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Prevention and control of non-communicable diseases

Report of the Secretary-General

Summary

Non-communicable diseases represent a new frontier in the fight to improve global health. Worldwide, the increase in such diseases means that they are now responsible for more deaths than all other causes combined.

Commonly known as chronic or lifestyle-related diseases, the main non-communicable diseases are cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. While the international community has focused on communicable diseases such as HIV/AIDS, malaria and tuberculosis, the four main non-communicable diseases have emerged relatively unnoticed in the developing world and are now becoming a global epidemic. However, such diseases could be significantly reduced and prevented, with millions of lives saved and untold suffering avoided, through proven and affordable measures, many of which are complementary to global health efforts already under way. The knowledge and technology to fight the onset and effects of non-communicable diseases already exist. It's time to act to save future generations from the health and socio-economic harm of such diseases.

Note: The primary focus of the present report is on the four groups of diseases covered by the Global Strategy for the Prevention and Control of Non-communicable Diseases: cardiovascular diseases, cancers, diabetes and chronic respiratory diseases, which are largely caused by four shared behavioural risk factors. The same focus is given by General Assembly resolution 64/265. The broader scope of non-communicable diseases also includes conditions such as gastrointestinal diseases, renal diseases, neurological and mental health disorders. Those conditions account for a substantial portion of the global burden of disease. Although they are not specifically addressed by the content and focus of the present report, many of the approaches and opportunities for tackling non-communicable diseases described are also directly relevant to those conditions.

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In 2008, 36 million people died from non-communicable diseases, representing 63 per cent of the 57 million global deaths that year. In 2030, such diseases are projected to claim the lives of 52 million people. However, the demographic of lives lost is not readily apparent; people with non-communicable diseases often die young, with 9 million annual deaths occurring in persons under 60 years of age. The epidemic is fuelled by a combination of rising risk factors, including tobacco use, an unhealthy diet, lack of physical activity and harmful alcohol use. The four main non-communicable diseases that share those risk factors cause almost 80 per cent of all deaths from such diseases.

Non-communicable diseases affect the developing world and lower-income populations hardest. Strong evidence links poverty, lack of education and other social determinants to such diseases and their risk factors. A vicious cycle is created by the epidemic, whereby non-communicable diseases and their risk factors worsen poverty, while poverty results in rising rates of such diseases. The prevention of non-communicable diseases would reduce poverty, particularly since the majority of expenditures for treatment in low- and middle-income countries are paid privately or from out-of-pocket health-care systems. At the same time, because of the magnitude of the illness, the disabilities and premature deaths they cause and the long-term care required, non-communicable diseases reduce productivity and increase health-care costs, thereby weakening national economic development.

While non-communicable diseases have traditionally afflicted mostly high-income populations, current evidence shows that the spread of such diseases is associated with increasing levels of development. Death and disease from non-communicable diseases now outstrip communicable diseases in every region except Africa, where the rate of such diseases is quickly rising. By 2030, non-communicable diseases are projected to cause nearly five times as many deaths as communicable diseases worldwide, including in low- and middle-income countries.

The burden of non-communicable diseases in low- and middle-income countries goes beyond the fact that those countries are home to the world's largest populations. Unplanned urbanization, ageing populations and the globalization of trade and product marketing, particularly for tobacco, alcohol and food, have led to a rise in the risk factors of such diseases. The lack of health-care capacity and social protection systems in lower-income countries means that non-communicable diseases are more likely to cause people to become sick and die from them at earlier ages.

Furthermore, the health and socio-economic toll of the non-communicable disease epidemic is impeding achievement of the Millennium Development Goals, which are falling short of targets set in many countries. That is especially the case for Goals 4 and 5, on women's and children's health, which are intricately linked to non-communicable diseases, specifically since poor nutrition during pregnancy and early life causes a predisposition to high blood pressure, heart disease and diabetes later in life.

However, the impact of non-communicable diseases can be prevented with an approach that incorporates cost-effective, population-wide health-care interventions to address risk factors, known as public health “best buys”, and primary health-care measures to treat those who have contracted or are at high risk of contracting such diseases. The widespread implementation of such interventions, which require modest investment, can lead to quick gains in counteracting the effects of non-communicable diseases.

The best buys for population-wide interventions include tobacco-control measures, including raising taxes and bans on advertising and smoking in public places; raising taxes on alcohol and enforcing bans on alcohol advertising; reducing salt intake; replacing trans-fats in foods with polyunsaturated fats; promoting public awareness about diet and physical activity; and delivering hepatitis B vaccinations. Primary health-care interventions include counselling, multi-drug therapy and screening and early treatment for cervical and breast cancers.

The obstacles are many yet the moral, social and economic imperative is clear. At present, there is an unprecedented ability to critically analyse weaknesses and opportunities in the emerging battle to prevent and control non-communicable diseases. Throughout the debate over best policy and programme action, it must be remembered that the health and socio-economic impacts of such diseases are largely preventable and that the public health foundation of research and technical skill needed for progress is strong.

