Global Forum for Health Research annual forums are a premier international event in health research for development.

In 2007, Forum 11 took place in Beijing, People’s Republic of China, bringing together some 600 key stakeholders to discuss research issues, best practices and gaps in securing equitable access.

This Forum 11 report provides an overview of the key issues discussed, detailing ideas on the use of evidence in policy- and decision-making, encouraging innovation in research and promoting equity and human rights approaches to health research. Other central themes include: research priority setting, research capacity strengthening, possibilities with inter-sectoral collaboration, advocacy for more research and resources and communication of research results.

The publication includes a user-friendly CD-ROM that features the final meeting documents.
Equitable access

Research challenges for health in developing countries

A report on
Forum 11
29 October – 2 November 2007
Beijing, People’s Republic of China

Prepared by Beverly Peterson Stearns
Foreword

Eight underlying principles and three focus areas from Forum 11
Since its establishment in 1998, the Global Forum for Health Research has worked for a world in which the potential of research and innovation is fully utilized to address the health problems of the poor. As we reach our first decade, we reflect on our role in focusing attention on research issues through highlighting gaps in knowledge, access or resources and pointing towards ways of filling these gaps. Our annual Forum has become a key event, bringing together hundreds of policy-makers, funders, researchers and other stakeholders to identify and share problems and, especially, solutions. The Forum moves around the world each year to balance the focus on different regions and enable participation of those involved in all aspects of research.

In 2007, we met in the People's Republic of China, at the invitation of the Ministry of Health. Speaking at the opening, World Health Organization (WHO) Director-General Margaret Chan highlighted the crucial importance of evidence to support the development of equitable health policies and programmes. Dr Chen Zhu, China's Minister of Health and a scientist by background, frankly acknowledged the challenges that China now faces in trying to achieve equitable access to health and emphasized the value of research in reaching towards this goal. Over the subsequent three and a half days, participants in Forum 11 explored many research aspects of equitable access, ranging across global, national and local domains and extending through biomedical, scientific, social, economic and political dimensions.

The report on Forum 11 provides an overview and synthesis of the key issues discussed and conclusions reached. These include the need for additional research; better systems of organizing and funding research; for ensuring participation in the processes by all the stakeholders; and for facilitating research to ensure impact on the health of those in need.

In its annual meeting, the Global Forum's goal is not to restate the problems and identify the needs but to push the agenda further to the recognition and implementation of solutions – whether these are in the realms of creating new technologies and processes, achieving behaviour change, or generating engagement and action.

Eight key phrases were central to Forum 11 deliberations:
• expanding the use of evidence in policy- and decision-making
• equity and human rights (access and inclusion)
• encouraging innovation in research
• priority setting
• research capacity strengthening
• power of inter-sectoral collaboration
• advocacy to underscore the importance of research and resources
• communication of research results.

And three areas of focus were particularly evident:
• moving towards the Millennium Development Goals (MDGs)
• broader determinants of health
• health systems reform.

All these issues are included in the Forum 11 Report on ‘Equitable access: research challenges for health in developing countries’. China, as a rapidly developing country, provided many examples of challenges and solutions. In 2008, we look forward to your help in bringing the ideas and hopes expressed in Beijing closer to realization.

Stephen Matlin
Executive Director
Global Forum for Health Research
Introduction
Introduction

There is perhaps no better place to discuss ‘equitable access’ than in Beijing, the ancient capital of the world’s most populous country. Equity has long been a much sought-after ideal in China, through centuries of turmoil and poverty, demonstrations and party congresses, and on the long march to prosperity. In China, as elsewhere, equity touches every dimension of health and research for health. It concerns people in all walks of life – but makes the biggest difference to the poor and vulnerable. Eighty per cent of the world’s population, and most of its poor, live in developing countries. China, with 1.3 billion people, has a considerable stake in the discussion of equitable access.

Forum 11 of the Global Forum for Health Research drew 620 participants from close to 80 countries. It was set in Beijing to ensure that people from the host country and other parts of Asia could take part. As China puts forward a health reform programme designed to cover both urban and rural parts of the country by 2020, it encounters on a grand scale the problems with which all developing countries are grappling.

WHO Director-General Margaret Chan, in the opening ceremony, reminded participants that equitable access lies at “the core of the most ambitious commitment ever made by the international community – that is the Millennium Declaration and its goals.” Progress towards the MDGs, she said, will be measured by how well the world’s poor and marginalized populations are reached. Midway to the 2015 delivery date on the MDGs, the goals directly related to health appear the least likely to be met, she told participants.

“Thanks to constant progress in biomedical research, medicine has never possessed such a sophisticated arsenal of tools and technologies for curing disease and prolonging life,” she said. “Yet each year more than 10 million young children and pregnant women have their lives cut short by largely preventable causes. Life expectancy can differ by as much as 40 years between wealthy and poor countries.”

The need for evidence

What is missing, Chan said, is that “the power of the interventions has not been matched by the power of health systems to deliver them to those in the greatest need, on an adequate scale, in time.” Her first suggestion for improving the situation is to collect sound evidence, without which, she said, there is no good way to compel efficient investment in health systems. She emphasized the need to develop national capacity to conduct health systems research. Information about the effects of health system interventions is largely derived from studies in high-income settings, she noted, and called it “another inequality in the evidence base that needs to be addressed.”

Above all, she said the need for basic, vital statistical information is critical. “Less than a third of the world’s population is covered by accurate data on numbers of births and deaths and the causes of these deaths. Do you believe it? What about the other two thirds?” she asked. “The world has about 6.4 to 6.6 billion people so we are talking about more than 4 billion people for whom we have no information.” Calling this a “scandal of invisibility,” Chan praised the launch at Forum 11, by the Health Metrics Network, of The Lancet’s series on civil registration and vital statistics. No single United Nations (UN) agency is responsible for ensuring that births and deaths are registered, Chan explained, and no civil registration system in the developing world has been sustained. Without statistics, she said, “we can have only partial view of the impact of US$ 120 billion spent annually in official development aid.”

Less than a third of the world’s population is covered by accurate data on numbers of births and deaths and the causes of these deaths. Do you believe it? What about the other two thirds?”

Margaret Chan
Forum 11 highlighted not only the need for evidence, but the need for more attention to the evidence we already have. For example, there is evidence that mental and neurological disorders are responsible for 13% of the global burden of disease and are a leading cause of disability worldwide. Yet mental health remains a neglected area of public health. The burden falls particularly heavily on low- and middle-income countries (LMICs), where 85% of the world's people live and where health budgets and providers are especially ill-equipped to handle mental health problems. The majority of countries in Africa and South-East Asia spend less than 1% of their health budgets on mental health.

It was precisely the neglect and inaccessibility of mental health care that was the focus of a project presented by Fabian Fiestas, Research Associate, Laboratories for Research and Development, Faculty of Sciences and Philosophy, Universidad Peruana Cayetano Heredia, Peru. Using in-depth interviews with 34 mental health researchers and stakeholders in Latin America, he probed experiences and ideas about improving access. The need to create a favourable political context emerged as the critical factor; the study cited knowledge about research and data as the necessary elements to achieve this goal. Mental health is ‘invisible’, Fiestas maintained, because there is no local data or that which exists is of poor quality. Mental health should be evident to everyone, he said, and in this regard, research could be used as a tool to create demand for and concern about it.

Carla Gallo, Associate Professor, Laboratories for Research and Development, Faculty of Sciences and Philosophy, Universidad Peruana Cayetano Heredia, Peru, noted that there was general agreement in the session on mental health research that the subject needs to be addressed as a community problem, not an individual problem. “Mental health research is a tool to make manifest the burden of mental disorders, triggering policy- and decision-making events, leading to better access to mental health care in populations,” she concluded.

The biggest developing country in the world

In Forum 11’s opening ceremony, Chen Zhu, Minister of Health of China, called attention to the huge disparities in terms of people's health status among different countries and to the serious imbalance in global health research. Health issues in developing countries have not received enough attention or support, he said, although progress has been made to increase the amount of health resources invested in global population issues.

He addressed the participants, “Ladies and gentlemen, as the biggest developing country in the world, China still suffers from wide disparities in the allocation of health resources, access to health services and in the health status of populations between urban and rural areas and among different regions. It's great to have big cities like Shanghai and Beijing, but this is not the whole China. The big cities on the coastal region are only part of China. If you go to the middle, and particularly western China, you may see different things.”

He suggested developed countries should provide necessary technological and financial assistance to developing countries, conduct more research on their public health problems and help improve public health service capacity. China, he added, will utilize domestic and overseas financial and human resources to develop health research. “We are willing to share these data and experience with our colleagues in other countries, especially colleagues from developing countries.”

Han Qide, President of Peking University Health Science Center and Vice-Chairman of the Standing Committee of National People's Congress, underscored the importance of the government's role. “It is one of the major responsibilities of governments to provide quality-guaranteed health services with equitable access,” he stated. The government of China has increased the intensity of health research during recent years, giving priority to prevention and treatment of important non-infectious diseases, he added. At the same time it has strengthened health policy research and promoted health reform. “Diseases respect no boundaries,” he said. “Effective cooperation is the crucial groundwork for protection against diseases, health promotion, overall human development, world peace and harmonization.”

Zuo Xuejin, Executive Vice-President, Shanghai Academy of Social Sciences, speaking in the opening plenary, acknowledged debates within China over
its health reform schemes. Since the outbreak of severe acute respiratory syndrome (SARS), there has been more emphasis on the government taking responsibility, he said, including financing the health system. Zuo endorsed a mix of direct financing of public health and basic services at the community level and health insurance at the secondary or tertiary level. “No optimal model fits the whole country,” he concluded and suggested the state provide the framework for further reform but provinces remain flexible to experiment with various measures.

Forum 11 opened a week after the close of the 17th National Congress of the Communist Party in Beijing, where a new health care reform was announced for basic medical insurance systems for urban residents along with a new type of cooperative care system for rural dwellers. However, details of the plan were not made public and debate continued on financing. The government has predicted that all Chinese will have access to basic medical care and health services by 2020.

Stephen Matlin, Executive Director, Global Forum for Health Research, in a press briefing before the opening of Forum 11, reflected that about one billion people live on less than US$ 1 a day and about two billion on less than US$ 2 a day. Many of these people live in tropical countries where they have no access to medicines that cost far more than they can afford and for which there is no financial incentive for drug companies to produce. In 2003, he said, the world spent US$ 126 billion on research and development for health, “a massive amount of money.” It was an expenditure that had quadrupled over the previous 20 years, but only a small fraction of it has gone to the needs of the poor in developing countries, he said.

The very nature of health threats has changed, necessitating a change in the way they should be approached. In the opening plenary, Matlin highlighted an important fact: only in Africa do infectious diseases still account for the majority of deaths; noncommunicable diseases present a greater burden of disease in every other area of the world. The divergence between African countries and other LMICs continues to increase, he said (see Figure 1).

Both China and India, the world’s two most populous countries, now ascribe more than 60% of their burden of diseases to noncommunicable

---

**Fig 1. Burden of disease by major cause groups and country groups, 2002**

<table>
<thead>
<tr>
<th>Country</th>
<th>DALYs per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High income</strong></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>200</td>
</tr>
<tr>
<td>Americas</td>
<td>150</td>
</tr>
<tr>
<td>China</td>
<td>100</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>50</td>
</tr>
<tr>
<td>South East Asia</td>
<td>40</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>30</td>
</tr>
<tr>
<td>India</td>
<td>20</td>
</tr>
<tr>
<td>Africa</td>
<td>10</td>
</tr>
</tbody>
</table>

Matlin attributed this to “life-style factors” – poor diet, lack of physical activity, tobacco use and living conditions. Of the 57 million deaths recorded in 2003, 33 million were from chronic diseases and slightly more than half of those were due to cardiovascular disease. A third of the deaths from cardiovascular diseases occurred in China and India. The same two countries are also leading in the number of diabetics: India with 32 million, followed by China with 21 million. The United States is in third place with 18 million. In China, the rate of obesity, which contributes to diabetes, has doubled in the past 10 years, Matlin remarked. WHO predicts that by 2030 the number of diabetics will rise to 360 million, more than doubling the 2000 estimate of 170 million. It is ironic, Matlin added, that while chronic diseases are growing, being underweight from lack of nutrition remains the largest single risk factor for ill-health.

During 2007 there has been an important change in demographics that affects global health. “For the first time, the urban population equals the rural population of the planet,” stated Matlin. The sheer increase in the global population also has a huge impact. Over the last half century there was a doubling of the world’s population – over the next half-century the prediction is for an increase of an additional 3 billion people. In 68 countries, over 40% of the population is below 15 years of age. But populations are also ageing, resulting in what Matlin calls the “opening and closing demographic windows of opportunity.” There will be more people dependent on fewer workers as the trend continues. All trends point in the same direction: the necessity to have stronger health systems in many countries to deal with more people and shortages of money, health-care providers and infrastructure (see Figure 2).

Especially because health systems throughout the developing world suffer from inadequate funding and staffing, projects based in the developed world must take care not to distort local health systems. This can happen with ‘big-ticket’ foreign projects, Matlin told the opening plenary. He cautioned that despite good intentions, foreign aid projects might unintentionally create new problems by draining off scarce local talent, channelling in-country experts to work only on the narrow focus areas specified by donors.

The spotlight has increasingly begun to fall on the broader determinants of health, not solely on...
disease or biological determinants. As Sir Michael Marmot, Chair of the WHO Commission on Social Determinants of Health, told the opening session of Forum 11, speaking by video from London: “There is no good biological reason” that the life expectancy of a woman in Botswana is 34 years while in Japan it is 86. This is due to socioeconomic factors and is avoidable, he said. “The fact that we do not avoid it is wrong and a matter of social injustice.”

Progress has been made, but very slowly in many countries. During the period between 1970 and 2000, living conditions and life expectancy improved considerably in much of the world – 1–3 years, for example, in South Asia – but in sub-Saharan Africa, the increase was a paltry four months. In some other areas, for example central and Eastern Europe, life expectancy actually declined.

Echoing the remarks of Director-General Chan, Marmot also spoke of the lack of evidence, but cautioned about delaying action while waiting for scientific evidence. “We don’t have randomized controlled trial evidence of the efficacy of intervention,” he said. “If those were the canons we have to abide by, we’re sunk.” He urged policy-makers to be more broad ranging in what they accept as evidence. Observations that lead to innovation or queries about the way things are done are also important in gathering information and offer opportunities that should not be missed. “We do not know enough about causation,” he said, “but we know enough to take action.” Each time this group meets, he told Forum 11 participants, “I would hope the quality of evidence will be improved.”

The need for coherence

Interest in global health, somewhat like the Chinese economy, has been soaring. Those who gathered at Forum 11 could observe both. Hundreds of participants eager to discuss health issues, research and innovation met at the conference centre beyond Beijing’s Sixth Ring Road while the mega-city itself pulsed with Olympic-sized construction projects, throngs of tourists and new shopping centres. Subways and housing projects were going up nearly as fast as the stock market. The international concern about global health set against the backdrop of China’s tremendous growth and its political decision to emphasize ‘opening up’ brought into focus many of the forces of globalization as well as the world’s tremendous potential to both create problems and to solve them. At Forum 11, a number of new initiatives were announced or launched, 75 posters were presented and a wealth of publications was distributed. The Marketplace was crammed with exhibits by nearly 60 organizations from around the world. Networking was constantly underway in the sessions, corridors and during meals.

The conference was one of three international meetings on health in Beijing within a couple weeks of each other: one on social determinants of health was held before Forum 11 and another on development of rural primary health care (PHC) was held immediately afterwards. Margaret Chan attended at least two of these meetings, others may also have attended more than one, but how much coordination of efforts was discussed at the meetings is not clear.

The spawning of so many initiatives has been a great boost to global health but has also created a problem. The lack of coherence in the way hundreds of health-related programmes have been set up has resulted in a fragmented effort: coordination is lacking between efforts at the global level and in linking global efforts to those of national health systems. Just as no single agency collects vital statistics, no one agency coordinates efforts on health. An underlying theme at Forum 11 was collaboration on projects and setting up of networks or international initiatives that can share evidence and experiences.

Stephen Matlin told reporters at a briefing in Beijing that he believes the global problem of lack of coherence should be a priority. He cited efforts by the World Bank and WHO to align their work to help countries strengthen health systems, but said there had been almost no attention to the problem in the health research field. “There have been lots of organizations trying to develop products and create better solutions for how to deliver the products, but the efforts are not coordinated,” he said. He emphasized that efforts launched from outside agencies must be done in a way that doesn’t undermine developing countries’ capacities to do their own research.
Donor coherence is another facet of the problem, according to Albrecht Jahn, Scientific Officer, Public Health/Directorate for Health, Directorate General for Research, European Commission. He said the commitments have been extremely variable, making it difficult to plan at the national level; funding for HIV in particular has surged during the past decade. It is necessary to not only increase the level of aid but also donor coherence and predictability, said Jahn.

He reported that a meeting of ministers from African, Caribbean and Pacific (ACP) countries in October had defined a basic health care package that should be part of national health plans and will recognize broader determinants of health. He described the European Union (EU) as moving towards general budget support with increased levels of aid, projected to be US$ 81 billion by 2010. Nearly 44% of it will go to ACP countries, Jahn said.
The broader determinants of health
CHAPTER 1

The broader determinants of health

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.”

World Health Organization Constitution, 1948

“The Conference strongly reaffirms that health... is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector. (...) The existing gross inequality in the health status of the people, particularly between developed and developing countries as well as within countries, is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.”

Alma-Ata Declaration, 1978

Almost 30 years after the Alma-Ata Declaration, attention is again being focused on factors that determine health other than disease and infirmity. Action in this area is long overdue; success of efforts to make changes would enable access of millions of people, especially those in developing countries, to the care they desperately need. These factors are sometimes described as ‘social determinants’, or ‘non-biological determinants’, and include poverty, gender, race, religion, cultural and political determinants. Here we refer to them collectively as ‘broader determinants’. Outright discrimination is not necessary to deprive people of access to health, although it too contributes. Just being born in a poor country or into a family with particular religious, cultural or political beliefs is enough. The skewed birth rates of girl and boy babies attest to one of the great determinants that affects health in much of Asia: the preference for male children. Health is a human right – without access it remains a goal, not a reality.

