

The 10/90 Report on Health Research 1999

Overview of the Global Forum

Priorities in Health Research

Analytical Work for Priority Setting

Poverty and Health

Partnership Initiatives in Health Research

Capacity Development

Communication to Help Bridge
the 10/90 Gap

Practical Framework for Setting Priorities



Global Forum for Health Research

Promoting Research to Improve the Health of Poor People

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Preface

Investment in health research and development by the public and private sectors amounts to about US\$ 56 billion a year. Most of this – a staggering 90% – is spent on research into health problems that concern only 10% of the world's population. As a result, only 10% of the limited funds available for health research is currently used to help improve the health of 90% of the world's population. This grave disparity is widely referred to as the 10/90 Disequilibrium.

To make matters worse, there is duplication in some areas of health research, major gaps elsewhere, dispersal of efforts, and an alarming lack of information on resource flows.

The many institutions that fund health research could help improve both global health and their own effectiveness if they were to exchange information, link their efforts, and base their decisions about resource allocation on explicit analysis of priorities.

The need for global prioritization in health research was raised in the 1990 Report of the Commission on Health Research for Development, *Health Research: Essential Link to Equity in Development*. This led to the creation in 1994 of the Ad Hoc Committee on Health Research Relating to Future Intervention Options,¹ under the auspices of the World Health Organization (WHO) and with the participation of a wide range of institutions,

¹ Report of the Ad Hoc Committee on Health Research, *Investing in Health Research and Development*, WHO, September 1996 (Referred to henceforth as "Report of the Ad Hoc Committee").

to reflect its broad mandate. The Committee presented its findings in Geneva on 27-29 June 1996 at a meeting which brought together researchers, government officials, non-governmental organizations (NGOs), and funders of research. The Committee's major conclusions were that, over the coming decades, the world community would continue to be faced by four major challenges:²

- The huge and unnecessary burden of infectious diseases among the poor that can be addressed with existing cost-effective interventions (referred to as "the unfinished agenda").
- The continually changing nature of microbial threats, such as HIV/AIDS, tuberculosis, and malaria.
- The epidemics of noncommunicable diseases and injuries in low- and middle-income countries, such as heart disease, neuro-psychiatric conditions, violence, and road traffic accidents.
- The great disparity in how efficiently and equitably different health systems provide services.

Participants at the meeting endorsed the main findings of the Report and, in particular, the recommendation for the creation of a Global Forum for Health Research to mobilize forces to help correct the 10/90 Disequilibrium.

The first Annual Forum (June 1997) launched the Global Forum for Health Research as an independent entity and established a Steering Committee of 16 members representing government policy-makers, multilateral and bilateral development agencies, foundations, international NGOs, women's associations, research institutions, and the private sector. The Secretariat of the Global Forum, located

at the Headquarters of the World Health Organization in Geneva, started its operations in January 1998.

During the first year, the Global Forum for Health Research concentrated its activities on the following strategies:

- **Organization of the Second Annual Forum:** Forum 2 was held in Geneva on 25-26 June 1998. The agenda is presented in **Annex 1**.
- **Analytical Work for Priority Setting along the lines of the five-step process for resource allocation developed by the Ad Hoc Committee on Health Research:** (i) analysis of the burden of disease; (ii) analysis of the reasons why the disease persists (analysis of the determinants); (iii) analysis of the current state of knowledge; (iv) estimation of the cost-effectiveness of present and future interventions; and (v) analysis of resource flows into health research, disease by disease.
- **Launching new initiatives:** the magnitude of many health problems is beyond the capacity of any single institution and requires a concerted effort involving a broad partnership. By acting together, the probability of finding solutions adapted to the magnitude of the challenges increases considerably. A number of initiatives were directly supported by the Forum in 1998 in the areas of health policies, malaria, tuberculosis, cardiovascular diseases, and domestic violence.
- **Communication and information:** intensive efforts were made to develop appropriate communication tools for the Forum, including a website, media contacts, and publication of the first *10/90 Report on Health Research*.

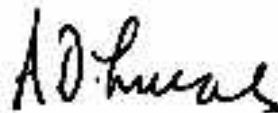
² The recommendations of the Ad Hoc Committee to deal with these challenges appear in Chapter 1, Section 2 of the present Report.

The objective of this report is to present the results of Forum 2 in the broader context of the 10/90 Disequilibrium. It will attempt to put each of the issues in context, summarize the perspectives offered at Forum 2, and outline the plan of action for the coming years. It is the first such report. The road to help correct the 10/90 Disequilibrium will clearly be a long one, but it is also clear that it will lead to better health for the majority of the world community. This will be made possible by a reallocation, by decision-makers in the South as well as in the North, of health research funds from lower to higher priority projects, from projects benefiting fewer

people to those benefiting the large majority. In view of the magnitude of the problems to be solved, there is a need to mobilize thousands of institutions. In this era of globalization, it is necessary to propel research on the health problems of the poor onto the global health agenda. It is unrealistic to contemplate a future in which the developing world will grow healthier and wealthier, while the poor everywhere remain marginalized by ill-health and poverty. The silent spread of drug-resistant microbes is evidence enough that no country can afford to ignore international health concerns.



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This report is highly indebted to the following reports: the 1990 Report of the Commission on Health Research for Development, *Health Research: Essential Link to Equity in Development*; the World Bank's *World Development Report 1993: Investing in Health*, and the 1996 Report of the WHO Ad Hoc Committee on Health Research, *Investing in Health Research and Development*. Without the enormous amount of work and the essential contributions of these reports, the present report would never have been possible.

Beyond the pioneering work of the three reports mentioned above, the present report benefited greatly from the ideas, technical inputs, and critical reviews from a broad range of partners in the various constituencies of the Global Forum for Health Research, including government policy-makers, multilateral organizations, bilateral aid donors, international foundations, national and international NGOs, women's organizations, research institutions, and private sector companies. In particular, the report builds upon the papers and discussions of the Second Annual Meeting of the Global Forum for Health Research (Forum 2), held in June 1998 in Geneva, Switzerland. A list of these papers and their authors appears in Annex 1 (Agenda for Forum 2, 25-26 June 1998). We would like to take this opportunity to thank all the authors and all the participants in Forum 2 for their valuable contribution to making progress on the road to improving the 10/90 Disequilibrium.

Finally, the Global Forum for Health Research wishes to express its profound gratitude for the financial support received from the Governments of Norway, Sweden, and Switzerland, and from the Rockefeller Foundation, the World Bank, and the World Health Organization.

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Acronyms and Abbreviations

Organizations and Programmes

ABPI	Association of British Pharmaceutical Industries
BOD	Burden of disease
CARG	Coordinating and Advisory Review Group for TB
CDC	Centers for Disease Control and Prevention (US)
CHD	WHO Division of Child Health and Development
COHRED	Council on Health Research for Development
CRISP	Computer Retrieval of Information on Scientific Projects
CVD	Cardiovascular diseases
DALE	Disability Adjusted Life Expectancy
DALY	Disability Adjusted Life Year
DANIDA	Danish Overseas Development Agency
DFID	Department for International Development (UK)
DOTS	Directly Observed Treatment Short Course (TB)
GBD	Global burden of disease
GFHR	Global Forum for Health Research
GTRI	Global Tuberculosis Research Initiative
HIID	Harvard Institute for International Development
HPSR	Health policy and health systems research
HRP	UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
IAVI	International AIDS Vaccine Initiative
ICBL	International Campaign to Ban Land Mines
ICRC	International Committee of the Red Cross
IFPMA	International Federation of Pharmaceutical Manufacturers Associations
IDRC	International Development Research Centre (Canada)
INCLEN	International Clinical Epidemiology Network
INCO-DC	International Cooperation with Developing Countries, European Commission
IOM	Institute of Medicine (US National Academy of Sciences)
IPA	International Pediatric Association
ISBI	International Society for Burn Injuries
MIM	Multilateral Initiative for Malaria in Africa
NCD	Noncommunicable diseases
NCHS	National Center for Health Statistics (US)
NIH	National Institutes of Health (US)
NORAD	Norwegian Agency for Development Cooperation

OECD	Organization for Economic Cooperation and Development
PAHO	Pan American Health Organization
QUALY	Quality Adjusted Life Year
RCS	Research Capability Strengthening
SDC	Swiss Agency for Development and Cooperation
SHARED	Scientists for Health and Research for Development
Sida/SAREC	Swedish International Development Agency/Swedish Agency for Research Cooperation with Developing Countries
STD	Sexually transmitted diseases
TDR	UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
UNAIDS	United Nations Joint Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNDPKO	United Nations Department for Peace Keeping Operations
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

Chapter 1: The Global Forum for Health Research: an Overview

The 1990 Report of the Commission on Health Research and Development and the 1996 Report of the WHO Ad Hoc Committee on Health Research concluded that the central problem in health research is the 10/90 Disequilibrium.¹ Indeed, of the US\$ 50-60 billion spent worldwide each year on health research by both the private and public sectors, only 10% is devoted to the health problems of 90% of the world's population.

The economic and social costs to society as a whole of such misallocation of resources are enormous. The 1996 Ad Hoc Committee on Health Research warned that the world community will face the following four critical health problems in the decades to come:

- **The unfinished agenda (unnecessary deaths, sickness, and disability):** Health advances and public education over the last century have produced numerous vaccines, cures, and treatments for many common infectious diseases. Despite this progress, infectious diseases, malnutrition, and poor maternal and child health account for one third of the entire disease burden in the world. In poorer countries, the burden from these conditions may be as high as 50%.
- **New and re-emerging microbes:** A growing number of drug-resistant microbes threaten to create new health emergencies and are leading to the resurgence of diseases such as tuberculosis, malaria, and pneumococcal disease, long thought to be under control.

- **Increase in noncommunicable diseases, injuries, and violence:** Epidemics of noncommunicable diseases such as cardiovascular diseases, neuro-psychiatric conditions, and chronic respiratory infections, as well as the growing burden of violence and injuries, are increasing in low-income countries.
- **Inequity and inefficiency in the delivery of health services:** Countries vary enormously in how efficiently and equitably they provide health services and many countries are reforming their health systems today without adequate information on which policies and structures work and which do not. Current efforts at health care reform require international research and information exchange on the following key items at the national level: effective health policies, disease burden, resource flows, and cost-effectiveness of interventions.

The Ad Hoc Committee made a number of key recommendations for each of the four challenges listed above. These are summarized in Insert 1.2 of Chapter 1. The Committee also made a number of institutional recommendations on the need to: (i) develop national research agendas; (ii) develop new instruments of collaboration between the public and private sectors; and (iii) increase funding for health research and development. Finally, it recommended the creation of the Global Forum for Health Research, as one of the instruments to help correct the 10/90 Gap and follow up on the work of the Ad Hoc Committee.

¹ The word "disequilibrium" is also used in this report to convey the meaning of the word "gap". Both words are used interchangeably throughout the report.

The Global Forum for Health Research

The central objective of the Global Forum is to help correct the 10/90 Disequilibrium and focus research efforts on the health problems of the poor by improving the allocation of research funds and by facilitating collaboration among partners. The Global Forum brings together a wide range of partners including government policy-makers, multilateral organizations, bilateral aid donors, international foundations, national and international NGOs, women's organizations, research-oriented bodies, and private sector companies. The Global Forum is an international foundation managed by a Foundation Council of 16 members representing the partners in the Global Forum.

The Global Forum believes that the magnitude of current major health problems exceeds the capacity of any single institution to find adequate solutions. However, by acting together, the probability of finding solutions increases markedly. Over the coming years, solutions to the present health challenges will largely depend on the strength of these partnerships. To reach this objective, the Global Forum has selected five strategies:

1. Annual Forum: Throughout the year and particularly at its Annual Meeting, the Global Forum acts as a market place where health problems and priorities can be examined by a variety of decision-makers, policy-makers and researchers. Presentations at the Annual Meeting address the latest thinking on the 10/90 Disequilibrium and act as a catalyst for action during the following year.

2. Analytical Work for Priority Setting: In the field of analytical work and in line with its central objective of helping to correct the 10/90 Gap, the Global Forum currently concentrates its efforts on the following analyses:

- Burden of disease and health determinants.
- Cost-effectiveness analyses and methods to assist resource allocation.
- Analysis of resource flows and monitoring progress in correcting the 10/90 Gap.
- Analytical work on specific conditions in the Forum priority areas.

3. Initiatives in key health research areas:

Initiatives bring together a wide range of partners in a concerted effort to find solutions to key health problems. Initiatives currently supported by the Global Forum include the following:

- Alliance for Health Policy and Systems Research
- Global Tuberculosis Research Initiative
- Initiative for Research on Cardiovascular Diseases
- Initiative on Domestic Violence against Women
- Initiative on Health and Societies
- Initiative on Prevention of Violence and Injuries
- Public/Private Partnership against Malaria.

In addition, the following Initiatives have received funding from the World Bank through the Global Forum:

- Multilateral Initiative for Malaria in Africa (MIM)
- International AIDS Vaccine Initiative (IAVI).

4. Communication and information: One of the cornerstones of the work of the Global Forum is the communication unit, which is responsible for collecting and disseminating information about the 10/90 Gap. Information on relevant health research is conveyed in an accessible form to constituents of the Forum, as well as to the media and decision-makers. This is accomplished through the publication of the 10/90 Report on Health Research,

maintenance of an interactive website, information distribution to key international and national media, and the publication of a series of technical papers called the Strategic Research Series.

- 5. Evaluation and monitoring:** Measuring progress in the correction of the 10/90 Disequilibrium is an integral part of the work of the Global Forum. Progress will be measured in terms of more widespread concern and knowledge of the gaps in health research and how priorities are set, the number and strength of initiatives which bring partners together in key areas of health research, improvements in the flow of resources and information, and finally, effectiveness in bringing solutions to the health problems of the large majority of the world's population.

Chapter 2: Priorities in Health Research and Development: Correcting the 10/90 Disequilibrium

Despite substantial gains in global health over recent decades, inequities in health status have widened, the environment has deteriorated, and other obstacles to the attainment of health for all have appeared or re-appeared. These developments challenge the global community in its pursuit of the objective of health for all in the next century. In this context, priority setting in health research assumes even greater importance.

This chapter summarizes some of the attempts which have been made in research priority setting, particularly that of the Ad Hoc Committee on Health Research. It does not attempt to summarize the uneven progress made in each of the priority areas. It draws some general conclusions that may be of use in future exercises to monitor research progress. It concludes that two kinds of

priority lists may be envisaged in health research: a comprehensive list of research priorities and a short list.

The comprehensive list will itemize priorities globally or by subject area (for example, child health or reproductive health). Such a list would be as exhaustive as possible, and include a mixture of short- and long-term R&D products or results. It would be based on a thorough evaluation of all factors and complete analysis of a priority setting process (such as the five-step process).

The short list, such as that generated by the Ad Hoc Committee in 1996, is a mechanism to select, from among the large number of research priorities, those that are currently under-resourced, may be achievable in the shorter term, and may result in highly cost-effective interventions.

Finally, this chapter draws attention to the fact that we are only in the early stages of learning how to set priorities effectively. Further development of methods and tools for priority setting will occur, and lists will have to be revised to keep pace with this. Tracking progress in priority areas can help reduce the 10/90 Gap by ensuring that the products of research, already available to wealthier populations, are also made available to the large majority of the world's population.

Chapter 3: Analytic Work of the Global Forum for Priority Setting

This chapter focusses on the three instruments supported by the Global Forum for Health Research to improve the priority setting process:

Analysis of the burden of disease

Over the past decade, major progress has been made in the calculation of the burden of

disease, particularly through the Global Burden of Disease Study (GBD 1990). Plans for the continuation of this work were presented at Forum 2 in June 1998. The continuation of this work is entitled GBD 2000, with projections of the estimated disease burden to the year 2030. This work at the global level needs to be complemented by disease burden studies at national levels. A number of such studies are under way.

Monitoring resource flows in health research

At present, there is no systematic monitoring of global investments in health research. The most recent estimates of resource flows in health research date back to 1992. Yet, this information is crucial if the allocation of resources is to be improved both at the global and national levels. In response, the Global Forum for Health Research and other partners have launched an international working group for the development of a systematic approach for monitoring resource flows. In parallel, a number of studies on resource flows at national levels have been supported by COHRED.

Cost-effectiveness analysis of investments in health research

Cost-effectiveness analysis helps identify which research projects are likely to produce the greatest improvements in health status for the available resources and therefore plays a crucial role in the priority setting process. The Global Forum for Health Research is supporting a number of cost-effectiveness studies in developing countries. The objectives are two-fold: first, to help develop a standard methodology in this field for broad application to interventions in the developing world, and second, to evaluate interventions against some of the major diseases. This has led to the evaluation of interventions against malaria in Africa and to the launch of seven other studies.

Chapter 4: The Poverty-Health Interaction: Old Problem, New Perspectives

Around 1.3 billion people in the world live in extreme poverty, surviving on less than US\$ 1 a day for all their needs. These people have little or no access to health services and education and limited prospects for a better life. They are far removed from decisions that affect their day-to-day lives. Increasingly, they are the victims of crime, conflict, and violence. It is important in both the generation and use of health R&D that the interests of the poor be made explicit. The Global Forum will support the promotion of health R&D to help correct the 10/90 Gap, with special attention to the health of the 1.3 billion poor and the development of strategies that can better serve their needs.

Data from the Global Burden of Disease Study (GBD 1990) have been used to study the burden of disease among the global poor and the results were presented at Forum 2. This study revealed that:

- Although the poor represent a quarter of the world's population of over five billion people, they share a disproportionately large burden of ill-health.
- An evaluation of the poorest 20% of the world's population indicates that they suffer more from all causes of ill-health, especially communicable diseases, than the richest 20%.
- Predictions for the future are dependent on the assumptions used, but reflect that any acceleration in the decline of death rates would benefit the poor. However, this does not question the need for priority setting.

These data confirm what health and development professionals have believed for decades: that poverty is a cause, an associated factor, a catalyst, and a result of ill-health. This kind of data is essential for any interventions

in the complex health and poverty relationship. Furthermore, it is the appropriate use of such data for decision-making that will change the 10/90 Gap.

Meanwhile, there is a critical need to focus on the ability of the poor to voice their concerns and participate in making decisions that affect their lives. Health and development programmes have a poor record of ensuring that this participation is both effective and sustainable. Mechanisms to enable the poor and the vulnerable to be involved and work towards a better future for themselves are central to overall health and development.

The global community should recognize that good health is a way out of poverty. It results in a greater sense of well-being and contributes to increased social and economic productivity. The impact of ill-health on productivity affects not only the poor but societies and economies as well. The issue of health and poverty is not just a moral issue, it is an economic issue as well. It is more cost-effective in the long run to reduce poverty by improving health and development interventions for the poor than to face the heavy costs of poverty on the community as a whole.

Chapter 5: Initiatives in Health Research

One of the goals of the Global Forum for Health Research is to support analytical studies on major health problems to determine the burden of disease, the cost-effectiveness of current interventions, and resource flows. However, while analytic studies are necessary, they are insufficient to solve the very complex problems at hand. The reasons for this are two-fold. First, global analytic studies do not always provide enough evidence to ensure informed decision-making on these problems in very different circum-

stances. For example, while analytic studies may show cardiovascular diseases (CVD) to be major health problems in both developing and developed countries, further exploration will be needed by multiple partners to determine both the extent of the problem and the most cost-effective intervention for societies in different phases of development, particularly in the middle- and low-income countries. Secondly, the magnitude of the problem goes beyond the capacity of any single institution to deal with it adequately, and requires concerted action by all the partners involved. The following Initiatives are currently supported:

- The Alliance for Health Policy and Systems Research was created in response to concern that research in this area had been neglected in middle- and low-income countries. Health policies and systems research generates knowledge that facilitates policy analysis, identifies global influences on health systems, promotes appropriate research, and promotes national capacity in health policy and systems research. A meeting of interested parties to launch this Initiative is scheduled to take place in Geneva in early 1999.
- The Global Tuberculosis Research Initiative is being established to provide a coordinated response to the increasing global incidence of the disease, the low uptake of the DOTS treatment strategy, increasing resistance to existing remedies, and the spread of the HIV/AIDS pandemic.
- An Initiative for the Control of Cardiovascular Diseases in Developing Countries is being established as an outcome of recent studies, such as the World Bank-funded study of the US Institute of Medicine. This report predicted that in middle- and low-income countries, there would be a rapid rise in the CVD burden from 10% in 1990 to 15% in 2020. There is an urgent need to develop strategies and cost-effective interventions for dealing with this problem. A small steering group is meeting in Cape

Town, South Africa, in February 1999, to draw up a plan of action to move the Initiative forward.

- The Initiative on Health and Societies plans to identify and study the key determinants of health outside the health sector, such as poverty, education, water and sanitation, and culture. A forthcoming report on a "brainstorming" session held in Bellagio, Italy, in April 1998, will form the basis for the launch of activities under this Initiative.
- The Initiative on Prevention of Violence and Injuries will contribute to a coordinated global response to the increasing problem of violence and injuries, which has hitherto been approached in a piecemeal way. A plan of action is now being drawn up.
- The Initiative on Domestic Violence against Women (including child abuse) has been launched by a number of partners in response to this increasing global problem. Domestic violence against women is widespread but the global burden is unknown. There is a strong body of opinion in favour of a more focused, evidence-based, comprehensive approach to the problem, separate from the broader issue of prevention of injuries and violence.
- The Global Forum has also been active in supporting the Public/Private Partnership against Malaria which aims to develop new antimalarial drugs in collaboration with the private sector.
- The Multinational Initiative on Malaria in Africa (MIM) is a global collaborative effort involving funding agencies, industry, and research scientists. The aim is to address the serious problem of malaria with a particular emphasis on Africa, where the disease accounts for the highest morbidity and mortality. The Initiative is a coalition of organizations and individuals concerned with malaria research and control. The Initiative has been active in raising international awareness of the problem, has strong links to Roll Back Malaria, and is promoting sustainable research capacity in Africa.

- The International AIDS Vaccine Initiative (IAVI) was established with the aim of developing safe, effective, and accessible HIV vaccines for use worldwide. World Bank support for this Initiative has been channelled through the Global Forum.

Chapter 6: Capacity Development for Health Research

Evidence-based decision-making at all levels of the health sector is critical for the implementation of health strategies. However, while high-income countries have a large number of scientists and adequate infrastructure for this, most developing countries lack the appropriate human and material resources to initiate research and use the findings for development. Strengthening research capacity in developing countries is one of the most effective and sustainable ways of advancing health and development in these countries.

Over the past two to three decades, many organizations and Forum partners have been involved in strengthening research capacity in developing countries. The lessons learned from a review of these activities point to the need for careful selection of participants for training, sound training at the highest level, the training of multidisciplinary teams, and the establishment of a close relationship with national programmes. Success is also dependent on capable and committed scientific leadership, continuity of funding, good infrastructure, adequate equipment, communication facilities, and sufficient remuneration of researchers.

There has been a recent renewal of efforts in capacity strengthening that will lead to a more balanced number of trainees between disciplines, a better response to national needs, and increased sustainability. The

Global Forum provides a platform for analysis of past efforts in capacity development by different agencies and stakeholders. Strategies for future capacity development efforts can be drawn up in the light of this analysis and appropriate recommendations made to policy-makers, research institutions, and bilateral donors.

Chapter 7: Using Communication to Help Bridge the 10/90 Gap in Health Research

This chapter highlights the challenges decision-makers face in allocating funds for health research and argues that these barriers can be addressed directly by more effective communication strategies. The first section examines the challenges and the second section outlines the communication strategies which the Global Forum will use to help correct the 10/90 Gap.

Challenges facing the decision-maker:

Lack of information, poor dissemination, and information overload

Decision-makers are often handicapped by a shortage of critical health information. This could be improved by the establishment of national vital registration systems and by the collection of disaggregated data on illness and disability. At the same time, decision-makers suffer from "information overload." With an estimated two million articles on medical issues now published annually, the sheer volume of data available can often obscure material crucial to the decision-making process. Even where relevant research data is available, it often fails to reach the attention of appropriate decision-makers and so they are unable to act on it. There is also a need for cross-sectoral sharing of research data – facilitated by using the new information technologies. The sharing of

research data between the health and non-health sectors will help build a more relevant core of information for decision-makers.

Focus on short-term or special interests

Another problem is the concentration by governments, institutions, and health officials on research with short-term health goals. While these appear to be in the best national interest, they can be a barrier to the funding of health research that could have a more far-reaching impact. Communication strategies need to clearly outline and explain the longer-term hazards inherent in the 10/90 Gap in health research and make the process of prioritization more vigorous and transparent.

Communication between the media and researchers

While most researchers find it difficult to interpret and circulate their work to the media or the general public, media coverage or lack of coverage of health research can have an enormous impact on what research decision-makers support. And while media coverage on health can bring attention to the disparities in health research and the dangers that this divergence presents for global health, the power of the media can also be used to respond to issues that attract the most vocal or influential constituent support. There is a need for a closer, more cooperative work relationship between scientists and journalists which will enable scientists to help the media understand the larger scientific issues and their current and future impact, while journalists can help scientists to better communicate the outcome of research.

Capacity constraints

Despite some success stories in building research capacity, there are still significant technical and capacity constraints in many countries, most of them poor. By circulating information about the need for capacity building in health research, communication strategies can help mobilize a wide range of partners who can work with decision-makers

to support funding for research capacity building.

Lack of funding

Traditionally, the health of the large majority of the world's population, particularly the poor, has been an inadequately funded area of research which has had to vie with more accepted projects for very limited funds. Communication strategies need to clearly show how carefully selected research on the health problems of the poor can lead to better health care delivery systems, more cost-effective treatment, and better health for society in general.

Lack of public/private sector collaboration

The Global Forum supports the idea that in cases where neither the public nor the private sector can solve the problem at hand, both sectors might find it advantageous to explore closer linkages. The Forum can act as a communication channel between the two sectors so that public-private partnerships can be created to search for appropriate solutions to some of the world's urgent health problems, while respecting the rules that apply to each sector.

Communication strategies of the Global Forum:

Communication strategies include the Annual Forum, the publication of the 10/90 Report, a Forum website, national, regional, and international media coverage, and publication of a series of technical papers on strategic research. A key element in communication efforts is the establishment of coalitions of partner organizations that can amplify the message of the Global Forum.

Chapter 8: A Practical Framework for Setting Priorities

The road to help correct the 10/90 Disequilibrium will clearly be a long one, but it is also clear that it should lead to better health for the majority of the world community. This will be made possible mainly by a reallocation, by decision-makers in the South as well as in the North, of health research funds from lower to higher priority projects, from projects benefiting fewer to those benefiting more people.

The difficult task of the decision-maker

How is a decision-maker with a small research budget to decide where to invest the funds in order to have the greatest impact on the health of the largest possible number of people in the country?

The question is highly complex due to the very large number of actors and factors affecting the health status of the community. The principal actors (or levels of intervention) fall into four main categories:

- Individuals, their families, and their immediate community: Genetic history aside, the individual chooses to a large extent how much risk he or she wants to take with health. The family decides, at least in part, how many children are wanted, how they should be educated, how to handle family conflicts, how to care for the disabled members. The community will greatly influence its own health status depending on the decisions it makes on issues such as sanitation, education, shelter, handling of violence, unemployment.
- The health ministry, researchers, and health professionals in general: This includes the institutions responsible for health legislation and policies, health care, health promotion, and all aspects of research in general. These are the backbone of the

country's health care system. Its organization, availability, and accessibility will profoundly influence the health status of the population.

- Institutions outside the health sector that have a profound influence on the community's health. Practically all sectors of economic activity in the country have an impact on the health status of the community: the development of the agricultural sector and the system of transportation of food items in the country, water supply and sanitation, the degree of pollution of the environment, the level of education, the social security system, the level of unemployment, the law enforcement system (i.e. controlling violence and criminality).
- Central government and its macroeconomic policies: Although apparently remote from the health situation of a particular individual, government macroeconomic policies and the principles of good governance in general have a direct impact on it. The level of economic activity in a country (determined by numerous external factors, but also by government policies), the allocation of the budget among government ministries, the degree of commitment of the ministries to their mission, the efficiency and effectiveness of the Administration, the research policies pursued by the government have a profound impact on the health status of the population.

To help the decision-maker: a priority setting matrix

The above list, which is not exhaustive, illustrates the complexity of the task confronting the decision-maker. To help the decision-maker make a rational decision regarding the allocation of limited research budgets, this chapter proposes to apply the five-step process developed by the Ad Hoc Committee to the four levels of intervention described above, in the following way (see Insert 8.2):

- What is the burden attributable to each main disease/risk factor in the country? This can be measured in DALYs (Disability Adjusted Life Years) or similar methods.
- Why does the burden of disease persist? Is it due to individual behaviour, family factors or failure of the community to recognize the problem or use existing tools efficiently? Is it due to the lack of bio-medical knowledge about the disease or lack of tools? Inefficient health systems and services? Do some of the causes originate in sectors other than health? Are government macroeconomic policies playing a negative role? The important thing to remember in going through Step 2 is to look at all possible determinants, not only the most immediate ones such as the state of bio-medical knowledge or the quality of the health services.
- What is the present level of knowledge? What is known today about existing and potential interventions (particularly the most important determinants identified in Step 2)? It is important to identify the level of knowledge with respect to all actors and determinants (individual/family/community, health ministry and health professionals, other sectors affecting health, government macroeconomic policies).
- Is research likely to produce more cost-effective interventions than the existing ones under each group of determinants? The previous step will have summarized the state of knowledge and identified a number of new potential interventions (or research projects) under each group of determinants. The task now is to select from among these potential research projects those that are most cost-effective (including the cost of research and the cost of the intervention itself).
- What are the present resource flows for that disease/risk factor? Given the present allocation of resources for this disease/risk factor, should more be invested to fight this disease/risk factor or would resources be better invested elsewhere in R&D?

Identification of health research priorities

In order to decide where to invest the funds so as to have the greatest impact on the health of the largest possible number of people in the country, the decision-maker should complete the double-entry table presented in Chapter 8 (insert 8.2) for each major disease in the country. An analysis of each table will identify those research areas for a particular disease that are likely to have the greatest impact on the health status of the population. A comparison of the key factors

across the tables will draw attention to the research areas which will be beneficial for several diseases at the same time. The research agenda for the country can then be defined on the basis of the priorities for each disease and across diseases. It will consist of those research projects with the greatest impact in reducing the overall burden of disease in the given community. This methodology can be applied at the local, national, regional or global level.

Chapter 1

The Global Forum for Health Research: an Overview

*Section 1:
The central problem in health research: the 10/90 Disequilibrium*

*Section 2:
Seventeen recommendations of the Ad Hoc Committee for tackling the 10/90 Disequilibrium*

*Section 3:
Objectives and strategies of the Global Forum for Health Research*

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*Section 7:
Collaboration between the Global Forum and other institutions*

Summary

The 1990 Report of the Commission on Health Research for Development and the 1996 Report of the WHO Ad Hoc Committee on Health Research concluded that the central problem in health research is the 10/90 Disequilibrium. Indeed, of the US\$ 50-60 billion spent worldwide each year on health research by both the private and public sectors, only 10% is devoted to the health problems of 90% of the world's population.

The economic and social costs to society as a whole of such misallocation of resources are enormous. The 1996 Ad Hoc Committee on Health Research warned that the world community will face the following four critical health problems in the decades to come:

- (i) the unfinished agenda (despite substantial progress in health, infectious diseases, malnutrition, and poor maternal and child health continue to account for one third of the global disease burden);
- (ii) new and re-emerging microbes (a growing number of drug-resistant microbes threaten to create new health emergencies);
- (iii) the increase in noncommunicable diseases, injuries, and violence;
- (iv) inequity and inefficiency in the delivery of health services.

Among the many recommendations made by the Ad Hoc Committee to deal with these problems was the creation of the Global Forum for Health Research, as one of the instruments to follow up on the work of the Ad Hoc Committee.

The central objective of the Global Forum is to help correct the 10/90 Disequilibrium and focus research efforts on the health problems of the large majority of the world's population, particularly the poor, by improving the allocation of research funds and by facilitating collaboration among partners. The Global Forum brings together a wide range of partners including government policy-makers, multilateral organizations, bilateral aid donors, international foundations, national and international NGOs, women's organizations, research-oriented bodies, and private sector companies. The Global Forum is an international Foundation managed by a Foundation Council of 16 members representing the partners in the Global Forum.

The Global Forum believes that, to a large extent, solutions to the present health challenges will depend on the strength of partnerships created between members of these eight constituencies over the years to come.

To reach this objective, the Global Forum has selected five strategies:

- the organization of an Annual Forum
- the undertaking of Analytical Work in the field of priority setting
- the launch of Partnership Initiatives in priority health research areas
- the dissemination of key information for decision-makers about the 10/90 Disequilibrium
- the evaluation and monitoring of progress in the correction of the 10/90 Disequilibrium.

Section I:

The central problem in health research: the 10/90 Disequilibrium

The 1990 Report of the Commission on Health Research for Development and the 1996 Report of the Ad Hoc Committee on Health Research concluded that the central problem in health research is the 10/90 Disequilibrium. Indeed, of the US\$ 50-60 billion spent worldwide each year on health research and development by both the private

and public sectors, less than 10% is devoted to the health problems of 90% of the world's population.

