



# Highlights on health in Lithuania 2005

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

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

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

## Keywords

HEALTH STATUS  
BURDEN OF DISEASE  
COMPARATIVE STUDY  
LITHUANIA

EUR/05/5046415L  
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## Summary: findings and policy considerations

### Life expectancy

WHO estimates that a person born in Lithuania in 2002 can expect to live 71.9 years on average: 77.9 years if female and 66.5 years if male. Life expectancy (LE) in Lithuania is more than nine years lower than the Eur-A average for males, and four years lower for females. Lithuanian males can expect 2.3 more years of life than the Eur-B+C average and females 4.4 more years. Lithuanians spend on average 8.6 years (11.9% of LE) with illness. Lithuania, along with other Baltic countries, has a large gender difference in expected healthy years of life because female LE is so much higher than that of males.

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 WHO/UNICEF estimate for infant mortality in Lithuania – 9 per 1000 live births – equals the national reported figure. Both infant and neonatal mortality rates remain well below the Eur-B+C averages, and are approaching the Eur-A averages.

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)

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

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

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

### Main causes of death

In 2002, the male and female mortality rates in Lithuania were respectively 76% and 37% higher than the Eur-A averages. In 2003, selected main non-communicable diseases accounted for about 80% of all deaths in Lithuania (52% of all deaths were caused by diseases of the circulatory system and 19% by cancer). External causes accounted for about 15% and communicable diseases for less than 1%.

The death rate from cardiovascular diseases is below the Eur-B+C average, but that from cancer is above it; both are clearly above the Eur-A averages. The risk of death from external causes and poisoning in Lithuania is above the Eur-A average for both sexes in all age groups except the elderly. Lithuania has the highest mortality rate from motor vehicle traffic accidents in the WHO European Region, the second highest from all traffic accidents (after the Russian Federation) and the third highest from accidental drowning (after Belarus and the Russian Federation).

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)

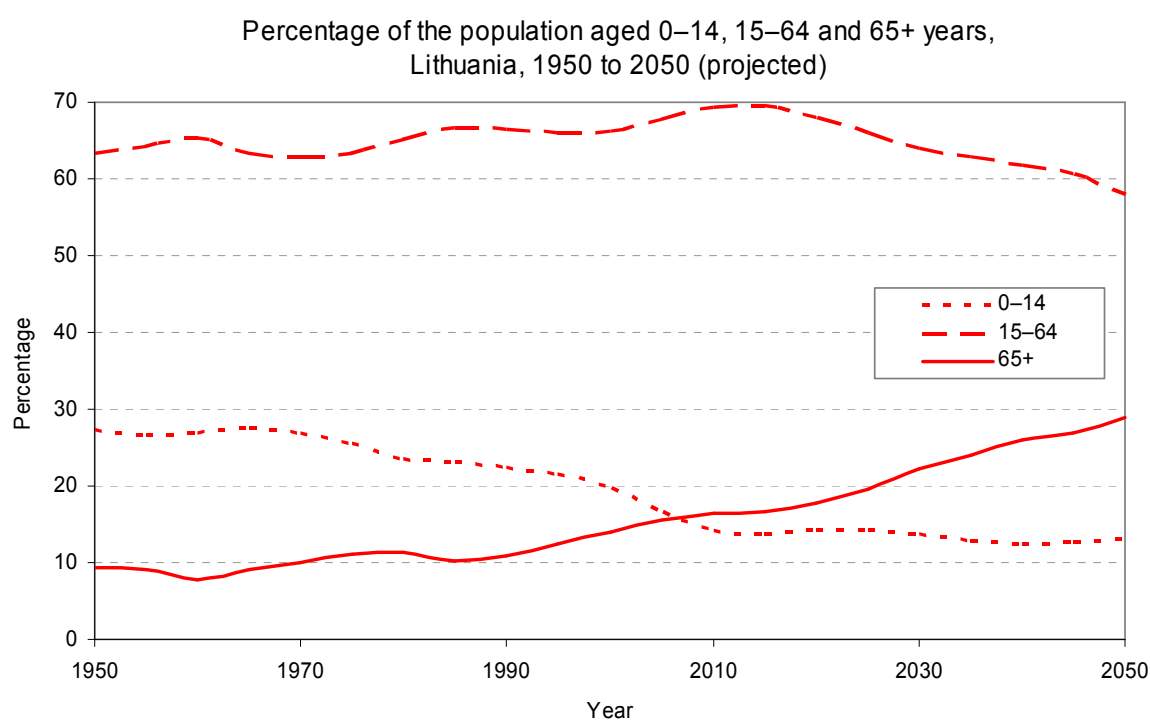
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## Selected demographic and socioeconomic information

### Population profile

In mid 2003, Lithuania had approximately 3.5 million people. Almost 66% of the population lives in urban areas, slightly higher than the Eur-B+C average.

The proportion of the population 0–14 years old was relatively steady during the 1980s but has fallen from about 23% in 1990 to 18% by 2003, below the Eur-B+C average. Conversely, the percentage of Lithuania's population 65 years old is above the Eur-B+C average. By 2030, an estimated 22% of Lithuania's population will be 65+ years (Annex. Age Pyramid).



Source: United Nations (2005).

The birth rate in Lithuania was among the lowest in Eur-B+C in 2003. Natural population increase and net migration in Lithuania are both negative and below the Eur-B+C averages.

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

Indicators	Lithuania	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	3454.2	–	–	–
0–14 years (%)	18.0	–	–	–
15–64 years (%)	67.2	–	–	–
65+ years (%)	14.9	–	–	–
Urban population (%) <sup>a</sup>	66.8	63.7	25.0	73.3
Live births (per 1000)	8.9	12.8	8.6	27.1
Natural population growth (per 1000)	–3.0	0.8	–7.5	23.0
Net migration (per 1000)	–1.8	1.8	–6.6	2.1

<sup>a</sup> 2002.

