



**Global Forum
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HELPING CORRECT THE 10|90 GAP



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Resource Modules

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Module III

Promoting the use of knowledge in policy and practice

Unit 2

Communicating knowledge: overview

**We welcome readers' comments to enable us to
continually update and improve this material.**

THE COLLABORATIVE TRAINING PROGRAMME

Alliance for Health Policy and Systems Research
Council on Health Research for Development
Global Forum for Health Research
INCLIN Trust

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Acronyms

AHRQ	Agency for Healthcare Research and Quality
CEEHD	Centre for Ethnicity, Health and Diversity, United Kingdom
COHRED	Council on Health Research for Development
EMB	Evidence-based medicine
ENHR	Essential national health research
STD	Sexually transmitted diseases

Module III. Promoting the use of knowledge in policy and practice

Unit 2. Communicating knowledge: overview

This unit provides an overview of issues in **communication** in order to enhance the **use of knowledge** in:

- policy development and health system management
- health care practice
- direct action by health service users.

The communication process to support health policy, practice and action involves a double challenge.

- For **researchers** – those who produce or generate knowledge – the challenge includes assessing knowledge needs, estimating how much information is enough, and trying to make information speak for itself – that is, ensuring that relevant knowledge is **usable**.
- **Knowledge users** need a mindset which recognizes that relevant and valid knowledge (or “evidence”) is required and often available; they also need the capacity (or “system”) for obtaining and evaluating knowledge, especially using or applying knowledge for a specific purpose or function.

The term “evidence”, for the purpose of this module, can be considered as (usually “scientific”) information which has been validated in some way, so that it can be used for specific functions. Terms such as “evidence-based medicine” (EMB) (or evidence-based health care) convey the same meaning.

The concept of “knowledge translation”

There are several terms that describe the idea of the **use** of knowledge. In this unit, the term “knowledge translation” will be used, with the caveat that this term can be used interchangeably with other terms such as: “knowledge transfer” or “implementation and uptake” of knowledge or research findings.

As one example, here is the definition that has been put forward by the Canadian Institutes for Health Research (CIHR):

“Knowledge translation is the exchange, synthesis and ethically-sound application of knowledge – within a complex system of interactions among researchers and users – to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system.” (CIHR, 2004)

This unit will address the challenge of knowledge translation from the perspective of three users of health knowledge:

- decision-makers (both policy and managerial decision-makers)
- health care practitioners
- health service users/the general public

Components of the knowledge translation process.

There is an accumulating body of evidence about the knowledge transfer process. This evidence can be considered under several headings, shown in [Box 1](#). Some of these components will be illustrated by reviewing the knowledge transfer process as it relates to the three user groups.

Box 1. Components of a research knowledge translation/transfer strategy

1. Message (what knowledge should be translated?)
2. Target audience (to whom should knowledge be transferred?)
3. Messenger (by whom should knowledge be transferred?)
4. Methods and strategies (how should research knowledge be translated or transferred?)
5. Evaluation (with what effect should research knowledge be translated?)

(Adapted from Lavis et al., 2002).

Decision-makers

Our use of the term “decision-makers” includes those who are responsible for making both **policy** decisions (for example, ministers of health) and **managerial** decisions (for example, managers of hospitals, regional health authorities, disease-specific health programme officials, and so on).

Below are brief notes to refer module users to some of the specific components of the Knowledge translation framework displayed in Box 2.

- The Recommended Reading section includes some general overviews of the research-to-policy process (Chunharas, 2001, Lomas, 2000). See [Concepts Reviews](#).
- Several countries have created centres to provide guidance for accessing evidence-based policy. An example is the Centre for Evidence in Ethnicity, Health and Diversity (CEEHD) in the United Kingdom.

Designing the “message” for decision-makers

The research literature suggests that messages should be derived from several studies, that is, a body of research knowledge, rather than single research reports or studies. Individual studies can lead to very different conclusions from those of systematic reviews of an aggregate of studies (Egger & Smith, 1997). Furthermore, decision-makers are often influenced more by “ideas” than by “data”, since ideas evolve over a period of time as general knowledge about a particular problem and how it can be handled (Weiss, 1991).

Knowledge translation methods and strategies (interventions)

Lomas (1993) suggests three types of knowledge translation activities.

