

Using evidence for policy-making in health



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How is evidence used in policy-making in health? The answer to this fundamental question requires an appreciation of the different mindsets, mentalities and “world views” of researchers and public policy-makers, and how these conditions influence the way they work, or do not work, together. An insight into this key dynamic then allows consideration of various possible solutions on how to improve this critical relationship so that scientific evidence may truly drive and inform health decision- and policy-making.

Goals, priorities, attitudes towards information, time pressures, accountability mechanisms and career paths tend to be different between researchers and policy-makers. They often distrust one another’s motives, lack respect for each other, have different views on the production and use of evidence, different accountabilities, and disagree on the fundamental issue of whether there should be a link between science and policy. Some possible solutions can be put forward to improve the use of evidence in policy-making: using knowledge “brokers” (translational researchers), new and better incentives to encourage researchers and policy-makers to work together, organizational capacity-building and embedding research in implementation, utilizing a broader definition of research, re-defining the starting point for knowledge transfer, and, finally, acknowledging that policy-making is a highly complex process.

In the face of continuing global health challenges, times of scarce resources and competing priorities, the use of evidence to inform policy-making becomes a moral and ethical responsibility and should be the key driver for improving health system performance.

Researchers and policy-makers are different creatures living in different worlds

Despite the intuitive, logical assumption that scientific evidence should automatically inform policy, there are problems in implementation and evidence-based policy is a goal which is not always reached¹⁻⁵. Many researchers are sceptical about the extent to which research is used, and, in turn, many policy-makers are sceptical about the usefulness of research in general. The causes for the disconnect are

complex but are probably related to some key factors including the fact that researchers and policy-makers have different goals, speak different “languages” and have different time frames for their work.

A researcher has, as his primary goal, the generation of new knowledge and the advancement of science. She/he often measures success through the publication of scientific publications in peer-reviewed academic journals, with this activity often used as the primary criteria for career advancement (the “publish or perish” syndrome). They are often less interested in broader issues, for example, the “big-picture” social or policy aspects and impact of their work. The objective in the research world is “publications, patents, and professorships”⁶. Given the unprecedented rate of increase in knowledge, researchers tend to become extremely specialized and narrow in their field of research, often resulting in others (researchers and non-researchers alike) not able to fully understand or appreciate the importance of their work. They aspire to become an “expert/professor/specialist” and work largely according to a rational, intellectual model.

In contrast to this desire for recognition by peers, the goal of policy-makers is to obtain popular support. Much of their daily work is to “put out fires” and manage political crises and they are thus more interested in broader issues, e.g. solutions that can be generally applied to a wide variety of problems and which are politically acceptable. So, in contrast to the research community, the key considerations in the policy world is “policy, practice, and people”⁶. Because of time pressures and lack of necessary skills policy-makers have very little time to read or evaluate original scientific publications of primary research. Instead, they prefer to read short summaries or even just “bullet points”. They strive to become a “Mr/Ms Fix-it and Jack of all trades”, and better still is if they can do this across different portfolios. They search for compromise and rapid fixes, by using an intuitive, visceral model.

Research researchers speak their own language which normally consists of at least some Greek letters and mathematical symbols. Their language often requires “translation” before it can be understood by non-researchers,

Policy-makers	Researchers
Complex policy problems	Simplification of the problem
Focused solutions	Interest in related but separated issues
Reducing uncertainties	Funding the truth
Speed	Time to think
Control and delay	Publish or peril
Manipulation	Explanation
Feasible and pragmatic solutions	Thoughtful deliberations

Source: Bensing JM. Doing the right thing and doing it right: toward a framework for assessing the policy relevance of health service research. International Journal of Technology Assessment in Health Care, 2003, 19:604-512.

Table 1: Conflicting interests of policy-makers and researchers

or even fellow researchers in a different field. Researchers often add a standard clause at the end of their papers stating that “our research indicates that more research is needed”. This is, of course, both exculpatory (“don’t blame me if this isn’t correct”) and self-serving (“but if you give me more money I might be able to give you a better answer”). Herein lies a key point of distrust: policy-makers believe that researchers do research primarily to generate more funding for more research, and not for the potential value of the research to society.