Five recommendations for progress are as follows:

(a) The greatest reductions in non-communicable diseases will come from a complete Government approach to adopting population-wide interventions that address risk factors. Those interventions can be achieved through modest and cost-effective investment;

(b) Sustained primary health-care measures, including prioritized packages of essential interventions, along with palliative and long-term care, must be implemented for those who already have non-communicable diseases or who are at high risk of contracting them. Many of the health-care interventions can, at low cost, be supported through health-related public policies;

(c) Addressing non-communicable diseases requires strengthening the capacity of Member States to monitor such diseases, their risk factors and determinants, especially in lower-income countries and including social data disaggregated by, for example, gender;

(d) Lessons learned from national HIV/AIDS, tuberculosis and malaria programmes in low- and middle-income countries must be harnessed for effective integration of communicable and non-communicable disease initiatives;

(e) Prevention and control of non-communicable diseases must be given priority, and commitments must be made at the highest levels by Governments, the private sector, civil society, the United Nations and international organizations, which should all work together.

I. Introduction

1. The present report has been prepared in response to General Assembly resolutions 64/265 and 65/238. It reviews the current status of non-communicable diseases, outlines the burden they impose on global health and socio-economic development and provides recommendations to counteract such diseases by monitoring their trends, scaling up measures to reduce risk factors, strengthening health systems and services and improving access to health care. Data on the burden of non-communicable diseases and on their prevention and control strategies are based on the World Health Organization *Global Status Report on Non-communicable Diseases 2010*.[1]

2. Global initiatives to address non-communicable diseases started in 2000, with the adoption by the World Health Assembly of its resolution 53.17, in which the Assembly endorsed the global strategy for the prevention and control of such diseases.[2] The strategy rests on three pillars: surveillance, primary prevention and strengthened health care. Since 2000, the World Health Assembly has adopted several resolutions in support of specific tools for the global strategy, including the WHO Framework Convention on Tobacco Control in 2003, the Global Strategy on Diet, Physical Activity and Health in 2004; and the Global Strategy to Reduce the Harmful Use of Alcohol in 2010. In 2008, the Assembly endorsed the 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases. The action plan has six objectives, with a particular focus on low- and middle-income countries and vulnerable populations. It comprises a set of actions that, when performed collectively by Member States, international partners and the secretariat, will address the growing public-health burden imposed by non-communicable diseases. Its six objectives include raising the priority accorded to such diseases in development work at the global and national levels and integrating the prevention and control of such diseases into policies across all Government departments; establishing and strengthening national policies and plans; promoting interventions to reduce risk factors, mainly tobacco use, an unhealthy diet, physical inactivity and the harmful use of alcohol; promoting research; strengthening partnerships; and monitoring non-communicable diseases and their determinants and evaluating progress at the national, regional and global levels.

II. A rising epidemic

3. Of the 57 million global deaths in 2008,[3] 36 million, or 63 per cent, were due to non-communicable diseases, principally cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. Total deaths from non-communicable diseases are projected to rise to 52 million in 2030. The rapidly growing magnitude of such diseases is driven in part by population ageing, the negative impact of urbanization and the globalization of trade and marketing. It is fuelled by the persistent increase in non-communicable disease-related risk factors, namely,

[1] Available from http://whqlibdoc.who.int/publications/2011/9789240686458_eng.pdf.

[2] Available from http://apps.who.int/gb/archive/pdf_files/WHA53/ea14.pdf.

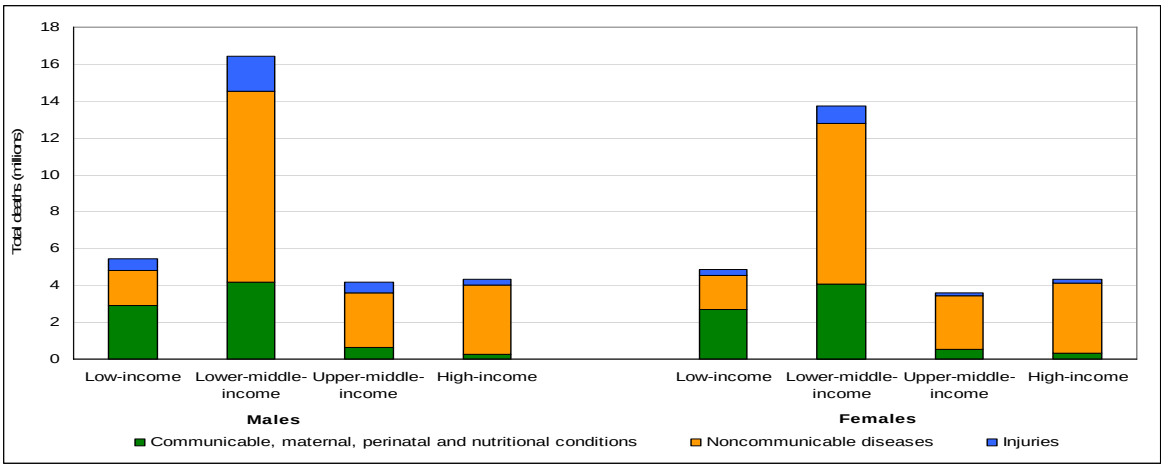
[3] A. Alwan et al., “Monitoring and surveillance of chronic non-communicable diseases: progress and capacity in high-burden countries”, *The Lancet* (2010).

tobacco use, an unhealthy diet, lack of physical activity and harmful alcohol use, particularly in low- and middle-income countries.

