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EUROPE

Highlights on health in Bulgaria

2005

Highlights on health

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, The former Yugoslav Republic of Macedonia, 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
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BULGARIA

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Summary: findings and policy considerations

Life expectancy

WHO estimates that a person born in Bulgaria in 2003 can expect to live 72 years on average: 76 years if female and 69 years if male. These values are higher than the corresponding Eur-B+C average values: by about 2 years for females and about 5 years for males. However, the values for Bulgaria for 2002 were below the corresponding averages for very low-mortality Eur-A countries that year: by 6 and 7 years, respectively, for females and males. WHO also estimates that Bulgarian people spend 9.6% (7 years) of their lives on average 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 infant mortality rate and both its components (neonatal and postnatal mortality rates) increased in Bulgaria between 1988 and 1997 and then decreased. The most recent infant mortality rate remains below the corresponding Eur-B+C average rate; however, it is almost three times higher than the corresponding 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).

Maternal mortality

Bulgaria's maternal mortality rate shows substantial variation over time and sometimes approaches the corresponding Eur-A average rate. The maternal mortality rate reported may be underestimated, though; according to WHO/United Nations Children's Fund/United Nations Population Fund estimates for the year 2000, the rate in Bulgaria was about 32 maternal deaths per 100 000 live births, while the nationally reported rate was 18 maternal deaths per 100 000 live births. Between 1990 and 2002, Bulgaria's maternal mortality rate fell by 17%. Between 2002 and 2015, the maternal mortality rate would have to fall another 70% to reach the Millennium Development Goal target, but at that point its rate would be lower than the current average maternal mortality rate for Eur-A.

More important than reaching the exact Millennium Development Goals 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 2003, the main noncommunicable diseases accounted for about 86% of all deaths in Bulgaria (of all deaths, 65% were caused by diseases of the circulatory system and 14% by cancer). External causes accounted for about 4% of all deaths and communicable diseases for less than 1%. Mortality rates place Bulgaria in the upper half of the European countries: below the Eur-B+C average rate, yet above the Eur-A

average rate. For both males and females, the largest difference in mortality rates between Bulgarians and their counterparts in Eur-A is found in the youngest population, below 15 years of age: the risk of dying for Bulgarian children is about 2.5 times higher than that for children in Eur-A.

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).

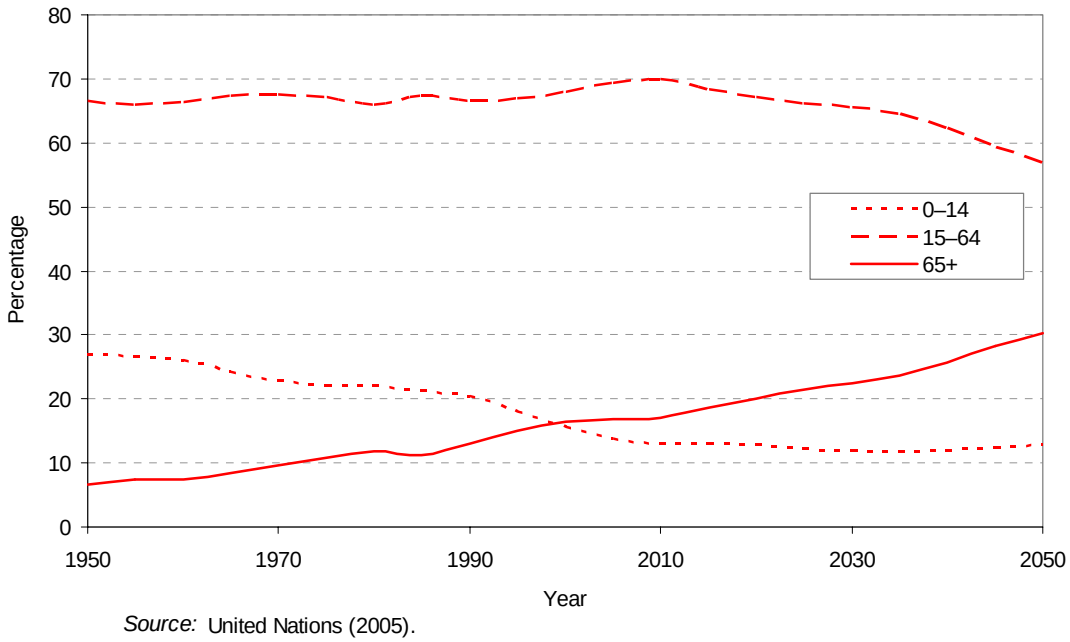
What are the advantages and disadvantages of restructuring a health care system to be more focused on primary health care services? (Health Evidence Network, 2004).

Selected demographic and socioeconomic information

Population profile

In mid-2003, Bulgaria had about 7.8 million people. About 69% of them lived in urban areas, which is higher than the corresponding Eur-B+C average rate. The percentage of the population 0–14 years old was relatively steady during the 1980s, but fell from about 20% in 1990 to 14% by 2003. By 2030, an estimated 23% of Bulgaria's population will be 65 years old and older *(*Annex. Age pyramid*)*.

Percentage of the population aged 0–14, 15–64 and 65+ years,
Bulgaria, 1950 to 2050 (projected)



Source: United Nations (2005).

The birth rate in Bulgaria was one of the lowest in Eur-B+C in 2003. Bulgaria's natural population growth is negative, and net migration is zero, both of which are below the corresponding Eur-B+C averages.

Selected demographic indicators in Bulgaria and Eur-B+C,
2003 or latest available year

Indicators	Bulgaria	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	7823.6	–	–	–
0–14 years (%)	14.4	–	–	–
15–64 years (%)	68.6	–	–	–
65+ years (%)	17.1	–	–	–
Urban population (%)[a]	69.4	63.7	25.0	73.3
Live births (per 1000)	8.9	12.8	8.6	27.1
Natural population growth (per 1000)	–5.4	0.8	–7.49	23.0
Net migration (per 1000)[b]	0.0	1.8	–6.6	2.1

[a] 2002; [b] 2000.

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

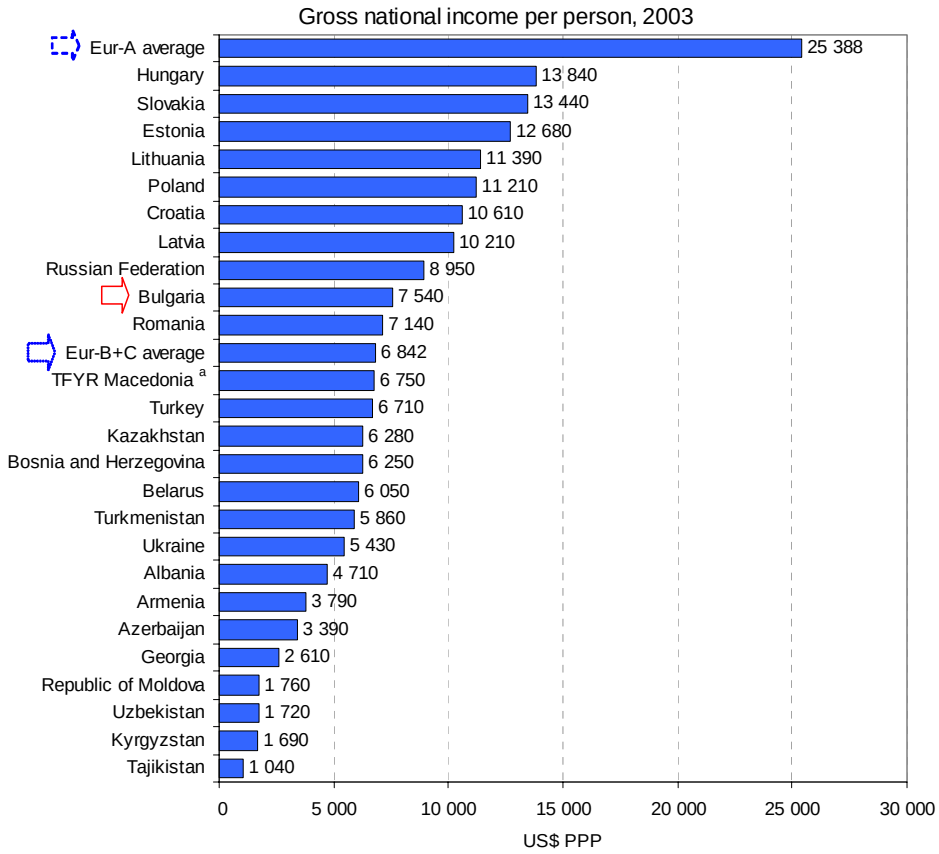
causing vulnerability to health risks. Here, the key factors are income, education and employment. Though moderately correlated and interdependent, each of these three determinants captures distinctive aspects of the socioeconomic background of a population, and they are not interchangeable. Various 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 person 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.

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 Bulgaria, per person gross national income, adjusted for purchasing power parity (PPP), was US$ 7540 in 2003, above the Eur-B+C average of US$ 6842.



[a] The former Yugoslav Republic of Macedonia
Source: World Bank (2005).

In 2001, relative to a national poverty line, 12.8% of the population in Bulgaria lived in poverty (World Bank, 2005). Using the World Bank's recommended benchmarks to measure absolute poverty in Europe, household surveys in Bulgaria found that, in 1989, 0.15% of people lived on US$ 2.15 per day or less. A 1997 survey found the rate to be 13.2% of the population. In 2001, it was 16.2%. If the US$ 4.30

poverty line is applied, the 1989 survey found 1.5% of people living in absolute poverty, by definition. Also for the higher benchmark, the 1997 survey established the rate at 71.7%, and in 2001 it was 53.1% (World Bank, 2005).

Another measure of relative poverty in terms of income is the Gini index. This presents the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

In 2001, the Gini index for Bulgaria was 31.9. The Gini indices for 15 Eur-B+C countries for 2000–2002 ranged from 26.2 for Bosnia and Herzegovina (2001) to 37.2 for Estonia (2000) (World Bank, 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 school.

In Bulgaria, in 2000, secondary school net enrolment (86.0% of the school age population) was above the corresponding average for Eur-B+C countries with data for that year (81.2% of the school age population). In 2001, the rate for secondary school net enrolment in Bulgaria went up to 86.6%. The average net enrolment in Eur-A in 2000 was 88.5% (UNESCO, 2005).