- **Diffusion:** These include activities that are passive and where the actual “translation” effect is relatively unplanned. The objective is simply to promote awareness. Examples include journal or newsletter publications and information on a website or in the mass media.
- **Dissemination:** Interventions here include more intentional strategies, such as direct-mailing of results to intended audiences, workshops and conferences. The goal is both awareness creation and attitude change.
- **Implementation:** Here the interventions are even more active, with the intent of adding behaviour change to awareness and attitude change. Efforts are directed to identifying and overcoming barriers systematically. Examples include specific meetings with opinion leaders, audit and feedback or reminder procedures and administrative or economic interventions.

In general, the more active and targeted the intervention, the more likely it is that research will be actually used in behaviour change. At the same time, the wider ideas are diffused and disseminated, the more likely they are to develop the understanding necessary to ensure the success of interventions. The evidence highlights the importance of the interaction between credible researchers (both individuals and institutional) and decision-makers as an important factor in explaining why some research is used, and some not (Gilson et al., 1999, Walshe & Rundall, 2001).

It should also be noted that the three knowledge translation strategies described above could apply to all categories of users.

Evaluation

There are few examples of systematic reviews of research regarding the effectiveness of diffusion, dissemination and implementation strategies (as defined above) on changing the behaviour of policy decision-makers. One such review was done by the EUR-ASSESS project, created to provide guidance to health technology assessment programmes in Europe (Granados et al., 1997). The project’s subgroup on Dissemination and Impact, after reviewing the available literature, concluded that personal contact with policy staff was more effective than distributing printed material. When printed reports are used, they should be short and should be written from the perspective of policy-makers, specifically addressing questions that need answering. The style of presentation should be clear and compelling. These insights

are now quite generally known, and are used in the preparation and presentation of policy briefs.

See Recommended Reading for the following papers.

- Lavis and colleagues (2002) have made a systematic review of the role of health services research in public policy-making. A paper summarizing this analysis can be found in the Recommended Reading section. See [Concepts Reviews](#).
- Some policy-makers have described their own experiences and insights as research users. An example is a publication of the International Health Policy Program (IHPP, 1996), with contributions from three policy-makers (from India, Ghana and the Philippines). See [IHPP](#).
- An increasing number of case-studies describe experiences in low-income and middle-income countries. **Some of these are listed as publications in the Case-studies section.**

Health care practitioners

Evidence-based health care has become a worldwide movement. The early efforts in this field in the 1970s used the term “critical appraisal of the medical literature”. In the last several years, the term “evidence-based medicine” or “evidence-based health care” has been adopted. There are many publications describing the features of evidence-based medicine. These included textbooks (Sackett et al., 1999) and other guides (Guyatt & Rennie, 2002). In the United States of America, the Agency for Healthcare Research and Quality (AHRQ) is the federal agency which supports research and provides policy guidance for health services.

The [Tools](#) section includes:

- a summary of a recent AHRQ report, available on the agency’s web site, which describes systems to rate the strength of scientific evidence
- a summary description of the work of the Cochrane Collaboration
- examples of EMB “tools”.

There are several resources that provide services for health care practitioners regarding evidence-based health care. One example is the Cochrane Collaboration, which provides systematic reviews of the best evidence for a wide variety of health interventions. Specific efforts are underway to include reviews that are applicable and relevant to health care practitioners in low-income and middle-income countries – an issue that has concerned many practitioners in these countries (Dans et al., 1998). Several groups have produced EMB “tools” (see Tools and Resources section for examples). All of these groups use established “meta-analysis” methods (sometimes called “systematic reviews”) to derive their conclusions and recommendations.

Many professional organizations in countries around the world are now producing “practice guidelines”. They draw upon evidence-based reviews, from sources such as those described above (Shehelle et al., 1999). There is increasing experience of the features of clinical practice guidelines that actually affect practice (Grol et al., 1998).

Methods and strategies (interventions)

Grimshaw and colleagues (2001) conducted a review of 44 systematic reviews (published up to 1999) on interventions to promote the uptake of research findings by health care providers (see also Bero et al., 1998). They classified interventions by their degree of effect on changing professional practice. A summary of their findings is presented below.

Interventions with little or no effect:

- educational materials (distribution of non-interactive educational printed, audiovisual or computer-produced materials)
- didactic educational meetings (lectures with little or no interaction).

Interventions that were effective some of the time:

- audit and feedback (the use of summaries of clinical performance to increase the practitioners’ awareness of their own or others’ practices)
- local opinion leaders (the use of respected peers to influence the practice of colleagues)
- local consensus processes (the inclusion of participating practitioners in discussions to ensure that they agree that the selected clinical problem is important, and that the proposed management approach is appropriate)
- patient-mediated interventions (the use of patient educational materials or patient reminders to change provider behaviour).