In 1990, for example, the top 20 diseases and risk factors in the world affecting 90% of the world's population as measured by the number of DALYs lost were the following:¹

Insert 1.1

Global estimates of disease burden for major diseases and risk factors in 1990 as measured by DALYs²

Cause	Burden of disease		Cause	Burden of disease	
	1990 ³	2020 ⁴		1990 ³	2020 ⁴
Lower respiratory infections	8.2	3.1	Malaria	2.3	1.1
Diarrhoeal diseases	7.2	2.7	Chronic obst. pulmonary disease	2.1	4.2
Perinatal conditions	6.7	2.5	Falls	1.9	1.5
Unipolar depression	3.7	5.7	Iron deficiency anaemia	1.8	0.5
Ischaemic heart disease	3.4	5.9	Protein-energy malnutrition	1.5	0.6
Tuberculosis	2.8	3.1	War	1.5	3.0
Cerebrovascular disease	2.8	4.4	Self-inflicted injuries	1.4	1.9
Measles	2.7	1.1	Tetanus	1.3	0.4
Road traffic accidents	2.5	5.1	Violence	1.3	2.3
Congenital anomalies	2.4	2.2	Alcohol	1.2	1.7

It is estimated that research funding for these diseases and risk factors represents less than 10% of total global investments in health research.

¹ Ad Hoc Committee on Health Research, September 1996.

² The strength of DALYs (Disability Adjusted Life Years) - the indicator developed for the calculation of the burden of disease - is that it quantifies, in a single indicator, time lost due to premature death with time lived with a disability. A number of explicit choices about age weighting, time preference, and preference for health states were made in the final calculation of DALYs. Different groups challenge some of these explicit choices, and major research is under way to refine each of these components. GFHR believes it is essential to continue current efforts to refine the DALY indicators as the burden of disease is one of the crucial elements for setting priorities in the field of health research. Other crucial elements for helping set priorities are the following: an analysis of the causes (both proximate and ultimate determinants) of the major health problems, judgement of the adequacy of the current knowledge base, study of the cost-effectiveness of existing and planned interventions, and assessment of the current level of effort (resource flows).

³ These figures are currently being revised. Some of the major chronic diseases and malaria are expected to show increases in disease burden.

⁴ By 2020, it is estimated that five more diseases will come into the top list of 20: HIV, tracheal/bronchial/lung cancers, osteoarthritis, bipolar disorders, and schizophrenia.

Section 2:

Seventeen Recommendations of the Ad Hoc Committee⁵ for tackling the 10/90 Disequilibrium

The economic and social costs to society as a whole of such misallocation of resources are enormous. Specifically, the 1996 Ad Hoc Committee on Health Research warned that the world community will face four critical health problems in the decades to come and listed **13 actions** which should be undertaken to confront these challenges. At the institutional level, it also made **four recommendations** regarding the need to

develop national research agendas, the role of the public and private sectors, the need to create a Global Forum for Health Research, and the need to reallocate health sector resources to research and development. In summary, the four challenges and 13 proposed actions are presented in Insert 1.2, and the four institutional recommendations are presented in Insert 1.3.

Insert 1.2

Critical Health Problems and Summary of Proposed Actions

Four critical health problems (1990-2020)	13 Recommendations (R) of the Ad Hoc Committee on Health Research (September 1996)
<p>1. The unfinished agenda: unnecessary deaths, sickness, and disability</p> <p>Health advances and public education over the last century have produced numerous vaccines, cures, and treatments for many common infectious diseases. Despite this progress, infectious diseases, malnutrition, and poor maternal and child health account for one third of the entire disease burden in the world. In poorer countries, the burden from these conditions reaches even 50%.</p>	<p>R1: Package development and evaluation</p> <ul style="list-style-type: none">• Evaluate the package for the Integrated Management of Childhood Illnesses (IMCI)• Understand the relative importance, in different environments, of increased nutrient intake and control of infectious disease as means to reduce malnutrition• Develop and evaluate the Mother-Baby package for pregnancy, delivery, and neonatal care• Evaluate the implementation of a range of family planning packages (wide choice of methods). <p>R2: New tools</p> <ul style="list-style-type: none">• Evaluate rotavirus vaccine in low-income countries• Evaluate conjugate pneumococcal vaccine and existing vaccine against <i>Haemophilus influenzae</i> type b in low-income countries• Improve the Expanded Programme on Immunization by simplifying delivery and maximizing the use of opportunities for immunization• Evaluate insecticide-impregnated bednets (possibly for inclusion in future Healthy Household package)• Develop new contraceptive methods.

⁵ Report of the Ad Hoc Committee on Health Research, September 1996.

2. New and re-emerging microbes

A growing number of drug-resistant microbes threaten to create new health emergencies and are leading to the resurgence of diseases, such as tuberculosis, malaria, and pneumococcal disease, long thought to be under control.

3. Increase in noncommunicable diseases, injuries, and violence

Epidemics of noncommunicable diseases such as cardiovascular diseases, neuro-psychiatric conditions, and chronic respiratory infections, as well as the burden of violence and injuries, are increasing in low-income countries.

4. Inequity and inefficiency in the delivery of health services

Countries vary enormously in how efficiently and equitably they provide health services and many countries are reforming their health systems today without adequate information on which policies and structures work and which do not. Current efforts in health care reform require international research and information exchange on the following key items at the national level: effective health policies, disease burden, resource flows, and cost-effectiveness of interventions.

R3,5,6: Intervention development

- Develop strategies to extend the coverage of DOTS for tuberculosis
- Develop an effective prophylactic for TB
- Conduct trials of conjugate pneumococcal vaccines
- Develop an HIV vaccine
- Improve methods for the diagnosis, prevention, and treatment of STD, including vaginal microbicides
- Develop malaria drugs and a vaccine
- Develop collaboration between the public and the private sectors.

R4: Strategic research

- Sequence the genomes of the major pathogens
- Investigate influences on the spread of antimicrobial resistance.

R7,8: Establish a special programme for research and training on noncommunicable diseases and healthy ageing

- Develop low-cost methods for collecting reliable data (disease surveillance points)
- Study the burden of noncommunicable diseases in developing countries and their determinants
- Concentrate on epidemiological and behavioural research (biomedical research is comparatively well supported in industrialized countries)
- Develop strategies for the cost-effective prevention, diagnosis, treatment, and rehabilitation of NCD (for example tobacco, psychiatric disorders).

R9,10: Establish a special programme (or initiative) for research, training, and capacity building on injuries

- Develop low-cost methods for collecting reliable data on the injury epidemic
- Study the burden of injuries and its determinants
- Develop strategies for the cost-effective prevention and treatment of injuries.

R11,12,13: Establish a special programme for research and training on health systems and policy

The work of this programme could focus on three areas:

- Research and data collection in health systems policy, including evaluating health intervention packages
- Development of international indicators for the measurement of health system performance and tools such as model legislation to implement goals
- Capacity building in health policies and systems
- Turn research results into action through tools for health workers: essential drugs lists, model legislation, priority intervention packages, pricing policies, practical manuals for health workers, summaries of research results for health workers and decision-makers

Insert 1.3

Four Institutional Recommendations of the Ad Hoc Committee

<p>1. At the national level: develop national research agendas</p>	<p>R14: Develop national agendas for health research, with the active involvement of all relevant actors (policy-makers, research institutions, community leaders, health care providers, etc.) dealing with major national health issues, including:</p> <ul style="list-style-type: none">• capacity building• translation of research results into policies and interventions• development of competitive procedures for staffing and allocation of funds among institutions• development of links between national and international institutions.
<p>2. Regarding the role of the public and private sectors: develop new instruments for collaboration</p>	<p>R15: Explore the development of new instruments (beyond the current patents system) for engaging the skills and energy of the private sector in the development of vaccines, drugs, diagnostic tests, and equipment for the use of low-income populations, through for example:</p> <ul style="list-style-type: none">• subsidies• guaranteed markets• streamlined regulatory requirements.
<p>3. At the international level: create a Global Forum for Health Research</p>	<p>R 16: Create a forum for investors in international health research to provide a mechanism for the review of needs and opportunities, making use of data on:</p> <ul style="list-style-type: none">• disease burden• level of ongoing efforts (resource flows)• R&D opportunities. <p>The Forum would bring together governments, donors, and the research community. Analytic work undertaken by and for the Forum would provide improved information for decentralized decisions on resource allocations. This in turn should help to focus resources more sharply on completing the highest priority tasks before moving on to others.</p>
<p>4. Regarding the overall allocation of resources: reallocate health sector resources to R&D</p>	<p>R 17: Reallocate health sector resources to research and development as a means to bring substantial gains, particularly for the health of poor populations.</p> <p>Since much R&D provides an international public good, there is a particularly strong case for public sector investors in the market economies to reallocate their health portfolios to increase R&D funding.</p>

Section 3:

Objectives and strategies of the Global Forum for Health Research

The main objective of the Global Forum is to help correct the 10/90 Disequilibrium and focus research efforts on the health problems of the large majority of the world's population, particularly the poor, by improving the allocation of research funds and by facilitating collaboration among partners both in the public and private sectors.

To reach this objective, the Global Forum has selected **five strategies**:

1. Annual Forum

Throughout the year, and particularly at its Annual Meeting, the Global Forum acts as a market place where health problems and priorities can be examined by a variety of decision-makers, policy-makers, and researchers. Presentations at the Annual Meeting address the latest thinking on the 10/90 Disequilibrium and act as a catalyst for action during the following year.

2. Analytical work for priority setting

In the field of analytical work and in line with its central objective of helping to correct the 10/90 Disequilibrium, the Global Forum currently concentrates its efforts on the following:

- Burden of disease and health determinants
- Cost-effectiveness analyses and methods to assist resource allocation
- Analysis of resource flows and monitoring progress in correcting the 10/90 Disequilibrium
- Analytical work on specific conditions in the Forum priority areas.

3. Initiatives in key health research areas

Initiatives bring together a wide range of partners in a concerted effort to find solutions to key health problems. The magnitude of these problems is such that they are beyond the capacity of any single institution to resolve and require the concerted efforts of a coalition of partners. By acting together, the probability of finding solutions increases markedly. Initiatives currently supported by the Global Forum include the following:

- Alliance for Health Policy and Systems Research
- Global Tuberculosis Research Initiative
- Initiative for Research on Cardiovascular Diseases
- Initiative on Health and Societies
- Initiative on the Prevention of Violence and Injuries
- Initiative on Domestic Violence against Women
- Public/Private Partnership against Malaria.

The International AIDS Vaccine Initiative (IAVI) and the Multilateral Initiative for Malaria on Africa (MIM) have received funding from the World Bank through the Global Forum.

4. Communication and information

One of the cornerstones of the work of the Global Forum is the communication unit, which has responsibility for collecting and disseminating information about the 10/90 Disequilibrium. Information on relevant health research is made available in a readable form to the constituents of the Forum, and to the media and decision-makers. This is

accomplished through the publication of the *10/90 Report*, maintenance of an interactive website, information distribution to key international and national media, and publication of a series of technical papers called the Strategic Research Series.

5. Evaluation and monitoring

Measuring progress in the correction of the 10/90 Disequilibrium is an integral part of the work of the Global Forum. Progress will

be measured in terms of more widespread concern and knowledge of the gaps in health research and how priorities are set, the number and strength of initiatives which bring partners together in key areas of health research, improvements in the flow of resources and information, and finally, effectiveness in bringing solutions to the health problems of the large majority of the world's population.

Section 4:

Who are the partners in the Global Forum?

The Global Forum aims to bring together a wide range of partners including:

- Government policy-makers
- Multilateral organizations
- Bilateral aid donors
- International foundations
- National and international NGOs
- Women's organizations
- Research-oriented bodies
- Private sector companies.

The Global Forum believes that solutions to the present health challenges will depend on the strength of the partnerships created between members of these eight constituencies over the years to come.

Section 5:

Legal status of the Global Forum for Health Research

The Global Forum for Health Research is an international foundation managed by a Foundation Council of 16 members representing the partners in the Global Forum. Basic decisions are made by the Foundation Council, the members of which are chosen from among the eight constituencies listed above. The Statutes of the Foundation appear as **Annex 2**.

Within the Foundation, there are no "members" as such, but "partners", each supporting the objectives and activities of the Forum in very different ways. Some may be able to come to the Annual Meeting of the Forum, others may not. However, they remain equal partners in the pursuit of the Forum objectives – united in the belief that, by joining forces, they can help improve the 10/90 Disequilibrium.

Any person or institution actively supporting the objectives of the Global Forum is a partner in the Global Forum and may be selected to become a member of the Foundation Council. In order to ensure effective representation, the members of the Foundation Council are selected by the constituencies themselves and are appointed for a period of three years, with appointments staggered in order to provide a rotating membership.

The Foundation Council is assisted by a Strategic and Technical Advisory Committee (Stratec). The members of Stratec are selected from the members of the Foundation Council. They are nominated for a term of two years, with appointments staggered to provide a rotating membership.

Section 6:

Relationship between the Global Forum, Analytical Work, and the Initiatives

This section is designed to clarify the following:

- **What is the international context** in which the identification of the analytical work and initiatives for collaboration with the Forum takes place?
- **What analytical work** will the Forum support and according to which criteria?
- **What initiatives** will the Forum support and according to which criteria?
- **What is the relationship** between analytical work and initiatives?

1. International context

In the field of health research, thousands of public and private institutions are making decisions every day that affect the overall allocation of resources between the various health problems. The outcome of all these decisions is that only 10% of the resources allocated globally to health research (estimated at US\$ 56 billion annually) is devoted to the health problems of 90% of the world's population.

Most of these public and private institutions collaborate in different ways to exchange information or act together on common problems. These forms of collaboration are often referred to as networks, partnerships, alliances, or initiatives. When looked at overall, they are characterized by the diversity of their objectives, strategies, activities, membership, organization, legal structure, degree of activity, and effectiveness.

Since the Global Forum has limited personnel and financial resources, it must use established criteria to select initiatives or networks that it wants to collaborate with directly to pursue its overall objective. However, a decision by the Forum to support a particular piece of analytical work or collaborative network does not indicate that other studies or concerted actions not selected are unimportant. Rather, it reflects that hard choices have to be made in view of limited resources.

Direct support by the Forum to a study or initiative will normally be limited in time and level of support. Meanwhile studies or initiatives, whether directly supported by the Forum or not, may be presented at the Annual Meeting of the Forum, in one form or another as appropriate. The Forum aims to contribute to the correction of the 10/90 Disequilibrium by supplying as much information as possible to partners in order to facilitate their decision-making.

2. Analytical work supported by the Global Forum

In order to be supported by the Forum, analytical work should normally meet the following criteria:

- Be in a domain identified as a Forum priority area and show the "value added" by the analytical work in terms of the "five-step process" (or an appropriate alternative).

- Have a clear definition of the following:
 - definition of the problem
 - global and specific objectives
 - strategies chosen to reach the stated objectives
 - partners
 - organization
 - specific activities under each of the strategies
 - estimated costs and sources of financing
 - expected results and indicators to measure these results.

In order to continue to receive support from the Forum, the results of the ongoing study will be periodically evaluated (internally and externally).

3. Initiatives to be supported by the Forum

Initiatives supported by the Forum normally evolve through four distinct phases:

- Phase I: Preparation
- Phase II: Proposal completed
- Phase III: Early implementation
- Phase IV: Full implementation.

The type of support given by the Forum to Initiatives is summarized in **Annex 3**.

Criteria to be fulfilled by an initiative in order to receive support from the Forum will depend upon its degree of advancement. In general, initiatives should meet the following criteria:

- Be in a domain identified as a Forum priority area and show the "value added" by the initiative in terms of progress along the lines of the "five-step process" (or of an appropriate alternative).
- From the outset, involve a broad range of partners from various constituencies.
- Involve institutions from developing countries.
- Have a clear definition of the following key elements of the initiative:
 - definition of the problem

- global and specific objectives
- equity issues
- gender inclusiveness and collection of gender disaggregated data
- strategies chosen to reach the stated objectives
- partners
- organizational structure and personnel
- specific activities under each of the strategies
- estimated costs and sources of financing
- expected results and indicators to measure these results.

To continue to receive support from the Forum, an initiative will be periodically evaluated (internally and externally) on the basis of its efficiency, effectiveness, and accountability.

4. Relationship between analytical work and initiatives

A piece of analytical work is a study of narrow or broad dimensions undertaken generally by a small group and designed to enlighten an issue in the field of priority setting (burden of disease and determinants, cost-effectiveness and methods to assist resource allocation, resource flows analysis, monitoring progress in the 10/90 Disequilibrium, and analytical work on specific conditions).

Initiatives are concerted efforts involving a large number of partners interested in working together to find solutions to critical health problems. The complexity of the problems to be solved is such that no partner can solve them alone; it is only through the contribution of all partners that solutions can be found. Although justified in their own right, analytical studies are often essential for the preparation and launching of initiatives.

Insert 1.4 below gives an overview of analytical work supported by the Forum and Insert 1.5 gives an overview of the Initiatives supported by the Forum.

Insert 1.4

Global Forum: overview of analytical work for priority setting

Thematic Areas	Forum supported	Of interest to the forum
1. General Analytical Work	<ul style="list-style-type: none"> – Burden of disease 2000 – Cost-effectiveness of interventions: development of a standardized method – Monitoring resource flows: Development of a systematic mechanism 	<ul style="list-style-type: none"> – National burden of disease studies
2. Reproductive Health	<ul style="list-style-type: none"> – Review of progress in R&D: Reproductive Health, Child Health and Infectious Diseases, 1996-98 – Burden of disease with a gender perspective 	<ul style="list-style-type: none"> – Review of progress in Human Reproduction R&D at WHO – Disease burden and reproductive health
3. Child and Adolescent Health	<ul style="list-style-type: none"> – Review of progress in R&D: Reproductive Health, Child Health and Infectious Diseases, 1996-98 	..
4. Infectious Diseases	<ul style="list-style-type: none"> – Review of progress in R&D: Reproductive Health, Child Health and Infectious Diseases, 1996-98 – Application of the 5-step process to malaria – Cost-effectiveness of malaria interventions 	<ul style="list-style-type: none"> – Food safety
5. Non-Communicable Diseases	<ul style="list-style-type: none"> – Neuropsychiatric disorders in developing countries 	<ul style="list-style-type: none"> – Research on tobacco control
6. Injuries, Violence and Health	..	<ul style="list-style-type: none"> – Violence against women in conflict areas
7. Policy and Systems Research	<ul style="list-style-type: none"> – Burden of disease among the poor 	<ul style="list-style-type: none"> – National studies on policy analysis

Insert 1.5

Global Forum: overview of Initiatives

Thematic Areas	Forum supported	Of interest to the forum
1. Reproductive Health	..	– Application of Mother-Baby Package
2. Child and Adolescent Health	..	– Integrated Management of Childhood Illnesses (IMCI) – Children's Vaccine Initiative (CVI) – Global Programme on Vaccines and Immunization (GPV) – Expanded Programme on Immunization (EPI)
3. Infectious Diseases	– Public-Private Partnership Against Malaria – Global Tuberculosis Research Initiative – South Asian Infectious Diseases Network (SAIDNET)	– Multilateral Initiative for Malaria (MIM) – International AIDS Vaccine Initiative (IAVI)
4. Non-Communicable Diseases	– Cardiovascular Diseases in Developing Countries	– Healthy Ageing – Tobacco Initiative
5. Injuries, Violence and Health	– Prevention of Injuries and Violence – Initiative on Domestic Violence against Women	..
6. Policy and Systems Research	– Alliance for Health Policy and Systems Research	– Capacity Strengthening for Health
7. Society, Culture, Ethics and Health	– Health and Societies	..

Section 7:

Collaboration between the Global Forum and other institutions

1. The need for partnership

In the Global Forum for Health Research, a partnership is defined as a group of allies sharing the goals, efforts, and rewards of a joint undertaking. The need for partnership is illustrated by the following:

- The existence of many effective organizations, but some duplication of effort and inefficiencies.
- The growing international and national need for collaboration:
 - Globalization of diseases, business, finances, politics, and people.
 - Demands for more institutional cooperation.
- Cross-cutting issues that demand a cooperative approach to problem solving:
 - Making priority setting more responsive to the health needs of the large majority of the world community.
 - Immensity of health problems reflected in the persistence of the burden of disease, despite huge investments in health and health research.
- The need for an interdisciplinary approach:
 - Scientific community, social scientists, economists, policy-makers, and political leaders.
 - Public sector institutions, private industry, and civil society.
- The growing need for rapid circulation of interdisciplinary information at international, national, and intra-organizational levels:
 - Clearing house for information and market place for connecting projects and funders.

- Transparency.
- Enhancement of knowledge used in decision-making and advocacy for change.

2. Criteria for collaboration

To be effective, potential Forum partnerships should meet the following criteria:

- Have explicit priorities with a definite profile of objectives and strategies.
- Bring together diversified players and their unique ideas.
- Know the strengths of other organizations.
- Use synergies between institutions on behalf of strategic issues.
- Agree upon a programme of complementary work rather than duplication.
- Recognize the contributions of each partner.
- Acknowledge the importance of an organizational framework.
- Ensure effectiveness, efficiency, and accountability.
- Build a critical mass of support for each of the efforts supported by the Forum.

3. Collaboration Strategies

At the institutional and organizational levels, the collaboration strategies include the following:

- Collaboration between the Governing Boards, such as those of the Global Forum for Health Research, the Council on Health Research for Development (COHRED), and the International Clinical Epidemiology Network (INCLLEN).

- Joint research projects, such as burden of disease and resource flows analysis.
- Joint initiatives, such as the Public/Private Partnership against Malaria with representatives from multilateral and bilateral aid agencies, foundations, NGOs, research institutions, and pharmaceutical companies.
- Joint conferences, such as the planned International Conference on Health Research in the year 2000.

Chapter 2

Priorities in Health Research and Development: Correcting the 10/90 Disequilibrium

*Section 1:
The context for priority setting in health*

*Section 2:
Priority setting in health research*

*Section 3:
Examples of priority setting*

*Section 4:
Progress in the priority areas identified by the Ad Hoc Committee, 1996-98*

*Section 5:
Priority setting: a summary of lessons from the past*

*Section 6:
Results of priority setting: a comprehensive list and a short list*

*Section 7:
Priority setting and the future*

Summary

Despite substantial gains in global health over recent decades, inequities in health status have widened, the environment has deteriorated, and other obstacles to the attainment of health for all have appeared or re-appeared. These developments challenge the global community in its pursuit of the objective of health for all in the next century. In this context, priority setting in health research assumes even greater importance.

This chapter summarizes some of the attempts which have been made in research priority setting, particularly that of the Ad Hoc Committee on Health Research. It does not attempt to summarize the uneven progress made in each of the priority areas. It does however draw some general conclusions that may be of use in future exercises to monitor research progress. It concludes that two kinds of priority lists may be envisaged in health research: a comprehensive list of research priorities and a short list.

The comprehensive list will itemize priorities globally or by subject area (for example, child health or reproductive health). Such a list would be as exhaustive as possible, and include a mixture of short- and long-term R&D products or results. It would be based on the analysis of a priority setting process (such as the five-step process), which would improve gradually as more information becomes available.

The short list, such as that generated by the Ad Hoc Committee in 1996, is a mechanism to select, from the more comprehensive list, those that are currently under-resourced, may be achievable in the shorter term, and may result in highly cost-effective interventions.

Finally, this chapter draws attention to the fact that we are only in the early stages of learning how to set priorities effectively. Further development of methods and tools for priority setting will occur, and lists will have to be revised to keep pace with this. Tracking progress in priority areas can also help reduce the 10/90 Gap by ensuring that the products of research, already available to wealthier populations, are also made available to the large majority of the world's population.

Section 1:

The context for priority setting in health

Despite substantial gains in global health over recent decades, inequalities in health status have widened, the environment has deteriorated, and other obstacles to the attainment of health for all have appeared or reappeared. These developments challenge the global community in its pursuit of the objective of health for all in the next century. Such a re-evaluation needs to take into account the following elements identified by WHO in 1998:¹

- determinants of health (including political, economic, social, and environmental factors outside the health sector)
- health patterns in the future (projected on the basis of current and foreseeable trends)
- inter-sectoral action (to uphold the principles of equity and sustainability in health care)
- partnerships in health (long-term collaboration between actors involved in health, with special attention to the community level)
- health personnel (whose training has to change in accordance with changing needs and changing options for meeting them)
- a dynamic and proactive role for WHO in standard-setting, monitoring, defining essential functions, and concerted action.

Improving the opportunities for health in a diverse, changing, and inequitable world calls for a careful examination of the basis of decisions made locally, nationally, and internationally. A crosscutting issue of central importance is health R&D, which is both a strategy to achieve the objectives of health, and a means for further defining the frontiers of what is possible and how it can be pursued. Efforts should be focussed on the most urgent and pressing health issues, and on those problems that affect the largest numbers. Such an approach will benefit all sectors and overall global health.

Health systems throughout the world are facing financial crises, demographic and epidemiological changes, and an increasing demand for more and costlier services. In response, widespread health system reform is being undertaken by national governments assisted by national and international organizations. The Ad Hoc Committee recommended strengthening global capacity to provide the information required for better decision-making for health system reform. A critical part of this is information on the economic and equity implications of health interventions.

¹ *Health for All in the 21st Century*. WHO, 1998.

Section 2:

Priority setting in health research

In the literature on economic evaluations of health care, the recommended criterion for priority setting is essentially that of health maximization. This normative basis could, however, be considered to reflect the stated objectives in many nations' health services when these refer to *efficiency* in terms of "value for money" or "as much health as possible within the given budget". Reflecting the additional objective of equity in most publicly financed health services has been an increasing research interest. Other objectives such as the measurement of the *severity of disease* have also been incorporated in the decision-making criteria of nations.

Priority setting in health becomes a complex task of evaluating the process using normative and other criteria as above. Another key consideration is the geographical level of application: local, national, regional or global. These multiple levels have common issues related to the appropriate use of resources, and yet offer vastly different settings for decision-making. Since the challenges in each will differ, the response and priorities for each will also need to be appropriate.

The Commission on Health Research for Development (1990) evaluated the distribution of resources for health R&D in relation to the purpose of that R&D. It concluded that the majority of health R&D resources (95%) are being used on issues that are relevant to only a minority of the world's population (5%). This is reflected in the fact that (i) little or no research is undertaken on diseases affecting mainly the poor; (ii) the application of research results for conditions prevalent in

more advanced countries is not directly transferable to less advanced countries due to the high costs of the proposed interventions and/or to the country-specific nature of the research undertaken. The population which is excluded from the benefits of health research is predominantly in the developing world, largely poor, and often marginalized from both power and decision-making. This situation raises questions of an economic, social, ethical, and political nature.

At the beginning of this decade, growing pressure to correct this imbalance in health research priorities led to the recommendation of the concept of Essential National Health Research by the Task Force on Health Research for Development, further developed by COHRED, and to the delineation of a research agenda by countries themselves. The Ad Hoc Committee was established in 1994 under the auspices of WHO. Since then, it has carried out its work in synergy with the 1990 Global Burden of Disease study and extended the work of the World Bank's *World Development Report 1993*. In its Report of 1996, the Ad Hoc Committee re-emphasized the 10/90 Gap in health research. In addition, it underlined the growing nature of the non-communicable disease epidemic in the developing world, especially the effects of smoking. It also indicated that the fight against communicable diseases was still essential and that conditions such as HIV/AIDS, malaria, tuberculosis, and acute respiratory infections posed serious threats to global health. Other issues highlighted in the report included anti-microbial resistance and the inequities in the delivery of health services.

Section 3:

Examples of priority setting

1. Priority setting in reproductive health: an example

Priority setting processes have been used by those involved in R&D work, such as the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (Insert 2.1).

Insert 2.1

Priorities in Health R&D: WHO

Sexual and Reproductive Health Research Priorities for WHO for the Period 1998-2003

The Process

- Phase I: Identification of research needs in the field of sexual and reproductive health
Outcome: Several hundred researchable topics distilled into 12 major issues
- Phase II: Further identification of research strategies for WHO's reproductive health programme
Outcome: 37 strategies grouped in 10 major issues
- Phase III: Prioritization among these strategies, using the criteria below, to identify those offering the best return on investment
-

The Criteria

1. Impact on health and development
 - Public health significance
 - Utility and sustainability
 - Reproductive rights and gender equity
 2. Feasibility
 - Practicality
 - Cost and time
 3. WHO's comparative advantage
 - Credibility and neutrality
 - Collective skills and resource base
 - Position
 - Capacity building
-

Description

Over 1997-98, WHO has worked with many partners in the field of reproductive health on a research agenda for 1998-2003. Each area within reproductive health was evaluated using a peer-reviewed process with participation of a wide range of stakeholders and a list of research priorities was developed (Phases I and II).

This list was then prioritized using a set of criteria and a three-stage process (Phase III). In the *first stage*, criteria were grouped into those that reflect the expected impact on health and development and feasibility. These were further weighted to reflect the relative importance of each criterion. The *second stage* involved the application of the criteria to determine those strategies that are suited to WHO's comparative advantage. These included an evaluation of whether WHO's credibility and neutrality is important to the research; whether the skills and resources of WHO are sufficient to make a significant contribution to the research; whether research would benefit from WHO's status and position; and the potential of the research for capacity development in developing countries. These criteria were also weighted and results fed into a *third stage* of the process which was an overall evaluation of the results after the first and second stages that helped to "balance" the priority list.

The resulting list of priorities included the three best buys in reproductive health identified by the Ad Hoc Committee within the top 10 list. The top 10 strategies in the results of the process described above included research on aspects of:

- unsafe abortions, abortion complications, post-abortion care
- broadening the choice of fertility regulation methods
- best practices for maternal care
- diagnosis and management of RTIs/STDs, including cervical cancer
- access to care issues
- violence against women, including misuse of medical interventions.

(Source: internal document, Special Programme of Research, Development and Research Training in Human Reproduction. UNDP/UNFPA/WHO/World Bank, 1998)

2. Ad Hoc Committee

One of the main contributions of the Ad Hoc Committee Report was the identification of specific areas where further investments in R&D would make a difference to global health. Their identification was based on a process that included an analytic (five-step) process, and considerations of the attributable burden likely to be reduced by interventions and attendant costs. The intention was to identify a limited number of areas where R&D was insufficient relative to the magnitude of the problem and to the potential for a significant advance. It was also to draw global attention (and resources) to these areas and track progress in promoting more work in these fields.

An important aspect of the Ad Hoc Committee work in priority setting was to underline the need for economic analysis in health. Resource allocation within health care, and especially health research, is both value-laden and ethically charged. Yet seeking cost-effective use of health R&D funds – especially public funds – is consistent with public health aims. Such a rationale has enabled the search for priorities and prioritization processes to be further developed.

The Ad Hoc Committee proposed a methodology for priority setting in health R&D and the list of such priorities was partly based on

this method. The 5-step process was proposed to inform priority setting. It involves seeking answers to the following:

- How large is the health problem? (magnitude)
- Why does the burden of disease persist? (persistence)
- How adequate is the current knowledge base? (knowledge base)
- Is the planned research likely to yield interventions significantly better than the existing ones? (cost-effectiveness)

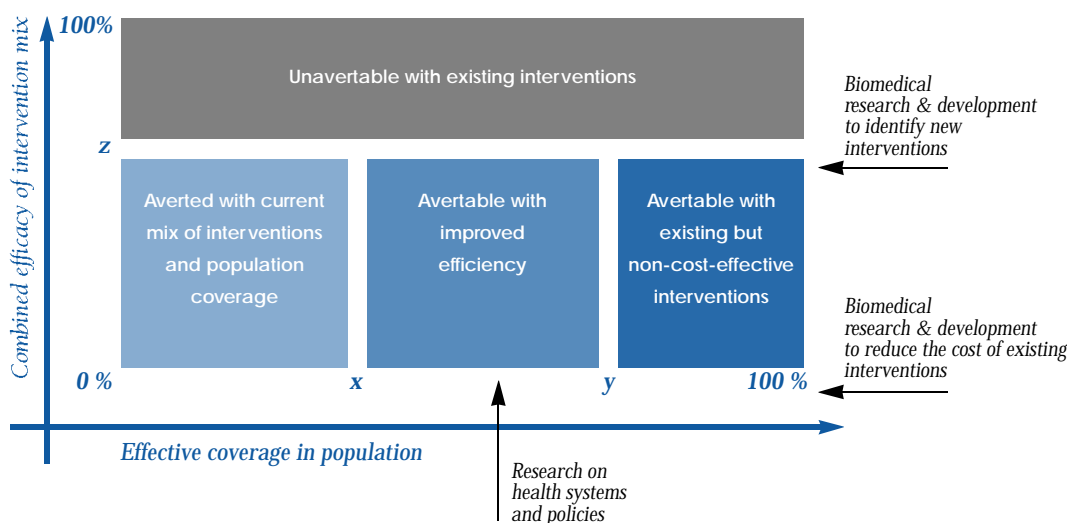
- How much is being spent already? (current resource flows)

Analysing the burden of a health problem to identify research needs is an important step in this process. As Insert 2.2 demonstrates, the total burden from a specific disease, the efficacy and effectiveness of interventions, and the extent to which effective interventions are reaching a population have to be considered. In doing so, areas where research may contribute and the type of research required can be defined.

