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The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health problems of the countries it serves. The European Region embraces some 870 million people living in an area stretching from Greenland in the north and the Mediterranean in the south to the Pacific shores of the Russian Federation. The European programme of WHO therefore concentrates both on the problems associated with industrial and post-industrial society and on those faced by the emerging democracies of central and eastern Europe and the former USSR. In its strategy for attaining the goal of health for all the Regional Office is arranging its activities in three main areas: lifestyles conducive to health, a healthy environment, and appropriate services for prevention, treatment and care.

The European Region is characterized by the large number of languages spoken by its peoples, and the resulting difficulties in disseminating information to all who may need it. Applications for rights of translation of Regional Office books are therefore most welcome.
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Contents

Foreword v

Introduction 1

1 The prerequisites for health 5

2 The health of people in Europe 13

3 Public health action 45
   Healthy lifestyles 45
   A healthy environment 58
   Appropriate health care 64

4 The principles and practice of health for all 77
   Health policies 77
   The foundations of public health action 78

5 Conclusion 83

Annex 1 85
   Basic socioeconomic indicators for the Member States of the WHO European Region

Annex 2 89
   Assessment chart of progress towards health for all
Foreword

This is the report on the third evaluation of the implementation of the health for all strategy in the WHO European Region. Previous large-scale evaluations were conducted in 1985 and 1990/1991, supplemented by two rounds of monitoring in 1987/1988 and 1993/1994. We have thus established a tradition of regularly analysing and reporting on a wide range of public health issues, addressed within the familiar structure of the WHO European strategy for health for all and its 38 targets. This report, produced by the WHO secretariat, has been made possible through contributions of data, results and observations by a large number of individuals and teams.

Reported here is the collective experience of the European Member States. Past experience is a rich source of information on and knowledge of which policies and strategies have worked well, and which have required modification to better adapt them to the constantly changing circumstances. Yet the dearth of valid and relevant data and indicators has still, at times, prompted experts involved in the analysis to settle not for quantitative but for qualitative assessment of progress and trends.

This report describes the major issues and developments in health in a concise manner. It is not easy, therefore, to choose a few aspects to highlight here. Nevertheless, I think that three key issues dominate: the role of the socioeconomic prerequisites for health, equity in health, and the mortality crisis in the newly independent states that emerged from the dissolution of the USSR.

The fundamental importance of the socioeconomic prerequisites for health is imbedded in the health for all policy. Many socioeconomic indicators show significant changes, particularly in eastern Europe. According to the United Nations Development Programme, for example, if US$ 4 (in 1990 purchasing power parities) per day is taken as the poverty threshold for the “countries in transition” in the European Region, the average incidence of income poverty in these countries increased between 1988 and 1994 from 4% to 32%, and the situation has surely worsened since then. In addition, social upheaval and armed conflicts have inflicted major damage on health in several parts of the Region. These developments are the underlying causes of many of the recent health problems in the transition countries, and the enormous difficulties for their health care systems. On the other hand, however, the ravages of these socioeconomic changes have been contained relatively well by the health systems in many of these countries.
Western European countries have continued to move along with slow economic growth but steadily increasing unemployment, which is becoming more and more of a serious problem from the political, economic and health points of view. Nevertheless, there have also been promising developments. The European Union has been further consolidated, creating more favourable prospects for public health action. In particular, the Public Health Article of the Treaty on European Union (Treaty of Amsterdam) has the potential for strengthening the health promotion programme for the European Union countries. Furthermore, ten countries from the central and eastern part of the WHO European Region have become candidates for accession to the European Union.

Equity continues to be a major issue across Europe. The differences in the levels of and trends in the main health indicators between countries remain unacceptably wide, and many are increasing. For example, given the current mortality patterns, a child born in the newly independent states today will live, on average, some 11 years less than a child born in the European Union. The difference is nearly 15 years between the countries with the highest and lowest life expectancies in the Region. Differences between social groups within counties also increasingly gain the attention of the public and policymakers and have clearly moved higher up on the political agenda, especially in western Europe. It cannot be said too often that equity in health is not only a major health issue but also a social, economic and political issue: an issue of social ethics and responsibility.

A mortality crisis has severely affected most of the newly independent states, with mortality trends strikingly similar in most of these countries. There was a drop in mortality around 1985, due to what has become known as the Gorbachov alcohol campaign. Mortality then rose slowly until around 1991, after which there was a very sharp rise followed by a downturn more recently. The evaluation reported here established that the very sharp and large increase in mortality in these countries was not due simply to the socioeconomic difficulties of the transition to a market economy, but that alcohol consumption patterns also played a major role. It is estimated that about 20% of the increase in premature mortality in these countries can be explained by an increase in alcohol poisoning, and this estimate could be roughly doubled if other alcohol-related deaths such as suicides and other accidents were taken into account.

The importance of this crisis for Europe as a whole can also be seen from the fact that, for the first time since the Second World War, life expectancy in the
Region declined from 73.1 years in 1991 to 72.4 years in 1994. This virtually takes the Region back to the mid-1980s in terms of life expectancy, a setback of some 10 years.

The third health for all evaluation in the WHO European Region has, once again, pinpointed the areas of concern for Europe and shown the importance of regular and dedicated monitoring and evaluation of health development. It shows that without policies and actions in the areas identified, the required improvement in health will not take place, and related socioeconomic development will suffer. In general, the health for all monitoring and evaluation exercise has been a valuable learning process at all levels, whereby the Member States of the European Region collectively approach the twenty-first century better equipped to pursue the renewed health for all policy of solidarity and equity in health.

J.E. Asvall
WHO Regional Director for Europe
Introduction

This is the report of the WHO Regional Office for Europe on the third evaluation of progress towards health for all in the European Region, carried out during 1996–1997.

At the thirtieth session of the WHO Regional Committee for Europe in September 1980, the Member States of the European Region approved their first common health policy: the European strategy for health for all. The Regional Committee adopted 38 specific regional targets to implement this strategy at its thirty-fourth session in September 1984. In addition, a list of regional indicators, incorporating the 12 global indicators, was proposed as a mean of assessing progress towards the attainment of the targets. In 1991, the forty-first session of the Regional Committee approved an updated version of the 38 regional targets and a list of indicators.

An important part of the policy adopted by the WHO European Region is the regular monitoring and evaluation of countries’ progress towards these targets, which result, among other things, in reports at the country and regional levels subsequently used for WHO reports at the global level. The reports of the Member States on the 1996–1997 evaluation at the country level were analysed and, together with the data and knowledge bases of the Regional Office, used to produce this report.

The general objective of the series of reports on health in Europe is to describe the most significant health trends in the Region and to evaluate them from the perspective of the European policy and targets for health for all. The analysis and presentation are based on the structure of the health for all policy for Europe. In addition, the series aims to encourage analytical rather than merely descriptive public health reporting at all levels in Member States.

The 1996–1997 health for all evaluation was the last before the year 2000. It also coincided with and was closely linked to the process of renewing the health for all policy for the twenty-first century. The report therefore attempts to answer two main questions. First, what has been achieved compared with

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1 Targets for health for all. Copenhagen, WHO Regional Office for Europe, 1985 (European Health for All Series, No. 1).

2 Health for all targets. The health policy for Europe. Copenhagen, WHO Regional Office for Europe, 1993 (European Health for All Series, No. 4).
the baseline year (1980) and with the year specified in the targets (2000)? Second, what are the constraints and the strengths of the policies implemented, including the implications for future action to improve them?

The health for all policy recognizes a socially and economically productive life as the main overall target of the strategy for health for all (World Health Assembly resolution WHA30.43). People must therefore have such basic assets as freedom from fear for their personal security and access to housing, decent incomes and social environments that protect and enhance physical and mental wellbeing. The first chapter focuses on these prerequisites for health.

The second chapter analyses the current state of health and the related trends in the Region in terms of mortality, morbidity, disability and increasing people’s potential to cope with adversity and to enjoy their lives. These health outcomes, and the respective specific health targets, are assessed from the perspective of the four cornerstones of the health for all policy:

- **ensuring equity in health** by reducing gaps in health status between countries and between population groups within countries;
- **adding life to years** by helping people achieve, and use, their full physical, mental and social potential;
- **adding health to life** by reducing disease and disability; and
- **adding years to life** by increasing life expectancy.

The analysis focuses on major groups of diseases and on population groups that are especially vulnerable, chosen to coincide with specific health for all targets: communicable diseases, cardiovascular diseases, cancer, other chronic diseases, mental health, accidents and the health of women, children and young people.

The third chapter evaluates progress in the main areas of public health action taken to help achieve the health outcome targets analysed in the second chapter. These areas comprise the prevention and control of the major risk factors related to personal lifestyles and the human environment, and ensuring appropriate health services.

The fourth chapter reviews the principles of and policies and practice related to health for all in the Member States. These provide the foundations for effective public health action and thus for achieving the health for all objectives and targets.
Constraints of data and methods
The availability and reliability of the statistical data on the health for all indicators vary considerably. Mortality-based indicators, incidence of infectious diseases and some hospital statistics are the best types of statistics available. Nevertheless, even mortality data are not available for analysis for five Member States with an overall population of about 64 million. The mortality data are probably the best data for international comparison, although death registration and coding practices vary between countries. The extent of international comparability is difficult to ascertain for most of the other health for all indicators, and comparison should therefore be made with caution.

In the 1990s, the Member States of the European Region of WHO became more numerous as Czechoslovakia, the USSR and Yugoslavia dissolved. This has increased the visibility of the differences in patterns of health and economic development that had previously been blurred by the averages of the larger country conglomerates to which the new Member States had belonged. Some differences within countries thus became differences between countries, and the Region embraced independent countries with indicators ranging from those typical for developing countries to those found in the world’s leading economies. In this situation, assessing the health status of the Region as a whole has not always been meaningful. Population-weighted subregional averages have mainly been used to illustrate differences in the health situation and trends between different parts of the Region. Because the health for all database is historically set to represent three major parts of the Region, three subregional groups and averages have mainly been used, but this does not imply any political view.

Regional and subregional weighted averages for any given indicator were calculated when data for at least 50% of the respective countries were available for all the years of the period under consideration. For some indicators, historical data for the new Member States were not available. For this reason, data for the USSR or the former Yugoslavia were used in calculating European and subregional averages for the years before 1990.

In general, mortality rates per 100 000 population refer to age-standardized rates, calculated using the European standard population.

1Andorra (a WHO Member State as from 15 January 1997), Bosnia and Herzegovina, Monaco, San Marino and Turkey.
Whenever appropriate data are available, the progress in achieving the European health for all targets is estimated in this publication for the European Region as a whole.

Definitions of country groupings
The newly independent states (NIS) are defined here as the 15 countries that gained independence after the dissolution of the USSR. Twelve NIS and the three Baltic countries (Estonia, Latvia and Lithuania) are grouped together because at times historical data for individual countries are lacking and because they have similar recent health patterns and trends. This definition of the NIS was created for the purpose of trend analysis for this report and is different from that used in other documents in which the Baltic countries are presented together with the countries of central and eastern Europe (CCEE).

The CCEE comprise 12 countries of the formerly centrally planned economies of central and eastern Europe that were not part of the USSR.

Wherever the grouping western Europe is used, it generally comprises the 15 countries of the European Union (EU) and the developed market economies outside the EU. Most of the figures have averages for the EU countries, which have grown in number over time and therefore the historical averages have been recalculated to include the current 15 EU member states.

Where relevant, two other subregional groups have also been used:

- the Nordic countries: Denmark, Finland, Iceland, Norway and Sweden; and
- the central Asian republics (CAR): Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
1

THE PREREQUISITES FOR HEALTH

Health is the most important personal asset in life. It is also inextricably linked to other assets such as personal security, adequate income, housing, social participation and support. These are therefore justifiably considered to be prerequisites for health. The links are complex and, depending on how the relevant policies structure and regulate these links, the prerequisites can either improve or reduce health and other personal assets. For example, economic growth may be conducive to better income, social tolerance and welfare, and finally health, but such a positive effect is not automatic. The prerequisites for health can even be adversely affected under economic growth if the appropriate social policies are not in place. Conversely, good health is important to improve productivity, to increase income, to ensure active social participation and to resist job strain and other adverse conditions. The lack of appropriate policies fostering the interaction between these factors can place health, and also economic development, at risk.

The links between these prerequisites and health are further complicated by other factors, such as those related to demographic changes, family and social structures, freedom to make healthy choices related to lifestyle and personal objectives in life, creating and enjoying a healthy environment, having continuous access to good health care and taking responsibility for one’s own health. Nevertheless, research and practice have convincingly demonstrated that the adequacy of the provision and regulation of the main prerequisites for health is very closely correlated with the health of the population. This first chapter therefore reviews the changes in the demographic background and the prerequisites for health, to set the scene and the role of these main factors as important preconditions for understanding health developments in Europe, as analysed in subsequent chapters.

The countries of the European Region

The Member States of the European Region of WHO (Annex 1) range from countries in the eastern part of the Region, which declared, beginning in about 1990, their intention to make fundamental shifts from centrally planned to market-oriented economies, to the highly industrialized market economies in western Europe. These countries vary widely in their level of economic development. With gross national product (GNP) per person as a main criterion, the number of Member States in the Region in four groups based on GNP per person in 1996 is:\footnote{World Bank atlas. Washington, DC, World Bank, 1998.}

- Low-income (US $785 or less) 5
- Lower middle-income (US $786–3115) 15
- Upper middle-income (US $3116–9635) 6
- High-income (US $9636 or more) 19
- No data\footnote{Andorra, Bosnia and Herzegovina, Malta, Monaco and San Marino.} 5

The shifting population background

Both the recent and the projected changes in the population background can influence social and
HEALTH IN EUROPE

health policies significantly. For example, the proportions of children and older people in the population indicate the level of economic strain on the working-age population and the challenges for the social and health policies in any country. The number of children in a family may influence the conditions under which children are growing up: family income, standard of living and social participation. Unregulated migration can create labour market problems and social tension in the countries that gain people as well as in those that lose them, and migration can be associated with such health problems as the transmission of some infectious diseases.

In addition, a country’s stage in the fundamental process of demographic transition from high to low rates of birth and mortality provides general guidance in assessing the progress in achieving health. This is because this stage is closely related to the epidemiological transition from a health situation dominated by acute diseases and injuries to one dominated by chronic diseases or, ideally, healthy aging. Population issues have therefore recently achieved a more central position in policy formulation in the quest for sustainable human development.

About 870 million people live in the countries of the European Region of WHO (United Nations estimate for 1997). Geographically, 45% of them live in western Europe, about 35% in the NIS and 13% in the CCEE. The population of Turkey comprises about 7% of the total population of the Region. Altogether, about 15% of the world population, estimated at about 5800 million in 1997, live in the Region. The geostrategic and sociocultural importance of the Region in the world is considerably greater than its proportion of the world population might indicate.

Birth rates continued to decrease in most European countries in the first half of the 1990s. The downward trend was insignificant in western Europe, however, whereas the decline has been sharp in the CCEE, although it has slowed down more recently. Birth rates also declined in the central Asian republics and Turkey, although they remain significantly higher in these countries than in the rest of the Region.

Total fertility rates continue to show common trends for the Region as a whole (for the countries for which data are available). The rates are far below the replacement level of 2.1 (except for Turkey and probably for some central Asian republics, Albania and Azerbaijan) and the rates are converging. Other common trends in the Region are the increase in the mean age of mothers giving birth for the first time and in the proportion of mothers giving birth outside wedlock. Nevertheless, about 90% of the mothers giving birth outside wedlock in some countries (such as Estonia, Iceland and Sweden) are cohabiting.

Given the low fertility rates, most countries in the Region are experiencing very slow population growth in the range of 0–1% per year, with most countries closer to 0% than to 1%. Most of the countries reporting negative growth in 1995 are in central and eastern Europe or are NIS. For example, the population of the Russian Federation has been declining substantially since 1991–1992, owing to decreasing birth rates and concurrent increases in death rates (Fig. 1).

Perhaps the most significant demographic trend continues to be population aging, as the demographic transition towards low fertility and extended life expectancy, including older people,
is altering the age distribution of populations (Fig. 2). Countries in western Europe have the highest proportion of people aged 65 years and over, but population aging has accelerated significantly in several CCEE and NIS. The central Asian republics continue to have relatively younger age structures. The population of older people is expected to continue to increase rapidly after 2000 in all parts of the Region (Fig. 3).

The Region has completed the demographic and closely related epidemiological transitions. Most countries have reached the post-transition stage, except for the few countries that still have relatively high fertility rates. The most important implication of this development is that healthy aging must be ensured by promoting health, preventing chronic noncommunicable diseases and providing appropriate health care, and by ensuring a useful role and decent standard of living for elderly people.

In addition to the demographic transition, population changes result from international migration. Nevertheless, these data are less accurate and consistent than those for birth and death registration. Also, migration in the Region has been influenced by the recent economic and political changes, and therefore discernible long-term trends are not so clear. On the whole, recent data show a decline of immigration into the traditional recipient countries of western Europe. The migration from the CCEE continues to be less important than anticipated, and that caused by the conflict in Bosnia and Herzegovina has also slowed down. The geopolitical changes related to the dissolution of the USSR, however, have created a situation whereby migration flows previously considered internal to the USSR have resulted in large proportions of foreign-born residents in some countries, especially Estonia and Latvia.
Accelerated political changes ...

After decades of entrenched but stable and clear-cut rivalry between two political systems, the fall of the Berlin Wall in November 1989 introduced sweeping changes in the CCEE and NIS. These changes dismantled the previous political and international arrangements and, consequently, led to the considerable disintegration of economies that had previously been closely tied.

At the same time, important developments have taken place related to integration in western Europe. The member states of the EU have increased in number, and many other countries have upgraded their relations with the EU. The Council of Europe, the Organisation for Economic Co-operation and Development and other international organizations have also gained new members and influence. The new political climate in Europe has further promoted the movement of information, goods, services and people. This effect is being magnified by technological and industrial globalization.
These political developments could improve the prerequisites for the health of the people of Europe considerably in the long term. Unfortunately, deterioration in those prerequisites related to health (at least in the short term) could not be sufficiently mitigated.