“Policy speak” is often used to describe the language which policy-makers use and it often contains acronyms, which in turn are defined by other acronyms. Much of the communication is confidential in nature and for a closed audience, and driven by unpublicized political agendas. They often include multiple signatures or are anonymous (containing no signatures), and are often stamped as “confidential”. While policy-makers do sometimes conduct research, it is rare to see their findings published in peer-reviewed scientific journals, if released at all. In general, the culture of open sharing of knowledge and information is not part of the policy-making world.

Scientific research in general is driven by fairly long time frames. Researchers want time for contemplation, thinking, formulating hypotheses, analysis, syntheses, talking to colleagues and more reflection. In general, it is believed that the longer it takes to do a research study, the better the research quality. It is also a fact that the process of science is a cumulative one and builds on the previous work of others. Many researchers spend their entire research career in one narrow subject area, in order to build up their expertise and track record, as well as national and international reputation in that area – to many, this is an end in itself.

In contrast, policy-makers work to a very different, much shorter time scale, often a matter of days or weeks. Answers are always needed instantly and the time pressures often take precedence over quality, since they must have prompt and firm opinion to look credible. This is reflected in the classic policy-makers’ sentiment, “I have made up my mind, don’t confuse me with the facts”. Policy-makers usually have short tenure managing projects, and will move on quickly to other responsibilities, in order to build up their repertoire of expertise in a wide variety of different areas. The conflicting interests of policy-makers and researchers is given in Table 1.

Why are they different?

The incompatibilities between researchers and policy-makers lead to very real problems in terms of promoting better use of evidence for health policy development. If they are to work together, researchers and policy-makers must know each other’s strengths and weaknesses, as well as likes and dislikes. There are a number of key issues that must therefore be addressed.

Researchers and policy-makers often lack trust and respect for the respective roles that they play. Researchers often have a “superiority complex” which translates into a condescending attitude and a lack of respect for those who are not researchers. They often take the view that their research is to be reviewed only by their peers and find it difficult to conduct “directed” or “applied” research, regardless of the potential benefits to society in general. They consider “academic freedom” to be sacrosanct and expect to be allowed to pursue their interests with no constraints. Therefore, they often resent the power of policy-makers to control research funding and the frequent misuse that is made of scientific data to fulfil a politically-driven policy agenda. At the same time, policy-makers resent the arrogance of researchers, the seeming self-fulfilment and self-serving nature of much of their research, and their narrow, tunnel vision approach to the world. Scientific input is often untimely, less-than-relevant, abstract and impossible to understand or contextualize. In extreme situations, they view scientific evidence as being detrimental to political and economic considerations, e.g. when evidence of an infectious disease outbreak can lead to economic loss as a result of reduced numbers of tourists.

In addition, researchers and policy-makers often have different views as to what constitutes evidence. Many scientific results are quantitative and can be assessed in rigorous, repeatable ways. Researchers obsess about research methodology and the “levels of evidence” gathered through different study designs, such as clinical trials and observational studies. Policy-makers, on the other hand, are often more informal in their assessment of information, even that of a quantitative nature. They look for important information based on quick reflections of reality for policy-making, e.g. poll results, opinion surveys, focus groups in marginal electorates, anecdotes and real-life stories. They operate on a different hierarchy of evidence – their “levels of evidence” may range from “any information that establishes a fact or gives reason for believing in something” to “available body of facts or information indicating a belief or proposition is true or valid”.

