Research findings are increasingly recognized as critical inputs in policy-formation and health planning. Probably the single most common recommendation in published research articles is for more research. Health research funding agencies distribute massive amounts of financial resources every year to support researchers and research institutions. The body of knowledge being gathered and consolidated by the research community is enormous. Despite being such an important resource, it is becoming apparent that this body of knowledge is not being used to improve health policies as much as it could be. Research findings are only one of many types of information required for good policy-making. Other concerns such as local resources, values and needs also come into the policy process.

Recognition of the importance of bridging the “know-do” gap is increasing around the world and has resulted in an emergence of various institutions involved in analysing this problem and promoting the transfer of knowledge to practice and policy.1 Within the field of evidence-based medicine, there have been several discussions on what constitutes the best type of evidence. Hierarchies of evidence have ranked systematic reviews at the top.2 Such discussions have also been applied to health policy-making. Some research has investigated the factors influencing the use of systematic reviews by public health decision-makers: and more recently how to improve the usefulness of these reviews for health managers and policy-makers.3,4

Most of the findings from this field are based on studies from developed countries, and relatively little is known about these factors in developing countries.5 There is therefore a great need for a better understanding of this situation in economically strained settings. With their limited resources, developing countries have much to gain from well-informed health policies.6

Introducing an essential medicines list (EML) along with a national medicines policy is widely accepted as an effective way of improving access to, and the supply of medicines, lowering their costs and improving rational use. The WHO Model List of Essential Medicines is the reference document usually used as a starting point for a country’s national list. The selection decisions for each list then require additional information in order to take into account the country’s specific health situation. Key textbooks, such as Managing Drug Supply describe the various criteria (see Box 1) used for selecting medicines for the list.7 Since research findings potentially have much to contribute to these criteria, examining their use in selecting the medicines for an EML is of great interest.

**Study setting: Mali**

This study was conducted in the landlocked West African country...
of Mali. Several of the medicines on Mali’s EML are not on the WHO Model List. The country’s EML also includes an extra section for “improved traditional medicines.” The various additional medicines on the EML provided an excellent opportunity for discussing specific decisions that might have been influenced by research findings.

Mali’s EML is updated approximately every two years by a national commission. The commission is composed of various civil servants within the Ministry of Health, including pharmacists, managers and directors of various health programmes and institutes, such as those fighting malaria, tuberculosis and HIV/AIDS. The commission also includes local medical practitioners and health workers considered experts in their field, and technical advisers from WHO and the European Union participate in this process. At the time of the study, the country’s official criteria for the selection of medicines specifically highlighted: harmlessness, efficacy, relevance to the disease pattern, availability on the international market, and cost-effectiveness.

**Study design and data collection**

The majority of the data were collected from 19 in-depth, semi-structured interviews. Key informants were chosen from the national commission that selects and updates Mali’s EML, as well as one health manager who was mentioned as having played a significant role in the decision-making process for this policy. Questions such as “how often” or “how many times” policy-makers used research findings were not specifically asked in the interviews. The research did not attempt to explicitly measure in which situations policy-makers used research findings and in which situations they did not. Instead, it aimed to explore policy-makers’ perceptions of their lived experience in selecting medicines for the EML.

A group discussion was also conducted with available interviewees. This provided an opportunity to observe interactions between policy-makers and present preliminary results to the group members for feedback. A document analysis was performed to validate comments made by the participants and to analyse actual sources of information accessed by the policy-makers. Documents analysed included technical notes used by the commission, minutes from meetings, a synthesis of the decisions made, and other relevant documents.

**What factors influence the extent to which research is used?**

After analysing the text from the interviews and natural group discussion, and reviewing the various documents supplied by the commission, several key factors emerged that policy-makers perceived as influencing their use of research findings (see Box 2).

**Access to information** was believed to be an important factor. The means to access both international and national resources in developing countries is often limited. The World Wide Web can facilitate the use of research findings when it is available, however policy-makers may not have reliable access to the Internet. And even if they do, many online resources require paid access. Language barriers can inhibit access as well, since almost all research findings are available in English, but difficult to access in other languages such as French, the working language in Mali.

