



Highlights on health in Belarus 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, 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

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Summary: findings and policy considerations

Life expectancy

WHO estimates that a person born in Belarus in 2003 can expect to live 69 years on average: 75 years if female and 63 years if male. The estimate for females is seven years lower than the average life expectancy for Eur-A females but is one year higher than the average life expectancy for Eur-B+C females. Among females, between 1989 and 1996, life expectancy declined three years. Since then, it has stabilized or increased slightly. Life expectancy for males in Belarus is lower than both the corresponding Eur-A and Eur-B+C averages for males: by 14 years and 2 years, respectively. Between 1987 and 1999, life expectancy among males in Belarus fell five years. WHO estimates that about 11% (8 years) of the average life span in Belarus is spent 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 in Belarus declined between 1995 and 2003. The United Nations Children's Fund (UNICEF) estimates the rate to be 13 deaths per 1000 live births in 2003, while the nationally reported rate that year was 8 deaths per 1000 live births.

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

According to WHO/UNICEF/United Nations Population Fund (UNFPA) estimates for the year 2000, the maternal mortality rate in Belarus was 35 maternal deaths per 100 000 live births, while the official nationally reported rate was 25 maternal deaths per 100 000 live births. Between 1990 and 2002, the maternal mortality rate (three-year moving average) in Belarus fell by almost 27%. By 2015, the rate would have to fall to 6 maternal deaths per 100 000 live births for Belarus to achieve the Millennium Development Goal target.

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, 2003)

Main causes of death

Between 1987 and 2003, the mortality rate among males in Belarus increased (41%) fairly steadily. Since 1996, the mortality rate has been higher than the average rate for males in Eur-B+C countries. Among females in Belarus, the mortality rate increased after 1989 and ended with a peak in 1996 – above the average rate for females in Eur-B+C. The rate then declined and, by 2003, levelled off at around the Eur-B+C average rate.

In 2003, the main noncommunicable diseases accounted for about 72% of all deaths in Belarus. In total, 52% of all deaths were caused by diseases of the circulatory system and 13% by cancer. External causes accounted for about 12% of total deaths and communicable diseases for about 1%.

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)

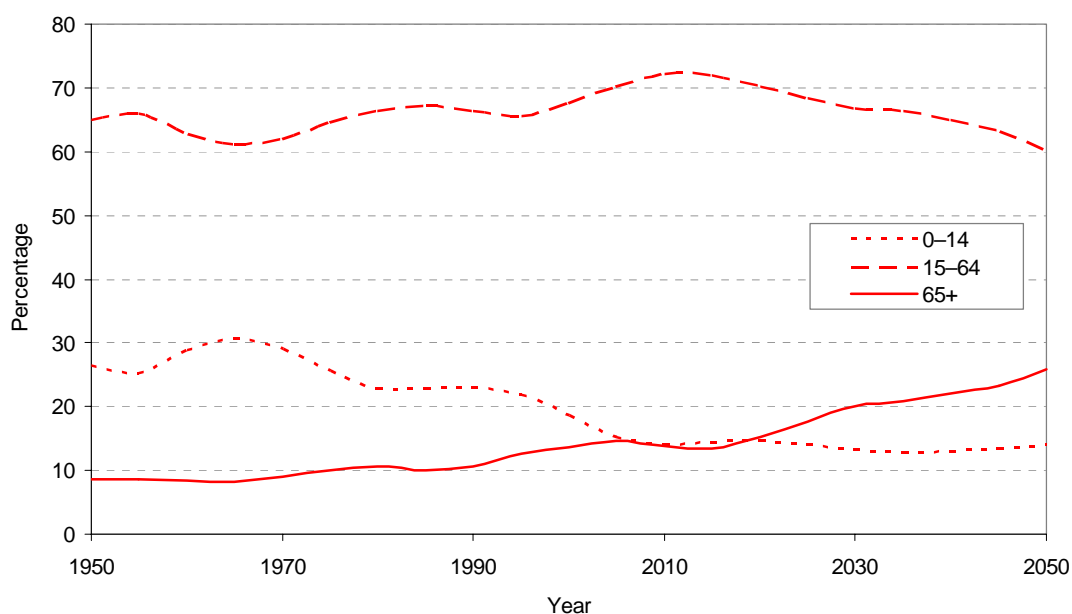
Selected demographic and socioeconomic information

Population profile

In mid-2003, Belarus had about 9.9 million people. About 70% of them lived in urban areas, which is among the highest percentages in Eur-B+C countries that year.

The percentage of the population 0–14 years old was relatively steady during the 1980s but fell from about 23% in 1990 to 17% by 2003. The percentage is below the Eur-B+C average for this age group. Also, the percentage of Belarus's population over 65 years old is above the Eur-B+C average for this age group. By 2030, an estimated 20% of Belarus's population will be 65 years old and older (Annex. Age pyramid).

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



Source: United Nations (2005).

The birth rate in Belarus was one of the lowest in Eur-B+C in 2003. Also, in Belarus, for that year, natural population growth was negative and much lower than the corresponding Eur-B+C average, while net migration was slightly positive and lower than the corresponding Eur-B+C average.

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

Indicators	Belarus	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	9873.8	–	–	–
0–14 years (%)	16.54	–	–	–
15–64 years (%)	69.3	–	–	–
65+ years (%)	14.16	–	–	–
Urban population (%) ^a	70.5	63.7	25.0	73.3
Live births (per 1000)	8.96	12.8	8.6	27.1
Natural population growth (per 1000)	-5.54	0.8	-7.49	23.0
Net migration (per 1000)	0.5	1.8	-6.6	2.1

^a 2002

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

Socioeconomic indicators

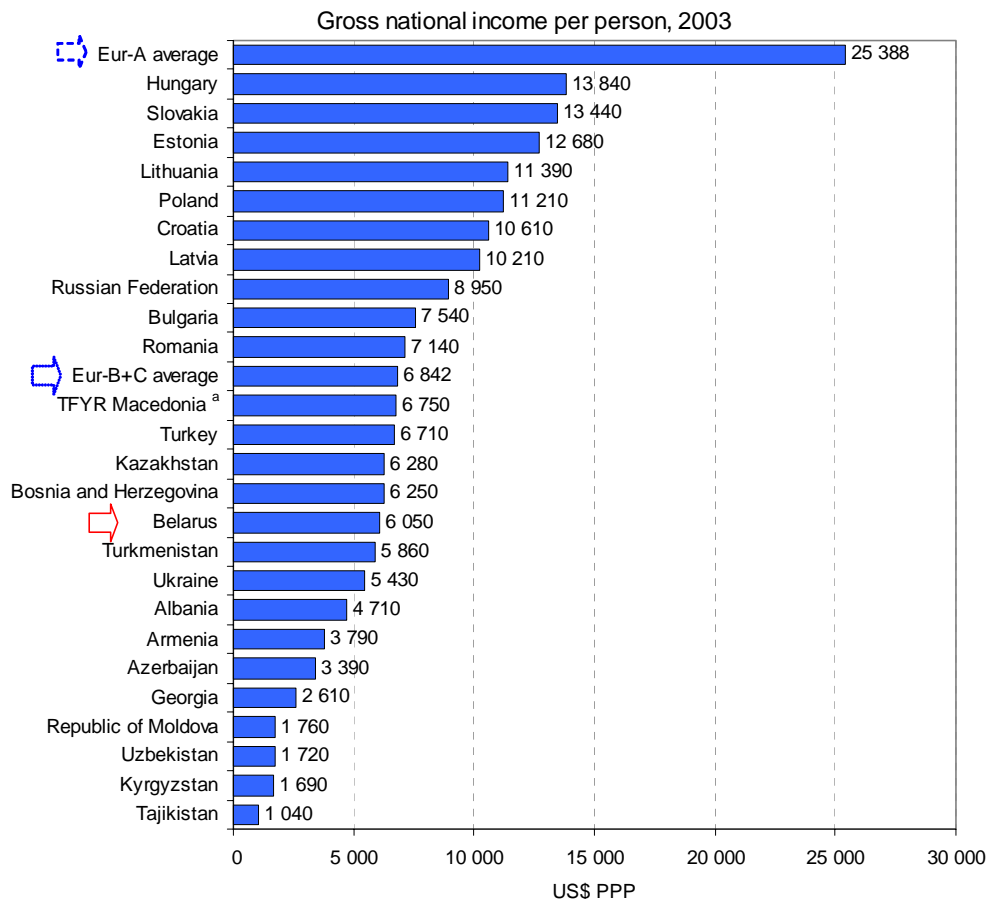
Health outcomes are influenced by various factors that operate at individual, household and community levels. Obvious factors are, for example, diet, health behaviour, access to clean water, sanitation and health services. However, underlying health determinants of a socioeconomic nature also play a 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 2003, in Belarus, the per person gross national income, adjusted for purchasing power parity (PPP), was US\$ 6050, below the Eur-B+C average of US\$ 6842.



^a The former Yugoslav Republic of Macedonia

Source: 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 2000, 41.9% of the population in Belarus was living in poverty (World Bank, 2005). Using the World Bank's recommended benchmarks to measure absolute poverty in Europe, annual household surveys from 1988 to 2000 in Belarus found that 10.5% of people were living on US\$ 4.30 per day in 1988, which jumped to 58.1% in 1995. The 2000 survey identified a fall in the rate, to 11.6% (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 2000, the Gini index for Belarus was 30.4. The Gini indices for 15 Eur-B+C countries for 2000–2002 range 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 schools.

In 2000, the percentage of school age children enrolled in secondary schools in Belarus was 79%, which is below the Eur-B+C average (81.2%) in 2000 (UNESCO, 2005).

Employment

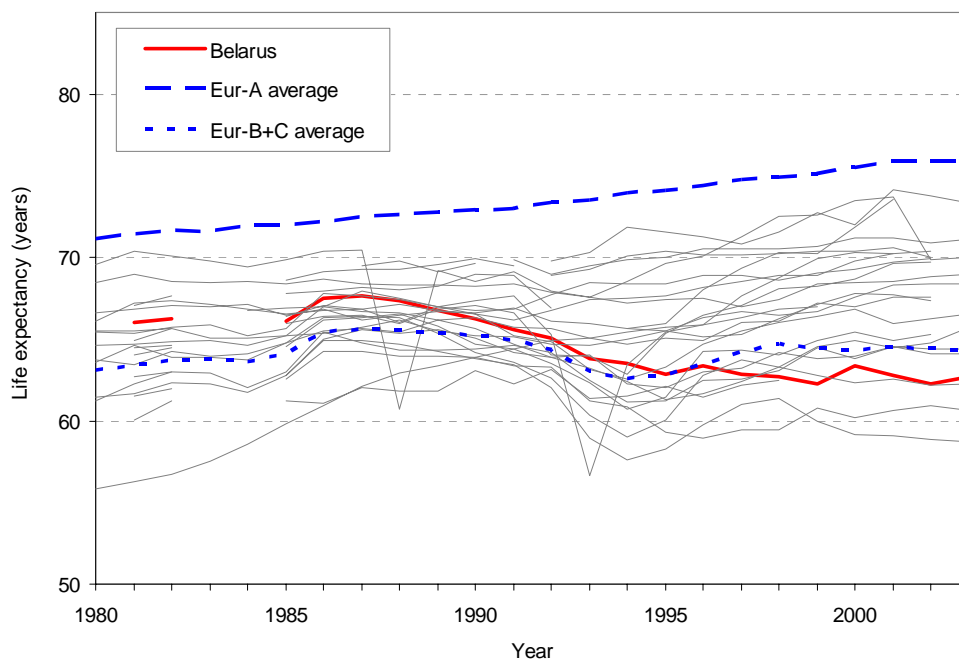
Being employed tends to be better for health than being unemployed, except in circumstances where employment exposes the individual to physical injury or psychological stress. National unemployment rates and rates for particular sub-populations are monitored to assess the extent to which people have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

The total unemployment rate in Belarus in 2001 was 2.3%, which by comparison is lower than 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. Rates for unemployment among youths are not available (ILO, 2005).

