



**Global Forum
for Health Research**
HELPING CORRECT THE 10|90 GAP



Health Research for Policy, Action and Practice
Resource Modules
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Module II

Setting priorities for health research

Unit 3

Critical analysis of experience

**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

CAM	Combined Approach Matrix
COHRED	Council on Health Research for Development
ENHR	Essential national health research
INCLIN	International Clinical Epidemiology Network
R&D	Research and development
NCCSDO	National Co-ordinating Centre for NHS Service Delivery and Organisation Research & Development, United Kingdom National Health Service
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
WHO	World Health Organization

Module II. Setting priorities for health research

Unit 3. Critical analysis of experiences

This unit provides:

- a brief description of major approaches that have been developed during the 1990s
- a comparative analysis of the different approaches
- a summary of lessons learned

and indicates some of the key issues that require further work.

Recent priority-setting experiences

An increasing number of countries, agencies and programmes have initiated priority-setting processes. A few examples illustrate this development.

- Over the last decade, more than 20 developing countries, facilitated directly or indirectly by the Council on Health Research for Development (COHRED), have embarked on national priority-setting processes, some of them including subnational components. (See [Recommended Reading](#) section for references and for a summary of some of the national experiences.)
- The WHO Ad Hoc Committee on Health Research Relating to Future Intervention Options applied its five-step process to key health challenges facing governments and health systems and identified priorities for R&D.
- Several WHO programmes, including the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction, organized processes to set priorities for their work in a specific problem area, using a variety of methods.
- The Global Forum for Health Research, in collaboration with WHO, applied its Combined Approach Matrix to specific diseases (malaria, onchocerciasis and tuberculosis, epilepsy and schizophrenia, cardiovascular disease), and to risk factors or determinants of a health problem (indoor air pollution).
- At the INCLIN Global Meeting XVIII (Sharm El-Sheikh, February 2002), the International Clinical Epidemiology Network (INCLIN) emphasized the idea of equity-oriented health research. The meeting encouraged research groups to include equity as one of the criteria in selecting, designing and conducting new research projects.

Overview of three major approaches to priority-setting

Taking into consideration the needs of potential major users of this module (countries, institutions, programmes, networks and agencies), three major approaches to priority-setting are described in this section: Essential National Health Research (ENHR), the Five-Step approach and the Combined Approach Matrix.

The ENHR approach

COHRED, working with developing countries, bases its approach on three key messages that drive its mission and way of working:

- put countries first
- work for equity in health
- make research an active part of development.

The description given below is derived from these experiences.

Rationale: It was noted that the criteria for priority-setting varied from country to country, and that few countries had specific guidelines about how they should be applied. Most countries did not specify who should develop the criteria, nor the objective and ethical basis on which decisions should be made. Against this background, COHRED decided that country experiences needed to be reviewed and improved in order systematically to guide current and future country efforts in developing and implementing their research agendas.

Information input

The process of setting priorities using the ENHR strategy requires the best currently available and locally specific information, and should address issues of equity. To establish an effective priority-setting process, an evidence-based situation analysis is required in three broad categories: **health status, health care system and health research system**. The sources of such information and the types of information that may be collected are described in further detail in Unit 2 (“Setting research priorities at the institutional level”).

Criteria to be applied in setting priorities

Priority-setting is, by its very nature, a political process. The “how” of making rational choices and judgements is one of the most difficult steps in priority-setting. This is essentially a two-step process: selecting criteria and applying them in order to select research topics for priority areas.

Selecting criteria

The review of country experiences in health research priority-setting indicated that the use of criteria varied from country to country. This ranged from no explicit criteria at all to a long list of criteria. Most of them can be grouped in one of the following categories (Okello et al., 2000:17).

- **Appropriateness:** should we do it?
Criteria in this category include: ethical and moral issues, human rights issues, legal aspects, political acceptability and adequacy and usefulness of the current knowledge base.
- **Relevance:** why should we do it?
Includes such criteria as: community concern, magnitude and severity of the problem, responsiveness to the national health policy and equity focus.
- **Feasibility:** can we do it?
The feasibility of carrying out the research in terms of its technical, economic, political, sociocultural and ethical aspects.
- **Impact:** what do the stakeholders get out of it?
This category includes such criteria as: short-term and long-term benefits, affordability, efficacy, effectiveness, equity and coverage.

The selection of the final criteria will depend on the purpose and level of action of the priority-setting initiative (e.g. global, national, community or institutional), the availability of information related to each criterion and the ability to define and measure the criteria in a common language or framework.

Selecting research topics from priority areas

In assembling research areas to be considered, an effort should be made to cluster health (care) problems into equivalent and meaningful groups, so that priority areas are not chosen merely by the breadth and magnitude of the topics covered. For example, the area of safe motherhood is much broader than single diseases such as leprosy or measles: by virtue of this fact alone, it is more likely to figure on the priority research agenda.

In selecting research areas, one of two approaches, or a combination of both, can be used (COHRED, 1997). In the first approach, participants can define a “sampling frame” to facilitate the identification of research areas and, more importantly, to determine what is missing, e.g. the disease listing prepared by the WHO Ad Hoc Committee on Health Research Relating to Future Intervention Options in the estimation of DALYs for different countries. The second approach is to institute a nomination process in which different groups and individuals can suggest potential priority areas.

Who should be involved?

It has been recommended that, besides researchers themselves, the potential users and the people affected by the research results should be involved in priority-setting. This would include, for example, researchers, decision-makers at various levels, health service providers and communities. This approach presupposes the involvement of participants with different paradigms for decision-making, such as the biomedical and epidemiological, the economic and the sociocultural and behavioural model. Furthermore, the choice of participants would be dependent on

the level of the health system addressed – for example, the macrosystem or national level versus the local or community level.

Lessons learned from the ENHR experience

Information used

The situation analysis tends to be biased towards the supply side of health and the health care system. It should be balanced by analysis on the demand side, including health needs, people's expectations, societal trends and values.

Data about inequities in health and health care are not included in most cases, thereby raising questions about the underlying value of the methodology.

Up to now, the methodology has not addressed the issue of extrapolation of subnational data to the national level and vice versa.

Criteria

There has been considerable work on elaborating, mapping out and listing of potential criteria for priority-setting, but relatively little has been done on how to select and apply criteria in practice.

The elaboration and understanding of potential criteria for priority-setting is more advanced than the process of, and guidelines for, selecting criteria.

In view of this absence of data about health inequities, explicit criteria to reflect the promotion of equity and development need to be constructed.

Involvement

More substantive involvement by the private sector (e.g. industry, professional associations), parliamentarians, donors and international agencies is needed, since these agents have been underrepresented up to now.

The Five-Step process

A Five Step Process for Priority Setting was proposed by the Ad Hoc Committee on Health Research Relating to Future Intervention Options which was formed in 1994 under the auspices of WHO. The Committee published a report (Ad Hoc Committee, 1996) and was then disbanded.¹

Rationale

The report was intended as a resource to assist decision-making by governments, industry and other investors in allocating funds to, and within, health R&D. The report emphasized global priorities since "... it is essential to complement national assessments with a global one ..." (Ad Hoc Committee, 1996:4).

¹ For further information, contact: Evidence and Information for Policy, World Health Organization, CH-1211 Geneva 27, Switzerland. Tel: +41 22 791 21 11; Fax: +41 22 791 31 11.

Information input

The approach suggests five steps to inform decision-making about the allocation of R&D resources to and within a problem area. The description below illustrates the type of information, needed for and used by this approach.

Step 1. Magnitude: calculate the burden of the conditions or risk factor

Measure the disease burden as years of healthy life lost due to premature mortality, morbidity or disability. The report used the DALY (disability-adjusted life year) as its main unit, but other summary measures, such as HeaLYs (healthy life years) and QALYs (quality-adjusted life years) can be used as well. The global burden of disease analysis, included in the report, results in an information base of about 500 different conditions or sequelae of diseases, which have been grouped into 96 detailed causes and, in addition, a variety of cause groups or clusters (communicable, noncommunicable, injuries). The information made available in this way refers to healthy life years lost as a consequence of morbidity and mortality.

