

# The World Health Report



**Life in the 21st century  
A vision for all**



World Health Organization  
Geneva

**EXECUTIVE  
SUMMARY**

Executive summary

# The World Health Report 1998

*Life in the 21st century – A vision for all*

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## Looking forward to health

**T**he 21st century offers a bright vision of better health for all. It holds the prospect not merely of longer life, but superior quality of life, with less disability and disease. As the new millennium approaches, the global population has never had a healthier outlook.

Weighing the evidence of the past and the present, *The World Health Report 1998* shows that humanity has many good reasons for hope in the future. Such an optimistic view must be tempered by recognition of some harsh realities. Nevertheless, unprecedented advances in health during the 20th century have laid the foundations for further dramatic progress in the years ahead.

This report provides the latest expert assessment of the global health situation, and uses that as a basis for projecting health trends to the year 2025. Examining the entire human life span, and sifting data gathered in the past 50 years, it studies the well-being of infants and children, adolescents and adults, older people and the "older old", and identifies priority areas for action in each age group. Women's health is given special emphasis. The future of human health in the 21st century depends a great deal on a commitment to investing in the health of women in the world today. Their health largely determines the health of their children, who are the adults of tomorrow.

The report's most disturbing finding is that, despite increasing life expectancy, two-fifths of all deaths in the

world this year can be considered premature, in that more than 20 million people a year are dying before the age of 50, while average life expectancy has risen to 66 years. Ten million of these deaths are among children under 5 years; 7.4 million others are among adults aged 20-49.

Even so, the most important pattern of progress now emerging is an unmistakable trend towards healthier, longer life. Supported by solid scientific evidence of declines in disability among older people in some populations, this has considerable implications for individuals and for societies.

The explanation for this trend lies in the social and economic advances that the world has witnessed during the late 20th century – advances that have brought better living standards to many, but not all, people. The world saw a golden age of unparalleled prosperity between 1950 and 1973, followed by an economic slump that lasted 20 years. A global economic recovery has been under way since 1994. The long-term benefits are now becoming apparent. While they are most evident in the industrialized world, they are slowly but surely materializing in many poorer countries, too.

For example, food supply has more than doubled in the past 40 years, much faster than population growth. Per capita GDP in real terms has risen by at least 2.5 times in the past 50 years. Adult literacy rates have increased by more than 50% since 1970. The proportion of children at school has risen while the proportion

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of people chronically undernourished has fallen.

These trends are changing the world. Without question, the world of 2025 will be significantly different from today's, and almost unrecognizable from that of 1950. The stunning technological advances of recent years, particularly in global telecommunications, have made the planet seem smaller than ever before. By the year 2025, it is likely to seem smaller still – and, with continuing population growth, it will certainly be much more crowded. In many ways, the face of humanity is being rapidly reshaped.

Two main trends – increasing life expectancy and falling fertility rates – mean that by 2025:

- Worldwide life expectancy, currently 66 years, will reach 73 years – a 50% improvement on the 1955 average of only 48 years.
- The global population, about 5.8 billion now, will increase to about 8 billion. Every day in 1997, about 365 000 babies were born, and about 140 000 people died, giving a natural increase of about 220 000 people a day.
- There will never have been so many older people and so relatively few young ones.
- The number of people aged over 65 will have risen from 390 million in 1997 to 800 million – from 6.6% of the total population to 10%.
- The proportion of young people under 20 years will have fallen from 40% in 1997 to 32% of the total population, despite reaching 2.6 billion – an actual increase of 252 million.

These demographic trends, which have profound implications for human health in all age groups, follow on the many positive changes that have occurred in the past 50 years. More people than ever before now have access to at least minimum health care, safe water supplies and

sanitation facilities. Most of the world's children are now immunized against the six major diseases of childhood – measles, poliomyelitis, tuberculosis, diphtheria, pertussis and neonatal tetanus.

During the same period there have been steady and sometimes spectacular advances in the control and prevention of other diseases, the development of vaccines and medicines, and countless other medical and scientific innovations. The past decades have seen the final defeat of smallpox, one of the oldest diseases of humanity, and the gradual reduction in several others, including leprosy and poliomyelitis.

### Crossing the threshold

Together, these and related achievements should help humankind to step confidently across the threshold into the new century. However, the future will pose many new as well as continuing challenges.

The war against ill-health in the 21st century will have to be fought simultaneously on two main fronts: infectious diseases and chronic, noncommunicable diseases. Many developing countries will come under greater attack from both, as heart disease, cancer and diabetes and other "lifestyle" conditions become more prevalent, while infectious illnesses remain undefeated. Of this latter group, HIV/AIDS will continue to be the deadliest menace.

This double threat imposes the need for difficult decisions about the allocation of scarce resources. Experience shows that reduced spending on controlling infectious diseases can cause them to return with a vengeance, while globalization – particularly expanding international travel and trade, including the transportation of foodstuffs – increases the risks of their global spread. At the same

time, the stealthy onset of chronic conditions also saps a nation's strength. This trend will increasingly be the main focus of attention in industrialized countries which, however, must not lower their guard against infectious diseases.

The past few decades have seen the growing impact on health of poverty and malnutrition; widening health inequalities between rich and poor; the emergence of "new" diseases such as HIV/AIDS; the growing problem of antibiotic-resistant infections; and the epidemic of tobacco-related diseases.

These are only some of the problems representing the unfinished agenda of public health actions at the end of one century and requiring urgent action at the beginning of the next.

This report looks at the health implications for all age groups – infants and small children under 5; older children of school age and adolescents (5-19 years); adults (20-64 years); and older people (65 and over). Some of the main findings of the report, as they apply to each age group, are summarized below.

### Infants and small children

- Spectacular progress in reducing under-5 mortality achieved in the past few decades is projected to continue, and could even accelerate. There were about 11 million deaths among children under 5 in 1995 compared to 21 million in 1955; there will only be 5 million deaths in 2025.
- The infant mortality rate per 1000 live births was 148 in 1955; 59 in 1995; and is projected to be 29 in 2025.
- The under-5 mortality rates per 1000 live births for the same years are 210, 78 and 37 respectively.
- In 1997, there were 10 million

deaths among children under 5 – 97% of them in the developing world, and most of them due to infectious diseases such as pneumonia and diarrhoea, combined with malnutrition.

