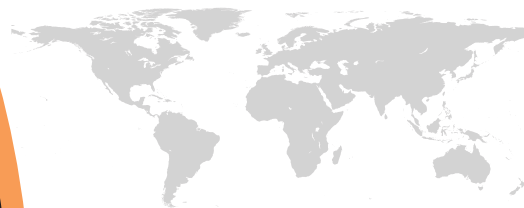


GLOBAL MINISTERIAL FORUM
ON RESEARCH FOR HEALTH

BAMAKO, MALI
17-19 NOVEMBER 2008

**STRENGTHENING
RESEARCH
FOR HEALTH,
DEVELOPMENT
AND EQUITY**



**REPORT FROM
BAMAKO**

-  **COHRED**
Council on Health
Research for Development
-  **Global Forum for
Health Research**
-  **Republic of Mali**
-  **UNESCO**
United Nations
Educational, Scientific and
Cultural Organization
-  **The World Bank**
-  **WHO**
World Health Organization

Strengthening research for health, development and equity

A report on Bamako, Mali, 17 - 19 November 2008

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Published by the Global Forum for Health Research, April 2009

ISBN 978-2-940401-18-5

Suggested citation: Global Forum for Health Research, *Strengthening research for health, development and equity*, 2009

Renforcer la recherche pour la Santé, le Développement et l'Équité

Rapport de Bamako, Mali, 17-19 novembre 2008

© Global Forum for Health Research 2009

Publié par le Global Forum for Health Research, avril 2009

ISBN 978-2-940401-18-5

Citation suggérée : Global Forum for Health Research, Renforcer la recherche pour la Santé, le Développement et l'Équité, 2009

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Design:  services-concept.ch

Photo credits/ Photographies: Olivier Asselin, Elizabeth Kemf, Sylvie Olifson © Global Forum for Health Research

Printed in Switzerland / imprimé en Suisse

REPORT FROM BAMAKO

Global Ministerial Forum on Research for Health
Bamako, Mali, 17-19 November 2008

STRENGTHENING RESEARCH FOR HEALTH, DEVELOPMENT AND EQUITY



Prepared by Beverly Peterson Stearns

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FOREWORD

The members of the Steering Committee of the Global Ministerial Forum on Research for Health, held in November 2008 in Bamako, Mali, are pleased to present this publication as the official report of the Global Ministerial Forum.

This is not a publication of proceedings but the “story” of the extraordinary gathering in Bamako, drawn together by Beverly Petersen Stearns with input from various teams of rapporteurs working throughout the meeting. The attached CD-ROM contains the Call to Action, Communiqué, Call for Civil Society Engagement in Research for Health, the final programme, list of participants, other official background documents and input into the Global Ministerial Forum from regional preparatory meetings and e-forum discussions.

Carel IJsselmuiden, Council on Health Research for Development (COHRED)

Stephen Matlin, Global Forum for Health Research

Lasseni Konaté, Government of the Republic of Mali

Julia Hasler, UNESCO

Ok Pannenberg, World Bank

Tim Evans, World Health Organization.

 **COHRED**
Council on Health
Research for Development

 **Global Forum for
Health Research**

 **Republic of Mali**

 **UNESCO**
United Nations
Educational, Scientific and
Cultural Organization

 **The World Bank**

 **WHO**
World Health Organization



LIST OF ILLUSTRATIONS

These boxes, tables and charts are “quotations” from presentations made at the Global Ministerial Forum, shown mostly as slides; they have been adapted to the format and style of this publication.

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INTRODUCTION

THE ROAD TO BAMAKO



INTRODUCTION: THE ROAD TO BAMAKO

Set against the backdrop of a global financial crisis and in a country that is one of the world's poorest, the Global Ministerial Forum on Research for Health came at a critically important time on a continent in desperate need of help for the health of its people. From 17-19 November 2008, a total of 1,100 registered participants from around the world gathered in Bamako, the capital of Mali, in West Africa, to ask questions, share information and formulate an agenda for "Strengthening Research for Health, Development and Equity." Six partners organized the Forum in Bamako: COHRED (Council on Health Research for Development), Global Forum for Health Research, UNESCO, World Bank, WHO and the host country, the Republic of Mali.

Stephen Matlin, Executive Director of the Global Forum for Health Research, chaired the steering committee for the conference. Participants came from 96 countries, including official delegations from the ministries of health, education, science and technology of 55 countries. In addition to ministers, participants included key players in the paradigm shift that extends "health research" to embrace all sectors that contribute to "research for health." That shift recognized the need to strengthen coordination of the health sector with other sectors that are interlinked, including education, agriculture, finance, science and technology. Participants in Bamako appeared to accept this shift in the concept of research for health without question.

This was also the first time UNESCO was involved in organizing a conference on research for health with this group of partners and its inclusion added emphasis to the importance of interdisciplinary coordination. **Walter Erdelen**, Assistant Director-General, Natural Sciences Sector, UNESCO, noted in the opening ceremony that all of UNESCO's programmes have an input in health and require partnerships and cooperation with other UN agencies. He added that UNESCO is the only UN agency with the explicit mandate in science. His colleague **Julia Hasler** of UNESCO's Natural Science Sector explained in a press conference before the opening of the Forum that the agency's programme and its budget are set by the 193 member states. Among their priorities for the next six years, she said, are Africa, gender equality and countries where there has been conflict. "We all have a moral obligation to find innovative ways of using all our expertise and experience, that we bring from different sectors, to discover ways of improving health for all."

At the end, the country delegations issued the *Bamako Call to Action on Research for Health*, a document that is considerably different than the draft they had going into the conference. It reflects the input not only from the ministers but from the Forum's presentations, discussions and spontaneous question-and-answer periods and tightens the language of the initial draft to focus more strongly on action that should be taken. The Global Ministerial Forum also released an official *Communiqué* reflecting the broader perspectives of researchers, development partners, the private sector, media participants, civil society and policy-makers who took part in the meeting. In addition, a Call for Civil Society Engagement in Research for Health was prepared for the conference and read out in the closing session. These three documents are included in full in the attached CD-ROM.

This *Report from Bamako* is an attempt to give background and insight into the content of the Forum and the documents that emerged from it. It also attempts to capture the spirit of an extraordinary meeting for which so many had prepared for so long. The perspective presented here is drawn from plenary speeches, session presentations, discussions and extemporaneous comments that were made during the three days in Bamako. Some material is based on accounts of sessions from reporters who filed directly to the TropIKA.net website from the conference. The total picture is intended to reflect the problems confronted, solutions proposed, the diversity of ideas and the common themes that ran through the conference. Some of the participants are mentioned here, but certainly not all. It would be impossible record all the contributions and subjects discussed in Bamako or the reams of data on research for health that were presented. The accompanying CD ROM includes the final programme, list of participants and material from many of the presentations. The *Bamako Call to Action on Research for Health*, the *Communiqué and the Call for Civil Society Engagement* stand as the best expression of the outcome of the meeting. How many of their recommendations are implemented in the near future will be the best measure of success.

Participants in the plenaries and the parallel sessions, especially those from low-income countries, commented frequently on the importance of their contact in Bamako with specialists and colleagues who hold similar research concerns or share common problems. While this is



difficult to document or measure, networking of this kind may be the most immediate benefit of the meeting in Mali.

The road that led to Bamako began in 1990 with a report from the Commission on Health Research for Development which estimated that – based on a total for 1986 of US\$30 billion – only around 5% of spending on health research and development was being channelled into problems primarily affecting the poorest 90% of the world's population. It urged that at least 2% of budgets of individual country ministries of health be allocated to research and that outside funders should invest at least 5% of development assistance into health research. It was formidably extended in Bangkok in 2000 with the International Conference on Health Research for Development and in 2004 in Mexico City when 52 official country delegations, including 21 of the world's health ministers, met for the first time to talk specifically about how research can strengthen national health systems and achieve the Millennium Development Goals (MDGs).

In Forum 8, held in parallel to the Ministers' meeting in Mexico, the Global Forum for Health Research organized sessions devoted to a broad spectrum of health research that drew 700 policy-makers, researchers and representatives of governments, development agencies and research institutions. In preparation for Bamako, regional consultations on the research for health agenda took place in Algiers, Copenhagen, Bangkok, Rio de Janeiro and Teheran. In September 2008, the 58th meeting of the WHO Regional Committee on Africa endorsed the Algiers Declaration's commitment toward research coordination within the health sector and with other sectors, as well as development of adequate national health research policies.

The African countries meeting in Algiers also re-dedicated themselves to two longstanding aspirations: the allocation at least 2% of national health budgets to research and the need for development partners to invest at least 5% of health aid in research and research capacity strengthening. While most developing countries can still barely manage to contribute 1% of their national health budgets to research, these elusive targets have resurfaced as major points in the *Bamako Call to Action*. This time, however, the emphasis is on country-led research strategies, a deliberate move that may supply the added incentive needed for reaching them. In addition to the regional consultations, on-line questionnaires and an e-Forum discussion group

Health Research for Development (HR4D), allowed for a much wider involvement of all interested individuals and organizations than possible through traditional meetings alone. There were also thematic preparatory meetings prior to Bamako, for instance around health policy and systems research and around civil society engagement in research for health. The CD-ROM attached to this report also includes synthesis reports on the questionnaires and e-discussion.

“But the expense alone of getting so many key people together in one of the world's poorest countries should surely shame us all into coming up with something concrete.”

Not everyone is convinced the targets will be met very soon. **Fiona Godlee**, Editor-in-Chief of the *British Medical Journal*, has commented that while the *Bamako Call to Action* was “better than some feared,” if ministers meet again in four years' time they might still be having the same conversations. She recounted how some delegates' expectations of any real results from Bamako were low; she quoted one “insider” telling her he expected it to be another call to inaction. In a blog entry for the *BMJ*, shortly after the meeting, she concluded: “But the expense alone of getting so many key people together in one of the world's poorest countries should surely shame us all into coming up with something concrete.”

Building a house of research

Travel to Bamako was difficult or inconvenient for some, and resulted in the absence of several key figures from the conference. The journey was made even more difficult when Air France pilots' struck on the eve of the Forum. However, those who persevered – and most did – generally arrived to find a community that was convinced that research provides the power to overcome towering health problems in the developing world. They were eager to take control of the means as well as the ends of research. They also embodied the skill and innovation with which researchers from low- and middle-income countries have been able to do a lot with sometimes very little. Africans, especially, appeared ready to take advantage of a global health research conference on their own continent, where the reality of the impact of health problems is evident and



clearly challenges research agendas. Many spoke out confidently and candidly.

President Amadou Toumani Touré of the Republic of Mali addressed the opening ceremony, thanking participants for their show of confidence in holding the summit in Bamako and declaring that his country was “duty-bound” to master technology and invest in science as the best way to achieve economic success. Noting that Mali has to cope with the endemic scourges of malaria, tuberculosis and HIV, emergencies such as avian flu and hemorrhagic fevers, as well as chronic diseases and epidemics, President Touré said that a successful health research system presented the best hope for solutions. He proudly noted that the organization of the summit represented the will to establish a culture of research for health in Africa and wasted no time making a promise: “You can count on my full support for a house dedicated to research in Bamako, where researchers can come together.”

More than once Mali was called a “shining example” of how research can be done if the government makes a commitment and if a country’s trained researchers return home to build a “House of Research.” Mali was lauded for its international institutes and its excellence in research. Programmes at the University of Bamako and at the Malaria Research Training Centre (MRTC), high on one of the city’s *collines*, demonstrate the determination of the Malians to take control of research and their future. The eagerness – and envy – of other African countries to do the same was evident throughout the conference, starting during the Media Day held before the opening where one African journalist remarked, “Research is Africa’s intellectual property and Mali is on the leading edge – do you have exchanges? How can we do the same?”

Much of the essence of the *Bamako Call to Action on Research for Health* centres on the call on national governments to give “priority to the development of policies for research and innovation for health, especially related to primary health care, in order to secure ownership and control, of their research for health agendas.” It seeks to support this effort by asking all partners, stakeholders, funders and development agencies, to align and harmonize programmes and funding to advance the goals of developing countries.

Even a World Day of Research for Health was proposed, to take place on 18 November each year, commemorating the efforts crystallized in Bamako.

In the speech read on behalf of **Margaret Chan**, the Director-General of the World Health Organization, the appropriateness of Mali as the site for the global ministerial forum was underscored. “This country has more than its fair share of pressing health needs, many of which are linked to poverty and reinforce poverty,” she pointed out. “But Mali has an asset”, she added, and praised the government’s policy that “makes equitable access to health care a national ambition, supported by a strong grassroots demand for quality care, close to home.” The 2008 *World Health Report: Primary Health Care – Now More Than Ever* holds up Mali as an example of what can be achieved when policy engages community participation. It also praises the way in which health policy in Mali has been guided by evidence generated during internal and external evaluations, pilot studies and research projects.

“Health is not merely a drain on economic resources, it is a producer of economic gains.”

Luis Sambo, Regional Director of the WHO Regional Office for Africa, appearing in the opening ceremony and speaking for Dr Chan, underscored the need for health research – “the right kind of research, now more than ever” – to overcome the global crises that affect health in profound ways: financial, fuel, food and climate crises. All these crises have global causes and global consequences for health, he said. Research provides the power to overcome forces that impact the world’s poor and it provides the tools to tackle the problems. “Health is not merely a drain on economic resources, it is a producer of economic gains,” Sambo said, and he cited a 2001 report of the Commission on Macroeconomics and Health to document that view. He called for “great haste” in moving the health research agenda forward, saying that research is needed to make the case that health be included in all policies. “We need research to guide health system reforms, as we have seen here in Mali. We need operational research to help give existing interventions a greater impact. Above all, we need research to persuade the world that investments in health must continue as one of the surest and best proven routes to a stable and prosperous global society.”



Highlighting the inequities

“Only in the Africa region are deaths dominated by another group of factors – communicable diseases and maternal, perinatal and nutritional conditions.”

In a press briefing in Bamako before the opening of the conference, Stephen Matlin highlighted the problems facing research for health for the majority of developing countries by presenting pertinent data. Life expectancy has increased over thousands of years, he told the media, but the gain has been extremely uneven across the world. While in high-income countries life expectancy is now about 80 years, in sub-Sahara Africa it is only about half of that. Of the almost 10 million children under five who die every year, nearly 97% of them are in low-income countries, almost half of them in Africa. “What is it that kills people?” he asked, and showed a graph displaying the causes of annual deaths globally (Illustration 1). In high-income areas, by far the major causes of deaths are non-communicable diseases such as cardiovascular disease, cancer, stroke and diabetes, but those are also the causes of death now in most other areas of the world. Only in the Africa region are deaths dominated by another group of factors – communicable diseases and maternal, perinatal and nutritional conditions. He compared the number of deaths in regions of the world with the location of researchers (Illustration 2), showing that the areas recording the most deaths are also those areas with the lowest densities of researchers.

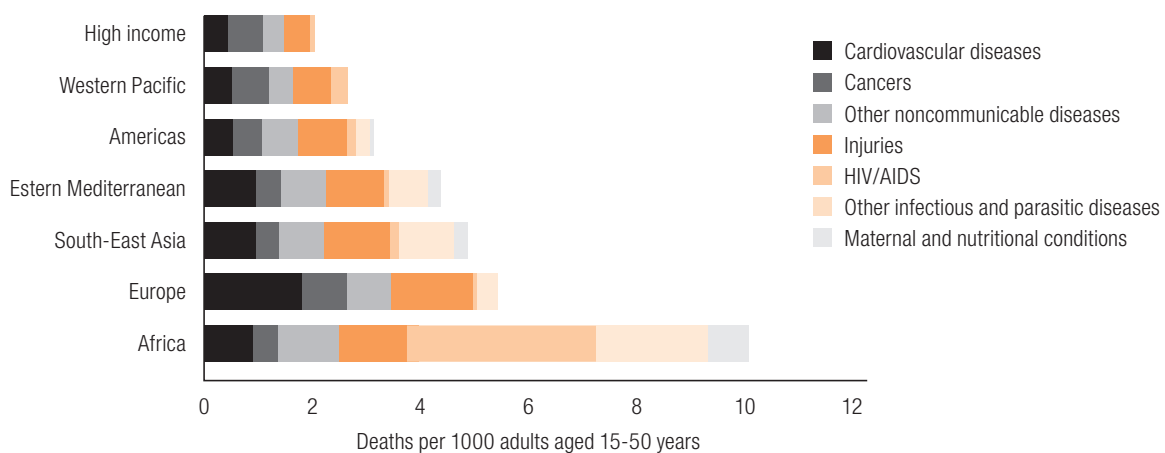
Matlin listed three important reasons for the disparities in the benefits of health research: lack of commercial incentive for creation of new drugs, the failure of science to find solutions to some difficult diseases and public health failures. He focused on the needs for:

- ◆ more investment in health, especially in low and middle-income countries;
- ◆ better focus on the health problems of the poor;
- ◆ new incentive systems and innovations for medical products.