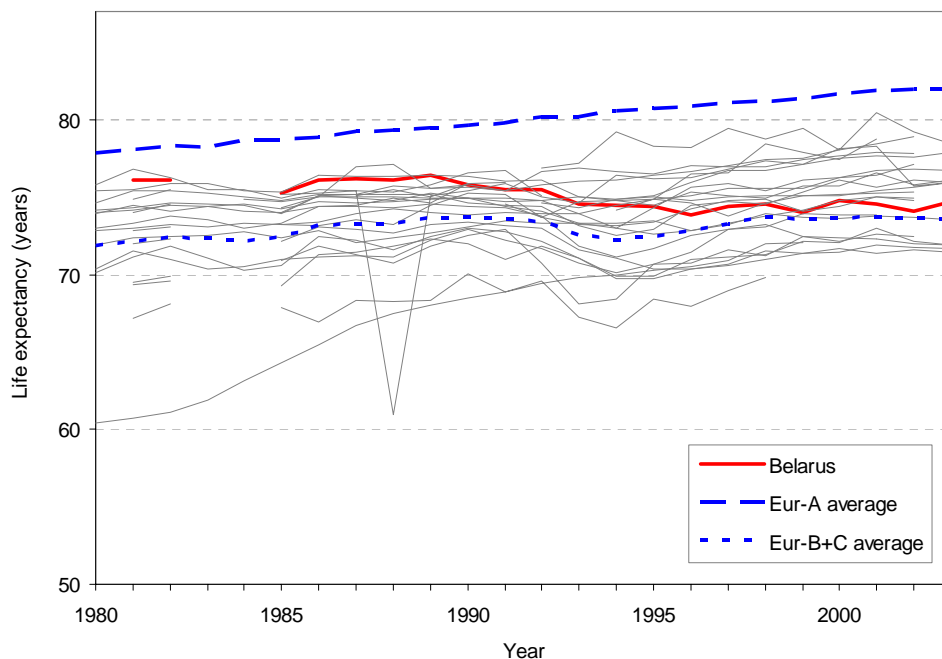
Life expectancy (LE) and healthy life expectancy (HALE)

According to WHO (WHO, 2004) estimates, based on nationally reported mortality data, a person born in Belarus in 2003 can expect to live 68.5 years on average: 74.7 years if female and 62.3 years if male. Life expectancy (LE) in Belarus is lower than the average LE in Eur-A: by about 13.6 years for males, and 7.2 years for females. Compared with the Eur-B+C average LE, Belarusian male LE is lower by 1.9 years while female LE is higher by 1.2 years.

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



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

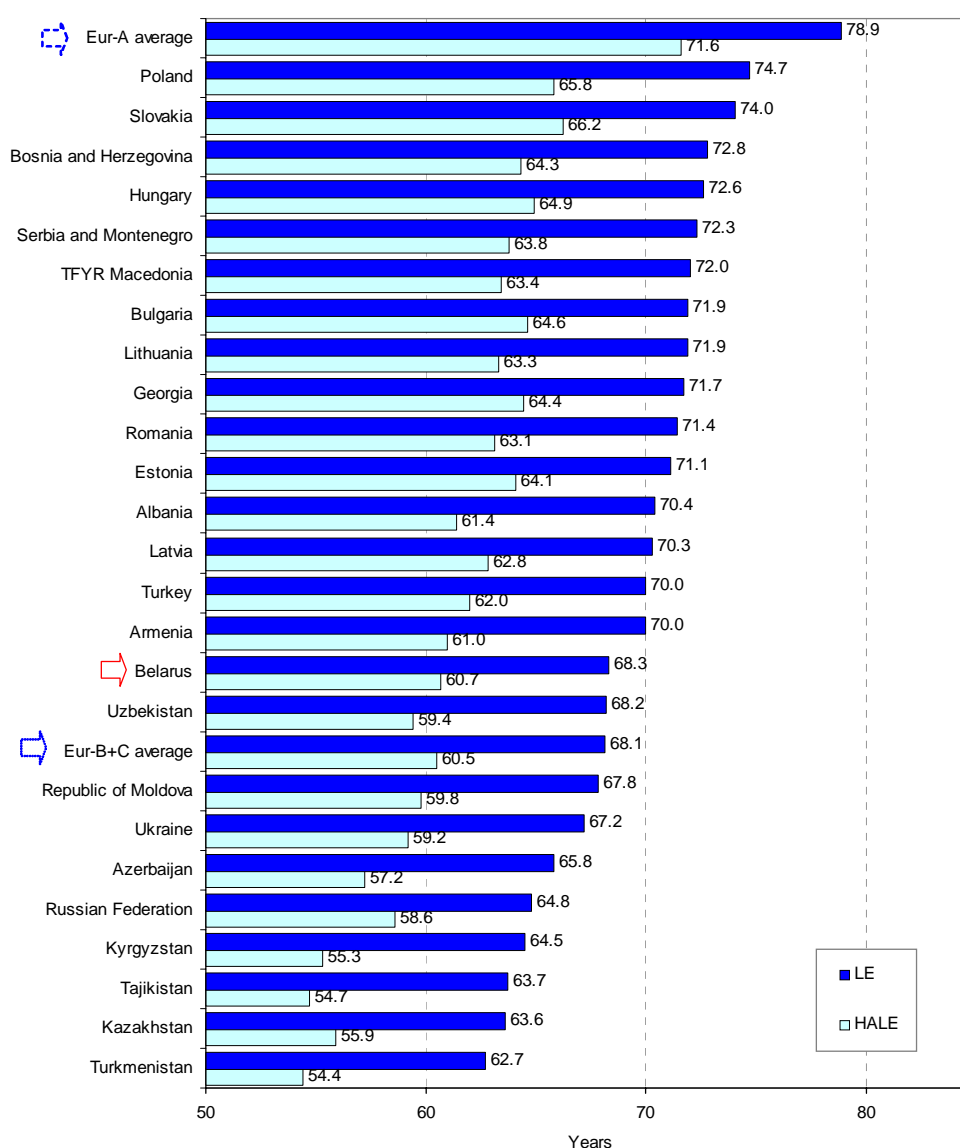


In Belarus, male LE declined (almost steadily) by 5.4 years during the period 1987–1999; it then stabilized, and in 2003 was longer than in 1999 by less than half a year. For this same period of time,

average LE for Eur-B+C countries declined until 1994, then increased for four years and finally levelled off. For Belarusian females, LE declined by 2.5 years between 1989 and 1996 and has shown an unsteady increase since then. The Eur-B+C average LE for females also declined, but for a shorter period (1990–1994), and in 1998 it was again at the previous level; however it has not increased since then.

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 Belarus, WHO (WHO, 2003c) estimates that people can expect to be healthy for about 89% of their lives. They lose an average of 7.6 years to illness and injuries – the difference between LE and HALE. This loss is equal to the average for the Eur-B+C countries (7.6 years) and is a little larger than the loss in the Eur-A countries (7.3 years).

LE and HALE, Belarus and Eur-B+C, 2002



Source: WHO (2003c).

Since females live longer and since the possibility of deteriorating health increases with age, they lose more healthy years of life (9.4 years) than males (6.0 years). Nevertheless, the longer LE for females in Belarus gives them 8.3 more years of healthy life than males. At the age of 60 years, this difference reduces to 4.1 years: women can expect 14.6 years of healthy life and men can expect 10.5 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 Belarus. Cardiovascular diseases (CVD) and unintentional injuries account for the highest burden of disease among males, and CVD and neuropsychiatric conditions account for the highest burden of disease among 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 Belarus (2002)

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Cardiovascular diseases	28.2	Cardiovascular diseases	31.9
2	Unintentional injuries	19.4	Neuropsychiatric conditions	18.0
3	Neuropsychiatric conditions	12.5	Malignant neoplasms	9.7
4	Malignant neoplasms	9.3	Unintentional injuries	6.9
5	Intentional injuries	8.0	Sense organ diseases	5.6
6	Respiratory diseases	3.8	Musculoskeletal diseases	5.5
7	Digestive diseases	3.6	Respiratory diseases	3.9
8	Infectious and parasitic diseases	3.5	Digestive diseases	3.5
9	Sense organ diseases	3.1	Intentional injuries	2.7
10	Musculoskeletal diseases	2.3	Diabetes mellitus	2.3

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 Belarus. According to the DALYs, alcohol and tobacco place the greatest burden of disease on the Belarus male population, and high blood pressure and high cholesterol level place the greatest burden of disease on females.

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

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Alcohol	21.2	High blood pressure	18.3
2	Tobacco	19.7	High cholesterol	15.6
3	High blood pressure	15.6	High BMI	12.2
4	High cholesterol	13.0	Low fruit and vegetable intake	8.1
5	High BMI	7.7	Physical inactivity	6.2
6	Low fruit and vegetable intake	7.7	Alcohol	4.9
7	Physical inactivity	4.9	Unsafe sex	2.1
8	Illicit drugs	2.7	Illicit drugs	1.5
9	Occupational risk factors for injuries	1.3	Lead	0.9
10	Lead	1.3	Childhood sexual abuse	0.8

Source: Background data from WHO (2003c).

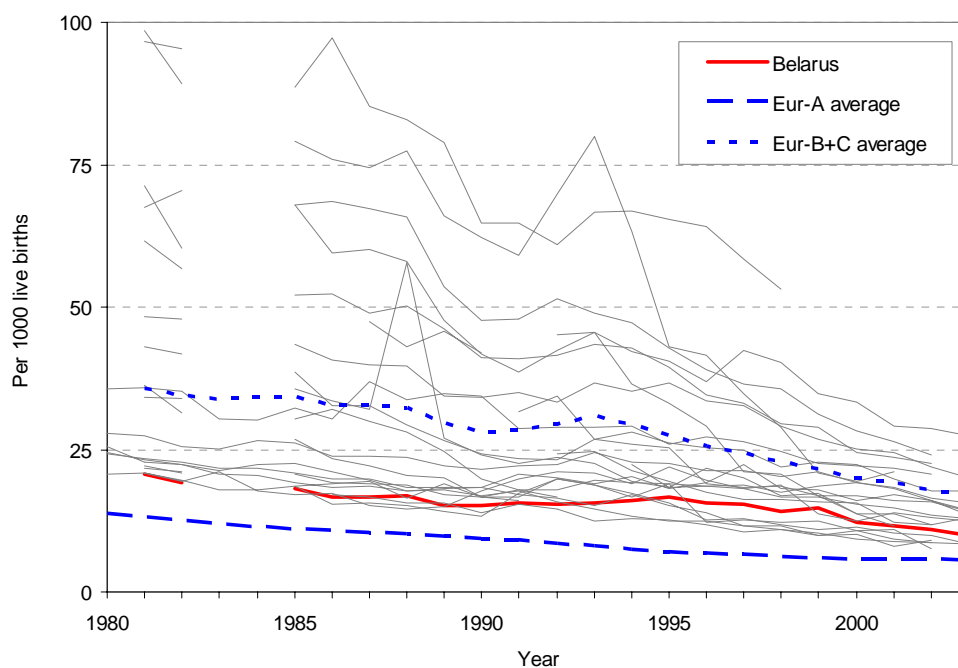
Mortality

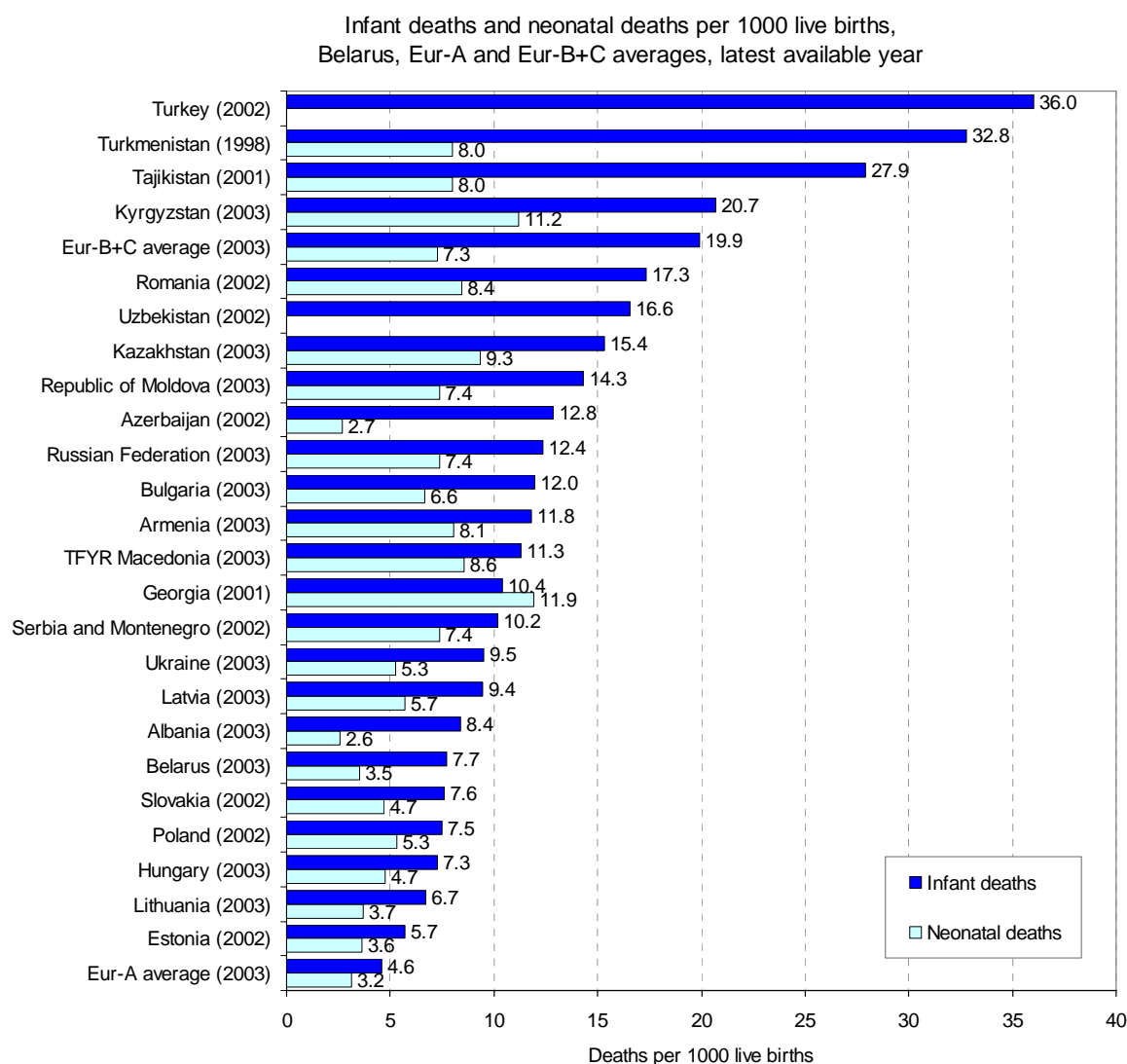
Infant, neonatal and child mortality

In Belarus, the rates for both infant and neonatal mortality are well below the corresponding Eur-B+C average rates; however, the infant mortality rate (IMR) is almost 70% higher than the corresponding Eur-A average rate. The IMR has declined in Belarus since 1995 (by 43%), which is more than the decline in the corresponding Eur-A average (19%); consequently, the excess infant mortality in Belarus has been halved (from 135% to 69%). However, according to United Nations Children's Fund (UNICEF) estimates of IMR in Belarus, the picture is less optimistic: in 2003, the IMR was 13 deaths per 1000 live births (UNICEF, 2005), while the nationally reported official rate was 7.7 deaths per 1000 live births.