- Most of these under-5 deaths are preventable. At least 2 million a year could be prevented by existing vaccines.
- Some 24 million low-birth-weight babies are born every year. They are more likely to die early, and those who survive may suffer illness, stunted growth or other health problems, even as adults.
- While most premature and low-birth-weight babies are born in the developing world, many born in industrialized countries owe their survival to high-technology neonatal care. Such care may have increasingly complex ethical implications.
- Tomorrow's small children face a "new morbidity" of illnesses and conditions that are linked to social and economic changes, including rapid urbanization. These include neglect, abuse and violence, especially among the growing numbers of street children.
- One of the biggest hazards to children in the 21st century will be the continuing spread of HIV/AIDS. In 1997, 590 000 children aged under 15 became infected with HIV. The disease could reverse some of the major gains achieved in child health over the past 50 years.
- Better prevention and treatment of some hereditary diseases in small children is likely.

### Older children and adolescents

Traditionally regarded as enjoying the healthiest phase of life, these youngsters have tended to receive insufficient public health attention. But today theirs is a "prime time" for health

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promotion to encourage them to establish healthy patterns of behaviour that will influence their development and health in later years.

- There will be an even greater need than at present for education and advice on unhealthy diet, inadequate exercise, unsafe sexual activity and smoking, all of which provoke disease in adulthood but have their roots in these early formative years.
- Research suggests that stress, poor physical surroundings and an inadequate care-giving environment during early childhood are related to violent and criminal behaviour at later ages. More children than ever are growing up in such circumstances.
- The transition from childhood to adulthood will be marked for many in the coming years by such potentially deadly "rites of passage" as violence, delinquency, drugs, alcohol, motor-vehicle accidents and sexual hazards. For many, especially those growing up in poor urban areas, adolescence will represent the most dangerous years of life.
- Sexuality and sexual activity, key aspects of affirming maturity and adulthood, are becoming more dangerous due to HIV and other sexually transmitted diseases, while globally there is still enormous ignorance about sex among young people, particularly adolescent males.
- In 1995, girls aged 15-19 gave birth to 17 million babies. That number is expected to drop only to 16 million in 2025. Pregnancy and childbirth in adolescence pose higher risks for both mother and child. Earlier sexual activity increases health hazards for women.

## Adults

Globally, adults are now surviving longer, largely because during the past half century, when they were children, epidemics of infectious diseases such as tuberculosis and respiratory disease were being better controlled. The continuing gains in the survival of infants and young children means that the adult population is increasing.

- Currently, just over half the population is of working age, 20-64; by 2025 the proportion will have reached 58%.
- The proportion of older people requiring support from adults of working age will have increased from 10.5% in 1955 and 12.3% in 1995 to 17.2% in 2025.
- The health of the adult population of working age will be vitally important if this age group is to support growing numbers of dependants, both young and old.
- However, more than 15 million adults aged 20-64 are dying every year. Most of these deaths are preventable.
- Among the most tragic of these deaths are those of 585 000 young women who die each year in pregnancy or childbirth.
- 2-3 million adults a year are dying of tuberculosis, despite the existence of a strategy that could effectively cure all cases.
- About 1.8 million adults died of AIDS in 1997 and the annual death toll is likely to rise.

The successes achieved in the past 50 years against microbial and parasitic diseases stem from the creation of a healthier environment, with improvements in hygiene and sanitation; treatment with effective and affordable antibiotic and antiparasitic drugs; and the availability of vaccines. Unfortunately, these types of drugs cannot be relied on to the same extent in

the future – because of the spread of strains of pneumonia, tuberculosis and malaria that are resistant to the most powerful medicines. Steady increases in cases of and deaths from tuberculosis are evidence of this trend.

- The future of infectious disease control is likely to lie with vaccines rather than drugs.
- In general, noncommunicable diseases such as coronary heart disease, cancer, diabetes and mental disorders are more common than infectious diseases in the industrialized world. Coronary heart disease and stroke have declined as causes of death in these countries in recent decades, while death rates from some cancers have risen.
- In developing countries, as their economies grow, noncommunicable diseases will become more prevalent, largely because of the adoption of “western” lifestyles and their accompanying risk factors – smoking, high-fat diet, lack of exercise. But infectious diseases will still be a major burden, none more so than HIV/AIDS.
- Cancer will remain one of the leading causes of death worldwide. Despite much progress in research, prevention and treatment, only one-third of all cancers can be cured by earlier detection combined with effective treatment. However, many of the remaining cancers could be prevented by a range of measures, including avoiding tobacco use and adopting a healthier diet.

Some likely trends to 2025 are given below:

- Overall, the risk of cancer will continue to increase in developing countries, with stable if not declining rates in industrialized countries. In individual countries, some cancers will become more common, others less common.

- Cases of and deaths from lung cancer and colorectal cancer will increase, largely due to smoking and unhealthy diet. Lung cancer deaths among women will rise in virtually all industrialized countries.
- Stomach cancer will become less common, mainly because of improved food conservation, dietary changes and declining related infection.
- Cervical cancer is expected to decrease further in industrialized countries due to screening; the possible advent of a vaccine would greatly benefit both developed and developing countries.
- Liver cancer will decrease as a consequence of current and future immunization against the hepatitis B virus in many countries and of screening for hepatitis C.
- Diabetes cases in adults will more than double globally, from 143 million in 1997 to 300 million in 2025, largely because of dietary and other lifestyle factors.

### Older people

- By 2025 there will be more than 800 million people over 65 in the world, two-thirds of them in developing countries.
- There will be 274 million people over the age of 60 in China alone – more than the total present population of the United States.
- Increases of up to 300% of the older population are expected in many developing countries, especially in Latin America and Asia, within the next 30 years.
- Population ageing has immense implications for all countries. In the 21st century, one of the biggest challenges will be how best to prevent and postpone disease and disability and to maintain the health, independence and mobility of an ageing population.

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- Even in wealthy countries, most old and frail people cannot meet more than a small fraction of the costs of the health care they need. In the coming decades, few countries will be able to provide specialized care for their large population of aged individuals.
- Some European countries already acknowledge that there is insufficient provision to meet with dignity the needs of all those over the age of 75, who currently consume many times more medical and social services than those under 75.
- Developing countries will face even more serious challenges, given their economic difficulties, the rapidity with which populations age, the lack of social service infrastructures, and the decline of traditional caring provided by family members.
- Many of the chronic conditions of old age can be successfully detected, prevented and treated, given sufficient resources and access to care.
- Worldwide, circulatory disease is the leading cause of death and disability in people over 65 years, but there is great potential for preventing and treating it.