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

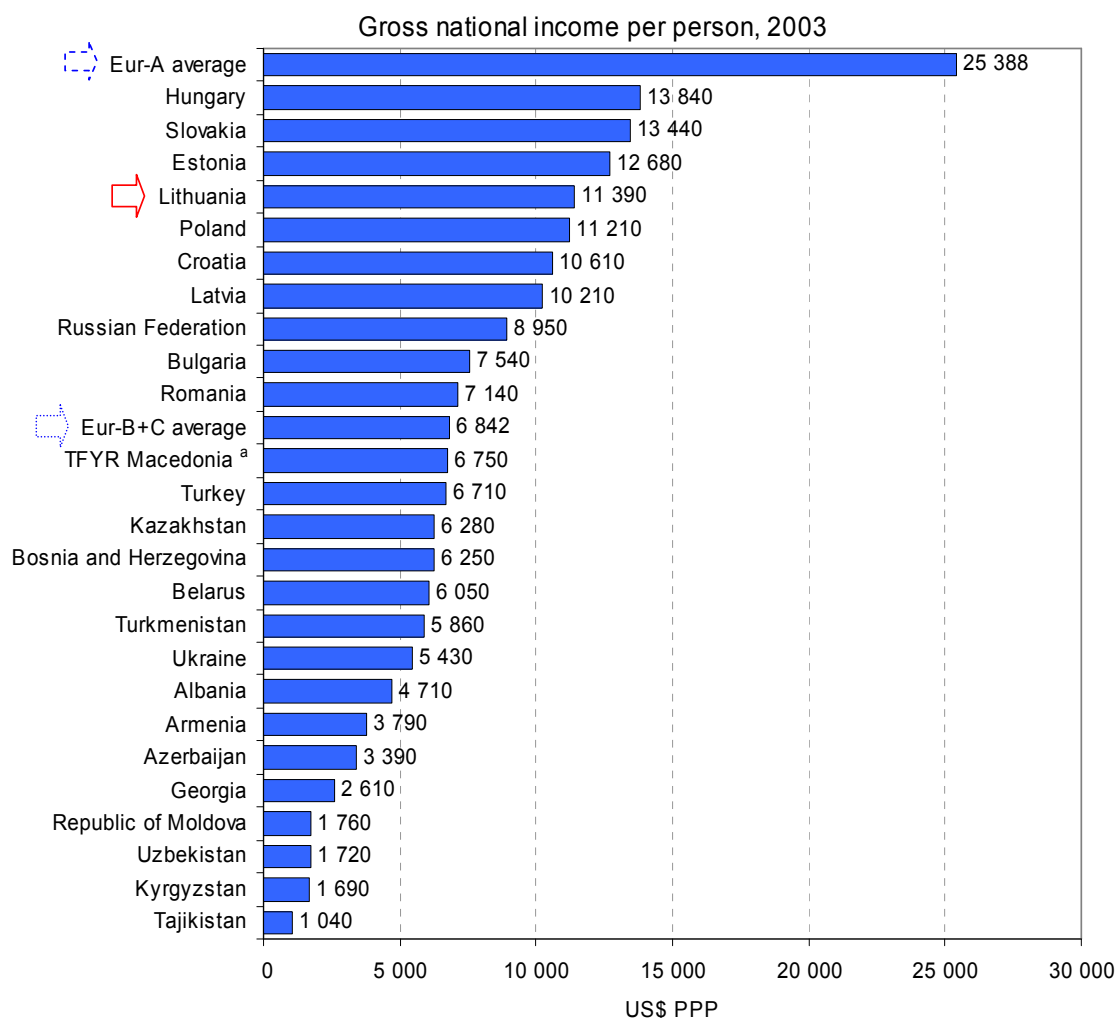
## Socioeconomic indicators

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.

In 2003, Lithuanians had a per capita gross national income of US\$ 11 390, above the Eur-B+C average.



<sup>a</sup> The former Yugoslav Republic of Macedonia

Source: World Bank (2005).

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.

Household surveys in Lithuania conducted over 13 years, from 1988 to 2000, found that despite a 13.6% absolute poverty rate in 1988 (using the US\$ 4.30 or less per person per day benchmark), annual rates jumped. In 1993, 86.9% of the population lived on US\$ 4.30 or less per person per day. By 2000, 40% of the population had this amount of daily income or less, and almost 7% had US\$ 2.15 or less (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.

Eurostat reports that in 2002, 17% of Lithuanians lived in relative poverty, that is, below the risk-of-poverty threshold set at 60% of the national median equivalized disposable income (after social transfers). The average rate for nine Eur-B+C countries with data for that year was 16%. By contrast, in 2001 an average of 14% of people lived in relative poverty in the 17 Eur-A countries with comparable data (Eurostat, 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, Lithuania's Gini index was 31.9. The Gini indices for 15 Eur-B+C countries for 2000 to 2002 range from 26.1 for Bosnia and Herzegovina (2001) to 45.6 in the Russian Federation (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.

Per cent net secondary school enrolment in Lithuania in 2000 was 91.6%, compared to an 81.2% average for Eur-B+C countries. The average net enrolment in Eur-A countries that year was 88.5% (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 Lithuania in 2001 was 17%, higher 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. Lithuania's rate dropped to 13.8% in 2002.

The proportion of Lithuanians 15–24 years of age available for and seeking employment was 28.9% in 2000, the most recent year with data. In 2001, the Eur-B+C average youth unemployment rate was 25.2% (ILO, 2005).