The world has seen a five-fold increase in expenditures for health R&D during the past 20 years; global investments in health research and development in 2005 were US \$160.3 billion, Matlin reported. Ninety-seven per cent of this comes from high-income countries and most of it (US\$155.2 billion) is spent by high-income countries on products and services tailored to their own health-care markets. Matlin noted that African Union countries have set a target to spend at least 1% of GDP toward research for health and that South Africa is coming close to achieving this goal.

“We need to further widen our definition of the research that is relevant to the health of people,” he said, and called attention to the social determinants of health. WHO’s constitution states that health is a fundamental human right, he said: disparities therefore are fundamentally inequitable.

Illustration 1: Adult mortality rates by major cause group and region, 2004



Presented by Stephen Matlin on Media Day

Source: World Health Organization 2008



“The world has seen a five-fold increase in expenditures for health R&D during the past 20 years; global investments in health research and development in 2005 were US \$160.3 billion.”

Ok Pannenberg, Senior Adviser for Health, Nutrition and Population at the World Bank, Washington DC, representing Joy Phumaphi of the World Bank who was unable to be in Bamako, also helped set the scene for the media at the briefing. He told them that while the World Bank is happy with implementation programmes and the near doubling of the voluntary resources being provided to global health programmes, headway remains difficult for poor populations. What is necessary is more research into how health-care systems work, he said, because many programmes designed to address the priorities of health problems of poorer populations are “hitting a glass ceiling” due to a lack of systemic structures and infrastructure.

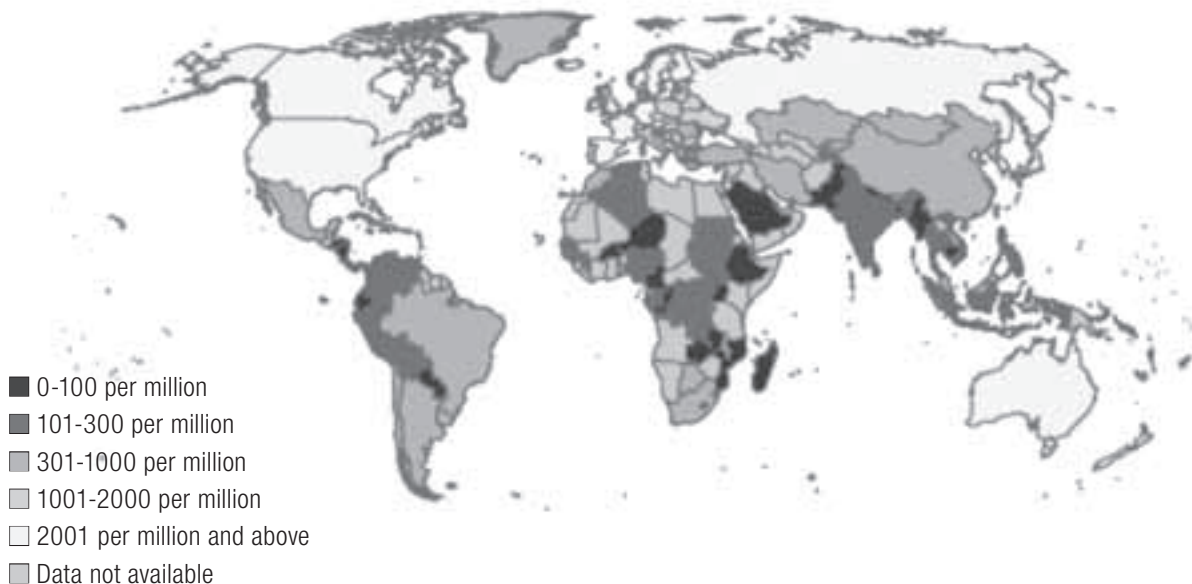
For example, he said, there is scant research being undertaken to analyse what can be done to address the shortage of health workers in developing countries. The World Bank, he also said, recognizes that economic growth is not possible without healthy populations and it wants to assure that investment in health is effective.

A dedicated conference secretariat was set up with core funding from the World Bank, jointly located at the Global Forum for Health Research and WHO.

Sponsors of the Global Ministerial Forum were the Bill and Melinda Gates Foundation, Rockefeller Foundation, Wellcome Trust and the governments of Canada, Norway, Sweden and the United Kingdom of Great Britain and Northern Ireland.

Illustration 2: How many researchers are there?

Researchers per million inhabitants, 2005 or latest available year



Note: About 70% of countries report full-time equivalents, the remaining use headcounts.

Presented by Stephen Matlin on Media Day

Source: *UNESCO Institute for Statistics*





CHAPTER 1

EQUITY AND SOCIAL DETERMINANTS FOR HEALTH



CHAPTER 1: EQUITY AND SOCIAL DETERMINANTS FOR HEALTH

While banks, boardrooms and governments were reeling as investments turned sour in the global financial downturn that began in mid-2008, another type of investment was at the top of the agenda in Bamako. Investment in health research, particularly for, in and by low- and middle-income countries, took on a new focus as equity and the social determinates of health were examined. Some of the questions raised:

- ◆ What measures could reduce health inequities?
- ◆ What kind of investment will generate evidence on ways social determinants influence population health and health equity?
- ◆ How do we evaluate the effectiveness of measures to reduce health inequities?

Broader determinants of health are sometimes referred to as the “causes of the causes” of health and have become the topic of study and discussion. In a session on the causes of health inequities, **Sir Michael Marmot**, Chair of the Commission on Social Determinants of Health (CSDH), delivered a video commentary on the findings of the Commission’s final report in August of 2008. It acknowledged that health inequities do exist and are not just a reflection of inequities in health care. Major causes come from outside the health care system and so it is essential to improve conditions in which people live and work, the report said. It analysed nine social factors:

- ◆ Early childhood development and education
- ◆ Employment conditions
- ◆ Urban settings
- ◆ Social exclusion
- ◆ Women and gender equity
- ◆ Globalization
- ◆ Health systems
- ◆ Public health conditions
- ◆ Measurement and evidence

Marmot emphasized that there is enough scientific evidence available to reduce health inequities and that action must be evidence-based. He stressed that health care must be universally available, regardless of the capacity to pay. The CSDH report sets forth a vision of a world where social justice is taken seriously and where governments take a leading role in that vision.

Participants focused on how social, political and economic determinants influence the quality and distribution of health

within a country and across borders. Global, regional and national levels may require different measures, they concluded. Moving from knowledge to action is critical. In a session that showcased examples of the role of ministries in dealing with inequities, a panel identified key steps to a global research agenda on social determinants of health. Proposals included new research designs, strengthening national and regional capacities to address the social determinants of health, extending academic and other international networks, reorganizing community contributions and developing new approaches to engage political commitment. Like other suggestions that arose in sessions at the conference, these were forwarded to the ministers across the courtyard, who were drafting the *Bamako Call to Action*. The *Communiqué*, for its part, also noted that social determinants of health must be included in the promotion of research for health. In a background paper to the session on the “causes of the causes” of health, WHO stated clearly that moving towards a vision for greater health equity requires a “fundamental rethink” on the relationship between the rich and poor, men and women, elite and socially excluded, and their rights and obligations.

Health equity was a focus of several speakers who described their own initiatives and experiences. **Mohammed Hassar**, Director of the Institut Pasteur du Maroc, explained that strengthening of national public health institutes is one of the most effective means of reducing social fractures between individuals or groups in a community. These institutes deal with health issues in general, and equity and social determinants in particular. Equitable access to health is a shared strategic objective, he said, accomplished through health surveillance, disease and injury prevention, population health assessment and emergency preparedness. The national public health institutes collect information on health status, evaluate programmes and interventions and synthesize data. These steps are crucial for encouraging public health action and making sure it is effective. Another key agency is the International Association of National Public Health Institutes (IANPHI), created in 2006 by a grant from the Bill and Melinda Gates Foundation, which works within Africa, Asia and the Americas to strengthen and link public health institutes around the world.

The success of centres in Africa that are working together on viral haemorrhagic fevers like Ebola and yellow fever,



Hassar said, illustrates that networks are essential in health systems. However, he lamented the focus on infectious diseases rather than chronic diseases by most of the institutions of the IANPHI and remarked that diabetes and cardiovascular health are growing problems not only in Morocco but throughout low- and middle-income countries.

Jennie Popay, Professor of Health Research at Lancaster University, UK, cautioned that much of the high-quality research that comes from high-income countries might not be applicable to health inequities of low-income countries. She called attention to the need to balance research on “mapping the genome,” which has increased understanding of pathways to individual health experiences, with research on “mapping the causal pathways” that link macro social determinants to patterns of health inequity. For example, she suggested examining how biological, behavioural and wider social, economic and political determinants interact jointly to produce greater vulnerability for both men and women in developing countries. Other priority issues for primary research include:

- ◆ Identifying the strategic drivers that have the potential to reverse inequities;
- ◆ Methodological research to develop more robust approaches to evaluate impacts on health equity of policies focusing on social determinants of health;
- ◆ Modelling work on the most cost-effective ‘mix’ of social determinant investments in different country contexts;
- ◆ Establishing thresholds of acceptable evidence among social determinants.

Panellists agreed that the global research agenda should build on existing mechanisms and networks, e.g. extending the range of Knowledge Networks set up by WHO to support the Commission’s evidence-building efforts. These networks allow for a multi-directional intellectual exchange by linking researchers in countries with limited resources to researchers working in countries with rich resource bases and extensive experience. They contribute to a more sustainable research capacity by establishing collaboration that will endure beyond the Commission and help identify existing research via electronic databases. The Commission’s knowledge networks were recognized for involving people from many different country contexts and sectors, and making it possible to appraise the applicability of policy and actions in individual country settings.

One of the key ways suggested for the health sector to deal with the wider determinants of health is to develop processes

and mechanisms that offer leverage for intersectoral engagement. In a roundtable discussion on research for health systems development, participants examined how health systems might use epidemiological and other evidence to bring in other sectors for collaboration. In the same way, they could provide training and education opportunities for staff to learn how to work together with people in a wide variety of other sectors. They discussed how health systems become not only “producers of health and health care” but also “purveyors of a wider set of societal norms and values.”

The role of civil society organizations (CSOs) in low-income countries was highlighted in several sessions. CSOs are generally regarded to have a great potential to contribute at the local level and participants agreed that they should be encouraged and further institutionalized. Some participants suggested that the peer-review process should engage non-traditional actors such as indigenous groups. **Amit Sengupta**, Co-Convenor, People’s Health Movement, India, expressed concern, as did others in Bamako, that it is donors, rather than a multilateral system, who are increasingly deciding the direction of research in developing countries. The global approach, he said, should not act as a barrier to local action. Sengupta reflected that civil society is still viewed as a vehicle for optimizing research uptake, and not as a useful tool in the decision-making process related to setting research priorities. He urged establishing more equal forms of partnership, a move that would require building of capacity within civil society as well as within research organizations.

Aissatou Toure, Board Member of the Council on Health Research for Development (COHRED) and Head of the Immunology Unit at the Institut Pasteur in Dakar, spoke in the opening ceremony about the common philosophy and set of values on health represented in the final report of the Commission on Social Determinants of Health and by the 2008 World Health Report on primary health care. The reports reflect a holistic view of health and well being, she said. “They argue for inclusiveness, ownership and requirement for wide intersectoral action to achieve better health for all.” Research is a core strategy in both reports, providing a context by:

- ◆ Promoting and understanding health, its determinants and impact on society and equity;
- ◆ Developing new and better interventions to prevent and address ill health;
- ◆ Informing the development of new health policies and contributing to improvement of existing policies;



- ◆ Providing the evidence base for decision-making at a personal, clinical, public health and policy level.

Toure, speaking on behalf of Marion Jacobs, Chair of the Council on Health Research for Development (COHRED), listed three key imperatives for moving from health research to research for health:

- ◆ *Take a systems approach* to research for health;
- ◆ *Ensure alignment* between needs, priorities and *harmonization* of national and international initiatives;
- ◆ *Engage all sectors and stakeholders, especially civil society organizations, in research for health.*

The systems view of research for health, she said, helps develop the foundations that countries need for strong research governance. It also clarifies a country's roles and responsibilities in research coordination and develops policies that help define the national agenda for research. The population – who are at the centre of the efforts – will benefit from a well-governed research system with good policies and laws that promote ethical research, she said, and a well-governed research system will, in turn, inspire the population's confidence. Alignment and harmonization help ensure that research funding focuses on national priorities, said Toure.

She acknowledged that the “influence of international sources is substantial, as is their potential to influence, and possibly distort, national agendas.” Citing results of a recent study involving five African countries and eight donor countries, she said external donors represented 90% or more of the funding available for health research in the countries, none of which had a fully operational health research system with clear agendas and research strategies. She expressed hope that the Global Ministerial Forum would look at how to arrive at mutually beneficial funding approaches to research for health.

She also urged inclusiveness of all stakeholders and especially of civil society organizations (CSOs), saying they are capable of improving the quality, focus and relevance of research for health. “Partnerships are built with and by CSOs around common concerns on national and global priorities.”

The need for ethical research

Ethics was a focus in one plenary, commented on in at least one other and came up frequently in many of the parallel

sessions. Some of the strongest statements came from developing countries where research and clinical trials are done by large pharmaceutical companies that are based in developed countries.

“Above all, ‘Do No Harm’ trumps the principal of doing good,” stated **Farhat Moazam**, Chair, Center of Biomedical Ethics and Culture, Sindh Institute of Urology and Transplantation, Pakistan, in a plenary on the second day.

Moazam emphasized the need for *ethical* research. Without ethics, she said, research and health are like a two-legged stool: they are unstable, unbalanced, incapable of bearing weight and, above all, difficult to trust. She described the specific need for research to benefit the world's most vulnerable citizens: women and children. “Women and children live in an androcentric and hierarchical society,” she said, adding that researchers and government officials are largely men in these countries where there is also a tremendous emphasis on status, education and gender. Moazam cautioned that, in the push for more innovation and clinical trials, poverty and inequity in countries should not be ignored. Ethics and research must be linked, she said. “Ethics, education and governance are a necessity, not a luxury.”

“Above all, ‘Do No Harm’ trumps the principal of doing good.”

As an example of the importance of ethics, she described the outsourcing of research through clinical drug trials, “from North to South, West to East.” These trials involve pharmaceutical companies and physicians as well as national governments, which Moazam said, should play a more important role to ensure that the research done is ethical. She cited a staggering statistic: in the last two years, drug trials sponsored by industry have increased by 79% in low-income countries. The reason is simple, she said. It is much cheaper for industry to conduct trials in developing countries and it is also easier to recruit the poor and illiterate to take part. In developed countries, she added, there is already a lack of trust and it is not as easy to recruit participants. While there are advantages of collaborative research, Moazam also described the “seductions,” foremost of which is money. She pointed out that Indian laws were recently re-written to make it easier to conduct clinical trials in India with pharmaceutical funding. She quoted an article predicting that by 2010



more than 2 million people will take part in clinical trials in India, resulting in payments of 1.2 million euros to people on the subcontinent. “How much ethical oversight do we have?” she asked. She described three trials that had been conducted in Africa and India without ethical guidelines or review, using experimental drugs, placebos or procedures for HIV/AIDS, cardiac disease and childhood meningitis. She criticized the manner in which the trials were carried out, the fact that the subjects were not well informed and that parents were unaware that an experimental drug was being used on their children. She declared: “This is a call for action, and I am especially talking to those who represent government in the countries.” We must have more oversight, she said. “We need to resuscitate the culture of conscience.” She presented several suggestions:

at the national level

- ◆ appointment of an independent, transparent, effective national ethics council;
- ◆ guidelines on ethics;
- ◆ legislation and enforcement of the guidelines;
- ◆ a nationally-relevant research agenda;
- ◆ capacity-building in research in ethics, not just in research.

at the provincial level

- ◆ an ethics review committee that is not a rubber stamp;
- ◆ collaborative programmes for training and research.