### Women

Women's health is inextricably linked to their status in society. It benefits from equality, and suffers from discrimination. Today, the status and well-being of countless millions of women worldwide remain tragically low. As a result, human well-being in general suffers, and the prospects for future generations are dimmer.

In many parts of the world, discrimination against women begins before they are born and stays with them until they die. Throughout history, female babies have been unwanted in some societies and are at a

disadvantage from the moment of birth. Today, girls and women are still denied the same rights and privileges as their brothers, at home, at work, in the classroom or the clinic. They suffer more from poverty, low social status and the many hazards associated with their reproductive role. As a result, they bear an unfair burden of disadvantage and suffering, often throughout their lives.

Global population ageing is resulting in the evolution towards societies which are, for the most part, female. Yet while women generally live longer than men, for many of them greater life expectancy carries no real advantage in terms of additional years lived free of disability.

The status of women's health in old age is shaped throughout their lives by factors over which they have little if any control. If longer lives for women are to be years of quality, policies must be aimed at ensuring the best possible health for women as they age. These policies should be geared towards the problems that begin in infancy or childhood, and should cover the whole life span, through adolescence and adulthood into old age.

**Infancy and childhood.** The health of parents, particularly the mother before and during pregnancy, and the services available to her throughout her pregnancy, especially at delivery, are important determinants of the health status of their children. Infants whose health status is compromised at birth are more vulnerable to various health problems later in life. Girls who are inadequately fed in childhood may have impaired intellectual capacity, delayed puberty, possibly impaired fertility and stunted growth, leading to higher risks of complications during childbirth. Female genital mutilation, of which 2 million girls are at risk every year, or sexual abuse during

childhood, increase the risk of poor physical and mental health in later years.

**Adolescence.** Most reproductive health and family planning programmes have not paid enough attention to the special needs of adolescents. Premature entry into sexual relationships, high-risk sexual behaviour and lack of education, basic health information and services all compromise the current and future well-being of girls in this age group.

These girls are at increased risk of sexually transmitted diseases, including HIV/AIDS, early pregnancy and motherhood, and unsafe abortion. Adolescent girls are not physically prepared for childbirth, and are much more at risk of maternal death than women in their twenties. Inadequate diet during adolescence can jeopardize girls' health and physical development, with permanent consequences. Iron-deficiency anaemia is particularly common among adolescent girls.

**Adulthood.** The consequences of poor health in childhood and adolescence, including malnutrition, become apparent in adulthood, particularly during the childbearing years. This time is a particularly dangerous phase in the lives of many women in developing countries, where health care services, especially reproductive health facilities, are often inadequate and where society puts pressure on couples to have many children. More than 50% of pregnant women in the developing world are anaemic.

About 585 000 women die each year of pregnancy-related causes. Where women have many pregnancies the risk of related death over the course of their lifetime is compounded. While the risk in Europe is one in 1400, in Asia it is one in 65, and in Africa, one in 16.

An estimated 50 million adult women in developing countries are

classified as being severely underweight, and about 450 million suffer from goitre.

**Older women.** Many millions of women are made old before their time by the daily harshness and inequalities of their earlier lives, beginning in childhood. They experience poor nutrition, reproductive ill-health, dangerous working conditions, violence and lifestyle-related diseases, all of which exacerbate the likelihood of breast and cervical cancers, osteoporosis and other chronic conditions after menopause. In old age poverty, loneliness and alienation are common.

## Leading and responding

### WHO, 1948-1998

The report first examines the origins of WHO, including its precursor organizations in the 19th and early 20th centuries, the international discussions at the end of the Second World War on the need for a new international health organization, and the setting up of WHO in 1948. It describes how the Organization approached the health problems of that time, how it dealt with the need to decentralize its activities and set up the six WHO regions, and how it established its working methods.

Up to and including the 1960s, the emphasis was on dealing with dangerous infectious diseases. In the 1970s there was more emphasis on the evaluation of developmental progress in general and social progress in particular, including the concept of health development, as distinct from the provision of medical care. A landmark in the development of health policy was the International Conference on Primary Health Care which took place in 1978 in Alma-Ata, following which it was universally recognized that health was

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a powerful lever for socioeconomic development and peace. In 1981 the Health Assembly adopted the Global Strategy for Health for All by the year 2000 which has since governed the health actions of the Organization and its Member States.

The period since the late 1980s has seen global political and economic upheaval, local civil strife and armed conflict, greater emphasis on market-based economies and democratic reforms, and a reduction in the resources available for international development activities and for national funding for health and social sector problems. These global changes were accompanied by other transitions ( environmental, demographic), that significantly affected health.

#### **How WHO works and what it does**

The report describes the way in which the Organization functions in order to carry out the mandate of its Constitution. For instance, it fulfils a wide range of normative activities, setting standards. Examples are the International Classification of Diseases, the International Health Regulations, the Nonproprietary Names for Pharmaceutical Substances, the Guidelines for Drinking-Water Quality, the Codex Alimentarius, the Code of Marketing of Breast-milk Substitutes, and the Organization's work in the field of biological standardization.

General programmes of work lay down medium-term objectives for a specified period (4-6 years), while programme budgets set out immediate objectives for activities to be undertaken during a biennium. Different emphasis was given at different times to WHO's role and functions in response to the world health situation. Functions have traditionally been grouped into two categories: direction

and coordination of international health work, and technical cooperation with countries. Within this framework, WHO's activities were aimed at yielding results that could be demonstrable to governments. The activities therefore followed a careful analysis with countries of their needs in support of their strategies. Programme orientation and targets have included strengthening national health services, promoting and protecting health, preventing and controlling specific health problems, and promoting medical and health research.

An essential task of the Organization is gathering vital information. Examples are the statistical services, and disease surveillance. The information, once collected, has to be processed and disseminated. For the latter purpose, WHO has public information, library and publishing services which use a variety of methods, including the most up-to-date communication techniques.