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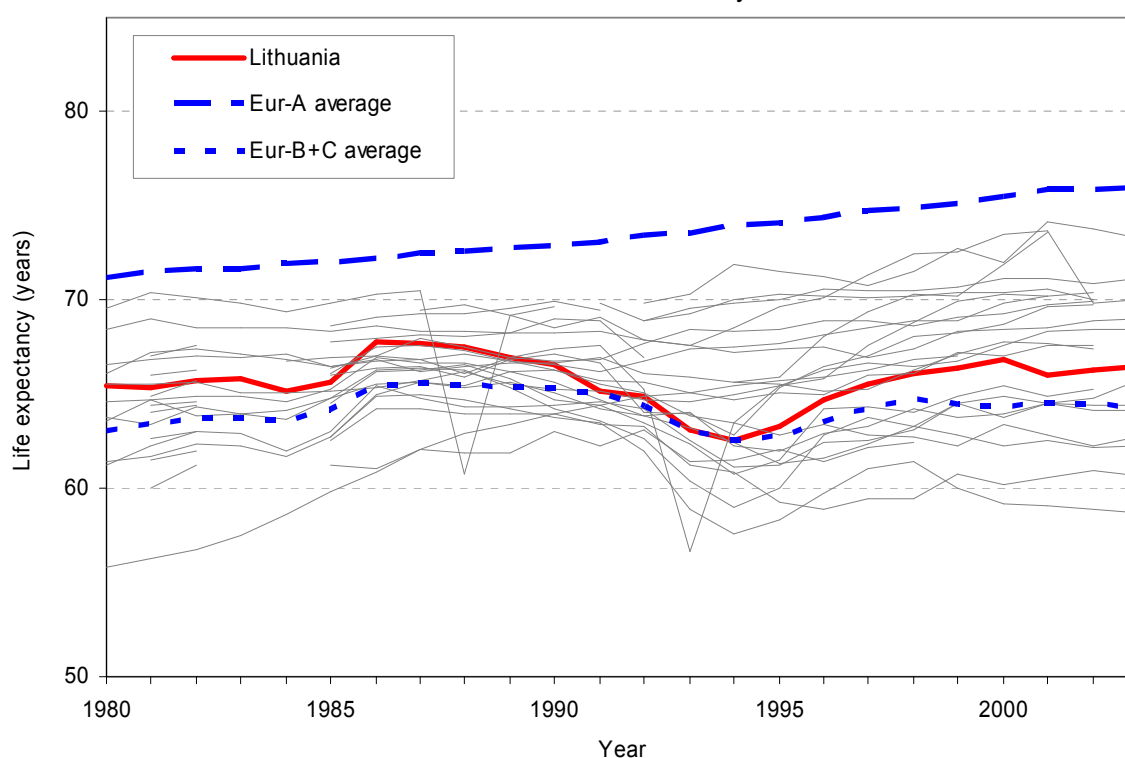


## Life expectancy (LE) and healthy life expectancy (HALE)

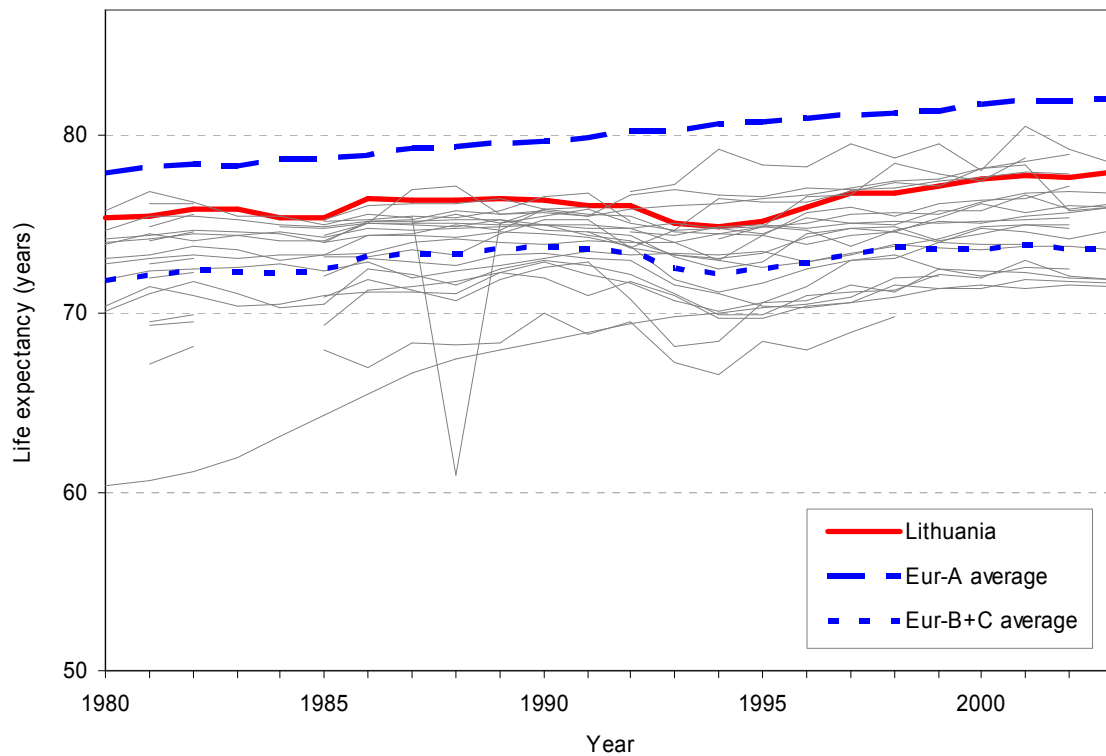
According to WHO (WHO, 2003c) estimates, a person born in Lithuania in 2002 can expect to live 71.9 years on average: 77.9 years if female and 66.5 years if male. LE is more than nine years lower than the Eur-A average for males, and four years lower for females. The LEs for both males and females are higher than the Eur-B+C averages, by 2.3 and 4.4 years, respectively.

