



Noncommunicable disease prevention and control

Report by the Director-General

This report reviews the global noncommunicable disease situation, including progress in control measures. Broader public health action is emphasized, including integration of preventive measures against major risk factors for chronic diseases within health services and, particularly in primary health care which has proven to be effective. The development and adoption of the health-for-all policy for the twenty-first century provides an opportunity to give action against noncommunicable diseases high priority.

“GLOBAL BURDEN” OF NONCOMMUNICABLE DISEASES: INTRODUCTION AND POLICY BASIS

1. For decades WHO has led research in and development of public health measures against chronic noncommunicable diseases,¹ as provided in a number of resolutions.² The review undertaken by the Executive Board in 1994 reiterated the importance and need for prevention and encouraged governments to adopt national policies for prevention and control.

2. Remarkable improvements in the health of populations have occurred in the past 50 years. Rising income, improved nutrition and living conditions, better education and the provision of basic public health measures brought average life expectancy at birth in developing countries to 64 years in 1995. By the year 2020 it may reach 71. However “longer life can be a penalty as well as a prize” (see *The world health report 1997*). Increased longevity and changes in lifestyle thanks to strong socioeconomic development at the same time paradoxically favour noncommunicable diseases, in particular circulatory disorders and cancer, in many respects

¹ For the purposes of this report noncommunicable diseases include chronic conditions of major public health importance, such as cardiovascular diseases, some cancers, chronic nonspecific respiratory disease, diabetes, certain chronic skeletal disorders, mental disorders and oral diseases, having one or more common risk factors (e.g., smoking, hazardous environment and unhealthy diet, alcohol abuse, physical inactivity and stress), which may aggravate existing genetic predisposition.

² See in particular the more recent provisions in resolutions WHA29.66, WHA35.30, WHA36.32, WHA38.30, WHA42.35 and WHA42.36.

facilitated and “communicated” internationally owing to the globalization of economic trends, trade, travel and modern media.

3. Several independent assessments of the most prevalent serious diseases have recently become available (*The global burden of disease*, Harvard 1996; WHO document TDR/GEN/96.1; *The world health report 1997*). The reports warn about the rise in noncommunicable diseases and their causes irrespective of countries and social classes, the unpreparedness of governments and the insufficiency of international action. *The world health report 1997* confirmed that major chronic noncommunicable diseases were responsible for nearly half of the total estimated 52 million deaths in 1996, about 67 000 a day. They also cause widespread disability and are a drain on economic resources throughout the world.

4. Noncommunicable diseases are not only a problem of the rich; they cause 40% of all deaths in developing countries, where they affect younger people than in developed countries - an alarming trend. As purchasing power increases in “middle-income” countries, multiple risk factors affect lower social population groups. Increase in tobacco use and a shift to “western” high-energy diets, creating higher risk of noncommunicable disease - often in a polluted environment - are more rapid in developing countries. The “epidemiological transition”, with its double burden of infectious and noncommunicable diseases, is common to many developing countries, where about two-thirds of the deaths due to circulatory diseases (64%), cancers (60%) and chronic obstructive lung diseases (66%) occur.

PROVEN PREVENTIVE MEASURES

5. Numerous studies over the last 40 years, have revealed certain risk factors for noncommunicable diseases and thus the health benefit of programmes to reduce such risks. By the late 1970s demonstration programmes in Europe and in the United States of America had convincingly shown that they can be reduced. The project in North Karelia, Finland demonstrated a sustainable effect over a 20-year period. WHO’s programmes such as INTERHEALTH (Integrated Programme for Community Health) and CINDI (Countrywide Integrated Noncommunicable Diseases Intervention) compared results in countries with different cultural and socioeconomic development patterns. In Mauritius a marked reduction in the prevalence of hypertension, hypercholesterolaemia and smoking was observed over five years; in Beijing and Tianjin in China corresponding beneficial changes were observed in diet and blood pressure control; a project in Chile showed how early smoking among schoolchildren could be prevented; in France the Evin law resulted in a 10% fall in tobacco consumption; changes in the pricing of meat and dairy products in Poland clearly affected coronary heart disease death rates.

6. There is ample evidence of such effects. In North Karelia, again, a 65% reduction in the mortality from coronary heart disease in the middle-aged population was largely explained by decreases in the three main risk factors in the population (cholesterol, high blood pressure, smoking). Extensive monitoring studies such as MONICA (Monitoring Cardiovascular Disease) confirm such evidence on a wider scale. Dramatic reductions in cardiovascular disease mortality in Australia, Canada, Finland, New Zealand, United States of America and some other countries, are associated with changes in risk levels coupled with improvements of treatment.

7. Substantial gains in health and quality of life thanks to noncommunicable disease control and “compression of morbidity” are thus feasible. *The world health report 1997* also notes that despite global population ageing severe handicap does not increase. Functional capacity of the elderly is a crucial consideration in social and health-care costs. Community-based noncommunicable disease prevention in Finland contributed most to the six-year life-expectancy increase for the last 25 years, during which the number of people on disability pensions because of cardiovascular disease fell by about 25%, indicating clearly that such prevention and control ensure major health gains.