#### **Measuring health**

In view of major limitations imposed by the lack of suitable measurements that can capture the meaning of health as defined in the WHO Constitution, the assessment of health trends given in the report uses conventional indicators such as life expectancy, mortality and morbidity. Efforts are under way, however, to develop indicators of positive health such as health expectancy and its variants, but problems of standardization of definitions and comparability of values derived inhibit their usage for trend assessment at this stage.

#### **Mortality trends**

The general trend in the number of deaths at different ages is downward (for both the developed market

economies and the LDCs), except in the age group 65 and above. Overall, the number of deaths worldwide was the same in 1995 as in 1955 but with a significant decline of about 50% among children under 5, and about 30% in the age group 5-19. There was an increase of about 5% in the working population aged 20-64. However, a relatively small reduction of about 18% was experienced by the female population in the reproductive age group 15-49.

In the LDCs however, the decreasing trend in the proportion of deaths among children, and a rapid increase in the proportion of deaths among older people, are noticeable. The proportion of deaths among adults – the working-age population – has been increasing from 25% in 1975 to 29% in 1995, and is expected to be almost 36% in 2025.

### Disease trends

Of more than 50 million deaths worldwide in 1997, about one-third were due to infectious and parasitic diseases such as acute lower respiratory diseases, tuberculosis, diarrhoea, HIV/AIDS and malaria; about 30% were due to circulatory diseases such as coronary heart disease and cerebrovascular diseases, and about 12% were due to cancers. While deaths due to circulatory diseases declined from 52% to 45% of total deaths in the developed world during the period 1985-1997, they increased from 16% to 25% of total deaths in the developing world. Cancer deaths increased from 6% to 9% of total deaths in the developing world but they formed a constant proportion of 21% of total deaths in the developed world. Infectious and parasitic diseases decreased from 5% to 1% of total deaths in the developed world and from 45% to 43% of total deaths in the developing world.

During the last few decades, substantial progress has been made in controlling some major infectious diseases. Some have disappeared or are almost eliminated as public health problems, but others remain daunting threats.

Global eradication of *smallpox* was declared in 1980 at the end of an eradication campaign which began in 1967.

The tropical disease *yaws*, which mainly affects the skin and bones, has virtually disappeared.

The latest in a series of *cholera* pandemics has been affecting much of the world since the 1960s, and the disease is still endemic in some 80 countries.

The global threat of *plague* has declined in the last four decades, largely due to the impact of antibiotics and insecticides and other control measures, but cyclical epidemics still occur.

The largest *yellow fever* epidemic ever recorded was in Ethiopia in 1960-1962, causing about 30 000 deaths. There are about 30 000 deaths globally every year among about 200 000 annual cases, a decline largely due to immunization. However, since the late 1980s there has been a dramatic resurgence of yellow fever in Africa and the Americas.

Improvements in sanitation and hygiene standards in recent decades have made outbreaks of *relapsing fever* transmitted by lice rare; they are most likely to occur in unhygienic and crowded conditions arising from wars or natural disasters.

Recent environmental changes closely linked to water resources development, and increases in population densities, have led to the spread of *schistosomiasis* to previously non-endemic or non-endemic areas and the disease remains endemic in 74 developing countries, mostly in Africa.

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Once a target for eradication, *malaria* remains a major threat, and the disease is endemic in 100 countries

The *onchocerciasis* Control Programme which began in West Africa in 1974 has since protected an estimated 36 million people from the disease. The African Programme for Onchocerciasis Control began in January 1996 and covers 19 additional countries. The Onchocerciasis Elimination Programme in the Americas was stated in 1991 in six Latin American countries and aims to eliminate severe pathological manifestations of the disease and to reduce morbidity in the Americas through the distribution of ivermectin. It is expected that the global elimination of onchocerciasis as a public health problem will be achieved before 2008.

*Chagas disease* occurs only in the Americas from Mexico to Argentina, and the disease is targeted for elimination of transmission in the Southern Cone countries of Latin America by 2003.

There has been an important recrudescence of *sleeping sickness* (African trypanosomiasis), particularly in central Africa, where reported cases have more than doubled over the past few years. In 1997, the World Health Assembly acknowledged the danger of epidemics in a number of African countries.

Since the first effective injectable vaccines against *poliomyelitis* were introduced in 1955, the disease has gradually been eliminated in much of the world, with cases declining by over 90% since the campaign for global eradication by the year 2000 was launched in 1988.

For *leprosy*, WHO developed and promoted multidrug therapy, which it began to recommend in 1981, since when the global leprosy burden has been reduced greatly. WHO's goal is to eliminate leprosy as a public health problem by the year 2000.

Progress towards the elimination of *dracunculiasis* (guinea-worm dis-

ease) in the past decade has been spectacular, with the number of cases falling dramatically worldwide and 21 formerly endemic countries being certified free of dracunculiasis transmission.

The outlook for *filariasis* control and elimination is encouraging, and in 1997 the World Health Assembly called for the elimination of lymphatic filariasis as a public health problem globally.

For the blinding disease *trachoma* the target is elimination by 2020 through long-lasting antibiotics.

Although there is hope of eliminating *measles* by the year 2000, it still kills nearly 1 million children a year.

*Tetanus* of the newborn is the third killer of children (after measles and pertussis) among the six EPI vaccine preventable disease, and is a concern in all WHO regions except Europe.

Once also a target for eradication, *malaria* remains a major threat, and the disease is endemic in 100 countries. The aim of the current global malaria strategy is to reduce mortality by at least 20% compared to 1995 in at least 75% of affected countries by the year 2000.

Complacency towards *tuberculosis* in the last three decades led control programmes to be run down in many countries. The result has been a powerful resurgence of the disease, now estimated to kill 2.9 million people a year. One-third of the incidence in the last five years can be attributed to co-infection with HIV.

Epidemic *meningitis* is a recurrent problem in the "meningitis belt" of Africa stretching from Senegal to Ethiopia and including all or part of at least 15 countries with an estimated population of 300 million people.

Increasing urbanization during the last decades has led to an increase in the prevalence of *dengue and*

**dengue haemorrhagic fever.** These conditions are reported from over 100 countries in all WHO regions except Europe. Dengue fever, and in particular life-threatening dengue haemorrhagic fever (DHF), often occurs in massive epidemics. WHO's strategy continues to be based on prevention of transmission by controlling the vector.