The **relevance of research findings** was also felt to affect its use. Research findings that are not relevant to policy-makers’ questions are not likely to be used. Policy-makers also believed that using research findings was a **time-consuming process**. Also, if a policy-maker’s **competency** in understanding the full meaning of the research is limited, it further inhibits its use. At the same time, if a policy-maker is knowledgeable in research methods and is skilled in effectively acquiring high quality, relevant and already synthesized data - such as those found in systematic reviews - research findings are much more likely to be used.

Policy-makers’ level of **trust in the research** also influenced the extent to which they believed it would be used. Research findings provided by trusted sources such as WHO or well-known international peer-reviewed journals such as the *Lancet* or the *New England Journal of Medicine* were perceived as more likely to be used. Similarly, the

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**Box 2: Factors influencing the use of research findings**

1. Policy-makers’ access to information
2. Relevance of research findings
3. Perception that utilizing research findings is time-consuming
4. Policy-makers’ competency in research methods
5. Trust policy-makers place on research
6. Authority of those who present their view
7. Relative importance or priority of research findings compared with other sources of information in the policy-process
8. Uncertainty of who is responsible or accountable for accessing, locating, and providing research findings to address the policy-decisions
authority of those who present their view to policy-makers could influence the extent to which the information provided was used in forming the policy. A researcher with a high level of authority might be effective at getting research findings into the policy process. The priority that policy-makers themselves place on research findings in the policy process also affects the use of such findings. If a policy is believed to be extremely technical - such as the analysis of effective medications for a particular illness - research findings are likely to be prioritized and will therefore influence the policy decision. 

Finally, accountability emerged as a unique factor in this study. Policy-makers felt that if someone on a committee is specifically delegated to accessing, locating and providing research findings to the rest of the group, the findings were more likely to be used. If such a task was not delegated, the likelihood of research getting into the policy process would be reduced.

**What can be done to improve policy-makers’ use of research findings?**

Several solutions can be found to bridging the know-do gap by looking at the factors inhibiting and facilitating the use of research findings that emerged in the study (see Box 3). Collaborative projects between policy-makers and researchers have been discussed in great depth. Such efforts address several of the factors outlined above. They improve access to findings by setting up direct links between the researcher and the policy-maker. They improve the relevance of the research by allowing policy-makers to contribute to the research process. They can improve the trust that the policy-makers place on the research, as the policy-maker has been able to witness first hand the processes involved. Collaborative projects can also improve policy-makers’ competencies in understanding, identifying and locating high quality, relevant research as it can serve as an opportunity for effective training for policy-makers. It can also increase the relative importance that policy-makers place on research findings.

Involvement of third parties to act as knowledge brokers, including international government and nongovernmental organizations and UN bodies, such as WHO, can also address several of the factors emerging in this study. Their involvement can facilitate access and reduce the time required to utilize research findings. Such involvement improves the trust that policy-makers place in the research findings and can even point policy-makers towards more relevant, high quality and synthesized findings. These organizations can also engage in capacity building and increase policy-makers competencies in accessing and understanding research findings.

Researchers and those who fund research also have an enormous role to play in facilitating the use of the research findings they produce and fund. Better orienting their research to policy-relevant issues would increase its uptake. Participatory research strategies that involve stakeholders throughout the research project (similarly to collaborations between researchers and policy-makers) increase the links between policy-makers and researchers and facilitate the transfer and uptake of the findings at the end of the research project. Similarly, the research community could help bridge the know-do gap by dedicating significantly more time, effort and financial resources to the dissemination of the research findings that it produces. The research community is also well placed to support and engage in the synthesis and summarization of entire bodies of research findings for easier access and use, such as the preparation of systematic reviews.

**Conclusion**

Research findings are an important and critical input for the formation of health policy, yet they are not being used to the extent that they could be. With a limited number of studies focusing on developing countries, there is a need for further investigation into how to improve the uptake of research findings by health policy-makers in such a setting. This study revealed several factors influencing the use of research findings in selecting essential medicines as perceived by policy-makers in Mali. Increased efforts on the part of all relevant players in the research to policy process can ensure that strategies to improve the current situation are both implemented and evaluated. In this way, policy-makers in countries such as Mali will be better equipped and informed to address the many complicated and difficult health-care problems afflicting their citizens.
References


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This article is based on work done for the author’s Masters’ thesis. The full results from this study are on the online, open access journal, Health Research Policy and Systems: