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Global Forum for Health Research

HELPING CORRECT THE 10|90 GAP



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Forum 9

Poverty, Equity & Health Research

A report on Forum 9, Mumbai, India, 12-16 September 2005

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This report summarizes a selection of presentations made at Forum 9, with the aim of bringing to a wider audience some of the issues raised. Neither the writer nor the Global Forum for Health Research necessarily agrees with the opinions reported.

For the final Forum 9 programme and for texts of full presentations made available to the Global Forum, the reader is referred to the CD-ROM annexed to this volume. The texts are also published on our website www.globalforumhealth.org.

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Poverty, Equity and Health Research

A report on Forum 9
Mumbai, 12-16 September 2005

prepared by
Beverly Peterson Stearns

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Foreword

We know in increasingly fine detail that there are enormous disparities in health around the world, both within and between populations in different countries. In particular, evidence is accumulating that those who live in a poor country, or who are among the poorer people within any country, have a high probability of suffering worse health and dying younger than their wealthier neighbours. Similarly, there are health gradients everywhere in the world that result from marginalization and social exclusion due to factors such as ability, caste, class, ethnicity, gender and race. Thus, there is growing recognition that the 'neglected diseases' which have been of concern in recent years (in particular the tropical parasitic and viral infections that mainly affect populations in less developed countries and for which traditional market mechanisms have failed to provide adequate remedies) are but an aspect of a wider picture involving 'neglected people'.

The existence of these health disparities runs counter to the principle that health is a human right and it presents the world with the imperative to make efforts to eliminate them. Much of the burden of morbidity and mortality that affects the poor and marginalized – for example, the high rates of maternal and infant mortality, malnutrition and infectious diseases that they suffer – are avoidable with simple, effective and cheap interventions that are already known. But the capacity is often lacking to deliver these interventions and to make them accessible and affordable to all people, highlighting that there are also 'neglected health systems'.

Addressing these neglected areas in order to achieve better health and reduce inequities in health requires political will, increased resources and enhanced effort to organize and deliver health products and services effectively. It also needs research – whether biomedical research to create the needed drugs, vaccines, diagnostics and medical appliances; health policy and systems research to understand and improve the organization and functioning of the health sector; social sciences and behavioural research to increase understanding of the factors that determine health and affect health-seeking behaviour; or operational research to examine how effectively systems and interventions are working on the ground and how they can be improved.

But here we find yet another neglected field. Fifteen years ago, the Commission on Health Research for Development estimated that less than 10% of the world's resources for health research were being applied to the health problems of developing countries, where 90% of the avoidable burden of ill-health was to be found. Since then, global expenditure on health research has more than tripled, but a large imbalance remains in how it is applied and the closure of the '10/90 gap' has been the focus of the work of the Global Forum for Health Research.

At the invitation of the Ministry of Health and Family Welfare of India and the Indian Council of Medical Research, the 2005 annual meeting of the Global Forum for Health Research, Forum 9, took place in Mumbai on 12-16 September 2005 and was opened by the President of India, His Excellency Dr APJ Abdul Kalam, with the Union Minister of Health and Family Welfare, Dr Anbumani Ramadoss, and the Chief Minister of Maharashtra, Shri Vilasrao Deshmukh.

This was a year when Mumbai itself was badly affected by flooding in the monsoon season, when the region was recovering from the aftermath of the Asian tsunami and was also struck by earthquakes, and when hurricanes did much damage to lives and livelihoods in the Americas, all of which disproportionately affected the poor and marginalized. It was appropriate, therefore, that Forum 9 addressed the theme of 'Poverty, Equity and Health Research'. The many oral and poster presentations and group discussions that took place in Forum 9 are summarized in this Report, which we hope will make a significant contribution to the global movement to close the gaps.

Professor Stephen Matlin
Executive Director
Global Forum for Health Research

List of illustrations

These boxes, tables and charts are “quotations” from presentations made at Forum 9, shown mostly as slides; they have simply been adapted to the format and style of this publication.

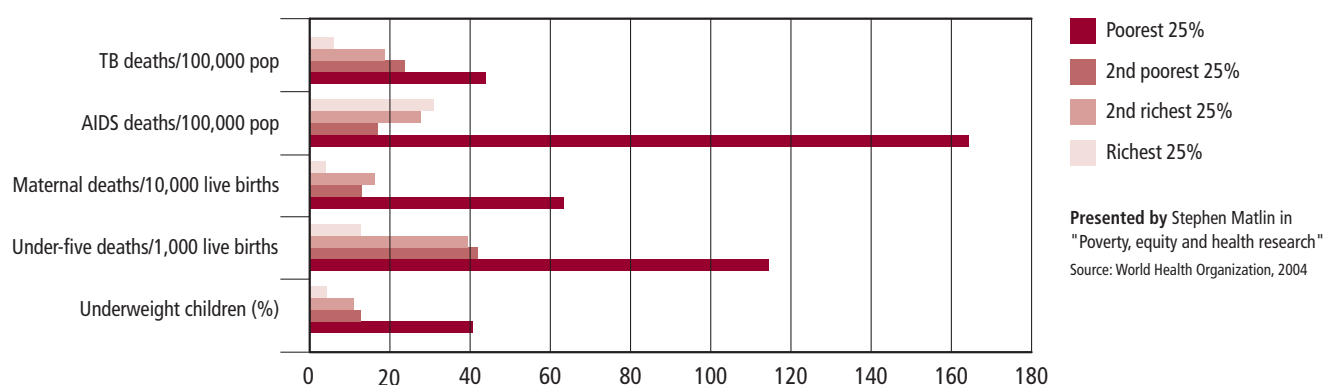
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Introduction

Forum 9, focusing on poverty, equity and health research, was held from 12 to 16 September 2005, in Mumbai, India, a city of 16-plus million inhabitants, many of whom are desperately poor, during a monsoon season in which deadly floods underscored the vulnerability of people who live on the margins of society. **Pramilla Senanayake**, Chair of the Foundation Council of the Global Forum for Health Research, and herself a citizen of Sri Lanka, noted in the opening ceremony that the people of the region shared not only history and culture, but also vulnerabilities to natural disasters such as the tsunami which devastated areas bordering on the Indian Ocean in December 2004. She said the common suffering had taught many lessons: the value of mutual assistance, the need to be better prepared for disasters and that “as in so many other areas of life, the ones who suffer most are the poorest and most vulnerable in our societies.” Less than a month later, on 8 October, an earthquake with magnitude of 7.6 struck northern India and Pakistan, bringing great destruction and death, especially to the poor and rural populations.

Stephen Matlin, Executive Director of the Global Forum for Health Research, noted in his welcoming address to Forum 9 that one-third of the meeting’s participants came from within India and a further concentration from the continent, the most populous region of the world and one where the poor often die young. The venue, he said, was chosen deliberately to be closer to where problems are and to enable deeper engagement of policy-makers, researchers and civil society workers of the regions. The Global Forum for Health Research exists, he reminded participants, to identify and focus attention on health research gaps and to bring together various sectors and organizations to close them.

Illustration 1. **The poor die young ...**



Lack of equity, Matlin reflected, has many far-ranging consequences. For example:

- people die in larger numbers because of where they happen to live in the world; in the 50-60 year age group the probability of dying is five times as great for someone in Africa as for someone in Europe;
- poor people die in larger numbers than rich people;
- the young die in low- and middle-income countries largely from causes that are preventable;
- while deaths due to some causes have been reduced during the last decade, others have been increasing, notably due to HIV/AIDS, malaria and perinatal conditions;
- discrimination based on gender, race, class or caste, ethnicity and ability determine the health and well-being of individuals in much of the world.

Matlin urged participants to keep in mind a broad definition of health research, from biomedical sciences through health policy systems, social sciences and operational research – and not to forget that the goal, good health, is a basic human right to which everyone is entitled. There could be no finer focus of health research than to contribute to achieving that human right to the maximum extent possible, he concluded.

Not waiting for MDG support . . .

The centrality of health to all of the eight Millennium Development Goals (MDGs), which had arisen from a UN summit in 2000, and the key role of health research in supporting the achievement of these goals, had been the main focus of Forum 8 held a year earlier in Mexico City. While less attention was paid directly to the MDGs in Mumbai, the theme of 'Poverty, equity and health research' continued and deepened the Mexico discussions as attention shifted to the tools and actions needed to attain the goals of reducing poverty, inequity and ill-health. Coincidentally, the 60th anniversary UN summit in New York was held during the same week as the conference in Mumbai and debated reform of the international organization – but resulted in little, if any, increased support for the MDGs. Mary Robinson, former UN High Commissioner for Human Rights and ex-President of Ireland, writing after the close of the New York UN summit, lamented the vacuum in leadership shown at the meeting. "What was lacking," she wrote in an article published in *The International Herald Tribune*, "quite simply was leadership: the vision that could have put backbone into long overdue reform and new purpose into the multilateral drive to tackle poverty." The MDGs, she added, are promises that "now seem set to join the pile of broken pledges that mark the old UN's history."

In Mumbai, however, participants gave their full attention to discussing ways to target the poor and marginalized, to improve equity, increase health research and enhance delivery systems. There was a sense that the need for action is urgent, that there is no time for complacency with what has been accomplished already or for bureaucratic delays.

Reflecting this action-oriented mood, Forum 9 highlighted the work of many key organizations, networks, coalitions and initiatives that are attempting to focus health research to address the many-faceted problems in global health. Their contributions to Forum 9 will be found throughout the report; examples include:

- The **Council on Health Research for Development (COHRED)** – an organization with which the Global Forum has established a very close working relationship – had helped to structure a number of sessions focusing on research capacity strengthening and country experiences in developing health research systems.
- The work of the **Disease Control Priority Project**, presented by **Catherine Michaud** and **Anne Mills**, illustrated the need for research that gives attention to both diseases and health systems.
- The need for data to identify where the problems exist and provide the evidence to support and evaluate interventions was a theme addressed by the **INDEPTH** network, which supports capacity building of demographic surveillance system sites, and **INCLEN**, which builds capacity in clinical epidemiology.
- The **World Bank** presented its Reaching the Poor Program (RPP), a systematic effort to find ways of overcoming the tendency of health programmes to achieve far lower coverage among the poor than among the better-off. The presentation at Forum 9 was the first major public release of RPP's findings.
- UNICEF/UNDP/World Bank/World Health Organization Special Programme for Research and Training in Tropical Diseases (TDR)
- UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
- WHO's new Commission on Social Determinants of Health
- Network for Equity and Health in South Africa (EQUINET)

Hoda Rashad, member of the World Health Organization's new Commission on the Social Determinants of Health, bluntly observed in the opening session: "It is surprising how much we already know about poverty, equity and health research, how little we do about it and how ineffective we are when we do act." The Commission's mission, she added, is "to lever and support policy change by turning existing public health

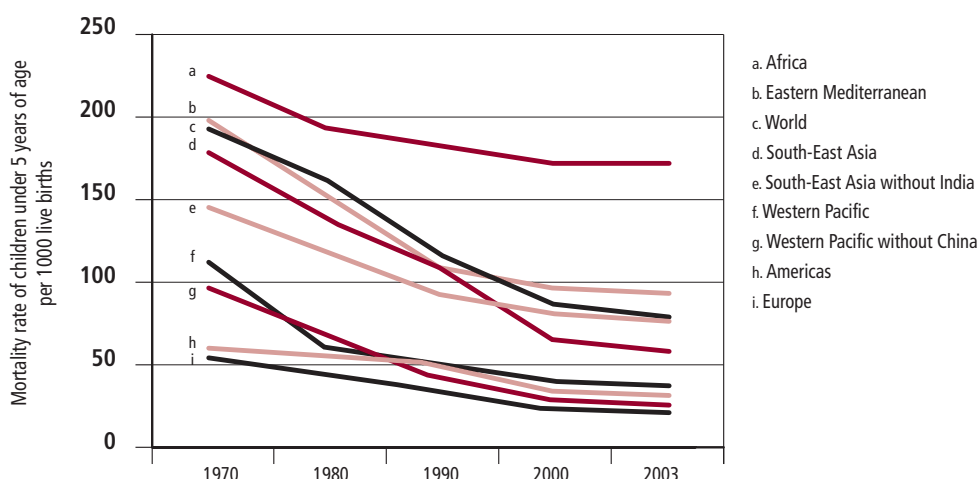
knowledge into an actionable global and national policy agenda.” Health differentials by sex, occupation and ethnic and social groups are not inevitable, she continued, and called for “action that goes beyond poverty alleviation.” Then, addressing a theme that would be echoed often in the meeting, she said: “We know that women who bear the toll of biased gender relations exhibit the highest burden of ill-health and depression, yet we continue to struggle to bring back reproductive health and gender dynamics to our MDGs.”

Mumbai participants proceeded to address at least two concerns that had not been included in the original list of eight MDGs: sexual and reproductive health and newborn care. The former had been a contentious issue and was deliberately set apart from the MDG maternal mortality goals; the latter may have been overlooked by some but is of grave concern to those working in countries where mothers and newborns die at alarming rates.

In a plenary on child and maternal health, **Daniel Makuto** of WHO’s Family and Community Health Cluster presented staggering figures which testify to growing disparities between rich and poor nations in mother and child health care and drew attention to the fact that progress in health care is slowing or coming to a halt in many countries. Eleven million children under the age of 5 die each year; half a million women die in pregnancy, childbirth or soon after, 3.3 million babies are stillborn and 6.6 million infants die before their first birthday. This is especially shocking, Makuto noted, because “we know that for this morbidity and mortality there are interventions.” The situation is not complex, he said, these deaths result because countries are unable to invest sufficiently in health systems due to poverty and humanitarian crises. HIV/AIDS have compounded economic downturns, he added, many countries face a health workforce crisis and the bottom line is that the poor and most vulnerable are excluded.

It is not the cost of interventions but the access to them that is the problem, Makuto emphasized. Universal access is necessary, along with the creation of a continuum of health care systems that include mother and child care from pregnancy through childbirth and into childhood. Newborn care, an area that has largely fallen through the cracks in the system, urgently needs to be addressed before another 4 million babies die within their first 28 days, he said. Addressing the problem requires long-term investment in strengthening health systems by increasing the number of health-care staff and formulating effective strategies.

Illustration 2. **Child mortality:**
Progress is slowing down



Presented by Daniel Makuto in "Scaling up access to health care for mothers and children: reducing the toll of child and maternal deaths"

Source: World Health Organization, April 2005

Illustration 3.

... and is unequally distributed

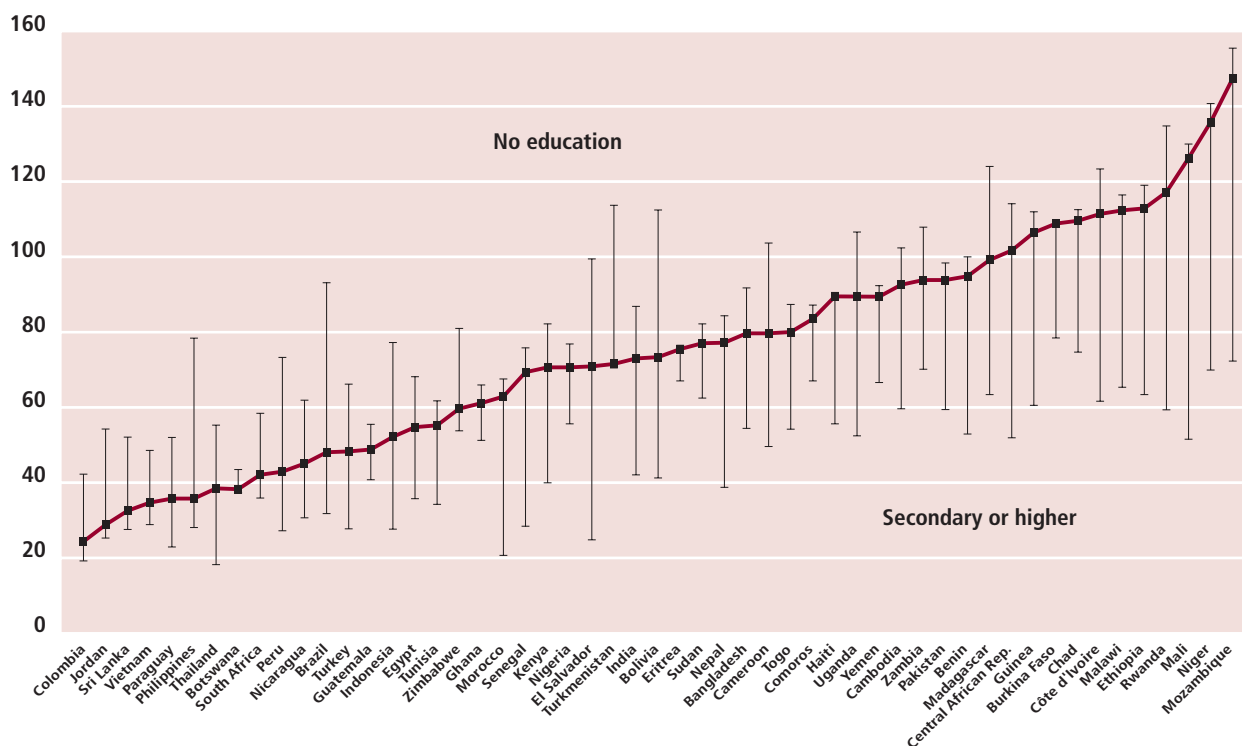
Child mortality

- 93 countries (40% of world's population): **on track towards 2/3 reduction by 2015 (MDG4)**
- 51 countries (48%): **slow progress**
- 43 countries (12%): **stagnation or reversal**

Presented by Daniel Makuto in "Scaling up access to health care for mothers and children: reducing the toll of child and maternal deaths"
 Source: World Health Organization, April 2005

World Bank economist **Berk Ozler** extended the discussion on equity to show that lack of education, for example, is not only an indicator for poor health, it can actually predict a shorter lifespan. A child in India whose mother has no education is at risk of not even surviving the first 12 months of life, he stated, adding dryly, "Its opportunities are curtailed very early on." Then citing a cognitive test taken by children in Ecuador, he explained that children age three performed roughly at the same level as their reference population in the world, but by age of five they fell significantly behind unless their parents were wealthy or highly educated. It is not clear, he said, whether children of uneducated parents can ever catch up.

