



# Highlights on health in Slovakia 2005

*Highlights on health* give an overview of a country's health status, describing recent data on mortality, morbidity and exposure to key risk factors along with trends over time. The reports link country findings to public health policy considerations developed by the WHO Regional Office for Europe and by other relevant agencies. *Highlights on health* are developed in collaboration with Member States and do not constitute a formal statistical publication.

Each report also compares a country, when possible, to a reference group. This report uses the 25 countries with low child mortality and low or high adult mortality, designated Eur-B+C by WHO, as the reference group. Eur-B+C comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Tajikistan, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

To make the comparisons as valid as possible, data, as a rule, are taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data in the reports is the European health for all database of the WHO Regional Office for Europe. Other data and information are referenced accordingly.

## Keywords

HEALTH STATUS  
BURDEN OF DISEASE  
COMPARATIVE STUDY  
SLOVAKIA  
EUR/05/5046415R  
<http://www.euro.who.int/highlights>

Address requests about publications of the WHO Regional Office for Europe to:

Publications  
WHO Regional Office for Europe  
Scherfigsvej 8  
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the WHO/Europe web site at <http://www.euro.who.int/pubrequest>.

### © World Health Organization 2006

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Where the designation "country or area" appears in the headings of tables, it covers countries, territories, cities, or areas. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use. The views expressed by authors or editors do not necessarily represent the decisions or the stated policy of the World Health Organization.

## Contents

	<i>Page</i>
Summary: findings and policy considerations.....	1
Selected demographic and socioeconomic information.....	3
Population profile.....	3
Socioeconomic indicators.....	4
Life expectancy (LE) and healthy life expectancy (HALE).....	6
Burden of disease.....	8
Main conditions.....	8
Main risk factors.....	8
Mortality.....	9
Infant, neonatal and child mortality.....	9
Maternal mortality.....	9
Excess mortality.....	11
Main causes of death.....	12
References.....	22
Annexes.....	24
<i>Annex. Age pyramid</i> .....	24
<i>Annex. Selected mortality</i> .....	25
<i>Annex. Mortality data</i> .....	26
Technical notes.....	29
Glossary.....	31



---

## Summary: findings and policy considerations

### Life expectancy

WHO estimates that a person born in Slovakia in 2002 can expect to live 74 years on average: 78 years if female and 70 years if male. Life expectancy in Slovakia is higher than the average life expectancy Eur-B+C: by more than four years for females and more than five years for males. However, it is below the Eur-A average life expectancy: by four years for females and six years for males. WHO estimates that people in Slovakia spend on average eight years (11% of life expectancy) with illness and disability.

As the length of life increases, older people can respond with lifestyle changes that can increase healthy years of life. Correspondingly, health care systems need to shift towards more geriatric care, the prevention and management of chronic diseases and more formal long-term care. Since people are living longer, measures to improve health and prevent disease need to focus on people of working age.

*Ageing and employment policies* (OECD, 2004)

*What are the main risk factors for disability in old age and how can disability be prevented?* (Health Evidence Network, 2003a)

### Infant mortality

The latest infant mortality rate in Slovakia (and both its components: neonatal and post neonatal mortality) is below the Eur-B+C average rate, but well above the Eur-A average rate.

Antenatal care is one of the most important services in health care. Nevertheless, it can be expensive, and interventions may be excessive, unneeded and unproven. A simplified model of antenatal care, based on evidence of benefit, is available.

*Managing newborn problems: a guide for doctors, nurses and midwives* (WHO, 2003a)

*What is the efficacy/effectiveness of antenatal care?* (Health Evidence Network, 2003b)

*What is the effectiveness of antenatal care? (Supplement)* (Health Evidence Network, 2005)

### Maternal mortality

In 1990, Slovakia had the lowest maternal mortality rate among the Eur-B+C countries with data, and in 2002 its rate was still among the lowest in that group. Between 1999 and 2003 there were 21 maternal deaths per 100 000 live births. Slovakia's rather low rate fluctuates around the Eur-A average rate. Between 1990 and 2002, Slovakia's maternal mortality rate fell by 9%, despite some fluctuations in the period. If Slovakia were to reach its Millennium Development Goal target, its maternal mortality rate would be well below the current Eur-A average rate.

More important than reaching the exact Millennium Development Goal for maternal mortality rates is that countries take concrete action to provide women with access to adequate care during pregnancy and childbirth. There are evidence-based initiatives proven to bring down the rates.

*The WHO reproductive health library, version 6* (WHO, 2003b)

### Main causes of death

In general, mortality rates for males and females in Slovakia are below (by about a fourth) the corresponding Eur-B+C average rates, yet they are well above the average rates for the very low mortality countries of the Eur-A reference group (56% for males and 44% for females).

In 2002, the main noncommunicable diseases accounted for about 89% of all deaths in Slovakia; external causes for about 6%; and communicable diseases for less than 1%. In total, 54% of all deaths were caused by diseases of the circulatory system and 22% by cancer.

Among Slovak males, the mortality rate for cancer of the lip, oral cavity and pharynx is the second highest in European countries (the mortality rate is almost three times higher than the Eur-A average rate), and the mortality rate for cancer of the colon, rectum and anus is the third highest (the mortality

---

rate is more than 2.5 times higher than the Eur-A average rate). In comparison with Eur-A averages, the largest excess mortality among females occurs for cancer of the uterine cervix (170% excess) and cancer of other parts of the uterus (50%).

Preventive care, delivered through a country's primary care system, can reduce all-cause mortality and premature mortality, particularly from CVD.

*A strategy to prevent chronic disease in Europe: a focus on public health action: the CINDI vision* (WHO Regional Office for Europe, 2004a)

*Towards a European strategy on noncommunicable diseases* (WHO Regional Office for Europe, 2004b)

*What are the advantages and disadvantages of restructuring a health care system to be more focused on primary health care services?* (Health Evidence Network, 2004)

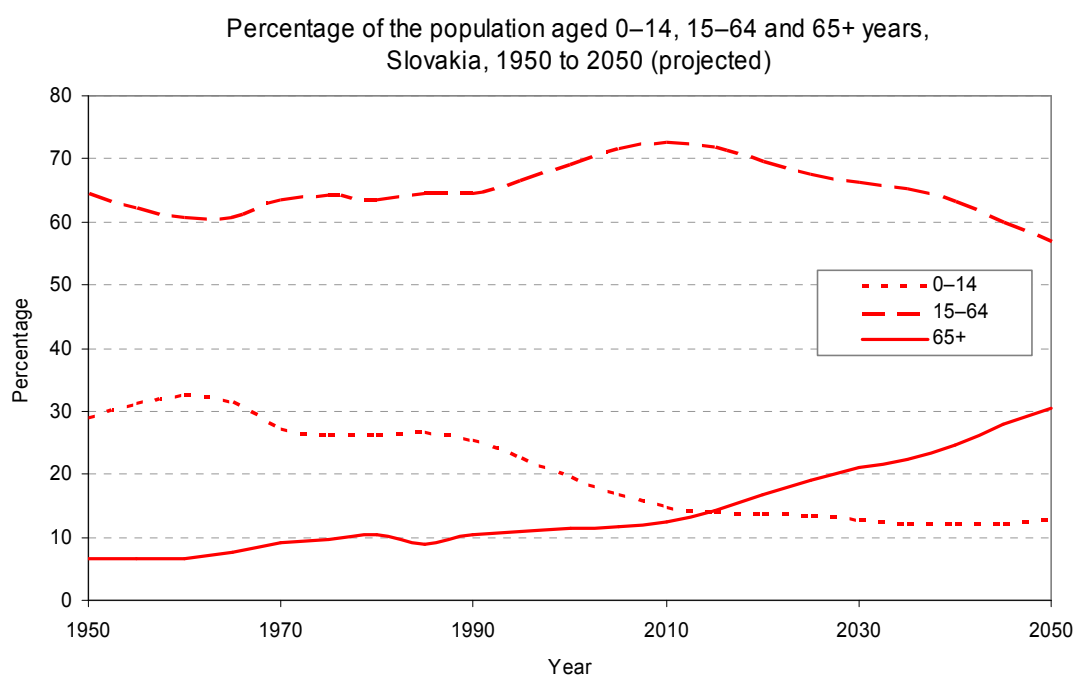
---

## Selected demographic and socioeconomic information

### Population profile

In mid-2003, Slovakia had about 5.4 million people. About 57% of them lived in urban areas, which is below the Eur-B+C average for that year.

The percentage of the population 0–14 years old was relatively steady during the 1980s, but fell from about 25% in 1990 to 18% by 2002. The percentage is below the Eur-B+C average for this age group. However, the percentage of Slovakia's population over 65 years old is above the Eur-B+C average. By 2030, an estimated 21% of Slovakia's population will be 65 years of age and older (Annex. Age pyramid).



Source: United Nations (2005).

The birth rate in Slovakia was among the lowest in Eur-B+C in 2002. Also, natural population growth and net migration in Slovakia that year were around zero and were slightly below the corresponding Eur-B+C averages.

Selected demographic indicators in Slovakia and Eur-B+C,  
2002 or latest available year

Indicators	Slovakia	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s) <sup>a</sup>	5402.0	–	–	–
0–14 years (%)	18.1	–	–	–
15–64 years (%)	70.4	–	–	–
65+ years (%)	11.5	–	–	–
Urban population (%)	57.2	63.7	25.0	73.3
Live births (per 1000)	9.5	12.8	8.6	27.1
Natural population growth (per 1000)	–0.1	0.8	–7.5	23.0
Net migration (per 1000) <sup>a</sup>	0.3	1.8	–6.6	2.1

<sup>a</sup> 2003.

Sources: Council of Europe (2005), WHO Regional Office for Europe (2005).

## Socioeconomic indicators

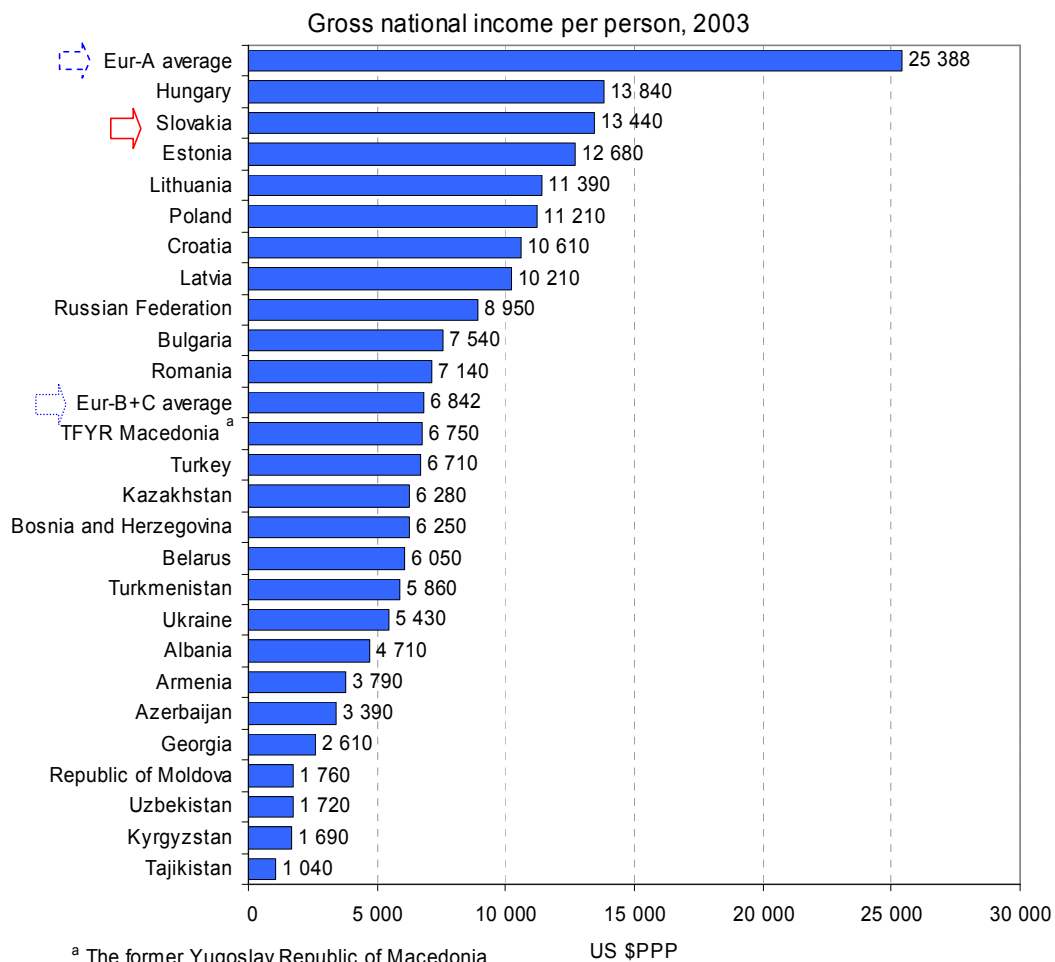
Health outcomes are influenced by various factors that operate at individual, household and community levels. Obvious factors are, for example, diet, health behaviour, access to clean water, sanitation and health services. However, underlying health determinants of a socioeconomic nature also play a role in causing vulnerability to health risks. Here, the key factors are income, education and employment. Though moderately correlated and interdependent, each of these three determinants captures distinctive aspects of the socioeconomic background of a population and they are not interchangeable. Various indicators represent the key socioeconomic determinants of health.

### ***Income: absolute poverty, relative poverty and income distribution***

There is an income gradient affecting health: the poor generally suffer worse health and die younger than people with higher incomes. For instance, the latter are better able to afford the goods and services that contribute to health, for example, better food and living conditions.

People are considered to be in absolute poverty if their incomes are not sufficient to purchase very minimal goods and services. The World Bank currently uses an absolute poverty line of US\$ 2.15 and US\$ 4.30 income per capita per day to measure poverty in low- and middle-income countries of the WHO European Region (using 1993 international prices adjusted for purchasing power parity). While there is no certainty that the poverty lines measure the same degree of need across countries, the World Bank uses them as a constant to permit comparison. Many countries in the Region calculate their national poverty lines on the basis of a minimum consumption basket selected and priced according to the specific circumstances of the country.

In Slovakia, per person gross national income, adjusted for purchasing power parity (PPP), was US\$ 13 440 in 2003, the second highest per person income in Eur-B+C.



Source: World Bank (2005).