Since Alma-Ata, another determinant of health has come sharply into focus: our environment. Some of the causes of climate change, such as burning fossil fuels and destroying large areas of forest, impact health slowly through air pollution and contamination of drinking water. Consequences such as hurricanes and floods produce threats to health that are less subtle: epidemics and death. Most governments and the UN now recognize that climate change is a serious problem. While research on environmental hazards and consequent health problems were not on the agenda at Forum 11, participants did observe Beijing’s serious air pollution and listened to reports on respiratory diseases. Safety of medicines and interventions is another subject that may have been on the minds of participants who had read recent news reports, but it was not on the agenda.

Threats to the environment and human security are increasingly being recognized as challenges to human health that need to be urgently addressed.

The impact of poverty

The crushing force of poverty is the leading obstacle in the drive to improve health in developing countries. It is what Joy Phumaphi, Vice-President for Human Development of the World Bank, calls “the largest roadblock to global health.” Speaking about research on the determinants of health equity, she warned that when the poor cannot afford basic health services, poverty can lead to a vicious cycle of ever-deteriorating health and increased poverty. She added that not only is health care access inequitable, but much of health care spending is regressive. “Governments spend disproportionately on those in the population that can actually afford services.” She urged the adoption of policies that aim not only to directly improve health through broad insurance programmes, but also target secondary factors associated with ill-health, such as low incomes, lack of knowledge about health and poor sanitation.
Only then can pro-poor health schemes achieve the greatest benefit, she said (see Figure 3).

“Across the developing world, government health services have largely failed the poor,” declared Phumaphi. “Just because governments have a public health programme, it does not mean that such spending is benefiting poor people. And just because a government targets resources towards the diseases of the poor, it does not mean that it necessarily reduces inequalities.” She cited the ‘Inverse Care Law’, which says that the availability of good medical care tends to vary inversely with the need for it in the population served. This “sad fact” is reflected today in many developing countries, she said.

There is evidence that groups outside government can play a helpful role in implementing health care reforms. Phumaphi cited the role of nongovernmental organizations (NGOs) in managing the PHC system in Cambodia from 1999 to 2003. In districts where NGOs were contracted by the government to manage public health care, there were much higher coverage rates than in government-managed districts.

Francisco Becerra-Posada, Director, Academic Agreement and Dissemination, Ministry of Health, Mexico, prefaced his prepared remarks with a personal reflection: “It is sad that humanity has evolved the use of governments to do something that we should do as humans for our fellow human beings.” It is not governments or institutions that are responsible for public health, but rather society as a whole, he said.

Per capita expenditures for health in countries vary dramatically, he noted, from US$ 10 in sub-Saharan Africa to US$ 2329 in high-income countries. However, even those nations with tight health budgets can substantially improve the health of their poorest citizens by channelling their investments wisely. He advised funding of early diagnostic tests for pregnant women and an improved focus on clean deliveries to cut down on childbirth-related sepsis that contributes to the deaths of half a million women each year. “If we know the causes, let’s find the answers.”

It is important to recognize that the foundation of many health problems is laid early in life, he said, so the better the care of children, the better outcomes. Similarly, he added that we know that unemployed people and their families suffer a much higher risk of premature death.

The World Bank, through the International Development Association, is contributing US$ 3.4 billion to the world’s poorest 81 countries over the next two years, Becerra said. He also noted that many small NGOs as well as large groups such as the Bill and Melinda Gates Foundation can play a role in implementing health care reforms.

**Fig 3. Infant mortality in 56 low- and middle-income countries (per 1000 live births)**

- Poorest 20% of population
- Richest 20% of population

<table>
<thead>
<tr>
<th>Region</th>
<th>Poorest 20%</th>
<th>Richest 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia, Pacific (4 countries)</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>Europe, Central Asia (6 countries)</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Latin America, Caribbean (9 countries)</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Middle East, North Africa (4 countries)</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>South Asia (4 countries)</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>sub-Saharan Africa (29 countries)</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong> (56 countries)</td>
<td>60</td>
<td>120</td>
</tr>
</tbody>
</table>

Foundation are working to improve health and research in health. The answers do not lie in just money, he said, but in innovation, problem-solving and development of decision-making tools. He urged straightforward language, rather than jargon, and joint efforts, such as those used in combating SARS, for tackling conditions that kill far more people than the outbreak of that disease did.

The health disparities between rich and poor in the developing world are so stark that reforms premised on “equal access” are inadequate, said Werner Christie, Counsellor for Science and Technology at the Norwegian Embassy in Beijing. To be most effective, policies should be based on “disparate access” which would grant priority to the disadvantaged people who need help most, he said. “Health systems and management research has taken a lot of ideas from business, but I don't think that's appropriate for health care,” commented Christie. A case in point, he added, is health economics. “Health economics and research in health economics has been focused too much on cost and too little on the value of health and the value of health services.” It's a mistake to treat health care as a “production chain,” he said. A better analogy would be to liken it a workshop or a network.

Christie, a former minister of health of Norway who has lived three years in China, drew attention to the country’s “biggest health reform ever, both in scope and in numbers” and urged support for it. He noted the challenges, such as childhood and maternal mortality rates that had been falling and are growing again in some areas. If the best promoter of public health is growth and economic development, he asked, why has this health problem in China not improved? Why are the Chinese people being asked to pay a larger percentage for health care than they used to? The research agenda for health services should include improving both effectiveness and efficiency of the system, Christie said. The approach should be “how we can do more, not how we can spend less.” Health care is the largest and most complex industry in the world, he reminded the audience, and suggested that a more sophisticated managerial science is needed to understand it. “It's not a matter of not affording health care,” he said, more research is needed on the value of health care, including how it contributes to gross domestic product (GDP).

Fig 4. **Under-5 year mortality rate in China by province (per 1000 live births)**

Walter Fust, Director-General of the Swiss Agency for Development and Cooperation, observed that, despite renewed international commitment to health, “a reduction in the equality gap is not yet in sight.” Fust, who was instrumental in the founding of the Global Forum in 1998, said that because research is improving people’s lives, it must pay attention to country-specific concerns. Researchers should work through and with national health research systems, he said, and while new knowledge needs to be used by policy-makers at the global level, it must also be accessible to local communities. “Access to research results and national health data is, in my opinion, a public good,” he said. “It is not primarily WHO that should ensure data availability for countries, rather the opposite is needed: countries should be responsible for and in a position to collect data and make it available to global initiatives and multilateral agencies.” He suggested statisticians at the national level disaggregate survey findings by specifics such as gender and geographic location – so information can guide policy-makers to devise smarter, more effective programmes.

Research financed by public money must be accessible to all, he emphasized. He urged countries to take the lead in defining their needs and developing strategies. They are the ones to build partnerships that can address their needs and set their agendas, he said. “Countries need to develop their leadership capacity to manage research strategies.” Asked by a participant, why an agency such as his would want to ensure that others have access to its results, Fust replied, “The more we share scientific results and knowledge, the more that knowledge is growing. Knowledge is one of the only resources that grows the more we use it.”

Lee Ann Basser, Associate Professor, School of Law, La Trobe University, Australia, who chaired the plenary on determinants of health equity, described health as a fundamental human right recognized in international law. “In fact,” she said, “it underpins all other human rights.” She called on researchers to employ an “inclusive approach” in setting research agendas and to be “accountable to stakeholders for outcomes.”

“The right to health does not mean the right to be healthy nor does it mean that poor governments must put in place expensive health services(...). But it does require governments and public authorities to put in place policies and action plans which will lead to available and accessible health care for all in the shortest possible time(...).”

Mary Robinson quotation taken as an excerpt from slide presentation by Walter Fust

In a session on poverty and illness, rural China was used as an example of how institutional factors can exacerbate health care problems of the poor. Market reforms have profoundly transformed the funding of rural health services, which were once entirely financed by the state. Now rural health organizations receive only 10% of their funding from the government, with consumers paying the rest. Pei Xiaomei, Professor, Department of Sociology, Tsinghua University, China, said that despite the slashing of state subsidies, rural health centres continue to act as providers of medical care and overseers of public health but are handicapped by a lack of technology and equipment. Poor people in the countryside often struggle to pay for health care and medicine. “There's definitely a conflict in the objectives between economic profit-making and delivery of appropriate health care,” Pei said.

The shift to market-oriented health care systems has led to considerable discontent and impoverishment among the rural poor, Pei said. He suggested it was public criticism of inequities that prompted the government recently to announce that it will extend health insurance to the entire rural population.

In the same session, Henry Lucas, Research Fellow, Institute of Development Studies, University of Sussex, United Kingdom, emphasized the link between poverty and major illness in rural areas of China during the country's transition to a market economy. He observed that researchers in many countries lack an understanding of how poor households cope with serious illness. Major health problems vary widely in their impact, and depend upon factors including the severity of the illness and whether it poses a risk to life, the level of the resulting disability to the ill person, the cost of treatment and the role of the sick person in a given family – whether he or she is a key income-earner, a baby or a grandparent. Lucas cautioned...
against simplifying the effects of major illness on low-income households. Too often, he said, “the language and focus on catastrophic health care expenditures has encouraged an excessive focus on hospital inpatient expenditures.” Besides acute health problems, poor households may also confront other destructive patterns of disease, such as chronic illness requiring long-term medication, or less serious but often recurring acute illness. In short, varying forms of illness are likely to affect the poor in different ways.

Gerald Bloom, Fellow, Institute of Development Studies, University of Sussex, United Kingdom, noted, “How you frame the question often leads to the intervention. So if you start with catastrophic illness, what you often get is hospital insurance.” To avoid arriving at overly simplistic policy prescriptions, researchers must think carefully about how to define the problem. “It’s not so easy to define major illness,” he said.

Another issue for policy-makers to consider, added Bloom, is the nature of entitlements. “In China and probably other places, it’s becoming harder and harder to define households, and thus the kinds of entitlements a family would have, and if a family is poor or not.” Thus, rural-to-urban migration trends worldwide will pose a challenge for governments as they try to create effective health care policies, he said.

No evidence that globalization has helped the poor

Ronald Labonté, Canada Research Chair, Globalization and Health Equity, Institute of Population Health, University of Ottawa, Canada, lashed out at globalization in a plenary address, calling it “inherently asymmetrical, rewarding the already developed and more powerful disproportionately to others.” He said two years of research for the Globalization Knowledge Network of the WHO Commission on Social Determinants of Health had found little or no empirical evidence that globalization inevitably promotes growth, decreases poverty or improves health. However, the study did provide evidence of many health-negative shifts caused by contemporary globalization, including trends showing health gains have slowed and worldwide life expectancy at birth has been reduced by 1.53 years since 1980. He said while the USA and the EU continue to pressure the World Trade Organization (WTO) to make deeper cuts in tariffs, tariff reductions have not led to increased revenue for most LMICs. “Instead their taxable revenue has declined,” he said. “The net effect: less public revenue to invest in health, education or other important social determinants of health.”

In his presentation, Globalization and health equity: innovation for an interconnected world, Labonté made recommendations on how to “transform what has been toxic in the past two and a half decades of increased global market integration – which is how we approached our study of globalization – to a healthier, fairer and more environmentally sustainable form.” What is needed, he said, are enforceable social rights, effective supranational regulation and systematic resource redistribution. Redistribution, he suggested, could employ international or global taxation on airline fuel, carbon emissions or arms sales to raise revenue that could be invested in health in developing countries. Other steps might include closing offshore tax havens and a nominal tax on growth of the US$ 11.5 trillion in existing accounts. These measures would raise around US$ 255 billion in revenue that, Labonté said, is more than enough to fill the MDG funding gap.

“Despite being tarnished by over two decades of unbridled market greed, redistribution remains global health’s most important policy goal,” he said. Even a small amount of redistribution is far more efficient in reducing poverty than is economic growth, he added.

Gregory Pappas, Professor and Chairman, Department of Community Health Sciences, Aga Khan University, Pakistan, speaking from the audience, suggested that what Labonté was speaking about was not simply globalization but the “neo-liberal ideology” that has been the dominant way of talking about globalization. This, Pappas said, is the “ideological gloss for a bigger process than globalization.” Labonté
agreed that he had focused on the dominant form of globalization, and added that the knowledge network was not anti-globalization but against the results and implications of its dominant form.

Time for a paradigm shift, was the message delivered in the session on globalization by Pia Rockhold, Senior Operation Officer, Disability and Development at the World Bank. She argued that there is a need for a holistic and harmonized approach to global health research, with stronger local ownership and inclusion of the poor. She reminded the participants that paradigms are universally recognized and shared.

Kuhn's paradigm

Paradigms are universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners.

A paradigm is what members of a scientific community, and they alone, share.

“The structure of scientific revolutions”

Thomas S Kuhn

Rockhold stressed the importance of qualitative rather than quantitative research when considering many of the key determinants of health, such as the environment in which people live, their beliefs, stigmas and disabilities. Mental health, she said, is a huge problem with both social and economic impacts that are often better assessed qualitatively. “Globalization is here to stay,” she acknowledged, adding that its most important element is knowledge. She suggested cross-disciplinary approaches to global health research to enhance development, and equality in using science and technology. “We need to adapt a more humble approach,” she concluded, and listed ways that approach could be employed:

- addressing common problems;
- facilitating the development of stronger ‘South-South linkages’;
- enabling selected middle-income countries to support other LMICs to build enhanced national capacity for science and technology;
- ensuring the involvement of all ‘subjects’ as active partners in research involving them.

Tuberculosis in China: a globalization lesson?

In a special session, organized by the Special Programme for Research and Training in Tropical Diseases (TDR), the spread of tuberculosis (TB) in China was described as an effect of globalization. Speakers generally agreed that the transition from a planned economy to a market economy in China has encouraged poor rural workers to move into urban areas, where they often have no access to medical care and live in crowded quarters. One-quarter of the world’s TB patients live in China, said Meng Qingyue, Director, Center for Health Management and Policy, Shandong University, China. He confirmed that there are about 6 million TB patients in China, with 120 000–150 000 TB deaths each year, double the total deaths from other infectious diseases. Eighty per cent of TB patients are believed still to live in rural districts, many in remote areas that are very poor and where health care delivery is also poor. Meng said that while treatment by the directly observed treatment, short-course (DOTS) method for TB was reported to be 100% in 2006, he did not believe it. “How about the quality and compliance with the programme?” he asked. While the government provides free drugs for TB patients, Meng said there are other costs associated with the disease that the patients must bear but often cannot afford.

Lessons of tuberculosis control for rural-to-urban migrants during globalization in China was the title of the presentation by Zhan Shao Kang, Professor, School of Public Health, Fudan University, China. He noted that historically, people in the rural areas have been poor while those in the cities have been rich. Beginning in the 1980s many people from poor rural areas sought a better life by moving to the cities, a move that also resulted in a change in infectious disease patterns. Zhan reported results of a study carried out in the Minhang area of Shanghai where about 50% of the total population are rural-to-urban migrants, a population he described as vulnerable because they are not only poor, but also have low health insurance coverage. “Our project aimed at understanding the relationship between TB control and the economic transition within the broader context of globalization,” he said. Between 1980 and 2002, a far higher rate of TB was identified in migrants than in residents of the city, the known cure rate was very low for migrants, and the
percentage that failed to follow up treatment was almost 90%. Most rural-to-urban migrants, are afraid of losing their jobs if TB is detected and are reluctant to be visited, Zhan said, adding that some hide relatives who are ill in their homes (see Figures 5 and 6).

As the government took a stronger role in dealing with the problem, the situation improved, Zhan reported. Showing results of what has been achieved between 1997–2006, he pointed to a dramatic increase in the number of identified cases as well as in the cure rate. He concluded that there are three public health implications: the government needs to take greater responsibility of health problems, extend insurance coverage and reduce inequity and poverty. A key lesson from the study is that there should be less delay in conducting research and getting the results to policy-makers, he said. He urged new solutions for societies making the kind of market transition that China has made. “We need a law to prevent dismissing migrant workers when they are ill with TB, we need a law to insure baseline living for migrant workers who are ill and we need social help for migrant TB patients,” he said.

Adrian Sleigh, Professor, National Centre for Epidemiology and Population Health, Australia, speaking in the same session, provided insights into TB in a rural setting in the heartland of China. He prefaced his remarks with a forecast: he expects the number of migrants within China will grow from the current estimate of 200 million to 500 million. Sleigh described a TB study conducted in four counties of Henan province in 2002–04 that examined the economic effects of TB and treatment involving working-age people. He showed that out-of-pocket costs – payments are required before treatment – of TB patients were high, averaging 56% of annual household income, even though they received free diagnosis and six months of TB drugs. If lost income was figured in, the cost was 150% of income. “Any way you cut it, this is a financial catastrophe,” Sleigh concluded. He noted that 66% of the patients borrowed from relatives and friends and a year later most were still unable to repay these debts. There is no question that poverty is both a risk for TB and the result of the disease, he said. He described various elements contributing to TB, including how poverty had driven nearly half the cases to migrate to do harsh work, often for 9–12 hours a day with no rest day and sometimes no regular meals. Sleigh concluded that TB patients need financial help because of income loss and costs due to illness, and that TB prevention, as well as rapid and free treatment, is essential for work migrants.

**Tobacco use: cause of mortality, morbidity – and poverty**

While the majority of the poor have little control over most of the causes of their poverty and ill-health, there is at least one notable exception: tobacco use. Seventy per cent of tobacco consumption is in lower-income countries, which account for half the global disease burden caused by tobacco use. Worldwide, it leads to 5 million deaths each year. By 2025, an equal percentage of tobacco-related deaths will take place in the South as in the North, according to Wardie Leppan, Senior Programme Specialist, International Development Research
Centre, Canada. In a special evening session, he highlighted the need for researchers in the field to find ways to draw attention to the need for greater tobacco control in developing countries. The session, organized by the International Development Research Centre’s Research for International Tobacco Control programme, pointed to strong evidence that tobacco use not only causes premature mortality and morbidity but channels scarce household funds away from basic needs and exacerbates poverty.