Employment

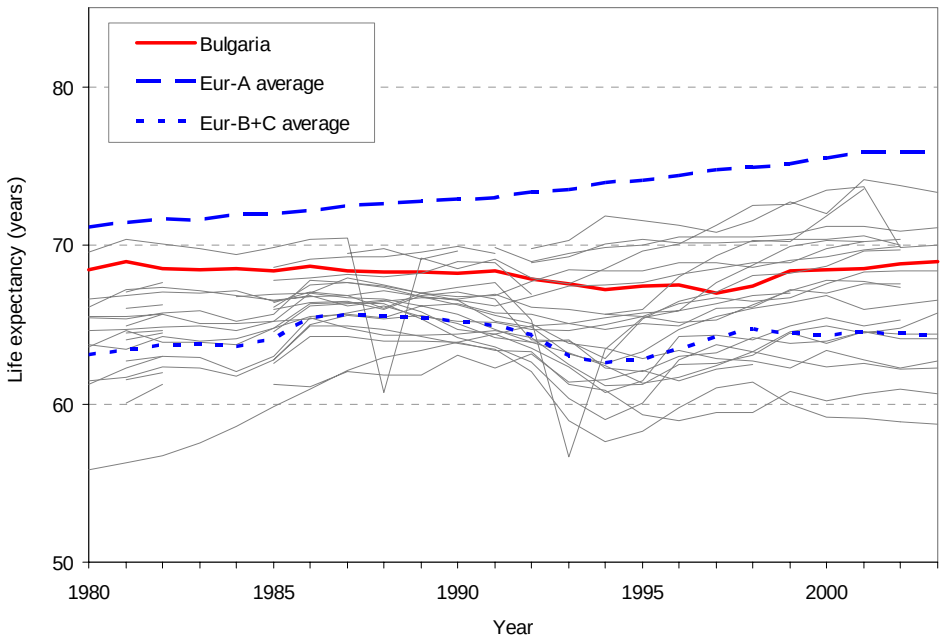
Being employed tends to be better for health than being unemployed, except for circumstances where employment exposes the individual to physical injury or psychological stress. National unemployment rates and rates for particular sub-populations are monitored to assess the extent to which people have 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.

The total unemployment rate in Bulgaria was 19.4% in 2001, compared with the 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 (ILO, 2005). That same year, the unemployment rate among young people in Bulgaria aged 15–24 years was 38.4%; in comparison, the average rate for nine Eur-B+C countries with data for that year was 25.2% (ILO, 2005).

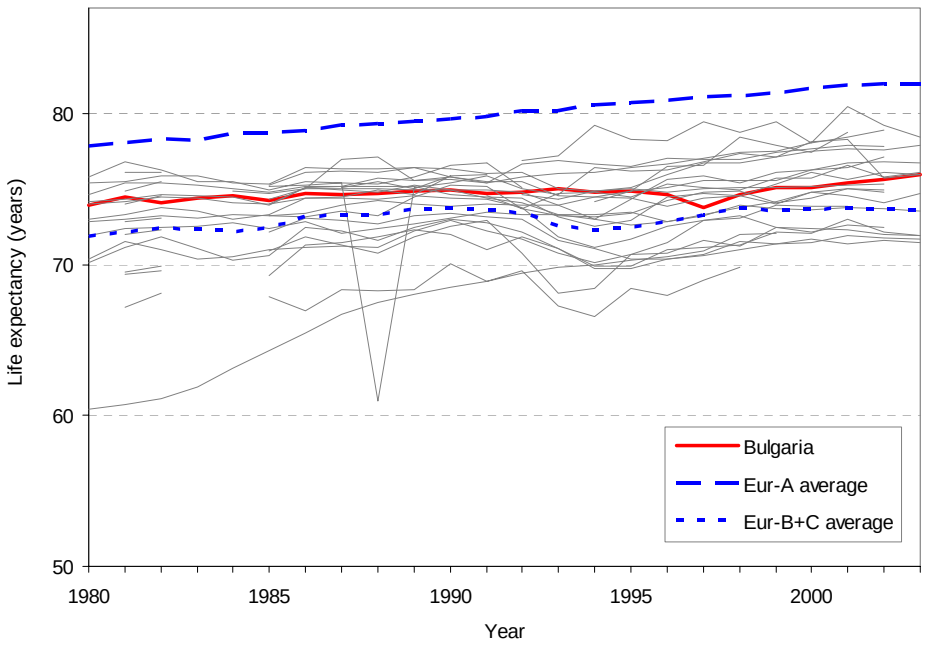
Life expectancy (LE) and healthy life expectancy (HALE)

According to figures compiled by WHO (WHO, 2004), a person born in Bulgaria in 2003 can expect to live 72.4 years on average: 76.0 years if female and 69.0 years if male. Life expectancy (LE) in Bulgaria is higher than the corresponding Eur-B+C average: by 2.4 years for females and 4.8 years for males; however, the values for Bulgaria in 2002 were below the averages for very low mortality Eur-A countries: by 6.3 and 7.0 years, respectively, for females and males.

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



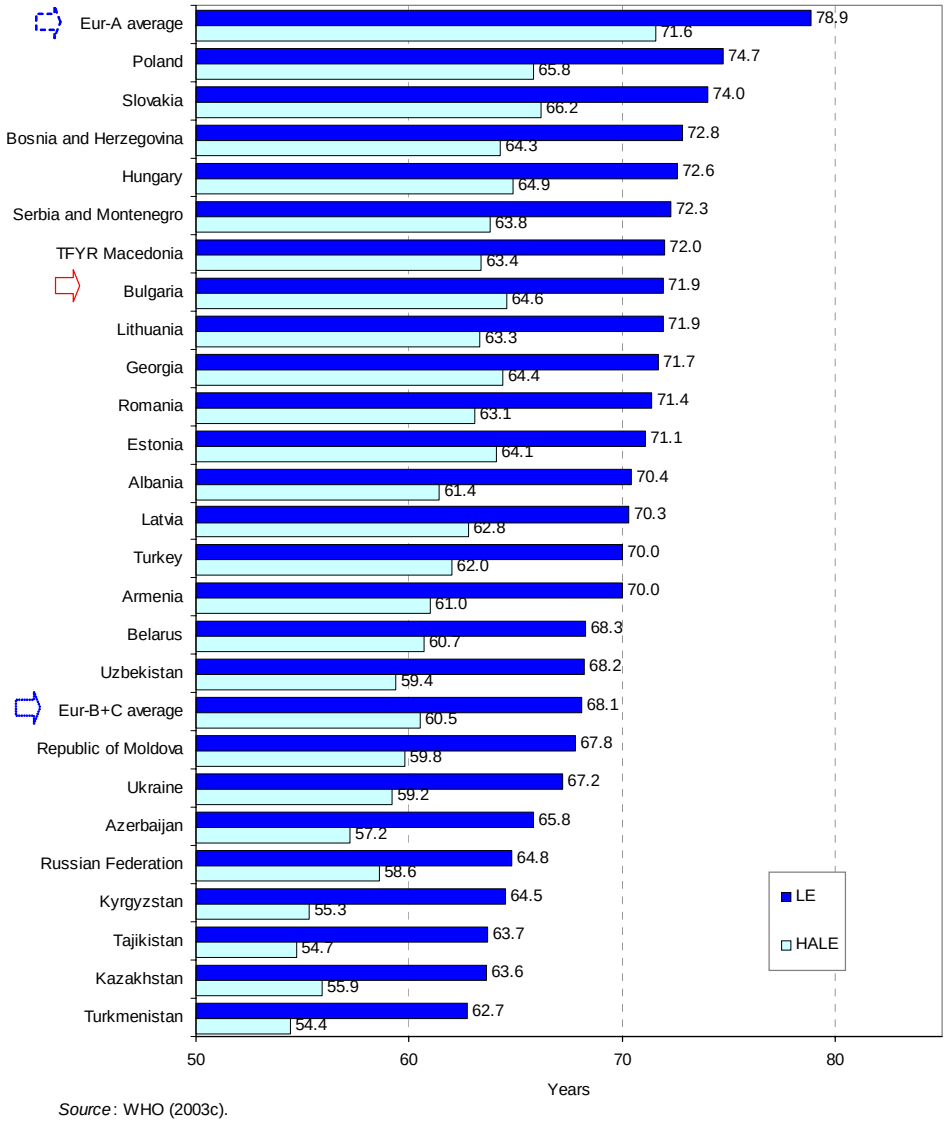
Life expectancy at birth for females, Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



In 1997, LE in Bulgaria dipped and was shorter than in 1981 by 2.0 years for males and 0.6 years for females. Since then, Bulgarians gained 2 years of LE, which was more than the average increase in Eur-A and Eur-B+C.

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 Bulgaria**,** WHO (WHO, 2003c) estimates that people can expect to be healthy for about 90% of their lives. They lose an average of 7.3 years to illness and disabilities – the difference between LE and HALE. This loss is the same as the Eur-A average (7.3 years) and a little less than the Eur-B+C average (7.6 years).

LE and HALE, Bulgaria, Eur-A and Eur-B+C averages, 2002



Source: WHO (2003c).

Since females generally live longer than males and since the possibility of deteriorating health increases with age, females lose more healthy years of life (8.5 years) than males (6.2 years). Nevertheless, the longer LE for females in Bulgaria gives them somewhat more than four years of healthy life than males. At 60 years of age, this difference reduces to 2.5 years: women can expect 15.0 years of healthy life and men can expect 12.5 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 following 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 Bulgaria. Cardiovascular diseases and neuropsychiatric conditions 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 Bulgaria (2002)

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Cardiovascular diseases	36.1	Cardiovascular diseases	33.9
2	Neuropsychiatric conditions	16.8	Neuropsychiatric conditions	20.3
3	Malignant neoplasms	11.7	Malignant neoplasms	11.6
4	Unintentional injuries	8.1	Sense organ diseases	6.6
5	Digestive diseases	4.6	Musculoskeletal diseases	6.0
6	Sense organ diseases	4.1	Digestive diseases	3.2
7	Musculoskeletal diseases	3.2	Diabetes mellitus	2.8
8	Intentional injuries	3.1	Unintentional injuries	2.7
9	Respiratory diseases	2.6	Respiratory diseases	2.2
10	Diabetes mellitus	2.1	Genitourinary diseases	2.0

Source: Background data from WHO (2003c).

Main risk factors

The following table shows the top 10 risk factors with their relative contributions, in descending order, to the burden of disease in the male and female populations of Bulgaria. According to the DALYs, high blood pressure and tobacco place the greatest burden of disease on the Bulgarian 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 Bulgaria (2002)

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	High blood pressure	21.2	High blood pressure	19.5
2	Tobacco	20.1	High BMI	12.2
3	Alcohol	12.0	High cholesterol	7.2
4	High BMI	9.9	Physical inactivity	4.1
5	High cholesterol	9.3	Low fruit and vegetable intake	3.7
6	Low fruit and vegetable intake	4.9	Tobacco	3.0
7	Physical inactivity	4.5	Alcohol	2.9
8	Illicit drugs	2.4	Unsafe sex	2.6
9	Lead	1.7	Illicit drugs	1.0
10	Urban outdoor air pollution	1.0	Childhood sexual abuse	1.0

Source: Background data from WHO (2003c).