Using the World Bank's recommended benchmarks to measure absolute poverty in Europe, household surveys in Slovakia from 1988 to 1996 found the percentage of people living in absolute poverty to be increasing. The 1988 survey identified 0.2% of the population as living on US\$ 4.30 per day or less. The last survey, in 1996, found the rate had jumped to 11.4% (World Bank, 2005).

Relative poverty is an indicator of income level below a given proportion (typically 50%) of the average national income. In high-income countries, there are far more pockets of relative poverty than of absolute poverty.

In 2003, 21% of the population in Slovakia lived in relative poverty – that is, below the risk-of-poverty threshold set at 60% of the national median equivalent disposable income (after social redistribution). That same year, across the nine Eur-B+C countries for which data are available, 16% of the population, on average, lived in relative poverty. In contrast, in 2001, across the 17 Eur-A countries with comparable data, an average of 14% of people lived in relative poverty (Eurostat, 2005).

### **Education**

Education tends to enhance an individual's job opportunities. In so doing, it can improve income, which in turn affects health positively. Education can also give more access to knowledge about healthy behaviour and increase the tendency to seek treatment when needed. A lower level of education – independent of individual income – is correlated with the inability to cope with stress, with depression and hostility and with adverse effects on health.

School enrolment is an indicator of access to education. The secondary school net enrolment represents the percentage of the total population of official school age (defined nationally) that is enrolled in secondary schools.

In 2000, the percentage of school age children enrolled in secondary schools in Slovakia was 74.8%, which was below the average for Eur-B+C countries with data for that year (81.2%) (UNESCO, 2005).

### **Employment**

Being employed tends to be better for health than being unemployed, except in circumstances where employment exposes the individual to physical injury or psychological stress. National unemployment rates and rates for particular sub-populations are monitored to assess the extent to which people have or lack access to opportunities that would enable them to earn an income and feel secure. Vulnerability to health risk is increased by long-term unemployment, that is, continuous periods without work, usually for a year or longer; the socioeconomic status of an individual and of his/her dependents can slide as the period of unemployment increases.

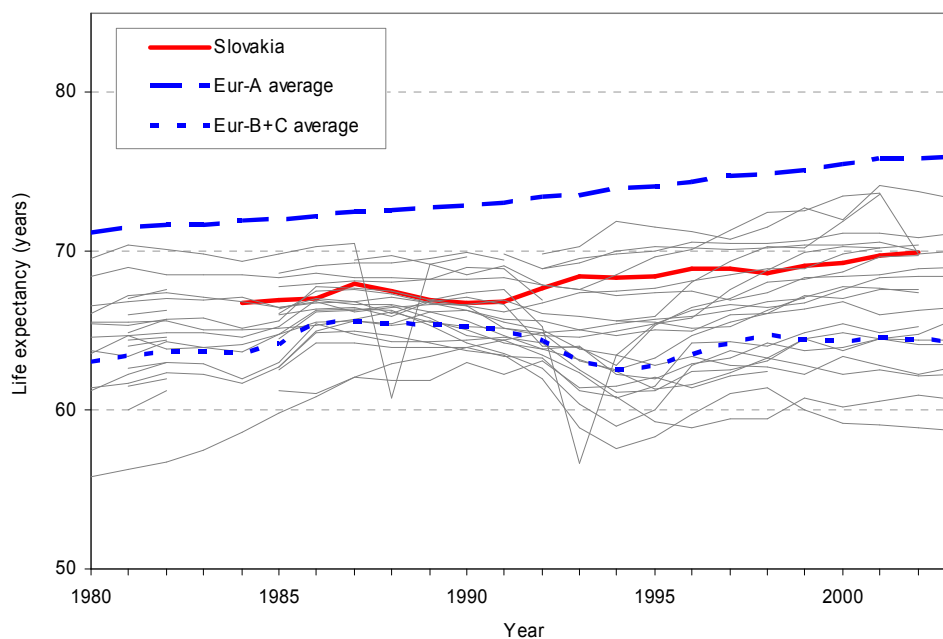
In 2001, the total unemployment rate in Slovakia was 19.3%, compared with the corresponding Eur-B+C average of 12.9%, keeping in mind that national rates are based on estimates of people available and seeking employment and that countries have different definitions of labour force and unemployment. In 2002, the rate dropped slightly, to 18.6%. The percentage of young Slovaks, 15–24 years of age, without work but available for and seeking employment was 39.1% in 2001 and 37.4% in 2002. The Eur-B+C average youth unemployment rate for 2001 was 25.2% (ILO, 2005).

---

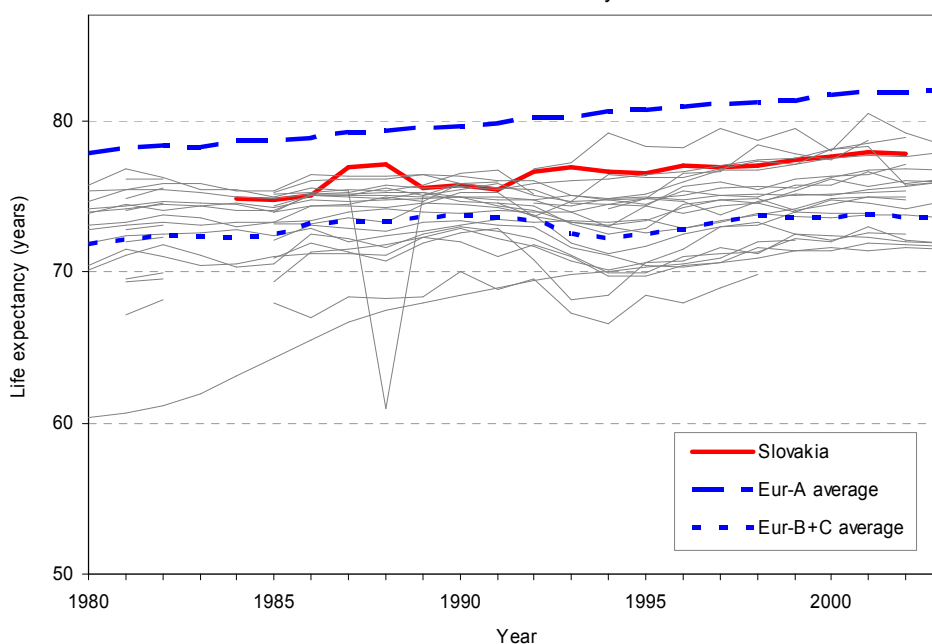
## Life expectancy (LE) and healthy life expectancy (HALE)

According to WHO (WHO, 2003c) estimates, a person born in Slovakia in 2002 can expect to live 73.9 years on average: 77.8 years if female and 69.9 years if male. Life expectancy (LE) in Slovakia is higher than the Eur-B+C average: by more than five years for males and more than four years for females. However it is below the average in low mortality countries of Eur-A: by four years for females and six years for males.

Life expectancy at birth for males, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



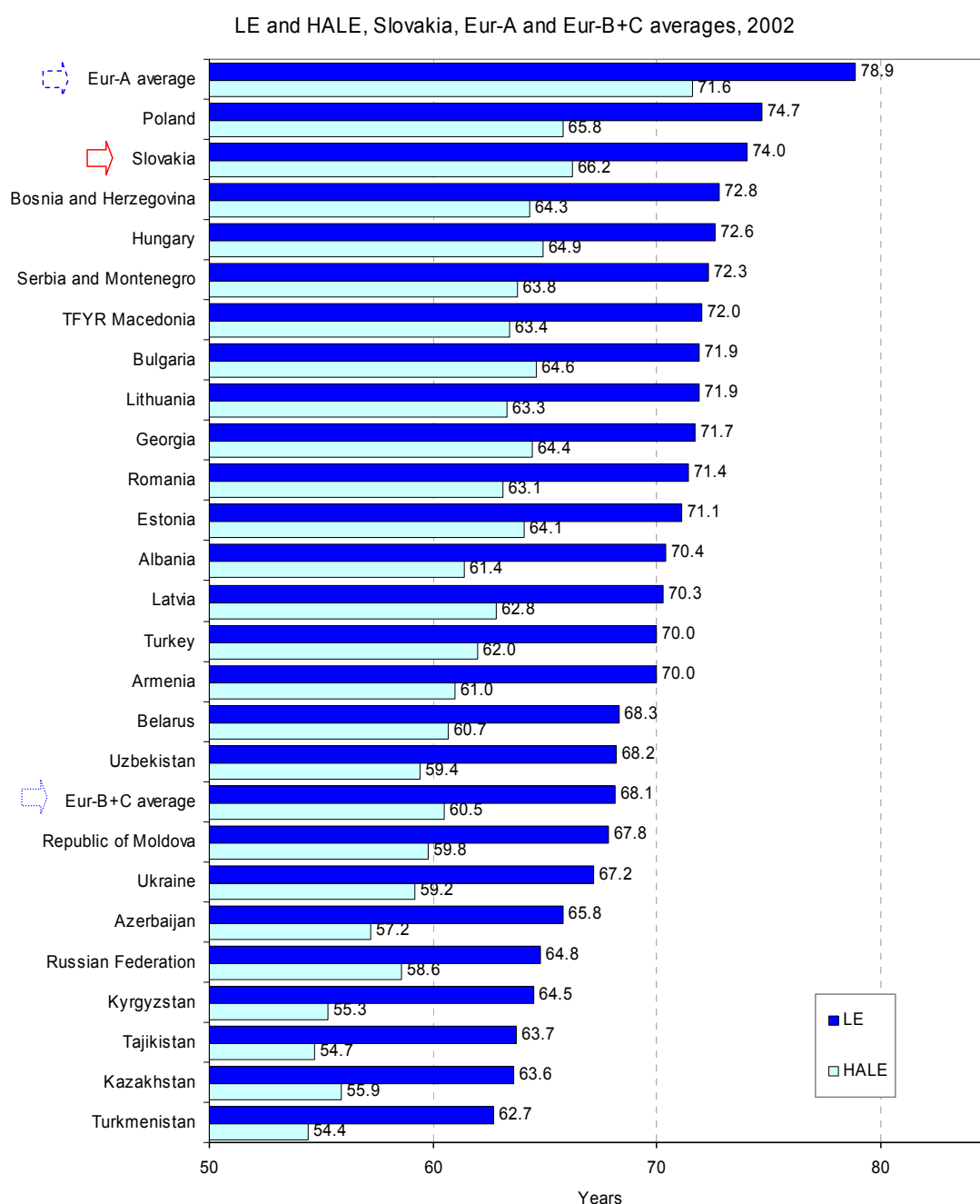
Life expectancy at birth for females, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



Life expectancy in Slovakia has been increasing since 1991, though not continuously, with a greater gain for males (3.0 years) than females (2.4 years). At the same time, there was practically no change in

Eur-B+C average LE, and the gains in Eur-A were similar, so the difference between LE in Slovakia and Eur-A average LE is practically still the same.

In addition to LE, it is increasingly important to know the expected length of life spent in good health. WHO uses a relatively new indicator for this purpose – healthy life expectancy (HALE), subtracting estimated years of life spent with illness and disability from estimated LE. For Slovakia, WHO (2003c) estimates that people can expect to be healthy for about 89% of their lives. They lose an average of 7.8 years to illness – the difference between LE and HALE. This loss is above the average for the Eur-A countries (7.3 years) and is only a little higher than the Eur-B+C average (7.6 years).



Since females generally live longer than males and since the possibility of deteriorating health increases with age, females lose more healthy years of life (8.9 years) than males (6.8 years). Nevertheless, the longer LE for females in Slovakia gives them five more years of healthy life, compared with males. At 60 years of age, this difference reduces to 3.8 years: woman can expect 16.1 years of healthy life and men can expect 12.3 years.

## Burden of disease

The burden of disease in a population can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age, free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows elaborates on the burden of disease in the population. The disability-adjusted life-year (DALY) is a summary measure that combines the impact of illness, disability and mortality on population health.

### Main conditions

The table shows the top 10 conditions (disability groups), in descending order, that account for approximately 90% of the burden of disease among males and females in Slovakia. Neuropsychiatric conditions and cardiovascular diseases (CVD) account for the highest burden of disease, both among males and females. Because mortality from neuropsychiatric conditions is minor, disability in daily living comprises the bulk of their burden on the population's health.

Ten leading disability groups as percentages of total DALYs for both sexes in Slovakia (2002)

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Neuropsychiatric conditions	21.2	Neuropsychiatric conditions	26.7
2	Cardiovascular diseases	21.0	Cardiovascular diseases	20.8
3	Malignant neoplasms	14.4	Malignant neoplasms	13.5
4	Unintentional injuries	13.4	Musculoskeletal diseases	7.3
5	Digestive diseases	7.9	Sense organ diseases	7.0
6	Sense organ diseases	3.9	Digestive diseases	6.3
7	Intentional injuries	3.8	Unintentional injuries	3.7
8	Musculoskeletal diseases	3.6	Respiratory diseases	2.4
9	Respiratory diseases	2.8	Diabetes mellitus	1.8
10	Respiratory infections	1.4	Infectious and parasitic diseases	1.6

Source: Background data from WHO (2003c).

### Main risk factors

The following table shows the top 10 risk factors with their relative contributions (percentage of total DALYs), in descending order, to the burden of disease in the male and female populations of Slovakia. According to the DALYs, tobacco and alcohol place the greatest burden of disease on the Slovak male population, and high blood pressure and high body mass index (BMI) place the greatest burden of disease on females.