Should researchers cater to the needs of policy-makers? Policy-makers are often frustrated because researchers cannot give them a quick, clear and simple answer. Researchers are frustrated because required data may not exist, or they do not know the answer or want to admit problems with their studies, or they cannot explain their complex findings in a simple language. Policy-makers believe that much of the research being conducted is pointless and lacks relevance, which is probably right as the motivation on the part of the researchers is often scientific curiosity and the

desire to publish. The core of the issue in using evidence differently lies in the differences in decision-making imperatives. Not only might scientific evidence conflict with values and beliefs of policy-makers, but the policy-maker uses evidence in the battle to control problem definition and policy solutions. Policy-makers thus look for evidence to support their claims, and thus systematic bias occurs in the way that policy-makers look for and use data. Another facet of this issue is that policy-makers are often concerned that highlighting knowledge gaps will reduce support for their programmes. They thus end up making uninformed decisions.

Further complicating the issues are the weaknesses in logic in both scientific and policy-making approaches to setting priorities and achieving outcomes. Science and policy-making are chaotic in different ways. Most scientific research is derivative, and unhelpful from a policy perspective. The 23rd paper on smoking and a certain disease may still be published, but it is not really advancing science unless the study is somehow markedly better than previous studies; too often, it is not. In other words, there is a lot of indifferent or “junk” science out there, and policy-makers are clever enough to recognize this. Policy-making is built on a history of related policies, but is also reactive to numerous and competing stakeholder demands. At the end of the day, policies are the result of compromises and are constantly framed and re-framed in response to changing contexts.

Also, researchers are always wanting to hedge their findings – they recognize the limitations of their data and are striving to provide proof “beyond reasonable doubt” – however, policy-makers need a simple one-line answer to what are often, at least to the researchers, complex issues. In presenting their results, researchers traditionally rely on so many caveats that policy-makers do not know what to believe. Policy-makers frequently have to exercise moral

judgements in the face of uncertainty, so decisions are taken “on the balance of probabilities”. They usually have plenty on their plates, and gravitate towards evidence that speaks to their own experiences, or that of their constituents. They seek a “one size fits all” or “cookie cutter” approach. Policy-makers want a “bottom line”, but researchers are uncomfortable giving one.

Researchers and policy-makers also tend to have different accountability mechanisms. Researchers are essentially accountable to editors of peer-reviewed journals, fellow researchers and those who fund their research. They may be interested in policy but, at the end of the day, are not required to focus on issues that have policy relevance or application. On the other hand, policy-makers are usually accountable to political parties, government and taxpayers, if not the voters, and must focus on things that are consistent with political agendas. Complicating this however is the increasing pressure on researchers to comply with views of governments that are increasingly responsible for setting priorities in the way research funds are allocated. So smart researchers will have their research proposals reviewed by policy-makers before submitting their grant proposals.

There is unfortunately no correlation between the quality of science and the policy derived from it. Good science does not always guarantee good policy; bad or even no science does not necessarily lead to bad policy. It is true that good policy does not always depend on waiting for good evidence. For example, condom promotion makes good common sense when setting policies to tackle sexually transmitted diseases. On the other hand, having a policy, no matter how carefully thought out, is no guarantee that it works. Having a policy for clean water, for example, does not necessarily make the water clean. It must be realized that science is needed both to help develop the policy and to evaluate the policy.

Another issue is related to the public image. Researchers are often respected as “wise and objective people”, free from political and economic interests and pressures. Policy-makers are often regarded as “powerful people”, but are not necessarily respected. It is not that either researchers or policy-makers are “wrong” or “bad”. One responds to scientific rationality, while the other responds to political pressures. Furthermore, the societies within which they work also have norms and expectations, which might be considered “cultural rationality”. The coming together of these competing rationalities is necessary to resolve the seeming incompatibilities and ultimately ending up with the adoption of evidence-based health policies.