Since 1980, Lithuanians have gained slightly less than two years LE, with a greater gain for women (2.5 years) than for men (1.1 years). These gains are significantly less than those in Eur-A (from 4 to 5 years), but are greater than (for males) or similar to (for females) those in Eur-B+C on average (from 1 to 2 years).

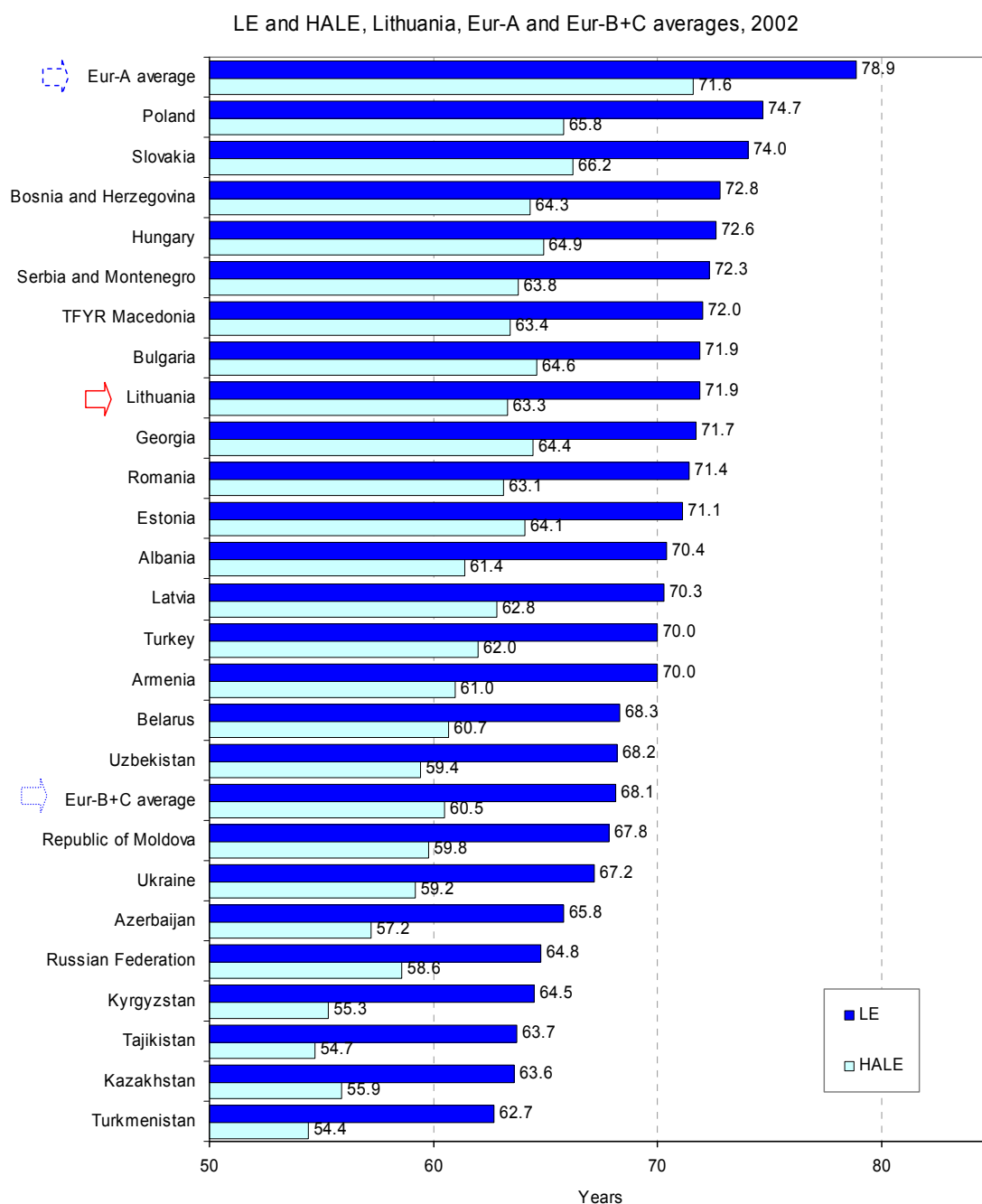
Life expectancy at birth for males, Lithuania, Eur-A and Eur-B+C averages, 1980 to latest available year



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



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 Lithuania, WHO (2003c) estimates that people can expect to be healthy for about 88% of their lives. They lose an average of 8.6 years to illness - the difference between LE and HALE. This loss is larger than the loss in the Eur-A countries (7.3 years) and the Eur-B+C countries (7.6 years).



Since women live longer and since the possibility of deteriorating health increases with age, women lose more healthy years of life (9.9 years) than men (7.3 years). Nevertheless, the longer LE for women gives them 8.6 more years of healthy life. The Baltic countries, with a range from 8.6 to 9.8 years, have the largest gender difference in the WHO European Region after the Russian Federation (11.5 years). Among people 60 years old, females can expect a longer HALE (16.2 years) than males (12.0 years), though the gender difference is much smaller in this group than in the general population, according to WHO estimates (WHO, 2003c).

## Burden of disease

The burden of disease in a population can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age, free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows

elaborates on the burden of disease in the population. The disability-adjusted life-year (DALY) is a summary measure that combines the impact of illness, disability and mortality on population health.