Economic development has followed the political changes closely (Fig. 4). The CCEE and NIS display a wide range of transition patterns. Some countries experienced a relatively small decline in gross domestic product (GDP), which reversed relatively quickly; by 1994, the decline in economic activity appeared to have stopped in all of the CCEE except for The Former Yugoslav Republic of Macedonia. In the NIS the decline was larger, but here also there were signs of stabilization by 1997, although some NIS continued to experience economic contraction. Nevertheless, the prospects are generally good for nearly all the CCEE and NIS, given the relatively plentiful assets in human capital and extensive basic infrastructure, although it will be costly to overhaul.

In western Europe, economic growth has recovered to an average of 2% of GDP per year after the recession in the early 1990s. Key macroeconomic indicators have mostly improved in the move towards monetary union within the EU.

... and worrying repercussions through the Region

Registered unemployment, unknown in the previous era in the CCEE and NIS, rose rapidly, initially more significantly in the CCEE. Hidden
unemployment and underemployment are still considerable and remain a major challenge for both economic and social policies. Unemployment in western Europe has increased steadily, and the overall rate has remained over 10% since 1993, so that many governments have declared that employment-creating measures are a major policy objective.

Income inequality has increased more obviously in the CCEE and NIS, but dispersion of earnings has also increased in several countries in western Europe. The most clear expression of these unfavourable trends is the stubborn and long-term continuation of cohorts of poor people in some countries of the Region, while in others this is a relatively new phenomenon (Table 1). The gains in the battle against poverty achieved after the Second World War started to slip back in the CCEE in the late 1970s, and in western Europe in the 1980s with the emergence of the “new poor” (people affected by poverty despite widespread affluence). Poverty has increased very sharply in most CCEE and NIS in the 1990s, as real wages declined drastically in practically all these countries beginning in 1989: for example, in Lithuania, the Russian Federation and Ukraine to as low as about 40% of the 1989 levels. In some countries in western Europe, the traditional benefits of the welfare state have been restricted because of pressures on public spending, and poverty has increased considerably.
Unfortunately, the negative trends in income levels and distribution as well as employment seem to be accompanied by slippage in other areas, such as housing and education, although data are very scarce.

Homelessness is also growing in many countries. London is estimated to have several hundred thousand registered homeless; similar estimates are available for France, and some 60 000 children are believed to live on the streets of Moscow and some 3000 in Romania.

The increase in violence and crime in the Region is at times associated with alcohol and drug use. Parts of the Region, however, have also faced dramatic increases due to armed conflicts in the NIS and the former Yugoslavia. Eight such conflicts took place at different times between 1989 and 1995, causing about 400 000 deaths with many more people injured and disabled. In addition, these armed conflicts have displaced thousands of people, undermining the prospects for economic recovery and reducing severely reasonable access to the prerequisites for health and to health services. The cessation of most of the conflicts and the return to peace in 1996/1997, if sustained, will greatly help to rebuild infrastructures and enable people to regain adequate access to the prerequisites for health.

### Table 1. Percentage of the population in poverty in selected countries in the European Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Western Europe</th>
<th>Population in poverty (%)</th>
<th>CEE</th>
<th>Population in poverty (%)</th>
<th>NIS</th>
<th>Population in poverty (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td></td>
<td>2</td>
<td>Czech Republic</td>
<td>1</td>
<td>Belarus</td>
<td>23</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>3</td>
<td>Slovakia</td>
<td>1</td>
<td>Latvia</td>
<td>23</td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td>4</td>
<td>Slovenia</td>
<td>1</td>
<td>Uzbekistan</td>
<td>29</td>
</tr>
<tr>
<td>Luxembourg</td>
<td></td>
<td>4</td>
<td>Hungary</td>
<td>2</td>
<td>Russian Federation</td>
<td>38</td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
<td>5</td>
<td>Poland</td>
<td>13</td>
<td>Estonia</td>
<td>40</td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
<td>8</td>
<td>Romania</td>
<td>22</td>
<td>Ukraine</td>
<td>41</td>
</tr>
<tr>
<td>Belgium</td>
<td></td>
<td>12</td>
<td>Bulgaria</td>
<td>33</td>
<td>Lithuania</td>
<td>46</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td>Turkmenistan</td>
<td>48</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td>Kazakhstan</td>
<td>50</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
<td>13</td>
<td></td>
<td></td>
<td>Republic of Moldova</td>
<td>65</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>Kyrgyzstan</td>
<td>76</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a For the CEE and NIS, a poverty line of US $4 per person per day (1990 purchasing power parity) has been used. For the countries of western Europe, a poverty line corresponding to the United States poverty line of US $14.40 per person per day (1985 purchasing power parity) has been used.

On the whole, inequality in the prerequisites for health has grown in the 1990s within and between countries and has clearly increased in many CCEE and NIS. The health status and trends should be reviewed and interpreted from this perspective, keeping in mind the fundamental role of the prerequisites for health and, especially, of the policies at all levels that take appropriate account of the vital interrelations between the basic human assets and health. An important consequence of this is that special attention should also be paid to the population groups that are economically, and hence socially, more vulnerable – children, women and elderly people.

**Key sources**

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Strasbourg, Council of Europe, 1996.


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*Human development report 1997.* New York,

*World Bank atlas.* Washington, DC,

*World population prospects 1950–2050.*
This chapter describes the health status and trends in the European Region, referring as appropriate to the first 12 regional targets for health for all. Accordingly, health outcomes are assessed in terms of mortality and morbidity by main disease groups or in selected population or age groups. Nevertheless, the importance and burden of specific diseases differ significantly in the different phases of the life span. For example, the leading causes of death in infancy and childhood are respiratory and infectious diseases and accidents. Among adults until middle age, accidents and other external causes of death are the main killers. Cancer and cardiovascular diseases become leading causes of death at older ages (Fig. 5).

Furthermore, assessment of progress towards the four main goals of health for all (ensuring equity in health, adding life to years, adding health to life and adding years to life) is woven throughout the chapter. Progress in adding years to life is mostly dealt with in the following section describing life expectancy trends. The progress made in adding health to life by reducing diseases and disability is described in the
appropriate sections on specific diseases. Although in the past there have been very few comparable data on disability and quality of life, there is now some improvement in their availability.

Inequity in health status is the main focus in this chapter. Particular attention is paid to the gap in health between the east and the west, including the recent mortality crisis in many NIS and its possible causes.

**Life expectancy trends – past, present and future**

The average life expectancy in Europe has declined for the first time since the Second World War. The average life expectancy at birth for the European Region slowly but constantly increased until the early 1990s, when a sharp decline in life expectancy in the NIS reduced the average life expectancy for the Region from 73.1 years in 1991 to 72.4 in 1994. Although there had been several small fluctuations previously, this was probably the first decline of this magnitude since the Second World War.

The subregional averages and the trends in the individual countries show a steady increase in the east–west gap in mortality and life expectancy, starting about three decades ago. In about 1970, the difference between the average life expectancy for the EU and that for the CCEE and NIS was about 2.5 years. In 1995, the lag behind the EU average reached about 11 years for the NIS and about 6 years for the CCEE (Fig. 6). The difference between the countries...
with the lowest and the highest life expectancies in the Region was about 15 years in 1995 (Fig. 7) versus about 7 years in 1970.

The general long-term life expectancy trends in Europe are:

- western Europe: continuous improvement, although the rate of improvement varies significantly between the individual countries;
- the NIS: stagnation or slight decline in the 1970s, sharp improvement around 1986, gradual deterioration to the previous levels by about 1991–1992, further sharp deterioration during 1993–1994 and, finally, initial signs of recovery in 1995 and 1996 in some countries;
- the CCEE: stagnation or slow improvement since the 1970s and slightly larger improvement in some countries from the early 1990s.

The east–west gap in mortality is present in all age groups, and life expectancy trends at different ages, including at 65 years, are therefore similar to those of life expectancy at birth.

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Fig. 7. Life expectancy at birth in countries and subregional groups of countries in the European Region, 1996 or latest available

*The Former Yugoslav Republic of Macedonia.

Source: data from the WHO Regional Office for Europe.
The European regional target for life expectancy at birth is 75 years. The Member States of the Region can be roughly divided into two groups according to their current levels of and trends in life expectancy. Twenty countries that have already achieved a life expectancy of 75 years and another two countries that are likely to reach it by 2000 represent 45% of the regional population. If the present trends continue, 23 countries, representing 46% of the regional population, will still be below the target by 2000. There are no data for trend assessment for the remaining countries (representing about 9% of the regional population).

For the individual countries, the gender-specific health for all target is at least 67 years for men and 74 years for women. From this perspective, 30 countries have already achieved the target level for males and 35 countries for females.

Assuming that the average life expectancy in the Region continues to increase at the same average rate of 0.11 years per year as for the period 1980–1994, it would take about 23 years (to around 2017) to reach the target of 75 years for the Region as a whole. This is, of course, heavily influenced by the above-mentioned deterioration in life expectancy in the NIS, and future progress in Europe as a whole will mainly depend on the speed at which this situation is reversed and the progress made by the CCEE and NIS.

Because of this, and because mortality and life expectancy trends in the NIS are especially complex and have attracted special attention because of the coinciding socioeconomic transition, the mortality crisis in these countries is discussed in more detail later.

**Increasing health expectancy – the ultimate argument**

Life expectancy and mortality and morbidity indicators must be supplemented by an assessment of the average number of healthy years that people enjoy in their lives. This is because increasing the length of life would be a hollow achievement if it were not accompanied, in the longer term, by an equivalent or larger increase of the proportion of life spent in good health and full ability.

There are different measures of adding health to life. In 1984, WHO proposed a set of three indicators to monitor whether the increase in life expectancy in general is accompanied by an increase in life expectancy without disability and/or chronic disease: life expectancy, disease-free life expectancy and disability-free life expectancy. The concept has since expanded to health expectancy, which includes all the indicators that measure different states of health in terms of their duration within the average life expectancy.

In Europe, health expectancy calculations are available for 15 countries in western Europe and 3 CCEE. Nevertheless, no direct comparison is yet possible because of the differences in the population surveys used to collect the necessary data. Illustrative results are presented in Table 2.

Although no definitive conclusions can be drawn yet, all the data suggest that the increase in life expectancy in western Europe has not been accompanied by an increase in the time lived in severe disability. This is a very encouraging finding that is likely to demonstrate the effect of appropriate disease prevention and high-quality health care.
Table 2. Comparison of life expectancy (LE) and disability-free life expectancy (DFLE) (in years) at birth and at age 65 for selected countries in western Europe

<table>
<thead>
<tr>
<th>Country and year</th>
<th>Life expectancy (years):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>at birth</td>
</tr>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>Finland, 1986</td>
<td>–</td>
</tr>
<tr>
<td>France, 1991</td>
<td>72.9</td>
</tr>
<tr>
<td>Netherlands, 1990</td>
<td>73.9</td>
</tr>
<tr>
<td>United Kingdom, 1992</td>
<td>73.7</td>
</tr>
<tr>
<td></td>
<td>at age 65</td>
</tr>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>LE</td>
</tr>
<tr>
<td>Finland, 1986</td>
<td>13.4</td>
</tr>
<tr>
<td>France, 1991</td>
<td>15.7</td>
</tr>
<tr>
<td>Netherlands, 1990</td>
<td>14.4</td>
</tr>
<tr>
<td>United Kingdom, 1992</td>
<td>14.5</td>
</tr>
</tbody>
</table>

Source: Robine & Romieu, 1997 (see under Key sources, p. 44).

No less important is the possibility that social inequality in health expectancy may be greater than the inequalities in life expectancy. This reconfirms the relevance of the close interrelation between the four main health for all goals: ensuring equity in health, improving the quality of life, improving health expectancy and increasing life expectancy.

The mortality crisis in the NIS – the toll of alcohol abuse

Many professionals in various sectors of society have focused on the unprecedented sharp increase in mortality in most of the NIS in the first half of the 1990s, especially in 1992–1994. For example, by 1994, life expectancy in the Russian Federation had declined to 64 years, below the level of the mid-1950s. For males, it fell to 57.6 years – well below the retirement age. The increasing mortality from cardiovascular diseases and external causes of death in the middle-aged population is responsible for about three quarters of this decline in life expectancy (Table 3). As these changes in mortality and, correspondingly, in life expectancy coincided with the initial phase of transition to a market economy, there has been a tendency to attribute this deterioration in health to the effect of the economic difficulties of the transition. Nevertheless, many scientists with more detailed knowledge of this area have been concerned for some years with some specific features of the mortality trends unique to most NIS and argue that the economic difficulties of the transition were not the sole and immediate cause of this increase in mortality.

Most striking is the similarity of the mortality trend patterns in most of the NIS (Fig. 8). Nothing similar has been observed in the CCEE, which were also exposed to a difficult socioeconomic transition at about the same time.

This similarity in mortality trends suggests that populations of the NIS have something in common. There is rather convincing, though indirect, evidence that the specific patterns of alcohol consumption in these countries have played a major role in contributing to increasing mortality in a very complex interaction of various factors.
### Table 3. Percentage contribution of the different causes of death to the decline in average life expectancy of 3.8 years in the Russian Federation between 1992 and 1994

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Age (years)</th>
<th>0</th>
<th>1–14</th>
<th>15–34</th>
<th>35–64</th>
<th>65–74</th>
<th>75+</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious and parasitic diseases</td>
<td></td>
<td>−0.5</td>
<td>−0.2</td>
<td>−0.5</td>
<td>−2.1</td>
<td>−0.1</td>
<td>0</td>
<td>−3.5</td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td>0.1</td>
<td>0.2</td>
<td>0</td>
<td>−0.7</td>
<td>0</td>
<td>0.1</td>
<td>−0.2</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td></td>
<td>0</td>
<td>0</td>
<td>−2</td>
<td>−27.2</td>
<td>−8.9</td>
<td>−5.6</td>
<td>−43.6</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td></td>
<td>0.7</td>
<td>−0.2</td>
<td>−0.6</td>
<td>−5.3</td>
<td>−0.9</td>
<td>−0.3</td>
<td>−6.6</td>
</tr>
<tr>
<td>Digestive diseases</td>
<td></td>
<td>0</td>
<td>0</td>
<td>−0.6</td>
<td>−3.8</td>
<td>−0.1</td>
<td>0.1</td>
<td>−4.4</td>
</tr>
<tr>
<td>Other diseases</td>
<td></td>
<td>0.3</td>
<td>−0.2</td>
<td>−0.5</td>
<td>−3.1</td>
<td>−0.3</td>
<td>−0.1</td>
<td>−3.9</td>
</tr>
<tr>
<td>External causes</td>
<td></td>
<td>−0.7</td>
<td>0.2</td>
<td>−9.9</td>
<td>−20.7</td>
<td>−1.1</td>
<td>−0.5</td>
<td>−32.6</td>
</tr>
<tr>
<td>Ill-defined causes</td>
<td></td>
<td>−0.2</td>
<td>−0.1</td>
<td>−0.6</td>
<td>−2.7</td>
<td>−0.3</td>
<td>−1.2</td>
<td>−5.1</td>
</tr>
<tr>
<td>All causes</td>
<td></td>
<td>−0.3</td>
<td>−0.4</td>
<td>−14.6</td>
<td>−65.6</td>
<td>−11.7</td>
<td>−7.4</td>
<td>−100</td>
</tr>
</tbody>
</table>

*Source*: data from the WHO Regional Office for Europe.

### Fig. 8. Standardized death rates for selected NIS, 1980–1996

*Source*: data from the WHO Regional Office for Europe.
Mortality trends during the transition can be better understood given the similar and sudden decline in mortality that occurred in 1985–1986, as the result of the strict anti-alcohol campaign launched in the USSR in June 1985. This demonstrates a strong link between mortality and alcohol consumption in almost all the NIS, except for some central Asian republics and Armenia, Azerbaijan and Georgia, which are somewhat culturally different in the patterns of drinking and types of alcoholic beverage consumed. The alcohol consumption patterns inherited from Soviet society are very different from those in most western European countries and even from most CCEE. Large quantities of strong beverages (such as vodka and brandy) are consumed quite frequently, especially by middle-aged men, often leading to risk-taking behaviour or even alcohol poisoning.

From mid-1985, as a result of the anti-alcohol campaign, alcohol could only be purchased in a small number of special shops and the supply was very limited. This caused an immediate and sharp decline in alcohol consumption and consequently reduced the number of fatal accidents, suicides and homicides. Estimates based on autopsy data from research studies show that about 59% of deaths from external causes in the Russian Federation in 1984 occurred under the influence of alcohol; in 1987 this proportion had dropped to 47%. Mortality from external causes of injury and poisoning in the USSR declined in 1 year by about 20%. In absolute terms, the largest reduction within this group was in unintentional injuries and poisoning (all external causes but excluding road traffic accidents, suicides and homicides), and the next largest reduction was in suicide (Fig. 9). At the same time deaths coded

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**Fig. 9. Standardized death rates from external causes, NIS average, 1981–1996**

<table>
<thead>
<tr>
<th>Year</th>
<th>Motor vehicle traffic accidents</th>
<th>Other injuries and poisonings</th>
<th>Suicide and self-inflicted injury</th>
<th>Homicide and intentional injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>10</td>
<td>70</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>1983</td>
<td>15</td>
<td>60</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>1985</td>
<td>25</td>
<td>50</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>1987</td>
<td>30</td>
<td>40</td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td>1989</td>
<td>35</td>
<td>35</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>1991</td>
<td>40</td>
<td>30</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>1993</td>
<td>45</td>
<td>35</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>1995</td>
<td>50</td>
<td>40</td>
<td>35</td>
<td>55</td>
</tr>
</tbody>
</table>

*Source: data from the WHO Regional Office for Europe.*
as ill-defined conditions, many of which were in reality caused by accidents, also showed a very large reduction. Research shows that the codes for ill-defined conditions were used in the USSR for coding some politically sensitive deaths from external causes (suicide, homicide and occupational accidents) in addition to the genuinely ill-defined conditions, in which the cause of death is not clear.