Based on nationally reported deaths and births in 2002, it can be expected that of every 1000 live births in Belarus, about 11 children will die before the age of 5 years. The Millennium Development Goal (MDG) target for the under-5 mortality rate for Europe and central Asia is 15 deaths per 1000 live births by 2015. Adjusting for underreporting of vital statistics, UNICEF estimates under-5 mortality in 2003 to be 17 deaths per 1000 live births (UNICEF, 2005), which is still above the Millennium Development Goal target. The lowest WHO estimates for the Eur-B+C countries are for Estonia and Slovakia, each at 8 deaths per 1000 live births.

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





Maternal mortality

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

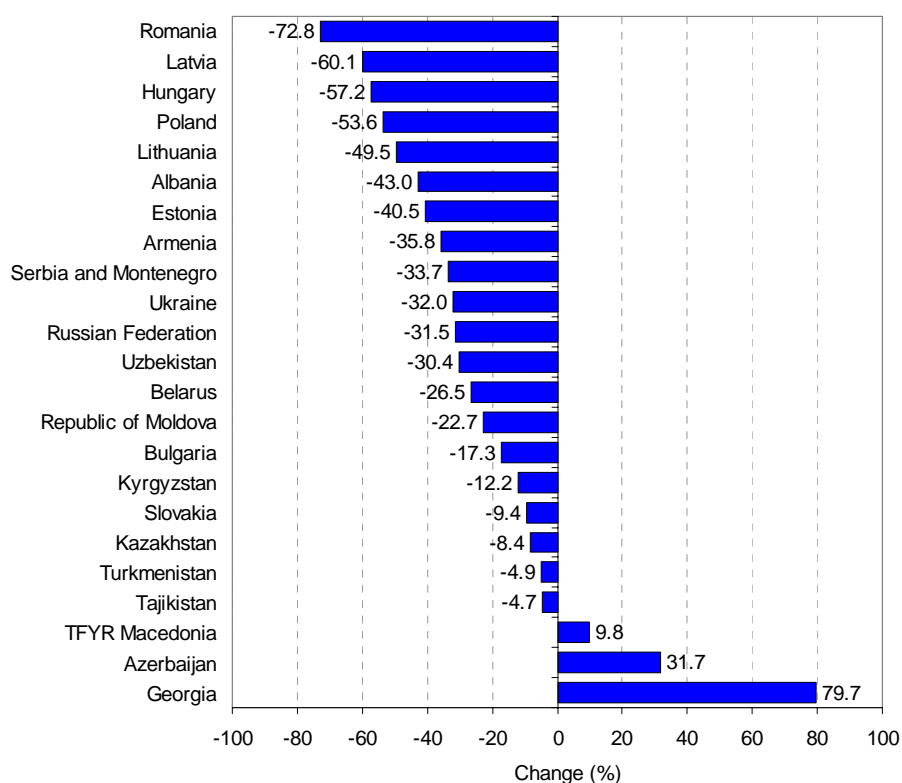
Despite the difficulties in accurately measuring MMR, nationally reported figures are accepted at face value relative to the MDG to improve maternal health – to reduce the MMR by 75% between 1990 and 2015. In some countries, the 2015 target may be equal to or lower than the average current MMR for high 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.

The MMR show substantial variation over time, without declining, and the rate is more than double the Eur-A average rate, though well below the Eur-B+C average rate. This rate may be underestimated since, according to WHO/UNICEF/United Nations Population Fund (UNFPA) estimates for the year 2000, the rate in Belarus was 35 maternal deaths per 100 000 live births (UNICEF, 2005), while the official nationally reported rate was 24.6 maternal deaths per 100 000 live births. Of the 93 maternal deaths reported for the period 1999–2003, 18 (21%) were attributed to abortion.

Between 1990 and 2002, the MMR (three-year moving average) in Belarus fell by almost 27% (see figure). By 2015, the rate would have to fall to 6.46 maternal deaths per 100 000 live births for Belarus to achieve the MDG target. This requires a 66% drop in the MMR over 13 years (if nationally reported figures are used) or more than 80% (if WHO/UNICEF/UNFPA estimates are taken into account).

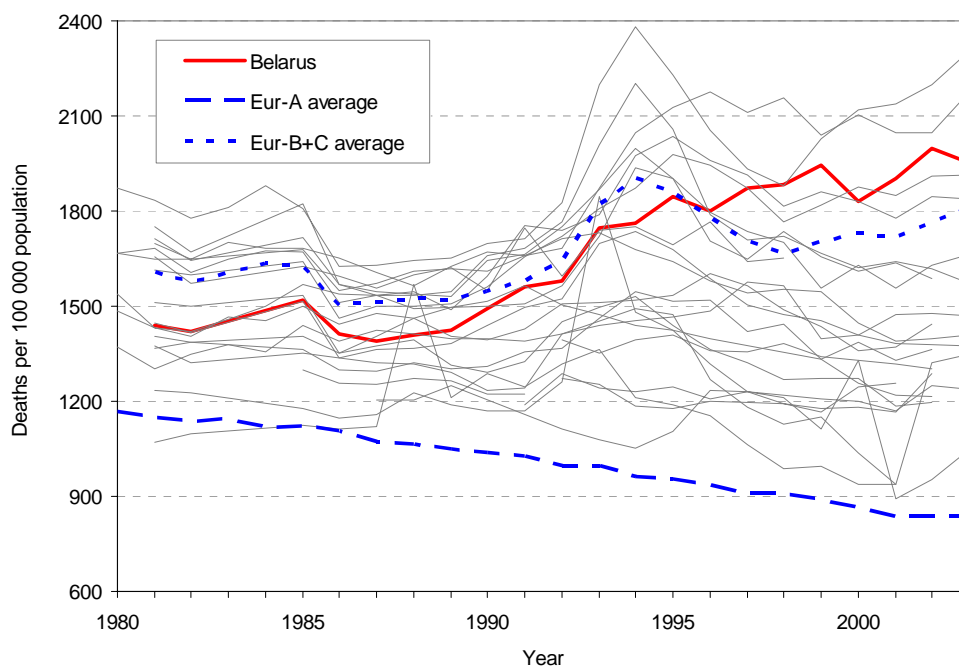
Per cent change for maternal mortality (3-year moving averages),
1990 to 2002 or latest available year



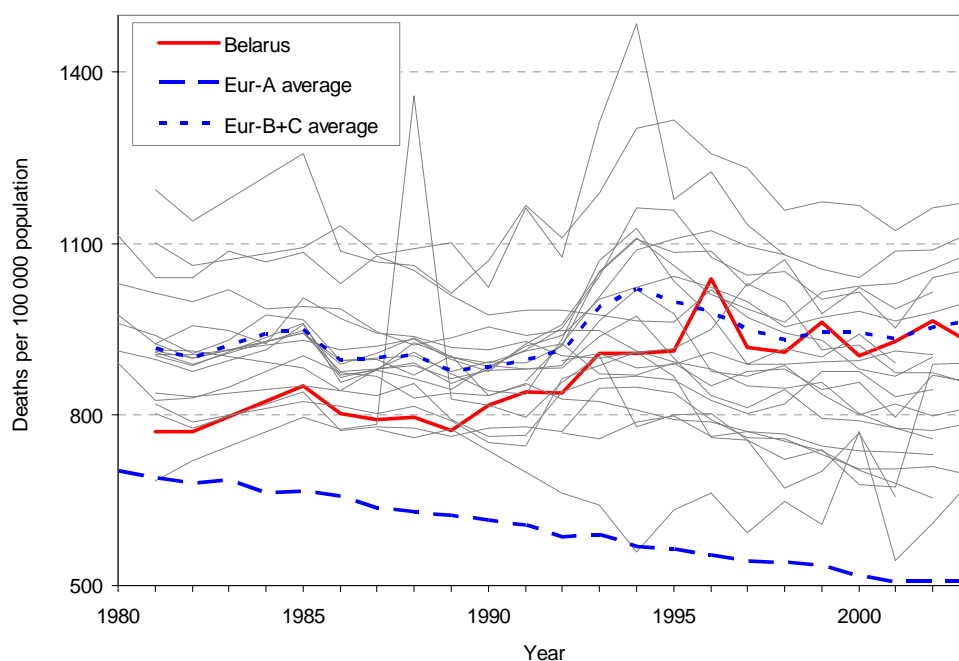
Excess mortality

To some extent, the mortality pattern in Belarus follows a specific pattern related to the alcohol policy in the former Soviet Union. In 1986, Belarus shared with the then other Soviet republics a fall in the mortality rate for all causes, reflecting a reduction in deaths from CVD and external causes. This followed the introduction in June 1985 of a vigorous campaign to restrict and thereby reduce alcohol consumption (the so-called Gorbachov anti-alcohol campaign). In 1987, mortality rates reached a low point in males, and in 1989 in females. Following economic liberalization in 1991, alcohol became more widely available and relatively cheaper than before 1985, and its consumption might have played a significant role in further increasing mortality. It is estimated that, in the Russian Federation, alcohol was responsible for 19% of the premature mortality increase in the period 1992–1994; however, there are no such estimates for Belarus. These trends, and the evidence supporting the causal role of alcohol, are covered in more detail in *Health in Europe 1997* (WHO Regional Office for Europe, 1998). There are, however, some noticeable differences between mortality trends in Belarus and the averages for the Commonwealth of Independent States and for Eur-B+C. In males, the mortality rates have increased almost steadily since 1987 (41% during the period 1987–2003), and from 1996 on the mortality rates are higher than the average rates for males in Eur-B+C countries. In females, the increase in the total mortality rate after 1989 ended with sharp rise, in 1996, above the Eur-B+C average rate, reflecting a sudden increase in mortality from CVD, followed by a decline and levelling off around the Eur-B+C average rate.

Standardized death rate (SDR) for all causes in males, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year

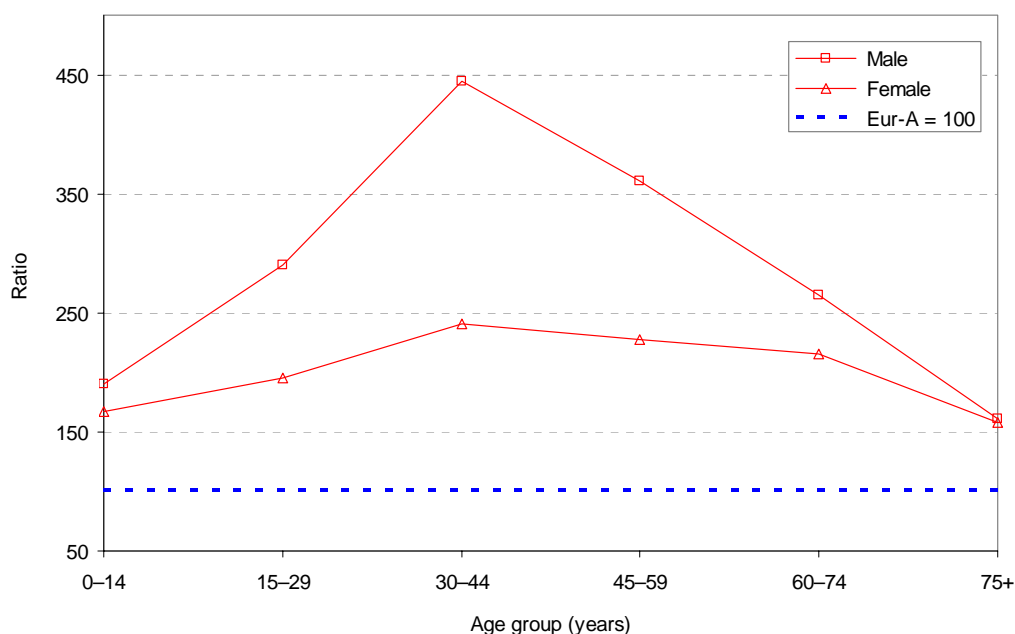


SDR for all causes in females, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year

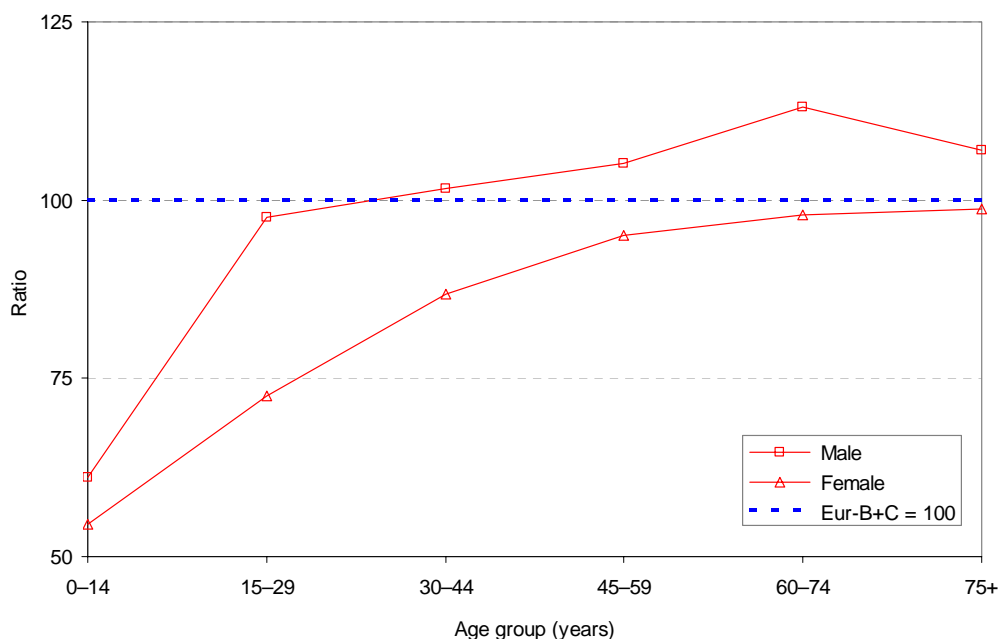


According to the latest figures, the mortality rate for males in Belarus is 7.4% higher than the corresponding Eur-B+C average rate, and the rate for females is about 4.1% lower. Across age groups, there is a small variation in this relative difference in mortality rates, with Belarusian children under 15 years of age showing a more than 40% lower mortality rate than the average rate for their peers in Eur-B+C. When compared with the Eur-A average mortality rates, the excess mortality in Belarus is present in all age groups, the largest being in young men 30–44 years old, who have a mortality rate more than four times higher than their peers in Eur-A. For Belarusian females, the differences are smaller than those for males.

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



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



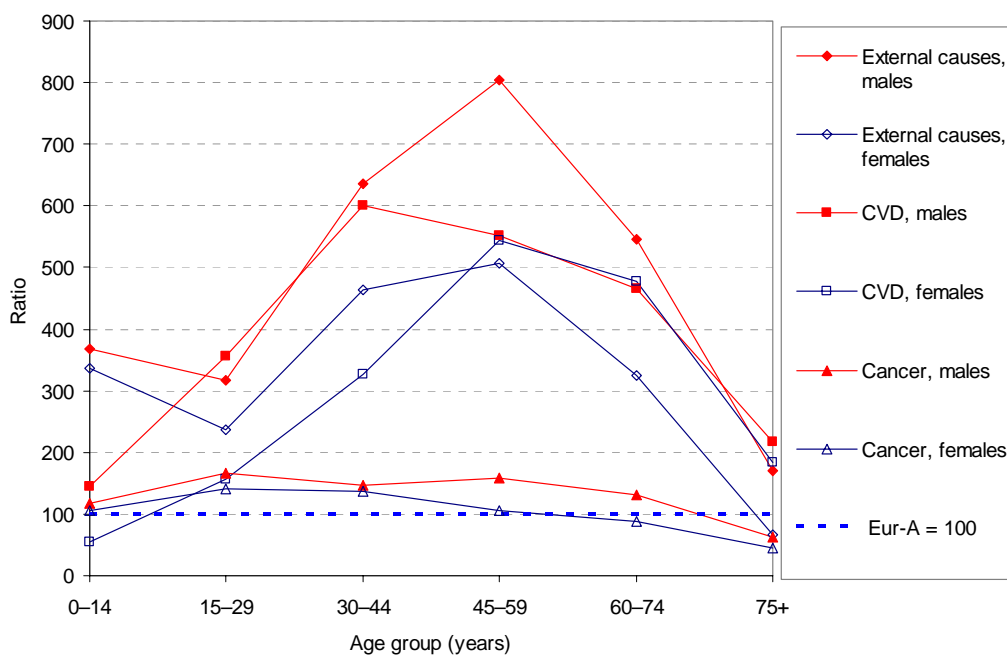
Main causes of death

In 2003, the main noncommunicable diseases accounted for about 72% of all deaths in Belarus; external causes for about 12%; and communicable diseases for about 1%. In total, 52% of all deaths were caused by diseases of the circulatory system and 13% by cancer (Annex. Selected mortality; Annex. Mortality data).

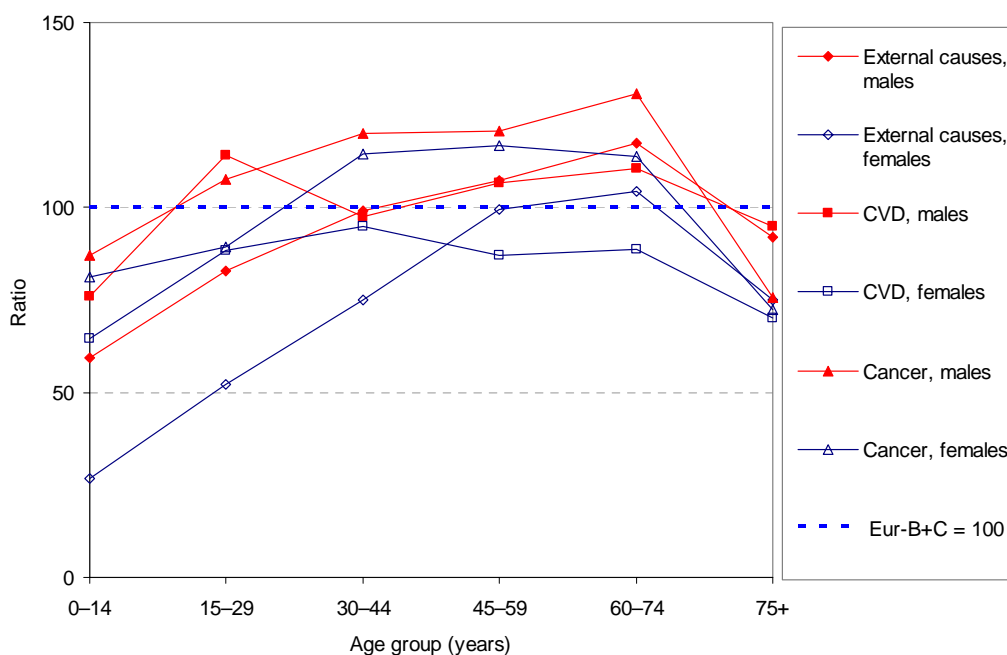
The risk of Belarusians dying from CVD is slightly lower than the Eur-B+C average risk; however, it is almost three times higher than the Eur-A average risk, and for working age men 30–59 years old and women 45–59 years old it is more than five times higher. The risk of death from cancer is lower than the Eur-A average for females – except the age group of 15–44 year olds – and for older men and women (women more than 60 years old and men 75 years and more). It is also lower than the Eur-B+C average

for the youngest and the oldest female age group and for the oldest men. Compared with the Eur-A average, Belarusian males have an almost five times higher risk of death from external causes, and for Belarusian females it is almost three times higher. In Belarus, the largest excess mortality occurs in people 40–59 years old, who have a mortality rate almost eight times higher than the Eur-A average for men and five times higher for women. Both boys and girls below 15 years of age in Belarus have more than a three times higher mortality rate for external causes than their peers in Eur-A countries. When compared with the Eur-B+C average, Belarusians, excluding the oldest and youngest males and females, have a little higher risk of death from external causes.

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



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

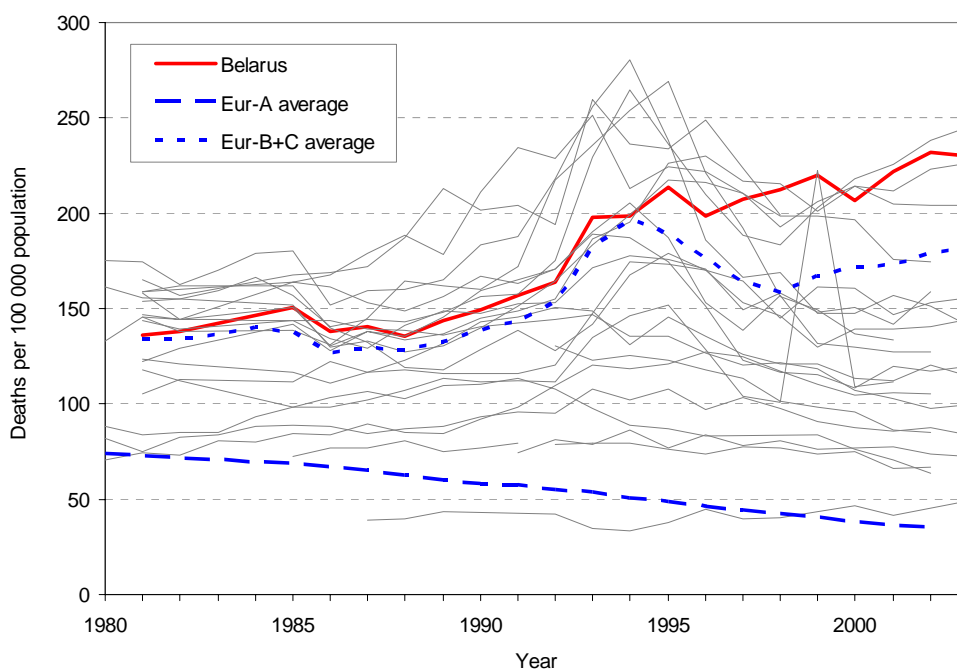


CVD

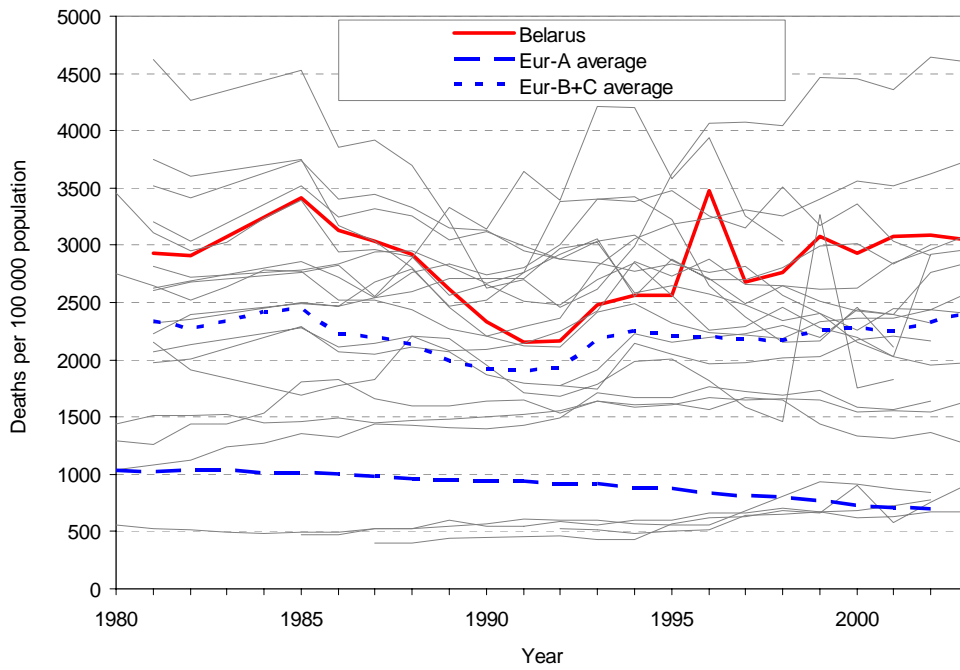
More than half of all deaths in Belarus are caused by CVD. Mortality rates for CVD are still increasing in males, and in females the rates show some stabilization in recent years. This situation occurs in the population older than 25 years. The most recent Belarusian rates indicate that, when compared with the Eur-B+C average, the population under 65 years of age is in a worse position than the older age group (the mortality rate for males below 65 years is the fourth highest in Europe).

Ischaemic heart disease is the single biggest killer in Belarus, being responsible for more than a third of all deaths in 2003, which is more than double the Eur-A average (15%) and more than the Eur-B+C average (28%). The risk of dying from this cause is almost five times higher in Belarus than the average risk in Eur-A and is about a fourth higher than the average risk in Eur-B+C. The rate for males is the third highest in Europe and is still increasing; the rate for men 25–64 years old is the second highest in Europe, more than six times higher than the Eur-A average rate for the same age group, and is still increasing. For women 25–64 years old and 65 years old and more, the mortality rates have stagnated in recent years, but they are also higher than the Eur-B+C average rates and are seven times higher than Eur-A average rates. Also, the mortality rates for cerebrovascular diseases for both sexes of all ages are lower in Belarus than the corresponding average rates in Eur-B+C, and the mortality rates have been increasing in males. For the age group of 25–64 year olds, excess mortality for cerebrovascular diseases, in comparison with the Eur-A average for that age group, is similar to that for ischaemic heart disease. Moreover, mortality from pulmonary heart disease is very low in the total population of Belarus and in the age group 65 years and more. However, the mortality rate for those aged 25–64 years has been increasing and is higher than the corresponding Eur-A average rate, which has been declining for years.