## Main conditions

The table shows the top 10 conditions, in descending order, that account for approximately 90% of the burden of disease among males and females in Lithuania. Cardiovascular diseases account for the most DALYs among both males and females in the country. Unintentional injuries account for the second highest burden among males. Neuropsychiatric disorders rank third among males and second 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 causes of disease burden measured in DALYs in Lithuania (2002)

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Cardiovascular diseases	21.9	Cardiovascular diseases	22.5
2	Unintentional injuries	18.1	Neuropsychiatric conditions	21.2
3	Neuropsychiatric conditions	14.7	Malignant neoplasms	13.4
4	Malignant neoplasms	11.7	Sense organ diseases	6.8
5	Intentional injuries	10.4	Musculoskeletal diseases	6.6
6	Digestive diseases	4.9	Unintentional injuries	6.5
7	Sense organ diseases	3.8	Digestive diseases	5.3
8	Musculoskeletal diseases	2.8	Intentional injuries	3.2
9	Respiratory diseases	2.5	Respiratory diseases	2.4
10	Infectious and parasitic diseases	2.4	Nutritional deficiencies	2.1

Source: Background data from WHO (2003c).

## Main risk factors

The table shows the top 10 risk factors with their relative contributions, in descending order, to the burden of disease in the Lithuanian male and female populations. According to DALYs, alcohol and tobacco use places the greatest burden of disease on males and high blood pressure and high cholesterol on females.

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

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Alcohol	22.1	High blood pressure	14.1
2	Tobacco	18.5	High cholesterol	9.3
3	High blood pressure	12.2	High BMI	8.3
4	High cholesterol	9.1	Alcohol	5.1
5	High BMI	5.8	Low fruit and vegetable intake	4.9
6	Low fruit and vegetable intake	5.7	Physical inactivity	4.2
7	Physical inactivity	3.7	Unsafe sex	2.8
8	Illicit drugs	1.2	Tobacco	2.1
9	Occupational risk factors for injuries	1.2	Childhood sexual abuse	1.0
10	Lead	1.1	Lead	0.8

Source: Background data from WHO (2003c).