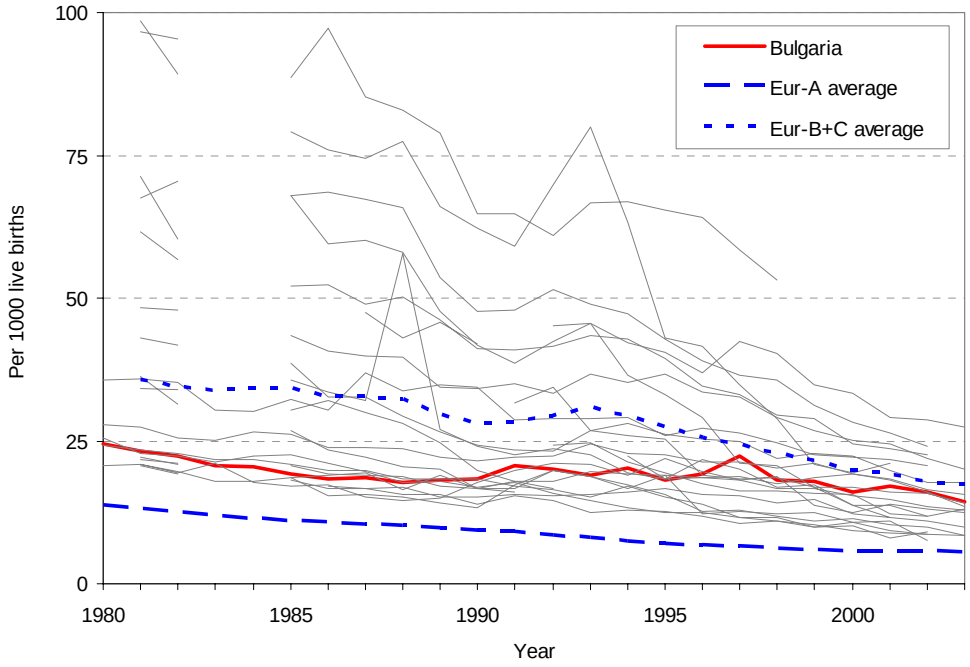
Mortality

Infant, neonatal and child mortality

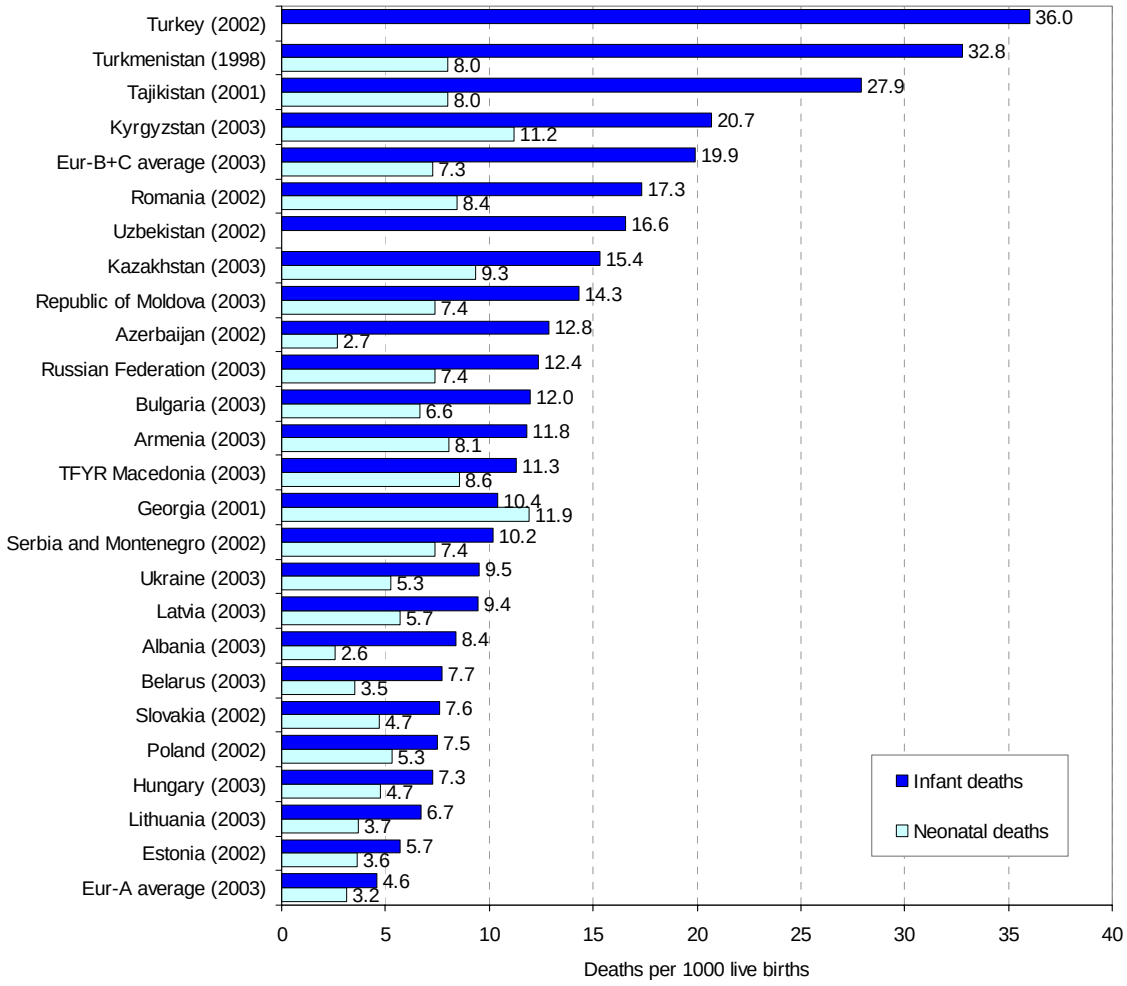
Infant mortality and both its components, neonatal and postnatal mortality, declined after a period of increase between 1988 and 1997. Although infant mortality rates remain below the corresponding Eur-B+C average rates, they are almost three times higher than the corresponding Eur-A average rates.

National data and WHO estimates for 2002 show that, of every 1000 live births in Bulgaria, about 16 children will probably die before 5 years of age. The Millennium Development Goal (MDG) for the under-5 mortality rate for Europe and central Asia is 15 deaths per 1000 live births by 2015. Based on the decrease in Bulgaria's rate over the 1990s, it should reach the MDG target before 2015. The lowest WHO estimates for Eur-B+C are for Estonia and Slovakia, each with 8 deaths per 1000 live births.

Probability of dying before age 5 years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



Infant deaths and neonatal deaths per 1000 live births,
Bulgaria, Eur-A and Eur-B+C averages, latest available year

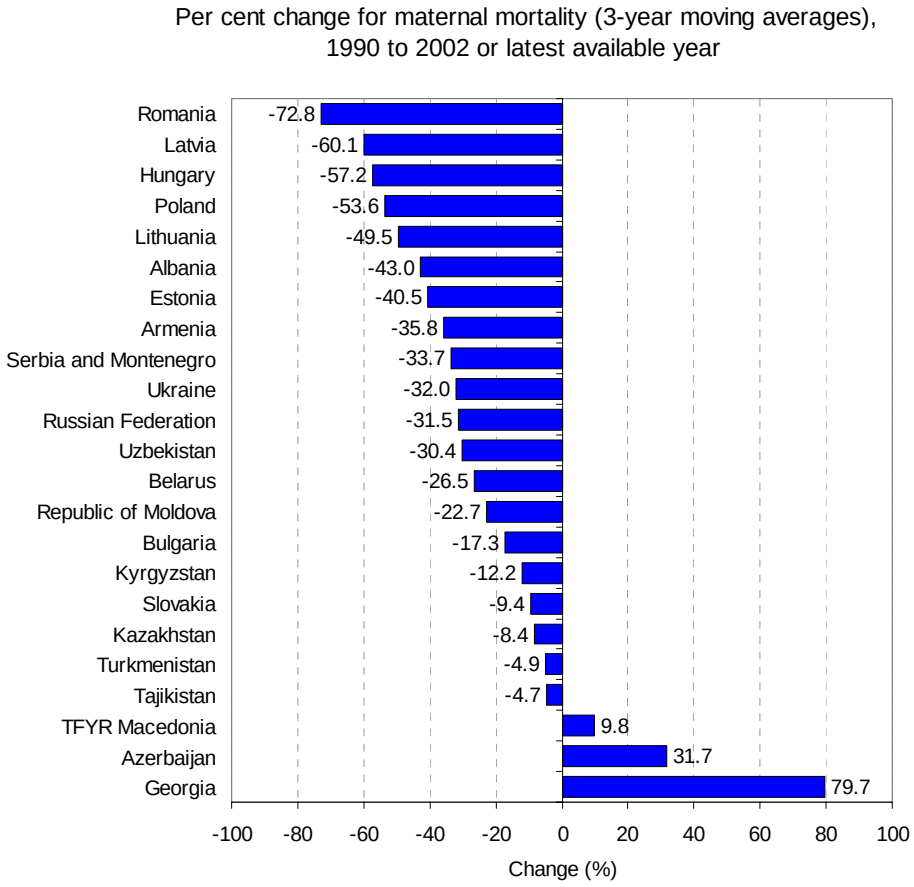


Maternal mortality

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 Millennium Development Goal (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 5 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.



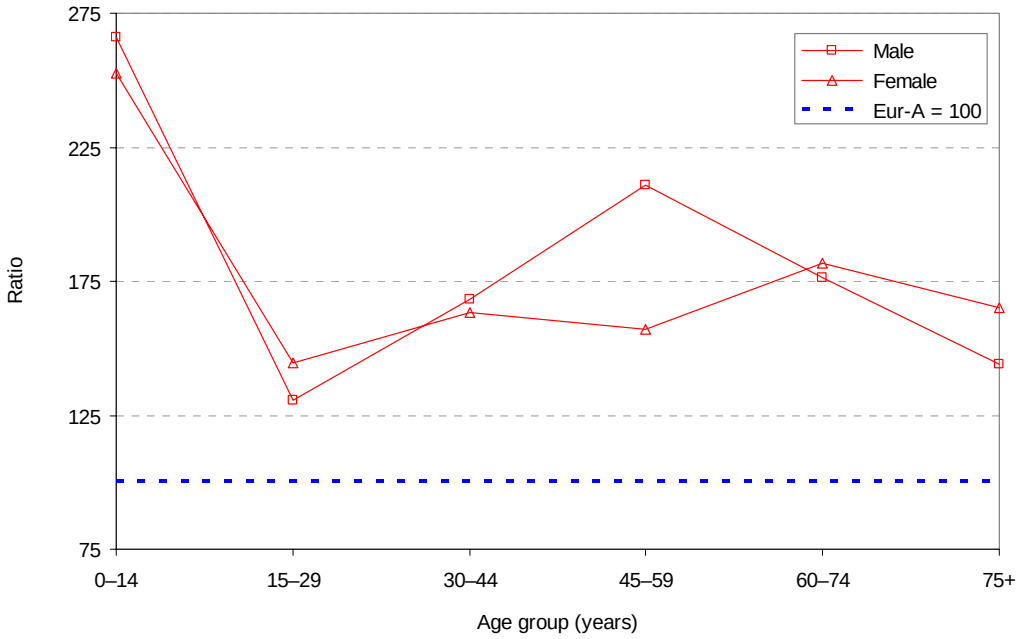
The MMR show substantial variation over time, but the most recent rate for 2003 is rather low and only a little higher than the corresponding Eur-A average rate. The MMR reported may be underestimated, though; according to WHO/United Nations Children's Fund (UNICEF)/United Nations Population Fund (UNFPA) estimates for the year 2000, the MMR in Bulgaria was about 32 maternal deaths per 100 000 live births (UNICEF, 2005), while the official rate was 17.6 maternal deaths per 100 000 live births. Of the 57 maternal deaths reported in 1999-2003, 11 (19%) were attributed to abortion.