There is a disturbing increase in the number of **leishmaniasis** infections. The disease is related to economic development and environmental changes which increase exposure to the sandfly vector. More recently the combination of visceral leishmaniasis and AIDS has appeared with the spread of the AIDS pandemic.

The **hepatitis B** virus infection (HBV) is a global problem, with 75% of the world's population living in areas where there are high levels of infection. More than 2 billion people worldwide have evidence of past or current HBV infection, and 350 million are chronic carriers of the virus.

First identified in 1989, the **hepatitis C** virus (HCV) has now become a major public health problem. The incidence of HCV infection worldwide is not well known, but WHO estimates that 30% of the world population is infected with HCV and 170 million individuals are chronic carriers at risk of developing liver cirrhosis and liver cancer.

The increased life expectancy recorded in recent decades, together with changes in lifestyle stemming from socioeconomic development, have paradoxically favoured **non-communicable diseases**, especially circulatory disorders, cancer, and some forms of mental illness. **Coronary heart disease** and **stroke** account for 12 million deaths a year, cancer kills 6 million, and 3 million deaths are due to chronic obstructive pulmonary disease (COPD). These and other noncommunicable diseases

now cause nearly 40% of all deaths in developing countries, where they affect younger people than in industrialized countries. The epidemiological transition, with its double burden of infectious and noncommunicable diseases, is common to many developing countries, where 64% of deaths due to circulatory diseases, 60% of cancer deaths and 67% of COPD deaths now occur.

In many parts of the world, dramatic shifts in **cancer** occurrence are being observed. In several newly industrialized regions cancer has become, unexpectedly quickly, one of the leading causes of death. Cancer of the breast, colon and prostate have emerged in several countries in which they were hardly known 20-30 years ago. For all countries, lung cancer is the most common cancer in men, followed in developed regions by prostate cancer, colorectal cancer and stomach cancer. In developing regions, stomach cancer is second, followed by liver cancer and cancers of the mouth and pharynx. In women, breast cancer is the most common in affluent populations, followed by colorectal cancer, lung cancer and stomach cancer. In developing areas, cervical cancer is most common, but breast cancer is almost as common; stomach cancer and lung cancer are third and fourth respectively. The most remarkable changes in the rankings compared to 10 years ago are the steep upward trend of prostate cancer (partly due to the introduction of early detection programmes), the increase in breast cancer, especially in developing countries, and the increase in lung cancer worldwide.

Population ageing, unhealthy diets, obesity and a sedentary lifestyle are the main factors that explain the alarming upward trend in recent years in **diabetes mellitus**.

Along with increased longevity and socioeconomic development has

In many parts of the world, dramatic shifts in **cancer** occurrence are being observed

WHO has shown that perinatal and neonatal deaths can be reduced by 30%

come an increase in some forms of **mental disorders** in the last two or three decades. Social and environmental factors play a role, particularly in explaining increases in alcohol and drug abuse, suicide, violence and other behavioural problems.

During the last 20 years numerous new infectious diseases have emerged and others have re-emerged in many parts of the world. Of these, the human immunodeficiency virus (HIV) that causes **AIDS** has had by far the most profound global impact. Other new diseases include Legionnaires' disease, Ebola haemorrhagic fever, Rift Valley fever, monkeypox, and the new variant of Creutzfeldt-Jakob disease (nvCJD).

The appearance in humans of a new influenza virus, A(H5N1), in Hong Kong at the end of 1997, whose animal source is suspected to be poultry, was a reminder of the need for continuing strong global **influenza** surveillance.

### Health expectancy

For a long time, knowledge of life expectancy at different ages, the infant mortality rate and the distribution of the causes of death according to the principal disease headings was sufficient to assess the health status of populations and to determine national public health priorities. However, during the last 20 years the need for a new type of indicator has arisen as a result of changes such as the lengthening of life expectancy due to the fall in mortality at older ages, and the issue of quality of the years lived, at very old ages in particular.

As not much is known about the limits of human longevity, health expectancy indicators – which provide information on the population's functional state and on its vitality as well as on its quality of life – are well adapted to the new conditions.

*Life expectancy without severe disability at age 65 in men has been shown to progress roughly in parallel with total life expectancy. Whatever the country examined, the increase in life expectancy is not accompanied by an increase in the time spent with severe disability the results indicate at worst a pandemic of light and moderate, but not of severe disabilities.*

### Health across the life span

The main findings of the report are summarized in the introduction. WHO's response to the problems identified is outlined below.

#### Infants and small children

WHO has participated in the achievement of outstanding improvements in child health during the last 50 years. Progress has been made in eliminating neonatal tetanus through maternal immunization and promoting breast-feeding and baby-friendly hospitals. WHO has shown that perinatal and neonatal deaths can be reduced by 30%, by using an essential set of interventions for the mother during pregnancy and delivery and for the newborn child after birth.

WHO's efforts to reduce child mortality have evolved from single-disease programmes in the 1970s to the current strategy of integrated management of childhood illness. WHO has promoted the wide use of oral rehydration therapy (ORT) to reduce mortality from acute diarrhoea and associated malnutrition. In the late 1980s it was shown that acute respiratory infections, mainly pneumonia, were the major killers of children aged under 5. Simplified standard case management became the basis of WHO's efforts to reduce pneumonia mortality. The programmes for control of diarrhoeal dis-

eases and for acute respiratory infections were merged in 1990. By then it was clear that most childhood deaths were caused by a small number of conditions: diarrhoea, pneumonia, measles, malaria and malnutrition. In 1992, WHO and UNICEF worked out clinical guidelines that integrated all five conditions. The resulting strategy is called integrated management of childhood illness.

In 1992, the World Declaration and Plan of Action for Nutrition was adopted, including nine goals for the year 2000 and nine action-oriented strategies for improving nutrition. By 1997, over 160 countries had received technical and/or financial support from WHO for developing and implementing their national food and nutrition policies and plans. The WHO global database on malnutrition and child growth now covers over 90% of the world's under-5 children, and its databank on breast-feeding covers 65 countries. The baby-friendly hospital initiative is being implemented in over 170 countries.

WHO's Expanded Programme on Immunization was launched in 1974 and by 1995, 80% of the world's children had been immunized against diphtheria, tetanus, whooping cough, poliomyelitis, measles and tuberculosis, compared to less than 5% in 1974. Following the successful eradication of smallpox, poliomyelitis has become the second disease targeted for global eradication. Virtually all endemic countries in the world have now begun to implement the WHO-recommended strategies to eradicate polio. By 1996, estimated measles morbidity and mortality worldwide had fallen by 78% and 88%, respectively compared to the prevaccine era.

