems, and which implementation strategies they consider. The goals here may be related to processes (e.g., more patients seen) or outcomes (e.g., improved health status), and incentives are more often tied to the former than the latter.
- Researchers may use the data generated by health systems or they may collect it themselves, and they do so in the context of research projects that generate the outputs that can be a source of information for health systems. The goals here may be process-related (e.g., more research reports written or more research grants received) or outcome-related (e.g., improved decision-making about health systems), and incentives are again more often tied to the former than the latter.

In thinking about how to improve knowledge brokering to support health systems policy, a useful first step may be to consider whether existing goals and incentives for all actors are aligned with the goals and objectives of interactive knowledge-sharing (the focus of the next section).

Building blocks for interactive knowledge-sharing mechanisms

Based on learnings from the BRIDGE study, we have identified possible features of interactive knowledge-sharing mechanisms that could make for more meaningful engagement between policy-makers, stakeholders and researchers. These features can be thought of as criteria to assess existing knowledge-sharing strategies, as we did in the BRIDGE study, and as building blocks to create promising mechanisms that involve policy audiences in innovative ways.

This section summarizes our findings and suggests ways this thinking might be used. We do not consider these points the definitive answer to better knowledge-sharing; we offer them to promote reflection and spur discussion and debate.

Consider what interactive knowledge-sharing mechanisms need to do

If the goal of interactive knowledge-sharing mechanisms is to engage policy-makers, stakeholders and researchers in a meaningful way, these mechanisms will need to meet certain objectives. For example, interactive knowledge-sharing mechanisms could:

- make health systems information easier to understand and use (eg., presentation and discussion of key implications);
- contextualize health systems information for a given jurisdiction (e.g., background on the policy context, local data, assessments of local applicability of the evidence); and

- complement health systems information by actively eliciting the tacit knowledge, views and experiences of those who will be involved in or affected by decisions.

Many existing mechanisms are unlikely to achieve these objectives due to the challenges outlined above.

Refer to the BRIDGE criteria to assess your current knowledge-sharing mechanisms

With these objectives in mind, we have identified 11 criteria that can be used to assess interactive knowledge-sharing mechanisms. We group these criteria under five broad headings in Box 5.

Box 5: Criteria to assess an interactive knowledge-sharing mechanism

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's targeted

5. targets policy-makers and stakeholders with an explicit statement that they are a key category of participant (not just researchers)
6. is timed to relate explicitly to a policy-making process or to requests from policy-makers

How it's 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 (and 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

Whatever your role in the support, creation or use of knowledge-brokering opportunities, consider how the interactive knowledge-sharing mechanisms you encounter would fare against these criteria. Given the specific objectives of your activities, as well as the context in which you're working (prompted by a review of Box 2), how would addressing each of these criteria enrich the engagement of multiple actors interested in the information being shared? Keep in mind that different objectives may warrant giving more weight to some criteria than others.

Compare how existing knowledge-sharing mechanisms perform against these criteria

In order to appreciate the extent to which various types of interaction actively engage both producers and users of health systems information, we assessed the following eight types of interactive knowledge-sharing mechanism against the criteria outlined in Box 5:

1. presentations describing evidence from a single study;
2. informal discussions;
3. networks;
4. online discussion forums;
5. online briefings/webinars;
6. training workshops;
7. personalized briefings; and
8. policy dialogues.

Table 1 summarizes what we found, with an X indicating that most examples we examined for a product type (1–8) met the criterion. Only one mechanism met more than 6 of the 11 criteria, namely policy dialogues, however, not all of the policy dialogue series we identified met all of these criteria. Only the online mechanisms – online discussion forums (4) and online briefings/webinars (5) – and in-person policy dialogues (8) typically involve the capturing of insights through products based on interactions.

Our assessments are based on many real-world examples of each type of interactive knowledge-sharing mechanism from across Europe (see Box 6 for more on our methods). In some cases, we found innovative mechanisms that met the criteria in creative ways and embodied different combinations of features. In the next section, we highlight five types of innovative example and, based on the BRIDGE research, describe their strengths and suggest ways they could be further improved.