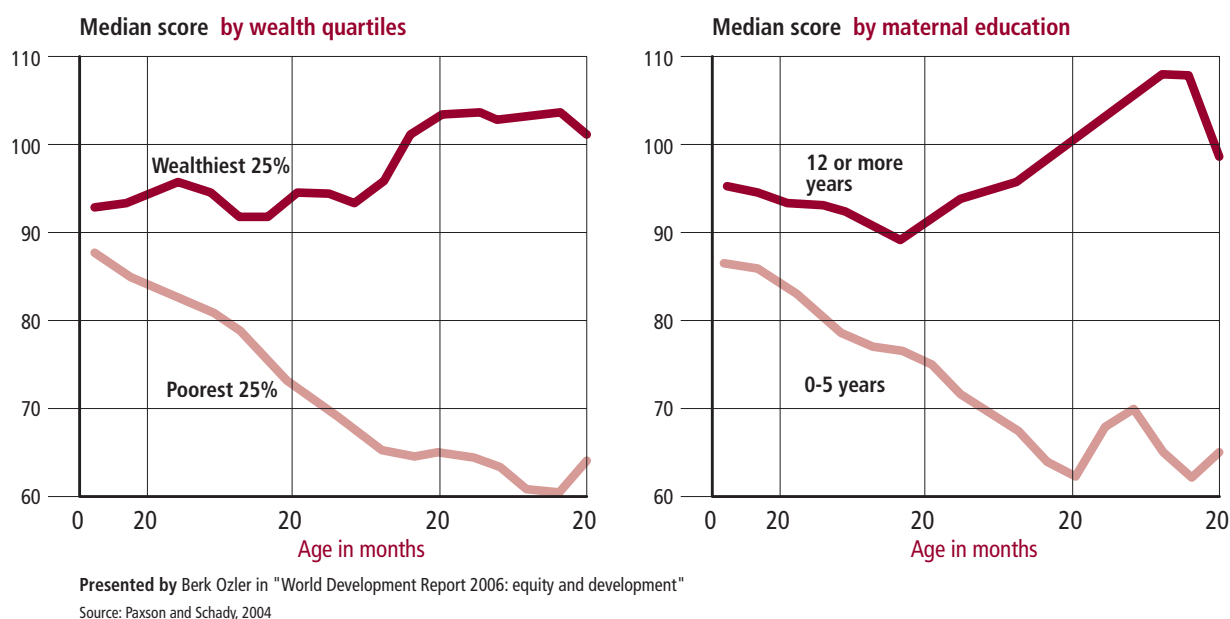
Illustration 4. **Inequity within countries:
 Illustrating unequal opportunities**



Presented by Berk Ozler in "World Development Report 2006: equity and development"

While there has long been a divide between those who believe that existing technology is sufficient but better systems to deliver it are needed and those who lobby for more research and development, in Mumbai there was a clear emphasis on doing all that was possible on both fronts to accomplish the common goal of good health. Several speakers said outright that debate between the two camps is counterproductive.

Illustration 5. **Opportunities are curtailed very early on**
Cognitive test performance by children in Ecuador



In short, the participants' inclination in Mumbai was to do for themselves what the UN may not be able to do for them. What emerged at Forum 9 was an emphasis on innovation, collaboration and networks, especially those emanating from the South, and/or with South/South connections. The role of newly termed 'Innovative Developing Countries' (IDCs) was recognized as key, with host country India clearly a leading member of this group. The importance of public-private partnerships (PPPs) was particularly highlighted. Although, even as **Mary Moran**, Director of the R&D Policy Project at the London School of Economics, summarized her recently published studies on the promising role that PPPs play in developing drugs for neglected diseases, she was cautionary about prospects. Her research had traced the boom in R&D to develop new drugs for "neglected diseases," such as malaria, TB and dengue, that has taken place since 2000, largely due to the success of PPPs, and raised the question of whether governments would help support the programmes. "This is an unprecedented opportunity for policy-makers to get behind a success and carry it over the line ... or to bring it to its knees," Moran said.

By the time of the last day's plenary on IDCs, participants appeared generally to recognize that networking by countries such as India, Brazil, South Africa and China holds great promise in health research. Alliances, cooperation and partnerships all emerged as providing great possibilities for developing countries.

When **Anthony MBewu**, President of the Medical Research Council of South Africa, spoke on the last day of the Forum, his message summarized the already acknowledged importance of innovation. "If the 19th century was the age of the British Empire and the 20th century was the age of the mighty dollar, then the 21st century will be known as the age of knowledge, and science and technology will be the most important global commodities traded in this new age," he stated. The critical issue for innovation, he said, is "whether science and technology are traded as global public goods, essential to health, development and prosperity of developing countries, or are hoarded and controlled through restrictive patents and copyrights in a similar way to the tariffs and market controls of the previous era." He warned that if innovation in the South is exported to the North, and the results are then exported back to developing countries at a market premium on intellectual property, an even greater knowledge gap could result.

MBewu was one of several who spoke of the crucial role that human intellectual capital plays in innovation; he also highlighted the role social and gender inequity play in IDCs. Referring to his own country, South Africa, he said it had been a great mistake to exclude 90% of the population from knowledge creation and innovation through 350 years of colonialism and apartheid. "Countries that marginalize large sections of their population from science through poverty, ethnic or gender discrimination will struggle to sustain and enhance innovation."

Indian Health Minister Anbumani Ramadoss set an optimistic tone by pointing out to journalists gathered for the opening of Forum 9 that India, with one-sixth of the world's population, was already becoming a global biotech capital. India ranks as the world's fourth largest producer of pharmaceuticals by volume, he said. He later told participants that not only does poverty promote ill-health but that good health can increase household incomes and national economic growth. It is estimated that a gain of five years in life expectancy can enhance a country's economic growth by 0.3 to 0.5% per year, he noted.

However, as Dr Ramadoss identified bright prospects, he also acknowledged that infant mortality rates and under-five mortality are considerably higher among India's marginalized populations, the "scheduled castes" and "scheduled tribes." In rural areas, the proportion of children underweight is substantially higher – a tribal mother is half as likely to be attended by a medically trained person at childbirth and children under three years are twice as likely to be malnourished. Among the disadvantaged, he said, women are the more disadvantaged and among the poor, they are poorer. It was a subject that would reappear often at the Forum.

Local journalists at the pre-Forum news conference pressed Ramadoss for a timetable, for concrete actions, especially those aimed at helping the majority of India's population of one billion. Their impatience for something more tangible than a list of goals or statistics was clear. As Ramadoss responded, he appeared quite aware of both their impatience and also of the financial burden the current system levies. Like the impoverished in many countries, India's poor pay proportionately more for health care than the rich: 12 per cent of their income as compared to 2 per cent of that of the wealthy. Ill-health therefore becomes a reason for indebtedness, the poor become poorer.

Indian President Dr APJ Abdul Kalam, who opened the Forum in Mumbai and is himself an eminent space scientist, used the occasion to stress the need for India's R&D institutions to give higher priority to development of vaccines against HIV and malaria, two diseases that pose serious threats to the health of his nation. He said that despite the country's development of the drug Arteether from Artemisinin, which has been found to be an effective cure for cerebral malaria, there has been no rapid reduction in the occurrence of malaria cases, and the number of HIV-infected people in India is increasing. As he called for development of an effective vaccine against HIV as quickly as possible, he urged increased networking of institutions throughout the world to work together to achieve this goal, as well as others, in health research.

It was a call that fell on receptive ears in Mumbai.

Chapter 1. The vicious cycle of poverty and ill-health

Throughout Forum 9 the vicious cycle of poverty and ill-health was repeatedly illustrated in presentations. In the opening plenary, Berk Ozler told how a child born in the poorest quintile of South Africa is more than twice as likely to die before its first birthday as is a child born in a rich quintile of that same country. If the first child survives and lives its average lifespan of 50 years, it can expect to have less than one year of formal schooling while the second child, with a lifespan expectation of 68 years, will complete 12 years of schooling. As striking as these differences, cited in the *World Development Report 2006*, are, they are dwarfed by the disparities between average South Africans and citizens of more developed countries. The poor not only have less income, but less voice and less access to health care and services. As experts throughout Forum 9 testified, nearly half of the disease burden in the least developed countries is determined by the prevalence of poverty.

Illustration 6. **A vicious cycle**



Presented by Robert Ridley in "Sustaining priority research for neglected tropical diseases"
Source: TDR (Special Programme for Research and Training in Tropical Diseases)

Poor people suffer ill-health more frequently, become more severely ill and are less likely to have access to healthcare – or sometimes to be able to take advantage of it. When they do have access, paying out-of-pocket for health care frequently leads to their further impoverishment. Data presented from India provided evidence linking out-of-pocket healthcare expenditure to household impoverishment. In some countries, health sector reforms have made this situation even worse.

Illustration 7.

Health care delivery: all forms of health care have to be bought by households in this resource poor context

- Public health sector: limited services, unresponsive providers, informal fees
- Qualified private sector: clustered in towns, limited services, expensive
- Informal health sector: widely accessible & more affordable but extremely limited services, at times, irrational & harmful

Presented by Aditi Iyer in "Entitlements to health care in rural Karnataka (India): interweaving webs of power"

Poverty and inequalities are interlinked. A South African study described by **Okore Okorafor**, a lecturer in the School of Public Health and Family Medicine, University of Cape Town, South Africa, showed that public health care resource allocations were less in the poorer provinces. The study used a deprivation index (see Illustration 8) to indicate health needs by geographic areas and compared per capita public health care expenditure and the deprivation index by provinces. Researchers concluded that, for a more equitable distribution of public health care resources, there is a need for uniform guidelines and norms at the national level to better allocate resources for public health care across provinces, as well as a system to ensure that provinces adhere to these guidelines.

Illustration 8.

Variables included in the deprivation index

- Proportion of population under 5 years of age
- Proportion of population that are Black Africans
- Proportion of population between the ages of 25 and 59 that are unemployed
- Proportion of population living in poor housing conditions
- Proportion of population without access to nearby piped water
- Proportion of population with poor toilet facilities
- Proportion of population without access to clean energy sources
- Proportion of household heads without any formal education
- Proportion of household headed by a female

Presented by Okore Okorafor in "Resource allocation to primary health care in South Africa: considering the poor under a fiscal federal system"

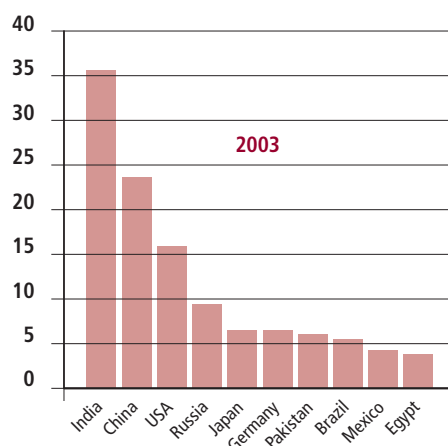
The increasing double burden

Statistics about health conditions in developing countries can be dramatic and do not always come where expected. In reciting the "global obituary" statistics for 2005, **Srinath Reddy**, Professor of Cardiology at the All India Institute of Medical Sciences, revealed that 35 million of the world's 58 million deaths are expected to be due to chronic diseases, compared with 17 million deaths from infectious diseases. More than half of those who die from chronic diseases (16 million) will be younger than 69. In India, of the 10.3 million expected deaths, 63% will be from chronic diseases.

In 1998 China recorded 2.6 million deaths due to cardiovascular disease, or 40% of all deaths. Reddy, who heads the Initiative on Cardiovascular Health Research in Developing Countries (IC Health), traced the rise in the levels of cholesterol in both men and women during the 1980s and 1990s, during the time of a massive increase in consumption of red meat, eggs and oils and a decrease in consumption of fruits and vegetables. He predicted that an increasingly high percentage of mortality in developing countries would come from cardiovascular disease. Not even sub-Saharan Africa is exempted from the growing dangers of chronic diseases. He cited "staggeringly high" figures of death from stroke in three areas of Tanzania for people 15-64 years old – with the highest levels in urban locations. He gave examples of how socioeconomic status and education are inversely related to high blood pressure and smoking; additionally, the socioeconomically disadvantaged groups fare worse in their recognition of the risk factors and access to good clinical care. As noncommunicable disease epidemics advance, the poor among countries and within countries are becoming the dominant victims, he said.

At Forum 8 in Mexico City, cardiovascular diseases were shown to be the leading cause of death in Mexico, a fact that surprised some. While cardiovascular disease is also a major cause of death in India, estimated at 29% of the deaths in 2005, the figures given for diabetes at Forum 9 were perhaps even more of a shock. India today has, by far, the greatest number of diabetes patients in the adult population of any country in the world, followed by China and the USA. This is just one example of the increasing double burden of disease that developing countries bear: infectious diseases, such as TB and AIDS, and also those diseases normally associated with more affluent countries, like diabetes.

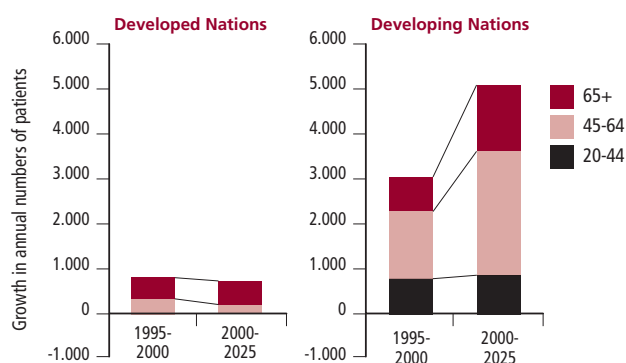
Illustration 9. **Top countries with diabetes**
Numbers of persons (million)



Presented by Stefan Björk in "The economic burden of diabetes in India: results from a national survey"
Source: Diabetes Atlas, 2003, 2nd edition

Illustration 10. **Diabetes: increase in prevalence**

Annual increase in number of Type 2 diabetes patients, by period and age group. Developed nations versus developing nations



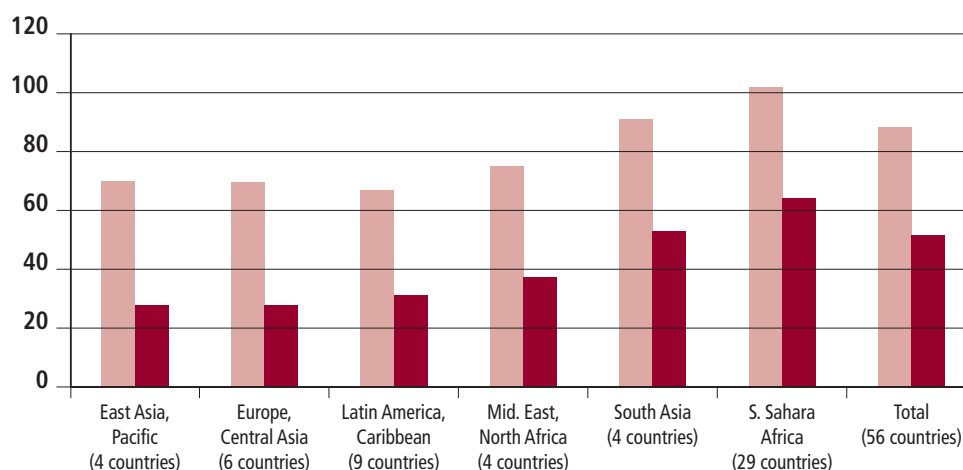
Presented by Stefan Björk in "The economic burden of diabetes in India: results from a national survey"

Source: Anders Gren: The changing pattern of Type 2 diabetes: prevalence estimates for 1995-2025. Fig. 3.3

On a global scale, diabetes has become a bigger killer than AIDS, declared **Stefan Björk** of the pharmaceutical company Novo Nordisk, as he opened a session on targeting the poor. Diabetes causes 3.2 million deaths a year and absorbs up to 10% of health care expenditures in many countries. It would be wise, Björk said, for governments to look at payment for diabetes prevention or early detection as an investment, not a cost. He said that while nearly half a billion people today either have diabetes or are in the "waiting room" of the disease, only half of them even know about their condition, fewer receive proper care and still fewer – about 6% – receive treatment and avoid late complications. In the developing world, diabetes tends to strike early, while people are in their 40s and are still working, thus delivering a double blow to the country and its economy. Because few people are able to monitor their blood sugar in developing countries, complications also occur earlier, resulting in higher costs. In India, that may mean one-third of a worker's annual income goes to treat the disease – a far greater proportion of a poor person's income than a richer person's. These factors combine to increase the economic burden to society, family and the individual. Because those who need advanced care often can ill-afford it, they and their families are caught in a debt cycle leading to further impoverishment.

Illustration 11. **Infant mortality rates**

Poorest and least poor 20% of the population
56 low- and middle-income countries



Presented by Davidson Gwatkin in "The World Bank Reaching the Poor Program"

"In 56 low and low- and middle-income countries, the poor are doing much, much worse than the richer: there is a huge gap between the poor and rich for every region we have data for," declared World Bank economist **Abdo S. Yazbeck**. "We are usually not reaching the poor as well as we think we are."

Illustration 12.

⚡ Vigilance

- In low-income countries everybody is poor: **NOT TRUE**
- Spending on health is spending on poor people: **NOT TRUE**
- Programs for the poor are poor programs, only universal programs work: **NOT TRUE**
- Targeting resources to diseases of the poor reduces inequalities: **OFTEN NOT TRUE**

Presented by Davidson Gwatkin in "The World Bank Reaching the Poor Program"

Summarizing a new World Bank Report, *Reaching the Poor*, that he produced with colleague **Davidson R. Gwatkin**, Yazbeck noted that the disparity in health care is apparent, particularly for the 20% of the population in the lowest economic sector of the developing world. Infant mortality and basic maternal and child health services lag especially far behind. But the report's authors also list their reasons for hope: the many promising service delivery options for reaching the poor more effectively, from Brazil's reorganized family health programme to distribution of bed nets for protection against malaria in Tanzania, to user fee exemptions for government clinics that reach 80% of the poor in Thailand. There are no simple answers, no silver bullets and no naïve assumptions, they say, only hard work. The first step is reaching the poor, then comes the follow-through by studying successful experiments, adapting to local conditions, experimenting and monitoring the results.

Funding options for healthcare were discussed in detail. Removal of user fees was mentioned, however even with their removal, barriers to accessing care – distance to hospital, cost of transportation and household responsibilities – are considerable. Health insurance with community-based pre-payment may offer some protection but it has very limited coverage and often excludes the poorest. Mandatory (social) health insurance was also mentioned but this often covers only civil servants and other formal sector workers and the government generally also pays more for it than the amount of its contributions to the general public, thus producing two-tier services and worsening inequities. Ghana was cited as an example of a country that is pursuing universal coverage, combining national social health insurance and community-based insurance.