Insert 2.2

Analysing the burden of a health problem to identify research needs

Relative shares of the burden that can and cannot be averted with existing tools



- x — population coverage with current mix of interventions
- y — maximum achievable coverage with a mix of available cost-effective interventions
- z — combined efficacy of a mix of all available interventions

(Source: reprinted from Report of the Ad Hoc Committee, 1996)

The Ad Hoc Committee's list of priority areas in child health, reproductive health, and infectious diseases is given in Insert 2.3.

Insert 2.3

List of priority areas in the “unfinished agenda”

Area of health	Description of priority area
Child Health	<p>Understand the relative importance, in different environments, of increased nutrient intake and controls on infectious disease as a means to reduce malnutrition.</p> <hr/> <p>Evaluate and refine the package for the Integrated Management of the Sick Child.</p> <hr/> <p>Evaluate the efficacy and optimal dosage of candidate rotavirus vaccine in low-income countries.</p> <hr/> <p>Evaluate the efficacy of candidate conjugate pneumococcal vaccine in low-income countries.</p> <hr/> <p>Evaluate the efficacy of existing Hib vaccine in low-income countries.</p> <hr/> <p>Develop and evaluate ways to increase efficiency in the Expanded Programme on Immunization by simplifying delivery and maximizing use of opportunities for immunization.</p> <hr/> <p>Evaluate promotion of insecticide-impregnated bednets, possibly for inclusion in a future healthy household package.</p>
Reproductive Health	<p>Develop, evaluate, and refine the Mother-Baby package for pregnancy, delivery, and neonatal care.</p> <hr/> <p>Evaluate the implementation of a range of family planning packages offering a wide choice of methods.</p> <hr/> <p>Develop new contraceptive methods, particularly to widen the choice of long-term, but reversible methods, post-coital methods for regular and emergency use, and methods for men.</p>
Infectious and communicable diseases	<p>Sequence genomes of major pathogens.</p> <hr/> <p>Investigate factors influencing the spread of anti-microbial resistance and approaches to monitoring resistant strains, with the aim of identifying ways of slowing their emergence.</p> <hr/> <p>Develop effective strategies to extend the coverage of directly observed treatment, short course (DOTS) for tuberculosis.</p> <hr/> <p>Develop an effective prophylactic for tuberculosis (e.g. single administration depot chemoprophylaxis).</p> <hr/> <p>Conduct trials of conjugate pneumococcal vaccines.</p> <hr/> <p>Develop a malaria vaccine.</p> <hr/> <p>Develop an HIV vaccine.</p> <hr/> <p>Develop improved methods for the diagnosis, prevention, and treatment of STDs, including vaginal microbicides.</p>

(Source: AA Hyder. Presented at the Second Annual Global Forum, 25-26 June 1998, Geneva)

Section 4:

Progress in the priority areas identified by the Ad Hoc Committee, 1996-98

One of the premises of the Ad Hoc Committee was that the identification of a short list of high priority investments for a global health research agenda focused on the health problems of the poor would help direct resources to them. Clearly this aim is more likely to be achieved if the list of priority areas is both updated and reviewed periodically to assess the extent and reasons for progress or lack of it. This evaluation of progress was done in 1998 on behalf of the Global Forum for Health Research.² The review draws attention to the progress made but also highlights areas where progress has been slow and attempts to identify reasons for this. Such reasons include lack of financial resources, lack of interested researchers with the capacity to conduct research, and changing research priorities.

The review of progress in health R&D priorities was done with the following objectives in mind:

- To evaluate progress in research and development in the priority areas in infectious diseases, child health, and reproductive health as identified by the Ad Hoc Committee in 1996.
- To assess the impact on resource allocations of having a short list of global health research priorities.
- To determine the implications of having

such a priority list and define the conditions under which it would be most helpful.

The methods used for evaluating progress were based on structured interviews of researchers, programme managers, and policy-makers, and a comprehensive review of the scientific and operational literature. The evaluation of progress considered the following factors:

- Baseline status of research on priority area around 1995-96.
- Definition of endpoint(s) in the priority areas that will determine completion and become the *reference point(s)* against which progress in the specific area can be measured.
- Intensity of research. This is an attempt to capture factors such as the pace and timeliness of research, strength of interest (amount of research), and appropriateness (site, design, methods).
- Success of research in the priority area.

The review of progress based on the above factors indicated the critical role of defining and stating the endpoint in each priority area. No research priority areas were suggested for noncommunicable diseases and injuries, but special programmes were suggested for further evaluation of those issues.

² Hyder A. A., *Review of Progress in Health Research and Development in Priority Investments. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

As shown in Insert 2.4, about half of the priority areas had a well defined endpoint, and another half had multiple endpoints. Furthermore, a number of areas are either inherently complex areas leading to a number of potential endpoints or relate to strategies that will continue to be improved through an iterative process of research and implemen-

tation. In both cases, it is difficult to say whether the endpoint has been reached. This report does not attempt to summarize the progress made in each of the priority areas. Rather, it draws some general conclusions that may be of use in future exercises to monitor research progress.

Insert 2.4

Endpoint analysis of priority investments in the “unfinished agenda”

Description of priority area	Type of endpoint		
	Well defined endpoint	Multiple endpoints	Other
Understand the relative importance of increased nutrient intake and controls on infections to reduce malnutrition			Complex
Evaluate and refine Integrated Management of Childhood Illness			Iterative process
Evaluate efficacy of candidate rotavirus vaccine in low-income countries	X		
Evaluate efficacy of candidate conjugate pneumococcal vaccine	X		
Evaluate efficacy of existing Hib vaccine in low-income countries	X		
Expanded Programme on Immunization: develop ways to increase efficiency		X	
Evaluate the promotion of insecticide-impregnated bednets	X		Complex
Develop, evaluate and refine Mother-Baby package			Iterative process
Evaluate family planning packages		X	
Develop new contraceptive methods		X	
Sequence genomes of major pathogens		X	
Investigate factors influencing anti-microbial resistance and monitor resistant strains		X	Complex
Extend the coverage of DOTS for tuberculosis	X		
Develop an effective prophylactic for tuberculosis	X		
Develop a malaria vaccine	X		
Develop an HIV vaccine	X		
Develop improved methods for prevention and treatment of STDs		X	Complex

(Source: AA Hyder, 1998)

The review of progress suggested that:

- If progress in priority areas is to be monitored, it is important to have clearly defined endpoints (products or milestones). Progress at various intervals of time can be measured (quantitatively or qualitatively) with respect to these reference points.
- Measuring progress in priority areas of operational research, which is often open-ended and iterative, requires the statement of clearly defined interim outcomes.
- Monitoring of R&D must take into consideration the time usually taken for each type of product development, for example, 5-10 years for drug or vaccine development.

The objectives of the study included an evaluation of the impact of the Ad Hoc Committee's work on health research and development. The review could not judge whether the priority list generated by the Ad Hoc Committee has had a major impact on resource allocation, since there are a large number of factors that affect the allocation and distribution of resources. Resource allocation for global health R&D is currently not monitored, especially not in a way in which small changes can be detected.

However, the attempt by the Ad Hoc Committee to make the imbalance in global health R&D resource allocations more explicit and transparent may have resulted in the increased sensitization of researchers and policy-makers to the importance of work in the identified priority areas. This, combined with the whole body of knowledge that includes elements of the burden of disease, cost-effectiveness, and prioritization methods, may have had a catalytic effect in many of the priority areas. However, further work will be needed to determine a direct effect.

Another important issue was the generation and redirection of resources towards priority areas of health R&D. The increased funding for the development of malaria vaccines under the Multilateral Initiative on Malaria in Africa has been one positive development. Others have been the renewed interest and allocation of funds for studying the impact of global anti-microbial resistance, investment in the search for a vaccine for HIV/AIDS, and an increase in funds for developing new contraceptives. Renewed interest in all these areas suggests that publicized statements of R&D priorities can draw attention to key issues. In time, this may lead to an increase in resource flows for specific issues.

Section 5:

Priority setting: a summary of lessons from the past

The production of a list of research and development priorities is not a one-time event. It is only the beginning of a process that includes defining, monitoring, promoting, and supporting work in that area over a longer period of time. As a consequence, one of the important results of the Global Forum's work has been the recognition that the usefulness of evaluating progress ultimately depends upon whether factors retarding progress are amenable to change. A priority area defined by a systematic process at one point in time will remain a priority until the endpoint has been achieved.

In addition, some generic findings also emerge from the work on priority setting in health R&D:

- Quantitative information (burden of disease, cost-effectiveness, resource flows) is a key element in the priority setting process. However, this information by itself is insufficient and there will always be a need for experience and expert judgement.
- Priority setting discussions are rarely held in the place where decisions will be implemented. As a result, such discussions tend to become theoretical and sometimes counter-productive.
- There are multiple levels of priority setting: local, national, regional, and global;

priority setting discussions become confused by mixing them together.

- Priority setting is a process of relevance to all actors involved in health R&D: governments, research institutions (medical research councils), academia (universities), and international agencies (WHO, World Bank, and NGOs e.g. COHRED).
- It is important to have priorities and priority setting processes, *but these must remain flexible in order to address new opportunities and challenges as they arise.*

One way of drawing attention to neglected priorities is to highlight the time lag between the development of useful scientific products and their availability to those most in need. An example of such delays is the decade between the registration of the Hib vaccine in some industrialized countries and its delivery in developing countries. Similarly, the "inequity clock" has started ticking on the rotavirus vaccine which was licensed in the United States in 1998. The clock will stop when the vaccine is accessible to the millions of children who suffer from this disease in the developing world. Research in these cases has to focus on shortening the time lag between the availability of a cost-effective intervention and its accessibility for the millions of people who need it.

Section 6:

Results of priority setting: a comprehensive list and a short list

Priority setting in health R&D can take place on various levels using different depths of analysis. A more comprehensive, analytic priority setting process in a specific field such as shown in Insert 2.1 may yield a long list of R&D priorities. On the other hand, some of those on the list will be more pressing than others and may be consolidated into a short list such as that developed by the Ad Hoc Committee. As a result, two kinds of priority lists may be envisaged in health R&D: a comprehensive list of R&D priorities, and a short list.

The comprehensive list will itemize priorities globally or by subject area (for example, priorities within child health or reproductive health). Such a list would usually be as exhaustive as possible, and include a mixture of short- and long-term R&D products or results. It would result from the analysis of a priority setting process (such as the 5-step process) and would improve gradually as more information becomes available. Such lists are often within the purview of health R&D institutions or specialized centres.

The establishment of short lists, such as that generated by the Ad Hoc Committee in 1996

(Insert 2.3), is a mechanism for selecting from the more comprehensive list those that may have one or more of the following characteristics :

- they address a major problem currently under-resourced
- they are expected to result in highly cost-effective interventions
- they are achievable in the shorter term.

These characteristics of priorities for health R&D will make such short lists worthy of urgent global attention. The search for an appropriate pneumococcal vaccine warrants inclusion in such a "list of opportunities" in view of the very high health benefits expected from a vaccine. Completing the research that would lead to the introduction of the rotavirus vaccine in the developing world at an appropriate cost is an urgent economic and equity issue, as the vaccine is already available in the developed world.

Section 7:

Priority setting and the future

We are only in the early stages of learning how to set priorities effectively. Further development of methods and tools for priority setting will occur, and lists will have to be revised to keep pace with this. Tracking progress in priority areas may serve as an indicator for global commitment to R&D in relation to the health problems of the large majority of the world's population. These priorities can help reduce health inequities by ensuring that the products of research, already available to wealthier populations, are also made available to the large majority of the world's population.

It would be useful to undertake a series of studies on decision-making processes which have led to the cost-effective allocation of resources. Such studies in both the public and private sector would serve as a vehicle for global learning. Similarly, it is critical to make such information available to all relevant constituencies. Wide dissemination of concepts, frameworks, studies, and reports in the area of priority setting is essential to an informed global debate.

Policy-makers need to be aware of the dangers of creating policy, or modifying existing policies, without adequate information. Prioritization of activities is an important task for developing and developed countries alike which, regardless of their funding base, need to justify spending in the health sector as opposed to other sectors. Prioritization takes place within a variety of contexts and each context has to rely on research in order to make the best informed investment choices.

As for the coming years, the review of progress in priority areas as defined by the Ad Hoc Committee in 1996 (Insert 2.3) revealed that, although substantial progress had been recorded in some areas, all areas require further efforts and investments, particularly the following where progress has been more limited:

- understanding of the relative importance of increased nutrient intake and controls on infections to reduce malnutrition
- evaluation of the implementation of a range of family planning packages
- development of an effective prophylactic for tuberculosis
- development of an HIV vaccine
- development of improved methods for prevention and treatment of sexually transmitted diseases
- evaluation of the efficacy and delivery of pneumococcal vaccine in developing countries
- development of antimalarial drugs and a vaccine
- delivery of the *Haemophilus influenzae* type B (Hib) vaccine in developing countries
- availability of rotavirus vaccine in developing countries.

Further priority areas (that require additional evidence-based information for proposing research for more specific interventions) may include the following:

- health policy and systems research
- effective strategies to reduce malnutrition

- reproductive health
- cardiovascular diseases in developing countries
- mental health in developing countries
- domestic violence (including violence against women and child abuse)
- road traffic injuries in the developing world
- child injuries in developing countries
- effective strategies against substance abuse.

This is a first and non-exhaustive list, which will be progressively refined, particularly

in relation to more specific recommendations, as more information becomes available. National and regional priorities for health R&D will also have to be determined by the countries concerned. Although this activity has a complementary role with the global effort, it comprises distinct and diverse processes. Repeated and refined priority setting exercises are important for future global and national health R&D.

Chapter 3

Analytical Work of the Global Forum for Priority Setting

*Section 1:
Burden of disease and health determinants*

*Section 2:
Measuring the 10/90 Disequilibrium*

*Section 3:
Relevant and appropriate use of resources: cost-effectiveness analysis*

Summary

This chapter focuses on the three instruments supported by the Global Forum for Health Research to improve the priority setting process:

Analysis of the burden of disease

Over the past decade, major progress has been made in the calculation of the burden of disease, particularly through the Global Burden of Disease Study (GBD 1990). Plans for the continuation of this work were presented at Forum 2 in June 1998. The continuation of this work is entitled GBD 2000, with projections of the estimated disease burden to the year 2030. This work at the global level needs to be complemented by disease burden studies at national levels. A number of such studies are under way.

Monitoring resource flows in health research

At present, there is no systematic monitoring of global investments in health research. The most recent estimates of resource flows in health research date back to 1992. Yet this information is crucial if the allocation of resources is to be improved both at the global and national levels. In response, the Global Forum for Health Research and other partners have launched an international working group for the development of a systematic approach for monitoring resource flows. In parallel, a number of studies on resource flows at national levels have been supported by COHRED.

Cost-effectiveness analysis of investments in health research

Cost-effectiveness analysis helps identify which research projects are likely to produce the greatest improvements in health status for the available resources and therefore plays a crucial role in the priority setting process. The Global Forum for Health Research is supporting a number of cost-effectiveness studies in developing countries. The objectives are two-fold: first, to help develop a standard methodology in this field for broad application to interventions in the developing world; and second, to evaluate interventions against some of the major diseases. This has led to the evaluation of interventions against malaria in Africa and to the launch of seven other studies.

Introduction

Interventions by governments and health agencies to improve the health of people are determined by health policies at the global and national level. Although the development of these health policies is inevitably influenced by political considerations, there has been an increasing effort to ensure that health policies and priority setting are more evidence-based and less dependent on the arbitrary views of individual policy-makers.

The analysis of evidence is a critical task at all levels of development. Good information is needed for sound decision-making and the cost of obtaining that information has to be weighed against its use. The search for evidence must be focussed on those areas directly relevant to health policy development and priority setting. The impact of diseases on populations, the effects and costs of interventions, the role of health determinants, and the resources used in the collection of such evidence are critical elements of this research.

The Global Forum for Health Research promotes and supports analytic work in a number of these areas. Priority is given to

those areas of health R&D that are central to improving the health of the large majority of the world's population. Through collaboration, partnerships, and co-sponsoring, new information can be generated, evaluated, promoted, and used for decisions that affect the allocation of resources for health research.

In addition to its work on some specific priority health conditions, the Global Forum has focussed on the following key analytic issues, which originate from the recommendations of the WHO Ad Hoc Committee:

- burden of disease and analysis of health determinants
- monitoring resource flows and priorities for health R&D
- cost-effectiveness analysis and methods to assist resource allocation.

Progress has been made in each of these fields and the Global Forum has been a catalyst and co-sponsor of this analytic work – facilitating the dissemination of results to a wider audience and generating interest and support from a wider range of constituencies.

Section 1:

Burden of disease and health determinants

1. Global burden of disease

The concept of the global burden of disease should be viewed as complementary to national burden of disease studies. At the global level, major work has been undertaken by the WHO Ad Hoc Committee and the Harvard University/WHO/World Bank Burden of Disease 1990 (GBD 1990) study. The GBD 1990 arose from the Health Sector Priorities Review of the World Bank over the last decade and was first presented in the World Bank's *World Development Report 1993*. The data has since been re-analysed and produced a wealth of information on a wide range of health conditions for different regions of the world.

An important focus of this work has been an emphasis on standardization of methods for data collection and analysis. The model for data collection has a significant influence on the type and quality of information collected, and the model presented by this work allows for varying degrees of precision, depending on the requirements. One of the objectives was to achieve consistency in global estimates from a wide spectrum of sources and ensure avoidance of double counting in data, especially for mortality estimates.

Another important aspect of GBD 1990 has been the investigation of the determinants of health. Estimates have been made of the contribution of smoking, alcohol, substance abuse, and other lifestyle factors to global ill-health. However, the burden of risk factors for diseases and other causes of ill-health need further exploration.

Over the past decade, the global burden of disease work has had a powerful influence on policy-makers and proved to be an effective tool for advocacy. The work has informed a large number of national and global initiatives and the accounting of healthy life lost as a consequence of morbidity has led to a renewed interest in a wide spectrum of conditions.

Disease burden estimates need to be updated periodically to take into account the changing demographic and health profiles of different countries and regions. Plans for such a Global Burden of Disease exercise for the year 2000 (GBD 2000) were presented at Forum 2 (Insert 3.1).

Insert 3.1

Goals for the Global Burden of Disease 2000 Project

- Inform debates on global and regional health priorities through the timely provision of information on the magnitude of health problems and risks.
 - Provide the technical and scientific foundation and guidance for national burden of disease analysis.
 - Provide the rubric to organize, maintain, and eventually institutionalize burden of disease analysis.
 - Incorporate new information on mortality, causes of death, and non-fatal health outcomes for global and regional assessments of burden.
 - Develop and disseminate new methods for burden of disease analysis.
 - Provide standardized epidemiological background for sectoral cost-effectiveness analysis.
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Specific Objectives of the Global Burden of Disease 2000 Project

- Estimate population and deaths in 1990 and 2000 by sex, region, and age.
 - Estimate mortality for over 100 diseases and injuries by sex, region, and age.
 - Estimate internally consistent incidence, prevalence, duration, and case-fatality for the major sequelae of each disease and injury by age.
 - Measure health state preferences by region for sequelae including gender, age, and socioeconomic status.
 - Use the information to calculate various composite measures of health outcome, DALYs and DALE (disability adjusted life expectancy).
 - Develop and measure inequalities of burden with specific application in 16 countries (two per region).
 - Estimate attributable and avoidable burden for major distal, proximal, and physiological determinants of premature mortality and non-fatal health outcomes.
 - Project alternative probable scenarios and select possible scenarios with significant policy implications – mortality and non-fatal health outcomes by cause, age, sex, and region to the year 2030.
 - Strengthen the capacity of developing countries to undertake burden of disease analysis and provide technical leadership for BOD.
 - Develop methods to estimate the incidence and prevalence of major co-morbidities and for the assessment of health state preferences of these co-morbidities.
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(Source: C. J. L. Murray. Presentation at the Second Annual Meeting of the Global Forum for Health Research, June 1998)

The aim of the project is to provide timely, objective information on the magnitude of global health problems and risks. An attempt will be made to measure the complete range of

fatal and non-fatal health problems as well as a range (distal, proximal, physiological) of risk factors. Efforts are currently under way to secure funds and to develop a network of

scientists from developed and developing countries to collaborate on the project. The Global Forum is a partner in the development of the project.

2. Developments at the national level

Efforts to obtain better data on the health profile of populations is continuing in all regions of the world. These efforts use a variety of strategies to collect information on the burden of disease and health determinants for local or national populations. The development of sentinel sites, use of national surveys and country-based burden of disease studies are among the main methods used. The range of diseases and conditions included varies according to the particular health problems of different areas. These efforts have a major impact through enriching both the databank of health information and the methodologies that can be used to measure the impact of ill-health on people.

Sentinel sites

The development of sentinel sites within countries, which are monitored and surveyed for demographic, epidemiological, and health data, is critical to a rapid assessment of health status and response in the developing world. These sites can play an important role in the development of systems and methods for monitoring health. The sentinel sites also provide fertile ground for community development, as well as opportunities for education, training, and community-based investigations (such as why some households in a population are at higher risk of disease than others).

An international network of these sites forms a collaborative mechanism for data and experience sharing. An example of this is the INDEPTH network in the developing world where vital data is being collected

prospectively.¹ The sites have a standardized methodology for data collection, especially on core health indicators. Local capacity is being developed to strengthen sites and improve the quality and type of data. Meanwhile, an effective platform has been created for the sharing of both information and expertise between countries – demonstrating the achievements that are possible even in resource-poor settings as a result of good direction and focused funding.

The network has 43 potential sites, including 28 in Africa. Linkages between these sites will enable them to pursue shared objectives, including to:

- be visible and become recognized as a critical member of the network
- continue to improve methods and technologies for resource-poor settings
- define a dynamic research agenda
- cultivate cross-national activities
- build institutional and individual capacity
- strengthen the research-policy interface
- improve the validity and general applicability of information for different regions.

The INDEPTH network hopes to achieve these opportunities through effective use of the following strategies:

- fostering connections between the sites collectively and regionally, and to the outside world through the use of technology and communication strategies
- reinforcing the methodologies through substantive research, technical exchange, and workshops
- strengthening the capacity of these field sites through training and partnerships
- gathering information through effective local and national partnerships and com-

¹ Binka F., *Bridging the Gap: Bringing Reliable Health Information to bear on Policy Formulation in Developing Countries*. Presented at the Second Annual meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

munication systems for use in the development of policies.

National Surveys

Although the use of nationally representative health interviews and examination surveys is well established, the use of such information for national and local decision-making has been relatively weak due to factors such as lack of political will, shortage of timely data, and the traditional gap between researchers and policy-makers. However, this situation is improving, as exemplified by work jointly funded and carried out by North-South partnerships in Africa and Asia. The Tanzanian Adult Morbidity and Mortality Project (AMMP) is an example of information that has influenced health policy and intervention development in that country.² This bilateral development assistance project (Tanzania and the United Kingdom) undertook prospective monitoring of three districts in 1992 to document the magnitude and

causes of mortality, describe health determinants, and estimate the socio-economic impact of diseases on the population. This information has been supplied to policy-makers and used in the policy-making process – a move which distinguishes AMMP from similar projects elsewhere in Africa.

Within five years of its launch, AMMP results have been used by both the public and NGO sectors at the national and district levels (Insert 3.2). The data have been used to develop a national strategy on tobacco legislation, and by district health management teams for health planning and intervention development. This work has afforded vital insights into the health of the Tanzanian people, including information on intra-country diversity in health status and access to health services. The use of information from such field sites is an example of optimal utilization of health R&D in the developing world.

Insert 3.2

Uses of AMMP Data in Tanzania August 1997 - January 1998

Level	AMMP Data Used	Policy/Planning Document
National		
Dir. Preventive Services, MoH	Smoking behaviour in AMMP areas.	Cabinet briefing paper on proposed tobacco legislation.
District		
District Health Management Team, Morogoro Rural District	<ul style="list-style-type: none"> • population; • household size; • death rates and major causes of death; • prevalence of NCDs; • prevalence of hepatitis B markers; • burden of disease as measured in Years of Life Lost (YLLs). 	1997/98 District Health Plan: <ul style="list-style-type: none"> • baseline demographics; • burden of diseases; • priority lists of diseases and health problems for intervention; • health education priority areas; • “problem trees” for maternal and under-5 mortality; • health needs priorities.

² Kitange H., *The Burden of Disease in Tanzania: Policy Implications of the Adult Morbidity and Mortality Survey*. Presented at the Second Annual meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

Insert 3.2 (continued)

Uses of AMMP Data in Tanzania August 1997 - January 1998

District Health Management Team, Temeke (Dar es Salaam)	<ul style="list-style-type: none">• population;• household size;• death rates and major causes of death;• health facility use before death.	<ul style="list-style-type: none">• Minimum Package of Health Services to be offered at all levels of the health service;• priority interventions;• priorities for health education;• training for health workers on quality of care;• community IEC on health service use.
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NGOs & Health Projects

Population Services International	<ul style="list-style-type: none">• YLLs lost to malaria in Dar es Salaam and Morogoro Rural District (all ages).	<ul style="list-style-type: none">• design of social marketing of insecticide-treated bednets for malaria control; evaluation of project impact.
WHO and Ifakara Health Research and Development Centre ELCT Northern Diocese Primary Health Care Programme	<ul style="list-style-type: none">• YLLs lost to malaria among children in Morogoro Rural District.• Information on risk of death due to noncommunicable diseases.	<ul style="list-style-type: none">• design of trial for use of artesunate suppositories in treating malaria in children during referral.• public health education and health promotion programme.

(Source: Adult Morbidity and Mortality Project (AMMP), Tanzania)

The National Health Survey of Pakistan is another example of both effective North-South partnerships and use of health information for policy development.³ This health interview and examination survey was conducted jointly by the Pakistan Medical Research Council and the National Center for Health Statistics/US Centers for Disease Control and Prevention (NCHS/CDC).

Nigeria is another example of a developing country where an important national survey on health has been conducted. As a result of the information on noncommunicable diseases gathered in this exercise, national guidelines for the management of hypertension have been developed. This timely

conversion of survey results into policy is a positive development.⁴

National burden of disease

Over the past five years, national burden of disease studies have been carried out in Latin America, Africa, North America, Europe, and Asia – demonstrating a resolve to pursue such evidence. These efforts are also important for the development of national capacity in this area and help focus attention on the need for more and better quality data for decision-making in health.

A burden of disease study recently completed in the United States has revealed significant variations between the 50 States.⁵ Life

³ *The National Health Survey of Pakistan: Summary*, Pakistan Medical Research Council. Distributed at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

⁴ Akinkugbe O.O., *The Nigerian Non-Communicable Disease (NCD) Programme*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

⁵ Murray C. J. L., *Global Burden of Disease 2000*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

expectancy in different States varied by as much as 40 years. The study shows that within the United States, life expectancies range from those equivalent to South Asia to those that are greater than the life expectancy for females in Japan. Such findings are not only important as documentation of a health status differential, but also as an indication of the variation in access to and delivery of health care. The reasons behind this inequity are central to health policy development.

3. Burden of disease methods

The methods for burden of disease assessment and evaluation of health determinants will improve over time as their use increases. These methods need to be validated in different environments and social settings – establishing another common area for global and national collaboration. In addition, the individual technical steps involved in these complex methods need to be assessed at national and local levels. Meanwhile, the impact of technical choices on health-related decisions should be made explicit, so that countries can have an informed debate about their health priorities.

Health data needs to be analysed and presented at a disaggregated level. A breakdown for important variables should be attempted to enable assessment of the burden on each segment of the population, defined by categories such as gender or poverty. The possible range of health states needs to be made explicit and the search for the effect of interventions on these groups should be part of the research design. District and geographical comparisons, time trends in data, and other aspects of health information and burden of disease assessment will help in exploring potential approaches to reducing the inequality in disease burden between different groups.

Burden of disease results are a product of data, methods, and analysis. Each of these

components has elements that can be strengthened over time with more experience. The lack of reliable and valid data either at the country or disease-specific level is a central concern for all types of analysis. Statistical correction methods can only adjust some errors and to a finite degree, and such limitations need to be recognized. Methods that are compatible for easy and timely use by countries need to be promoted so that they are used to assist decision-making, not only to fulfil a research need. Explicit use of epidemiological methods, value choices, assumptions, and borrowed estimates will increase the transparency of the analysis. This will further enhance the use of such results by policy-makers and help encourage the translation of essential research into health policy.

4. Agenda for the future

Over the past decade, there has been remarkable progress in global knowledge of the burden of disease and health determinants. However, the lack of information from a large part of the globe is still a problem. Efforts are needed to improve this and fill in the information gaps, especially where they are important for global, national, and regional decision-making.

Mortality

Increased efforts are needed to strengthen national vital registration systems in the developing world. The use of sentinel sites is one way of creating a rapid mechanism to obtain data. There is a need to create and strengthen additional strategies that are developed and sustained locally.

Cause of death reporting is either non-existent or unreliable, with a high proportion of deaths classified as ill-defined. Those unrecorded or not defined are more likely to be among the poor with little access to health care. Health information systems should address this critical need for better mortality descriptions.

Morbidity

There is an urgent need for better data collection on the morbidity profile of populations.

Methods

Countries should make use of burden of disease methods. There is also a need to develop simplified tools for use by national and sub-national decision-makers. These will enable the incorporation of local and national criteria and values, in addition to the global ones, for use by these countries. Meanwhile additional work is required to enable measurement of changes in health status, especially in relation to specific interventions.

Capacity

Improving the human and institutional capacity in developing countries to collect, analyse, and act upon health information is crucial. However, the creation of a better evidence base for decision-making in the health care and health R&D sectors will depend upon the availability of human and technological resources within these countries.

Search for inequities

The use of disaggregated data is of critical importance in the search for and description

of health inequities. This data can be used to support demands for more equity in global health care. Meanwhile, information on health inequities should be backed up by an analysis of the interventions required to reduce these inequities. Future work in this area will involve the identification of programmes and strategies to reduce inequities.

5. Conclusion

Any research agenda at the global or national level is an investment. In the face of scarce resources, the very act of research needs to be justified. Therefore, efforts should be directed to using research to generate data that helps policy-makers make better informed and more rational decisions on resource allocation.

It is also important to understand that the extent and speed with which data-based health policies are developed is influenced by the way health systems function and by legislative and regulatory aspects of decision-making. Since there is diversity between different types of health systems, this variation should be studied carefully to ensure the optimal development and implementation of policies.

Section 2:

Measuring the 10/90 Disequilibrium

1. Monitoring resource flows for global health research

At present, there is no systematic monitoring of global spending on health research. As a result, there are no accurate estimates of global spending, nor of the amounts allocated for research on the main diseases or risk factors. Yet this information is vital if the allocation of resources is to be improved at the global and national levels.

Although no regular monitoring system exists, independent estimates of resource flows have been attempted. The Commission on Health Research for Development (1990) estimated that 95% of health R&D resources are spent on problems affecting people in the industrialized world, while only 5% are spent on health problems in developing countries (Insert 3.3).

Insert 3.3

Global Resources for Health R&D: The Facts

Estimates for 1986 *(Commission on Health Research for Development)*

- Global investment in health research: US\$ 30 billion
- Investment for problems of developing world: US\$ 1.6 billion

Estimates for 1992 *(Harvard University)*

- Global investment in for health research: US\$ 56 billion
 - Investment for problems of developing world: US\$ 2 billion
-

Additional estimates for 1992 and 1995 by researchers at Harvard University identified a similar range of imbalance in which only 5%-10% of global spending on health R&D was

being spent on health issues that affected the large majority of the world's population. These figures are referred to as the 10/90 Gap.

2. Components for monitoring global resource flows

The development of a systematic mechanism for monitoring resource flows is one of the analytic work components of the Global Forum.⁶ A core group of partners, including members of the governmental, non-governmental, multilateral, bilateral, and

academic sectors are collaborating in the development of such a system (Insert 3.4). Meetings hosted by WHO and the Global Forum for Health Research were held in March 1998 and January 1999. The major components of the system include an international database on research funds and an international database on research projects.

Insert 3.4

Global Forum for Health Research

Monitoring Resource Flows for Global Health Research and Development

Core group membership

- COHRED - Council on Health Research for Development
 - Global Forum for Health Research
 - Government of Thailand
 - Government of Malaysia
 - Harvard School of Public Health, Harvard University, USA
 - Health Authority of New Zealand
 - National Institutes of Health, USA
 - Pan American Health Organization (PAHO)
 - Government of the Philippines
 - Sida/SAREC - Swedish International Development Cooperation Agency
 - SHARED - Scientists for Health and Research for Development, Holland
 - Wellcome Trust, United Kingdom
 - World Health Organization (WHO)
 - United States Agency for International Development (USAID)
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⁶ Michaud C., *Systematic Mechanisms for Monitoring of Resource Flows*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

International database of health R&D funds

The creation of a database to track funding is part of the effort to monitor global resource flows. It will be based on information supplied by all major funding agencies on their allocation of funds for global health R&D. The database will begin with information from reporting systems currently used by these agencies and work towards converting that information into a common format. Thus, allocations from each funding agency will be used to extract relevant information and will be fed into the database. The agencies themselves may eventually adopt this kind of "conversion" system – allowing data to be fed directly into the database. This compendium of information would then form the basis for monitoring resource flows over time. Sharing over the Internet and further analysis of this information will allow for an iterative process and gradual improvement of the database.

