Global health agenda for the twenty-first century

Adrian Ong, Mary Kindhauser, Ian Smith, and Margaret Chan

Introduction

... the preservation of health is ... without doubt the first good
and the foundation of all the other goods of this life.
(René Descartes, Discours de la méthode, 1637)

The right to the highest attainable level of health is enshrined in the
charter of the World Health Organization (WHO) (2002a) and
many international treaties. It is this aspiration that spurs the work
of the Organization and frames the broader global public health agenda
for the twenty-first century. It is a tall order. But the right to health is more important today than ever before, given the dramatic evolution in the architecture of global public health and the growing prominence of health within the human security, rights, and development agendas.

The past century had witnessed remarkable gains in health, rapid economic growth, and unprecedented scientific advances. These advances have led to major improvements in health care in which millions more lives are protected than ever before. Life expectancy at birth has continued to rise, by almost 8 years between 1950 and 1978, and 7 more years since (WHO 2007c). These transformations are unmatched in history.

Yet, in spite of this optimistic outlook, the international community faces a demanding health agenda. Many public health problems, both new and old, remain to be solved. Despite progress, nearly 2.6 billion people, especially in fragile states, remain in extreme poverty and live on less than US$2 a day. Nearly 10 million children die before their fifth birthday, with approximately four million of these deaths occurring during the neonatal period (UNICEF 2007). Nutrition is a major problem with one-third of all children in developing countries stunted; half the people in developing countries lack access to improved sanitation (World Bank 2007a). Health inequalities are growing wider between and within countries, between rich and poor, between men and women, and between different ethnic groups.

These stark numbers reinforce the urgent need for collective global action. The United Nations Millennium Declaration in 2000 committed states to a global partnership to reduce poverty, improve health and education, and promote peace, human rights, gender equality, and environmental sustainability by 2015 (UN 2000).

These Millennium Development Goals (MDGs) establish health as a key driver of socioeconomic progress. In so doing, they elevate the status of health within the development agenda and recognize the two-way, though uneven, link between poverty and health. Poverty contributes to poor health, and poor health anchors large numbers of people in poverty. In all countries, poverty is associated with high childhood and maternal mortality, malnutrition, and increased exposure to infectious diseases as well as chronic diseases such as cardiovascular diseases, diabetes, and cancer.

Investments in health must thus work to reduce poverty, ensure the poor have access to health care, and prevent economic ruin as a result of high health expenditures. As the world around us is becoming progressively interconnected and complex, human health is contingent on the integrated outcome of ecological, sociocultural, economic, and institutional determinants. It is increasingly recognized, also in the Millennium Declaration, that broad intersectoral action in tackling these determinants of health is needed to achieve significant and more durable health gains, especially for the poor.

This chapter lays out, in three sections, a strategy and agenda for global public health by assessing the current context, challenges and opportunities in the global health landscape. Many of the issues highlighted are not new. The first section examines current global health problems and the challenges they present. It reviews the revolution in health spurred, in part, by demographic transitions in societies and by globalization and its related nutritional and behavioural transitions. The second section analyses the impediments to scaling up health service delivery and improving access to care. Building upon these lessons and issues, the final section outlines the fundamental principles and means by which health systems can meet the challenges of the twenty-first century.

The evolving global health landscape

The issues and actors in global health today are myriad and complex. Shaped by the potent forces of globalization, demographic changes and emergent diseases, the agenda for health has never been more challenging nor more pressing. This section surveys
current trends and phenomena in international health that meaningfully impact the public health agenda for the new century.

**Health within the larger human context**

Health in its own right is of fundamental importance and, like education, is among the basic capabilities that give value to human life (Sen & Sen 1999). It is an intrinsic right as well as a central input to poverty reduction and socioeconomic development. Health-related human rights are core values within the United Nations and WHO, and are endorsed in numerous international and regional human rights instruments. They are intimately related to and dependent on the provision and realization of other social and economic human rights such as those of food, housing, work, and education. Appreciation of this defining value underscores all efforts to provide equitable health care for all.

Health is also a central element of human security. The WHO Constitution defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (2002a). Humanitarian emergencies, including natural and human-made disasters, outbreaks of epidemic-prone diseases, conflicts and complex emergencies, constitute what has traditionally been considered the main threat to health security worldwide. However, wider considerations of human security, with the individual as a focus, also encompass issues of safe food and water, adequate shelter, clean air, poverty-related threats, violence, and the adverse effects of climate change on health (Ogata & Sen 2003). Strengthening the capacity of health and related sectors and improving international coordination can effectively contribute to reducing avoidable morbidity and mortality resulting from these threats to health security.

The pace of global economic integration has accelerated over the past decade, dramatically transforming the world’s economic and political landscape. Globalization, with its remarkable acceleration of trade, knowledge, and resource flows, offers unprecedented promise for improving human health. Many experts assumed that as economic conditions within a country improved, health would improve accordingly through income growth, poverty alleviation and the broader availability of health and other social services.

Yet, to date, globalization has had a complex influence on health and results have been uneven. Opinions differ with regard to the economic benefits of globalization and its impact on poverty and health. Some have argued that income inequality has not widened and that the higher growth rates that follow market integration in developing countries have benefited the poor (Ben-David 2000; Dollar 2001; Dollar & Kraay 2002). Others hold that the economic benefits of recent globalization have been largely asymmetrical, creating among countries and within populations, beneficiaries, losers, and growing inequalities between the two with consequent effects on health (Mazur 2000; Wade 2004; Globalization Knowledge Network 2007).

Globalization may thus create wealth but has no rules that guarantee its fair distribution. Economic growth per se does not ensure equitable health improvement for all. Rather, action within and between countries to mitigate and remove structural inequality is the necessary counterpart to worldwide growth itself and the policies that aim to support it (Marmot 2007). New governance policies structured around equity, distributive fairness, and social justice should be strengthened to minimize the negative externalities of global integration.

**A changing world**

Populations of the world are experiencing unprecedented demographic change. There are three billion more people today than there were in 1960. Another 2.5 billion will likely be added by 2050 based on mid-range population estimates (UN 2008).

Behind these numbers lie other important demographic trends common to many countries. Women are bearing fewer children, people are living longer and healthier lives, populations are aging, and increasing numbers of migrants are moving from villages to cities and from one country to another in search of better opportunities (UN 2008). A sharp contrast exists between the poorest nations with their rapidly growing and young populations, and the more demographically advanced and richer nations with near zero population growth and aging populations.

In populations with increasing life expectancy, the number and proportion of people reaching old age has risen throughout the world. Every month, one million people worldwide reach the age of 60 years. Of these, 80 per cent live in the developing world (WHO 2006c). Also with improved public health, more children are now surviving into adolescence and adulthood. One in every five people in the world is an adolescent. Out of 1.2 billion adolescents worldwide, about 85 per cent live in developing countries and the remainder live in the industrialized world (UN 2008).

This growth in human numbers, unprecedented and greater demand for food, water, energy, and other natural resources, important to the demographic heterogeneity and transition strongly impacts priorities and resources required to meet the shifting health needs of populations.

Each age category of persons faces a differing burden and nature of diseases. Many adolescents suffer premature deaths arising through accidents (including road crashes), suicide, violence, pregnancy-related complications, and other illnesses. They are exposed to tobacco-related diseases, harmful use of alcohol, substance abuse, sexually transmitted infections, unwanted pregnancy, and other health problems related to behaviour. Every year, an estimated 1.7 million young men and women between the ages of 10 and 19 lose their lives to preventable or treatable causes (WHO 2002b).

In many developing countries, the speed of modernization has outpaced the ability of governments to provide the necessary supporting infrastructures. Road traffic injuries are a growing public health issue, disproportionately affecting the poor and persons in the most economically productive age group. Such events kill an estimated 1.2 million people annually and injure as many as 5.2 million. Over 70 per cent of road traffic fatalities are under 45 years of age (Peden et al. 2004).

Maternal mortality has remained virtually unchanged for the past 20 years. Each year, more than half a million women die from complications of pregnancy and childbirth (Hill et al. 2008). Developing countries account for almost all of maternal deaths. The greatest burden is felt in sub-Saharan Africa, where more than half of all maternal deaths occur; in these countries, a woman is 100 times more likely to die from complications of pregnancy than a woman in the industrialized world. Underlying many of these deaths is the poor availability of health services. Seven in ten of all maternal deaths are estimated to arise from
complications requiring emergency obstetric services. Yet, access to these services in many developing countries is limited, making improving health systems and access to assistance from trained attendants during birth imperative for reducing maternal mortality.