China is the world’s biggest tobacco consumer and also its largest producer. China National Tobacco Company, a state monopoly, supplies the 350 million Chinese who are cigarette smokers. Taxes on cigarettes generated US$ 31.4 billion, or about 10% of China’s revenue in 2005, a far higher proportion than in any other country.

Qian Juncheng, Vice Division Chief, Division of Survey and Evaluation, Center for Health Statistics and Information at the Ministry of Health, China, discussed findings from the 2003 National Health Services Survey, which found that poor households that used tobacco reported higher morbidity, lower health care utilization and more expensive aggregate medical expenditures than poor non-smoking households. “Tobacco use resulted in impoverishment, especially among the poorest households,” he reported. “Tobacco control in rural areas especially should be given more attention.” His presentation included many slides documenting the high health care costs and low degree of understanding among the public and within the medical profession about the risk of tobacco use (see Figures 7 and 8).

Presentations on tobacco use also came from Viet Nam and the Philippines. Twenty-nine per cent of the population of Viet Nam fell below the international poverty line in 2002, and about one third of children under five were underweight. About 56% of men smoke – but only 2% of the country’s women. Households without smokers spent more on food and education than those with smokers. “Tobacco use is one of the factors leading to poverty in Vietnamese poor households, and tobacco control is a potential strategy for poverty reduction,” said Pham Thi Hoang Anh, Country Director of Health Bridge, Viet Nam. She recommended that higher tobacco taxes might help to discourage smoking, noting that tobacco taxes are currently quite low in Viet Nam.
In the Philippines, where 27% of families fall below the poverty level and 30% of children under five are chronically malnourished, 57% of men and 12% of women use tobacco. **Marina Miguel-Baquilod**, County Research Coordinator, National Tobacco Control Team, Department of Health, Philippines, called for the Philippines to enforce the UN Framework Convention on Tobacco Control (FCTC), signed by 168 countries, that became effective in 2005. That agreement obliges signatory nations to restrict tobacco advertising, increase the price of cigarettes and add health warnings to packaging, as well as to create smoke-free buildings and workplaces. She recommended policies that would discourage people from starting to smoke, including cigarette taxes and laws to protect people from second-hand smoke. However, she acknowledged a substantial hurdle for anti-tobacco forces: the Filipino government considers combating infectious diseases to be a higher priority than discouraging smoking.

Given the scarce financial resources of the anti-tobacco lobby, Baquilod suggested a sensible approach would be to “insert a mention of tobacco control into established programmes, [such as those] for maternal health care, rather than wait for money and resources” for stand-alone tobacco control programmes.

An audience member noted that some health problems and habits appear so entrenched that governments may initially be sceptical about prospects for change. That used to be the case in Tanzania, which grappled with such a high rate of malaria that officials shrugged off the issue, she said. “It took time to convince the government in Tanzania that it was a problem; it wasn’t just like a cold.”

On the last day of the conference, Beijing’s newspapers carried a story headlining WHO Director-General Margaret Chan’s warning on tobacco use. “In the world, tobacco tops all mortality compared to tuberculosis, HIV/AIDS and malaria combined,” she said. She urged China to take measures to reduce smoking. “If the government does the economic assessment right, they will see the health burden from things like lung disease outweigh the revenue generated from selling tobacco.”

---

**The importance of gender**

“Just being a woman doesn’t mean one is necessarily disadvantaged,” observed **Lakshmi Lingam**, Professor, Centre for Women’s Studies, School of Social Sciences, Tata Institute of Social Sciences, Mumbai, India. However, she added that the combination of being a woman, poor and of a low caste creates a very different outcome. She described how a poor, dalit Indian woman suffers from the intersection of three social stratifiers, commenting also that a dalit man has “definitely lower access to services than an upper-class woman.”

Lingam proposed broadening the concept of access and addressing social problems, especially for women in India and other Asian countries. “When you see women in the health care services, they are the tip of the iceberg,” she remarked. Unlike the situation in western countries, far fewer women than men in India use health care services. It is not because women are ill less often than men, but because they have many more barriers to cross before they arrive at a hospital, she said. She listed seven barriers each woman has crossed by the time she seeks health care, ranging from the urgency of her need to the economic resources of her family. Lingam distinguished between the family’s inability to pay for any care and ‘rationing bias’, which occurs when the family decides who within the household should receive scarce money for care (see Figure 9).

---

**Fig 9. Access mediated through multiple factors**

Presented by Lakshmi Lingam in “Gender and health: emergent issues beyond access”.
Once a woman does enter a hospital, Lingam says, she may be discouraged by the lack of privacy, insensitivity or disrespect shown by the health-care providers and may return to home remedies. An outcome in hospitals that can be devastating is the possibility of iatrogenic morbidities due to negligent practices that produce new infections. Lingam highlighted a common fear among women who believe “if you go in for one health problem, you're bound to get one more, in the sense of ‘buy one, get one free’.”

Extending the emphasis on health for women beyond concern for maternal mortality has been an uphill battle in India, Lingam said. Among issues still not adequately addressed are sex-selection abortions, unnecessary caesareans and hysterectomies, and domestic violence.

Studies of interventions to increase gender equity in poor areas of China and India have revealed similarities but also some marked differences. Both countries have large rural populations where poverty persists despite robust economies in the countries as a whole. In both countries there has been a historical cultural preference for sons that has resulted in skewed sex ratios at birth. Studies by the Gender and Health Equity Network, carried out in Guizhou province in China and Koppal District of Kamataka State in India, have demonstrated that different political and cultural backgrounds of the countries influenced women's roles. “Women's access to health services and their health outcome can be improved without the obvious improvement in participation in decision making and accountability,” concluded Jing Fang, Board Member, Yunnan Reproductive Health Research Association, China. She added, “This is particularly true in the case of China.”

The India case study concentrated on making public health providers more responsive to women's health needs and used a bottom-up approach, started from outside the health system. In China, the objective was to demonstrate a viable model of local governance to improve accountability of local health officials and workers and the study used a top-down approach, started from inside the health system.

Uncovering domestic violence

In the session on gender equity, I tamze Verulashvili, Head, Health Division, Women's Center, Georgia, called attention to the reasons domestic violence had so long remained hidden in her country. Referring to a 1998 survey of 1251 women, she said the majority thought family problems should not be made public, while others gave fear of public opinion as their reason for not reporting abuse. The women were almost evenly divided about what they did during the conflict period: half went to friends and half to relatives. The Women's Center, founded in 1996, published a book in 2000 on domestic violence, evaluating its status in Georgia and suggesting action. The book, Verulashvili said, became the basis for advocacy and led to the creation of domestic violence legislation, which was adopted in 2006. The Center held lectures and training sessions for health-care professionals to help them recognize signs of domestic violence and learn how to refer victims to shelters.

The health-care professionals, she said, were the needed link between domestic violence victims and their health and social problems. The impact of domestic violence was revealed in a routine screening of 297 pregnant women: 134 cases of mild to serious health problems due to violence were found. Low birth weight was the most common consequence for newborns. The Center has held training programmes for gynaecologists, established a hotline for practitioners and published a manual on how to screen women for abuse. It has also published books on the medical aspects of domestic violence and on reproductive rights and health. By publication of the evidence of abuse, Verulashvili said, the Center has been able to raise awareness of the problem. The number of reported cases of domestic violence climbed from 3254 in 2005 to 3665 in 2006 and to 2968 in the first half of 2007.

“Sexual violence is massively common but substantially hidden in all societies in the world.”

Elizabeth Dartnall, Programme Officer, Sexual Violence Research Initiative (SVRI), South Africa and rapporteur for a roundtable discussion of violence against women, said the discussion confirmed that “sexual violence is massively common but substantially hidden in all societies in the world.” Roundtable participants from many countries reported very limited or no services for
survivors of sexual violence, with the exception of South Africa, where violence against women is on the national agenda and the country has a policy for sexual assault care and support. However, services in South Africa were described as being too focused on medications and lacking in psychological support. Reports from several countries suggested that cultural norms and traditional male domination support violence against women.

A special report from SVRI, ‘Sexual Violence Against Women and Children in China’, released at Forum 11, suggests that sexual violence is a substantial public health problem in China. “Unfortunately data on sexual violence in China is lacking,” wrote Edward Ko-Ling, Assistant Professor, Social Work and Social Administration, University of Hong Kong, China, author of the report and a participant in the roundtable session. “The interpretations and comparisons between studies is greatly hampered by the lack of an agreed definition of sexual violence and the great variation in methodologies and sampling used.” Additionally, the disparate nature of Chinese societies makes generalization of research findings difficult. “The limited data on the nature and extent of the problem means that sexual violence in China remains low on the agenda of policy-makers and service-providers,” the report concludes. The review indicates that while services for victims of sexual violence in Hong Kong are being developed, there is no specialized health or professional social work service for survivors of sexual violence in the rest of the People's Republic of China.

If the pattern of sexual violence in China is to be better understood, the government must first establish – and it must be urged to establish – a data system to collect reported incidents, and a community profile of sexual violence victimization must be developed.”

**Will research decrease maternal deaths?**

This question was the theme of a discussion on equity issues that hinder access to maternal mortality reduction programmes. Ninety-nine per cent of the 529,000 lives claimed each year by maternal mortality are in developing countries. The MDGs set a target of reducing maternal mortalities by 75% by the year 2015 but, as participants heard, progress has been slow.

Most complications of childbirth are preventable by early detection and management, including caesarean section delivery, according to a study by Sara Holtz, Cynthia K Stanton and Nan Astone, of the Johns Hopkins Bloomberg School of Public Health, USA. The study used the percentage of caesarean deliveries out of overall births as a marker of women's access to obstetric care in developing countries. While no one has yet suggested an optimum rate for caesarean sections, the WHO recommends a minimum of 5% and a maximum of 15%, said Cynthia Stanton, who presented the group’s findings. On average, the rate of caesareans in cities is three times higher than in rural areas in the developing world, reflecting huge socioeconomic disparities. However, one issue that had remained unclear is whether the areas reporting low rates of caesarean deliveries did so because of a lack of surgical services, or because of a need for help with health care costs and transportation. The study sought to determine whether there was evidence of clustering of caesarean deliveries out of overall births as a marker of women’s access to obstetric care in developing countries. While no one has yet suggested an optimum rate for caesarean sections, the WHO recommends a minimum of 5% and a maximum of 15%, said Cynthia Stanton, who presented the group’s findings. On average, the rate of caesareans in cities is three times higher than in rural areas in the developing world, reflecting huge socioeconomic disparities. However, one issue that had remained unclear is whether the areas reporting low rates of caesarean deliveries did so because of a lack of surgical services, or because of a need for help with health care costs and transportation. The study sought to determine whether there was evidence of clustering of caesarean deliveries within urban areas or rural areas, after accounting for household wealth. Using demographic and health surveys from 43 developing countries in sub-Saharan Africa, Latin America and South and South-East Asia, they found little evidence of clustering of caesarean deliveries – thus indicating that wealth is the real barrier, not the lack of services.

Lack of money – inadequate funds for both patient care and health-care staff – also emerged as a great barrier to improved maternal and
child health (MCH) in rural China, according to a study by Zhang Tuohong, Professor, School of Public Health, Peking University, China. Zhang focused on a total of six countries selected from three different provinces and found programmes devoted to MCH care broadly suffered from inadequate funding, even though they have been widely recognized as an important part of public health. Though the government provides some salaries for staff focused on MCH, it does so only at the highest county level, not the lower township and village levels, she reported. Most county MCH hospitals have to make money through fee-for-service approaches to support health promotion, prenatal care and postnatal visits. In township level health care centres, MCH staff tend to have limited education and training, making it difficult for them to provide good quality care. Many MCH staff transfer to higher-level hospitals, exacerbating the problem in the townships. These township centres also lack decent equipment. She quoted a township doctor in Lantian County: “The same bed is used for procedures for contraception, abortion and women's check-ups. Cross-infection is unavoidable. We know that the delivery room and the ordinary sick room should be separate, but we cannot change this in a short time.”

**Economic difficulty**

*We want to do antenatal check-ups once a week or once a month, but we are poor, we cannot afford it. Going for check-ups once a month will reduce the risks.*

Pregnant woman in Lantian County, quoted in Zhang Tuohong’s presentation, “How effective are national programmes on maternal and child health in promoting women’s equitable access to health care?”

Zhang found large socioeconomic disparities in MCH care; for instance, better-off women may have as many as 10 antenatal exams, while poor women will not have any.

Poor women may opt to not have perinatal care and to deliver at home because:

- It is cheaper (women have to pay out-of-pocket fees for their perinatal care).
- They do not understand the benefits of a hospital delivery.
- Township doctors are perceived as having low skills, and the hospitals of having poor equipment.
- They were dissatisfied with the level of care they received in a hospital in the past.
- Transportation is a problem.

She offered a number of possible strategies for reducing the rate of home deliveries. These include providing better health education for women and families; improving the quality of care in hospitals; reducing the cost of deliveries and offering free transport to hospitals. Zhang suggested maternal health care could be improved by providing better salaries for MCH workers; free training for township hospital staff; better equipment in hospitals, especially in delivery rooms; and subsidies for women who deliver in hospitals. She recommended the creation of a separate fund devoted to postnatal care that could be folded into the family planning system (see Figures 10 and 11).

Access to health care for women, children and adolescents was highlighted in a session on sexual and reproductive health research. Andrés de Francisco, Deputy Executive Director, Global Forum for Health Research, began with a status report: annually there are more than a half million maternal deaths, 10 million childhood deaths and 3.3 million babies that are stillborn. Most of these deaths, he said, are preventable. He described the high levels of deaths as “the most striking consequences of social inequalities, weak health systems and inadequate health services.”

**Access to health care**

*‘Targeting women in urban poor communities in the Philippines for maternal health-care services,’ by Alice Joan G Ferrer, won the competition for the best poster by a researcher under-40 at Forum 11. Ferrer, who teaches at the University of the Philippines in the Visayas, said the results of her study imply that there is no need to actively search out women for postnatal care: “It is better to provide a health facility near the women that offers high quality maternal care services.”*

Programmes developed from research to reduce mortality and improve child and maternal health have been effective in some areas but in many LMICs where child mortality has been reduced, neonatal and maternal mortality have often remained high. De Francisco explained that...
Equitable access: a report on Forum 11

Fig 10. Rate of maternal deaths (per 100 000 births), 2000


unless mothers and children are targeted with joint sets of interventions and health strategies, mortality may remain high. Use of joint strategies on a continuum of care that spans the lives of mothers and children is needed; it should lead from home to health centre and, if necessary, to referral facility. A comprehensive research agenda to guide maternal and child health, he said, needs an evidence-based menu with options for effective interventions. Evidence-based development tools for health service workers are necessary.

An example from Africa showed that partnerships between the public and private sector can increase access and coverage and lead to improved case management. Oluseyi Oyedele, Senior Researcher, South African Development Community Sexually Transmitted Infections (STI) Initiative, Health Systems Trust, South Africa, used the STI project to demonstrate how quality care can be offered not only in public health care facilities but also in private facilities, where half of all patients receive care. Working in partnership with country research institutions in Botswana, Namibia and Zambia, he showed: the private sector is important in the provision of services; the medical councils and private practitioner associations are empowered by health legislation to regulate the private sector; STI patients prefer to utilize the private sector. Patients favoured the private sector for STI care in spite of free STI services in the public sector for reasons of confidentiality and the perception that being treated by a doctor was better and service was faster. Between 80%–90% of those utilizing private facilities were covered by medical insurance. Oyedele reported that workshops were held in each country and the findings showed consensus was reached on the need for the public and private sectors to work more closely together for improved STI services.

Gabriela Perrotta, Counsellor, National Programme of Sexual Health and Responsible Procreation, Ministry of Health, Argentina, described the difficulties of adolescents of poor areas of Buenos Aires and different provinces in accessing sexual and reproductive health care. She used adolescent pregnancy, generally concentrated in poor populations, and inadequate nutrition of mothers as indicators of access to health. Economic, social, cultural and gender-related factors all contributed to inequitable access to health care. Results, she reported, showed that “gender autonomy, which is usually a challenge for young girls of poor neighbourhoods, is an important issue when considering health care access options.” The research led to an interdisciplinary approach that helped construct a new framework and strategy to improve accessibility and reduce gender inequity.
“Its implementation has changed the attitude of health professionals,” she stated, “improving the access of adolescents to sexual and reproductive health care.”

An evening session that identified sexual and reproductive health research needs was introduced by Paul Van Look, Director, Reproductive Health and Research, WHO. In the session, organized by the Special Programme of Research, Development and Research Training in Human Reproduction (HRP), Andrés de Francisco first presented a framework for the identification of gaps and research priorities for sexual and reproductive health. Then he related the preliminary results of a survey, undertaken jointly by the Global Forum for Health Research and HRP, to elicit views on issues in sexual and reproductive health in LMICs. Responses were obtained from 502 stakeholders in 99 countries, via a standardized questionnaire, and these provided a total of 1402 perceived gaps and priorities. Catherine d’Arcangues, Coordinator, Reproductive Health and Research, WHO, presented the qualitative results of the survey. Three discussants provided views from Latin America, Asia and Africa. They described the potential uses and limitations of such an approach to priority setting, and proposed to continue working on advocacy for the identified areas.

Political determinants

Two presentations in Beijing underscored different facets of the importance of research on equity and political determinants. One dealt with migration of health workers seeking a better life and moving out of their countries, and sometimes their occupation, in order to find it. The other concerned partnerships, political skills and community relationships. In either case, money was the biggest issue.

