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**FUTURE SCENARIOS IN GLOBAL PUBLIC HEALTH:  
2006-2015**

## Future scenarios in global public health: 2006-2015

**This is a document of fictional scenarios designed to stimulate analytical discussion**

### INTRODUCTION

1. The global health context within which WHO operates continues to change. Significant progress has been made in some areas in recent years, but progress has been uneven. For example, in 16 countries, current levels of under-five mortality are higher than in 1990. The world faces epidemics of emerging and re-emerging diseases, while clearly identified risk factors drive the growing epidemic of noncommunicable disease. Health systems in countries all over the world are undergoing reforms, struggling to find effective and equitable ways to address the needs. Women, adolescents, and children bear the disproportionate burden of poor health because of inequalities in access to resources and health care and societal discrimination. All of this is occurring in a global context marked by insecurity, extension of local conflicts, increasing social inequalities and migration, alongside the development of new technologies and expansion of the global economy and markets.
2. Most recently, global health security has been threatened by the AIDS epidemic, as well as outbreaks of SARS and avian influenza, increasing the possibility of global pandemics on a scale not witnessed for nearly a century. In a globalized, interconnected world, such disease outbreaks can have a profound impact on the health of populations and on the economies of whole countries.
3. This interrelationship between health and development is now clearly recognized and is reflected in the centrality of health within the Millennium Development Goals. However, health is not only a prerequisite for economic and social development. It is an important goal in its own right, which is being pursued within a broad context of socioeconomic development. Non-health factors such as poverty reduction, equity, sustainable development, good governance, stewardship of the environment, human rights, and global security are actively taken into account.
4. Significant changes in international cooperation have taken place, with the emergence of global public-private partnerships, novel arrangements for health governance and financing, and increased investments in health. New mechanisms for health financing such as Poverty Reduction Strategy Papers (PRSPs), the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), and the Global Alliance for Vaccines and Immunization (GAVI), are changing the way health is resourced in many countries.
5. Responding to and helping shape the future of health will take careful foresight and planning. This planning will be influenced by past experience, but must also take into account uncertainty about the future. Limitations, uncertainties and flaws inherent in data and trends about the future impede our ability to apply precise models of the future. The development of different scenarios that incorporate trends across many disciplines, however, provides a tool to systematically consider future options.

6. The scenarios presented here represent four different views of global health over the period 2006-2015. The first assumes “status quo”, with global trends continuing on their current path; the second presents a “worst case scenario”, with a dramatic deterioration in the global situation; the third envisages substantial improvements in the global health situation through market-driven approaches; and the fourth imagines significant progress achieved through multilateral approaches to improve sustainability and equity. These scenarios are intentionally provocative. None of them are to be construed as a prediction of the future, but are intended only as an exercise to promote creative, strategic thinking.

7. These are preliminary scenarios, and could be substantially modified, based on answers to several questions. How will interactions between economics, trade and investment, the environment, health systems, disease prevention and health promotion, technology and social inequalities influence them? What are the implications for other forces shaping global health – for example, the current operations of the world’s health agencies, governments and civil society; investment choices; donor and research communities; and international and domestic policies. These scenarios and the discussion they generate will ultimately provide a backdrop for identifying and targeting key strategies for global health and the role of WHO, to be reflected in the 11th General Programme of Work 2006-2015.

### **SCENARIO 1: STEADY CHANGE TO 2015**

A world of interdependent economies and policies where rich countries support growth in poorer countries and health improves globally, though with great disparities between rich and poor

#### **The big picture**

8. Global population has reached 7200 million people by 2015. Although the world produces enough food for everyone, the availability and accessibility of nutritious food is still one of the great inequities between the haves and have-nots, with women and girls generally having less access to nutritious foods. Development aid focuses on alleviating specific conditions, with relatively little attention to their prevention.

9. Urbanization in all countries poses major problems, since urban populations are growing three times as fast as the population as a whole. Extreme population density has created ecological and socioeconomic problems in cities that had not planned for rapid population growth.

10. Political, economic, cultural and religious conflicts have kept many countries in some degree of fear for their security, and has led to increasing numbers of displaced people. An active civil society and calls by governments for multilateral approaches to address conflict has reinforced diplomatic action. This doesn’t prevent conflict, but response has become more effective and unified.