N. Devadasan, research associate in public health at the Institute of Tropical Medicine, Belgium, explained that there is still little concern and knowledge about the effectiveness of community health insurance and whether it improves access to health care. Devadasan presented a study from India that showed community health insurance can increase access to health care for the poor, under certain conditions. **Tara Sinha**, research coordinator, Self-Employed Women's Association, India, presented evidence that an integrated community-based scheme can offer better protection for poor members compared to a stand-alone health insurance scheme. For community-based health insurance to work, she said, the health system needs to support accessible hospitals that offer quality care.

Joseph Capuno, an Assistant Professor at the University of the Philippines, presented examples of health insurance funding mechanisms in the Philippines and Vietnam. He described tactics to increase the number of poor people in health insurance systems, including a shift from targeting the poor in the poorest provinces to the poor in rich provinces. He also suggested tapping other sources of financing, those from the private sector, as well as those in local or external donor agencies.

The Oportunidades programme in Mexico had been highlighted in Forum 8 as an important new social protection mechanism that was delivering improved health services coverage to many poor people in the country. However, a paper by Mexican academic **Hector Ochoa** of the College of the Southern Frontier, showed that progress was far from uniform across all regions. In particular, in the state of Chiapas the programme was failing to reach the poorest people and, for some, was resulting in even wider gaps in equity. Ochoa was candid in his summation of the government programme that, he said, had become the main strategy of the Mexican government for poverty alleviation in terms of budget allocation and population problems. The programme emphasized the components of education, health and nutrition; it was based on the assumption that they are interrelated and improving one would improve all. It supplied monetary benefits to mothers so they could supplement family nutrition in this rural region that is one of the country's poorest and where mortality for children under five is more than twice that of Mexico as a whole. But evaluation of the programme in Chiapas showed worse health status for the people enrolled in Oportunidades than for the non-beneficiaries of the programme, including an increase in the prevalence of children suffering from chronic malnutrition. The quality of health services offered under the programme was shown to be poor, with essential drugs and medical staff not available, medical equipment not functional and women not receiving results of tests for cancer screening. Not only did the evaluation expose the failure of the Oportunidades programme in Chiapas, it also demonstrated the importance of locally monitoring and evaluating all programmes to improve health.

Lucy Gilson, a Professor at the University of Witwatersrand in South Africa, in her report as a roving rapporteur at the conference, identified Ochoa's presentation as a "missed opportunity for dialogue" at Forum 9. Noting that the Oportunidades initiative had been promoted by international agencies as a new approach for reducing poverty, she said further discussion among participants could have contributed to both strengthening health research and research that forms policy.

An EQUITAP study looked at who benefits from public health spending in Asia and found that successful countries had a commitment to public sector financing and service delivery, as well as a commitment to universal access. Distribution of personnel, especially doctors – who are currently concentrated in urban areas – requires policies that ensure rural areas are served. Inequality and poor health care in rural areas was a recurring subject in many Forum 9 presentations.

Renowned British scientist **Gill Samuels**, Pfizer's former executive director for science policy in Europe and recipient in 2005 of the Confederation of British Industry's first First Women award for Science, stressed the importance of focused collaboration between organizations working on drug targets (public) and those with capacities to take forward innovative lead structures (private). Another important area for collaboration is between R&D organizations and academia – an area, she said, that has been key especially for infectious disease.

She identified several gaps in the innovation pipeline leading to new drugs. One of the most important, she noted, is the need for more new candidate compounds because attrition in the R&D pipeline is high. The way forward, she proposed, is to recognize that problems of development and access are complex and multifaceted: "Avoid simplistic solutions and the blame game."

Hoda Rashad pointed out that, by far, the greatest share of health problems are attributable to broad social conditions. "Throughout the world, vulnerable and socially disadvantaged people have less access to health resources, get sicker and die earlier than people in more privileged social positions," she said. Yet health policies have been dominated by disease-focused solutions that largely ignore the social environment. As a result, health problems persist, inequalities have widened, and health interventions have obtained less than optimal results. "We cannot continue to pay lip service to public health problems while continuing with our biomedical model," declared Rashad.

As Berk Ozler observed in presenting ideas on solutions, investing in the capacities of those with limited opportunities is important, and policy can make a difference when it is carefully designed, well targeted and started early. Others advocated a better combination of research with action plans to allow utilization of findings. Protection mechanisms are needed to stop the increasing inequalities and ill-health burden that women bear. There are clearly key links between health/ill-health and poverty and gender inequalities and the empowerment of women was seen as crucial.

Addressing country priorities

India's Minister of Health voiced a common insight that ran through the conference presentations: not only how to make research work, but "work for the common man." Ramadoss suggested setting country research agendas to address key country priorities – rather than having donor-directed research agendas. Research should be combined, he added, with action plans to allow utilization of findings, involving policy-makers right from the beginning. Ramadoss also included context- and country-specific research in healthcare financing mechanisms, especially for health insurance for those outside the formal sector. Regions and health care profiles should also be considered in formulating basic packages of health care, the minister said, and communities should be included and consulted by those who set research agendas.

Caroline Nyamai-Kisia, Director of AfriAfya, Kenya, the rapporteur for the theme of poverty at Forum 9, endorsed Ramadoss' suggestion that funding of research should be directed towards individual priorities of developing countries. "Poverty is multidimensional and embedded in local contexts," she observed. "There is need for proper country research strategies and these, when in place, could further help donors align their support."

Nyamai-Kisia also contributed to the discussion of communicating research, using her experience gained through AfriAfya, the African Network for Health Knowledge Management and Communication. "Health research is only useful if put into action," she pointed out, "getting research put into action means communicating it effectively to all levels." She presented challenges faced in bringing health information to rural communities, using as an example a programme to educate villagers about HIV/AIDS. "There is a paradox of information poverty in the face of information overload," she said, reflecting on the interface of the conditions in many rural areas and the benefits of modern information and communication technology. She noted that there is poor communication between research organizations and action organizations. In addition, there is also poor communication between both of these organizations and communities. There is often a lack of access between groups and individuals; where they do meet, there is sometimes poor communication. Barriers to good communication may be as varied as the technical language researchers use or the broader issues of culture, gender and power. The discussion in this session included an audience composed of researchers, policy-makers, NGO and field practitioners, broadcast media, journal editors and a librarian. The first point to be raised was that the discussion should be about dialogue, rather than communication from researcher to community. The overwhelming message from the discussion was that communication is important and should not be seen as an add-on at the end of a project but rather an integral part of the research process.

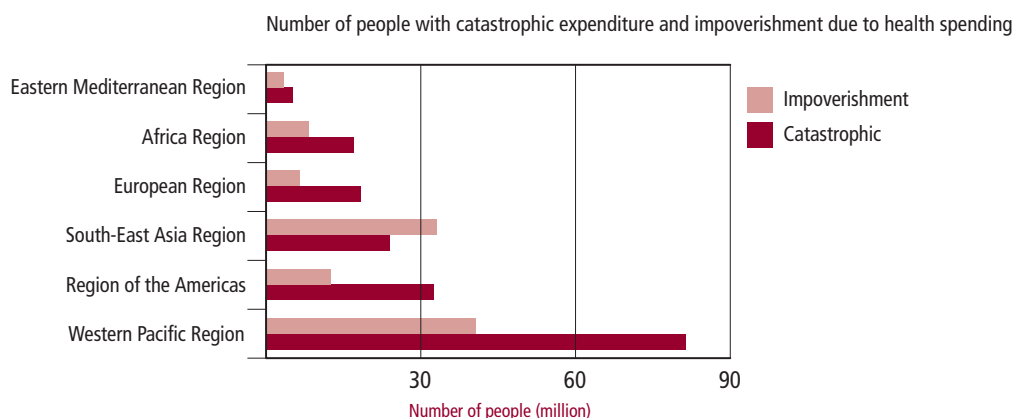
Chapter 2. Equity: a goal, not a reality

Health inequities and inequalities affect individuals and sectors of communities profoundly, making some more vulnerable than others in terms of risk of infection, disease and injury, access to care, treatment and outcomes. Time and again, speakers in Mumbai noted that differences in health care among individuals and between groups are avoidable, unnecessary, unfair. They returned frequently to how poverty and inequities coexist and interrelate. The inequities triggered through discrimination by gender, ability, age, class, race, ethnicity, sexuality and geography result in poverty in much of the world; the poor are conversely more likely to experience inequity across and among social fields. For example, a woman from a minority caste in an isolated area living with physical impairments from polio is far more likely to be poor and to have poor access to health care than a man with the same caste and physical condition, or a woman without impairment or from a different caste. Health status, life chances and outcomes for individuals are all influenced by inequalities and are shaped by differences in social status. These differences occur at social, institutional and systems levels. Inequities are reflected at international, national and local levels and also exist, as many presentations illustrated, within households.

Not only do the poor suffer disproportionately from disease, but their out-of-pocket payments for medical care often lead to further impoverishment. **Padma Shetty** of WHO's Coordination of Macroeconomics and Health Support department documented this and other disparities:

- 41% of the poorest quarter of the world's population are underweight compared with 3% of the richest;
- 114 deaths among children under five per 1,000 live births in the poorest quarter compared with 13 per 1,000 for the richest;
- 63 maternal deaths per 10,000 per live births for the poorest quarter compared with 4 per 10,000 for the richest;
- 164 AIDS deaths per 100,000 people for the poorest compared with 31 for the richest.

Illustration 13. **Catastrophic health expenditures**



Presented by Padma Shetty in "Investing in health for equitable development: lessons from the National Commissions of Macroeconomics and Health"

Source: Evidence and Information for Policy, WHO (World Health Organization)

Sabri Rbeihat, advisor to the UN Rapporteur on Disability, speaking on “health as a human right,” described health as an indicator of development. However, he emphasized that the existence of medical services does not imply access for all, even in the most industrialized countries. The right to health is experienced differently by various segments of society depending on a number of factors, he said, including gender, race, geographic location, age and disability. Health services everywhere remain urban centred, he said, adding that there is a general lack of information about health and health services, and little information available about rights. Social attitudes shape access to care, quality of care, risk factors of complications and co-morbidity, mechanisms of social inclusion and investment in the physical as well as social environment. He called for equal opportunities for those with disabilities and the same level of medical care within the same system as other members of society.

Illustration 14.

Importance of health care

- Level of health is indicator of development
- Development level is determined by health of the population
- Development level is determined by prevalence, availability, accessibility, coverage of health care services

Presented by Sabri Rbeihat in “Health as a human right: lessons from the Disability Movement”

Lenore Manderson, ARC Federation Fellow at the Key Center for Women’s Health in Society, University of Melbourne, Australia, noted in her evaluation as theme rapporteur that Rbeihat’s comments on ability “are no less applicable to other types of inequality and resultant inequity, yet his address neither provoked discussion from the floor, nor did it lead to attention to other fields of inequality.”

Gender disparities

Gender was the focus of great attention at Forum 9, reflecting in part the growing research in this area and the sustained commitment to addressing gender inequality through international conventions, declarations and plans of action. In the plenary session on gender as a social determinant of health, and in parallel presentations and poster sessions, speakers drew attention to the systematic discrepancies between treatment of men and women. These include the disadvantages that women face in terms of information about and access to health services, in the availability of resources to meet direct and indirect costs of services, and the opportunities, resources and support to sustain good health. They drew attention, too, to difficulties in diagnostic delays, to the stigma directed against women within families as a result of particular health conditions (e.g. TB, HIV), and to the psychosocial impact of certain infectious diseases and other health conditions.

The plenary session on gender emphasized that equity was a goal rather than a reality. It called for continued research on social and structural barriers to equity, and on the ways in which both sex and gender influence the health status of men and women. **Piroska Östlin**, senior researcher at the Karolinska Institutet, Sweden, distinguished between sex and gender; together they influence the opportunities to remain healthy, the exposure to health risks and health outcomes. Together they also influence the access to health information and services and the consequences of ill-health. She pointed out gender imbalances in research content, the research process and in the research community and concluded that integrating gender considerations into health research contributes to better science and more effective policies and programmes.

Illustration 15.

DEFINITION

"Gender is used to describe those characteristics of women and men, which are socially constructed, while sex refers to those which are biologically determined."

Presented by Pirooska Östlin in "Gender as a social determinant of health"

Source: World Health Organization, 2002

Mitchell Weiss, head of Public Health and Epidemiology at the Swiss Tropical Institute, related how gender affects vulnerability to infection and disease, access to services, and the social and physical consequences of poor health. Where data are available, as is the case for a multi-country study on tuberculosis, they show men are more likely to seek diagnosis but also, that men and women present with different symptoms. Once diagnosed and receiving medical attention, women appear to better adhere to treatment regimens. Stigma related to diagnosis also varies: men experience stigma in work settings, while for women, stigma is more likely experienced within the family. Weiss emphasized that we need continued research on the interactions of biology and society.

Selemani Mbuyita, research officer at the Ifakara Health Research and Development Center, Tanzania, reinforced the importance of disaggregating data by gender and other hierarchies. He described how the BIAS FREE Framework – developed by Margaret Eichler and Mary Anne Burke – was applied at a workshop in Tanzania to evaluate a report analysing the development of a Standardized Exemption Mechanism. The approach made transparent the ways in which research design, conduct and analysis may all carry biases in relation to gender, ability, race/ethnicity, socioeconomic status, age or residence. Health policies and programmes that do not consider these differences, he believes, will exacerbate rather than redress fundamental inequalities.

Shireen Jejeebhoy, senior programme associate with the Population Council of India, described a number of community-based interventions in India designed to support young women, providing them with vocational skills and a place to meet, thereby reducing their social isolation and building confidence, independence and ability to participate in the decision-making affecting their own lives. There is an increasing global recognition that within the realm of adolescent sexual and reproductive health, self-agency plays a key role. "Agency is a person's sense that she has the power and capacity to act, make a decision, express important concerns, communicate ideas and negotiate wanted outcomes," explained Jejeebhoy. Agency also plays a key protective role in sexual and reproductive health. "We feel that it is a major determinant of reproductive and sexual health and has implications for the choices that adolescent girls make." Livelihood interventions are a response to this recognition, she added, and include building vocational skills, developing a savings orientation, raising awareness of new ideas and rights, providing safe spaces for girls to meet and encouraging them to express their opinions.

In the parallel session on community roles in health research, **Neena Shah More** from the Society for Nutrition Education and Health Action for Women and Children, India, described an approach she and her colleagues termed “appreciative enquiry,” which combined approaches common to rapid ethnographic assessment, situational analysis and participatory research. The specific research was conducted in a sample of wards in urban slum areas of Mumbai, to explore why women failed to take advantage of local health services, despite their geographic proximity. These slums are densely settled by people drawn to the city from diverse areas in search of work. Houses – often single rooms made from scrap materials – are dark and crowded, often without electricity, potable water or adequate sanitation. A proportion of slum dwellers have no real housing but live on the pavement. All are vulnerable to forced resettlement and slum demolition. Primary reasons for women’s lack of use of health services relate to their need to generate income, competing household and work responsibilities, inflexible clinic consultation hours, costs associated with clinic attendance, poor quality of care and, especially for tribal women, a perception of overt discrimination.

Krishna Rao, a research associate at the Johns Hopkins Bloomberg School of International Health, USA, presented an intervention in Uttar Pradesh, designed to test whether utilization of district hospitals, female district hospitals, community and primary health centres would increase with improvements in facilities and quality of services. A related question was whether such interventions would particularly serve those who were poorest. Six months after the interventions, visits to all centres had increased. While there was no difference by income in those attending community and primary health care centres, the increase in attendance at district and female district hospitals was greatest in the top quartile, leading Rao to characterize the intervention as “pro-rich.” Discussion from the floor questioned this interpretation, given that poverty and wealth were relative, but noted the possibility that the poorest lacked resources to travel to the hospitals. On the other hand, although exit interviews were conducted and included assessment of income level, no other data about patients were disaggregated for analysis; it was not possible to establish other differences in the patient population, such as age, sex or caste.

“ . . . and the disabled ”

Disability was another field of inequality that received particular attention in Mumbai. At a meeting on disability, health and well-being, **Monica Bartley**, a director from the Statistical Institute of Jamaica, suggested that the addendum “and the disabled,” should not be used since it makes disability appear as an afterthought.

It was also not accidental, observed Lenore Manderson, that the BIAS FREE Framework begins its list of social hierarchies with “gender, ability . . .” and not gender and disability. This is important because it draws attention to the ways in which ability – and gender – are socially constructed.

In a session on measuring equity, **Erik Nord**, senior researcher, National Institute of Public Health, Norway, suggested that application of the disability adjusted life years (DALY) measure to the allocation of resources for health interventions required modification to take account of differences, including those of sex/gender. He did however acknowledge that the DALY is useful for practical purposes. Monica Bartley, in contrast, contended that in its weightings and interpretation, it discriminates, devaluing the lives of individuals whose bodies and health status deviate from an ideal (“in perfect health”). Where health policies and programmes are developed on the basis of DALYs, she said, there is a risk that resources are diverted from those with highest need to those whose lives are evaluated as most productive, therefore increasing, rather than reducing, inequalities that derive from poor health status and consequent disability. The International Classification of Functioning (ICF), however, draws attention to the relationships between body functions and

structure, as well as to activity, participation and the physical and social environment – the context in which people with different abilities live. The ICF, **Mary Chamie**, Chief of the Demographics and Social Statistics Branch of the UN, argued, provides an alternative to the DALY to identify population needs for all people, not only in terms of health services but also in terms of the wider social, economic and built environments.

Research from Malaysia, Thailand and Myanmar was presented in parallel sessions on disability and gave insight into the distress of individuals who suffer from lifetime disabling conditions, injury or chronic illness. While rehabilitation services and welfare support schemes are available to some extent, particularly in the two middle-income countries, there remain considerable barriers to short-term care for those whose access is limited for economic or geographic reasons. The studies showed how few mechanisms there are to provide support to minimize social exclusion following loss of mobility. Discussion focused on local explanatory models of cause and outcomes of impairment, and on the marginalization of individuals in impoverished communities once they were physically unable to contribute to the household economy.

Lenore Manderson, rapporteur on the theme of equity, observed that race, ethnicity, age, and rural or urban residence were repeatedly recognized at Forum 9 as determinants of inequality. Yet little attention, she said, was paid to the specificity, complexity and variation of these inequities. “Demographic changes globally will force us to come to terms with ageing and the elderly sooner, not later,” she predicted in the closing session, “and they will force us to rethink the environmental factors that impact upon health and well-being, the implications of this across sectors, and therefore also the need for intersectoral responses. It will also force us to move ability and age from the margins to the centre.”