FRAMEWORK FOR FURTHER ACTION

8. Epidemiological and community social research in different parts of the world has clearly identified multiple risk factors in the development of major noncommunicable diseases and traced their origins in unhealthy lifestyles and polluted environments. Potential risk may be determined already in early childhood, emphasizing that prevention must start in the early years of life and extend through adolescence and adulthood. The strategy is based on a remarkable number of common modifiable risk factors such as tobacco use, high-calorie diet (particularly saturated fats), alcohol, and lack of physical activity (stress and environmental pollution have recently been added to the list); in adulthood they are often present in various combinations. Smoking alone is responsible for 90% of lung cancers, 75% of chronic obstructive respiratory diseases and 25% of myocardial infarctions, in developed countries. High calorie diet and sedentary life lead to obesity and coronary heart disease, stroke, some forms of cancer, diabetes and chronic rheumatic disease.

9. The first principle is the integrated approach based on recognition of the risks and determinants of health, which can be positively influenced only if the health sector and related sectors act in harmony. The health sector should play a catalytic role and facilitate coordination of action that is intersectoral, multidisciplinary and community-based. The second principle is closer involvement and cooperation of health services, with primary health care focusing on prevention or reduction of risk factors. Primary prevention of noncommunicable diseases, that is affordable to all countries must include measures for the whole population and for high-risk groups - the former to reduce the average level of risk in a community, which is of prime importance and is complemented by the high risk strategy, the latter to focus on those at high risk usually because of a combination of risk factors and/or because disease is already present.

10. Broad policy and strategy based on a public health framework and health care delivery services with a sound balance of the above measures as well as health promotion and disease prevention, and early detection, treatment and rehabilitation, are essential for integrated noncommunicable disease programme development at local, national and regional levels.

Essential elements

11. **Public health policy.** Prevention and control of noncommunicable diseases is integral to sustainable human development and public health, since much of the premature mortality is preventable and the morbidity imposes a huge burden on health and social systems. At national level ministries of health play a catalytic role and must maintain their ability to determine the nation's health policy and help regulate health protection and health resources development, monitoring the population's health and the quality of health care according to the available expertise and motivation, and reflecting intersectoral and multidisciplinary responsibilities at different levels of the health service, as was stipulated by the Ottawa Charter for Health Promotion (1986).

12. **Collaboration and coordination.** Apart from crucial intersectoral action there is both a need and an opportunity for cooperation, as further stressed by the Jakarta Declaration (1997), between ministries of health, nongovernmental organizations, the private sector and community groups. Nongovernmental organizations offer national and international opportunities for discrete efforts to find common ground and coordinate noncommunicable disease prevention and control. The international "Heart Health Initiative" set out in the Victoria Declaration (1992) is a good example of such international efforts to combat cardiovascular disease.

13. **Health services reorientation and human resources.** A two-pronged approach to noncommunicable disease prevention within the context of health sector reform is needed: (1) "new" public health functions to meet the challenges of a community-based framework for prevention, and closer collaboration with health care delivery services; (2) reliance on existing services to balance action for prevention and care covering the whole lifespan, with support to school health programmes in order to establish healthy eating and exercise patterns and prevent early smoking habits. Where specific risk groups are concerned, appropriate treatment protocols must combine non-pharmacological interventions with cost-effective drug therapy for certain diseases or conditions

as an urgent priority, especially in developing countries where the availability of drugs is limited. Health care providers must acquire better knowledge and communication skills, with training in preventive tasks, first through continuous education. However, the more pragmatic introduction of public health in pre- and post-medical and nursing education should be one of the goals of reform. Such an integrated approach in core functions of the health sector will gradually become sustainable.

14. **Surveillance, monitoring and evaluation.** A database establishing norms and standards is essential for noncommunicable disease programmes to ensure planning, monitoring and evaluation, and to provide feedback. It takes longer to change noncommunicable disease rates than infectious diseases. The determination of risk factors and indicators to measure such change is therefore necessary, permitting adjustment of programmes in the course of implementation. WHO's experience is invaluable for the establishment of reliable indicators to assess trends and compare countries' experience.

15. **Application of data and determination of research needs.** To complement existing data, operational research is required on more effective health service support for community programmes, more efficient primary health care teams, cost-effective clinical measures to reduce risks, and case management. Further research is also needed on noncommunicable diseases in women and the elderly, and on genetic predisposition and resistance to disease.

INTERNATIONAL ACTION AND THE ROLE OF WHO

16. Noncommunicable disease prevention and control have so far been limited by the fragmentary nature of activities by individual Member States. Global action is required to complement such efforts and help initiate programmes where needed, as many of the risks are international, such as those resulting from the promotion of tobacco or fattening foods, not to mention environmental pollution. WHO has mobilized the international community, setting standards and norms for action against cardiovascular diseases, cancer, diabetes, chronic rheumatic diseases and oral health and for epidemiology, prevention and treatment.

17. In view of the increasing burden, WHO must take the lead in international collaboration against noncommunicable diseases, using the resources at its disposal and the opportunities for cooperation, to support and coordinate efforts: (1) to build up regional collaborative networks to promote integrated prevention and control; (2) to develop and revise norms and standards as appropriate; and (3) to strengthen technical capacity in Member States for formulating policy and programmes, from research and demonstration projects to integrated national programmes.

ACTION BY THE EXECUTIVE BOARD

18. The Executive Board may wish to recommend to the Director-General the establishment of a plan of action for noncommunicable disease prevention and control, in order to provide support for Member States in implementing practical and effective programmes; to request the Director-General to promote and support the development of a global, national and local surveillance system; and as a matter of urgency, to strengthen the capacity to implement such measures.

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