11. Despite continued conflict, globalization and regional integration continue with few restrictions. The global economy continues to grow, primarily led by high income countries and Asian markets. The economic gaps between and within the richest and poorest nations have increased further. Many people, especially increasing numbers of women, work in informal economies without protection or security. Corruption continues to be a major problem.

12. Changing climate patterns have contributed to natural disasters that immediately affect health, the environment, and social and economic infrastructures. Floods, droughts and desertification are destroying productive lands and threatening the livelihood of subsistence farmers. This has a particularly negative impact on women who are primarily responsible for producing food, providing water, firewood and care in the household.

### **A picture of health**

13. The proportion of the population aged 60 or older has increased dramatically since the beginning of the 21st century. Older people, especially women, are often neglected, therefore complicating medical conditions that could otherwise have been managed or prevented. Health care systems desperate to manage acute conditions including AIDS, malaria, tuberculosis and other infectious diseases are faced with inadequate resources to manage heart disease, cancer and diabetes. Younger generations are seeing the effects of poor diets and sedentary lifestyles in increasing rates of obesity and noncommunicable diseases. Rates of disease among both old and young disproportionately affect the poor. Young people, especially girls, are experiencing high rates of HIV/AIDS. Social violence, injuries and depression have increased along with urbanization and are becoming serious obstacles to health improvement.

14. Seasonal outbreaks of influenza have decreased in impact globally, as the coordinated public health measures established during the SARS and avian influenza outbreaks of the early part of the century have continued to be employed.

15. Tobacco use has decreased in countries party to the WHO Framework Convention on Tobacco Control. Consequently, multinational tobacco companies focused intense marketing campaigns in nations who have not ratified the Convention. Smoking rates in these countries have increased across all age and social groups, in both men and women.

16. Poliomyelitis was eradicated in 2005 through multilateral and multisectoral collaboration. This brought new energy to global child immunization campaigns. Initially immunization rates were promising. However, lack of sustained funding impeded the efforts and immunization rates returned to pre-eradication levels.

17. Although health systems have remained chronically under funded, donor support for HIV/AIDS increased as successful treatment initiatives led to longer lives for those infected. Stigmatization of people living with HIV/AIDS has decreased as testing and treatment has become more accessible. However, infection rates, especially among women, have continued to grow because harm reduction strategies such as condom use and needle exchange are still not easily accessible or acceptable and men's control over women's sexual behaviour prevents women from negotiating safe sex in many parts of the world.

18. Health sector reform has continued with incremental improvements. Inequity is still a major concern – across and within nations. Drugs and treatments are available in most places to those who can afford them, but are in limited supply and of uncertain quality for the poor. Similarly, medical innovations that hold promise for devastating childhood afflictions like malaria do not reach those who are most vulnerable. Persistent shortages of doctors, nurses and pharmacists have created delays in diagnosis and treatment. However, the scale-up effort to treat HIV/AIDS resulted in a greater number of community health workers, especially in rural areas. Communications technology has made telemedicine a reality in most parts of the world, but like other elements of the health care system, it is neither available nor accessible to the majority of people.

## SCENARIO 2: DECLINE

The world economy goes into a deep recession following a financial crisis and several natural and man-made disasters. Significantly greater disparities within and across nations result, with a diminished investment in human capital. Rates of illness and death increase, with negative trends in the health of the poor of the world more than offsetting gains in other populations.

### The big picture

19. Significantly decreased attention to population and reproductive health programmes result in a worsening status of women in much of the developing world. Many populations are facing severe water shortages. Development aid drops.

20. Migration to urban areas exceeds absorption capacity, resulting in broad unemployment, overcrowding, a growing number of street children, and the spread of infectious diseases. Economic, social and health systems are extremely stressed. Urban sprawl occurs seemingly without boundaries. Wealthier families relocate to the suburbs, becoming increasingly separated in their lifestyles from the rest of the population. Poorer city neighbourhoods become further racially and ethnically segregated within the city. Violent crime is often linked to poorer neighbourhoods, as are the poor health and low life expectancy that accompany poverty, inadequate housing, and unemployment.