Table 1: An assessment of interactive knowledge-sharing mechanisms against the BRIDGE criteria

Criteria	Types of interactive knowledge-sharing mechanism							
	1	2	3	4	5	6	7	8
What it covers								
1. addresses a topical/relevant issue		X		X	X		X	X
2. addresses the many features of an issue						X	X	X
What it includes								
3. focuses in part on tacit knowledge, views and experiences				X	X	X		X
4. considers in part a body of health systems information						X	X	X
How it's targeted								
5. targets policy-makers and stakeholders		X	X	X	X	X	X	X
6. is timed to relate to a policy-making process or to requests					X		X	X
How it's organized								
7. involves targeted invitations, interaction and attribution rule			X			X		X
8. involves the pre-circulation of information products								X
9. each participant has the potential to contribute		X		X		X		X
How its use is supported								
10. captures insights through products based on interactions				X	X			X
11. brings these products to attention through e-mail alerts/listservs				X	X			X

Box 6: How did we assess BRIDGE data against these criteria?

- Data for 163 eligible knowledge-brokering organizations in 31 countries were collected through a web site review followed by an in-depth site visit for a sample of 28 organizations.
- Criteria to assess the eligibility of the organization for the BRIDGE study are found in the Appendix.
- To assess innovativeness in information packaging, each mechanism was reviewed against the criteria in Box 5. The review was conducted by one BRIDGE study team member for all 163 organizations and by two BRIDGE study team members for the 28 organizations that were the focus of site visits. Differences between the two assessors were resolved through discussion. A third BRIDGE team member was consulted for a final decision when the two assessors could not obtain agreement.

Five innovative examples that others could adopt or adapt

We have identified five innovative types of interactive knowledge-sharing mechanism that meet many of the BRIDGE criteria outlined in Box 5. For each type of mechanism, we provide:

- an innovative example(s) of a series and, where available, links so the series can be explored;
- an innovative example(s) of a typical forum or event in the series and, where available, links so it can be examined;
- an assessment of the strengths of the series, based on how well it meets the criteria in Box 5; and
- an assessment of how the series might be improved so that it meets more of the applicable criteria.

Our aim here is not to say that these are unquestionably the best mechanisms or examples of mechanisms. It is far too early in the generation of evidence about interactive knowledge sharing to make such a bold statement. Instead we hope to encourage others to adopt or adapt these mechanisms and rigorously evaluate them because we believe that they meet at least some of the criteria we consider to be important in interactive knowledge sharing. Our aim is also to spark the creation of new mechanisms that meet some of the same or even different criteria.

It is important to note that work profiled here comes from organizations that emphasize their knowledge-brokering function and therefore embody a diversity of elements that are addressed in all three BRIDGE summaries. Here we focus on their interactive knowledge-sharing mechanisms; however, readers interested in their information-packaging mechanisms and organizational models may find a promising example of each of these described in detail in BRIDGE Summary 1 and BRIDGE Summary 3, respectively.

1) Online discussion forums

An online discussion forum offers policy-makers and stakeholders an opportunity to interact (but not in real time) with researchers and knowledge brokers.

A blog series is one type of online discussion forum, and a good example is the PRAXIS blog from Poliitikauuringute Keskus (PRAXIS)/Centre for Policy Studies (PRAXIS). This blog series, written in Estonian, discusses current research results as they relate to health systems issues. The PRAXIS blog series can be viewed online, as can an example of a blog in the series. (This example relates to population policy and the need for comprehensive social protection in an ageing population.) PRAXIS is also profiled for its organizational model in BRIDGE Summary 3.

The PRAXIS blog series, like other similar series, has a number of key strengths:

- addresses a topical/relevant issue;
- focuses in part on tacit knowledge, views and experiences;
- targets policy-makers and stakeholders (in addition to researchers and others);
- each participant (in this case, every reader of the blog) has the potential to contribute by commenting on the blog (and moderated contribution of blog entries is under discussion);
- captures insights through products based on interactions (in this case, the blog series itself); and
- brings these products (in this case, blogs focused on new topics) to the attention of policy-makers and stakeholders through e-mail alerts/listservs.

While this blog series invites policy-makers and stakeholders to post comments, we found few responses to blog postings by PRAXIS staff. This is a challenge faced by many organizations that generate new blog series; they must consider ways to engage their target audiences to actively participate in the blog responses and offer their views and experiences.

Although promising, online discussion forums can only be as helpful as their format permits. As an interactive knowledge-sharing mechanism, online discussion forums may be limited by the fact that they cannot offer real-time interactions between the organization that creates the blog and those who read and respond to it. In addition the PRAXIS blog, like many other blogs, typically:

- does not address the many features of an issue (at least not in a systematic way);
- does not consider a body of health systems information;
- is not timed to relate to a policy-making process or to requests from policy-makers;
- does not involve targeted invitations or an attribution rule (however, presumably any posted comments can be attributed to the individual who posted them); and
- does not involve the pre-circulation of information products (for example, to launch a new topic).