Hassan Abu Aisha Hamid, Minister of Health of the Republic of Sudan, rose in a plenary session to express his concern that many times ethics are violated in the use of clinical trials. There should be a guardian of ethics in clinical trials, he said, adding that this issue should be addressed by participants of the Forum.

The issue of counterfeit drugs was also discussed as a phenomenon of great concern. “Why are we not able to control those who produce the counterfeit drugs?” one participant from Africa asked. “In our countries we lack control, we are at the mercy of counterfeiters.” It was a subject that concerned others, not all of whom live in developing countries. **Mark Walport**, Director of the Wellcome Trust, UK pointed out that drug counterfeiting is a serious global problem and cited an incidence of counterfeit statins in the UK. Then he added, “When someone counterfeits an anti-malaria drug and someone takes it, that’s murder because the anti-malaria drug can prevent death.”

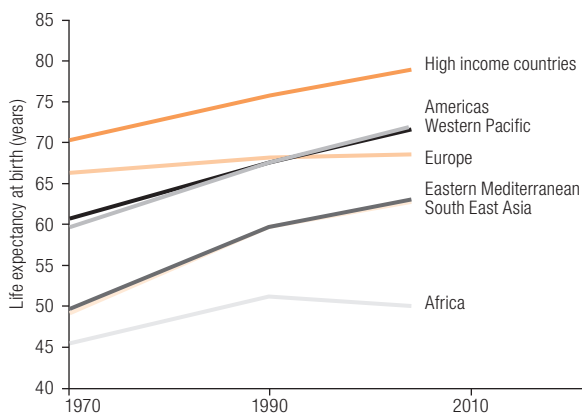
“Let us make a massive move for strengthening community-level services as part of the health system.”

Miriam Were, Chairman of the National Aids Control Council in Kenya, and winner of the first Hideyo Noguchi Africa Prize for achievement in innovative medical services, delivered a keynote address highlighting the dismal situation for women and children in sub-Saharan Africa and calling on the world community to take action. One in 16 women in sub-Saharan Africa is at risk of dying in pregnancy or childbirth, compared with 1/2800 in the world. Child deaths have decreased drastically throughout the world *except* in sub-Saharan Africa. This, Were said, is a result of a global health system that has failed the people in its weakest link: women and children. She urged the world community to view the global health situation as a chain and its weakest component as critical to the viability of the whole. Global leaders have an obligation to point out the links between poverty and health and to take action, Were declared, adding that weak linkages in the health system compound the impact of poverty and infectious disease. She urged “the global village” to take steps against poverty and improve health everywhere. While acknowledging that dictators have stolen huge portions of some countries’ budgets, depriving poor people of many benefits, she said the “unjust practices” of some governments of richer countries have also exacerbated the situation through providing agricultural subsidies to their farmers. The result, she said, is that African farmers are unable to compete on the world markets and the poor grow poorer.

She described “communities in paralysis” in poor countries, where people suffer from physical and economic exhaustion as entire families are affected by illness and poor medical care. In many cases, she said, hopelessness leads to lethargy and alcohol abuse. There are research avenues to deal with communities in paralysis, she said, and observed that communities need to see clear outcomes that provide an incentive to improve health. “Let us make a massive move for strengthening community-level services as part of the health system,” she urged. Were, co-founder of the Uzima Foundation, is the chairperson of the National AIDS Control Council of Kenya, and has long worked at the community level on HIV/AIDS. She reported that the prevalence of HIV/AIDS in Kenya dropped from 10% in 2001 to 5.2% in 2006. She told Bamako participants that she believes “the joy of working at the community level still outweighs the challenges.”



Illustration 3: Trends in average life expectancy at birth from 1970 to 2004 by country income and WHO region



Note: High-income countries are shown separately as a single group, low- and middle-income countries are grouped by WHO region.

Sources: United Nations Population Division (*Population Prospects 2006 revision*), and World Health Organization 2008.

Presented by Stephen Matlin on Media Day

The call from civil society

A rallying cry came from members of civil society organizations (CSOs) for a greater voice in research for health – and there was scepticism about whether the governments and pharmaceutical industry would listen to what they had to say. In the midst of world crises, an agenda for research for health needs to be taken forward with urgency, declared **Thelma Narayan**, Public Health Consultant, Centre for Public Health and Equity, Community Health Cell, Society for Community Health Awareness, Research and Action, India. In opening a session devoted to civil society engagement, she underscored the importance of setting mechanisms in place to bring CSOs into roles that can make a difference. Like several other speakers, she endorsed the shift from health research to research for health and exchanged views on how developing countries can become more active players. **Ayo Palmer**, Director, Public Health Research and Development Centre, Gambia, told the session she believes countries in the South are beginning to take control of the research process. While this is encouraging, she said the shift from biomedical research to research for health must be a collective effort. She cited recommendations in the *Call for Civil Society Engagement* that emerged from a consultative meeting in Denmark in October 2008, and the blueprint that meeting produced to strengthen the role of CSOs in research for

health. Civil society organizations must be recognized as not merely bystanders, Palmer emphasized, but as partners that can make a contribution to research in their countries. One way to do that, she said, was to share experiences and work together to solve common problems. “Civil society organizations are missing a voice in research for health and if we are to make the transition from health research to research for health, we need to come on board,” Palmer concluded.

“Human resource retention is critical – but 70% of Africa’s researchers are outside of Africa.”

Sam Kinyanjui, Head of Training, Kenya Medical Research Institute, The Wellcome Trust Programme, Kenya, shared a vision of African-led health research that reduces the burden of disease. He said this could be accomplished through promoting self-sustaining pools of excellence through research, funding partners and web-based discussion forums in Africa. Africa has the highest burden of infectious diseases but lowest research capacity, he noted. This underscores the need for *local* capacity training for health research. Human resource retention is critical – but 70% of Africa’s researchers are outside of Africa, he said, referring as others had to the problem of “brain drain.”

“Where is the African researchers’ input into capacity-building initiatives?” asked Kinyanjui. He focused on two targets – government and research funders – and suggested researchers need to push government on one side and engage funders on the other. He suggested looking at researchers as a network and vehicles for advocacy. “We need a strong African voice to push governments,” he said.

Mary Woolley, President, of Research!America, USA, offered encouraging historical insights from how the value of engaging civil society has been established in the United States. She suggested civil society groups set an ambitious goal: “Make it seem like history is being made.” Publish a clear call to action and be positive, she counselled, state clearly that CSOs *will be* part of research for health. Citing the success of Research!America in helping the National Institutes of Health to double its budget between 1999 and 2003, she listed new challenges, related to vaccines and autism as well as activists’ efforts to combat AIDS. She encouraged participants to build networks at Bamako and



to engage civil society as a strategy for success. Make a movement to empower advocates, she urged participants, and establish special programmes to teach them to be better advocates for global health research.

In the morning plenary on the last day, following the presentations, members of civil society in the audience asked pointed questions that triggered some animated responses. Several questions related to pharmaceutical companies and the request by an executive from one of the companies on the podium to recognize and engage industry as an essential partner. **Claudio Schuftan**, Member of the Steering Council, People's Health Movement, Viet Nam, rose from the audience to aim a question at industry. "Why *should* we trust you and forge a partnership?" he asked. "What new do you really have to offer to research that matters to the poor?... You ask us to work with you. No! *You* work with *us*! Perhaps a good style would be for Big Pharma to re-invest the huge windfall profits that they have had in the many years in the past" on matters that have benefits for the world's poor.

Other members of civil society spotlighted the need for developing countries to have more weight in framing the issues and setting their countries' agendas for research as well as more development of drugs within the developing countries. There were calls for more cooperation and collaboration between developed countries and developing countries. Still others echoed a common concern voiced during the conference about the brain drain. One member of the audience observed that retaining workers is one of the biggest problems. "People are happy to work, but if they are not recognized" for their work, they will leave and go somewhere else, he said.

Mark Feinberg, Vice-President, Medical Affairs and Policy, Merck & Co., USA, called attention to the specific role that industry plays globally in the research and manufacturing of products for health. Different people address different parts of the continuum of research for global health, he said. He called it "a moral obligation" to work for treatments of the world's poorest people. He listed drugs for river blindness, lymphatic filariasis, HIV/AIDS, malaria, hepatitis B and other diseases, all developed in high- or middle-income countries and available in the developing world or to organizations that work there. Many of these programmes are costly and sometimes the research is not successful in discovering new interventions, he said. For example, he explained there is no way that all

the investment in an HIV/AIDS vaccine will bring a profit on investment. However, he stressed that the commitment is there and innovations do lead to meeting the needs the world's poorest people.

Mark Walport also responded, saying that he was from an independent charitable foundation with no axe to grind, and wanted to make one point clear: "Blind ideological attacks have absolutely no value whatsoever." He acknowledged there needs to be more drug industrialization in developing countries but raised another question that was relevant: "Where do the drugs we have come from that are used to treat malaria?" It is industry that makes drugs, he said, and more clinical trials taking place in developing countries is not necessarily a bad thing. Referring to the discussion on the agendas, he said he did not believe countries set research agendas, but rather scientists do. It is the best researchers, those who come up with their own ideas, who are the drivers of research, he said.

"The time has come to move forward above and beyond where we are now, to serve the population that we are trying to serve."

Gill Samuels, Chair, Global Forum for Health Research, told the plenary that she had followed this discussion with a "degree of sadness." She pledged that the Global Forum would provide an effective platform within the coming year to bring together a constructive discussion engaging industry, civil society and research groups. "The time has come to move forward above and beyond where we are now, to serve the population that we are trying to serve," she said.





CHAPTER 2

ENABLING THOSE WHO NEED IT MOST



CHAPTER 2: ENABLING THOSE WHO NEED IT MOST

Throughout the Forum, there was an eagerness among many participants from low-income countries, and especially those within Africa, to seize the opportunity to learn more about research for health and to take control of determining their own priorities and research agendas. This vision was alluded to by President Touré's speech about the "culture of research for health in Africa," built on in the presentation of **Health Minister Oumar Ibrahim Touré** and then became strikingly clear with the contributions of African scientists such as **Ogobara Doumbo**, Chairman, Department of Epidemiology of Parasitic Diseases, Faculty of Medicine, Pharmacy and Dentistry, University of Bamako, and a noted malaria researcher. Doumbo lauded his government for its commitment to health research and expressed appreciation to the government for allowing researchers to be mobile, "to go to Geneva, for example" and then to be supported when they return home. Doumbo spoke out strongly for the reduction of "brain drain" through the establishment of good working conditions and an enabling environment for African researchers in their home countries. The PhDs that have returned to Mali from schools in the US or Europe have been able to send their children to schools in Mali for a good education. The numbers of returning researchers, Doumbo said, is creating a "critical mass" on which to build the House of Research. Others from Africa were sceptical their countries could do as well. One journalist from Benin, during the Media Day programme, called the Mali experience "amazing." He said that while there had been progress in his own country, more of its doctors were in France than in Benin.

"We all should be held accountable if, in another 10 years, we have not eradicated malaria."

Doumbo related his own experience in fighting the malaria health emergency in sub-Saharan Africa, where 80% of malaria deaths occur. In spite of recent progress, he said, a child dies every 30 minutes from malaria or its effects. Asked about the short-term strategies to deal with the disease that infects 300 million people a year, he cited three lines of immediate action: mosquito nets to prevent transmission of malaria, a combination of medicines for treatment of the disease and screening pregnant women to discover if they are carrying malaria. He also reminded the audience

that the conditions for the mosquito, *Anopheles gambiae*, were created by people; people should therefore be able to control them. Efforts to create a vaccine against malaria are moving forward, he added, and Mali is committed to doing clinical trials. He believes by 2015, it may be possible to have a vaccine that is effective 30-50% of the time against malaria. He said the real solution, however, lies in fixing health systems that have broken down. He told them: "We all should be held accountable if, in another 10 years, we have not eradicated malaria."

Asked by a local journalist why Mali's researchers are not clearly mentioned on the packages of medication, Doumbo replied that it was enough to take part in the discovery of new products, to contribute. There is no place for competition in malaria research, he told the journalist. "We have to work together for the population." Doumbo advocated going beyond the surface problems and embedding ethics in the everyday practice of health. Mali, he said, has a chance to have an impact on other developing countries and should seize that opportunity and set an example.

Mali's Malaria Research Training Center

The Malaria Research Training Center (MRTC) in Bamako was the focus of much attention during the conference, particularly by those eager to set up a similar centre in their home areas. The Center is dedicated to research on malaria and other vector-borne diseases and has three goals: to build capacities in areas of entomology, molecular biology and epidemiology; to research malaria control; to collaborate internationally on efforts to develop vaccines. It was set up in 1992, preceding by two years the founding of the University of Mali, which changed its name to the University of Bamako in 2000. The Center was established through collaboration between the staff of the Faculty of Medicine, Pharmacy and Odonto-Stomatology and the US National Institutes of Health (NIH), the Rockefeller Foundation and WHO. NIH remains the main supporter; current partners include the Ministry of Health of Mali, TDR, WHO, Institut Pasteur, the Gates Foundation and several universities in the USA, Europe and Africa. Ogobara Doumbo, the director of the MRTC, is also the head of the vaccine-testing programme that the Center runs with the NIH Laboratory of Parasitic Diseases. A staff of more than



50, nearly all from Mali, plans and carries out a programme aimed at developing strategies for the control of malaria; research is also underway on filariasis and leishmaniasis. From 1992-2008 the MRTC staff published, with their international collaborators, more than 240 peer-reviewed articles in highly regarded journals.

The Center was one of the first to develop a molecular biology unit in Africa, focussing on *Anopheles gambiae*, the main carrier of malaria in the region. There are 12 laboratory-based research groups, all led by Malian PhDs, each funded by research grants, an impressive collection of professionals that testifies to Doumbo's efforts to create a "critical mass." Many of the researchers have recently returned from studying in Europe or the US; they are required to return to Mali on a regular basis and not wait until they have finished their degrees. Doumbo credits the success of the Center to the decision of senior researchers to stay in the country and to the partnership with the government and other agencies that is built on mutual trust and respect.

Doumbo's goal is to reach more than 80% of the target population that is affected by malaria and he notes with pride that there have been no malaria deaths in areas where research projects are underway. One major concern is that there are not enough certified labs at the national, region and district levels, and all fever cases during transmission season tend to be diagnosed as malaria. This, he points out, leads to the wrong treatment for the patient, a higher cost to the family's budget and increased risk of creating drug resistance to the artemisinin-based combination therapy (ACT) used to treat malaria. Together with other scientists, the Malians have been able to map the disease burden of malaria and chloroquine resistance across the country and helped develop new ACTs. Great progress has been made since 1994, when traditional healers were still the main care providers for severe malaria cases in parts of the country, he said. Since then, there has been significant reduction in overall childhood mortality and dramatic reduction of malaria-specific mortality.

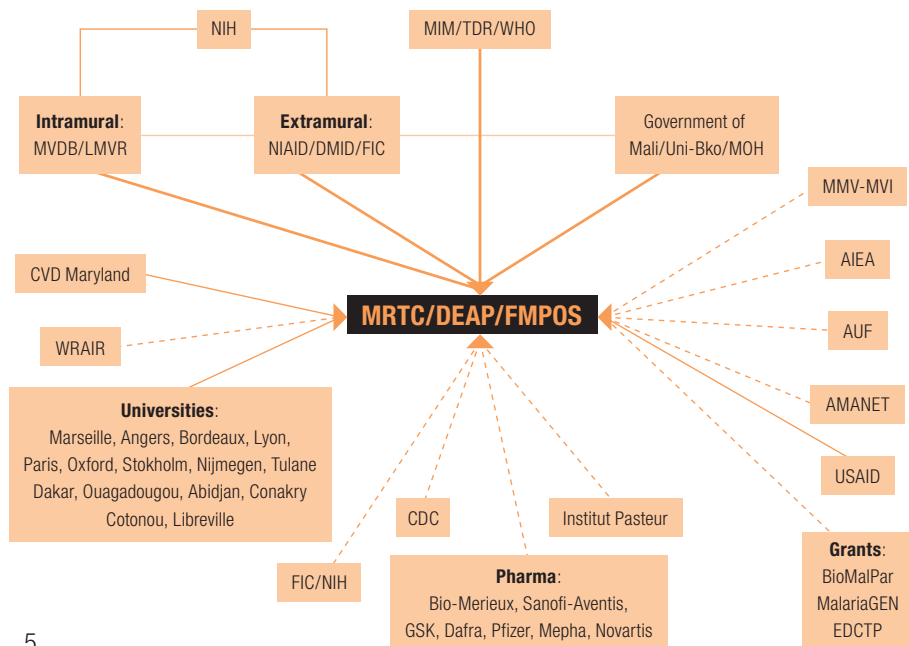
Illustrations 4 and 5

Organization of the Malaria Research and Training Center:
Created by the collaborative efforts of the staff of the Faculty of Medicine, Pharmacy and Odonto-Stomatology in Bamako, the National Institutes of Health in the US, the Rockefeller Foundation and WHO/TDR, MRTC conducts research on malaria and other tropical diseases. It now involves numerous universities and agencies throughout the world but its work is directed and executed by Malians.