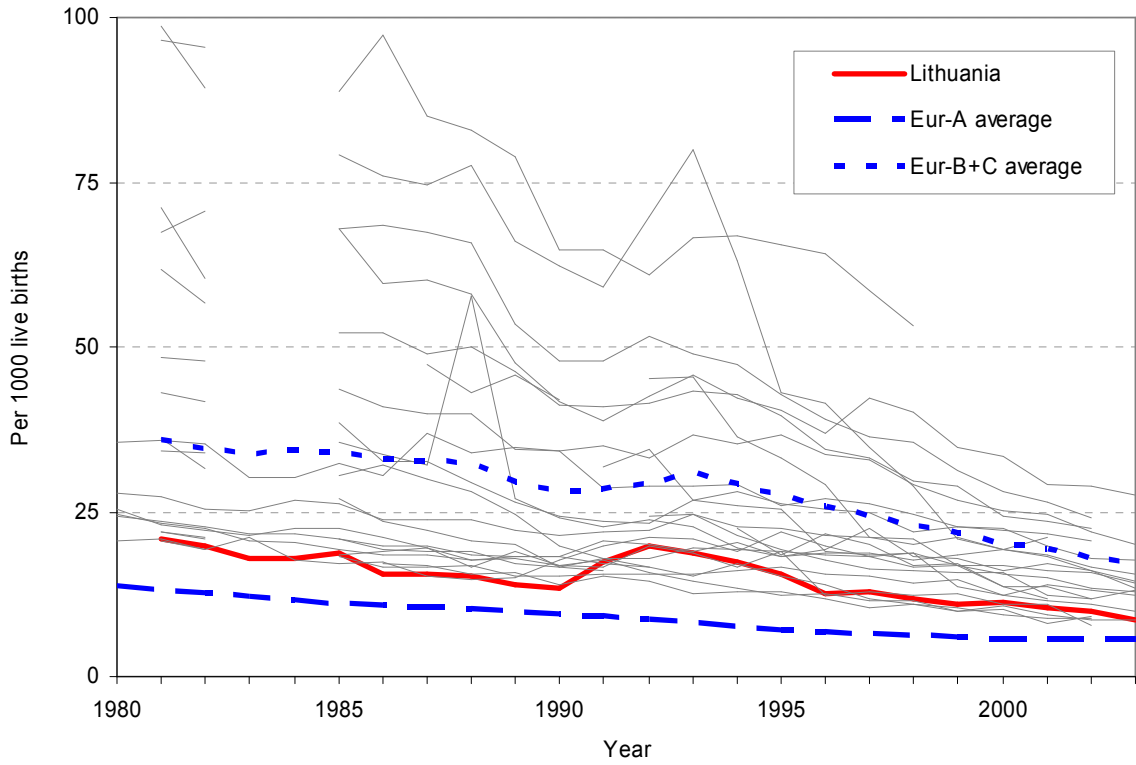
## Mortality

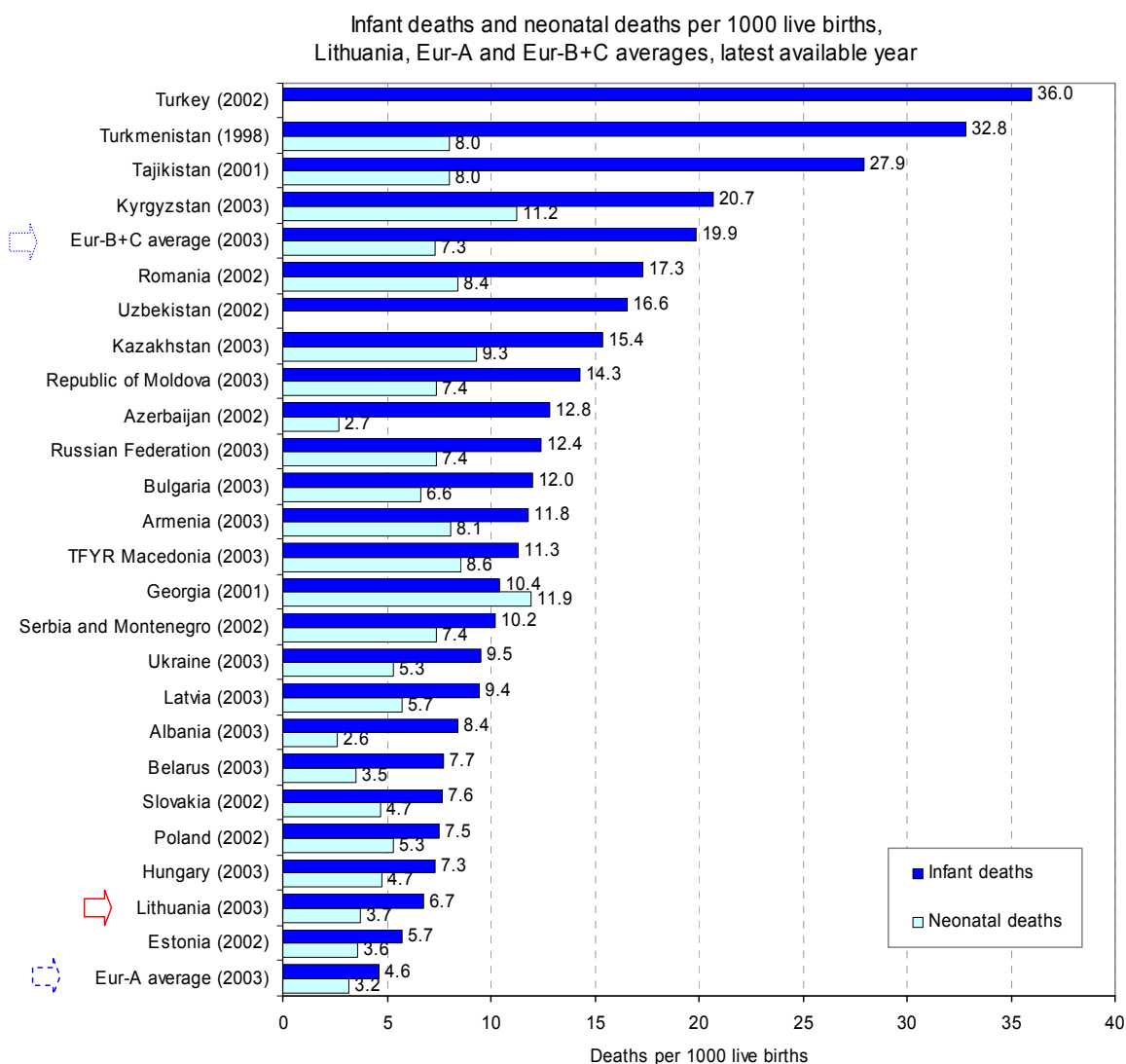
### Infant, neonatal and child mortality

Both infant and neonatal mortality in Lithuania remain well below the Eur-B+C average, and approach the Eur-A averages. The risk of dying from prematurity and other perinatal causes, and from congenital anomalies have decreased significantly. The WHO/UNICEF estimate for infant mortality in Lithuania (9 per 1000 live births) equals the national figure, thus confirming the improvement.

National data and WHO estimates for 2003 agree that out of every 1000 live births in Lithuania, there is a probability that 10 or 11 children will die before age 5, already better than the Millennium Development Goal of 15 per 1000. The lowest Eur-B+C rates estimated by WHO are for Estonia and Slovakia, each at 8 deaths per 1000 live births.

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





## Maternal mortality

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

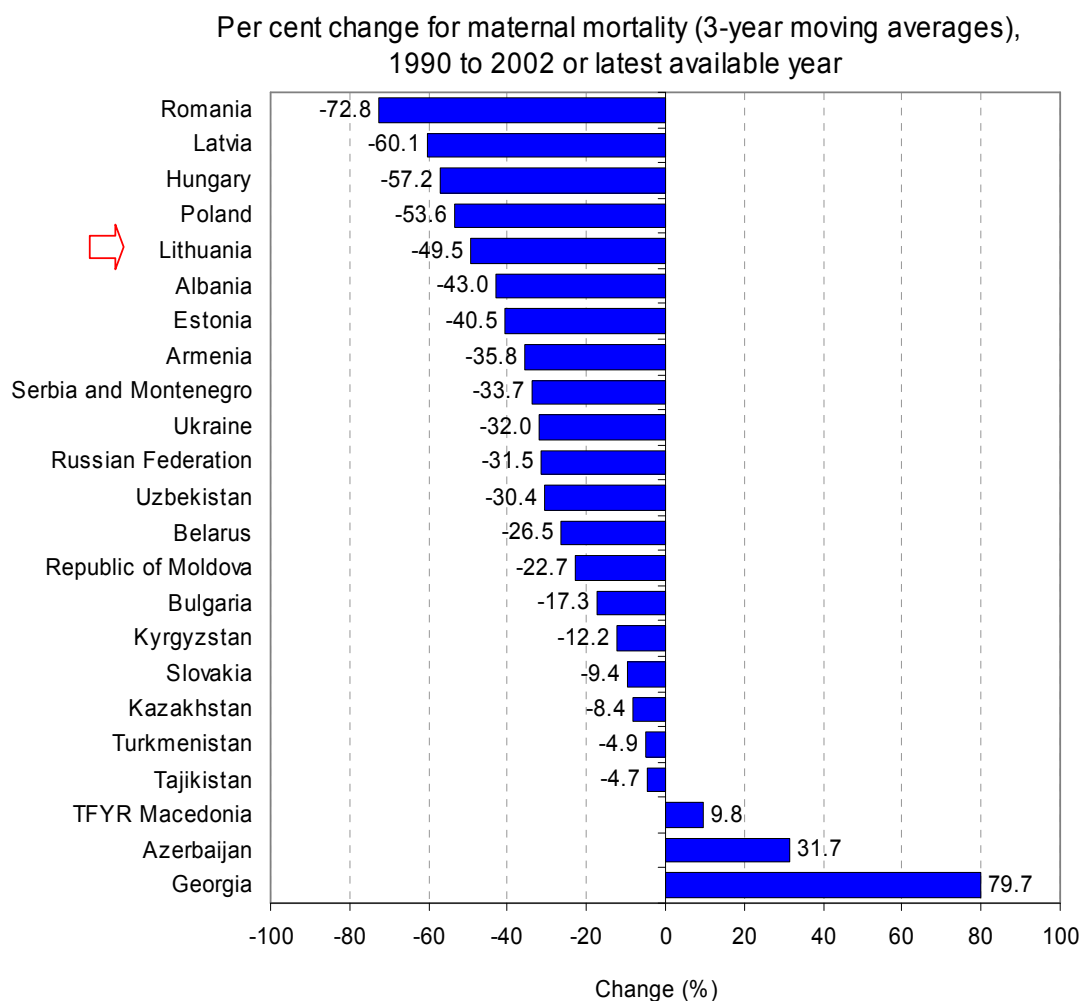
Despite the difficulties in accurately measuring MMR, nationally reported figures are accepted at face value relative to the MDG to improve maternal health – to reduce the MMR by 75% between 1990 and 2015. In some countries, the 2015 target may be equal to or lower than the average current MMR for high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