Step 2. Determinants: identify the reason why the disease burden persists

Analyse the factors (determinants) responsible for the persistence of the burden, such as lack of knowledge of the condition, lack of tools, failure to use existing tools, or factors outside the health domain. Within the global burden-of-disease analysis, the comparative risk assessment (CRA) methodology has been developed. This is a systematic evaluation of the changes in population health that result from modifying the population distribution of exposure to a specific risk factor or group of risk factors. The Global Burden of Disease 2000 study¹ selected 20 risk factors and determinants, including factors such as alcohol use, blood pressure, air pollution, unsafe water, etc.

Step 3. Knowledge: judge the adequacy of the current knowledge base

Assess the potential of the current knowledge base to solve the health problem and evaluate the applicability of solutions, including the cost and effectiveness of existing interventions.

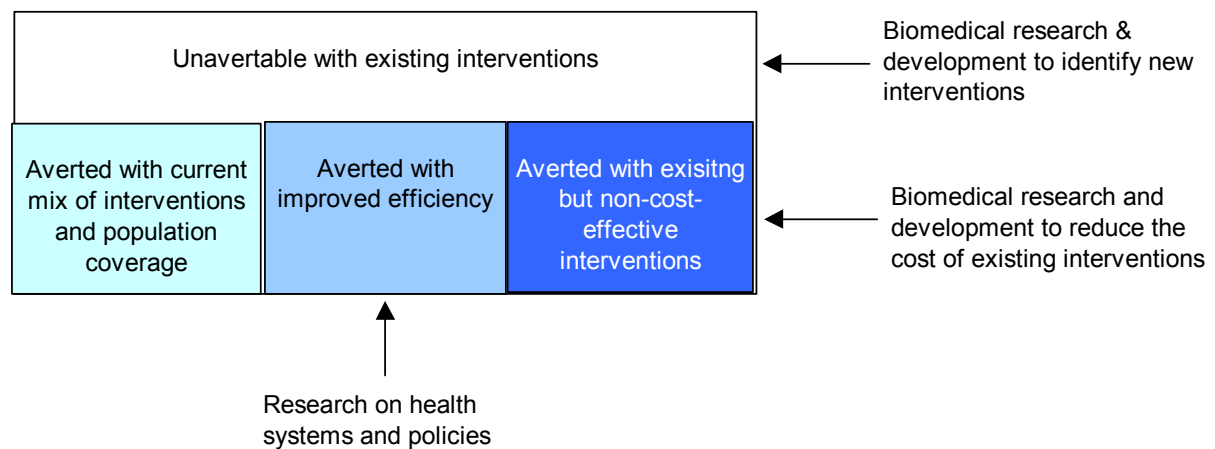
Step 4. Cost-effectiveness: assess the promise of the R&D effort

Assessment includes consideration of the expected cost-effectiveness of the potential intervention, as well as the probability of developing it successfully. Cost-effectiveness analysis provides information to determine which interventions are likely to provide the greatest improvements in health with the available resources. It requires the following information:

- the extent to which current and potential interventions improve population health (effectiveness)
- the resources required to implement the intervention (costs).

¹ Further information on the Global Burden of Disease project available online at: <http://www3.who.int/whosis/menu.cfm?path=evidence.burden>.

Figure 1. Results of the five-step process for analysing the burden of disease of a health problem to identify research needs



(Source: adapted from Ad Hoc Committee, 1996)

Through its recent CHOICE project¹ (Choosing Interventions that are Cost-Effective), WHO is assembling regional databases on the costs, impact on population health and cost-effectiveness of key health interventions.

Step 5. Assess the adequacy of the current level of effort

Calculate the present level of investment in research for specific diseases and/or determinants. This information category refers to levels of resource allocation to R&D or "resource flows" for particular health problems and/or different types of research.

Criteria used in setting priorities

The following criteria are central to this approach:

- burden of disease and determinants
- performance of the system
- financial flows.

Burden of disease and determinants

In order to qualify for a burden-of-disease analysis, the condition should meet one or more of the following criteria: epidemiologically significant, requiring a significant amount of health service provision or forming a significant factor in current health policy debates. Determinants are selected on the basis of the following criteria:

- among the leading causes of disease burden
- neither too specific nor too broad

¹ Further information on the CHOICE project available online at: <http://www3.who.int/whosis/menu.cfm?path=whosis cea&language=english>.

- high likelihood of causality
- reasonably complete data
- potentially modifiable.

Performance of the system

The following criteria can be used to monitor health system performance (Ad Hoc Committee, 1996:82):

- **efficiency**, which can be gauged in terms of share of the country's gross national product it consumes and the health outcomes, but also in terms of the cost-effectiveness of the interventions
- **equity**, to be gauged in terms of the extent to which services are accessible to the population which needs them
- **quality**, which can be gauged in its technical dimension – through the extent to which it is effective and achieves the health gains expected – and its interpersonal dimension – through the satisfaction of users.

Financial flows

No further criteria have been developed (as yet).

Who should be involved?

The Ad Hoc Committee did not address, either directly or indirectly, the issue of who should be involved in such a systematic approach. However, analysis of the approach suggests that it is strongly expert-driven, for example:

- the analysis of burden of disease (step 1) refers explicitly to “epidemiologists”
- the identification of determinants (step 2) requires “the judgement of field experts”
- the assessment of the knowledge base (step 3) relies on “the subjective judgement of informed scientists”
- data on cost and effect (step 4) are being developed “for analysts from different countries”.

Lessons learned from the five-step process

The approach explicitly aims to offer a rational and systematic process for setting **global** health research priorities. It recognizes the need for and importance of national agendas for research, but emphasizes at the same time that it is essential to complement these national agendas with a global one.

The approach is intended “to contribute to an agenda for international action in which individual nations’ agendas inform global priorities, and global needs and experience influence national agendas” (Ad Hoc Committee, 1996:xxi). Methodological issues related to this interface between global and national priority-setting are not, however, addressed by this approach.

The burden-of-disease analysis, which is a central component in the approach, has enlarged the information base available for research priority-setting, at the national as well as the global level. The use of this information to guide research priority-setting and funding allocation has, however, been limited at both levels.

While there has been progress in the development and application of tools for burden-of-disease measurement, new methodological challenges, related to contextual measurement, comorbidity and risk assessment, have been identified and require further refinement of currently available tools.

Considering its expert-driven character, the approach requires a considerable and varied critical mass of “experts” for its application. It also raises questions about how to involve other stakeholders in the priority-setting process.

Combined Approach Matrix

The Global Forum for Health Research (GFHR)¹ has developed the Combined Approach Matrix (CAM), sponsored its trial application for various conditions, and discussed advances and challenges in annual international meetings that bring together a large and varied constituency of researchers and potential users and funders of research. The CAM Manual is available on the website of the Global Forum at <http://www.globalforumhealth.org/FilesUpld/90.pdf>.

Rationale

The Combined Approach Matrix was developed as a framework to integrate and summarize information obtained through a variety of priority-setting processes. (GFHR, 2002:63). The Matrix ([Table 1](#)) should be viewed as a tool for organizing information obtained in priority-setting exercises conducted at national, regional or global levels. It aims to incorporate criteria and principles for priority-setting defined in the ENHR approach, the “visual health profile” proposed by the WHO Advisory Committee on Health Research, and the five-step approach of the Ad Hoc Committee on Health Research. The innovative feature of the Combined Approach Matrix is the application of the five steps of priority-setting in health research to various levels of potential interventions. The aim is “... to use priority-setting techniques to gain as many years of healthy life as possible for a given investment in health research (GFHR, 2002:86).

Information input

The Combined Approach Matrix requires selection of a disease (for example, tuberculosis), or disease group (for example, cardiovascular diseases) or risk factor or disease determinant (for example, indoor air pollution). Diseases and disease groups that have emerged as priorities in global priority-setting exercises over a 12-year period are shown in part 2 of the Recommended Reading section, “[Reviews and manuals of priority-setting experiences](#)”. The focus on determinants and risk factors has been more recent. If cost-effective solutions are not available for a major threat,

¹ Global Forum for Health Research: c/o World Health Organization, CH-1211 Geneva 27, Switzerland. Tel: +41 22 791 42 60; Fax: +41 22 791 43 94. E-mail: info@globalforumhealth.org.

then the assessment of the burden arising from risk factors is likely to provide an estimate of the potential for prevention. [Table 2](#) illustrates some leading risk factors quoted in *The world health report 2002* (WHO, 2002).