International database of health R&D projects

For the establishment of an international inventory of health R&D projects, the following issues need to be considered:

- coverage of the database
- maintenance and control of the database
- checks and quality control
- protection and privacy issues.

The US National Institutes of Health (NIH)⁷ has experience in the development of this kind of database for NIH-funded projects. The Computer Retrieval of Information on Scientific Projects (CRISP) has been a gopher-based system and is being adapted by NIH for the World Wide Web. Meanwhile, Scientists for Health and Research for Development (SHARED) is a similar new initiative, developed in Holland to facilitate the global

exchange of information among researchers. It has been set up on the World Wide Web by a group of European and developing country scientists and funded by European sources. It lists the R&D projects by categories and provides detailed contact information at the individual level. The possibility of linking a US-based system (CRISP) with the SHARED system might combine the benefits of both, with the added value of providing additional financial information for the new system.

Accessibility of developing countries

Researchers, agencies, and other organizations based in the developing world often have difficulty in accessing information. There is a need to ensure that scientists in developing countries are able to:

- access the Internet both promptly and at low cost
- find data pertaining to resource flows in health R&D
- obtain information on health R&D
- obtain information on funding opportunities for health R&D.

These in turn relate to the availability of technology, the cost of acquiring and using it, and, to some extent, to the development of an information technology infrastructure in these countries. Although efforts are being made to grapple with some of these issues, there is no concerted initiative to address these needs in relation to health R&D. In the United States, for example, the University of Texas has developed STARLINE, an information data-base on funding, for use on the Internet. This can provide online information on potential sources of funding for researchers and partners in the developing world.

⁷ Baldwin W., *Points for Consideration for Developing a Scientific Database*. Presented at the Second Annual meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

3. The challenges

The monitoring of resource flows for global health R&D faces a number of challenges:

- Since there is currently no system or institution that monitors global resource flows, information available from different sources is fragmented and varies widely in both quantity and quality.
- Information relating to public health sector investments in health R&D is not readily available and estimates have to be based on additional country-specific or regional analysis.
- The information available on resource flows is not based on standardized classification systems or definitions.
- There is no common or accepted analytic framework for resource flows in health R&D.

The international working group (Insert 3.4) is currently discussing strategies to deal with these challenges, especially the development and maintenance of an "international database", which could include the following:⁸

Decentralized approach

Each country or entity would be responsible for establishing and maintaining its own system which could be accessed via a centralized global system. This would provide individual control over the quality and timeliness of information that is fed into the database. This would also avoid the creation of an additional database and a separate process for submission of data to a central system, bringing some cost savings. However, it would not provide for central assessment of quality and would be delayed in many countries by the lack of funds to develop such a system.

Centralized system

Each country or entity would submit information to a central system. In this way, quality assurance would be consistent and delays in establishing individual systems would be avoided. Economies of scale could be achieved through the inclusion of a large number of participants and through putting the creation of such a system out to competitive tender. However, a separate, centralized organization and management structure would be needed, thereby incurring additional costs. The system would also require continuous maintenance and up-loading of information from different sites.

A hybrid or combined system

This would be based on features from both the centralized and decentralized approaches. It could be a web-based system with a virtual database with links to every site. Such a mixed approach would provide the opportunity for central quality control, avoid the creation of individual systems (thereby reducing costs), avoid separate systems for data entry and retrieval, provide the opportunity to integrate existing data sets, and have a common interface for all users. However, the cost savings from economies of scale that may be realized with a central system may not apply in this case.

Other issues currently being addressed by the core group (and other partners) include the following:

- Provide a clear understanding of institutional mechanisms currently in place to monitor health R&D investments from major funders/donors.
- Agree on a set of standardized inputs and methods for the creation of a data set at the aggregate and disaggregate levels. The core group has started deliberations on this

⁸ From Baldwin W. (see above).

issue, beginning with a review of definitions used in this area.

- Initiate selected country-based studies, especially in the developing world, with partners (such as COHRED) to document the flow of resources and define methods for governments to monitor such flows. Country-based studies have been initiated in Africa (South Africa), Latin America, and South-East Asia (Philippines, Thailand),

while other country-based experiences have been exchanged within the core group (Inserts 3.5 and 3.6).

- Explore strategies for incorporating data from different institutions in the developed world (such as those in the OECD countries). The core group discussed this at length and a common sharing of ideas is under way for the development of an analytic framework.

Insert 3.5

Resource Flows for Health R&D: A Study of the Philippine Experience

Objectives

- To trace the flow of health R&D resources in the Philippines, by looking at funding sources, as well as the nature and composition of health R&D expenditures.
 - To assess and document a system for setting health R&D priorities.
 - To determine if health R&D funds match the priorities of the national research agenda.
 - To compare health R&D data and establish trends over time using survey results from the Department of Science and Technology.
 - To conduct inter-country comparisons on the amount and nature of expenditures for health R&D.
-

Methodology

Definition of health R&D:

- For purposes of this project, a modified version of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) definition of R&D was used.
-

Data collection:

- The accounting framework was used to track the flow of funds for health R&D from funding sources to fund users, the latter referring mainly to funding recipients tasked to undertake the R&D activity.
 - Primary data were generated with the use of a structured questionnaire that requested information on the flow of resources for health R&D in 1996. Institutions identified in the framework as funding sources and users were surveyed. Responses were subsequently supplemented with personal interviews.
-

Sample:

Government sector departments	Private sector	Funding agencies
• Health	• Top 100 pharmaceutical companies	• Bilateral
• Science	• Academic/research centres	• Multilateral
• Education, culture and sports	• Hospitals	
• Academic/research centres	• Others (clinics, etc.)	
• Hospitals		
• Others		

Insert 3.5 *(continued)*

Results

Government of the Philippines

- An estimated US\$ 72.13 million of resources allocated for R&D activities.
- US\$ 12.05 million or 16.7 % was devoted to health R&D.
- Health R&D accounted for 0.57 % of health resources overall. (WHO-prescribed standard: at least 2 % of national health expenditures should be devoted to health R&D).
- Health R&D expenditures appear to be concentrated in three departments, with the Department of Health accounting for the largest share at US\$ 8.83 million (73 % of total health R&D resources).

Methodological and other issues

- Inconsistency of definitions across respondents
- Estimation errors in measuring R&D resources
- Absence of a system for monitoring health R&D
- Absence of an effective validating mechanism that can flag under-reporting, over-reporting, and double counting
- The time lag between health R&D priority pronouncements and implementation.

(Source: Alano B., 1998)

Insert 3.6

Philippines Government Budget for Health and for Health R&D

	Millions of US\$	Percent of Total
Total Government Budget	11 282	100.0
Expenditures for Health	2 129	18.9
Expenditures for Health R&D	12	0.1

4. Systematic monitoring of global investments in health research and development

The activities outlined above will form the basis for the development of a workplan for the core group. This workplan will define the key features of an institutional mechanism for the systematic monitoring of global investments in health research and development. The overall objective is to develop a database of internationally comparable statistics on global investments in health R&D, which can serve as a tool to improve priority setting (Insert 3.7). Specific objectives include the following:

- provide the scientific database needed by research managers to inform decisions on the allocation of scarce resources and to monitor changes in the allocation of resources over time

- complement rather than duplicate existing databases of scientific projects
- emphasize R&D investments that have the greatest potential to reduce the burden of disease among poor populations in developing countries.

Such information will enable regular comparison between the magnitude of health problems and the amount of money invested in finding solutions to these problems. This comparison will serve as an indicator of the appropriateness of R&D resource use and send a powerful message to those who allocate resources between competing R&D needs. The current 10/90 Disequilibrium will then be monitored, and any reductions in the gap will be used as one indicator of better decision-making and priority setting in health.

Insert 3.7

Complementary systems for monitoring health R&D

Feature	CRISP	SHARED	Global System
Nature	Database of scientific projects	Database of scientific projects	Database of financial resources; based on funding institutions worldwide
Objective	Information on projects funded by NIH/USA	To assist interaction among researchers	To inform decision-makers on the allocation of health R&D resources
Dollar amounts	No	No	Yes
Data entry	NIH	Decentralized	Global Forum
Project start	1970s	1995-96	Expected 1999
Donors	U.S. Government	European sources *	Global Forum and partners

* GTZ: German Development Agency; WOTRO-MW: Netherlands Organization for Scientific Research; others

(Source: A.A.Hyder)

Section 3:

Relevant and appropriate use of resources: cost-effectiveness analysis

1. Rationale

While estimates of the burden of disease and estimates of the resource flows for health R&D are important components of evidence-based priority setting, information about the likely "value for money" of different investments is also critical. Cost-effectiveness analysis helps identify which research projects are likely to produce the greatest improvements in health status for the available resources, and whether the new tool is likely to be more cost-effective than existing ones.

However, for many interventions, no reliable data exist on either costs or effectiveness, and for others, the only data available pertain to developed countries. For virtually no intervention is there good information on the way costs and effectiveness vary according to factors such as the scale of the intervention (for example, 10% coverage for childhood immunization compared to 80%); the cost structure and financing system of different countries; and the epidemiological setting. Although a few attempts have been made to collate the evidence from individual studies, the lack of methodological consistency between studies has made comparison difficult.

Ideally, policy-makers at the country level would have information on the cost-effectiveness of all competing interventions in their local settings. However, since it will not be possible for studies to be undertaken on every possible intervention in every country, it will be necessary to adapt the results of studies undertaken in different

settings. Therefore, there is a critical need not only to stimulate individual studies on cost-effectiveness but also to develop methods that allow their results to be transferred and adapted between countries. This work is vital for the development of evidence-based health policies within individual countries, and it can also be used by institutions which fund R&D, to help them set their own priorities for R&D.

The field of cost-effectiveness analysis in health research is one component of the analytic work supported by the Global Forum. A number of activities and projects already under way involve the application of cost-effectiveness analyses at two different but equally important levels. One is directed towards establishing generic methods and their application to interventions in the developing world, and the other is a disease-based application to major global causes of loss of healthy life.

The Ad Hoc Committee examined the cost-effectiveness of several interventions and potential interventions and presented the results in the 1996 report (Insert 3.8). Estimates were presented as the cost in US dollars for a disability adjusted life year (DALY) averted. Thus, cost estimates for a package of the integrated management of the sick child were estimated to double in a middle-income country as compared to a low-income country. At the same time, interventions for malaria generally appeared cost-effective, although this varied according to field conditions.

Insert 3.8

Estimated Cost-effectiveness of Selected Health Interventions

Intervention	Conditions	Cost (US\$) per DALY
Integrated Management of the Sick Child		
Package for IMSC	Low-income country	30-50
	Middle-income country	50-100
Malaria		
Impregnated bednets	Government distribution, 50-100% compliance, 25% reduction in mortality	7-14
Chemoprophylaxis	Government distribution	28
Hypothetical vaccine	EPI delivery, 30% mortality reduction, protection for 1-5 years, cost US\$ 1-7.5 per child per year	0.40-11
	No EPI delivery, protection for one year, cost US\$ 15 per child per year	24

(Source: Ad Hoc Committee Report 1996)

2. Malaria control in Africa: value for money

A study reviewing currently available information on the economic evaluation of malaria control in Africa was supported by the Global Forum and presented at Forum 2.⁹ This work focused on the cost-effectiveness of various anti-malaria measures (vector control, chemoprophylaxis, and case management) in an attempt to draw some general conclusions from results for high- and low-risk trans-

mission areas in Africa. Gross National Product (GNP) levels were also used to further study the impact in three different economic strata. The data were taken from work already completed or published and supplemented by extensive inter-sectoral expert consultation. Results were expressed as "cost per DALY averted". Additional elements such as the indirect effect of such interventions on economic productivity and cost savings were also evaluated.

⁹ Goodman C., *Economic evaluation of malaria control in Africa*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

Each malaria intervention studied proved to be cost-effective (less than US\$ 150 per DALY averted). Sub-sets of these were highly attractive with cost-effectiveness of less than US\$ 25 per DALY averted. The relative cost-effectiveness analysis was affected by factors such as the intensity of transmission, economic status, and current levels of health infrastructure.

These results indicate that:

- Overall, interventions against malaria in Africa are technically feasible and generally cost-effective.
- Cost-effectiveness is affected by a number of factors such as intensity of transmission, economic status, etc.
- Cost-effective packaging of such interventions will have to be done with knowledge of local circumstances.

Despite their cost-effectiveness, the total costs of implementing such interventions at high coverage levels can be quite high (Insert 3.9).

The total cost of implementing insecticide-treated bednets, residual spraying, or chemoprophylaxis for children would be extremely expensive for any government. This is a challenge beyond the issue of cost-effectiveness and involves the reallocation of total budgets and mobilization of new funds for such interventions. However, it is the search for cost-effective interventions that makes such assessments possible and useful. It is also this process that allows for the identification of interventions which are both cost-effective and have low total costs, such as chemoprophylaxis of pregnant women through ante-natal programmes (Insert 3.9).

While conclusions from such analytic work on cost-effectiveness are critical to decision-making, it is recognized that decisions cannot be made solely on the basis of this type of information on cost-effectiveness. There is also a need to consider the availability of local resources, budget levels, and management issues.

Insert 3.9

Malaria control in Africa: total costs of cost-effective interventions at 100% coverage

Target population	Delivery system or location	Malaria intervention	Total cost as % of total health budget (%)
Under 5 years of age	Typical low-income nation	Insecticide-treated nets	50
		Residual spraying	80
	Community Health Workers	Current chemoprophylaxis	20-45
Pregnant women	Ante-natal clinics	Current chemoprophylaxis	0.25
		More effective (new drug) chemoprophylaxis	1.2

(Source: Goodman et al., 1998)

3. Comparative cost-effectiveness of health interventions: development of a standardized methodology

The Global Forum has attempted to help fill the gap in the development and application of cost-effectiveness analysis methods in health, especially health R&D. One outcome of this is the launch of a study on the cost-effectiveness analysis of health interventions in developing countries.¹⁰

The overall objective of this project is to stimulate the development of a comparative database showing the cost-effectiveness of interventions that could contribute most to improving health status. More specific objectives are to:

- develop a standard methodology for use in all studies, thus enabling comparison between results
- stimulate a series of studies on priority topics using this methodology (or, where possible, recalculate the results of different studies to make them consistent with the agreed methodology)

- develop a method for adapting the results of studies undertaken in one setting to other settings where cost structures, the scale of the intervention, the availability of facilities, and other variables may differ
- develop (as an interim goal) a set of cost-effectiveness estimates for different regions of the world with varied epidemiology and cost-structures.

A workshop involving the selected teams was held in Geneva after Forum 2 and a draft set of guidelines was discussed at the meeting. Over the next year, the teams will use these guidelines in their studies and the guidelines will then be modified if necessary before final publication in 1999. These case studies will help facilitate the establishment of the database and methods for ensuring the international transferability of results. The results of these studies will be available in late 1999, and it is hoped that this body of work will encourage additional donors to invest in the expansion of the database. Seven teams are currently participating in this project (Insert 3.10).

¹⁰ Evans D.B., *Comparative cost-effectiveness study: standardized methodology and case studies. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

Insert 3.10

Participants in Global Forum study on cost-effectiveness of health interventions in developing countries

Institution	Title of project
All India Institute of Medical Sciences	Cost-effectiveness of hypertension control in developing country populations
Johns Hopkins University	Road traffic injuries in the developing world
London School of Hygiene and Tropical Medicine	Cost-effectiveness of HIV/AIDS prevention strategies
London School of Hygiene and Tropical Medicine	Health care to improve the outcomes of labour, delivery, and postpartum (LPD)
Mexican Institute of Social Security	Cost-effectiveness analysis of health interventions for preventing work injuries
Ministry of Health Education and Communication Centre	Cost-effectiveness study of pap smear screening in Malaysia
PATH Canada	Cost-effectiveness of micronutrient interventions

Meanwhile, a collaborative study, involving WHO, the World Bank, and Harvard University has reviewed the recommended methods for cost-effectiveness analysis suggested by contemporary experts (e.g. Gold et al. 1996). While these methods are very useful for individual countries wanting to make small changes to existing health priorities, they are not appropriate for countries that want to re-evaluate large parts of their health portfolios. Because existing guidelines on cost-effectiveness analysis are designed to evaluate small changes in research portfolios, they may lead in the wrong direction when used in conjunction with a more extensive review of the entire health research agenda.

In early 1998, a consultation was held with experts involved in the development of existing cost-effectiveness guidelines, to discuss proposed changes. A draft set of guidelines for countries wishing to re-evaluate their entire portfolios is now under preparation and will be presented to a wider audience of practitioners and revised accordingly. The project will also involve the production of a separate database of a number of major interventions for various regions of the world where epidemiological conditions and cost structures are likely to be relatively homogeneous.

Chapter 4

The Poverty-Health Interaction: Old Problem, New Perspectives

*Section 1:
Poverty, health, and the poor*

*Section 2:
The facts*

*Section 3:
Research on poverty and health*

*Section 4:
Poverty and sustainable development*

*Section 5:
Women: the face of poverty*

*Section 6:
The future*

Summary

Around 1.3 billion people in the world live in extreme poverty, surviving on less than US\$ 1 a day for all their needs. These people have little or no access to health services and education and limited prospects for a better life. They are far removed from decisions that affect their day-to-day lives. Increasingly, they are the victims of crime, conflict, and violence.

It is important in both the generation and use of health R&D that the interests of the poor be made explicit. The Global Forum will support the promotion of health R&D to help correct the 10/90 Gap, with special attention to the health of the 1.3 billion poor and the development of strategies that can better serve their needs.

Data from the Global Burden of Disease Study (GBD 1990) have been used to study the burden of disease among the global poor and the results were presented at Forum 2. This study revealed that:

- Although the poor represent a quarter of the world's population of over five billion people, they share a disproportionately large burden of ill-health.
- An evaluation of the poorest 20% of the world's population indicates that they suffer more from all causes of ill-health, especially communicable diseases, than the richest 20%.
- Predictions for the future are dependent on the assumptions used, but reflect that any acceleration in the decline of death rates would benefit the poor. However, this does not question the need for priority setting.

These data confirm what health and development professionals have believed for decades: that poverty is a cause, an associated factor, a catalyst, and a result of ill-health. This kind of data is essential for any intervention in the complex health and poverty relationship. However, it is the appropriate use of such data for decision-making that will change the 10/90 Gap.

Meanwhile, there is a critical need to focus on the ability of the poor to voice their concerns and participate in making decisions that affect their lives. Health and development programmes have a poor record of ensuring that this participation is both effective and sustainable. Mechanisms to enable the poor and the vulnerable to be involved and work towards a better future for themselves are central to overall health and development.

The global community should recognize that good health is a way out of poverty. It results in a greater sense of well-being and contributes to increased social and economic productivity. The impact of ill-health on productivity affects not only the poor but societies and economies as well. The issue of health and poverty is not just a moral issue, it is an economic issue as well. It is more cost-effective in the long run to reduce poverty by improving health and development interventions for the poor than to face the heavy costs of poverty on the community as a whole.

Section 1:

Poverty, health, and the poor

Health and poverty are inextricably linked. Poverty is often associated with ill-health, while ill-health can lead to poverty. More importantly, however, good health can lead people out of poverty. And that alone is sufficient reason for global efforts to focus on this area.

Around 1.3 billion people in the world live in extreme poverty, surviving on less than US\$ 1 a day for all their needs.¹ These people have little or no access to health services and education and limited prospects for a better life. They are far removed from decisions that affect their day-to-day lives. Increasingly, they are the victims of crime, conflict, and violence.

Over the past millennium, and the last decade in particular, global health status has improved dramatically. In developing countries, child death rates have been cut by half since the 1960s, the percentage of people with

access to clean water has doubled, people have more food to eat, and life expectancy has increased in every country.² Despite these advances, there is a continuing need to intensify efforts to develop new strategies to ensure further gains in health care and health status, especially for the world's poor.

Although the global community recognizes a wide range of human rights and obligations, these cannot be freely exercised in many parts of the world. The rights to security, freedom, and dignity, regardless of race, gender, belief or religion are not upheld; basic needs for water, food, education, and health are not met; and every day decisions are taken that involve the inappropriate allocation of resources. The Global Forum will pursue the promotion of health R&D with a prime focus on the health of the large majority of the world's population, particularly the poor, and the development of strategies that can better serve their needs.

¹ At 1985 purchasing power parities. *World Development Indicators*, 1997.

² *Eliminating World Poverty*, Department for International Development, UK, 1997.

Section 2:

The facts

1. Poverty: how big a problem?

There are many definitions of poverty. Yet, whichever definition is used, the results do not change significantly: poverty is a global phenomenon. According to the 1997 World Development Indicators, of the 5.5 billion people on earth, 1.3 billion – nearly a quarter of the world's population – are poor. This definition is reflective of absolute poverty and not only relative poverty in each country.

2. Where are the poor?

More than two thirds of the people designated as poor live in Asia and the Pacific, 17% in Africa, and 10% in the rest of the world (Insert 4.1). This geographical distribution indicates much more than the physical presence of the poor in some parts of the world. It is a measure of the differential opportunities for people to realize their full potential to become healthy and of all of the additional factors that prevent or facilitate the development of such an environment.

Insert 4.1

*Regional distribution of the poor**

Region	% of the poor living in region
South Asia	39
East Asia & Pacific	34
Sub-Saharan Africa	17
Other	10
Total	100

* Those living at less than US\$ 1 per day at 1985 prices.

(Source: World Development Indicators, 1997)

3. What is the health status of the poor?

The magnitude of the burden of ill-health on the poor is shown in Insert 4.2. The sheer numbers of people who are without basic health services, or of children who are under-

nourished is overwhelming. This profile of the poor is true for South Asia, East Asia, sub-Saharan Africa, and Latin America. The poor everywhere are in worse health than those who are not poor.

Insert 4.2

Health Status of the Poor in Developing Countries (number of people in millions)

Health Indicator	Developing World*	South Asia	Sub-Saharan Africa	Latin America and Caribbean	South East Asia and Pacific	Arab States	Oriental Asia
People lacking access to health services	766	264	205	55	69	29	144
Malnourished children under 5 years of age	158	82	28	5	20	5	17
People not expected to survive to age 40	503	184	124	36	52	26	81
People lacking access to safe water	1202	230	249	109	162	54	398

* Total for all regions.

(Source: Human Development Report 1997)

4. How can this health status be defined?

In the absence of current information, existing data needs to be analysed to determine the impact of ill-health on the poor. The Global Burden of Disease Study (GBD 1990) provided estimates of the morbidity and mortality impact of diseases on the world population for 1990. This data has been used to study the

burden of disease among the poor and the results were presented at Forum 2.³ This analysis (Insert 4.3) provided a description of the disease burden for the poor and investigated the relationship between health estimates for the global population and those for poor people.

³ Gwatkin D. and Guillot M., *The Burden of Disease Among the Global Poor. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

Insert 4.3

(i) The burden of disease among the global poor

This study provides information about the burden of disease among the poor to complement data about society as a whole, the principal focus of most burden of disease work to date. The information presented deals with the 1990 situation and with trends between 1990 and 2020.

The 1990 Situation.

Communicable diseases are found to be considerably more important for the poorest 20% of the world's population than suggested by global averages.

They account for 58% of deaths and 66% of DALY loss among the world's poorest 20% compared with 34% of deaths and 44% of DALY loss in the overall global population.

Communicable diseases are responsible for 77% of the mortality gap and 79% of the DALY gap between the poorest and richest 20% of the global population, compared with 15% and 9% attributable to non-communicable diseases.

The projected trend 1990-2020.

An accelerated overall decline in communicable diseases would benefit the world's poor much more than the rich.

An accelerated decline in mortality from communicable disease, distributed evenly across all social classes, would benefit the world's poorest 20% about ten times as much as it would the world's richest 20%.

Implications:

Findings like these argue for basing research and policies designed to help the poor:

- on burden of disease information specific to the poor.
- on information about the distributional impact of alternative policies or research strategies on anticipated future disease trends.

(Source: Edited from Gwatkin D. and Guillot M., The Burden of Disease Among The Global Poor, 1998)

(ii) Distribution of Death by Cause In Different Population Groups, 1990

Cause	Percentage of deaths		
	Entire Global Population	Poorest 20% of the Global Population	Richest 20% of the Global Population
Communicable, Maternal, Perinatal, Nutritional (Group I)	34.2%	58.6%	7.7%
Noncommunicable (Group II)	55.7%	32.0%	85.2%
Injuries (Group III)	10.1%	9.4%	7.1%
TOTAL	100.0%	100.0%	100.0%

(iii) Distribution of DALY Loss by Cause in Different Population Groups, 1990

Cause	Percentage of DALY Loss		
	Entire Global Population	Poorest 20% of the Global Population	Richest 20% of the Global Population
Communicable, Maternal, Perinatal, Nutritional (Group I)	43.9%	63.6%	10.9%
Noncommunicable (Group II)	41.0%	23.3%	75.8%
Injuries (Group III)	15.1%	13.1%	13.3%
TOTAL	100.0%	100.0%	100.0%

Results that emerge from this work include the following:

- Although the poor represent a quarter of the world's population of over five billion people, they share a disproportionately large burden of ill-health.
- An evaluation of the poorest 20% of the world's population indicates that they suffer more from all causes of ill-health, especially communicable diseases, as compared to the richest 20%.
- Predictions for the future are dependent on the assumptions used, but reflect that any acceleration in the decline of death rates

would benefit the poor proportionately more than other groups. However, this does not question the need for priority setting.

The data from these studies confirm what health and development professionals have believed for decades: that poverty is a cause, an associated factor, a catalyst, and a result of ill-health. This kind of data is essential for any interventions in the complex health and poverty relationship. However, it is the appropriate use of such data for decision making that will change the 10/90 Disequilibrium.

Section 3:

The facts: research on poverty and health

Estimation of the burden of disease and health determinants provides an opportunity to study the interaction between health and poverty.⁴ When available data is disaggregated by factors that define poverty, then the differential impact of the burden on the poor can be studied. Disaggregation of data by age, gender, residence, and socioeconomic status as defined by income, ownership of commodities or land holdings, for example, allow a deeper understanding of the burden of disease on:

- children of both sexes
- economically active young adults of both sexes
- women of reproductive age
- rural versus urban populations
- high versus low socioeconomic status
- various combinations of the above.

A methodological challenge to the study of the health-poverty relationship has been the lack of individual level data. Participants to Forum 2 were introduced to efforts to over-

come this problem by developing methods that allow the use of aggregate data to study the effect of poverty on health and vice versa.⁵ These methods have been used to assess inequalities between the poor and the non-poor, using multi-country data sets, a number of health indicators, and uniform definitions of poverty. The results:

- confirm that the poor have a greater risk of ill-health than the non-poor, irrespective of age, residence, and gender
- indicate that the magnitude of the health inequality between the poor and non-poor can vary, depending on the health status indicator; and
- reveal a high inter-country variation between the health inequality of the poor and the non-poor.

Further work on both the methods and their application are necessary to help define the health inequality/poverty relationship and indicate potential areas for interventions.

⁴ *Health Research: Essential link to equity and development. Commission on Health Research for Development, 1990.*

⁵ *Jamison D., Health, Poverty and Development. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

Section 4:

Poverty and sustainable development

A perspective on poverty and health within the larger context of health and socio economic development was also presented at Forum 2.⁶ This explored issues that directly affect the nature of the poverty/health relationship. Some of the concerns to be addressed include:

- institutional frameworks of government institutions that may hamper or assist health development
- explicit consideration of the poverty impact of health policies, and the health impact of poverty reduction policies
- public/private partnerships for reducing inequities in health and increasing the welfare capital of vulnerable groups
- the cause/effect relationship between internal (within country) and external (international) migration on poverty and health
- inter-sectoral approaches that utilize the most appropriate strategies from a

wide array of disciplines for poverty reduction and health gains.

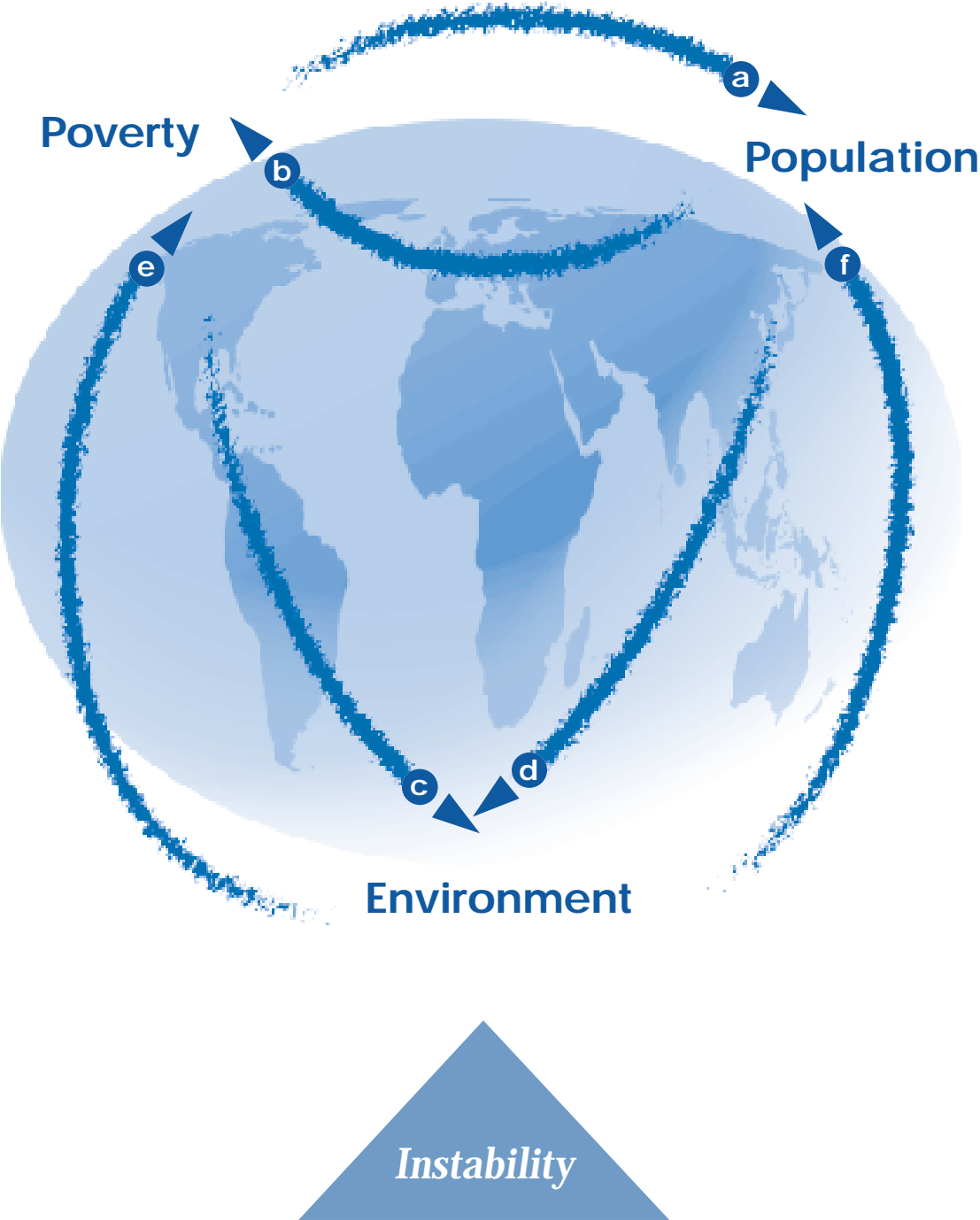
Although the above list is by no means exhaustive, it illustrates the complexity of the health/poverty relationship and its influence on a large number of other factors.

Other critical factors in the relationship between poverty and health are population and environmental health issues. Eighty per cent of the poor in Latin America, 60% in Asia, and 50% in Africa live on marginal lands of low productivity and high susceptibility to degradation. Similarly, in the world's cities more than one billion people live without facilities for garbage disposal or water drainage, and breathe polluted air. These are mostly the poor, especially in urban or peri-urban slums. It is important to recognize this complex interaction between poverty, population, health, and the environment and study potential interventions (Insert 4.4).

⁶ Carrin G. and Martin J., *Health and Socioeconomic Development: Pressing issues in Poverty and Health*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

Insert 4.4

The Poverty, Population, Environment (PPE) Spiral = Instability



a

- High child death rates lead parents to compensate by having many children.
- Lack of water supply, fuel, and labour-saving devices increase the need for children to help in fields and homes.
- Lack of security in illness and old age increases the need for many children.
- Lack of education means less awareness of family planning methods and benefits, less use of clinics.
- Lack of confidence in future and control over circumstances does not encourage planning, including family planning.
- Low status of women, often associated with poverty, means women are often uneducated and without power to control fertility.

b

- Unemployment, low wages, dilution of economic gain.
- Increasing landlessness; inherited plots divided and subdivided among many children.
- Overstretching of social services, schools, health centres, family planning clinics, water and sanitation services.