MMR in Lithuania has decreased substantially since the early 1990s, but it is still more than double the Eur-A average. Between 1990 and 2002, it fell by almost 50%, despite an increase between 1990 and 1993 that peaked at about 31 maternal deaths per 100 000. From 1993 to 2002, the rate fell by 61%. For Lithuania to reach its MDG target, MMR would have to fall another 50% from the 2002 level.

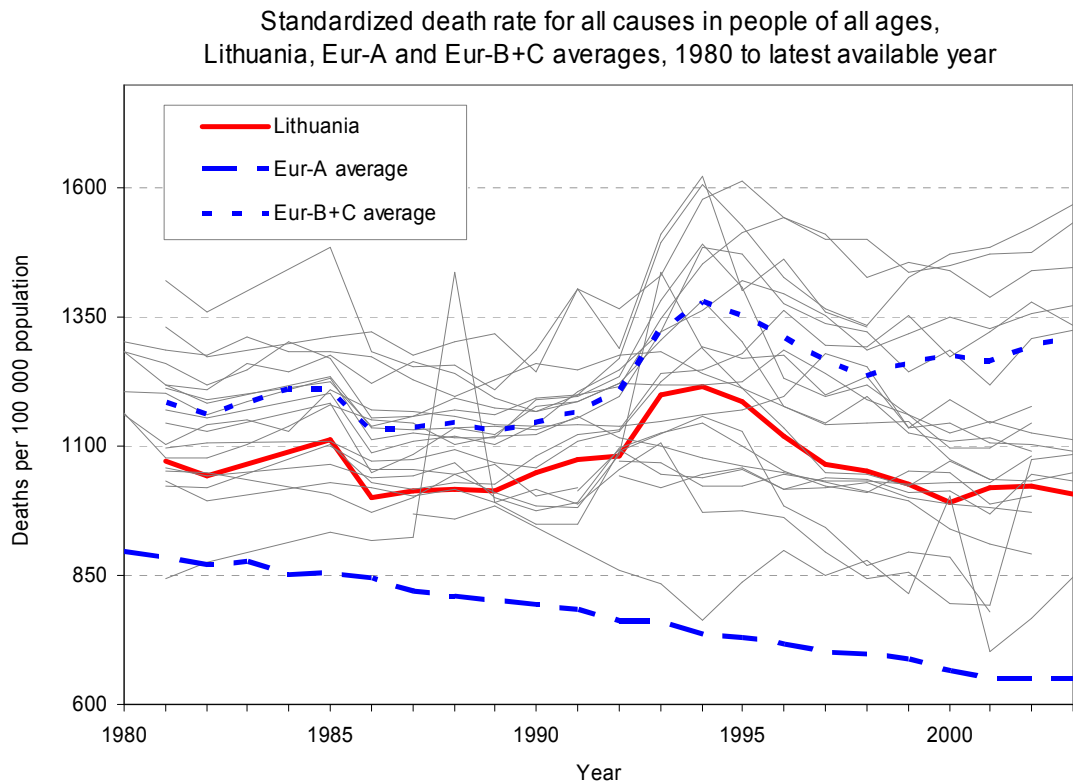
From 1999 to 2003, 6 of 21 maternal deaths were due to induced or spontaneous abortion (including ectopic pregnancies). The Lithuanian share (29%) was the third highest in the WHO European Region,

after Estonia and Romania. Improved abortion procedures and better follow-up of these women may prevent these kinds of maternal deaths.