Some suggestions on bridging the gap

How can we bridge this chasm and gap between researchers and policy-makers? Arguably, a key first step might be an attempt to understand what may be the predictors of success (and failure) in the way researchers and policy-makers communicate and value each others’ efforts. Innvaer et al. reviewed 24 interview studies with health policy-makers (a total of 2041 interviews) concerning their perceptions of the use of research evidence in health policy decisions⁷. The most commonly reported facilitators were personal contact (13/24

Facilitators	Number of studies
Personal contact between researchers and policy-makers	13
Timeliness and relevance of the research	13
Research that includes a summary with clear recommendations	11
Research that confirms current policy or endorses self-interest	6
Good quality research	6
Community pressure or client demand for research	4
Inclusion of effectiveness data	3
TOTAL studies	24
Barriers	Number of studies
Absence of personal contact between researchers and policy-makers	11
Lack of timeliness and relevance of research	9
Mutual mistrust between researchers and policy-makers	8
Power and budget struggles	7
Poor quality of research	6
Political instability or high turnover of policy-making staff	5
TOTAL studies	24

Table 2: Facilitators and barriers to use of research by policy-makers, identified in a systematic review of 24 interview studies (tabulation of data provided by Innvaer et al., 2002⁷)

interview studies), timely relevance (13/24), and the inclusion of summaries with policy recommendations (11/24) (Table 2). The most commonly reported barriers were absence of personal contact (11/24), lack of timely relevance of research (9/24), and mutual mistrust (8/24). The question then is how to fully recognize the incompatibility problems and to promote successful experiences in the collaboration between researchers and policy-makers, i.e. promote facilitators and suppress barriers. Also, the solutions to the questions run deeper than simply putting the researchers and policy-makers in personal contact, or just asking researchers to provide timely and relevant findings. Some specific suggestions can be proposed.

Knowledge brokers

Given the differing values, perspectives and language described above, a suggestion has been made that one possible mechanism to consider is the development of a cadre of knowledge “brokers” or “facilitators”^{2,4,8}. Such knowledge brokers may serve as a catalyst to look for, and nurture if possible, the relationship between the two groups. In other words, they can ensure that policy-makers are employing “the right science”, and that researchers are doing “the science right”³. For example, by integrating and synthesizing scientific information into more accessible formats, good knowledge brokers may be able to say to the policy-makers who are swamped with information, “Here is the list of the top 10 major issues in this country according to current knowledge”. The knowledge broker may then turn to the researchers, “Give me the science on what works to tackle these issues” and then produce an inventory of evidence-based best practices. The demand for evidence and information should, ideally, come from the policy-makers themselves but this often does not happen. A critical role of the knowledge broker is to “translate” this demand and “re-translate” information which comes from the research community – in a way which is understandable and transparent, including evidence which is “in conflict” with what policy-makers have already decided. Knowledge brokerage can also be seen as initiatives to simplify and present the information in a way that is more attractive to policy makers – a good example is the Health Evidence Network set up recently by the World Health Organization (WHO), which goes a step beyond Cochrane style systematic reviews and tries to come up with one-page policy briefs in response to questions posed by policy-makers⁹. Another variation on this theme is the idea of “trading places”, a temporary “job exchange” programme where policy-makers and researchers take each others’ places for a period of time to enable them to obtain insights into the other’s point of view. This practice has been tried, for example, between chief executives and lobbyists in Canada.

Better incentives

Research funding does not usually provide for information dissemination to policy- and decision-makers. Engagement with the public and with policy-makers, is not rewarded. Incentives are also needed to encourage policy-makers to

acquire a higher level of scientific training than is the present norm. Scientific thinking and results can be dumbed down only so much before becoming meaningless. On the other hand, at least some researchers need to develop a sense of the “big picture” and work on ways to make scientific work understandable and usable by intelligent lay people. Unfortunately, none of these will happen unless there are incentives for them. The current reward mechanisms simply do not work optimally to encourage policy-makers and researchers to work together. However, what incentives are there for this partnership? New incentives may have to be created in order for changes to take place. An obvious starting point would be to include links to policy as another criteria in academic promotion, instead of solely relying on the number of papers published.