21. Threats of major terrorist actions provoke greater national security concerns. National budgets, already stressed by the poor economic situation, are increasingly prioritized toward defence and domestic security. Discriminatory actions are overt in society and covert in public policy.

22. Protectionism has restricted trade, including food and agricultural products, adding to the economic and health inequities between developing and developed countries. Increased poverty has resulted in an increase in the number of women and children forced to resort to sex work to supplement household incomes.

23. Despite a decline in energy consumption, inadequate enforcement of emission standards and other environmental protection acts has led to a continued acceleration of global warming. Frequent and severe tropical storms have destroyed coastal areas in low-lying and island nations.

### A picture of health

24. Older adults, particularly in urban settings, are marginalized and viewed as having limited worth. Social security mechanisms are strained, leaving many in dire circumstances. Depression, isolation and neglect grow, and older people are often the victims of financial exploitation, robberies and personal attack. Physical and sexual violence against women is on the rise as men and youth, frustrated with their situation, are expressing their anger through violence.

25. A new, highly infectious strain of influenza develops with mortality rates of approximately 30%, and up to 60% for children, older adults and people with compromised immune systems. Inadequate funding and preparation to contain outbreaks leads to a global pandemic. Under-funded health systems have pulled resources from all other areas to fight the global pandemic. Policy makers are pressed to halt most international travel during influenza season. The cost of handling domestic

influenza places further pressure on global health aid and contributes to the deepening of the recession.

26. Non-communicable diseases remain the leading cause of illness, disability and premature death, resulting in an enormous drain of social and economic capital. Maternal, infant and under-five childhood mortality rates have all increased globally. Perinatal health care and childhood immunization programmes have been cut due to lack of funding. Poliomyelitis, apparently eradicated in 2005, has re-established itself due to lack of financing for completion of the end-game strategy.

27. Resource constraints, both national and international, have limited HIV/AIDS treatment efforts in developing countries. Sub-standard and expired drugs contribute to the spread of multi-drug resistant HIV. Prevention programmes have come under the same financial pressure and consequently have had much less impact than originally anticipated. Several Asian and African economies suffer negatively from the macroeconomic impact of the HIV/AIDS epidemic. Failure to adequately address the HIV/AIDS pandemic has led to a lack of confidence in multilateral approaches to control disease.

28. Health systems are divided in developing countries, one for those who can afford new medicines and technologies and substandard care for others. Acute need takes precedence over longer-term prevention strategies. Although the economic depression has decreased the number of health professionals moving to practice in wealthier countries, lack of domestic resources and outdated infrastructures limit the capacity of skilled professionals to deliver much beyond basic care.

### **SCENARIO 3: IMPROVED HEALTH CARE FROM A RESPONSIBLE MARKET**

Policy-makers increasingly use the market to develop equitable health care and to promote appropriate technology that benefits the economy and people, particularly the most disadvantaged. People's health improves, though some disparities remain.
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#### **The big picture**

29. Attempts to increase gender balance in education and employment and to promote gender equality between men and women in all spheres of society have slowed the rate of population growth, particularly in developing countries. Food resources are more manageable and famines have decreased in scale and duration. Women are offered food security through rights and control over land and greater access to credit and markets. Intergovernmental negotiations combined with private sector involvement in macro- and micro-delivery systems have ensured that water supplies are equitably distributed.

30. Sustainable economic growth, coupled with urban planning (including efficient transport and infrastructure development), allowed manageable growth of mega cities. Large employers, especially service industries and trade, invest in the communities where large numbers of their employees live. Public/private-funded schools that emphasize education for both boys and girls and inter-generational community centres reap immediate rewards for neighbourhoods.

31. Economic growth, security cooperation, civil society action and international diplomatic efforts lower tensions in conflict-ridden areas. Nations are benefiting from a strong global economy, and open and fair markets. This fosters multilateral relations and further reduces concerns over terrorist attacks.

32. Developing countries have become more integrated into the global economy through fair and open access to rich country markets and reduced protectionism. Increased foreign trade and investment have reduced global inequality, leading to an absolute decrease in the number of poor people and continued growth in poor countries, at rates higher than those of wealthy nations. The top third of developing countries involved in trade integration are growing particularly fast. Only the small number of countries choosing to forgo economic integration have seen decreases in economic growth.