Ten leading risk factors as causes of disease burden measured in DALYs in Slovakia (2002)

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Tobacco	19.0	High blood pressure	11.6
2	Alcohol	18.5	High BMI	9.4
3	High blood pressure	11.2	Alcohol	6.0
4	High BMI	6.9	High cholesterol	5.3
5	High cholesterol	6.0	Physical inactivity	3.2
6	Low fruit and vegetable intake	3.4	Tobacco	3.0
7	Physical inactivity	3.1	Low fruit and vegetable intake	2.7
8	Illicit drugs	2.2	Unsafe sex	2.4
9	Occupational risk factors for injuries	1.2	Childhood sexual abuse	1.2
10	Lead	1.2	Illicit drugs	1.0

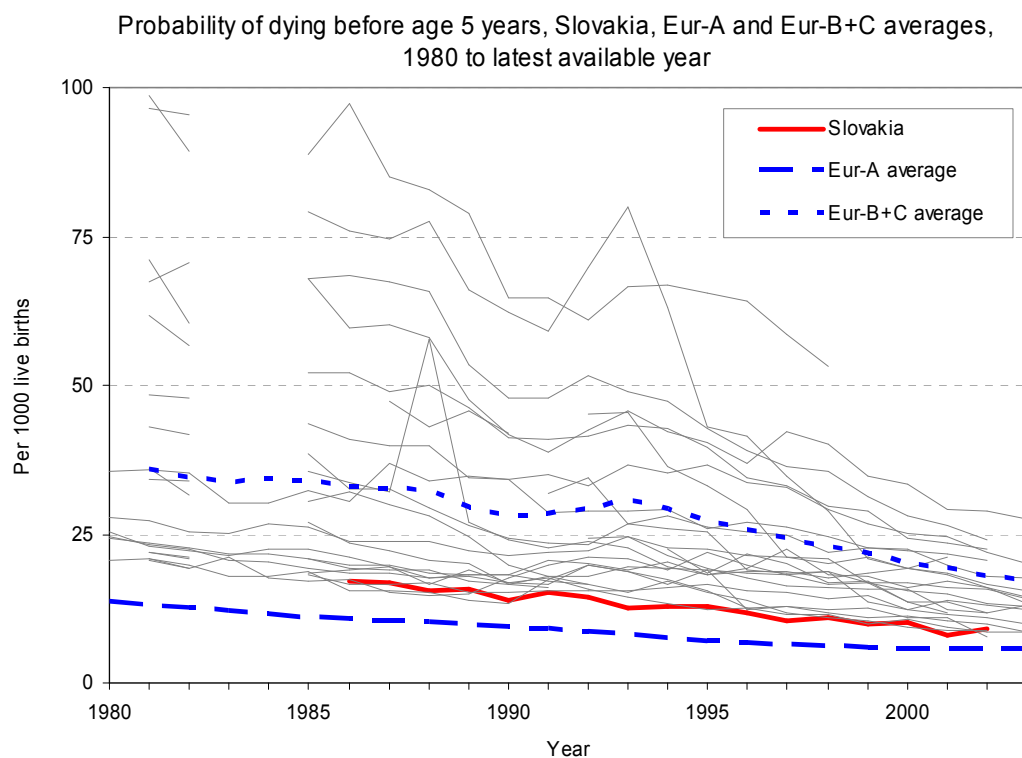
Source: Background data from WHO (2003c).

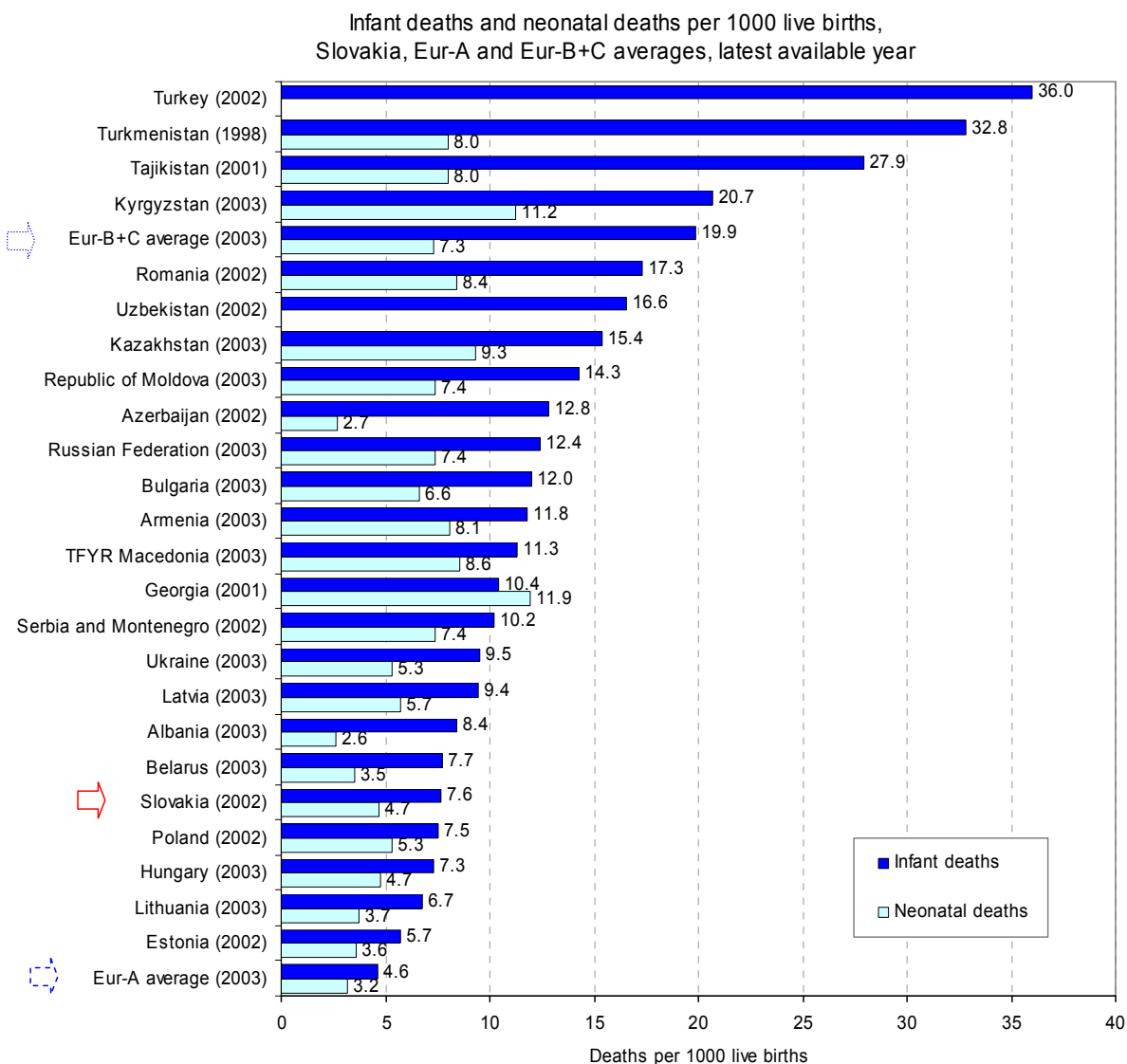
## Mortality

### Infant, neonatal and child mortality

In Slovakia, infant mortality and both its components, neonatal and post neonatal mortality, remain below the corresponding Eur-B+C averages. However, they are well above the corresponding Eur-A averages. This excess in infant mortality, in comparison with the Eur-A average, has been declining since the mid-1990s. In 2002, however, the rate increased by 22% (both the neonatal and post neonatal mortality increased).

National data and WHO estimates for 2002 show that of every 1000 live births in Slovakia, it can be expected that about nine children will die before the age of 5 years; this is already below the Millennium Development Goal target of 15 under-5 deaths per 1000 live births. The lowest WHO estimates for the Eur-B+C countries are for Estonia and Slovakia, each at 8 deaths per 1000 live births.





## Maternal mortality

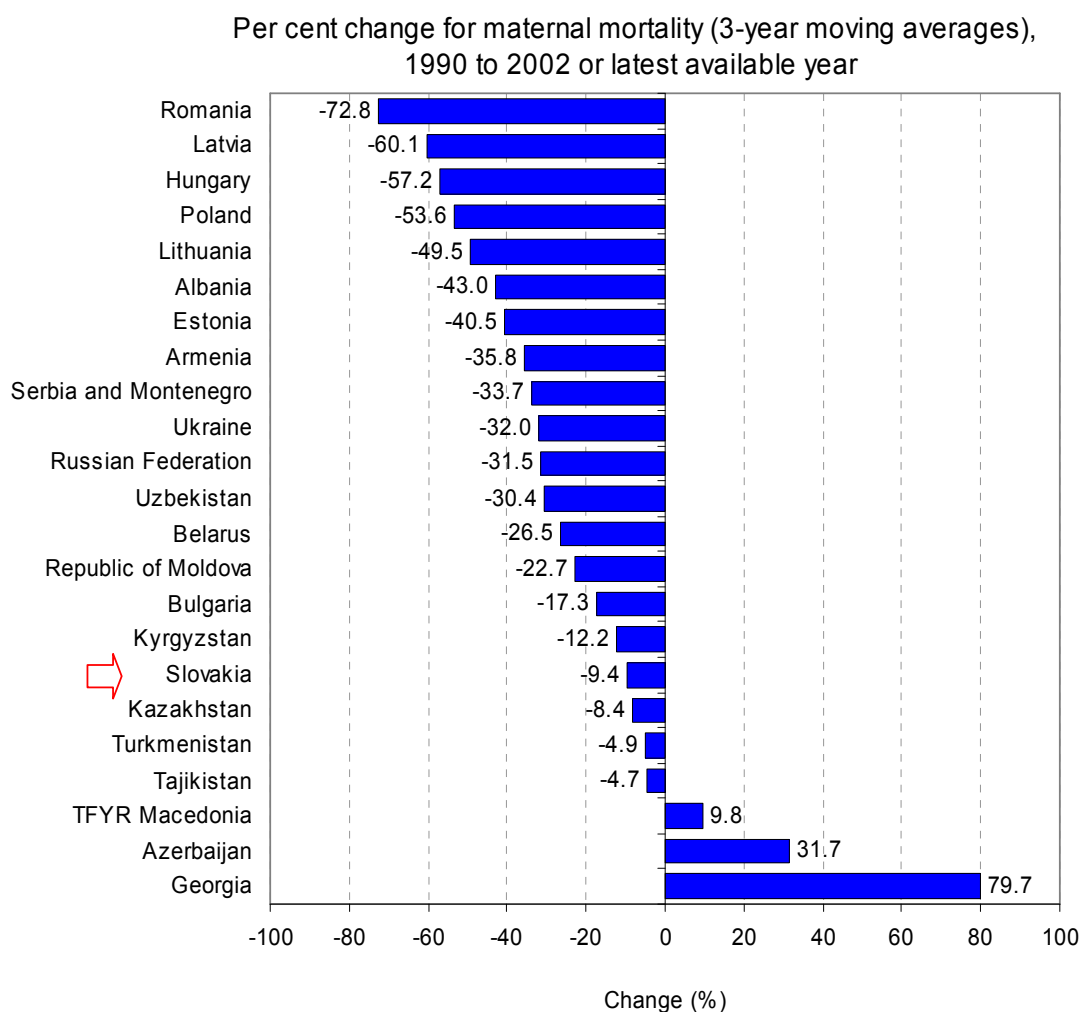
### **Maternal mortality rates (MMR) and the Millennium Development Goal (MDG)**

Despite the difficulties in accurately measuring MMR, nationally reported figures are accepted at face value relative to the MDG to improve maternal health – to reduce the MMR by 75% between 1990 and 2015. In some countries, the 2015 target may be equal to or lower than the average current MMR for high income countries in the European Region (the Eur-A 2001 average of five maternal deaths per 100 000 live births). Countries with 2015 targets lower than the current Eur-A average can be judged as having achieved or being likely to achieve the MDG (World Bank, 2004).

However, in some countries, MMR were higher in 2002 than they had been in 1990. Applying the 75% reduction to the 1990 baseline in these countries creates, in some cases, a 2015 MDG target that requires dramatic reductions in MMR before 2015. In these cases, more important than reaching maternal mortality targets is taking concrete action to provide women with access to adequate care during pregnancy and childbirth, initiatives that have proven to bring down MMR.

In 1990, Slovakia had the lowest MMR among Eur-B+C countries with data. Between 1990 and 2002, its MMR (three-year moving average) fell by 9.4%, despite some fluctuations, and its rate fluctuated around the Eur-A average. Its 2002 rate is among the lowest in the Eur-B+C group. During the

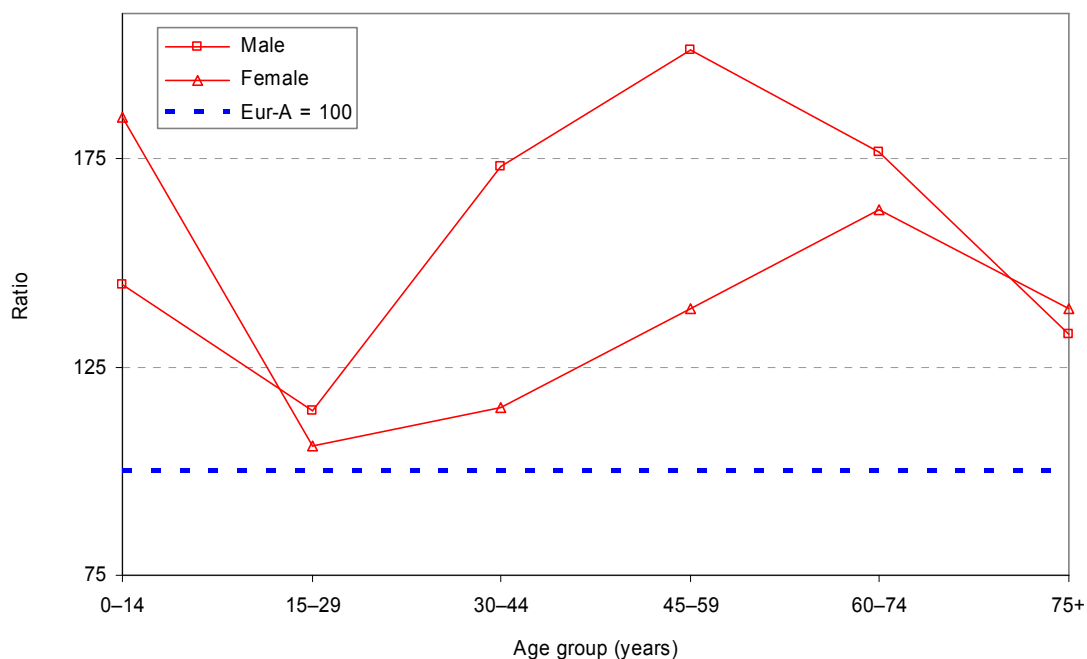
period 1999-2003, there were 21 maternal deaths per 100 000 live births. If Slovakia were to reach its MDG target, its MMR would be well below the current Eur-A average.