Presented by Ogobara Doumbo on Media Day



4



5



Taking stock

Mali's success in some areas is even more outstanding given the background against which it takes place. While the MRTC and other facilities for health and agriculture may be considered centres of excellence in Mali, the vast majority of their funding comes from outside the country. The government of Mali allocates only 0.15% of GDP to health research. The Republic of Mali is generally ranked as one of the poorest countries in the world, listed at #175 on the UN's 2006 Human Development Index of 177 countries. It is a land where 65% of the area is desert or semi-desert and where life is hard for its 12.3 million people, the vast majority of whom work in agriculture. Male life expectancy is 48 years and female is 52, infant mortality claims 104 babies in every 1,000 live births and fertility is estimated at 7.4 children/woman. Only about 45% of the population is literate. GDP per capita in 2007 was \$1,100. The adult prevalence of HIV/AIDS in Mali is nearly 2% and the risk of major infectious diseases, including malaria, schistosomiasis, meningococcal meningitis, hepatitis and typhoid, has been very high.

In short, Mali is the kind of country that researchers had in mind when they gathered in May 2008 (at the instigation of the Alliance for Health Policy and Systems Research) to assess health policy and system research in low- and middle-income countries and trace the path of what has transpired since the Ministerial summit in Mexico in 2004. Their suggestions were voiced in Bamako during a session probing the path of developments since the Mexico. In "From Mexico to Mali: Taking stock of achievements in health policy and systems research," participants used Mali as an example to illustrate how to create new avenues of research on two fronts:

1. between Malian researchers working either within or outside of Mali;
2. between Malian researchers and researchers from other countries, located in Africa or beyond.

Much of the discussion in this session pertaining to Mali can also be applied to other countries. Speakers focussed on strengths that could be relied on and weaknesses that should be corrected. Among the strengths was the popularity among researchers of existing centres of excellence for research on health and food safety, the expanding information resources available in universities and scientific circles, and the opportunity provided for faculty and researchers to divide their time between teaching and

research in a two-prong career path. The improvement in ethical practices in biomedical research was also cited as a strength, as was the cutting-edge research currently being done on malaria and drug resistance, of great importance to Mali and other developing countries.

At the top of the list of weaknesses was the lack of trained scientists and the almost complete lack of funding of research for health from the country itself. The lack of international standards in many labs, mechanisms that are not performing well and failure to establish an effective coordinating agency were other weak points. The problem of "brain drain," the loss of educated and trained health personnel, came up in many sessions in Bamako and several speakers suggested potential ways to curb the loss of human capital. Foremost among these suggestions was making the local research environment more attractive so trained researchers and personnel would return to their home countries and stay. Brain drain has become a huge problem in combating disease in sub-Saharan Africa which, according to WHO, has 24% of the burden of disease and only 3% of the world's health workers.

Discussants commended the Malian government for recognizing the importance of research for health and making a commitment to it, noting that these are the first steps toward budgetary commitment and action. They recommended a decentralization of research, because currently everything is located in Bamako, as well as continued recruitment of young scientists, establishment of multidisciplinary teams and networks and creation of a national research agency that has high visibility and encourages interaction.

These recommendations are reflected in the *Bamako Call to Action*, which emphasizes a country-led approach, and global research for a health agenda "determined by national and regional agendas and priorities, with due attention to gender and equity considerations." It specifically urges funders of research and innovation and international development agencies to "better align and harmonize their funding and programmes to country research and innovation for health plans and strategies in line with the Paris Declaration on Aid Effectiveness." The *Communiqué* underscored the need for the research agenda for low- and middle-income countries (LMICs) to be driven by LMICs. "In many low-income countries, external funding supports the majority of domestic [funding for research], though external research priorities may not match local needs," it points



out. “Some of those countries have developed national research strategies and require development partners to adhere to these plans; this should be encouraged.”

Remember the MDGs

In Mexico City in 2004, the focus was on health research to achieve the Millennium Development Goals, agreed to by the UN Millennium Assembly in 2000 and the most ambitious commitment ever made to improve health of the world's poor. Of these, MDGs #4 to reduce child mortality, #5 to improve maternal health, and MDG #6 to combat HIV/AIDS, malaria and other diseases were of urgent concern. The participants in Bamako who reviewed the progress towards the MDGs noted that they remain an ambitious target and many countries have not yet taken steps towards research for health that will advance them to meeting the goals by 2015. Faced with the financial crisis on top of the other challenges, many participants commented that innovation and collaboration would probably offer the best hope for solutions.

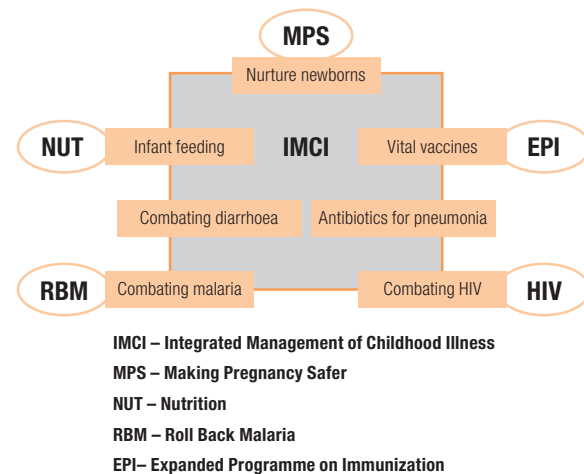
In Bamako, a special session on collaborative strategies to reach the goals of reducing child mortality and maternal health examined successful approaches used in Tanzania and India. In a presentation on maternal health financing, **Karaikurichi Ramani** of the Centre for Management of Health Services, Indian Institute of Management, India, said the major problem in working towards meeting MDGs #4 and #5 is not lack of funds but the inability to transform the funds into good quality services. It is particularly difficult in India, he said, because maternal indicators are poor: a large number of women are married before they are 18, they drop out of school early, the incidence of anaemia among women is high (55%) and about 70% of the population is rural and has little access to public health obstetricians.

In Tanzania, 157,100 children die every year from malnutrition and preventable diseases such as malaria and diarrhoea; more than one third of women in the country experience the death of a child. **Catherine Sanga**, Assistant Director, Reproductive and Child Health, Ministry of Health and Social Welfare, Tanzania, described a successful programme, Integrated Management of Childhood Illness (IMCI), which has reduced mortality and lowered the cost of health care per child in her country. Implemented between 1997 and 2002, it has been responsible for the dramatic increase in the number of health workers in many areas. Districts that

have implemented IMCI have trained health workers in case management and offer health systems support through drugs, vaccines and management. Sanga stated that IMCI has the potential to save the lives of 28,000 children a year in Tanzania and, despite the high maternal and infant mortality rate, may enable Tanzania to attain MDG #4 by 2015. Running parallel with IMCI are efforts to increase immunization, supplement diets with vitamin A and zinc and to distribute bednets. The major challenges are the slow progress in decreasing neonatal mortality rates and achieving a further decrease in maternal mortality rates, both due in a large part to the fact that 54% of deliveries take place at home and the number of skilled health workers is inadequate.

Collaboration between India and Tanzania on how the two countries can learn from each other by reviewing each other's national programmes was a major theme in the presentation. It reflected a objective that ran through the Forum in Bamako: how developing countries can help themselves and each other.

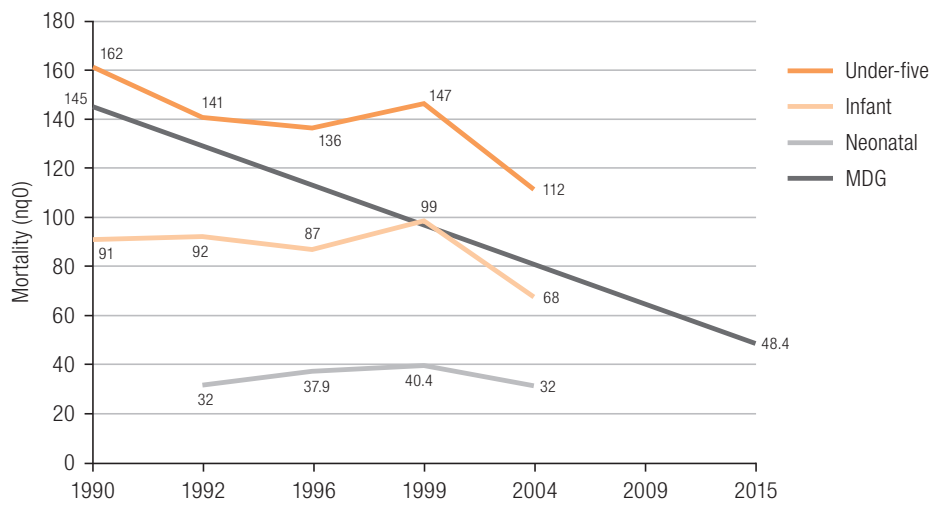
Illustration 6: IMCI is a key delivery strategy



Presented by Catherine Sanga in the session “Collaborative strategies to reach Millennium Development Goals 4 and 5: successful examples for maternal and child health”



Illustration 7: Progress towards attaining MDG 4



An improvement of 24% in under 5 mortality represents **39,200 fewer child deaths per year in Tanzania**

Presented by Catherine Sanga in the session "Collaborative strategies to reach Millennium Development Goals 4 and 5: successful examples for maternal and child health"





CHAPTER 3

BUILDING CAPACITY, STRENGTHENING SYSTEMS



CHAPTER 3: BUILDING CAPACITY, STRENGTHENING SYSTEMS

“Low-income countries need a cadre of people who can ask their own questions and can develop the tools to address them.”

Hannah Akuffo, Research Director, Department for Research Cooperation (SAREC), Swedish International Development Cooperation Agency, called for an alignment of efforts and the development of clear strategies that will allow donors and funders to maximize their impact on research for health. She said this would reduce fragmentation and, above all, “to do no harm” to partner country institutions. But it was her next statement that brought applause from the plenary audience: “Low-income countries need a cadre of people who can ask their own questions and can develop the tools to address them.”

She listed four important attributes of a national research capacity:

- ◆ commitment to research
- ◆ the capacity to generate one’s own knowledge and utilize it
- ◆ establishment of a culture of inquiry
- ◆ the ability to produce agents of change.

Akuffo referred to the Paris Declaration’s provisions for harmonization, alignment and coherence in support of research. It highlights the need for research through developing a knowledge base and expertise for countries to analyse, formulate, negotiate, implement and evaluate their own development agenda. These are functions that are often performed by external consultants provided by donors. Partnerships with other countries could help harmonize the agenda, she suggested, and good strategies will strengthen it. Coherence should be seen as an attempt to assist the process, not undermine efforts or projects of fragile partner institutions. She cautioned that ownership should not be overlooked; issues of relevance in low-income countries must connect with the funding of donor organizations. “Can low-income countries afford *not* to make decisions based on evidence relevant to the specific environments for health research?” she asked. “Considering the dynamic circumstances the world is in, including climate change, can countries be content with old research results from other situations?” She followed

those questions with many others that should be asked by funders and governments.

She referred to an outline of a strategy, established in April 2008, for funders to support research capacity for health: ESSENCE or Enhancing Support for Strengthening the Effectiveness of National Capacity Efforts. This is a collaborative framework between funding agencies that provides synergism to address research capacity needs, she explained. It aims to improve the impact of investment in institutions and mechanisms that address the needs and priorities within national strategies on research for health. It is open to all funders, bilateral development agencies, philanthropists and charities that support research capacity in low-income countries in Africa.

Another perspective was heard from **Keizo Takemi**, Senior Fellow at the Japan Center for International Exchange. He told the opening plenary that the Japanese Government views research for health through a broad approach to human security. This incorporates protection of the country’s people and the economy, he said, and must be followed through many sectors, beginning with the ministers of health and finance, extending to implementation agencies and the private sector. He endorsed a people-centred, community-driven approach linked to health-system strengthening. He said countries should not focus on a top-down or bottom-up approach but on one in which people are the most important consideration. The question for each country is how to utilize resources in the most efficient way. He listed three key challenges nations face:

- ◆ recognizing that a ‘cookie-cutter’ approach doesn’t work
- ◆ creating regional centres of excellence
- ◆ clarifying and strengthening the role of WHO.

He emphasized the importance of keeping up the momentum on research for health, an endeavour that Japan led as host of the G8 during 2008. Planning should be underway and a sustainable scheme should be in place when leadership of the G8 passes to Italy in 2009, said Takemi.

Capacity for an appropriate purpose

Across a wide courtyard from the main convention centre, in the Salle Ovale of another building, the ministerial



discussions in Bamako reviewed the history of global cooperation in research for health, received reports and listened to recommendations. Each day, experts from various fields crossed the courtyard and made special presentations to the ministers, giving their input on a number of issues. It was here that the draft of the *Bamako Call to Action* was discussed and modified before being presented to participants in the closing plenary of the Global Ministerial Forum.

“People often talk about building capacity, but capacity is not an abstract thing.”

Robert Ridley, Director, UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR), presented the ministers in the Salle Ovale with a view of the research continuum and suggestions for the path to capacity building. The steps he outlined were based on improved knowledge and the tools that led to interventions and, ultimately, to strategies. These, he said, combine to result in an impact on public health. One of the challenges he described is how to link up the different disciplines for a smooth transition in capacity building. Ridley traced developments from 1970 to 2008, with particular attention to the ministerial discussions in Bangkok and Mexico that led to Bamako, all during a period of increasingly rapid developments. Priority-setting, the determination and ranking of what is needed to be done to give a sense of direction, was the first of the research elements that came out of the Global Strategy and Plan of Action, an intergovernmental working group of the World Health Assembly, in 2008, Ridley said. He commented that several countries have had good experience in priority-setting, and it is critical for governments to assure uptake of the priorities. The next element listed in the Global Strategy and Plan of Action is building capacity. “People often talk about building capacity, but capacity is not an abstract thing,” Ridley said. “Capacity is only useful if it is being utilized for an appropriate purpose.” Research capacity can ultimately empower countries, both in terms of its impact on health and by strengthening its economy. Excellence in research results when ethics, standards and quality are applied and good practice is developed, he added. The interface between research, on the one hand, and policy and action, on the other, is critical; the dialogue between researchers and policy-makers makes it possible for researchers to do appropriate research and for policy-makers to be aware of how the research is being done.

He pointed also to how capacity and research system development require long-term political and financial commitment and have strong links with education. National capacity is required to set national agendas, and then to inform and respond to an international or global agenda. Partnerships and networking are important at all levels. Many of the highlights presented by Ridley to the ministers were, at the same time, echoing through session discussion groups across the courtyard in the convention centre.

“Capacity is only useful if it is being utilized for an appropriate purpose.”

Illustration 8



Presented by Robert Ridley to the Ministerial Forum discussions

Asked to list high priorities for research, Ridley responded that developing countries need to decide *what kind of products of research* they want to receive, both from their own research and from international research. Good research in developing countries would facilitate a dialogue, he said, leading to more equal discussion between North and South about research priorities. He added that *a strong sense of national ownership* of research is needed but it should also be understood that science research is international by its nature. He urged countries to recognize their own expertise and its value and then to make a political commitment at a top level.

The comment about ownership triggered a response from several ministers about lack of ownership that many countries have over international research institutes established on their soil. One emphasized that ownership also extends to capacity. “At the end of the day, capacity is also owned, you drive it and harness an agenda,” he said. Another added that leaders must establish a favourable



environment for work so that researchers trained abroad would want to return to their home countries.

Paulo Buss, President of the Oswaldo Cruz Foundation, Brazil, suggested that cooperation between institutions is needed and cited examples of how the Pasteur Institute and institutes in Canada and the USA have strong programmes that could help other countries build their own capacities.