Interventions that were generally effective:

- educational outreach visits (the use of individuals such as pharmacists, nurse-facilitators and study investigators to visit practitioners and explain the desired change)
- interactive educational meetings (including small-group sessions and problem-based learning)

- reminders (the use of manual or computerized reminders to prompt behaviour change)
- combinations (multifaceted interventions with two or more of the interventions listed above).

The general public

This subsection deals in particular with the transfer of health knowledge to the general public (the “community”). It is recognized, however, that the community is much more than just a passive recipient of information. The community (or the public) is also a source of knowledge and wisdom. This idea is considered in more detail in Unit 6 of this module, entitled “Local knowledge”.

The translation or transfer of research (new knowledge) to the general public involves a range of methods and strategies. Using the three categories proposed by Lomas (1993), described above, the most common strategy is that of diffusion – such as reading or hearing about health knowledge through the mass media. More intentional strategies could be considered as “patient education” dissemination and implementation interventions. These include distributing written and audiovisual materials, and specific behaviour modification interventions (for example, to increase patient “compliance” or “adherence” to the recommendations of health practitioners).

Grilli and colleagues assessed 22 studies concerning the effects of mass media interventions on the use of health services (Grilli et al., 2001). This review revealed that planned and unplanned media campaigns had a consistent and positive effect on health service utilization. They recommended that the mass media should be considered as one of the tools to encourage the use of effective services and discourage the use of services of unproven value.

There is a growing body of literature which assesses patient education or health education interventions. The EUR-ASSESS project (mentioned above) also reviewed published studies about patient education (Granados et al., 1997). This review suggested that the effectiveness of strategies is correlated with the extent to which educational principles are followed. The report concluded that information-focused interventions are more likely to have an impact on knowledge, and that alternative interventions (such as financial incentives) have more impact on attitudes and behaviour.

A more specific strategy for promoting the use of research evidence by patients involves the use of patient decision aids. O’Connor and colleagues (1999) conducted a systematic review of 17 studies that evaluated the effectiveness of patient decision aids. The review concluded that decision aids improve patients’ understanding of research evidence (knowledge), reduce decision-related conflict, and facilitate more patient involvement in the decision-making process without increasing their anxiety. However, there was a variable effect on actual decisions taken, and on the outcomes of these decisions.

A significant and important drawback of the reviews and studies cited above is that, with few exceptions, the studies have been conducted in high-income countries. Therefore, their relevance and applicability to populations in low-income and middle-income countries is questionable. At the very least, similar studies need to be replicated in a variety of settings. Perhaps more importantly, we need to look more broadly for insights about how research knowledge can lead to change in health-related behaviour, and eventually to improved health.

As an example, the “knowledge-behaviour gap” has been a preoccupation of health social scientists for many years. Some of the studies provide important insights into why, despite being aware of the risks of illness, such as HIV/AIDS and other sexually transmitted diseases, individuals are resistant to adopting recognized prevention and treatment strategies.

The [case studies](#) in the recommended reading section include:

- a recent book by Higginbotham and colleagues (2001), which presents some of this important research in low- and middle-income countries
- a study from Uganda about HIV/AIDS concerns.

Of course there are other users of knowledge and research other than the above three groups – including the media, the scientific community (peers), donor agencies. The five components mentioned above could and should be applied to each of these as well.

Tools and resources

Institutions, manuals, guidelines, web sites

Centre for Ethnicity, Health and Diversity (CEEHD)

The CEEHD is one of six centres in the Economic and Social Research Council (ESRC) Network for Evidence Based Policy and Practice, United Kingdom. Its role is to identify, assess and disseminate research evidence in the multidisciplinary field of ethnicity and health. This centre is located in two academic units: at the University of Warwick, and at De Montfort University in Leicester. The contact person is Dr Anil Gumber in the Centre for Health Services Studies (CHESS) at the University of Warwick. Tel. +44 24 7652 2300. Anil.gumber@wbs.ac.uk

Cochrane Collaboration

The Cochrane Collaboration is an international organization that aims to help people make well-informed decisions about health care by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of health care interventions. Most of the work is done by “collaborative review groups” (of which there are about 50), covering a wide range of health problems. The reviews are

published in the Cochrane Library. For more information, visit the web site: <http://www.cochrane.org>. (There is also a Cochrane Consumer Network, which aims to help people make informed decisions about health care. More information can be found at a separate web site: <http://www.informedhealthonline.org>.)