Building organizational capacity and embedding research into implementation

Attempts should also be made to include mechanisms, processes and structures within organizations to ensure there is input from researchers and policy-makers. For example, the American Association for the Advancement of Science (AAAS) has a programme where researchers are actively encouraged to enter the policy-making arena¹⁰ by putting them into staff roles at the federal and local levels thus creating a cohort of politically informed citizens-researchers. A range of possible workforce development approaches and appointment strategies could be considered, e.g. requiring diverse skills, secondments, job rotations, dual appointments, liaison units, etc. Skills required of policy-makers in the future will likely be different because the world of public administration is changing. The idea of a “chief knowledge officer”^{11,12} has been put forward and there are suggestions that this individual should actually be the chief medical officer of a country. In an attempt to “do the science within government”, the World Health Organization has launched an initiative called EVIPNet (Evidence-informed Policy Networks)¹³ which aims to establish national mechanisms and structures to facilitate better linkages and dialogue between researchers and policy-makers. WHO followed a model recently established in East Africa where Tanzania, Kenya and Uganda have jointly established the REACH-Policy (Regional East African Community Health-Policy) initiative, which has as its goal the more effective use and application of knowledge to strengthen health policy and practice.

A broader definition of research

If research is defined more broadly, it may be easier to argue that research is an investment, not a cost; that all countries should have a health-research system that drives health-sector reform; that research should be applied to improve health equity; that research must be conducted according to universal ethical standards; and that the results of research should be accessible to all. A key challenge in public health is the use of knowledge in strengthening health systems⁴. To strengthen health systems, there is a need for human resource development through, among other things, strengthening capacity for operational research in health

systems development. Partnerships are urgently needed between government policy bodies and academic/research organizations experienced in this area.

Re-defining the starting point

It is time perhaps to change the starting point, i.e. public policy-makers must be placed at centre stage and researchers should aim to serve their needs. In addition, citizens and civil society have a vital – and so far neglected – role to play in setting research priorities¹⁴ and having an influence on policy formulation. There is an important role of the citizen or community in evidence-based policy, for example, in the increasing community engagement and citizen participation in health systems and the increasing trend towards including patient and public input into research. Research-funders and policy-makers have to become a lot more skilled at ensuring that researchers spend a lot of their time researching the questions that have the greatest potential to improve society. They should be encouraged to fund synthesis research and impact assessments in support of policy decisions. The trick here is to connect science with policy, and policy with science. It is desirable to have both “evidence-based policy” and “policy-based evidence”¹⁵. In other words, policies should be based on evidence, and once policies have been formulated, there should be evidence on how to achieve the set goals, and to develop, implement and evaluate needed strategies. There is no better way than to have policy-makers intimately engaged in the science. However, one must be careful to make sure that “evidence-based policy-making” does not become “policy-based evidence-making”, i.e. creating and selecting evidence that suits and justifies certain formulated policies. Sometimes policy-makers want to stretch the interpretation of research findings to reinforce the “validity” of the policies they are already decided upon. There are potential problems when researchers get too close to policy, e.g. concerns about loss of objectivity and freedom to criticize government policy, and how to guard against this.

Policy-making is complex

It should be acknowledged that it is too simplistic to think that policy-making could ever be based solely on scientific evidence. In addition to scientific evidence, policies are also based on values, emotions, “know-how”, intuition, “gut

feeling” and the wishes of interest groups, for example. The reality of how decisions are made dictates that scientific evidence is only one consideration among several. Such evidence can even in its best form be only background. In some cases, it is perfectly possible for wise policy-makers to develop good policies without research. In other cases, policy-makers listen more to the voters than to the researchers. We should perhaps admit this and not set unrealistic expectations for the role of scientific evidence, and acknowledge that, on the other hand, failing to grab accessible evidence may delay intervention opportunities. For example, it took 263 years after the discovery of the preventive value of citrus juice against scurvy before sailors’ shipboard diets were routinely supplemented with it at the end of the 19th century. The link of smoking to lung cancer was found in 1950 but it was not until 1957 that any legislative action was initiated. How long will it take to tackle the current epidemic of obesity if our will to intervene awaits the delivery of perfect evidence that proposed solutions will work? Thus, the balance between action and further research is an interesting and important one. When do we need policy decisions and when do we need more research? □

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