Alexander Ochem, a scientist with the International Centre for Genetic Engineering and Biotechnology, South Africa, told ministers that effective capacity building means having funding, especially “scientifically indigenous funding.” The reason for poor funding, he said, is that often the funds are misappropriated. He advocated reaching out, instead of being narrowly local, and joining an African network with regional and local coordinates. A virtual network could fill the gap, he said.

In the discussion that followed, a representative from Sweden proposed creation of regional funds that would reflect a greater commitment from the South and add more equity to the North/South equation. She also endorsed better regional cooperation and the need for networks. These, she said, would provide greater sustainability in the long run.

Andrew Kitua, Director-General of the National Institute for Medical Research, Tanzania, was clear in his view. “It’s high time to forget and stop the old approach, whereby institutions are built by others from outside,” he said. It is important to enable ownership of the agenda, he told ministers. He favours a national agenda so funds outside the ministries of health, science and technology, can also be tapped. A national agenda will feed into a regional agenda that then will contribute to a global agenda, he said.

Other representatives of developing countries acknowledged the importance for nations to fund research themselves but pointed out that it is simply not possible for some countries to contribute anywhere near 2% of their health budgets to research. Is it possible, one asked, for outside agencies to jump-start the process, so developing countries could later take over? Another suggested politely that the “august body” should think about the possibility of a debt write-off for developing countries that would enable more funds to be used for research.

If there was frustration felt by ministers from developing countries, there was also impatience voiced by delegations from richer countries at the slow pace towards action.

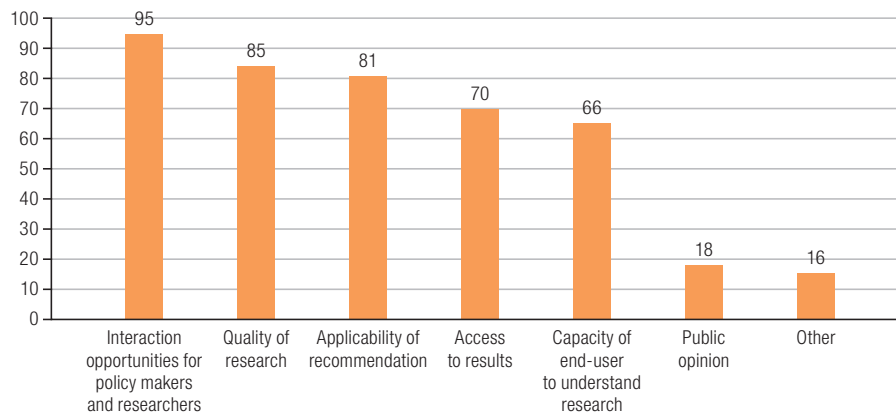
Calling health products “true global public goods,” a representative of the Norwegian delegation bluntly told his colleagues that he believed there were too many boards, structures and papers being debated, too many resources wasted in meetings. More action is needed, he said, and “in view of the financial crisis, we need to do it *now*.” He proposed inclusion in the Call to Action of a demand for alignment and coordination in building research capacity locally and regionally, so action could be taken quickly and efficiently.

The proposal was supported by the United Kingdom’s representative, who also asked: “Why are we not picking up the action plan from the Algiers Declaration?” She emphasized the great need for simplifying the complexity they were encountering. “It is expensive, it does not allow focus and flexibility in a way we need, we do not have a nimble international architecture, it doesn’t deliver value for money to those who are funders, let alone those who wish to receive the funds,” she said. She proposed an additional amendment for streamlining the WHO research strategy to align it with the research structures in government, action that is particularly critical during the current financial climate.

“We need research that stops health systems from making people poor and killing them.”

Discussion of capacity-building continued throughout the three-day meeting. On the last day, **Martin McKee**, Professor of European Public Health, European Observatory on Health Systems and Policies, WHO Regional Office for Europe, London, highlighted it again. He quoted Hannah Akuffo’s earlier comments: “Countries may not need a national airline, but they do need a national research capacity.” This, McKee said, had resonated because he had worked in countries of the former Soviet Union, most of which, he pointed out, were absent from the Forum. While some of those countries do have national airlines, they lack a national research strategy, he said. “Where do we go when we have nothing to build on?” he asked. “What do we do in countries where the governments are, at best, disinterested in the health of their people and, at worse, hostile to it?” Another question, which McKee said was many times at the heart of the problem, is “How can we allow young researchers to thrive and prosper without having to leave the country?” To address these and other



Illustration 9: Findings – Factors affecting impact of research

Sources: *Study on research For Health and Health Systems Strengthening Murugi, J; de Haan, S; Wyss, K; Matthys, B. Swiss Tropical Institute (STI). Swiss Agency for Development and Cooperation (SDC), Council On Health Research for Development (COHRED).*

Presented by Michael Devlin in the session "Research for health and health systems strengthening"

questions, McKee suggested keeping a simple goal in mind: "We need research that stops health systems from making people poor and killing them."

Towards a framework of research priorities

A large crowd attended the session discussing research for health and health system strengthening in Africa. The key messages concentrated on building effective strategies and the need for strong political and financial support.

Jane Julie Murugi Guiton, Research Officer, Council on Health Research for Development (COHRED), Switzerland described interactions between policy-makers and researchers as the key to facilitating research impact, but said the interface is often weak. Researchers and policy-makers view the world differently, she stressed; research is often perceived as irrelevant to policy-making. Researchers need to communicate better and in more creative ways with clear, concise messages, she advised.

Examples from African countries illustrated a need for better research capacity, implementation of research and access to information. They also provided some striking successes. **Nelson Sewankambo**, Dean of the Medical School at Makerere University, Uganda, examined how a single study in Uganda produced evidence that one dose of a drug to each mother and newborn child could decrease HIV transmission by 40%. Within two years, he said, use of that one drug became a national policy. He explained that this came at a time when HIV/AIDS was high

on the agenda in Uganda and policy-makers viewed the intervention as affordable and effective. Researchers, he added, championed the use of the drug and had teamed up with government to widely disseminate the results of the study. Even though the drug manufacturer promised that the drug would be free, however, the programme was not as effective as anticipated because only 40% of women in Uganda deliver their babies in health units. "Uganda still grapples today with this problem," Sewankambo said. "How do we make sure women have access to this intervention?"

He contrasted that success of discovery of an effective intervention with another in Kenya, Uganda and South Africa. Three clinical trials all pointed in the same direction: that circumcision could reduce the transmission of HIV. However, no policy regarding circumcision has been set in place in Uganda, Sewankambo said, because there has been no support from the highest levels of policy-makers.

Suggestions from **Augusto Paulo José Silva**, Permanent Secretary, Ministry of Public Health, Guinea Bissau, speaking in the same session, included:

- ◆ recognizing that the best implementation policy is a national health policy;
- ◆ improving the link from information to policy at the ministerial level;
- ◆ facilitating access to information, especially that in scientific journals.

Carel IJsselmuiden, Director of the Council on Health Research for Development (COHRED), Switzerland,



pointed out at the beginning of the Bamako Forum that his organization's contribution to the conference would focus on the capacity that is already in Africa and other developing regions "to strengthen it in such a way that it becomes part of priority-setting project." Particularly in sub-Saharan Africa, almost all funding for research comes from external sources to the budget, he said. In Mali, he said, NIH had funded the centres of excellence and, as a consequence, a foreign budget sets the priorities of what kind of research is done.

By and large, he said, 90% of research in Africa goes to HIV/AIDS, TB and malaria. To move from health research to research for health, IJsselmuiden advised going beyond those three diseases to research on hypertension, diarrhoea, environmental health and other areas that do not receive funding from international sources. For example, in Uganda, he said most researchers spend their time on research for which funding is predetermined by donor agendas, arrives directly from them and is not necessarily linked to the problems affecting all segments of the population. Ugandan researchers therefore do not work on other urgent problems such as childhood diarrhoea, pneumonia, old age and chronic diseases. "So we believe very strongly that a strong national capacity at the Ministry of Health, at the Ministry of Science and Technology, at the Ministry of Education needs to be there in order to help shape the national health priorities and an agenda for research."

He underscored the importance of the Paris Declaration on Aid Effectiveness which, he said, is not just a guide on just what *kind* of research is done, but on the *way* it is done – approaches that are designed to strengthen the national ability to govern research. The Declaration encourages better alignment and engagement between research donors, on the one hand, and the countries they aid, on the other.

In his closing statement, IJsselmuiden had two ideas he said he wanted to float: a new focus on pro-poor research in-country; and the transfer of solutions from Northern Africa to be applied to problems in Southern Africa. He also raised the possibility of forming of a Pan African organization that could give more emphasis to regional problems and share information among countries. Referring to the *Call to Action*, IJsselmuiden expressed the hope that by the next ministerial summit, the discussion will no longer be about research for the world's poorest nations but research by them, for themselves.

Richard Nchabi Kamwi, Minister of Health and Social Services of Namibia, chaired a roundtable discussion on research for health systems development whose objective was to come up with priorities that would build efficient, equitable and sustainable health systems. The discussants looked at human resources and the need to identify what works in specific contexts and the need to 'sell' this evidence to policy- and decision-makers in those contexts. They also examined the need to identify what might be generic and transferable from one context to another. The group discussed the migration of health workers and how countries might benefit from, or compensate for, that phenomenon.

One group of roundtable participants listed another priority: the involvement of the private sector in health systems and its impact on access to health for the world's most vulnerable. Discussants in another group agreed that more research is also needed to understand the views of communities on what is meant by "equitable and universal" access – and what it costs to achieve that by using different definitions. They confirmed the need for cross-country research on long-term experiences in achieving universal access to health care, especially examining the success or failure of providing services free in low-income settings. They considered disease-specific programmes and how globally funded initiatives (GHIs) interact with health systems in different countries. There is a need, they found, to ensure that the GHIs support the core functions of health systems and primary care at different levels.

Badara Samb, Adviser to the Assistant Director-General, Health Systems and Services, WHO, Geneva, stressed the urgent need for the implementation of a comprehensive evidence-based framework to ensure that mutual threats are recognized and avoided, and that positive synergies are built. Kamwi added that there is also the need to improve coordination at a national level in order to avoid sending mixed messages through programmes with different funding mechanisms.

Among other priorities they cited was the need to assess the effects of global and regional policies on current health systems. They agreed that specific research priorities be set at a national level, coordinated by ministries of health. Further research was advocated on the wider determinants of health, including ways to protect vulnerable people from impoverishment due to the cost of health care. The group looked at cross-cutting issues concerned with community participation in research. **David Saunders**, Director of the



School of Public Health, University of the Western Cape, South Africa, stressed the need for more participatory health systems research as a powerful tool in ensuring successful implementation of efficacious interventions. Addressing power relationships was also discussed. Doctors, research has shown, are often seen as arrogant and out of touch with the people they treat. The discussants wondered whether research might be viewed the same way; they suggested paying more attention to changing this perception. They concluded that there is a need to demystify research so it is not seen as simply an academic activity but one from which the people in communities will benefit.

e-health and knowledge gaps

Archbishop Emeritus of Cape Town **Desmond Tutu**, Nobel Peace Prize laureate, delivered a special video message from South Africa, endorsing the potential of e-health technology, which he called “an extraordinary and exciting development” with the potential to reach people outside traditional health care systems. Thirty years after Alma Ata, universal health care is still a dream, Tutu said. “Every single day 30,000 children die of preventable disease. These children die needlessly because care, if it exists, is often substandard and critical health information is buried in medical files.” He lamented the shortage of 1.7 million care providers in Africa, a reality he had observed while working with society’s most vulnerable on a continent that is home to one-third of the world’s poorest people. “A radical solution for better health is needed, and it is needed *now*,” he emphasized. He listed e-health tools that could be used in every part of the world: electronic health records, information-gathering software and mobile devices that could be held in the palm of a hand. Donors, government, industry researchers and civil society can all play a vital part in the change, Tutu said. The e-health proposal grew out of a Rockefeller Foundation initiative launched earlier in 2008. In addition to knowledge-sharing, it offers software especially adapted to train health workers. Tutu said he believes e-health can offer “a new paradigm to fight disease, poverty and the challenges inherent in a globally interlinked world.” It is a great equalizer between rich and poor, he said, and may help South Africa and other developing nations in making “the quantum leap from neglected to truly thriving health systems.”

While e-health may have been among the more innovative of the suggestions, there were many other ideas put

forward on ways to fill knowledge gaps. **Kamran Lankarani**, Minister of Health and Medical Education of the Islamic Republic of Iran, said the current challenge for those countries with innovation already in place is to reach out to more low-income countries. He advocated a more open innovation model, one that includes networking and sharing, and that “honours the dignity of every human being.” Innovation should not be exclusively applied to technology, he continued, it is also needed in health policy to support more equitable solutions. Those who most need help are the least likely to get it, he reflected, and pointed out that even within one country there are huge differences between the poorest and richest sectors of society. He suggested creating a strategic framework to tackle the underlying causes of inequity, with better decisions made by “the many, not the few.” It is possible to develop national health innovation road maps that include knowledge transfer and translation, Lankarani affirmed, but a change of emphasis is needed. The emphasis has been on saving banks, not people, he said – and the plenary session burst into applause.

Luis Sambo also focussed on the knowledge gap, saying weak health information systems limit the use of research in decision-making. Added to this, he said, is the human resource crisis in Africa, where many experts and specialists who have been trained abroad continue to live outside the continent. He foresaw two very important steps: for national governments to commit more resources to health research, and for new partnerships to be formed within and among countries.





CHAPTER 4

THE ENTWINING PROBLEMS OF CLIMATE, FOOD, DISEASE



CHAPTER 4: THE ENTWINING PROBLEMS OF CLIMATE, FOOD, DISEASE

Climate change, food and water security and the challenges of transboundary diseases received considerable attention in parallel sessions at Bamako, as did pandemics, infectious diseases and antibiotic resistance. Participants got a first-hand explanation of how entwined many of the health problems and consequences are, as well as the potential of innovative approaches to combat them. There were repeated and urgent calls for multi-sectoral, national, regional and global responses. There had been concern that two global agendas might emerge among researchers: one for climate change adaptation and mitigation, another for public health. However, efforts in Bamako largely focussed on establishing agendas linking the two areas, with an emphasis on finding common solutions through research for health.

Climate change has risen to a place among major global concerns. UN Secretary General Ban Ki-Moon, addressing the UN Climate Change Conference in December 2007, was bluntly outspoken about its importance: "Today we are at a crossroads, one path leading towards a comprehensive new climate agreement, and the other towards oblivion." WHO Director-General Margaret Chan has been adamant that climate change endangers global health in fundamental ways and believes developing countries and small island nations will be the hardest hit. Among the grave dangers to health are an increase in malnutrition and infectious disease. Chan has reported that malnutrition was responsible for 3.5 million deaths in 2007 and, by 2020, crop yields are expected to drop by 50% in some African countries. At Bamako, concerns were understandably high.

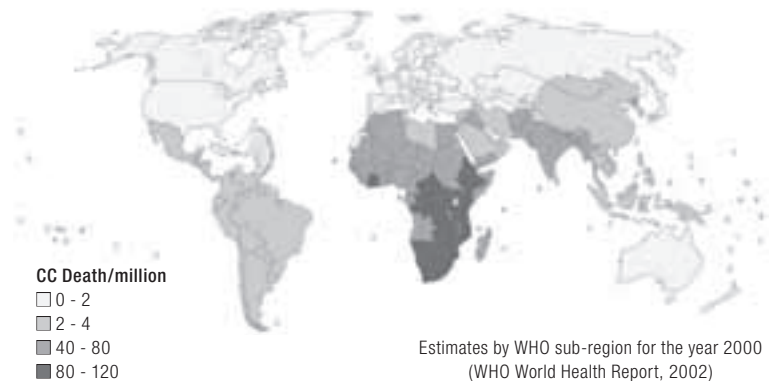
Saqib Shahab, Public Health Physician, Community Medicine Programme, University of Alberta, Canada, suggested to a parallel session that it is necessary to identify common aspects in climate change and public health research to decide how integrating the fields can have a synergistic impact. He commented that the "10/90 gap" in research and intervention in public health also extends to the areas of climate change;

he stressed that it is critical for developing countries to do research in this area. "The vast majority of current and future mortality [from climate change] is going to be in low-income countries," Shahab said, affirming what others have also predicted. He suggested innovative strategies be employed for research in climate change *and* public health. He endorsed a convergence of public health promotion and climate change mitigation/adaptation strategies, along with partnering among a wide variety of stakeholders. He also advocated a multidisciplinary approach to climate change research, one that is applicable to local contexts and sustainable.

