



## CHAPTER ONE

# *Protecting the People*

*This report deals with health risks, where risk is defined as a probability of an adverse outcome, or a factor that raises this probability. In order to protect people – and help them protect themselves – governments need to be able to assess risks and choose the most cost-effective and affordable interventions to prevent risks from occurring. Some risks have already been reduced, but changes in patterns of consumption, particularly of food, alcohol and tobacco, around the world are creating a “risk transition”. Diseases such as cancers, heart disease, stroke and diabetes are increasing in prominence. This trend is particularly serious for many low and middle income countries which are still dealing with the traditional problems of poverty, such as undernutrition and infectious diseases.*



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# 1

## PROTECTING THE PEOPLE

### REDUCING THE RISKS

People everywhere are exposed all their lives to an almost limitless array of risks to their health, whether in the shape of communicable or noncommunicable disease, injury, consumer products, violence or natural catastrophe. Sometimes whole populations are in danger, at other times only an individual is involved. Most risks cluster themselves around the poor.

No risk occurs in isolation: many have their roots in complex chains of events spanning long periods of time. Each has its cause, and some have many causes.

In this report, risk is defined as “*a probability of an adverse outcome, or a factor that raises this probability*”.

Human perceptions of and reactions to risk are shaped by past experience and by information and values received from sources such as family, society and government. It is a learning process that begins in childhood – when children learn not to play with fire – and is constantly updated in adulthood. Some risks, such as disease outbreaks, are beyond our individual control; others, such as smoking or other unhealthy consumptions, are within our power to either heighten or diminish.

The challenge and responsibility of reducing risks as much as possible, in order to achieve a long and healthy life, is shared by individuals, whole populations and their governments. For example, putting on a car seat belt is an individual action to reduce risk of injury; introducing a law to make wearing seat belts compulsory is a government action on behalf of the population.

Many people believe it is their government’s duty to do all it reasonably can to reduce risks on their behalf, such as making sure that foods and medicines are safe. This is particularly important where individuals have little control over their exposure to risks. Such actions are commonly referred to as “interventions”. In this report, an intervention means “*any health action – any promotive, preventive, curative or rehabilitative activity where the primary intent is to improve health*”.

Although governments rarely can hope to reduce risks to zero, they can aim to lower them to a more acceptable level, and explain, through open communication with the public, why and how they are doing so. Governments must also develop high levels of public trust, because the public is quick to judge how well risks are being managed on its behalf. This applies whether the risk relates to a rapidly moving new epidemic or to a long-term exposure.

In order to protect the people – and help them protect themselves – governments need to be able to assess accurately how great the risks are. Until now, that has been a seriously neglected task. Without some quantitative approach to gauging the importance of specific risks, in terms of the likely size of their impact on populations, government policies might be driven exclusively by factors such as pressure groups or the emotive weight of individual cases.

A key purpose of this report is to provide governments with a strategy for that assessment as an avenue towards developing the best policies and an array of intervention options for risk reduction. It also offers a comprehensive approach to the definition and study of risks.

In this report, risk assessment is defined as “a systematic approach to estimating the burden of disease and injury due to different risks”. It involves the identification, quantification and characterization of threats to human health. Risk assessment can provide an invaluable, overall picture of the relative roles of different risks to human health; it can illuminate the potential for health benefits by focusing on those risks, and it can help set agendas for research and policy action. The broader activity of risk analysis is a political activity as well as a scientific one and embraces public perception of risk, bringing in issues of values, process, power and trust.

## THE RISK TRANSITION

In the general sense, many risks to health have, of course, already been reduced – and a few, such as smallpox, have been eliminated or eradicated. Much of the credit is due to the great progress in public health and medicine in the last century. Improvements in drinking-water and sanitation, the development of national health systems, the introduction of antibiotics and mass immunization against the causes of infectious diseases, and more recently, better nutrition, are outstanding examples. Governments, particularly in the last 100 years, have played the leading role in protecting and improving the health of their populations.