Chapter 3. Sexual and reproductive health: a continuum

Forum 9 looked at the needs for research on sexual and reproductive health through the lenses of poverty and equity, and discussed the issues in plenary, parallel and poster sessions. A spectrum of concerns emerged, from adolescent behaviour to global disparities in maternal, newborn and child health. The theme of *exclusion* from health care was striking: of women, the poor, the disabled, sometimes in combination. Others are discouraged by society from seeking care, especially those who bear a stigma due to AIDS, caste or lack of education. Discussion returned frequently to accessibility and quality of care as well as to the involvement of the community in providing for and responding to health care needs.

There was a growing emphasis at Forum 9 that health care should be considered as a continuum, from the beginning of sexual activity to pregnancy, childbirth and child care, thus extending and broadening the framework not only to different life stages but also to education, to employment and to men. Newborns and adolescents emerged as two groups that should receive more focused attention.

"In the world today there are over one billion young people, ages 15 to 19 years old," began **Adrienne Germain**, President, International Women's Health Coalition, USA, as she introduced a plenary on sexual and reproductive health which concentrated on adolescents. "Their health, education, their opportunities to make choices about their lives, whether it is marriage, work opportunities, political participation or social engagement, will determine not only their own futures but the world's." Just behind this group, she added, are another one billion children and youths, under 14 years old. "Together these two generations of young people account for fully one-third of the world's population today, nonetheless, we know relatively little about adolescents in particular." They are often inaccessible to researchers and yet a key segment of society. In addition, today's adolescents are coming of age during a period when the world is coping with the ongoing pandemic of HIV/AIDS, still primarily a sexually-transmitted disease.

Germain listed reasons for lack of knowledge about adolescents: they are frequently married and/or secluded, learning from them or about them often requires parental permission or, if they are young men, their fertility and sexual behaviour may not be of interest to family planning researchers. Even when data is gathered, she noted that it is often lumped together, concealing significant differences. "There is a great deal of difference between the circumstances of a 15-year-old and a 29-year-old," she pointed out. However, she was hopeful that the small, but growing body of research and programme experiences would illuminate vitally important realities, some of which may "contradict assumptions we hold about who adolescents are and what factors constrain their lives."

Growing up global

Cynthia Lloyd, Director of Social Science Research at the Population Council, presented highlights from "Growing up Global," a National Academy of Science review she had chaired. She called attention to the need for a new research agenda bringing perspectives on schooling and adolescent behaviour together. She emphasized key data that traced the rapid rise in the percentage of sexually mature adolescents attending school:

- the majority of 15 year-olds in developing countries, of both sexes, are students;
- in many countries, the majority of 15 to 17 year-olds attend primary, not secondary, school;
- there is unprecedented growth in school attendance and attainment;
- recent growth rates in school attendance are more rapid for girls.

Showing data for 51 developing countries, she said it is apparent that schooling is becoming a reality and that “student” has become “a social state” for people in their teenage years. While most of the 15 to 17 year-olds in Asia and Latin America are in secondary school, the data showed that most students of that age in Africa are still in primary schools, a fact that Lloyd observed is relevant to reproductive health and needs more consideration.

Referring to data for children with more than six years of schooling in specific countries, including India and Pakistan, Lloyd said there has been a trend in the past 20 years for students to stay in school, and there has also been a narrowing of the gender gap among students, with an increasing number of girls in school.

Girls and young women face challenges and risks that male students do not. Over 30% of women giving birth in South Africa, India and Bangladesh, are under 18 and in countries where maternal mortality is high. In addition, becoming pregnant usually means girls will have to leave school. Lloyd noted the primary reason adolescent girls give for having an abortion is that they want to stay in school. In many cases, she said, social attitudes towards premarital sexual activity and/or regulations concerning access to services mean that young people are denied advice and resources that would prevent unwanted pregnancies and sexually-transmitted diseases.

The data, Lloyd said, point to the impact of the rising age of marriage, with implications that sex is increasingly likely to occur prior to marriage, and maternal mortality/morbidity are significant risks for young women, as is infection with HIV/AIDS. “It is during this stage of life that various behaviours are adopted that have long-term implications for health,” she said. “The [review] panel concluded that unprotected sex at this age is one of the riskiest behaviours that young people can engage in.”

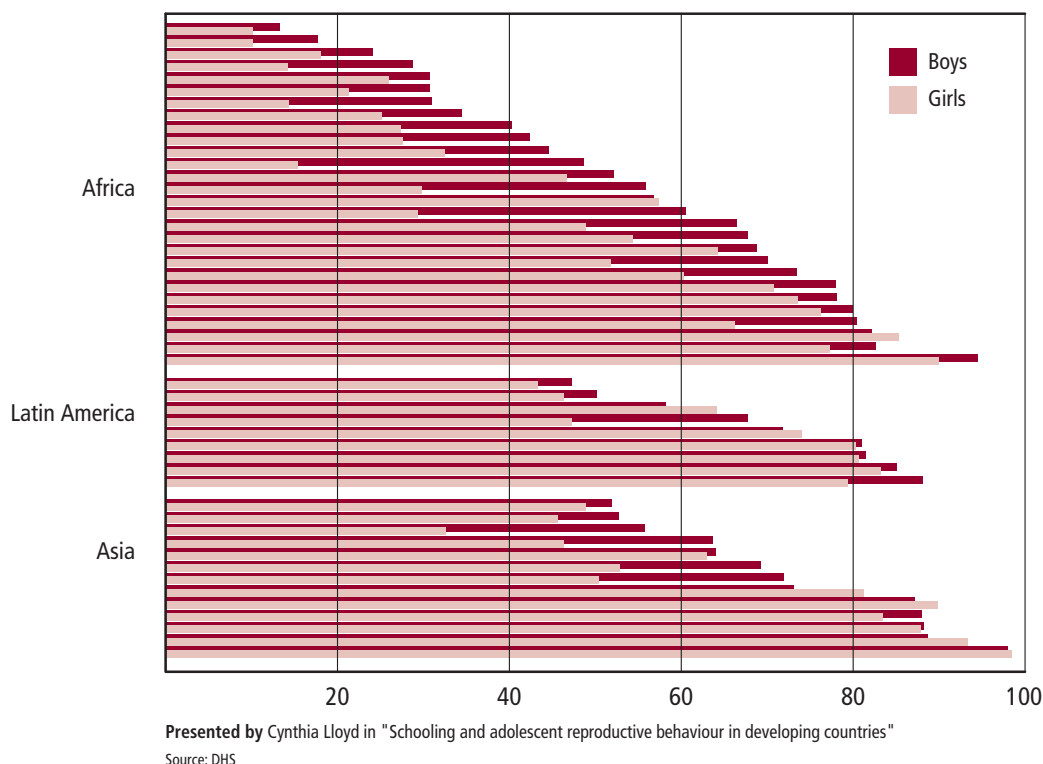
Illustration 16.

Percent distribution of countries by type of change: Comparison of 20-24 year olds to 40-44 year olds			
	Increase	No Change	Decrease
Marrying by 18	2.4	22.0	75.6
Having premarital sex by 18	58.5	39.0	2.4
Having sex by 18	22.0	46.3	31.7
Based on 41 DHS countries			

Presented by Cynthia Lloyd in “Schooling and adolescent reproductive behaviour in developing countries”
Source: Population Council

Lloyd highlighted another finding of the study, showing that students are less likely to have had sex than non-students, and if they do have sex, they are more likely to use contraception than non-students. The review panel concluded that expansion of opportunities for secondary schooling could represent one of the most significant reproductive health interventions for youth. Indeed, Lloyd added, the conclusion that the most important intervention may lie *outside* the public health sector shows that a new research agenda will require alliances between those whose expertise is schooling and those whose expertise is adolescent health.

Illustration 17. Percent currently enrolled (15-year olds)



The concept of "agency," that was described by Shireen Jejeebhoy, is especially pertinent to adolescent girls in India. In comparison with 15-year-old boys, girls of the same age are less likely to be in school or working and far more likely to be married. They also are far more limited: in exposure to health information, in their control of economic resources and decision-making, in mobility and exposure to the outside world and by their lack of social networks and support. Adolescent Indian girls, for the most part, live in a patriarchal setting where gender role imbalances are perpetuated by traditions and expectations. They need support to make the transition from skills acquisition to skills utilization. Researchers must engage the gatekeepers – the parents and/or husband – to be able to reach adolescent girls and be able to assess sexual and reproductive health outcomes.

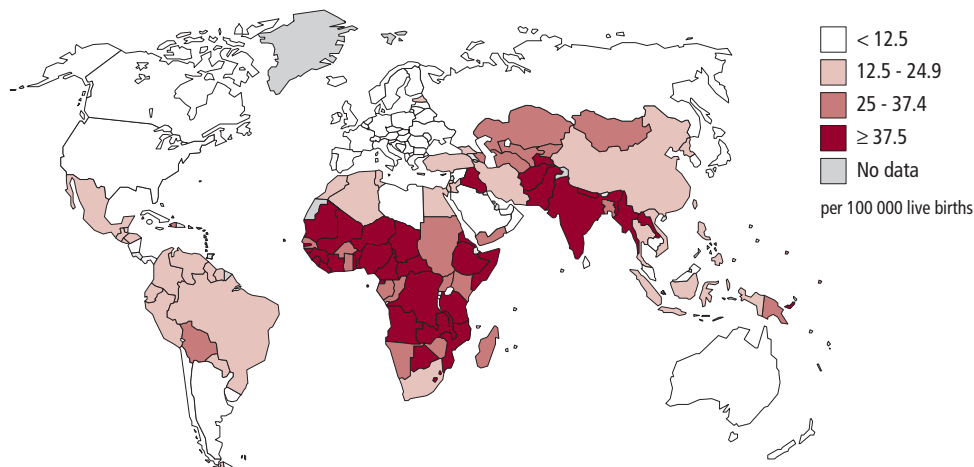
Margarita Diaz, President of Reprolatina in Brazil, a project to improve quality and expand access to reproductive health services in Latin America, described results from a pilot programme done in Brazil, a country of more than 30 million adolescents (16.5% of the population is between 10 and 19 years old) and where, between 1990 and 2002, more than 22% of deliveries (in some states as much as 30%) were by women aged 15-19. Reprolatina's adolescent programme, she explained, is based on what works in a resource-poor public-sector setting. The work she described, a WHO-sponsored pilot project done in Santa Barbara d'Oeste, focused on services exclusively for adolescents, training adolescents as health promoters, and on support groups for pregnant adolescents, including advice to teenagers on how to avoid second and third pregnancies. The programme showed an increased use in reproductive health services. It also showed an integration of health with education and the importance of building alliances as well as capacity. Through the programme, a website for adolescents was created to deliver information; it was possible to see that the use of peer-group educators was both sustainable and replicable. The programme highlighted the need to find ways to make the benefits available as soon as possible to more adolescents in a sustainable way and the need to "engage the gatekeepers," the adults who surround adolescents.

Important points were made in the discussions following the presentations, sometimes before adjournment, sometimes following it. Those speaking from experience in India spoke out about how adolescents in school are not necessarily treated in ways that enhance their self-respect, but rather are taught in the same way as younger children. Others pointed out that adolescents may also be subjected to unwanted sexual attention and/or violence. In addition, research tends to focus on married adolescents while there is also a need to address the unmarried youth.

Daniel Makuto, referring to *The world health report 2005 – Make every mother and child count*, listed grim figures about the growing disparities in maternal and child health care between rich and poor countries. “What went wrong?” he asked, as he looked at tables showing 11 million children under five dying each year, and the alarmingly high maternal and newborn mortality rates in many developing countries, especially in Africa. He suggested a number of reasons why so many people are excluded from care:

- countries’ inability to invest sufficiently in health care systems;
- poverty, humanitarian crises, HIV/AIDS compounding economic downturns;
- health workforce crises, migration from many high mortality and morbidity countries.

Illustration 18. **Similar patterns for newborn mortality ...**

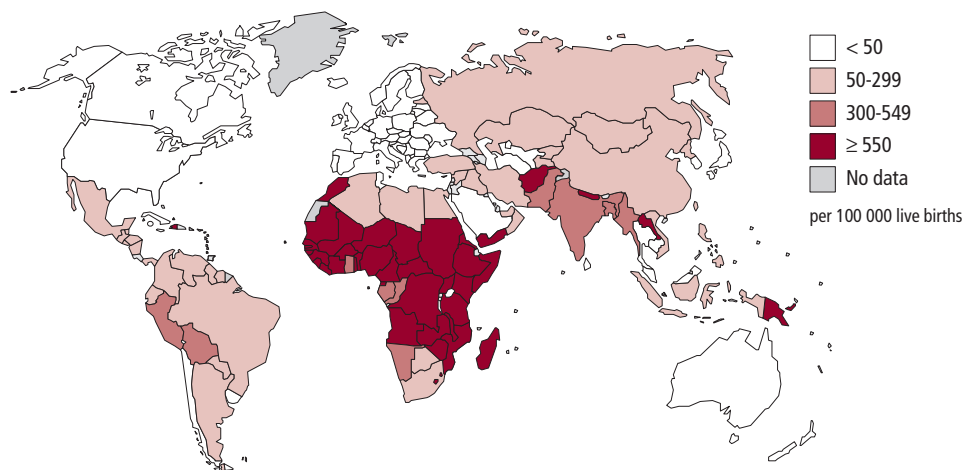


Presented by Daniel Makuto in "Scaling up access to health care for mothers and children: reducing the toll of child and maternal deaths"

Source: World Health Organization, April 2005

All these issues conspire to exclude the poor and most vulnerable in these countries, Makuto said. He proposed using proven interventions to help women in a programme that weaves care for pregnant women into a continuum that includes skilled care at and after birth, back-up hospital care when necessary, and care for newborns that continues through the post-natal period into childhood. As it is, care for newborns has largely fallen into the cracks between maternal and child health care programs. Not recognized for their vulnerability and barely able to cry, let alone have a voice of their own, newborns have been subject to neglect, preventable diseases and poor health care in developing countries. Makuto reported more than 4 million neonatal deaths occur every year, about half of which are within the first 72 hours of life with an added 3.3 million stillbirths each year.

Illustration 19. ... and for maternal mortality



Presented by Daniel Makuto in "Scaling up access to health care for mothers and children: reducing the toll of child and maternal deaths"

Source: World Health Organization, April 2005

WHO sees a mother-newborn-child (MNCH) health care programme as the core from which a sustainable health system could be built – but this will require consolidated effort by all the partners.

The spotlight on maternal health can reveal some impressive figures which are not often cited: nearly half of women in developing countries deliver without any skilled birth care and fewer than a third are estimated to have any postpartum care. In fact, in sub-Saharan Africa just being pregnant puts a woman at great risk: one of 16 women who are pregnant will die during pregnancy or childbirth.

A number of participants spoke about the need to bring men more into the discussion of sexual and reproductive health, however, women continue to remain the sex at risk. **Chander Puri**, Director of the National Institute for Research in Reproductive Health in Mumbai, reminded participants that reproductive health in India accounts for 19.7% of the burden of disease for women and 13.7% for men. This has been the case since 1990 and shows no sign of declining. With the shift from rural to urban areas, women in particular need to be targeted for help. While the technologies may be available to do this, the necessary services frequently are not.

Indian research programmes were offered as examples of operational research approaches and experiences in reproductive health. Attempts were made to draw lessons from them, to extend those lessons to applications and to extend or "scale up" local projects to help meet challenges in other areas, and other countries.

Dinesh Agarwal, a technical adviser with the United Nations Population Fund in New Delhi, reported that while there has been a decline in fertility rates in India, contraceptive use remains stagnant. At the same time there are high levels of reproductive tract infections (RTI) and sexually transmitted infections (STI) which require attention and treatment. Maternal mortality remains unacceptably high, often the result of home deliveries carried out by untrained persons. Proposed programmes for delivering interventions, he says, now focus on “how to” rather than “what” in bridging the gap between what is known and what is done. He stressed the need for more behavioural research and attention to ways to improve access and quality of services as well as involvement of both public and private sectors. Sanjay Chauhan, Assistant Director of Operational Research, National Institute for Research in Reproductive Health, also voiced concern about RTIs and STIs in India, calling them a public health problem. Still, no nationwide study on them has been published and there is often reluctance among both men and women to seek care. There are plans, Chauhan said, for a national consultation meeting in India on RTI/STI-related issues to draft final guidelines to be given to the Minister of Health and Family Welfare.

It was not surprising that impatience for action was sometimes voiced, not only by participants in the audience, but sometimes by the speakers on the dais. “How can one reduce the time between the generation of evidence and its mainstream implementation?” asked **Catherine d’Arcangues**, Coordinator of Family and Community Health at WHO’s Geneva headquarters. There is an increasing awareness, she said, that there is a long time lag between the generation of evidence and its implementation in clinical practice. She cited the 250-year time lag between discovery of the benefits of citrus to prevent scurvy and its use by the Royal Navy. “Even today when communication has never been so intense, this time lag is counted in years,” she added. The approaches to changing clinical practice are not themselves based on evidence, she noted. To change clinical practice to keep it updated with the latest evidence requires a set of interventions that are setting-specific. Additionally, there is a need for rigorous evaluation of different interventions to bridge the ‘know-do gap’. It is essential to document experiences carefully, so as to identify key influencing factors and build knowledge to facilitate replication in other settings.

AIDS-spawned epidemics

Gender-based violence impacts on women’s physical and psychological health in both the short and long term. In some countries, women who are subject to violence are at greater risk of HIV, and conversely women with HIV appear to be at an elevated risk of structural and interpersonal violence. **Nandinin Prasad**, of the Hyderabad office of the International Center for Research on Women, noted that one out of every three women globally experiences sexual, physical or psychological abuse at some time in her life. Citing evidence from a study of 1366 pregnant women in Soweto, she showed that women in relationships involving physical abuse were 48% more likely to be HIV-positive than women not in abusive relationships; women in relationships with domineering men had a 52% greater risk of HIV infection than women not in relationships with controlling men. The feminization of HIV/AIDS, she said, is apparent: of the 16,000 new infections that occur every day, up to 60% are among girls and women. “Gender-based violence is not only a cultural issue, but also a global health issue,” she stated.

Illustration 20.