Between 1990 and 2002, Bulgaria's MMR (three-year moving average) fell by 17.3% (see preceding figure). However, its 1990 rate (almost 17 maternal deaths per 100 000 live births) was among the lower rates in the Eur-B+C group that year. By 2000, the rate peaked at about 19 maternal deaths per 100 000 live births, then fell by almost 30% to reach the 2002 level. Between 2002 and 2015, the MMR would have to fall another 70% to reach the MDG target, but at that point its rate would be lower than the current average MMR for Eur-A.

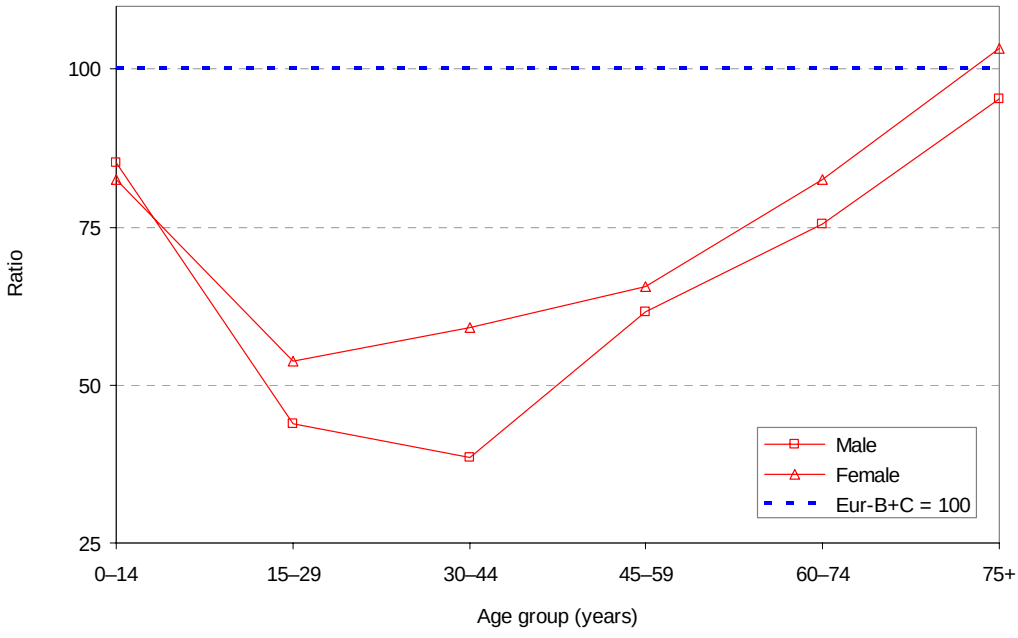
Excess mortality

In general, mortality rates for males and females place Bulgaria statistically in the upper half of the European countries. They are below the Eur-B+C average rates (in 2003, 24% and 11% excess, respectively, for males and females), yet well above the average rate for the very low mortality countries of Eur-A (65% excess for males and 69% for females). The excess mortality in Bulgaria, in comparison with Eur-A, has been decreasing slowly since 1997; however, it is very age dependent, even though it is present across all age groups. For both males and females, the largest difference is in the youngest population (below 15 years of age), for Bulgarian children have about a 2.5 times higher risk of dying than their counterparts in Eur-A. Also, the mortality rate for middle-aged Bulgarian men (45–59 years old) is more than twice as high as the corresponding Eur-A average rate. The excess mortality of Bulgarian women aged 15 years and more does not vary much across age groups.

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



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



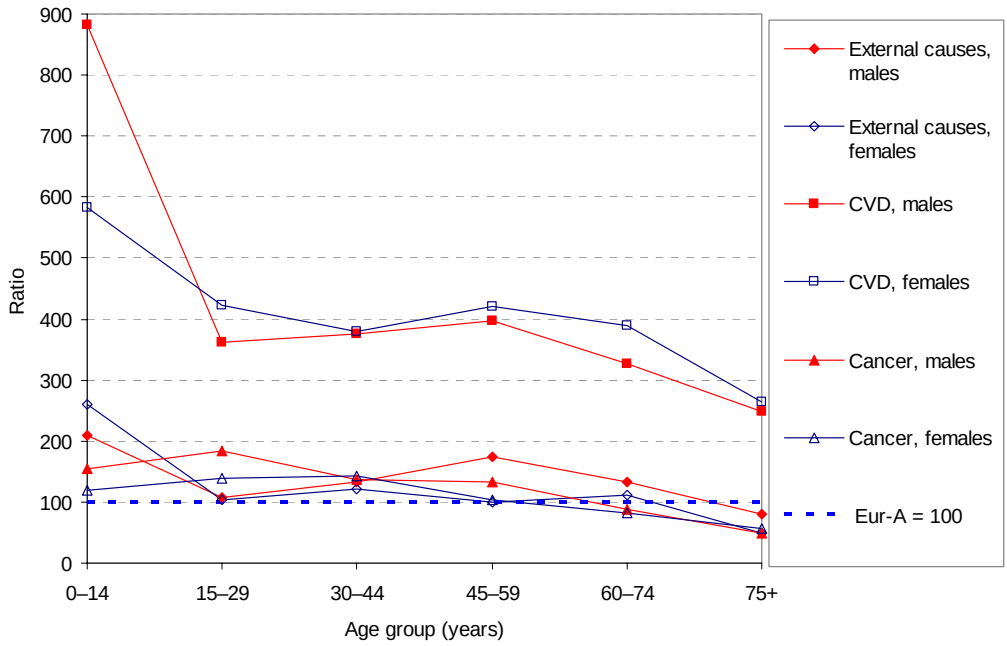
Main causes of death

In 2003, the main noncommunicable diseases accounted for about 86% of all deaths in Bulgaria; external causes for about 4%; and communicable diseases for less than 1%. In total, 65% of all deaths were caused by diseases of the circulatory system (more than the Eur-B+C average rate of 57%) and 14% by cancer (similar to the Eur-B+C average rate of 13%) (Annex. Selected mortality; Annex. Mortality data).

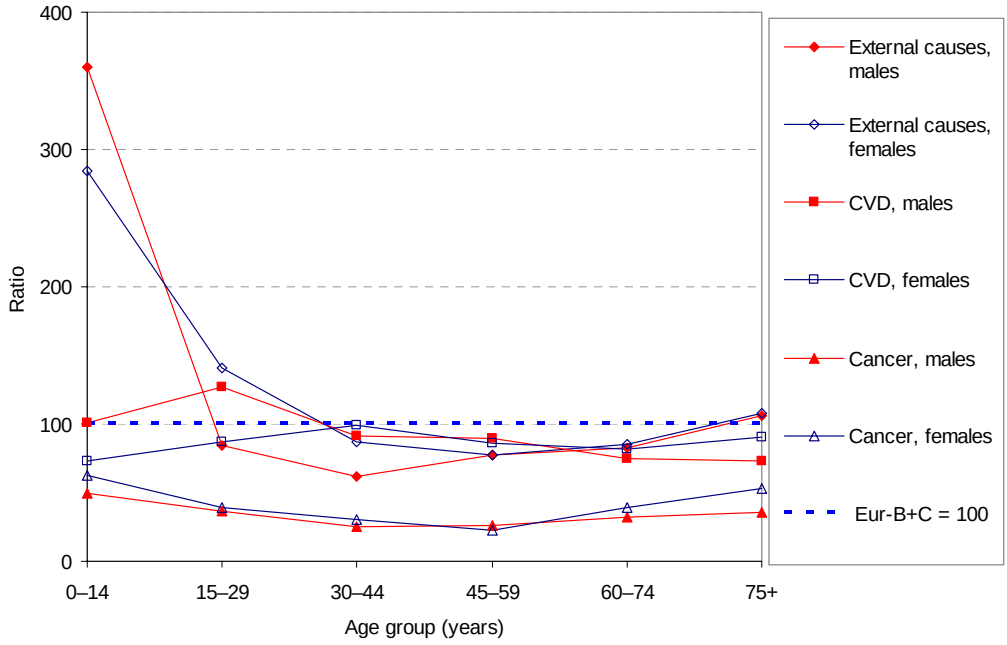
The risk of Bulgarians dying from CVD is similar to that of the corresponding Eur-B+C average; however, it is about three times higher than the corresponding Eur-A average. On the other hand, for men and women aged 60 years and more, the risk of death from cancer is lower than that of the corresponding Eur-A average risk; it is also lower than that of the corresponding Eur-B+C average risk for all age

groups. The risk of death from external causes for Bulgarian males is higher than the corresponding Eur-A average risk, while that for Bulgarian females is about the same as the Eur-A average risk. In Bulgaria, the death rate for external causes for both boys and girls less than 15 years of age is more than twice that in Eur-A countries. When compared with the Eur-B+C averages, Bulgarians across all age groups, except 0–14 year olds, show a lower risk of death from external causes.

