Global partnerships for health* 

As a reflection on Dr Brundtland’s speech, I would like to stress the important role global partnerships can play in the struggle for equitable health improvement. Dr Brundtland’s focus, reasonably, is on infectious diseases with an emphasis on HIV/AIDS and SARS. She puts much emphasis on the undeniable successes in 2003 in controlling SARS, but less emphasis on our shamefully slow response to HIV/AIDS. The real lesson from SARS is the appalling state of public health services in most countries, both wealthy and poor. The Canadian post-SARS experience has had a major effect; the lessons have been learnt and a new public health agency has been established. However, it remains to be seen whether other countries, notably China, will be able to make the long term investments needed to improve the public health infrastructure which was sorely tested by SARS. It is only in the last year that WHO has played a critical role in ensuring that treatment is more readily available for HIV/AIDS patients, though this remains an extremely difficult task because of the decades of neglect of health systems in most countries. The effective response to SARS, and increasingly to HIV/AIDS, is based on a partnership model and this approach must now be generalised to all major global public health challenges.

Dr Brundtland pays some attention to tobacco control and chronic, noncommunicable disease. The WHO Framework Convention on Tobacco Control is an important milestone in the global fight against tobacco. Forty countries must ratify the Convention before it comes into effect and this will likely be achieved before the end of 2004. However, the implementation of the Convention at the national level, especially in key countries like India and China, will require long term investments from WHO and other partners, and tobacco control policies must be integrated with the response to chronic diseases more generally.

Chronic diseases are responsible for 60% of global mortality and approximately one third of the global burden of disease. WHO still devotes less than 5% of its budget to chronic diseases, despite the fact that the true extent of these epidemics was highlighted by the World Bank over a decade ago. Furthermore, these epidemics were not seriously considered by Dr Brundtland’s Commission on Macroeconomics and Health and are not integral to the Millennium Development Goals. The causes of these epidemics are well known and the same in men and women in all regions. Moreover, cost effective interventions are available and are working. The decline in cardiovascular disease rates explain the increasing life expectancy in many wealthy countries, although these declines began long before serious prevention and control programmes were established – testifying to the importance of the dissemination of the results of public health research. The main challenge now in the field of chronic disease prevention and control is to ensure that the knowledge and experience gained helps the low and middle income countries, especially India and China, where the epidemics have still not generated an effective and coordinated response; partnerships will facilitate the required response.

WHO under its new Director General, Dr Jong-wook Lee, is reemphasising the importance of the Organization’s Constitution with its strong social justice underpinning. Operationalising these sentiments has always been difficult for WHO, but it is the concern for poor and disadvantaged people which is driving the 3 by 5 initiative to bring HIV/AIDS drugs to millions of people. The same force is behind the creation of the Commission on the Social Determinants of Health, to be launched in early 2005, with the aim of assisting countries respond in a practical manner to the underlying determinants of health which have so far been given only token attention by the public health workforce. WHO is the only agency with responsibility for improving the health of all populations. At its best, WHO unites on-the-ground efficacy at country level with the exercise of global authority and coordination functions. It bonds the most advanced science to a normative commitment to justice and human rights.

However, as an intergovernmental organisation accountable to 192 Member States and with an annual budget of approximately $1.4 billion, WHO faces unique difficulties in achieving its broad goal. Tensions emerge between WHO’s need to be responsive to the agendas of Member States and its mandate to provide leadership based on scientific evidence. Likewise, the interests of different countries clash, as can those of non-governmental organisations and representatives of the for-profit sector, when they seek to collaborate within the public – private partnerships so important to many aspects of WHO’s global health work today. When such difficulties arise within WHO, they must be resolved through painstaking compromise, rather than by unilateral executive decision. Unwieldy as they may be, however, democratic processes remain preferable to any known alternative, especially in the promotion of such fundamental public goods as health. It is within a democratic forum that the voices and health needs of vulnerable groups stand the best chance of being heard.

The global community must confront today’s emergencies while laying sustainable foundations for a healthier future. This means synergizing targets such as “3 by 5” with the broad scale-up of equitable, integrated health systems that can meet the needs of communities and make quality health services available to everyone. Neither WHO nor indeed any other single institution can accomplish such a task. But, working closely with countries and partners, WHO can provide the initial leadership to develop appropriate partnerships. It remains to be seen whether the global community will muster sufficient political commitment and sufficient resources to shape a healthier future for all people, especially the most disadvantaged. Enormous technical and political challenges stand in the way. Democratic, inclusive institutions such as WHO must be used to their full potential, along with all partners, if progress toward health equity is to become a reality.

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*These comments are the views of the author and do not necessarily reflect the stated policy of WHO.
Diverging opinions

In February 2004 the first international symposium on public health genetics entitled ‘Public Health Genetics—Experiences and Challenges’ was hosted at the Center for Interdisciplinary Research (ZiF) in Germany, internationally well-known as a ‘think tank’ for interdisciplinary research. At this symposium contrasting viewpoints about the relevance of genomics for public health were presented.