The complexity of health worker migration

Ann Keeling, Director, Social Transformation Programmes Division, Commonwealth Secretariat, United Kingdom, described the “highly political and contentious issue” of health worker migration. The Commonwealth, a voluntary association of 53 countries mostly of the former British Empire, comprises 1.8 billion people. Although the combined population of the countries of the Commonwealth amounts to 30% of the world's people, Keeling said it has a disproportionate global burden of disease: 60% of maternal deaths and 60% of HIV cases. It has only 15% of the world's doctors and 18% of the nurses to handle its health care needs. Within the Commonwealth, she said, there is a “huge equity issue, basically
that the countries with the highest disease burden have the greatest shortages.” Seventeen of the countries have critical shortages of doctors, nurses and midwives. “The Commonwealth is currently short of two million trained health workers,” she said, adding that WHO’s estimate of the global shortage is 4.3 million. The impact of migration from the countries has been significant for health care: 1 in 4 African doctors and 1 in 20 African nurses are now working in developed countries. “The stark result is that people, particularly women and children, are dying from preventable causes for the lack of trained health workers.” This has resulted in situations like that in Mozambique, where a doctor in a rural area is attempting to treat 100,000 patients.

Keeling related the anomaly of unemployed health workers in some LIC countries, partially because of fiscal constraints on the governments to hire them, but also due to the choice of workers. “India is now the world’s largest exporter of doctors but India has a lot of rural doctor positions unfilled,” she said. “The doctors in urban areas would rather migrate than fill those positions.” Some countries, including Cuba, India and the Philippines, are actively training health workers for export.

Many considerations figure into the complex issue of worker migration. Among them are how effectively governments offer retention packages, the incentives for rural service, safety issues such as contracting HIV, and human rights concerns, especially in countries where there are conflicts. “All the research that we’ve done shows that more people are migrating to get professional development opportunities rather than because they want more money,” Keeling noted. Workers migrate worldwide and not only from poor to rich countries, but from rich to rich and poor to poor countries.

However, “the worst-case scenario,” Keeling sees is the health-care worker who migrates out of the profession, so the world loses a health worker from its global pool. If a health worker from Africa migrates to a developed country but works there in another capacity, he may never return to his country or to work in the health profession.

Keeling said the research agenda on migration issues should include the impact of codes on migration flows, examination of the effect of migration on health, the impact of return migration policies, and reasons for the high attrition of health professionals in key countries. “Eighty per cent of students from medical schools in some low-income countries are not going into the profession,” she observed. “There is very high attrition within the first five years. What can be done to keep them health professionals?”

**How Sultanabad got its sewer line**

**Gregory Pappas**, Professor and Chairman, Department of Community Health Sciences, Aga Khan University, Pakistan, told a down-to-earth success story from Karachi, a mega-city of about 17 million people where nearly half the population lives in slums, a quarter without running water in their homes. “I’m going to talk about public health
partnership building, which is a very political process,” he began. He related a case study about construction of a sewer line in Sultanabad, a neighbourhood slum built originally on a garbage dump where 30,000 people had no permanent sanitation. Sanitation issues, he pointed out, are about social development and can be politically complex. In this case, when it rained, the sewage from the slum flowed into the schoolyard of a nearby elite school, creating tension between the two communities. The slum’s new activist mayor, who had come to office with the promise to build a sewer line, wanted to construct the line alongside the school’s walls but the head of the school opposed the idea. Pappas, who knew the head of the school, was approached by the mayor and acted as an intermediary. He described his role and the university’s as that of a catalyst. Pappas took the head of the school on a tour of the area bordering the school to show him how impoverished and dangerous the situation in the slum was and suggested that students from the two communities hold a clean-up day. The joint event was “wildly successful” and led to a relationship between the school, the mayor, the community’s board and later the city, which supplied funds. Eventually a plan was jointly agreed on and the school allowed the construction of the sewer line along its walls and, in turn, the slum’s mayor agreed that the community would cut back on the houses encroaching on the school’s property.

In analysing what transpired, Pappas said the major factors were the common understanding of the problem, the clean-up day that established a rapport between the groups, and the political skills of the individuals, especially the mayor who was very popular. Funds were not an issue, he added. “The fact that there was a longstanding relationship in the history of the partners was a real critical factor.” The study found that the collaborative process was essential, and that addressing the political determinants of health equity is a dynamic process. “It took a huge amount of effort of a lot of high-level people ... the amount of effort it took to get one little sewage line built is a very humbling experience for me,” Pappas concluded. He stressed the need for an urban health movement to address the problems of mega-cities. Urbanization does not necessarily equal development, he added, and mega-cities have many unique problems. “We need a very serious public-private partnership to overcome these problems.”
Innovation and its impact
CHAPTER 2

Innovation and its impact

The face of innovation is changing, becoming at times more serious or more competitive, but still holding tremendous promise for developing countries. Some of the exuberance that first accompanied the discovery of the potential that innovation holds for health has diminished as success has brought recognition of new problems and complexities. The lack of co-ordination of the myriad projects underway may also have dampened some of the enthusiasm. As applications developed through innovative research have been implemented and new ones are put forward, the experience gained by innovators and implementers may slow down or help direct progress, but will enhance success in the long run. In Beijing there was little talk of ‘innovative developing countries’, as there has been at earlier forums; the designation may have become unnecessary. The Internet and various networks have combined to enhance access to research and boost possibilities for sharing discoveries from just about anywhere in the world.

In a roundtable discussion at Forum 11, innovation was depicted as a chain, a process that runs from problem identification to implementation and measurement. Richard Gold, Director, Centre for Intellectual Property Policy, McGill University, Canada, suggested that what is needed are models, not a model, of innovation. Others raised questions: Do any sustainable innovative models exist, in full or in part? How does one measure sustainable innovation?

The topic of innovation was especially appropriate for discussion in Beijing. “It is very fitting that this discussion is happening here in China, because if you look globally at one of the innovations that is having the most impact on global health at the moment, it is the artemisinin derivative, the basis of anti-malarial therapy,” said Robert Ridley, Director, Special Programme for Research and Training in Tropical Diseases (TDR) introducing the plenary session on innovation. He recounted efforts in the 1970s by Chinese scientists that led to the development of artemisinin and the partnerships they made that have resulted in the manufacture of artemisinin combination therapies (ACTs), today’s most effective treatment for malaria. “Those drugs represent the largest scale-up of manufactured introduction of any drug in the history of mankind,” Ridley said. “And all that for a drug that is not making a profit!”

Success in each innovation, however, brings other needs into focus. This was demonstrated later in a session on policy coherence for product development. The impressive number of drug and vaccine candidates being developed to treat malaria was highlighted, exposing the problem of bottlenecks in Africa’s infrastructure and the lack of coordination of the many efforts to solve the problem of malaria, a disease that kills more than a million people each year.

Showing a slide of the current global portfolio for malaria drugs, Mary Moran, Director, Health Policy Division, George Institute for International Health, Australia, explained that it was “quite unlike the normal portfolio, which should be big at the discovery end and then should winnow the way towards the planned entrance into the market.” There are currently 8 pre-clinical candidates and 13 new malaria drugs in clinical trials, six of them in phase III and three already in registration. Half of the products are being developed by product-development partnerships (PDPs) and the rest by industry and public groups. Moran noted that seven of the drugs are new artemisinin combinations. She also pointed out that policy-makers will have to fund and manage phase IV trials for up to 12 drugs by 2011, needing to enrol tens of thousands of patients (see Figure 13).

Turning to a more typical graph for malaria vaccines, she explained there are currently 45 vaccine projects running, including 16 in clinical trials, a number that has nearly doubled since 1995. What that means, she said, is that by 2009, there will be 31 malaria vaccine candidates in clinical trials, one of which will go to phase III trials in the middle of next year. “Our modelling shows that no other malaria vaccine will reach phase III trials by 2012,”
she said. She also cautioned that the vaccine portfolio she had just described is not as promising as it may look: “The top is big because of uncoordinated discovery activity and the bottom end is small because everything failed” (see Figure 14).

She then described a ‘problematic shift’ in the type of trials needed for nearly half of the new malaria vaccine candidates. Because there is no validated ‘challenge’ model, the vaccines will need blood-stage trials in endemic areas in Africa before it is known whether they will work. This, Moran said, means 40–50 small trials with fewer than 60 subjects and up to 20 larger trials with a few hundred to a few thousand subjects. “These figures would drop if we could get some scientific and policy co-ordination,” she said, emphasizing the need to prioritize the trials, partly because of the huge number of people who will be involved if the trials run simultaneously and partly due to cost. There will be an enormous need for patient enrolment for the first few years, then very little, she said, adding that it is necessary to build capacity but avoid creating overcapacity. Another complication is that while there will be 23 trial sites in Africa by next year; none of the existing mature sites is financially self-sustaining. “We’ve moved to one step without really considering the implications of the following step,” Moran said. “The problem is that no one really runs the process. It has a life of its own.”

How much money will the vaccine and drug developers need? Using a pipeline simulation model, Moran quoted a projected cost for clinical development and manufacturing of the total global malaria portfolio for the next five years as US$ 560–640 million. Most of it, she expects, will come from western governments. She stressed that this is total funding for all drug and vaccine projects, not including coordination costs. She had two recommendations on how the spending should be allocated: the majority of the funds should go to building and sustaining African trial sites – “an opportunity not to be missed” – and most of the remaining should go to contract research organizations that make the vaccines, often hold the trials and manufacture the drugs.

Fig 13. Global malaria drug portfolio in November 2006 (n=21)

<table>
<thead>
<tr>
<th>Phase of development</th>
<th>Breakthrough innovation NCE*</th>
<th>NCE in a known class*</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preclinical</td>
<td>Tinidazole - primaquine</td>
<td>PS-26</td>
<td>4(1H)-pyridone GSK932121</td>
</tr>
<tr>
<td></td>
<td>Isoquine</td>
<td>Tetracyclines</td>
<td>SAR97276AT3</td>
</tr>
<tr>
<td></td>
<td>Trioxanes</td>
<td>Tafenopuine</td>
<td>AQ-63</td>
</tr>
<tr>
<td></td>
<td>Artesunate - mefloquine</td>
<td>Rectal artemunate</td>
<td>Artesunate - armodiquine</td>
</tr>
<tr>
<td></td>
<td>Fosmidomycin - clindamycin</td>
<td>IV artemate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trioxanes</td>
<td>Ferroquine - artemate</td>
<td></td>
</tr>
</tbody>
</table>

* A “breakthrough innovation in NCE” is a novel candidate that targets malaria in a completely new way. An “NCE in a known class” is a novel candidate, but with a non-novel method of action, i.e. it is an addition to an existing class of drugs. “Others” includes Fixed Dose Combinations, label extensions, reformulations and re-registration of existing drugs to Western standards.

Presented by Mary Moran in “Malaria drugs and vaccines: the next five years”.
Susanne Huttner, Director, Directorate for Science, Technology and Industry, Organisation for Economic Co-operation and Development (OECD), presented the Noordwijk Medicines Agenda as a model for changing innovation for neglected and emerging infectious diseases. The agenda, which grew out of an OECD-hosted forum, focuses on improving the efficiency of the systems and lowering the cost of developing new medicines. “Insufficient incentives for R&D create bottlenecks to commercialization and access,” said Huttner. In OECD countries, such problems are increasingly viewed as “failures of the innovation system” – a network that extends to government, academia, industries and end users.

Upali Tissa Vitarana, Minister of Science and Technology of Sri Lanka, suggested developing countries would benefit from identifying areas for local innovation, promoting in-country R&D centres and strengthening product development capacity. “We need capacity for technology transfer and commercialization of research in low- and middle-income countries,” said Vitarana. He noted that the diseases of greatest interest to global health initiatives are not necessarily critically health problems for all developing countries. For example HIV, an area of focus for some major foreign aid projects, is not the leading health challenge in Sri Lanka. Vitarana called for developing countries to nurture their own scientific capabilities so they can tailor research to addressing their country’s problems. “We need capacity to generate our own technology. These are areas that need strengthening,” he said.

Offering the perspective of the pharmaceutical industry, Detlef Niese, Head of External Affairs, Novartis Pharma AG, Switzerland, emphasized that partnerships and innovation are important in contributing to production of new drugs, but what is really needed is “a master plan” that includes a pipeline of development, public-private partnerships and sustainable funding mechanisms. Niese acknowledged that market forces do not efficiently stimulate investment into research for diseases in the developing world. He recognized, too, that in developing countries, health care delivery is handicapped by poor infrastructure, including weak transport systems and supply chain failures. The donation of medicines to poor countries by pharmaceutical firms must be accompanied by training and education, he said. “While these [donation] programmes don’t provide an end solution, they buy us time to get other mechanisms in place.” The development of innovative drugs requires that any new medicine for infectious disease has a new therapeutic target, no cross-resistance with existing medicines, the ability to overcome drug resistance and must be cheap and stable for use in developing countries. “A wonder drug may not come at once,” he said. “We need to be prepared for incremental innovation.”

Greater support for research and translation could help accelerate innovation and delivery, Huttner said. Another helpful step would be to improve access to information through mapping, clearinghouses, collaborative Internet protocol (IP) mechanisms and philanthropic licensing. She suggested some key questions to consider: What are the most promising new research and financing models? Do we have the right policy frameworks in place to create transparency and efficiency in innovation systems? How do we scale up high-performing pilot projects?

Patents: another track, another voice

Demonstrating how innovation can be employed in all avenues of health research, including the business side, Thomas Pogge, Professor of Political
Science, Columbia University, USA, explained his proposal for a major innovation in patents. “We need a systemic solution, one that can align the profit motive of the pharma industry, on the one hand, with the global disease burden on the other hand,” he said. Under the current framework of R&D, diseases of the poor are neglected and medicines for them that do make it to market are often sold at high prices. Pharmaceutical companies funnel a disproportionate amount of money towards marketing those drugs, distorting the consumer market, Pogge said. He added that the monopoly patent system essentially confers the greatest benefits for drug treatments that alleviate symptoms of a disease but do not cure it, so drug makers can continue to sell drugs over the patient’s lifetime. “The ideal patient never dies and never gets well,” he said, summing up the philosophy that dissuades drug makers from focusing on preventive medicines or cures. He gave vaccines as an example of how governments are more likely to be able to negotiate lower prices, through bulk purchases, than consumers could obtain as individuals – a fact that makes vaccines less compelling to pharmaceutical companies that want to maximize profits. Pogge also addressed the ‘last mile problem’ of inadequate health infrastructure in poor countries. Even if affordable medicines exist, he said, the system needs to be improved to make sure the medicines reach the poorest patients – and that they know how to use them properly.

"Scribner could have become a multi-millionaire, but instead he gave his invention away, by so doing saving millions of lives in different corners of the world, including mine in sub-Saharan Africa."

He proposed an alternative to the traditional monopoly patent, what he calls ‘Track 2’: Under it, innovators would forgo market exclusivity and, in exchange, receive a financial reward based on the reduction of the global disease burden that could be attributed to their new medicine. “The best term to describe it is ‘comprehensive advance market commitment’,“ Pogge said, adding that to be sustainable and scalable, a reform plan must engage drug industry interests. He observed that only by engaging the interests of the rich and elite can an alternative plan be effective.

Track 2, according to Pogge, would draw attention to ignored health problems by giving drug makers an incentive to work on them; offer patients better access to medicine through lower prices; remove the bias in favour of treatments; and, by compressing margins, discourage excessive marketing. He says the alternative would also improve the last mile problem. Pharmaceutical companies, encouraged by their potential global health impact, he predicted, “would have an incentive to collaborate with each other and with NGOs and health ministries to overcome barriers to access to medicines.”

‘Of patents and patients’ was the title of an essay written by Seye Abimbola of Nigeria, one of the five winners this year of the ‘Young Voices’ essay competition for the under-30s sponsored by the Global Forum for Health Research and The Lancet. Drawing on the story of the American physician Belding Scribner, the inventor of a shunt that allowed repeated haemodialysis for chronic renal failure patients, Abimbola made a plea for commitment to make medicines and interventions available to the all the people who need them. “Scribner could have become a multimillionaire, but instead he gave his invention away, by so doing saving millions of lives in different corners of the world, including mine in sub-Saharan Africa,” he wrote. He suggested a Belding Scribner Award for Medical Innovation and the establishment of a UN agency to be run by a board of trustees that includes scientists, economists and politicians. The agency would fund medical research and reward innovations through contributions of 2–3% from every country’s GDP. Additionally, he envisioned major research institutes contributing 20% of their budgets to the agency. Abimbola disputed the reason often given for granting patent monopolies, i.e. that excess revenue is spent on research for new interventions, thus stimulating further research and leading to more innovations. “There is hardly any pharmaceutical company that spends more than 15% of its annual revenue on research,” he wrote. “The rest goes to other things: advertising, marketing, lobbying, etc.” Abimbola received a Bachelor of Medicine and Surgery from Obafemi Awolowo University, Ile-Ife, Nigeria; was a visiting student at the Institute of Neurology, London; and currently works at Wesley Guild Hospital, Ilesha, Nigeria. His essay was published, along with 39 others, in ‘Young Voices in Research for Health 2007’, which was released in Beijing. As one of
the top winners, he was at Forum 11 to receive recognition and attend the sessions.

Patent extension was one of the ‘push’ mechanisms described by Bénédicte Callan, Administrator, Science, Technology and Industry, OECD. Speaking in the same session as Pogge, she suggested that a drug maker might be allowed an extension on one of its existing medicines in exchange for bringing out a new drug focused on infectious disease. Push mechanisms, she explained, offer incentives for research at the front end of the innovation cycle. She gave other examples, including government R&D funds for basic research and translational research, and public–private partnerships (PPPs) for product development, such as those virtual pharmaceutical firms use to develop products for neglected infectious diseases. Another funding option is targeted R&D tax credits for research into neglected diseases. She said all the mechanisms could easily be put in place to reduce costs and risks for the private sector to work on infectious diseases.

Pull mechanisms provide incentives for usable health technology when the product is close to coming to market. One example is the US$ 1.5 billion advance market commitment (AMC) of five nations and the Bill and Melinda Gates Foundation, which will provide seven to ten years of funding to support development of pneumococcal vaccines. “This is one of the more exciting new mechanisms to be incentivized. It’s being closely watched to see if it does end up with a new product, and whether it will gain enough momentum for multiple new AMCs to be created,” said Callan.