33. Most countries have established sustainable mechanisms for employment that support environmental and social protection policies. There is a readiness on the part of consumers to purchase products from manufacturers that comply with international standards. Corporations see a competitive advantage in social responsibility. Human capacity is valued as a primary resource requiring safe working conditions, fair wages and retirement options.

34. Modifications to support healthy life choices are seen by policy makers as prudent counterparts to environment-based policies. Research funds are invested in harnessing alternative energy sources on a large scale. Progress is being made towards reducing the impending impact of global climate change.

### **A picture of health**

35. Older adults are encouraged to stay active and engaged in their home and work communities; this has kept older adults fit and encouraged them to be proactive in taking steps to protect their health. Seeing a market niche for the health of the elderly, corporate health centres have opened community-based senior care clinics which include preventive and maintenance care for chronic conditions such as heart disease and diabetes, and seasonal immunization programmes for influenza and pneumonia.

36. Recognizing the cost of tobacco in terms of direct health care expenses and indirect costs due to lost productivity, most governments have cut ties with tobacco companies and enforced strong anti-tobacco policies. Employers are offering on-site smoking cessation programmes to employees and their families. Consumer demand, fear of tobacco-style litigation and global advocacy have prompted the food industry to invest in more nutritious food options and to minimize marketing to children. As a result, obesity rates among children and early onset of lifestyle-related NCDs have begun to decrease.

37. Pharmaceutical industry cooperation to increase access to HIV/AIDS treatment has brought affordable, quality medicines to most people who need them. As survival rates have increased, demand for prevention has increased as well. By investing in research and development on HIV vaccines, microbicides, and new drugs, the pharmaceutical industry has brought us closer to saving millions of lives from HIV/AIDS, especially those of women who have no other means of protecting themselves. Condom manufacturers are active in discussions with governments and multilateral agencies to ensure availability and use in ways that are culturally sensitive. Following the eradication of poliomyelitis and measles, other vaccine-preventable diseases of children are being effectively addressed through public/private ventures and multilateral cooperation.

38. Health care systems in many parts of the world are still under-funded, but there are efforts to improve financing options for both public and private sectors. Resources are distributed to assure availability, accessibility and high quality of health care services for all population groups in both urban and rural settings. Although rural settings still lag behind in service options, health information systems have been improved thanks to a massive effort by transnational communication companies to

build country capacity in data collection and sharing. Such advances, more adequate funding of health systems, and national incentive packages have encouraged health care professionals to remain in their home countries.

#### **SCENARIO 4: IMPROVED HEALTH THROUGH INTERNATIONAL COOPERATION**

The world unites around core, shared values that reinforce the centrality of health and solidarity. Health improves for all and disparities between rich and poor decrease.
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##### **The big picture**

39. Sexual and reproductive health centres within the public health system, coupled with efforts to improve women's status, have contributed to decreased global fertility, and consequently a slowing population growth. Food supply is well managed by governments and malnutrition is reduced, particularly in developing countries.

40. The capacity to manage urban growth has improved through continual urban planning and policy-making efforts. Public transit in many areas has been subsidized to reduce traffic congestion and pollution. Commercial, residential and green space is zoned to encourage walking and foster community development. Greater community involvement has improved social relations among community members, particularly between generations, and decreased random violence. Laws and policies that promote gender equality between men and women have reduced violence against women, given women greater control over their lives, and improved the health of the entire family.

41. A series of natural disasters early in the decade led the world to consider its interdependence. Effective multilateralism has become the core of global governance, especially with respect to democratic representation and decision making, accountability to people and the environment, and policy coherence.

42. Substantial debt relief has increased resources available for government-sponsored social sector programmes in the poorest countries. National debts are managed in a way which does not further impoverish nations. Bilateral and multilateral investments are made to promote sustainable development with the majority of OECD countries now contributing 0.7% of their GNP to development aid. Effective measures are being taken to ensure that economic progress benefits the most vulnerable groups, strengthens social, economic and gender equity, and substantially narrows the gaps between the haves and have-nots. Sustainable economic growth and full employment is pursued by most countries.