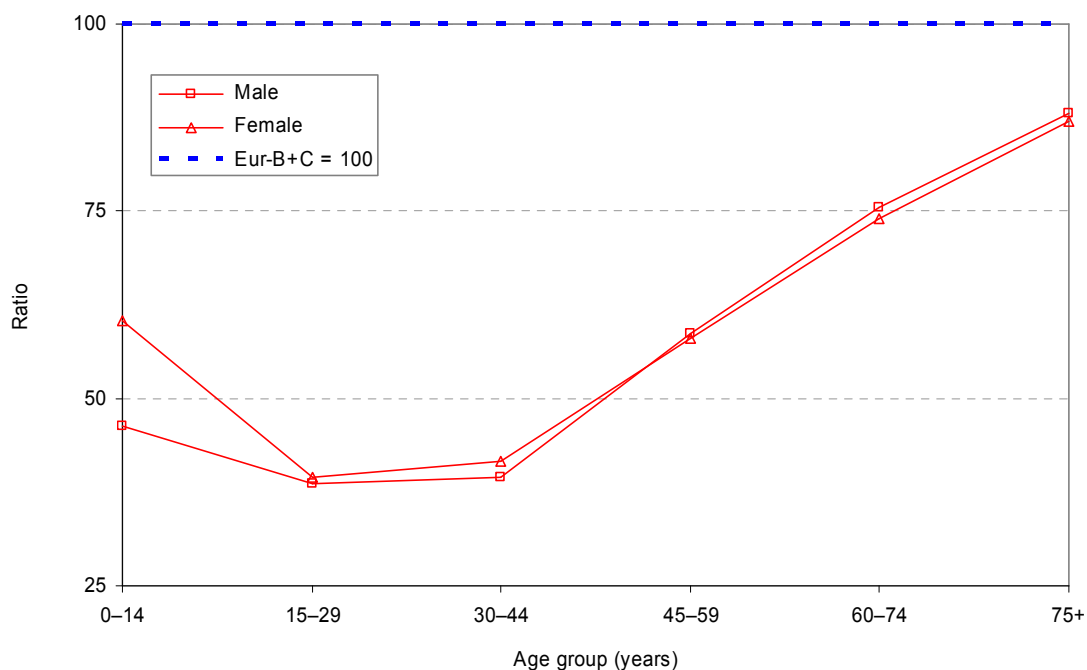
## Excess mortality

In general, mortality rates for males and females place Slovakia in the middle of the European countries. They are below (by about a fourth) the Eur-B+C average rates, yet are well above the average rates for the very low mortality countries of Eur-A (56% excess for males and 44% for females). The excess mortality in Slovakia, in comparison with the countries of Eur-A, is very age dependent, even though it is present across all age groups. For males, the largest difference is in the age group of 45–59 year olds, while among females those in the relatively worst situation in 2002, due to a sudden increase in the mortality rate, were below 15 years of age. However, the largest long-term excess mortality among females is in the age group of 60–74 year olds. During last few years, the excess mortality in Slovakia is practically unchanged in the population below 65 years, but it is increasing in the older population, aged 65 years and more, due to a very small decline in mortality in this age group.

Total mortality by sex and age group in Slovakia  
in comparison with Eur-A (Eur-A = 100), 2003



Total mortality by sex and age group in Slovakia  
in comparison with Eur-B+C (Eur-B+C = 100), 2003

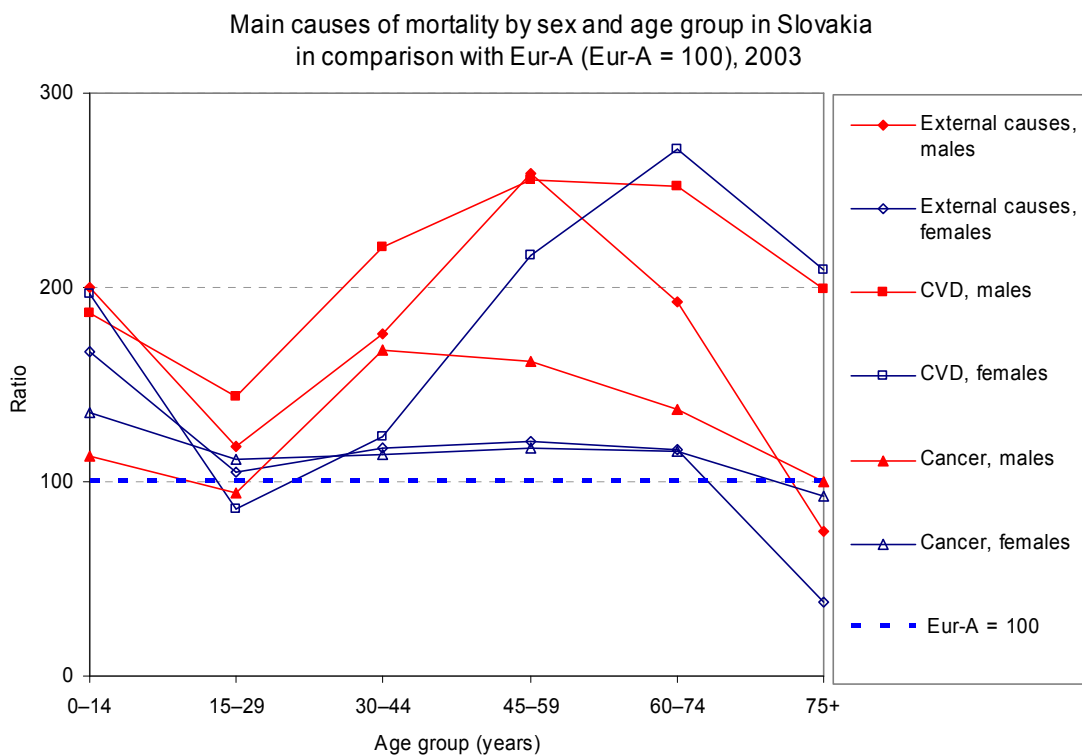


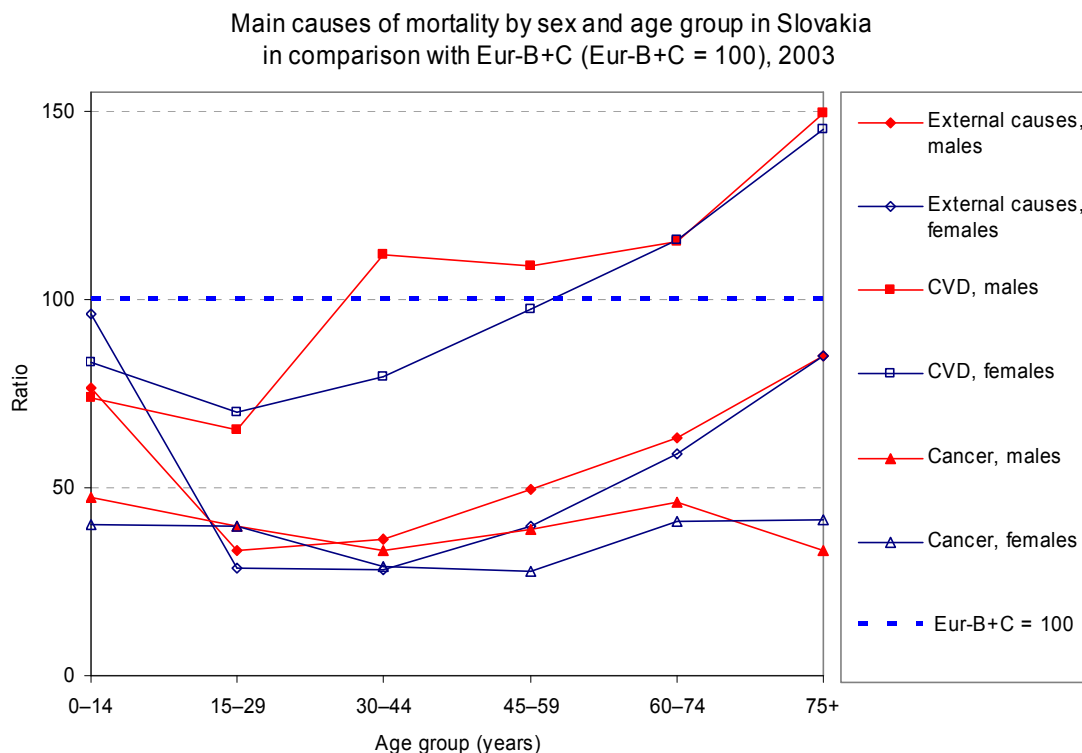
## Main causes of death

In 2002, the main noncommunicable diseases accounted for about 89% of all deaths in Slovakia; external causes for about 6%; and communicable diseases for less than 1%. In total 54% of all deaths were caused by diseases of the circulatory system and 22% by cancer (Annex. Selected mortality; Annex. Mortality data).



Slovaks have a lower risk of dying from CVD than the average person in Eur-B+C (by about 30%). The risk, however, is much higher than the average risk for Eur-A (more than a twofold excess). The risk of Slovak males dying from cancer is higher than the Eur-B+C average risk, but it is higher than the Eur-A average risk for men more than 25 years old. The mortality rate for cancer among Slovak women 25–64 years old is at the same level as the corresponding Eur-B+C average rate and is above the corresponding Eur-A average rate. However, the mortality rate for cancer among Slovak women aged 65 years and more is at the same level as the corresponding Eur-A average rate, though higher than the corresponding Eur-B+C average rate. Also, Slovak males have much higher mortality rates for external causes (overall by about 60%) than males in Eur-A, on average, in all age groups but the oldest (aged 75 years and more). As for females, those below 75 years of age have slightly higher mortality rates for external causes than their peers in Eur-A, on average, and those 75 years and more have much lower mortality rates. When compared with Eur-B+C average mortality rates, those in Slovakia are much lower.





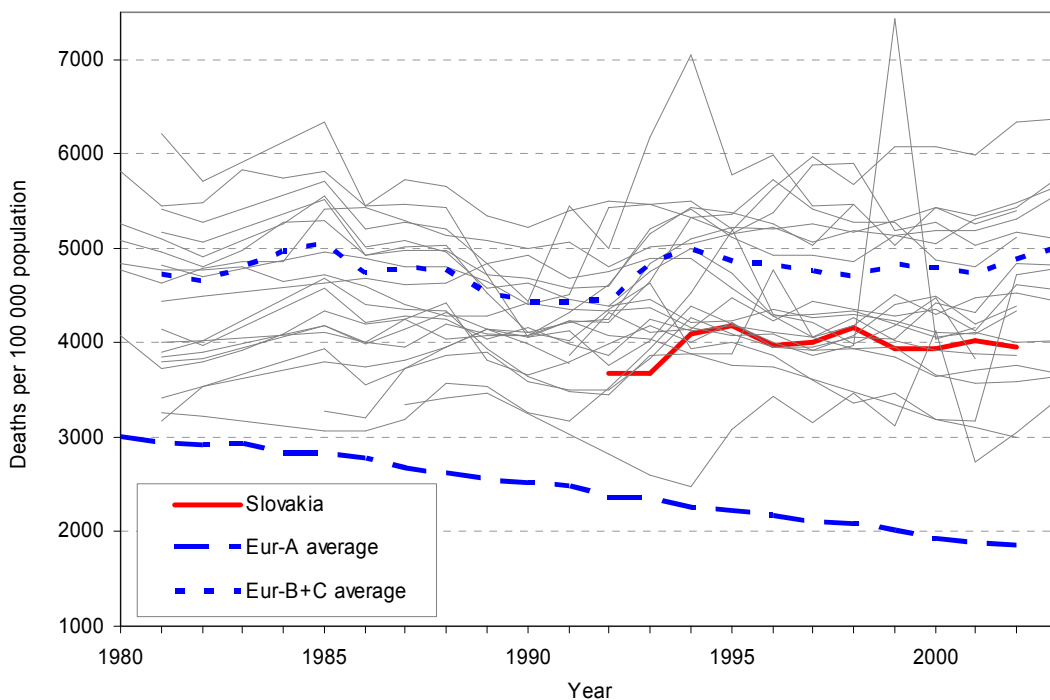
## CVD

Mortality from CVD has been decreasing in Slovakia since 1995, though rather slowly, and the excess mortality in comparison with Eur-A is growing. During the period 1995–2002, mortality rates in Slovakia declined by 8.5% in males and by 8.6% in females, while the average rates in Eur-A countries declined by 18.9% in males and by 17.2% in females. Only in women 25–64 years old has the improvement in Slovakia (a decline of 34%) been greater than the average in Eur-A countries (a decline of 22%). On the other hand, the mortality rates in Slovak women aged 65 years and more did not change during this period.

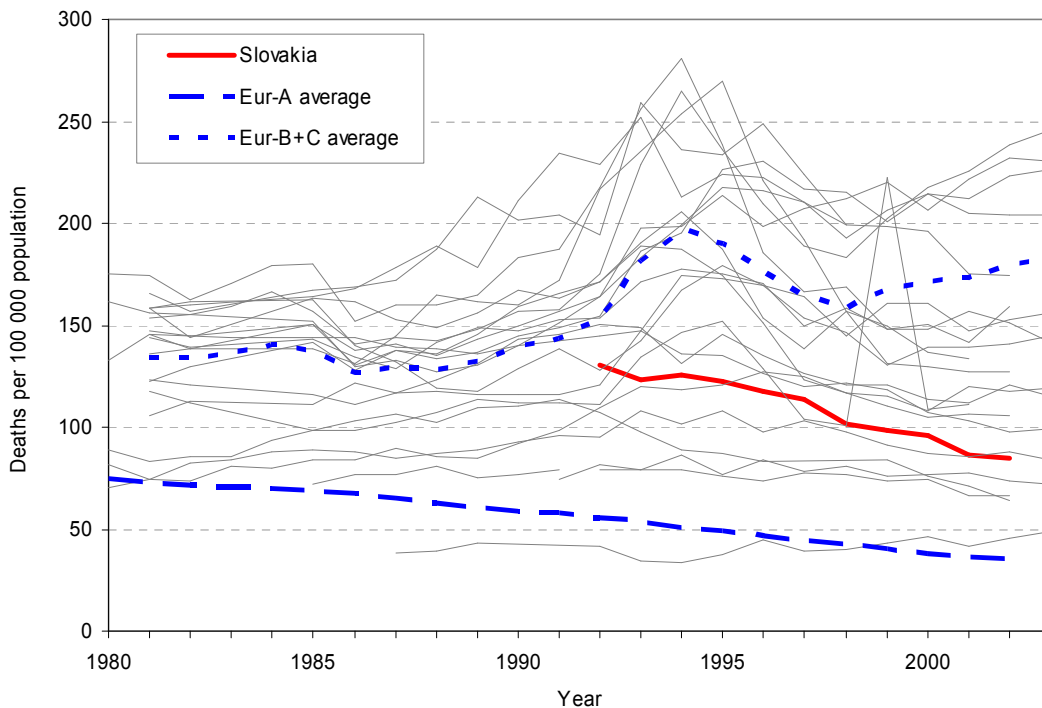
Ischaemic heart disease is by far the single biggest killer in Slovakia, and it caused 29% of all deaths in 2002, which is almost twice the average share of the Eur-A countries. The risk of dying from this cause is almost three times higher than the Eur-A average risk, yet it is still below the Eur-B+C average. The mortality rates for ischaemic heart disease in Slovaks 25–64 years old are declining faster than the Eur-A average rates for the corresponding age group; thus the excess mortality is slowly decreasing. However, in those aged 65 years and more, the rates are increasing, unlike in Eur-A, on average. Consequently, the mortality gap is slowly widening.