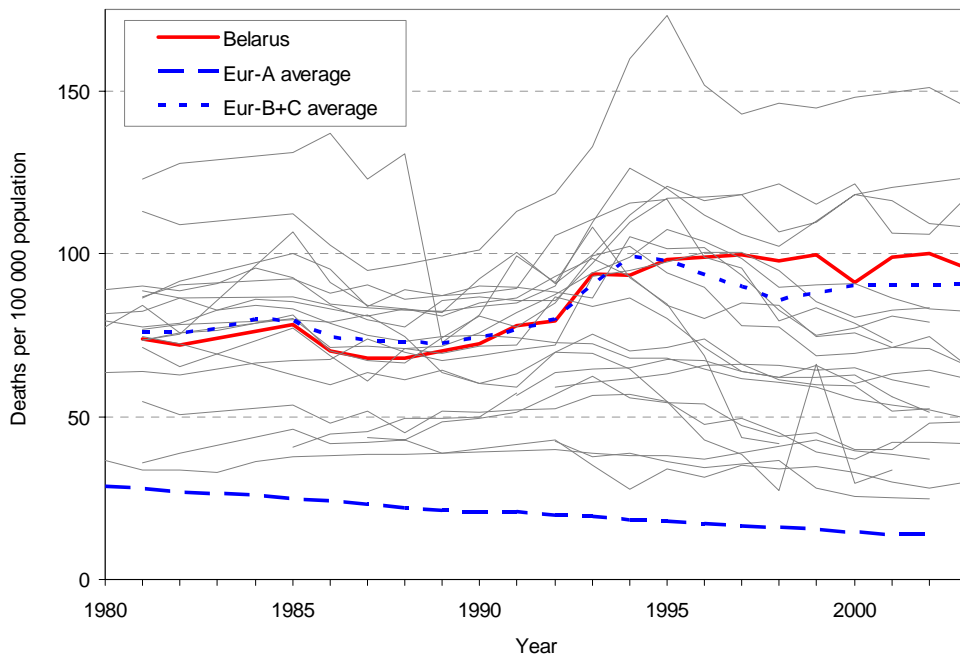
SDR for ischaemic heart disease in people aged 25–64 years, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



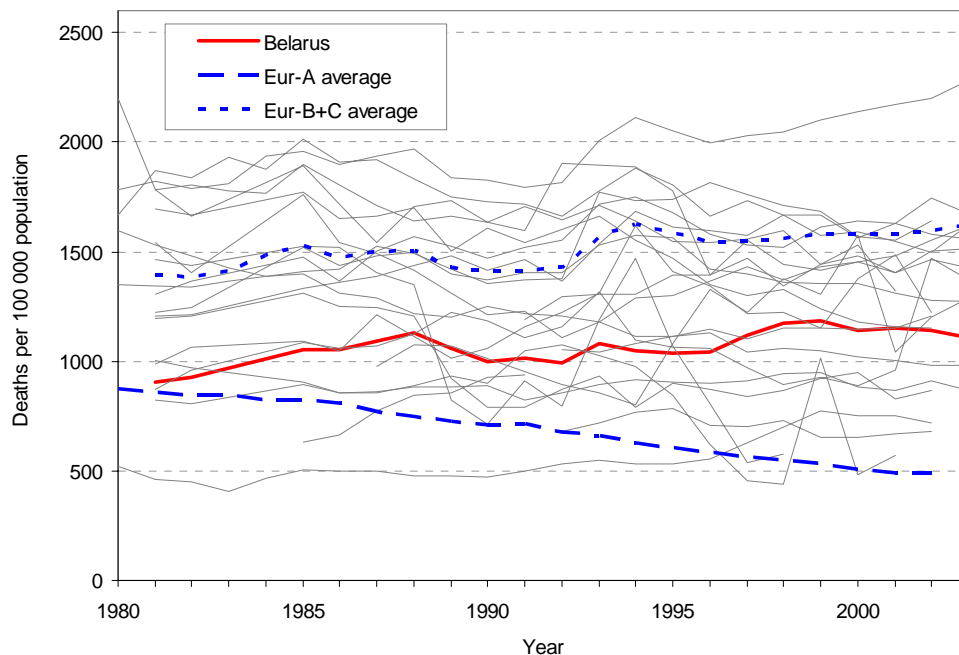
SDR for ischaemic heart disease in people aged 65+ years, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



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



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



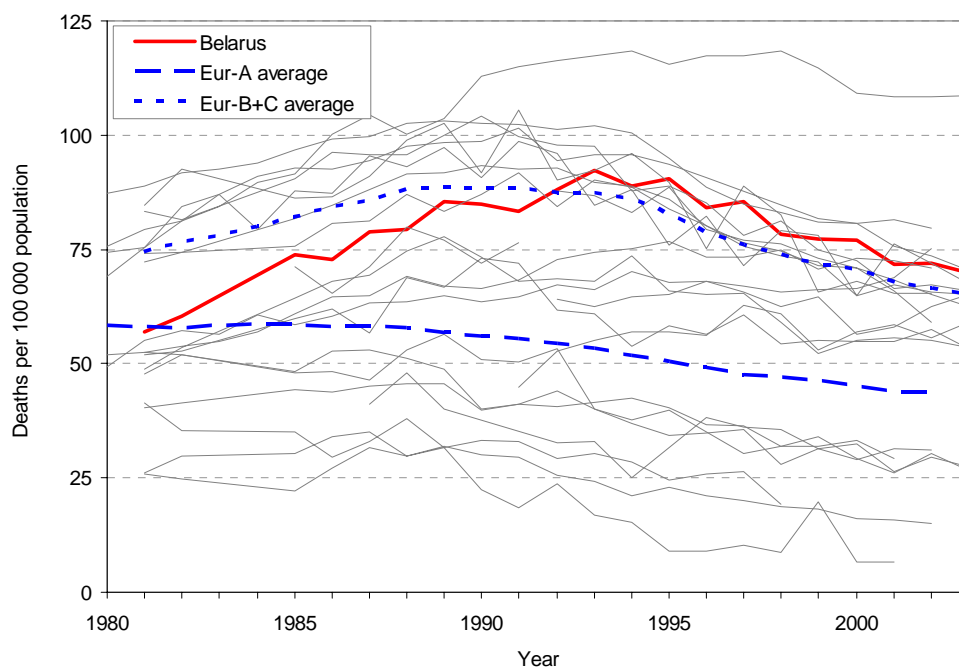
Cancer

Cancer causes about 13% of all deaths in Belarus, which is similar to the average in Eur-B+C countries and is less than half of the average cancer rate in Eur-A countries (28%). Mortality from cancer has clearly decreased in recent years in all age groups below 75 years. In Belarus, mortality rates for cancer in females are below the corresponding Eur-B+C average in all age groups, whereas for males this relationship fluctuates; however, for the age groups of 25–64 year olds and 65 year olds and more, the mortality rates among Belarusian men remain higher than the corresponding Eur-B+C average rates (the mortality rate for cancer among Belarusian men 25–64 years old is the fourth highest in Europe).

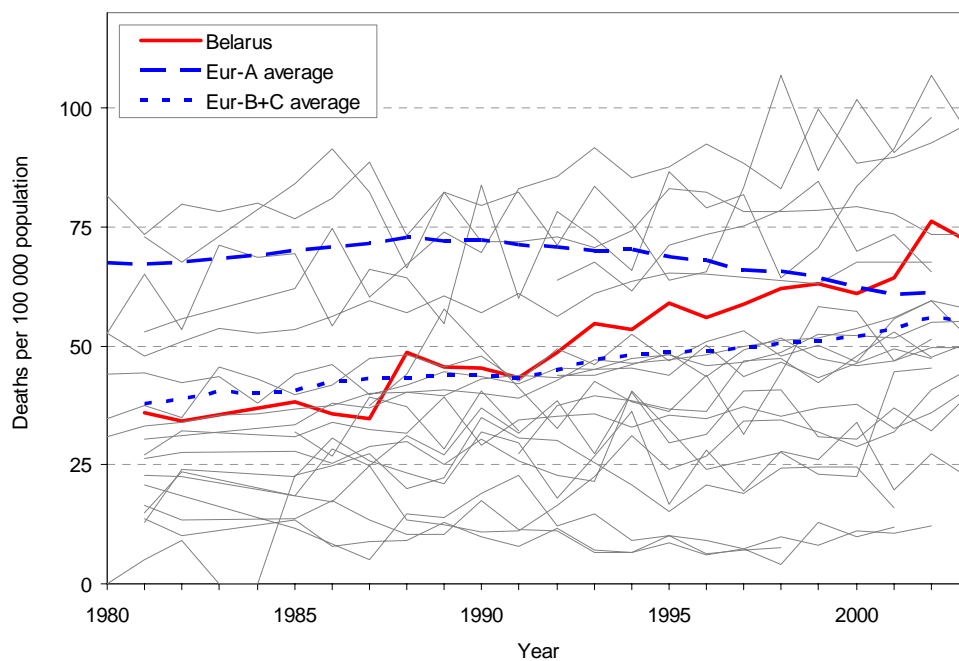
In Belarus, only the risk of dying from stomach cancer has shown a clear long-term decline, though the mortality rates are higher than the Eur-A and Eur-B+C average rates: for males the rate is the third highest in Europe and for females it is fourth highest. In males, mortality from cancer of the trachea, bronchus and lung (TBL) has been declining since 1995 – in parallel, though at a higher rate, than the Eur-B+C and Eur-A average rates (12% and 22%, respectively). Also, mortality from cancer of the lip, oral cavity and pharynx stopped increasing in recent years, though the rate is above Eur-A and Eur-B+C average rates, and the mortality rate for cancer of the colon, rectum and anus has decreased by 8% since 2000 and is close to Eur-A and Eur-B+C average rates. Moreover, the mortality rate for prostate cancer has been increasing in Belarus faster than the average rate for Eur-B+C; in 2003 it was 26% higher and, lately, the rate has even exceeded the Eur-A average.

As for females, the mortality rate for breast cancer follows the growth in the Eur-B+C average rate, though at a lower level. For the years 2002 and 2003, the mortality rate for women aged 65 years and more declined by 11.5%, while in younger women, aged 25–64 years, the rate increased 14%. Also, mortality from cancer of the uterine cervix has been stable, even though the mortality rate fluctuates from year to year, being 2.5 times higher than the Eur-A average rate and 13% lower than the Eur-B+C average rate in 2003. The mortality rate from cancer of other parts of the uterus also varies from year to year around the average rate for Eur-B+C countries. In Belarusian females, mortality from TBL cancer has been declining since 1991, and the mortality rate is the fourth lowest in European countries: 47% lower than the Eur-B+C average and 68% lower than the Eur-A average. This decline is present in women more than 24 years old. Moreover, mortality rates for cancer of the colon, rectum and anus increased until 1995 and then levelled off, showing a fluctuation close to the Eur-A and Eur-B+C average rates.