Addressing chronic diseases are another major challenge that now has global dimensions. Current demographic trends, together with deteriorating environmental conditions, unhealthy lifestyles and improper nutrition, has led to a rise in non-communicable or chronic diseases, including mental and substance abuse disorders, and a subsequent demand for long-term medical care in many societies (WHO 2006c). In developing countries, this has created a second burden of disease alongside the continuing struggle to control infectious diseases and the HIV/AIDS epidemic.

While the proportion of burden from chronic diseases, including mental disorders, in adults in developed countries remains stable at over 80 per cent, the proportion in middle-income countries has already exceeded 70 per cent. Almost 50 per cent of the adult disease burden in the high-mortality regions of the world is now attributable to chronic diseases (WHO 2003b). The health impact of this ‘risk’ transition affects all countries, though the effects may be more severe in the developing world, where health services and social support systems are often inadequate to meet the rising needs.

A few common risk factors are responsible for a considerable proportion of the burden of chronic diseases. Attributable causes include improper diet, inadequate exercise, smoking, and excessive alcohol consumption. An intervention that addresses one of these risk factors can possibly reduce the risk for several diseases, thus giving special impetus for health promotion and effective prevention efforts in controlling chronic diseases. The long time lag between the development of high population levels of risk and the emergence of non-communicable disease epidemics, testifies to the importance of intervening now to control the major risk factors, especially in poorer countries where they tend to be neglected in the face of competing priorities.

Tobacco addiction is a global epidemic and remains the second major cause of death in the world, being currently responsible for about one in ten adult deaths—nearly five million deaths each year. By 2030, unless urgent action is taken, tobacco’s annual death toll will rise to more than eight million (Mathers & Loncar 2006). Today, almost one in three adults of the global population smoke. Of these, almost 80 per cent live in low- and middle-income countries (WHO 2008c). Due to the increase in the global adult population, coupled with expanded marketing by the tobacco industry, the total number of smokers is expected to reach about 1.6 billion by 2025, making the negative economic and health implications of tobacco use simply staggering. This growth is being driven largely by the rise in tobacco use in low-income countries and, more ominously, among young persons, especially females, in highly-populous countries (WHO 2008c).

Similar disturbing trends are occurring in the area of nutrition. Changes in global dietary patterns involve the increasing consumption of fats, energy-dense and highly processed foods. The world faces in many ways a double burden of nutrition—the co-existence, often in the same country, of under-nutrition and over-nutrition, with both as leading determinants of morbidity and mortality.

The next few decades will also see an unprecedented escalation of urban growth. About half of the world’s population now lives in urban areas (UN 2008). In developing countries, 43 per cent of the urban population lives in slums, and in the least developed countries, 78 per cent of urban residents are slum-dwellers, with 30 per cent of families headed by women.

The flow of migrants from villages to cities is so rapid that the population growth in the rural areas of the developing world has virtually stopped. As a result, most of the 3 billion people expected to be added to the world population in the future are going to be added to urban centres and shantytowns in developing countries, further aggravating already overburdened infrastructure and public services (UNFPA 2007). More disturbingly, this urban population growth will be composed to a large extent, of poor people (Garau et al. 2005), the needs of whom are often overlooked in urban planning.

The contribution of human activities to changes in the climate system is irrefutable. Increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels are phenomena associated with the ongoing and accelerating warming of the climate system (Climate Change 2007). Climate change—possibly the defining issue of the new millennium—poses a significant addition to the spectrum of environmental health hazards faced by humankind. The impacts of climate on human health will not be evenly distributed around the world, with the impoverished populations of the developing world likely to be the first and hardest hit (Confalonieri et al. 2007). It will affect, in profoundly adverse ways, the basic determinants of health—air, water, food, shelter, and freedom from disease—and could vastly increase the current huge imbalance in health outcomes. The implications of climate variability for human health and security are far-reaching, effecting death and disease through heat waves, floods, droughts, and other extreme weather events. Yet, the greatest health impact may not come from such acute shocks, but from the indirect pressure on the natural, economic, and social systems that sustain health, many of which are already under stress in much of the developing world (Parry et al. 2007).

In recent years, there has been a notable rise in the supply and trade of counterfeit and substandard medicines, including useless and, in some cases, even toxic products (WHO 2006b). This is a vast and under-reported problem that particularly affects countries where regulatory and legal oversight is weakest; it is an important cause of unnecessary morbidity, mortality, and negatively impacts public confidence in medicines and the effectiveness of health programmes (Dondorp et al. 2004). The drugs most commonly counterfeited include antibiotics, anti-malarials, hormones, and steroids. Yet, increasingly, more sophisticated and deceptive practices have seen even anticancer and antiviral drugs, including those used to treat HIV/AIDS, being faked. It has been estimated that some 10–30 per cent of medicines on sale in developing countries, especially those in sub-Saharan Africa, are counterfeit (Cockburn et al. 2005). The impact of this exploitive and poorly regulated trade on health outcomes has been enormous.

Similarly, widespread and inappropriate use of antimicrobials has created high levels of drug resistance and a growing crisis in health care management. Mainstay antimicrobials are now failing at a rate that outpaces the development of replacement drugs (Heymann et al. 2001). Hospital-acquired infections with drug
resistant organisms are a serious and mounting complication of hospitalization, contributing significantly to morbidity, mortality and health care costs. Formerly curable diseases such as gonorrhea and typhoid are rapidly becoming difficult to treat, while old killers such as tuberculosis and malaria are now growing increasingly resistant to mainstay therapy (Smith & Coast 2002). Ominously, the emergence of multi-drug resistant tuberculosis, which is 100 times more expensive to treat than susceptible tuberculosis, and extensively drug-resistant tuberculosis, which is virtually impossible to treat, is jeopardizing current control and elimination efforts (Raviglione & Smith 2007). Drug resistance is a deepening and complex problem accelerated by the overuse of antibiotics in developed nations and the paradoxical underuse of quality antimicrobials in developing nations owing to poverty, trade in counterfeit medicines and a dearth of effective health care.

**Communicable diseases, crises, and epidemics**

Armed conflicts, epidemics, famine, natural disasters, and other major emergencies have a significant impact on populations and their health. Each year, one in five countries experiences a crisis, often overwhelming national capacities to mitigate and manage such emergencies. These complex humanitarian crises often arise unpredictably and cause untold suffering, population displacement and death. The dislocation of large populations creates immense public health challenges with regard to food, water, sanitation, shelter the risk of epidemics in already vulnerable groups of persons, and the provision of routine immunizations, care, and essential medicines.

New infectious diseases have been emerging at the unprecedented rate of about one a year for the past three decades, a trend that is expected to continue (Smolinski et al. 2003). The shrinking of the world by technology and economic interdependence has allowed diseases to spread with great speed. The dissemination of HIV/AIDS and SARS are just two contemporary examples.

Constant evolution is the survival mechanism of the microbial world, and these organisms are well equipped to exploit opportunities to adapt and spread. The opportunities are numerous: Through increased population movements via tourism, migration or disasters; growth in international trade in food and biological products; social and environmental changes linked with urbanization, deforestation and alterations in climate; advancement in medical procedures; and changes in animal husbandry and food production methods (Ong & Heymann 2007).

The free movement of goods, capital, and labour in an increasingly interconnected world facilitates the transnational spread of diseases and places all countries at common risk. However, the same globalizing forces that create such rampant opportunities for pathogens can also provide mechanisms for innovative, global efforts to control infectious diseases. Recognition of shared vulnerability to these diseases, and their often considerable economic consequences, has brought a strong global commitment to make their detection, reporting, control, and prevention a collaborative effort (WHO 2007b).

**Health actors and partners**

Globalization is eroding traditional distinctions between domestic and foreign affairs. The health of populations largely depends on health and welfare policies of national governments. Yet, growing internationalization, migration, and macroeconomic considerations are, to greater extents, influencing the policy space of national governments and their ability to sustain health and welfare policies for their constituencies. Increasingly, health determinants have become more multifaceted, complex and shaped by factors outside the control of the health sector.