Information on the selected condition is analysed in five steps (namely five sets of questions, as shown in the first column of the Matrix). Each step is applied at four levels, namely: the individual, family and community; health ministry, research institutions, health systems and services; sectors other than health; and central government and macroeconomic policies (GFHR, 2000:37-38). The five steps and four levels are shown in Table 1.

Table 1. The Global Forum Combined Approach Matrix to help priority-setting for health research

Five steps in priority-setting	The individual, household and community	Health ministry and other health institutions	Sectors other than health	Macroeconomic policies
1. What is the burden of the disease/risk factor?				
2. Why does the disease persist? What are the determinants?				
3. What is the present level of knowledge?				
4. How cost effective could future interventions be?				
5. What is the resource flow for that disease/risk factor?				

Identifying research areas and research topics

- Research areas likely to have the greatest impact on health are identified on the basis of the matrix table completed for each disease or determinant.
- Comparison across tables facilitates identification of research areas that would benefit several diseases at the same time.
- Priority research projects are defined.
- Research projects having the greatest impact on the burden of disease can then be identified.

Criteria used in priority-setting

- Burden of disease, measured by DALYs or other indicators.
- Analysis of determinants of disease burden (at the four intervention levels).
- Cost-effectiveness of interventions, measured in terms of DALYs saved.
- Effect on equity and social justice (effect on equity not directly measured as yet).
- Ethical, political, social, cultural acceptability.
- Probability of finding a solution.

- Scientific quality of research proposed.
- Feasibility (availability of human resources, funding, facilities).
- Contribution to capacity-strengthening.

Table 2. Estimated attributable burden from 14 selected risk factors

		DALYs	% Total
1.	underweight	138	9.5%
2.	unsafe sex	92	6.3%
3.	blood pressure	64	4.4%
4.	smoking and oral tobacco	59	4.1%
5.	alcohol	58	4.0%
6.	unsafe water, sanitation and hygiene	54	3.7%
7.	cholesterol	40	2.8%
8.	indoor smoke from solid fuels	39	2.6%
9.	iron deficiency	35	2.4%
10.	body mass index	33	2.3%
11.	zinc deficiency	28	1.9%
12.	inadequate fruit and vegetable intake	27	1.8%
13.	vitamin A deficiency	27	1.8%
14.	physical inactivity	19	1.3%

(Source: WHO, 2002)

Who should be involved?

Current experience in applying the Matrix indicated the need to involve:

- epidemiologists for the analysis of burden of disease
- “the judgement of field experts” for the identification of determinants
- “the subjective judgement of informed scientists” for assessment of the knowledge base.

However, in order to fill in the vertical columns in the Combined Approach Matrix, there is a need to involve opinion leaders, civil society representatives, health managers, researchers and senior policy planners from health and other related government departments. Currently there is limited experience of involving all of these different stakeholders.

Lessons learned

- The CAM method provides a practical standardized tool for data presentation and for improved transparency in the priority-setting process. It provides the

- evidence base for priority-setting for health research. However, it is **not** a method for producing the priorities themselves.
- Field-testing at the global level confirms the applicability of the approach to specific disease conditions and risk factors or determinants of health:
 - it brings home to researchers the need to select priorities on a rational basis
 - it highlights the need to incorporate the impact on health and health interventions of the social, economic and political context.
 - It requires intensive inputs from expert groups.
 - The CAM approach facilitates a balanced consideration of various criteria, for example by highlighting the fact that cost-effectiveness should not be regarded as the overriding criterion, but should be considered alongside disease burden, reasons for persistence and level of knowledge (GFHR, 2002:63).
 - Experience to date suggests that this approach is suitable for disease groups and related risks. It has not been applied to research on policies and cross-cutting issues affecting health, and may not be suitable for such issues. Experience in using this methodology indicates that it is challenging because (a) data may not be available; (b) it requires complex information, and expertise to provide such information may not be available; (c) the exercise may be time-consuming and expensive (GFHR, 2004) However, the key questions do highlight the critical issues that should be considered.

Comparative analysis of approaches

Issues	A. ENHR	B. Five-Step process	C. Combined Approach Matrix
1. Rationale	Systematically to guide current and future country efforts to develop and implement their research agendas	To assist decision-making by governments, industry and other investors on the allocation of funds to, and within, health R & D To complement national assessments with a global one	To incorporate criteria and principles for priority-setting of previous approaches into a combined approach To use priority-setting techniques to gain as many years of healthy life as possible for a given investment in health research
2. Level of application	National and subnational	Global	Global (disease, determinants/risk factors)
3. Information used	Quantitative and qualitative data in relation to: - health status - the health care system - the health research system Particular focus on analysis of health needs, people's expectations and societal trends (demand side)	Burden of disease (DALY) Information about 20 risk factors and determinants, such as alcohol use, blood pressure, unsafe water, etc. Knowledge base about the health problem Cost-effectiveness of current and potential interventions Resource allocation to R & D on specific health problem	The same information as the Five-Step process, but applied at four levels of intervention: - individual, family and community - health ministry, health systems and services, health research community - sectors other than health - central government and macroeconomic policies
4. Criteria	Appropriateness: ethical and moral issues, human rights issues, legal aspects, political acceptability, adequacy and usefulness of the current knowledge base. Relevance: magnitude and severity of the problem, responsiveness to national health policy, equity focus. Feasibility: technical, economic, political, sociocultural and ethical aspects. Impact: affordability, efficacy, effectiveness, equity and coverage.	Burden of disease: - epidemiologically significant - requiring significant amount of health service provision - significant factor in policy debates Determinants: - among leading causes of disease burden - high likelihood of causality - available data - potentially modifiable Performance of the system: - efficiency - equity - quality Financial flows	As specified in the theoretical model: - burden of disease - determinants of disease burden - cost-effectiveness - effect on equity - ethical, political, social, cultural acceptability - probability of finding a solution - scientific quality - feasibility - contribution to capacity-strengthening As applied in the piloting: research projects that have the greatest impact in lowering the burden of disease
5. Actors	Researchers Decision-makers Health service providers Communities	Experts (scientists)	Experts (scientists) – current experience. Potentially, should also involve all stakeholders, as in ENHR
6. Reference document	COHRED (1997)	Ad Hoc Committee (1996)	GFHR (2002, Chapter 4)

Note: [Section 6](#) of the Tools and Resources section of this unit provides an alternative comparative analysis of priority-setting, using different dimensions of analysis to compare the approaches developed by ENHR, the Ad Hoc Committee and the Global Forum for Health Research (GFHR, 2002:Insert 4.1).

Key issues

Relative focus on methods and tools OR processes

Priority-setting requires attention to methods and tools as well as to the **process** of setting priorities. These two aspects influence each other, and in turn influence the outcome of the priority-setting exercise. All three approaches include elements of both aspects, but differ in the degree of emphasis placed on each one. The ENHR approach gives emphasis to the process of priority-setting, but provides less guidance on methods and tools for analysing information inputs. In contrast, the five-step and CAM approaches focus on methods and tools, with less guidance on processes.

Identifying priority research

Priorities can be identified in terms of health problems and/or health system problems.

The three approaches recognize both perspectives, but balance them with different weights and also use somewhat different, though overlapping, information bases. Giving predominance to a health problem/disease perspective in priority-setting results automatically in a higher ranking for categories of diseases, risk factors, technologies and health interventions and research addressing these categories, while cross-cutting health system issues do not achieve the same cumulative importance. Any priority-setting initiative should therefore work out a proper balance between both perspectives, with a systematic approach within each one, possibly using different criteria.