Main causes of mortality by sex and age group in Bulgaria
in comparison with Eur-A (Eur-A = 100), 2003



Main causes of mortality by sex and age group in Bulgaria
in comparison with Eur-B+C (Eur-B+C = 100), 2003

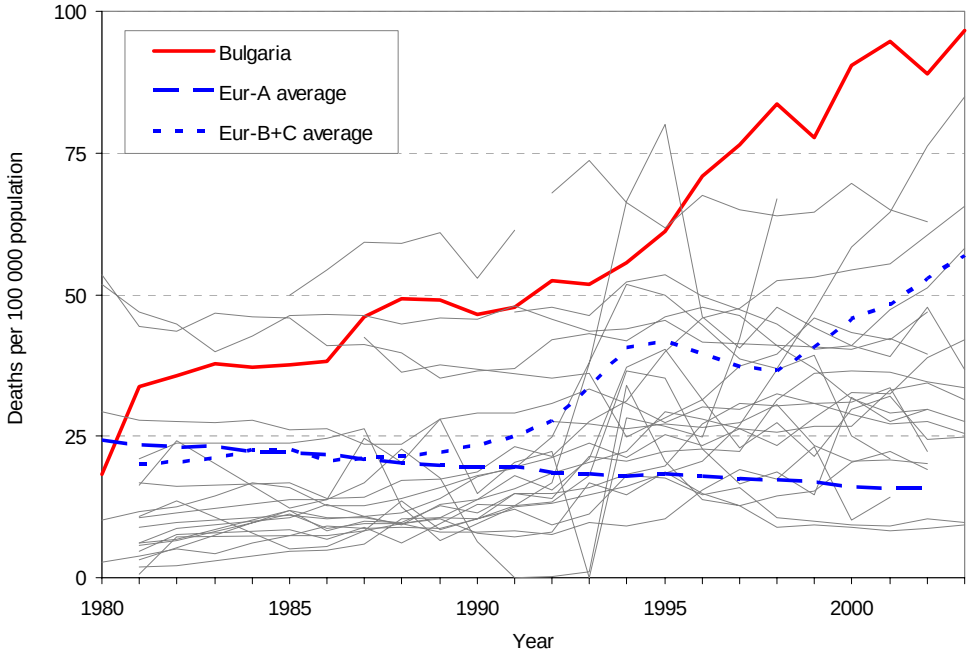


CVD

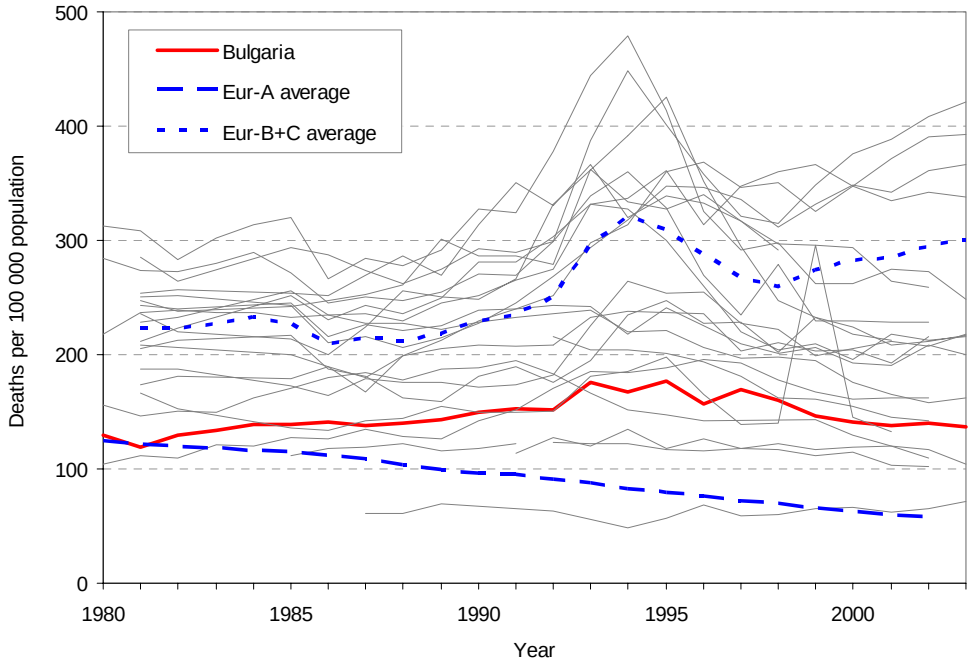
Mortality from CVD in Bulgaria reached its highest level in 1997 and 1998; it then plunged considerably the next year and finally stabilized in men while very slowly declining in women. The CVD mortality gap between Bulgaria and the Eur-A group has yet to decrease significantly.

In Bulgaria, unlike the countries of the Eur-A group, the largest proportion of CVD deaths is attributed to diseases of pulmonary circulation and other heart diseases, with a three times higher death rate than that of the corresponding Eur-A average; it is the second highest in European countries. In the population aged 25–64 years, deaths attributed to diseases of pulmonary circulation and other heart diseases are the highest and are increasing. The death rates more than doubled in Bulgaria between 1990 and 2003, while showing a clear decrease in Eur-A countries. Also, the risk of dying from cerebrovascular diseases is three times higher in Bulgaria than it is on average in Eur-A countries, and from ischaemic heart disease it is less than two times higher; the excess mortality in Bulgaria is not decreasing.

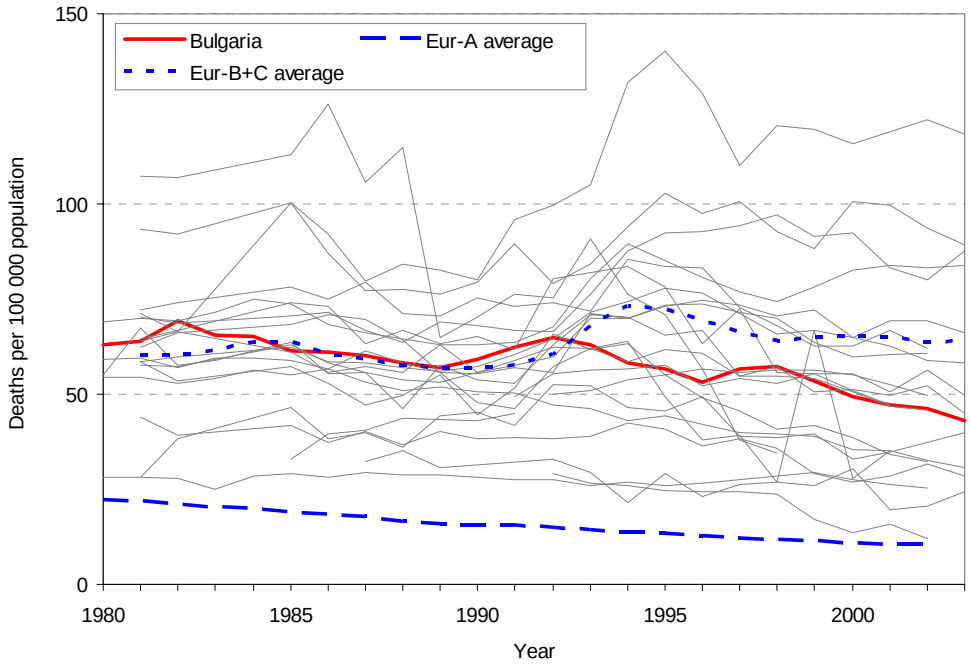
SDR for pulmonary heart diseases and other heart diseases in people aged 25–64 years, Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



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



SDR for cerebrovascular diseases in females aged 25–64 years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



Cancer

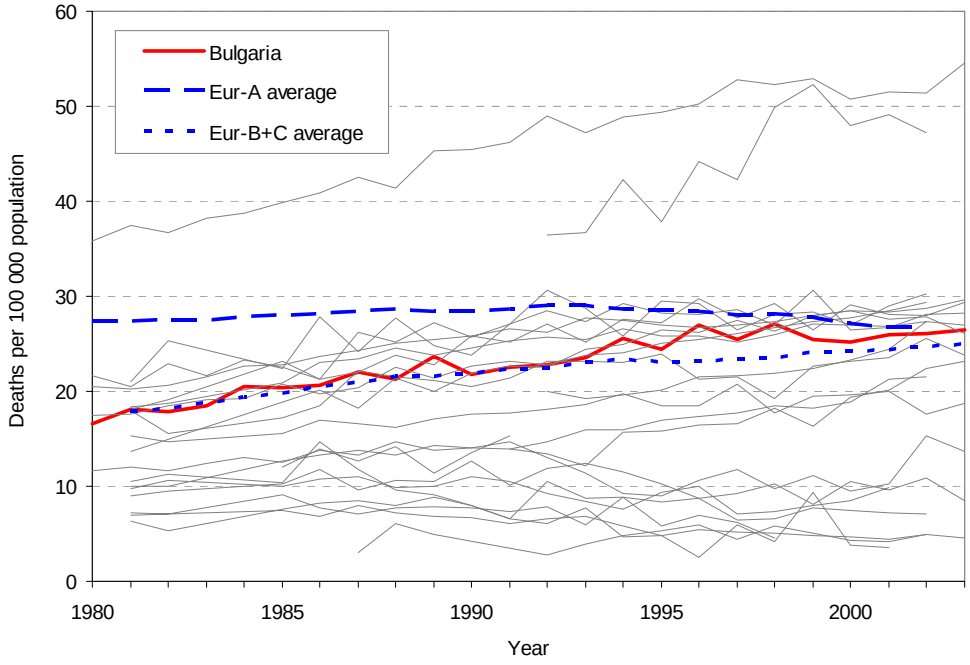
Cancer accounted for 14% of all deaths in Bulgaria in 2003, which is half of the corresponding Eur-A average (28%). Yet, from the beginning of the 1990s, the risk of dying from cancer in the population below 65 years of age has been higher in Bulgaria (with males worse off than females) than the corresponding Eur-A average risk. On the other hand, the death rate in Bulgaria in those 65 years and more has been below the corresponding average Eur-A rate for the same years.

In Bulgaria, only the risk of dying from stomach cancer shows a clear long-term decline, though the death rates are higher than the corresponding Eur-A average rates. In Bulgaria, male mortality rates for cancer of the colon, rectum and anus, cancer of the pancreas, and cancer of the prostate are lower than corresponding Eur-A average rates; however, their values are increasing, and the difference is decreasing. In Bulgarian females, mortality rates for cancer of the colon, rectum and anus have been declining in recent years.

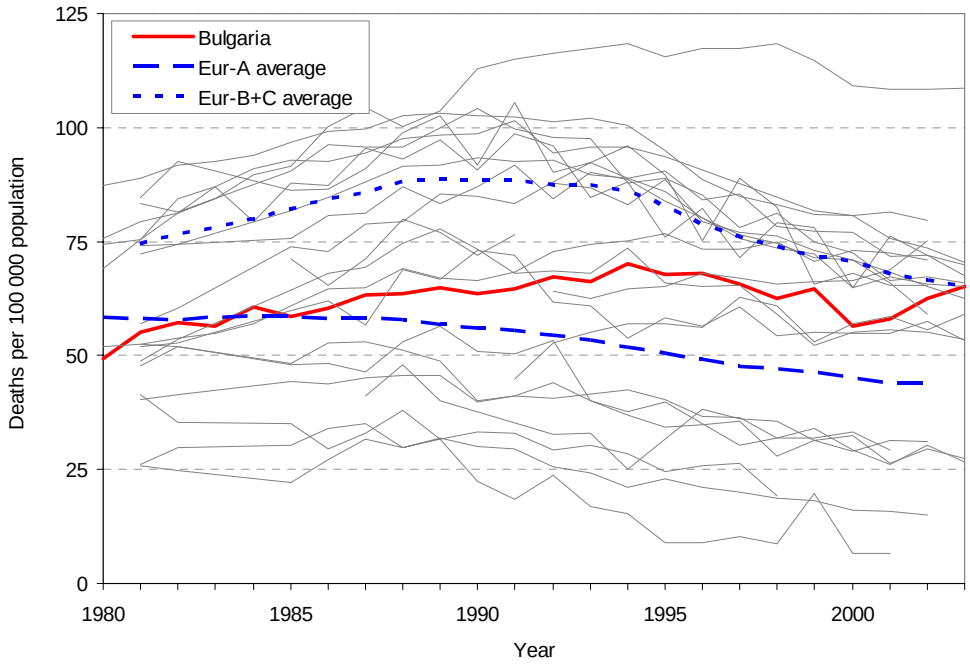
Mortality rates for ovarian cancer and breast cancer in Bulgarian women are relatively stable and below the corresponding Eur-A average rates. The risk of dying from cancer of the cervix, however, is growing in Bulgaria: it is three times higher than the Eur-A average level and has reached the Eur-B+C average level. Also, mortality rates from cancer of other parts of the uterus are higher in Bulgarian women than those of Eur-A (and even Eur-B+C) average levels, but they are declining.