"Most research relating to climate change and health conducted to date has been financed and conducted in high-income countries and has paid little attention to the particular health needs of low- and middle-income countries."

Shahab was one of the authors of *Strengthening the Base: Preparing Health Research for Climate Change*, published by the Global Forum for Health Research on World Health Day, 7 April 2008. It called urgently for research on ways to protect the health of the world's poorest populations from the effects of climate change. The report pointed out: "Most research relating to climate change and health conducted to date has been financed and conducted in high-income

Illustration 10: An unequal burden – mortality from climate change



Presented by Saqib Shahab in the session "Climate change and health"



countries and has paid little attention to the particular health needs of low- and middle-income countries.”

Urgent public health steps are required *now*, Shahab said, and listed priorities:

- ◆ protection and assurance of water supplies and sanitation;
- ◆ control for vector-borne diseases;
- ◆ health education and promotion, especially related to thermal stress;
- ◆ inter-sectoral approaches for improving environment, food security and alleviating poverty.

A pragmatic approach, he suggested, is to invest in public health now and climate change adaptation and mitigation for the future.

Madeleine Thomson, Senior Research Scientist and Chair, Africa Regional Programme Committee, International Research Institute for Climate and Society, The Earth Institute, Columbia University, USA, argued that the health sector needs to be ‘climate smart’ in order to effectively engage in both the mitigation and adaptation discussions. To achieve this goal, she said, two things are needed: high value climate information, and a health community able to understand, use and request the appropriate climate data and services.

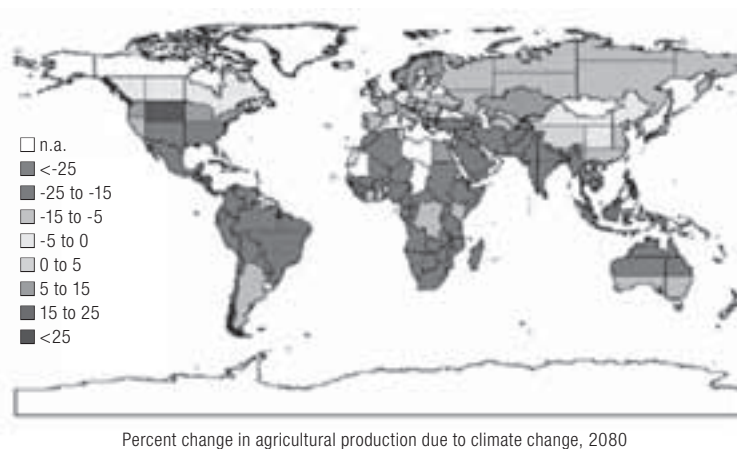
Maria Neira, Director, Public Health and Environment, WHO, Geneva, explained that while research on health and climate change is increasing rapidly, it still lags far behind other traditional risk factors for health. The number of scientific journal publications on air pollution and health is eight times greater than those on climate change and health, she said, and the number of publications on smoking and health number 40 times more over the period since 1990. What is needed, she stated, is improved evaluation of current climate-related health risks and less emphasis on long-term predictions. More focus is also needed on what are likely to be important outcomes, such as malnutrition, she said. Identification of sensitive populations and life stages is important, as well as measurement of the fraction of morbidity/mortality attributable to climate hazards. Neira explained it is also necessary to assess the impact climate change has on existing interventions. For

example, hand washing, an intervention against diarrhoea, may be compromised by water shortages resulting from droughts caused by climate change. She stressed it is urgent to move forward on the recently agreed research agenda on climate and health as defined by WHO and partners in Madrid in October 2008.

Yewande Aramide Awe, Senior Environmental Engineer, Environmental Health Group, Environment Department, World Bank, Washington DC, described how the impact of climate change on agriculture will challenge the availability of food and affect the nutrition of people in the poorest countries. WHO experts say half of the consequences of malnutrition are attributable to environmental issues, especially poor water, sanitation and hygiene. Climate change is projected to worsen the disease burden in many areas and especially increase deaths from malaria, diarrhoea and acute respiratory infections. Awe quoted a World Bank 2008 study showing that the economic impact of environmental factors on malnutrition, cognitive development and education may lower a country’s GDP by as much as 9% in sub-Saharan Africa or South Asia.

Research has also shown that a self-reinforcing cycle exists between poor nutrition and infection. Malnourished children also tend to have poorer cognitive and learning abilities as they grow older. As in so many other situations, the cost will be borne mostly by the poor, with children under five in sub-Saharan Africa suffering the most. Preventive actions that have multiplier effects were highlighted, e.g. improved sanitation and hygiene, provision of clean water.

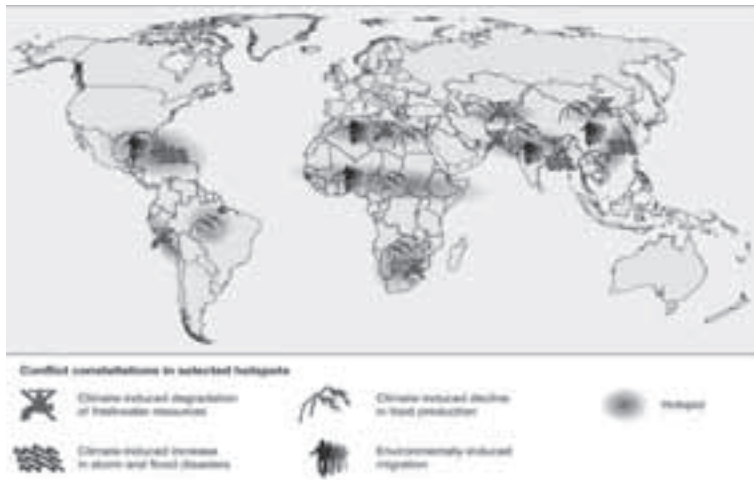
Illustration 11: Climate change will reduce production growth in many of the poorest countries and regions



Source: Cline 2007

Presented by Yewande Aramide Awe in the session “Climate change and health”

Illustration 12: In hotspots, reduced food availability is coupled with increased likelihood of infection as water becomes scarcer



Presented by Yewande Aramide Awe in the session "Climate change and health"

Awe said for every death prevented by environmental health intervention, additional deaths from diseases could also be averted.

The presentation proposed research efforts to be directed toward improving data quality, availability and analysis in developing countries. Collaboration on research across multiple sectors such as agriculture, health and the environment was recommended, as was better analysis of health impacts of climate change, particularly those related to human nutrition.

A need for collaboration with agriculture

"We know that the poor spend 50% to 70% of their income on food and therefore, if the food price increases, they are immediately affected."

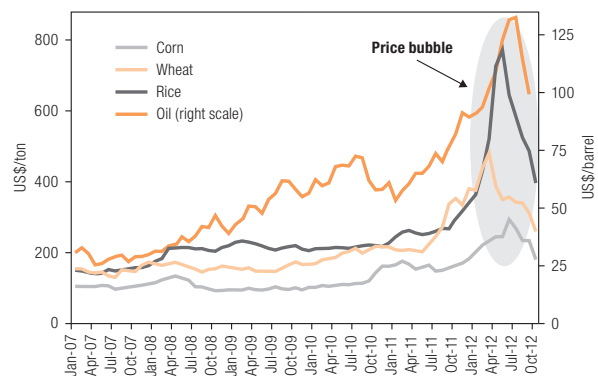
In Mali and many other developing countries, the primary source of livelihood comes from agriculture, a sector vulnerable to the effects of climate change and to global financial fluctuations. The people in these countries are also among the world's poorest and those most vulnerable to ill health. **Marie Ruel**, Division Director, Food Consumption and Nutrition Division, International Food Policy Research Institute, USA, called attention to the unprecedented increases in the prices of corn, wheat, rice and oil in 2007-2008. The price jump in cereals,

the staple of many of the world's poor, presents a life-threatening dilemma to people already malnourished, she said, and quoted statistics showing the number of people who are malnourished increased from 848 million in 2003-2005 to 923 million in 2007. "We know that the poor spend 50% to 70% of their income on food and therefore, if the food price increases, they are immediately affected," said Ruel. Price increases in food are the result of rising prices of energy and biofuels, climate shocks such as floods and drought, global market and trade policies, speculation and market crises and low investment in agriculture. All of this has been compounded by the current

global financial crisis, she said. "The bottom line is that we need to see more collaboration between the agriculture and health sector."

She described some health impacts that appear quickly: a 50% increase in the price of food in Bangladesh results in a 25% increase in anaemia in women and children, Ruel said. Other impacts are only seen later because it takes time to capture the damage that occurs and individual families deal differently with the scarcity of food. Some effects are irreversible and far-reaching: for example, the withdrawal of girls from school and the selling of a family's productive assets, both of which occur in times of crisis. "In the short term, there is an impact in poverty but also the next generation will also be affected."

Illustration 13: Food price bubble, 2007-08



Source: Data from FAO 2008 and IMF 2008.

Presented by Marie Ruel in the session "Food security, agriculture and nutrition"



Ruel listed “win-win” solutions, including biofortification of food, homestead food production and local procurement of food assistance through creation of markets for small farmers. She suggested ways of strengthening links between agriculture and health that look beyond traditional approaches, and listed four avenues to pursue to get the research agenda implemented, presented to drafters of the *Bamako Call to Action*:

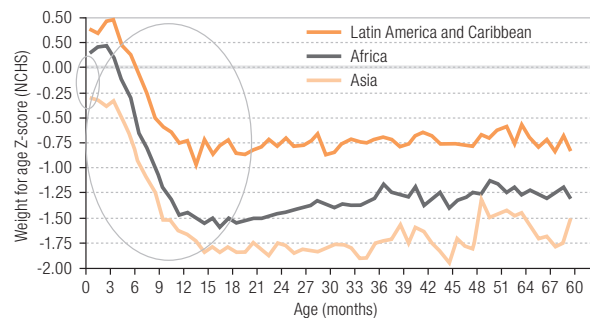
- ◆ formulate policies that create incentives for intersectoral collaboration and benefit more than one sector;
- ◆ employ bi- and multi-sectoral policy reviews for new policies in support of cooperation;
- ◆ use health impact assessments to monitor health impacts of new agricultural projects and technologies;
- ◆ trace food-agriculture health links along the food value chain to search for critical control points.

Menno Mulder-Sibanda, Senior Nutrition Specialist for Africa, World Bank, Washington DC, approached the subject of nutrition as an investment issue and a driver of economic growth. Malnutrition, he said, can account for losses of between 2%-3% to GDP and may lead to a potential reduction in lifetime earnings of at least 10% for each malnourished individual. Long term, studies have shown that malnutrition is linked to smaller adults, and lower school attendance and performance. Nutrition is one of the targets listed under the Millennium Development Goal #1, to eradicate extreme poverty and hunger, and he said that most developing countries are “off track” in efforts to address it. Mulder-Sibanda also pointed out that 40% of countries don’t even have data on nutrition and of the other 60%, only one-third are “more or less on target” to meet the MDG goal. The immediate causes of malnutrition are dietary intake but it is an issue that is closely linked with health and care, he said.

“What it all leads to is we have to focus on the window of opportunity for improving nutrition, a very small window, the window from pregnancy through the first two years of a child’s life,” he said. It is during this period that most functional development takes place, including brain development, he explained. “Indeed, impaired cognitive development is an impairment for life,” he said.

“We know we can afford it. Investment in nutrition is one of the world’s best investments.”

Illustration 14: The “Window for Opportunity” is very small : from pre-pregnancy to 18-24 months of age



Presented by Menno Mulder-Sibanda in the session “Food security, agriculture and nutrition”

Showing a slide of how many of the world’s health problems are compounded by malnutrition, he said: “We know we can afford it. Investment in nutrition is one of the world’s best investments.” He suggested a better balance between short- and long- term interventions and scaling up interventions in a sustainable way. He called for new research on government policies for nutrition, incentives to push the subject higher on agenda and then hold policy-makers accountable for incorporating it into a framework.

In the question period following the discussion on food for health, **Amadou Diallo**, Mali’s Minister of the Environment, endorsed biofortification as “a new concept not dealt with enough” and asked the panellists to talk more about it. Biotechnology and biofortification are limited in scope in Africa because so few people know about them, he said. He also asked about country regulations on wastewater use and how they are enforced. Others asked questions and underscored the need for sharing best practices, especially in Africa.

The impact of good nutrition on illness surfaced in a number of presentations, often in connection with how malnourished people are more vulnerable to infection. **Robert Ochai**, Executive Director, The AIDS Support Organization, Uganda, reflecting on the various elements that contribute to HIV infection, said vulnerability is a result of “multiple entwined processes,” and that a key one is food insecurity. Malnutrition compromises the efficacy of treatment and is clearly linked to mortality. Additionally, food insecurity for the entire family deteriorates when an adult family member is chronically ill with HIV and AIDS, he said. He acknowledged that while not all the information about nutrition security is known, action should not be delayed. “Evidence on the effectiveness of



some interventions is still weak, however, due to the great need, we have to build the boat while sailing, we can not afford to wait for all the answers,” he said.

“Evidence on the effectiveness of some interventions is still weak, however, due to the great need, we have to build the boat while sailing, we can not afford to wait for all the answers.”

A perspective on another area of health research and agriculture came from **Robert Bos**, Scientist, Public Health and Environment, WHO, Geneva. Fresh water resources are becoming scarce, he observed, and an increasing number of farmers are turning to using waste water and grey water in agriculture. Without effective risk assessment and management, this use presents important health hazards. The people who work with waste water are exposed; they also carry elements of disease with them. He estimated that 10% of the world’s population consumes waste-water irrigated foods; 20 million hectares in 50 countries are irrigated with raw or partially treated waste water. However it is not fully known, Bos said, the extent to which waste water and excreta are used in agriculture. He described a risk management approach to assure the most cost-effective implementation of measures along the chain from waste generation to produce consumption. The approach would also recognize the value of waste water as a resource and source of nutrients to support agricultural production. Monitoring waste water to assess microbial targets is critical, he emphasized. He reported that current research is underway on non-treatment options for the safe use of waste water in low-income communities. The research agenda calls for health and economic impact assessments to attribute the burden of disease to specific components in the production and consumption of waste water. It also focuses on communicable diseases and nutrition and includes evaluation of governance mechanisms for sustainable sanitation design and operation.

Climate change in public health planning

Policy-makers do not have to wait for perfect data to take action, stated **Rainer Sauerborn**, Director and Chair, Department of Tropical Hygiene and Public Health, University of Heidelberg, Germany. There is enough

evidence to identify key climate-sensitive diseases and conditions as well as the areas most likely to be affected, he said. Policy-makers can incorporate climate change impacts into public health planning through policies that promote prevention of disease and mortality and through early detection of climate change events and their health impacts.

Sauerborn cited the ‘precautionary principle’ of the Intergovernmental Panel on Climate Change, which argues for policies to be designed, budgeted, implemented and evaluated even in the absence of ‘perfect’ knowledge. The second policy principle guiding early public health adaptation policy and planning falls under its ‘no regrets strategy,’ he said. This means that interventions targeting likely climate sensitive diseases and conditions would be beneficial even in the absence of the climate change contribution to disease.

Even in the absence of climate change, Sauerborn said infectious diseases have become increasingly unstable. He attributed this largely to resistance emergence, increased travel of vectors, pathogens and hosts, changes in land use and diminishing control efforts. He suggested three steps in a research-based policy to identify the *additional* climate-induced burden of infectious diseases in a globally coordinated way:

- ◆ improving the scientific basis of the climate-health link;
- ◆ identifying key climate-sensitive infectious diseases and most likely affected areas;
- ◆ systematic use of health impact knowledge that has been generated to influence the mitigation argument.

“Transboundary” diseases, those that stray beyond a country’s border with the possibility of reaching epidemic proportions, was the focus of **Gabriel Rugalema**, Senior Officer, AIDS and Food Security, Economic and Social Development, Food and Agriculture Organization of the United Nations, Rome. He emphasized the importance of cooperation to control transboundary diseases like malaria, HIV/AIDS, tuberculosis and influenza. Agriculture, which manipulates the natural environment, facilitates the spread of transboundary diseases as land is deforested and water is diverted for use by communities. Humans also spread disease as they move and transport products from one region to another.