Nevertheless, with time and the perestroika liberalization process, strict anti-alcohol restrictions were gradually lifted and the old drinking patterns started to return. After the market economy and privatization were introduced in about 1991, the trade in alcoholic beverages became one of the most profitable businesses. Alcohol became even more widely available than before 1985 and relatively cheaper than food and other basic goods. Official alcohol consumption statistics did not include the large quantities of imported alcohol and illegally produced vodka, often containing poor-quality industrial ethanol or methanol, which makes it especially toxic. Thus, the related mortality from external causes started to increase again in 1990–1992 and returned to the 1984–1985 level in most NIS.

Unfortunately, this trend continued, showing an even sharper increase, especially in 1993–1994. Again, in absolute terms, accidental injuries and poisoning contributed most to the increase (Fig. 9). For example, mortality from accidental poisoning in the Russian Federation almost doubled from 28 to 51 deaths per 100 000 population between 1992 and 1994. Alcohol poisoning was responsible for 18 and 38 deaths per 100,000 population, respectively, which means that 20 of 23 extra cases of accidental poisoning were due to alcohol. The doubling of alcohol poisoning was observed in both sexes and almost all age groups. This indicates that alcohol consumption played an important role in the 1993–1994 increase in mortality from external causes, although the underlying conditions for it were created by the turbulent socioeconomic environment of the transitional period.

The role of alcohol consumption in increasing mortality from external causes is generally easy to understand. It is more difficult to accept, however, that an increase in alcohol consumption could have a similar detrimental effect on mortality from diseases of the circulatory system (Fig. 10). Trends in premature mortality from cardiovascular diseases in most NIS showed a typical sharp decline in 1986, followed by a gradual increase until about 1991–1992, when it reached the pre-campaign levels of 1984–1985. For 1993–1994, mortality from cardiovascular diseases showed a further sharp increase similar to that of mortality from external causes.

The trends in cardiovascular mortality in the NIS were somewhat different among people 65 years and older from those of younger people. After an initial drop in 1986, mortality from cardiovascular diseases among elderly people continued to decline or remained at a low level until 1992, when it increased during 1993–1994, almost simultaneously in different countries. Although alcohol probably also had an effect the elderly, as one of the most vulnerable groups, were probably the first to suffer from the more difficult living conditions caused by the initial phase of the economic transition. Many of them lost their life savings from hyperinflation, which hit these countries almost simultaneously in 1992.

Many prospective epidemiological studies have shown that small doses of alcohol may play a certain role in preventing cardiovascular diseases.
Nevertheless, these findings do not contradict the argument for the lethal role of alcohol in the NIS because of two important differences. First, the specific drinking pattern prevailing in most NIS is consumption of excessive amounts of highly concentrated alcoholic beverages in one sitting “binge drinking”. Second, the event being considered is not the development of cardiovascular diseases as chronic conditions but their lethal manifestation. Furthermore, the cause of death written on the death certificate is not always the true underlying cause of death; in the case of cardiovascular diseases this is particularly significant, as explained later.

Evidence indicates that much of the initial decrease (during 1985–1986) and the subsequent increase in cardiovascular mortality between 1986 and 1994 can be attributed to sudden cardiac deaths (before hospital admission or within 24 hours of the onset of symptoms). According to data from the WHO MONICA (monitoring of trends and determinants in cardiovascular diseases) project centre in Kaunas, Lithuania, routinely registered sudden coronary deaths as a proportion of total mortality from ischaemic heart disease among men aged 25–64 years increased from 65% in 1987 to 86% in 1993. The WHO MONICA project centre in Moscow found a similar increase, from 43% to 69%, even after excluding from the analysis sudden deaths that were not later confirmed as coronary deaths. Sudden coronary deaths are often associated with alcohol intake, most likely through arrhythmia. Hence a proportion of such deaths that are included in the routine official mortality statistics as deaths from cardiovascular diseases are actually caused by alcohol poisoning. Some of the
deaths induced by alcohol poisoning can also have other immediate causes, such as suffocation.

Data from the same WHO MONICA project centres show that approximately 10–20% of the sudden coronary deaths among adult men should actually be reclassified as alcohol poisoning (Table 4). Another 10–30% of such deaths that show post-mortem alcohol concentrations of less than 350 mg per 100 ml of blood could also potentially be triggered by alcohol intoxication.

Data from the WHO MONICA centre in Moscow demonstrate that the number of sudden cardiovascular deaths that were actually caused by alcohol poisoning increased during 1992–1993 compared with previous years. During the period 1985–1991, 4741 sudden cardiovascular deaths were registered in the project area among people 25–64 years old (autopsy rate 65%). The registered cause of death, cardiovascular disease, was not confirmed by autopsy data in 15% of the cases, including about 6% that should be reclassified as alcohol poisoning (post-mortem blood alcohol concentration exceeding 350 mg per 100 ml of blood). In the period 1992–1993, 1611 sudden cardiovascular deaths were registered in the same area (average 805 per year or about a 20% increase compared with the previous period). According to autopsy data, about 20% of these deaths should now be reassigned to causes other than cardiovascular diseases, including 14% attributable to alcohol poisoning. It means that approximately 56% of the supposed increase in sudden cardiovascular deaths between the two periods should be attributed to definite alcohol poisoning. Alcohol intoxication was very likely a triggering factor in many of the remaining cases: those with a post-mortem blood alcohol concentration below 350 mg per 100 ml.

Given that sudden cardiovascular deaths account for nearly half of total mortality from cardiovascular diseases among men younger than 65 years, an estimated one quarter to one third of the recent increase in the mortality among men in Moscow registered as being caused by cardiovascular diseases should actually be attributed to alcohol intoxication. This proportion could be

Table 4. Post-mortem blood alcohol concentrations (mg alcohol per 100 ml of blood) among men aged 25–64 years who died suddenly in Moscow and Kaunas, 1984–1994

<table>
<thead>
<tr>
<th>MONICA project area</th>
<th>Percentage of cases with blood alcohol clearly detected but concentration &lt; 350 mg/100 ml</th>
<th>Percentage of cases with blood alcohol concentration &gt; 350 mg/100 ml (alcohol poisoning)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>24</td>
<td>37</td>
</tr>
<tr>
<td>Kaunas</td>
<td>42</td>
<td>34</td>
</tr>
</tbody>
</table>

*aThe data for Moscow include sudden deaths (before any hospital admission or within 24 hours of onset of initial symptoms) registered in routine mortality statistics as deaths from any cardiovascular disease. The data for Moscow in 1984 are not available.

*bThe data for Kaunas include sudden deaths (24 hours after onset of initial symptoms, irrespective of the place of death) registered in routine mortality statistics as deaths from ischaemic heart disease.

Source: data from the WHO MONICA project centres in Moscow and Kaunas.
applicable to cardiovascular disease mortality in other parts of the Russian Federation and in neighbouring countries with similar mortality trends and alcohol consumption.

If deaths officially registered by the routine system as being caused by alcohol poisoning are included, about 19% of the increase in premature mortality in the Russian Federation between 1992 and 1994 should be attributed to alcohol poisoning alone (Table 5). This percentage does not include the significant number of alcohol-related deaths coded as other accidents, suicides, homicides, alcohol dependence and possibly other causes of death.

The actual share of alcohol-related deaths in the dramatic increase in total mortality between 1992 and 1994 is probably much higher than one fifth. This specific effect of alcohol consumption may also have contributed to the stagnation and some increase in mortality in the USSR and some CCEE in the 1970s.

A large proportion of the increase in mortality in the NIS should be attributed to the specific patterns of alcohol consumption, although further in-depth investigations are needed to assess more accurately how large this proportion is. This has important implications for policy focused on generally reducing alcohol consumption and promoting safer patterns of alcohol consumption. These are essential preconditions for significant immediate reduction of mortality in these countries, along with general socioeconomic development and improvement in living conditions.

**Infectious diseases: re-emerging threats**

Communicable diseases know no political or geographical barriers. However, whereas in the past epidemics were rare and confined mainly to

<table>
<thead>
<tr>
<th>Table 5. Estimated increase in mortality attributable to alcohol poisoning in the Russian Federation between 1992 and 1994</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cause of death according to routine mortality statistics</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alcohol poisoning</td>
</tr>
<tr>
<td>All other accidents, suicide and homicide</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
</tr>
<tr>
<td>Mental disorders (including alcohol dependence) and diseases of the nervous system and sensory organs</td>
</tr>
<tr>
<td>All causes</td>
</tr>
</tbody>
</table>

*Source: data from the WHO Regional Office for Europe.*
other regions, they now contribute significantly to the overall incidence of such diseases worldwide. Infectious diseases unknown in Europe for decades have re-emerged in the 1990s. At the same time, new diseases have been spreading, and microbial resistance to some drugs is now making the control of infectious diseases even more difficult. Furthermore, although so far the major problems in the re-emergence of infectious diseases have been confined largely to the CCEE and especially the NIS, there is a certain risk that these diseases will spread to western Europe just as AIDS is now spreading eastwards. New diseases in animals also pose increased risks: one example is bovine spongiform encephalopathy. Concern is growing that the infectious agent responsible may be passed through the food chain to humans and cause a variant of the currently incurable Creutzfeldt–Jakob disease.

The re-emergence of diphtheria has resulted in a huge epidemic that has affected the NIS since 1990, accounting for about 150 000 cases and 4000 deaths. More than 90% of the diphtheria cases reported worldwide between 1990 and 1995 occurred in the NIS.

Imported cases of diphtheria have also been documented in Finland, Germany, Norway, Poland and elsewhere. The importation of cholera, followed by epidemics of varying scale in countries bordering the Black Sea, Caspian Sea and Mediterranean Sea during the 1990s, is another example of the re-emergence of communicable diseases in Europe.

Epidemic malaria was nearly eliminated in Europe in the 1980s, but the number of registered cases has exploded in recent years: from 20 000 in 1992 to more than 200 000 in 1995. Most cases have been found in Azerbaijan, Tajikistan, Turkey and the neighbouring countries, but 3000–4000 malaria cases have been imported to other countries of the European Region.

In addition, mortality and morbidity from diarrhoeal diseases and acute respiratory infections are increasing among children under 5 years of age. Influenza epidemics continue to comprise millions of cases and cause thousands of deaths throughout the Region.

In many countries in the eastern part of the Region, the incidence of tuberculosis is increasing (Fig. 11) and tuberculosis strains resistant to drugs are spreading. The downward trend of tuberculosis incidence in western Europe has levelled off, and 30–50% of the new tuberculosis cases in these countries occur among immigrant populations. HIV infection probably also plays a certain role in reducing some people’s resistance to tuberculosis.

Today, the rising tuberculosis trends could be reversed in both affluent and less developed countries by means of the breakthrough DOTS (Directly Observed Treatment, Short-course) strategy, which, unfortunately, is not yet widespread enough.

As of November 1997, the cumulative total number of reported AIDS cases in the European Region was 197 000, and an estimated cumulative total of 680 000 people had been infected with HIV. The AIDS incidence in most countries in western Europe appears to have stabilized during the past few years, but an epidemic related to injected drug use is still on the rise in the Mediterranean countries. In the NIS, HIV has been spreading rapidly to countries that had barely been affected a few years ago. In 1996,
more than 10 000 new cases of HIV infection, primarily related to injected drug use, were registered in the Ukraine alone, where previously only 60–80 new cases of HIV infection had been reported annually. The rapid spread of HIV among injecting drug users and the epidemic of sexually transmitted diseases in the general population are two worrying developments whose likely synergy has greatly increased the risk for a rapid and widespread epidemic of HIV in the NIS.

The incidence of syphilis and other sexually transmitted diseases has increased dramatically in almost all NIS (Fig. 12). Substantial underfunding of services for people with sexually transmitted diseases, people’s increasing unwillingness to use these services, and neglect of safer sexual practices facilitated by new social and economic pressures are the key factors fueling the epidemic of sexually transmitted diseases.

Globally, hepatitis B causes an estimated 2% of all deaths, and is the third most frequent cause of death among the infectious diseases, after tuberculosis and malaria. In the European Region, hepatitis B continues to have a large health and economic impact on all countries in the European Region. The proportion of people who have chronic infection, which may progress to chronic liver disease, liver cirrhosis and liver cancer, ranges from less than 1% of the population in many countries in western Europe to 2–5% in some countries in southern and central Europe and 5–10% and more in Armenia, Azerbaijan and Georgia and in parts of the Russian Federation and the central Asian republics. The health
and economic burden of hepatitis B and its sequelae is high and is widely underestimated. For example, even in Germany, which has a prevalence of chronic infection of less than 1%, about 5% of newborn babies will be infected with hepatitis B virus in their lifetime. The annual costs related to treatment and economic loss caused by acute and chronic hepatitis B infections in Germany are estimated to be DM 2500–4500 million.

Overall mortality from infectious and parasitic diseases demonstrates a typical east–west gap. The CCEE have shown a nearly continuous decline, and now the average is relatively close to that in the western part of the Region. After initially also declining, the average for the NIS levelled off in the mid-1970s for about 10 years. The downward trend was renewed in the mid-1980s, followed by a sharp increase after 1991 (Fig. 13).

The dramatic upsurge of some communicable diseases in the European Region is largely the result of socioeconomic deterioration, which has adversely affected social infrastructure, including health services. In addition, cuts in health budgets, weak international cooperation and the resistance of infectious agents to antimicrobial drugs have combined to exacerbate the situation. The Member States of the Region therefore recognize the special priority accorded to preventing and controlling communicable diseases. Broad coalitions, including WHO, other agencies and donor organizations, have been formed to ensure primary immunization of children, to eradicate poliomyelitis and to control diphtheria, tuberculosis, diarrhoeal diseases and
acute respiratory diseases. One of the most important achievements is ensuring high immunization coverage in most of the countries in the Region, including the NIS. The average regional coverage with primary immunization of children is 80%, and eight countries have achieved 95% coverage. Some NIS have not yet implemented comprehensive immunization schedules because of financial constraints. Universal immunization for hepatitis B and *Haemophilus influenzae* type b has been implemented in several countries in western Europe, and invasive diseases caused by *H. influenzae*, primarily bacterial meningitis in children, have been reduced substantially.

WHO’s campaign to eradicate poliomyelitis has been successfully implemented in the European and Eastern Mediterranean Regions through Operation MECACAR, which is implementing mass immunization in the Mediterranean, Caucasian and Central Asian Republics. From 1995 to 1997, overall immunization coverage averaged 95%. Nevertheless, the recent severe outbreak of poliomyelitis in Albania, which also affected areas of neighbouring countries, demonstrates the fragility of the achievements towards eliminating disease in some parts of the Region. Nevertheless, eliminating poliomyelitis is the only disease elimination target that can be reached by the year 2000.

The global goal of the WHO Expanded Programme on Immunization of a 95% reduction in measles mortality has been achieved in the
Region. The incidence of measles has decreased in many Member States, and the disease is close to being eliminated in some northern countries of the Region. The diphtheria epidemic is gradually coming under control. The success of the diphtheria control support programme means that the incidence of diphtheria can be reduced to pre-epidemic levels by the year 2000. The incidence of mumps and congenital rubella has decreased sharply in many Member States, and these diseases are close to being eliminated in some countries in the northern part of the Region.

Control programmes for diarrhoeal and acute respiratory diseases in children have been initiated, covering Armenia, Azerbaijan, Belarus, Georgia and the Republic of Moldova.

Despite the major efforts and successes in fighting infectious diseases, including the development of effective vaccines, drugs and techniques, these traditional threats to health have regained ground recently, which requires public health authorities to strengthen their vigilance and joint action.

**Diseases of the circulatory system – a mountain that can be pushed farther away**

Cardiovascular diseases require special attention because they are the leading causes of mortality and disability in the European Region. Cardiovascular diseases are responsible for 49% of all deaths in the Region. This proportion varies significantly with age, and they are responsible for the overwhelming majority of deaths at older ages (see Fig. 5). Cardiovascular diseases are responsible on average for 53% of all deaths in the NIS, versus about 45% in the rest of the Region.

The ratios of the main subcategories of cardiovascular disease vary substantially. Mortality from ischaemic heart disease and cerebrovascular diseases as a proportion of total cardiovascular disease mortality is markedly higher in the NIS than in the rest of Europe. This variation may be explained in part by differences in diagnostic practices and death certification in the different parts of the Region. Although myocardial infarction mainly affects older people, it also occurs among middle-aged people. About 50% of those who have a myocardial infarction die as a result, and a further 10% are left with medium- or long-term problems, such as reduced physical capacity, psychoemotional disturbances and less favourable employment status. About 20–25% of people who have strokes die, and about 15% of the survivors have severe lifelong disability.

Subregional trends in mortality from cardiovascular diseases resemble the trends in total mortality or life expectancy. Cardiovascular disease mortality in the CCEE and NIS is responsible for more than half of the east–west gap in life expectancy. Although the subregional averages were very close in 1970, the east–west difference has expanded steadily (Fig. 14). Around 1994–1995, the average mortality rates per 100 000 population from cardiovascular diseases before the age of 65 were 55 in western Europe, 144 in the CCEE and 233 in the NIS, the ratio being about 1 : 2.5 : 4. As mentioned earlier, part of the excess cardiovascular disease mortality in the NIS, and possibly in some other countries, may be an artefact caused by the practice of coding as cardiovascular disease the sudden deaths caused by other factors that may be difficult to verify retrospectively, such as alcohol intoxication.

What is the current status of countries in achieving the health for all target for mortality from
cardiovascular diseases (reduction by 15% among people 0–64 years old as compared with the 1980 level)? The countries and the respective percentage of the population of the Region that they comprise are distributed as follows:

- 22 countries (46.2% of the regional population) have already achieved the target;
- 3 countries (5.4% of the population) are likely to reach the target by the year 2000;
- 18 countries (38.8% of the population) are almost all showing increasing mortality and will most probably not be able to reverse the trends to an extent that would allow them to achieve the target by the year 2000; and
- for the remaining countries (9.6% of the population) data for assessing trends are not available.

Lifestyle-related risk factors such as smoking, unhealthy nutrition (such as excessive consumption of fatty foods and salt), obesity and insufficient physical exercise play a key role in the development of cardiovascular diseases. Lifestyle-oriented prevention is therefore most important. Morbidity and mortality can be further reduced by improving treatment and by combining community-based and high-risk group prevention of cardiovascular diseases. Several examples of community-based cardiovascular disease and other noncommunicable disease control programmes have demonstrated that community-based prevention works well.