These features constitute potential areas of improvement for online discussion forums.

Some organizations host intranet sites (closed, members-only sites) that may involve discussion boards. While these do not foster open dialogue beyond the closed network, they create a safe way for members to discuss policy issues and exchange information. Also, a number of organizations are begining to rely on social media (e.g., Facebook web pages) as a discussion forum. A common challenge with this approach among the organizations that we reviewed for the BRIDGE study was the lack of dialogue in these online discussion forums between

the knowledge-brokering organization and others like policy-makers, stakeholders and researchers. Facebook pages were often used to post new information products but not to create true discussion forums informed by these products.

2) Online briefings or webinars

An online briefing or webinar is a web-based presentation by a researcher or knowledge broker where policy-makers and stakeholders can interact in real time about the issues raised in the presentation.

A good example of an online briefing is the series from The King's Fund in the United Kingdom, a foundation that we also profile for its organizational model in BRIDGE Summary 3. These events involve webcasts of breakfast meetings or seminars featuring policy-makers, stakeholders and researchers, with audio and video recordings of the briefings later made available through The King's Fund web site. While the events are webcast, it's not always the case that remote participants can ask questions of the speakers in real time; however, responses to Twitter posts can be fed back to speakers in the form of questions. An example of this series discusses implications from the UK government's white paper on public health.

The online briefing series, like other similar series, has a number of strengths:

- addresses a topical/relevant issue (at the time of data collection this had included issues such as the United Kingdom government's Big Society vision as it relates to public health);
- focuses in part on tacit knowledge, views and experiences;
- is timed to relate to a policy-making process or to requests (in this case, the government's white paper);
- targets policy-makers and stakeholders (in addition to researchers and others);
- captures insights through products based on the interactions (e.g., Twitter posts made during the event as well as a blog summarizing the comments and issues that arose during the discussion, and presenting areas for potential focus or action on the issue); and
- brings these products to the attention of target audiences through e-mail alerts/listservs.

A good example from outside the region is the Breakfast with the Chiefs series from Longwoods publishing. This series provides online briefings by invited health system leaders who share new ideas, policies and/or best practices with colleagues. Speakers include policy-makers, stakeholders and researchers. Because the speakers are scheduled far in advance, they are less likely than The King's Fund series to relate to a policy-making process. Participants can attend

the briefings in person or via webcast, and both types of participant have the potential to contribute by posing questions to the expert presenter. A video of the full event is made available on Longwoods.com a week after the live presentation. An example of a Breakfast with the Chiefs session discusses the role of community hospitals. The King's Fund series, like other online briefings we identified usually:

- does not address all of the different features of an issue (at least not in a systematic way);
- does not consider in part a body of health systems information (e.g., systematic reviews);
- does not involve targeted invitations to online participants or an attribution rule, although presumably any comments captured in audio or video can be attributed to the individual who made the comments;
- does not involve the pre-circulation of information products; and
- does not offer each participant (specifically the many online participants) the potential to contribute in real time.

These points can be considered areas for improvement by other organizations who prepare similar types of online briefing or webinar, although in particular contexts there may be good reasons for not addressing them. Such events may be particularly useful when they are timed to address a relevant policy issue for which policy-makers and stakeholders are seeking further information to support decision-making on policies or programmes.

3) Training workshops

A training workshop is a session that aims to help policy-makers and stakeholders enhance their skills in finding and using health systems information.

A good example is the training workshop, the first in a planned series, offered by the Nasjonalt Kunnskapssenter for Helsetjenesten (NOKC)/Norwegian Knowledge Centre for the Health Services (NOKC). This workshop draws heavily on the SUPporting POlicy Relevant reviews and Trials (SUPPORT) tools for evidence-informed policy-making (Lavis et al., 2009) and covers how to find and use health systems information to clarify a problem, frame options to address a problem, and address how an option will be implemented. NOKC's organizational model is highlighted as a promising example in BRIDGE Summary 3.

Strengths of this workshop, like other training opportunities with similar objectives, include:

- addresses the many features of an issue;
- focuses in part on tacit knowledge, views and experiences (for example, through the SUPPORT tool on policy dialogues);

- considers in part a body of health systems information;
- targets policy-makers (but not stakeholders);
- involves targeted invitations and in-person interaction (but not an attribution rule); and
- offers each participant the potential to contribute.