A potential downside of the AMC approach, she noted, is that it requires a new commitment by funders for each individual disease – and governments may not be able to sustain the enthusiasm to make multiple commitments over time. In considering the different mechanisms, she said, “One question to keep in mind is what do different mechanisms cost and who bears the cost?” – the government, the consumers or the pharmaceutical industry? “A second question is: what’s sustainable and causes systemic change?”

Robert Hecht, Senior Vice-President, Public Policy, International AIDS Vaccine Initiative (IAVI), USA, reflected that while there have been a number of innovations on financing service delivery for the poor, it is important to achieve comparable breakthroughs in vaccines. “The question I would put to you is, what are the next big ideas in how to break through the logjam to develop new medicines and vaccines?”

The Global Fund, the GAVI Alliance (formerly The Global Alliance for Vaccines and Immunization) and the World Bank grant programmes are being used to fund service delivery, not scientific innovations, he said. He suggested that much more could be done to funnel both public and private money into higher-risk technology platforms in academia and biotech – “where most of the breakthroughs have come over the past couple of decades in new medicines and vaccines.” It may also be possible, he added, to use capital markets to raise funds through bonds and other debt instruments to tap into private sector capital.

At the close of this panel, Shaidah Asmall, Director, Higher Education HIV/AIDS Programme, Higher Education South Africa, noted that one recurring theme was the need for financing solutions that would be politically palatable to rich countries. “We must agree to a pragmatic view, a balance between [the needs of] developed and developing countries. We need to make sure we’re not just serving one or the other.” Increasingly, all countries are facing similar health problems, she said.

**Verbal autopsy and AIDS**

Verbal autopsies have often been used as an indirect method of ascertaining cause of death from information about symptoms supplied by bereaved household members. This information may be included on death records when no other information is available. Because of the lack of mortality statistics in most developing countries, it is being used as an interim measure, until civil registration infrastructure can be strengthened.

At Forum 11, verbal autopsy was also discussed in the context of supplying data for other uses, specifically to help formulate good public health policy. An adaptation of the methodology may also help ascertain the extent of a disease and the efficacy of the interventions employed to control it.
Ben Lopman, Research Associate, Department of Infectious Disease Epidemiology, Imperial College London, United Kingdom, showed how verbal autopsy was adapted to measuring AIDS mortality in two areas of Tanzania and Zimbabwe. Lopman’s team worked with two cohorts, one in Kisesa Ward in Tanzania where HIV prevalence in 2001 was 8.3% and the other in Manicaland in Zimbabwe where prevalence was 20.5%. The important point was that for both groups, the HIV status was known for the patient before death. Workers who were trained to identify the symptoms of AIDS patients did verbal autopsies shortly after the deaths. Lopman defined the ‘gold standard’ in the AIDS deaths as a person who had been HIV positive at a previous survey based on antibody testing, had not been injured or in an accident shortly before death and, if it were a woman, had not had an obstetric-related death.

Primary health care’s rejuvenation

PHC, the backbone of the health care system, has resurfaced on the global agenda and, while it would not normally be considered an innovation, it is being re-evaluated in light of the innovations and technologies that have become available and which may change the way it is employed.

Don Matheson, Director of International Relations, Ministry of Health, New Zealand, opened a roundtable discussion on the relevance and promise of PHC remarking on its striking rejuvenation. After emphasis on PHC had disappeared for many years, he said there is again strong political commitment for it. Globally, he added, it is seen as a vehicle for social cohesion; he interpreted this as a reassertion of the Alma-Ata agenda that focused on health equity. Until recently, Matheson said, PHC has not matched these political drivers but now that it has regained attention, there is a great opportunity to take advantage of the renewed political agenda.

Ravi Narayan, Community Health Advisor, Society for Community Health Awareness, Research and Action, India; and David Sanders, Director, School of Public Health, University of the Western Cape, South Africa, presented PHC’s historical background to the roundtable participants, setting the stage for the discussion of how to approach current challenges. They quoted Margaret Chan, Director-General, WHO, to illustrate the critical link between PHC and universal access to health care:

“Decades of experience tells us that PHC is the best route to universal access, the best way to ensure sustainable improvements in health outcomes, and the best guarantee that access to care will be fair.”

Margaret Chan at the International Conference on Health for Development in Buenos Aires, Argentina, 16 August 2007

Sanders observed that most articles and papers on PHC do not consider broader determinants of health, intersectoral collaboration or community participation. Roundtable participants raised a number of questions about these areas and suggested ways to handle emerging challenges as well as employ new technology. The participants of the roundtable proposed some research priorities for PHC, which will be published by the Global Forum for Health Research.

“After Alma-Ata, what happened to primary health care?” someone asked in a session on child health equity, chaired by Zulfiqar A Bhutta, Professor and Chairman, Paediatrics and Child Health, Aga Khan University Hospital, Pakistan. There was agreement that there is no unique solution to ensuring equity of care through strengthening PHC. However, Luis Huicho, Professor of Paediatrics, Universidad Nacional Mayor de San Marcos, Peru, suggested, “it is timely to revisit the issue of comprehensive PHC, to gather reliable information on whether it may actually allow universal and equitable coverage with health interventions that lead to substantial and sustained improvements in child health.” He reviewed important successes of PHC, particularly in the 1980s, which, he said, was fundamentally due to political will to meet universal basic needs and active social participation. In all the reviewed countries, he said concrete strategies were established with clear targets to reduce inequities in the allocation of resources for PHC.
Zeroing in on health systems
Zeroing in on health systems

Health systems have come under scrutiny as global health problems gain recognition in an age of massive investment in health and research. There has never been so much activity devoted to health – and yet the MDGs for health still appear beyond reach. Stephen Matlin observed at the beginning of Forum 11 that there is growing awareness that health systems, essential for research and the delivery of health care, will increasingly be required to deal with the growth of chronic diseases throughout the developing world. This comes in addition to coping with infectious diseases. He underscored the need for robust, well-rounded health systems that are also well managed. These are absolutely necessary, he said, for health promotion and prevention before illness strikes, and support when people become ill.

In the opening plenary, Tolu Fakeye, speaking for Adenike Grange, Federal Minister of Health, Nigeria, proposed measures to facilitate equity in health systems in developing countries. He spoke of the relevance of health research to design and improve health systems and of the need to continue building and using research capacity. “A minimum package of health services, especially comprising the health-related MDGs, should be determined and all efforts should be made to ensure they are provided universally,” he stated. He announced that a provisional package would soon be presented for adoption by the health authorities of all his country’s states and the federal capital territory of Abuja. He called for national health accounts (NHAs) to estimate the financial resources used for health and how they are spent, in order to develop policies to enhance health system performance. “The results of NHA estimation in Nigeria, which covered the period of 1998–2002, startled us with some revelations,” he told participants. “For example, out-of-pocket means accounted for almost two thirds of total health expenditures. That obviously exposed our national health system as a severely inequitable one.” Equity in the health system, Fakeye continued, is critical for ensuring better health, especially for the poor. He recommended institutionalization of community health insurance schemes and guaranteeing quality services for all segments of society.

In a session later the same day, Yan Guo, Professor of Health Management, Peking University School of Public Health, China, explained how the Commission on Social Determinants of Health was set up in 2005 to improve equity in health through stimulating action on social factors. By broadening knowledge and facilitating debate on the causes of ill-health, it was hoped that knowledge would lead to action, she said. The commission works through promoting knowledge on social determinants of health; advocacy among policy-makers, institutions and society; action to integrate knowledge into public policy; and by supporting institutional leaders on issues concerning the social determinants of health. WHO set up nine knowledge networks to inform on prospects for action on social determinants of health, including one on health systems.

Lucy Gilson, Professor, Centre for Health Policy, University of the Witwatersrand, South Africa, presented the findings of the Commission’s Health Systems Knowledge Network. She began with a summary: “The available evidence, published and perhaps most importantly also experiential, clearly shows that health systems can promote health equity, but all too often, as we know, they exacerbate health inequity.” The forces that entrench inequity, she said, include:

- commercialization and globalization
- neo-liberal health reforms
- organizational culture, including gender inequity.

“All of these forces embed inequity and in strengthening health systems we have to think about how to tackle these forces as well as...
what we need to do within health systems." The first thing that must be done, she said, is to recognize that the public sector plays the primary role in working towards health equity and should be strengthened to achieve that function. Of course, she added, “Politics always matters to health and health equity.”

She named areas that the network recommends for strengthening: leadership and processes that leverage inter-sectoral action, practices that enable engagement and social empowerment, provisions and financing aimed at universal coverage, and revitalization of PHC. Referring to policy development on the national level, she commented, “It is not good enough to implement the new interventions in the most resourced areas; it is critical that the least capacitated areas are strengthened enough to implement interventions that can address health problems.” The report, Gilson says, argues that more is needed than technical analysis – it says there is a need for political action and commitment. Research needs to be supported by communities and health workers; it needs to be persuasive to public managers; and it needs to be credible and focused on elements that need to be understood and strengthened, she concluded.

In the same session, Ritu Sadana, Coordinator, Equity, Poverty and Social Determinants of Health, Evidence and Information for Policy, WHO, and Amit Sengupta, Joint Convenor, People's Health Movement, India, agreed that several knowledge networks are calling for a push for alternatives, “not business as usual.” Sengupta said that that evidence from the knowledge networks shows that radically different strategies on how to make a difference to health are needed. Today there is no longer the excuse that the tools and approaches do not exist, he said. He suggested a framework of three core values to inform the knowledge system and to translate knowledge to action. The values, he said, are equity, the right to health and empowerment. “Empowerment is not just knowledge,” he explained. “The erroneous notion that we empower somebody needs to be abandoned. We do not empower anybody, what perhaps we can do is create enabling conditions around which people can empower themselves.”

**How to measure what is not clear**

Measuring access to health services has been elusive. “Even though access to health care is frequently identified as a goal for health care systems, what is meant by access often remains unclear,” commented Sylvie Olifson-Houriet, Health Economist, Global Forum for Health Research, who was a rapporteur for the session on ‘Framework for measuring access’. Stephen Birch, Professor, Department of Clinical Epidemiology and Biostatistics, Centre for Health Economics and Policy Analysis, McMaster University, Canada, agreed that there is no consensus on the meaning or measurement of access to health care. He stressed that a conceptual framework is important to guide analyses of health care systems and to inform policies. After discarding a number of definitions he thought insufficient, he suggested that the most appropriate might be represented by the equation:

[...] Access equals empowerment to benefit from health care."

Whatever definition of access to health care is used, he said, needs to be transferable across cultural, economic and geographic settings. Birch also provided a framework of access based on separate dimensions of affordability, availability and acceptability. Once the definition is clarified and the different dimensions of access are understood, the barriers to access can be identified, Birch said.

**A financial assessment**

A session on the financing of health systems drew many participants to hear Diane McIntyre, Associate Professor, Public Health and Family Medicine, Health Economics Unit, University of Cape Town, South Africa, share highlights of a recent Global Forum publication. ‘Learning from experience: health care financing in low- and middle-income countries’ she said, seeks to pinpoint problems that are repeatedly found in health systems around the world. Noting the growing consensus that health systems should be universal, providing all citizens with adequate health care at an affordable cost, the author remarked, “In the medium to long term you can
have much greater impact and reduce differentials if you progressively pursue universal coverage. “My preference is to head firmly in the direction of universal coverage, but in the allocation of resources, pay greater attention to the poor.” A core principle of an equitable health system is financial protection, she said, ensuring that no one will be impoverished or have their livelihood threatened because of the high cost of care. Health systems that meet these expectations demand the creation of cross-subsidies, she explained, from the wealthy to the poor (paying according to ability to pay) and from the healthy to the sick (collecting benefits based on need). Both taxes and health insurance are key prepayment mechanisms at the core of health care financing, she said.

“My preference is to head firmly in the direction of universal coverage, but in the allocation of resources, pay greater attention to the poor.”

McIntyre cited several success stories in health care financing in low- and middle-income geographies, including Costa Rica, Sri Lanka and the Indian state of Kerala. Despite relatively low income levels, all three boast high life expectancy and score well on other indicators of health. “What’s common to all of them is a strong commitment to the public funding of health services,” she said. Sri Lanka, which relies primarily on taxes for funding, offers extensive geographic coverage of hospital care. The vast majority of the population uses public sector hospitals. Costa Rica has taken a slightly different approach, pairing mandatory insurance with tax funding. “Sometimes people think mandatory insurance will decrease the need for tax funding. But on the contrary, Costa Rica felt the need to increase taxes to subsidize the national health insurance contributions of the poor.”

Tax funding is essential, she concluded. She proposed earmarking 15% of national budgets for the health sector – a target suggested by African leaders in 2001 in Abuja, Nigeria, for LMICs. She also listed health insurance, especially mandatory insurance with a single risk pool, as a key part of an integrated funding mechanism.

Margaret Kruk, Assistant Professor, Health Management and Policy, University of Michigan School of Public Health, USA, examined whether, as countries spent more on health budgets, a pro-poor distribution of primary health service could narrow the child mortality gap between the poor and better off. The project she described also aimed to determine whether pro-poor basic health care might slow the pace of overall achievement, since the multiple health care problems of the poor might require extra work to alleviate. Focusing on immunization data from 47 developing countries, Kruk found that the fairest distribution of immunizations to both the poor and the rich was associated with the smallest total drop in under-five mortality. Indeed, the distribution most oriented towards the rich was most effective, resulting in the largest drop in mortality.

“As health spending rose, mortality among poor children did not fall as fast as among their better-off counterparts, despite the substantially higher baseline rates of child mortality,” Kruk said. “This suggests there is a trade-off between equity and overall achievements” in health care coverage of developing country populations.

To reduce inequities, pro-poor health strategies may need to be accompanied by additional improvements in education, nutrition levels and water sanitation to make the greatest difference, Kruk said. Her findings also suggest researchers should carefully review what policies were undertaken by a handful of countries (including Colombia, Egypt and Turkey) that have accomplished the difficult task of both reducing overall mortality and improving equity.

The research/policy interface

Research is a massively neglected force in policy-making and global health, observed Richard Horton, Editor-in-Chief of The Lancet, in a discussion of current challenges for improved policies. He said this recognition had led to a reassessment of the role of a medical journal and to a change of direction for The Lancet. A medical journal has the potential of being a catalyst between the research community and the policy community, Horton explained. It can promote an exchange and create a solid research foundation through peer-reviewed, published articles. It has the ability to amplify and distil messages for policy-makers, moving beyond the academic community to draw in civil society.
Francisco Becerra-Posada, Director, Academic Agreement and Dissemination, Health Research Policy Directorate, Ministry of Health, Mexico, agreed, adding that each country should look for its own catalysts. He pointed out that a country’s researchers should understand the responsibility they have to their funding agencies and the power their publications have to shift policy. The role they have in the transfer of knowledge is very important, he said.

Lakshmi Lingam, Professor, Centre for Women’s Studies, School of Social Sciences, Tata Institute of Social Sciences, India, remarked that health policies talk to other policies. She raised some questions: Are doctors being trained to look at social determinants of health? Are medical schools looking at recognized evidence? What do researchers see as their priorities? Can we have academic research with a human face, research that recognizes issues of power and equity? More questions emerged during the discussion period: Who is The Lancet accountable to? How do we train and equip health scientists so they have a broader understanding of the political environment? Who sets the groundwork for debate – the researchers, politicians, the public?

Health policy frameworks was the topic of one of the four sessions at Forum 11 where the Council on Health Research for Development (COHRED), Switzerland, made an effort to stimulate discussion of how national health research systems could support important objectives. COHRED also coordinated sessions on innovative communications, equity and health system analysis in the Western Pacific. In the session that addressed equity, the role of civil society was highlighted as extremely important, with discussants calling for more people-centred, equity-oriented research agendas. Case studies from Costa Rica, South Africa and Tunisia reflected common concern for equity in health research system development and policy development as well as in priority-setting methodology. Health research can help address equity by making visible inequity, participants agreed. Now that health equity is getting attention, they said it is time to capture the momentum and push for political commitment to action.

Learning from policies and products: HPV-HIV vaccines

Introducing a session on policy coherence for product development and access, Chair Carlos Morel, Scientific Coordinator, Oswaldo Cruz Foundation, Brazil, noted that when PDPs were first created, not much thought was given to the next step: access to the products. Now, that issue is being discussed intensively, and knowledge can be gained and exchanged from a number of experiences and products.

Robert Hecht, Senior Vice-President, Public Policy, International AIDS Vaccine Initiative, USA, explained that the human papillomavirus (HPV) causes cervical cancer, the most common form of cancer for women in the developing world. Globally it results in over 270 000 deaths each year; half a million new cases occur each year with almost 90% of them in the developing world. He addressed policy coherence in two ways: first, through the introduction of vaccines for HPV and attempts to achieve coherence across the range of policies needed to bring the vaccine to adolescent girls and women in developing countries; then, with regard to the opportunity for learning across vaccines, specifically to apply what has been learned from HIV to the HPV vaccines and, conversely, collecting knowledge gleaned from the HPV vaccines to employ when an HIV vaccine becomes available.

There are two new vaccines against HPV currently on the market. Hecht said they are highly effective, safe and provide protection for at least five years, perhaps longer. Working with PATH, IAVI has focused on introducing the HPV vaccines through country demonstration projects. He remarked on the similar social, economic, political and operational challenges presented by vaccines for HPV and HIV. These include the health systems challenge for delivering a vaccine for adolescents and a series of economic issues on how to pay for it. The HPV vaccine has the potential, he said, of changing the paradigm of interventions being available in rich countries far before they are accessible in the developing world.

Global barriers to access of HPV and HIV vaccines include the very high vaccine prices and insufficient global political support for the vaccines. (At US$ 120/dose in a three-dose
treatment in the USA, HPV is far beyond the reach of many of the people who need it; the manufacturers have said the price would be lower in developing countries.) At the country level, there are other barriers, including fears about the vaccines, lack of national leadership support and the absence of a proven vaccine delivery strategy for adolescents. For each of the barriers, there has already been a response developed and Hecht described several. He suggested that the vaccines could be coupled with existing child or adolescent vaccines and/or medications. The HPV vaccine also could serve to introduce other sexually transmitted infection control programmes in developing countries and would complement adolescent and women's screening and treatment programmes. However, there remains the common challenge of integrating both vaccines with existing prevention programmes, not replacing existing prevention options.