Rugalema warned that these diseases are concerns not only because they impact human health and affect agricultural production, but they also carry a high economic cost



by debilitating workers and their families or requiring destruction of crops and animals affected. Additionally, they also cause quarantines to be set in place and thereby curtail movement, they impact markets and trade when contagion becomes a concern, and they absorb significant resources to control them. Almost by definition, he said, they are large-scale problems.

Agriculture can play a role in the spread of transboundary diseases but it can also contribute to solutions. For example, he pointed to malaria, which was originally controlled in the USA and Britain not by chemicals but by land use. Ruglema called for more collaboration between the agriculture and health sectors and particularly suggested that Africa could use collaboration between agriculture and health to contain some problems. He listed some areas for transboundary cooperation: disease surveillance and early warning systems, care and treatment of populations affected, sharing human and financial resources to fight the spread of disease. He suggested examining policy with attention to how countries can share information. Diseases such as tuberculosis will continue to be a problem unless there is political will to deal with them, he warned, and drew attention to “selective blindness” of some cultures or governments about diseases. It is important to recognize that one country or institution alone cannot solve some health problems, he said. He also made a suggestion: if funders made interdisciplinary research a priority, strong research structures could be set up to respond to transboundary diseases that require international and global perspectives and responses.

Global coordination was cited as the key to solving – or preventing – transboundary diseases, pandemics and infectious diseases, all of which take a deadly toll as they spread across borders and jump from one continent to another. Globalization, which brings an economic boost to some areas, has also accelerated the spread of diseases in the world. Discussion in Bamako focussed on the partnerships that might help provide solutions and the local surveillance that can feed into early warning systems reduce the toll taken. The emphasis was on constructing systems and solutions from a local perspective rather than on the basis of what is decided by outside agencies, funders or researchers.

María Guzman, Head of Virology, Pedro Kouri Tropical Institute, Cuba, shared her insights on Cuba’s successful battle with infectious diseases, despite the country’s small

national budget. Through immunization clinics and a strong HIV/AIDS programme that offers free anti-retrovirals for all Cuban patients, the country has reduced deaths from infectious diseases to less than 8% of mortality. Guzman said an emphasis on the link between health and a high level of education, as well as strong political will, has enabled Cuba’s success. She also credited her country’s collaboration with other countries on healthcare as an important factor in its success. The main causes of death in Cuba now are heart disease, injuries, pneumonia and cancer, similar to causes of mortality in much richer countries.

A special session devoted to tuberculosis research highlighted the gravity of the global situation with TB, the world’s second deadliest infectious disease, following HIV/AIDS. It is responsible for the deaths of nearly 1.6 million people annually; approximately 9.2 million new cases of TB were reported in 2006. Sub-Saharan Africa and Southeast Asia bear the highest number of cases. TB deaths have quadrupled over the past 15 years in African countries where HIV incidence is high. This TB/HIV co-infection is of great concern to health researchers, as is the growing threat from multi-drug resistant TB. The WHO-based “Stop TB Partnership” calculates that TB research funding of at least US\$900 million/year is needed to research the development of new tools and methods to combat the disease. Partnerships and collaboration were again named as key to the solution; financing remains a critical concern if the strategies being developed are to be implemented and effective.

Drug resistance as a global priority

An alarming number of diseases have become resistant to the drugs used to treat them. Sometimes this is the result of overuse or inappropriate use of pharmaceuticals; it always means the loss of a tool in the struggle against disease. Drug resistance is found in the developed world as well as developing countries; it has especially grave consequences in sub-Saharan Africa, where malaria, tuberculosis and many infections have become resistant to commonly used drugs. **Susan Foster**, Director of Public Policy and Education, Alliance for the Prudent Use of Antibiotics, USA, delivered a report from the Center for Global Development’s working group examining the problem. “Drug resistance ought to be a global priority,” she said. “It is causing avoidable mortality and morbidity and undermining global health



efforts.” She described a spectrum of problems created by drug resistance:

- ◆ Actions taken for one disease are not perceived as having repercussions for other diseases, but they often do;
- ◆ Because resistance limits the lifespan of the drugs already on the market, it also makes industry less interested in research and development, especially for antibiotics and antibacterial drugs;
- ◆ Older antibiotics that treat common infectious diseases are often more toxic, while the newer ones are more expensive;
- ◆ Treatment options become more limited when a widely-used drug, such as an antibiotic, cannot be used due to resistance.

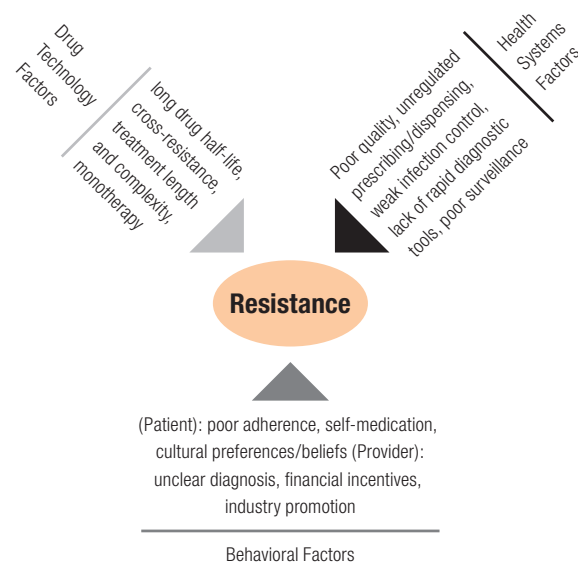
Foster warned that some diseases are on the verge of becoming untreatable, such as extreme drug-resistant tuberculosis and Methicillin-resistant *Staphylococcus aureus* (MRSA) infections. Cholera and shigella might be next, she said. Some of the newer commonly used antibiotics are also encountering resistance. Even multi-drug therapy is encountering problems: in a recent outbreak of cholera in Bangladesh, resistance to the drugs being used to combat it increased from zero to 100% in just seven months. Another dimension of the problem may be seen in the fact that countries are spending more on antibiotics and antimicrobials to get the same effect, a difficult setback in an era of competition for the health budget dollar and the need for financial restraint.

Resistance knows no barriers and requires international coordination to control, Foster said. “We have a situation that is crying out for solutions, but the incentives to find solutions are severely lacking.” She depicted how the private and public interests are in conflict: parents of a sick child are not very concerned about the common good of using an antibiotic, they simply want their child to be cured. Think about drug efficacy as a diminishing resource, she suggested, one that currently has no mechanism or incentives for controlling it. It has been difficult to track resistance or find funders to support surveillance, she said, and there is tension between those who would use antibiotics and antimicrobials for prevention and those who want to preserve them for therapeutic uses. In the meantime, the supply of new antibiotics and antibacterials is drying up. “We’re cruising toward zero unless something happens,” Foster warned; she sees only four new chemical entities in the pipeline. Already the newer drugs are much more

expensive, i.e. the combination drug Amoxicillin/clavulanic acid is 20 times more expensive than the ampicillin being currently used. The cost of standard treatment for malaria may increase by a factor of 10; for extreme drug-resistant TB, the cost of treatment for one person is already 500 times as much as the cost of treatment for the standard strain.

Foster made a plea to use the drugs that are still effective as carefully as possible. She listed specific groups for outpatient antibiotic use: children, new mothers and adults with HIV. She believes antibiotics are appropriate to use against pneumonia, acute respiratory diseases, diarrhoeal diseases, ear, throat, skin infections, tuberculosis, maternal infections and sepsis. “If we got these things right, if we made progress on these conditions, I think we would be moving the ball quite a bit ahead down the field,” she concluded.

Illustration 15: Common solution framework to address resistance across diseases



Presented by Susan Foster in the session “Drug resistance as a global health policy priority”

Martha Gyansao-Lutterodt, Programme Manager, Ghana National Drugs Programme, Ghana, added a West African perspective, focussing first on drug resistance to malaria, then tuberculosis and onchocerciasis. She described the impact on Ghana of having to change its malaria treatment policy due to the resistance developed to chloroquine and sulphadoxine/pyrimethamine therapy and said the challenges involved had been huge. During the two



to three years before chloroquine was completely lost, there were several sets of replacement treatment guidelines, soaring treatment costs, struggles with the monotherapies that were still available and the substandard or counterfeit ACTs that circulated in regional markets. “I am afraid we are going through the same thing again,” she said.

Showing a political map of West Africa, Gyansa-Lutterodt said the problem of drug resistance requires coordinated action among countries and a global approach as well. The disease problems are also complex, requiring combined therapies for malaria and often special consideration of HIV/AIDS co-infections in people with tuberculosis. The consequences of drug resistance are great and far-reaching for Africa. Drivers of drug resistance are primarily the same throughout developing countries: weak health systems, low literacy, high poverty rates, lack of compliance in taking medicines and a lack of drug and diagnostic technologies within the country.





CHAPTER 5

LEADERSHIP CHALLENGES IN RESEARCH



CHAPTER 5: LEADERSHIP CHALLENGES IN RESEARCH

Many leaders participated in the Forum in Bamako, from the President of Mali to the organizers from the six partners who set the agenda for the meeting, to the researchers on the front lines. Innovators, funders, representatives from government and non-government agencies, academic and industry researchers showcased their contributions for improving global health. Each highlighted some of the challenges they face and presented ideas for solutions. By the end of the three-day meeting, participants had listened to a spectrum of perspectives from around the world, representing many sectors associated with health research. The people in what are generally considered positions of power frequently said that empowering others was their goal, specifically empowering those in developing countries to assemble their own health research agendas and to build the capacity and systems to implement them. Collaboration and partnerships were considered key: nationally, regionally and globally.

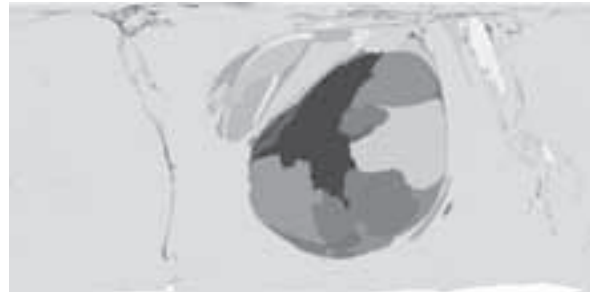
Behind the discussions about health, a global financial crisis was unfolding, adding to the uncertainty of plans for the future. **Francisco Becerra-Posada**, Senior Adviser for Latin America, Council on Health Research for Development (COHRED), Mexico, was one of those who spoke of the global financial crisis as a threat that could also be viewed as an opportunity to be creative and innovative. Set priorities for research for health, engage policy-makers and stakeholders in the process and communicate the priorities to researchers, he urged participants. Researchers and national health research systems should communicate research more effectively, he added. "We can – we must – do better."

Funders, not donors

When a panel of research leaders in the final plenary session focused on meeting the challenges ahead, a comment by one member set an important tone. Mark Walport made an important distinction: "We're funders, not donors," he said. "We are here to achieve a mission: we're interested in the results of research and we need to see that it translates into action."

He displayed re-scaled maps of the world in which the size of the continents corresponded to the number of the deaths from malaria and cardiovascular disease, illustrating how data matters to perception of the impact of disease. "We can map diseases like we never could before," he explained, referring to how GPS mapping is used in collaborative projects. He added that information from developing countries is needed to make the maps, and funding then can enable people in those countries to take an active role. The way to reverse "brain drain" from developing countries, he said, is to create a working environment in the countries that most need researchers, so local researchers will stay in their countries and develop programmes to increase institutional capacity. He emphasized the need for collaboration and partnerships so agencies and governments of developed countries can help strengthen national and institutional networks in countries in Africa.

Illustration 16: Malaria deaths

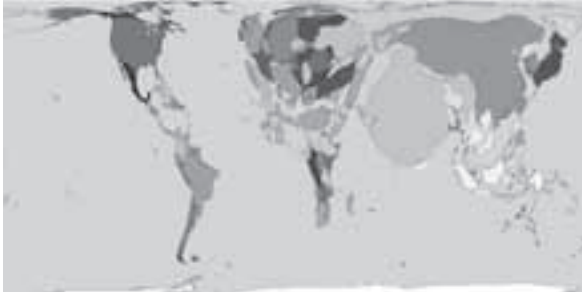


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Territories are sized in proportion to the absolute number of people who died from malaria in 2002. In 2002 Malaria caused 9.3% of all deaths of children under 15 years old and 4.4% of all deaths in very poor territories with low life expectancy. Malaria caused 1.6% of all deaths worldwide in 2002 with an average of 147 deaths per million people.

Presented by Sir Mark Walport in the session "Pandemics and infectious diseases"



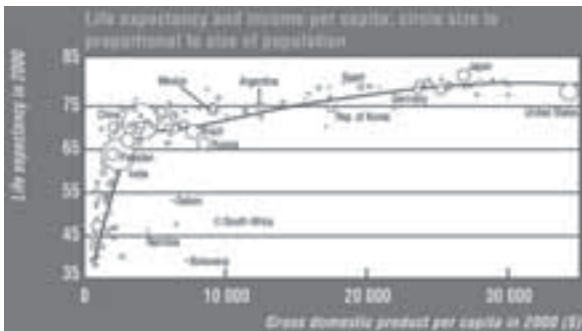
Illustration 17: All cardiovascular disease deaths

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Territories are sized in proportion to the absolute number of people who died from cardiovascular disease in 2002. Cardiovascular diseases caused 29% of all deaths worldwide in 2002, an average of 2688 deaths per million people per year.

Presented by Sir Mark Walport in the session "Pandemics and infectious diseases"

Walport concluded with an illustration of how health and wealth are bound together: a slide showing how life expectancy rates in countries are correlated with gross domestic product per capita.

Illustration 18: Health and wealth

Source: *World Development Report 2006*

Presented by Sir Mark Walport in the session "Pandemics and infectious diseases"

"Probably most importantly, we are creators of links, connections and partnerships," observed **Daniel Jacob**, EC Deputy Director General for Research. More important than even the money spent or the individual programmes developed, he said, are the bridges built between the EC and scientists, between scientists themselves, between the EC and its member states, with countries, institutions and the WHO. "So, what do we do? We try to play a role at the global level, to set priorities and to provide research funding opportunities," he explained. He described a partnership model of research that has led to the creation of the

European & Developing Countries Clinical Trials Partnership (EDCTP), to respond to the global health crisis caused by TB, malaria and HIV/ AIDS – all of which are particularly devastating in Africa. In addition to medical research, he said the EC is especially concerned with health systems and equitable access to technology in developing countries.

Alice Dautry, President of the Institut Pasteur, France, described the philosophy behind her institute and the challenges she sees to effective innovation and research. The world needs high technology and tools in an environment where people's minds are open and offer fertile ground for innovative ideas, she said. Even more important than the amount of funding, she said, is that resources be distributed over a long term. She traced the history of her 120-year-old research institute that employs 2,500 people on five continents and listed some elements that have led to its success:

- ◆ publication of scientific literature
- ◆ strong political will and support within host countries
- ◆ the ability to foster knowledge and thinking
- ◆ identifying the right questions and correct protocol relevant to a country and disease
- ◆ recognizing the context of a problem or disease

The institute's research activities cut across various areas of biomedical research including virology, bacteriology, immunology and basic sciences. With a network of 30 research centres, nine of which are in Africa, the institutes draw strength from their ability to form partnerships and collaborate. Dautry recommended establishment of training centres for field and technical staff as a way to build capacity and prevent brain drain from a country.

Paulo Buss, President of the Oswaldo Cruz Foundation, Brazil, reflected on the financial crisis and its impact on the world's poor, through skyrocketing food prices and the collapsed housing markets that have forced people from their homes. Rich people of the world have a role to play, he said, and speculators need to be held accountable. Capitalism should no longer exclude the poor, who pay a high price, he added. Citing the "huge inequalities" that the Alma Atta Declaration addressed – but have been largely ignored – he stressed the need for today's research for health to pay attention to the determinants of health and for politicians at all levels to rise to the occasion.

"Health systems, frankly, are too often seen as amorphous, abstract and vast."