A good example of a training series from outside the region is the EXTRA/FORCE programme from the Canadian Foundation for Healthcare Improvement/Fondation canadienne pour l'amélioration des services de santé. This is an intensive, two-year training programme that helps policy-makers and stakeholders (in this case, managers in health-care organizations) to find and use health systems information to diagnose problems and design and implement interventions of importance within their organizations.

Training workshops are a useful mechanism for engaging policy-makers and stakeholders in skill development so they can find and use health systems information, but such training typically:

- does not (necessarily) address a topical/relevant issue, although participants in these workshops are encouraged to pick an issue that they are working on as the focus for the problem-based learning;
- is not timed to relate to a policy-making process or to requests;
- does not involve the pre-circulation of information products; and
- does not capture insights through products based on the interactions, and consequently products cannot be brought to the attention of target audiences through e-mail alerts/listservs.

These may be justifiable features of a training workshop, given its general skill development objectives. However, training workshops or programmes may be improved (and take better advantage of the event to provide more meaningful interaction on relevant policy issues) by involving policy-makers in identifying issues that will be examined during the training, by planning such training in relation to a specific policy-making process, and by capturing the insights from the training for current and future work.

Some organizations, such as the Fundación Gaspar Casal (FGC)/Gaspar Casal Foundation (FGC) in Spain, offer targeted training workshops that involve policy-makers. However, these workshops appear to focus on general management training or policy-related training and less on how to find and use health systems information.

4) Personalized briefings

A personalized briefing is a formal in-person presentation and discussion of health systems information on an issue prioritized and framed by policy-makers and stakeholders.

The Terveyden ja Hyvinvoinnin Laitos (THL)/National Institute for Health and Welfare in Finland is an organization that provides personalized briefings to the national parliament or a parliamentary committee, usually as part of a public hearing in a legislative process. We profile THL's organizational model in BRIDGE Summary 3. These briefings present a formal statement that is typically prepared at the request of policy-makers but is sometimes offered at the suggestion of THL. These formal statements are not posted on the THL web site but may be available through the parliament's web site. Strengths of this mechanism include:

- addresses a topical/relevant issue;
- addresses the many features of an issue;
- considers, at least in part, a body of health systems information;
- targets policy-makers (but not a wider set of stakeholders); and
- is timed to relate to a policy-making process or to requests from policy-makers.

While personalized briefings are potentially innovative and influential interactions, this knowledge-sharing mechanism typically:

- does not focus in part on tacit knowledge, views and experiences;
- does not involve targeted invitations to an optimal range of participants (in this case the focus is on the organization's expert view) or an attribution rule (however, presumably the formal statement can be attributed to the organization);
- does not offer each participant the potential to contribute (only the members of the group to whom the briefing is being given can contribute); and
- does not capture insights through products based on the interactions and consequently products cannot be brought to the attention of target audiences through e-mail alerts/listservs.

Also, the briefings do not always involve the pre-circulation of information products.

Many of these points reflect the realities of a remarkably direct opportunity to influence policy-making, although it may be helpful to consider these points as ways in which such briefings might be enriched. While other European organizations may offer personalized briefings to discuss health systems

information with policy-makers and/or stakeholders, few were identified as part of the BRIDGE study (either as part of the review of web sites of knowledge-brokering organizations or through the site visits with a sample of organizations).

5) Policy dialogues

A policy dialogue convenes policy-makers, stakeholders and researchers to deliberate about a policy issue. Ideally the dialogue is informed by a pre-circulated policy brief and organized in a way that allows for a full airing of participants' tacit knowledge and real-world views and experiences.

A good example of a policy dialogue series is organized by the European Observatory on Health Systems and Policies, which is also highlighted for its organizational model for knowledge brokering in BRIDGE Summary 3. A list of completed policy dialogues provides examples that span a broad range of issues related to governance, financial and delivery arrangements within European health systems. An example of a policy dialogue is one related to addressing health workforce issues in the European Union and beyond, and a policy dialogue report was created as a result of this event (which is not typical for this policy dialogue series).

Key strengths of this policy dialogue series, like other policy dialogue series, include:

- addresses a topical/relevant issue;
- addresses the many features of an issue;
- focuses in part on tacit knowledge, views and experiences (they are drawn out by an impartial mediator who ensures that all perspectives are heard);
- targets policy-makers and stakeholders;
- is timed to relate to a policy-making process or to requests;
- involves targeted invitations and in-person interactions (but not an attribution rule); and
- offers each participant the potential to contribute (although experts are given greater attention than local policy-makers and stakeholders by virtue of the time devoted to their presentations).