The level of total mortality from cancer of the trachea, bronchus and lung (TBL) in Bulgaria has shown relatively long-term stability and is below the Eur-A average level. However, in men 25–64 years of age, the rates are higher than the respective Eur-A averages, and they grew during the last three years. For Bulgarian women, the rates are below the Eur-A average level, and unlike the Eur-A rate the Bulgarian rate is not growing.

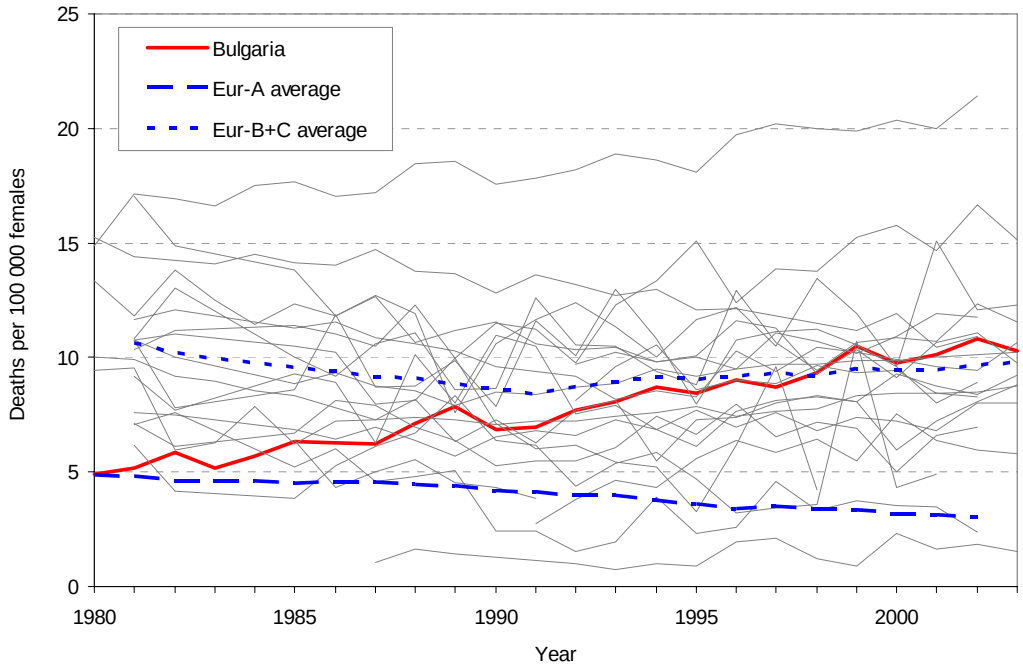
SDR for colon, rectum and anus cancer in males, all ages,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for trachea, bronchus and lung cancer in males aged 25–64 years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



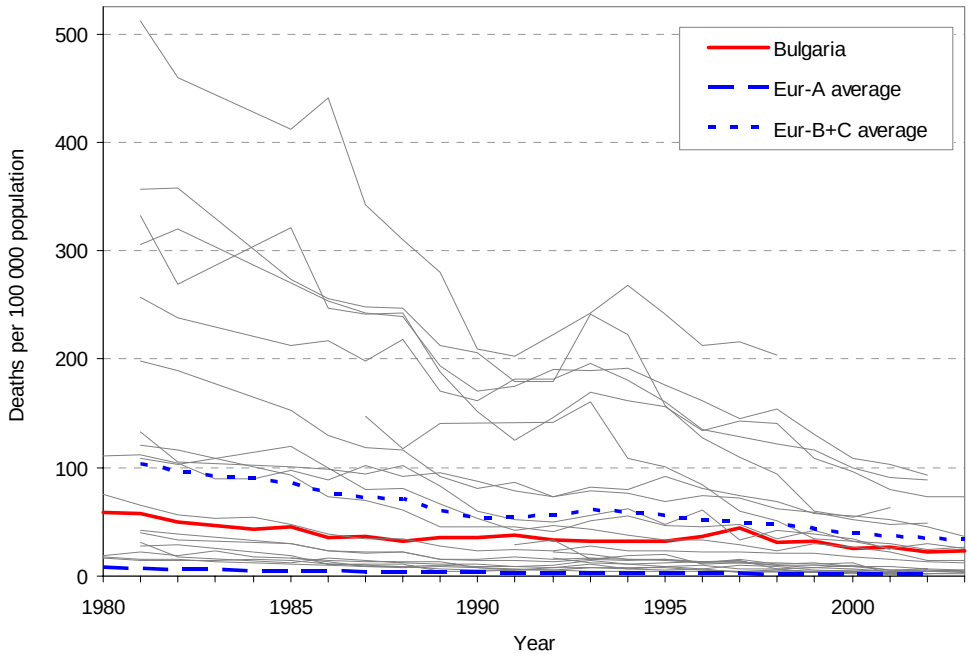
SDR for cancer of the cervix in females aged 25–64 years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



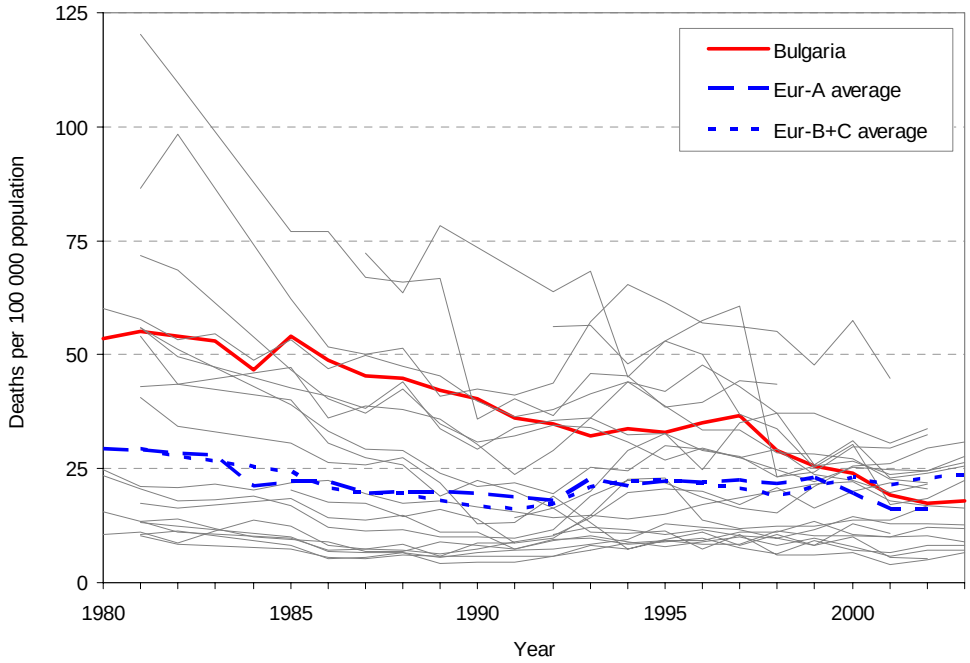
Respiratory diseases

In 2003, respiratory diseases accounted for 3.3% of all deaths in Bulgaria. Mortality rates for respiratory diseases have declined steadily for more than the last 20 years, faster than the corresponding Eur-A average rates, and have been below the Eur-A average rates since 1998. However, the rate for people below 65 years of age in Bulgaria is twice as high as the Eur-A average rate, and for children below 15 years of age the excess mortality in Bulgaria is much larger. Unlike in Eur-A and Eur-B+C, in general, in Bulgaria mortality from pneumonia is higher than from chronic lower respiratory diseases in females as well as males. For both causes, mortality rates in Bulgaria show a long-term decline. The rate for pneumonia is one of the highest in Europe; during the 1980s, it reached the average Eur-A level. Mortality from chronic lower respiratory diseases, however, is much lower.

SDR for respiratory diseases in children aged 0–14 years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for pneumonia in people of all ages,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



Digestive diseases

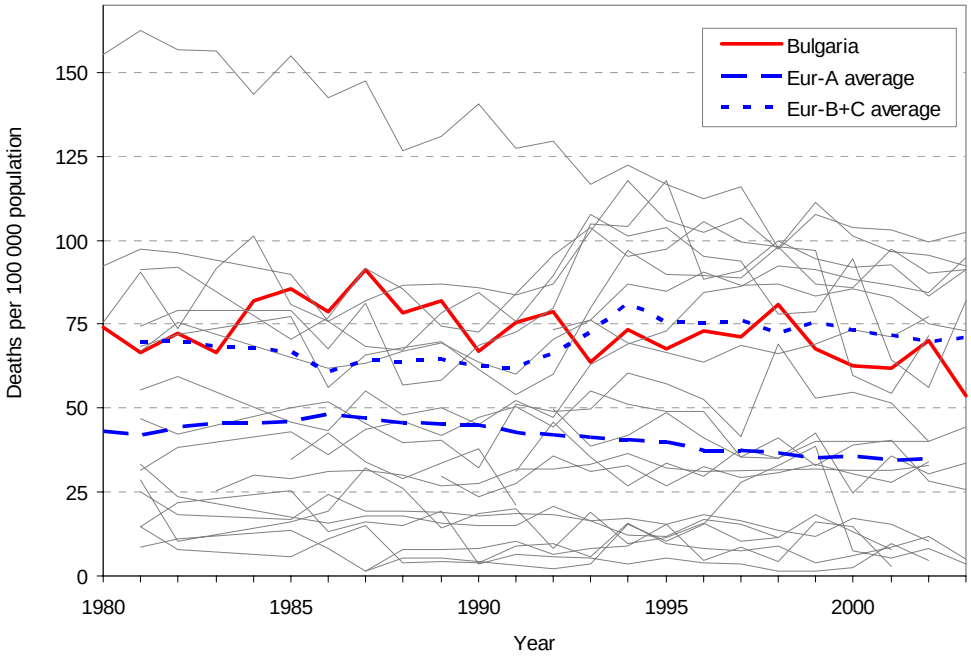
Mortality from diseases of the digestive system has been declining since 1995. In males, however, the mortality rates are above the corresponding Eur-A averages for all males below 65 years. In elderly men the rates in Bulgaria are lower than the Eur-A average rates. In females the mortality rates have been declining for a longer period than in males and have always been below Eur-A average, being among the lowest in Europe.