43. Nations ratify and enforce global environment frameworks and encourage the private sector to further incorporate sustainable environment policies into their corporate governance strategies. Water resources are managed through collaborative processes involving stakeholders in governments and civil society.

##### **A picture of health**

44. In many high-income, middle-income, and low-income countries, health and health equity is an increasingly important force in policy-making and governance. Health has come to be seen as a

multisectoral responsibility. In many nations, cross-sector planning occurs such that ministries of housing, education, transportation, trade, etc. all set public health targets for their areas of responsibility.

45. Older adults are respected as integral members of the community. Most national health and welfare systems are based on “life cycle” models and incorporate continuous efforts for health promotion. Prevention and care services of high quality are accessible in the community and covered by national health systems. Increased attention to the prevention, early detection and treatment of chronic diseases has increased years of healthy life in older adults, and nationally supported long-term care systems focus on improving the quality of the end of life.

46. Several pandemics of influenza and other new respiratory infections have been averted through the global outbreak, alert and response network, which links national disease control centres in the majority of member states.

47. Ten years after coming into force, the WHO Framework Convention on Tobacco Control has been either ratified or acceded to by almost all member states, which fully implement its articles. Tobacco use has declined significantly, along with associated illness and death. Civil society advocates demand similar policy attention to other contributors to noncommunicable diseases, resulting in adoption of national standards for diet and physical activity. Previously increasing rates of childhood and adult obesity and associated conditions have been reversed.

48. Through multilateral cooperation, major immunization campaigns are waged to bring immunization rates in developing countries in line with those of wealthier nations. The eradication of poliomyelitis and measles spurred action that has been sustained through donor aid. In tandem with these increased childhood immunization efforts has come an increase in support for non-discriminatory access to sexual and reproductive health services, especially for young people. This includes confidential contraception advice, prevention and treatment of sexually transmitted diseases, and access to condoms. Multilateral funding efforts have focused on countries with the highest infant and maternal mortality rates. As a result of sustained efforts, rates in participating countries have dropped dramatically. Likewise, sustained efforts in the prevention, testing and treatment of HIV/AIDS, care and support of HIV positive people, and concerted efforts to reduce stigma have led to decreasing rates of new infections and longer life expectancy for those infected. National antiretroviral treatment programmes based on public health services in the community provide accessible and lifelong treatment for people with HIV. Effective vaccines against HIV and malaria have been recently approved and are now being made widely available in several countries.

49. Universal access to efficient and high quality health care systems is seen as an important component of good governance and development. International cooperation to double health spending in most low-income countries has been successful thanks to new and innovative ways of generating resources. Several governments have collaborated to introduce a tax on international financial transactions and apply the resources to strengthening existing health services, with a certain amount earmarked for outreach to indigenous and marginalized ethnic or cultural groups within countries. National programmes to train and retain skilled health professionals include communications strategies such as telemedicine and knowledge sharing.

### Comparison of selected drivers of change across scenarios

Driver	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Political/social arena	Predictable areas of conflict and allegiance	National protectionism	Trade-based alliances	Strong multilateralism across all sectors
Economies	Modest, predictable growth	Developing countries decline; moderate growth in wealthy nations; disparities widen.	Global growth, based on market-based approaches; particular growth in developing countries	Global growth based on equity enhancing national and multinational policies
Health determinants	Understood, but health system focus is curative	Disregarded	Major factor, dependent on profitability	Basis for all public policy
Health indicators	Incremental improvements in AIDS, tobacco use, and child mortality	Devastating impacts on health across the spectrum	Incremental increases in developing countries, great improvements in stronger economies	Great improvements in most areas, in most nations
Health systems	Large gaps in funding and human resources	Severe under-funding, human resource shortages; fee-for-service systems	Privately financed health care systems meet the needs of most people, some treatment gaps	Universal care and insurance coverage, prevention and early detection stressed in clinical and community settings
Communication and health technology	Significant advances, unevenly applied	Advances available only to wealthy	Significant advances, equitably applied, dependent on sustainable growth	Significant advances, equitably applied

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