An example of note from outside Europe is the McMaster Health Forum stakeholder dialogues. This series is unique in the broad array of products made publicly available after each dialogue. An example of the stakeholder dialogue series relates to developing a rural health strategy in Saskatchewan, Canada, with the following typical products related to this dialogue available online:

- a topic overview that introduces the topic and the products available on the topic;

- an evidence brief that mobilizes relevant health systems information about a problem, three options for addressing the problem, and key implementation considerations (the evidence brief is circulated to dialogue participants 10 days before the event);
- video interviews that are conducted with participants immediately following the dialogue;
- a dialogue report that captures the key insights and next steps identified during the deliberations; and
- a monthly evidence service that highlights newly published or newly identified health systems information that can add momentum to or suggest the need to modify plans arising from the dialogue.

Individually the policy dialogues organized by the European Observatory on Health Systems and Policies are seen by their organizers to be influential. A few areas for improvement of these policy dialogues include opportunities for:

- considering in part a body of health systems information (e.g., by means of a policy brief);
- pre-circulating information products; and
- capturing insights through products based on the interactions for all policy dialogues.

Next steps within Europe

Possible next steps to enrich interactive knowledge-sharing mechanisms across Europe include:

- support for documentation of approaches and lessons learned through experimentation with interactive knowledge-sharing mechanisms;
- support for adoption/adaptation of interactive knowledge-sharing mechanisms to establish routine forums for meaningful exchange among policy-maker and stakeholder audiences and knowledge-brokering organizations;
- further innovation as defined by criteria in Box 5; and
- ongoing evaluation to assess current and new mechanisms. This could include formative evaluations whereby knowledge-brokering organizations create, adopt or adapt interactive knowledge-sharing mechanisms, solicit feedback about them from policy-makers and stakeholders, and monitor their use to continually improve them. Evaluation could also take the form of summative evaluations whereby knowledge-brokering organizations examine the impact that the interactive knowledge-sharing mechanisms are having, with reference to measures suggested in Box 4.

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

- Funders can fund or directly undertake the documentation of approaches and lessons learned, fund or create learning/sharing opportunities for knowledge-brokering organizations (e.g., conferences, workshops, mentoring and networking), innovate in their own knowledge-sharing mechanisms, and fund both formative and summative evaluations.
- Knowledge-brokering organizations can contribute to the documentation of approaches and lessons learned, participate in learning/sharing opportunities, innovate in their own knowledge-sharing mechanisms, and participate in evaluations of information products.
- Researchers could assist these knowledge-brokering organizations by permitting their work to be the focus of interactive knowledge-sharing mechanisms, participate in the organization of these interactions, and permitting products based on these interactions to be made publicly available. A subset of researchers with particular interests in knowledge brokering could lead evaluations of knowledge-sharing mechanisms.
- Policy-makers can learn about what expectations to set through learning/sharing opportunities, communicate their expectations about interactive knowledge sharing, and participate in evaluations.

In addition to national action on these next steps, the clearest opportunities to add value through European action are in support for documentation and for evaluation, as well as in funding learning/sharing conferences and networks that bring together a nascent community of European knowledge brokers who can showcase their own innovations and learn from others. While many knowledge-sharing mechanisms are appropriately targeted at the national level, there are economies of scale that could accrue from a Europe-wide focus on learning/sharing across national borders and on evaluation of a range of knowledge-sharing mechanisms from across Europe but using a common evaluation framework. At the same time, some knowledge-sharing mechanisms are appropriately targeted at the European level where only a Europe-wide focus would make sense.

Additional thoughts about possible next steps can be found in the two BRIDGE policy briefs. While the first policy brief focuses on how knowledge brokering can be advanced in a country's health system (Lavis, Permanand, Catallo, BRIDGE study team, 2013), action at the European level could include supporting the types of activity described in the policy brief. The second policy brief examines more directly how knowledge brokering can be better supported across European health systems (Lavis, Permanand, Catallo et al., 2013).

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Appendix

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:

- 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.
- 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 that this means guideline-producing organizations and health technology assessment agencies, which are routinely studied, are not covered.
- 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.
- 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.
- 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 do not make their reports publicly available.
- 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.
- 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).

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 study 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 (across the 27 European Union member states and 4 European Free Trade Association countries), describe them in the context of what we know and what we don't know about knowledge brokering, and disseminate the findings to different audiences through various events and publications.

The **European Observatory on Health Systems and Policies** is a partnership that supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health systems in the European Region. 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 Observatory's products are available on its web site.

(http://www.healthobservatory.eu).

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