### Older children and adolescents

Adolescence is a crucial time in the

cycle of human development with implications for individual and public health. The main objective of WHO's general approach has been to expand the knowledge base for adolescent health and development, to understand the meaning, parameters and status of adolescent physical, psychological and social health, and to elucidate the specific actions that will promote the health and development of young people in all societies. The main results so far have been the dissemination of vital information, and publicizing priority needs.

The World Health Assembly in 1989 called on Member States to provide resources and develop programmes to meet the health needs of young people. A number of databases on major health issues for young people were established, including sexual reproductive health.

The key to promoting health in children of school-age and adolescents is health education in the school setting. The WHO Global School Health Initiative recommends that the school environment must provide safe water and sanitary facilities; protect from infectious diseases; protect from discrimination, harassment, abuse and violence; and reject the use of tobacco, alcohol and illicit drugs. Every school must enable children and adolescents at all levels to learn critical health and life skills so that they can make healthy choices and adopt healthy behaviour throughout their lives.

### Adults

Since 1971, WHO has specifically highlighted the family as the core unit for health care, leading to the concept of family health. By safeguarding the health of mothers and that of workers, the family unit is able to protect the health of dependent children and elderly.

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Many WHO programmes are now addressing women's needs

By the late 1980s and early 1990s it was clear that, with increasing co-infections with HIV and the spread of multidrug-resistant strains, the *tuberculosis* epidemic was growing worse. In 1991, the World Health Assembly called for the strengthening of district-centred tuberculosis programmes and the widespread implementation of directly observed, standardized, free, short-course chemotherapy (DOTS). In 1993, the World Health Assembly declared a global tuberculosis emergency. The DOTS strategy is being used to document and manage the cure of cases of tuberculosis, thus reducing the sources of infection in the community.

In the 1980s, WHO spearheaded the emergency response to alert world authorities to national epidemics of *HIV/AIDS*. Since 1986, the Organization has helped Member States to establish or strengthen their national AIDS programmes; to carry out rapid assessment; to improve diagnostic, laboratory and blood screening capacity; and to plan national activities and long-term response based on reliable projections. The development of a cheap, safe and effective vaccine is a priority although the outlook is extremely long term, at least 10 years. WHO in collaboration with UNAIDS has three major roles in this area: supporting and coordinating research; negotiating with industry to ensure that the products of research will be available to those most in need; and seeking mechanisms to encourage vaccine research which is commercially far less attractive than research on new drugs.

The majority of occupational diseases can be prevented through action in the work environment, improvement of working conditions and the reduction of harmful exposure. WHO's work on *occupational health* dates back to 1950, when it

set up with ILO a joint committee on the subject. At the beginning of the 1990s, WHO set up a new agenda for work, development and health, which led to the Global Strategy for Occupational Health for All. Member States are urged to devise national programmes, with special attention to full occupational health services. WHO promotes health in the workplace in a wider sense through the concept of the healthy company or healthy organization.

*Special concerns of women.* Many WHO programmes are now addressing women's needs, and the Organization is developing a policy on gender and health which should facilitate this work. Some regional offices are undertaking the collection of data to develop country women's health profiles. In 1997, WHO produced information packs which include the most up-to-date prevalence data, and has worked with professional associations to raise awareness of these issues. A multicountry study on violence against women in families, looking at prevalence, health consequences and risk and protective factors, was launched, covering countries from all regions.

The Global Commission on Women's Health focuses on three key areas: education for the health of girls and women; violence against women; and maternal morbidity and mortality. Activities at the country and regional levels have focused on data collection, literature reviews and research endeavours in areas where gaps in knowledge about women's health exist.

WHO's activities in reproductive health in 1997 include the expansion of the research initiative on the role of men in reproductive health; publication of data from the WHO collaborative study of cardiovascular disease and steroid hormone contraception; the completion of data collec-

tion – and initiation of final analysis – of a large postmarketing surveillance study of Norplant contraceptive implants; and the launching of several regional initiatives on the subjects of female genital mutilation, the increasing rate of Caesarean section and the quality of antenatal care.

### Older people

In 1979 the World Health Assembly adopted its first resolution specifically targeted to health care of older people, that led to the establishment of a global programme. WHO has organized scientific meetings on ageing-related issues such as nutritional status, cardiovascular diseases, mental health, prevention of respiratory infections, family life and support, prevention of accidents, and health promotion. Published in 1984, *The uses of epidemiology in the study of the elderly people* stimulated new approaches to research on ageing. Activities from the late 1980s to the mid 1990s were focused on determinants of healthy ageing, osteoporosis and age-associated dementias. In 1994, the programme was reoriented towards "ageing and health".

The WHO programme deals with both old age and ageing. It emphasizes health promotion, with a focus on healthy ageing, or ageing well. It takes account of gender differences evident in both health and ways of living, and the cultural settings in which individuals' age determine their health in older age. It is concerned also with strategies to maintain cohesion between generations; and the many ethical issues of population ageing.

### The changing world

There are three main global trends that affect health: economic trends, population trends and social trends.

Under **economic trends** the report examines the growth of the economy during three periods: 1950-1973, an age of unparalleled prosperity; 1973-1993, when most of the world economy operated below its potential; and the period since 1993, when economic recovery began. Next, an account is given of increasing inequalities and the global burden of debt. Finally, sectoral changes and emerging opportunities are analysed.

The issues explored under **population trends** are: population size and growth; international migration and refugees; age composition and dependency ratios; and fertility – with a discussion of contraceptive prevalence, adolescent fertility, and infertility.

Under **social trends**, urbanization is first examined – about 45% of the world's population now live in urban areas. Environment and housing have a major impact on health and are next examined. Housing is of central importance to quality of life, and the question of housing poverty is discussed. In almost all countries there are people who suffer from hunger and malnutrition, and food and nutrition – including food security, urban agriculture, and nutritional status – are the next subjects explored. Education also obviously has a direct impact on health, quality of life and employment prospects, and current attempts to increase the number of school enrolments of both boys and girls are highlighted in the report. Finally the interrelated problems of unemployment (including youth unemployment and the need for educated labour) and poverty (including the need to implement poverty programmes) are carefully examined.