Indeed, the framework of international health is no longer dominated by a few organizations, and now involves numerous players. Health activities are now being pursued by more than 40 bilateral donors, 26 UN agencies, 20 global and regional funds, and 90 global health initiatives (Alexander 2007). An increasing number of non-governmental, faith-based and private sector organizations are delivering care and complement the efforts of national health systems. New philanthropists have emerged, and fast-growing economies have become aid givers and international investors. Governments acting alone, or in international partnerships, have initiated programmes and made available new funding. The number of innovative funding mechanisms continues to grow, as does the size of resources they provide. In quantity, aid for health has almost tripled over 10 years and nearly doubled in the last 5 years (OECD 2007).

Public–private partnerships in the area of research are increasingly important, as they often focus on health needs otherwise neglected by market-driven forces. Academic, industrial, government and non-governmental research continue to shape the directions and use of knowledge acquisition. Industry, trade and finance are powerful drivers of research and development and a critical force in producing and distributing goods. They can also influence decisions on health policy.

In just the past 10 years, more than 100 partnerships, focused on individual diseases, have formed. In addition, the formation of public–private partnerships, often involving large donations of medicines, has marked a watershed, by bringing new actors, resources, business models and a sense of urgency to bear on neglected diseases. Partnerships focused on product access have proven remarkably effective in supplying communities with free or reduced cost, quality-assured medicines and vaccines. The Mectizan Donation Program, The Stop TB Global Drug Facility, and the Global Alliance for Vaccines and Immunization (GAVI) provide three examples.

Globally, there has been a down-sizing of government and a marked trend towards privatization of many functions formerly within the public domain. To varying degrees, many countries have experienced a shift from centrally planned and regulated to market-dominated economies.

Health care policy in most developing countries has generally emphasized the development of government-owned health services, largely financed by government tax revenues. However present, evidence indicates that private health care supply is significant and growing rapidly in many countries (Preker et al. 2007). Despite public policies promoting universal access to subsidized public services, the majority of health care contacts in developing countries are with private providers on a fee-for-service basis. Private health care is typically dominant for ambulatory treatment of illness, which in developing countries accounts for the largest share of total health care spending. It is usually less dominant for inpatient treatments and limited for preventive and public health services.

The extensive private sector activity in the health sector has seen growing public–private linkages, such as the contracting-out of
selected services or facilities, development of new purchasing arrangements, franchising and the introduction of vouchers. Selective contracting out of services to the private sector is often a component of national health policy, leveraging on these private resources in the service of the public sector and to improve the efficiency of publicly funded services (Mills et al. 2002). Contracts for primary care with private providers serve as a quick and simple solution to gaps in coverage, especially in areas where government provision is inadequate and there are private providers already practising. The private sector represents a resource that is available and used even in the poorest countries and among lower income groups (Berman 2000). For example, the majority of malaria episodes in sub-Saharan Africa are initially treated by private providers, mainly through the purchase of drugs from shops and peddlers (Goodman et al. 2007). For some diseases of high priority, e.g. malaria, tuberculosis and sexually-transmitted infections and where public infrastructure is limited, scaling up of prevention and treatment efforts in the many countries hinges on enhancing utilization of private sector services (WHO 2008a).

Challenges and gaps

Addressing discrimination, equity, and social justice

Inspection of health outcomes through an equity lens reveals that the impressive gains in health experienced in recent decades are unevenly distributed. Aggregate indicators, whether at the global, regional or national level, do not offer sufficient granularity and often hide striking variations in health outcomes between men and women, rich and poor, both across and within countries.

However, health inequities involve more than inequality in health determinants or outcomes, or in access to the resources needed to improve and maintain health. They also represent a systematic failure to address the root causes of health inequities, the social determinants of health and strategies for health and their causes (Whitehead 1992; WHO 2006a). Indigenous people, ethnic minorities, people in poor communities, people living with HIV/AIDS, people with disabilities, and migrants suffer most especially from avoidable discriminatory social, economic, and welfare policies and practices. Beyond this, many marginalized groups are also disenfranchised and voiceless in the economic and social policy-making process.

For example, the richest one-tenth of the population of Latin America and the Caribbean earn 48 per cent of total income, while the poorest tenth earn only 1.6 per cent (ECLAC 2005). This inequality in income distribution extends to unequal access to education, health, water and electricity, as well as huge disparities in voice, assets and opportunities (World Bank 2007b). In some countries of Latin America, greater than 97 per cent of the people in the highest income quintile have access to health care services as compared to less than 10 per cent in the lowest quintile. Not surprisingly, 40 per cent of child deaths in the region occur among those living in the poorest quintile whereas the highest quintile accounts for only 8 per cent (Lancet 2007). Further, the poorest quintile of the population showed 3–10 times the prevalence of stunted children than the richest quintile in nine countries (Belizean et al. 2007).

In the case of health, the disadvantaged position of women in many societies undermines their ability to protect and promote their own physical, mental and emotional health. Women’s status and empowerment—as measured by education, employment, household decision-making, intimate partner violence, and reproductive health—strongly influences their effective use of health information and services (Gill et al. 2007). Independent of related factors, educated women are more likely than are uneducated women to use antenatal care, to use trained providers and to have safe deliveries (Grown et al. 2005). Similarly, education not only results in substantial improvements in a woman’s own health as a mother, but also has positive intergenerational effects on the health and nutrition of her children and their households (Bloom et al. 2001). For a variety of reasons, health policies and programmes all too often fail to adequately address these issues around women’s autonomy but instead perpetuate gender stereotypes.

The dimensions of inequities in health are also evident in the health status and access to health services of populations. The poor availability of drugs that can significantly reduce AIDS-related mortality in regions of the world most affected by AIDS is a case in point.

It is estimated that, globally, over 33 million people are living with HIV, with more than two out of three adults and nearly 90 per cent of children infected with HIV living in sub-Saharan Africa (UNAIDS 2007). Yet, this region still accounts for over 70 per cent of the global unmet antiretroviral treatment need. Worldwide, over 2 million people living with HIV were receiving treatment in resource-poor countries, representing less than a third of the estimated 7.1 million people in need (UNAIDS 2006).

Such stark disparities in health outcomes are not unique to any one country or region. They exist, to a greater or lesser extent, within all societies of all nations. In many societies, over-consumption and under-consumption coexist with hunger and malnutrition. Great differences in life expectancy can be seen between the social classes, different occupations, ethnic groups and between the sexes in many countries, including those of highly developed economies (Marmot 2005).

Addressing governance and coordination

In recent years, there has been a unprecedented profusion of new actors, partners and sectors involved in the work and delivery of health care. In the past, few global actors possessed the political or financial authority to influence global health agendas. Today, a rich diversity of new institutions is actively reshaping global health priorities for policy and investment. These new partnerships and initiatives have added significant resources for tackling diseases of the poor and benefiting the health of large populations.

At the same time, this crowded health landscape has created a new set of challenges. The multiplicity of actors has led to an increasingly fragmented, reactive, and disparate agenda for international health (Ruger & Yach 2005). Despite efforts towards better global health partnerships, global health governance has been criticized as being too fragmented, uncoordinated, and largely donor driven. Results on the ground have been mixed; lower-income countries are growing increasingly reliant on external assistance; aid frequently does not support health systems or countries’ health priorities; and financing is unpredictable and unsynchronized among donors.

Partnerships are by their very nature, issue-specific and results focused; their interventions are not always congruous with recipient countries’ national priorities nor do they efficiently leverage national system resources. Non-aligned international aid skews national priorities of recipient countries by imposing those of donor partners. To achieve their narrow issue-specific goals, there
is often insufficient consideration of the impact of their activities on the wider health system, including distortion of local wage structures and health worker resources. The lack of harmonization across agencies has led to inefficiency and overlap in implementation; duplication in planning, project-specific monitoring and evaluation, missions and financial management, and parallel systems for health service delivery (e.g. drug procurement and distribution). This increases significantly the transaction costs of these ventures and jeopardizes sustainable health gains.

Historically, the locus of health governance has been at the national and subnational level as governments of individual countries have undertaken primary responsibility for the health of their domestic populations. However, a range of health determinants are increasingly affected by factors outside the remit of the health sector—trade and investment flows, conflict, illicit and criminal activity, environmental change, and communication technologies (Dodgson et al. 2002).

Similarly, the health of individuals suffers or benefits not just from the impact of their domestic environment or personal choices, but also from decisions made at national levels and outside their own countries. Yet, ministries of health and even nation states themselves may lack the power to effect change for health due to a range of developments: Decentralization to regional and local health authorities, decisions set by donors or by lending institutions, rules set by international agreements and regimes, and of course the wider forces of globalization.