Outcome:

Instability

- Setbacks for democracy, repression, authoritarianism.
- Diversion of resources to military.
- Poor investment climate, loss of tourism revenues, etc.
- Disruption of health and education services.
- Disruption of trade and economic opportunity.
- National and international resources diverted to emergencies.
- Social divisions.
- Political unrest.
- Refugee problems, internal and international migration.

c

- Difficulty in meeting today's needs means that short-term exploitation of the environment must take priority over long-term protection.
- Lack of knowledge about environmental issues and long-term consequences of today's actions.

d

- Increasing pressure on marginal lands, over-exploitation of soils, overgrazing, overcutting of wood.
- Soil erosion, silting, flooding. Increased use of pesticides, fertilizer, water for irrigation; increased salination, pollution of fisheries.
- Migration to overcrowded slums, problems of water supply and sanitation, industrial waste dangers, indoor air pollution, mud slides.

e

- Soil erosion, salination, and flooding cause declining yields, declining employment and incomes, loss of fish catches.
- Poor housing, poor services, and overcrowding exacerbate disease problems and lower productivity.

f

- Loss of water or soil forces migration.
- Degradation of fisheries requires migration.
- Pollution makes cities uninhabitable.

(Source: Reprinted from Taylor-Ide, D., and Taylor, C., *Community Based Sustainable Human Development*, UNICEF, 1993)

In summary, the larger foundation on which health development and poverty alleviation are built must not be forgotten. The potential for change differs greatly among the world's people and the systems in which they live. Although these differences need to be

recognized, it is also becoming clear that there is a common vision of health and social development that includes equity, elimination of poverty, employment, social justice, and the basic needs for human welfare such as health, education, shelter, and food.

Section 5:

Women: the face of poverty

Of the 1.3 billion people living in extreme poverty in the world today, 70% or 0.9 billion are women. These women are not only poor but in poor health, and they are also caring for children and families. Poverty, and its complex array of contributing factors, has been identified as one of the key determinants of women's health. There is a need to study the health effects of poverty on women, and the impact of poverty alleviation on women's health. The cause-effect relationship of gender, health, and poverty is a challenging area that requires further investigation and

greater global investment in health R&D efforts.

In a paper presented at Forum 2, research on women's health from a gender perspective was defined as:

- investigating ways to improve women's health
- analysing why gender differences are affecting women's health
- how these differences affect women's health status.⁷

⁷ Jasis M., *Research from a Gender Perspective: Latin American Examples for Change*. Presented at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.

This perspective stresses the importance of recognizing women as active partners in the research effort, especially as subjects of the research. Innovative health research efforts developed in Latin America and elsewhere include gender as an integral part of health R&D.

Analysis of multi-country data is revealing the consequences for women of being ill, poor, and powerless, the so-called "triple burden." It is imperative that research on the relationship between health and poverty should not just include a gender element, but specifically focus on it.

Section 6:

The future

There is a need for focused research to better understand the transition between different poverty levels. What are the implications of the poor becoming poorer? Similarly, what is the nature of the transition from being very poor to being less poor, and what are some of the accompanying factors that have a health impact?

Appropriate policies linked to these research initiatives will result in the development of interventions. Examples of policies on poverty elimination which also incorporate health are shown in Insert 4.5. These policies are designed to alleviate poverty through economic development, and health and education programmes.

Insert 4.5

Statement of Purpose of DFID

DFID's aim is the elimination of poverty in poorer countries.

Objectives

We shall pursue this through the promotion of sustainable development and in particular by:

- building development partnerships with poorer countries
- working more closely with the private and voluntary sectors, and research community
- working with and influencing multilateral development organizations
- working with other government departments to promote consistent policies affecting poorer countries
- using our knowledge and resources effectively and efficiently.

Our specific objectives are:

1. Policies and actions which promote sustainable livelihoods

In particular we shall contribute to:

- sound policies and pro-poor economic growth
- the development of efficient and well-regulated markets
- access of poor people to land, resources, and markets
- good governance and the realization of human rights
- the prevention and resolution of conflicts
- the removal of gender discrimination.

2. Better education, health, and opportunities for poor people

In particular we shall contribute to:

- lower child and maternal mortality
- basic health care for all, including reproductive services
- effective universal primary education
- literacy, access to information, and life skills
- safe drinking water and food security
- emergency and humanitarian needs.

3. Protection and better management of the natural and physical environment

In particular we shall contribute to:

- sustainable management of physical and natural resources
- efficient use of productive capacity
- protection of the global environment.

(Source: Eliminating World Poverty: A Challenge for the 21st Century, Department for International Development, 1997)

Meanwhile, there is a critical need to focus on the ability of the poor to voice their concerns and participate in making decisions that affect their lives. Health and development programmes have a poor record of ensuring that this participation is both effective and sustainable. Mechanisms to enable the poor and the vulnerable to be involved and work towards a better future for themselves are central to overall health and development.

The global community should recognize that good health is a way out of poverty. It results in a greater sense of well-being and contributes to increased social and economic productivity. The impact of ill-health on

productivity affects not only the poor but societies and economies as well. As a result, both ill-health and poverty have far-reaching effects that extend beyond the individual or community and have a global impact.

In order to make a real difference, what is needed is a genuine *commitment* to the poor. The ability to stimulate research that benefits the poor, and to develop the capacity for the poor to be productive in health R&D, are challenges for the Global Forum. Efforts to better understand the risks of disease and ill-health, effective interventions to reduce them, and partnerships to sustain these efforts will be part of the main strategy of the Forum.

Chapter 5

Initiatives in Health Research

*Section 1:
Alliance for Health Policy and Systems Research*

*Section 2:
Global Tuberculosis Research Initiative (GTRI)*

*Section 3:
Control of Cardiovascular Diseases in Developing Countries*

*Section 4:
Initiative on Health and Societies*

*Section 5:
Initiative on Prevention of Violence and Injury*

*Section 6:
Initiative on Domestic Violence against Women*

*Section 7:
Public/Private Partnership against Malaria: New Medicines for Malaria Venture (MMV)*

*Section 8:
Multilateral Initiative for Malaria in Africa (MIM)*

*Section 9:
International AIDS Vaccine Initiative (IAVI)*

Summary

Initiatives are one of the key strategies of the Global Forum for encouraging multiple partners to join in concerted efforts to find solutions to key health problems. By definition, these problems are of such magnitude that they are beyond the capacity of any single institution to resolve and require the concerted efforts of a coalition of partners. By acting together, the probability of finding solutions increases markedly.

This chapter reviews the progress made over the past year in Initiatives currently directly supported by the Global Forum. These include the following:

- Alliance for Health Policy and Systems Research
- Global Tuberculosis Research Initiative
- Initiative on Control of Cardiovascular Diseases in Developing Countries
- Initiative on Health and Societies
- Initiative on Prevention of Violence and Injury
- Initiative on Domestic Violence Against Women
- Public/Private Partnership against Malaria: New Medicines for Malaria Venture (MMV)

It also reviews progress in the following Initiatives which have received funding from the World Bank through the Global Forum:

- Multilateral Initiative on Malaria in Africa (MIM)
- International AIDS Vaccine Initiative (IAVI)

Introduction

In reviewing the major health challenges at the end of the twentieth century, lack of information was identified as one of the major barriers to progress. There is an unmet need for clear scientific evidence based on systematic analysis of key health problems, which can be used as the basis for decision-making. One of the goals of the Global Forum for Health Research is to support analytic work on some of the major problems responsible for the high disease burden, to analyse the cost-effectiveness of alternative intervention methods, and to analyse resources flowing into health research and development (R&D). However, while analytic studies are necessary, they are insufficient to solve the very complex problems at hand. In the first place, analytic studies do not always provide enough evidence to ensure informed decision-making on these problems in very different circumstances. For example, while analytic studies may show cardiovascular diseases (CVD) to be major health problems in both developing and developed countries, further exploration will be needed by

multiple partners to determine both the extent of the problem and the most appropriate cost-effective intervention for societies in different phases of development, particularly in the middle- and low-income countries. Secondly, the magnitude of the problem goes beyond the capacity of any single institution to deal with it adequately, and requires concerted action by all the partners involved.

In order to accommodate this need for concerted action, the Global Forum for Health Research has supported the launch of a series of Initiatives – each involving a wide range of partners with a common interest in working together to find solutions to key health problems through further studies, consultation, and concerted actions. The current list of Initiatives supported by the Forum, together with information on the criteria for selection of the Initiatives can be found in Chapter 1. The present chapter provides more detail about the different Initiatives supported by the Global Forum, particularly those presented at Forum 2.

Section 1:

Alliance for Health Policy and Systems Research

1. Rationale for the Alliance

The report of the Ad Hoc Committee on Health Research concluded that health policy and systems research has been neglected in middle- and low-income countries. The report points out that health care systems vary greatly in their ability to improve health conditions, extend access, and curb expenditure growth. It underlines the fact that there is an urgent need to provide scientifically sound, socially relevant, and ethically acceptable guidance for more effective and sustainable health policies. At present, countries are undertaking health system reforms without having adequate information on those policies and structures which work and those which do not. There is a surprising lack of information on the performance of health systems and on how policies have affected performance.

The report recommended that efforts should be deployed to strengthen health policy and health systems research (HPSR). Much research in this area has been *for* policy – focusing on the development and assessment of products, technologies, and approaches of immediate use for curative or preventive services. The research has thus been micro- and disease-oriented. Research *on* policy – covering areas such as what influences policy, who decides on policy, how policy is communicated and implemented, for example

– has received much less attention. An international consultative meeting was held in Lejonadal, Sweden in April 1997 for senior scientists, policy-makers, and representatives of various agencies and programmes with an interest in promoting health policy and systems research. The meeting recommended the creation of an Alliance for Health Policy and Systems Research to further develop this area of work. The Alliance has a 15-member Interim Board, chaired by Professor Anne Mills, and is currently supported by the Governments of Norway and Sweden.

2. Purpose of the Alliance

Since its creation in May 1997, the Alliance has been working towards drawing up a coherent set of activities and clear and workable organizational arrangements.¹ Its objectives are to:

- promote national capacity for HPSR with a particular emphasis on countries with limited capacity to participate in HPSR
- develop essential information for policy decisions in the health sector as a basis for concerted action at national, regional, and global levels
- stimulate the generation of knowledge which facilitates policy analysis
- strengthen international research collaboration and structures for shared learning among countries

¹ Anne Mills, Chair of Interim Board of the Alliance on Health Policy and System Research in a presentation at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.

- identify global influences on health systems and promote appropriate and responsive policy research.

3. Implementation of the Alliance plan of action

Implementation of the Alliance plan of action must take into account three main concerns:

- research and capacity development priorities must reflect the priorities of developing countries themselves and not priorities imposed by external donors
- ongoing work in this area must be complemented and not duplicated by the Alliance – a strategy that will also help strengthen networking
- the Alliance should encourage research that meets the practical needs of policy-makers.

4. Issues to be addressed by the Alliance

The Alliance was created in response to concern about the neglect of key research areas that are of importance for the health of the poor. They include:

- general organization of the health system and how it can be modified to ensure greater equity
- how best to structure and allocate responsibility for the main functions of regulation, financing, organization, and delivery of health services
- ways of financing and organizing the components of the health care system so as to ensure that the needs of the poor are met
- encouraging countries to explore a particular issue in a comparable way, thus ensuring that they can exchange experiences and learn from each other.

5. Tasks of the Alliance

Over the next three years, the Alliance plans to:

- Monitor HPSR efforts to identify gaps and imbalances, liaise with those involved,

and identify issues that require HPSR. The Alliance will ensure that its work in this area will be complementary to that of the Forum at the global level and of COHRED at the country level.

- Advocate for and collaborate in the establishment of sustainable country-level capacity for health policy/systems analysis and research. This activity will involve close collaboration with all partners and agencies active in this area. It should also include formal training activities and capacity building through research. The Alliance has prepared a paper that focuses on capacity building for health policy and systems research.
- Advocate for and collaborate in research on health policy and systems in order to address gaps and emerging issues, and translate results for policy- and decision-makers. The Alliance aims to mobilize funds and provide technical guidance for research in these neglected areas. It will also support the dissemination of research findings.
- Identify key methodologies and tools for comparative analysis of the different health service delivery methods used in individual countries, and promote the production and dissemination of methodologies and tools. This might mean, for example, bringing together a group of users and experts to review existing tools, recommend particular ones or commission the development of new ones.
- Facilitate the systematization, analysis, and sharing of information through a process of improved information exchange and tailoring information to the needs of different groups, including policy-makers and researchers.

Research *for* policy should meet the following conditions:

- The Initiative should be *inclusive*, with developing countries being genuine and active partners.

- The successful operation of health systems impacts strongly on outcomes and the application of the results of research. Collaboration between initiatives is strongly recommended to ensure consistency, avoid duplication, and ensure the appropriate use of research to inform policy decisions.
- Developing countries should be helped to develop adequate capacity as well as to generate, adapt, and use research outcomes optimally in their countries.
- Efforts should be made to ensure that priorities in developing countries are, as far as possible, driven by the needs of the countries and not donor driven.

Research on policy should take into account that:

- In developing countries, the policy context which governs the organization of the health system is highly country-specific. It is important to understand the health service delivery systems within which interventions will take place to improve health status. This involves complex relationships such as: relationships between health systems and the political environment, the organizational arrangements which affect programme implementation and management, the role of the private sector and interest groups, the role of NGOs and lobby groups, the advantages and constraints of legislative and regulatory considerations, and human behavioural dynamics as they cut across gender, race, and equity issues.
- Advocacy for use of any research product in developing countries should not only be

addressed to governments but to the wider body of informed leadership and scientific opinion in the country in order to achieve greater understanding of the relevance of the proposed changes.

6. The structure of the Alliance

There is broad agreement by partners of the Alliance on the following proposed structure:

- The Alliance will involve those showing a demonstrable interest in HPSR.
- The Board will comprise up to 18 members with an elected Chair and an executive group of 3-5 people which would be closely involved with the secretariat.
- The Alliance will have a small secretariat.
- The Alliance will have close relations with WHO, the Global Forum for Health Research, and COHRED.

Capacity strengthening for HPSR is a major focus of the work of the Alliance. The aim is to enable developing countries to acquire the expertise for research in this area. Lack of capacity in this area has been one of the main reasons for its neglect in low-income countries. However, the Alliance also needs to recognize that capacity development is a long-term activity. The main focus of capacity development in the Alliance will be on specific country needs and priorities.²

7. The way forward

A proposed detailed three-year workplan and budget for the Alliance will be discussed among interested parties in the first part of 1999.

² Makubalo, L..E., *Discussant for the paper on the Alliance for Health Policy and Systems Research presented by Anne Mills at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.*

Section 2:

Global Tuberculosis Research Initiative (GTRI)

1. The TB burden

Tuberculosis (TB) is the largest single cause of adult deaths. At any one time, over 20 million people are sick with the disease. It accounts for almost 3% of total disease burden worldwide and ranks sixth among all causes of disease burden in the world. TB is often described as a disease of the poor since it is more commonly found among the under-nourished and in people living in areas of poor housing and overcrowding. It is now a leading cause of death among those with HIV infection.

The burden of TB in Africa is about 3.4% of the region's total DALYs and is projected to reach 7% by year 2020. In India, TB accounts for nearly 5% of the burden. Countries with the highest TB burden also include Bangladesh, China, Indonesia, Nigeria, Pakistan, and the Philippines. The Ad Hoc Committee Report pointed out that, despite the magnitude of the problem, TB research has been neglected. In 1992, spending on R&D for TB amounted to about 0.1% of the total spent on health research that year. The rapid increase in cases throughout the world today has been aided by the rapid upsurge in the HIV/AIDS pandemic and exacerbated by the increasing resistance of the bacterium to known remedies. Unfortunately, the increasing prevalence of TB has not been matched by an increase in funds for research. WHO has developed a treatment strategy – the Directly Observed Treatment Short Course (DOTS) strategy – which is a package of measures for the management of TB. DOTS is

now accepted as current best practice for TB control and is in place in about 96 countries. However, coverage is grossly inadequate, with only 17% of the world's TB patients currently being treated with the DOTS approach. Although under optimal conditions cure rates are as high as 90%, this rate varies with the capacity of health systems in different countries. In many low-income countries, the rate is probably less than 30%. In addition, the spread of drug-resistant microorganisms necessitates the development of new drugs and new and effective diagnostic tests to monitor the spread of resistance.

2. Why the TB burden persists

Recent indications suggest that the wide prevalence of the disease today is due to:

- Failure to use existing tools properly. The prime tool for combating TB is the DOTS strategy. However, many health systems in low-income countries do not yet use DOTS. To make matters worse, many countries are still using inappropriate TB regimes.
- Lack of additional tools to support DOTS and prevent or treat the disease. Questions to be answered include whether DOTS alone can eliminate TB, even under optimal conditions. Are the present formulations of DOTS the most appropriate? Is there a need for new tools other than DOTS? Is there a need for a more effective childhood vaccine, for example? Are the reasons for the continuing high prevalence of TB fully known? Is it possible to come up with

a more focused intervention strategy that will reverse the high prevalence of TB?

- Resistance to current TB drugs and the impact of the current pandemic of HIV/AIDS infection.
- The long-term neglect of strategic research.

3. Progress so far

WHO has taken the lead in establishing the Global TB Research Initiative (GTRI).³ This initiative brings together the world's TB control and research experts to devise a multi-pronged strategy for TB control in which research would play an important role and have a real impact. A meeting was held in March 1998 which brought together the major stakeholders in TB research. It was recommended that action should be taken to:

- promote operational research in TB control to improve the efficiency and availability of TB therapy at district and family level
- establish a process to develop and sustain a focused and prioritized global research agenda, taking into account the needs of populations at greatest risk
- set up a framework of analysis and discussion of TB research, which will be required to support this agenda
- develop strategies to enable countries with a high burden of TB to develop and enhance their own operational research capacities to deal with this growing problem.

This meeting paved the way for the creation by WHO of the Global TB Research Initiative, currently managed by Dr Paul Nunn of the Global Tuberculosis Programme.

4. The way forward

In October 1998, a top-level meeting on tuberculosis was held at the White House, at the invitation of the US First Lady. The meeting was attended by the US Secretary of Health, the Administrator of the US Agency for International Development (USAID), the Director-General of WHO, the President of the World Bank, and the President of the George Soros Foundation. The aim was to discuss possible new initiatives for TB control and to prevent the emergence of drug-resistant strains, and to mobilize new funds to accelerate international control efforts.

At a meeting in Geneva in October 1998, the Coordination and Advisory Review Group of WHO's Global Programme for Tuberculosis drew up a strategy to slow down the spread of drug-resistant forms of TB and increase operational research to enhance the use of DOTS.

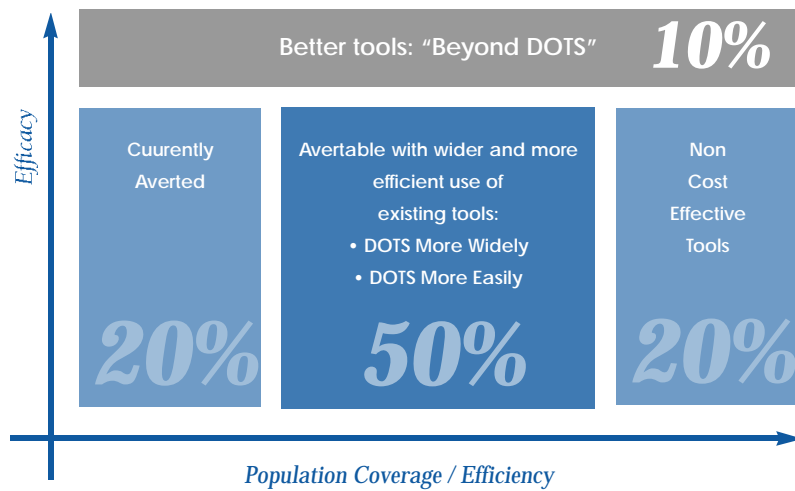
The Global Forum will focus on monitoring progress in the activities of the GTRI, which is part of the Stop TB initiative recently launched by WHO. The next step in the development of GTRI is to bring together the main interested parties to draw up a work-plan for the coming years. Research upstream – health policy and systems research – is needed to keep ahead of the threats posed by the resurgence of TB, particularly in relation to the problem of drug resistance.⁴ However, research downstream is also needed to enhance research capacities in endemic countries. Ultimately, the onus is on researchers in endemic countries to participate in research for their own national needs (Insert5.1).

³ Nunn, P., *Presentation on the Global Tuberculosis Research Initiative made at the Second Meeting of the Global Forum for Health Research 25-26 June 1998, Geneva.*

⁴ Heymann, D., *Discussant to the paper presented by Paul Nunn on the Global Tuberculosis Research Initiative at the Second Annual Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

Insert 5.1

TB Research Needs; 1990 – 38 Million DALYs



(Source: Paul Nunn,WHO)

Section 3:

Control of Cardiovascular Diseases in Developing Countries

1. Disease burden

Noncommunicable diseases (NCD), though less frequently associated with the developing world, are expected to transform its health needs over the next two decades. Today, these diseases loom as major public health problems in developing countries. The report of the Ad Hoc Committee referred to NCD as "emerging epidemics". While populations in all countries are ageing, the population of the middle- and low-income countries are aging faster as their life expectancy rises. Population aging in turn increases the burden of NCD in the population, most notably the burden of cardiovascular diseases (CVD). The principal forms of CVD are ischaemic heart disease and cerebrovascular disease.

In established market economies, CVD already accounts for a high burden and so any subsequent increase in burden will be small. By contrast, in middle- and low-income countries, the increase is expected to be very steep. CVD in developing countries account for nearly 10% of the global burden of disease from both death and disability and are likely to increase to nearly 15% by the year 2020. The burden of CVD on developing countries is likely to be enormous. Projections show that by the year 2020, it will be greater than the burden of communicable diseases. Although there is little data on the economic costs of CVD in developing countries, a considerable body of evidence suggests that

risk factor prevention programmes and low-cost case management offer a feasible cost-effective means of reducing CVD mortality and disability in these countries. However, in most developing countries, implementation of disease prevention and control programmes is hampered by lack of awareness of cost-effective CVD control options and by the misapprehension that this will detract from investment in communicable diseases control as well as preventive action in childhood, maternal, and reproductive health. It is therefore necessary to promote policy dialogue on CVD, based on informed knowledge of opportunities for R&D which offer effective and affordable responses that can be applied throughout developing countries.

2. Reasons for the increasing burden of CVD

The World Bank-funded study, *Control of Cardiovascular Diseases in Developing Countries*, carried out by the Institute of Medicine (IOM),⁵ highlighted some of the possible causes of the global epidemic of CVD, including:

- increasing life expectancy, particularly among the middle and older age groups that are likely to develop CVD
- economic development, leading to higher income and changes in lifestyle (possibly including a high fat and high salt diet)

⁵ Reddy, S., Presentation on the IOM report at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.

- interactions between different risk factors, including increased tobacco use and dietary changes resulting in obesity.

These factors need confirmation through research and inter-country studies that will generate new information on risk factors for CVD in developing countries. Policy-makers in developing countries need a strong knowledge and evidence base in order to devise the best strategies for dealing with this emerging epidemic.

The IOM report used four main criteria to establish priorities for R&D investment to control CVD in developing countries:

- Investments with a large impact on populations regardless of gender, socio-economic status or location.
- Investments in processes (not necessarily results) that are broadly transferable to other low- and middle-income countries.
- Investments in research that yield results in a measurable time-frame of 5-10 years.
- Investments with a focus on measurable data. The data collection should follow established methodologies in epidemiology, health policy, economics, and social behaviour.

3. Possible interventions

The IOM report makes the following recommendations on possibilities for R&D investments for the control of CVD in developing countries:

- Determine the size of the CVD burden in developing countries. Since the nature and form of CVD varies between developing and developed countries and even between the developing countries themselves, it is necessary to create standardized protocols for CVD surveys in individual countries

under different socio-economic, ethnic, epidemiological, and ecological conditions. This study would also entail studying the range and magnitude of different risk factors for CVD. After the initial study, sentinel sites may be set up for monitoring CVD trends over time. The studies should also be designed to enable quantification of the strength of association of a CVD risk factor with the eventual development of disease. Studies are under way at the University of Newcastle Human Diabetes and Metabolic Research Centre in the UK⁶ in collaboration with developing country partners and funded by the Department for International Development (DFID), UK. The group has developed rapid evaluation methods to determine the quality of CVD care as well as survey research protocols for peri-urban and rural settings in three low/middle-income countries. The group has also developed and implemented treatment guidelines within the study areas.

- Use case control studies to develop targeted and effective prevention methods. Although prospective studies are known to be more robust methodologically because exposure to risk factors demonstrably precedes disease, retrospective case control studies can usually generate data faster and at lower cost. The study designs in the different countries should be set up so that both methods can be used.
- Reduce tobacco use. This major undertaking, which is needed in most middle- and low-income countries, should be preceded by a survey of regular tobacco use by sex and age group. Different intervention measures should be tried, including the evaluation of the cost-effectiveness of community-based interventions that promote abstinence from tobacco, and of interventions that encourage smokers to stop smoking. There is also a need to

⁶ Professor Alberti, current President of the Royal College of Physicians, UK, and former Manager of the project.

evaluate the economic impact of tobacco control on developing countries that grow, manufacture, and export tobacco and tobacco products, in order to encourage a change to alternative crops. The global issue of tobacco use has been taken up by WHO with the establishment of the Tobacco Free Initiative and the work of the CVD initiative will be done in close collaboration with this WHO initiative.

- Detect and treat high blood pressure. This should include, as a first step, estimation of the level and distribution of high blood pressure and prevalence of hypertension in population samples among different ethnic groups in selected middle- and low-income countries. The cost-effectiveness of different detection and intervention measures should be determined with a view to improving awareness, treatment initiation and adherence, and control of the disease. Some low-cost combination therapies may be initiated after appropriate trials.
- Initiate pilot studies to test essential, low cost drugs. This will involve evaluating the responses of different ethnic populations in middle- and low-income countries to the use of cardiovascular drugs and different interventions.
- Develop and assess algorithms of affordable clinical care for CVD. This is important for middle- and low-income countries. The algorithms should cover the wide spectrum of cardiovascular diseases and include risk management and rehabilitation.
- Strengthen R&D capacity in developing countries. This is critical for the sustainability of CVD control in middle- and low-income countries. Capacity

development should focus on two key areas. The first is to train health workers in cardiovascular epidemiology, clinical research methodology, health policy research, and health economics. The second is to develop institutional capacity for undertaking integrated research relevant to CVD control in developing countries.

4. The way forward

The recommendations of the IOM study, together with results from other studies in developing countries, have provided a firm foundation for future activities. Institutional mechanisms are now being developed to carry out the above activities in order to facilitate CVD prevention and control, with a particular emphasis on the middle- and low-income countries. A broad-based steering group of CVD experts from high-, middle-, and low-income countries has been set up and a meeting convened in February 1999 in Cape Town, South Africa, for interested parties to plan future action to take these recommendations forward. At present, this group comprises: WHO, NIH, the Wellcome Trust, the World Bank, Medical Research Councils in developing countries such as India and South Africa, and university scientists. The group has ample representation from the middle- and low-income countries where CVD is now a significant emerging health problem. The steering group will discuss all the recommendations of the IOM study and other relevant data and select some of these for priority action. It will also draw up a strategic plan of action, with suggestions on possible sources of funding.

Section 4:

Initiative on Health and Societies

1. The problem

In recent years there has been a significant increase in research on the impact of social determinants, social environments, and social processes on health. It is known that many factors/determinants outside the health sector have a major influence on health. These factors include poverty and income level, education (particularly of girls and women), food, water, sanitation, culture, and behaviour. With growing evidence that health and disease follow a social gradient, the knowledge base on social interventions has widened. However the associations between social variables and health outcomes remain largely disconnected from mainstream health policy, interventions, and research.

Over the past decade, these factors have been further complicated by new threats and opportunities to health such as rapid social and cultural change, globalization of trade and communications, rapid urbanization and rural exodus, and aging of the population. This has led to increasing recognition of the need for a broader agenda for health action. This Initiative will address two categories of factors:⁷

- Factors that moderate the interface between social determinants and health: for example, education, poverty, and social interactions within households.
- Factors that determine the success and

failure of interventions designed to improve and promote health. These may be the result of failure to adequately monitor changes in social and political systems.

2. Why the problem persists

Many middle- and low-income countries have tended to invest less of their GNP on health. Moreover, a large part of this is spent on disease control – especially control of communicable diseases and epidemics. However, public health services are often not sufficiently well organized to take on a leadership role in drawing attention to the key social determinants of health. In addition, governments are not always aware of people's health needs, and rarely organize consultations to determine these needs. Meanwhile, the impact on the health sector of the development programmes in other sectors are often poorly understood. Although it is recognized that sustainable development will only occur if health is built into it, few countries have incorporated health goals into their economic development plans. Similarly, health goals are unlikely to be successful unless they are built into the development programmes of other sectors such as education, agriculture, and community development. For this reason, a growing number of bodies and institutions have identified intersectoral policies and technologies as key steps to achieving better health.

⁷ Kickbusch, I., *Presentation on the Initiative on Health and Societies at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.*

3. The way forward

A group of interested parties met in Bellagio to discuss this issue in detail and initiate the development of the Initiative on Health and Societies. The Initiative is being managed by Dr Ilona Kickbusch, formerly of WHO and

now Professor of International Health at Yale University School of Medicine in the United States. When the report of the Bellagio meeting has been finalized, a meeting will be held to carry this Initiative forward.

Section 5:

Initiative on Prevention of Violence and Injury

1. The Health problem

There has been an extraordinary and continuing rise in the burden of death and disability from injury and violence in recent years. The report of the Ad Hoc Committee revealed that in 1990, 15% of disease burden in developing countries was due to injuries. Projections indicate that this figure may increase to 20% by the year 2020. However, this predicted increase has not yet been matched by research efforts to find solutions to the problem.

The Ad Hoc Committee report classified injuries into two broad categories that also corresponded to the classification of WHO:

- Unintentional injuries, such as traffic accidents, burns, falls, drowning, and poisoning.
- Intentional injuries, such as suicide, homicide, child abuse, war-related injuries, and other forms of organized violence.⁸

The consequences of injuries and violence extend far beyond the immediate physical injuries as they can also have a psychological impact on the victims. The trends in unintentional and intentional injuries in 1990 and projected to 2020 are shown in Insert 5.2.

⁸ Romer, C., *Presentation on Initiative against Injury and Violence at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.*

Insert 5.2

Trends in Unintentional and Intentional Injuries, 1990 and 2020

Injuries	% Global Burden	
	1990	2020
Road-traffic accidents	2.5	5.1
Other unintentional injuries	8.5	7.9
Total unintentional	11.0	13.0
Self-inflicted	1.4	1.9
Violence	1.3	2.3
War	1.5	3.0
Total intentional	4.1	7.1
Total Injuries	15.1	20.1

Note: Numbers in this table have been rounded to one decimal place. This leads to rounding errors that prevent the totals for individual conditions from exactly matching the group sub-totals.

(Source: Ad Hoc Committee Report)

2. Why the problem persists

The rapid increase in the burden of violence and injuries is the result of a combination of factors:

- A spectacular demographic explosion in low- and middle-income countries, together with an equally dramatic rise in car ownership. However, this has not always been matched by the development of appropriate road networks to cope with this increase. In many of the crowded cities, pedestrians, cyclists, and road carts vie with cars for space in the narrow streets.
- Alcohol abuse and rising consumption of drugs by drivers – an additional cause of the increase in road accidents in both developed and developing countries.
- Poverty, an apparent risk factor for unintentional injuries. Poor people appear to be more vulnerable to injuries, occupational fatality in agriculture and industry, and pedestrian fatalities.
- Ongoing conflicts in many countries, particularly in Africa, Asia, and Eastern Europe. Conflicts have devastating effects on a country's economy, on its infrastructure (including schools and hospitals), on industry and agriculture, and on the people themselves (through displacement, malnutrition, risk of epidemics, rape, and the use of landmines, for example).
- The rapid increase in the number of criminal homicides in urban areas. This is aggravated by the poor economic situation, rising unemployment, and by the rapid growth in the illicit drug trade.

3. The response

WHO has taken the lead in drawing up workplans on violence and health, which have been approved by the World Health Assembly. These workplans have also involved collaboration with NGOs working in the area. WHO is currently consulting the International Committee of the Red Cross (ICRC) and bilateral agencies on the issue of landmines. Meanwhile, countries including South Africa, Brazil, and Colombia have intensified national efforts to deal with the problem of violence and injuries. Elsewhere, in Burundi, a situation analysis was carried out on violence against women in conflict situations, now a significant global problem.⁹ The analysis, requested by the Burundi Government and funded through the Italian Government, covered the period 1993-1997. It revealed a high prevalence of many of the usual health consequences of conflicts such as physical and psychological trauma, often resulting in death, malnutrition, and epidemics of communicable diseases. Women were more severely affected by malnutrition because many of them had the additional burden of caring for young babies and children. In addition, they were targets of sexual violence and rape, resulting in unwanted pregnancies and sexually transmitted diseases (STDs). While the situation in Burundi is no different from many other conflict situations around the world, the analysis helped to underline the gravity of the situation and the need for concerted action.