### Achieving health for all

In 1977, the World Health Assembly decided that the main social target of

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Overall there has been strong political commitment to achieving the health-for-all goals

governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. In other words, as a minimum, all people in all countries should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live. The third evaluation of progress in implementing the Global Strategy for Health for All by the year 2000 (carried out in 1997) has shown significant improvements worldwide both in health status and in access to health care. Increasing numbers of Member States are carrying out monitoring and evaluation of their health-for-all strategies at specified intervals; for the first evaluation in 1985, 147 out of 166 Member States reported, at least with respect to the global indicators. In 1997, 158 out of 191 Member States did so, although some indicators were more widely covered than others – e.g. 90% of countries reported on immunization, but only 30% on access to local health services.

Overall there has been strong political commitment to achieving the health-for-all goals, and most countries have endorsed at the highest level the necessary policies and strategies. Existing health services are being reoriented to a health system based on primary health care, taking into account the role of the individual, the family, the community and local nongovernmental organizations, as well as health personnel. Substantial attention has been given to the health of women and their role in development.

Globally there have been significant increases in the following elements of primary health care since the first evaluation in 1985: immunization against the eight EPI target diseases;

trained attendance at childbirth; local health services; and water supply and excreta-disposal facilities. Gaps between the developing and developed countries have been significantly reduced, although improvements in the least developed countries have been less satisfactory.

Coverage levels for the various elements of primary health care have improved in the developing countries. In these countries, 65% of pregnant women have access to antenatal care services and 53% to skilled attendance at delivery. In rural areas, 75% of the population have access to a safe water supply, and about 34% to adequate sanitation.

The rapid increase in coverage of immunization programmes from 5% in the 1970s to over 80% in 1996, has had a big impact on the health status of children. These improvements, however, are less significant in the LDCs than in other developing countries.

It is estimated that by 1997, 106 countries representing 64% of the global population had an average life expectancy at birth above 60 years; an infant mortality rate below 50 per 1000 live births, and an under-5 mortality below 70 per 1000 live births. In 1975, 69 countries representing 30% of the global population met these targets.

There was inevitably concern about resources for health in view of the growing costs of health services. Countries use various methods to finance their health systems, but few countries, even the most prosperous, are satisfied with the distribution of financial resources between promotive and curative services. There are also many problems associated with the provision of human resources for health – problems relating to education and training and to distribution.

As health systems become more complex and costly, and as the appli-

cation of new and existing technologies becomes more refined, making the right decisions about the allocation of often scarce resources has become more difficult. Reproducibility and comparability of results are essential to the success of health laboratories. The concept of quality assurance – comprising external quality assessment and internal quality control – has been promoted by WHO and accepted worldwide. The Organization has also emphasized the provision and improvement of the quality of radiological services for diagnosis and therapy, areas that have seen spectacular progress.

### WHO worldwide

For each of the six WHO regions, health trends since 1948 are summarized, as well as current activities or problems in particular areas such as health sector development, human resources for health, maternal and child health, epidemiological surveillance systems, new and emerging diseases, water quality and supply, and malaria. In respect of each region future prospects and challenges for the 21st century are considered.

### Global partnerships for health

WHO has always worked in partnership with the United Nations itself and with other entities within the system. Examples are its longstanding cooperation with the United Nations in the sphere of drug dependence, and its more recent participation in the system-wide Special Initiative on Africa. There has always been very close cooperation between WHO and UNICEF, especially in the field of immunization. Other examples of partners in the United Nations system are ILO (for occupational

health), UNESCO (for school health) and FAO (for nutrition).

WHO also works with the World Bank, regional development banks, the European Union, and a wide range of nongovernmental organizations – some engaged in a particular branch of medical science and others representing a more general interest.

In response to emergencies – natural and other disasters – WHO works with Member States, UNICR and other international agencies. WHO links emergency management policy to development in order to help affected countries to achieve long-term improvements in public health systems – a prerequisite for sustainable development.

In the field of research, the International Agency for Research on Cancer, subject to the general authority of WHO, concentrates on environmental biology and cancer epidemiology. With UNDP, UNFPA and the World Bank as co-sponsors, WHO has since 1972 had a special programme of research, development and research training in human reproduction. There is a similar arrangement with UNDP and the World Bank for WHO's special programme for research and training in tropical diseases, established in 1975.

WHO's Advisory Committee on Health Research has developed a research policy agenda to complement and support the Organization's policy and strategy for health for all in the 21st century. WHO has always had a network of collaborating centres in many fields of health, which are the keystones of the collaborative research capacity and institutional strengthening efforts developed under the Organization's leadership at all levels.

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## Health agenda for the 21st century

*The World Health Report 1998* and its three predecessors have helped create a comprehensive map of the major issues that have dominated world health in the second half of the 20th century. The priorities for international action recommended in these four reports chart the future for health action in the 21st century.

*The World Health Report 1995 – Bridging the gaps*, identified poverty as the greatest cause of suffering and showed the widening health gaps between rich and poor. It recommended using available resources as effectively as possible and redirecting them to those who need them most.

*The World Health Report 1996 – Fighting disease, fostering development* identified three main priorities: completing the unfinished business of eradication and elimination of specific diseases; tackling "old" diseases such as tuberculosis and malaria, and the problems of antimicrobial resistance; and combating newly-emerging diseases.

*The World Health Report 1997 – Conquering suffering, enriching humanity* stressed the importance of health expectancy over life expectancy in the context of chronic noncommunicable diseases. Its main recommendation was the integration of disease-specific interventions into a comprehensive chronic disease control package incorporating prevention, diagnosis, treatment, rehabilitation and improved training of health professionals.

This year's report has shown the major developments and achievements in health in the past 50 years and described the economic trends, population trends and social trends which will influence health in the early 21st century. Substantial gains

have been made in life expectancy and in infectious disease control; these need to be safeguarded.

On the *unfinished agenda* for health, poverty remains the main item. The priority must be to reduce it in the poorest countries of the world, and to eliminate the pockets of poverty that exist within countries. Policies directed at improving health and ensuring equity are the keys to economic growth and poverty reduction.

*Safeguarding the gains* already achieved in health depends largely on sharing health and medical knowledge, expertise and experience on a global scale. Industrialized countries can play a vital part in helping solve global health problems. It is in their own interests as well as those of developing countries to do so.