Globalization has in many ways eroded the boundary between the determinants of public and individual health, and made health a global public good. Many public health goods can no longer be achieved through domestic policy action alone and depend on international cooperation. This has arisen from the international transfer of risk, intensification of cross-border flows of people, goods, services, and ideas, and the increasing threat to common resources. Policy-making is largely organized on a country-by-country basis and there is no international equivalent of the state. As a result, global public goods are increasingly underprovided for and global public bads are increasingly overprovided.

This blurring of health and jurisdictional frontiers is most obvious in the case of communicable disease transmission and the spread of non-communicable disease risk factors.

For example, susceptibility to tobacco-related diseases, once strongly linked to, and blamed on the lifestyle choices of individuals, is also increasingly being attributable to a variety of complex factors with cross-border effects, including trade liberalization, direct foreign investment, global marketing, transnational tobacco advertising, and the international movement of contraband and counterfeit cigarettes (Chen et al. 1999; Betcher et al. 2000). In response to this globalization of the tobacco epidemic, the WHO Framework Convention on Tobacco Control (FCTC) (WHO 2003a) was developed to provide both demand- and supply-side strategies for curbing global tobacco consumption. This includes restrictions on tobacco advertising, sponsorship and promotion; raising prices through tax increases; as well as strengthening legislation to clamp down on tobacco smuggling.

The issue of antimicrobial resistance is also illustrative. It is a global problem that must be addressed in all countries as no single nation, however effective it is at containing resistance within its borders, can protect itself from the importation of resistant pathogens through travel and trade. Poor prescribing practices in any country now threaten to undermine the potency of vital antimicrobials everywhere.

**Gaps in health services**

Health is the final common pathway, contingent on the good functioning of many other processes and sectors. In many cases, the power of global health interventions is not matched by the power of health systems to deliver them to those in greatest need, on an adequate scale or in time. Many low-income countries are facing a double crisis of devastating disease and failing health systems.

There is growing awareness in international health groups that weak national health systems limit the gains and opportunities that can be made in many areas of health, including the health MDGs. Chronic under-investments have led to fragile and fragmented health systems that are especially lacking capabilities in key areas such as health financing, information systems, health workforce, and drug supply.

There has been an implicit assumption that through the implementation of narrow disease-specific interventions, broader health systems will be strengthened more generally. Yet, the evidence of benefit for these selective initiatives on national health system capacities has been mixed. Already weak systems may be further compromised by the over-concentration of resources in specific ‘vertical’ programmes, leaving many other areas further under-resourced. The establishment of many selective and disease-specific initiatives within countries have resulted in competing and overlapping subsystems within the broader health care system. This can lead to duplication of overheads, distortions of local salary and work norms, service disruptions in existing programmes, and distraction from core work activities (Travis et al. 2004).

Further, many groups and communities still do not have access to essential public health interventions even when these are known to be cost effective. This is largely due to inadequate allocation of resources to health and disproportionate allocation to curative and high technology services in urban settings. Also, the funds that are committed often do not benefit those who need them most, and remain underutilized. Equitable health systems need financing mechanisms which remove the barriers to health care, specially those confronting disadvantaged groups. Gaps in implementation include, in some cases, too much emphasis on pilot projects and islands of excellence, with inadequate plans and health system capacity to scale up (WHO 2006c).

**The role of the private sector**

New challenges have emerged with the commoditization of health care and the often unregulated delivery of health care in the nongovernment health sector. Private health care is expanding rapidly and is acknowledged as an important and often well-resourced provider of health care services in many countries. Yet, this important component of the health care system has received little policy attention. Increasingly, experience with the private sector has indicated a number of problems with the quality, price and distribution of private health services. This has led to a growing focus on the critical role of government in regulation and the orientation of the private sector with public health goals.

The effectiveness of private services is often very low. Poor treatment practices have been reported for diseases such as tuberculosis (Uplekar et al. 2001) and sexually transmitted infections (Chalker et al. 2000), with implications not only for the individuals treated
but also for disease transmission and the development of drug resistance. For example, to improve affordability, partial doses of drugs may be sold as private services are priced to the purchasing power of the client. In Sierra Leone, for example, the price of purchased drugs was almost a third of the cost of treatment at a public health centre (Fabricant et al. 1999). The rise of chronic diseases in the developing world, often bringing with it a life-long need for medication, is expected to compound this problem considerably.

The use of the more expensive private services, or treatment for chronic conditions, can result in households being unable to afford other vital requirements or being driven into poverty through greater out of pocket expenditure. Moreover, rapidly growing private services compete with the public sector for trained human resources, further weakening public services (Mills et al. 2002).

**A crisis in human resources for health**

Human resources have been described as ‘the heart of the health system in any country’ (WHO 2006d). Yet, many national health systems are in crisis, with the shortage of workers severely compromising the delivery of essential health services and interventions. Abundant evidence demonstrates that progress in health in the poorest countries will not be possible without strong national health systems for which the work force is essential. The work force determines health outputs and outcomes and drives health systems performance.

Uneven distribution deprives many groups of access to life-saving services, a problem compounded by accelerating migration in open labour markets that draw skilled workers away from the poorest communities and countries. Health workers are leaving poorer areas for wealthier ones, and often leaving the country. This is particularly invested in their training to take up jobs abroad. Shockingly, for every Liberian physician working in Liberia, about two live abroad in developed countries; similarly for every Gambian professional working in the Gambia, likewise about two live in a developed country overseas (Clemens & Pettersson 2008).

Many health services are consequently jeopardized by this trend, including childhood immunization, care during pregnancy and childbirth, and access to treatment for HIV/AIDS, tuberculosis, and malaria. The inadequacy of human resources for health significantly correlates with poorer maternal mortality, infant mortality, under five mortality rates (Anand & Barnighausen 2004), and childhood vaccination coverage (Anand & Barnighausen 2007). As the number of health workers declines, survival declines proportionately. Unless the workforce crisis is addressed, neither priority disease initiatives, including those aimed at achieving the health-related MDGs, nor health systems strengthening can succeed.

Sub-Saharan Africa faces the greatest crisis: This part of the world accounts for 11 per cent of the global population and 24 per cent of the global burden of disease, but has only 3 per cent of the world’s health workforce (WHO 2006d). Shortages are widespread, with a gap of more than 1 million health workers estimated for Africa alone. Globally, WHO estimates that more than 4 million more health workers are required to achieve the health-related MDGs and has identified 57 countries with critical shortages of health workers—36 of these countries are in Africa.

The causes of these shortages are manifold. There is a limited production capacity in many developing countries as a result of years of underinvestment in health education institutions. Decades of economic and sectoral reform capped expenditures, froze recruitment and salaries, and restricted public budgets, depleting working environments of basic supplies, drugs, and facilities (Narasimhan et al. 2004). Moreover, the training output is poorly aligned with the health needs of the population. There are also ‘push’ and ‘pull’ factors that encourage health workers to leave their workplaces, mainly related to unsatisfactory working conditions, low salaries, political instability and poor career opportunities. Surveys among health workers intending to migrate or already migrated consistently cite issues of remuneration and living conditions as primary reasons for their departure (Vujicic et al. 2004). Other factors contributing to the shortage of health workers include growth of the global population as training of health workers stagnates, the rise in chronic diseases, and the ageing of populations, which increases the need for long-term care. The devastation of HIV/AIDS is also a major force assailing health workers in the hardest hit societies of sub-Saharan Africa, Asia, the Americas, and eastern Europe; it is a triple threat that is increasing workloads on health workers, exposing them to infection, and stressing their morale (Joint Learning Initiative 2004).

Undoubtedly, health workers have a clear human right to migrate in search of a better life. Yet, people in source countries hard hit by an exodus of health workers also have the right to health in their own countries, and to see a return on their considerable investments in education and training (Robinson & Clark 2008). The space between these two fundamental rights is the arena where a clear global framework for response and cooperation is needed. It will require working in partnership and across sectors in both source and recipient countries, to implement and monitor effective strategies to develop a well-performing health workforce (Global Health Workforce Alliance 2008).

**Gaps in knowledge**

There is growing recognition that research is critical in the fight against disease. Knowledge contributes to the policies, activities, and performance of health systems, and to the improvement of individuals’ and populations’ health.