Adaptation to various levels — more work is needed

The three approaches are rational; they collect all available information about what is needed and what is possible, identify objectives and collect data about the value placed on these objectives by various groups. The methodology of the three approaches requires adaptation to the context (level, area, type of problem) they are addressing. COHRED has gathered experience of applying its approach at national level, while the Global Forum has gathered most of its experience at the global level. There is a need to consider other levels at which there is very little experience. For example, COHRED has identified “subnational” levels, but as yet there is little experience available. Latin American researchers who reviewed the CTP materials have suggested the need to consider the regional level. It has further been suggested that local management levels could be involved through municipal forums, development-association meetings, health committees and boards, since these could provide suitable environments for dialogue and negotiation.

Value systems influence the criteria applied in priority-setting

The three approaches recognize the need for criteria as the means of ranking health research needs. They also formulate a series of such criteria, and there are considerable similarities between the criteria used in the different approaches. However, the questions of how to select and rank these criteria and, even more importantly, the underlying values which they express (e.g. equity versus cost-effectiveness) are more or less ignored by the three approaches. Given the fact that priority-setting is basically a political process, any priority-setting initiative should therefore explicitly address the issue of underlying values.

Importance of stakeholder involvement

The importance of involving stakeholders in the different stages of the priority-setting process is unanimously recognized, but the methodologies and tools to achieve this have been addressed and developed only marginally. Future priority-setting exercises should make more explicit efforts to innovate in, experiment with and document this important aspect of the priority-setting process.

The following are some key issues.

- Should all stakeholders be involved at every stage of the priority-setting process? For example, should communities be involved? At what level or at what stage? Who would represent the “community”, and what strategies could usefully be employed?
- It is often the case that research depends on the availability of funds or the requirements of donors or bilateral or multilateral agencies. Considering the importance of donor funding in health research and the much criticized “donor-driven” character of research in developing countries, what strategies would be appropriate and effective for involving donor agencies in national priority-setting exercises?
- In some countries, priority-setting is limited to the institutional environment (academic or research centres) and not necessarily linked with national health policy priorities. How can such initiatives be upgraded?

Weaknesses in the health research system limit the capacity for priority-setting

Experiences from around the globe show the difficulty and complexity of the priority-setting process and the different contexts that need to be considered. Several critical weaknesses in the health research system have serious implications for priority-setting. These include:

- fragmentation of the research system
- difficulties in obtaining the participation of actors who cannot be ignored (such as international funding agencies)
- the role and interests of researchers as a corporate category
- the lack of stewardship of institutions which are supposed to lead the process
- lack of funding.

The national-global link — the challenge of “upward synthesis”

The 1990 report of the Commission on Health Research for Development (CHRD, 1990) recommended that priorities established at a **national** level should determine **global** health research priorities; the same issue has been raised by others (COHRED Working Group on Priority Setting, 2000). While comparative analyses of country experiences in priority-setting have produced valuable lessons learned with respect to the **process** of setting priorities at the national level, attempts to synthesize the **products** (actual country priorities) are lacking.

Research on “very neglected diseases”

Despite increasing attention to equity-oriented health research, there are “very neglected diseases” where little or no research is being done (for reasons such as those described in the report of the Commission on Macroeconomics and Health (CMH, 2001)). The nongovernmental organization *Médicins sans Frontières* (MSF), through an initiative known as “Drugs for Neglected Diseases”, has made substantial investments to initiate drug development research for some of these conditions (Trouiller et al., 2002).

Public/private partnerships

The last several years have seen an increased interest in the role of private/public partnerships as research coalitions. As an example, readers are referred to Section 13, Chapter 8, of the recent *10/90 report on health research 2001-2002* (GFHR, 2002) for a description of the “Initiative on Public-Private Partnerships for Health” as well as the book, *Public-private partnerships for public health*, edited by Michael Reich (2002).

Priorities for research on health systems and health policies

In most low-income countries, the capacity of the health system to absorb and integrate research is very weak. It has been recognized that much more “operational” research is needed at the local level on issues related to the strengthening of health systems (Brugha et al., 2002). Examples of system-wide problems are: ineffective and inefficient allocation of resources, poor accessibility to services, poor distribution of human resources.

None of the priority-setting approaches has developed tools and methods for research on health systems and policies. A major constraint in systematic priority-setting is the lack of a general consensus about how to categorize and measure health systems problems. (AHPSR, 2002). There are some national examples of priority-setting in this area. (Sanchez et al., 1998; NCCSDO¹, United Kingdom). However, none has focused on refining or evaluating the tools and methods for collecting and analysing information inputs in line with the work that has been done for diseases and determinants.

However, there is a growing consensus about the importance of facilitating the use of research findings. Criteria are emerging for research on health policy and systems

¹ NCCSDO: National Co-ordinating Centre for NHS Service Delivery and Organisation Research & Development, United Kingdom National Health Service — see <http://www.sdo.lshtm.ac.uk>.

that is most likely to be utilized in decision-making. For example, some of the criteria for improved utilization include:

- research that has been identified with the active involvement of potential users
- results that are timely and of good scientific quality
- active systematic efforts to disseminate results to users and support users in applying the results.

Some research funding agencies have included such criteria in their call for research proposals. However, the criteria have not been systematically applied as yet in priority-setting at national or global levels.

Beyond *setting* priorities

Identifying priorities for research could be considered the first step towards improving health by making better use of the available evidence. It will be necessary to align financial and human resources towards the priorities that have been identified. Otherwise, priority-setting will be a hollow exercise, and countries and agencies will soon lose interest.

It is beyond the scope of this module to deal with issues related to the realignment of financial and human resources.

However, parts 4 and 5 of the Recommended Reading section provide summaries of some recent advances on these issues, e.g. [Resource Flows](#).

Recommended reading

1. Country experiences in priority-setting for research

List of national priority-setting exercises

For each country with experience in health research priority-setting, as facilitated by COHRED, we include the following information (if available):

- year(s) when the priority-setting process took place
- reference document
- contact person and e-mail address.

To obtain a reference document, readers are invited to approach the country contact person or e-mail cohred@cohred.org.

BENIN 1991 & 2000

Cellule béninoise décentralisée de la RNES [recherche nationale essentielle en santé], plan quinquenal 1993-1997, March 1993.

Cesar Akpo (bfayomi@internet.bj)

BURKINA FASO 1997

Actes du Premier Symposium sur la Recherche Nationale Essentielle en Santé au Burkina Faso, 1997.

Alain Zoubga (alain.zoubga@sante.gov.bf)

CAMEROON 2001-2002

Martyn Sama (msama@camnet.cm)

CÔTE D'IVOIRE 2000

Rapport d'avancement. Enquêtes pour l'identification des besoins prioritaires de la santé des populations, 2000.

Louise Haly Djoussou (djoussou@globeaccess.net)

CUBA 2002

Final report, workshop on priority setting for improving more health, more equity and more human development in the National Health Research System, 2002.

Eric Martinez (adolfo@infomed.sld.cu)

CURACAO 1996

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Izzy Gerstenbluth (izzyger@attglobal.net)

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Yemane Teklai (yemaneteklai@hotmail.com)

GUINEA 1992 & 2000

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N'nah Djenab Sylla (drsyllam@sotelgui.net.gn)

INDIA 1992

ENHR: priorities and capacity building needs, proceedings of the national workshop held at Pune (BAIF Foundation), 1992.

(cohred@cohred.org)

INDONESIA 1999

The development of national health research priority and national health research agenda for Indonesia (2000/1 – 2004/5).

Agus Suwandono (dragus@indosat.net.id)

JAMAICA 1996

A profile of health research in Jamaica 1991-1995, 1998.

Peter Figueroa (figueroap@moh.gov.jm)

KENYA 1992 & 1997

ENHR in Kenya – executive summary: concept papers meeting for ENHR in Kenya, 1997

Mohammed Abdullah (Abdullah@iconnect.co.ke)

LAO PEOPLE'S DEMOCRATIC REPUBLIC 1997

Priority-setting in Lao PDR, 1997.

Boungnong Boupcha (boungnong@moh.gov.la)

MALAWI 2001

Report on essential national health research priority-setting exercise, 2001.

Allan Macheso (malaria@malawi.net)

MALI 2001

Premier symposium national sur la recherche en santé – definition des priorités nationales de recherche en santé au Mali, 2001.

Absatou N'Diaye (absatoundiaye@hotmail.com)

NEPAL 1998

Conference on prioritisation of ENHR agenda (Journal of ENHR), 1998.