Although a range of initiatives have been launched to deal with the problem of violence and injuries, many of these have been fragmentary and piecemeal. As a result, statistics on global incidence remain unreliably low and financing has been inadequate. The Initiative on Injuries and Violence has been established in order to provide a coordinated global response to this

problem and develop a consensus on the way forward. The public health approach to the problem is based on the approach used successfully for the control of communicable diseases. The Initiative is being coordinated by Dr Claude Romer of WHO. Its objectives are to:

- develop a science-based public health response to the problem
- identify partners willing to invest in priority research
- support a process that will develop the capacity of countries to develop a sustainable response to the high burden of violence and injuries.

4. The way forward

The next stage involves broadening the base of this Initiative through the involvement of multiple partners. In addition to WHO, these are expected to include: bilateral partners such as Switzerland and Belgium; the ICRC; international organizations such as UNESCO, UNICEF, and the United Nations Department of Peace Keeping Operations (UNDPKO); NGOs such as Handicap International, International Society for Burn Injuries (ISBI), International Pediatric Association (IPA) and the International Campaign to Ban Landmines (ICBL); ministries of health in countries most interested in the problem, such as Brazil, Colombia, and South Africa; and universities. A small steering group of interested parties will be convened to identify a few of the key issues for which research is needed. A research agenda will be drawn up, outlining priority areas for possible action. This will be followed by the development of a strategic plan of action for the next few years. At the outset, activities will focus on four main areas:

- surveillance, to define the magnitude of the problem

⁹ Djeddah, C., *Presentation of a case study in Burundi on violence against women in forced displacement, made at the Second Annual Meeting of the Global Forum, 25-26 June 1998, Geneva.*

- identification of risk factors
- interventions, to determine what really works
- implementation.

The experience from activities carried out so far will be useful in drawing up a realistic plan of operations focusing on some key studies:

- social epidemiological studies to better understand how patterns, causes, and levels of violence are related to socio-economic development
- epidemiological studies to provide better data sets on incidence of injuries, their

external causes, and the cost-effectiveness of existing interventions

- epidemiological studies to quantify the links between alcohol abuse and interpersonal violence in different settings
- epidemiological studies to measure the risks attached to firearms in different socio-economic groups
- health policy research to identify the gaps between current capacity and projected needs for the provision of cost-effective emergency medical services in rural and urban areas.

Section 6:

Initiative on Domestic Violence against Women

1. Background

Domestic violence against women occurs in all societies throughout the world. It often goes unreported or unrecognized and tends to be accepted as the norm. The extent of the problem is largely unknown. Several groups are involved in the issue of violence against women and numerous studies have documented the problem in different settings

and socioeconomic environments. While there is extensive literature on the subject, including some by WHO,¹⁰ there has been no holistic approach to the problem. In addition, there has been no research to define the broad public health dimensions of the problem nor any attempt to clarify the legal and economic issues involved. As a result, there is a limited

¹⁰ WHO/FRH/WHO/97.8

information base on which to plan future action.

There is a strong body of opinion in favour of a more evidence-based, comprehensive approach to dealing with domestic violence against women as a specific issue, independent of the broader issue of prevention of injuries and violence. This initiative will bring together a wide range of stakeholders and groups interested in the subject. The focus of the Initiative is to understand the burden of the problem, why it persists, what actions have been taken so far, and with what results.

This approach was strongly supported by the Fourth World Conference on Women in Beijing, in September 1995, where it was recommended that research and data collection should be undertaken on the prevalence of different forms of violence against women, especially domestic violence, and research into the causes, nature, and consequences of violence against women.

WHO has decided to take the lead in dealing with this problem. As a first step, a multi-country study is being proposed that would provide data on prevalence in some selected countries, document the health consequences, the risks and protective factors, and suggest possible approaches to the problem based on experience in the selected countries.¹¹ Countries will be selected to reflect a range of different cultures and levels of socioeconomic development, and the studies will involve the use of reasonably large sample sizes and common protocols to ensure that the results are comparable. The following countries have been selected for the initial studies: Brazil, Namibia, Peru, and Thailand. Some of the partners presently collaborating with WHO

on this Initiative, particularly in the multi-country studies are: women's organizations, UNFPA, INCLEN, and the Governments of France, Ghana, Holland, and the UK.

2. Why the problem persists

Although the issue of violence against women appears to have surfaced only recently as a serious problem, it has existed for many years. The problem occurs in both developed and developing countries. It has cultural overtones and has remained hidden and taboo in many countries. Social norms, fear, shame, and social constraints in different countries and cultures have often precluded women from articulating the problem or even discussing it. Its persistence is closely linked to historical male dominance within societies and the unequal position of women, who have hitherto accepted domestic violence without complaint. It often appears as if this kind of violence is tolerated by societies. However, the exact extent of the problem is unknown and poorly documented. The legal and judicial systems have been unsympathetic towards victims of rape and other forms of violence against women. As a result, cases have largely gone unreported. Rape and child abuse, more recently complicated by paedophile activities, is another form of this problem.

The problem of domestic violence against women can also have intergenerational repercussions – often leading to traumatic reactions among child witnesses in later life. Meanwhile, all forms of violence against women have serious consequences for a woman's physical and mental health.

3. The way forward

What this Initiative plans to do is to broaden its base by involving a range of different

¹¹ Garcia Moreno, Claudia. *Presentation on Domestic Violence Against Women at the Second Meeting of the Global Forum for Health Research, 25-26 June 1998, Geneva.*

partners and stakeholders. The studies to be undertaken should have an epidemiological focus and include the following:

- social epidemiological studies to better understand and quantify the patterns, causes, and levels of domestic violence against women and child abuse
- epidemiological and intervention studies to provide better data sets in all countries on the incidence of domestic violence against women, and possible cost-effective interventions
- epidemiological and social studies to quantify the links between alcohol abuse, poverty, and unemployment in domestic violence against women.

The lead, contacts, and activities planned by WHO on this issue will form a suitable starting point. A meeting is being planned which will bring together different stakeholders to define a common way forward – establishing a shared agenda, strategies, and plan of action. The synergy of this approach, involving multiple partners, should yield more dividends than any single agency acting alone.

A meeting of a core group of interested parties will take place in the first part of 1999 to plan future activities.

Section 7:

Public/Private Partnership against Malaria: New Medicines for Malaria Venture (MMV)

This new Initiative supported by the Global Forum for Health Research is a public/private sector collaborative effort to discover and develop new antimalarial drugs. It is being launched amid growing awareness among the private and public sectors that they will have to find new ways of collaborating to ensure that the fruits of scientific and pharmaceutical discoveries reach as broad a population as possible. This issue is particularly acute in the area of tropical diseases such as malaria, which accounts for 1.7-2.5 million deaths

a year and contributes to the poverty and underdevelopment of many countries, especially those in sub-Saharan Africa.

The malaria control situation is worsening, due to a variety of clinical, economic, and environmental factors, most notably the spread of drug resistance.¹² New drugs are desperately needed but the increased costs of developing and registering new drug products, coupled with the prospect of inadequate commercial returns, has led to

the almost complete withdrawal of the pharmaceutical industry from investing in drug discovery and development in this area. The public sector has increased basic science funding, but lacks the expertise and the mechanisms to discover, develop, register, and market products. If this status quo continues into the next century, the outlook for the control of one of the world's major diseases looks bleak.

The MMV not-for-profit initiative aims to address this problem through a partnership between the pharmaceutical industry and the public sector. The initiative will operate under the umbrella of the WHO Roll Back Malaria Initiative. Other international agencies backing this scheme include the World Bank and several foundations, including the Rockefeller Foundation. There has been a significant input from the pharmaceutical industry in the development of the MMV Initiative, notably from the International Federation of Pharmaceutical Manufacturers Associations (IFPMA) and the Association of British Pharmaceutical Industries (ABPI).

The goal of the MMV project is to achieve a sustainable portfolio of drug discovery and development projects that would result in the registration of one new affordable antimalarial every five years. It will be a "virtual" R&D venture. Under its guidance and support, drug

discovery partnerships between academic groups and industry will be established and funded at a level guaranteed to offer a real chance of success (i.e. several million US dollars per project). Development candidates will be passed on to a virtual development unit which will take projects through to registration and seek industrial partners for manufacture and marketing. Any royalty income obtained through out-licensing will go to MMV to provide a degree of financial sustainability.

Several pharmaceutical companies have agreed to partner drug discovery projects, primarily through providing gifts in kind, such as access to their chemical libraries and high throughput screening facilities, as well as access to more general expertise in this area, a commitment worth several million dollars a year. In addition, a funding commitment of US\$ 15 million a year is being sought, primarily from the public sector.

Sufficient funding has been obtained through WHO/Roll Back Malaria and other agencies to allow the initiative to start in 1999 through the funding of the first one or two research projects. Efforts are now under way to acquire additional funds to ensure the full establishment of MMV and establish the legal framework for its operation.

¹² *Health Horizons* No 34, Spring 1998.

Section 8:

Multilateral Initiative for Malaria in Africa (MIM)

1. Background

The Multilateral Initiative for Malaria in Africa (MIM) is a global collaborative effort by funding agencies, industry, and research scientists to address the serious problem of malaria, with a particular emphasis on Africa where the disease has its largest impact. MIM was conceptualized at a meeting in Dakar, Senegal, in January 1997. At a follow-up meeting in The Hague in July 1997, it became evident that the differing funding mechanisms of the various organizations funding malaria research presented a considerable barrier to the establishment of a common fund for MIM-related research activities. It was acknowledged that any joint activities must allow individual agencies to operate within the constraints of their particular mandate. During the subsequent meeting in London in November 1997, an eight-point list of priorities was adopted to address priority research areas.

MIM has therefore developed as a loose coalition of organizations and individuals concerned with malaria research and control. It has no formalized administrative structure, and the list of activities prioritized by MIM are intended to be supported through the existing mechanisms of participating organizations. This is to avoid the unnecessary creation of new levels of administration and to make full use of existing funding mechanisms. The Wellcome Trust was nominated coordinator of MIM activities for the current year.¹³

2. MIM objectives

The objectives of MIM are:

- To raise international public awareness of the problem of malaria in order to mobilize the resources needed for action.
- To promote global communication and cooperation between organizations and individuals concerned with malaria.
- To develop sustainable research capacity in Africa through international research partnerships and thereby enhance the capacity of African countries to address local health problems.
- To ensure that research findings are suitably applied in malaria control.

3. Progress so far

The immediate priorities of MIM and some of the activities carried out so far are:

- Communication and advocacy: Malaria Foundation International has been nominated to handle MIM public relations and communication issues. The organization runs a web page and has been involved in generating publicity material for broader malaria issues. MIM plans to use the databases of Scientists for Health and Research for Development (SHARED), and the publications of articles in *Science*, *Nature*, and *The Lancet* as the media for communications and advocacy.
- Improved electronic communication systems for African researchers: the US

¹³ Davies, C., *Presentation of the Multilateral Initiative on Malaria in Africa at the Second Meeting of the Global Forum for Health Research, 25-26 June, 1998, Geneva.*

National Library of Medicine is leading the effort to improve access for African scientists to electronic communications facilities and the Internet. They have already carried out connectivity in Mali as a test case and have set up a technical group to study the feasibility of connectivity in three other African countries.

- Capacity-building in Africa: MIM plans to develop a compendium of existing capacity for malaria in Africa with a strong focus on indigenous capacity. In addition, a Task Force for Malaria Research Capability Strengthening in Africa, coordinated by TDR, was set up to administer US\$ 2.9 million of funds made available to TDR by a number of partners. The Task Force – comprising an international panel of 10 experts chaired by an African scientist – awarded 15 out of 63 fully developed research proposals that were submitted in response to a call for applications. There has been another call for applications for research funding and further awards will be made at a meeting in March 1999.
- Strategic and operational aspects of malaria control: One of the main criteria for the research proposals is that they address key strategic and operational aspects of malaria control. The Task Force for Malaria Research Capability Strengthening in Africa is helping to promote high quality science among African scientists and is an important mechanism for research sustainability in Africa.
- Information and communication technology: Fogarty International, NIH, and the National Library of Medicine have established a training programme in information and communication technology. Meanwhile, the launch this year of Wellcome Training Fellowships is also a step in capacity strengthening as is the

development by the Wellcome Trust of a CD-ROM interactive tutorial in malaria for researchers and public health workers.

- Antimalarial drug resistance and surveillance: a meeting was held in Geneva in May 1998 attended by 20 organizations encompassing the full spectrum of activities: malaria control programmes, policy formulation, clinical and epidemiological research, and strategic research. The aim was to define the roles and responsibilities of different organizations and develop plans for concerted action to address gaps in current programmes.¹⁴
- Malaria in Africa: the MIM African Malaria Conference is planned for 15-19 March 1999 in Durban, South Africa, to build upon the Southern African Malaria Conference. It aims to promote dialogue at the research-implementation interface throughout Africa and strengthen malaria research capacity in Africa by promoting scientific collaboration both within Africa and internationally. This may be the beginning of an annual MIM Pan African Malaria conference. It will be an important venue for African scientists to meet, possibly for the first time, with their African colleagues and partners from outside Africa to discuss research findings.
- Interaction between research and implementation: MIM is committed to WHO's recently launched Roll Back Malaria campaign with which it will work closely.
- The *falciparum* genome sequencing project: a coordinated approach is being taken to this project, including the establishment of networks for sharing information and resources.
- Targets for reducing malaria morbidity and mortality: this is currently carried out through WHO/TDR reorganized product and development programmes.

¹⁴ MIM Newsletter, Issue 1, June 1998.

4. The future of MIM

MIM partners are gradually taking common action to deal with priority research issues, such as anti-malarial drug resistance. The ultimate goal is to generate sufficient resources to invest in priority malaria research in developing countries – thereby helping to correct the 10/90 Disequilibrium. Some of the

activities involve collaborative research with African researchers and will benefit the poor. Meanwhile, African institutions are benefiting from research capacity developments, an indispensable requirement for doing research. Together, these efforts are making a positive contribution towards correction of the 10/90 Disequilibrium.

Section 9:

International AIDS Vaccine Initiative (IAVI)

1. The problem

The HIV/AIDS pandemic, which started in the late 1970s, has left no country untouched. The response to this has been a multiplicity of efforts, funds, and organizations to deal with the issue. Much of the global effort is directed at disease containment, promotion of healthy lifestyles, and prevention of the disease.

The International AIDS Vaccine Initiative (IAVI) was established with a single aim: to ensure the development of safe, effective, and accessible HIV vaccines for use worldwide. The rationale is that large sums of money are currently being spent on a range of preventive measures and on the use of chemotherapy involving expensive drugs of limited efficacy.

However, the use of these methods alone is unlikely to stop the increasing prevalence of the disease. An added factor is the high cost of available drugs for treating the disease, which are beyond the resources of developing countries. The approach being taken by IAVI is to complement and not compete with existing HIV/AIDS vaccine programmes that have increasingly emphasized basic research. The addition of a vaccine would make a difference to the course of the pandemic and could result in the elimination of the disease. About US\$18 billion is currently being spent on research, preventive measures, and treatment of HIV/AIDS, but less than 1% of these resources have been for vaccine

research. Yet the potential impact of an effective HIV/AIDS vaccine may be greater than for any other intervention.

The development costs of an HIV/AIDS vaccine are high – making it a risky undertaking for any industrial developer.¹⁵ This risk is confounded by the fact that about 90% of the potential vaccine market will probably be in developing countries. To make matters worse, the vaccines may have to be country-specific since the virus strains circulating in most developing countries differ from those in developed countries.

It is clear that development of an AIDS vaccine by the pharmaceutical industry will be seriously constrained by commercial prospects. As a result, public sector intervention is strongly indicated. Even where a vaccine is eventually developed in an industrialized setting, the example of other vaccines – hepatitis B and *Haemophilus influenzae* type b, for example – suggests that vaccines would not be readily available in developing countries.

2. IAVI objectives

The objectives of the Initiative are to:

- mobilize public and governmental support for accelerated vaccine development
- identify scientific gaps in progress towards a vaccine, work to fill them, and advance promising candidate vaccines
- provide incentives for accelerated private investment.

One of the important characteristics of IAVI is its unique strategy of accelerated product development and human testing through international collaboration. The

IAVI's *Scientific Blueprint for AIDS Vaccine Development*, issued in June 1998, outlines clear time-lines and milestones to maximize the likelihood of success within the next decade. Deadlines for the activities listed have to be met by both the IAVI and their industrial partners, venture capitalists, international agencies, and developing nations. There would be rapid and definitive testing of safe, promising vaccine candidates in humans by a process described as "thoughtful empiricism".¹⁶ This is an accelerated process for testing candidate HIV/AIDS vaccines, developed in response to the rapid spread of HIV. In this process, all reasonable candidate vaccines undergo Phase I trials to evaluate safety and immunogenicity. Those that prove to be safe and induce protective immune responses are then advanced into Phase II trials, first in those with an elevated risk of HIV, and eventually in larger trials to determine their efficacy.

Developing country scientists are actively involved in this research. The vaccines produced will be appropriate for use in areas where the epidemic is spreading most rapidly. The blueprint also proposes the establishment of International Product Development Teams to foster genuine partnerships between industrialized and developing countries in vaccine research and development. IAVI has received unrestricted major grants to begin immediate implementation of the blueprint. These include a US\$1.5 million grant from the Gates Foundation and \$370 000 from DFID.

In its blueprint, IAVI points out that:

- Multiple efficacy trials of different vaccine approaches around the world must begin

¹⁵ Berkley, S., *Presenting the International AIDS vaccine Initiative at the Second Meeting of the Global Forum for Health Research*, 25-26 June 1998, Geneva.

¹⁶ IAVI Report, vol.3 no 3 July–September 1998.

within the next five years if an effective HIV/AIDS vaccine is to be developed within the decade.

- Very few manufacturers have been willing to commit to testing multiple vaccine concepts in human trials.
- Despite the need for a balanced approach to the research and development of multiple vaccine designs, support for basic research continues to dominate national AIDS programmes.
- Few novel designs are entering Phase I trials and fewer still that have been designed for testing and use in developing countries.
- It is essential to involve developing countries in all stages of vaccine development.

IAVI has a board of directors comprising scientists, policy-makers, and leaders from the pharmaceutical industry and other sectors of industry. Its extensive list of partners includes: the Rockefeller Foundation, the World Bank, UNAIDS, National AIDS Trust, Fondation Marcel Mérieux (France), and SANASO (South Africa). IAVI has received funding from the World Bank through the Global Forum and is now attracting additional funding for its work. However, these amounts are very small in relation to the amount currently spent on treatment.

3. Future activities

The following activities will continue into the year 2000:

- Advocacy for funding both in developed and developing countries.
- Publication of the IAVI newsletter and

maintenance of the Web site.

- Award of scientific grants for development of DNA vaccines for developing country use and for the preparation of isolates from developing countries so that companies can produce reagents for these strains.
- Development of a new product development strategy. This will involve the selection of 1-3 promising products and building an international HIV/AIDS Vaccine Product Development Team around each one.
- Discussions with leaders and scientists from all major vaccine companies to ensure a strong dialogue with developing country scientists.

It is likely to be a decade before a successful HIV vaccine is ready for distribution.

Conclusion

Initiatives are one of the important strategies of the Forum for encouraging multiple partners to collaborate and focus their energies on key health problems. By definition, the problem which is the focus of the initiative goes beyond the capacity of any single institution to deal with it adequately and requires the concerted efforts of all the partners involved. Initiatives carried out by multiple partners should be capable of making a difference in the area of their planned action. The principle of equality of all partners should be maintained, with no one partner being dominant. Participation by low- and middle-income countries is indispensable in all Initiatives – particularly since the health problems involved account for the highest burden in these countries.

Chapter 6

Capacity Development for Health Research

*Section 1:
Research capacity development by individual agencies*

*Section 2:
Lessons from the past*

*Section 3:
The aim of renewed efforts in capacity development*

*Section 4:
Objectives of concerted international efforts in capacity development*

*Section 5:
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*Section 6:
The way forward*

Summary

Evidence-based decision-making at all levels of the health sector is critical for the implementation of health strategies. However, while high-income countries have a large number of scientists and adequate infrastructure for this, most developing countries lack the appropriate human and material resources to initiate research and use the findings for development. Strengthening research capacity in developing countries is one of the most effective and sustainable ways of advancing health and development in these countries and of helping correct the 10/90 Gap in health research.

This chapter summarizes the lessons learned from the efforts undertaken by a number of institutions over the past two to three decades, and outlines the characteristics of a cadre of effective health researchers. One important prerequisite for such a cadre is a commitment by the scientific leadership to find solutions to key national health problems, underlining that capacity development is not an objective in itself but a tool to find cost-effective solutions to the country's priority health problems. Other important lessons include the need to ensure (i) an appropriate balance between trained scientists and the availability of research facilities and (ii) the sustainability of research efforts.

The role of the Global Forum is to:

- provide a platform for the open exchange of ideas on strategies for capacity development
- participate in carrying out critical analysis of examples of capacity development efforts
- play an advocacy role in drawing attention to the positive lessons emerging from the exchange of views and analysis.

There has been renewed commitment among partners of the Global Forum to accelerate research in capacity development efforts. In late 1998, an informal group of partners met to discuss a series of retrospective case studies presented by SAREC (Sweden), USAID, WHO, and indicators for evaluation presented by HIID. Plans for 1999 include: the completion of case studies; the selection and field testing of indicators of research capacity development; and assessment of research capacity needs at country level in a number of developing countries, and of the role of developed country institutions in research capacity development. A report on these efforts will be presented at Forum 3 in June 1999.

Introduction

The introduction of evidence-based decision-making at all levels in the health sector is a fundamental step towards improving people's health. Many recent reports have shown that investment in health R&D will continue to have high payoffs both in health status and economic productivity. All countries, whether developed or developing, rich or poor, need research for development. In developing countries – particularly during the current economic crisis – research can point the way towards using existing health resources more effectively.

However, while the developed countries have benefited greatly from the increase in knowledge and advancement of technology derived from scientific research, many developing countries lack the human resources needed both to initiate research and make use of the findings for development. Strengthening research capacity in developing countries would be one of the most effective and sustainable ways of advancing health and development in these countries. The minimum level of research capacity needed requires a critical mass of national researchers, adequate equipment and supplies, and adequate funding.

Section 1:

Research capacity development by individual agencies

The need for research capability strengthening (RCS) in developing countries has been a key component of research promotion by the World Health Organization, particularly within the UNDP/World Bank/ WHO Special Programme for Research and Training in Tropical Diseases (TDR) and the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP). Over the past three decades, these two

programmes have trained several thousand scientists from many developing countries at MSc and doctoral levels, and also provided post-doctoral training and short-term training in special techniques and methodologies. In addition to training, institutional development grants have been provided in an effort to provide scientists with suitably equipped environments for research (laboratories, insectaries, and field stations, for example). From an initial focus on mainly biomedical

and clinical disciplines and human reproduction, these developing countries in Africa, Asia, and South America have now also developed research capabilities in epidemiology, medical statistics, the social sciences, and health economics. Most of those involved have since become leading scientists in their own fields.

One form of training which has proved to be a catalyst for research capability strengthening involves the use of partnership grants. These grants have enabled strong institutions in developed or developing countries to receive joint funding with a weaker institution in developing countries. The scheme has also facilitated hands-on training for younger scientists.

Other partners of the Global Forum have also provided financial support for capacity building over the past two to three decades. This has involved the award of training grants to developing country nationals, institutional development support, and partnership grants. These partners include both bilateral and international agencies such as Sida/SAREC, DANIDA, IDRC, the European Commission's INCO-DC programme, Rockefeller Foundation, SDC and the former UK Overseas Development Agency (ODA, now DFID).¹ Most of those trained through the above mechanism are now holding research and management positions in their home institutions. During Forum 2, COHRED, INCLEN, Sida/SAREC, SDC, UNDP, USAID, WHO, and the World Bank made short presentations indicating their continued commitment to capacity development in developing countries.

Limited evaluation carried out in these middle- and low-income countries by individual donors has shown that there is a high level of competence in the area of strategic research, particularly in biomedical disciplines and epidemiology. However,

competence in disciplines such as the social sciences and health economics have lagged behind and efforts are now being made to accelerate the training of social scientists and health economists for developing countries. More recently, wide gaps in knowledge have appeared as countries and institutions have identified the need for certain areas of competence to meet the specific needs of their societies. Today, many countries are reforming their health systems in an effort to bring these closer to the people – thereby increasing equity and encouraging greater participation by the population. These reforms call for special competence among scientific staff to analyse health issues, prioritize these, and formulate appropriate policies for governments. As a result, research and competence in new disciplines such as health policies, health accounts, and health management have become increasingly important. Equally important is the need to ensure that capability strengthening extends to the research infrastructure in developing countries. It is also important to emphasize more effective uptake of research results and their use in policy formulation.

There is a new firm commitment among partners of the Global Forum to accelerate and increase research capacity development efforts in low- and middle-income countries, to meet the increasing needs of these countries. This commitment was strongly supported by the report of the Commission for Health Research and Development (1990), the World Bank's *World Development Report 1993*, and the 1996 Report of the Ad Hoc Committee. Assisting in building research capacity in middle- and low-income countries is one of the key methods for redressing the 10/90 Disequilibrium. Appropriate capacity development will enable these countries to successfully compete for the research funds needed to generate information for evidence-based decision-making.

¹ See list of acronyms and abbreviations.

Section 2:

Lessons from the past

In an effort to plan for increased research capability strengthening, it is important to be guided by the successes and failures of past efforts involving a wide range of partners. This kind of assessment should involve answers to the following questions:

- What lessons have been learnt from the capacity strengthening efforts and strategies deployed by the different partners?
- What are the reasons for the successes and failures?
- To what extent have these efforts contributed to self-reliance?
- To what extent have the efforts been sustainable and what factors favoured sustainability?
- Where have these efforts been synergistic and where, if at all, have they been counter-productive?
- To what extent have the efforts provided the developing countries with an appropriate mix of trained scientists and infrastructure to carry out essential national health research to meet their national health agenda?
- What role can the Forum play on this issue?

The reasons for success and failure are many and some of these have been summarized in Insert 6.1 while the characteristics of a cadre of effective health researchers are summarized in Insert 6.2.

Insert 6.1

Indicators of the success or failure of Research Capability Strengthening (RCS)

Accounting for the success or failure of capacity development involves providing indicators for use in measurement. The indicators selected will vary and for each situation should correspond to the answer to the question "capacity for what". Some of the usual indicators used are:

- scientific publications meeting national research priorities
- ability of the institution to attract additional resources
- ability of the scientist to win competitive research grants
- the amount of training of junior scientists in the institution
- the level of uptake of their research findings.

Insert 6.1 *(continued)*

Success was found to be associated with the following:

- capable scientific leadership committed to finding solutions to key national health problems
- continuity of funding for research
- ability to attract a core of dedicated young scientists and provide them with independent research funding
- adequate and appropriate infrastructure for research (buildings and premises)
- adequate equipment and supplies, including modern communication facilities and scientific literature
- linkage to another (stronger) institution, particularly in the North
- stable conditions of service with adequate remuneration.

Failure was associated with the following:

- weak scientific leadership, including diverting these leaders to other non-scientific tasks
- strong external (usually political) influences on the running of the institution
- severe external political adversity, creating frustration among the scientists
- poor remuneration, thus compelling the scientists either to seek other sources of remuneration to augment their income or leave the country
- inappropriate service conditions, resulting in the resignation of scientists.

(Source: Thomas Nchinda, Global Forum for Health Research)

Insert 6.2

Characteristics of a cadre of effective health researchers

Research capacity development to establish a cadre of effective health researchers calls for:

- well focused, goal-oriented research in line with national research priorities
- careful selection of participants on the basis of clear objectives, taking into account personal qualities of intelligence and resourcefulness
- sound training at the highest level in research methods in an appropriate technical field
- continuity of support, including a suitable mentor willing to help the researcher to become established (e.g. the institutional director or an external scientist doing collaborative research with the researcher)

Insert 6.2 *(continued)*

- time protection to permit serious research work, so the researcher is not wholly distracted by administrative and other tasks
 - infrastructure support including space, communication facilities (electronic communication), scientific literature, and library resources
 - an enabling environment in the institution for further discussion of research plans and results
 - a balanced combination of biomedical and community-based field research, risk-factor research leading to behaviour change
 - close relationships with national programmes for disease control to help ensure the relevance of research priorities and facilitate the dissemination and application of research findings
 - North-South partnerships based on equality of partners, with a clear line of research for each partner.
-

(Source: Summarized from presentation by Fraser, D.W. at Forum 2,25-26 June 1998, Geneva and Internal Report by Lucas, A.O., external evaluator of WHO/TDR-Rockefeller Foundation joint programme in an internal document dated June 1993)

Any detailed analysis of past efforts in capability strengthening should include case studies in a number of low- and middle-income countries in Africa, Asia, and Latin America.

An example from Sub-Saharan Africa can be used to illustrate capacity development in one of the poorest countries in Africa, which is facing severe economic constraints (Insert 6.3).

Insert 6.3 ***Strengthening research in Mali***

Mali is one of the 40 "least developed countries" according to World Bank and UNDP figures. It has one of the highest infant mortality rates (168 per 1000), one of the lowest life expectancies at birth (47 years), the lowest proportion of the population with access to health services, and the lowest adult literacy rate (20%). Against such a background, the research scene offers little relief. The findings of the Commission on Health Research for Development (1990) show that Mali is one of the poorest countries in health personnel, with only 30 trained scientists.

In spite of this, Mali illustrates what can be done when enough encouragement and help are given to researchers who provide in enthusiasm and commitment what they lack in material resources. These factors were found in two Malian research institutions: the Department of Epidemiology of Parasitic Diseases (DEAP), part of the National School of Medicine; and the National Institute of Public Health Research (INRSP) which belongs to the Ministry of Health. With a modest start in 1988 with a WHO/TDR capital grant of \$60 000 to the two institutions and the leadership of a Malian entomologist Yeya Toure, assisted by a medical parasitology colleague Ogobara Doumbo, a step-by-step process of research capacity development was initiated. With TDR assistance, young nationals were identified for the award of TDR's research training grants for Master's and Doctorate training. These trainees returned to the institution and continued research within the context of an institutional strengthening grant, which TDR had awarded to the institution. More scientists were identified and sent for training in Canada, France, Italy, the UK, and the US.

Insert 6.3 *(continued)*

As of 1998, the two institutions have identified and sent about 25 young nationals for training in different disciplines (including epidemiology, molecular biology, entomology, health economics, and social anthropology), about 12 at doctorate level. The doctoral training used the sandwich course approach, with data collection being carried out within the ongoing research activities in Mali. About half of these have now returned to Mali and have been involved in cutting edge as well as operational research in various aspects of malaria. Other staff members have received short-term training on the acquisition of skills relevant to their research.

DEAP recently won the highly prestigious and competitive NIH grant amounting to nearly \$400 000 a year over 5 years. All of their scientists are involved in the research and it has provided them with the opportunity for further training.

DEAP has intensified training of scientists for the country and for other countries of the region. It has become a recognized malaria training centre and has been running the senior level epidemiology training programme for regional medical officers of the sub-region on behalf of the WHO African region. It has also orientated much of the research carried out by its scientists to meet national needs, and the scientists are working closely with the national disease control services in malaria, schistosomiasis, and other tropical diseases. One of their colleagues who heads the epidemiology department in INRSP, Mamadou Traore, played a major role in the preparation of the National Programme on Health Sector Reform. DEAP was a beneficiary of one of the grants awarded under the MIM/TDR Task Force, an important step in ensuring research sustainability for that institution and for other institutions in the country and across Africa.

(Source: TDR, 1998)

Section 3:

The aim of renewed efforts in capacity development

In order to renew efforts to develop research capability, the different partners involved need to address two neglected areas: research both on and for the formulation of health policy, for which present training efforts are

inadequate; and the ability of scientists in developing countries to develop and modify research tools to suit their own national agenda. The partners should develop a strategy that will best help middle- and low-income

countries to build indigenous capacity to respond to the specific health challenges of their countries through research and the appropriate use of research findings. Such concerted action should focus on three important issues:

- Efforts should be directed towards ensuring that capacity building is in line with national health priorities. This process will require the use of appropriate focused training to increase the number and quality of trained researchers in the country in the appropriate disciplines and subject matters.
- Capacity strengthening should be directed towards providing an adequate balance of trained scientists and institutional facilities

for carrying out quality research. Equipment and supplies provided must be in response to real needs and match the availability of trained capacity to use them adequately.

- Efforts should be made to ensure the sustainability of research efforts. This requires mechanisms for ensuring that funds are continuously available for research. Some of this can take the form of partnership grants as well as networking.

With the above three in place, the aim of renewed capacity development should be to promote the use of research findings for evidence-based decision-making.

Section 4:

Objectives of concerted international efforts in capacity development

The objectives of concerted international efforts in capacity development are to:

- Develop competencies (skills and knowledge) among scientists in developing countries in areas of health critical to local, national, and international needs.
- Help identify key research problems in developing countries (needs assessment)

and ensure that the skills developed are used to solve priority health problems by country and region, including the translation of research results into appropriate action.