Mortality from cerebrovascular diseases is declining in those 25–64 years old and in the older population, aged 65 years and more; however, only in the younger age group is it declining faster than the Eur-A average, so the excess mortality is decreasing only in this age group. Mortality from diseases of the pulmonary circulation and other heart diseases in Slovakia is lower than in most of the Eur-A countries (28% below average in males and 37% in females) and has been declining. A certain peculiar change in the mortality rate over time for diseases of the pulmonary circulation and other heart diseases was a sudden increase in 1998, followed by even larger drop the next year.

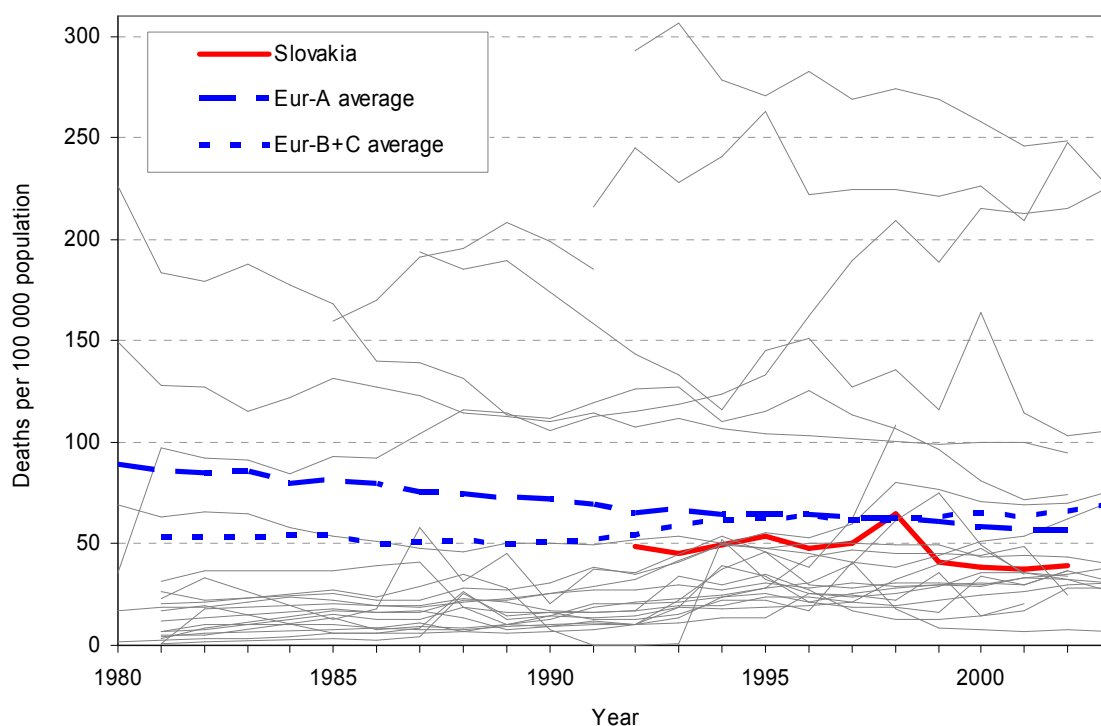
SDR for CVD in people aged 65+ years, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for ischaemic heart disease in people aged 25–64 years, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



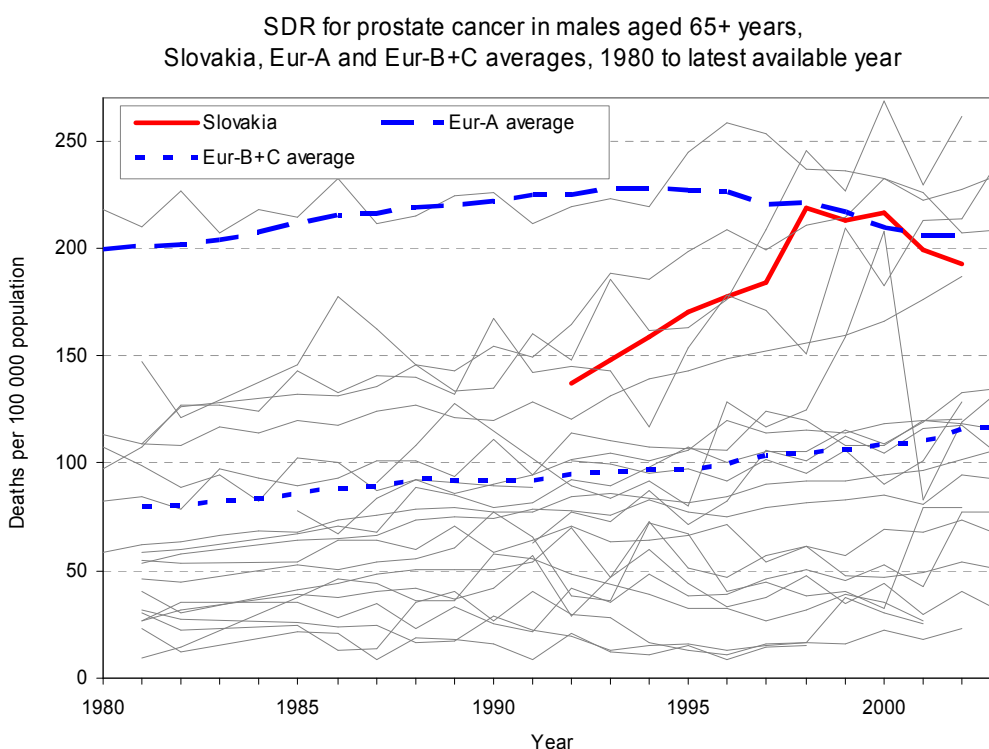
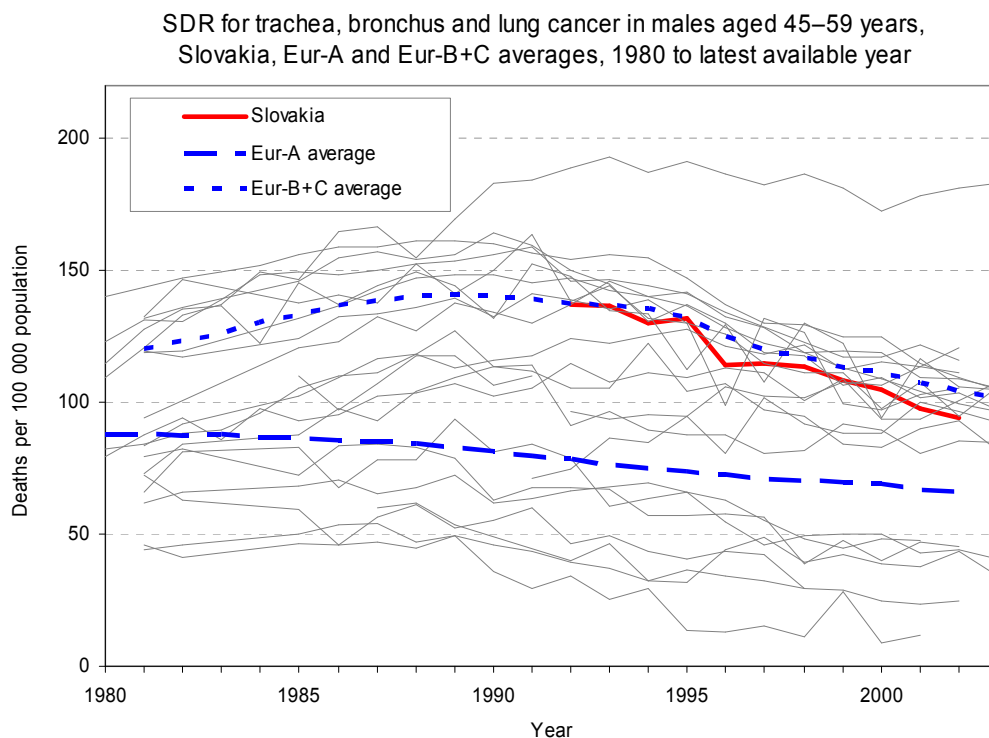
SDR for pulmonary heart disease and other heart diseases in people of all ages, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



## Cancer

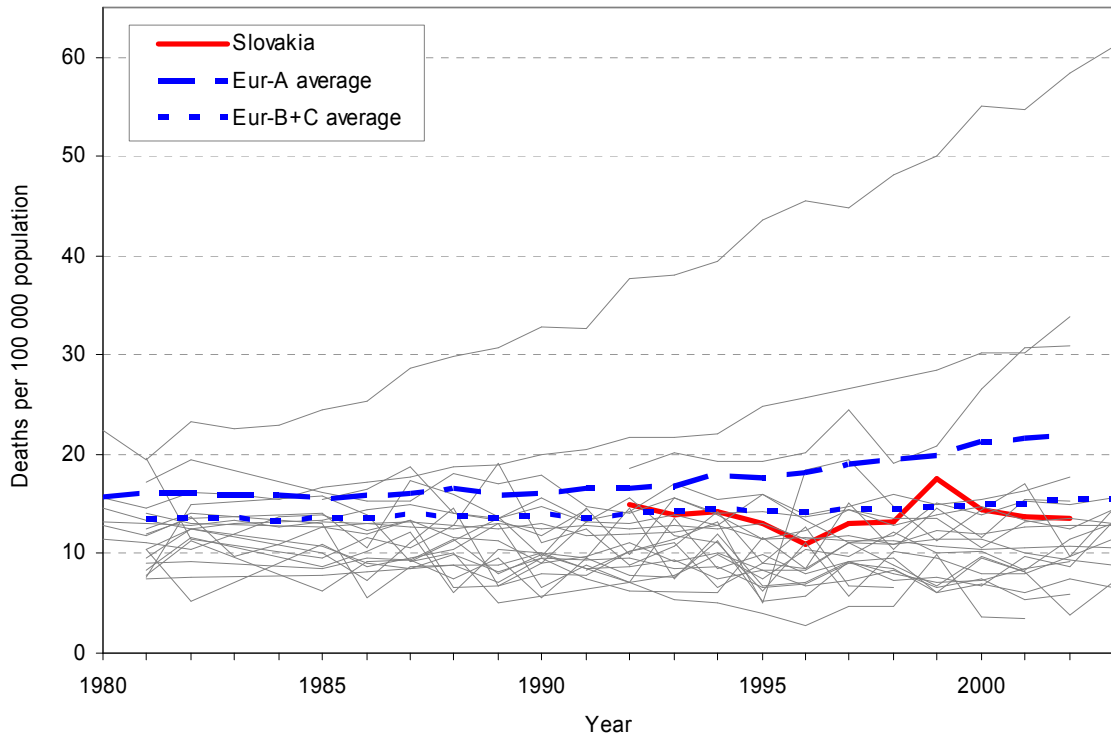
Cancer accounted for 22% of all deaths in Slovakia in 2002, which is less than the Eur-A average (28%), yet the risk of dying from cancer is higher in Slovakia than the corresponding average risk in Eur-B+C, by about 18%. Slovak males, with a 27% excess in mortality, show greater vulnerability than Slovak females, with an 8% excess. All mortality rates for cancer in the overall population and in older people (65 years and more) increased until 1998 and then declined – faster than the Eur-A average. Also, in younger Slovak men (25–64 years old), mortality from cancer since 1998 has declined more rapidly than the corresponding Eur-A average; however, their mortality from cancer is still much higher (by 55%) than the Eur-B+C average for the respective age group.

Among Slovak males, the mortality rate for cancer of the lip, oral cavity and pharynx is the second highest in European countries (the mortality rate is almost three times higher than the Eur-A average), and for cancer of the colon, rectum and anus it is the third highest (the mortality rate is more than 2.5 times higher than the Eur-A average). Also, the mortality rate for stomach cancer is much higher (by about 70%) in Slovakia than in the Eur-A on average. In the last few years, none of the mortality rates has increased. During 1990s, the largest increase in the mortality rates for cancer was for malignant neoplasms of lymphoid and haematopoietic tissue (with an increase of 65% during the period 1993–2000), for prostate cancer (with an increase of 54% during the period 1992–2000) and for cancer of the colon, rectum and anus (with an increase of 43% during the period 1992–1999). On the other hand, during the period 1995–2002, mortality from lung cancer declined faster in Slovakia (19%) than in the Eur-A on average (11%), and the excess mortality from this cancer in Slovak males declined from 33% to 21%.

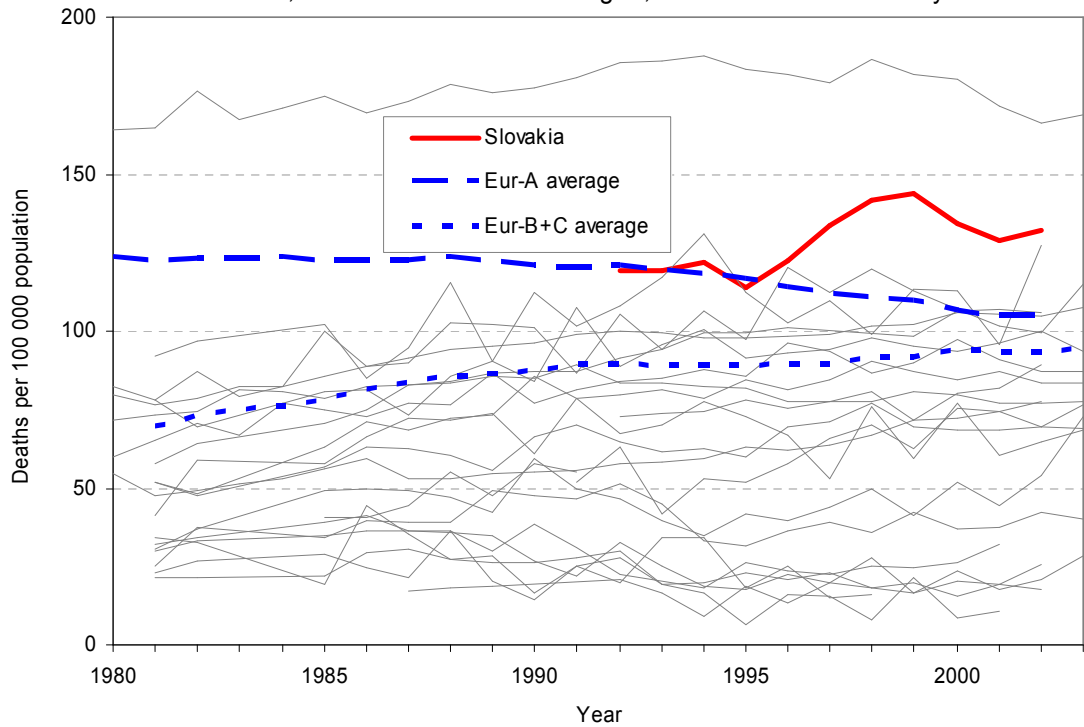


As for mortality in Slovak females, the mortality rate for cancer of the colon, rectum and anus earned them the fourth highest place in Europe (42% excess of deaths in comparison with the Eur-A average). However, the largest excess mortality, in comparison with the Eur-A average, occurs for cancer of the uterine cervix (170%) and cancer of other parts of the uterus (50%), with only the mortality rate for the latter cancer showing considerable decline. Also, mortality rates for breast cancer increased until 1999 and have declined since then, being now below the Eur-A average rate. Moreover, the mortality rate for cancer of the trachea, bronchus and lung (TBL) has not followed the increase in the corresponding Eur-A average rate, and in 2002 the mortality rate in Slovak females was 35% below the Eur-A average.