However, gaps in research and the dissemination of knowledge and health information are growing ever more acute. International research efforts are poorly coordinated and fragmented. Spending on health research, when viewed from a global perspective, is grossly skewed and under-funded. The landmark findings of the Commission on Health Research for Development (1990) almost two decades ago, highlighted the discrepancy in research funding and priorities—that only 5 per cent of the total global research funds were spent on research addressing the problems of developing countries whose citizens bore greater than 90 per cent of the global burden of preventable conditions affecting health. The magnitude of this discrepancy is an issue of continuing concern (Global Forum for Health Research 2007).

Despite impressive advances in science, technology, and medicine, society has failed to allocate sufficient resources to fight the diseases that particularly affect the poor. There is a dearth of research and development into neglected diseases such as African trypanosomiasis, lymphatic filariasis, schistosomiasis, and Chagas disease, which account for a high burden of disease in disability-adjusted life years. Sex-disaggregated data is important for developing effective and gender-sensitive health services and policies, yet these data are seldom collected. Lack of access to information
through modern communications technology in poor parts of the world is hampering the wider dissemination of best practices in diverse fields such as hygiene, injury prevention, tobacco and substance abuse.

The limited resources available can fund only a fraction of the promising research opportunities. Hence, prioritization is essential for health research in order to focus on areas of greatest need. Yet, the degree to which research funding should reflect the burden of disease has been the subject of extensive debate. Even where there is agreement on existing or new research priorities, the best way of financing the discovery, production and delivery of these pubic goods for health, and making them affordable by poor countries, is seldom clear.

**Prescription for the new millennium**

**An agenda for health**

As can be appreciated from the above discussion, the world is falling short in winning sustainable and equitable improvements for health. Aggregate global health indicators have improved substantially since the middle of the past century, but gross health inequalities persist. Indeed, the gaps are widening between the world’s poorest people and those better placed to benefit from economic development and public health progress. This trend takes place within an evolving global health landscape characterized by a complex and challenging mixture of old and new health problems and greater pluralism in health actors, funding resources and opportunities.

An analysis of the past provides a starting point for defining an agenda for the future. From the gaps thus examined and our understanding of current key challenges and shortfalls in response, it is evident that greater global commitment and solidarity are needed to forge greater health gains. Lasting health progress, including attainment of the health-related MDGs, depends on strong political will, supported by sound, integrated and evidence-based policies and broad participation from actors both within and outside the health sector.

Global efforts to improve health are inseparable from medical science, but social, economic, environmental and political factors also determine health opportunities and outcomes. Although trends in some major determinants of health, such as demographic changes, are relatively predictable, many are not (WHO 2006c). Progress in public health is rarely linear. Health emergencies—whether climatic, seismic, or infectious in nature—illustrate how quickly situations can change and how precarious health can be. The fragility of health gains has repeatedly been shown in response, for example, to economic and social changes and civil disruption. As such, any global public health agenda has to plan for inherent unpredictability and volatility in the health of populations and societies.

The following outline of a global health agenda identifies seven priority areas. The broad agenda borrows from the eleventh general programme of work of the WHO, which was endorsed and adopted by its 193 Member States at the World Health Assembly in May 2006. It serves as a strategic framework and direction for the future work of the Organization and all it Member States in the new millennium. Of the seven areas, the first three frame the fundamental principles and concepts underlyng health advancement: Investing in health to reduce poverty; building individual and global health security; and promoting universal coverage, gender equality and health-related human rights. The remaining four items focus on more strategic and explicit areas of endeavour: Tackling the determinants of health; strengthening health systems and equitable access; harnessing knowledge, science and technology; and strengthening governance, leadership, and accountability.

**Establishing the role of health in development and poverty reduction**

Elimination of poverty and extreme hunger is foremost among the MDGs. For the poor with few possessions, health is their main, if not their only, asset—if they do not have even that, they have nothing. For many of these people, being healthy means the possibility to work, earn a living and support their families. When the health of the main earner in poor families is compromised, the implications for economically dependent family members, particularly children, are particularly severe. By definition, poor people have few reserves and may be forced to sell what assets they have, including land and livestock, or borrow at high interest rates, to deal with the immediate crisis precipitated by illness. Each option leaves them more vulnerable, less able to recover, and in greater danger of moving down the poverty spiral (Braveman & Gruskin 2003). Poor people are thus caught in a vicious circle: Poverty breeds ill-health, ill-health maintains poverty.

Yet, the escape from poverty rests on more than just one pillar. Having a population that is healthy and educated enough to participate in the global economy is as important as enlightened economic reform. At the international level, priorities for improving public health are clear: Focus on health problems and diseases that affect the poor disproportionately. Health gains require directing programme benefits towards the poor and increasing the quality and availability of health services, especially where they are most scarce (World Bank 2007b).

Good health enables individuals to be active agents of change in the development process, both within and outside the health sector. The provision of health services is no longer viewed merely as a consumer of resources and an onerous obligation of governments. Health is also a producer of economic gains and integral to development in a broader sense. Beyond raising living standards through economic growth, health and development improve human capital through empowerment and enhancement of individual agency (Sen & Sen 1999). As such, health and poverty alleviation hold a prominent place in debates on priorities for development. Countries, at all levels of development, are realizing the need for sustained, equitable increases in health investment as a contribution to prosperity and social stability.

Our understanding of poverty has broadened from a narrow focus on income and consumption. Poverty is now known to encompass many other dimensions—lack of education, inadequate housing, social exclusion, unemployment, and environmental degradation. Each of these elements diminishes opportunity, limits choices and threatens health. Thus, poverty encompasses not just low income, but also lack of access to services, resources and skills; vulnerability; insecurity and powerlessness.

Poor countries, and poor people within countries, suffer from a multiplicity of deprivations that translate into high levels of ill-health. These wide differences in health status are considered unfair, or inequitable, because they correspond to differing societal,
cultural, and system-wide constraints and opportunities. Further, these differences lie largely beyond the choice of the individual (Wagstaff 2002). Poverty-oriented health strategies require complementary policies in other sectors (WHO 2003b). These include improving access to education, enhancing the position of women and other marginalized groups, shaping development policies in agriculture and rural development, and promoting open and participatory governance.

Multidimensional poverty is a potent determinant of health risks, health seeking behaviour, health care access and health outcomes. Economic indicators focusing primarily on income alone offer a limited assessment of poverty, and a limited platform for attacking poverty. In contrast, health indicators provide a greater measure of the multi-faceted nature of poverty. For this reason health should be a key measure of the success or failure of development and of poverty reduction policies during this century (Haines et al. 2000).

Government expenditures on health are often designed to give everyone equal access to health care. Yet, in practice, equal access is usually elusive. Health improvements have not been shared equally and health inequalities among and within countries remain entrenched. Publicly financed health care fails to reach the poor in almost all developing countries. Most research conducted in developing countries in the last 20 years has confirmed that publicly financed health care benefits the well-off more than the poor (Devarajan 2003). If access to health services were distributed according to need, the poor would come first. However, in many cases, the ‘inverse care law’ unduly prevails and, as a result, the availability of good medical care tends to vary inversely with the need for it in the population served (Tudor Hart 1971).

Health services can fail poor people in many ways by lack access, in quantity, in quality, and in cost. The striking differences in health status among different economic groups reflect inequities in access, utilization, to facilities that provide decent standards of care, and to the means to pay for good care. In most instances, the poor are less educated than the rich and lack knowledge in areas of hygiene, nutrition and good health practices. Regressive patterns of health financing force greater out-of-pocket expenditure, and exacerbate poverty and ill health. For example, poor people often delay health care until a problem is advanced, more difficult or impossible to treat, and much more costly. This well-documented tendency becomes more of a problem with the rise of chronic diseases in low- and middle-income countries, as it jeopardizes early preventive and protective care.

If policy-makers want health to reduce poverty, they cannot allow the costs of health care to drive impoverished households even deeper into poverty. As noted above, the provision of effective and accessible health services helps protect the poor from spiralling into worsening economic problems. To achieve this, propagation of more equitable socioeconomic policies is paramount. Programmes can address barriers to health for the poor in many ways: Through better education and health promotion, better targeting of services to specific groups, improvements in quality of care, incentives for health providers, and financing mechanisms that make care affordable to those most in need (Mundial 2005). Fair health financing schemes promote the alignment of contribution with the ability to pay, and the use of services with the degree of need. An emphasis on prepayment for health care through taxes or insurance, with contribution tied to an individual’s disbursement capacity, goes far in supporting the poor. The emphasis in conditional cash transfer programmes, such as those in Brazil and Mexico, on channelling resources through female household members, shows the importance policy places on supporting their role in protecting children’s development and promoting family health (Marmot 2007).