In a session on improved health systems, many questions were raised about the gap between policy and research. A theme began to emerge around the need for strong community engagement in applying research to influence health policy. **Adnan Hyder**, Assistant Professor, Departments of International Health, Health Policy and Management, Johns Hopkins Bloomberg School for Public Health, USA, reviewed a number of factors that may affect how health systems research contributes to policy. These include: societal norms that influence both processes and expectations; the informal usage of health systems in a particular place, as opposed to in theory; and perceptions of science and its value within a given community. He suggested it is worth considering some key questions:

- Is research critical to improving policy decisions made in health systems, especially in LMICs?
- Do decision-makers operating in the sphere of health systems value and demand research evidence for improving their decisions?

**Ejaz Rahim**, Member (Social Sector), Planning Commission, Ministry of Planning and Development, Pakistan and since November 2007 Pakistan's new Minister of Health, asked from the policy-maker's point of view: “Can every statistic be considered research?” Rahim laid out a series of other questions, including: How does health fit into a nation's social agenda? Is there an annual research plan at the country or even global level that can be linked to development objectives?
Ok Pannenborg, Senior Adviser for Health, Nutrition and Population, World Bank, drew attention to a practical consideration: the health ministries in developing countries typically lack a director of research, or at least one able to exercise any real power. Another problem is that national statistics-gathering bodies are underdeveloped, so statistics are relatively unreliable or lacking altogether. Within nations, Pannenborg proposed forging tighter links between decision-makers in ministries of health and those in research institutes. But he acknowledged that another problem concerns translating global scientific findings to the national level. “Many countries have NIH syndrome – not invented here,” said Pannenborg. He explained that if research was not done within a given country, decision-makers may be sceptical about whether it is relevant to local conditions. One possible way to win stronger backing for putting research into practice at the policy level is to link universities of a given developing country more tightly with government circles, extending even to the municipal level.

A question was raised in this session by a participant working in research who pointed to a recurring phenomenon that complicates efforts to bridge the gap between research and policy: high levels of bureaucratic turnover. He cast the problem as “NMB – not my baby,” explaining: “When new policy-makers come in, they're not looking for continuity. The people in power are much more concerned about their particular agenda and less about the long-term strategies and goals that predecessors may have their names associated with.” Agreed Hyder: “That is a fundamental question. Do we establish relationships with institutions or personnel? We all know we need champions, people who can take legislation and get it implemented.” But he added that often, those policy-makers do not have long-term tenures.

Thelma Narayan, Public Health Consultant, Society for Community Health Awareness, Research and Action (SOCHARA), India, offered a possible solution for contending with this lack of continuity. Researchers can establish credibility with community groups that will continue to press for health reforms even as bureaucracies change. Narayan added that the media can have a useful role as an outside monitor to ensure that research does not become captive to a biased political agenda.

“ We need global initiatives to earmark resources for HPSR [health policy and systems research],” said Green, citing a related need for “a greater voice in low- and middle-income countries in agenda setting.”

In a different session, Andrew Green, Professor, International Health Planning, Nuffield Centre for International Health and Development, University of Leeds, United Kingdom, described how scientists can use research findings to shape policy. First, they set priorities for research, conduct it and disseminate the results. Then, in a step that Green said is little understood, they filter out the most important findings and amplify those most relevant to policy-makers. Only then can policies be made. He noted that priorities are often set by international agencies and philanthropic organizations in the North that rely on ‘expert opinion panels’. In practice, Green said, this may mean the developing countries themselves are not involved in setting the research agenda, so they miss an opportunity to develop their own internal capacities. “We need global initiatives to earmark resources for HPSR [health policy and systems research],” said Green, citing a related need for “a greater voice in low- and middle-income countries in agenda setting.” He said that until the research culture makes a shift from this traditional orientation, countries themselves must develop mechanisms to set their own research priorities, perhaps led by their ministries of health and assisted by the national health research councils.

China’s health system reform

Tang Shenglan, Health and Poverty Adviser, Health System Development, WHO Representative Office, Beijing, outlined efforts to reform health systems in China, a process that has been underway for more than two decades but was given renewed emphasis at the recent Communist Party Congress. “Despite China's spectacular economic growth, the slowdown of improvements in public health has occurred concomitantly with a rise in disparities in health outcomes between urban and rural populations,” Tang said. According to national health account studies, he said, out-of-pocket payment for health care from individuals rose from 20% in 1980 to 54% of total health
expenditure in 2005. He attributed difficulty and inequity in access to health care to the rapid increase of medical care costs and the inadequate coverage by health insurance. He described China's various health insurance schemes: three types of urban mainstream social health (two of which require co-payments and deductions), the new Rural Cooperative Medical Scheme (RCMS) and Medical Financial Assistance (MFA) for the poor, elderly and disabled. Not all those who are eligible for MFA, however, automatically receive benefits and they must go through a complicated procedure of application, Tang said. The annual use rate in 2004 was much higher in RCMS areas (3.4%) than in non-RCMS areas (2.2%) but, in general, the rich everywhere had a much higher hospital admission rate than the poor. The new RCMS has failed to change the pattern of inpatient services among different income groups because it requires deductible and co-insurance payments, which the poor frequently cannot afford. Although 685 million people (78%) of the rural population is estimated now to be covered by RCMS, the financial protection offered by it and the urban health insurance schemes is very limited. Tang concluded:

- Inequity in population coverage remains a serious issue both in the urban and rural health insurance systems.
- Most benefit packages focus on catastrophic diseases, require fee-for-service payment and may not be cost-effective.
- Low-income groups are disadvantaged when seeking services and benefits because they cannot afford co-insurance payments and deductibles.

Looking ahead, Tang said the healthy economic growth in China over the past three decades has provided the government with a financial base for universal health care. It is critical for the government to reform the current health care schemes to provide basic care for all, he said.

“Let me show you something,” said Wu Jing, Researcher, Center for Health Statistics and Information, Ministry of Health, China, as she began presentation of China's new National Essential Health Services Package (NEHSP). She showed photos of people in urban areas waiting all night to register at a hospital and an elderly couple using traditional treatments because they could not afford to see a doctor.

Health policy-makers attach high importance to these problems, she explained, and to illustrate the commitment of the government to changing the situation, she described the framework of China's health system. It consists of essential health care, basic health insurance, an essential drug system and a public hospital management system. The government’s priorities are the country's major health issues, she said, those resulting in the highest burdens of disease. Other priorities are cost effectiveness, emphasizing proven interventions; economic affordability based on national revenue capability; and equity, she said. The proposed NEHSP addresses essential public health functions, public health services and clinic health services that employ 1.52 doctors/thousand people and 1.06 nurses/thousand people and utilize 235 types of western drugs and 128 traditional ones. The estimated cost of the proposed NEHSP is 169.3 billion RMB (US$ 23 billion), of which 53% will go to essential public health functions. Wu said confidently that the total cost is both politically and financially feasible for China. The proposed plan has been sent to the Ministry of Finance, she added, and further adjustment on data and methods will be done. The next steps will include collaborating with related experts to carry out implementation design (see Figures 16 and 17).
Chapter 3 – Zeroing in on health systems

Fig 16. Feasibility analysis of China’s National Essential Health Services Package (NEHSP)

**Political feasibility**
- 17th CPC Congress & “person-first” policy
- “Building harmonious society”

**Economic feasibility**
- China’s GDP (Gross domestic product) increase rate >10%
- China public revenue: ¥ 3542.3 billion
- NEHSP cost <5% of the public revenue

Presented by Wu Jing in “A national essential health services package”.

“The urban poor in China have been long ignored,” stated Meng Qingyue, Director, Center for Health Management and Policy, Shandong University, China, in the same session. “When you talk about the poor, the sense is that they are located in rural areas,” he said. Take a closer look at the details, he advised. The urban poor include people with no family support or income and no working ability, as well as people without permanent jobs or income and those who are poor as a result of bankruptcy. This amounts to 22 million people, or about 5–6% of China’s total urban inhabitants. However, Meng also called attention to the magnitude of the growing problem of rural migrants who have joined the urban poor – an estimated 120 to 200 million people. A survey by the Ministry of Civil Affairs shows that 50–60% of poor urban households are created because people needed to pay for illnesses; a similar survey shows that the rate for patients who should see a doctor, but fail to do so, is over 50%. The urban poor are constrained by access to many resources, not only health care, he said.

He described the Urban Health and Poverty Project (UHPP), a project co-financed by the Chinese government and the United Kingdom’s Department for International Development. Its aim, he said, was to explore suitable mechanisms for protecting the poor through Medicaid and to improve access to health care for the poor by increasing health care utilization and removing financial burdens. It was designed to assist national and local policy-making on Medicaid and to provide community-based medical assistance by offering a wide range of health care services in four cities. UHPP Medicaid greatly increased utilization of health care in Shenyang and Chengdu during a project between 2001 and 2004, and greatly reduced both inpatient and outpatient expenses per visit, he reported. The goal of the programme was not money, he stressed, but rather access of the poor to health care. The programme’s impact on primary care in community health centres was especially positive and resulted in huge increases in visits, examinations, consultations and immunizations. Local governments have supported the Medicaid programme and the mechanism developed in programme has been used by the central government. It needs now to be coordinated with other schemes. Meng emphasized that it is just one of the significant systems for protecting the poor.

Fig 17. Essential public health services of China’s proposed NEHSP

9 Categories (52 items)
- Routine health information management
- Vaccine
- Infectious disease control
- Maternal and children health care
- Elder health care
- Chronic diseases control
- Mental health care
- Family planning
- Health education (the spread of knowledge)

Presented by Wu Jing in “A national essential health services package”.

The information gap
CHAPTER 4

The information gap

Several speakers in Beijing talked about the difficulties of gathering information on the number of rural migrants for a national health plan in China, the struggle to record causes of death in Viet Nam, and efforts to calculate the number of women worldwide who would use an HVP vaccine. Those reports and many others demonstrated how central information is to health research. Yet much is lacking – and in a way that makes vital differences every day.

Ironically, in this ‘information age’ of the Internet and search engines, much health information does not exist, is inaccessible to those who need it or there is simply little interest in using it. At Forum 11, there appeared to be a scramble to correct the problem. There were sessions devoted to mortality statistics, metrics, knowledge networks, responsible journalism and one on access to information, which included presentation of the Cochrane Developing Countries Network. Lunchtime gatherings heard about the launches of ‘Sound Choices’, the Alliance for Health Policy and Systems Research’s new evidence-informed health policy; TropIKA.net, an online network for tropical disease research; EQUINET, a regional online network for equity in southern Africa; an intellectual property management in health innovation handbook on a searchable CD-ROM; and Global Health Forecasting for new medical interventions and technologies.

Four special ‘meet-the-authors’ gatherings were held to allow participants to interact with the authors of some of the latest publications produced by the Global Forum for Health Research. These included: ‘Research capacity for mental health in low- and middle-income countries: results of a mapping project’; ‘Research issues in sexual and reproductive health for low- and middle-income countries’; ‘Global Forum Update on Research for Health Vol. 4’; ‘Young Voices in Research for Health 2007’ and ‘Learning from Experience: health care financing in low- and middle-income countries’.

Editor-in-Chief Richard Horton, The Lancet, took an active part in the meeting, the British Medical Journal’s editor Fiona Godlee chaired a session on globalization and health, RealHealthNews editor Robert Walgate and Shereen El Feki, Presenter, Al Jazeera, United Kingdom, shared and learned alongside other participants. Other writers, editors and journalists were less visible but equally busy in poster sessions, the Marketplace or generally exchanging information.

Evidence – or the lack of it – was a central focus of WHO Director-General Margaret Chan’s address at the opening ceremony. She sounded incredulous as she stated that less than a third of the world’s population is accounted for in data on births, deaths and causes of deaths.

The Lancet is also asking, ‘Who Counts?’ This is the name of its series on the dismal situation in much of the world for registering births, deaths and the cause of deaths. The series is sponsored by the Health Metrics Network, a global partnership funded by the Bill and Melinda Gates foundation and hosted by WHO that was established to address the lack of reliable health information in developing countries. The first article in the series put the problem into perspective: “Compared with economic data, systematic compilation of health indicators is the exception rather than the norm.” The articles are designed to make clear the lack of civil registration in many countries, the successes that have been achieved and the many missed opportunities. They suggest interim measures for collecting health data in developing countries and encourage approaches that combine methods to generate better vital statistics in the short term, with capacity building for civil registration systems in the long run. “Ultimately, this campaign is about how much each of us values the life of every other human being,” writes Richard Horton in his commentary at the beginning of the series. “It is a test of our humanity.”
Mortality statistics: unreliable, incomplete, lacking

“Mortality statistics are fundamental to trying to make health systems work,” said Sally Stansfield, Executive Secretary, Health Metrics Network, Switzerland, as she opened a session on health information for decision-making in Beijing. Noting that most of the burden of disease in developing countries is reflected in premature mortality, she said, “If we fail to document causes of deaths and register deaths then we cannot responsibly develop and plan health interventions or measure the impact they deliver.” She quoted some statistics to bring home the magnitude of the problem: two thirds of deaths go unregistered in the world, only 31 of 193 countries report ‘quality cause’ of death to WHO. “In order to show that we think life is important, we need to get serious about the causes of death in order to be able to better preserve life for our citizens,” said Stansfield.

Viet Nam is one of the countries where there has been no official vital statistics registration. Chalapati Rao, Lecturer, International Health, School of Population Health, University of Queensland, Australia, traced how mortality estimates had been made for the global burden of disease in Viet Nam by using reference cause of death data from China, India and Thailand. Similar assumptions for mortality estimation are used for countries in the Middle East, Africa and from Latin America, he said. “The conclusion we can draw from all of this is that the global burden of disease, mortality and cause of death estimates at national, regional and global levels are largely based on guesswork,” he stated. There is need for more local data for monitoring and surveillance to enable country-specific assessment, he said. While there is recognition by many developing countries of the importance of health measurements, Rao said there is no clear road map on how to improve data availability. In Viet Nam, a new civil registration system was launched in 2005 and an analysis of that system is underway. Review of the old system found no clear mandate to report the cause of death. Also, death of a newborn within 24 hours of birth was not required to be reported, thus skewing child mortality rates. Clerks, often overburdened, said they realized that death registration was important but birth registration was more important and so gave priority to recording just births. Probing causes of death can be a very sensitive issue, Rao observed, and quoted a man saying his father’s death was his own personal issue – a comment with which Rao said he agreed. He advocated revising civil registration and vital statistics systems through multisectoral collaboration developed from operations research projects. He also noted the need for sustained funding, internally for routine operations and externally to support research activities.

Community sensitivities regarding death registration

“(...)Death(...) is a very sensitive [issue] and it is impossible for us to go and ask the family to register the death while they are grieving. We will be shouted at(...)”.

Reporting the cause of death may also be an obstacle for death registration as one district justice clerk commented: “When we ask for the cause of death, they say, ‘My father’s death is my personal issue.’ I agree with this point of view myself.”

Taken from slide presentation by Chalapati Rao

Alan Lopez, Head, School of Population Health, University of Queensland, Australia, briefly reviewed the situation in 16 Pacific Island states, where there is great uncertainty about births and deaths in small, remote populations. “You may wonder why bother about the Pacific Islands? Well, that’s the problem, no one ever has,” Lopez said. Noting that WHO knows very little about mortality conditions in the Pacific Islands, he described a three-year project evaluating for the first time in about 20 years the number and causes of death. Pacific Islands are small, dispersed and it appears that several are undergoing rapid epidemiological transitions, Lopez explained, however, no one is sure because there is very little data. Generally, these islands are thought to have low child mortality and high adult mortality, a different profile than most countries. Lopez expressed concern about recent reports that child mortality is rising in some populations and life expectancy has not improved over the past two decades. The uncertainty reflected in these reports “is simply unacceptable,” not only for national mortality monitoring but also for international mortality assessments. In the Solomon Islands, for instance he said, there is a reported life expectancy of 60–75 years. “A life expectancy range that gives
you 15 years of uncertainty is effectively useless for public policy," he remarked. “We know that vital registration data is systematically under-enumerated, but we don't know to what extent.” The key objective of his study is to obtain cause-specific mortality for the region and targeted islands and develop better methods suitable for small island populations to obtain more reliable mortality and cause of death estimates.

Over 40% of deaths in Thailand in 2005 were assigned to ill-defined causes, reported Yawarat Porapakkham, Co-Principal Investigator, Setting Priorities Using Information on Cost Effectiveness (SPICE), Ministry of Public Health, Thailand. The use of vital statistics from civil registers in Thailand has been, therefore, limited. She outlined her study to verify the registered causes of death in a sample of 10,000 deaths from the registration data using verbal autopsy procedures to deliver a ‘best estimate’ of cause of death and also to indicate the feasibility of using the procedure in routine civil registration. Selecting two provinces from each region, trained medical researchers conducted interviews and analysed medical records to verify cause of death. The interim results showed efficacy of verbal autopsy in identifying specific causes of death in 97% of the cases.