In the opinion of Neil Holtzman, em. Professor of Genetics and Public Policy Studies at the Johns Hopkins Bloomberg School of Public Health, ‘… there is little need for further integration of genetic services and education into public health especially in countries in which public and private health services are dichotomized…’ Almost in contrast to this opinion Ron Zimmer, Director of the Public Health Genetics Unit at the University of Cambridge, stresses, that, although public health genetics is still in its infancy, ‘… rapidly advancing science and patient and public expectations require a strategic approach to the assessment, development and implementation of genetic services using all the skills of the public health practitioner. The development of policy for these services must start now, given the pace of genetic science, particularly in view of the need to educate and train a whole cohort of practitioners in the principles of genetics and molecular science. The focus on prevention… should seek to use its best advantage the opportunity embraced by a better understanding of the gene, while holding back those demands of both patients and physicians where evidence is insufficient to justify significant investment. The grasp of both medical and management perspectives available to the public health physician imposes a special responsibility to take up and develop this aspect of public health practice.’

Regarding patient expectations we know already from the fifth survey of the Eurobarometer on Biotechnology, which was conducted in 2002, that 44% of Europeans are positive about the results of biotechnology, whereas 17% are sceptical.

How can we deal with all these different perspectives? Where is the truth? Or furthermore, is there any truth?

The challenge

Interestingly enough, European and US public health institutes and platforms like the Public Health Genetics Unit in Cambridge (PHGU), the German Center for Public Health Genetics in Bielefeld (DZPHG) and the Office of Genomics and Disease Prevention at the Centers for Disease Control and Prevention in Atlanta (CDC), who work closely together with researchers from genetic and molecular science (‘modern biology’), as well as from population science and humanities and social science (ELSI), are much more optimistic and clear about the relevance of genomics for public health than others. They all have strong links or are even part of the respective national genome research projects in these countries and are translating genomic knowledge from biotechnology through genetic epidemiology into public health (‘translational research’). By using methods like horizon scanning, fact-finding and monitoring to identify research trends as early as possible, they are already doing a prospective evidence-based evaluation, i.e. an evaluation that is already carried out in the process of basic research and not just in the (retrospective) process of the implementation of public health strategies, which always will tend to lag behind.

In the past 20 years, the advances in genome research have revolutionized knowledge of the role of inheritance in health and disease. Nowadays, we know that our DNA determines not only the cause of single-gene disorders, which affect millions of people worldwide, but also predispositions (‘susceptibilities’), which are based on genotype and haplotype variants, to common diseases such as cancer, cardiovascular diseases, psychiatric disorders or even to some infectious diseases.

Evidently, these rapid advances in genomics and accompanying technologies are triggering a shift in the comprehension of health and disease as well as in our understanding of new approaches to prevention and therapy. Which consequences can be drawn from this knowledge, and how can it be translated into policies and practice in a responsible and timely manner?

Obviously, the integration of genomics into public health research, policy and practice will be one of the most important future challenges for our health-care systems. Expertise is already feasible and can be clustered and evaluated for a socially accountable use.

For example, in a condition like coronary heart disease, to be a heterozygote for the LDL receptor gene confers an increased risk for developing this condition. But, as is also true for all other risk factors (e.g. social factors, diet, smoking, physical activity), which have been identified by epidemiologists in this context in the past decades, the presence of the genetic marker is not predictive, and those with it may not develop the disease, while those without it may end up with the disease. Thus, the scenario is very much like that of coronary heart disease in the presence of raised blood pressure or cholesterol levels: the

Public health and genetics—a dangerous combination?

‘It is clear, that the science of genomics holds tremendous potential for improving health globally… The specific challenge is how to harness this knowledge and have it contribute to health equity, especially among developing nations…’ This is a quote by Gro Harlem Brundtland, former Director General of WHO, which can be found in the year 2000 Report of the Advisory Committee on Health Research.

At the same time, Craig Venter, former president of Celera Genomics, stressed the significance of this issue at the occasion of a symposium about the future of public health at Harvard School of Public Health:

‘Three years ago the human genome—the ‘book of life’—was largely unknown. Today, anyone can read what it contains. Genomics is already providing fascinating insights into our species’ evolution and clues to the some of the differences between individuals in susceptibility of diseases. The key question for public health, however, is whether it will improve the health of all of the world’s people, or whether it will just widen the technology gap between rich and poor. Ask people what they understand of the potential of genomics for human health, and many will talk about an unprece-
dented opportunity to develop new drugs and vaccines. Others are concerned that the poor will gain nothing, while the rich will gain a kind of ‘boutique medicine’: the opportunity to buy a full analysis of their personal genetic makeup, and then purchase designer therapies. If genomics is to make a major impact on global health, it will have to help provide affordable population-wide tools for combating common diseases…’

Even though there are of course compelling reasons to think globally in terms of health and genomics, first of all, we have to act locally. We have to ask the question whether we are doing ‘the right things’ at the local level? Are our public health strategies evidence-based? Thus the European public health agenda demands a vision that reaches beyond the research horizon to arrive at application and public health impact. What is the role of genomics in this scenario?