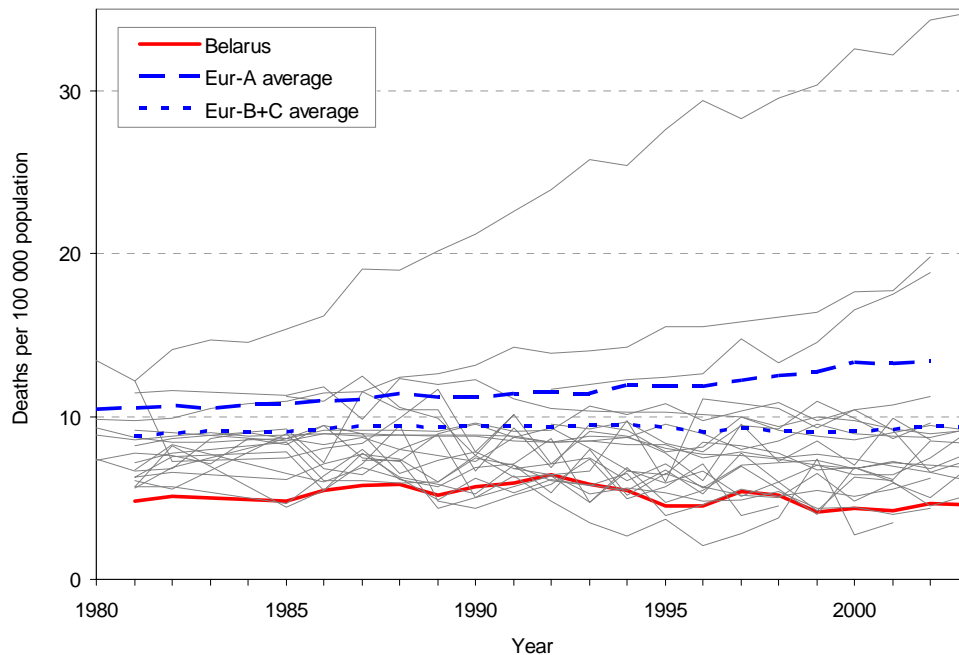
SDR for trachea, bronchus and lung cancer in males aged 25–64 years,
Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



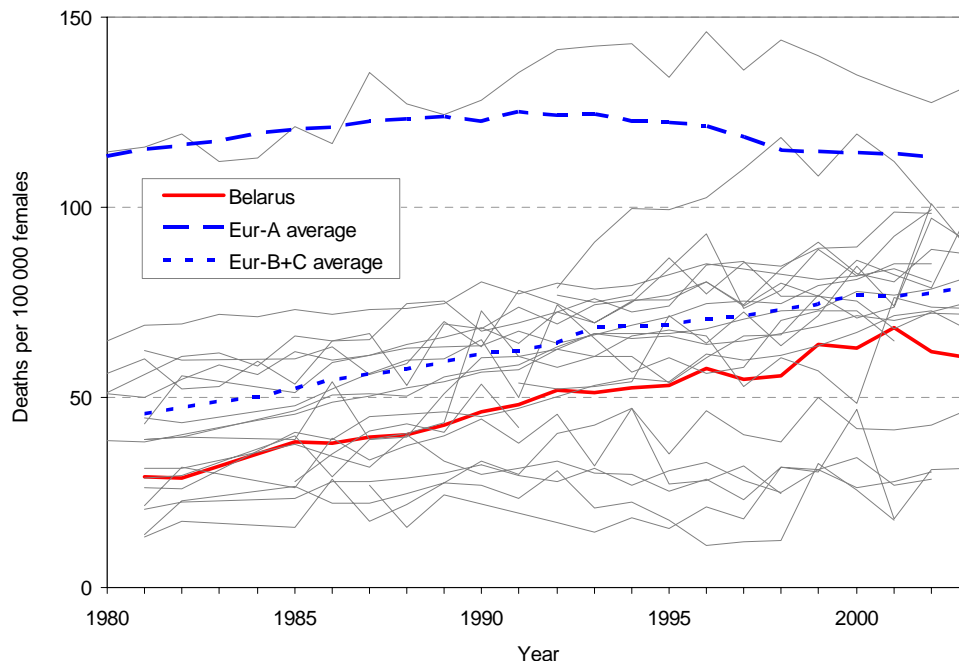
SDR for cancer of the prostate in males aged 60–74 years,
Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



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



SDR for breast cancer in females aged 65+ years, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year

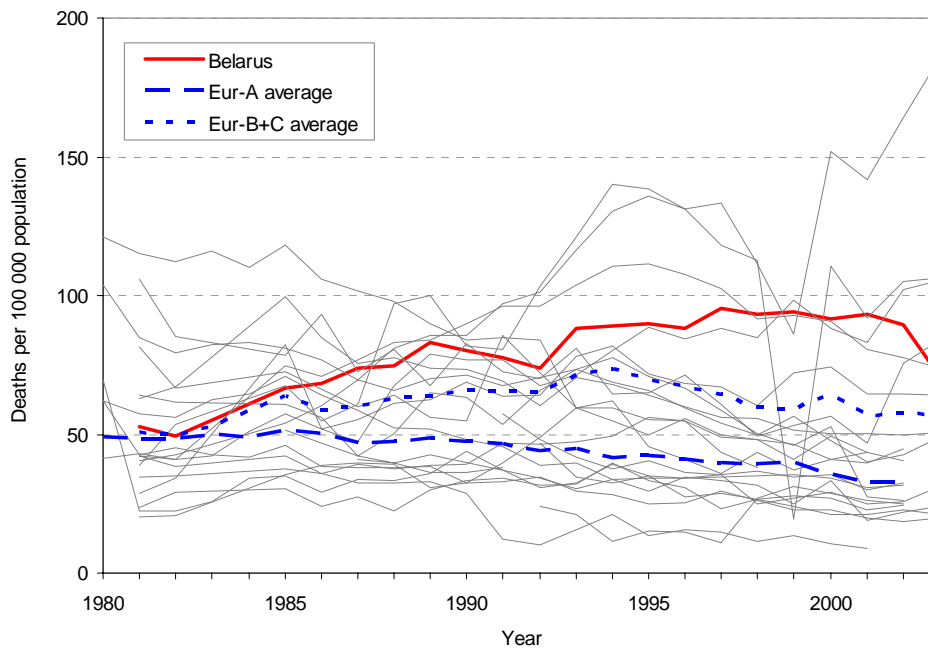


Respiratory diseases

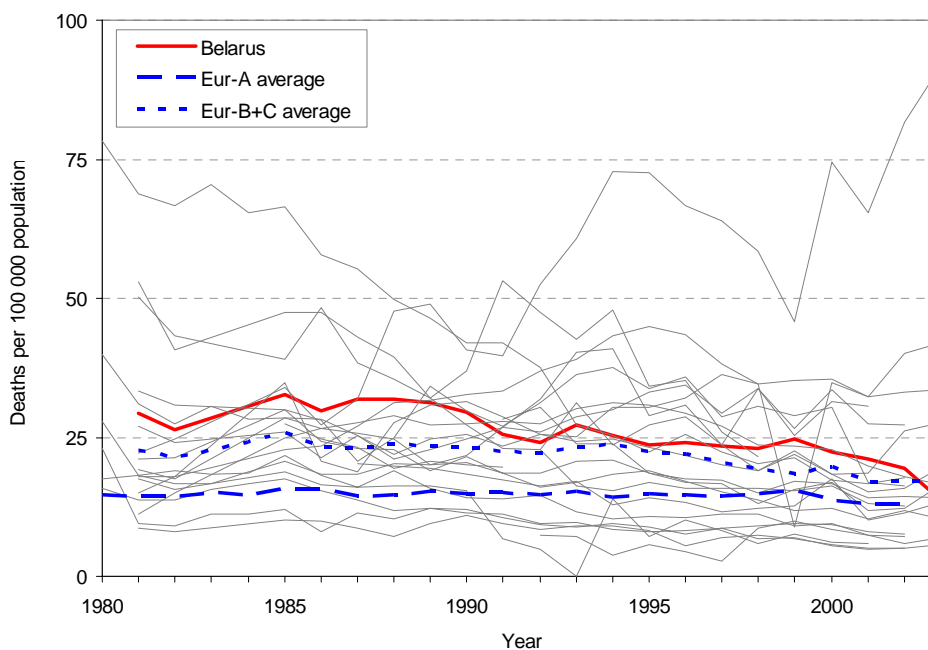
In 2003, respiratory diseases accounted for 3.4% of all deaths in Belarus. Male mortality rates for these diseases declined rapidly until 1992 and then again during the period 1999–2003 (by almost 30%), dropping below Eur-B+C average rate, though staying well above the Eur-A average rate. A similar pattern of change appears in older men (65 years and more); however, in those below 65 years of age, the mortality rates have been rather stable at a lower level during the period 1986–1992 and at a higher level from 1993 onwards (more than four times higher than the Eur-A average rate). In females, since 1981, mortality from respiratory diseases has been declining faster than Eur-A and Eur-B+C averages, and the mortality rate in 2003 is lower than those averages by almost 50%: it is the fourth lowest in Europe.

In Belarus, mortality from chronic lower respiratory diseases in males is much higher than mortality from pneumonia, and it is higher than the corresponding Eur-A (more than double) and Eur-B+C (about a fourth) averages. In 2003, there was a surprising drop in the mortality rate for chronic lower respiratory diseases in both males and females in Belarus, though mortality rates for females have been declining since 1983. The mortality rate for pneumonia is lower in Belarus than the average rates for Eur-A and Eur-B+C, which have been declining in recent years, and the rate for Belarusian females is the lowest in European countries.

SDR for chronic lower respiratory diseases in males, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



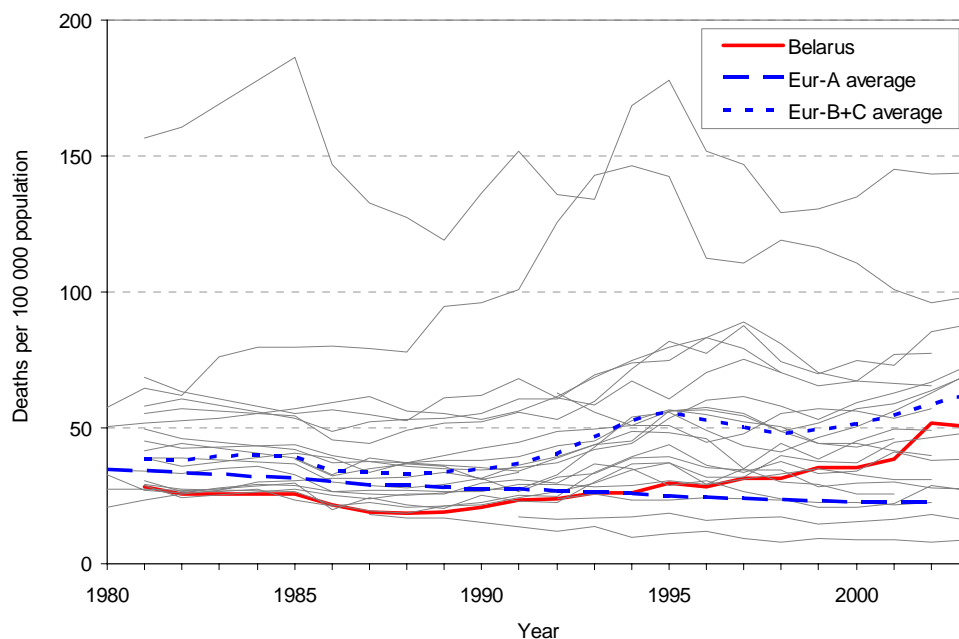
SDR for chronic lower respiratory diseases in females, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



Digestive diseases

Mortality from diseases of the digestive system has been increasing in males and females, and the mortality rates for the last few years have been above the Eur-A average rates, though well below the Eur-B+C average rates. This pattern occurs in the population below 65 years of age; for the population aged 65 years and more, the mortality rates show some decline and have always been below Eur-A and Eur-B+C average rates, being among the lowest in Europe (the rate for women in this age group is the second lowest). The increase in the mortality rate in the population 25–64 years of age results from increasing mortality from chronic liver diseases and cirrhosis.

SDR for diseases of the digestive system in people aged 25–64 years, both sexes, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



Symptoms, signs, abnormal findings, ill-defined causes

Almost 13% of deaths in Belarus are coded for this group of ill-defined causes – a rate similar to the mortality rate for cancer. Mortality rates for these causes soared dramatically between 1988 and 1991, and from the second half of 1990s they changed, following a U-shaped curve, with values increasing since 2000. In both males and females, the mortality rate for this group of causes is the highest in European countries, twice as high as the Eur-B+C average for males and three times higher for females. Also, the overall rate for both sexes is almost six times higher than the Eur-A average rate and about twice as high as the Eur-B+C average rate. The situation is better in the population below 65 years of age, for which the mortality rate from ill-defined causes in Belarus is now equal to the Eur-B+C average rate, though it is increasing faster than the average. Such a high rate for this cause of death indicates unsatisfactory coding of causes of death and serious underreporting of some specific causes, especially in the elderly population.

External causes

Mortality from external causes more than doubled between the second half of the 1980s and 1999. It then levelled off. Even though there has been no increase in recent years, the mortality rate in Belarus is higher than Eur-B+C average rate: for males it is the fourth highest in Europe, and for females it is the fifth highest. Premature mortality is a particular problem: the mortality rate for males below 65 years of age is the second highest in Europe, and for females it is the fourth highest (23% and 12% above the Eur-B+C average in males and females, respectively).

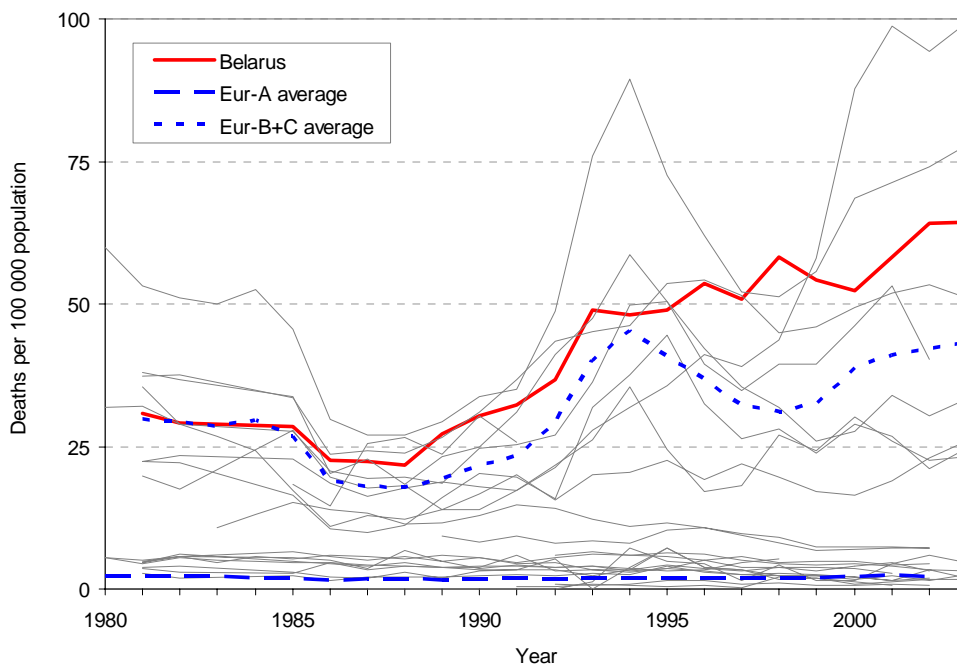
In Belarus, the main subgroup of external causes of death in both sexes is accidental poisonings (in males they surpassed suicides in 2002). The mortality rate for both sexes is the third highest in Europe, about 50% higher than the Eur-B+C average rate for males and about 40% higher than the Eur-B+C average rate for females. The mortality rate has been increasing for accidental poisonings, and the rate has tripled since the second half of the 1980s. Almost three quarters of this mortality can be attributed to alcohol poisoning, which represents the highest mortality rate in European countries.