Gopal Prasad Acharya (nhrc@healthnet.org.np)

NICARAGUA 1992

Prioridades de investigaciones esenciales en salud y potencial de recursos humanos, 1992

Ernesto Medina (emedina@unanleon.edu.ni) and (cohred@cohred.org)

NIGERIA 1991

International Conference on Health Research Priorities for Nigeria in the 1990s and Strategies for their Achievements, 1992.

Oni Idigbe (nimr@home.metrong.com)

PAKISTAN 2001

Report of the Seminar on Health Research Priorities for Pakistan.

Tasleem Akhtar (pmrc@isb.comsats.net.pk)

PHILIPPINES 1992 & 1999

Health science and technology priorities, 1999-2004, 1999.

Mario Villaverde (marcvill@central.doh.gov.ph)

SENEGAL 2000

Programme national de recherche en santé (PNRS), 2001

Babacar Drame (bdrame@sentoo.sn)

SOUTH AFRICA 1996

Proceedings of the First ENHR Congress on Priority Setting, 1996.

Lindiwe Makubalo (makubl@health.gov.za)

SUDAN 1999

Priority-setting and advocacy workshops in Sudan, 2000.

Samia Habbani (samia_habbani@hotmail.com)

TANZANIA 1999

Tanzania Essential National Health Research Priority Setting Workshop, 1999.

Andrew Kitua (akitua@twiga.com)

THAILAND 1997

National Workshop on Prioritisation of Health Research and Development, 1997.

Chitr Sitthi-amorn (schitr@chula.ac.th)

UGANDA 1992

Report of the Ad Hoc Committee on ENHR in Uganda, 1992.

Raphael Owor (unhro@infocom.co.ug)

ZIMBABWE 1995

The essential national health research process, 1995.

Stephen Chandiwana (chandiwana@blair.co.zw)

Descriptions of country experiences in priority-setting

Most of the following documents are available from COHRED (cohred@cohred.org)

Abdullah MS, Mugambi M, Owor R (1995). Report of the National Convention for Setting ENHR Priorities in Zimbabwe, 22-25 August 1995. Harare. 27pp.

Report on the ENHR priority-setting workshop by the regional facilitators. The report touches on relevant aspects of the meeting.

Atelier de réactualisation des priorités nationales en matière de recherche en santé en République de Guinée, Conakry, 26-29 avril 2000 [Priority-setting workshop for health research in the Republic of Guinea, Conakry, 26-29 April 2000]. 7pp. Available on the COHRED database at <http://www.cohred.org>.

This report gives a summary of the research priority-setting workshop that took place in Guinea in April 2000. It includes a detailed list of the research priorities and research topics identified.

Blair Research Laboratories, Ministry of Health and Child Welfare, Zimbabwe (1995). The essential national health research priority setting process. Proceedings of the national convention on ENHR priority setting process. Harare. 68pp.

Before the national convention on ENHR priority-setting in 1995, data were collected over a two-year period, beginning at the grassroots level and progressing to the higher levels of the districts and provinces. At the district and provincial levels, structured questionnaires were used and a review of disease statistics was carried out. At the community level, key stakeholders, including women's groups, were consulted by means of focus groups. A total of 112 focus-group discussions were conducted in all 56 districts of the country. The data generated provided background information for district-level meetings. The recommendations of these meetings were discussed and refined at eight provincial-level workshops. A list of health and health research priorities was compiled and formed the background document for the national convention, at which 20 priority areas were identified, 18 of which are disease-oriented and two related to health services.

Boupha B (1997). Priority setting in LAO PDR: country report. Vientiane, Ministry of Health, Council of Medical Sciences. 4pp. Available on the COHRED database at <http://www.cohred.org>.

This paper, presented at the 2nd regional meeting of ENHR Asia in Hanoi (1997), focuses on priority-setting and its use for the development of the second five-year Health Research Master Plan.

COHRED (Council on Health Research for Development) (2000). ENHR priority setting – lessons from Nepal (COHRED Learning Brief No. 2000.3). Geneva. Available on the COHRED database at <http://www.cohred.org>.

The conference on priority-setting for health research, which took place in 1998, provides some lessons learned for other countries about to embark on similar activities.

Commonwealth Caribbean Medical Research Council (CCMRC) (1995). Regional Workshop on Essential National Health Research and Priority Setting in Health Research. Ocho Rios, Jamaica, November 6-8, 1995. 30pp. Available on the COHRED database at <http://www.cohred.org>.

During the workshop, participants identified and examined issues and problems in implementing health research in their countries. They critically reviewed mechanisms for priority-setting for health research in the Caribbean, and discussed how these could be improved. Finally, each country team prepared a draft plan of action for ENHR and regional proposals for collaboration in ENHR activities in the Caribbean. It was anticipated that country teams would continue to promote and develop ENHR activities on their return to their home countries.

Council on Health Research for Development (COHRED) (2000). Priority setting for ENHR – the Indonesian experience (COHRED Learning Brief No. 2000.4). Geneva. Available on the COHRED database at <http://www.cohred.org>.

This learning brief presents the Indonesian experience of priority-setting for health research.

Department of Science and Technology, Philippine Council for Health Research and Development (1999). Proceedings of the 5th National Health S&T Congress. 126pp. Available on the COHRED database at <http://www.cohred.org>.

A national Health Science & Technology (S&T) Congress, organized by the Philippine Council for Health Research and Development (PCHRD), was held in Manila in March 1999. Region-based and nationwide consultations (coordinated by the Council in partnership with the ENHR unit of the Department of Health) were undertaken in 1997 and 1998 in preparation for this conference. The methodologies used by each region to identify health science and technology priorities included a consultative workshop, a review of statistics, in-depth interviews and survey questionnaires. The output from the regions formed the groundwork for the national science and technology agenda. The identified priorities focused on the traditional concerns of improving health and health care: diagnosis, treatment, management, prevention and control. The importance of sociocultural and behavioural dimensions in priority health issues was also highlighted. The expressed need to understand the social factors associated with specific health problems indicated people's growing awareness of the desirability of adopting a more holistic approach in addressing the country's health concerns.

Department of Science and Technology, Philippine Council for Health Research and Development (1999). Draft national health S&T priorities 1999-2004. 49pp. Available on the COHRED database at <http://www.cohred.org>.

This document presents the results of the region-based nationwide consultation process which the Philippine Council for Health Research and Development (PCHRD) convened from September 1997 to mid-1998. The report highlights the rationale for these consultations and the uniqueness of each region or zone. It presents a summary of research and development (R&D) priorities, capacity development concerns, identified information needs and recommended utilization and communication strategies. The document concludes with proposals as to how the

results of these consultations can have an impact on national research planning and implementation.

Directorate Research Coordination and Management, Department of Health, Pretoria, South Africa (1996). Proceedings of the first ENHR congress on priority setting, Edelweiss Functions Centre, November 14-15 1996, Pretoria, South Africa. Pretoria. 34pp. Available on the COHRED database at <http://www.cohred.org>.

The first National ENHR Congress on Priority Setting in South Africa was hosted by the Department of Health in 1996 and was attended by 77 organizations. The aims of the workshop were three-fold: to identify health research areas that address priority health problems, to develop a process for consensus-building and to facilitate the establishment of an ENHR committee. The congress achieved its aim of establishing a preliminary list of priority health problems and urgent research questions. This was achieved through consensus and participation of basic scientists, clinical researchers, administrators, health service providers, funders and representatives of professional associations. The Congress also provided an insight into the prioritization process.

ENHR Secretariat, National Institute for Medical Research, Dar es Salaam, Tanzania (1999). Tanzania essential national health research priority-setting workshop, Arusha International Conference Centre, 15-21 February 1999. 50pp.

The priority-setting process was the beginning of a dynamic process of identifying the areas where Tanzania's meagre research funds should be concentrated. The process was demand-driven. The exercise involved modifying the "standard" methodology to suit local needs. The result is a list of priorities that have been reached by involving most of the stakeholders in health research.

Essential National Health Research, Bangladesh (ENHR, B) Secretariat (1997). Priority setting for research in health and population: Bangladesh experience. 13pp. Available on the COHRED database at <http://www.cohred.org>.