As the 20th century ended, *The World Health Report 1999* traced the revolutionary gains in life expectancy achieved in the previous few decades. These amounted to 30–40 years more life for people in some countries. Although the devastating impact of some diseases, such as HIV/AIDS, malaria and tuberculosis must be borne constantly in mind, it can still be said that a substantial proportion of the world’s population faces relatively low risk from most infectious diseases. However, although the risk factors considered in this report do not include pathogens such as bacteria, viruses and parasites, these continue to be leading contributors to ill-health. Other risk factors related to infectious diseases should not be overlooked. These include the growing problem of antimicrobial resistance, chronic infections that are associated with certain cancers, and the deliberate use of microbial agents to cause harm through terrorism or warfare. More generally, the generation and application of new knowledge about diseases and their control has played a vital role in improving the quality as well as the duration of life.

Decades of scientific research into the causes of disease and injury has given the world a vast knowledge base – now more widely accessible than ever before, thanks to the Internet – and a huge potential for prevention and risk reduction. However, what is known, and what can be done, is not always reflected adequately in public health practice.

Meantime, while some risks to health have diminished, the very successes of the past few decades in infectious disease control and reduced fertility are inexorably generating a “demographic transition” from traditional societies where almost everyone is young to societies with rapidly increasing numbers of middle-aged and elderly people.

At the same time, researchers are observing marked changes in patterns of consumption, particularly of food, alcohol and tobacco, around the world. These changing patterns are identified in this report as being of crucial importance to global health. They amount to nothing less than a “risk transition” which is causing an alarming increase in risk factors in middle and low income countries.

Understanding why these changes are happening is vitally important. At a time when there is much discussion about globalization, it should be recognized that health itself has become globalized.

The rapid increases in international travel and trade and the mass movement of populations witnessed in the last few decades mean that infectious diseases can spread from one continent to another in a matter of hours or days, whether they are conveyed by individual travellers or in the cargo holds of aircraft or ships. However, the transition in which other forms of health risk appear to be shifting from one part of the world to another usually occurs much more slowly, more indirectly and less visibly, often requiring years to be detectable.

Nevertheless, as globalization continues to affect societies everywhere, the risk transition seems to be gaining speed. Today, more people than ever before are exposed to products and patterns of living imported or adopted from other countries that pose serious long-term risks to their health. The fact is that so-called “Western” risks no longer exist as such. There are only global risks, and risks faced by developing countries.

Increasingly, tobacco, alcohol and some processed foods are being marketed globally by multinational companies, with low and middle income countries their main targets for expansion. Changes in food processing and production and in agricultural and trade policies have affected the daily diet of hundreds of millions of people. At the same time, changes in living and working patterns have led to less physical activity and less physical labour. The television and the computer are two obvious reasons why people spend many more hours of the day seated and relatively inactive than a generation ago. The consumption of tobacco, alcohol and processed or “fast” foods fits easily into such patterns of life.

These changing patterns of consumption and of living, together with global population ageing, are associated with a rise in prominence of diseases such as cancers, heart disease, stroke, mental illness, and diabetes and other conditions linked to obesity. Already common in industrialized nations, they now have ominous implications for many low and middle income countries which are still dealing with the traditional problems of poverty such as undernutrition and infectious diseases.

Unfortunately, these latter countries are frequently unable to meet the health challenges confronting them. Demands on their health systems are increasing but resources for health remain scarce. Governments find themselves under pressure from the global demands of market forces and free trade. Such demands often imply the absence or reduction of appropriate laws, regulations and standards intended to protect the health and welfare of their citizens.

As *The World Health Report 1999* predicted, over a billion people entered the 21st century without having benefited from the health revolution: their lives remain short and scarred by predominantly “old” diseases. For many countries, this amounts to the notorious “double burden” – struggling to control the disease burden of the poor while simultaneously responding to rapid growth in noncommunicable diseases.

In short, while many risks have been reduced, others at least as serious have taken their place and are being added to those that still persist. And as the terrorist actions of 2001 showed, some previously unimaginable risks must now be confronted.

Meanwhile, large numbers of individuals, although not poor, fail to realize their full potential for better health because of a lack of enlightened policies and decisions in many sectors and the tendency of health systems to allocate resources to interventions of low quality or of low efficacy related to cost.

Increasing numbers of people forego or defer essential care or suffer huge financial burdens resulting from an unexpected need for expensive services. Altogether, the continuing challenges to reduce risks to health thus remain enormous.