Ok Pannenberg commended the organizers for bringing together for the first time not only health ministers but also ministers for science and technology and researchers from throughout the world. There are many forces that impact on health, and therefore it is imperative, he said, to consult these ministries as well as education, environment, finance and others. The meeting in Bamako, he added, had the potential to highlight the need for better health research systems which, especially with a financial downturn and fluctuating food prices, are critical for the world's most vulnerable, the millions without health care. The World Bank, Pannenberg said, realizes that more support needs to be given to health systems, which have only received marginal attention thus far. "Health systems, frankly, are too often seen as amorphous, abstract and vast," he observed and added that the Bank has reassessed its priorities on both implementation and research. It does not regard malaria, TB, AIDS and health systems separately, but better health systems for more effective malaria, TB and AIDS programmes. For example, he said that although there has been a substantial decrease in the price of retro-viral treatments for AIDS in recent years, this had not translated to helping the poor. Acknowledging that there has been progress, he said "we have also seen many HIV/AIDS programmes in Africa hit the wall" due to missing or poor health structures, failing logistics, poor communications and corrupt or bad health financing. "Health services, and especially human resources, have become the Achilles' heel of many aid programmes." It is futile to do research for health without capacities to deliver, he said, adding that 57 countries in the world have fewer than the WHO-defined minimum of 2.3 health professionals for every 100,000 citizens. He compared it to living in Paris with only 60 physicians for the entire city or in Washington, DC with 18 physicians.

Pannenberg endorsed "pathfinder solutions" achieved through research to provide tools to deal with the emerging health problems caused by climate change: a crisis in food production, water shortages and increasing diseases. He suggested that research can help measure the problems as well as the solutions, "to look at what is working and what is not." The capacity to manage and use skills within a country is a tough challenge, he said, and urged participants to use Bamako as a platform to build partnerships. He noted that the capacity to conduct and use research is very much a function of a country's innovation culture, and pointed to Singapore, Taiwan, South Korea, Brazil and increasingly India, as countries that have already shown what can be

done with innovation. Perhaps, he added, Ghana and Nigeria might also successfully employ the innovation to health research.

Within weeks of the meeting in Bamako, the World Bank issued a forecast saying capital flows to developing countries were expected to plunge by 50% in the wake of the global recession. The Bank warned that if the forecast proved accurate, the downturn could throw many developing countries into crisis and keep tens of millions of people in poverty. It was a forecast that probably would not have surprised many of those meeting in Bamako but starkly accentuated the importance of action on a global health agenda.

Charly Gabriel Mbock, Member of the Scientific Committee for Africa, Management for Social Transformations Programme, United Nations Educational, Scientific and Cultural Organization (UNESCO), Yaoundé, endorsed a more "social approach" to health research and asked the audience to keep in mind an important point: "One of the teachings of Bamako is humility." He supported solution-oriented research and a bridging philosophy – and added that an African dialogue circle would also be helpful.

Fiona Godlee challenged a comment, made in an earlier plenary, that scientists should set the agenda. "This may be, in a large part, why we are where we are today," she commented. It is governments, NGOs and the public that can and should set the agenda, Godlee argued. "I think national research agendas and contributions from the public and states have to be the way forward."

Research must address the right question and be designed from the outset to be implemented, and not only published, she continued. She observed that a common theme in Bamako had been that research should take place much more in local institutions and developing countries themselves. She suggested there should be a push for donors to put more trust in local institutions, to find a way around problems of corruption and encourage more core investment in the institutions. The final verdict on the value of the discussions in Bamako will come only when an impact is seen on the huge challenges that affect the world's poorest people, she said,

From the standpoint of civil society, Thelma Narayan was clear about what is needed: "We need to be much more bold," she told the final plenary. "The present health situation is totally unacceptable." Even in countries like



India that have had a good economy, there are high levels of malnutrition, she said. She attributed this to the huge inequities in society. “We need to show a fearless search for truth, not to exclude biomedical research but to focus on the social controls.” She noted that the Forum in Bamako did not put much emphasis on some social determinants – gender analysis, for example – but the role of civil society in the development of research for health had come out strongly.

A transforming effort

Even before the opening session in Bamako, **Timothy Evans**, Assistant Director-General, Information, Evidence and Research, World Health Organization, Geneva, declared unequivocally that developing countries *can* support efforts in research. Speaking at a press conference, he said each country must decide *how* it can conduct research for better results. Developing countries must harness international cooperation to face the crises ahead, he added, not only the financial crisis, but the food and climate crises as well.

“I think there is an enormous opportunity to put countries in the driver’s seat for shepherding, stewarding, that critical research agenda which is so important to policymakers at this point in time.”

In the closing news conference, Evans listed his priorities coming out of the *Bamako Call to Action*. At the top of the list, he said, is a continued endorsement of the WHO Director-General’s high-level Task Force on Health Systems Research, originally set up in 2003 to give support to the research agenda for the Millennium Development Goals. While this recommendation was also the top priority of the Mexico summit, Evans said it has become increasingly clear that the time is *now* for health systems research. Second among priorities, he said, is the imperative of strengthening country leadership in the research agenda. “I think there is an

enormous opportunity to put countries in the driver’s seat for shepherding, stewarding, that critical research agenda which is so important to policymakers at this point in time.” The theme, Research for Health, is transforming, Evans observed, because all sectors have something to contribute and it is the responsibility of the health sector to make sure all of society’s resources are tapped to respond to health problems effectively.

This thought was echoed soon afterward by Stephen Matlin. “Research for health is a new idea that transforms thinking about the range of efforts; it demands much more collaboration and cooperation,” he said. He observed that the *Bamako Call to Action* emphasizes that a greater effort is required, different from the one made in Mexico four years earlier. This effort addresses funding specifically, he said, an area the Global Forum for Health Research has already focussed on in its annual reports, *Monitoring Financial Flows for Health Research*.

In the 2008 report on financial flows, Matlin drew attention to the lack of attention paid to targets or goals related to financing development and health. “How well do countries

Illustration 19: Health R&D and national R&D as a % of GDP (2005)

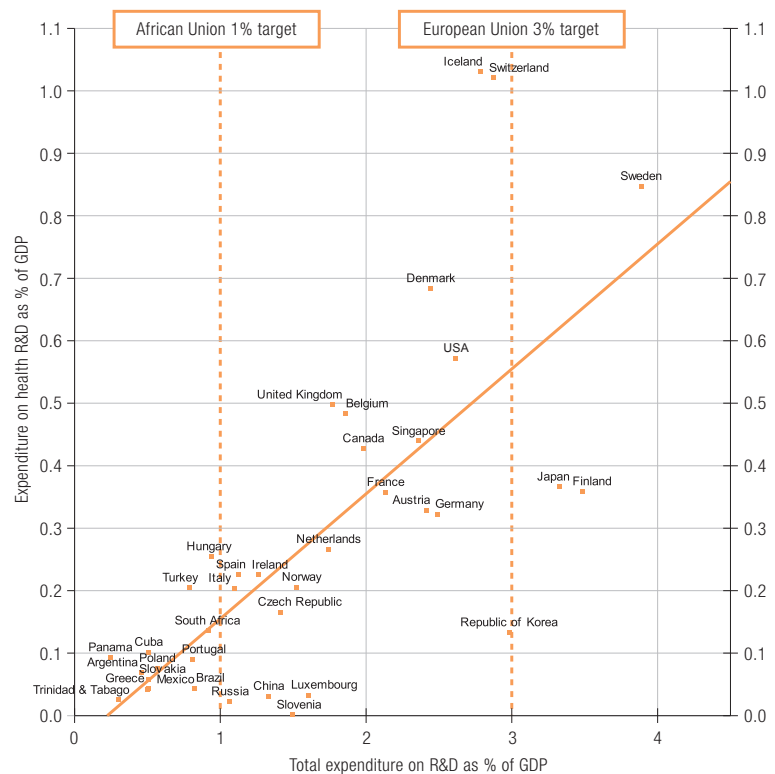


Figure 4.2 from *Monitoring Financial Flows 2008*, “R&D for health and national R&D as a percentage of GDP, 2005”



perform in reaching them and how, if at all, are they held accountable when they do not achieve them?" he asked. "In a few cases, efforts have been made to monitor progress, but in many instances there appears to be a complicit silence." He announced the development of a "report card" for research and development for health, structured around 10 specific targets and adjusted for four different categories: all countries, high-income countries, low- and middle-income countries, plus a special category for global health initiatives and development agencies. Some of the targets are firm commitments by countries, others may be aspirational, but it would provide a mechanism to monitor R&D investments and expenditures.

Matlin said the Global Forum would further develop the "report card" in the coming years, collecting and reporting data that are available and working through advocacy and partnerships for the development of information systems for producing data where they do not yet exist. He said the final objective is not more money for researchers but more knowledge and tools created to improve health and health equity globally, especially in poor countries.

Health Minister **Oumar Ibrahima Toure** of Mali told the closing news conference that the *Call to Action* was a "consensus-based" document and what will be critical is that there is political will to implement it. "The Malian government fully supports research for health," he said, and reminded them that while the government's budget is small, the research budget increases from year to year. He reiterated that Mali is determined to build "a house devoted to research," where researchers can gather and share information, so the results of research will be translated into action.

Echoes of optimism and the Young Voices

In Bamako, participants in a number of the sessions repeated a slogan of optimism that had gained popularity during the US presidential campaign: "Yes we can." It was an echo that resounded through several presentations by Africans, and it was the concluding thought of Desmond Tutu as he threw support to e-health, an endeavour that may have seemed be the domain of youth but one that the 77-year-old Nobel laureate firmly endorsed as holding promise for the future.

Two groups of young people present in Bamako were recognized for their early interest and outstanding efforts

in research for health. In addition to what they have already achieved in their studies, research and in the field, they brought fresh perspectives and new ideas to an area that will benefit from an infusion of creative energy. The "**Young Voices in Research for Health**," professionals under 30, participated in an essay contest sponsored by the Global Forum for Health Research and *The Lancet* that focussed in 2008 on the theme of climate change and health. The theme was chosen because the impact of climate change urgently requires research, innovation and action on a problem that greatly affects the health of the world's poor and most vulnerable people. The effects of climate change are also a legacy that is being passed down to the younger generation, which will have to use substantial resources to deal with it. Six regional winners, chosen from nearly 300 contestants, came from Brazil, the Philippines, Senegal, Uganda, United Kingdom and the USA to take part in the Bamako Forum, together with other young African researchers whose essays had been shortlisted. The result was a vibrant exchange, promise of the creation of a network of next generation researchers for health and already some firm friendships.

Thirteen recipients of Canada's **Global Health Leadership Awards** were also invited to Bamako and were honoured at a welcome reception preceding the opening of the Forum. It was the first time they had met as a cohort. Two came from Argentina, and one each from Bolivia, Cameroon, Chile, Colombia, Ecuador, Georgia, Honduras, India, Senegal, Turks and Caicos, and Uganda. During the next four years, the awardees, all young professionals, will be encouraged to improve their technical expertise, leadership abilities and partnership skills so they can better address priority health systems and policy issues. The awards were made through the Global Health Research Initiative, a partnership of five Canadian agencies: Health Canada, the Canadian Institutes of Health Research, the International Development Research Centre, the Canadian International Development Agency and the Public Health Agency of Canada.

The Forum in Bamako provided the opportunity for both groups to listen to a broad range of perspectives on global health issues, hear the latest research news, develop a network of colleagues with common interests and contribute to the debates.

In the closing ceremony, María Guzman delivered a reflection on the current state of global health and a look ahead to Forum 2009, the next annual meeting of the Global Forum



for Health Research which takes place in Havana, Cuba. “The twentieth century was marked by an unprecedented rise in life expectancy and an equally impressive decline in infant mortality in the developed world,” she said. “We will not be able to do the same in the twenty-first century unless we make some changes – it is important to reverse the dramatic situation many face.” It is necessary to extend improvement in global health to the people who are the most vulnerable: the children, women and the elderly, in both developing and developed countries, Guzman said. The principal challenges lie in social justice and individual access, she added, for while health-care is an economic challenge, it is also a political and ethical challenge.

Cuba, she said, is an example of a country where universal health care is free, the average lifespan of an individual is 78 years, and investment in science is a priority. There are 70,000 doctors and 500 health-care clinics for the 11 million people in Cuba. The country also has the capacity to meet about 80% of the domestic demand for pharmaceuticals –but there are challenges to overcome. Two outstanding goals, she said, are reducing child mortality and increasing the average lifespan to 80 years. Cooperation with other countries is important, she said, and developing a better health-care system and strategies are key. “The right to health care is not just a question of human rights but one of creating opportunities,” she stated.

She extended an invitation to all participants to come to Cuba for *Innovating for the health of all*, Forum 2009, to be held 16-20 November in Havana.



AFTERWORD

There was a particular moment in the closing ceremony that captured a distinctive facet of the meeting in Bamako. One short message amid the formal protocol, the closing speeches and litany of thank-yous stood out for its humility. The Minister of Health and Social Services of Namibia, **Richard Nchabi Kamwi** ascended the podium and commended the government of Mali for taking a lead in research for health in Africa. He expressed his gratitude to the government and people of Mali and congratulated them for the success of the meeting. “We asked my brother, the honourable Minister of Health of Mali, if we could be afforded the opportunity to go and see with our own two eyes what you have on the ground, your expertise demonstrated here,” the minister said. He told about the visit to a village where researchers were collecting data, then to the state-of-art laboratories and medical school. It was very instructive to observe this expertise, he said; his delegation had appreciated the opportunity to observe for themselves.

He concluded with what he obviously thought was another very important point, addressed to the government and people of Mali but intended for all the organizers of the Bamako Forum. “Since we arrived here, a good number of us, we never bought lunch, we never bought dinner. It was all given to us. We shall forever be indebted.” Many in the audience joined in spontaneous applause and mutual gratitude.

There are probably few international meetings where visiting ministers make such a public point of thanking their hosts for lunch and dinner. But health ministers from some of the world’s poorest countries, meeting in a land where malnutrition is a grave problem, understood how much they had been given, and in how many forms, at this meeting. They appreciated the food along with their colleagues’ support of research for health. Both are basic needs in a culture where nothing is taken – or received – for granted.



ACKNOWLEDGEMENTS

The Secretariat of the Global Ministerial Forum on Research for Health gratefully acknowledges all the assistance it received for this Forum. In particular, the support and commitment at the highest level from the government of the Republic of Mali. We extend thanks to the President, His Excellency Amadou Toumani Touré, and his government, in particular the Minister of Health, Mr Oumar Ibrahima Touré, for their presence.

On behalf of the six partners co-organizing this conference, namely the Council on Health Research for Development (COHRED), the Global Forum for Health Research, the Government of Mali, UNESCO, the World Bank and WHO, we would like to thank all the committees, teams and individuals who have worked hard to make this Global Ministerial Forum a success. In particular, we wish to thank the organizing committees:

- ◆ The Steering Committee (Chair: Professor Stephen Matlin, Global Forum for Health Research)
- ◆ The National Organizing Committee (Chair: Lasseni Konaté, Ministry of Health, Mali)
- ◆ The Programme Committee (Chair: Professor Fred Binka, University of Accra, Ghana)
- ◆ The Logistics Committee (Chair: Alexandra Petersen, Global Forum for Health Research)
- ◆ The Communications Committee (Chair: Jamie Guth, UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR))
- ◆ The Finance Committee (Chair: Pauline McKay, UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR))
- ◆ The Fundraising Subcommittee (Chair: Sylvia de Haan, Council on Health Research for Development (COHRED))

We would like to recognize the following contributions:

- ◆ to building the programme by the individual session organizers, who come from all the six partner organizations;
- ◆ to the organization of the ministerial discussions and drafting of the Bamako Call to Action by UNESCO and WHO;
- ◆ to logistics and financial management provided by the Global Forum for Health Research.

The regional preparatory meetings made a tremendous contribution to generating momentum and input to the conference and we would like to acknowledge the governments of the host countries, the regional offices of WHO and the partner organizations and sponsors who funded these meetings.

We are also most grateful to the various organizations holding special sessions and satellite meetings, who have supported participants from around the world to attend the Global Ministerial Forum.

Finally, we would like to thank the World Bank for providing funding to establish the Secretariat of the Global Ministerial Forum and the sponsors who have generously enabled this Forum to take place, namely the Bill & Melinda Gates Foundation, the International Development Research Centre (IDRC), The Rockefeller Foundation, The Wellcome Trust and the governments of Norway, Sweden and the United Kingdom of Great Britain and Northern Ireland.

The enormous contributions of numerous individuals could not be included here. Full acknowledgements can be found on the CD-ROM attached to this report.

Ania Grobicki, Head of the Secretariat, Global Ministerial Forum on Research for Health, together with Rebecca Lacroix, Hélène Boussard, Mélanie Gonin and Elizabeth Kemf.



NOTES

A series of horizontal dotted lines for writing notes.