This paper, presented at the 2nd regional meeting of ENHR Asia (1997), gives an overview of the Bangladesh approach to priority-setting for health research from 1990 to 1997.

Essien EM, Idigbe EO, Olukoya DK (1991). International Conference on Health Research Priorities for Nigeria in the 1990s and Strategies for their Achievement, February 19-22, 1991. Proceedings and recommendations. Lagos, National Institute for Medical Research. 486pp.

The National Institute for Medical Research, in conjunction with the Federal Ministry of Health, organized a priority-setting conference in February 1991. The content of this report consists of communications and recommendations of the conference, including presentations at the preparatory meetings.

Kitua A, Mashalla YJS, Shija J (2000). Coordinating health research to promote action: the Tanzanian experience. British Medical Journal, 321:821-823.

The failure of the malaria eradication programme in some developing countries illustrates their failure to coordinate their health research activities. Coordination is needed in order to make effective use of scarce resources, but also to identify priorities and communicate them to policy-makers and the public. After many years when Tanzanian health research institutions failed to collaborate, they have now joined in a

national health forum. The forum has already identified research priorities and is setting out an ethical framework for research.

Ministry of Health, Senegal (1999). Sénégal: programme de promotion-plaidoyer et de définition des priorités pour la Recherche Nationale Essentielle en Santé. Dakar, Ministère de la Santé. 5pp.

In 1998, the Research Bureau conducted a study on health research at the district level. The main objective of this study was to evaluate research capacities within the health system, identify priority research areas and training needs, and advocate for health research at all levels. As a result of this study, a plan of action was elaborated.

National Institute of Health Research and Development (Ministry of Health, Indonesia) (1999). The development of national health research priority and national health research agenda for Indonesia (2000/1-2004/5) by application of ENHR approaches. 87pp. (See COHRED database at <http://www.cohred.org>, accessed August 2004)

The National Institute of Health Research and Development (NIHRD) of the Ministry of Health took the lead in setting a health research agenda for Indonesia. The following process was followed to set the research agenda.

- *Situation analysis of health needs, status, problems and potentials by reviewing relevant secondary resources.*
- *Round-table discussions between all stakeholders, organized around eight primary-health-care-related areas. Based on discussion of the situation analysis and their own experiences and research needs, participants in each round-table discussion group developed a list of proposed essential research.*
- *National workshop to develop a national health research priority list.*
- *Establishment of a national health research agenda following the national workshop.*
- *Establishment of a mechanism to channel and utilize the research results. To ensure the effective management and implementation of the research agenda, a Network on National Health Research and Development has been formed by Ministerial Decree (September 1999).*

The report provides, in addition to a description of the process, a list of priority research areas and subareas, the expected output and the expected users of this research.

Sachetana (1998). Journal of essential national health research, Nepal. Kathmandu, Nepal Health Research Council. 54pp.

This first issue of Sachetana includes the proceedings from the conference on prioritization of the ENHR agenda (Nagarkot, Nepal, 12-14 August, 1998). It includes the methodology used for health research priority-setting, the experiences of the participants using this methodology and the research priorities identified.

Sanchez DM, Bazzani R, Gomez S (1998). Priorities in collective health research in Latin America. Montevideo, Geops. ISBN 9974-32-187-5. 210pp.

This book is an attempt to determine an agenda in collective health research for the Latin American region. It is intended to be useful for decision-making in the area of health research policies, for both national and international agencies.

Schneider M (2001). The setting of health research priorities in South Africa. Burden of Disease Research Unit, Medical Research Council, South Africa. ISBN 1-919809-15-5. 137pp.

The study examines the approaches used for prioritization and consolidates them into a framework for analysing and classifying health research. In addition, it examines how the measurement of the burden of disease can inform such a process. Particular attention is given to issues relating to equity and the debates related to composite measures of health such as the disability-adjusted life-year (DALY).

The study observes that Essential National Health Research has been adopted as a policy, but that the efforts to implement it need to be more vigorous. Progress has been made in terms of prioritization, but this needs to be followed up by more detailed analysis to develop a more usable list of priorities. Efforts to audit expenditure on health problems need to be strengthened.

Schneider M, Bradshaw D (1998). Setting priorities for health research, experiences from South Africa. Tygerberg, South African Medical Research Council. 27pp.

The authors attempt to understand the process of health research prioritization and reflect on South African experiences. The report examines in depth two priority-setting perspectives – that is, the health systems perspective and health problem perspective. The authors recommend that both approaches be used in South Africa, but with special attention to equity.

2. Reviews and manuals of priority-setting experiences

Ad Hoc Committee (Ad Hoc Committee on Health Research Relating to Future Intervention Options) (1996). Investing in health research and development (document TDR/Gen/96.1). Geneva, World Health Organization. (See

http://www.who.int/tdr/publications/publications/investing_report.htm.)

This report is the outcome of a review of health needs and related priorities for research and development in low-income and middle-income countries. It is intended as a resource to assist decision-making by governments, industry and other investors in the allocation of funds to, and within, health R&D. The report explains the methods the Ad Hoc Committee has been using to assess R&D needs and opportunities, in particular the five-step approach.

Bruce N (2001). Indoor air pollution and health: Applying a framework to identify research priorities for health and other sectors (Presentation, Forum 5, Geneva, 9-12 October 2001).

This paper, presented and discussed at Forum 5 (Geneva, 2001), reviews the application of the Combined Approach Matrix to the problem of indoor air pollution in developing countries. It analyses determinants, identifies research under the headings of the five-step approach, as proposed by the Ad Hoc Committee, and does this at four levels of intervention. The paper assesses the strengths and weaknesses of the approach and makes recommendations for how the method might be further developed.

COHRED (Council on Health Research for Development) (1997). Essential National Health Research and priority setting: lessons learned (COHRED document 97.3). Geneva. 66pp. See <http://www.cohred.org>.

Experiences of priority-setting continue to accumulate worldwide. While the conceptual framework, perspectives and practices of priority-setting may differ from country to country, its impact is common to all – it is guiding them in planning their health research programmes, in mobilizing and allocating their research resources and in strengthening local research capacity. This monograph is the outcome of the COHRED Working Group on Priority Setting. It can be used by different stakeholders at district, national and global levels, to guide them in a process which has as its ultimate goal the achievement of equity in health and development.

COHRED (Council on Health Research for Development) (2000). Negotiations for national research: making priorities matter (COHRED Learning Brief 2000.5). Geneva. 2pp. Available on the COHRED database at <http://www.cohred.org>.

This learning brief deals with the difficulties encountered when national research priorities are not in line with global research priorities.

COHRED Working Group on Priority Setting (2000). Priority setting for health research: Lessons from developing countries. Health Policy and Planning, 15(2):130-136.

This paper is a review of the issues around research priority-setting, especially as they relate to the health problems of developing countries. The paper proposes a strategy for priority-setting, based on lessons learned from ENHR approaches attempted in several developing countries. With equity in health and development as its goal, the proposed model is demand-driven and involves multidimensional inputs and multiple stakeholders. Various steps of the process are discussed, and the paper concludes with a discussion about the gap between national research priorities and the agenda set at regional and global levels.

GFHR (Global Forum for Health Research) (2000). The 10/90 report on health research 2000. Geneva.

See particularly Chapter 2, entitled “Complementary approaches for priority setting in health research: review and perspectives”, and Insert 5.2 Epilepsy – risks, obstacles and opportunities for interventions: application of the five steps for priority-setting. <http://www.globalforumhealth.org>.

The 10/90 report 2000 describes the progress made by the partners in the Global Forum to help correct the 10/90 gap by focusing on research activities and initiatives

that address health problems of middle-income and lower-income countries. Chapter 2 reviews major efforts in the past decade to systematize the approach to priority-setting in health research, including ENHR and the work of the Ad Hoc Committee and the Advisory Committee on Health Research. A comparison is made of these approaches, indicating their common denominators and main differences.

GFHR (Global Forum for Health Research) (2002). The 10/90 report on health research 2001-2002. Geneva. (See particularly Chapter 4, entitled “Progress in priority setting methodologies”, and Chapter 8, entitled “Some networks in the priority research areas”).