However, there is growing national and international recognition of the risks themselves. During the World Health Assembly in Geneva in May 2002, WHO's Member States took part in organized round table discussions on risks to health (1, 2). One after another, health ministers or their representatives spelt out the main risks confronting their country. Tobacco, alcohol, unhealthy diet and obesity featured prominently alongside chronic diseases and traffic injuries in many low income and middle income countries. Ministers clearly demonstrated their knowledge of the trends in major risks in their countries, and their willingness to take action to reduce them (see Box 1.1). This report is intended to help them choose the best risk reduction policies that will in turn promote healthy life in their populations.

### Box 1.1 Countries endorse the focus on risks to health

Ministers of health attending the Fifty-fifth World Health Assembly in Geneva, Switzerland, in May 2002 participated in round table discussions on the major risks to health. Faced by the challenge of balancing preventive and treatment services, and the need to target prevention programmes where most health gain can be achieved, they supported the development of a scientific framework with consistent definitions and methods on which to build reliable, comparable assessments. There was support for an intersectoral approach to prevention strategies involving partnerships with communities, nongovernmental organizations, local government, and private sector organizations.

The number of potential risks to health is almost infinite, and the rapidly changing age structures of many populations will lead to changing risk profiles in the coming decades. Poverty is an underlying determinant of many risks to health and affects disease patterns between and within countries; other aspects of socioeconomic development, particularly education for women, also have a key role. Globalization has been hailed as a strategy to reduce poverty, but the liberalization of trade can lead to both benefits and harms for health. Tobacco is either an established or a rapidly emerging risk to health in all developing countries: the need for more stringent tobacco control is uniformly recognized – including increased taxation, bans on advertising, and the introduction or expansion of smoke-free

environments and cessation programmes. Alcohol is another commonly cited and increasing risk to health in many countries; and conditions with important dietary components, such as diabetes, obesity and hypertension, are increasingly globalized, even in countries with coexistent under-nutrition.

The chain of causes – from socioeconomic factors through environmental and community conditions to individual behaviour – offers many different entry points for prevention. Approaches can be combined so that interventions focus on background environmental (e.g. indoor air pollution) and distal (e.g. sanitation) risks, as well as more proximal risks such as physical inactivity and alcohol abuse.

Risk communication is an integral part of the risk management process. An open approach between governments and their scientific advisers and the public is recommended, even when there may be unpalatable messages or scientific uncertainty. How risks are described, who are the scientific spokespersons, how dialogue and negotiations take place, and whether uncertainties are adequately communicated all have substantial influence on maintaining trust.

International as well as national efforts are needed to combat the very widely distributed risks to health – high blood pressure, tobacco, alcohol, inactivity, obesity and cholesterol – that are now major threats throughout the world, and cause a large proportion of disease burden in industrial-

ized countries. In middle income countries these risk factors already contribute to the double burden of risks to health, and they are also of growing importance in low income countries. With ageing populations and trends in disease rates, these exposure levels are likely to assume increasing importance. Unless prevention begins early, with initiatives such as those envisaged in the Framework Convention on Tobacco Control, then the low and middle income countries will suffer a vast increase in the number of premature deaths from noncommunicable diseases.

Every country has major risks to health that are known, definite and increasing, sometimes largely unchecked, for which cost-effective interventions are insufficiently applied. Once major risks to health have been identified, the key challenge is to increase the uptake of known cost-effective interventions. Where cost-effective options to reduce major risks are not yet available, an international research investment is needed. Some countries have had considerable success with risk factor interventions that have led, for example, to large reductions in the prevalence of HIV/AIDS and moderate but population-wide shifts in major cardiovascular risk factors, such as blood pressure and high cholesterol levels. Sharing other countries' successes and learning from their predicaments will improve prevention in many different settings, especially in rapidly developing countries.

## REFERENCES

1. *Fifty-fifth World Health Assembly, Ministerial round tables: risks to health*. Geneva: World Health Organization; 2002. WHO document A55/DIV/5.
2. *Fifty-fifth World Health Assembly, Ministerial round tables: risks to health. Report by the Secretariat*. Geneva: World Health Organization; 2002. WHO document A55/DIV/6.