Since demand for health care by poor people is price sensitive, any reduction in the price charged to the user will induce an increase in demand. Yet, access to ostensibly free health care is, for most users, far from free (Gwatkin et al. 2004). Indeed, use of this entitlement has associated participation costs, such as transportation, food expenditure, and loss of time. Ensuring that the poor access and participate in health services may therefore necessitate the employment of various schemes to reduce participation costs. Examples include the use of vouchers, fee waivers, social health insurance and reimbursement for transport and food.

In addition to supply-driven pro-poor schemes, several complementary approaches are being explored. These focus on creating an effective demand and pressure for relevant health services on the part of the poor, to offset the influence of better-off groups that traditionally shape priorities and programmes. Individuals should have the opportunity to participate in political and social decisions about public policies that affect them (Ruger 2003). This strengthens agency, a process that is central to the sustainability of effective health systems and the achievement of broader development goals; it also provides a foundation for cohesive societies. Participation and enablement allow people to hold service providers accountable, both directly and indirectly, through access to feedback to policy-makers. Community-based programmes that involve beneficiaries in aspects of programme design, implementation and evaluation can achieve better health outcomes through empowerment and creating a greater sense of ownership. The recently introduced approach of community-led total sanitation, which offers no subsidies but relies on communities to make sanitation a priority and devise local solutions, provides a good example of the potential for rapid, community-wide, and sustainable results (Kar & Bongartz 2006).

In addition, models of social protection have been put forward to lessen the vulnerability of the poor to adverse health crises and catastrophic expenses. An array of social safety nets, social assistance programmes such as cash transfers, food-subsidy programmes, public works, and microfinancing schemes can be used to ameliorate adverse shocks and alleviate poverty. Such schemes, which can enhance social security, need to be targeted to reach poor and vulnerable populations.

Good policies and investments in health are not, in themselves, sufficient to ensure growth and poverty reduction. Institutions and governance are additional key determinants. Efforts to improve governance may aim to increase political accountability, strengthen civil society participation, create a competitive private sector, impose institutional restraints on power or improve public sector management. The role of government in all these processes is critical. Poverty reduction strategies, where they exist, also place national governments in a central role, making them responsible for the cross-sectoral implementation of policies specifically designed to tackle the causes and consequences of poverty in their country.

**Promoting universal coverage, gender equity, and health-related human rights**

Effective public health action needs an ethical position as well as technical competence. To shape a healthier future, public health
must be clear about its values, as well as its scientific principles. As enshrined in the WHO constitution and many international instruments of law, the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being. Appreciation of this defining value underscores all efforts to provide good health for all. The foundation for realizing physical, mental and social well-being is inextricably linked to the protection and fulfillment of human rights. For example, the violation or neglect of human rights, as expressed by torture or violence against women, can lead to ill-health. Conversely, the fulfillment of human rights can reduce a person’s vulnerability to ill-health (Mann et al. 1999).

The progressive realization of rights to health requires action and policies that make appropriate and affordable health care accessible to those in greatest need in the shortest possible time. The underlying determinants of health also need to be addressed: Access to safe and potable water, adequate sanitation, safe and nutritious food, and housing; healthy occupational and environment conditions; and access to health education and information, also in the area of sexual and reproductive health.

Health and development outcomes are greatly enhanced by employing human rights as an integral dimension in the design, implementation, monitoring and evaluation of health-related policies and programmes. Through this approach, substantive rights-based elements such as attention to vulnerable groups, safeguarding dignity, equality and freedom from discrimination, employing a gender perspective and ensuring accessible health systems, can be considered and addressed.

A pressing problem in many countries is the deficiency in access by poor and marginalized groups to essential health services. A commitment to universal coverage embraces the principle of fair distribution of opportunities for rectifying based on people’s needs, rather than their social privileges. It implies equitable health systems characterized by accessibility, affordability, quality and acceptability, and prioritized towards the needs of the marginalized and vulnerable population groups—children, women, indigenous and tribal populations; ethnic, religious and national minorities; immigrants, persons with disabilities and people living with HIV/AIDS. Indeed, some low-income countries with policies that emphasize equitable access to essential care have achieved greater life expectancies than wealthy countries with no such policy objectives. These better health outcomes are achieved when equitable access to care is, at the outset, a categorical and unambiguous objective of policy-makers.

Inequities in health occur along several axes of social stratification, including sex, race, ethnic group, language, educational level, occupation, and residence. Whole classes of people whose health is compromised by economic or social disadvantages are beset by many other problems that make their lives miserable; yet their health plight is often invisible to policy-makers and poorly captured in statistics. To better unmask these variations in health, the employment of disaggregated health data that go beyond gross health statistics and national averages allows for a more profound appreciation of inter-group disparities. Such data go far in informing the redistribution of social and economic resources to those in greatest need and in bringing evidence to bear on political choices in health. Further, mitigation of these health inequities serves the dual goals of equity and efficiency for health services.

A rights-based approach to health also recognizes the need for empowerment and participation. All groups, including the vulnerable and marginalized, have the right to participate in the design, implementation and monitoring of health policies, programmes and legislation that can affect their health. However, a characteristic common to marginalized groups is their lack of power to influence their political, social and economic conditions. Thus, to be effective and sustainable, interventions that aim to redress inequities must typically go beyond remedying a particular health inequity. The broader aim is to help empower the target group through systemic changes, such as legislative reform or changes in economic or social relationships, and the reduction of stigma and discrimination.

In recent decades, great strides have been made in the health of women. Yet, in most societies, disadvantages for women persist. Women’s health is compromised by the disproportionate prevalence among them of poverty, few prospects of employment beyond the home, the indignities of violence and rape, limited influence on their sexual and reproductive lives and limited power to influence decisions. Goal 3 of the MDGs—to achieve gender equality and empower women—seeks specifically to rectify those disadvantages through policies and programmes that build women’s capabilities, improve their access to economic and political opportunities, and guarantee their safety. Complementary health interventions, such as expanding access to sexual and reproductive health care, health information and education, are also needed to ensure substantial improvements in women’s health. Moreover, policies and programmes designed with a gender perspective must explicitly aim to rectify inequities and disadvantages faced by women. Ample evidence demonstrates that when women are given opportunities to develop their potential, health indicators for families and communities rapidly improve. As noted in the Millennium Declaration, the empowerment of women is an effective way to combat poverty, hunger and disease and to stimulate development that is truly sustainable.

Many countries are working to expand coverage of essential health services by renewing their systems of primary health care, an approach that is again being strongly supported by WHO. A commitment to the values, principles and approaches of primary health care encourages a focus on vulnerable and marginalized populations, promotes population-based and personal care services, emphasizes prevention as well as cure, and strengthens the referral system. It also encourages intersectoral action to address the root causes of ill health and helps orient the private sector to public health goals (WHO 2006c).

**Building individual and global health security**

In recent years, health has been conceptualized as a security issue, both in terms of individual and community health security, expressed as access to the fundamental prerequisites for health, and global health security. Global health security seeks protection from risks and dangers to health that arise from the ways in which nations and their populations interact at the international level.

At the international level, the relationship between health and security faces many new challenges (and opportunities) in an increasingly globalized world characterized by unprecedented speed and volume of international travel, the interdependence of businesses and financial markets, and the interconnectedness brought on by the revolutions in information technology.
Acute threats to human health posed by conflicts, disease outbreaks, natural disasters and zoonoses have become a larger menace in a globalized society. The 2003 outbreak of severe acute respiratory syndrome (SARS)—the first severe new disease of the twenty-first century—demonstrated how much the world has changed in terms of its vulnerability to emerging diseases. SARS spread rapidly along the routes of international air travel and caused enormous economic losses and social disruption well beyond the outbreak zones. As the emergence of diseases is tied to fundamental changes in the way humanity inhabits the planet, more new diseases can be anticipated as this century progresses. In particular, the behaviour of emerging and epidemic-prone diseases has made all nations acutely aware of their shared vulnerability and their shared responsibility for mutual self-protection. Global public health security is thus both a collective aspiration and a mutual responsibility (WHO 2007d).