Violence as an outcome of HIV/AIDS

- Women who test for HIV and share results with partners may be at increased risk of violence
- Stigma, which lays basis for violence against the infected, is gender differentiated and in fact women are often “blamed” and face more severe repercussions – thrown out of home, isolated, physically attacked

Presented by Nandinin Prasad in “Gender-based violence and HIV/AIDS: links and programmes”

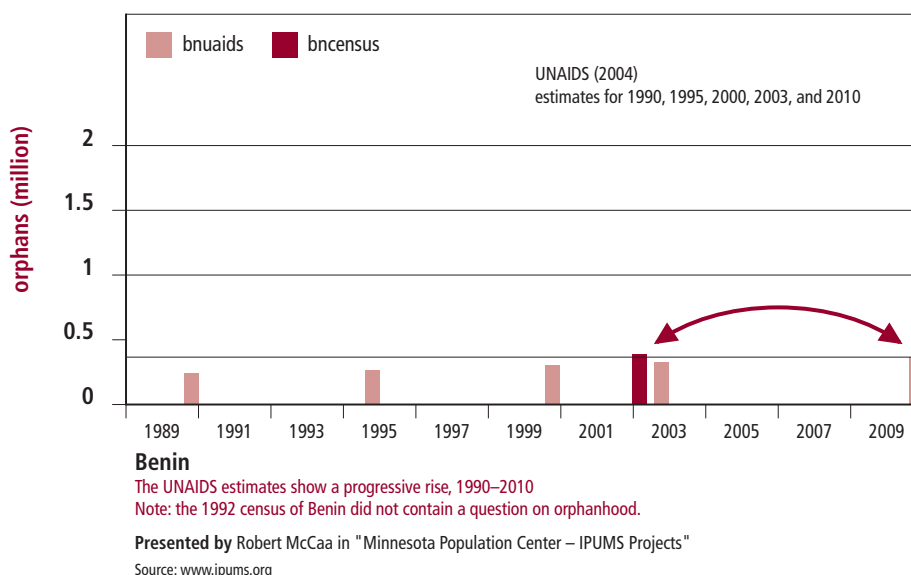
Prasad stressed the need for new and innovative responses, especially programmes that cut across sectors to address both gender-based violence and HIV, as well as the need to shift from a focus on individual behaviour to supportive systems for women which provide them opportunities to generate income in order to prevent compounding their inequality.

Another tragic result of the rise of HIV/AIDS across sub-Saharan Africa is the explosion in the number of orphans – projected to reach 50 million by the end of this decade, up from less than 30 million in 1990, when HIV/AIDS accounted for less than 2% of orphans. By 2010, HIV/AIDS is expected to be responsible for more than 35% of orphans. **Felicien Accrombessy** of the National Agency for Employment, Benin, presented a study (carried out with Robert McCaa of the University of Minnesota Population Center, USA) calibrating orphanhood from microdata from Kenya, South Africa and Benin. In Benin, the 2002 census revealed 385,000 orphans, already 15,000 more than UNAIDS had predicted by 2010. In fact, taking into account reduced fertility, census and health survey estimates for four-fifths of southern Africa consistently exceed UNAIDS projections – and those projections are for a 300% increase in the number of orphans between 1990 and 2010.

The problem of caring for the orphans is especially difficult given the low life expectancy and the high incidence of poverty in many African countries. The extended family, particularly the grandmother, generally assumes the care of children who have lost their parents, but the study raised the question of how much longer this cultural behaviour would continue and cited the growing phenomenon of «slave children» in West Africa.

The researchers were sceptical about the kind of instructions given to census-takers, but called into question even more the role tradition and culture play in defining an orphan. Remarking on the sociocultural background, they note: “For policy-makers interested in promoting child welfare, is the biological definition necessary or is the sociological definition OK?” They quoted Africans about the distinctions they make in describing members of their extended family. The researchers recommended that, for the 2000 round of censuses, microdata should be used as they become available and for the 2010 censuses, microdata would be a valuable benchmark if they include clear questions on orphanhood.

Illustration 21. **The 2002 census of Benin reveals as many orphans as predicted for 2010**



Chapter 4. Neglected populations and opportunities

There is a growing awareness of the need for research on neglected populations, not only on the “neglected diseases” that afflict them. Diseases designated as “neglected” have generally included the major poverty-linked diseases of HIV/AIDS, malaria and tuberculosis: others include Chagas Disease, leishmaniasis and sleeping sickness. Non-infectious neglected diseases and conditions include osteoporosis, obstetric fistula and road traffic injuries. It is apparent that neglected patients share a commonality: they are poor. While the rich may sometimes have the same diseases or conditions as the poor, the difference is that the rich have the resources for treatment.

Who is it that neglects the diseases and/or the populations? Participants explored the possibilities:

- Is it the patient who does nothing about a disease, such as malaria, which may be so endemic that the afflicted get used to it and do little to prevent or treat it?
- Is it the policy-makers who neglect giving attention to a disease, such as tuberculosis, which is especially prevalent in poor areas?
- Is it the pharmaceutical industry, which fails to invest more resources in research and development, or to find cheaper but effective drugs to treat diseases such as HIV/AIDS?

In several discussions, suggestions were made that local and international communities should extend health research to include multi-sectoral collaboration on disease. There were proposals that research priority setting should be done in conjunction with international partners but carried out by local governments.

Robert Ridley, director of the UNICEF/UNDP/World Bank/World Health Organization Special Programme for Research and Training in Tropical Diseases (TDR), was one of several speakers who emphasized that only by understanding the socioeconomic environment can understanding of research needs and priorities be aligned with the needs of the communities affected by the diseases.

Illustration 22.

 Many 'neglected diseases' Mortality estimates for 2002 (World Health Report 2004)	
Infectious and parasitic diseases	10,904 (thousands)
HIV / AIDS	2,777
Diarrhoeal diseases	1,798
Tuberculosis	1,566
Malaria	1,272
Childhood diseases	1,124
STI (excluding HIV)	180
Meningitis	173
(Other) Tropical diseases	129
Hepatitis B	103
Hepatitis C	54
Dengue	19
Japanese encephalitis	14
Intestinal nematode	12
Leprosy	6

Presented by Robert Ridley in "Sustaining priority research for neglected tropical diseases"
Source: World Health Report 2004, WHO

The surge in neglected diseases in recent years is related to the economic background of the populations affected, Ridley said. There is a need to look at the matrix in which the diseases develop. In addition, appropriately directed research, from basic research through drug and vaccine development into implementation research and health systems, is critical to any global response to fight these diseases. Still, there is variation in the extent of research efforts for different diseases, he pointed out, with HIV/AIDS, malaria and TB drawing the biggest shares of funding and resources. The work presented by **Nirmal Ganguly**, Director General of the Indian Council of Medical Research, that has been done in India, Nepal and Bangladesh on visceral leishmaniasis, he said, demonstrates how new tools can result from research and underscores the importance of local ownership in research. In addition, it is vital to recognize social, economic and behavioural aspects, how research can be embedded in countries and integrated into health systems, and how inter-country coordination can be facilitated by agencies such as WHO and TDR.

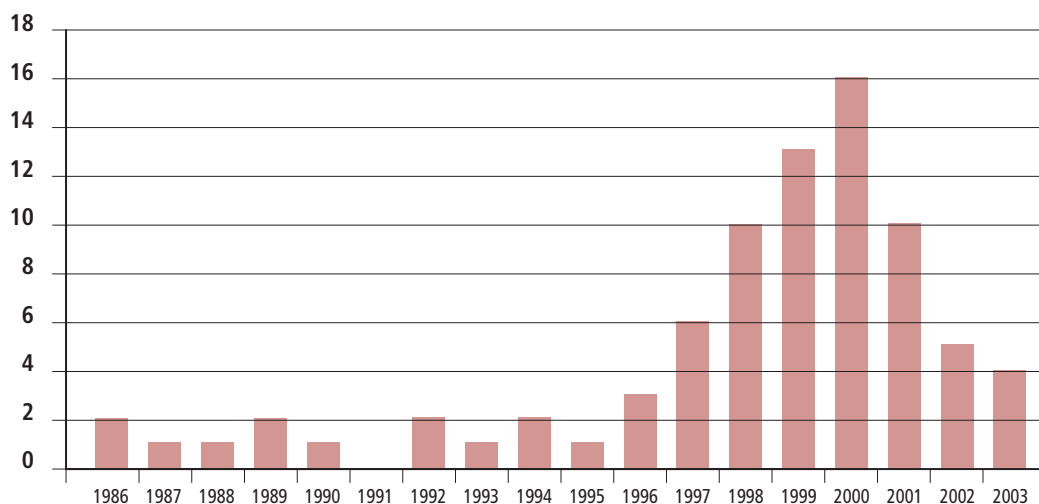
However, Ridley added that the challenges in this are great: to maintain the level of funding for basic science, which has a cross-cutting benefit for all diseases, and to continue innovation and product development. And while this is done, there also must be more attention to equity and human rights to establish a better balance of research between neglected diseases and more common diseases. What is needed most of all, Ridley concluded, is enhanced evaluation and implementation research for *all* diseases.

The promise of public-private partnerships

The subject of public-private partnerships (PPPs) pervaded a large number of sessions at Forum 9. PPPs hold promise for neglected diseases and stand out as an example of what cutting-edge innovation can offer. References to PPPs appeared in addresses of government officials, economists and pharmaceutical company representatives. They were cited in discussions of networking and cooperation, in innovative business approaches and are linked with cooperation not only between the public and private sectors but also between the North and South. The buzz of excitement over Mary Moran's recently published study (see page 9) cut across economic, business and pharmaceutical sectors.

Elizabeth Ziemba, President of SHARED, a non-profit organization dedicated to improving access to medicines in developing countries, approached what she called the "well-documented gap between the global disease burden and research dollars" by examination of the possibilities of public-private partnerships to bridge the gap. She described a 2003 report she had prepared for the European Union (as a contribution to the WHO report *Priority Medicines for Europe and the World*, November 2004) that focused on how it could support neglected disease research in the developing world, including a list of priority medicines to be proposed for research funding. Public-private partnerships were identified as the vehicle to develop medicines for which there is little or no commercial incentive. Ziemba reported that 16 PPPs for product development were identified, which had together raised more than US\$ 1 billion in funding. It was no surprise that the main funding for PPPs is private foundations, with the Gates Foundation the overwhelming dominant force in determining which PPPs are funded and for which projects. The report to the EU showed "the relatively small proportion of funding from governments and how it translates into the private sector setting the parameters of public policy issues," she said. The question for the European Union – and, by extension, for governments in general – was "Is this the best way to set public health priorities?"

Illustration 23. PPPs created between 1986 and 2003



Presented by Elizabeth Ziemba in "Public-private partnerships for neglected diseases: opportunities for the European Union to address pharmaceutical gaps for neglected diseases"

The only PPP for product development that the EU had provided funding for was the European Malaria Vaccine Initiative. From further research collected in a more recent WHO report, Ziemba compared the EU's contribution with the 17 PD-PPPs for which the Gates Foundation had provided direct funding. While the EU had established and funded the European and Developing Countries Clinical Trials Partnership (EDCCTP), this had only focused on HIV/AIDS, malaria and TB, not on other neglected diseases. The report to the EU argued that global health problems require political will and putting the EU's resources behind PPPs could greatly accelerate closing the '10/90 gap'. If the EU failed to become a more meaningful participant, it would also allow the US and UK to set the agenda for global health. The report also established that the EU funding process was not "user friendly," and discouraged innovation as well as discouraging PPPs from applying for funding. The report on *Priority Medicines for Europe and the World* called for sustaining adequate funding for neglected diseases, expanding activities of the EDCCTP, supporting PPPs, and reviewing the application process. It won not only praise from the *British Medical Journal*, but the Dutch government awarded 2 million euros to the Global Alliance for TB Drug Development and began meetings with the WHO on future plans. The EU has also established a technology platform for pharmaceutical innovation that will incorporate some of the concepts of the project. Ziemba sees the report as an advocacy tool for PPPs, to be used as leverage to make a case with EU countries individually as well as collectively.

The 2005 Indian Patent Act

Amit Sen Gupta, EC Member of the Delhi Science Forum, called attention to India's prominence today on two fronts: in discussions about neglected diseases as well as those about drugs for the poor in developing countries. It is estimated, he said, that 50% of all the antiretroviral drugs used in the world are manufactured in India, at costs that may be one-fortieth or one-fiftieth the cost that the original makers of those drugs charge. About 45% of drugs produced in India are exported. Naturally, he said, there should be concern about the recent changes in the India Patents Act to bring the country into alignment with the TRIPS (Trade-Related aspects of Intellectual Property Rights) agreement. It is important to understand, he added, that the 1970 Indian Patents Act was a key instrument in promoting India's position in manufacturing generic drugs and leading to its becoming the fourth largest pharmaceutical-producing country in the world in volume. Gupta emphasized that the 1970 Patents Act, which did not require patents for pharmaceuticals, food and chemical-based products, was based on common sense: "that profits should not extend to health and nutrition." TRIPS does not allow differentiation between sectors, he said, and India now must apply for patents in all sectors, including pharmaceuticals.

Illustration 24.

Features of 1970 Indian Patents Act affected by TRIPS provisions

- No product patents for pharmaceuticals, food and chemical based products
- Process patent only for 5 years
- License of right for domestic enterprises
- No constraint on exports of products manufactured under license
- Insistence on "working" of patents
- Revocation for "non-working"
- Royalty ceiling of four percent

Presented by Amit Sen Gupta in "Amendments to Indian Patent Act: impact on access, exports and research and development"

Source: Delhi Science Forum

Gupta noted that even in India, only 20-50% of the people can afford to buy all the drugs they need. He added that other countries sell older drugs that are not patented, below the price that India does. He focused on the importance of the Compulsory Licences Provision in the Indian Patent Act of 2005 which, he said contains sweeping powers for the government and lies at the heart of providing a balance to a patents system by curbing monopolies and promoting competition. However, between 1995 and 2005, there have only been eight compulsory licences on pharmaceuticals issued in the world; Gupta charged 'Big Pharma' and countries such as the United States with bringing political pressure to ensure that compulsory licences are not issued. Another provision that has also come under fire, he said, provides for Indian companies that are already producing drugs to continue to do so after payment of a royalty.

Illustration 25.

Features of TRIPS

- Product and process patents for all inventions (no discrimination)
- Imports on par with "working" of a patent
- Uniform 20 year patent term for products and processes
- No license of right provision
- Compulsory license: tight conditionalities, export constraints
- Revocation for non-working – mandated judicial review

Presented by Amit Sen Gupta in "Amendments to Indian Patent Act: impact on access, exports and research and development"

Source: Delhi Science Forum

Gupta believes the most troubling recent development in the Indian pharmaceutical market is that large Indian companies, “precisely those companies that have made investments in R&D,” are becoming junior partners in multinational organizations which then use the Indian infrastructure to develop products for the multinational organization. “In my mind, that would really be a pity,” he said, “because I do believe that India has the infrastructure and the ability and the capability, both human and resources, to conduct independent product research.”

On the road

Road traffic injuries (RTI), the ninth leading cause of death in the world, also disproportionately affect the poor. In 2002 there were 1.2 million deaths, or 2% of all deaths, attributed to road traffic injuries globally and 91% of them occurred in low- and middle-income countries. **Robyn Norton** of the George Institute of Health, Australia, and chair of the Road Traffic Injuries Research Initiative, explained how significant differences in culture and industrial development have a dramatic impact on those who use the same roads. The most vulnerable are the pedestrians, cyclists and, especially, motorcyclists who share the roads with larger vehicles. Passengers in public transportation that is not properly maintained also frequently become victims. The poor may start driving earlier, have no formal training, use defective vehicles, and have a different logic and needs than the wealthier. Victims of road accidents are likely to be supporters of households and when they are killed or injured, the entire household suffers. The poor spend a greater proportion of their income on funeral and medical expenses than the better-off.

The greatest barrier to tackling the problem of road traffic injuries, Norton said, is first to convince policy-makers and donors of the strong link between RTI and poverty; securing funding to identify factors associated with increased risk for the poor is then necessary. In Malaysia, for example, motorcycles account for 49% of registered vehicles, 45% of accidents and 60% of all road traffic fatalities. In areas where motorcycle lanes were constructed, accidents declined by 39% and fatalities were reduced by 600% – the kind of example that gives a cost-benefit analysis considerable weight with funding agencies.

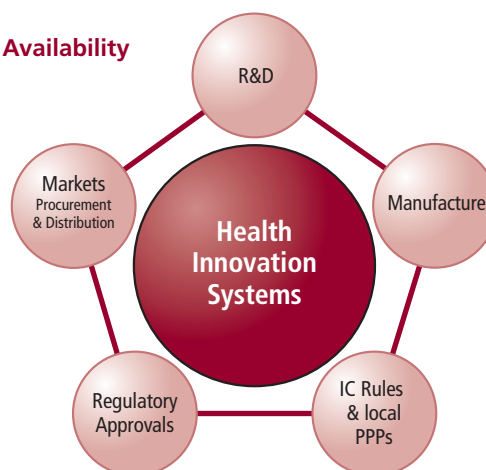
Chapter 5. Innovation

If necessity is the mother of invention, innovation appears to be her close relative. India developed cheap generic drugs to treat its own burgeoning population and built up an industry by exporting them to other developing countries. The President of India proudly used his opening address to announce the latest discovery: a molecule that could lead to a quicker treatment of tuberculosis, a disease that takes a larger toll in India than in any other country.

Charles Gardner, Associate Director of Health Equity at the Rockefeller Foundation, emphasized at the outset of his presentation that innovation applies to the entire pipeline of the health system, from research to the person who needs its benefits. It includes products, such as drugs, vaccines and bed nets, which it processes through engineering and implementation, and sets in place using policies, practices and regulation. He traced the shift from the great neglected diseases programmes of the 1980s to products of public-private R&D partnerships of the 1990s toward a systems approach today using product development partnerships (PDPs). The goal is product availability for the poor, he said, and it is being pursued by organizations such as the International AIDS Vaccine Initiative (IAVI), Medicines for Malaria Venture (MMV), Global Alliance for TB Drug Development, International Partnership for Microbicides (IPM), and the Pediatric Dengue Vaccine Initiative (PDVI). "It's not just about products," he emphasized, "it's about product development, advocacy, awareness and about culture change." To a great extent, the priorities are based on the health inequities of neglected diseases: HIV/AIDS, malaria and tuberculosis are at the top of the list.

The PDPs have Northern headquarters, but a global focus. They supply a mix of public and private contributions and follow non-profit business models to achieve a technological goal that would increase access and bridge the 'know-do gap'.