Finland reduced mortality from coronary heart disease among men aged 35–64 years by two
thirds between 1970 and 1975. This is attributed to reducing the risk factors for cardiovascular diseases, especially in the framework of the North Karelia project, which is one of the CINDI programme demonstration areas. Malta has also reported a spectacular reduction in premature mortality from cardiovascular diseases to less than one third of the level in 1980, which demonstrates that major improvement does not require a long time.

Such programmes need to be multifactorial and integrated. Intersectoral collaboration, community action for health, and efficient and quality-oriented systems of health care delivery are the strategic principles.

Cancer – progress depends largely on reducing smoking

The general increase in the east–west mortality gap also applies to the trends in mortality from cancer among people younger than 65 years. In 1995 the average standardized mortality rates from cancer per 100,000 population were 84 in the EU, 112 in the CCEE and 109 in the NIS. The average in western Europe started to decline slightly in the 1980s, and the current average is about 9% lower than the 1980 level. Most CCEE had a continuous increase in cancer mortality among people 0–64 years old until 1990 and some levelling off or even decline since 1990. This is attributable mainly to some stabilization or decline in lung cancer mortality (Fig. 15). Lung cancer mortality among women in the eastern part of the Region is lower than in other parts of Europe because they have been less exposed to tobacco smoking in the past. Among people aged 65 years and more, cancer mortality is higher in the western part of the Region.

In the Region as a whole, cancer mortality has not been reduced significantly despite the considerable resources devoted to detecting, diagnosing and treating cancer in the last two decades. Progress is mixed for specific cancer sites. For cancer of the breast, the lung and the ovaries, progress is poor. Other types of cancer, such as cervical and testicular cancer and certain types of leukaemia, have been better controlled.

What is the current status of countries in achieving the health for all target for mortality from cancer (reduction by 15% among people 0–64 years old as compared with the 1980 level)? The countries and the respective percentage of the population of the Region that they comprise are distributed as follows:

- only 5 countries (14.6% of the population) have reduced cancer mortality by at least 15%;
- another 8 countries (7.6% of the population) are likely to achieve this by the year 2000;
- 12 countries (25.8% of the population) show declining trends, but the slope of the decline is not steep enough to reach a 15% reduction by the year 2000;
- 18 countries (42.4% of the population) show increasing trends; and
- there are no data for the remaining countries (9.6% of the population).

The single most important risk factor for cancer is tobacco smoking, which is responsible for about one third of all cancer cases in Europe.

Diet is also an important risk factor for certain types of cancer. Several recent studies and
The CCEE average does not include data for the former Yugoslavia or the countries that emerged after its dissolution.

**Fig. 15. Standardized death rates from cancer of the trachea, bronchus and lung, 0–64 years, in subregional groups of countries in the European Region, 1970–1996**

*The CCEE average does not include data for the former Yugoslavia or the countries that emerged after its dissolution.*

*Source:* data from the WHO Regional Office for Europe.

reports recommend increasing the consumption of vegetables and fruit and restricting consumption of fat and meat. The relevance of other risk factors has also become increasingly convincing. These include the role of the human papilloma-virus in the development of cervical cancer and the carcinogenic risk of some industrial chemicals and hazardous occupational agents, infectious agents and medicinal drugs.

**Other chronic diseases – preventive action shows results**

Most other chronic diseases frequently escape immediate attention because they are less lethal than cardiovascular diseases and cancer. Chronic diseases such as diabetes, chronic respiratory diseases, osteoporosis and other degenerative musculoskeletal disorders, however, continue to be major and increasing health problems in Europe, especially because the population is aging. For example, 20–25 million Europeans have diabetes. If diabetes is not adequately treated, it may shorten people’s life span and have many adverse affects on health, also as one of the major risk factors for cardiovascular diseases. Mortality from diabetes shows stable or decreasing trends in the CCEE and in western Europe, but rising trends from an initially lower rate in the NIS (Fig. 16). The prevalence of chronic obstructive pulmonary diseases in some countries is reported to be as high as 2–7%.

Good oral health is essential in preventing diseases of the digestive system, including cancer, and in achieving a good quality of life. Major efforts in preventing and treating oral diseases
over the last decade have improved the oral health status in most European countries, although there has been some deterioration in the eastern part of the Region (Table 6). People keeping their teeth for life has increasingly become the norm in western Europe.

The most important means of reducing the burden of chronic diseases are primary prevention, early diagnosis, management and comprehensive rehabilitation. A multidisciplinary approach to managing chronic diseases is essential. The new focus on primary health care in many European countries resulting from the reform of health care policies provides an opportunity to strengthen the preventive management of chronic diseases.

Simple measures, such as teaching people with diabetes to control their blood sugar levels, can lead to dramatic improvement and can virtually eliminate the serious side effects of diabetes. WHO and the International Diabetes Federation have developed technical guidance on simple measures to improve diabetes control, and recent pilot efforts have demonstrated the feasibility of such programmes and their considerable economic benefit.

Nevertheless, financing continues to be a major constraint on activities to promote health and prevent chronic disease. In addition, the health-promoting value of nursing in containing chronic disease has not yet been recognized in some countries, especially in the CCEE and NIS, where
### Table 6. Average number of decayed, missing and filled permanent teeth among 12-year-old children and average number of missing teeth per person among people 35–44 years old in selected countries in the European Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Decayed, missing and filled permanent teeth</th>
<th>Missing teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1985</td>
<td>1989</td>
</tr>
<tr>
<td>Albania</td>
<td>5.9</td>
<td>–</td>
</tr>
<tr>
<td>Austria</td>
<td>4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Belarus</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Belgium</td>
<td>3.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>4.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Croatia</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>5.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Denmark</td>
<td>3.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Estonia</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Finland</td>
<td>3.0</td>
<td>2.0</td>
</tr>
<tr>
<td>France</td>
<td>3.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Germany</td>
<td>6.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Greece</td>
<td>4.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Hungary</td>
<td>7.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Iceland</td>
<td>7.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>2.7</td>
<td>–</td>
</tr>
<tr>
<td>Israel</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Italy</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Latvia</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Lithuania</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>–</td>
<td>3.0</td>
</tr>
<tr>
<td>Malta</td>
<td>2.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Norway</td>
<td>4.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Poland</td>
<td>5.1</td>
<td>4.4</td>
</tr>
<tr>
<td>Portugal</td>
<td>3.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Republic of Moldova</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Romania</td>
<td>1.7</td>
<td>3.1</td>
</tr>
<tr>
<td>San Marino</td>
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<td>3.7</td>
</tr>
<tr>
<td>Slovenia</td>
<td>–</td>
<td>5.1</td>
</tr>
<tr>
<td>Spain</td>
<td>4.2</td>
<td>–</td>
</tr>
<tr>
<td>Sweden</td>
<td>3.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Turkey</td>
<td>–</td>
<td>2.7</td>
</tr>
<tr>
<td>Ukraine</td>
<td>3.7</td>
<td>–</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.0</td>
<td>3.1</td>
</tr>
</tbody>
</table>

*Source:* data from the WHO Regional Office for Europe.
nursing education for the management of chronic diseases is limited.

**Mental health – a challenge for the twenty-first century**

The most prevalent disorders in any population at any given time are probably disorders that affect their mental health, ranging from stress through to depression and neurosis to major psychosis. Mental health and wellbeing include a very wide range of conditions – from severe mental disorders to levels of satisfaction with the perceived state of health and health-related quality of life. People who have mental disorders include psychiatric patients cared for in psychiatric institutions; noninstitutionalized psychiatric patients living in the community; people with stress, depression, alcohol dependence or low self-esteem who are not necessarily in formal treatment; and people with specific mental health problems arising from violent events such as war and rape.

The magnitude of the burden of mental disorders is more often underestimated than not, or it is not brought to the attention of policy-makers and the general public. In addition, there are inherent culture-related problems in defining mental health, and comparing and interpreting trends in different countries are therefore difficult. The proportion of the population with severe mental disorders as registered and reported by countries varies from under 1% to 6%, with most countries in the range of 1–3%. Unregistered, less serious mental disorders are much more prevalent.

The prevalence of psychiatric patients with a length of stay in psychiatric hospitals exceeding 1 year vary even more. Most countries report this number to be less than 100 per 100 000 population, but several indicate a higher number.

Most of the available data on the incidence of new cases of mental disorders under treatment refer to the CCEE and NIS. The average for the NIS in 1995 was 302 new cases of mental disorders per 100 000 population, including 39 cases of alcoholic psychosis. These data are not available for most countries in western Europe.

The massive political and socioeconomic upheaval in the eastern part of the Region since 1989 has greatly increased the everyday pressures on the population. Some countries have experienced the extreme stress of overt war, causing death, destruction, separation of families and vast migration of people. Many of these people suffer from post-traumatic stress syndrome.

The average suicide rates in the NIS show a typical U-shaped trend, the initial decrease caused by the anti-alcohol campaign in 1985 and the subsequent rise coinciding with the end of the campaign and the influence of the socioeconomic transition. The average for the EU started to decline slowly in the mid-1980s (Fig. 17). What is the current status of countries in achieving the health for all target for suicide (reversal of increasing trends)? The countries and the respective percentage of the population of the Region that they comprise are distributed as follows:

- since the end of the 1980s, trends in the suicide rate have been declining in 26 countries (45.7% of the population), including 9 countries where increasing trends had been reversed since 1980;
- in 17 countries (44.8% of the population) suicide rates are increasing; and
• there are no data for the remaining countries (9.6% of the population).

There appear to be marked differences in the prevailing doctrines of psychiatric care between countries in western and eastern Europe. Many countries in western Europe have attempted to reduce the number of inpatient beds and to adopt a care in the community approach, whereas the eastern part of the Region still has large psychiatric hospitals, many in poor condition. Nevertheless, the available statistics on the number of beds in psychiatric hospitals do not show clearly different patterns for east and west (Fig. 18). The difference is probably more how the available hospital beds are distributed and used than their number. Many country reports confirm that actions are being initiated to supplement the classical clinical approach to mental disorder with an integrated community-based care approach.

Although insufficient data are available, mental health problems can be expected to continue to increase in Europe and to become one of the major health challenges in the next century.

Countries in western Europe and the CCEE and NIS seem to differ clearly with respect to perceived health, although there are exceptions. This indicator is difficult to interpret, as it is related not only to physical and mental health but also to the cultural and psychosocial background and living conditions. Nevertheless, the differences in the proportion of people who assess their health as being good or very good can be very large. These differences tend to support
somewhat an east–west gradient in health and require more attention from both researchers and policy-makers (Fig. 19). Although the differences also reflect various culture-related traits, it is not obvious why culturally quite similar populations, such as Estonia and Finland, present rather different levels of perceived good health (Fig. 20). Although these differences do not prove anything by themselves, public health authorities should analyse carefully the possible underlying causes.

Reversing the trends in injuries and poisoning

The human and economic consequences of injuries and poisoning are enormous; many can be avoided at little additional cost. Injuries and poisoning are the leading cause of mortality at young ages in the Region (see Fig. 5, external causes) and, therefore, the costs in terms of productive years of life lost are especially high. This is also the second leading contribution to the east–west mortality gap (Fig. 21). In 1995, the ratio of mortality from external causes of injury and poisoning in western Europe, the CCEE and the NIS was about 1 : 2 : 4. The homicide rates in these subregions had an even more skewed ratio of about 1 : 3 : 20 (Table 7). Rising crime and violence, high alcohol consumption and the weakening of the state’s ability to fight crime seem to be the main factors leading to the high levels of homicide in the CCEE and NIS during the economic transition.
Fig. 19. Percentages of people who assess their health as being good or very good standardized by age in selected countries in the European Region, 1994–1996

Source: data from the WHO Regional Office for Europe.

Fig. 20. Percentages of people who assess their health as being good or very good according to age and sex in Estonia (1994) and Finland (1995)

Source: data from the WHO Regional Office for Europe.
Road accidents involving motor vehicles are the causes of injury and death that can be prevented most effectively. Measures include adequate use of safety belts, improving the quality of roads and vehicles, appropriate speed regulations, and reducing driving under the influence of alcohol. The annual average number of reported road transport accidents involving injury is about 340 per 100,000 population in the EU countries. This is 2–3 times higher than the averages in the CCEE and NIS. The situation is reversed for mortality, being almost twice as high in the eastern part of the Region than in western Europe, which means a much higher case fatality rate in eastern Europe.
The external causes of death other than purposely inflicted injuries and road transport accidents are responsible for the largest proportion of deaths, especially in the NIS. For example, accidental poisoning caused 17.5% of the deaths from all external causes in the Russian Federation in 1995, including 12.5% of the cases of alcohol poisoning. Alcohol poisoning caused more deaths than did transport accidents in the Russian Federation in 1995. Undetermined injuries, whether accidentally or purposely inflicted, were responsible for 14% of the deaths from external causes in the Russian Federation. Accidental falls, drowning and all remaining causes accounted for 27% of the deaths from external causes.

The cost of medical treatment of injuries is also very high. For example, the average hospitalization rate for injuries in Europe is 1.6 per 100 population per year, the third leading category after cardiovascular diseases (2.2 per 100 population) and diseases of the digestive system (1.9 per 100 population).

What is the current status of countries in achieving the health for all target for external causes of death (at least 25% reduction from the 1980 level)? The countries and the respective percentage of the population of the Region that they comprise are distributed as follows:

- 12 countries (29.3% of the regional population) have already reduced mortality from external causes by at least 25%;
- 6 countries (11.4% of the population) will probably achieve a 25% reduction by the year 2000;
- 4 countries (4.1% of the population) show declining trends but not sufficient to reach the target;
- 21 countries (45.6% of the population) show increasing trends; and
- there are no data for the remaining countries (9.6% of the population).

The health of women, children and young people

No society treats its women as well as its men, concluded the Human development report 1997 from the United Nations Development Programme. Women have lower average education, income and social status. Relative deprivation from these decisive prerequisites for health must be consequently eliminated, as women ultimately ensure the survival and stability of our communities.

In 1995, the average maternal mortality rates per 100 000 live births were 6 in western Europe, 18 in the CCEE and 41 in the NIS, a ratio of about 1 : 3 : 7. In the 1990s, the average maternal mortality rates have practically levelled off in western Europe and in the NIS (Fig. 22). In the CCEE, maternal mortality continues to decline slightly after the sharp fall in 1990, mainly because of the trends in Romania. Maternal mortality from illegal abortions in Romania was extremely high but decreased by half in 1990 after the anti-abortion law was abolished and continues to decline, although it is still the highest in Europe.

The health for all target is less than 15 maternal deaths per 100 000 live births. Because the birth rates and maternal mortality in the central Asian republics and Turkey are still relatively high, much of the progress in the Region as a whole...
depends on the progress made in these countries. Including an estimate for Turkey, the average maternal mortality rates in the Region in 1980 and 1994 were approximately 44 and 36. Unfortunately, assuming that the same trends continue, the European average is likely to reach only 32 by the year 2000. At the country level, 32 countries (60% of the regional population) have already achieved or will probably reach the target by the year 2000.

Induced abortion remains the major method of family planning in the CCEE and NIS (Fig. 23). This makes it the leading cause of maternal mortality in these countries. The insufficient use of contraceptives and counselling services in these countries is largely caused by culturally related patterns of behaviour.

In addition to health problems related directly to maternity, women have other specific health problems. The death rates from cervical cancer among women in the CCEE and NIS are more than twice the average in western Europe and are increasing. This difference is largely caused by a lack of screening services and programmes for early detection. Breast cancer remains a major cause of premature death among women. Although stabilizing and tending to decline, the death rate from breast cancer in western Europe is still higher than those in the CCEE and NIS which, in turn, have rising trends.

Nutrition-related conditions such as anaemia and iodine deficiency also require more attention. Anaemia affects up to 40–50% of the women of reproductive age in the central Asian republics.
Fig. 23. Induced abortions reported in countries in the European Region, 1996 or latest available

Source: data from the WHO Regional Office for Europe.

and 17% of the pregnant women in the Region in general. Deficiency of iron, folate and iodine adversely affects not only women’s health but also pregnancy outcomes.

The health problems of adolescent girls and of older women, which are aggravated by their relative social disadvantage, are especially pressing. Adolescent girls are suffering from increasingly high rates of unwanted pregnancies, sexually transmitted diseases, abortion and suicide and are being targeted by tobacco companies, which is leading to more smoking among young women. Women live longer than men on average, but their quality of life in older age is frequently compromised by social isolation and such conditions as chronic rheumatic diseases, osteoporosis and old-age depression.

Infant mortality has declined steadily in nearly all parts of the Region (Fig. 24). Part of the temporary elevation of the average for the NIS after 1990 can be attributed to the change in the national definitions. During 1991–1993, some of these countries changed the definitions of live births to comply with the definitions recommended by WHO. This increased the infant mortality rates by a few points compared with the levels obtained under the previous definitions.

The average infant mortality rates per 1000 live births (including estimates for Turkey) in the
Region were 25.7 in 1980 and 18.1 in 1994. Assuming that this trend continues, the rate should be 14.8 by the year 2000, just below the level of 15 per 1000 live births that is the target for countries that had rates exceeding 20 per 1000 in 1980. At the country level, 30 countries representing about 55% of the regional population have already achieved or will probably achieve the health for all target by the year 2000. This includes 22 countries with rates between 10 and 20 per 1000 live births in 1980 that are now lower than 10, and 8 countries that were above 20 in 1980 and are now under 15 per 1000.

Nevertheless, the health of young children in the CCEE and NIS continues to be of concern. In Europe, the chances of a child surviving the first 5 years of life still differ significantly depending on where the child lives (Fig. 25).