The second major subgroup of external causes of death is suicides. The mortality rate for suicide in males doubled between 1988 and 1996 and has been declined since then; the mortality rate, however, is about 50% higher than the Eur-B+C average rate and is the third highest in European countries. For females, the mortality rate for suicide has been unstable; recently, after declining between 1997 and 2001, it increased in 2002 and 2003 and is 27% higher than the Eur-B+C average rate.

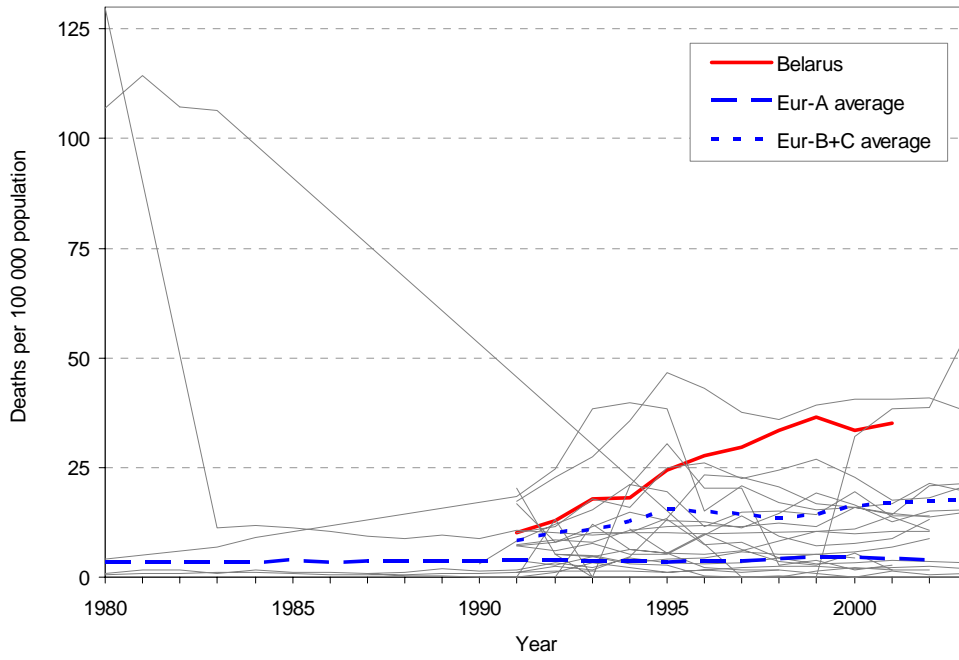
Events of undetermined intent are the third most common external cause of death in Belarus for both sexes. The mortality rates more than tripled between 1991 and 1999, and then the trend is indeterminate, since there are no data for 2002 and 2003. The rates for males and females are the fourth highest in European countries and are about twice as high as the Eur-B+C average rates. Such an increase in this cause of death indicates deteriorating quality of coding for external causes of death and underreporting of some specific causes.

After these first three subgroups of external causes in males come motor vehicle traffic accidents, accidental falls, and accidental drowning and submersion. Mortality rates for falls and drowning are the third highest in European countries, and while the former unexpectedly increased twofold in 2002 the latter shows significant yearly variation, with some increase. For females, the subsequent subgroups of external causes of death are motor vehicle traffic accidents, homicide and accidental falls, which surpassed, in 2002, accidental drowning and submersion as a cause of death. The female mortality rate for accidental drowning and submersion is the second highest in European countries, while mortality rates for motor vehicle traffic accidents, homicide and accidental falls are close to the Eur-B+C average rates.

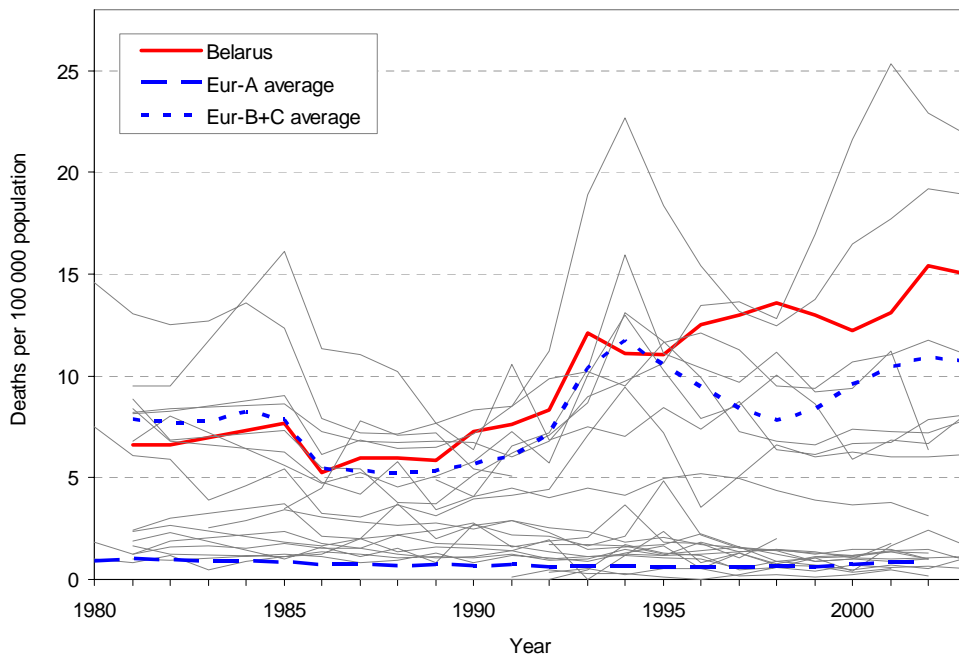
SDR for accidental poisoning in males, all ages,
Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



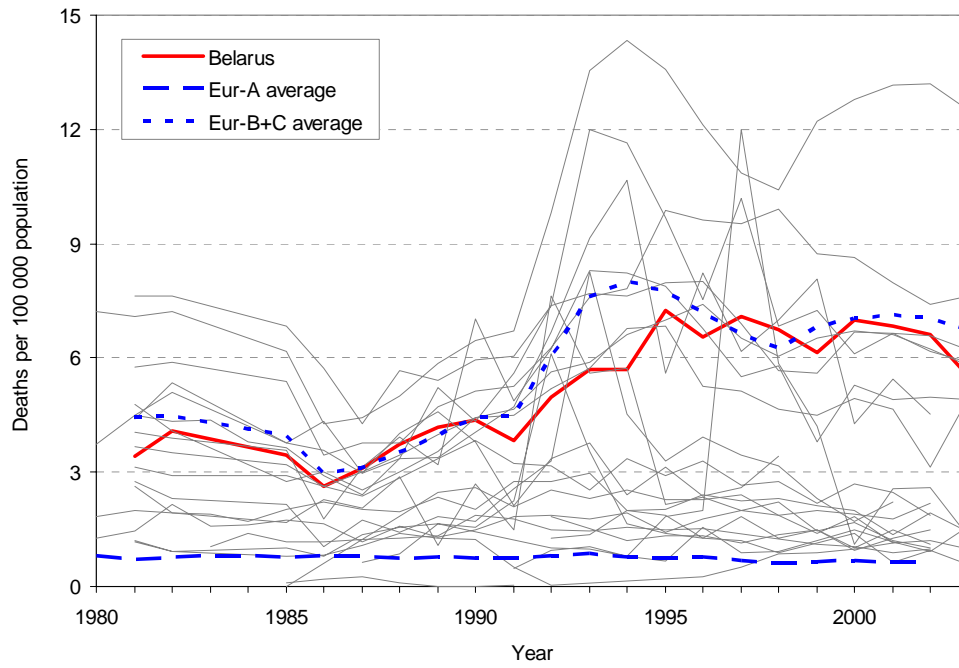
SDR for events of undetermined intent in males, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for accidental poisoning in females, all ages, Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



SDR for homicide and assault in females, all ages,
Belarus, Eur-A and Eur-B+C averages, 1980 to latest available year



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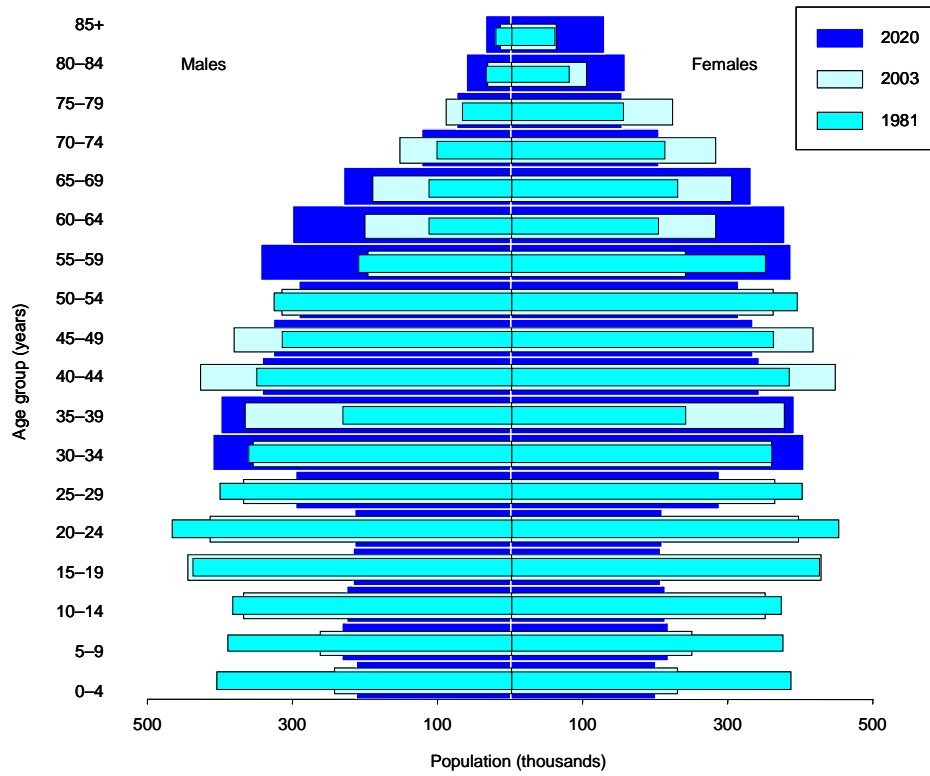
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Annexes

Annex. Age Pyramid

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



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

Annex. Selected mortality

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

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

Condition	SDR per 100 000		Excess mortality in Belarus (%)	Total deaths in Belarus (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Belarus to Eur-A (%)	Total deaths in Eur-A (%)
	Belarus (2003)	Eur- B+C average (2003)						
Selected non-communicable conditions	960.3	1044.9	-8.1	71.9	79.6	533.8	79.9	82.4
<i>Cardiovascular diseases</i>	694.2	741.8	-6.4	52.0	56.5	243.4	185.2	37.6
Ischaemic heart disease	456.8	362.7	25.9	34.2	27.6	95.9	376.3	14.8
Cerebrovascular diseases	173.0	221.7	-22.0	13.0	16.9	61.1	183.1	9.4
Diseases of pulmonary circulation and other heart disease	26.5	68.9	-61.5	2.0	5.3	56.6	-53.2	8.7
<i>Malignant neoplasms</i>	169.5	172.0	-1.5	12.7	13.1	181.5	-6.6	28
Trachea/bronchus/lung cancer	33.2	33.9	-2.1	2.5	2.6	37.1	-10.5	5.7
Female breast cancer	20.5	22.1	-7.2	1.5	1.7	27.0	-24.1	4.2
Colon/rectal/anal cancer	19.2	19.0	1.1	1.4	1.4	20.7	-7.2	3.2
Prostate	18.0	14.3	25.9	1.3	1.1	25.1	-28.3	3.9
<i>Respiratory diseases</i>	45.1	63.1	-28.5	3.4	4.8	47.8	-5.6	7.4
Chronic lower respiratory diseases	33.4	31.2	7.1	2.5	2.4	20.2	65.3	3.1
Pneumonia	8.8	23.6	-62.7	0.7	1.8	16.2	-45.7	2.5
<i>Digestive diseases</i>	36.4	52.3	-30.4	2.7	4.0	30.8	18.2	4.8
Chronic liver disease and cirrhosis	14.9	32.0	-53.4	1.1	2.4	12.6	18.3	1.9
<i>Neuropsychiatric disorders</i>	15.1	15.7	-3.8	1.1	1.2	30.3	-50.2	4.7
Communicable conditions	13.4	20.8	-35.6	1.0	1.6	8.4	59.5	1.3
AIDS/HIV	0.6	0.8	-25.0	0.0	0.1	1.1	-45.5	0.2
External causes	162.9	139.6	16.7	12.2	10.6	40.3	304.2	6.2
<i>Unintentional</i>	120.0	102.2	17.4	9.0	7.8	28.7	318.1	4.4
Road traffic injuries	14.8	14.7	0.7	1.1	1.1	9.9	49.5	1.5
Falls	11.6	7.5	54.7	0.9	0.6	6.1	90.2	0.9
<i>Intentional</i>	43.0	37.4	15.0	3.2	2.9	11.6	270.7	1.8
Self-inflicted (suicide)	33.5	23.2	44.4	2.5	1.8	10.6	216.0	1.6
Violence (homicide)	9.5	14.2	-33.1	0.7	1.1	1.0	850.0	0.2
Ill-defined conditions	168.4	64.0	163.1	12.6	4.9	20.9	705.7	3.2
All causes	1335.5	1312.2	1.8	100.0	100.0	647.8	106.2	100.0