SARStrans: sharing limited knowledge

Information not only needs to be reliable and collected by researchers, but also shared with other researchers and with policy-makers, sometimes very quickly. This was illustrated in a presentation on SARStrans, the European Union-funded project that brings knowledge about SARS together with analytical methods for control. SARStrans was designed to enhance preparedness for epidemic outbreaks such as the one that broke out in China in November of 2002 and spread to several cities, causing 774 deaths worldwide and infecting thousands. The Chinese government did not inform WHO of the outbreak until February 2003, after which WHO issued a global alert. The delay resulted in criticism of the government of China and heightened global concern about pandemics. Roy Anderson, Rector Elect, Imperial College London, United Kingdom, explained that the evolution, spread and persistence of infectious diseases are facilitated in today's society by increasing air travel, growing populations and densely crowded urban areas. The SARS experience, he said, alerted policy-makers and health workers to the need for preparedness. During an emerging epidemic, there is high scientific uncertainty because of the limited knowledge. Several important steps were recognized from the SARS epidemic: identification of the pathogen, development of a diagnostic test and treatment protocol, estimation of the key epidemiological parameters, and the formation and implementation of public health interventions. There is a need for rapid priority setting and collaboration – and no time for research, Anderson noted. An interdisciplinary and international approach are both essential. The SARStrans plan suggests developing an international database for epidemic situations, a crucial step but currently nonexistent; a ‘basket of tools’ for WHO and decision-makers, to be implemented by countries, not researchers; and international parity through bilingual, accessible data input for which algorithms can identify missing data (see Figures 18 and 19).

Information for advocacy?

Whether health researchers and other scientists engaged in solving challenges to global health should become advocates for the field is a
sensitive question and a neglected one. Mary Woolley, President and Chief Executive Officer, Research!America, USA, approached it head on. “With existing and emerging infectious disease limiting development in low- and middle-income countries, the cost of medical care threatening health and economic well-being in the United States, and chronic disease becoming a burden globally, the role of global health research simply must expand to include advocacy – training researchers to improve and put to work their public communications skills,” she said. Scientists generally prefer to work out of the limelight, she observed, and aside from academic journals, “disdain publicity for their findings.” She said they should keep in mind that letters to the editors of newspapers are read by voters as well as by elected officials and that speaking to non-science groups is an effective way to explain the importance of medical research and build rapport with the public. “All researchers would rather spend time on their own work than respond to urgent news media requests or meet with elected officials whose own professional culture they may scorn,” she said, but they need to speak out to inform – and to speak out clearly. Policy-makers need scientists to get to the point, she added, they need to know why global health research is important to their constituencies. She pointed out that public health is influenced by the political sphere; she illustrated this with examples of how activists in the USA have influenced political policy on HIV and breast cancer, and how concern within the Institute of Medicine of the National Academies of Science led to establishment of a Council of Public Representatives at the National Institutes of Health. She attributed the limited public awareness of scientists, in part, to why less than six cents of every health dollar in the USA is spent on research to improve health, of which less than one cent goes to global health research. Most
Equitable access: a report on Forum 11

Americans, 62% of those polled, she said, think this is too little.

Fig 20. US spending on research to improve health

Limited public awareness of scientists is one reason why...

...less than six cents of every health dollar in the US is spent on research to improve health, of which...

...less than one cent of every health dollar in the US is spent on global health research.


In response to the need for advocacy on global health research, Research!America has established the Paul G Rogers Society for Global Health Research, comprised of scientific leaders from a spectrum of research fields and public health. Its ‘ambassadors’, Woolley said, are writing letters to editors, op-ed essays, giving media interviews, meeting with elected officials and government leaders to convince them of the importance and needs of public health. “However active and effective the Rogers ambassadors prove to be, the job of advocating for science is ultimately the responsibility of all stakeholders in global health research, including all scientists,” she told participants.

Barriers to health journalism

Many researchers are wary of media misreporting and aware of the possibility of sensationalism, Robin Vincent, Senior Adviser, Panos, United Kingdom, told the roundtable discussion on responsible journalism. When researchers and government sources are reluctant to talk to the media, journalists may be driven to seek information from alternate sources, he added. These may include pharmaceutical companies and activists. In other cases, political pressure may discourage investigative reporting on particular government policies or the impacts of specific industries or companies. He related data from a global survey of 450 organizations and interviews in 15 countries on a range of barriers to effective health journalism. Where the media has played a constructive role in providing sensitive and informed coverage of health issues, he said, this is often underpinned by engagement between journalists and those most affected by a health condition, and by good relationships with health ministries.

This was the theme of comments made by Shereen El Feki, of the London office of Al Jazeera, in the closing plenary. “I used to be a medical researcher,” she recounted, “But when I became a journalist, I discovered that reporters were not always welcomed in these kind of gatherings.” One of the things that had struck her at Forum 11, she said, was the desire, expressed repeatedly, to better communicate to the public largely through the media. The reasons for this, she observed, are varied, but the desire to reach out to the media is commendable. However, she said she had detected “a certain amount of wariness about dealing with journalists, a concern that you may be misquoted, that your research might be sensationalized or misreported.” Addressing participants working in developing countries where there has not been an established relationship with the media, she told them they have great opportunity to begin forging a positive relationship. Her first suggestion was familiar to participants who had been discussing evidence-based policy-making. “You need evidence,” she said. El Feki then asked:

- Do you know, for example, who is covering science and health issues within your country?
- Do you have any idea how often these issues are written about?
- Do you know how well, in a quantitative way, they are being reported?
- Do you know who is doing the reporting and what their background is – for example, do they come from a science background?
- Do you know what their sources are?
- And, crucially, do you know about your
public, where the community is going to find information about health and science?

El Feki suggested that national research councils or universities might commission a baseline analysis of how the media reports on health research in certain areas. She highlighted the need for building trust in the relationship with journalists, and for respecting them as professionals, “just as they respect you.” She said, “Very often journalists are seen as parasites by professionals: they descend upon us, they drain us dry of information and then they go off and leave us.” If you want good coverage and a working relationship, she advised participants, you need to invite journalists in to see your projects, visit your lab, to speak about what they do. Acknowledging that in many developing countries, there may not be science and health reporting, she advised researchers to talk with the head of the local media outlet and explain why it is important that someone covers these issues. “You’re dealing with matters of life and death – they should be covered,” she said.

One of the interesting things about young scientists is that they can be really good communicators because they remember what it is [like] not to understand, not to know all the jargon. They remember what it is like to be on the public side.”

She suggested students and young researchers, from the undergraduate level up, be encouraged to communicate to the wider world about their work. This also gives them the opportunity to put their research into a broader context, she noted, which is the angle that journalists are frequently seeking. El Feki acknowledged that there currently are many programmes to train journalists in developing countries. However, she has not seen any evidence that the efforts to train journalists are connected with efforts to train researchers. She wondered whether there are any joint courses for students of life sciences and journalism, because “this is a collaboration that should be explored very early.” Drawing on her own experiences, she observed: “One of the interesting things about young scientists is that they can be really good communicators because they remember what it is [like] not to understand, not to know all the jargon. They remember what it is like to be on the public side.”

Equitable access to publication was a major concern of Eduardo Martins, Coordinator of Health Information, Center for Technological Development in Health, Science and Technology Information, Oswaldo Cruz Foundation, Brazil. He presented an analysis he said demonstrates that health research agendas of rich countries have “almost nothing to do with priorities formulated by international bodies such as the United Nations Millennium Development Goals.” Citing scientific publications as the principal medium for researchers to present the results of work to peers, policy-makers and investors in science, he said journals and the Science Citation Index of the Institute for Scientific Information (ISI) are often inaccessible in LMICs. ISI has a paid access base that includes fewer than 8% of the approximate 80 000 journals published worldwide, he said. To be included in its index, the ISI requires publications be in English and that the subject matter covered be of global interest. Martins said data show 50% of the journals indexed by the ISI are published in Europe and nearly 40% in North America. The countries with the greatest investment and scientific production, he added, define the agenda or research priorities. These facts are critical, he explained, because neglected diseases that afflict poor populations do not commonly occur in developed countries and research into these diseases is not of interest to editors of large-circulation scientific publications in developed countries. This, he said, is one factor contributing to the domination of the research agenda of developed countries. Another, he added, is that research-financing priorities decided by international sponsoring agencies do not seem to have any relation to the consensus agreed upon by developed countries during international forums and conferences.
The future of research
CHAPTER 5

The future of research

The future holds growing complexities for health, predicted Timothy Evans, Assistant Director-General, Information, Evidence and Research, WHO, Geneva, in the closing plenary. He envisaged an increasing focus on the brain, “the centre of memory, reason, creativity, communication, behaviour, and central to the rest of the physical organism, and the portal to the sensory system of the social, economic, physical environment.”

As we move towards 10 billion people on the planet between the years 2050 and 2100, Evans said researchers will increasingly examine the brain’s potential and interrelation with the rest of the body. He predicted that scientists will move beyond single causal risk factors to embrace a multitude of determinants, often working in combination, that affect health. He forecast recognition of lifetime risks and longitudinal exposure, along with ‘life-course cohorts’, that focus on populations born in certain contexts and certain periods. He predicted that research paradigms will shift from one led by individual scientists to broader-based, collaborative efforts and multidisciplinary initiatives that tackle specific problems, often on a global or regional scale.

The way we do research will also change. “Research will increasingly have to be ethical and accountable,” he said. “A recipe for disaster is research indifferent to the concerns of the public and impermeable to their recommendations.”

Evans foresees a continuation of the trend of the Internet to promote a more open-source culture of research, a phenomenon now characterized by the rapid growth of blogs, Wikis and social networks like Facebook. He raised the possibility, however, that due to a demographic squeeze from decreased fertility and increased competition, there may be a shortage of skilled health researchers. “We will be scrambling for talent,” he predicted. “The clinical scientists and public health action researchers may become dinosaurs because we cannot provide conditions conducive to bringing the best minds to this area. We have to think carefully about the demographics of research workers as we move forward.”

With a call for more emphasis on basic research, Adel Mahmoud, Professor, Molecular Biology, Woodrow Wilson School, Princeton University, USA, highlighted the critical role of discovery. “Ninety-nine per cent of the tools we have today came out of basic research,” remarked Mahmoud in the closing plenary. He added that the process of discovery is democratic, but the ideas do not come unless they have support. He noted that one of the new HPV vaccines was unexpectedly discovered in the course of basic research. Rather than speaking about the future, he made a point about the week past: “What is missing from this debate is innovation, and research starts with the process of discovery,” he said. “I do not enjoy the simplistic economic analysis that says if you pour money on a subject it will solve the problem – that has been proven wrong year in and year out.”

He pointed to the National Institutes of Health in the USA, which, he said, has spent US$ 1 billion a year for the past 10–15 years to come up with an HIV vaccine. “It’s 27 years after the recognition of the virus and we do not have a vaccine,” he said. “Dangling money in front of scientists does not lead to discovery.” He urged participants to think about this statement, “Otherwise, we are misleading the whole world.”

Mahmoud drew attention to the complex, interdisciplinary nature of health and said he objects to the notion that the future will be full of magic bullets. The idea that there is a simple solution for a complex problem is a fallacy, he said.

He also addressed the absence from the discussion of the national leadership of the developing world, especially from the countries that are struggling for solutions to major health problems. With a few notable exceptions – he cited Senegal, Thailand and Uganda’s efforts to fight HIV – there has been no leadership. “Where are the health issues on the national agenda of most developing nations?”
he asked. If the national leadership does not take a position to motivate and move their people forward, it will not happen, he said. In closing, Mahmoud assured his audience: “I do come from that side of the world [Egypt] and consequently, I have a real feeling for the billions of people who are living in the developing world.”

“Alma Ata never envisioned health as anything other than being provided by government.”

Sania Nishtar, President and Chief Executive Officer, Heartfile, Pakistan, suggested that the private sector play a more active role in health care innovation in the same way business leaders have stepped up to address problems of climate change. “On the issue of climate change, CEOs are talking the language of NGOs.” That’s due not to altruism, but because they sense opportunities for profit, she said. However, she acknowledged that the private sector’s active response to climate change could nonetheless serve as a constructive example for health researchers.

Thirty years after Alma Ata, we have not learned the lesson about health, Nishtar said, although some progress and perspective have been gained. She called attention to the fact that “Alma Ata never envisioned health as anything other than being provided by government.” We have a huge opportunity now to uphold equity and to improve the state of health, she said.

She turned to another subject that she said she wanted to highlight. “Corruption is a hugely important subject and I use this word with no apologies,” she said. “It takes not only financial forms, but methodological and intellectual forms that are very prevalent now.” Corruption compromises public investment, she declared, and works in a variety of ways. Money for medicine and care is too often siphoned off before it reaches the public and there is often no paper trail. She urged those in health care fields and in health systems research to be sure to track expenditures.
Reflections
CHAPTER 6

Reflections

In a special presentation, Pramilla Senanayake, the retiring Chair of the Foundation Council, Global Forum for Health Research, delivered reflections on her tenure and the growth of the Global Forum for Health Research. “I have been associated with the Global Forum almost from its birth,” she said, recalling her positions, first as a Foundation Council member, then as chair of the Strategic and Technical Advisory Committee (STRATEC) and, for the past three years, as Chair of the Foundation Council. She described the roles of the Global Forum: producing publications (evidence), tracking resource flows and supporting initiatives for research in priority areas such as equity, poverty and sexual and reproductive health. Some of the initiatives, she said, “have grown up and flown the nest, others are very much close to the nest and still being nurtured.” However, she said it has been the annual Forum meetings that have been the high point, especially during the last years. “It is here that collaboration and networking have been most evident and enormously helpful, both formally and informally,” she said.

Then she added a personal note, addressing the suggestion by some that the Global Forum might do better by working more nationally or regionally. “I would strongly endorse the need for the Global Forum to remain global, because I find that by remaining global, our impact nationally is enormous,” she said. She related how her country, Sri Lanka, had brought a diverse group of 13 individuals to Forum 10 in Cairo. “They came because they wanted to be sure that what they’re funding is crucial,” she said. “I can say they went back fully convinced that money spent on research within their own country has enormous cost/benefits.” Upon their return to Sri Lanka, she said, they also developed individual research projects, not only on what was discussed in Cairo, but on many other issues. “It’s amazing to see the impact of what happened in Cairo embedded in what is going on at the provincial level in my country.”

Senanayake especially thanked the Secretariat of the Global Forum, what she called “the backbone and strength” of the organization, and the Foundation Council for their support during a “fantastic term of office.”

A ‘Young Voice’

The closing ceremony also featured a short presentation by Zhang Lingling, China, one of five regional winners of the 2007 ‘Young Voices in Research for Health’ essay competition. She recounted in her essay and in the closing session how, as a 12-year-old in China, she had been taken to the nearby village clinic and had been given an injection for a high fever. The injection, it turned out, did not contain the correct medication and her condition worsened. Her mother, one of China’s ‘barefoot doctors’, took her then to a county hospital where she was properly treated and recovered. That experience, Zhang said, convinced her that access to health care was important but equally important was the quality of the care. Zhang is currently a doctoral student training in international health systems at Harvard University’s School of Public Health and a fellow researcher of the Harvard-China Initiative and the Center of Human and Economic Development Studies of Peking University. Her story and enthusiastic presentation was representative of the positive spirit expressed
by the talented ‘Young Voices’, 11 of whom took part in Forum 11.

A group of rural workers in Liaoning Province around 1971, including Zhang Lingling’s mother Hou Baocui (centre) who was a barefoot doctor.

Stephen Matlin announced that in November 2008, the Global Forum’s annual meeting will be integrated into the Global Ministerial Forum on Research for Health, taking place in Bamako, Mali. Following large gatherings in Bangkok (2000) and Mexico City (2004), the conference will be jointly organized by the Council on Health Research for Development; Global Forum for Health Research; Government of Mali; United Nations Educational, Scientific and Cultural Organization (UNESCO); World Bank; and WHO. A series of regional consultations are being held to prepare for the conference and questionnaires are available for individuals to contribute to the process, he said. Participants were referred to the organizing secretariat’s website: www.bamako2008.org where a call for abstracts would be launched early in 2008.

Gill Samuels, Chair-Elect of the Foundation Council of the Global Forum for Health Research, closed Forum 11, telling participants: “I think the most important thing these forums do is not to foresee the future but to enable the future. You all are part of that. You have the future in your hands, and I look forward to working with all of you.”
Afterword: search and research
Afterword

Even as the ancient Chinese were building the Great Wall to protect their cities and kingdoms from marauding bands of foreigners, they were also sending out traders and explorers along what would come to be known as the ‘Silk Road’. These adventurers searched beyond known borders, exchanging not only silk and other goods as they moved westward, but also knowledge. China’s ancient empire became renowned for its advanced culture and impressive inventions, which included paper and printing. Searching for information and new ideas was a tool long before there were ‘search engines’. Now, the Chinese are shooting for the moon, literally, and in just about every other type of endeavour. Participants in Forum 11 benefited from the exchange of knowledge in Beijing, hearing the results of research that has been done throughout the world, even when those results showed that there is still much to do to accomplish common goals.

The search for health is not new to China – its first emperor, QinShiHuangti, died in 206 BC while searching for an elixir to extend life. The 17th Party Congress of the People’s Republic of China that met in Beijing in October put forward its 11th five-year reform health plan, which was discussed at Forum 11. Details, however, have been slow in coming. What has captured, by far, the most attention in China during the past months is the countdown for the Olympic Games, due to open in Beijing on the auspicious date of 8-8-08. The projected cost of the games has been revised to US$ 2.4 billion; the Chinese have said they expect to turn a profit of US$ 20–30 million. Throughout Beijing, there are immense signs with lighted numbers ticking off the days, hours and seconds until the games begin.