Evidence-based medicine tool kit

This collection of tools for identifying, assessing and applying relevant evidence for better health care decision-making is based on the work of the Evidence Based Medicine Working Group (<http://www.med.ualberta.ca/ebm/ebm.htm>).

Agency for Healthcare Research and Quality (AHRQ) (2002). Systems to rate the strength of scientific evidence (AHRQ Evidence Report File No. 47). Available online at: <http://www.ahrq.gov/clinic/evrptfiles.htm#strength>.

This report identifies and compares systems that rate the quality of evidence in individual research studies and compilations of studies addressing a common scientific issue. The report also provides guidance on the leading approaches currently in use for improving the quality of scientific evidence. Using well-specified criteria, the authors identified 19 study-quality and 7 strength-of-evidence grading systems that people conducting systematic reviews and technology assessments can use as starting point for future evidence-based research projects.

Porter RW, Prysor-Jones S (1997). Making a difference to policies and programs: a guide for researchers. Washington, DC, Support for Analysis and Research in Africa (SARA).

This guide is a product of a collaborative effort that included the SARA project (USAID), COHRED, the Joint Health Systems Research Programme for Eastern and Southern Africa (WHO Regional Office for Africa), and the ENHR Africa Secretariat. "The basic premise of the Guide is that research informs policies and programmes most effectively when there is a three-way process of communication linking researchers, decision-makers, and those most affected by whatever issues are under consideration." The last section of the guide on "Communicating research results" includes a useful set of practical suggestions for conducting personal briefings with decision-makers.

Recommended reading

1. Concepts, reviews and analytical papers

Chunharas S (2001). Linking research to policy and action. In: Neufeld V, Johnson N, eds. Forging links for health research. Perspectives from the Council on Health Research for Development. Ottawa, IDRC Books.

This chapter analyses some of the experiences of developing countries over the 1990s in strengthening the link between research and policy and action. It identifies key components of effective research-policy linkages. These include the dual processes of research and policy development, the context in which they both operate, the stakeholders involved, the products or outputs of both processes, and the critical role of mediators. In particular, the chapter emphasizes the importance of mediators in bridging the two parallel processes of research and policy development. It puts forward the proposal that various mediators can play distinctive and complementary roles in achieving successful linkages between research and action.

Lavis JN et al. (2002). Examining the role of health services research in public policymaking. *Milbank Quarterly*, 80(1):125-154.

This article begins by saying that both health services (systems) researchers and public policy-makers must have realistic goals in making better use of research in policy development. Using an issue-based framework, this paper looks at three issues:

- *“looking for research use in all the right places”*
- *“knowing what you’re looking for”*
- *“finding patterns in when research is used and not used”.*

The paper draws upon various fields of research: organizational behaviour and management research, research in knowledge utilization, and political science research. To illustrate the key points, the writers examine the role of health services research in Canadian provincial policy-making.

Lomas J (2000). Connecting research and policy. *Canadian Journal of Policy Research*, 1(1):140-144.

*Jonathan Lomas is Executive Director of the Canadian Health Services Research Foundation, based in Ottawa. The abstract of this useful paper begins with the assertion: “Researchers and policy-makers would both benefit from a greater understanding of each other’s worlds.” The paper argues that these two groups need to learn more about the realities of **processes** in each other’s environment, and then look for opportunities for interaction. Tables summarize the stages in both the policy-oriented research process and the decision-making process. A helpful diagram provides a “schematic view of the contextual influences on the decision-making process”.*

2. Illustrative case-studies

COHRED Working Group on Research to Action and Policy (2000). Lessons in research to action and policy. Case-studies from seven countries (COHRED document No. 2000.10). Geneva. Available online at: <http://www.cohred.org>.

This COHRED issues paper includes useful case-studies about the research-to-action-and-policy process. They are:

1. *vaccine research, development and production in Brazil*
2. *the use of research for decision-making in the health sector: the case of “shared care” in Burkina Faso*
3. *the social safety network in the health sector (SNN-HS): is health research used to improve the SSN-HS policies in Indonesia?*
4. *research to action for reducing health inequalities: the experience of Lithuania*
5. *research to action and policy: combating vitamin A deficiencies in South Africa*
6. *Chagas disease and foot-and-mouth disease eradication in Uruguay*
7. *the role of research in child health policy and programmes in Pakistan.*

Higginbotham N, Briceno-Leon R, Johnson N, eds. (2001). Applying health social science. Best practice in the developing world. London, Zed Books.