A. Hidden, misunderstood and underrecorded

4. As the international community has intensified efforts to combat the global burden of communicable diseases such as HIV/AIDS, malaria and tuberculosis, a growing burden of non-communicable diseases has emerged relatively unnoticed in the developing world. Today, the burden of non-communicable diseases in low- and middle-income countries exceeds that in high-income countries. While popular belief holds that such diseases afflict mostly high-income populations, nearly 80 per cent of non-communicable disease-related deaths occur in developing countries. Non-communicable diseases are the most frequent causes of death in all regions of the world except Africa (see figure I), where such diseases are rising rapidly and are projected to cause almost three quarters as many deaths as communicable, maternal, perinatal and nutritional diseases by 2020 and to exceed them as the most common causes of death by 2030.

Figure I
Total deaths by broad cause group, World Bank income group and sex, 2008



Source: WHO, *The Global Status Report on Non-communicable Diseases 2010.*

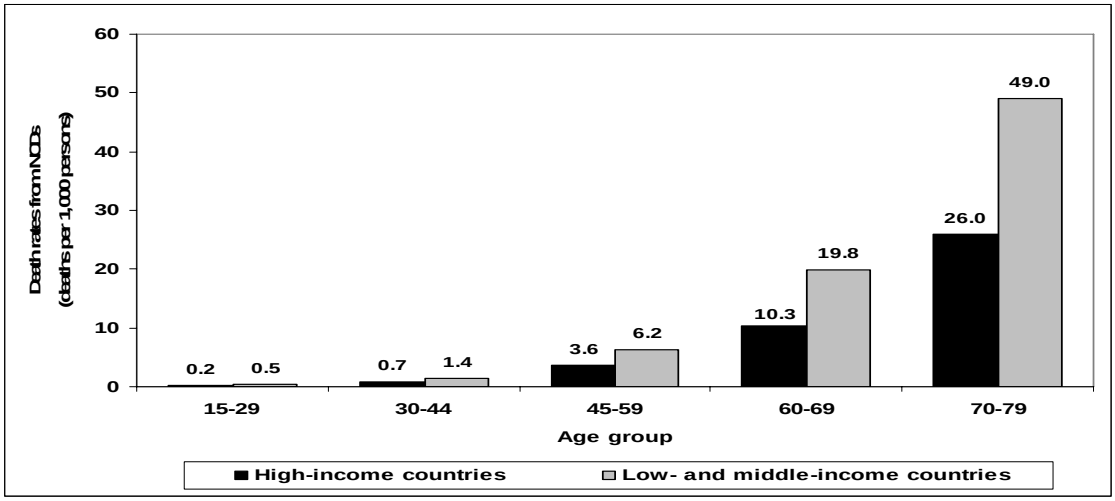
5. In low- and middle-income countries, non-communicable diseases will be responsible for nearly five times as many deaths as communicable diseases by 2030. Over 80 per cent of cardiovascular and diabetes deaths, almost 90 per cent of deaths from chronic obstructive pulmonary disease and more than two thirds of all cancer deaths occur in low- and middle-income countries. The estimated percentage increase in cancer incidence by 2030 compared with 2008 will be greater in low-income (82 per cent) and lower-middle-income countries (70 per cent) than in upper-middle-income (58 per cent) and high-income countries (40 per cent).

6. The large proportion of non-communicable disease-related deaths in low- and middle-income countries is not only the result of the fact that those countries have the largest populations. Urbanization and the globalization of trade and product marketing, particularly for tobacco, food and alcohol, have led to a rise in the risk factors of such diseases in the developing world. The lack of health-care capacity

and social protections in lower-income countries means that non-communicable diseases are more likely to cause people to become sick and die from them at younger ages.

7. As seen in figure II, death rates from non-communicable diseases are higher in low- and middle-income countries than in high-income countries across all age groups.

Figure II
Death rates from non-communicable diseases in high-income and in low- and middle-income countries, 2008



Source: WHO, *The Global Burden of Disease: 2004 Update.*

8. Lower-middle and upper-middle-income countries have higher rates of childhood obesity than high-income countries, and the highest smoking rate among men is found in lower-middle-income countries. The highest rates of high blood pressure are seen in Africa. The percentage of global cancer rates attributable to a few treatable chronic infections is substantially larger in low-income countries than in high-income countries.

9. Despite evidence of a global epidemic, non-communicable diseases are still not regarded by policymakers or the public as a global health priority. Because the diseases are common and their risk factors ubiquitous, many fail to understand the burden that such conditions exact on populations of the developing world. Perhaps because the risk factors of such diseases and other diseases are part of everyday life, many people fail to see the epidemic or recognize that it is largely preventable.

B. Current and future health risks

10. Cardiovascular diseases are responsible for the largest proportion of non-communicable disease-related deaths under the age of 70 (39 per cent), followed by cancers (27 per cent). Together with chronic respiratory disease and diabetes, they are responsible for almost 80 per cent of deaths caused by non-communicable diseases.

11. Premature death is a major consideration when evaluating the impact of non-communicable diseases on a given population, with approximately 44 per cent of all non-communicable disease-related deaths occurring before the age of 70. In low- and middle-income countries, a higher proportion (48 per cent) of all deaths from such diseases is estimated to occur in people under the age of 70, compared with high-income countries (26 per cent). The difference is even more marked in younger age ranges: in low- and middle-income countries, 29 per cent of non-communicable disease-related deaths occur among people under the age of 60, compared with only 13 per cent in high-income countries.

12. Although cardiovascular mortality has declined in some developed countries due to preventive and treatment measures, in all low- and middle-income countries where no such measures have occurred, cardiovascular diseases will continue to increase steeply in the coming decades, resulting in premature heart attacks and strokes that affect people in their economically productive years.