- Evaluate all current efforts to strengthen research capability in developing countries, and assess the capacity of these countries to carry out quality training in different

disciplines and to develop indicators for measuring them.

- Establish an environment (physical, material, social, and intellectual) to sustain and enhance externally funded research and promote at national level the recognition of research as an integral part of health system development.
- Design a plan of action for the development of national research agendas, combining both national efforts and assistance from key partners.
- In collaboration with key partners, propose new and innovative methods for furthering research capability strengthening in lower- and middle-income countries in a more interactive and cost-effective manner. This may involve the introduction of new technological approaches in teaching and learning processes, including continuing education, and the innovative use of multi-media teaching methods.
- Design a suitable mechanism for measuring outcomes through the use of appropriate indicators.

Section 5:

The place and role of the Global Forum

The main role of the Global Forum in capacity development is to:

- Provide a platform for the open exchange of ideas on strategies for capacity development;
- Participate in carrying out critical analysis of examples of capacity development efforts;
- Play an advocacy role in drawing attention to the positive lessons emerging from the exchange of views and analysis.

Capacity development in developing countries will help correct the 10/90 Disequilibrium by providing developing countries with trained

researchers and a research environment in which to operate. Research to solve the health problems of developing countries will depend largely on the availability of indigenous researchers. These trained scientists should be able to participate in many of the analytical studies needed to inform decision-making in their countries and facilitate the uptake of research findings. In addition, they should play an active role in the different Initiatives undertaken by the Global Forum. Capacity development underpins all the activities of the Forum, including the analytic work and activities undertaken under the different Initiatives.

Section 6:

The way forward

There has been much discussion recently on the coordinated approach to capacity development. Some of the critical factors indispensable to this approach are summarized in Insert 6.4.

Insert 6.4

Factors indispensable in capacity development

Capacity development should:

- be systematic and comprehensive since it has wide applications for individual actors at different levels of the health system
- focus on both human and material resources including infrastructure for information and dissemination of information
- address the importance of equity and social justice, which has different implications for the community, the ministry, and research institutions
- include all stakeholders
- wherever possible, take place in developing countries and make use of South-South collaboration
- place a strong emphasis on multi-disciplinary research and build up research teams
- wherever possible, deploy novel training methods, including the preparation of tailor-made teaching materials and the use of long distance computerized learning methods
- consider ways of tackling the "brain drain", in view of the current economic constraints in many developing countries
- have a long-term perspective.

(Source: This box is edited and modified by Thomas Nchinda from one appearing in the COHRED "Concept cum Action" paper discussed at its brainstorming session in Geneva, 19-20 January 1998.)

In October 1998, an informal group representing seven partners (WHO, USAID, SAREC, COHRED, GFHR, Harvard Institute for International Development, and the Rockefeller Foundation) met in Geneva to evaluate health research capacity development. The participants discussed a series of retrospective case studies presented by three partners (SAREC, WHO and USAID) and indicators for evaluation presented by HIID, institutions which have been funding research capacity development in developing countries over the past two decades. Although the mission of these organizations varies substantially, there was general agreement that capacity development was a useful tool, as opposed to a goal, for successful health research and development. It was agreed that the indicators to be used needed further clarification. Meanwhile, new programmes need to collect baseline data as part of capacity development so that change can be measured over time.

The group decided to move ahead with the following:

- Completion of retrospective case studies with inputs from all interested parties in order to refine the indicators for assessment of research capacity development (led by C.Miller, USAID).
- Selection and field testing of common indicators of research capacity development for evaluation by developing country researchers (led by S.Wayling of TDR).
- Assessment of research capacity needs at country level in a number of developing countries, using a systems approach. This will be used as means of further evaluating and refining an existing assessment tool and is based on COHRED material (group led by M.Kerker).
- The role of developed country national institutions in research capacity development (led by C.Miller, USAID).

An assessment of the efforts undertaken will take place at the end of March 1999. The Forum will liaise with USAID and COHRED to monitor progress. A first report on these efforts will be presented at Forum 3.

Chapter 7

Using Communication to Help Bridge the 10/90 Gap in Health Research

*Section 1:
Barriers to prioritizing health research for the poor*

*Section 2:
What the Global Forum can contribute through communication*

Summary

This chapter highlights the challenges decision-makers face in allocating funds for health research and argues that these barriers can be addressed directly by more effective communication strategies. The first section examines the challenges and the second section outlines the communication strategies which the Global Forum will use to help correct the 10/90 Gap.

Challenges facing the decision-maker:

Lack of information, poor dissemination, and information overload

Decision-makers are often handicapped by a shortage of critical health information. This could be improved by the establishment of national vital registration systems and by the collection of disaggregated data on illness and disability. However, even where relevant research data is available, it often fails to reach the attention of appropriate decision-makers. To make matters worse, the proliferation of information on a wide range of health issues can often obscure material crucial to the decision-making process. There is also a need for cross-sectoral sharing of research data – facilitated by the use of new information technologies.

Focus on short-term or special interests

Another problem is the concentration by governments, institutions, and health officials on research with short-term health goals. This can be a barrier to the funding of health research that could have a more far-reaching impact. Communication strategies need to explain the hazards inherent in the 10/90 Gap in health research and help make the process of prioritization more vigorous and transparent.

Communication between the media and researchers

While most researchers find it difficult to interpret and circulate their work to the media or the general public, media coverage or lack of coverage of health research can have an enormous impact on what research decision-makers support. There is a need for a closer, more cooperative working relationship between scientists and journalists which will enable scientists to help the media understand the larger scientific issues, while journalists can help scientists better communicate the outcome of research.

Capacity constraints

Despite some success stories in building research capacity, there are still significant technical and capacity constraints in many countries, most of them poor. By circulating information about the need for capacity building in health research, communication strategies can help mobilize a wide range of partners who can work with decision-makers to support funding for research capacity building.

Lack of funding

Traditionally, the health of the majority of the world's population, particularly of the poor, has been an inadequately funded area of research which has had to vie with more accepted projects for very limited funds. Communication strategies need to clearly show how carefully selected research on the health problems of the poor can lead to better health care delivery systems, more cost-effective treatment, and better health for society in general.

Lack of public/private sector collaboration

The Global Forum supports the idea that in cases where neither the public nor the private sector can solve the problem at hand, both sectors might find it advantageous to explore closer linkages. The Forum can act as a communication channel between the two sectors so that public-private partnerships can be created to search for appropriate solutions to some of the world's urgent health problems, while respecting the rules that apply to each sector.

Communication strategies of the Global Forum:

Communication strategies include the annual publication of the 10/90 Report, a Forum Web site, national, regional, and international media coverage, and the publication of a series of technical papers on strategic research. A key element in communication efforts is the establishment of coalitions of partner organizations that can amplify the message of the Global Forum.

"In health, as elsewhere, good information facilitates sound decision-making."¹

Introduction

Most people are not even aware of the 10/90 Gap or its impact, despite the fact that this disequilibrium in health research has been of concern to some health specialists for the last decade. For the general public, and even for those who make decisions about priorities for social advancement and government, health research remains an obscure field of expertise left to remote scientists who peer through microscopes. Research tends to come alive when the media report on the discovery of new drugs and illnesses or when someone becomes seriously ill and hopes that research will provide a last-minute cure. Certainly, most people do not follow the intricate and diverse processes that institutions and governments use when they select health research priorities. It is also clear that the different criteria used for research funding vary widely around the globe, and that the processes for selection are almost uniformly complex and unclear.

However, increasing budgetary constraints in health and social services over the past decade have resulted in intensified scrutiny of the criteria for support, prioritization process, and results of health research. The report of the Ad Hoc Committee noted that "... *the distribution of resources and effort across the spectrum of health problems appears to reflect uneven advocacy and special pleading rather than rational and coordinated responses to need*".²

Why is it that, despite the huge investments in health and the progress made over the last 20 years, the "unfinished agenda" in infectious diseases remains unfinished and the health prognosis for low-income countries for the next 30 years begins on a negative note in most studies on disease burden. Part of the answer to this question can be found in an almost universal lack of important basic

national health data. In other cases, although research information is available to ensure the control or elimination of significant health problems at relatively low cost, this data is not being fully communicated to or used by those who make decisions on health priorities. Examples abound of lack of action, despite the availability of health research which documents effective health interventions or priorities. Disease-specific research data reveal that DOTS works to combat tuberculosis (TB); that malaria in young children can be curbed significantly by insecticide-impregnated bednets and provision of chemoprophylaxis to pregnant women; that tobacco kills; that the incidence of cardiovascular diseases (CVD) is increasing in the developing world. Yet, many health systems are slow to implement effective programmes against TB and malaria, increasing numbers of young people are enticed into smoking, and many countries ignore predictions of increased death and disability from CVD.

There is no easy answer to these incongruities, for there are numerous barriers to the establishment of more effective health research and health care. Many questions need to be asked of decision-makers and health researchers about how priorities are set in health research. A key element for improving decisions made about health priorities is the provision of accurate and relevant research information, presented in a style that encourages its use by decision-makers. Among the primary communication tasks for the Global Forum are the encouragement of research that provides accurate, essential health data, and the expansion and improvement of the dissemination of this data and other relevant information vital for prioritizing health issues. The promotion of such material will make it easier for researchers and decision-makers to address the health problems of the large majority of the world's population.

¹ World Development Report 1993: Investing in Health, p. 146.

² Report of the Ad Hoc Committee.

Section 1:

Barriers to prioritizing health research for the poor

Decision-makers face several obstacles when trying to allocate funds for health research in an efficient, effective, and relevant manner. These barriers obscure the health needs of the large majority of the world's population and can effectively block any attempt to redirect resources away from less important research areas. Often these barriers can be addressed directly by more effective communication strategies.

1. Lack of information, poor dissemination, and information overload

Burden of disease

The first challenge to effective allocation of health research funds is the shortage of critical health information for decision-making. Decision-makers need to be aware that there is often a lack of important health data that would facilitate decisions about research and health priorities. Health professionals and the community at large need to support and understand the establishment of a national vital registration system which would provide the health data needed for improved planning and priority setting in health. In addition, health services and institutions need to collect data on who is ill or disabled by causal factor, gender, age, geographic location, and economic status. This disaggregated data allows health analysts and planners to make more informed choices about resource allocation based on current or predicted international, national, and local burden of disease. The collection of such data is also the first step towards identifying unmet research needs and facilitating the use of better diagnostic tools.

While such evidence is not the only tool for priority setting, it can be a powerful indicator of health needs. Healthy debate over the ways to express burden of disease serves to highlight the need for better data collection and presentation, as well as the continuing search for ways to strengthen the analysis and use of health data. The Global Forum seeks to emphasize the need for essential health data and attempts to communicate successful research, methodology, and uses of this data.

Intersectoral information

Research data needed to make critical decisions about health is not only biomedical or biotechnical in nature. There is a need to assess programmes and data from sectors other than health in order to evaluate the possible consequences for health. Professionals from the economic and social sectors need to join with health professionals to share information on structural adjustment programmes, environmental hazards, trade barriers, education, and infrastructure, and the health impact of these sectors on society. Conversely, research over the last decade has revealed that health has a pivotal impact on other sectors such as economic development. Without good health, it is impossible for the local or global community to reach educational, developmental, economic, or social goals. This calls for cross-sectoral sharing of research data and material – a process that rarely occurs today, but which could be facilitated using the new information technologies.

The sharing of research data from each of these sectors will help build a more relevant core of information for decision-makers to access when selecting priorities in a variety of fields. Despite intellectual agreement on the need for intersectoral sharing of information in programme prioritization, there are few examples of effective cross-sectoral communication at the national and international level. Decision-makers need to be encouraged to make use of the full range of determinants, including those from other sectors, when considering health priorities.

Circulating and identifying critical information

In the past, many researchers considered their work finished when the research was completed, evaluated by others, and then published. Today, there are increasing demands for research to have a direct health application and for it to be more widely disseminated to policy-makers. It is clear that pertinent health research often fails to reach the attention of appropriate decision-makers and as a result they are unable to act on it. Once research data is collected and evaluated, the material must be communicated in a straightforward manner to decision-makers, who often do not have degrees in epidemiology, statistics, or other highly technical fields.

New information and communication technologies promise to enable civil society and government institutions to make better informed choices in health research and policy. Electronic information about health can be found at free sites such as ProMED-mail, a Web site with a bulletin board where anyone can report or discuss an outbreak of disease. More sophisticated research information sites include the Cochrane Database of Systematic Reviews. Meanwhile, international institutions, such as UNESCO, UNICEF,

WHO, and the World Bank, and private subscriber networks and journals provide both hard and electronic copies of health data and information.

While it is true that researchers may still work in isolation in many parts of the world, there is an exciting potential for building networks of information sharing and cooperation such as INDEPTH, mentioned in Chapter 3. Too often, researchers themselves are unaware of related work being done by their peers around the world. The existence of good communication facilities encourages health researchers to share their information and data with others and to build up a library of resources to access. The INDEPTH network aids researchers by pulling together parallel research studies which can contribute collaborative information. It is likely that public health will be fundamentally affected in a positive way by technological advances in communications, since more health information will be provided to health specialists, researchers, patients, and decision-makers.³

However, new information technologies also accentuate another information problem that interferes with sound prioritization in health research. While on the one hand there is a shortage of essential health information, on the other, there is an alarming amount of extraneous information to assault the eyes, ears, and minds of decision-makers. Today, health information overload can affect anyone with access to the Internet. The problem is that the sheer volume of data available can often obscure material crucial to the decision-making process. To make matters worse, the decision-maker is often faced with choices that have to be made within a short time-span.

Keeping up with new information also poses a problem for researchers. *"Relying on the passive diffusion of information to keep health*

³ Moore, Nick., *The Information Society*. Page 279 *World Information Report 1997/98*. UNESCO

*professionals' knowledge up to date is doomed to failure in a global environment in which about two million articles on medical issues are published annually... Health professionals need to plan for rapid changes in knowledge... which encompass not only diagnostic techniques, drug treatment, behavioural interventions and surgical procedures but also ways of delivering and organizing health services and development of health policy."*⁴

The new information technologies also create additional communication problems such as how to ensure the authenticity of information and how to protect intellectual property rights and privacy. An additional concern is how to ensure that the poorer countries and population groups do not have to endure the additional burden of being "information poor". Thabo Mbeki, Vice-President of South Africa, highlighted this problem during a 1995 meeting of the G-7 members: "*Over half of humankind has never dialled a phone number. There are more telephone lines in Manhattan [NY] than in the whole of sub-Saharan Africa.*"⁵

But it is impossible to stop the global information revolution and the impact is already considerable in the developing world. The potential benefit from information sharing is enormous and methods must be devised to ensure that important health research information is readily accessible and understandable to key decision-makers.

2. Focus on short-term or special interests

Many governments, institutions, and health officials involved in research tend to focus mainly on short-term national and local interests. Such concerns are natural and to be expected. But concentration on short-term health goals, which on the surface appear to be in the best national interest, can be a barrier to the funding of health research that

could have a more far-reaching impact. Often, immediate health issues may be perceived by the public and political leaders as warranting instant action and resources, while other, longer-term health research appears to offer only a distant reward for the investment of scarce resources in what is seen as an "international" health problem of little immediate national consequence. Fighting highly visible health "fires" may be politically more comfortable than explaining why research is needed on the spread of drug-resistant TB among the poor or on affordable prevention of cardiovascular disease, which will have an impact 20 years from now. In addition, the political pressure surrounding decisions on health research priorities may be multiplied by perception or cultural beliefs, ideology, fear, and resistance to change, or past experience with unsuitable research allocations.

Additional influence over decision-makers is exercised by local researchers and research institutions. Local input into priority setting is critical to good decision-making but local advice can also reflect special interests which do not correspond to the health research needs of a population. Some institutions and researchers may prefer the challenge, independence, and glamour of basic research or specialized "high-tech" research. There is a place for such research in national priorities, but support is also needed for relevant applied and social research.

Communication strategies need to clearly outline and explain the hazards inherent in the 10/90 Gap in health research. In this era of globalization, it is necessary to propel research on the health problems of the large majority of the world's population into the global spotlight. It is unrealistic to contemplate a future in which the developed world will maintain

⁴ Haines, A., Donald A., *Making Better Use of Research Findings*. *BMJ* 1998;317:72

⁵ Quoted by Dykstra Lynch, Mary, *Information Highways*. Page 300 *World Information Report 1997/8*. UNESCO

current health and wealth and the developing world will grow healthier and wealthier, while the poor everywhere remain marginalized by ill-health and poverty. The silent spread of drug-resistant microbes is evidence enough that no country can afford to ignore international health concerns.

There is also a growing national and international obligation to ensure that health research produces some beneficial return to society. In this context, communication efforts to make the process of prioritization more vigorous and transparent may help decision-makers to more clearly understand that health research for the poor is likely to have high returns for society in terms of increased productivity and reductions in health and social costs. In a recent article published in *The American Journal of Public Health*, Derek Yach and Doug Bettcher of the World Health Organization put forward a strong argument for the need to move beyond the distrust and fear of the 1970s and 1980s into a new period of "mutually assured progress", where there is a "shared interest in human and social capital and reducing cross-national disparities in terms of health and disease risk."⁶ Communication efforts on health research need to clearly explain how national well-being is influenced by international and regional health necessities, as well as international environmental and economic concerns.

3. Communication between the media and researchers

Alton Blakeslee, the late science writer for the Associated Press Wire Service who headed the National Association of Science Writers in the United States, said of the challenge facing science and the media: "*The first error is failing to talk in a simple, common language. Our knowledge does not become a communicative idea if it must punch through a briar patch of sticky*

words."⁷ Most researchers find it difficult to interpret and circulate their work to the media or public audiences outside the research community. At the same time, international, national, and local media coverage of health research or lack of such coverage can have an enormous impact on what research decision-makers support. Many scientific organizations bemoan the lack of media understanding and coverage of important research questions in health and other fields of science. Yet, scientists fear misinterpretation of data and sensational coverage which may encourage incorrect policy decisions.

Media coverage on health can bring attention to the disparities in health research and the dangers that this divergence presents for global health. But the power of the media can be abused and can be used to respond to issues that attract the most vocal or influential constituent support. Media coverage and constituent endorsement often accurately reflect the health needs of a population, but they can also derail efforts to examine the health research needs of the majority. In a democratic society, the media has a powerful impact on health priorities, but that does not guarantee attention to the health problems of the majority of the population or to those of the poor.

So important is media influence that in 1996 *The Lancet* ran a special series on "Medicine and the media". In one article, Vladimir de Semir from the Science Communication Observatory of Pompeu Fabra University in Barcelona, Spain, detailed how media decisions about what is newsworthy are driven by, among other things, cultural bias, editorial judgement, imitation, the need to compete with sensational stories which attract audiences and money, and finally, a journalist's intuition.⁸ Scientific credibility, the sheer

⁶ Yach D., Bettcher D., *The Globalization Of Public Health*. *Am J Public Health*. 1998;88:735-741.

⁷ Hartz J., Chappell R., *Worlds Apart: How the Distance Between Science and Journalism Threatens America's Future*, 1997.

⁸ De Samir V., *What is Newsworthy? The Lancet*. 1996; 347: 1163-1166

volume of technical information, media demands for human interest stories, and external pressures all influence whether and how a health story is covered by the media.

Mass media interest in health research is often regarded as a two-edged sword by the scientific community, who on the one hand will criticize journalistic lack of interest in important scientific query but then decry the style with which journalists report on research. Increasingly, medical institutions and journals are turning to media releases to attract attention to their research, often with mixed results. In June 1998, *The Lancet* carried an article on "Medical research and the popular media" in which doctors from the University of Edinburgh described the manner in which their research on submissive personalities and coronary heart disease was reported in the UK press. This included headlines such as "Put the rolling pin down darling, it's bad for your heart..." That particular headline recalled the old image of the housewife with her pastry roller raised in anger and gave the distorted view that the research had concluded that women would be healthier if they remained submissive.

The researchers from Edinburgh summarized the scientific community's love-hate relationship with the media. "*For we three media-shy researchers, the benefits were to provide our funding body with increased public exposure, and to provide our employer, the university, with what we hoped would be welcome publicity. The costs were watching data from thousands of patients collected over several years trivialised, distorted, and used in some outlets to support a set of misogynistic attitudes.*"⁹ In the same issue,

Jeremy Laurance illustrates the wide gulf between scientists and journalists as he defends the headline and coverage. "*The first rule of journalism is that what is published must be read. No matter how great the discovery or how important the revelation a piece is worthless unless it is presented in a way that makes the reader want to read it. Newspapers are not mere repositories of information. They are organs grappling for readers' attention against burning toast, mewling infants, windy station platforms and crowded bars.*"¹⁰ He might well have added an additional task: to alert decision-makers to what health policies and research are needed by their communities.

Despite the growing need for better understanding of health research by the public and policy-makers, it is easy to understand why scientists and journalists view each other with mistrust. What is needed is a closer, more cooperative working relationship between professionals which will enable scientists to help the media understand the larger scientific issues and their current and future impact, while journalists can help scientists to understand how to better communicate and craft the message of their work. Even the most experienced scientific journalists worry about the volume and content of the material which they have to absorb and interpret every day. Robert Hotz, of the *Los Angeles Times* relates, "*I wade through an enormous stack of journals every week, and it's a common observation that in recent years it is increasingly difficult to understand what anyone is talking about, even if you are a specialist. The purpose, clearly, of scientific communication is not to communicate research results; it is to satisfy a kind of caste system of language and vocabulary.*"¹¹

⁹ Deary T. J., Whitemann M.C., Fowkes F. C. R., *Medical research and the popular media. The Lancet, 1998; 351: 1727*

¹⁰ Laurence J., *This is what the game is about. The Lancet, 1998; 351: 1727.*

¹¹ Hartz and Chapell, *Ibid.*, p 40.

Incorrect interpretation of data, use of selective data or quotes, and sensationalism of research findings not only create nightmares for responsible scientists, journalists, and editors, but also mislead decision-makers and the public about health priorities. If an experienced science writer like Holz is worried about understanding the material that comes across his desk, it is not difficult to imagine the difficult task decision-makers face trying to balance conflicting messages about priorities and needs, and grappling with complex research information.

4. Capacity constraints

Sometimes, important national health research cannot be carried out because of lack of researchers and/or infrastructures to support the work. Chapter 6 of this report examines in detail the important role that research capacity strengthening plays in health research. Despite some success stories in building research capacity, there are still significant technical and capacity constraints in many countries, most of them poor. These constraints need to be openly discussed and successful remedies devised and shared between countries. Researchers as well as public interest groups need to examine what support is available and needed for vital national research. The combined efforts of government, funders, researchers, and NGOs could have a significant impact on ending some of the limitations that keep many countries from addressing grave health problems.

By circulating information about the need for capacity building in health research, communication strategies can help mobilize a wide range of partners who can work with decision-makers to ensure that funding is available for research capacity building. A clear evaluation of current research capacity and more public appreciation of the importance

of capacity building in health programmes would help ensure that countries would be able to face the health challenges of the future with adequate personnel and institutions.

5. Lack of funding

Traditionally, the health of the large majority of the world's population, particularly of the poor, has been an inadequately funded area of research that has had to vie with more accepted projects for very limited funds. In general, research receives only a small amount of health funding. Policy-makers fear research will draw funds away from health care itself, although this rarely happens. Communication strategies need to clearly show how carefully selected research on the health problems of the poor can lead to better health care delivery systems, more cost-effective treatment, and better health for society in general.

The establishment of better information channels between donors, researchers, and decision-makers is also needed so that the various partners in health research can be more systematic in determining research priorities. Database systems such as CRISP (funded by NIH in the US) and SHARED (funded by the EC) mentioned in Chapter 3 are efforts to track health research projects. SHARED, a more recently established database, presents information about ongoing research and development projects on health in the South.¹² SHARED is an interactive site with information contributed from field "focal points" and also links to other sites with information on health research. Its aim is to support evidence-based decision-making in health research by making relevant material more easily available to donors and partners in the developing world. The Global Forum is supportive of these communication efforts to make the selection of health research priorities more transparent and more reflective of national and international disease burdens.

¹² Mons B., *Sharing Data on Health Research*. Presented at the Second Annual Global Forum for Health Research, 25-26 June 1998, Geneva.

6. Lack of public/private sector collaboration

Today, about half of all health research is carried out by the private sector. At the same time, the private sector has reduced its involvement in many priority areas such as malaria, because the commercial prospects appear very limited. Detailed information on private sector investment in health research is almost always confidential, as are the determinants of decisions about what research to pursue. What is clear, is that much of the developing world is suffering from the spread of infectious disease. The absence of vaccines and the growth of drug resistance present difficult problems for decision-makers trying to control diseases such as malaria, HIV/AIDS and TB, which affect large numbers of people. New products are desperately needed, especially affordable ones that can be used to treat poorer populations. However, governments and nongovernmental organizations in

the public sector, while supporting some basic research in new products, usually lack the tools and expertise needed to discover, develop, register, and distribute new products.

The Global Forum supports the idea that in cases where neither the public nor the private sector is able to work alone, both sectors might find it advantageous to explore closer linkages. The Forum can act as a communication channel between the two sectors so that public/private partnerships can be created to search for appropriate solutions to some of the world's urgent health problems, while respecting the rules that apply to each sector. Such partnerships should try to build on a clear understanding of what each partner brings to the partnership and what each expects from it. A specific collaborative effort is now being explored by the Global Forum and others in the field of malaria.

Section 2:

What the Global Forum can contribute through communication

The overall task of the communication programme is to help information flow freely among partners of the Global Forum and to strengthen cooperation among scientists,

medical practitioners, NGOs, women's groups, foundations, governments, and bilateral and multilateral agencies in order to correct the 10/90 Gap in health research.

The aim is to gain the support of key constituencies so that decision-makers, health researchers, and the public will no longer tolerate the 10/90 Gap. The effort to increase the flow of critical information has been strengthened by the addition of networks and coalitions which work together with the Global Forum to inform key decision-makers through information sharing.

There is no doubt that the media plays an important role in influencing health priorities and funding. In the United States, a 1997 National Health Council poll of 2256 adults found that the primary sources of health news were "...television (40%), doctors (36%), magazines or journals (35%) and newspapers (16%)."¹³ While this poll is obviously specific to the United States, it reflects a growing trend around the world as the public and decision-makers alike rely increasingly on the media for decisive health information.

Health research information must be conveyed in an understandable manner to a variety of audiences for the Global Forum and its partners to be successful in helping to correct the 10/90 Gap. The main target audience are decision-makers who define which research is carried out and how its results are applied to health policy. This includes not only those who work in ministries of health but also people in ministries of finance and planning, education, and other sectors. Also included are leaders of health sector institutions, local and national politicians, and the media that report on their activities. Private sector leaders are also an important primary audience, since a large degree of health research is carried out under the auspices of private industry.

Publicizing pertinent research and successful policies to combat the 10/90 Gap further encourages these leaders to take action. Clearly

written explanations of the cost-effectiveness of health interventions can help stimulate effective health research and reform, even under difficult budget constraints.

To be effective, communication must be creative, well-focused, and respond to the cultural and social values of its audience. Though the style of the information may vary around the globe, the message of the Global Forum remains the same: the 10/90 Gap in health research represents a severe misallocation of resources and correction of this imbalance will benefit not only the poor but the entire global community.

Communication strategies

Publication and dissemination of the 10/90 Report on Health Research

The *10/90 Report*, published once a year, examines the main ideas presented at the Annual Forum on the 10/90 Disequilibrium. It is not merely a report on the proceedings, but adds to the Forum discussions and presents the latest thinking on key topics such as burden of disease, resource flows, priority setting, cost-effectiveness and capacity building. While the *10/90 Report* includes technical information, it also attempts to present the human face of health research in simple language that makes complex data relevant to the public and decision-makers.

The *10/90 Report* is distributed to the partners and constituencies of the Global Forum, major decision-makers in relevant ministries, members of the media, and other appropriate individuals and institutions. The full Report is available on the Forum's Web site so that it can be downloaded and available to opinion-makers and leaders not yet identified by the Forum. The Report is currently provided free of charge to interested parties. A press conference is held to announce the publication of the *10/90 Report* and targets

¹³ Quoted in Johnson, Timothy., *Shattuck Lecture, Medicine and the Media*. *N Engl J Med* 1998; 339: 87-92

major media in the North as well as media in selected countries in the South.

Forum Web site

By 1999, the Global Forum will have a Web site that is easily accessible to those interested in health research. The Forum will continue to maintain the site so that it is interactive and relevant to the health research field. As analytical work is completed on topics related to the 10/90 Gap, the results are put onto the site. In addition, the site continues to highlight initiatives and the work of partners who are working in the field of priority health research.

Media

As the Forum collects information from partners, analytical work, and initiatives, newsworthy information is assembled and distributed to the major international media in a series of news advisories on health research. When major health information and data are available, media kits will be issued.

Starting in 1999, the Global Forum will target the leading media outlets in selected regions and countries as well as the international media. Media work will be encouraged among regional and country partners of the Forum. Partners are encouraged to use their own materials or materials created by the Global Forum.

The aim of media work is not only to highlight the 10/90 Gap in health research, but also to promote positive stories concerning the results of health research and its effect on the health situation worldwide. Positive stories include such topics as the existence of cost-effective medical interventions and the growing cooperation between the public and private sector in health care and research. Institutions and partners that are working effectively to lessen the 10/90 Gap will be given prominence.

The Strategic Research Series

The Global Forum publishes a series of technical papers that identify and address the major issues of the 10/90 Gap and offer possible solutions. These papers reflect the work of the Global Forum and its partners and are circulated to a selected audience of professionals in health research, the media, and government.

Conferences/meetings

The Global Forum will also circulate information on the 10/90 Gap to appropriate meetings on health, research, poverty, gender, and development. Participation may be of a technical nature with members of the Foundation Council and Secretariat of the Global Forum presenting a paper, study, or poster session. Forum 3 on Health Research will be held in June 1999 in Geneva.

Building alliances and coalitions

A primary strategy of communication is to encourage and advance the building of information networks and coalitions. It is particularly important to participate in and encourage the creation of networks from the South so that health information from the field can be widely exchanged. Outreach activities of the Global Forum are also aimed at the young researchers who will make up the scientific community of the future. These young professionals are encouraged to attend the Annual Forum and other meetings throughout the year so that they can be more aware of the 10/90 Gap and add their strengths to efforts to combat it. The Director-General of the World Health Organization, Dr Gro Harlem Brundtland, writing in the magazine *Science*, outlined how current and future health challenges can be met with these young professionals: "*Research is crucial. It is also essential that scientists from different disciplines approach problems in an interdisciplinary way. This is a call for talented young*

scientists from many branches of knowledge to reach out to improve world health and for science policy-makers in governments, agencies, foundations and industry to underwrite their mission."¹⁴

To communicate is to share or pass on information. There is an abundance of information that needs to be collected and disseminated in order for decision-makers to correctly address the health needs of the majority of the world's people. Tom Stoppard, the British playwright, observed that "...words are[sacred]. They deserve respect. If you get the right ones in the

right order, you can nudge the world a little..."¹⁵

The Global Forum aims to provide relevant information to researchers and policy-makers, to provide a way for those in health research to share results with each other and other sectors of society, and, lastly, to provide the information needed by policy-makers to take action to reduce the 10/90 Gap. There is every indication that when the public and decision-makers are "nudged" by information on priorities in health research, action will be taken to gradually correct a disequilibrium which is both economically and ethically unjust.

¹⁴ Brundtland, G.H., *Reaching Out For World Health*. Science, 1998; 280: 2027

¹⁵ Quoted in an exhibition at the Freedom Forum, Washington, DC.

Chapter 8

A Practical Framework for Setting Priorities in Health Research

*Section 1:
The actors and factors determining the health status of a population*

*Section 2:
The five steps in priority setting*

*Section 3:
A framework to help identify priorities in health research*

Summary

This is the first *10/90 Report on Health Research*. The road to help correct the 10/90 Gap will clearly be a long one, but it is also clear that it should lead to better health for the majority of the world community. This will be made possible mainly by a reallocation, by decision-makers in the South as well as in the North, of health research funds from lower to higher priority projects, from projects benefiting fewer people to those benefiting the large majority of the world's population.

How is a decision-maker with a small research budget to decide where to invest the funds in order to have the greatest impact on the health of the largest possible number of people in a given community (at the global, regional or national levels)? The question is highly complex due to the very large number of actors and factors affecting the health status of the community. How can the decision-maker select those determinants which will have the greatest impact for a given cost? To answer that question, this chapter proposes to apply the five-step process developed by the Ad Hoc Committee in 1996 to the following four main levels of intervention with a key impact on the health status of the community:

- individuals, their families, and their immediate community
- the health ministry and health professionals in general
- institutions outside the health sector but with a profound effect on the community's health
- central government and its macro-economic policies.

The five-step process involves seeking answers to the following:

Step 1: What is the burden attributable to each main disease/risk factor in the country?

Step 2: Why does the burden of disease persist?

Step 3: What is the current level of knowledge? What is known today about existing and potential interventions?

Step 4: Is research likely to produce more cost-effective interventions than the existing ones under each group of determinants?

Step 5: What are the current resource flows for that disease/risk factor?