This report updates the 2000 report and includes a more detailed description of the Global Forum’s Combined Approach Matrix. It includes helpful tables which display key recommendations to be found in major reports over the past 12 years, as they relate to the various dimensions in the Matrix.

Chapter 8 of the report describes several global research coalitions that promote and coordinate research on specific priority conditions. Several of the research coalitions mention the process of priority-setting, either directly or indirectly. For example, the Child Health and Nutrition Research Initiative (CHNRI) has as one of its objectives “to promote priority research discussion with a broadened approach to child health, nutrition and development” (p.182). This group plans to use “established methodologies for priority-setting” to achieve this objective. The chapter also provides an excellent up-to-date summary of the work being done by these coalitions on a number of priority areas identified by various reports over the past 12 years. The diseases and conditions include the following:

- *tuberculosis (pp.139-145)*
- *HIV/AIDS (pp.146-149)*
- *cardiovascular health (pp.150-157)*
- *malaria (pp.157-166)*
- *mental health and neurological disorders (pp.166-171)*
- *reproductive health (pp.172-175)*
- *road traffic injuries (pp.176-180)*
- *child health and nutrition (pp.181-187)*
- *sexual violence against women (pp.187-191)*
- *health policy and systems (pp.193-200).*

Mugambi M (1995). Country experiences with priority setting for ENHR. A working document. Geneva, COHRED. 22pp. Available on the COHRED database at <http://www.cohred.org>.

This document reviews country experiences in implementing the ENHR strategy, with a particular emphasis on priority-setting for research. It looks at processes, mechanisms and outcomes as outlined in plans and is based on experiences from seven countries (or groups of countries).

Nuyens Y (1997). Workshop on Priority Setting for Essential National Health Research (PSENHR): review of processes, mechanisms and outcomes of PSENHR. Geneva, Council on Health Research for Development. 23pp.

In this working paper, the priority-setting experiences in nine countries have been analysed according to the following questions.

- *Who has participated in the exercise?*
- *How have the participants been involved?*
- *What is the information used to set the research priorities?*
- *Which criteria have been used?*
- *What was the outcome of the priority-setting?*

This paper has been used for the development of the monograph on priority-setting.

Okello D et al. (2000). A manual for research priority setting using the ENHR strategy (COHRED document 2000.3). Geneva, Council on Health Research for Development. 47pp. See <http://www.cohred.org>.

This manual provides facilitators of a health research priority-setting workshop with a step-by-step guide for successfully leading the process. Starting with the preparatory work needed for a priority-setting exercise, the manual goes on to discuss elements for priority-setting, criteria for priority-setting, the follow-up activities after the priority-setting exercise and the implementation of the research agenda. The annex of the publication includes modules on how to use criteria for research priority-setting.

The table in Insert 5.2 presents the results of a research priority-setting exercise undertaken by the WHO Mental Health Programme, using the Combined Approach Matrix.

3. Research on health systems and policies — priority-setting

Hanney SR et al. (2003). The utilization of health research in policy-making: concepts, examples and methods of assessment. Health Research Policy and Systems, 1:2. Available online at:

<http://www.health-policy-systems.com/content/1/1/2> (accessed August 2004).

The importance of using health research in policy-making and of understanding the mechanisms involved is increasingly being recognized. Recent reports calling for more resources to improve health in developing countries, and global pressures for accountability, draw greater attention to research-informed policy-making. Key utilization issues have been described for at least 20 years, but the growing focus on health research systems creates additional dimensions. The utilization of health research in policy-making should contribute to policies that may eventually lead to desired outcomes, including health gains.

In this article, exploration of these issues is combined with a review of various forms of policy-making. When this is linked to analysis of different types of health research, it assists in building a comprehensive account of the diverse meanings of research utilization. Previous studies report methods and conceptual frameworks that have

been applied, with varying degrees of success, to record utilization in policy-making. These studies reveal various examples of impact within a general picture of underutilization of research. Factors potentially enhancing utilization can be identified by exploration of: priority-setting; activities of the health research system at the interface between research and policy-making; and the role of the recipients, or "receptors", of health research. An interfaces-and-receptors model provides a framework for analysis.

The article identifies the reasons for assessing health research utilization and recommends possible methods of doing this. Research utilization can be better understood and enhanced by developing assessment methods informed by conceptual analysis and review of previous studies.

Janovsky K, ed. (1995). Health policy and systems development: an agenda for research. Geneva, Switzerland: World Health Organization.

The book identifies the elements or actors in the health system, their functional interrelationships and the place of health policy as one of the dimensions of the health system. It documents the key research needs, methods and priority research issues in health policy, health needs assessment, health financing, public/private mix, decentralization, quality of care and monitoring of health systems. It provides a rationale for setting health research priorities and analyses the different levels at which priorities can be set – sector, geographical, services, clientele, diseases and programmes. The book also outlines a framework for assessing health research priorities and reviews the experiences of countries at the forefront of efforts to set priorities on a more explicit basis. Important elements of the framework for assessing health research priorities include perceived relevance or potential impact, expressed interest of stakeholders or the policy agenda, advancement of knowledge, coherence of issues and research methods and societal values. The book advocates a holistic approach to health policy or systems development. This is seen as a prerequisite for increasing the capacity of the health system as a whole to improve health status and to assess or predict the net effects of health interventions or different combinations of institutional changes in terms of efficiency, equity, quality and cost-effectiveness, in line with the objective of health policy and systems research.

Joint Project for Health Systems Research in the Southern African Region (1990). Health systems research, does it make a difference? Geneva, World Health Organization.

The booklet highlights the importance of carrying out health systems research of good quality and applicability to national health research priorities to secure the involvement of policy-makers in health research priority-setting and in using research results. It outlines the approaches and methodologies used to identify the health needs of communities and find solutions to them. It also describes the main characteristics of health systems research. In addition, the booklet indicates the rationale for the Joint Project for Health Systems Research in the Southern African Region between the Dutch Directorate-General for International Cooperation (DGIS) and WHO – namely to promote the contribution of properly organized health systems research to primary health care implementation in Africa. It also indicates the strategies adopted, the activities undertaken and the achievements and constraints of the programme.

Neufeld V, Johnson N, eds. (2001). Forging links for health research. Perspectives from the Council on Health Research for Development. Ottawa, IDRC Books.

The book surveys the contribution of health research to equitable development. In particular, it explores how developing countries could strengthen the linkages between research and action or policy in order to solve their health problems effectively. The book also emphasizes the importance of building coalitions between communities, researchers and policy-makers to establish a dialogue for defining health research priorities and developing and understanding solutions to specific health problems to promote equitable health development.

4. Resource flows: reviews and manuals

Alano BP Jr, Almario ES (2000). Tracking country resource flows for health research and development (R&D), a comparative report on Malaysia, the Philippines, and Thailand, with a manual on tracking country resource flows for health research and development. Manila, Center for Economic Policy Research. ISBN 971-508-082-0. 75pp. Available on the COHRED database at <http://www.cohred.org>.

This publication consists of two parts. The first part is the integrated report drawn from country studies on resource flows for health research and development in Malaysia, Thailand and the Philippines. It presents the findings and highlights the data that can be compared between them. The second part is the manual that presents the method used by the three countries to track their respective health R&D resources. It is addressed to other countries that would like to embark on a similar effort, explaining the different steps involved. Every attempt is made to simplify the steps and make them as straightforward as possible.

GFHR (Global Forum for Health Research) (2001). Monitoring financial flows for health research. Geneva. ISBN 2-940286-05-1. 73 pp.

Health research is essential to the design and implementation of health interventions, health policies and health service delivery. The financing of health research and development is critical to its success. The information on health research financing is fragmented. This study aims to provide decision-makers with an overview of currently available information on resource flows into health research. The main aim of the study is not so much to provide actual figures as to describe the process for arriving at these estimates as a basis for further improvements, and to indicate what to expect from the various sources of data and approaches to research.

5. Resource flows: case-studies

Center for Economic Policy Research (2000). Analysis of the funds flow for health research and development in the Philippines, 1997-1998: final report. Manila. 111pp.