SDR for trachea, bronchus and lung cancer in females aged 45–59 years, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year

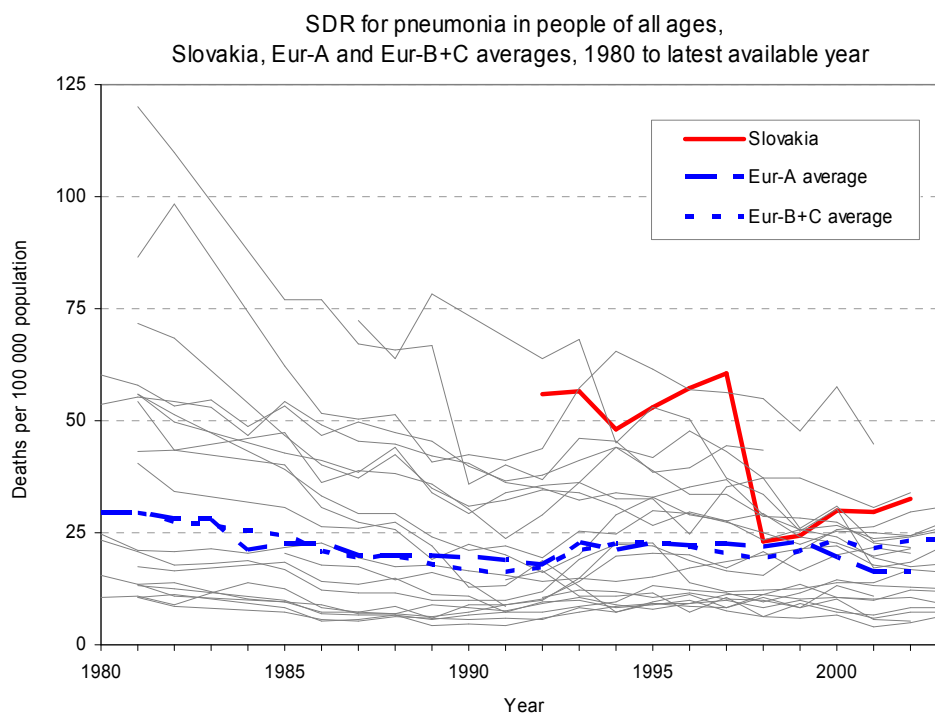


SDR for colon, rectum and anus cancer in females aged 65+ years, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



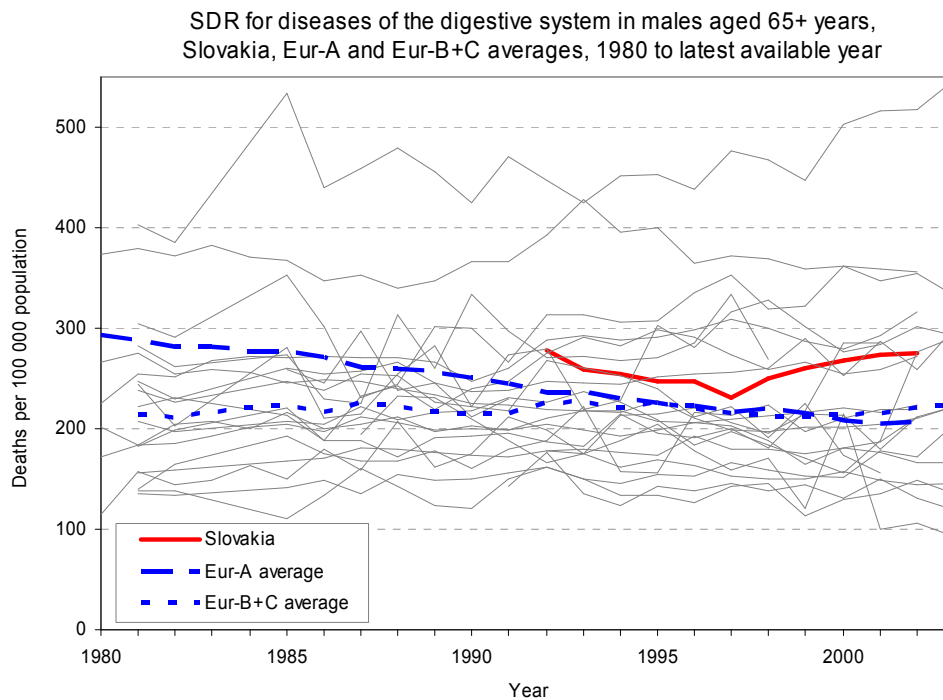
### Respiratory diseases

In 2002, respiratory diseases accounted for 5.7% of all deaths in Slovakia, which is less than the Eur-A average (7.4%). However, mortality rates for these diseases are a little higher (by 16%) than the Eur-A average rates. The long-term trend in the mortality rates for respiratory diseases was disrupted by a drop in 1998, caused by a sudden plunge (by about 60%) in the mortality rate for pneumonia, which may reflect a change in the coding of causes of death. Despite such a substantial decrease in the mortality rates for pneumonia, they are still higher than mortality rates for chronic lower respiratory diseases in both males and females. The mortality rate for chronic lower respiratory diseases has been lower in Slovakia than the corresponding average rate for people in Eur-A; however, Slovaks have excess mortality from pneumonia in comparison with the corresponding average mortality rate for people in Eur-B+C.



### Digestive diseases

The share of mortality from diseases of the digestive system (5.4% of all deaths in Slovakia in 2002) is similar to that of respiratory diseases (5.7%). The mortality rates for diseases of the digestive system in Slovak males are almost twice as high as the corresponding average rates for males in Eur-A, and in Slovak females the rates are higher than those of their average Eur-A counterparts, by more than 40%. Mortality from digestive diseases stopped declining in Slovakia after the mid-1990s and then started to increase, in the same way as the corresponding Eur-B+C average, though unlike the decline in the corresponding Eur-A average. These trends are shaped by changes in the mortality rates for chronic liver disease and cirrhosis.



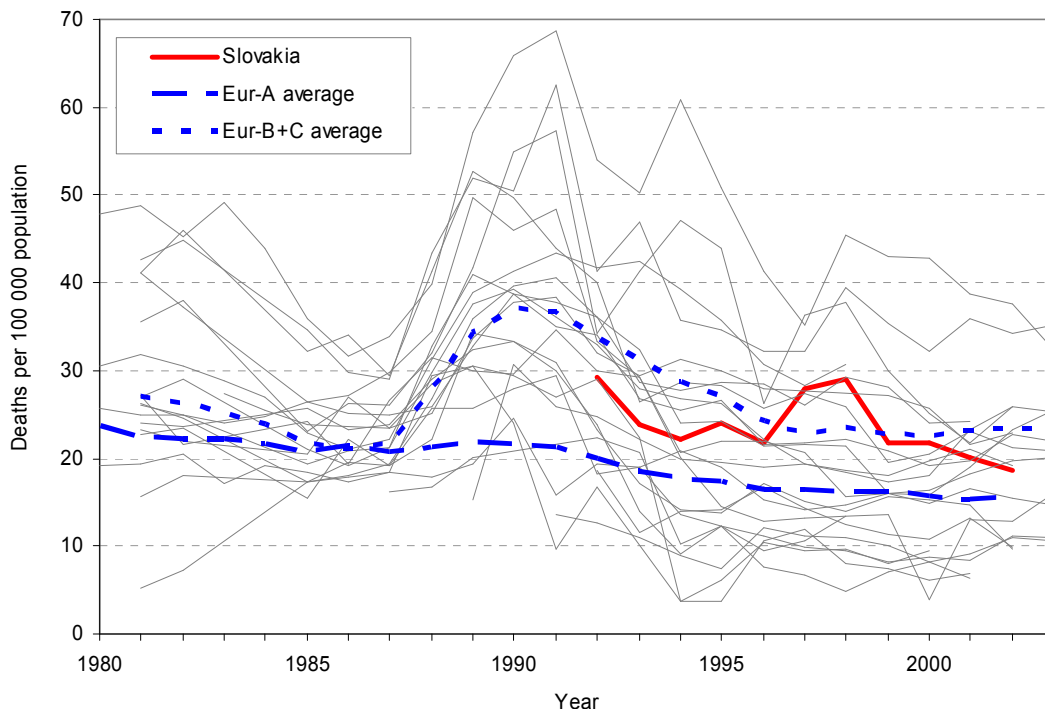
### **External causes**

In 2002, the mortality rates for external causes in Slovak males were higher (by about 60%) than those in their average Eur-A counterparts, but the rates declined a little faster than the Eur-A average. In Slovak females, in 1998, a sudden lowering of the level (by 30%) disrupted the long-term trend in mortality rates for external causes, and in 2002 the rate was 10% below the Eur-A average. This drop in the rates occurred in both men and women 75 years old and more, and in females it affected the total mortality rate for external causes. The more specific cause of this change was a slump in mortality rates for accidental falls in people 75 years old and older.

Since 1999, suicides have been the main external cause of death in Slovak males; they declined until 1997, when they reached their lowest level and showed some stability, but since then they have been above the Eur-A average rates. The second major external cause of death for males is motor vehicle traffic accidents. For this cause, the mortality rates are higher than the Eur-A average rates but are declining faster than the Eur-A rates, after a substantial increase in the period 1997–1998. The third major cause is accidental falls, for which the rates have declined since 1993, when the rate was the highest for external causes; now, they are at half of the level of the 1993 suicide rate.

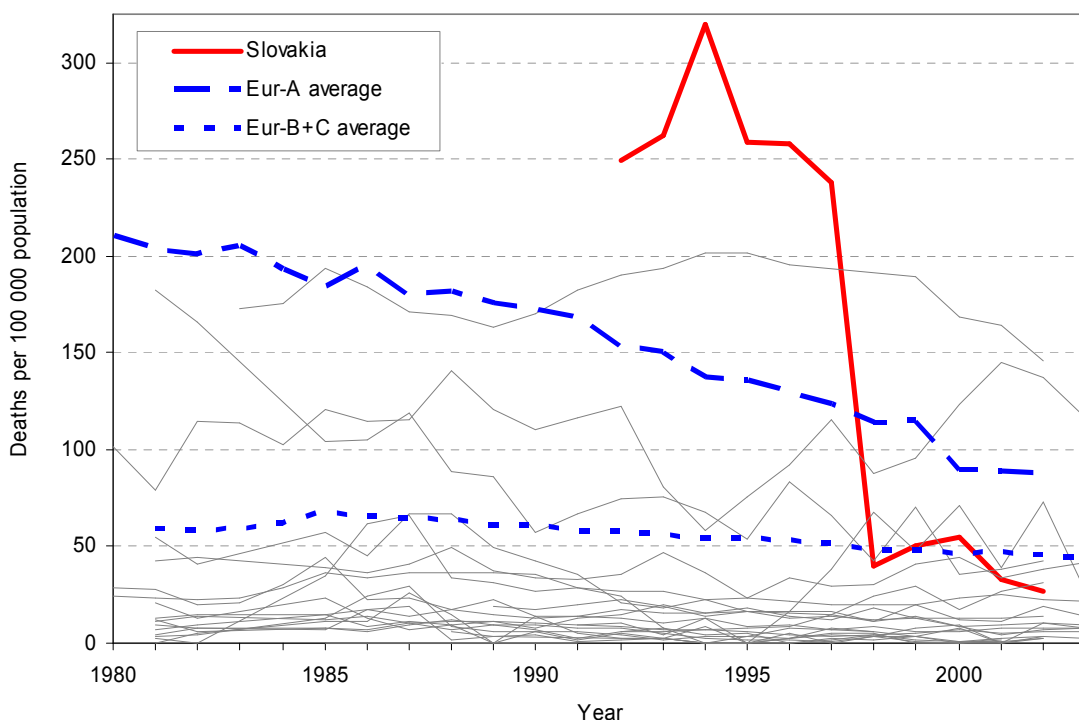


SDR for motor vehicle traffic accidents in males, all ages, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



Among females, motor vehicle traffic accidents have been the main external cause of death since 1998. The rates are a little above the Eur-A average rates. The second major cause is suicide, with suicide rates below the Eur-A average (by a third in 2002). The third major cause is accidental falls, which until 1997 were by far the main external cause of death in females; now, however, the mortality rate for this cause is below the corresponding Eur-A average rate.