If only the Millennium Development Goals, with their targets to save and improve lives, could receive attention like this, perhaps during this century millions of people would find, if not an elixir for life, certainly a better quality of health. This is a global challenge and can only be met with a global commitment.
Acknowledgements
Acknowledgements

The Secretariat of the Global Forum for Health Research gratefully acknowledges all the assistance it received in the preparation of Forum 11. In particular, it would like to record its thanks to the following:

For co-hosting the meeting
The Government of the People’s Republic of China
Dr Liu Qian, Vice-Minister of Health, China

For participating in the Opening Ceremony
Dr Chen Zu, Minister of Health
Dr Han Qide, Vice-Chairman of the National People’s Congress
Dr Margaret Chan, Director-General, World Health Organization
Pramilla Senanayake, Chair, Foundation Council

For collaboration in the organization and logistics of Forum 11
International Health Exchange and Cooperation Center, Ministry of Health
Our suppliers and the staff of the conference venue

For contributions to the programme
Members of the Foundation Council of the Global Forum for Health Research
Alliance for Health Policy and Systems Research
Child Health and Nutrition Research Initiative (CHNRI)
Council on Health Research for Development (COHRED)
Health Metrics Network
Initiative on Cardiovascular Health Research in Developing Countries (IC-Health)
Institute for Development Studies
International Forum for Rural Transport and Development (IFRTD)
International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Asia-Pacific
Medical Device and Diagnostics Council
Panos
Sexual Violence Research Initiative (SVRI)
World Alliance for Patient Safety
World Health Organization Commission on Social Determinants of Health
World Health Organization Regional Office for the Western Pacific
World Health Organization Representative Office, Beijing

For collaboration in filtering and evaluation of abstracts

For preparing reports on sessions
Carla AbouZahr, Priscila Almeida Andrade, Celia Almeida, Garry Aslanyan, Jill Astbury, Nagesh Narayan Borse, Dennis Brown, Joanne Carpenter, Chen Yingyao, Adrijana Corluka, Mireille Cronin Mather, Elizabeth
Equitable access: a report on Forum 11


Special thanks are due to
The Lancet, for cosponsoring the essay competition Young Voices in Research for Health
Jie Chen, member of the Foundation Council
Hui Zhou and Zhang Lingling (translation of the Foreword into Chinese)
Julia Federico (proofreading of the report)

The Global Forum for Health Research takes this opportunity to thank all who contributed to the success of Forum 11, especially those who played an active role in oral and poster presentations, roundtables, luncheon sessions, special sessions and in the Marketplace.

For full programme details, a list of participants as well as papers and posters presented, see the CD-ROM annexed to this report.

Global Forum Secretariat at Forum 11
Stephen Matlin, Executive Director
Andrés de Francisco, Deputy Executive Director
Andrea Bauler, Kirsten Bendixen, Nicola Braik, Melanie Brown, Helen Buffle, Mary Anne Burke, Valérie de Roguin, Hannah-Sarah Faich, Ann Margareth Gaspard, Monika Gehner, Abdul Ghaffar, David Hayward, Susan Jupp, Jean-Jacques Monot, Sylvie Olifson-Houriet, Oana Penea, Alexandra Petersen, John Warriner.
List of illustrations

The following figures, tables and charts are “quotations” from Forum 11, most of which were featured in slide presentations, and have been incorporated into this publication.

1. Burden of disease by major cause groups and country groups, 2002 .................................................. 8
2. Countries with a critical shortage of health service providers, 2006 .................................................. 9
3. Infant mortality in 56 low- and middle-income countries ................................................................. 15
4. Under-5 year mortality rate in China by province ................................................................................. 16
5. Delayed response to the new problem in TB control during globalization ........................................ 20
6. Improving migrant TB control during globalization .......................................................................... 20
7. Leading producers of tobacco leaves, 2001 ....................................................................................... 21
8. Reasons for attempting to quit smoking ............................................................................................ 21
9. Access mediated through multiple factors .......................................................................................... 22
10. Rate of maternal deaths, 2000 ........................................................................................................... 26
11. Rate of child deaths, 2000 ................................................................................................................ 27
12. Balancing rights and obligations ....................................................................................................... 28
14. Global malaria vaccine portfolio in November 2006 ....................................................................... 34
15. Some issues/challenges common to HPV and AIDS vaccines .......................................................... 44
16. Feasibility analysis of China’s National Essential Health Services Package (NEHSP) .................... 47
17. Essential public health services of China’s proposed NEHSP ........................................................... 47
18. Minimal database for epidemic situations .......................................................................................... 52
19. Public health control measures and transmission dynamics .............................................................. 53
20. US spending on research to improve health ...................................................................................... 54
Foreword
Avant-propos

Huit principes sous-jacents et trois domaines prioritaires au centre de ce 11e Forum

Depuis sa création en 1998, le Forum mondial pour la recherche en santé (Global Forum for Health Research) s'efforce de bâtir un monde dans lequel les ressources en matière de recherche et le potentiel d'innovation seront exploités pleinement pour résoudre les problèmes qui touchent les populations pauvres. À l'heure où nous entamons notre deuxième décennie, il convient d'examiner dans quelle mesure nous avons permis d'attirer l'attention sur les enjeux de la recherche en mettant en évidence l'écart qui s'est creusé entre les pays sur le plan des connaissances, de l'accès à la santé ou des ressources et en proposant des pistes de solutions dans le but de combler cet écart. Notre Forum annuel est devenu un événement de première importance, au cours duquel des centaines de décideurs, de bailleurs de fonds, de chercheurs et d'autres acteurs du développement se réunissent afin de cibler et de faire connaître les défis à relever et, plus particulièrement, de proposer des solutions. Chaque année, le Forum est organisé dans une ville différente, en vue d'attirer l'attention sur une région du monde en particulier et de permettre à ceux qui s'investissent dans tous les aspects de la recherche d'y participer.

En 2007, nous nous sommes réunis en République populaire de Chine, sur l'invitation du ministre de la Santé. Dans le discours qu'elle a tenu lors de la cérémonie d'ouverture, le Dr Margaret Chan, Directeur général de l'Organisation mondiale de la Santé (OMS) a expliqué qu'il était essentiel de présenter des données probantes aux décideurs pour favoriser l'élaboration de politiques et de programmes de santé équitables. Le ministre chinois de la santé, le Dr Chen Zhu, scientifique de formation, a présenté en toute franchise les défis auxquels doit faire face la Chine au moment où elle tente de garantir un accès équitable à la santé à tous ses citoyens, et il a souligné le rôle que la recherche est appelée à jouer dans la réalisation de ces objectifs. Au cours des trois journées et demi de travail qui ont suivi, les participants au 11e Forum mondial pour la recherche en santé ont exploré plusieurs aspects de la recherche sur l'accès équitable à la santé : des enjeux mondiaux aux enjeux nationaux et locaux, les dimensions biomédicale, scientifique, sociale, économique et politique de la question, ont tour à tour été analysées.

Le rapport du 11e Forum mondial pour la recherche en santé offre une vue d'ensemble des principaux sujets qui ont été abordés lors du Forum et des conclusions qui ont été tirées à l'issue des discussions. Il traite notamment de la nécessité d'accroître les capacités de recherche, d'améliorer les systèmes d'organisation et de financement des travaux de recherche, de faire tous les acteurs participer au processus et de favoriser la recherche afin qu'elle ait un impact véritable sur la santé des populations pauvres.

À l'occasion de son assemblée annuelle, le Forum mondial pour la recherche en santé ne cherche pas à rappeler les enjeux ni à cerner les besoins, son objectif est de viser la prise en considération et la mise en œuvre des solutions proposées – qu'il s'agisse de créer de nouvelles technologies ou de nouveaux processus, de faire adopter de nouveaux comportements ou de favoriser l'engagement et le passage à l'action.

Huit points se sont retrouvés au cœur des débats :
• Nécessité de généraliser l'utilisation de données probantes dans le cadre de l'élaboration des politiques et des prises de décisions;
• Équité et droits de l'homme (accès et inclusion);
• Nécessité d'encourager l'innovation en recherche;
• Établissement des priorités;
• Renforcement des capacités de recherche;
• Force des collaborations intersectorielles;
• Travail de sensibilisation visant à souligner l'importance de la recherche et des ressources;
• Diffusion des résultats des projets de recherche.

Par ailleurs, les discussions ont fait ressortir trois domaines prioritaires :
• Nécessité de tendre vers les objectifs du Millénaire pour le développement (OMD);
• Recours à des déterminants de la santé plus généraux;
• Renforcement des systèmes de santé.

Toutes ces questions sont traitées dans le rapport du 11e Forum mondial pour la recherche en santé qui s'intitule « Equitable access: research challenges for health in developing countries » (Un accès équitable à la santé : les défis de
la recherche dans les pays en voie de développement). L'exemple de la Chine, qui connaît un développement rapide, a permis de mettre en lumière bon nombre d'enjeux et de solutions. En 2008, nous comptons sur vous pour nous aider à faire un pas de plus vers la concrétisation des idées et des attentes exprimées à Pékin.

Stephen Matlin
Directeur général
Forum mondial pour la recherche en santé
Prefácio

Oito princípios básicos e três áreas de interesse a partir do 11º Fórum

O Global Forum for Health Research (Fórum Mundial para Pesquisa em Saúde) tem lutado, desde o seu estabelecimento em 1998, por um mundo no qual a capacidade de pesquisa e inovação seja utilizada por completo para tratar dos problemas de saúde das populações pobres. À medida que alcançamos nossa primeira década, refletimos sobre nossos papéis em dirigir as atenção para questões de pesquisa, ao darmos ênfase às lacunas de conhecimentos, de acesso ou de recursos e ao apontar para as formas de preenchermos tais lacunas. Nosso fórum anual tornou-se um evento fundamental, que reúne centenas de mentores de políticas, financiadores, pesquisadores e outros interessados diretos no intuito de identificar e compartilhar os problemas e em especial suas soluções. O fórum acontece a cada ano em um local distinto do mundo para equilibrar o foco sobre as diferentes regiões e permitir a participação de cidadãos envolvidos em todos os aspectos da pesquisa.

Em 2007, nos reuniom na República Popular da China, sob convite do Ministério da Saúde. Por ocasião do discurso de abertura, a Diretora Geral da OMS, Dr. Margaret Chan, ressaltou a importância crucial de comprovações que dêem suporte para o desenvolvimento de políticas e programas de saúde imparciais. O Ministro da Saúde da China, Dr. Chen Zhu, que também é um cientista por formação, admitiu abertamente os desafios que a China enfrenta atualmente na tentativa de alcançar o acesso equitativo à saúde e enfatizou o valor da pesquisa para se atingir esse objetivo. Durante os três dias subsequentes, os participantes do 11º Fórum exploraram vários aspectos da pesquisa sobre acesso equitativo, abrangendo domínios globais, nacionais e locais e se estendendo a dimensões biomédicas, científicas, sociais, econômicas e políticas.

O relatório do 11º Fórum fornece uma visão geral e um resumo dos principais assuntos discutidos e conclusões alcançadas. Incluem-se entre esses tópicos a necessidade de: pesquisas adicionais; melhores sistemas para a organização e o financiamento de pesquisas; assegurar a participação de todos os interessados diretos; e, facilitar a pesquisa para garantir um impacto sobre a saúde dos necessitados.

No encontro anual, o objetivo do Global Forum não se limita a reiterar problemas e identificar necessidades, mas também deve impulsionar os programas em direção ao reconhecimento e implementação de soluções – pertencem elas à esfera da criação de novos processos e tecnologias, da obtenção de mudanças de comportamento ou da geração de compromissos e ações.

Oito locuções-chave foram fundamentais para as deliberações do 11º Fórum:

- Expansão do uso de comprovações para o estabelecimento de políticas e a tomada de decisões
- Equidade e direitos humanos (acesso e inclusão)
- Estímulo à inovação em pesquisa
- Estabelecimento de prioridades
- Fortalecimento da capacidade de pesquisa
- Poder da colaboração intersetorial
- Apoio para ressaltar a importância da pesquisa e de recursos
- Comunicação de resultados de pesquisas.

Foram três as áreas de interesse particularmente evidentes:

- O movimento em direção às Metas de Desenvolvimento do Milênio (Millennium Development Goals – MDGs)
- Determinantes mais amplos de saúde
- Fortalecimento dos sistemas para a saúde.


Stephen Matlin
Diretor Executivo
Global Forum for Health Research
Prólogo

Foro 11: ocho principios subyacentes y tres áreas de interés especial

Desde su creación en 1998, el Foro Mundial para la Investigación en Salud viene trabajando por un mundo en el que el potencial de investigación e innovación se aproveche plenamente para abordar los problemas sanitarios de los pobres. Al cumplir nuestro primer decenio, reflexionamos sobre nuestro papel para enfocar la atención en las cuestiones de investigación poniendo de relieve los desequilibrios en conocimiento, acceso o recursos, y apuntando posibles vías para solucionar estos desequilibrios. Nuestro foro anual se ha convertido en una cita fundamental para congrega a centenares de responsables políticos, patrocinadores, investigadores y otras personas interesadas en identificar y compartir problemas y, especialmente, soluciones. El Foro acude cada año a una zona diferente del mundo para equilibrar la atención a las distintas regiones geográficas y hacer posible la participación de todas las personas implicadas en todos los aspectos de la investigación.

En el 2007 nos reunimos en la República Popular China, por invitación de su Ministerio de Sanidad. La directora general de la OMS, Dra. Margaret Chan, destacó en su alocución inaugural la importancia crucial de las pruebas científicas en respaldo del desarrollo de políticas y programas sanitarios equitativos. El doctor Chen Zhu, ministro chino de sanidad y científico de formación, admitió abiertamente los desafíos que afronta la China actual en su intento de lograr un acceso equitativo a la salud, e hizo hincapié en la importancia de la investigación para alcanzar dicho objetivo. En los tres días y medio siguientes, los participantes en el Foro 11 exploraron múltiples aspectos de la investigación sobre acceso equitativo, a nivel mundial, nacional o local, y abarcando las dimensiones biomédica, científica, social, económica y política.

El informe del Foro 11 ofrece una síntesis general de las principales cuestiones debatidas y de las principales conclusiones alcanzadas. Entre ellas, cabe mencionar la necesidad de nuevas investigaciones y de mejores sistemas para organizar y financiar la investigación, así como la necesidad de garantizar la participación de todas las partes interesadas y de facilitar la investigación para mejorar la salud de los más necesitados.

Más que insistir en los problemas ya sabidos e identificar las necesidades, el objetivo de la reunión anual del Foro Mundial es sobre todo impulsar los programas de actuación dirigidos al reconocimiento y la puesta en práctica de soluciones, ya sea en el ámbito de la creación de nuevas tecnologías y procesos, de los cambios de comportamiento, o del compromiso y la acción.

Las deliberaciones del Foro 11 giraron en torno a ocho principios centrales:
• Uso creciente de las pruebas científicas en la formulación de políticas y la toma de decisiones
• Equidad y derechos humanos (acceso e inclusión)
• Fomento de la innovación en investigación
• Establecimiento de prioridades
• Potenciación de la capacidad de investigación
• Refuerzo de la colaboración intersectorial
• Necesidad de resaltar la importancia de la investigación y los recursos
• Comunicación de los resultados de investigación.

Y hubo tres áreas que destacaron como de especial interés:
• Progreso hacia los Objetivos de Desarrollo del Milenio
• Determinantes más amplios de la salud
• Fortalecimiento de los sistemas sanitarios.

Todas estas cuestiones se abordan en el informe del Foro 11 sobre «Acceso equitativo: desafíos en la investigación sobre la salud en países en desarrollo». China, como país en rápido desarrollo, aportó numerosos ejemplos de desafíos y soluciones. En el 2008, confiamos en ayudar a conseguir que las ideas y esperanzas expresadas en Pekín estén más cerca de hacerse realidad.

Stephen Matlin
Director ejecutivo
Foro Mundial para la Investigación en Salud
序

第十一届世界卫生组织论坛的八项基本议题与三个焦点领域

世界卫生组织论坛成立于1998年，宗旨是确保卫生研究与革新成果惠及贫困人口。回顾过去的十年，我们通过强调知识、可及性与资源在全球范围内的不均衡性及为缩小差距付出的努力来促进卫生研究发展。我们一直反思自己在这一过程中所起的作用。年度论坛会议是一项年度盛事，它能够汇集上百位政策制定者、研究人员、发展合作伙伴以及其他利益相关者来商讨该领域存在的问题及解决方案。年度研讨会每年在不同的地区举行，有助于权衡不同地区的不同焦点问题，又有利于参与者触及相关卫生研究的方方面面。

应中华人民共和国卫生部之邀，2007年年度会议于北京举行。世界卫生组织总干事陈冯富珍女士在开幕词中强调了突出卫生计划与政策公平性的重要性。中华人民共和国卫生部部长陈竺博士也坦陈了中国目前为实现卫生公平可及性所面临的挑战，并指出了在此领域付出努力的重要性。之后三天半的会议中，参与者详细探讨了关于到卫生公平在全球、国家及地区范围内可及性的问题，涉及生物医学、科学、社会学、经济学及政治学等各个领域。

这份第十一届峰会的报告是会议关键议题及研讨成果的总结及概述。它涉及的议题有：深入研究的必要性，更好的组织与投资的研究体系，保证所有利益相关方在研究过程中的参与及为卫生服务的研究提供便利。

在这次会议中，全球论坛的目的并不是重述现存的问题并重复需求，而是侧重于解决方案的认可与执行——无论它是否需要技术与进程的革新，是否导致行为的变化，或是否产生相应的义务及活动。

第十一届年度会议的八个关键议题是：
- 推广统计结果在政策决定中的应用
- 公平及人权（可及性与包容性）
- 鼓励研究创新
- 环境背景优先性
- 提高研究能力
- 跨部门合作的力量
- 提倡研究与资源的重要性
- 研究成果的交流

本届年度会议的另外三个突出的焦点领域：
- 继续致力于实现《千禧发展目标》
- 卫生研究更广泛的决定因素
- 加强巩固卫生体系

这本第十一届年度会议报告《公平的可及性：发展中国家卫生研究的挑战》涵盖了以上所有议题。正在飞速发展的中国提供了不少挑战与解决的方案的实例。2008年，我们期盼着我们共同的努力能使在中国提出的计划与期望成为现实。

史蒂芬·马特林
执行董事
世界卫生组织论坛
Global Forum for Health Research annual forums are a premier international event in health research for development.

In 2007, Forum 11 took place in Beijing, People’s Republic of China, bringing together some 600 key stakeholders to discuss research issues, best practices and gaps in securing equitable access.

This Forum 11 report provides an overview of the key issues discussed, detailing ideas on the use of evidence in policy- and decision-making, encouraging innovation in research and promoting equity and human rights approaches to health research. Other central themes include: research priority setting, research capacity strengthening, possibilities with inter-sectoral collaboration, advocacy for more research and resources and communication of research results.

The publication includes a user-friendly CD-ROM that features the final meeting documents.