This study is a follow-up of pioneering research to track fund flows for health research and development resources in the Philippines through primary and secondary data pertaining to the calendar year 1996. Using the methodology and learning of this earlier project, this study continues the analysis of fund flows for health research in the Philippines for the years 1997 and 1998. The study also looks into the priority-

setting process for health research in the Philippines. The data of the study is presented in this report. Recommendations are made for an improved measurement of health R&D flows, a coordinating mechanism for matching funds with priorities and for sustained monitoring.

COHRED (Council on Health Research for Development) (2000). The flow of Philippine funds for health research and development (COHRED Learning Brief No. 2000.7). Geneva. 2pp. Available on the COHRED database at <http://www.cohred.org>.

This learning brief provides a summary and presents the major conclusions of the Philippine component of a multicountry study on the flow of funds for health research and development. The study also involved Malaysia and Thailand.

Institute for Medical Research, Ministry of Health, Malaysia (1998). Resource flows for health research and development. Malaysian study: phase I; progress report. 21pp.

This Malaysian case-study is part of a COHRED-funded multicountry study that tracks resource flows for health research and development (R&D). It responds to the recognition that monitoring resource flows is a key input to any useful discussion on health R&D policy. There is a need to collect, analyse, and disseminate information on health resource flows in order to address the health problems of low-income and middle-income countries more effectively. The report presents the results of the first phase of the study. It documents the health research priority-setting process in the country, and presents the existing health R&D-related datasets. The workplan for phase 2 of the multicountry study is also presented.

Pongpanich S et al. (2000). Resource flows for health research and development. Thailand agenda for health research and development: phase II; final report. Bangkok, College of Public Health, Chulalongkorn University. 73pp. Available on the COHRED database at <http://www.cohred.org>.

This study is a first attempt to track health research and development (R&D) funds in Thailand. Using an accountancy framework which traces the flow of funds from sources to users, the overall objective is to develop a basic methodology for tracing and measuring health R&D funds in a country. It can be used as a tool to streamline and fine-tune the allocation of health R&D funds. The study also looked into the priority-setting process for health research in Thailand.

Yepes FJ, Sanchez LH, Ramirez ML (2001). Funding research for policy in Colombia's reformed health sector. Alliance for Health Policy and Systems Research Working Paper No. 11. Available online at: <http://www.alliance-hpsr.org> – Services – Alliance information products – Working papers (accessed August 2004)

The extract given below illustrates some of the issues involved in aligning financial resources to research priorities. It refers to the prospect of increased financing for health research in Colombia following the adoption of a law allocating a certain percentage of lottery revenues to health research.

“Health policy and systems research is scarce in Colombia. Of all the research projects undertaken in Colombia between 1990 and 1997, 40% were in biomedical sciences, 29% in clinical sciences, 23% in epidemiology and only 8% in HPSR ... The

Ministry of Health has not had a clear HPSR policy, nor indeed a health research policy at all, and has allocated research resources haphazardly. This is a vicious circle; if there is no policy to strengthen HPSR capacity there will be no critical mass of investigators and only a small number of HPSR proposals for funding ...

The Ministry of Health is now deciding how these resources [from the lottery funding] should be allocated ... The first option [the status quo] gives the Ministry autonomy to set priorities, select relevant research subjects and purchase specific research from a national and international market on demand. However, it exposes research to nontechnical influences, risks a lack of continuity owing to the frequent political changes and imposes restrictions on the use of information by Government bureaucrats. The second option [which would see Ministry of Health resources placed in the Science and Technology system] ensures peer-reviewed selection, a stable relationship and unrestricted use of information, but makes the proposals vulnerable to the interests of the supply side (researchers and research institutions) which may not suit the Ministry's priorities."

6. Comparative analysis of three priority-setting approaches (as suggested by the Global Forum)

Characteristics	Essential National Health Research approach	Ad Hoc Committee on Health Research approach	Global Forum for Health Research Combined Approach Matrix
1. Objective of priority-setting	Promote health and development on the basis of equity. Help decision-makers make rational choices in investment decisions.	Help decision-makers make rational choices in investment decisions so as to achieve the greatest reduction in the burden of disease for a given investment (as measured by number of DALYs*** averted).	Help decision-makers make rational choices in investment decisions so as to have the greatest reduction in the burden of disease for a given investment (as measured by number of DALYs averted), on the basis of the practical framework for priority-setting in health research.
2. Focus at the global or national level?	Focus on situation analysis at country level; residual problems to be studied at global level.	Focus on situation analysis at the global level; method also applicable at the country level.	Method applicable at both global and national levels.
3. Strategies/principles	Priorities set by all stakeholders. Process for priority-setting should be iterative and transparent. Approach should be multidisciplinary.	Five-step process. Process should be transparent.	Priorities should be set by all stakeholders. Transparent and iterative process. Approach should be multidisciplinary (biomedical sciences, public health, economics, environmental sciences, education sciences, social and behavioural sciences).
4. Criteria for priority-setting**			
- Burden of disease	Based on an estimate of severity and prevalence of disease.	Measured by DALYs	Measured by DALYs or other appropriate indicators.
- Analysis of determinants of disease burden	Analysis of multidisciplinary determinants (biomedical, economic, social, behavioural, etc.)	Analysis of mostly biomedical determinants. Other determinants implicit.	Analysis of determinants at following intervention levels: - individual/family/community - health ministry + research - sectors other than health - government macroeconomic policies.
- Cost-effectiveness of interventions (resulting from planned research)	Some attempts at measurement in terms of impact on severity and/or prevalence.	Cost-effectiveness measured in terms of DALYs saved for a given cost.	Cost-effectiveness measured in terms of DALYs saved for a given cost.
- Effect on equity and social justice	Central criterion in ENHR approach (not directly measured).	Inbuilt equity orientation, based on same weights given to year of healthy life saved for poor and rich population (effect on equity not directly measured as yet).	Inbuilt equity orientation, based on same weights given to year of healthy life saved for poor and rich population (effect on equity not directly measured as yet).

Characteristics	Essential National Health Research approach	Ad Hoc Committee on Health Research approach	Global Forum for Health Research Combined Approach Matrix
- Ethical, political, social, cultural acceptability	This criterion is present, although in varying degrees, in various approaches, either explicitly (particularly in the ENHR approach) or implicitly.		
- Probability of finding a solution	Specifically mentioned in the ENHR approach.	Part of the cost-effectiveness analysis.	Part of the cost-effectiveness analysis.
- Scientific quality of research proposed	Precondition of all approaches.		
- Feasibility (availability of manpower, funding, facilities)	Specifically mentioned in the ENHR approach.	Implicit.	Feasibility is part of the list of criteria.
- Characteristics	ENHR approach	Ad Hoc Committee on Health Research approach	Combined Approach Matrix of the Global Forum for Health Research
- Contribution to capacity-strengthening	Explicitly mentioned in the ENHR approach.	Not mentioned. Could be integrated in the cost-effectiveness analysis	Can be integrated in the cost-effectiveness analysis
5. Critical problems and priority research areas	Will depend on each country's situation.	Infectious diseases, malnutrition and poor maternal/child health. New and re-emerging infectious diseases due to antimicrobial resistance (tuberculosis, sexually transmitted diseases, HIV/AIDS, malaria) Increase in noncommunicable diseases and injuries. Inequities and inefficiencies in delivery of health services.	Health system research (efficiency and equity of health systems). Child health and nutrition (diarrhoea, pneumonia, HIV, malaria, vaccine-preventable diseases, nutritional deficiencies, tuberculosis). Maternal and reproductive health (mortality, sexually transmitted diseases and HIV, nutrition, family planning). Noncommunicable diseases (cardiovascular, mental and neurological conditions). Injuries.
6. Implementation tools	Essential national health research plans.	Forum for investors in international health research. National agendas. Public/private collaboration.	Analytical work for priority-setting. Research networks (initiatives) for priority diseases. Annual meeting of partners to help correct the 10/90 gap.

Source: table modified from: GFHR, 2000:Insert 4.1.

** The criteria for priority-setting listed are those proposed in all three approaches.

*** DALYs= disability-adjusted life-years: here used to denote the number of years of healthy life lost to disease.

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