13. Cancer is predicted to be an increasingly important cause of death and disease in the coming decades in all regions of the world. Forecasted changes in population demographics in the next two decades mean that the estimated incidence of 12.7 million new cancer cases in 2008 will rise to 21.4 million by 2030, with nearly two thirds of all cancer diagnoses in low- and middle-income countries.

14. Based on the WHO *Global Status Report on Non-communicable Diseases 2010*, the overall prevalence of high blood pressure in adults aged 25 and over was approximately 40 per cent in 2008, with higher rates seen in lower-income countries. Unless action is taken, more than 80 per cent of the world's tobacco-related deaths will be in low- and middle-income countries by 2030. Annual tobacco-related deaths are projected to increase from about 6 million today to 8 million in 2030, accounting for 10 per cent of all deaths in that year. As automation increases in the workplace and at home, the lack of physical activity is also expected to increase. In some regions more than 40 per cent of adults, particularly women, are insufficiently active.

15. Furthermore, the growing globalization and industrialization of the food chain is leading to increased consumption of processed food, resulting in an upsurge in saturated fat, trans-fats, salt and refined sugars in the diet. The prevalence of overweight infants and young children has been rising steadily in recent decades and is expected to continue to rise. While the highest prevalence of overweight infants and young children is found in the upper-middle-income group, the fastest growth is in the lower-middle-income group. In 2008, 35 per cent of adults were overweight. Worldwide, an estimated 2.8 million people die each year as a result of being overweight. The worldwide prevalence of obesity has nearly doubled between 1980 and 2008. In some regions, such as Europe, the Eastern Mediterranean and the Americas, over 50 per cent of women are overweight.

16. The harmful use of alcohol takes an exceptionally high toll in the growing number of middle-income countries. In some regions, one in five male deaths is attributed to alcohol and nearly half of all alcohol-attributable deaths occur from non-communicable diseases.

17. Regarding occupational risks, the International Labour Organization attributes about 1.4 million non-communicable disease-related fatalities to factors including exposure to hazards at work.

C. Non-communicable diseases in other contexts

18. A gender perspective is critical to understanding differences in men's and women's risks of morbidity and mortality from non-communicable diseases. In 2008, such diseases killed 4.9 million men and 3.3 million women between the ages of 15 and 59 worldwide. More women aged 15 to 59 years die due to non-communicable diseases in Africa than in high-income countries.

19. The risk for men of dying from non-communicable diseases exceeds that of women in all age groups, a phenomenon that has been attributed to men's greater exposure to risk factors such as tobacco and the harmful use of alcohol, and their lower use of preventive health care and weaker social ties relative to women. Trends in other risk factors, however, also point to a growing burden of such diseases among women. Women tend to be less physically active than men, are more likely to be obese and, in some populations, are taking up smoking at alarming rates. In several developed countries, lung cancer death rates have been rising faster among women than among men, reflecting women's later uptake of tobacco use relative to men. That suggests that the gender gap in mortality from such diseases may narrow in the future. In that regard, more attention is needed for a gender-based approach founded on accurate gender-disaggregated data.

20. Non-communicable diseases and risk factors also have a significant impact on maternal and child health. Undernutrition in utero and low birth weights, which are particularly prevalent among low-income populations, increase the risks of cardiovascular diseases and diabetes. The rising prevalence of high blood pressure, diabetes and gestational diabetes is increasing adverse outcomes in pregnancy and maternal health. Improving maternal health and nutrition plays an important role in reducing the future development of such diseases in offspring.

III. Socio-economic impacts

21. The epidemic of non-communicable diseases creates serious socio-economic consequences by increasing individual and household impoverishment and thwarting human and economic development. As mentioned above, the distribution and impact of such diseases and their risk factors are highly inequitable and impose a disproportionately large burden on low- and middle-income countries and populations. Because poverty is closely linked with non-communicable diseases, the expanding epidemic of such diseases is predicted to impede poverty reduction initiatives in low-income countries and communities.

A. Impact on social and human development

22. Strong evidence links poverty, lack of education and other social inequities to non-communicable diseases and their risk factors. In high-income countries, for example:

- The prevalence of physical inactivity, daily smoking and regular alcohol consumption was found to be consistently highest among men and women with the least education. An additional four years of schooling was associated with a decreased risk of heart disease and diabetes.

- Blue-collar workers have significantly higher levels of cancer and female blue-collar workers have a higher incidence of metabolic syndrome, compared with female white-collar workers.
- Obesity is higher among women with lower-income levels.
- Heart diseases and diabetes are more prevalent among immigrants and indigenous peoples in certain countries.