SDR for accidental falls in females aged 75+ years, Slovakia, Eur-A and Eur-B+C averages, 1980 to latest available year



## References

- Council of Europe (2005). *Recent demographic developments in Europe 2004*. Strasbourg, Council of Europe.
- Eurostat (2005). Eurostat's reference database. Luxembourg, Statistical Office of the European Communities (<http://europa.eu.int/comm/eurostat>, accessed 3 May 2005).
- Health Evidence Network (2003a). *What are the main risk factors for disability in old age and how can disability be prevented?* Copenhagen, WHO Regional Office for Europe ([http://www.euro.who.int/HEN/Syntheses/20030820\\_1](http://www.euro.who.int/HEN/Syntheses/20030820_1), accessed 11 October 2005).
- Health Evidence Network (2003b). *What is the efficacy/effectiveness of antenatal care?* Copenhagen, WHO Regional Office for Europe ([http://www.euro.who.int/HEN/Syntheses/20030820\\_1](http://www.euro.who.int/HEN/Syntheses/20030820_1), accessed 11 October 2005).
- Health Evidence Network (2004). *What are the advantages and disadvantages of restructuring a health care system to be more focused on primary health care services?* Copenhagen, WHO Regional Office for Europe ([http://www.euro.who.int/HEN/Syntheses/20030820\\_1](http://www.euro.who.int/HEN/Syntheses/20030820_1), accessed 11 October 2005).
- Health Evidence Network (2005). *What is the effectiveness of antenatal care? (Supplement)* Copenhagen, WHO Regional Office for Europe ([http://www.euro.who.int/HEN/Syntheses/20030820\\_1](http://www.euro.who.int/HEN/Syntheses/20030820_1), accessed 15 January 2006).
- ILO (2005). Key indicators of the labour market database [web site]. Geneva, International Labour Organization (<http://www.ilo.org/public/english/employment/strat/kilm/index.htm>, accessed 29 November 2005).
- OECD (2004). *Ageing and employment policies*. Paris, Organisation for Economic Co-operation and Development ([http://www.oecd.org/document/37/0,2340,en\\_2649\\_201185\\_32019685\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/37/0,2340,en_2649_201185_32019685_1_1_1_1,00.html), accessed 14 November 2005).
- UNESCO (2005). Country/Regional profiles [web site]. Montreal, UNESCO Institute for Statistics ([http://www.uis.unesco.org/profiles/selectCountry\\_en.aspx](http://www.uis.unesco.org/profiles/selectCountry_en.aspx), accessed 2 December 2005).
- United Nations (2005). World population prospects: the 2004 revision population database [database online]. New York, United Nations (<http://esa.un.org/unpp/index.asp?panel=1>, accessed 28 September 2005).
- WHO (2003a). *Managing newborn problems: a guide for doctors, nurses and midwives*. Geneva, World Health Organization (<http://www.who.int/reproductive-health/publications/mnp/mnp.pdf>, accessed 13 October 2005).
- WHO (2003b). *The WHO reproductive health library, version 6*. Geneva, World Health Organization (<http://www.who.int/reproductive-health/rhl/index.html>, accessed 11 October 2005).
- WHO (2003c). *The world health report 2003 – Shaping the future*. Geneva, World Health Organization (<http://www.who.int/whr/2003/en>, accessed 11 October 2005).
- WHO (2004). *The world health report 2004 – Changing history*. Geneva, World Health Organization (<http://www.who.int/whr/2004/en>, accessed 11 October 2005).
- WHO Regional Office for Europe (2002). *The European health report 2002*. Copenhagen, WHO Regional Office for Europe: 156 (<http://www.euro.who.int/europeanhealthreport>, accessed 11 October 2005).
- WHO Regional Office for Europe (2004a). *A strategy to prevent chronic disease in Europe: a focus on public health action: the CINDI vision*. Copenhagen, WHO Regional Office for Europe (<http://www.euro.who.int/document/e83057.pdf>, accessed 11 October 2005).
-

---

WHO Regional Office for Europe (2004b). *Towards a European strategy on noncommunicable diseases*. Copenhagen, WHO Regional Office for Europe (<http://www.euro.who.int/document/rc54/edoc08.pdf>, accessed 11 October 2005).

WHO Regional Office for Europe (2005). European health for all database (HFA-DB) [online database]. Copenhagen, WHO Regional Office for Europe (<http://www.euro.who.int/hfad>, accessed 20 January 2005).

World Bank (2004). *The Millennium Development Goals in Europe and Central Asia*. Washington, DC, World Bank.

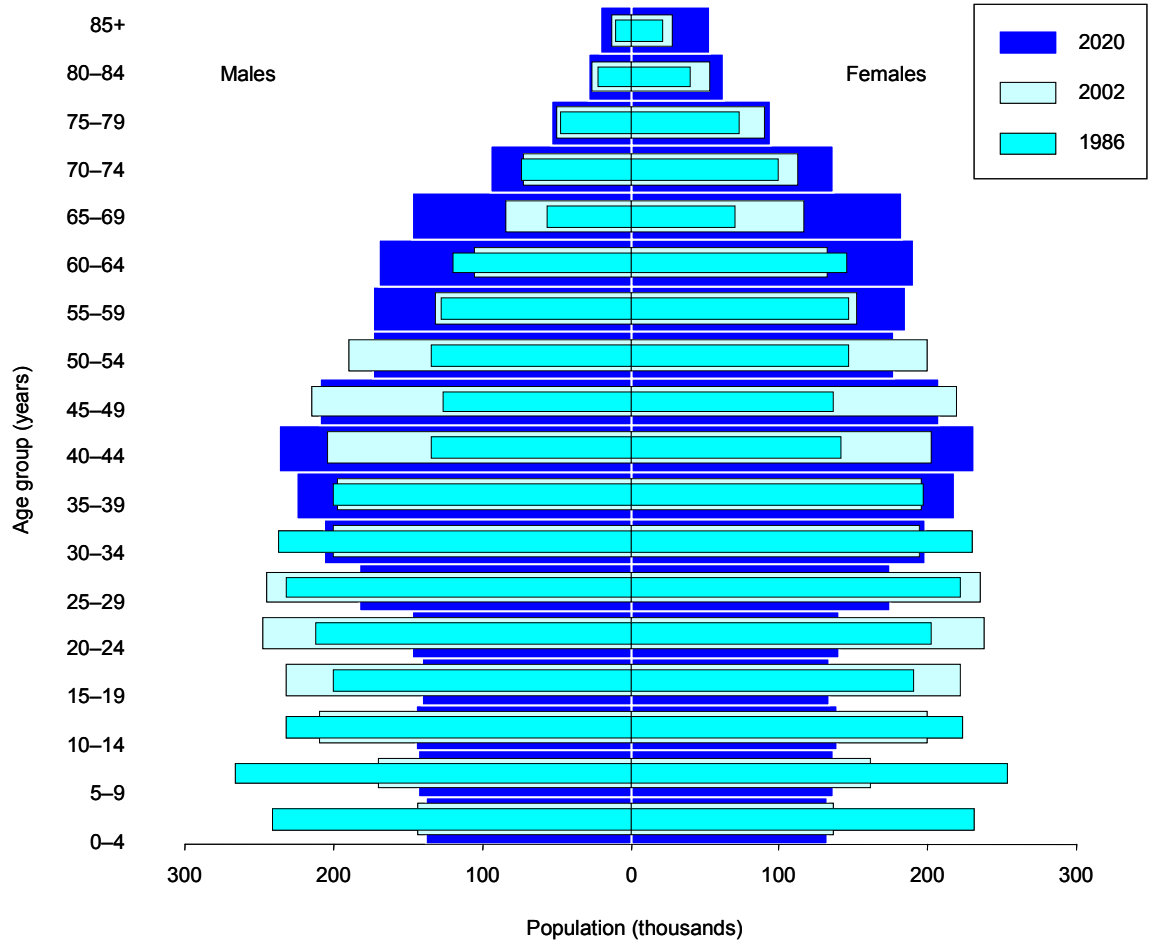
World Bank (2005). *World development indicators 2005*. Washington, DC, World Bank (<http://devdata.worldbank.org/wdi2005/home.htm>, accessed 28 September 2005).

---

# Annexes

## Annex. Age pyramid

### Age pyramid for Slovakia



Sources: WHO Regional Office for Europe (2005) and United Nations (2005).

## Annex. Selected mortality

## Selected mortality in Slovakia compared with Eur-B+C averages

Condition	SDR per 100 000		Excess mortality in Slovakia (%)	Total deaths in Slovakia (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Slovakia to Eur-A (%)	Total deaths in Eur-A (%)
	Slovakia (2002)	Eur-B+C average (2003)						
<b>Selected non-communicable conditions</b>	860.3	1044.9	-17.7	88.6	79.6	533.8	61.2	82.4
<i>Cardiovascular diseases</i>	527.7	741.8	-28.9	54.3	56.5	243.4	116.8	37.6
Ischaemic heart disease	283.5	362.7	-21.8	29.2	27.6	95.9	195.6	14.8
Cerebrovascular diseases	88.2	221.7	-60.2	9.1	16.9	61.1	44.4	9.4
Diseases of pulmonary circulation and other heart disease	39.6	68.9	-42.5	4.1	5.3	56.6	-30.0	8.7
<i>Malignant neoplasms</i>	213.3	172.0	24.0	22.0	13.1	181.5	17.5	28.0
Trachea/bronchus/lung cancer	38.1	33.9	12.4	3.9	2.6	37.1	2.7	5.7
Female breast cancer	24.3	22.1	10.0	2.5	1.7	27.0	-10.0	4.2
Colon/rectal/anal cancer	32.6	19.0	71.6	3.4	1.4	20.7	57.5	3.2
Prostate	24.1	14.3	68.5	2.5	1.1	25.1	-4.0	3.9
<i>Respiratory diseases</i>	55.2	63.1	-12.5	5.7	4.8	47.8	15.5	7.4
Chronic lower respiratory diseases	14.0	31.2	-55.1	1.4	2.4	20.2	-30.7	3.1
Pneumonia	32.4	23.6	37.3	3.3	1.8	16.2	100.0	2.5
<i>Digestive diseases</i>	52.9	52.3	1.1	5.4	4.0	30.8	71.8	4.8
Chronic liver disease and cirrhosis	26.5	32.0	-17.2	2.7	2.4	12.6	110.3	1.9
<i>Neuropsychiatric disorders</i>	11.2	15.7	-28.7	1.2	1.2	30.3	-63.0	4.7
<b>Communicable conditions</b>	3.8	20.8	-81.7	0.4	1.6	8.4	-54.8	1.3
AIDS/HIV	0.0	0.8	-100.0	0.0	0.1	1.1	-100.0	0.2
<b>External causes</b>	55.4	139.6	-60.3	5.7	10.6	40.3	37.5	6.2
<i>Unintentional</i>	40.3	102.2	-60.6	4.1	7.8	28.7	40.4	4.4
Road traffic injuries	11.5	14.7	-21.8	1.2	1.1	9.9	16.2	1.5
Falls	7.0	7.5	-6.7	0.7	0.6	6.1	14.8	0.9
<i>Intentional</i>	15.2	37.4	-59.4	1.6	2.9	11.6	31.0	1.8
Self-inflicted (suicide)	13.0	23.2	-44.0	1.3	1.8	10.6	22.6	1.6
Violence (homicide)	2.2	14.2	-84.5	0.2	1.1	1.0	120.0	0.2
<b>Ill-defined conditions</b>	10.6	64.0	-83.4	1.1	4.9	20.9	-49.3	3.2
<b>All causes</b>	971.5	1312.2	-26.0	100.0	100.0	647.8	50.0	100.0

## Annex. Mortality data

Table 1. Selected mortality for the group 0–14 years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	79.4	-3.6	49.4	-2.4	151.7	-3.8
	M	79.1	-4.8	55.3	-2.5	170.5	-3.9
	F	79.7	-1.9	43.3	-2.4	131.9	-3.8
<i>Infectious and parasitic diseases</i>	M	1.7	104.9	1.4	-1.1	10.9	-7.0
	F	1.4	19.4	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	0.8		0.2	-0.7	5.1	-8.2
	F	0.9	16.6	0.1	-7.3	4.7	-7.9
<i>Malignant neoplasms</i>	M	3.8	-3.7	3.3	-1.8	5.1	-1.9
	F	3.5	1.9	2.6	-1.8	4.2	-1.9
<i>Cardiovascular diseases</i>	M	2.5	-5.5	1.4	-3.1	3.3	1.1
	F	2.5	18.2	1.3	-2.5	2.6	0.1
<i>Respiratory diseases</i>	M	7.1	-5.8	1.4	-4.3	35.9	-5.0
	F	5.2	-8.3	1.0	-4.2	30.7	-5.0
Pneumonia	M	5.7	-5.9	0.5	-6.0	20.9	-4.9
	F	4.8	-8.3	0.4	-5.1	17.9	-4.7
<i>Certain conditions originating in perinatal period</i>	M	286.2	-8.0	255.3	-2.1	607.6	-2.7
	F	328.5	-4.6	202.3	-1.6	427.5	-2.7
Congenital malformations & chromosomal abnormalities	M	19.4	-3.6	11.6	-2.9	24.2	-2.8
	F	22.7	1.3	10.0	-3.3	21.0	-2.6
<i>Ill-defined causes</i>	M	1.4	-6.4	5.0	-3.9	5.6	-0.6
	F	2.0	-1.5	3.4	-4.2	4.6	-1.0
<i>External causes of injury &amp; poisoning</i>	M	13.7	-0.2	7.0	-4.0	29.0	-3.4
	F	7.3	-3.4	4.6	-3.2	18.1	-3.1
Road traffic injuries	M	3.7	-2.7	2.5	-4.5	4.7	-2.6
	F	2.9	-3.3	1.7	-4.8	3.0	-1.6

Table 2. Selected mortality for the group 15–29 years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	62.7	-1.4	56.0	-2.3	161.0	-0.9
	M	93.1	-1.7	82.0	-2.3	241.7	-1.0
	F	31.2	-0.5	29.3	-2.2	79.0	-0.6
<i>Infectious and parasitic diseases</i>	M	0.1	-12.1	1.2	1.5	12.3	3.0
	F	0.0	-14.3	0.8	1.9	5.1	2.5
<i>Malignant neoplasms</i>	M	5.7	-4.9	6.2	-1.0	8.8	-1.9
	F	5.4	-2.3	4.7	-1.4	7.7	-1.9
<i>Cardiovascular diseases</i>	M	5.9	1.1	4.1	-2.4	17.6	0.0
	F	2.1	-4.8	2.3	-2.0	7.3	-0.9
<i>Respiratory diseases</i>	M	3.3	-4.2	1.4	-3.6	6.9	0.2
	F	2.1	-5.5	0.9	-2.7	3.8	-1.1
<i>Digestive diseases</i>	M	2.0	-2.2	0.9	-3.5	8.0	3.0
	F	0.9	-7.5	0.5	-3.8	3.7	3.1
<i>Ill-defined causes</i>	M	4.6	35.1	4.0	-3.1	11.6	7.1
	F	1.8	127.5	1.4	-1.3	3.3	5.8
<i>External causes</i>	M	64.7	-2.3	58.3	-1.4	162.4	-1.6
	F	14.6	0.7	14.4	-1.6	36.9	-0.2
Road traffic injuries	M	23.0	-2.0	28.5	-1.3	27.8	-1.5
	F	7.1	2.2	7.3	-1.4	8.0	0.3
Accidental drowning	M	2.7	-2.1	1.3	-2.2	10.8	-3.9
	F	0.5	-4.5	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	4.0	-2.6	2.8	0.0	19.1	3.3
	F	0.6	33.2	0.7	0.8	4.4	2.5
Self-inflicted (suicide)	M	14.7	-1.4	12.7	-1.8	36.8	0.0
	F	2.2	-0.1	3.1	-2.2	5.8	-1.3