This book, published by Zed Books in conjunction with the International Forum for Social Sciences in Health, offers 10 “best case” examples from Africa, Latin America and Asia-Pacific of how social and behavioural science approaches were able to make a difference in improving a significant problem of human health. The case-studies cover a range of health concerns, from mental health, noncommunicable diseases, sexually transmitted diseases/HIV, tropical diseases and health help-seeking behaviour to provision of health services. They illustrate a variety of intervention approaches: a community-based housing project (Venezuela), peer counselling for STD prevention (Argentina), HIV/AIDS training strategy for traditional healers (Zimbabwe), creation of lay therapy management groups (Congo), work-related social skills training for persons with schizophrenia (Hong Kong), and a multipronged community education and action programme to reduce heart disease (Australia). A number of the case-studies address the so-called “knowledge-behaviour gap” – that is, the gap between what people know and what they actually do. The final chapter of the book teases out some common elements of best health social science practice.

IHPP (International Health Policy Program) (1996). How can research influence health policy? Reports from policymakers in three countries (IHPP Occasional Paper, February 1996). Washington, DC.

This interesting booklet contains three essays. Each is a perspective from a policy-maker regarding the research-to-policy process. Dr Moses Adibo is a former Deputy Minister of Health of Ghana. Mr Rajiv L. Misra is a former secretary in India’s Ministry of Health and Social Welfare (1991-94). Dr Alfredo Bengzon is the former Minister of Health of the Philippines, and is now associated with an academic institution. In a foreword, Davidson Gwatkin (Director, IHPP) provides a helpful analysis of “common themes” across the three perspectives. These include: channels of influence, content, the role of research institutions, the role of individual links and the contribution (to policy research) of external assistance.

Case-study: Bridging the “knowledge-behaviour gap” — representing HIV/AIDS concerns in Uganda

(Abstracted from: Sewankambo N, Spittal P, Willms D (2001). Representing HIV/AIDS concerns in Uganda: the genogram as a visual complement to ethnographic and epidemiological evidence. In: Higginbotham N, Briceno-Leon R, Johnson N, eds. (2001). Applying health social science. best practice in the developing world. London, Zed Books.

The reported incidence and prevalence rates of HIV infection in sub-Saharan Africa are staggering, and to many people in the western world the statistics are difficult to comprehend and accept. At the end of 1999, UNAIDS estimated that, out of a global total of 34.3 million adults and children living with HIV/AIDS, 24.5 million were living in sub-Saharan Africa. In Uganda alone, there was a reported estimate of 820 000 adults and children living with HIV/AIDS and 1.7 million AIDS orphans. With strong prevention programmes and an openness about the reality of HIV/AIDS, Uganda has brought its estimated prevalence down to around 8 per cent.¹

For the people of Uganda, numbers are not the issue. They experience the harsh reality of living with HIV/AIDS every day. Their stories are expressions of denial, hopelessness, despair and suffering. Their world is made real through case-studies, narratives and life-histories that uncover the emotional intensity of “giving up their lives” to this disease, of losing hope, of voices dimmed through death and the destruction of family desires. Numbers quantify a certain reality and provide evidence of “how bad it is”. Stories, on the other hand, dynamically demonstrate the relational tensions, dilemmas and contingencies of “being without hope”.

In their work in the Rakai district of Uganda, the researchers tried to find ways to represent these realities, not only to a variety of stakeholders (academic, donor and government constituencies) but to the community itself. They are currently experimenting with genograms – a clinical tool typically used in family medicine and family-based therapy to depict (primarily genealogical) relationships between family members. They can also be used to record sexual unions and any resulting offspring, as well as illness or death. The researchers have used genograms both for data collection and for participatory learning to stimulate discussion and action in the community.

As a graphic research and educational tool, genograms have been found to complement ethnographic data, usually in the form of narratives and stories, and epidemiological data that report HIV/AIDS incidence and prevalence in statistical and numerical formats. The researchers suggest that communicating the reality of HIV/AIDS to varieties of communities and sectors requires these three approaches: quantitative representation (numbers and trends reflected in incidence and prevalence rates), qualitative and ethnographic representations (case-studies, narratives, stories), as well as visual representations (in this instance, the genogram). They argue that this will provide a more compelling and persuasive appreciation of the impact of HIV/AIDS on communities in sub-Saharan Africa.

¹ Joint United Nations Programme on HIV/AIDS (UNAIDS) (2000). *Report on the global HIV/AIDS epidemic: June 2000*. Geneva. p.9.

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