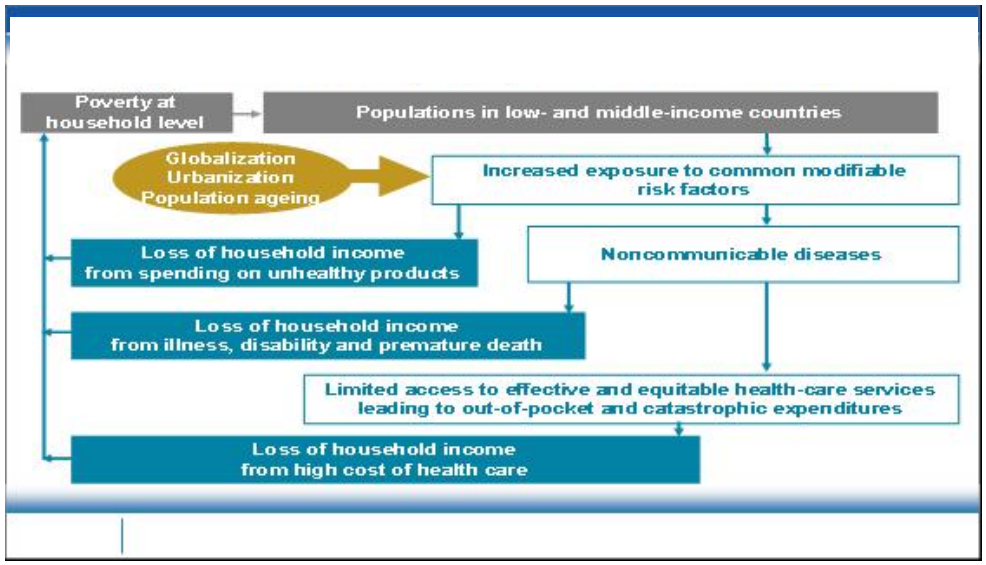
23. In low- and middle-income countries, an increasing number of studies show associations between non-communicable diseases and social determinants:

- Tobacco use, hypertension, physical inactivity and alcohol use are more common among people with lower educational achievement.
- Lower education levels and urban residency are associated with an increased risk of diabetes.
- Cardiovascular mortality rates decreased among educated people compared with those without formal education.
- Poor people are more likely to smoke and are at greater risk of being exposed to a number of non-communicable disease-related risk factors, including second-hand smoke and harmful alcohol use, as well as suffering from asthma.

B. Impact on household income

24. Non-communicable diseases lead to loss of household income from unhealthy behaviours, poor physical capacity, long-term treatment and high cost of health care.

Figure III
A vicious circle: poverty contributes to non-communicable diseases and non-communicable diseases contribute to poverty



Source: *Global Status Report on Non-communicable Diseases 2010*, p. 35.

25. From a risk factor perspective, tobacco is a particular problem. People in many low-income households spend a significantly higher portion of their household budgets on tobacco compared with high-income households. That causes a reduction of household spending on other important needs, most notably education and medical care. Alcohol can also significantly drain family expenditures.

26. Poor physical capacity as a result of non-communicable diseases often prevents people from working or seeking employment, thus reducing household income. Annual income loss from such diseases, from days spent ill or providing care, amounted to an estimated $23 billion (0.7 per cent of gross domestic product) in India in 2004.

27. Treatment for cardiovascular diseases, cancer, diabetes and chronic respiratory diseases can quickly drain household resources, driving families into poverty. The WHO *World Health Report 2010*[4] states that each year 100 million people are pushed into poverty because they had to pay directly for health services. The report indicates that out-of-pocket payments represent more than 50 per cent of total health expenditures in a large number of low- and middle-income countries. A multi-country review of drug costs showed that it costs an average of two to eight days' wages to purchase a one-month supply of at least one cardiovascular medicine. Paying for care associated with diabetes, heart diseases and cancer can cost low-income households up to a third of their incomes, and can lead to distress borrowing and selling of assets. Catastrophic hospitalization expenditures are higher with non-communicable diseases compared with communicable diseases.

C. Impact on economic development

28. Non-communicable diseases have become a major component of health-care system expenditures in developed countries as well as in the developing world. Estimated losses in national income from heart disease, stroke and diabetes in 2005 were estimated at $18 billion in China, $11 billion in the Russian Federation, $9 billion in India and $3 billion in Brazil. Health-care costs and productivity losses are increasing in most developing and developed countries irrespective of population size and are consuming a growing portion of national budgets. For the Latin America and Caribbean region, diabetes health-care costs were estimated at $65 billion annually, or between 2 and 4 per cent of gross domestic product and 8 to 15 per cent of national health-care budgets. Oman has experienced a 64 per cent increase in health-care expenditures from 1995 to 2005, due largely to non-communicable diseases.

D. Impact on the Millennium Development Goals

29. The socio-economic impacts of non-communicable diseases are also affecting the Millennium Development Goals, which are falling short of the targets set in many countries.

30. Preventing non-communicable diseases is important for Goal 1 (on poverty and hunger), as they have a negative impact on productivity and family income and

[4] WHO, *World Health Report: Health Systems Financing: The Path to Universal Coverage* (Geneva, 2010).

because a substantial proportion of household income is spent on health care in low-income countries.

31. Regarding Target 1c (to halve, between 1990 and 2015, the proportion of people who suffer from hunger), improper nutrition during pregnancy is associated with stillbirths and pre-term births and increases the risk of gestational diabetes. There is also a significant relationship between maternal nutrition, foetal health and vulnerability to cardiovascular disease and diabetes later in life.

32. Non-communicable disease prevention and control may also contribute to the achievement of Goal 2 (on universal primary education), since costs for non-communicable disease-related health care, medicines, tobacco and alcohol displace household resources that might otherwise be available for education. The problem is particularly acute in very poor families, which have the most to gain from education of their children.