Acute respiratory infections, diphtheria, poliomyelitis, measles, pertussis, typhoid and other diarrhoeal diseases and accidents cause high levels of mortality and morbidity that can be averted through simple, available prevention. Reduced immunity caused by poor weaning practices, introduction of foods other than breast milk before the age of 4 months and poor hygiene standards are also contributing to the spread of infections. Other causes of mortality and morbidity are the lack of the basic prerequisites for a healthy life, such as the availability of safe drinking-water and good sanitation facilities. In the central Asian republics, for example, less than half the rural population
Young children in western Europe have lower mortality and morbidity than those in the CCEE and NIS. Nevertheless, respiratory infections, asthma and respiratory allergy are increasing in western Europe, probably related to environmental pollution.

Maternal and child health remains an important public health priority, and nearly all the CCEE and NIS have adopted policies on protecting mothers and children. The care of women and children is increasingly seen as an interdisciplinary task, and new approaches have been initiated in Europe that aim to integrate gynaecological, obstetric and child health services.

At the same time, many Member States have addressed the special health needs of adolescents by developing services specifically for them. In addition, health promotion in schools has been supported by the development of initiatives in health-promoting schools. Schools have been strengthened in their ability to assist children and young people in understanding how to improve their social, physical and emotional health through a holistic approach, to integrate health
education programmes into the school curriculum, to make school environments healthier, and to improve their collaboration with parents and communities.

National family planning and reproductive health projects comprising training in family planning, supplies of contraceptives and medical equipment and counselling, as well as special projects for adolescent health, are being implemented in nine CCEE and NIS and are being prepared in four more countries.

Social policies and the state of the national economies are the strongest determinants of maternal and child health. Changes in health policies alone will therefore have only a limited impact if socioeconomic constraints are severe. In particular, the privatization of health care in many countries constitutes a major threat to the health of women and children because if access to maternal and child care depends on private funding, access to adequate services by socioeconomically weak population groups will be restricted even more.

**Key sources**


ROBINE, J.-M. & ROMIEU, I. *Monitoring health inequalities in Europe: the need for health surveys* (working paper prepared for the Fourth Consultation on Common Methods and Instruments for Health Interview Surveys in Europe, Copenhagen, 26–28 February 1997 (document EUR/ICP/INFO 02 03 0518)).
This chapter addresses the main strategies for achieving the health for all targets reviewed in Chapter 2. First, the policies, actions and outcomes essential to attain lifestyles conducive to health in the WHO European Region are evaluated. The chapter then focuses on the contribution of the environment to health before turning to the policies and performance of the health services and their contribution to the health of the populations in the Region. The analysis and evaluation of progress in these three main areas of public health action are guided by an understanding of the close interrelation of the developments in each of them and of their dependence on the achievements in the basic prerequisites for health.

Healthy lifestyles
The health for all policy attempts to promote healthy lifestyles as realistic and attractive alternatives guided by the principle of making the healthy choice the easier choice. This requires governments, industry and individuals to each play a role. Furthermore, the ability to make healthy choices should be strengthened to ensure that it is not restricted to socially and economically privileged people. Political, economic, social, cultural and other factors are interwoven and all play a role in determining and sustaining the health of a population. It is increasingly recognized that the ways in which society fosters the economy, regulates employment, provides education, assists its members in times of economic and other difficulties, sets up strategies to counteract poverty, crime and drug use and stimulates equitable and sustainable economic and social development decisively affect health promotion.

Policies to encourage nonsmoking must not be compromised
In the first half of the 1990s, around 30% of the adults in Europe were daily smokers, and no country has yet met the target for the year 2000 of 80% nonsmokers.

Although the percentage of smokers is generally higher in the CCEE and NIS than in western Europe, high percentages of the population continue to smoke in some countries in western Europe (Fig. 26).

Of the 36 countries for which data are available, cigarette use is increasing in 15 countries (predominantly in the eastern part of the Region), decreasing in another 14 (predominantly in western Europe) and stable in 7 (Fig. 27). The prevalence among women is increasing in 15 countries and, although generally lower, is nevertheless in some countries now equal to or higher than that among men. Of the 33 countries for which there is information on trends in smoking among young people, cigarette use is increasing in 21 countries, declining in 7 and stable in 5.

Tobacco was responsible for an estimated 1.2 million deaths in the European Region in 1995, or about 13% of all deaths. In the CCEE and NIS, 20% of all men aged 35 will die from a tobacco-related illness by the age of 69 years. This is twice the rate of middle-aged men in western Europe.

Tobacco products are responsible for 25% of the social gradient of mortality from coronary heart
disease in western Europe. For those in the Region dying in middle age from smoking-related illnesses, the mean years lost per person ranges from 19 to 23. Although the death rate from smoking-related diseases among men is decreasing in western Europe, the rate for women continues to increase. In the CCEE and NIS, the number of deaths attributable to smoking is increasing in both sexes. If current trends continue, by the year 2020, tobacco is expected to kill more people worldwide than any other single cause.

Children’s health is also damaged by smoking. The mother smoking during pregnancy is negatively related to the weight of the newborn child and can adversely affect its health. Recent data demonstrate that babies of smokers are more likely to die from sudden infant death syndrome than are babies of non-smokers.

The increase in smoking prevalence in many CCEE and NIS is probably also related to
marketing practices and price deregulation in recent years, combined with a lack of effectively implemented antismoking policies.

**Sensible drinking: some progress in the west but setbacks in the east**

Ninety per cent of the countries exceed 2 litres of pure alcohol consumed per person per year, which is related to the lowest mortality risk for populations (Fig. 28).

Alcohol consumption in 21 countries, mainly in the eastern part of the Region, either increased over the entire period 1980–1993 or has been increasing in more recent years, but the officially registered data for alcohol sales in the CCEE and NIS do not indicate the actual situation. Owing to the introduction of free-market conditions during the early 1990s, a situation not matched by appropriate legislation and registration, large quantities of alcohol were imported and sold, particularly in the NIS, without being reflected in national statistics. Studies carried out in some countries suggest that actual consumption may be 2–3 times higher than that shown in routine statistics (Fig. 28). The sharp increase in the incidence of alcoholic psychosis in these countries between 1992 and 1995 provides additional evidence of high and increasing alcohol consumption.
In most western European countries, especially those with a relatively high alcohol consumption, trends are declining or stable (Fig. 29). Nevertheless, only three countries – France, Italy and Spain – have achieved the target for the year 2000 of a 25% reduction in alcohol consumption between 1980 and 1995. Evidence indicates that consumption is increasing among young people in the Region.

Alcohol is a dependence-producing drug, and this dependence is associated with an increased risk
of illness and premature death. Drunkenness is also associated with a high risk of injury and death, both to the person who becomes intoxicated and to others. Many epidemiological studies show that drinking small quantities of alcohol reduces the risk of coronary heart disease and ischaemic stroke; most of the risk reduction occurs at the level of 10 g of absolute alcohol every other day. As discussed above in relation to the mortality crisis in the NIS, however, high alcohol consumption in populations, particularly when combined with practices of drinking to intoxication, leads to a tremendous increase in mortality.

Death rates from chronic liver disease and cirrhosis of the liver vary widely throughout the Region. The highest and most rapidly increasing rates are found in countries in the eastern part of the Region (Fig. 30). The average mortality in the EU, although slightly declining, is still about twice as high as the average for the Nordic countries.

Psychoactive drugs: related deaths and crime are rising in Europe

Europe is estimated to have 1.5–2 million heavy users of psychoactive drugs. The prevalence of people who have ever used drugs and of current users varies considerably from country to country. For most drugs, including cannabis, opiates, amphetamines and cocaine, use is increasing throughout the Region, especially in the eastern
part, although the number of heavy opiate users has stabilized or declined in some western European countries. The consumption of amphetamine-like substances such as 3,4-methylenedioxymethamphetamine and ecstasy is increasing rapidly in many western European countries. Throughout the Region, illicit drug use is increasing among young people. Using illicit drugs increases the risk of poisoning, dependence, psychosis, suicide and premature death. Intravenous drug use increases the risk of infective endocarditis, hepatitis infection and HIV infection. The level of injected drug use remains high in many countries in the western part of the Region, however, and is increasing in the eastern part of the Region.

About 40% of AIDS cases are among drug users, and HIV seropositivity among drug users in western Europe is high. In most CCEE and NIS, in general HIV seropositivity among drug users is still low, but reported HIV seropositivity is growing explosively in some countries such as Belarus, the Russian Federation and Ukraine, owing to increasing HIV transmission among injecting drug users.

Healthy nutrition: the art of striking the right balance

Food choices are important determinants of health. Inappropriate diet is a risk factor for several chronic diseases, including cardiovascular diseases and cancer. The risk of coronary heart disease rises with increases in serum cholesterol. The major nongenetic determinant of serum cholesterol levels is fat consumption, and evidence indicates that high fat intake is associated with an increased risk of breast and colon cancer.
In addition, low consumption of vegetables and fruits is also associated with higher morbidity from cardiovascular diseases and cancer. High sodium intake increases the risk of elevated blood pressure and thus the incidence of stroke. Salt consumption appears to be much higher in the CCEE and NIS than in most countries in western Europe.

Obesity is widely, and probably increasingly, prevalent and is recognized as one of the main preventable causes of ill health. For example, the mortality rate rises with increased relative body weight. Although this increase is steeper for both men and women under 50 years of age, the effect of overweight on mortality persists well into the ninth decade of life. It is now seen as an independent risk factor for coronary heart disease and has a strong correlation with diabetes, gall bladder disease, hypertension, cancer and other non-fatal health problems. An estimated 2–7% of health care costs are attributable to obesity.

Although data on the prevalence of obesity and overweight in Europe are limited, national studies suggest that about 10–20% of men and 10–25% of women are obese (Fig. 31). The

Fig. 31. Percentages of people who are overweight (body mass index ≥ 27a) by sex and age group in selected countries in the European Region, 1995–1996

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Males</th>
<th>Females</th>
</tr>
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<tbody>
<tr>
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<tr>
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<td>15–24</td>
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*Weight in kg/(height in m)².

Source: data from the WHO Regional Office for Europe.
countries in the eastern part of the Region generally have a higher prevalence of obesity than do those in western Europe. The prevalence of obesity has increased by 10–40% in most European countries in the past decade. For example, in the United Kingdom the prevalence of obesity rose from 6% to 8% among men and from 8% to 12% among women between 1980 and 1993.

For the Region as a whole, fat consumption as a proportion of total energy intake increased steadily until 1990 followed by a gradual decline. The recent decline has been largely caused by reductions in the CCEE and NIS and to a lesser extent by reductions in the Nordic countries. In the EU countries the percentage of total energy obtained from fat has continued to increase (Fig. 32).

Nevertheless, certain components of the diet can benefit health. The consumption of a diet rich in vegetables and fruit is associated with a lower risk of coronary heart disease and of some types of cancer, because vegetables and fruit have an antioxidant capacity. Most populations in Europe need to increase their consumption of vegetables and fruit significantly.

There is some evidence that vegetable consumption has increased in countries in the northern part of Europe, but this has not nearly reached the WHO recommendation (400 g/day). In the CCEE and NIS the availability of milk and meat

Fig. 32. Percentages of total energy available from fat in food in subregional groups of countries in the European Region, 1980–1995

Sources: data from the WHO Regional Office for Europe; Food balance sheets from the Food and Agriculture Organization of the United Nations.
dropped significantly and that of bread and cereals increased between 1989 and 1994. The result was a declining amount of energy available for each person. These data are drawn from food balance sheets from the Food and Agriculture Organization of the United Nations, which describe the national availability and not consumption of food. Nevertheless, the data are likely to reflect the actual changes in food consumption.

Micronutrient deficiencies also cause widespread ill health. Anaemia is prevalent in about 11% of the European population as a whole. Some CCEE and NIS have extremely high levels of anaemia. Surveys conducted in the 1990s found that nearly 70% of children 1–2 years old and 36% of women were anaemic in Azerbaijan, and 69% of children 1–3 years old and 49% of women were anaemic in Kazakhstan. Nevertheless, this deficiency results from a high intake of inhibitors of iron absorption, such as tea and cow’s milk, from a very early age (under 4 months) rather than from low iron intake itself.

Iron deficiency is associated with impaired immune function and poor birth outcome, and iodine deficiency can cause the fetal nervous system to develop abnormally during the first 3 months of gestation. Iodine deficiency is endemic in Europe and affects about 17% of the population. Only six countries have no degree of endemic iodine deficiency disorder owing to good public health measures, such as iodine fortification of animal fodder, through which iodine reaches the human food supply in milk and meat. Attempting to obtain sufficient iodine from iodized table salt poses a risk of consuming excessive salt (more than 6 g/day).

The prevalence of stunted growth among children in some countries in the eastern part of the Region is 8–10 times higher than the average prevalence in western Europe. The elevated prevalence of stunted growth suggests that many children’s intake of nutrients, and especially micronutrients, is inadequate to promote linear growth and confirms that the environmental and socioeconomic conditions are poorer in the eastern part of the Region than in western Europe.

An increasing proportion of the population in Europe is living in relative or absolute poverty. Poverty has a major impact on the relationship between patterns of eating on a low budget and disease. Urban poverty, in particular, excludes access to a varied and adequate diet, especially among unemployed and old people. Unemployment and age are associated with rising levels of chronic disease, and diet may be impoverished through falling incomes if, at the same time, people who can grow their own food stop doing so. This has been a typical scenario in many CCEE and NIS in the period of economic transition; rising unemployment and people on fixed incomes spending up to 75% of their disposable income on food.

**Physical activity**

New scientific evidence shows that regular physical activity has great potential for improving and maintaining everyone’s health and wellbeing. Health-enhancing physical activity is effective, feasible, acceptable and safe. Nevertheless, few countries in the European Region monitor levels of physical activity (Fig. 33). The fourth survey in the Health Behaviour of School-Aged Children Study, which provided data from

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Fig. 33. Percentages of people assessed as physically active in their leisure time, by age group, in selected countries in the European Region

Source: data from the WHO Regional Office for Europe.

20 European Member States, reported in 1993–1994 that 62–92% of boys and 41–84% of girls aged 11–15 years exercised vigorously two or more times per week.

The risk of physical inactivity is likely to increase in most countries of the Region, as trends indicate a more sedentary lifestyle. The prevalence of inactivity is so high in some countries that large proportions of the population cannot maintain a diet adequate in micronutrients without gaining excess body weight. Physical activity thus needs urgently to be increased. This would probably reduce the risk of disease by a factor comparable to that achieved by controlling other common risk factors, such as smoking or a high intake of dietary fat. Nevertheless, most of the countries in the Region lack appropriate data to develop and monitor national policies on physical activity.

Policies for controlling risk factors related to lifestyles

Policies for controlling and reducing specific risk factors should be further developed as part of an overall healthy public policy (see below). The formulation of a broad and common set of basic principles can greatly help to ensure that policies
for specific risk factors are mutually compatible, synergistic and reinforcing.

Policies aiming to reduce tobacco and alcohol consumption should be based on the European Alcohol Action Plan,\textsuperscript{10} the European Charter on Alcohol,\textsuperscript{11} the Third Action Plan for a Tobacco-free Europe\textsuperscript{12} and the Madrid Charter against Tobacco.\textsuperscript{13}

Although the vast majority of countries in the European Region have some element of public health policy on alcohol, drugs and tobacco, most lack commitment and have effectively failed to implement such policies. As of early 1995, only one fifth of the 39 countries providing information assess their own national alcohol policy as being comprehensive. Most of the countries adopting comprehensive policies are in western Europe. Lithuania and Poland have also introduced such policies, and Slovenia has advocated a policy relating to tobacco use.

Economic liberalization in the CCEE and NIS led to the collapse of the previous system of controlling the availability of tobacco and alcohol through, for example, pricing and limitations on outlets, hours of sale and advertising. New control mechanisms have hardly been introduced and/or pose great difficulties in enforcing. The absence of regulation and the power to enforce it, combined with the heavy commercial promotion of alcohol and tobacco and the overall impoverishment of the population, are held to be responsible for the increase in unhealthy lifestyles in these countries. Focusing on education, in the absence of regulation, has limited effectiveness.

As a result of their entry to the EU, the strict alcohol control policies of Finland and Sweden have been relaxed, thereby contributing to an increase in the consumption levels there. At the same time, a great step forward was taken in December 1997 by the Health Council whereby the Health Ministers adopted a common position that there should be an EU-wide ban on tobacco advertising. This decision will have its impact within the EU, but also serves as an example beyond its borders.

The illicit drug market is regulated globally through prohibition, but prohibition increases the profits of illicit drug production and trafficking and thus stimulates continued supply. The success of the prohibition strategy is also brought into question by the considerable quantities of illicit drugs available in almost all countries in the Region. Most countries, having been sensitized by the international community, are aware of the need for intersectoral cooperation in meeting the problems of illicit drug use and have, for example, established high-level coordinating committees. In the western part of the Region, strategies for reducing the harm of the existing drug use as a means of preventing HIV infection have been introduced to a varying extent. In general, strategies for harm reduction still need to be developed in the eastern part of the Region,

\textsuperscript{11} European Charter on Alcohol. Copenhagen, WHO Regional Office for Europe, 1996 (document EUR/ICP/ALDT 94 03/CN01).
\textsuperscript{13} It can be done. A smoke-free Europe. Copenhagen, WHO Regional Office for Europe, 1990 (WHO Regional Publications, European Series, No. 30).
but positive steps have been taken in a number of these.

Food and nutrition policies to promote healthy eating include nutrient reference values for the population, and these are then interpreted to provide healthy eating guidelines for various population groups. In order to implement policy, action plans should include fiscal, agricultural and retail policies that encourage an increase in the consumption of vegetables and fruit and a decrease in fat consumption.

Innovative methods should be developed to disseminate information to the public through the health care services, schools, nongovernmental organizations and the mass media.

The First and Second European Conferences on Food and Nutrition Policy were held in Budapest in 1990 and The Hague in 1992. The regional follow-up conference of the 1992 International Conference on Nutrition was held in Poland in 1996; 40 countries attended and produced country reports, plans of action and preliminary policies relating to food and nutrition. These reports are being collated into a comparative analysis of food and nutrition policies for the European Region of WHO.