Increased international cooperation in health can be facilitated by a managed global network making use of the latest communication technologies. Global surveillance for the detection of and response to emerging infectious diseases is essential. As a result of increased global trade and travel, the prevention of foodborne infections in particular is of increasing importance. Wars, conflicts, refugee movements and environmental degradation also facilitate the spread of infections as well as being health hazards in themselves.

*Enhancing health potential* in the future depends on preventing and reducing premature mortality, morbidity and disability. It involves enabling people of all ages to achieve over time their maximum potential, intellectually and physically through education, the development of life skills and healthy lifestyles.

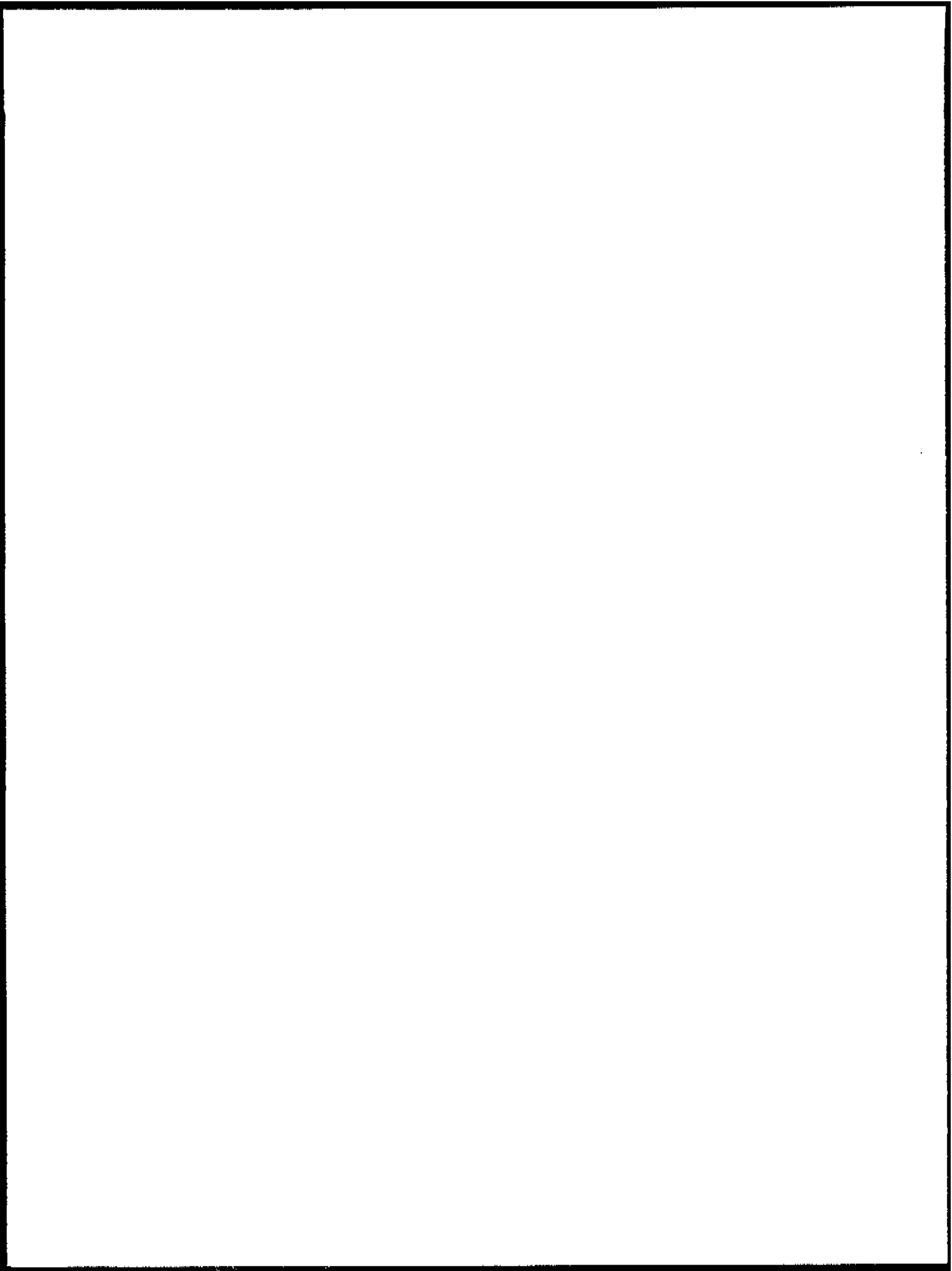
The implications of *healthy ageing* – the physical and mental characteristics of old age and their associated problems – need to be better understood. Much more research is

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required in order to reduce disability among older age groups.

Concern for the older members of today's society is part of the intergenerational relationships that need to be developed in the 21st century. These relationships, vital for social cohesion, should be based on equity, solidarity and social justice.

The young and old must learn to understand each other's differing aspirations and requirements. The young have the skills and energies to enhance the life quality of their elders. The old have the wisdom of their experience of life to pass on to the children of today and of coming generations.



# W

hat will life be like in the 21st century? Will the world continue to grow healthier, with ever more diseases conquered by scientific advances, and life expectancy extending even longer? Or will new diseases and failing drugs cancel out these gains? If populations live longer, will these extra years be healthy and productive or merely an extended sentence of suffering?

Will continuing population growth finally stifle the planet's life, depleting finite resources, polluting beyond repair, and making megacities and urban slums the home for more and more? Or will better family planning options – and mounting deaths from AIDS – reverse recent trends?

Will we conquer malnutrition, obesity, drug abuse, poverty, depression, and the common cold? Will we eradicate polio, leprosy, measles, and other ancient foes? Will deaths from heart disease and cancer finally begin to decline? And when science surely delivers spectacular new therapeutic tools, who will be able to afford them? Will the gaps between the health of rich and poor grow ever wider?

These are some of the many questions addressed in *The World Health Report 1998*. Issued as the World Health Organization marks its 50th anniversary, the report takes an expert look at health trends over the past five decades, assesses the current global situation, and predicts how health conditions, diseases, and the tools for managing them will evolve up to the year 2025. Using the latest data gathered and validated by WHO, the report paints a picture of a world poised to achieve unprecedented good health – if the lessons learned during recent decades are understood and heeded.