33. There are also strong links with Goals 4 and 5 (on child and maternal health). The rising prevalence of high blood pressure and gestational diabetes is increasing the adverse outcomes of pregnancy and maternal health. Diabetes during pregnancy presents serious risks to both the woman and the baby. The prevalence of gestational diabetes may be as high as 20 per cent among high-risk populations. The reported incidence of maternal mortality of pregnant women with type 1 diabetes is 5 to 20 times higher compared to women without diabetes. Smoking is an additional risk factor for foetal growth and development. Furthermore, mothers who smoke are likely to breastfeed for shorter periods of time and have lower quantities of and less nutritious milk. Exposure to second-hand tobacco smoke also increases the risks of childhood respiratory infections, sudden infant death and asthma.

34. The increasing burden of non-communicable diseases also threatens Goal 6 (to combat HIV/AIDS, malaria and other diseases), by interfering with effective tuberculosis control. In an analysis of 22 countries that account for 80 per cent of the global tuberculosis burden, diabetes was associated with 10 per cent of adult tuberculosis cases, smoking with 21 per cent and harmful alcohol use 13 per cent. Smoking is implicated in over 50 per cent of tuberculosis deaths in India.

35. Goal 8, to develop a global partnership for development, aspires to provide access to affordable essential drugs in developing countries. However, international efforts to provide such access are often focused on AIDS, tuberculosis and malaria. At a time when most ill health and deaths are caused by non-communicable diseases, it is important for essential health care for such diseases to be included in initiatives on health needs and development.

IV. A preventable epidemic

36. The ability already exists to counteract the non-communicable disease epidemic, thus saving millions of lives, preventing untold suffering and reducing enormous costs. Knowing how to reduce such diseases is not the problem; the problem is lack of action.

37. The greatest reductions in non-communicable diseases will come from population-wide interventions to address the risk factors of tobacco use, unhealthy diet, lack of physical activity and harmful use of alcohol. Such interventions are low-cost, cost-effective and even revenue-generating in some cases; they are

especially inexpensive when compared with procedures necessary for patients with advanced stages of disease. But effective interventions are not implemented on a wide scale for a variety of factors, including inadequate political commitment, insufficient engagement of non-health sectors, lack of resources, vested interests of critical constituencies and limited engagement of key stakeholders.

38. Appropriate health care for people with non-communicable diseases will reduce complications, disability and premature death. However, such health care remains lacking or inadequate in many settings, and access to essential technologies and life-saving medicines is limited, particularly in low- and middle-income countries.

39. The close links with child and maternal health and the importance of early-life origins of non-communicable diseases require that preventive and health-care interventions relating to such diseases be integrated into reproductive, maternal and child health programmes, especially at the primary health-care level.

A. Preventing causative factors and addressing determinants: a multisectoral challenge and response

40. Quick gains against the non-communicable disease epidemic can be achieved through modest investments in interventions. What is needed for widespread implementation of the interventions is the active engagement of non-health sectors and a complete Government approach, including sectors such as education, trade, agriculture, food security and the environment.

41. Among actions that should be taken immediately are “best buys” and “good buys”. A best buy is an intervention that is not only highly cost-effective but also cheap, feasible and culturally acceptable to implement. Good buys are other interventions that may cost somewhat more or generate somewhat less health gain but still provide good value for money.[5] Best buys to reduce major risk factors for non-communicable diseases include:

- Smoke-free workplaces and public places
- Warnings about the dangers of tobacco
- Comprehensive bans on tobacco advertising, promotion and sponsorship
- Raising excise taxes on tobacco and alcohol
- Restricting access to retail alcohol
- Enforcing bans on alcohol advertising
- Reducing salt and sugar content in packaged and prepared foods and drinks
- Replacing trans-fats with unsaturated fat in food
- Promoting public awareness about diet and physical activity through education and consumer information, including through mass media
- Delivering hepatitis B vaccine immunization

[5] WHO, *Global Status Report on Non-communicable Diseases 2010* (Geneva, 2010).

42. In addition to best buys, there are many other cost-effective and low-cost population-wide interventions that can reduce risk factors for non-communicable diseases. They include nicotine dependency treatment, enforcing drunken driving laws, promotion of adequate breastfeeding and complementary feeding, restrictions on the marketing of foods and beverages that are high in salt, fats and sugar, especially to children, and the introduction of food taxes and subsidies to promote a healthy diet.

43. There are other population-wide interventions that focus on cancer prevention. Almost 70 per cent of cervical cancer is preventable, and vaccinations for human papillomavirus (HPV), the main cause of cervical cancer, are particularly effective. Prevention through early detection, such as screening for breast and cervical cancers, can also be effective in reducing the cancer burden and death.

44. Most population-wide interventions must originate outside of a country's health sector, requiring multisectoral partnerships and a health-in-all-policies approach by Government. For example, the best buys of raising excise taxes on tobacco and alcohol must be accomplished by governmental agencies and policymakers outside the health sector. Similarly, education campaigns focusing on healthier diets and increased physical activity cannot be developed by the health sector alone. Such efforts need support from civil society, academia, non-governmental organizations and others to achieve success.

45. Industry and the private sector must be engaged. Their role is critical in population-wide behavioural interventions. For example, initiatives by the food industry in reformulation to healthier products and in exercising responsible marketing are crucial. Food operators and suppliers can improve the availability of healthy food products, including fruits and vegetables and foods with lower levels of saturated fats, added sugars and salt. Marketers can comply with recommendations against the marketing of food and non-alcoholic beverages to children.