The WHO CINDI programme supports Member States in developing comprehensive, integrated policies for preventing and alleviating the consequences of noncommunicable diseases. The CINDI programme aims to promote healthy lifestyles by reducing smoking, improving nutrition, reducing alcohol use, increasing physical activity and moderating psychosocial stress; to enhance the preventive practices of health professionals; and to ensure success by exchanging information and building up international networks. Over the past few years, the CINDI programme has considerably expanded its network and mobilized resources for action in the participating countries.

Overall progress in reducing the disease risk factors related to lifestyles has been poor during the 1990s. This is especially the case in the CCEE and NIS, where the use of alcohol, drugs and tobacco, and the related harm, has increased.

There are some positive exceptions, however. Cigarette consumption in France fell by 7.3% between 1991 and 1995 after the Evin law was adopted that banned tobacco advertising, increased tobacco prices and imposed greater restrictions on smoking in public places. Finland has achieved a massive reduction in smoking prevalence after the introduction of a comprehensive policy on tobacco control.

The main constraints in implementing policy result from the political and economic power of the international industries producing alcohol, tobacco and illegal drugs and the fact that countries have not taken seriously enough the health and social consequences of the use of these substances.

**Healthy public policy**

Promoting and sustaining health in the Member States require supporting the development of healthy public policies. To achieve this, intersectoral policies and programmes to support healthy lifestyles should be implemented at both the national and subnational levels of policy-making. Legislative, financial, managerial, educational and administrative support to health promotion should be strengthened and investment for health increased. Participatory
mechanisms should be used at the country, regional and local levels to involve people in the formulation, implementation and evaluation of policy.

More specifically, the Member States should consider investment for health at all levels of policy-making as a strategy for optimizing the health-promoting impact of a wide range of policies. These policies include education, income maintenance, health care, labour, housing, agriculture, transport, tourism, energy and communication. The strategy involves identifying relevant policy attributes; considering factors that may enhance or inhibit policy change; assessing change options that offer benefits both to health objectives and the primary goal of a specific policy sector; and planning the political process of achieving the necessary legislative, regulatory, financial, organizational or educational changes. Finally, although governments play an important role in health, business interests, community and other nongovernmental organizations as well as individuals influence health significantly. Their potential for preserving and promoting people’s health should be encouraged. Alliances must be forged to provide the impetus for action for health.

The commitment to healthy public policy varies between Member States. In many countries awareness is growing that the health care sector alone cannot promote and sustain people’s health. This awareness, however, does not correspond with systematic action and review of the potential of legislative, financial, organizational, managerial and educational measures to improve health.

The promotion of health and adoption of healthy lifestyles are often hampered by social and political difficulties in countries. Drastic reduction of social welfare, diminished scope of social policy, economic scarcity and fiscal upheaval risk eroding progress even further in many Member States in both western and eastern Europe. In many instances, countries’ economic and political priorities are inconsistent with, and even work against, progress towards health. The development of healthy public policy remains one of the toughest health for all targets to achieve.

Reports from Member States and specific country surveys reveal that, in many Member States:

- health promotion is given an insignificant role in health care reform;
- the budget earmarked and used specifically for health promotion is, on average, less than 1% of the total health budget;
- the institutional arrangements for healthy public policy are still very weak or inappropriate;
- programmes are often ad hoc and mainly issue-based using health education as the major, if not the only, means of implementation; and
- modern training in health promotion is not available.

The following positive trends can be noted in Member States:

- awareness is increasing of the need to develop a health promotion strategy in accordance with the concept and principles highlighted in the Ottawa Charter for Health Promotion and incorporated into the European health for all policy;

• there is more interest and action in developing settings-based health promotion programmes and policies; many countries are investing in intersectoral cooperation between the education and health sectors with the aim of producing health-promoting schools; and activities in the workplace and health care settings are also increasing; and
• bodies outside the health sector, such as labour unions, the education sector, voluntary organizations, businesses and self-help and consumer organizations, are launching a growing number of health promotion initiatives.

A healthy environment
An important objective of the health for all policies and strategies is to ensure a physical and social environment that is free from hazards to health, provides support for personal development and is equitably accessible to all people. A healthy environment is an important direct and indirect determinant of human health and therefore a major social asset and can improve the quality of life immensely. Exposure to adverse environmental factors can cause ill health directly or can contribute to the detrimental effect of other factors. Such exposure to some adverse situations and factors is more prevalent among specific population groups, such as those in poverty, and may be especially harmful for vulnerable population groups such as children or women of reproductive age. Environmental policies and programmes should therefore not only avoid or reduce exposure to harmful factors and improve situations related to the ambient air, drinking-water, recreational water, waste and the soil, people’s workplaces and settlements, but also be fully incorporated into balanced and sustainable socioeconomic development for the current and the future generations, in Europe and globally.

Still few data and few indicators
In the early 1990s, the WHO European Centre for Environment and Health carried out a comprehensive analysis of the state of the environment and health in the European Region. The resulting report, Concern for Europe’s tomorrow,\(^\text{15}\) was presented to the Second European Conference on Environment and Health in Helsinki in June 1994. It underlined the difficulties in obtaining a clear picture of environmental health in the Region:

Lack of comparable data of an appropriate quality is a major obstacle to priority setting and environmental health management in the Region. A set of core environmental health indicators needs urgently to be agreed and developed for use on a Region-wide basis.

These statements remain valid. There are major gaps in the indicators needed for day-to-day environmental health management at all levels. This relates, for example, to monitoring compliance with standards, early warning of the population and research. A standardized system of data collection must be developed and implemented to obtain the information necessary for monitoring progress and evaluating results. In the absence of the essential information prerequisites, the current evaluation is necessarily limited.

From planning to action
The last few decades have witnessed a growing recognition that the quality of our environment is vital to our health, and that development is the key to both. Sustainable development – development that meets the needs of the present without compromising the ability of future generations to meet their needs – is at the heart of any effort to achieve better health.

Achieving this objective will require major changes in policies and strategies for solving a wide range of environmental health problems and creating a safe, secure environment. However, solving these problems in Europe can only be achieved by the relevant sectors working together. With this in mind, the Regional Office for Europe organized two ministerial-level conferences that brought together two of these sectors: environment and health.

The first, in Frankfurt in 1989, endorsed the European Charter on Environment and Health, a major step towards joint development of public health and environment policy. The Frankfurt Conference also led to the establishment of the European Centre for Environment and Health, which considerably strengthened the capability of the Regional Office to anticipate and respond to environmental health needs. In addition, it initiated the development of the Environmental Health Action Plan for Europe.

The second conference, in Helsinki in 1994, endorsed the Declaration on Action for Environment and Health, which focuses on the environment as such and are part of the Environment for Europe process that began in 1991, have resulted in a major mobilization of resources. The third ministerial conference “Environment for Europe” in Sofia, Bulgaria, in 1995, recognized the positive impact of the process of developing NEHAPs on the collaboration between the environment and health sectors. In some countries, such as Hungary, the processes of developing a NEAP and a NEHAP have been linked, to facilitate setting priorities for environmental actions based on health concerns.

The Helsinki Declaration re-emphasized the need for effective environmental health management at all levels. Some countries have also adopted the principles of subsidiarity and intersectorality and have attempted to

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implement them. The countries in which verticality is still the basic rule are encouraged to update or initiate collaboration with all sectors relevant to environmental health at all levels. Nevertheless, efforts must be expanded in all countries to increase the integration of horizontal sectors, such as urban planning, energy, transport, industry and agriculture, when policies and programmes are developed and projects implemented. This is essential at the national, regional and local levels, and some countries have already restructured their activities in this direction. This approach should be strengthened by implementing appropriate projects at the local level, which would demonstrate that intersectoral teamwork is much more beneficial to the health status of the local population than are isolated and vertical programmes and projects.

The outcomes of such projects can become visible only after several years of consistent effort. Long-term dedication of the countries to sustainable development and to improving the health of the population will therefore determine the success of the policies adopted.

**Safe drinking-water – a precious commodity still lacking for many people**

The percentage of the population connected at home to a drinking-water supply differs substantially throughout the Region: over 97% in EU countries, over 95% in the Nordic countries, over 79% in the CCEE and NIS and over 62% in the central Asian republics. Some EU countries have slightly decreased and some central Asian republics have slightly increased coverage since 1990–1991.

Drinking-water continues to be contaminated by soil and sewage in many places. This contamination is significant in some areas, as shown by recent outbreaks of such waterborne diseases as cholera, hepatitis A, cryptosporidiosis, typhoid, and gastrointestinal and parasitic diseases. Even countries with an acceptable quality of drinking-water supply cannot consider the issue resolved, as certain population groups, such as migrants or those in rural areas, may be at risk from special hazards, and the entire population may be at risk from emerging microbial and chemical hazards.

Unfortunately, few countries have implemented suitable and effective systems for wastewater collection and treatment. This is important for countries’ disease prevention programmes and for those countries in which the water resources are already scarce or will be so in the first part of the next century. In addition, better wastewater collection and treatment can improve water quality in transfrontier rivers, lakes and seas, and this is therefore not just a national concern but also an international one. All countries should therefore be encouraged to do this.

Water quality analysis is only the final element of a chain of activities and preconditions, including the availability of resources and the condition, maintenance and operation of technical equipment. Regulation, institutional and economic aspects and quality control should be included. Further, such pricing policies as cost recovery and the polluter-pays principle, which have been implemented in some countries, should be promoted.

Ensuring safe drinking-water in the long run requires establishing the financial self-sufficiency of the systems of water production and distribution in every country. This can ensure that the prerequisites for the quality of water supply can
be provided and sustained. However, many countries subsidize water prices. In the CCEE and NIS this is still inevitable because of the very limited purchasing power of the population. As shown in Fig. 34, the real absolute price of the drinking-water in the EU varies considerably. Remarkably, the relative price (price related to GNP per person) is very similar for most of the countries. In Greece, Italy and Spain, however, the relative price is significantly lower, most probably because of government subsidies. Given the importance of and need for financial self-sufficiency on the part of water agencies or companies, all countries should be encouraged gradually to reduce and finally eliminate water price subsidies.

Air quality – some notable improvements in the west

Air pollution, whether indoors or outdoors, can cause ill health, and pollution with particulate matter can reduce life expectancy. Reduction of air pollution requires greater efforts towards comprehensive approaches for implementing abatement strategies. Two different but complementary approaches are being applied in the Region, mainly by countries in western Europe and especially the Nordic countries:

- reducing air pollution from mobile sources by implementing legislative and fiscal instruments, improving the technical characteristics of vehicle engines and improving fuel quality; and

![Fig. 34. Drinking-water prices in relative and absolute terms in 11 EU countries, around 1994](image)

INDEX

<table>
<thead>
<tr>
<th>Country</th>
<th>Relative price a</th>
<th>Absolute price b</th>
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<tr>
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<td>Italy</td>
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a Index relating absolute price to GNP per person.
b In French francs/m³.

Source: data from the WHO Regional Office for Europe.
• reducing air pollution from fixed sources by identifying pollution sources, improving the technical processes and changing the fuels used, and thereby lowering the concentration of the pollutants in the emissions at source.

In general, progress has been made in all parts of the Region, especially in western Europe, in reducing air pollution by particulate matter and sulfur dioxide from stationary sources. Nevertheless, the rapid increase in road traffic in most parts of the Region has increased pollution from mobile sources (exhaust from vehicles using diesel oil and petrol) that emit nitrogen dioxide and particulate matter, leading to the formation of summer smog in many cities in southern and western Europe.

Air pollution from nitrogen dioxide and sulfur dioxide is decreasing globally, but in Europe about 70% of the urban population is exposed to annual average concentrations of nitrogen dioxide that exceed the WHO guideline value.\(^\text{18}\) Emissions of sulfur dioxide have declined in most Member States, especially in western Europe, including the Nordic countries – in some countries by as much as 6% per year. This improvement is due to changes in fuels (type and quantities), changes from small multiple sources to large single sources with tall stacks, and emission-control measures.

Particulate matter from diesel oil and petrol use in heavy industry and motor vehicles continues to be a special health concern in urban areas. Although few countries (mainly in western Europe) monitor concentrations of respirable particulate matter systematically, available data show a reasonably consistent pattern of lower concentrations in northern Europe and higher concentrations in southern Europe.

In summary, at least one third of the Region’s population still live in urban areas where pollution levels continue to be of health concern. Most of these areas are in the CCEE and NIS.

**Foodborne diseases on the rise**

Some surveys show that foodborne diseases have increased over the last few years in several countries, although some Member States have reported stabilization or even decreasing numbers of cases. Salmonellosis is still the most important foodborne disease, with *Salmonella enteritidis* the pathogen in 50–90% of the cases, although in the early 1980s *S. typhimurium* caused most of the cases in humans. Campylobacteriosis has become the most frequent gastrointestinal infection in a number of countries.

Contamination of foods starts mainly at the farm: eggs and egg products are the most frequent vehicle of contamination. Nevertheless, most outbreaks result from either inadequate preparation (heating) or preservation (cooling) of food in restaurants, mass catering and private homes.

The human and social costs of the episodes of foodborne diseases are high, especially for very young and elderly people. In addition, emerging foodborne diseases, such as the new variant of Creutzfeldt–Jakob disease, have created particular concern for public health. Creutzfeldt–Jakob disease clearly illustrates the strong impact that such diseases can have on consumer confidence in government action and on consumption patterns. All food production and distribution procedures should therefore be very carefully designed, carried out and monitored by

\(^{18}\) *Air quality guidelines for Europe*. Copenhagen, WHO Regional Office for Europe, 1987 (WHO Regional Publications, European Series, No. 23).
independent professionals under the supervision of the health authorities. Some countries have already adopted appropriate national legislation to ensure this.

**Waste management**

Many countries in the northern part of western Europe, such as Denmark, Finland, the Netherlands and Sweden, have made good progress in waste management. Some countries in southern Europe (such as Italy, Malta, Portugal and Spain) and some CCEE (such as the Czech Republic, Hungary and Poland), as well as some Baltic countries, have also taken modest steps forward. In contrast, most of the other countries in the Region have made little or no progress or have even regressed.

The Region produces an estimated 2600 million tonnes of waste per year, mainly industrial waste (980 million tonnes; 37% of the total) and agricultural waste (1000 million tonnes; 38% of the total). Municipal solid waste accounts for 220 million tonnes (about 8%) and other waste such as sewage sludge, debris and mining waste comprises 450 million tonnes (about 17%).

The average municipal waste production in the Region is estimated to be about 250 kg per person per year, although this varies substantially: for example, the Russian Federation produces 100 kg per person per year and Israel produces more than 600 kg per person per year. Overall, the rates of municipal waste production have been increasing by an average of 2.5% annually, although the rate of increase is only about 1.5% in some countries.

No data are collected systematically on the exposure of the general public to uncollected, treated or landfilled municipal waste and its impact on health. Cause and effect are difficult to establish as the potential health effects, such as gastrointestinal, skin, eye and physical disorders, can be caused by many other factors in daily life. Close proximity to waste may be the sole causal factor in only a minority of cases, but this is likely to be one of several factors creating an adverse health condition. Attempts to identify causal links have not been convincing, but the health of people collecting and treating waste can be affected through physical injury from such causes as explosions and fires.

Waste workers are therefore definitely at risk. For example, in a waste-sorting plant in Denmark, where bronchial asthma is defined as a decrease in the peak flow in the lungs of more than 100 l/min under work as compared with normal breathing capacity, 8 of 15 workers developed such a reduction in lung capacity and, hence, suffered from bronchial asthma. In the United Kingdom, workers engaged in municipal waste landfilling showed a combined risk of 80 injuries and deaths per 100 000 landfill workers, similar to the risk in the agricultural and engineering sectors.

Several countries and local communities have improved their waste collection, treatment and disposal by developing technically and financially sustainable programmes commensurate with the skills available in each locality. Training of waste engineers, waste managers and waste workers is a key element. In parallel, countries have been developing relevant legislation and regulation.

**Health promotion at work – a good investment**

In general, data on occupational accidents and diseases are not comparable between countries: they can reflect variation in notification and
registration practices rather than real differences in rates. In the European OECD countries, about 10% of registered occupational accidents that result in personal injury are severe, leading to more than 60 days of absence from work, and 1–5% of all registered occupational accidents lead to permanent disability. The latest reported rates of occupational fatalities per 100 000 workers range from zero in Armenia to 1.04 in the Nordic countries and 4.11 in Estonia. Survey data from Denmark have been used to estimate that only half of all occupational accidents in countries with good registration systems are reported; underreporting in other countries is therefore likely to be significantly higher.

The physical workload and musculoskeletal strain from working conditions still affect 10–30% of the workforce in highly industrialized countries and up to 50% of that in less industrialized countries. About 25% of manual workers and 33% of farmers in the EU countries are reportedly exposed to poor ergonomic conditions. Injuries related to physical strain, especially repetitive tasks, are the leading occupational diseases in many countries. Work disability is often caused not only by work-related problems but also by the interaction of occupational and non-occupational factors and diseases, which emphasizes the importance of designing health promotion strategies in work settings.

The economic loss from occupational accidents and injuries in some European countries is calculated to be 3–5% of GNP. In the United Kingdom, for example, the costs of personal injury from work accidents and work-related ill health are estimated to be equivalent to about 5–10% of the gross trading profit of all companies in the United Kingdom. Estimates for some Nordic countries show that the financial losses may even rise to 10–15% of a country’s GNP if premature work incapacity and mortality among skilled employees are included.

For example, cardiovascular, respiratory and musculoskeletal disorders, cancer and certain mental disorders are the leading causes of work disability and loss of healthy and productive life. Although these diseases are also related to unhealthy lifestyles, workplace health promotion can be important in reducing them. Too few enterprises, however, have included health promotion as part of their occupational health and safety programmes. Also, in most countries government responsibility for preparing and implementing the policy for making the work environment healthy and safe is still divided between the ministries responsible for health and for labour.

**Appropriate health care**

Appropriate preventive, curative and community care has a central role in achieving the European targets for health for all. Appropriate care can, through the use of adequate policy instruments and cost-effective management of resources, focus on accessible primary care supported by strong secondary and tertiary care, including services for people with special needs, to ensure high quality of care and maximum health gain.