External causes

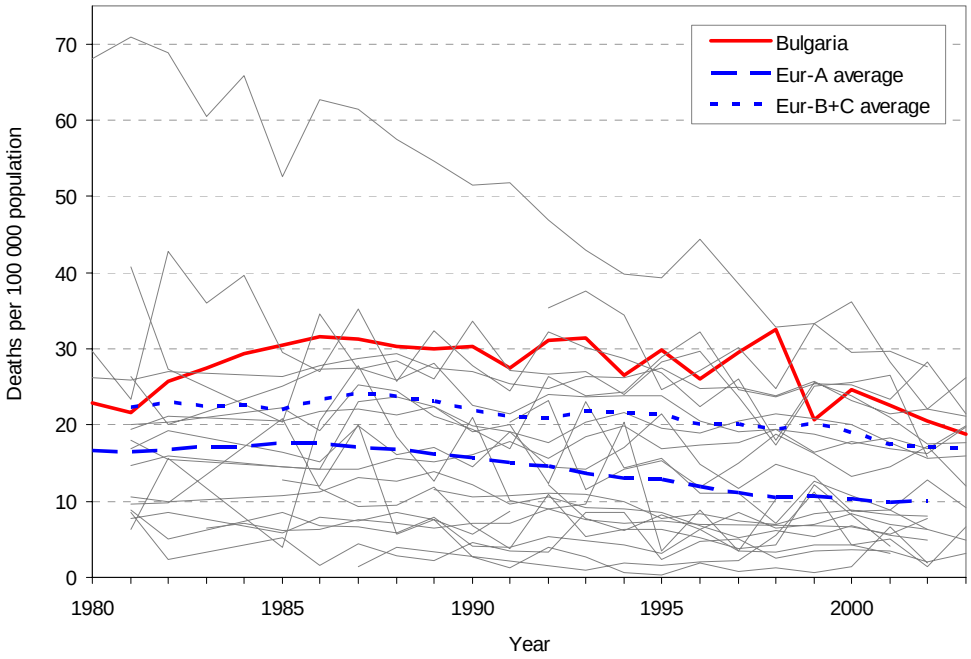
The level and trend of mortality rates for external causes in Bulgarian females have been similar to those of the Eur-A averages. In males, however, they are still higher than the Eur-A average, even though they have decreased faster than the Eur-A average since 1994. This overall picture differs slightly in the younger and older populations: for males and females below 65 years of age, the rate in Bulgaria is higher than the Eur-A average rate; in men 75 years of age and older and in women even above 65 years, mortality rates in Bulgaria are lower than the corresponding Eur-A average rates.

In Bulgaria, the main external cause of death is suicide. Its level has been declining since the second half of 1990s; however, it is higher than the Eur-A average, for both males and females. Excess mortality from suicide is higher in older people (aged 65 years and older) than in younger people. Motor vehicle traffic accidents are the second most important external cause of death in the overall Bulgarian population and the first most important cause in those below 30 years of age. Death rates, after a noticeable decline from 1994 to 1997, have not changed much in the last few years and are similar to the corresponding Eur-A average rates, which are well below the corresponding Eur-B+C average rates. Death rates for accidental drowning, for exposure to smoke, fire and flames, for accidental poisoning and for homicide in Bulgaria have been higher than the corresponding Eur-A average rates and show a slow decline or some stabilization. Also, Bulgarian mortality rates for accidental falls are lower than the corresponding Eur-A average rates and are declining faster.

SDR for suicide and self-inflicted injury in males aged 65+ years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for suicide and self-inflicted injury in females aged 65+ years,
Bulgaria, Eur-A and Eur-B+C averages, 1980 to latest available year



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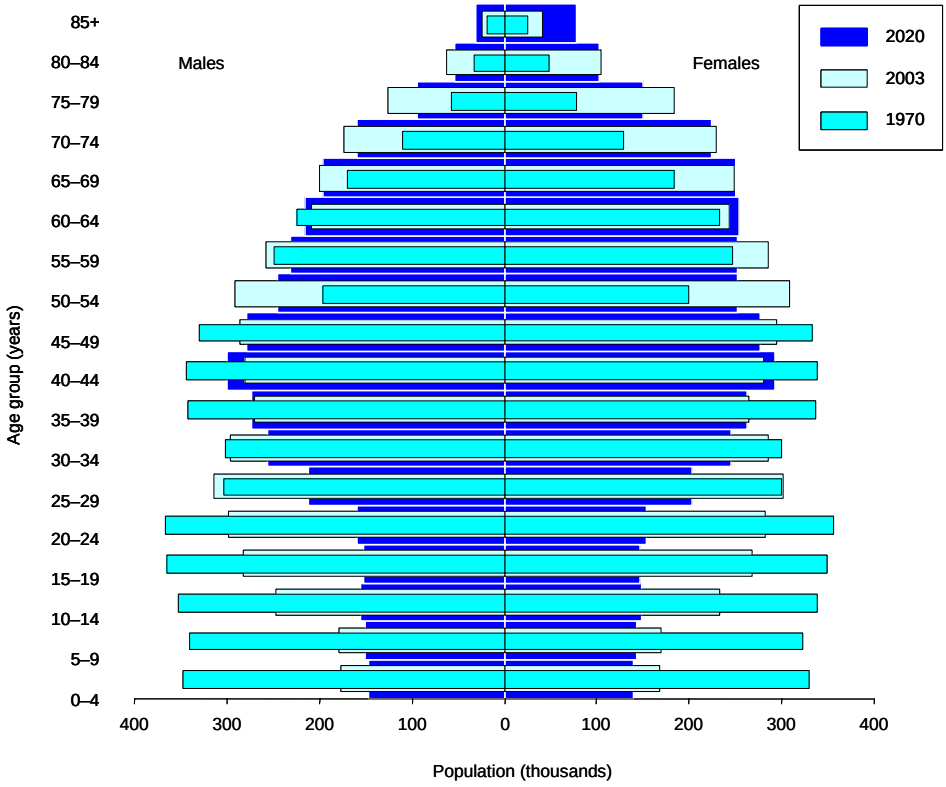
Annexes

Annex. Age Pyramid

AGE PYRAMID FOR BULGARIA, 1970, 2001 AND 2020 (PROJECTED)



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

Annex. Selected mortality

SELECTED MORTALITY IN BULGARIA COMPARED WITH EUR-A OR EUR-B+C AVERAGE

Selected mortality in Bulgaria compared with Eur-B+C averages

Condition	SDR per 100 000		Excess mortality in Bulgaria (%)	Total deaths in Bulgaria (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Bulgaria to Eur-A (%)	Total deaths in Eur-A (%)
	Bulgaria (2003)	Eur- B+C average (2003)						
Selected non-communicable conditions	939.1	1044.9	–10.1	86.2	79.6	533.8	75.9	82.4
Cardiovascular diseases	713.0	741.8	–3.9	65.4	56.5	243.4	192.9	37.6
Ischaemic heart disease	184.0	362.7	–49.3	16.9	27.6	95.9	91.9	14.8
Cerebrovascular diseases	192.5	221.7	–13.2	17.7	16.9	61.1	215.1	9.4
Diseases of pulmonary circulation and other heart disease	226.6	68.9	228.9	20.8	5.3	56.6	300.4	8.7
Malignant neoplasms	152.5	172.0	–11.3	14.0	13.1	181.5	–16.0	28.0
Trachea/bronchus/lung cancer	31.2	33.9	–8.0	2.9	2.6	37.1	–15.9	5.7
Female breast cancer	20.8	22.1	–5.9	1.9	1.7	27.0	–23.0	4.2
Colon/rectal/anal cancer	19.7	19.0	3.7	1.8	1.4	20.7	–4.8	3.2
Prostate	15.1	14.3	5.6	1.4	1.1	25.1	–39.8	3.9
Respiratory diseases	36.2	63.1	–42.6	3.3	4.8	47.8	–24.3	7.4
Chronic lower respiratory diseases	12.5	31.2	–59.9	1.1	2.4	20.2	–38.1	3.1
Pneumonia	18.1	23.6	–23.3	1.7	1.8	16.2	11.7	2.5
Digestive diseases	27.8	52.3	–46.8	2.6	4.0	30.8	–9.7	4.8
Chronic liver disease and cirrhosis	14.1	32.0	–55.9	1.3	2.4	12.6	11.9	1.9
Neuropsychiatric disorders	9.6	15.7	–38.9	0.9	1.2	30.3	–68.3	4.7
Communicable conditions	7.5	20.8	–63.9	0.7	1.6	8.4	–10.7	1.3
AIDS/HIV	0.0	0.8	–100.0	0.0	0.1	1.1	–100.0	0.2
External causes	46.2	139.6	–66.9	4.2	10.6	40.3	14.6	6.2
Unintentional	31.7	102.2	–69.0	2.9	7.8	28.7	10.5	4.4
Road traffic injuries	9.5	14.7	–35.4	0.9	1.1	9.9	–4.0	1.5
Falls	3.1	7.5	–58.7	0.3	0.6	6.1	–49.2	0.9
Intentional	14.5	37.4	–61.2	1.3	2.9	11.6	25.0	1.8
Self-inflicted (suicide)	11.9	23.2	–48.7	1.1	1.8	10.6	12.3	1.6
Violence (homicide)	2.6	14.2	–81.7	0.2	1.1	1.0	160.0	0.2
Ill-defined conditions	55.7	64.0	–13.0	5.1	4.9	20.9	166.5	3.2
All causes	1089.5	1312.2	–17.0	100.0	100.0	647.8	68.2	100.0

Annex. Mortality data

Mortality data

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	127.6	–2.0	49.4	–2.4	151.7	–3.8
	M	145.3	–1.9	55.3	–2.5	170.5	–3.9
	F	108.8	–2.2	43.3	–2.4	131.9	–3.8
Infectious and parasitic diseases	M	6.7	–0.7	1.4	–1.1	10.9	–7.0
	F	7.2	–0.6	1.1	–3.0	9.5	–6.6
Intestinal infectious diseases	M	1.5	–6.5	0.2	–0.7	5.1	–8.2
	F	1.8	–5.6	0.1	–7.3	4.7	–7.9
Malignant neoplasms	M	5.1	–3.0	3.3	–1.8	5.1	–1.9
	F	3.1	–6.0	2.6	–1.8	4.2	–1.9
Cardiovascular diseases	M	11.8	16.6	1.4	–3.1	3.3	1.1
	F	7.4	6.8	1.3	–2.5	2.6	0.1
Respiratory diseases	M	24.4	–4.1	1.4	–4.3	35.9	–5.0
	F	21.1	–3.0	1.0	–4.2	30.7	–5.0
Pneumonia	M	20.4	–4.1	0.5	–6.0	20.9	–4.9
	F	18.3	–3.0	0.4	–5.1	17.9	–4.7
Certain conditions originating in perinatal period	M	473.2	–2.6	255.3	–2.1	607.6	–2.7
	F	320.6	–1.4	202.3	–1.6	427.5	–2.7
Congenital malformations and chromosomal abnormalities	M	25.0	–2.5	11.6	–2.9	24.2	–2.8
	F	19.7	–4.8	10.0	–3.3	21.0	–2.6
Ill-defined causes	M	10.7	36.0	5.0	–3.9	5.6	–0.6
	F	6.8	33.2	3.4	–4.2	4.6	–1.0
External causes of injury and poisoning	M	14.4	–4.6	7.0	–4.0	29.0	–3.4
	F	11.3	–2.3	4.6	–3.2	18.1	–3.1
Motor vehicle traffic injuries	M	3.4	4.0	2.5	–4.5	4.7	–2.6
	F	2.7	–3.3	1.7	–4.8	3.0	–1.6