B. Providing essential health care: strengthening health-system capacity and response

46. The long-term nature of many non-communicable diseases demands a comprehensive health system response that brings together a trained workforce with appropriate skills, affordable technologies, reliable supplies of medicines, referral systems and the empowerment of people for self-care, all over a sustained period of time.

47. If rising non-communicable disease trends in low- and middle-income countries are to be reversed, current approaches to addressing such diseases need to be changed. At present, the main focus of health care for such diseases in many low- and middle-income countries is hospital-centred. In the case of cardiovascular disease and diabetes, a large proportion of people at a high risk remain undiagnosed, and even those who have been diagnosed have insufficient access to essential primary health care to prevent complications.

48. When a non-communicable disease diagnosis is made, it is often at a late stage of the disease, when people become symptomatic and are admitted to hospitals with

acute events or long-term complications and disabilities. Treatment for advanced stage diseases is expensive as high-technology interventions are required.

49. In many countries, cancer patients currently have limited or no access to care owing to delayed diagnosis, lack of trained oncologists and specialized nursing staff and a lack of diagnostic facilities such as pathology services, specialist equipment and drugs. Radiotherapy facilities in developing countries are deficient, with some 36 countries lacking any radiotherapy services. The availability of oral morphine and staff trained in palliative care is limited in many low- and middle-income countries, even though such services can be made available at a low cost.

50. While the strengthening of health-care systems must be the ultimate goal, short- and medium-term measures are necessary for people who either already have non-communicable diseases or who are at high risk of contracting them. Such measures should create prioritized packages of low-cost, high-impact essential interventions at the primary health-care level. Non-communicable disease treatment programmes can further benefit from greater community engagement, acceptance and individual self-care.

C. Assessing the capacity of countries to address non-communicable diseases

51. According to WHO surveys conducted in 2000 and 2010, the capacity of Member States to prevent and control non-communicable diseases is uneven, with advancement mostly in high-income countries. Many countries have at least one policy, plan or strategy to address such diseases or their risk factors. However, most of the policies and plans are for individual risk factors or diseases rather than an integrated and multisectoral approach, and a large percentage of them are not operational or are insufficiently funded.

52. Improving country-level surveillance and monitoring systems that are integrated into existing national health information systems must be a priority in the fight against non-communicable diseases. Three necessary components of all non-communicable disease surveillance are: (a) monitoring exposures to risk factors; (b) monitoring outcomes, namely, morbidity and disease-specific mortality; and (c) surveying health system responses, including national capacity to prevent non-communicable diseases through, for example, policies and plans, infrastructure, human resources and access to essential health care and medicines.

53. The availability to treat non-communicable diseases in low-income countries is one quarter that in high-income countries. Even in hospital settings in low-income countries, the availability of basic technologies and treatment for such diseases is often severely lacking. A study conducted in some low-income countries revealed that up to two thirds of generic medicines were not freely available in the public sector and almost 50 per cent were not available in the private sector.

V. The way forward

54. The global non-communicable disease epidemic can be countered through population-wide and individual health-care interventions that are proven, evidence-based and within the grasp of nearly all countries. However, there are many barriers

to success owing to the wide scope of actions required at the national and global levels, the various sectors that must be involved in interventions and the many vested interests that may try to block or weaken them. To succeed, the prevention and control of such diseases must be given priority and political commitment at the highest levels of governments. The way forward should include the considerations set out below.

Multisectoral action and "health in all policies"

55. Addressing risk factors and social determinants is beyond the capability of the health sector alone, as international experience demonstrates the need for strong engagement of non-health sectors. Effective multisectoral action requires the adoption of "health in all policies" approaches, meaning that sectors outside the health sector must consider health issues when formulating policies, strategies and standards. Examples of guidelines that promote multisectoral action can be found in the WHO *Global Status Report on Non-communicable Diseases 2010*.

A life-course approach

56. Non-communicable diseases and their risk factors are best addressed throughout the course of people's lives, through healthy behaviours and early diagnosis and treatment that begin before pregnancy and continue through childhood and adult life. Fostering meaningful community participation and engagement along with active partnerships among multiple stakeholders is imperative.

Surveillance and monitoring

57. A standardized framework of measurable core indicators must be adopted to monitor trends and progress.

Reduced risk factors

58. Multisectoral action must immediately address non-communicable disease-related risk factors through population-wide interventions that are affordable, cost-effective and can even be revenue-generating for Governments.

Health-system strengthening

59. People with non-communicable diseases must receive improved basic health care, which can be attained by addressing gaps in all six health-system components: finance, governance, health workforce, health information, essential medicines and technologies and service delivery. Above all, a strong primary care system is critical, especially where resources are limited. Health-care services models should be transformed from acute emergency care to chronic lifelong care. A first pragmatic step is to develop a realistic set of high-impact and cost-effective interventions to prevent, detect and treat such diseases.

Non-communicable disease-related risk factors and the trade, marketing and production of food

60. Government and private sector entities involved in the food supply can dramatically improve diet at the global and country levels through regulations, incentives and voluntary efforts. The reformulation of processed food can reduce salt and saturated and trans-fats, and changes in trade, taxation and subsidy policy

can increase the availability of fruit, vegetables and other healthy foods. The supply of fruits and vegetables can also be improved by supporting local sustainable production and building up an efficient local supply chain. In that regard, policies aimed at scaling up livestock production need to be reconsidered, while at the same time ensuring adequate sea and land sources of unsaturated fat. Standards for the marketing of food and non-alcoholic beverages can be developed and implemented based on recommendations endorsed by the World Health Assembly and others.