Illustration 26. **Availability**



Presented by Charles Gardner in "Innovative Developing Countries"

Gardner, in the closing plenary, called the announcement by India's health minister to increase the national health budget from less than 1% to 2% of GDP and the proportion of the health budget allocated to research to 2% by 2010 a "dramatic promise." He said it is not only an indication of the priorities and policies within India, but an extension of science technology and industrial capabilities to enhance research and strengthen health innovation systems. The question is, he noted, whether the Innovative Developing Countries can align their national health policies with their economic and industrial policies and also address the poor. He predicted an additional influence of the network between India, Brazil and South Africa (IBSA) will be felt in Africa, especially in the battle against HIV/AIDS.

Human intellectual capital

Remarking that some of what are now called “developing countries” across North Africa, the Middle East and India had actually started global innovation 2000 years ago, **Anthony MBewu**, President of the Medical Research Council of South Africa, pointed out that in the last 500 years, the USA and the countries of Europe have led science and technology at a pace that has increasingly left other countries behind, “in a widening knowledge gap.” Emerging nations that now are becoming known as Innovative Developing Countries (Brazil, India, South Africa and the People’s Republic of China), he said, have recently made progress but still have a long way to go. He referred to great disparities between the G8 and the four IDCs in GDP, population and especially in “knowledge production,” an area for which the G8 is responsible for more than 90% and the four IDCs for only 1.8 %.

Illustration 27.

Population, economies and knowledge production			
G8	GDP	4 IDCs	G77
Pop: ~ 1bn GDP: 20bn (70%) KM: >90%	1. USA 2. China 3. Japan 4. India 8. Brazil 25. South Africa	Pop: 2.6bn (40%) GDP: 20% KM: 1.8%	Pop: 5.5bn (85%) GDP: 30% KM: ?

Presented by Anthony MBewu in “Sustaining and enhancing innovation in South Africa”

Source: MRC

The most important input for the innovation process is human intellectual capital, MBewu said, and here the developing countries of the world may have an advantage: “In the 21st century, the 1.1 billion brains of India, 1.3 billion brains of China, 700 million brains of Latin America and 770 million brains of Africa will be the intellectual capital that the countries of the world trade for in order to establish economic and technological supremacy. The superpowers of the 21st century, be they the USA, the EU, India or China, will exchange as their currency the super intellects of the world – and the bidding wars have already begun.”

On the way to Mumbai, he remarked, he read that four Indian Americans have been named among the top 35 innovators in *Technology Review Magazine*: all under 35 years old, working at prestigious institutions and in their own start-ups. He also cited a young South African scientist who recently had made a startling discovery that could be used in nanoscale machines of the future.

Unlike Africa, MBewu said, India and China have been quick to exploit their extensive diasporas. People from both countries have trained in the US and Europe in “brain drain” programmes that have spawned the world’s second biggest software industry, in the case of India, and huge science and technology parks and cities in the case of China. Other IDCs, he added, must learn from these successful programmes and develop recruitment and retention strategies in order to drive improved health and development in their own countries.

Social and gender equity are the most important innovations that IDCs need to make in their march towards greater prosperity and development, MBewu said. “Access of girls and women to education, and participation in the workplace is critical for socioeconomic development, furthermore, political participation is also critical.” He pointed to the South African Cabinet, which is nearly 50% women, as an example of the political participation of women in his country.

Research scientist **Richard Mahoney**, Professor at the Biodesign Institute, Arizona State University, USA, suggested that an understanding of health innovation systems could guide strategies, funding and actions of organizations in both private and public sectors. Crediting Sanjaya Lall, an Oxford economist, with a list of six determinants of innovation, Mahoney explained the list is exhaustive and complex. The determinants are R&D, manufacturing, domestic markets, export markets, intellectual property rights and regulation. The six components are interconnected: progress overall requires progress in each. Innovative organizations build networks that allow them to address each of the determinants, he added, and cooperation is essential between public and private sectors. A comprehensive financing policy by a national government or by the private sector for example, will take into consideration all six determinants. At Forum 9, Mahoney pointed out, he had not heard a single presentation regarding innovation “that attempts to look across all six of these determinants and present a comprehensive understanding of how our capability to develop and introduce new drugs and vaccines is proceeding in a systematic and comprehensive way.”

Illustration 28.

Policies for health innovation						
Determinants						
	R&D	Domestic market	Export market	Manufacture	IP management	Regulation
Capacity Building / Education						
Financing (public and private sector)	Tax incentives for R&D on diseases of the poor	Support for national health systems	Policies to promote exports	Subsidies for building factories	Support for court systems, patent offices	Support for regulatory agencies
Development and introduction of new technologies						

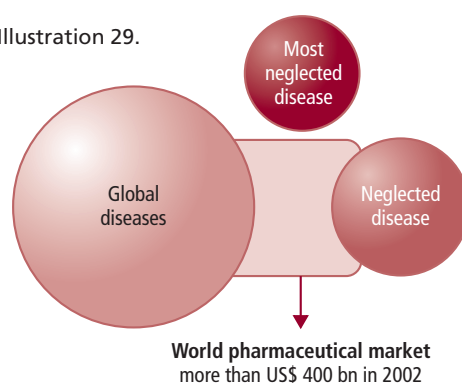
Presented by Richard Mahoney in "Innovation systems and global health"

He cautioned participants not to split into two camps: those favouring R&D and those who promote enhanced delivery of existing technologies. “Innovation studies tell us that this argument is counterproductive to both groups,” he said. “Innovation is a complex undertaking that requires the networked efforts of *all* the actors concerned with the determinants of innovation.”

Carlos Morel, Scientific Coordinator of the Centre for Technological Development in Health, Oswaldo Cruz Foundation, Brazil, titled his presentation on innovative developing countries: “Neglected capacity of developing countries to address neglected diseases.” Neglected diseases are not neglected by developing countries, but rather by the industrialized countries of the world. They include not only endemic diseases, such as polio and rabies, or re-emerging diseases like tuberculosis, but also emerging diseases in the developing world: avian flu is an example.

As neglected diseases become global diseases, incident in both rich and poor countries, incentives for research and development will appear in rich-country markets. Fewer incentives can be expected in poor countries where diseases such as HIV/AIDS and tuberculosis will continue to affect large and vulnerable segments of the populations. The “most neglected” diseases, such as sleeping sickness, river blindness and leishmaniasis, will overwhelmingly or exclusively affect developing countries.

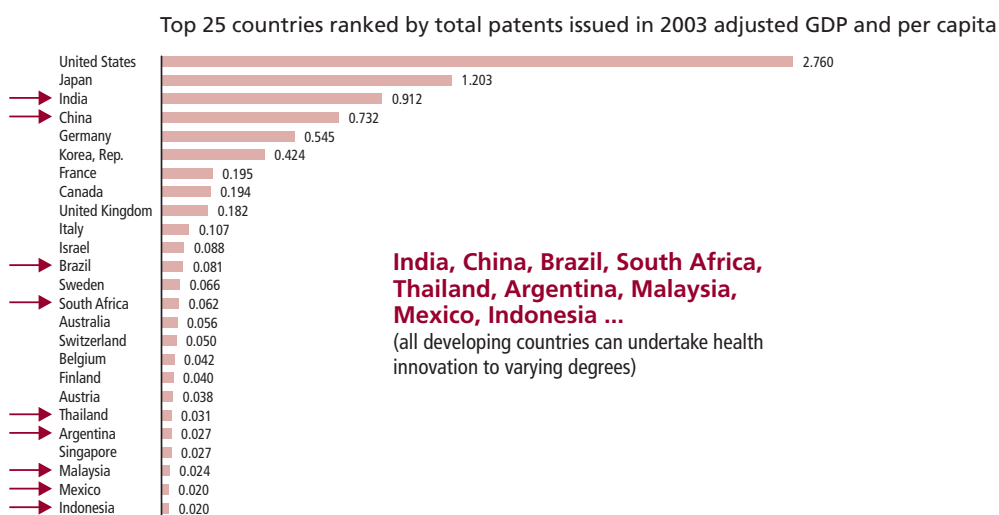
Illustration 29.



Presented by Carlos Morel in "Health innovation: the neglected capacity of developing countries to address neglected diseases"

Source: MSF (2001) Fatal Imbalance: The Crisis in Research and Development for Drugs for Neglected Diseases; Yamey (2002) The world's most neglected diseases. Br.Med.J. 325:176-177

Citing a recently published article in *Science* (15 July 2005) he had co-authored on health innovation networks, Morel underscored the importance of developing countries pursuing health innovation themselves. The article documents that “for Brazil, China, India and South Africa, the number of highly cited academic papers rose nearly two-fold from 1993-1997 to 1997-2001, whereas the number of US patents has increased 10-fold.” While acknowledging that academic publications and patents do not help the poor unless they are turned into tangible products or policies, the *Science* article showcases the growing capabilities of developing countries, including their role in manufacturing health products to meet global needs.

Illustration 30. **Innovative developing countries**

Presented by Carlos Morel in "Health innovation: the neglected capacity of developing countries to address neglected diseases"

Source: Morel et al (2005) *Science* 309:401-404, 2005 (supporting online material)

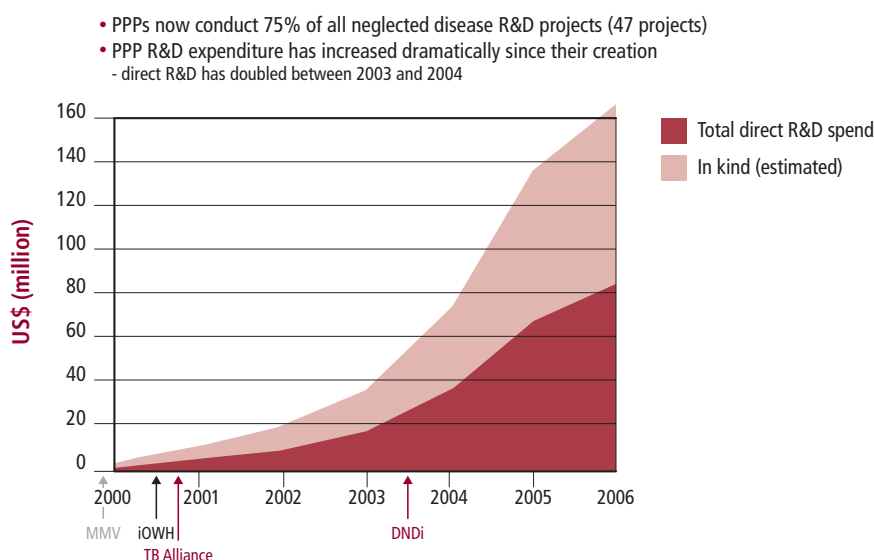
The article lists concrete evidence of the contributions of IDCs: China is already the world's leading producer of penicillin; the Serum Institute of India is the world's leading manufacturer of diphtheria-pertussis-tetanus vaccine; over 60% of the UN Children's Fund's vaccine requirements for the Expanded Programme on Immunization are met by Brazil, Cuba, India and Indonesia. In dollar amounts, 67% of India's drug exports and 74% of Brazil's drug exports go to other developing countries, while 63% of Uganda's drug imports and 54% of Tanzania's drug imports come from other developing countries. "Innovation system theory," write the authors of the Science article, "has rarely been applied to global health problems, whereas the global health community has rarely focused on the innovation systems. We believe that new insights may arise at the intersection of these two cultures and research communities."

A window of opportunity

Public-private partnerships hold a very important place in the discussion of innovation as well as of neglected diseases. There was much interest as **Mary Moran**, Director of the Pharmaceutical R&D Policy Project at the London School of Economics (funded by the Wellcome Trust), explained how drug development for neglected diseases has soared in recent years as it has been driven by PPPs, which now conduct three-quarters of all neglected disease projects.

There were 63 neglected disease drug projects in development at the end of 2004, she said, compared with only 13 in the quarter century prior to 2000. Eighteen new drugs are already in human trials, holding the prospect of up to eight or nine new neglected disease drugs within the next five years. Four new public-private partnerships have been created since 1999, as well as three new institutes for research and development in malaria, tuberculosis and dengue. One-third of the products are being developed in academia, two-thirds by industry.

Illustration 31. **Public-private partnerships**

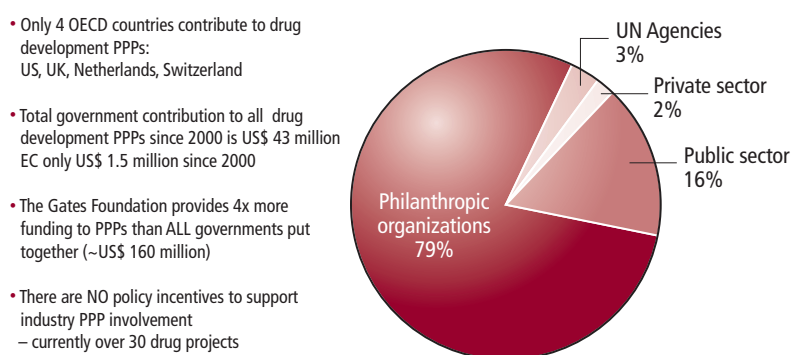


Presented by Mary Moran in "Neglected disease drug development: how big is the gap?"
Source: Wellcome Trust / London School of Economics

Moran emphasized that PPPs have performed better, by all drug development measures, than either drug companies working alone or public groups working alone. These measures include the health value of final drugs, speed of development, cost-efficiency and the fact that the vast majority of PPP projects deliver drugs to poor patients at low or no-profit prices. “We have these very cheap active mechanisms, which appear to engage industry very actively,” she said, but added that investors and policy-makers continue to hesitate about using them. She pointed to the total PPP investment of US\$ 43 million by only four governments since 2000, amounting to only 16% of funding. “I wish the EC commissioner were here,” she told participants, “because the EC is just dreadful, only US\$ 1.5 million – they should be blushing.”

Eighty percent of PPP funding still comes from philanthropists; the Gates Foundation has contributed four times the amount governments have to support PPPs.

Illustration 32. **Funding constraints are choking off this rapid-growth sector**



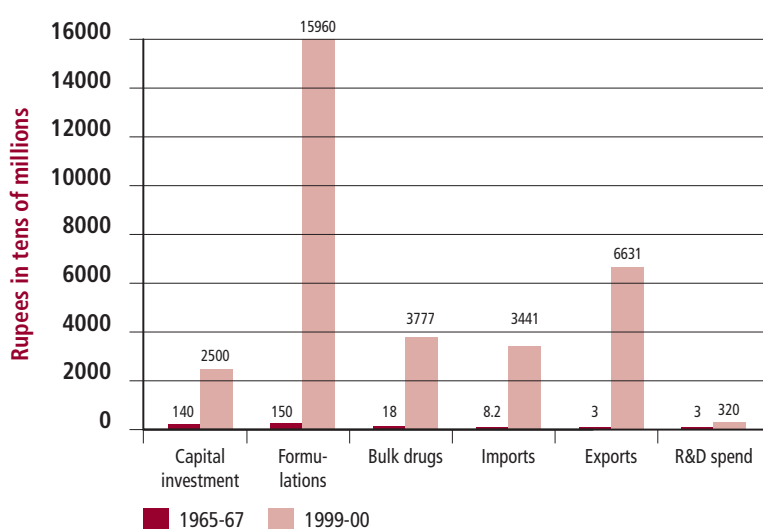
Presented by Mary Moran in "Neglected disease drug development: how big is the gap?"
Source: Wellcome Trust / London School of Economics

Moran sees governments' focus on making neglected diseases profitable for companies as threatening to move big companies away from the not-for-profit PPP model back to a for-profit commercial model. She called on policy-makers to take another look at the possibilities offered by PPPs and for governments to lend support before the financial gap widens further and the window of opportunity closes. “In the absence of government support, the PPPs may collapse,” she warned. “They have a 40% shortfall for 2005 and they need more, not less, if their successful products move into clinical trials.”

Nirmal K. Ganguly, Director General of Indian Council of Medical Research, the host partner of the Global Forum in holding Forum 9 in India, highlighted innovation as he noted India's leadership among developing countries in international drug and vaccine development. With support from a growing GDP which has made India one of the fastest growing economies in the world, Ganguly said his country will pursue increasing innovative development and build networks with other countries in Southeast Asia, as well as globally. India has been active not only in developing drugs and vaccines, but in creating delivery systems so that these products can be dehydrated, stored at room temperature, used as aerosols, gels or eaten.

Among research accomplishments, Ganguly listed Miltefosine, the first oral remedy against visceral leishmaniasis, and a medication capable of controlling an epidemic. It can be easily and economically produced, stored at high temperatures, has Phase III success rates of 98% and negligible side effects. Currently, India has the most advanced pharmaceutical industry in the developing world, placing fourth in world volume and thirteenth in value of its products. It is home to the highest number of FDA-approved pharmaceutical plants outside the USA. However, Ganguly acknowledged that while R&D expenditures have increased dramatically, they are not adequate.

Illustration 33. **Indian pharma industry growth indicator**



Presented by Nirmal K. Ganguly in "Innovations for drugs and vaccines: India's perspectives"

Source: Organization of Pharmaceutical Producers of India

He referred to new regulations that came into effect in January 2005, under which India agreed to comply with the World Trade Organization's TRIPS regulations, which provide minimal patent protection. Under the new IP regime, Ganguly said, Indian companies may be motivated to increase investments, adding that India can build on its potential to discover and develop drugs at a much lower cost than players based in developed countries.

Mary Woolley, President of the US advocacy organization Research!America, delivered a discerning perspective on how to use information about investment in health research to drive policy change. "The United States public is supportive of greater investment in global health research, once they find out how dismally low it is at present," she explained. She added that policy-makers are not aware of public support for global health research, something the stakeholders could change. Research!America is a non-profit organization whose mission is to make medical and health research, including research to prevent disease, disability and injury, a higher national priority. It has been a leader in the drive to double the funding of the National Institutes of Health in the US. One of the tools Research!America has used is the public opinion poll, adding a question generally not asked in polls: "How much of a priority do you think it is for the US government to spend money for research for health?" Polls have shown, Woolley said, that there is substantial interest, and people are familiar with health problems, both in the US and globally. To demonstrate how much the US spends on medical and health research, pollsters express it in an easily understood manner: six cents of every US health dollar is spent on medical and health research.

Much less than one cent of every dollar goes to global health research, Woolley added. When asked, most Americans say they think the US spends far too little on global health. Asked about their priorities, two-thirds of Americans responded that they are willing to pay more taxes in support of research to improve health. They also believe that corrections to inequities in health are amenable to medical research.

Woolley made two specific recommendations to participants:

- It is extremely important for health researchers to get used to talking about the economic value of health research.
- It is also important to appeal to humanitarian and human interest through public health messages.