Public health emergencies throw into sharp relief the strengths and weaknesses of infrastructures designed to protect the public on a daily basis. To ensure global health security, two interrelated strategies are required: A significant strengthening of public health within both developed and developing countries and the establishment of mechanisms that facilitate the collaborative action of countries. The Global Outbreak Alert and Response Network (GOARN), which proved instrumental in the response to SARS, is one such mechanism. The revised International Health Regulations are another. These regulations, which came into force in 2007, are designed to minimize the international consequences of public health emergencies. For those caused by emerging and epidemic-prone diseases, the regulations follow a proactive approach to risk management that aims to stop an outbreak at source, before it has an opportunity to spread internationally. To do so, the regulations further recognize that all countries must possess a set of core capacities for outbreak surveillance and detection, laboratory diagnosis, and response. Meeting these core requirements, as set out in the regulations, would greatly strengthen collective global health security. Unfortunately, the necessary systems and infrastructures in many countries are lacking, making greater investment in capacity building an urgent priority.

The effectiveness of many collective agreements, including the International Health Regulations, depends on transparency and cooperation between national governments and the larger international community. Accordingly, the open and timely sharing of essential health information and knowledge is a central obligation under the revised Regulations that must be honoured by all countries as a prerequisite for collective security. In addition, given the multidimensional challenges to health security, governments must also foster greater cooperation between different sectors and stakeholders. For example, the engagement of sectors such as health, agriculture, trade and tourism is a key element in preparedness plans for a future influenza pandemic.

While conflicts and natural disasters are localized events, they can also take on international dimensions. During such events, routine health services are frequently disrupted; the health consequences can be compounded by breakdowns in water supply and sanitation or interruptions in the supply of essential medicines and equipment. The risk of epidemics increases dramatically when people are crowded together in temporary shelters. Most natural disasters and long-term conflicts will require assistance and cooperation from the international community. Ensuring the capacity for such swift global response reduces avoidable loss of lives and mitigates suffering.

At the level of the individual and the community, more proximal determinants, such as access to food, water, and shelter, healthy environments, and protection from violence, especially for women, are the focus of security concerns. Broader issues in human security, such as education, gender equality, poverty and globalization have consequential effects on health and require the continued action of governments in framing more equitable development and international policies. Climate change is a further contemporary challenge to collective security (CNA Corporation 2007) and demands urgent attention. Numerous adverse effects on health are projected. While the warming of the planet is expected to be gradual, the effects of extreme weather events—more storms, floods, heat waves, and droughts—will be abrupt and acutely felt. Both trends can have profoundly adverse effects on health. WHO has focused attention on five main health consequences of climate change: (1) Increases in malnutrition and in the severity of childhood infectious diseases; (2) increases in death, disease and injury due to extreme weather events; (3) increases in episodes of diarrhoeal disease; (4) increases in the frequency of cardiorespiratory diseases; and (5) altered distribution of vectors responsible for infectious diseases, most notably malaria and dengue (WHO 2008b). To address these challenges, Member States have called on WHO to promote research and pilot projects aimed at health protection, especially in vulnerable countries. While climate change is a global phenomenon, scientists predict that developing countries, especially in sub-Saharan Africa, will experience the earliest and most intense frequencies, also for health.

Health systems strengthening and ensuring equitable access

Appropriately constituted and managed health systems provide a vehicle to improve people’s lives, protecting them from the vulnerability of sickness, generating a sense of security, and building social cohesion within society; they can ensure that all groups benefit from socioeconomic development and they can generate the political support needed to sustain them.

Patterns of disease, care and treatment are not static. Health systems have to cope with a spectrum of competing health changes and challenges. Their capacity to respond is similarly impacted by many factors operating at different levels. On a more local level, services and programmes are challenged by the availability of resources, both financial and human, as well as government policies in relation to decentralization and the role of the private sector and civil society. With increasing globalization, issues such as migration, transnational spread of disease, and trade, including obligations under international treaties, are constraining the policy and fiscal space of national governments. In the face of multiple objectives and limited resources, governments have to reconcile the competing demands for access and efficiency against those of ensuring affordability and quality. Strategies for strengthening the health sector also need to be linked to broader processes of national development planning, such as civil service reform, public expenditure reviews and reform, decentralization, and poverty-reduction strategies.

As can be appreciated, strengthening health system performance is a wide-ranging subject, requiring action on many levels and management fronts. Given the contextual complexity, there is no
one blueprint or single set of best practices that can be put forward as a model for improved performance. Yet, health systems across countries share commonalities in function, services and objectives; they also share some common experiences and face some similar difficulties. By addressing these challenges through a collaborative, coordinated way, driven by desired health outcomes, sustainable system-wide benefits can be achieved. To be most effective, this process must be country-led and based on priorities set out in comprehensive national health plans. It requires attention to the various functions of the health system to achieve the objectives of: Improved health and health equity through accessible, affordable, quality services to all who need them, greater social and financial risk protection, improved efficiency and responsiveness to health needs, and greater patient safety (WHO 2006c).

Strengthening health systems means addressing key constraints related to health worker staffing, governance, infrastructure, health commodities, logistics, tracking progress, and effective financing. Stronger leadership and governance helps ensure good oversight, accountability, attention to regulation and coalition building both within and outside the national health sector. Stewardship in government seeks innovative engagement with civil society and the private sector and to orient programmes and resources towards public health goals. Communities and individuals must be actively engaged to participate in the decision-making process of policies that affect their health. Policy-making needs to be more collaborative, better coordinated and better informed. A well-functioning health information system contributes to this by the generation, analysis and dissemination of timely and critical information on health determinants, status, and performance. Building up managerial skills at all levels and accommodating reform is critically important, as is the delivery of primary health care.

The contributions of primary health care to improvements in many aspects of work and life, and individual health are well documented (Marmot et al. 2005). Evidence demonstrates that health systems oriented towards primary health care—with its underpinning values of universal access, equity, community participation, and intersectoral action—produce better outcomes, at lower costs, and with higher user satisfaction (Doherty & Govender 2004). Its emphasis on health promotion, continuity of care across levels of care and over the life course, use of appropriate technology and care that is ‘close-to-client’ is central to health policies in many countries. Equally important, especially as a contribution to efficiency, is the provision of as much care as possible at the first point of contact effectively supported by secondary level facilities through a fully functioning referral processes. Large gains in health outcomes have been seen in countries with a strong political commitment to aligning their health system to the principles of primary health care. Such an approach is relevant to both developing and developed countries alike.

The health workforce is central to managing and delivering health services in all countries. The effectiveness of health systems and the quality of the health services depend on a well-functioning workforce that is responsive, motivated and skilled. Yet, the current crisis of human resources, including shortages and mal-distribution, is jeopardizing the delivery of services in all countries, especially those in sub-Saharan Africa. This shortfall is aggravated by skewed distribution geographically between urban and rural areas and between the private and public sector. To address this crisis, governments must exercise leadership in developing holistic national strategic policies for workforce development, based on sound evidence and participatory feedback. Increased investments to improve performance and productivity are also essential through compensation adjustments, incentives, education, and the provision of safer working conditions. National and international efforts need to be aligned to address the issues of ethical hiring of health workers trained abroad and the negotiation of policies that shape migration and international labour markets (WHO 2006d).

To achieve sustainable funds for health and social protection, regressive patterns of financing need to be addressed. Reducing reliance on out-of-pocket payments where they are high, and by moving towards prepayment systems based on pooling of financial risk across population groups should be encouraged. Additionally, where needed, social protection schemes should be supported to ensure the poor and other vulnerable groups have access to services based on need, while ensuring that health care costs do not lead to financial catastrophe.

**Tackling the determinants of health and promoting intersectoral participation**

Modern concepts of health recognize that underlying conditions establish the foundation for realizing physical, mental, and social well-being. Health is a consequence of multiple interacting determinants operating in dynamic biological, behavioural, social, and economic contexts that change as a person develops. Health risks are created and maintained by social systems; the magnitude of those risks is largely a function of socioeconomic disparities and psychosocial gradients. Some social circumstances that affect health relate to social determinants, but other multidimensional disadvantages such as education, gender, poverty, discrimination, and health inequity. Beyond these, exposure risks such as working environments, living conditions, unsafe sex and the availability of food and water also contribute to health risks. Wider economic, political and environmental determinants include urbanization, intellectual property rights, trade and subsidies, globalization, air pollution, and climate change.