Health care systems in Europe have their roots in different traditions and organizational models. Nevertheless, many have undergone considerable reforms in the 1990s to respond to changing economic and health circumstances.
Health care systems – balancing solidarity and competition

The total expenditure on health as a percentage of GDP varies widely in the countries in the Region (Fig. 35). The countries can be divided into three groups according to the predominant method of funding their health system: a model mainly based on taxation; a model chiefly based on social insurance; and a model characterized by centrally planned normative distribution of government budget funds.

Fig. 35. Total health expenditure as a percentage of GDP in countries and subregional groups of countries in the European Region, 1995 or latest available year

Source: data from the WHO Regional Office for Europe.

a The Former Yugoslav Republic of Macedonia.
The countries using taxation include the Scandinavian countries, Ireland and the United Kingdom and countries in southern Europe such as Greece, Italy, Portugal and Spain. All these systems provide universal or nearly universal access to health care. None of these countries has expressed any intention to shift away from taxation as the main source of funding for health care. Their populations widely accept the role of the public sector as the main provider of funds.

The countries financing health care by social insurance, such as Austria, Belgium, France, Germany, Luxembourg and Switzerland, have long-established statutory insurance-based systems. These systems have been inspired by similar principles but differ significantly. The government regulates the health care system closely in nearly all cases. The level of government control and regulation has increased substantially in order to contain costs (by, for instance, imposing a ceiling on premiums) or to ensure equity and solidarity.

The third group comprises the CCEE and NIS, most of which are moving towards health care funded by health insurance, largely through payroll taxation. These countries are at different stages of changing their systems. The republics of the former Yugoslavia already had a health insurance system. Hungary and the Russian Federation (1991), the Czech Republic and Estonia (1992), Latvia and Slovakia (1993), Georgia (1995) and Kazakhstan (1996) all adopted such systems during the 1990s. Other countries, such as Belarus, Bulgaria, Kyrgyzstan, Lithuania, Poland and Romania, still rely principally on general revenue to finance health care but are considering national health insurance laws. Several factors, including economic recession and the premature introduction of these schemes, have led to a series of problems in the shift to insurance-based funding in the CCEE and NIS.

A core concern in countries engaged in reforming their system of funding health care has been balancing the principle of solidarity with the pressures to establish competition among insurers and providers. In many countries, private health insurance schemes are operated in a manner that corrodes social solidarity. For example, recent experience with private competitive insurance in the Czech Republic, Israel, the Russian Federation and, to a lesser degree, the Netherlands demonstrates that these schemes erode solidarity in health care financing, since health insurers tend to select people with low risk. Another example is the access to essential drugs. In western Europe, access to drugs by the entire population is ensured through extensive publicly financed schemes for health care delivery, but in the CCEE and NIS there has been a marked shift towards private financing of drugs. The accompanying irrational use of drugs is creating problems with access and affordability for large parts of the population and adversely affecting health outcomes.

Health care reform – policies and process

Many countries have re-emphasized their political will to reform health care systems to improve access to health services of good quality, based on primary health care. The Ljubljana Charter\(^ {19} \) codified the principles to guide this process. Nevertheless, the gap between principles and practice is large.

\(^ {19} \textit{The Ljubljana Charter on Reforming Health Care. Copenhagen, WHO Regional Office for Europe, 1996 (document EUR/ICP/CARE 94 01/CN01).} \)
Many countries have had difficulty in formulating a generally accepted national health care policy that promotes the principles of the Ljubljana Charter. Nevertheless, the impact of the reform debate on health care policy has been obvious. Many European countries have started to review their health care systems. For example, Germany and the United Kingdom have formally adopted comprehensive reform programmes. On the whole, the countries in western Europe have decided to retain their previous general orientation towards health care policy but are making major evolutionary changes. More choice, competition and pluralism have been introduced into tax-based systems. Countries with insurance-based systems have implemented more cost containment, primary health care and preventive services.

The Baltic countries and several CCEE (such as Croatia, the Czech Republic, Hungary, Poland, Romania and Slovakia) have changed their orientation from the centrally planned model of health care towards health insurance. Changing policy in this part of the Region, however, is more difficult than was initially thought 3 or 4 years ago, because of prolonged economic constraints, the inertia of old attitudes and political instability, although one by one the health care systems have started to function better.

In the large NIS such as the Russian Federation and Ukraine, the formulation of an official policy on health care has followed the same lines as in the CCEE, but implementation has proved to be even more difficult with unfortunate consequences for patient care. The NIS that have continued to operate centrally planned health care, with some incremental reforms, have fared better.

In all countries, the reform process has been hindered by the growing costs of health services. The aging of the population (which increases the need for health care), the increased availability of new treatments and technologies and rising public expectations have exerted financial pressures. Most countries have responded with a series of measures to control rising costs. In western Europe, successful macroeconomic measures have given way to additional efforts to restrain escalating costs at the institutional level. This has been less successful in the CCEE and NIS, although there is also some encouraging experience of improving efficiency.

The quest for cost containment and more efficiency, especially in the CCEE and NIS, and the imperative to obtain more money for health care frequently overshadow the principles and values of health for all.

Many countries have been led into short-sighted excessive reliance on market forces and monetarist policies, whereby solidarity and equity sound outdated, although these principles are as important as they were before, if not more so. Consequently, the reforms often do not contain any elements of improvement for users, who are asked to pay more and get less.

There is little evidence that many of the reform policies in the eastern part of the Region would actually be effective in meeting the stated objectives of the reform. In certain instances, the debate has been driven by ideology and rhetoric rather than by evidence.

On the whole, countries with well organized civil societies and democratic traditions have been better able to safeguard essential health care services for their populations, even in times of
economic recession, and to transfer stated policies into action and not just into laws that are difficult to implement. Unfortunately, the CCEE and NIS tried to accomplish too much too quickly. This means that many well intended initiatives never materialized. In fact, only a few countries have implemented reform initiatives at the level to which they had committed themselves.

Managing change – the roles of the state, the market and centralized health systems
The greatest pressures for change are related to the role of the private sector and the introduction of market-style mechanisms in the health sector, such as an increase in consumer choice and competitive incentives to change the behaviour of health personnel. In some instances, market-style mechanisms have been combined with continued public sector ownership and operation of facilities. This hybrid approach has a number of different names: internal market, public competition, provider market and quasi-market. The design and implementation of this type of planned market have played an important role in health reform in Finland, Italy, Spain, Sweden, the United Kingdom and in some CCEE.

The application of market-style mechanisms to the health sector poses a number of challenges. Most countries in the Region agree that unrestrained market activity in the financing and provision of health care is not desirable.

Policy-makers are increasingly realizing that competitive measures need to be carefully designed if they are to achieve their intended objective. Market mechanisms have been successful when they are linked to tight monitoring and evaluation as well as clear standards for market participants.

In a number of Member States, adopting incentive-oriented frameworks requires not less government activity but different kinds of government activity with an increase in regulation, sometimes at the regional or local level. Regulatory measures have demonstrated their effectiveness in a number of areas. They have been especially effective in monitoring and evaluating outcomes and not with stipulating the money and other resources to be allocated.

Another major pressure for change has arisen from the disappointment, throughout Europe, with large, centralized and bureaucratic institutions. In almost every country the same drawbacks of centralized systems have been identified: lack of efficiency, innovation and responsiveness to changes in the factors affecting health and health care. Decentralization, coupled with accountability, can be an effective means of improving the delivery of services, securing better allocation of resources according to need, involving the community in decisions about priorities and reducing inequity.

In several tax-based systems in western Europe, the hierarchy between health authorities and care providers has been replaced by more decentralized management arrangements, in some cases quasi-autonomous nongovernmental organizations (“quangos”) or self-governing hospitals. These have been introduced in the United Kingdom, and similar arrangements are being considered in other countries. In social insurance systems, the managerial autonomy of providers has been strengthened by the introduction of market-oriented relationships between the insurer and the provider. In several CCEE, responsibility for hospitals has been decentralized to local authorities; in some cases, these authorities can contract directly with insurers.
Nevertheless, self-governing schemes are generally still at an early stage of development in the Region. Key issues include public accountability, the representativeness of management boards and legal liability.

Nevertheless, the experience in some countries shows that decentralization may also have negative effects such as fragmented services or inequity. Successful decentralization requires a number of preconditions such as sufficient local administrative and managerial capacity and appropriate mechanisms for accountability and public participation. In addition, the evidence in many countries demonstrates that certain areas, such as the basic framework for health policy or regulations concerning public safety, are better managed centrally.

**Primary health care is being strengthened**

Overall, primary health care is being strengthened in the Region. Nevertheless, the experience has not always been positive, and greater efforts are needed to overcome resistance to reform. Again, attempts to strengthen primary health care in the CCEE and NIS have been hampered by political instability and financial constraints. Initiatives to introduce market mechanisms and fee-for-service schemes in primary health care are often launched with little regard to the health outcome. For example, users are allowed to choose a practitioner, but increasing out-of-pocket payments restrict access for the most needy people. Primary health care has become more oriented towards cure at the expense of health promotion and disease prevention, and some well organized preventive programmes have been discontinued. Responsibility for primary health care overwhelmingly tends to be decentralized to local authorities, but these efforts are not always reinforced by transferring financial resources to these local authorities for primary health care. In addition, hospital-based medical specialists in many Member States continue to be reluctant to accept policies that strengthen primary health care and/or restrict direct access to secondary care.

Innovative primary health care systems in some countries have increased the use of needs assessment, in order to plan interventions in the community based on methods that integrate public health, epidemiological and clinical approaches.

Primary health care services are still often organized in parallel vertical programmes. This weakens the standing of primary health care in the eyes of both the health professionals and the public. Nevertheless, integrated horizontal services have been developed in some countries, providing a full range of ambulatory services, supplemented by home care and a good working relationship with the social welfare services.

The implementation of policies to develop primary health care has been accompanied by the introduction of schemes for training general practitioners or family physicians or for retraining physicians already in practice. Some countries are developing family physician services with a parallel community nursing service if one did not already exist. In addition, some Member States have created academic departments of general practice or family medicine and introduced the subject into the undergraduate curriculum of medical students.

The few existing data cannot confirm that financial resources are being redistributed towards primary health care, despite the expressed will to develop primary health care accompanied by
such a redistribution. Other indicators, such as immunization rates and infant and perinatal mortality, provide some evidence about the outcome of policies to reform primary health care. These indicators have mostly improved, although this is not always consistent, and some countries show negative trends. Inequity in accessibility between social groups also persists and has even worsened in some cases.

**Hospital care**

Since hospitals are the main recipients of health care resources, they are central in implementing health care reform in every country. Many changes have been made, with the aims of increasing user satisfaction, using resources more rationally and achieving better outcomes. Most countries claim to have achieved moderate to good progress in this area, although the pace of change has been slower than many would prefer. The number of hospital admissions varies greatly, even between countries with similar levels of economic and health development. For example, in 1995 admissions per 100 population per year were 24.7 in Austria and 10.3 in the Netherlands. The numbers are increasing in most of the countries in western Europe (Fig. 36) because the shorter duration of admission allows higher turnover of patients, except in the Nordic countries, where the trend seems to be reversed. The hospitalization rates have increased in most CCEE. In the NIS, the average rate dropped sharply in the transition period but still remained higher than in the rest of the Region. Hospitals all over Europe are shifting from being general hospitals for chronically ill patients to acute hospitals with a shorter average length of stay and more day patients. This is based on a

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**Fig. 36. Inpatient hospital admissions in subregional groups of countries in the European Region, 1980–1996**

![Image showing hospital admissions trend](source: data from the WHO Regional Office for Europe.)
shift from treatment of mainly chronic illness and simple procedures to more treatment of relatively acute illness and more complicated clinical interventions.

On average, the number of hospital beds per 1000 population has decreased in all parts of the Region, most notably in the NIS, although not all countries have followed this trend (Fig. 37).

The average length of stay (Fig. 38) has declined steadily in the 1990s nearly everywhere apart from the NIS. It is difficult to determine the roles of such factors as more efficient technologies, changes in the case mix and changes in the indications and criteria for hospital admission and discharge. The bed occupancy rates in western Europe have remained practically unchanged at an average of 77% but have decreased significantly in the CCEE and NIS to levels comparable to those in western Europe. These factors, plus the more complex technology, shorter lengths of stay and increasing numbers of hospital admissions, may increase hospital costs unless expenditure is restricted. The strategies oriented towards health for all (focusing on reducing the number of beds and the length of stay by moving processes traditionally done in hospitals to primary health care or by providing home care services for patients discharged early) frequently create problems in primary health care because financial or human resources are not usually transferred at the same time as patients. This does not necessarily mean that health for all strategies have failed to meet their stated objective, because the average quality of care seems to have improved everywhere, including in the CCEE and NIS.

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**Fig. 37. Hospital beds available in subregional groups of countries in the European Region, 1980–1996**

<table>
<thead>
<tr>
<th>Year</th>
<th>CCEE</th>
<th>EU</th>
<th>NIS</th>
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<tbody>
<tr>
<td>1980</td>
<td>860</td>
<td>980</td>
<td>920</td>
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<tr>
<td>1982</td>
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<td>1996</td>
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</tbody>
</table>

Source: data from the WHO Regional Office for Europe.
Progress has been made on alternatives to hospitalization such as day surgery, day care and home care for both acute and chronic care. Also, technology is being used better, and policies on improving the quality of care have been implemented in many countries.

Even more importantly, hospitals are viewing health in a broader sense than just curative care and are embarking on health promotion activities more systematically. For example, the number of hospitals belonging to the Health Promoting Hospitals network grew from 20 in 1991 to 288 by the end of 1997 and the number of countries with regional or national networks increased from 11 to 20 in 1997.

Many countries have used new arrangements to contain public expenditure on hospital treatment. For example, Germany has placed a limit on the reimbursement claims physicians can present, Georgia has been trying to introduce co-payments, and the United Kingdom has introduced competition between hospitals through the fundholders. The principle of co-payments by patients for medical services from the national health system was implemented in Slovenia. Other countries, such as Italy and Scotland, are implementing changes in the payment of health care professionals, moving from a salary base to a more flexible scheme based on productivity, level of qualification and scientific prestige. This is regarded as a strategy to motivate
professionals and increase productivity, but it is difficult to link incentives to professionals’ outcome or performance because assessing this is very complex.

Awareness is growing that hospital management requires special skills, and the tradition of hospital directors being senior physicians highly qualified in clinical work is shifting to professional managers with or without a medical background in countries in which this was not previously the case, such as Poland, Spain, Turkey and Turkmenistan. Training of hospital managers is a priority in many countries.

Adequate information systems are lacking not only in many CCEE and NIS but also in many countries in southern Europe. Patient registries, electronic communication within hospitals and communication between hospitals and primary care are frequently still underdeveloped. Upgrading information systems is expensive and requires new skills.

**The quest to improve the quality of health care**

Continuous development of the quality of health care remains important to all Member States in the Region. Quality of care development has the objective of reducing inequities in health care within and between countries, and is defined as a process of identifying and using constructively the best practices through optimal use of existing health care resources.

A major milestone in this area was the development and endorsement in 1993 by the European Forum of Medical Associations and WHO (EFMA) of recommendations regarding the role and policy of national medical associations in quality of care development with the overall aim of benefiting patient care.

One of the key recommendations of EFMA is that ensuring the quality of health care is primarily the responsibility of the health care providers themselves and is therefore an ethical, educational and professional responsibility inherent in the medical professions. A number of countries have developed national policies on quality of care development embodying EFMA recommendations. Belgium, Denmark and Slovenia have begun to implement such policies, and they are being developed in Albania, Bulgaria, Croatia, Estonia, Hungary, Israel, Lithuania, Poland, the Republic of Moldova, Romania and Slovakia.

Following European consensus on quality indicators, such as for diabetes management, obstetric and perinatal care, oral health care and mental health, a number of countries have collected data in these areas, coordinated both at the national and international levels, based on compatible structures and parameters. Country nodes have been installed, and a server based at the Regional Office enables aggregated, comparable and anonymous data to be compiled. The results have been analysed for the European Region.

The results of these activities include improving pregnancy outcomes among diabetic women in Denmark and Iceland. The analysis also demonstrates that outcomes in perinatal and obstetric care in some CCEE and NIS are identical to those in western Europe and that the same quality of obstetric care, as measured by accepted indicators of crucial obstetric outcome, can be achieved with less frequent use of technologically intensive interventions (Fig. 39).
Improvements in other areas of health care delivery have been less visible. For example, although European countries use 8–30% of health care expenditure on medicines, unnecessary and inappropriate prescription, dispensing and use of medicines is widespread in all countries. Studies have demonstrated that a carefully planned combination of regulatory and educational measures accompanied by continuous monitoring can be effective in improving drug use, but too little is known about the final effect on the health of patients.

**Key sources**


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THE PRINCIPLES AND PRACTICE OF HEALTH FOR ALL

Health policies

The health for all approach in formulating national policies

About half the Member States in the Region have formulated health policies based on the health for all approach or have initiated that process at the national level (or in federal countries at the level of regions). This includes a number of CCEE and NIS, which, following a period when they seemed to be exclusively concerned with reforming health care, have begun to take a wider health perspective, at least as expressed in their policy documents. In some countries this movement started at or has spread to the local or city levels.

Such overall policies for health are formulated very differently. First, many countries try to set priorities among the actions defined in their policies, rather than including the whole span of topics covered by the 38 regional targets for health for all. Second, some of the newer policy documents specify the criteria by which the priorities were set. On the whole, these criteria are rather similar, relating to the magnitude of the health challenge in terms of its impact on mortality and morbidity, the potential for effective intervention and the possibility of measuring progress, although a few countries also refer to some of the social aspects of health challenges. Good examples of issue-specific policies and some innovative partnerships within the overall policy frameworks are increasing in number.

The types of policy instrument suggested or used, however, tend to be traditional. For example, lifestyle policy seems to focus more on traditional measures of health education to promote understanding of the risks of smoking and alcohol use rather than on broader-based community action to change the reasons why people smoke and drink. There are very few examples of tackling the root causes of inequity in health, such as income disparity or variation in education and job opportunities.

There have been some welcome attempts to improve information systems and research, which are essential for policy formulation, monitoring and evaluation. The information available does not allow assessment of the fate of such policies in times of political or financial crisis or of how to maintain momentum or continuity at such times.