“We believe that self-interest, national interest and global interest can be aligned – they must be,” she concluded.

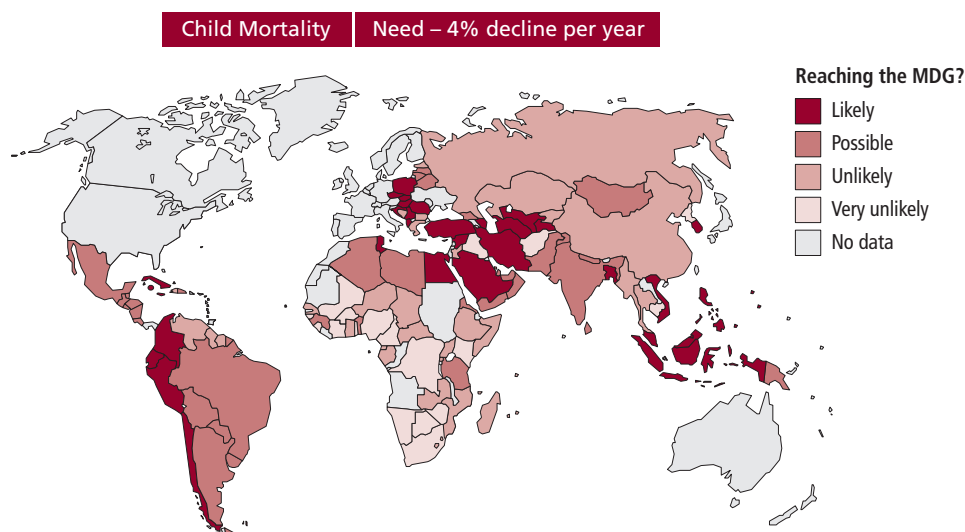
Chapter 6. Policies and priorities

Richard Horton, Editor-in-Chief of *The Lancet*, delivered a wake-up call in his introduction to the plenary session on health policy and systems research, pointedly observing that while there is a great deal of attention given to biological and clinical factors associated with disease, “there is absolutely no attention whatsoever to health system constraints or health policy issues” surrounding the implementation of interventions to prevent some basic devastating diseases. Speaking about the lack of action to prevent diarrhoeal disease – a major killer of children under five – Horton asked participants why a basic health system challenge continues to fall through a policy gap, resisting collective efforts throughout the world. “Despite all the work from the Mexico Statement last November and the attention that is put on health systems and health policy research, it is still enormously neglected,” he said.

His judgment was supported by **Professor Sir Andrew Haines**, Director of the London School of Hygiene and Tropical Medicine, United Kingdom, who predicted that full implementation of existing interventions could reduce child deaths by two-thirds and maternal mortality by three-quarters – but there is a “tremendous gap” in providing resources needed to reach the goals. Evidence suggests, he said, that low-income countries will largely fail to achieve key MDGs by 2015. He pointed specifically to profound regional disparities in human resources, noting that there is a 10-fold difference in the number of health workers per head of population of sub-Saharan Africa and in the Pacific, North America and Europe. Countries need to recruit and retain health care workers, not just doctors and nurses, but also low- and middle-level workers, he said.

The importance of both primary care and community involvement is under-recognized and need more attention for both are fundamental to achieving the MDGs. Sir Andrew Haines, who led a WHO Task Force on Health Systems Research with the aim of improving prospects for achieving the MDGs, reported that services in low-income countries are just too fragmented to deliver the volume and quality of services to those in need.

Illustration 34. **Prospect of meeting Millennium Development Goals**

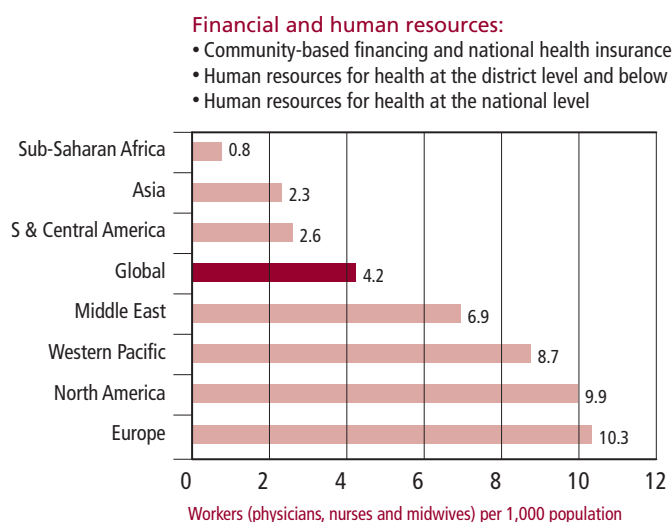


Presented by Andrew Haines in "Task Force on Health Systems Research: a research agenda to help attain the Millennium Development Goals"

Source: World Bank Group, 2003

Part of the problem, Sir Andrew explained, is that, unlike HIV/AIDS, the topics of health systems and health policy are not visible or emotive enough to gain attention; they may be seen as too applied or lacking in rigour and don't receive the recognition they should. Additionally, it will take a long time to change the system that is linked to lack of capacity and funding. It is very important for health researchers to formulate clear messages for action, he said, noting: "We in research have not been very good in that." He also emphasized involving a range of policy-makers in the process. "Many policies and strategies today are based on beliefs rather than evidence," he continued, adding that more work also needs to be done on setting priorities, coordinating international efforts and evaluating the results of major programmes.

Illustration 35. **Suggested topic areas for health systems research**



Presented by Andrew Haines in "Task Force on Health Systems Research: a research agenda to help attain the Millennium Development Goals"

The implementation gap

"Implementation is always a battle, a contest, it always involves resistance," stated **Lucy Gilson**, a Professor at the Centre for Health Policy, University of Witwatersrand in South Africa, "and what is true for health systems intervention generally is particularly true for interventions that seek to re-orient health systems to tackle equity problems." She described the "implementation gap" as that which lies between what we know about human interventions to address health problems and what we do in implementing them.

Gilson presented three studies by the Network for Equity and Health in South Africa (EQUINET) and focused on how they represented the use of power. The studies were done in Tanzania, Cape Town and Zambia; all three, she said, presented a common experience in the health system regarding power. They demonstrated how those at the top, in bureaucracies and agencies, were afraid of losing power and so did not actively pursue new programmes. Gilson also said the health workers charged with carrying out the programmes were used to a culture of compliance, and so did not take responsibility when it was given to them. These implementation gaps resulted from conflicts between policy goals and the beliefs of those charged with implementing them. Health systems are complex, said Gilson, they are composed not just of hardware, including technology, organizational structure and money, but also software, the relationships and norms that shape practice. To bridge the implementation gap, she said, more focus has also to be on the software. "We have a war here for the hearts and minds of those who work in the health system and those who use the health system and benefit from it." Political will, she said, has to be supported and, on the other hand, there is a need to actively

build support for policies. This is two-way communication, Gilson said, “it is not enough to tell people what to do, we have to work with them.”

Later, in the final plenary, Gilson noted that she had been disappointed at the “quietness” of civil society at a conference on poverty and equity. That sector had been more vocal in Mexico City, she said. She wished there could have been more engagement with policy-makers, whom she knew were present. She pointed to the lack of clear language and dialogue among participants who used phrases such as “upstream/downstream” and “delivery systems” without making clear to others from different languages and cultures exactly what they mean. “There are parallel conversations going on,” she said, “between those who work at the international level and those who work at the national and local levels. We don’t always talk to each other – can we bridge that gap?” She asked, “If we can’t talk to each other, how can we expect to talk to policy-makers?”

Toward the end of the Forum 9, other suggestions for the next annual meeting began to emerge, and there were also revelations as researchers, government officials and donors met in and between sessions to exchange information and experiences. Perhaps one of the most striking exchanges came in a special session on funding national health research. **Ok Pannenberg**, Senior Advisor for Health at the World Bank, explained that 0.7% of World Bank monetary support to the health sectors of countries is earmarked by the Bank for health research – *but countries almost never use it*. He suggested the reason is that in ministries of health, the research director is not usually a member of the senior management team and, in the past, has frequently not been a scientist or researcher. Move the R&D agenda higher up, he urged, within the country’s research culture, so the availability of funds can be recognized and utilized for the purpose for which it was intended, so it can expand the research structure of the countries that need it.

The global nature of health research was highlighted in a presentation by **Catherine Michaud**, a Senior Research Scientist at the Harvard Center for Population and Development Studies. She urged a paradigm shift: away from dividing the world between developed and developing countries and towards recognition of the growing convergence in their health issues. It is important to dispel the notion that the health needs of people in developing countries are not related to those of rich countries, she said. In most parts of the world, the key contributors to the burden of disease are now chronic conditions; only in sub-Saharan Africa and parts of South Asia do infectious diseases continue to dominate.

Shared responsibility

In discussions of the political economy of health research, roles and responsibilities of high-income countries were analysed by a number of participants but, for the most part, the picture that emerged did not offer great hope for developing countries.

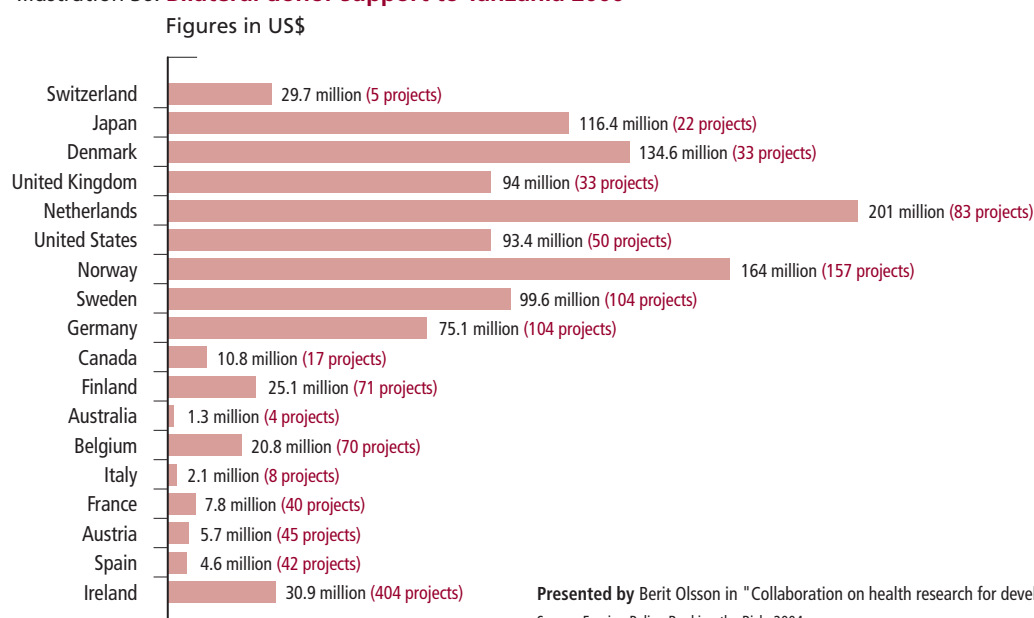
In a presentation “Beyond fatal indifference?”, **Ronald Labonte**, of the Institute of Population Health, University of Ottawa, Canada, took a hard look at how G7/G8 countries define and discharge their responsibilities for global health. The G8 has 13.7 % of the world’s people, 44.1% of the world’s economic activity and almost 75% of development assistance spending. He argued that the debt burden of developing countries far exceeds their repayment capacity; several countries have paid up to twice the amount borrowed and still have to pay more. He suggested that this debt burden could be used more productively to support development programmes that would be able to increase economic productivity. He listed actions taken but that have been disappointing:

- Several G7/G8 summits have generated a great deal of rhetoric but have not yielded real solutions;
- Multilateral agency spending and lending have done little to improve health indicators;
- The AIDS epidemic and other health indicators have actually worsened as a result of structural adjustment programmes that were preconditions for development assistance.

Labonte acknowledged that the 2005 G8 Summit made a commitment for US\$ 40-56 billion in debt cancellation for heavily indebted poor countries, but only a limited number of countries qualify under this agreement. The Summit also promised US\$ 25 billion development assistance per year for Africa but those funds are tied to an EU pledge to raise members’ aid spending to 0.7% of Gross National Income (GNI) – and neither Canada nor the USA will commit to this goal. He concluded that there is a real need for commitment among the G8 countries, as well as for innovative thinking and action.

In the final plenary, **Berit Olsson**, Director of Research Cooperation, Swedish International Development Cooperation Agency, described the Swedish government’s policy for global development: “shared responsibility.” There should be a coherent agenda for funding research not only *on and for* global development, she said, but also *in and by* developing countries. She recalled that the Commission for Health Research in 1990 had presented a similar dual agenda and yet research systems in low-income countries remain weak, with a lack of coherent support. There has been a lot of research on and for development but not much in and by developing countries, she said.

Illustration 36. **Bilateral donor support to Tanzania 2000**



Presented by Berit Olsson in "Collaboration on health research for development"

Source: Foreign Policy, Ranking the Rich, 2004

Olsson described the way in which donor countries divide up their funding. Showing a slide (Illustration 36) with 18 bars, each one representing aid to Tanzania for a variety of projects from a different country, Olsson said: “This is not a joke, this is a reality – this is how Tanzania analyses donor support.” Gesturing toward Sweden’s contributions, amounting to nearly US\$ 100 million for 104 projects, she called her country “a villain.” The whole research community must shape up and sharpen its focus, she told participants, adding that what is needed are national strategies, alignment of support and harmonized procedures. If donor countries do not harmonize their support and reporting requirements, they will fragment the developing countries they seek to help. Olsson also suggested research leaders should be trained in developing countries, where the training will also benefit their institutions. Looking to the future, she suggested that the Global Forum and COHRED jointly work on systems for health research and support low-income countries so they can produce their own national strategies for research.

Chapter 7. Tracking the resources

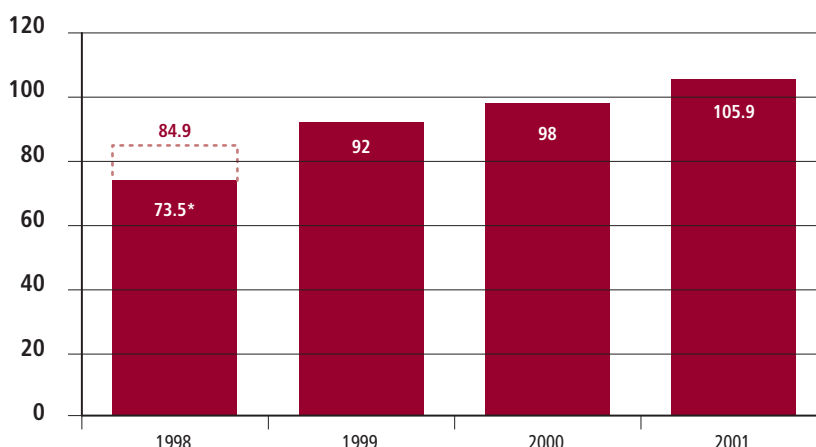
When the 1990 Commission on Health Research for Development made its first estimates of global spending, the estimate suggested that less than 10 per cent of the global budget on health R&D was being devoted to the specific health problems of developing countries where 90 per cent of the world's burden of preventable ill-health were to be found. This '10/90 gap' reflected the inequality of global health research and the chasm that existed between developed and low-and middle-income countries. First the Council on Health Research for Development (COHRED) and then the Global Forum for Health Research grew out of this recognition of inequity. The Global Forum was set up in 1998 with the mandate to help reduce inequities in health research and the allocation of health research expenditures. It began a survey of resource flows, aimed at understanding what the world spends on which areas of research, where the finances come from, how they are being used and whether the priorities of global health are being targeted. This is critical information for improvement of the situation.

However, investments in health research have not been easy to estimate or track. Examination of this area has revealed great gaps in knowledge. Part of the reason is that investments come in various forms and are recorded in a variety of ways, locally and in different countries. They are referred to in reports on financial flows but appear under subheadings as diverse as human resources and research capacity strengthening. They are also aggregated so that the nature and kind of research may not be clear. Money for basic research comes from both public and private sources, which are not always coordinated.

Andrés de Francisco, Deputy Executive Director of the Global Forum for Health Research, states clearly that comprehensive, up-to-date and reliable statistics on expenditures on research for health *do not exist for any country in the world*. When the Global Forum published *Monitoring Financial Flows for Health Research 2004*, it estimated that investments in health R&D (based on 2001 data) had increased to nearly US\$ 106 billion – a considerable jump from the 1990 estimate of US\$ 30 billion, made by the Commission on Health Research for Development. The 2001 figure, de Francisco says, was arrived at through complicated estimation methodologies aimed at assigning to health research a proportion of total R&D expenditures reported by countries to the OECD. It is, he says, a very rough total of expenditures by the largest players in the field; data for many low- and middle-income countries are missing. The data that do appear also often do not reveal details on which areas of health are receiving financial support. Furthermore, estimates are more likely to identify expenditures on biomedical rather than social science research – the latter being an area that has been belatedly recognized as vital to the understanding of the determinants of health.

An update not only estimates that investments in health R&D have increased dramatically but that new resources from public and private resources have emerged. Special networks and initiatives for neglected diseases have been created as well as public-private partnerships for product development. Another promising factor has been the establishment of global challenge funds and, very importantly, rising levels of investment in health research by low-and middle-income countries themselves.

As part of a new set of focused studies being compiled in 2005 by the Global Forum, de Francisco and his colleague Mary Anne Burke have probed more deeply into the OECD numbers and looked at the proportion of public and private expenditures spent on basic research. Their study uses the example of Brazil to show how the two sectors there have approached research in order to increase the capacity of the country to respond to national health needs. Other chapters in the forthcoming publication will focus attention on expenditure on malaria and HIV/AIDS.

Illustration 37. **Estimates for total health R&D expenditure, US\$ billion**

Source: Global Forum Estimates based on OECD data

* Estimated global health R&D expenditure total 1998 in the Global Forum publication *Monitoring Financial Flows for Health Research 2001*

Updated methodology used for this report would put this figure at \$84.9 billion.

Presented by Andrés de Francisco in "Measuring financial flows for research on health"

Why measure financial flows?

The study by de Francisco and Burke explains that tracking expenditures on research for health is required both to assess the impact of public policies aimed at increasing investment in health R&D and to identify where more effort is needed. The information gained may also be used for advocacy purposes and to promote a debate at the policy level. "Critical information for countries in which the physical, mental and social well-being of their populations is under constant threat is urgently needed," the study says. "Understanding what people need to be healthy, and what works when they are sick, is critical for the reduction of the gross inequities in health that define our world."