Essential medicines and technology

61. Governments, in collaboration with the private sector, should give greater priority to treating chronic diseases and improving the accessibility of medicines to treat them. Important mechanisms for providing sustainable access to medicines include the development and use of evidence-based guidelines for the treatment of non-communicable diseases, efficient procurement and distribution of medicines in countries, the establishment of viable financing options and promoting the use of generic medicines. Subsidies should be established to help the poorest segments of the population. In addition, the development of new medical treatments and technology is needed. Necessary policies regarding research and development, intellectual property and other areas can be modelled after successes that improved access to new medicines for HIV/AIDS and tuberculosis.

Social protections

62. The ultimate protection for people at high risk or who already have non-communicable diseases is universal health insurance coverage. A significant factor in the unequal distribution of such diseases among low- and middle-income countries is the lack of public or private health insurance. Universal social protections must be the goal.

Non-communicable diseases in emergency situations

63. Crisis situations such as natural disasters and prolonged conflict can have a significant effect on patients of non-communicable diseases. Local communities and the international humanitarian community should develop the capacity to ensure continuity of health care during crises, while preparedness should include stores of essential medications and technology for such diseases.

Non-communicable diseases and migration

64. Conditions surrounding the 1 billion migrants worldwide can increase exposure and vulnerability to non-communicable disease-related risk factors. While the focus of migratory health initiatives has been on communicable diseases, Governments must also integrate migrant health into the control and prevention policies for such diseases.

Non-communicable diseases and occupational health

65. Part of the burden of non-communicable diseases is attributable to occupational risk factors including exposure to chemical, physical, biological, ergonomic and psychosocial hazards at work. Regulation to prevent exposure to such hazards must be implemented as necessary. Multisectoral action, including

monitoring by concerned social partners, is critical to reinforce implementation of national policies on health at work.

Advances in information and communications technology

66. Advances in information and communications technologies have made access to information easier and cheaper and should be used to further expand the availability of health information. Mobile telephones and the Internet give remote communities an opportunity to be connected to health services, and such devices also facilitate the collection of clinical and public health data.

VI. Conclusions

67. Member States and the international community have made the non-communicable disease epidemic a priority. Urgent action is now needed at all levels. The High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases, to be held in New York on 19 and 20 September 2011, is a historic opportunity for Heads of State and Government to commit to concrete actions and to address impediments for success in the fight against non-communicable diseases. The recommendations below are proposed for Member States, the private sector, civil society and United Nations agencies and international organizations.

VII. Recommendations

68. It is recommended that Member States:

(a) Include prevention and control of non-communicable diseases among priorities in national health strategies and plans;

(b) Implement cost-effective population-wide interventions, including through regulatory and legislative actions, for the non-communicable disease-related risk factors of tobacco use, unhealthy diet, lack of physical activity and harmful alcohol use;

(c) Strengthen national information systems by implementing a surveillance framework that monitors key risk factors and determinants, morbidity and mortality and health-system capacity. Set standardized national targets and indicators to assess the progress made in addressing non-communicable diseases;

(d) Promote multisectoral and “health in all policies” approaches to address the social determinants and risk factors of non-communicable diseases;

(e) Engage non-health sectors and key stakeholders, including the private sector and civil society, in collaborative partnerships to promote health and reduce non-communicable disease-related risk factors;

(f) Implement international agreements and strategies to reduce risk factors, including the 2003 WHO Framework Convention on Tobacco Control, the Global Strategy on Diet, Physical Activity and Health and the Global Strategy to Reduce the Harmful Use of Alcohol;

(g) Revitalize primary health care and promote access to cost-effective interventions for non-communicable diseases, including access to essential medicines and technologies;

(h) Mobilize additional resources and support innovative approaches to financing essential non-communicable disease health-care interventions within primary health care.

69. It is recommended that the private sector:

(a) Promote healthy behaviour among workers, including occupational safety through good corporate practices, workplace wellness programmes and insurance plans;

(b) Contribute to improved access and affordability for the essential medicines and technologies for non-communicable diseases;

(c) Ensure responsible and accountable marketing and advertising, especially with regard to children;

(d) Ensure that foods needed for a healthy diet are accessible, including reformulating products to provide healthier options.

70. It is recommended that civil society:

(a) Mobilize political and community awareness in support of non-communicable disease prevention and control;

(b) Address shortcomings in non-communicable disease prevention and treatment services for marginalized populations and crisis situations and build community capacity in promoting healthy diets and lifestyles;

(c) Mobilize additional resources and support innovative approaches to financing the prevention and control of non-communicable disease.

71. It is recommended that United Nations agencies and international organizations:

(a) Acknowledge the threat of the non-communicable disease epidemics to sustainable development and integrate cost-effective preventive interventions into the development agenda and related investment programmes, including poverty reduction initiatives, in low- and middle-income countries;

(b) Develop, in collaboration with Member States, a global set of indicators to monitor non-communicable disease trends and assess the progress countries are making to reduce the burden of such diseases;

(c) Ensure the effective engagement of all non-health sectors in health and non-communicable disease policies;

(d) Ensure the active engagement of United Nations agencies, funds and programmes in global and regional initiatives to address the health and socio-economic impacts of non-communicable diseases.