Accordingly, any effort to reduce health disparities cannot be confined to the provision of better access to care and resources alone but must also go beyond to address the underlying determinants. Such an approach supports the advancement of global health equity. Acting on the structural conditions in society affecting health offers a better hope for sustainable and equitable outcomes in health beyond just medical or social interventions alone. As a framework for this, a strategy of health promotion is needed that enables the fulfilment of health through the creation of supportive environments, healthy public policies, access to information, life skills and opportunities for making healthy choices (Charter 1986). Such policy options are expected to increase after the Commission on Social Determinants of Health publishes its findings (Marmot 2005). The work of the Commission will be instrumental for rendering the problem of health inequity real and actionable by institutional authorities and policy practitioners.

Given their aetiology, many of the attributable causes of chronic disease lend themselves to prevention or control. Physical inactivity, improper diets, tobacco use, and excessive alcohol consumption represent major modifiable risk factors. These factors are now recognized as being amenable to alleviation throughout life, even into old age. Just as the risk occurs at all ages, so all ages are part of the continuum of opportunity for prevention. This can be best applied through a life-course approach that includes maternal health, exclusive breastfeeding for six months, health promotion in schools,
and in the work-place, sex education, a healthy diet, and regular physical activity from childhood into old age (WHO 2006c).

However, against a backdrop of globalization and changing health risks, the advocacy for change in individual behaviour alone is insufficient by itself. In many instances, the individual and even the health sector have little or no control over many of the powerful influences on health; many of these issues lie within the ambit of governments and commercial responsibilities. Action on these determinants requires the collaborative engagement of multiple stakeholders across many levels—from communities to governments, local to international and private to non-governmental. Cooperation and advocacy must necessarily push the boundaries of public health action to overcome such structural factors.

Governments, and ministries of health in particular, must play a leading role in intersectoral action to secure better public health policies and achieve some control over the transnational forces that affect the health of their populations. The widespread influence of globalization has increased the need for new frameworks of international collaboration, including conventional international law, to address and formulate policy responses to emerging opportunities for and threats to global health (Taylor 2002). International organizations, such as the WHO, play a pivotal role in contributing to the coherent development of greater global dialogue, building effective partnerships, and stimulating effective governmental and intergovernmental action on public health issues.

Multilateral collective strategies, especially the development of international standards and instruments, are central for protecting and promoting public health. Increasingly, international health legislation is proving an important tool for creating global health covenants in promoting cooperative action against shared health challenges. Agreements such as the revised International Health Regulations (2005) have demonstrated the power of multinational cooperative arrangements to protect against the transnational spread of disease and pathogens. In the same way, governments must move to strengthen corresponding national regulatory and enforcement frameworks and capacities to support and advance many of these same themes.

Health damaging behaviours in particular, such as the use of tobacco, poor diet and sedentary lifestyles, have proven amenable to such collective action. On an international level, a strong model of cooperation and intersectoral action is provided by the WHO Framework Convention on Tobacco Control, an instrument that embraces a social determinants approach to tobacco control and demands broad intersectoral action on matters as diverse as trade, agriculture, education and the environment (Taylor & Bettcher 2000). Similarly, the WHO global strategy on diet, physical activity and health emphasizes community-based approaches and engagement with industry for action on the structural drivers of food availability, accessibility and acceptability at the global and national levels (Chopra et al. 2002).

Contemporary international cooperation efforts have also seen the linkage of health with other traditionally distinct but substantive issues become increasingly common. For example, the fundamental interdependence of sustainable development and health necessitates intersectoral coordination of economic, social, and environmental policies to promote population well-being. Other growing issue linkages to health have been elaborated in recent years such as the health dimensions of social justice (WHO 1993); the role of human rights (WHO 2000); and the fundamental role of human development in achieving health (WHO 2001a).

At the national level, ministries of health must exercise stewardship and advocacy to centre health in development planning and secure increased financial allocation to health in the national budget. This implies the ability to formulate strategic policy direction and clarify the roles and responsibilities of the different actors in health; clear policy priorities must be established while maintaining an overview of societal interests and reorienting policies towards pro-poor public health goals. It also implies ensuring good regulation and the tools for implementing it, and to provide the necessary intelligence on health system performance in order to ensure accountability and transparency.

Through intersectoral engagement, ministries must create a platform for coordination and consensus-building across mutually-relevant sectors—public, civil, and private. Such engagement needs to address cross-cutting issues such as civil service reform, social determinants of health, macroeconomic policy, gender equality, and health-related human rights. Where they exist, health targets must be in integrated into poverty reduction strategies, based on comprehensive and equity-based health sector investment plans.

Recent years have also seen greater expansion and commitment in external resources for health. Concomitantly, there has been an upsurge in the number of external agencies involved in the health sectors of developing countries with growing volumes of resources transferred to these health systems. Notwithstanding the beneficial impact of increased resources, recipients and donors must find greater efficiency in the aid policy process to deliver sustainable health development (Buse & Walt 1997).

In countries where there is significant health sector investment by international partners, there is an imperative to develop capacities and policies to coordinate and manage such cooperation. Substantive challenges regarding development assistance revolve around its possible distortion of country priorities, and the issues of volatile and unpredictable aid that impedes long term macroeconomic and sectoral policy formulation (WHO 2007a). In many developing countries, progress towards rationalizing the new flow and mechanisms of such aid has been limited by the lack of comprehensive national health strategies, and critical deficits in national absorptive and planning capacity.

It is recognized that for aid to become truly effective, stronger and more balanced accountability mechanisms are required at different levels. Aid is more effective when partner countries exercise ownership with strong and effective leadership over their development policies and strategies. This fundamental tenet underpins the
Paris Declaration (OECD 2005) and other multilateral initiatives that aim to increase the effectiveness of aid. To strengthen health systems, expand use and coverage of health services and help achieve the MDGs in developing countries, new initiatives such as the International Health Partnerships (IHP) have been successfully launched; an agreement between donors and developing countries, the IHP aims to put the Paris Declaration into practice in the health sector by setting out a process of mutual responsibility and accountability for the development and implementation of national health plans of developing countries (Alexander 2007). Above all, the IHP recognizes that successful and sustainable health initiatives must be country-led and country-owned.

Globalization and the liberalization of trade and services have materially transformed the capacity of governments to monitor and protect public health. As such, governments must effectively assess and respond to the risks and opportunities for population health presented by negotiated international agreements such as the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and the General Agreement on Trade in Services (Blouin et al. 2006). Governments are challenged to remain informed and engaged in a wide range of issues—covering food, insurance, occupational and environmental health conditions, pharmaceuticals, and affordable access to medicines among others—and their deeper implications for health equity and public health.

Harnessing knowledge, science, and technology

Against a backdrop of unprecedented technological and economic resources for health, the stark reality of large inequities in health status looms ever larger. Across many developing countries, the health status of populations has declined, largely as a result of HIV/AIDS, but also because of enduring poverty, an inadequate tax base in many developing countries, a resurgence in infectious diseases, and a upsurge in non-communicable diseases. Indeed the health status of populations has declined, largely as a result of insufficient research has been focused on interventions for the poor, such as treatment for neglected tropical diseases, antibiotic delivery mechanisms for children with pneumonia and access to perinatal care (WHO 2007a).

There has been considerable momentum in recent years by governments, industry, charitable foundations, and non-governmental organizations in funding initiatives to develop new products to fight diseases affecting developing countries, and to increase access to new ones. Strong advocacy must continue to sustain the political will and commitment for such initiatives, in the unprecedented opportunities for health they have created. Multilateral finance mechanisms such as the International Finance Facility for Immunization, the use of Advance Market Commitments to stimulate the development of new vaccines, the Global Fund, UNITAID, and the Global Alliance for Vaccines and Immunization provide long-term, sustainable and predictable funding needed to scale up access and reduce prices of drugs, vaccines, and diagnostics for the treatment of diseases disproportionately affecting developing countries.

The sharing of knowledge and research also serves to promote health through its effect on individual behaviour and better health practices. The dissemination of health information, especially through the use of media, on such issues as tobacco use, and sexual and reproductive health in adolescents and young adults, helps raise awareness, and enhance health promoting behaviour. Advances in the use of information and communication technology to provide health care in remote or hard to reach areas, data collection and research remains an expanding and valuable resource.

Conclusion

At the midpoint to 2015—the target year for the achievement of the MDGs at a global level—we are mindful of the significant gaps and challenges in health that still confront us. We cannot afford to fail. To attain these goals requires action on equity and the underlying social determinants that influence health. It also demands our attention to improving the performance of health systems and for better evidence in policy. The impact of our outputs will be measured by the real and qualitative improvement of the health of women and the people of Africa. Progress on these fronts necessitates unwavering political will and global participation. Only then can we hope to achieve true health for all.