The study advocates work on two levels: building capacity in countries to develop viable, robust and sustainable national statistical systems and developing good quality data leading to improvements and equity in health and health research. It cites the lack of commitment by governments in low- and middle-income countries to build robust national statistical systems as well as the "very fragmented" international statistical system in which different international organizations collect different sets of global health data. It commends the 2005 Bangkok Charter for Health Promotion for situating "health within a human rights framework, calling for solidarity in efforts to achieve democracy, equity and social justice as the cornerstones of health."

Ritu Sadana, a Scientist in the Evidence and Information for Policy department at WHO in Geneva, described a proposal to use National Health Accounts (NHA) as a framework for guidelines to estimate expenditures for health research. This is the system most likely to already be in place in low- and middle-income countries, she said, including those where other sources of R&D statistics are practically non-existent. It is also the health expenditure accounting system currently promoted by the World Bank, WHO and USAID and it includes guidelines for health research. Additionally, use of National Health Accounts would enable comparisons of national health expenditures between countries and over time. However, Sadana acknowledged that relatively few low- and middle-income countries have taken steps toward conducting health accounts on a regular and sustained basis. This "institutionalization" of health accounts, she said, could establish a base to concentrate experience and technical capacity as well as develop ongoing expenditure estimates. She argued for a shift in the classification of health research to a core, or "above the line," entry within the NHA, a move that would reflect the importance of increasing the investments in health research. This change could also result

in the use of NHA as a policy tool in the re-orientation of health research. In making the case for including health research and development above the line, Sadana stressed that knowledge must be considered as an investment and one that would lead to better decisions. However, she added that it is important to note that the current health account classifications and estimated expenditures on health R&D are not included within the standard estimate of “total expenditure on health” across countries. Any shift to raise the position of health research in the NHA code would have to be made in steps, she said, with some expenditures given higher priority than others.

Illustration 38.

Above or below the line?		
	NHA code	Health care function
Core entry	HC.1	Services of curative care
	HC.2	Services of rehabilitative care
	HC.3	Services of long-term nursing care
	HC.4	Ancillary services to medical care
	HC.5	Medical goods dispensed to outpatients
	HC.6	Prevention and public health services
	HC.7	Health administration and health insurance
Memorandum	HC.R.1-5	Health-related functions
	HC.R.1	Capital formation for health provider institutions
	HC.R.2	Education and training of health personnel
	HC.R.3	Research and development in health
	HC.R.4	Food, hygiene and drinking-water control
	HC.R.5	Environmental health

Presented by Ritu Sadana in "Getting financial flows data for health research 'above the line' in national health accounts: performer-based survey data, disaggregation perspectives and challenges"
Source: International Classification for Health Accounts for health care (ICHA-HC)

The many facets of research capacity strengthening

Research capacity strengthening was placed high on the agenda in Mumbai as one of the major themes running throughout the Forum. Some participants believed this was a natural legacy of Mexico City's Forum 8 meeting. Others, who see research capacity strengthening as the key in bridging the 'know-do gap', thought the subject had long deserved a more prominent position, both on the programme and on the global agenda. While it ranks high in importance in the health field, it is also a subject that is fractured, split into various fields and its components may be presented incompletely or selectively. Participants in Mumbai noted the many facets of the subject and approached it from different directions, some emphasizing leadership, others partnerships, putting people first, or social and political angles. Attention shifted from where the field had come from, to where it currently stands and the critical challenges that lie ahead.

Francisco Becerra-Posada, Director of Academic Agreement and Dissemination in the National Health Institutes of the Mexican Ministry of Health, focused on the need for better leadership of health research by government. Research, he said, must not only be directed with the excellence of science as a priority, but must be pertinent to global, national or local problems. He described the turnaround in health research in Mexico that had occurred under the leadership of Health Minister Julio Frenk, a researcher himself. Mexico now requires researchers to find opportunities within relevant topics, and encourages a consensus within the health sector on research areas. Funds for non-priority research have been reduced. The challenge, Becerra said, lies in getting researchers and the health sector to share the same vision. Innovation, in his view, is applied especially to the way funds are established and allocated. The new Health and Social Security Research Fund (FOSISS) finances and links research with national priorities. The funds are trans-annual, thus not linked to fiscal budget limitations; researchers apply for them through submission of projects that are reviewed by an evaluation committee. Health researchers' salaries have nearly doubled since 2003 as a result of the Fund, Becerra said.

In answer to participants' questions, Becerra described how a full-time research administrator at FOSISS manages a strict follow-up to track the research funds that are utilized. However, he admitted they have been less successful in auditing the technical aspects, such as the final results, number of graduate students who took part in how many projects and the number of resulting international publications.

Illustration 39.

Health research capacity

- Health research capacity is the ability to define problems, set objectives and priorities, build sustainable institutions and organizations, and identify solutions to key national problems

Presented by Fred Binka in "Building national capacity for health research: the role of South-based networks such as INDEPTH"

Source: Global Forum for Health Research, 2000

Fred Binka, Executive Director of the INDEPTH Network in Ghana, described how networks such as INDEPTH, which are based in the South, make a difference in building and strengthening human and institutional capacities at local levels. INDEPTH is an international network of demographic surveillance system sites designed to provide population-based empirical information for health policies and programmes. A key objective of the INDEPTH Network is to support capacity building and collaboration among its 33 sites in 19 countries. It also creates an environment for sharing successful practices and experiences. Binka listed a host of challenges for the network at the global, national and institutional levels. These include difficulty in setting priorities, resource mobilization and allocation, quality control and dissemination, and utilization of research findings. The lack of reliable demographic and health data in developing countries, he noted, sometimes results in policy-makers acting "in the dark". An effort must be made to identify gaps in national programmes, communicate results of the programmes and engage policy-makers. Only by working with national institutions and receiving contributions from them for capacity-building activities can the network become sustainable.

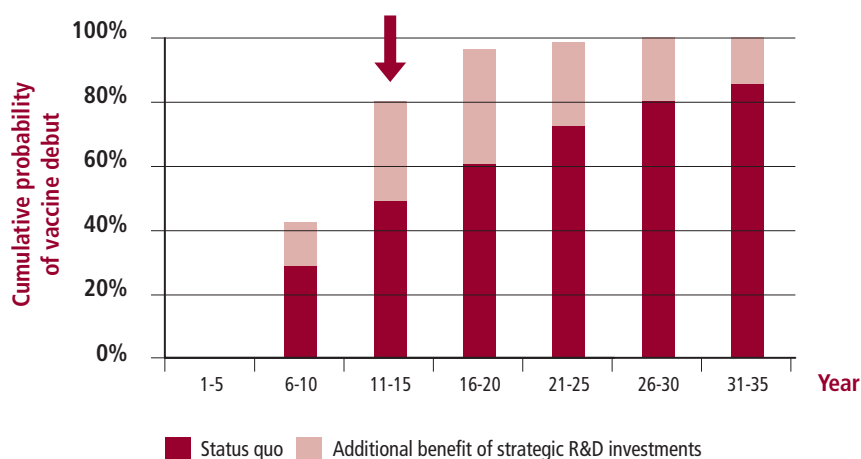
The need for new technology – and a vaccine

Robert Hecht, Senior Vice-President for Public Policy, International AIDS Vaccine Initiative (IAVI), called for a "new paradigm" in health research to come to the aid of the developing world. This would take a combination of increased financial resources, scientific coordination and focus, support for private-sector incentives and developing country leadership. "We need new technologies in order to achieve and maintain the Millennium Development Goals as they apply to health," he said, adding "Nothing epitomizes this more than the HIV/AIDS vaccine." Hecht, like many others, believes that the goal of a world without AIDS can only be attained by a vaccine to halt the pandemic. He listed other critical global health targets: ending malaria, developing drugs and diagnostics for TB, reducing under-five child mortality and developing new vaccines against pneumococcal and rotavirus infections.

"The problem is that the current system for health research and development just doesn't work very well," Hecht stated. "Public-sector research doesn't drive new ideas into new products, the innovation we need." Industry lacks incentives, he said, the risks are huge and developing countries are not yet as engaged politically and technically to move the agenda forward. Hecht recapped the stark statistics about AIDS: 40 million people are HIV-positive globally, 5 million new HIV infections occur annually and there are 3 million deaths each year from HIV-related illness. In addition, he described how AIDS makes its victims vulnerable to

other illnesses, such as tuberculosis, how it is linked with an exponential increase in child mortality, deepens poverty and exacerbates inequalities linked to both gender and income. Currently nearly US\$ 4 billion is being spent on anti-retrovirals to treat AIDS in the US and US\$ 6.7 billion is estimated to be needed for 2007. Only a vaccine, Hecht maintained, could prevent millions of infections and save resources for treatment.

Illustration 40. **Targeted spending would speed the timeline to vaccine**



Presented by Robert Hecht in "Strengthening the system for health innovation for developing countries – the case of AIDS vaccines"

Source: IAVI and the Bill & Melinda Gates Foundation, 2005

Because of the urgency created by the pandemic, Hecht advocated targeted spending to speed development of an AIDS vaccine. In addition, he urged stronger scientific coordination and incentives for industry, coalitions of developing countries and product development partnerships.

Illustration 41.

Coalitions of developing countries

- The Ministers take note of the affirmation of the G-8 of its commitment to the global HIV/AIDS pandemic. In order to translate that concept into tangible activities, the Ministers considered that the process of development of an HIV/AIDS vaccine must be accelerated. In this context, the Ministers urge the G-8 to support the India-Brazil-South Africa (IBSA) effort for Research and Development of an AIDS vaccine. IBSA countries will endeavor to bring on board like-minded countries to join this collaborative effort.

Presented by Robert Hecht in "Strengthening the system for health innovation for developing countries – the case of AIDS vaccines"

Source: Kapil Sibal, Minister of Science & Technology, India, at IBSA Ministerial Meeting on Science and Technology, Rio (9 June 2005)

Dr Abdul Kalam, the President of India, suggested specific research priorities, including not only a vaccine against HIV as the highest priority, but integrating research efforts of malaria, typhoid and diarrhoeal disorders for facilitating development of a combination vaccine "so we can aspire to a world free from all three diseases within the next decade." He called for strengthening and coordinating organizational, institutional and individual capacities to enable "working together for the benefit of the people."

How to use research to aid in “scaling up” interventions was another focus. **Anne Mills**, Professor and Head of the Health Economics and Financing Programme at the London School of Hygiene and Tropical Medicine, identified general management functions central to human resources: how to deliver quality care and increase access to a range of services that remain largely neglected. She also addressed the issue of migration of doctors and nurses, a phenomenon that is severely affecting health care systems in developing countries, especially in sub-Saharan Africa – and a problem that was recognized repeatedly in discussions. Mills concluded by drawing attention to “the notable lack of evidence in most of the areas key to strengthening health systems.” Addressing the problems requires not only better study designs and analytical methods, she said, but also building expertise in health systems research.

In another session, **Freddie Ssengooba**, a lecturer in Health Policy Planning and Management at the Institute of Public Health, Makerere University, Uganda, provided results from a Uganda study that investigated practical issues related to decentralization of human resources, one of the areas of major reforms that have unfolded in healthcare delivery systems. Compared with the direct posting of health-care workers upon graduation, decentralization enabled a demand-driven recruitment of workers. However, soon after the change under the decentralization policy, budget constraints imposed a cap on recruitment, limiting human resources. Forty per cent of workers described feeling trapped in a district system with no opportunity of advancement or transfer. They also shared a sense of insecurity in job tenure. Major survival strategies included “politicking” and appeasement toward local leaders. The findings point to neglected human resource management, Ssengooba said, and reflect the health care system’s attention to equity, motivation and makeup of the workforce. The study also illustrates the necessity of understanding the decentralized system of financing and institutional rules that impact on incentives within human resource departments.

Motivation was also a concern, although from a different standpoint, in a discussion of China’s capacity strengthening of its health research systems. **Jie Chen**, Professor and Director, Key Lab of Health Technology Assessment, Ministry of Health, China, suggested that the doubling during the past decade of scientific papers from China on the Index of the Institute for Scientific Information (ISI) may be a result of direct financial reward from the government or institutes for each paper. Other incentives for outstanding work by researchers include higher salaries, flexible working time, funding support, patent awards and a good environment. Jie Chen’s worry is that the motivation system in China may encourage health researchers there to focus on direct and quick outcomes rather than on longer-term outcomes of improvement of health and equity.

Marian Jacobs, Chair, Council on Health Research for Development (COHRED), delivered a clear call for supporting existing capacity as one way to slow down the “brain drain.” Noting that the continent of Africa has developed substantial capacity to identify and address its own health problems and that there has been increased research capacity in much of the South, she stated that, yes, in principle, the MDGs could be realized. However, she qualified her statement with a quotation from the 2005 Task Force on Child and Maternal Health:

“The nature of the challenge is about access to, and the distribution of power and resources between and within countries; in the structures of global governance; and in the intimate spaces of families, households and communities. Until we face up to the fundamental anchoring of health status, health systems and health policy (and health research) in these dynamics, our seriousness about achieving the goals can be legitimately questioned.”

Although many presentations and discussions called attention to the increasing support for individuals, a common refrain was that there remains very limited sustained support for institutional building. This is not a new observation; despite the efforts of some donors and national institutions, there has not been much change. One suggestion of how to improve the situation came from **Nuridin Akunov**, an analyst working in the Manas Health Policy Analysis Project in the Ministry of Health of Kyrgyzstan. Speaking about his country's health policy research, Akunov proposed that capacities need to be strengthened both within and outside of the research team and within institutions, particularly to develop an alternative to reliance on donor funds.

Rachelle Harris, research manager at the Centre for the Management of Intellectual Property in Health Research and Development (MIHR), United Kingdom, identified capacity-building gaps, one being socially responsible technology transfer for public sector benefit. The need for improved collaboration and centres of excellence with regional partners was a sub-theme in capacity strengthening, extending the importance of networks and cooperation that ran through Forum 9. Many presentations provided concrete details of collaborations with positive results between low-income or middle-income countries in Africa, as well as the promise of much more extensive collaboration among three of the regional leaders, South Africa, India and Brazil.

Fabio Zicker, TDR's Programme Coordinator for Research Capability Strengthening, noted the prerequisites of exchanges: that the ability to develop, understand and adapt – as opposed to purchase or import technologies – requires basic, applied and implementation research capacity. A vision, leadership and ability to identify relevant research questions are all necessary.

Ritu Sadana, the theme rapporteur for research capacity strengthening, summed up a key message from the sessions: there should be strengthened research capacity *and* capacity utilization, with support urgently needed to increase ownership of research. There was consensus, she said, that both the process and output of research need to be improved and that innovation is critical. Sadana quoted Mahatma Gandhi: "Be the change in the world you want to see." The challenge for all leaders in global and national health research, she said, is how to better equip and orient researchers, their managers and institutions to be that change.

Forum 10, set for 29 October to 2 November 2006 in Cairo, will build on the discussions of equity that took place in Mumbai. Assistant Minister Dr Safa El Baz, on behalf of the Minister of Health of Egypt, invited participants to continue the discussions there under of the theme of "Combating disease and promoting health." Appropriately, **Hoda Rashad**, Member of the Commission on Social Determinants of Health, and Professor at the American University, Egypt, provided a compelling vision not for a distant future, but an immediate one. She projected that health research will need to expand its boundaries to address social determinants to a much fuller degree, requiring a wider range of capacities and disciplinary perspectives, cross-sector collaboration, and skills to translate and advocate for change to redress the "causes of the causes" of ill-health.

Referring to the launch of the Commission on Social Determinants of Health in April 2005, she quoted a remark made then by Richard Horton, editor of *The Lancet*: "We blush at having to stress an obvious truth" about worsening inequities. "How long will we continue to keep on blushing?" asked Rashad. "The Commission," she said, "plans to heed the call that Horton made, to disturb quiet political consensus, to create discomfort but more importantly, to spearhead drastic changes." She made an appeal: "We want partners and a broad constituency; we recognize that policy change is not about evidence and models. We need communities that demand change, create pressure and action."

“The annual meeting of the Global Forum for Health Research provides an opportunity for communities to interact,” summed up Stephen Matlin. “Our goal is to focus attention on the major challenges the world faces: how research can help us to uncover and understand the complex range of biological, political, economic, social and environmental factors that influence health; and how research can be used to devise, experiment with and scale up interventions that will prevent untimely death, mitigate ill-health and contribute to the well-being of all people.”

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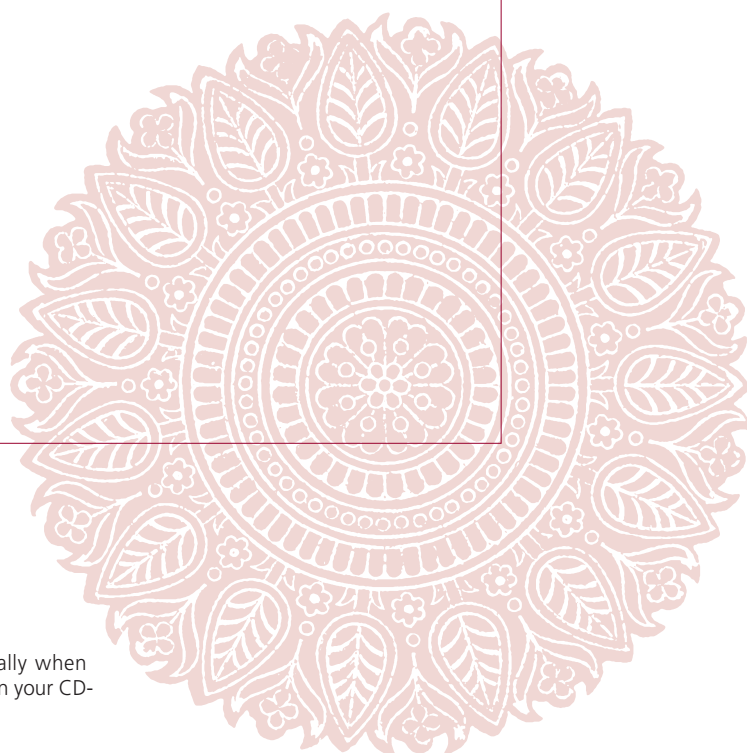
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This **CD-ROM** is designed to start up automatically when inserted into your CD-ROM drive. If it does not, open your CD-ROM directory and click on **start.htm**.

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Global Forum for Health Research

HELPING CORRECT THE 10|90 GAP

Forum 9



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