Table 3. Selected mortality for the group 30–44 years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	184.0	-1.7	120.3	-2.5	453.8	-0.7
	M	277.0	-1.4	161.6	-2.6	700.0	-0.8
	F	89.9	-2.4	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	44.9	-2.2	27.6	-2.3	40.2	-2.8
	F	34.8	-2.7	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	4.5	-7.0	5.0	-3.4	7.3	-4.2
Female breast cancer	F	2.2	0.0	2.8	-0.6	2.2	-1.0
<i>Cardiovascular diseases</i>	F	6.1	-5.0	10.0	-2.6	10.0	-2.3
	M	57.7	-2.7	26.1	-2.5	158.6	-0.4
Ischaemic heart disease	F	12.7	-3.3	10.4	-2.1	45.3	0.0
	M	23.0	-5.2	11.8	-3.1	73.7	-2.2
Cerebrovascular diseases	F	2.6	-6.3	2.4	-2.7	14.4	-1.3
	M	7.4	-6.2	4.4	-3.2	24.6	-0.4
<i>Respiratory diseases</i>	F	2.8	-3.1	3.6	-2.5	10.6	-1.3
	M	10.4	-2.6	3.9	-3.5	34.3	0.9
<i>Digestive diseases</i>	F	3.5	-6.9	2.2	-2.0	9.8	0.8
	M	36.2	0.4	12.6	-2.4	50.2	1.4
<i>External causes</i>	F	9.0	0.0	5.4	-1.7	19.4	4.1
	M	99.5	-1.9	58.8	-1.2	299.5	-1.9
Road traffic injuries	F	17.0	-3.7	15.1	-1.8	58.9	-1.0
	M	20.1	-3.7	16.0	-0.5	31.4	-1.7
Self-inflicted (suicide)	F	5.1	-2.6	3.9	-2.0	7.1	-0.5
	M	27.4	-1.9	21.2	-1.5	54.9	-2.4
	F	3.2	-6.9	5.8	-2.2	7.9	-2.5

Table 4. Selected mortality for the group 45–59 years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	768.1	-1.4	435.6	-1.3	1294.9	-0.6
	M	1162.6	-1.3	580.1	-1.4	1981.7	-0.6
	F	406.0	-1.9	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	351.3	-1.8	218.2	-1.2	323.2	-1.9
	F	180.8	-0.7	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	94.2	-4.1	65.9	-1.5	101.4	-2.9
Female breast cancer	F	13.6	0.6	21.8	3.4	15.4	1.0
<i>Cardiovascular diseases</i>	F	40.1	-0.8	44.0	-2.2	45.3	0.1
	M	394.1	-2.4	156.4	-2.6	793.1	-0.1
Ischaemic heart disease	F	108.0	-4.6	50.9	-2.5	271.7	-0.6
	M	201.8	-4.3	86.2	-3.3	435.3	-0.7
Cerebrovascular diseases	F	45.1	-5.2	17.8	-3.4	111.1	-0.6
	M	53.2	-2.8	23.7	-2.6	168.6	-0.9
<i>Respiratory diseases</i>	F	15.3	-7.3	14.5	-2.1	88.4	-1.4
	M	41.0	-3.6	20.3	-1.7	108.7	-1.4
<i>Digestive diseases</i>	F	14.1	-3.2	10.2	-1.3	24.5	-0.7
	M	132.3	0.6	49.6	-0.8	129.7	0.7
<i>External causes</i>	F	48.7	4.9	20.3	-0.7	57.3	1.9
	M	158.9	0.3	62.8	-1.0	409.2	-0.9
Road traffic injuries	F	24.8	-1.9	20.9	-0.9	89.1	-1.1
	M	22.1	-4.2	13.0	-1.3	28.5	-1.8
Self-inflicted (suicide)	F	3.8	-6.6	4.1	-2.1	7.5	-1.4
	M	45.1	1.0	23.1	-1.1	68.1	-2.4
	F	6.3	-1.3	8.5	-1.2	10.2	-3.4

Table 5. Selected mortality for the group 60–74 years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	2577.6	-1.8	1570.9	-1.9	3411.7	-0.1
	M	3773.0	-1.5	2156.9	-2.1	4996.4	0.1
	F	1728.6	-2.2	1069.2	-1.9	2339.0	-0.6
<i>Malignant neoplasms</i>	M	1154.5	-0.9	851.3	-1.4	1002.5	-0.8
	F	508.2	0.4	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	336.5	-3.0	261.8	-1.9	321.7	-1.5
Female breast cancer	F	40.8	3.1	59.0	0.2	37.1	-1.4
<i>Cardiovascular diseases</i>	F	80.1	0.6	79.7	-1.6	68.7	1.3
	M	1840.5	-2.3	744.9	-3.6	2903.0	0.6
	F	890.3	-3.4	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	985.2	-2.9	381.3	-4.2	1582.2	1.2
<i>Cerebrovascular diseases</i>	F	454.4	-3.2	133.5	-4.6	731.4	0.5
	M	301.9	-2.7	143.3	-3.7	833.7	0.2
<i>Respiratory diseases</i>	F	160.9	-4.9	86.7	-4.1	528.9	-0.8
	M	202.5	-2.4	144.0	-3.5	303.0	-2.4
<i>Digestive diseases</i>	F	65.4	-5.8	62.5	-2.4	68.6	-3.6
	M	236.4	2.8	111.6	-1.6	193.0	0.1
<i>External causes</i>	F	92.0	3.4	54.1	-1.7	94.2	0.2
	M	147.9	-2.1	79.3	-1.4	320.0	1.0
Road traffic injuries	F	36.3	-4.7	32.1	-2.1	88.7	-0.5
Self-inflicted (suicide)	M	24.1	-3.0	14.8	-3.0	24.3	-1.5
	F	6.0	-5.6	5.9	-3.4	9.5	-1.0
	M	28.4	-3.8	24.5	-1.6	60.5	-0.8
	F	5.3	-5.7	8.7	-2.6	12.7	-3.1

Table 6. Selected mortality for the group 75+ years by sex in Slovakia and Eur-B+C:  
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Slovakia (2002)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	10982.2	-0.4	8059.6	-1.0	12338.8	0.0
	M	13055.2	-0.3	9832.0	-1.1	14838.0	0.1
	F	9944.8	-0.4	7112.5	-0.9	11421.7	0.0
<i>Malignant neoplasms</i>	M	2225.9	1.2	2231.1	-0.4	1489.3	1.2
	F	1047.7	0.1	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	425.5	1.3	457.1	-0.7	323.5	1.0
Female breast cancer	F	63.6	-1.8	102.7	1.5	55.6	0.5
<i>Cardiovascular diseases</i>	F	130.0	1.1	159.6	-0.4	92.0	3.1
	M	8664.1	0.0	4356.2	-2.1	10221.2	0.4
	F	7500.8	0.2	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	4959.7	2.2	1708.0	-2.2	4925.6	1.4
<i>Cerebrovascular diseases</i>	F	4110.1	3.2	1150.0	-2.2	4028.6	1.2
	M	1516.1	0.5	1119.8	-2.5	3004.4	0.7
<i>Respiratory diseases</i>	F	1256.1	-1.9	1026.9	-2.4	2967.6	0.5
	M	1086.2	-2.4	1156.5	-2.4	824.1	-2.1
<i>Digestive diseases</i>	F	650.6	-3.3	591.9	-2.1	302.3	-3.2
	M	349.8	0.6	340.3	-1.1	270.4	0.3
<i>External causes</i>	F	248.2	2.8	279.8	-0.4	175.0	1.1
	M	200.3	-6.9	275.0	-0.6	604.2	0.1
Road traffic injuries	F	71.7	-11.0	187.8	-1.2	172.4	-1.2
Self-inflicted (suicide)	M	33.9	-3.7	28.1	-2.2	34.6	-3.1
	F	13.3	-2.6	10.0	-3.1	14.7	-1.7
	M	60.7	1.9	49.5	-1.6	86.6	-1.1
	F	10.2	7.3	11.8	-3.2	22.4	-1.9



---

## Technical notes

### Calculation of averages

Averages for the reference group, when based on data in the European health for all database of the WHO Regional Office for Europe, are weighted by population. Some countries with insufficient data may be excluded from the calculation of averages. Otherwise, for data from other sources, simple averages have been calculated where required.

To smooth out fluctuations in annual rates caused by small numbers, three-year averages have been used, as appropriate. For example, maternal mortality, usually a small number, has three-year moving averages calculated for all countries. When extreme fluctuations are known to be due to population anomalies, data have been deleted, as appropriate.

### Data sources

To make the comparisons as valid as possible, data for each indicator have, as a rule, been taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data for figures and tables in this report is the January 2005 version of the European health for all database of the WHO Regional Office for Europe. The health for all database acknowledges the various primary sources of the data.

In cases where current census data for national population are unavailable, coupled with ongoing migrations of people in and out of countries, UN estimates or provisional figures supplied by the country are used to approximate national population. Such population figures create uncertainty in standardized death rates.

### Disease coding

Case ascertainment, recording and classification practices (using the ninth and tenth revisions of the International Statistical Classification of Diseases and Related Health Problems: ICD-9 and ICD-10, respectively), along with culture and language, can influence data and therefore comparability across countries.

### Healthy life expectancy (HALE) and disability-adjusted life-years (DALYs)

HALE and DALYs are summary measures of population health that combine information on mortality and non-fatal health outcomes to represent population health in a single number. They complement mortality indicators by estimating the relative contributions of different causes to overall loss of health in populations.

DALYs are based on cause-of-death information for each WHO region and on regional assessments of the epidemiology of major disabling conditions. The regional estimates have been disaggregated to Member State level for the highlights reports.

National estimates of HALE are based on the life tables for each Member State, population representative sample surveys assessing physical and cognitive disability and general health status, and on detailed information on the epidemiology of major disabling conditions in each country.

More explanation is provided in the statistical annex and explanatory notes of *The world health report 2003*<sup>1</sup>.

### Limitations of national-level data

National-level averages, particularly when they indicate relatively good positions or trends in health status, as is the case in most developed countries, hide pockets of problems. Unless the health status of a small population is so dramatically different from the norm that it influences a national indicator, health risks and poorer health outcomes for small groups will only become evident through subnational data.

### Reference groups for comparison

---

<sup>1</sup> WHO (2003). *The world health report 2003 – Shaping the future*. Geneva, World Health Organization (<http://www.who.int/whr/2003/en>, accessed 10 June 2005).

---

When possible, international comparisons are used as one means of assessing a country's comparative strengths and weaknesses and to provide a summary assessment of what has been achieved so far and what could be improved in the future. Differences between countries and average values allow the formulation of hypotheses of causation or imply links or remedies that encourage further investigation.

The country groups<sup>1</sup> used for comparison are called reference groups and comprise:

- countries with similar health and socioeconomic trends or development; and/or
- geopolitical groups.

The 27 countries with very low child mortality and very low adult mortality are designated Eur-A by WHO. Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. However, data for most indicators are unavailable for two of the 27 countries: Andorra and Monaco. Therefore, unless otherwise indicated, Eur-A and averages for Eur-A refer to the 25 countries for which data are available.

The 25 countries with low child mortality and low or high adult mortality are designated Eur-B+C by WHO. Eur-B+C comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Tajikistan, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan. Unless otherwise indicated, Eur-B+C and averages for Eur-B+C refer to these countries.

Comparisons should preferably refer to the same point in time, but the countries' latest available data are not all for the same year. This should be kept in mind as a country's position may change when more up-to-date data become available.

Graphs have usually been used to show time trends from 1980 onwards. These graphs present the trends for all the reference countries as appropriate. Only the country in focus and the group average are highlighted and identified in the legend. This enables the country's trends to be followed in relation to those of all the reference countries, and performance in relation to observable clusters and/or the main trend or average to be recognized more easily.

---

<sup>1</sup> WHO (2004). *The world health report 2004 – Changing history*. Geneva, World Health Organization (<http://www.who.int/whr/2004/en>, accessed 26 August 2004).

---

## Glossary

### Causes of death

Causes of death	ICD-10 code
Cerebrovascular diseases	I60–I69
Chronic liver disease and cirrhosis	K70, K73, K74, K76
Chronic obstructive pulmonary disease	J40–J47
Colon/rectal/anal cancer	C18–C21
Diseases of pulmonary circulation and other heart disease	I26–I51
Falls	W00–W19
Female breast cancer	C50
Ischaemic heart disease	I20–I25
Pneumonia	J12–J18
Prostate cancer	C61
Neuropsychiatric disorders	F00–99, G00–99, H00–95
Road traffic injuries	V02–V04, V09, V12–V14, V19–V79, V82–V87, V89
Self-inflicted (suicide)	X60–X84
Trachea/bronchus/lung cancer	C33–C34
Violence	X85–Y09

### Technical terminology

Disability-adjusted life-year (DALY)	The DALY combines in one measure the time lived with disability and the time lost due to premature mortality. One DALY can be thought of as one lost year of healthy life.
GINI index	Measures inequality over the entire distribution of income or consumption. A value of 0 represents perfect equality; a value of 100, perfect inequality. Low levels in the WHO European Region range from 23 to 25; high levels range from 35 to 36. <sup>1</sup>
Healthy life expectancy (HALE)	HALE summarizes total life expectancy into equivalent years of full health by taking account of years lived in less than full health due to diseases and injuries.
Income poverty line (50% of median income)	The percentage of the population living below a specified poverty line: in this case, with less than 50% of median income.
Life expectancy at birth	The average number of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to continue throughout the child's life.
Natural population growth	The birth rate less the death rate
Neuropsychiatric conditions	Mental, neurological and substance use disorders
Population growth	(The birth rate less the death rate) + (immigration less emigration)
Standardized death rate (SDR)	The age-standardized death rate calculated using the direct method: that is, it represents what the crude rate would have been if the population had the same age distribution as the standard European population.

<sup>1</sup>WHO Regional Office for Europe (2002). *The European health report 2002*. Copenhagen, WHO Regional Office for Europe:156 (<http://www.euro.who.int/europeanhealthreport>, accessed 28 May 2004).