Annex. Mortality data

Mortality data

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	88.5	-4.6	49.4	-2.4	151.7	-3.8
	M	104.1	-4.5	55.3	-2.5	170.5	-3.9
	F	72.0	-4.6	43.3	-2.4	131.9	-3.8
<i>Infectious and parasitic diseases</i>	M	5.1	-5.9	1.4	-1.1	10.9	-7.0
	F	3.4	-6.5	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	0.5	-9.8	0.2	-0.7	5.1	-8.2
	F	0.2	-11.6	0.1	-7.3	4.7	-7.9
<i>Malignant neoplasms</i>	M	3.9	-3.4	3.3	-1.8	5.1	-1.9
	F	2.7	-4.1	2.6	-1.8	4.2	-1.9
<i>Cardiovascular diseases</i>	M	2.0	9.7	1.4	-3.1	3.3	1.1
	F	0.7	-5.1	1.3	-2.5	2.6	0.1
<i>Respiratory diseases</i>	M	5.5	-8.8	1.4	-4.3	35.9	-5.0
	F	2.6	-9.8	1.0	-4.2	30.7	-5.0
Pneumonia	M	2.9	-9.3	0.5	-6.0	20.9	-4.9
	F	1.0	-10.6	0.4	-5.1	17.9	-4.7
<i>Certain conditions originating in perinatal period</i>	M	319.9	-5.8	255.3	-2.1	607.6	-2.7
	F	208.0	-5.6	202.3	-1.6	427.5	-2.7
Congenital malformations & chromosomal abnormalities	M	24.2	-4.3	11.6	-2.9	24.2	-2.8
	F	18.9	-4.1	10.0	-3.3	21.0	-2.6
<i>Ill-defined causes</i>	M	5.5	13.4	5.0	-3.9	5.6	-0.6
	F	7.0	19.3	3.4	-4.2	4.6	-1.0
<i>External causes of injury & poisoning</i>	M	25.2	-3.0	7.0	-4.0	29.0	-3.4
	F	14.7	-4.0	4.6	-3.2	18.1	-3.1
Road traffic injuries	M	3.1	-7.4	2.5	-4.5	4.7	-2.6
	F	2.4	-3.7	1.7	-4.8	3.0	-1.6

Mortality data contd

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	147.7	-0.7	56.0	-2.3	161.0	-0.9
	M	235.8	-0.7	82.0	-2.3	241.7	-1.0
	F	57.3	-1.7	29.3	-2.2	79.0	-0.6
<i>Infectious and parasitic diseases</i>	M	6.0	20.1	1.2	1.5	12.3	3.0
	F	1.2	1.8	0.8	1.9	5.1	2.5
Malignant neoplasms	M	10.0	-0.4	6.2	-1.0	8.8	-1.9
	F	6.8	-4.4	4.7	-1.4	7.7	-1.9
<i>Cardiovascular diseases</i>	M	14.6	-3.3	4.1	-2.4	17.6	0.0
	F	3.8	-4.3	2.3	-2.0	7.3	-0.9
<i>Respiratory diseases</i>	M	3.4	-1.7	1.4	-3.6	6.9	0.2
	F	0.4	-9.0	0.9	-2.7	3.8	-1.1
<i>Digestive diseases</i>	M	6.7	11.0	0.9	-3.5	8.0	3.0
	F	1.8	14.8	0.5	-3.8	3.7	3.1
<i>Ill-defined causes</i>	M	7.8	2.1	4.0	-3.1	11.6	7.1
	F	3.2	4.7	1.4	-1.3	3.3	5.8
<i>External causes</i>	M	174.6	-0.7	58.3	-1.4	162.4	-1.6
	F	33.0	-0.1	14.4	-1.6	36.9	-0.2
Road traffic injuries	M	33.2	-1.4	28.5	-1.3	27.8	-1.5
	F	7.2	-1.3	7.3	-1.4	8.0	0.3
Accidental drowning	M	18.7	-2.7	1.3	-2.2	10.8	-3.9
	F	2.6	-0.4	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	19.8	1.9	2.8	0.0	19.1	3.3
	F	3.7	2.8	0.7	0.8	4.4	2.5
Self-inflicted (suicide)	M	48.6	2.9	12.7	-1.8	36.8	0.0
	F	6.3	5.2	3.1	-2.2	5.8	-1.3

Mortality data contd

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	444.7	0.9	120.3	-2.5	453.8	-0.7
	M	711.3	0.9	161.6	-2.6	700.0	-0.8
	F	187.2	1.0	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	39.1	-3.2	27.6	-2.3	40.2	-2.8
	F	41.6	-0.7	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	7.0	-3.0	5.0	-3.4	7.3	-4.2
	F	1.3	12.0	2.8	-0.6	2.2	-1.0
Female breast cancer	F	11.4	1.0	10.0	-2.6	10.0	-2.3
<i>Cardiovascular diseases</i>	M	157.4	-0.4	26.1	-2.5	158.6	-0.4
	F	33.9	0.3	10.4	-2.1	45.3	0.0
Ischaemic heart disease	M	86.6	-1.6	11.8	-3.1	73.7	-2.2
Cerebrovascular diseases	F	13.5	0.5	2.4	-2.7	14.4	-1.3
	M	26.0	-0.5	4.4	-3.2	24.6	-0.4
<i>Respiratory diseases</i>	F	8.4	-2.3	3.6	-2.5	10.6	-1.3
	M	21.9	2.5	3.9	-3.5	34.3	0.9
<i>Digestive diseases</i>	F	3.7	-0.4	2.2	-2.0	9.8	0.8
	M	40.0	9.2	12.6	-2.4	50.2	1.4
<i>External causes</i>	F	13.5	11.5	5.4	-1.7	19.4	4.1
	M	358.9	0.5	58.8	-1.2	299.5	-1.9
Road traffic injuries	F	67.4	2.0	15.1	-1.8	58.9	-1.0
	M	29.6	-4.2	16.0	-0.5	31.4	-1.7
Self-inflicted (suicide)	F	6.6	-1.3	3.9	-2.0	7.1	-0.5
	M	80.0	0.5	21.2	-1.5	54.9	-2.4
	F	10.8	1.0	5.8	-2.2	7.9	-2.5

Mortality data contd

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	1322.1	0.2	435.6	-1.3	1294.9	-0.6
	M	2084.5	0.2	580.1	-1.4	1981.7	-0.6
	F	664.9	-0.2	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	344.7	-2.4	218.2	-1.2	323.2	-1.9
	F	162.2	-1.7	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	105.4	-3.2	65.9	-1.5	101.4	-2.9
	F	6.5	-0.1	21.8	3.4	15.4	1.0
Female breast cancer	F	42.5	-0.2	44.0	-2.2	45.3	0.1
<i>Cardiovascular diseases</i>	M	850.5	0.2	156.4	-2.6	793.1	-0.1
	F	270.6	-0.5	50.9	-2.5	271.7	-0.6
Ischaemic heart disease	M	534.7	-0.1	86.2	-3.3	435.3	-0.7
Cerebrovascular diseases	F	123.6	0.3	17.8	-3.4	111.1	-0.6
	M	189.6	0.1	23.7	-2.6	168.6	-0.9
<i>Respiratory diseases</i>	F	97.5	-1.1	14.5	-2.1	88.4	-1.4
	M	88.4	-2.0	20.3	-1.7	108.7	-1.4
<i>Digestive diseases</i>	F	12.6	-4.0	10.2	-1.3	24.5	-0.7
	M	103.4	6.0	49.6	-0.8	129.7	0.7
<i>External causes</i>	F	52.2	15.0	20.3	-0.7	57.3	1.9
	M	494.3	0.9	62.8	-1.0	409.2	-0.9
Road traffic injuries	F	104.1	0.7	20.9	-0.9	89.1	-1.1
	M	29.2	-2.8	13.0	-1.3	28.5	-1.8
Self-inflicted (suicide)	F	7.9	-4.5	4.1	-2.1	7.5	-1.4
	M	102.8	-1.3	23.1	-1.1	68.1	-2.4
	F	12.8	-3.5	8.5	-1.2	10.2	-3.4

Mortality data contd

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	3588.1	1.3	1570.9	-1.9	3411.7	-0.1
	M	5652.3	1.8	2156.9	-2.1	4996.4	0.1
	F	2290.4	0.3	1069.2	-1.9	2339.0	-0.6
Malignant neoplasms	M	1107.9	-0.6	851.3	-1.4	1002.5	-0.8
	F	389.2	-1.0	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	346.1	-1.2	261.8	-1.9	321.7	-1.5
	F	20.3	-3.1	59.0	0.2	37.1	-1.4
Female breast cancer	F	59.5	1.9	79.7	-1.6	68.7	1.3
Cardiovascular diseases	M	3407.8	3.3	744.9	-3.6	2903.0	0.6
	F	1571.0	1.1	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	2351.1	3.9	381.3	-4.2	1582.2	1.2
	F	972.6	2.2	133.5	-4.6	731.4	0.5
Cerebrovascular diseases	M	776.1	1.7	143.3	-3.7	833.7	0.2
	F	470.1	-0.7	86.7	-4.1	528.9	-0.8
Respiratory diseases	M	326.1	-2.3	144.0	-3.5	303.0	-2.4
	F	52.3	-5.1	62.5	-2.4	68.6	-3.6
Digestive diseases	M	140.5	3.1	111.6	-1.6	193.0	0.1
	F	63.0	1.9	54.1	-1.7	94.2	0.2
External causes	M	418.1	4.7	79.3	-1.4	320.0	1.0
	F	101.0	2.1	32.1	-2.1	88.7	-0.5
Road traffic injuries	M	25.2	-1.7	14.8	-3.0	24.3	-1.5
	F	8.1	-5.4	5.9	-3.4	9.5	-1.0
Self-inflicted (suicide)	M	92.4	2.3	24.5	-1.6	60.5	-0.8
	F	16.5	0.7	8.7	-2.6	12.7	-3.1

Mortality data contd

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

Causes of death	Sex	Belarus (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	12416.8	0.5	8059.6	-1.0	12338.8	0.0
	M	15871.4	0.5	9832.0	-1.1	14838.0	0.1
	F	11285.8	0.6	7112.5	-0.9	11421.7	0.0
Malignant neoplasms	M	1411.9	0.9	2231.1	-0.4	1489.3	1.2
	F	506.1	-1.5	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	341.0	2.5	457.1	-0.7	323.5	1.0
	F	29.7	-3.2	102.7	1.5	55.6	0.5
Female breast cancer	F	58.7	1.9	159.6	-0.4	92.0	3.1
Cardiovascular diseases	M	9386.9	1.9	4356.2	-2.1	10221.2	0.4
	F	6594.2	1.3	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	6805.8	2.2	1708.0	-2.2	4925.6	1.4
	F	4509.8	1.6	1150.0	-2.2	4028.6	1.2
Cerebrovascular diseases	M	2019.7	1.2	1119.8	-2.5	3004.4	0.7
	F	1675.8	1.1	1026.9	-2.4	2967.6	0.5
Respiratory diseases	M	740.5	-4.1	1156.5	-2.4	824.1	-2.1
	F	185.3	-6.6	591.9	-2.1	302.3	-3.2
Digestive diseases	M	138.8	-0.3	340.3	-1.1	270.4	0.3
	F	69.0	-2.6	279.8	-0.4	175.0	1.1
External causes	M	456.5	7.0	275.0	-0.6	604.2	0.1
	F	125.1	0.7	187.8	-1.2	172.4	-1.2
Road traffic injuries	M	37.0	3.5	28.1	-2.2	34.6	-3.1
	F	13.7	0.7	10.0	-3.1	14.7	-1.7
Self-inflicted (suicide)	M	102.5	4.9	49.5	-1.6	86.6	-1.1
	F	22.1	4.2	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 groups¹ 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).