Mortality data contd

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	75.1	–2.4	56.0	–2.3	161.0	–0.9
	M	106.1	–2.3	82.0	–2.3	241.7	–1.0
	F	42.5	–2.9	29.3	–2.2	79.0	–0.6
Infectious and parasitic diseases	M	2.7	6.5	1.2	1.5	12.3	3.0
	F	1.7	3.0	0.8	1.9	5.1	2.5
Malignant neoplasms	M	11.1	–1.1	6.2	–1.0	8.8	–1.9
	F	6.7	–2.2	4.7	–1.4	7.7	–1.9
Cardiovascular diseases	M	14.8	1.7	4.1	–2.4	17.6	0.0
	F	10.2	3.0	2.3	–2.0	7.3	–0.9
Respiratory diseases	M	3.3	–2.6	1.4	–3.6	6.9	0.2
	F	1.8	–5.6	0.9	–2.7	3.8	–1.1
Digestive diseases	M	1.5	–7.5	0.9	–3.5	8.0	3.0
	F	1.4	–3.9	0.5	–3.8	3.7	3.1
Ill-defined causes	M	6.6	17.3	4.0	–3.1	11.6	7.1
	F	2.2	5.6	1.4	–1.3	3.3	5.8
External causes	M	59.3	–3.7	58.3	–1.4	162.4	–1.6
	F	14.4	–4.1	14.4	–1.6	36.9	–0.2
Motor vehicle traffic injuries	M	20.2	–2.1	28.5	–1.3	27.8	–1.5
	F	4.9	–5.1	7.3	–1.4	8.0	0.3
Accidental drowning	M	2.6	–6.2	1.3	–2.2	10.8	–3.9
	F	0.8	30.6	0.2	–2.1	1.9	–2.2
Accidental poisoning	M	1.6	–3.4	2.8	0.0	19.1	3.3
	F	1.0	5.3	0.7	0.8	4.4	2.5
Suicide	M	9.9	–4.4	12.7	–1.8	36.8	0.0
	F	2.6	–6.0	3.1	–2.2	5.8	–1.3

Mortality data contd

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	198.9	–2.6	120.3	–2.5	453.8	–0.7
	M	269.7	–3.3	161.6	–2.6	700.0	–0.8
	F	127.3	–0.7	78.5	–2.1	215.6	–0.2
Malignant neoplasms	M	36.8	–4.5	27.6	–2.3	40.2	–2.8
	F	43.6	–1.5	31.3	–2.0	43.8	–1.4
Trachea/bronchus/lung cancer	M	9.1	–4.2	5.0	–3.4	7.3	–4.2
	F	2.6	3.9	2.8	–0.6	2.2	–1.0
Female breast cancer							
	F	8.9	–4.1	10.0	–2.6	10.0	–2.3
Cardiovascular diseases	M	98.3	–1.4	26.1	–2.5	158.6	–0.4
	F	39.4	0.5	10.4	–2.1	45.3	0.0
Ischaemic heart disease	M	32.7	–3.8	11.8	–3.1	73.7	–2.2
	F	8.4	–0.5	2.4	–2.7	14.4	–1.3
Cerebrovascular diseases	M	18.7	–3.3	4.4	–3.2	24.6	–0.4
	F	9.4	–2.0	3.6	–2.5	10.6	–1.3
Respiratory diseases	M	7.2	–7.2	3.9	–3.5	34.3	0.9
	F	3.5	–3.5	2.2	–2.0	9.8	0.8
Digestive diseases	M	18.8	–5.6	12.6	–2.4	50.2	1.4
	F	5.3	0.9	5.4	–1.7	19.4	4.1
External causes	M	74.6	–4.1	58.8	–1.2	299.5	–1.9
	F	17.7	–0.9	15.1	–1.8	58.9	–1.0
Motor vehicle traffic injuries	M	18.6	–2.7	16.0	–0.5	31.4	–1.7
	F	4.2	–0.6	3.9	–2.0	7.1	–0.5
Suicide	M	18.6	–1.9	21.2	–1.5	54.9	–2.4
	F	5.5	–2.1	5.8	–2.2	7.9	–2.5

Mortality data contd

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	825.1	–1.2	435.6	–1.3	1294.9	–0.6
	M	1219.5	–1.2	580.1	–1.4	1981.7	–0.6
	F	458.8	–1.0	293.3	–1.0	698.9	–0.5
Malignant neoplasms	M	289.0	–0.7	218.2	–1.2	323.2	–1.9
	F	159.6	–1.0	155.0	–1.0	186.1	–0.5
Trachea/bronchus/lung cancer	M	107.4	–0.2	65.9	–1.5	101.4	–2.9
	F	15.6	–0.3	21.8	3.4	15.4	1.0
Female breast cancer							
	F	37.9	–1.2	44.0	–2.2	45.3	0.1
Cardiovascular diseases	M	613.2	–0.4	156.4	–2.6	793.1	–0.1
	F	209.3	–0.4	50.9	–2.5	271.7	–0.6
Ischaemic heart disease	M	208.4	–2.6	86.2	–3.3	435.3	–0.7
	F	49.2	–1.3	17.8	–3.4	111.1	–0.6
Cerebrovascular diseases	M	130.2	–2.4	23.7	–2.6	168.6	–0.9
	F	57.2	–3.5	14.5	–2.1	88.4	–1.4
Respiratory diseases	M	38.5	–4.7	20.3	–1.7	108.7	–1.4
	F	10.5	–4.5	10.2	–1.3	24.5	–0.7
Digestive diseases	M	71.1	–3.8	49.6	–0.8	129.7	0.7
	F	14.3	–3.2	20.3	–0.7	57.3	1.9
External causes	M	106.9	–3.2	62.8	–1.0	409.2	–0.9
	F	20.4	–2.3	20.9	–0.9	89.1	–1.1
Motor vehicle traffic injuries	M	16.3	–3.7	13.0	–1.3	28.5	–1.8
	F	4.7	2.4	4.1	–2.1	7.5	–1.4
Suicide	M	27.7	–2.1	23.1	–1.1	68.1	–2.4
	F	6.5	–3.2	8.5	–1.2	10.2	–3.4

Mortality data contd

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	2750.7	–1.0	1570.9	–1.9	3411.7	–0.1
	M	3772.3	–0.6	2156.9	–2.1	4996.4	0.1
	F	1929.5	–1.3	1069.2	–1.9	2339.0	–0.6
Malignant neoplasms	M	746.8	0.2	851.3	–1.4	1002.5	–0.8
	F	360.6	–1.4	439.8	–1.1	438.9	–0.7
Trachea/bronchus/lung cancer	M	228.2	0.0	261.8	–1.9	321.7	–1.5
	F	29.6	–2.6	59.0	0.2	37.1	–1.4
Female breast cancer							
	F	62.1	–0.7	79.7	–1.6	68.7	1.3
Cardiovascular diseases	M	2389.3	–0.4	744.9	–3.6	2903.0	0.6
	F	1278.7	–1.0	335.7	–3.9	1507.8	–0.3
Ischaemic heart disease	M	683.2	–2.7	381.3	–4.2	1582.2	1.2
	F	300.7	–3.4	133.5	–4.6	731.4	0.5
Cerebrovascular diseases	M	658.8	–1.9	143.3	–3.7	833.7	0.2
	F	409.6	–2.4	86.7	–4.1	528.9	–0.8
Respiratory diseases	M	137.3	–4.1	144.0	–3.5	303.0	–2.4
	F	41.9	–4.8	62.5	–2.4	68.6	–3.6
Digestive diseases	M	131.8	–2.6	111.6	–1.6	193.0	0.1
	F	47.9	–2.2	54.1	–1.7	94.2	0.2
External causes	M	102.6	–3.1	79.3	–1.4	320.0	1.0
	F	35.0	–3.5	32.1	–2.1	88.7	–0.5
Motor vehicle traffic injuries	M	14.6	–4.0	14.8	–3.0	24.3	–1.5
	F	5.4	–5.1	5.9	–3.4	9.5	–1.0
Suicide	M	30.9	–3.0	24.5	–1.6	60.5	–0.8
	F	12.7	–4.3	8.7	–2.6	12.7	–3.1

Mortality data contd

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

Causes of death	Sex	Bulgaria (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	12720.1	–0.4	8059.6	–1.0	12338.8	0.0
	M	14154.4	–0.3	9832.0	–1.1	14838.0	0.1
	F	11807.9	–0.4	7112.5	–0.9	11421.7	0.0
Malignant neoplasms	M	1091.9	0.3	2231.1	–0.4	1489.3	1.2
	F	653.0	0.2	1136.2	–0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	166.8	–0.6	457.1	–0.7	323.5	1.0
	F	41.9	–2.9	102.7	1.5	55.6	0.5
Female breast cancer							
	F	93.1	0.9	159.6	–0.4	92.0	3.1
Cardiovascular diseases	M	10806.7	0.3	4356.2	–2.1	10221.2	0.4
	F	9490.9	0.0	3577.9	–1.9	8805.6	0.4
Ischaemic heart disease	M	2735.0	–2.5	1708.0	–2.2	4925.6	1.4
	F	2245.6	–2.5	1150.0	–2.2	4028.6	1.2
Cerebrovascular diseases	M	2838.9	–0.1	1119.8	–2.5	3004.4	0.7
	F	2603.6	–0.5	1026.9	–2.4	2967.6	0.5
Respiratory diseases	M	476.9	–4.3	1156.5	–2.4	824.1	–2.1
	F	295.0	–4.5	591.9	–2.1	302.3	–3.2
Digestive diseases	M	209.5	–1.4	340.3	–1.1	270.4	0.3
	F	113.1	–1.6	279.8	–0.4	175.0	1.1
External causes	M	213.3	–1.8	275.0	–0.6	604.2	0.1
	F	91.9	–2.1	187.8	–1.2	172.4	–1.2
Motor vehicle traffic injuries	M	19.1	–4.3	28.1	–2.2	34.6	–3.1
	F	8.5	–3.4	10.0	–3.1	14.7	–1.7
Suicide	M	91.7	–1.6	49.5	–1.6	86.6	–1.1
	F	25.9	–3.9	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*[1].

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.

[1] 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).

Reference groups for comparison

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[1] 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, The former Yugoslav Republic of Macedonia, 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.

[1] 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	*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 owing to premature mortality. One DALY can be thought of as one lost year of healthy life.
GINI index	The 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[1].
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.

[1] 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).