In summary, in order to decide where to invest the funds so as to have the greatest impact on the health of the largest possible number of people in the community, it is proposed that the decision-maker complete the double-entry table presented in Chapter 8 (Insert 8.2) for each major disease. An analysis of each table will identify those research areas for a particular disease that are likely to have the greatest impact on the health status of the population. A comparison of the key factors across the tables will draw attention to the research areas which will be beneficial for several diseases at the same time. The research agenda can then be defined on the basis of the priorities for each disease and across diseases. It will consist of those research projects with the greatest impact in reducing the overall burden of disease in the given community.

Section 1:

The actors and factors determining the health status of a population

There have been a number of attempts to represent the complexity of the actors and factors affecting the health status of a population and their interrelationships. Insert 8.1 below is one such example derived from a number of previous descriptions.¹

The insert is entitled "Overview of the main actors and factors determining the health status of a population" in recognition of the fact that, behind each group of determinants, there are institutions which are clearly responsible for dealing with this particular group of determinants.

What is the health status of a community and what are its determinants?

The health status of a community is measured by the following two components:

- The degree of ill-health, or degree of mortality and morbidity resulting from diseases, disabilities, violence, and social maladjustment characterizing this particular community.
- The degree of physical and mental well-being characterizing this particular community.

Insert 8.1 draws attention to the fact that the health status of a community is largely determined by the following four broad groups of actors, corresponding to four different levels of intervention:

¹ References on determinants of health

D. T. Jamison, W. H. Mosley, A.R. Measham et al.: Disease control priorities in developing countries, New York Oxford University Press 1993, published for the World Bank

L. B. Lerer, A. D. Lopez, T. Kjellstroem et al.: Health for all: analysing health status and determinants, World Health Statistics Quarterly, 51 (1998), pp 7-20

R. Wilkinson (ed.): Social determinants of health: the solid facts, WHO monograph, WHO Regional Office for Europe, Copenhagen, 1998

D. T. Jamison, J. Frenk, F. I. Knaul: International collective action in health: objectives, functions, and rationale, The Lancet, J51 (1998), pp 514-517

WHO: Advisory Committee on Health Research, A research policy agenda for science and technology - a synopsis, World Health Organization, Geneva, 1997

J. Frenk: The new public health, Annual Review of Public Health, 14 (1993), pp 469-490

J. Sepulveda, C. M. Lopez, J. Frenk et al.: Key issues in public health surveillance for the 1990s, MMWR-Morb-Mortal-Wkly-Rep., 41 Suppl. (1992), pp 61-76

J. C. Caldwell, G. Santow: Selected readings in the cultural, social and behavioural determinants of health, Canberra Health Transition Centre, Australian National University, 1989

W. H. Mosley, L. C. Chen: An analytical framework for the study of child survival in developing countries, in Child survival - strategies for research, W.H. Mosley & L.C.Chen (eds), Population and development review, suppl. to vol 10 (1984), Cambridge University Press, Cambridge, ISBN 0-521- 30193-9

D. Deliege: Psychosocial components of national health strategies, World Health Statistics Quarterly, 36 (1983), pp 489-552

I. Level of the individual, family, and community

While genetics cannot be easily changed, the individual chooses to a large extent how much risk he or she wants to take with health. The family decides, at least in part, how many children are wanted, how they should be educated, how to handle family conflicts, how to care for any disabled members. The community will greatly influence its own health status through *local* decisions on sanitation, education, shelter, handling of violence, and unemployment.

II. Level of the health ministry, health systems/services, health research community

The health ministry and health professionals are responsible for the health legislation and policies of the country, health education, and health promotion in general. They are the backbone of the health care system provided in the country. The organization, availability, and accessibility of the health sector will profoundly influence the health status of the population.

III. Level of sectors other than health

Practically all sectors of economic activity in a country have an impact on the health status of the community through *national* or *regional* policies and decisions in the following areas: the development of the agricultural sector and the system of transportation of food items in the country, water supply and sanitation, the degree of pollution of the environment, the level of education, the social security system, the level of unemployment, the security system (i.e. controlling violence and criminality).

IV. Level of central government (macroeconomic policies)

Although apparently remote from the health situation of the individual, the macroeconomic policies of the government and the principles of good governance in general both have a direct impact on it: for example, through the level of economic activity in a country (determined by numerous external factors, but also by government policies), the allocation of the budget between the various ministries, the degree of commitment of the ministries to their mission, the efficiency and effectiveness of the administration, and the research policies pursued by the government.

Section 2:

The Five Steps in Priority Setting

Among this vast array of determinants affecting the health status of a population, how is a decision-maker with a limited research budget to decide where to invest the funds so as to have the greatest impact on the health of the largest possible number of people in the country?

In 1996, the Ad Hoc Committee on Health Research proposed the following five steps to help the decision-maker make a rational decision regarding the allocation of the limited research budget:

Step 1: What is the burden attributable to each main disease or risk factor in the country?

This can be measured in DALYs (Disability-Adjusted Life Years) or similar methods.

Step 2: Why does the burden of disease persist?

Is it due to individual behaviour, family factors or failure of the community to recognize the problem or use existing tools efficiently? Is it due to a lack of biomedical knowledge about the disease or lack of tools? Inefficient health systems and services? Are some of the causes rooted in sectors other than health? Are government macroeconomic policies playing a negative role? The key point to remember in going through Step 2 is to look at *all possible determinants*, not only at the most immediate ones, such as the state of biomedical knowledge or the quality of the health services.

Step 3: Present level of knowledge: what is known today about existing and potential interventions (particularly in relation to the determinants identified in Step 2 as the most important for the health of the people)?

Here again, it is important to identify the level of knowledge on each of the possible determinants, i.e. to ask the following questions:

- At the level of the individual/family/community: What is known about the factors which are in the hands of the individual, the family or the community and which have an important impact on the particular disease or risk factor? Are the existing tools cost-effective? Are these tools widely recognized within the community? Are they applied? If not, why not? Are new tools necessary?
- At the biomedical and health policy/systems levels: How effective and cost-effective are the existing drugs/vaccines? Are the best policies and practices sufficient for treating the problem at hand? Are they applied? If not, why not?
- At the level of sectors other than health: What is being done in these other sectors (agriculture, environment, education, etc.) which has an impact on the disease or risk factor at hand? How cost-effective are these interventions? What are promising new avenues for research?
- At the macroeconomic policy level: Are existing policies effective for the health

status of the population? Can they be made more effective? What research is necessary for making them more effective?

Step 4: Is research likely to produce more cost-effective interventions than the existing ones under each group of determinants?

Step 3 will have summarized the state of knowledge and identified a number of new potential interventions (or research projects) under each group of determinants. Step 4 will select from among these potential research projects those having the greatest impact for the amount invested, i.e. the most cost-

effective ones (including the cost of research and the cost of the intervention itself).

Step 5: What are the present resource flows for that disease/risk factor?

Given the present allocation of resources in the country for this disease/risk factor, should more be invested or should resources be better invested elsewhere in research and development?

The application of the five steps described above should greatly facilitate the work of the decision-maker in identifying key research priorities.

Section 3:

A framework to help identify priorities in health research

The following table (Insert 8.2) is a framework linking the five steps in priority setting with the four broad groups of actors/ factors determining the health status of a population (corresponding to intervention levels).

According to Insert 8.2, defining the health research priorities for a given community (global, regional, national) would require the following analyses (adapted according to the country-specific circumstances):

Insert 8.2

A practical framework for setting priorities in health research

Five Steps in Priority Setting	Data and Analytic Requirements
I. What is the burden of the disease/risk factor?	Health Status Assessment of the burden of disease (DALYs, QALYs, etc.)
II. Why does the burden of disease (BoD) persist? What are the determinants?	Acquisition of knowledge about disease determinants
III. What is the present level of knowledge?	What is known today about existing and new potential interventions? How cost-effective are they?
IV. How cost-effective could future interventions be?	Is research likely to produce more cost-effective interventions than the present ones?
V. What are the resource flows for that disease/risk factor?	Assessment of the public and private resource flows

(Source: Ad Hoc Committee Report 1996 and Global Forum for Health Research)

Actors/factors determining the health status of a population (intervention levels)

Level of the Individual, Family, and Community	Level of the Health Ministry, Health Research Institutions, and Health Systems and Services	Level of Sectors other than Health	Level of Central Government and Macroeconomic Policies
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Tool of analysis: VHIP (Visual Health Information Profile proposed by the Advisory Committee on Health Research)

Analysis of:

- Individual determinants
- Family determinants
- Community determinants influencing the BoD

Analysis of:

- Biomedical knowledge
- Health policies
- Health systems
- Health services influencing the BoD

Analysis of sectoral policies having an impact on the BoD, for example:

- Education
- Environment
- Working conditions
- Security policies

Analysis of macroeconomic policies having an impact on the BoD, for example:

- Budget policies, structural adjustment programmes
- Research policies
- Good governance

Knowledge about factors influencing the C/E¹ of interventions at:

- Individual level
- Family level
- Community level

Knowledge about factors influencing the C/E of interventions in:

- Biomedical research
- Health policies
- Health systems
- Health services

Knowledge about factors influencing the C/E of interventions in sectors outside health, for example:

- School training in hygiene
- Nutrition campaign
- Pollution control

Knowledge about factors influencing C/E of interventions in macroeconomic policies, for example:

- Structural adjustment programmes and health
- Research policies
- Good governance

Estimated C/E of potential interventions at:

- Individual level
- Family level
- Community level

Estimated C/E of potential interventions in:

- Biomedical research
- Health policies
- Health systems
- Health services

Estimated C/E of potential interventions in various sectors outside health:

- School training in hygiene
- Nutrition campaign
- Pollution control

Estimated C/E of potential interventions in macroeconomic policies, for example:

- Structural adjustment programmes and health
- Research policies
- Good governance

¹ C/E: cost-effectiveness.

1. The first efforts of the team would be directed at assessing the burden of the main diseases and risk factors for the country.

2. In parallel, the team would gather the necessary data to fill the "Visual Health Information Profile" proposed by the WHO Advisory Committee on Health Research.²

This profile would summarize data, on an internationally comparative basis, between countries and over time, on key parameters measuring the health status of the country's population, including:

- Disease conditions and health impairments: life expectancy at birth; death rate; maternal mortality; under-5 mortality; infant mortality.
- Health care system: access to care; total fertility rate; immunization coverage; expenditure on health (% of GNP).
- Food and nutrition: daily calorie supply per capita; food production per capita.
- Environmental determinants: GNP per capita; access to safe water; access to adequate sanitation; population growth rate, energy consumption per capita.
- Sociocultural characteristics: adult literacy; expenditure on education (% of GNP); births under the age of 20; tobacco consumption.

3. The team would then fill in one such framework table for each of the main diseases in the country (identified in point 1).

This would involve giving as much information as available on the main questions for each of the diseases: (i) why does the burden of each disease persist; (ii) what is known today about existing and new potential interventions; (iii) is research likely to

produce more cost-effective interventions; and (iv) what are the resource flows for that disease/risk factor in the country. These four questions should be raised for each of the four main groups of actors determining the health status of a community, corresponding to the four intervention levels:

- Individual, family, community
- Health ministry, health systems and services, health research community
- Sectors other than health, having an important impact on health
- Central government and macroeconomic policies.

The advantage of the proposed table is that it will summarize all available information regarding one disease and facilitate comparisons between the likely cost effectiveness of different types of interventions. The information will necessarily be partial in the first year, probably even sketchy in some cases, but it will improve year by year and even limited information is often sufficient to indicate where priorities lie.

4. Identification of the priority research areas for each disease.

Through an analysis of each table, it will be possible to identify the research areas for a particular disease which are likely to have the greatest impact on the health status of the population. For each disease, the most promising research area in terms of expected impact on the health status of the population may be different, depending on the nature of the disease: intervention at the family or community level, intervention in the biomedical field, intervention through sectors other than health (for example, water supply and sanitation, or education of girls), intervention through macroeconomic policies (for example, reform of the administration).

² WHO Advisory Committee on Health Research (ACHR), *A Research Policy Agenda for Science and Technology*, A SYNOPSIS, December 1997, pp. 27-35.

5. A comparison of the key factors across the tables will draw attention to the research areas which will benefit several diseases at the same time.

6. The priority research agenda for the country will then be defined on the basis of the priorities for each disease and across diseases. It will comprise those research projects having the greatest impact in terms of reduction of the burden of disease in the country.

This is a long-term effort. However, the tool should demonstrate its usefulness even in the first stages of the process in the following two ways: first, it will highlight the most important gaps in the information needed to make evidence-based decisions and, secondly, it will allow many decisions to be made despite the limited availability of information. This methodology can be applied at the local, national, regional, or global level.



Global Forum for Health Research

Promoting Research to Improve the Health of Poor People

Annex 1

Foundation Council

Dr Adetokunbo O. Lucas
Chairperson

Ms Rashidah Abdullah
Asian-Pacific Resources and Research
Center for Women

Mr Rolf Carlman
Swedish International Development
Agency

Miss Margaret Cone
International Federation of
Pharmaceutical Manufacturers

Dr Tim Evans
Rockefeller Foundation

Dr Richard Feachem
World Bank

Dr Theodor M. Fliedner
WHO Advisory Committee
on Health Research

Dr Julio Frenk
Mexican Health Foundation

Ms Adrienne Germain
International Women's Health
Coalition

Dr Matthias Kerker
Swiss Agency for Development and
Cooperation

Dr Mary Ann Lansang
College of Medicine University of the
Philippines

Dr Sigrun Møgedal
Norwegian Center for Partnership in
Development

Dr Carlos Morel
Oswaldo Cruz Foundation Ministry of
Health of Brazil

Dr Nikolai Napalkov
World Health Organization

Dr Pramilla Senanayake
International Planned Parenthood
Federation

Dr Charas Suwanwela
College of Public Health Chulalongkorn
University

Secretariat

Mr Louis J. Currat
Executive Secretary

Dr Thomas C. Nchinda
Senior Health Specialist

Dr Kamini Mendis
Senior Health Specialist

Ms Elizabeth Carey-Bumgarner
Senior Communication Specialist

Ms Diane Keithly
Administrative Officer

Ms Kirsten Bendixen
Administrative Assistant

Attacking the 10/90 Disequilibrium in Health Research

Second Annual Meeting

25–26 June 1998

Palais des Nations, Room XVI, Geneva

Agenda

Thursday, 25 June 1998

08:30–09:15 Room XVI	Welcome by Dr Adetokunbo O. Lucas, Chair of Forum 2 <ul style="list-style-type: none"> • Summary of main events since Forum 1 • Objectives for Forum 2 Adoption of the agenda	<i>Adetokunbo O. Lucas</i>
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SESSION 1 "If you don't measure it, you won't change it?";

09:15–10:00 Room XVI	A. Does priority setting bring change? <ul style="list-style-type: none"> • Review of Progress in Health Research and Development: Reproductive Health, Child Health, and Infectious Diseases, 1996-98 	<i>J. Tulloch, A. Hyder</i>	Forum2.Doc.1
	• Discussant: Are we affecting the 10/90 disequilibrium?	<i>L. Andres de Francisco Serpa</i>	
10:00–10:30 10:30–11:15 Room XVI	Coffee Break B. Burden of disease and determinants <ul style="list-style-type: none"> • Global Burden of Disease 2000 • Bridging the gap: Bringing Reliable Health Information to bear on Policy Formulation in Developing Countries • Burden of Disease in Tanzania: Policy Implications of the Adult Morbidity and Mortality Study 	<i>C. Murray</i> <i>F. Binka</i>	Forum2.Doc.2 Forum2.Doc.3
	• Discussant	<i>H. Kitange</i> <i>D. Yach</i>	Forum2.Doc.4
11:15–12:00 Room XVI	C. Resource flows <ul style="list-style-type: none"> • Proposal for a Systematic Mechanism to Monitor Resource Flows 	<i>C. Michaud,</i>	Forum2.Doc.5
	<i>J. Sepulveda</i>		
	• Presentation of a Country Approach: the Case of the Philippines	<i>B. Alano</i>	Forum2.Doc.6
	• Discussants	<i>D. Jamison,</i> <i>P. Mansourian</i>	
12:00–12:45 Room XVI	D. Cost-effectiveness of interventions <ul style="list-style-type: none"> • Comparative Cost-Effectiveness Study: Standardized Methodology and Case Studies • Cost-Effectiveness of Interventions for Malaria Control in Africa 	<i>D. Evans</i>	Forum2.Doc.7, 28 Forum2.Doc.8
	• Discussant	<i>C. Goodman</i> <i>M.A. Lansang</i>	
12:45–13:00 Room XVI	E. Sharing data on health research	<i>B. Mons</i>	Forum2.Doc.9
13:00–14:30	Lunch		

SESSION 2 Working Group meetings;

14:30–16:00 Room XVI Room H3 Room F3 Room A206	A. Progress in some priority areas B. Burden of disease C. Resource flows D. Cost-effectiveness	<i>J. Tulloch</i> <i>R. Morrow</i> <i>J. Sepulveda, W. Baldwin</i> <i>D. Evans</i>	Forum2.Doc.1, 1A Forum2.Doc.2, 2A, 3, 4 Forum2.Doc.10, 10A Forum2.Doc.7, 7A, 8
16:00–16:30	Tea Break		

SESSION 3 Poverty or health? Some new perspectives

16:30–18:00 Room XVI	A. Health and Socio-Economic Development: Research for Action B. Burden of Disease among the Poor: Current Situation, Future Trends and Implications for Research and Policy C. Gender, Health and Equity D. Health, Poverty and Development Discussants: What are the Policy Implications ?	<i>J. Martin</i> <i>D. Gwatkin</i> <i>G. Rao Gupta</i> <i>D. Jamison</i> <i>J. Frenk, A. Lopez</i>	Forum2.Doc.11 Forum2.Doc.12 Forum2.Doc.13 Forum2.Doc.27
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SESSION 4 Discussions over cocktails;

18:30–20:00	Invitation to all participants by the Chairman of the Forum Eighth floor restaurant – Palais des Nations
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Friday, 26 June 1998

08:30–08:45
Room XVI

Summary Day One and Perspectives Day2

Adetokunbo O. Lucas

SESSION 5 Alliance for Health Policy and Systems Research

08:45–09:30
Room XVI

Presentation of the initiative: problem, objectives, workplan, expected results

A. Mills

Forum2.Doc.14

Discussants: What impact on the health of the poor?

R. Carlman, E.M. Makubalo

SESSION 6 Attacking the 10/90 imbalance

(including a 30-minute coffeebreak)

09:30–12:00
Room XVI

Group A: How to bring resources to new and resurgent diseases?

Chair: J. La Montagne

Presentations:

- HIV/AIDS and the International AIDS Vaccine Initiative
- Malaria: MIM (Multilateral Initiative on Malaria in Africa)
- Tuberculosis: Global Tuberculosis Research Initiative
- Discussant: what are the effects on the 10/90 disequilibrium?

S. Berkley

Forum2.Doc.15

C. Davies, A. Oduola

Forum2.Doc.16

P. Nunn

Forum2.Doc.17

D. Heymann

09:30–12:00
Room XI

Group B: Noncommunicable diseases: status and progress of analysis

Chair: A. Mbewu

Presentations:

- A Proposal for Control of Cardiovascular Diseases in Developing Countries
- Initiative: Health and Societies
- Initiative against Injuries and Violence
- Initiative: Violence against Women

S. Reddy, D. Jamison

Forum2.Doc.18

I. Kickbusch

Forum2.Doc.19

C. Romer, C. Djeddah

Forum2.Doc.20

C. Garcia-Moreno,

Forum2.Doc.21

R. Abdullah

- Discussants: What are the effects on the 10/90 disequilibrium?

N. Napalkov, P. Senanayake

SESSION 7 Cross-cutting issues: Capacity development for health research

12:00–13:00
Room XVI

Setting the Stage: From History to Vision

C. Suwanwela

Forum2.Doc.22

National Perspectives

- Capacities for the Production of Quality and Relevant Health Research
- Capacities for a National Health Research System and Process
- Capacities for Mobilizing Resources for Health Research
- A Country Case Study: Uganda

S. Chunharas

M.A. Lansang

S. Tollman

R. Owor

Forum2.Doc.23

Panel Discussion: Effects on the 10/90 Disequilibrium

Chair: M. Abdullah

Forum2.Doc.24A

- Participants: D. Fraser (INCLIN), L. Freij (SIDA/Sarec), T. Godal (WHO), M. Mauerstein (UNDP), T. Nchinda (Global Forum), C. Suwanwela (COHRED)

Concluding Remarks: A Proposal for Concerted Action

M. Kerker

13:00–14:00

Lunch

SESSION 8 The GlobalForum: Organizational questions;

14:00–15:00
Room XVI

The Global Forum as a Foundation

Adetokunbo O. Lucas

Forum2.Doc.25

Relationship between the Forum, Analytical Work and the Initiatives

Adetokunbo O. Lucas

Forum2.Doc.26

SESSION 9 Conclusions: Proposals to help correct the 10/90 disequilibrium;

15:00–15:30
Room XVI

Conclusions and proposals from the Thematic Groups

- Group A: T. Godal; Group B: N. Napalkov; Policy Alliance: R. Carlman

15:30–16:45

Conclusions and proposals from the Forum constituencies and general discussion

- Representatives from the Forum constituencies:
Government Policy Makers: C. Morel; Multilateral Aid Agencies: R. Feachem;
Bilateral Aid Agencies: S. Møgedal; Non-Governmental Organizations: C. Suwanwela;
Women's Organizations: A. Germain; Foundations: T. Evans; Private Sector: M. Cone;
Research Institutions: J. Frenk; WHO and ACHR: F. Antezana

General Discussion

16:45–17:00
17:00

Conclusions and objectives for Forum 3

Adetokunbo O. Lucas

Close of business of Forum 2

And the effort continues: Forum 3 will be held in June 1999 in Geneva.

The Global Forum for Health Research

The Global Forum for Health Research was created in 1997 with the participation of 150 representatives from a variety of organizations in the North and the South. Participants included members of the World Health Organization, the World Bank, bilateral cooperation agencies, international foundations, women's organizations, international and national NGOs, research institutions and private sector companies.

The Global Forum for Health Research is a Swiss foundation managed by a Foundation Council of 16 persons representing the partners of the Global Forum. The Council is presided over by the Chair of the Forum, Dr Adetokunbo O. Lucas. The Foundation Council is assisted by a Strategic and Technical Advisory Committee chaired by Dr Carlos Morel. The Secretariat is located in the headquarters of the World Health Organization in Geneva, Switzerland and is managed by the Executive Secretary, Mr Louis J. Currat.

The Global Forum for Health Research is supported financially by donations from Norway, the Rockefeller Foundation, Sweden, Switzerland, the World Bank and the World Health Organization.

Documents Available from the Global Forum for Health Research

- Investing in Health Research and Development: Report of the Ad Hoc Committee on Health Research Relating to Future Intervention Options, WHO, September 1996.
- Report of the First Global Forum for Health Research, June 1997.
- Frenk, Dr Julio. Closing the Gaps in Health Research. Keynote address to the Global Forum for Health Research, June 1997.

How to Contact the Global Forum

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Annex 2

Global Forum for Health Research

Statutes of the Foundation

Before Mr Jean-Luc Ducret, Notary Public at Rue de Candolle 26, Geneva, appear:

1. Adetokunbo O. Lucas, Chair, Adjunct Professor of International Health, Harvard University, Cambridge, Massachusetts, USA
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2. Rashidah Abdullah, Asian-Pacific Resource and Research Center for Women, Jalan Maktab, 54000 Kuala Lumpur, Malaysia
3. Rolf Carlman, Sida, Department for Research Cooperation (SAREC), 10525 Stockholm, Sweden
4. Margaret Cone, International Federation of Pharmaceutical Manufacturers Associations, 30 rue du St.Jean, 1211 Geneva 18, Switzerland
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7. Theodor Fliedner, Institut für Arbeits- und Sozialmedizin, Ulm Universität, 89081 Ulm, Germany
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9. Adrienne Germain, International Women's Health Coalition 24, East 21st Street, New York, NY 10010, USA
10. Matthias Kerker, Swiss Agency for Development and Cooperation, Department of External Affairs, 3003 Berne, Switzerland
11. Mary Ann Lansang, Clinical Epidemiology Unit, College of Medicine, University of the Philippines Manila, Ermita, Manila, Philippines
12. Sigrun Møgedal, DiS, Center for Partnership in Development, Vinderen 0319 Oslo 3, Norway
13. Carlos Morel, Oswaldo Cruz Foundation, Ministry of Health Av Brazil 43 65, Rio de Janeiro, RJ 21045 900, Brazil
14. Pramilla Senanayake, International Planned Parenthood Federation, Regents Park Inner Circle, London NW1 4NS, UK
15. Charas Suwanwela, College of Public Health, Chulalongkorn University, Bangkok 10330, Thailand

as founders,

who declare having decided to create the following Foundation :

Section I - Name, Headquarters and Duration

Article 1: Name

Under the denomination 'Global Forum for Health Research', a Foundation is hereby established in accordance with Article 80 and following of the Swiss Civil Code and on the basis of the present Statutes. This Foundation is placed under the ordinary supervision of the Supervising Authority of the Federal Ministry of the Interior in Berne.

Article 2: Seat

The 'Global Forum for Health Research', hereinafter called the Foundation, will have its seat in Geneva, Switzerland.

Article 3: Duration

The duration of the Foundation is unlimited.

Section II - Objectives, Activities and Capital

Article 4: Objectives

The overall objective of the Foundation is to bring partners together to help focus research efforts on the health problems of the poor through an improvement in the allocation of research funds, support of better priority setting processes and methodologies, promotion of relevant research, support for concerted efforts in health research and dissemination of the research findings.

The specific objectives of the Foundation are as follows :

- a) Facilitate the exchange of ideas and the undertaking of concerted efforts among partners by organizing at periodic intervals Forum Meetings of interested Parties.
- b) Keep informed and exchange information and knowledge about the prioritization efforts in health research and contribute to these efforts in an appropriate way.
- c) Support concerted efforts in pursuit of the Foundation's global objective between various actors in the health research field (governments, multilateral development agencies, bilateral development agencies, foundations, international NGOs, women's organizations, research-oriented bodies, private commercial enterprises).
- d) Stimulate the dissemination of essential information in support of the Foundation's global objective.
- e) Contribute to the mobilization of resources for health research in line with the Foundation's global objective.
- f) Take all actions it will judge appropriate in the pursuit of its global objective.

Article 5: Capital

The Foundation capital amounts to US\$ 1 million. The Foundation capital is open to further contributions by the same donors or other Parties.

Section III - Organization

Article 6: Organs of the Foundation

The organs of the Foundation are the following:

- The Foundation Council.
- The Secretariat.

Article 7: The Foundation Council

7.1 The Foundation Council is composed of a maximum of twenty members selected from the various constituencies referred to in Article 4(c) above. The Foundation Council constitutes itself and elects its members. In particular, it elects its Chair. It is convened and presided over by the Chair of the Foundation. It meets twice a year in normal sessions.

7.2 The Foundation Council may make decisions when the majority of its members are present or represented. Except as otherwise provided in the present Statutes or in the By-Laws, the Foundation Council makes its decisions by simple majority of the members present or represented. In case of equality of votes, the voice of the Chair is determining.

Article 8: Duties and Powers of the Foundation Council

The Foundation Council is the highest policy and decision making body of the Foundation. The Foundation Council delegates to the Secretariat the management functions which are not reserved to the Council by law, the present Statutes or the By-Laws. The Foundation Council has in particular the following duties and powers:

- a) Act on behalf of the Foundation and take all such action as is deemed necessary in the pursuit of the Foundation's objectives.
- b) Establish the By-Laws of the Foundation.
- c) Appoint the Chair, the other members of the Foundation Council, the Executive Secretary and the auditors.
- d) Establish the policies and principles followed by the Foundation.
- e) Adopt the Workplan and the Budget of the Foundation.
- f) Approve the annual report and audited accounts of the Foundation.
- g) Undertake periodically the evaluation of the Foundation, its strategies and activities.
- h) Create such committees as may be deemed desirable and necessary for the implementation of the objectives, programmes and projects of the Foundation.
- i) Delegate any powers of the Council which can lawfully be delegated to any committee or agent.
- j) Maintain close relations with the representatives of the constituencies mentioned in Article 4(c) above.
- k) Take note of the report of the Annual Meeting of the Forum and make the necessary decisions.
- l) Make all decisions which are not in the competence of another organ of the Foundation.

Article 9: The Chair and Vice-Chair

9.1 The Chair is appointed by the Foundation Council for a term of three years, renewable once. The appointment is decided upon by the majority of the members of the Council.

The Chair represents the Foundation in its dealings with third parties, convenes and presides over the Foundation Council, actively promotes the Foundation's objectives, and helps mobilize resources for the activities of the Foundation.

9.2 The Foundation Council may nominate a member of the Foundation Council as a Vice-Chair. The powers and duties of the Vice-Chair are those delegated to him/her by the Chair.

Article 10: The Secretariat

The Secretariat is composed of (a) the Executive Secretary appointed by the Foundation Council for a term of three years, renewable; and (b) staff members as may be necessary, appointed by the Executive Secretary, in consultation with the Chair. Its functions are the following:

- a) Execute all decisions of the Council.
- b) Prepare the annual workplan and budget and submit it to the Foundation Council for approval.
- c) Execute the workplan approved by the Foundation Council and manage the activities of the Foundation.
- d) Manage the personnel and financial resources of the Foundation and sign the commitment and disbursement authorizations in the name of the Foundation.
- e) Prepare the annual meeting of the Global Forum for Health Research and the meetings of the Foundation Council and such other Committees as may be instituted by the Foundation Council.
- f) Establish implementing regulations and procedures for the Secretariat.
- g) After the close of each fiscal year, present to the Foundation Council an annual report on the activities and operations of the Foundation.
- h) Prepare the report of the Annual Meeting of the Forum.
- i) Perform such other tasks and functions assigned by the Council.

Article 11: The External Auditors

Accounts will be audited annually by an internationally recognized auditing firm appointed by the Foundation Council as Auditor. The fiscal year corresponds to the calendar year. Audited accounts will be submitted to the Foundation Council for its final approval within four months of the closing of the calendar year.

Section IV - Representation and Liability

Article 12: Representation

The Chair (for matters which are the responsibility of the Foundation Council) and the Executive Secretary (for matters which are delegated to him/her) or their representative are entitled to represent the Foundation in all dealings with Third Parties.

Article 13: Signatures

All instruments committing the Foundation shall be signed by the Chair or his/her representative, except for the matters delegated to the Executive Secretary.

Article 14: Liability

The Foundation is responsible for its liabilities on all its assets. Members and officers of the Foundation or its organs shall incur no personal liability in respect of the commitments of the Foundation.

Section V - Final Provisions

Article 15: Amendments to the Statutes

The Foundation Council may at any time make amendments to the present Statutes by notarized decision, after having obtained the approval of the Supervising Authority.

Amendments to the present Statutes require a decision made by a two-thirds majority of the Foundation Council.

Article 16: Dissolution

The dissolution of the Foundation will proceed with the agreement of the Supervising Authority when its objective can no longer be achieved.

The Foundation may decide on its dissolution by a two-thirds majority of the Foundation Council. The liquidation of its assets, after payment of its liabilities, shall be affected by the Foundation Council to activities pursuing similar objectives to those of the Foundation. A restitution of assets to the founders is not possible.

Article 17: Entry into Force

The present Statutes entered into force on 24 June 1998.

Annex 3

Type of support provided by the Forum to Initiatives

The nature of the support provided to an initiative will vary with both its phase of development and its specific characteristics:

Phase I Initiatives - Preparation Phase

- Technical advice in the organizational aspects based on experience with other pieces of analytical work or initiatives.
- Technical advice in the cross-cutting issues common to all analytical work or initiatives, such as:
 - work in the field of capacity-building
 - collaboration between public and private sectors
 - health policy issues
 - gender-related issues
 - issues linked to priority setting
 - monitoring and evaluation of results
 - support in the field of communication and information.
- Provision of seed money to assist with initiative development.

Phase II Initiatives - Proposal completed

- Space in the agenda of the Annual Meeting of the Global Forum for a presentation of the work completed or planned and the mobilization of further interested parties. Fully developed initiatives (whether supported directly by the Forum or not) meeting the criteria for initiatives indicated above may be given space for plenary presentation during the Annual Meeting of the Forum.
- Convening or participation in the convening of a meeting of interested parties to mobilize resources and begin activities under the initiative.

Phase III Initiatives - Phase of early implementation

- Support in the search for funding (including administration of funds) and, to a limited extent, direct financial support (seed money). As a rule, the Forum will ask all partners to participate in the financing, including contributions in kind.
- Execution of secretarial tasks mandated by the Foundation Council (generally against reimbursement).
- Serving as a temporary home for activities of the initiative until a separate legal entity is established or a permanent home is found.

Phase IV Initiatives - Phase of full implementation

- Monitoring progress and funding. If the level of funding is inadequate, assistance in mobilizing additional resources.
- If an initiative is completed (e.g. a vaccine at the end of Phase III trials) or if it appears unlikely to proceed satisfactorily, then the Foundation Council may terminate its support to the initiative.