Awareness of inequity in health appears to be growing, and the understanding of the concept of inequity has broadened somewhat from a rather narrow focus on geographical variation to a broader focus on differences in income, education and employment, including the lack of it.

Countries have emphasized more the need to tackle these broad determinants of inequity in health, but this has been less evident in the action actually taken. Action proposed or implemented to promote equity in health usually focuses on providing legislative access to health care, including pharmaceuticals, rather than on alleviating other barriers to demand for care such as education or cultural beliefs, or dealing with
other causes of inequity in health such as income inequality.

Nevertheless, there have been some excellent examples of attempts, especially in western Europe, to reach out to ethnic groups, especially those for whom language can be a barrier. In certain local areas, gypsies and travellers pose serious health challenges, and although countries are discussing this more openly, considerable action is needed in cooperation with representatives of such vulnerable groups.

Healthy Cities – a health for all movement extending beyond Europe
The key vehicle for health for all at the local level in the Region continues to be the WHO Healthy Cities project, which started in 1987. It has become a global movement with hundreds of cities involved in all WHO regions. The main focus of activities in the European Region in the current phase (1993–1998) is formulating and implementing city policies and comprehensive city health plans based on health for all; developing city health profiles (documents that include information on the state of health and health determinants); promoting action for equity and sustainable development (including Agenda 21); and establishing mechanisms for community empowerment, intersectoral action and accountability for health. Through its extensive networks, the project promotes innovation, capacity building (in preventing disease, health promotion and ecological management) and cooperation between cities.

Thirty-eight cities in 22 countries (including 13 member states of the EU) are participating in the core regional network, reaching out to more than 732 cities in Europe through associated national networks.

By the end of 1997, about half the 38 project cities had completed a comprehensive, intersectoral health plan. These are policy documents based on health for all principles that often include explicit targets. The Liverpool city health plan is an excellent example. Cities involved in the Healthy Cities project network demonstrate a wealth of health promotion initiatives and projects that address lifestyles, environmental health and the needs of vulnerable groups, and draw on the contribution of various sectors, new actors and community groups. Project cities and national network cities are also very active in developing new systems for health monitoring.

In summary, the Healthy Cities project:

- increases the importance of health and equity as issues in politics and policy;
- facilitates cooperation between local government departments and other sectors;
- creates a platform and a framework that actively involves nonstatutory and community agencies; and
- reinforces the ability of cities to implement sustainable development strategies.

The foundations of public health action
Gradually strengthening the new public health
The traditional content of public health has included sanitary hygiene and sanitary
epidemiological surveillance: controlling the transmission of infectious diseases and of environmental pollution at source by means of surveillance and imposing restrictions justified by adopted norms and standards. In the 1990s, public health in many countries has succeeded in encompassing activities outside the health care sector, mainly related to health promotion and ecology, inspiring and activating new actors and sectors. A variety of nonmedical disciplines has also become involved, in addition to the traditional disciplines. While this modern public health movement has evolved, the formal and traditional public health services in many countries have not. Public health professionals in many countries are still operating with limited skills, mostly using medical approaches, in relatively low-status positions with a limited scope of responsibilities and few resources.

A modern public health infrastructure includes advanced technical skills to assess the need for health and health care, the ability to develop effective and realistic policies, and mechanisms to facilitate intersectoral action and public policy objectives. Although awareness of the role of public health is increasing, some reform programmes still do not address public health sufficiently.

An important role of public health is to undertake research. Modern health services are driven by advances in biomedical research, and public health research must keep pace. In practice, relatively few countries undertake such research, and it is rarely part of a well considered strategy designed to meet the health needs of the populations concerned.

The research gap between east and west also needs to be reduced considerably. Each CCEE and NIS is working to develop research institutes and centres capable of tackling the whole range of research related to public health but is facing considerable economic difficulties. Many talented specialists have left public health for commercial employment or to emigrate.

European countries have developed their public health services and infrastructure in very diverse ways. In general, the new public health appears to be stronger in Ireland, the Netherlands, the Scandinavian countries and the United Kingdom. Some other countries, such as Italy and Spain, have considerable variation, with some regions making a strong contribution to public health. All these countries have modern communicable disease surveillance and control systems and well developed health promotion programmes as well as mechanisms for incorporating public health concerns into the organization of health services. Several countries, including Denmark, France, Germany, Hungary and Poland, have undertaken initiatives that will strengthen their public health function, either through major training programmes or by restructuring services.

The NIS have had little enthusiasm for reforming the sanitary–epidemiological (sanepid) system, with its focus on traditional hygiene and a narrow laboratory-based approach. As government budgets have declined, these services have lost funding. Given the current challenges caused by social fragmentation, this budget shortfall has caused breakdowns even in areas where the sanepid system previously enjoyed success, such as communicable disease control. In the CCEE, the picture is more complex. Hungary has extensively restructured the former sanepid system to include health
promotion as well as noncommunicable disease epidemiology, although the process of change has been difficult. Some changes took place in Romania, leading to reintegration of components of the sanepid system. Other countries, such as Bulgaria, the Czech Republic and Slovakia, place less emphasis on reforming the sanepid system.

The importance of adequate health information in planning, managing and monitoring health and health services is being better recognized throughout the Region, as highlighted elsewhere in this report. Many countries have improved access to, dissemination and use of health data and information, using computer and telecommunication technology and, most importantly, regular public health reporting.

Attempts have been made to improve the ability of information systems to portray existing inequity in health, and interest is increasing in trying to produce information on equity in health that can be relevant to policy. Major research programmes have been carried out in some EU countries such as the Netherlands and the United Kingdom, and in Spain a government-appointed commission recently reported on inequity. The experience of monitoring and evaluating progress towards health for all in Europe has conclusively demonstrated that a comprehensive mechanism for international public health monitoring and evaluation can be established. A cooperative process has been initiated that provides all countries with information and feedback on the prevailing health and socioeconomic situation and makes it easier to reach rational decisions on adjusting and modifying national, regional and international health policies and strategies. The reports received from Member States since 1985 show that the countries of the Region have increasingly taken the task of monitoring and evaluation more seriously. It is now widely acknowledged that health targets must be supplemented by an efficient monitoring mechanism based on workable indicators. If data are not provided or are considered impossible to compile, policies may not be taken seriously. Considerable emphasis should therefore be placed on further strengthening the use of this concept of health targets, monitoring and evaluation in countries.

Ethics and health – good progress in the European Region

Ethical considerations in health-related matters have become more pertinent than ever because of two main trends in Europe. First, the introduction of new medical technologies has sparked a totally new dimension in the traditional bioethical discussions. Second, because of economic constraints, most European countries have suggested limiting the expanding health services. In fact, many countries have already cut (previously) existing services, which in turn has put pressure on the principle of distributive justice. The Ljubljana Charter (see footnote, p. 66) therefore emphasizes, as its first fundamental principle, the importance of such values as human dignity, equity, solidarity and professional ethics. The population is becoming more prominently divided into two groups – the “haves” and the “have-nots” – especially in the CCEE and NIS, which have been hit hard by the economic situation and the harsh reductions in available funds, but also in the more affluent countries of the Region. In such an environment, the health care sector has had a difficult dilemma: the commitment to ethical values versus economic and market realities. It is therefore more important than ever to provide good advice for health care
professionals, administrators and decision-makers on ethical principles, which must act as guiding lights, especially under difficult circumstances, even situations of armed conflict.

It is encouraging that many of the Member States under severe economic constraints have been able to focus on ethical considerations and that this has safeguarded the essential services for their populations. Ethics has also guided them in the difficult debate with counterparts in the financial sector and industry, which sometimes consider short-term economic profits to be a higher priority than health gains for the population.

Many countries refer to confidentiality, rights to services and information in their legislation, but these rules are often scattered in different pieces of legislation and are sometimes difficult for people to use to protect their individual rights. To overcome this problem, Member States have adopted two main strategies: compiling the elements of patients’ rights into a charter (France, Ireland and the United Kingdom) or incorporating these rules in a more binding way in legislation (Finland, Iceland, Israel, Lithuania and the Netherlands). Many countries in Europe are in the process of preparing either charters or legislation on patients’ rights (Fig. 40). The WHO Declaration on the

Fig. 40. The state of the development of patients’ rights in countries in the European Region as of June 1997

Source: data from the WHO Regional Office for Europe.
Promotion of Patients’ Rights in Europe\textsuperscript{20} and initiatives taken by the Council of Europe have greatly enhanced developments in the area of health and ethics.

Another main line in health and ethics focuses on the new technologies. This includes such challenges as \textit{in vitro} fertilization, research on human embryos and fetuses, prenatal diagnosis, gene therapy, the use of modern information technology and its links with confidentiality, euthanasia and abortion. Only a few countries, such as France and the United Kingdom, have brought their legislation and ministerial decrees up to date to fit the new circumstances. At the European level, the Committee of Ministers of the Council of Europe adopted the Convention on Human Rights and Biomedicine\textsuperscript{21} on 19 November 1996. It is the first binding international text in the health field aimed at protecting human beings against the possible misuse of new biological and medical techniques. The work on the Convention took almost 15 years, which reflects the moral, religious and political sensitivity surrounding the ethical debate. The framework drawn by the Convention may help countries that hesitated to bring the ethical challenges into their relevant legislation.

**Key sources**

\textit{Citizens’ choice and patients’ rights}. Copenhagen, WHO Regional Office for Europe, 1996 (document EUR/ICP/CARE 94 01/CN 01 (A)).


\textit{The WHO Healthy Cities project. State of the art and future plans}. Copenhagen, WHO Regional Office for Europe, 1997 (document).

\textsuperscript{20} Declaration on the Promotion of Patients’ Rights in Europe. Copenhagen, WHO Regional Office for Europe, 1994 (document ICP/HLE 121).

CONCLUSION

This health for all evaluation has once again shown that developments in health in the changing Europe of the 1990s indisputably indicate the cardinal role of socioeconomic factors in improving and maintaining health. In western Europe the socioeconomic environment is generally stable and indeed has improved moderately in many respects, although with great variation. The situation has worsened considerably, however, in the CCEE and NIS, where expectations at the time of the second health for all evaluation in 1990–1991 quickly proved to be too optimistic. Many of these countries were hit by a sharp economic downturn, civil unrest, rapidly increasing socioeconomic problems with resulting difficulties for their health care systems. A few countries show signs of economic recovery, but many are still struggling to halt the regression in social and health development. The difficulties of transition led to rapid impoverishment of large population groups, accompanied by increased income inequality and a weakening of social support systems.

These diverging patterns are also reflected in a widening health gap between the NIS and western Europe, with the CCEE occupying an intermediate position. This applies to nearly all indicators of health status. The achievement of equity as the central plank of the health for all policy remains at present under threat, requiring considerable commitment and action from Member States.

Unfortunately, the gap between rich and poor seems to have widened even in many affluent countries in western Europe, with an increase in the number of poor and/or socially marginalized people. In these countries, however, there seems to be moderate progress towards most of the health for all targets, although progress is limited for several targets, and the ambiguous trends in lifestyles and the environment, with their related risk factors, may signal a decline in health gain.

The overall health situation in the CCEE and NIS has shown unprecedented deterioration since 1990–1991. Although a few CCEE are achieving some health gain, this is offset by deterioration in most other countries in the eastern part of the Region. More specifically, communicable diseases have returned as a priority concern for public health. Tuberculosis incidence has reappeared as a problem. Infectious and sexually transmitted diseases, malaria and typhoid have reached epidemic proportions in a number of countries. Noncommunicable diseases, such as cardiovascular diseases and cancer, continue to take their toll owing to unhealthy lifestyles (especially tobacco smoking, alcohol use and a poor diet). One outstanding feature is the very high excess mortality among middle-aged men, which represents a significant mortality crisis in the NIS. There is considerable evidence that a major part of this crisis is related to the specific and especially damaging patterns of alcohol consumption in these countries.

The health care systems in many countries have tried to radically transform their structure and the mix of public and private funding to improve efficiency, effectiveness, the quality of care and the satisfaction of users and providers. Nevertheless, the overwhelming difficulties entailed in effecting an economic turnaround are making it
very challenging to implement reforms and in some countries even to sustain existing health care systems.

Although actual progress towards many of the health for all targets has not been as good as the Member States hoped, the principles of health for all remain fundamental for health development. The belief of Member States in these fundamental principles is reflected in the fact that about half of them have already formulated national health policies based on the health for all approach. The lesson of this experience is that implementing these policies requires very strong political commitment and substantial resources and time.

Recent developments have underscored the value for Member States of setting explicit targets for health policies and committing themselves to regularly monitoring and evaluating progress towards achieving them. This approach helps to ensure that all available resources are mobilized for health gain and that the pledges of Member States are followed by the best possible action.

The importance of such action has once again been underscored by the results of this evaluation, which show that, along with new developments in the Region, historical concerns persist. In this latter respect the concluding sentences from the first evaluation of progress towards health for all in the European Region\textsuperscript{22} are as valid today as they were in the 1980s:

Of particular concern is the evidence of worsening inequities in some countries and the lack of progress with regard to some factors that influence health status. Prominent among these are health-damaging lifestyles, which (combined with factors in the social environment, especially long-term unemployment) may have a highly deleterious cumulative effect on the particularly vulnerable sections of our populations, including our youth. The health of our future generations is at stake. Action is urgently needed if we are to achieve the goal of health for all.

### ANNEX 1

**Basic socioeconomic indicators for the Member States of the WHO European Region**

<table>
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<tr>
<th>Member State</th>
<th>Mid-year estimated population (millions), 1996 or latest available (1)</th>
<th>GNP per person (US $), 1996 (2)</th>
<th>GDP per person (PPP $), a 1994 (3)</th>
<th>Total health expenditure as a percentage of GDP, 1996 or latest available (1)</th>
<th>Infant mortality per 1000 live births, 1996 or latest available (1)</th>
<th>Life expectancy at birth (years), 1996 or latest available (1)</th>
<th>Human development index, b 1994 (3)</th>
<th>Immunization coverage (%), c 1996 or 1995 (1)</th>
<th>Unemployment as a percentage of the labour force, 1996 (4)</th>
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### Health in Europe

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*PPP $: purchasing power parity in US dollars.

*a The human development index measures the average achievements in a country in three basic dimensions of human development: longevity, knowledge and a decent standard of living. A composite index, the human development index thus contains three variables: life expectancy, educational attainment (adult literacy and combined primary, secondary and tertiary enrolment) and real GDP per person (in PPP $).

*b Percentage of children at 12 months of age who received third doses of oral poliomyelitis vaccine.

**Sources:**

(1) Health for all statistical database, WHO Regional Office for Europe.


ANNEX 2

Assessment chart of progress towards health for all

This chart summarizes the assessment of progress towards each of the regional targets. Progress has been categorized as follows:

- **good**: target attainable or already achieved;
- **moderate**: situation improved, but much more progress is required if target is to be met;
- **little or none**: target unlikely to be achieved without major effort; or
- **negative**: developments are in a direction opposite to that required by the target.

The results for most targets are not based on a precise quantitative analysis. Wherever possible, an attempt has been made to compare the assessment for 1990–1991 (indicated by X) with that for 1996–1997 (indicated by 0). The combination of X and 0 in the same box indicates similar assessments in both 1990–1991 and 1996–1997.

<table>
<thead>
<tr>
<th>Regional target Description</th>
<th>Progress</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>1. Equity in health</td>
<td>0</td>
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<tr>
<td>2. Health and quality of life</td>
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<tr>
<td>3. Better opportunities for people with disabilities</td>
<td>X 0</td>
</tr>
<tr>
<td>4. Reducing chronic disease</td>
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<tr>
<td>5. Reducing communicable disease</td>
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<tr>
<td>6. Healthy aging</td>
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<tr>
<td>7. Health of children and young people</td>
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<tr>
<td>8. Health of women</td>
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<tr>
<td>9. Reducing cardiovascular disease</td>
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<tr>
<td>10. Controlling cancer</td>
<td>X</td>
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<td>11. Accidents</td>
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<tr>
<td>12. Reducing mental disorders and suicide</td>
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<tr>
<td>13. Healthy public policy</td>
<td>X 0</td>
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<tr>
<td>14. Settings for health promotion</td>
<td>X 0</td>
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<tr>
<td>15. Health competence</td>
<td>X 0</td>
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<tr>
<td>16. Healthy living</td>
<td>X 0</td>
</tr>
<tr>
<td>17. Tobacco, alcohol and psychoactive drugs</td>
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<td>No.</td>
<td>Description</td>
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<tr>
<td>18.</td>
<td>Policy on environment and health</td>
</tr>
<tr>
<td>19.</td>
<td>Environmental health management</td>
</tr>
<tr>
<td>20.</td>
<td>Water quality</td>
</tr>
<tr>
<td>21.</td>
<td>Air quality</td>
</tr>
<tr>
<td>22.</td>
<td>Food quality and safety</td>
</tr>
<tr>
<td>23.</td>
<td>Waste management and soil pollution</td>
</tr>
<tr>
<td>24.</td>
<td>Human ecology and settlements</td>
</tr>
<tr>
<td>25.</td>
<td>Health of people at work</td>
</tr>
<tr>
<td>26.</td>
<td>Health service policy</td>
</tr>
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<td>27.</td>
<td>Health services resources and management</td>
</tr>
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<td>28.</td>
<td>Primary health care</td>
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<td>29.</td>
<td>Hospital care</td>
</tr>
<tr>
<td>30.</td>
<td>Community services to meet special needs</td>
</tr>
<tr>
<td>31.</td>
<td>Quality of care and appropriate technology</td>
</tr>
<tr>
<td>32.</td>
<td>Health research and development</td>
</tr>
<tr>
<td>33.</td>
<td>Health for all policy development</td>
</tr>
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<td>34.</td>
<td>Managing health for all development</td>
</tr>
<tr>
<td>35.</td>
<td>Health information support</td>
</tr>
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<td>36.</td>
<td>Developing human resources for health</td>
</tr>
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<td>37.</td>
<td>Partners for health</td>
</tr>
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<td>38.</td>
<td>Health and ethics</td>
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