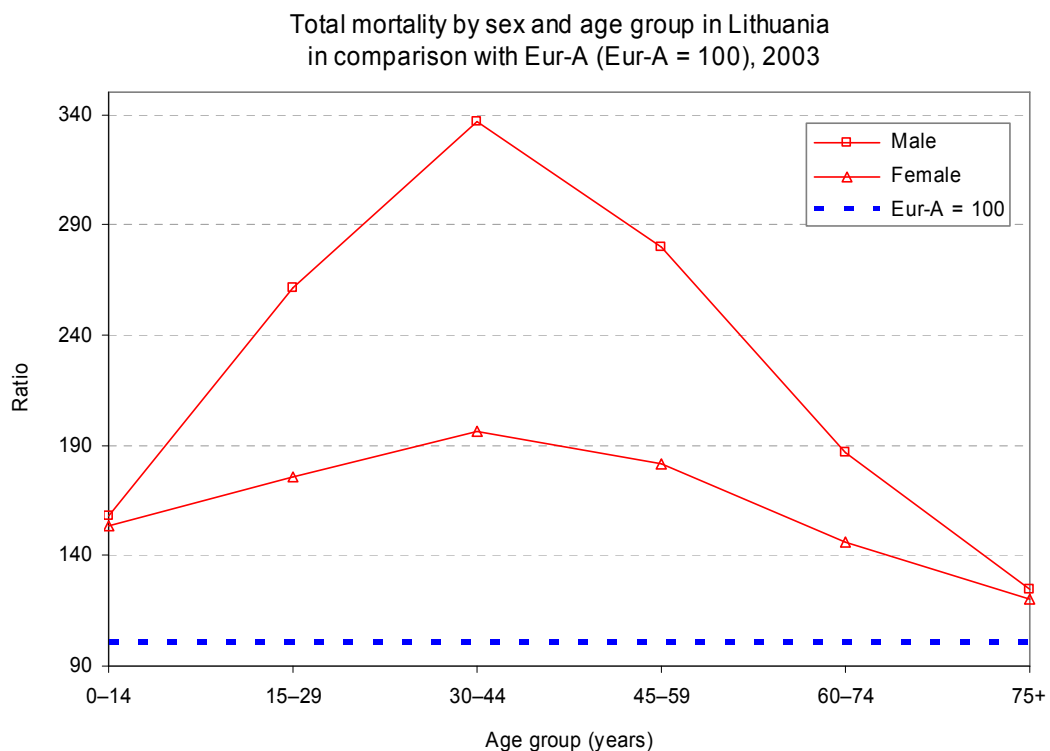


### Excess mortality

The mortality patterns in all three Baltic countries follow alcohol policies. In 1986, Lithuania shared with the other Baltic countries a drop in the death rate from all causes, reflecting a reduction in deaths from cardiovascular disease and external causes. This followed the introduction in June 1985 of a vigorous campaign to reduce alcohol consumption (the so-called Gorbachev anti-alcohol campaign). Mortality rates reached a low point in 1989, but following economic liberalization in 1991, alcohol became more widely available and relatively cheaper than before 1985, which has most likely contributed to the 12% increase in mortality between 1992 and 1994, especially among men. 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). Since mid-1990s, the total death rate in Lithuania has decreased by one sixth and is now substantially below the Eur-B+C average.

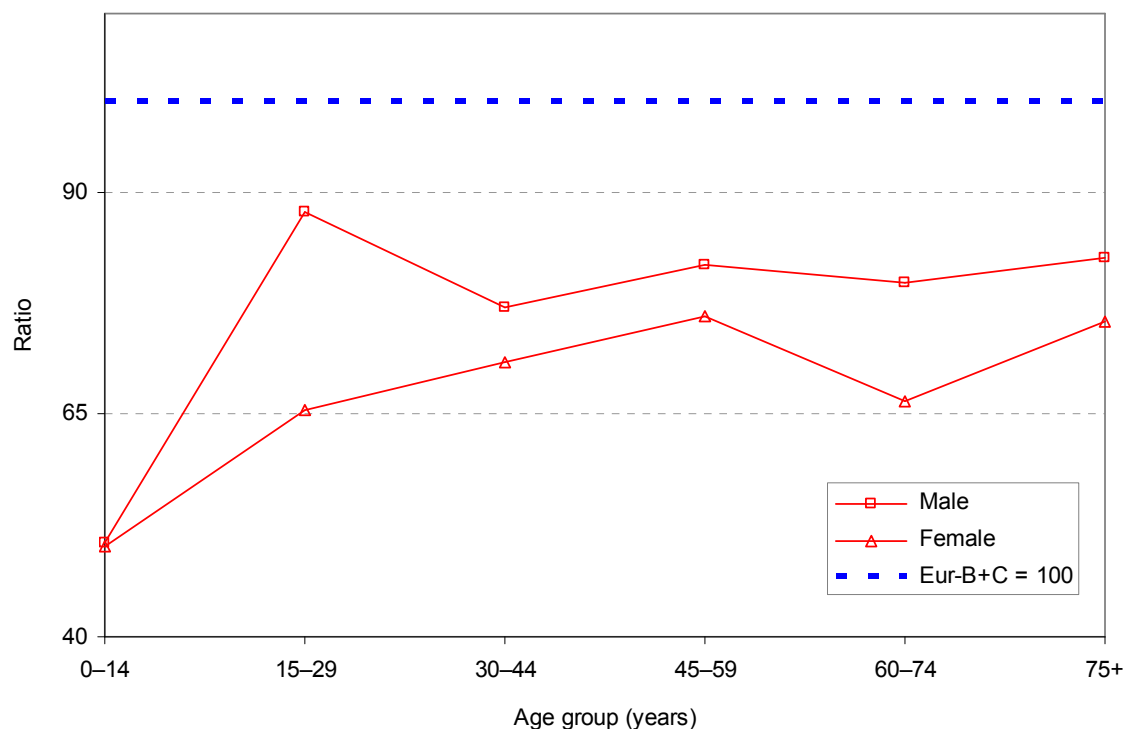


In 2002, the male and female mortality rates in Lithuania were respectively 76% and 37% higher than the Eur-A averages. Excess mortality can be seen in all age groups, especially those under 75. For men, total mortality is at least twice the average in the 15–59 age group and at least three times the average in the 30–44 age group. The excess risks among females are more moderate. Despite this excess mortality, the Lithuanian rates are lower than the Eur-B+C average (-20% and -28%, respectively), also when viewed by age groups.





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



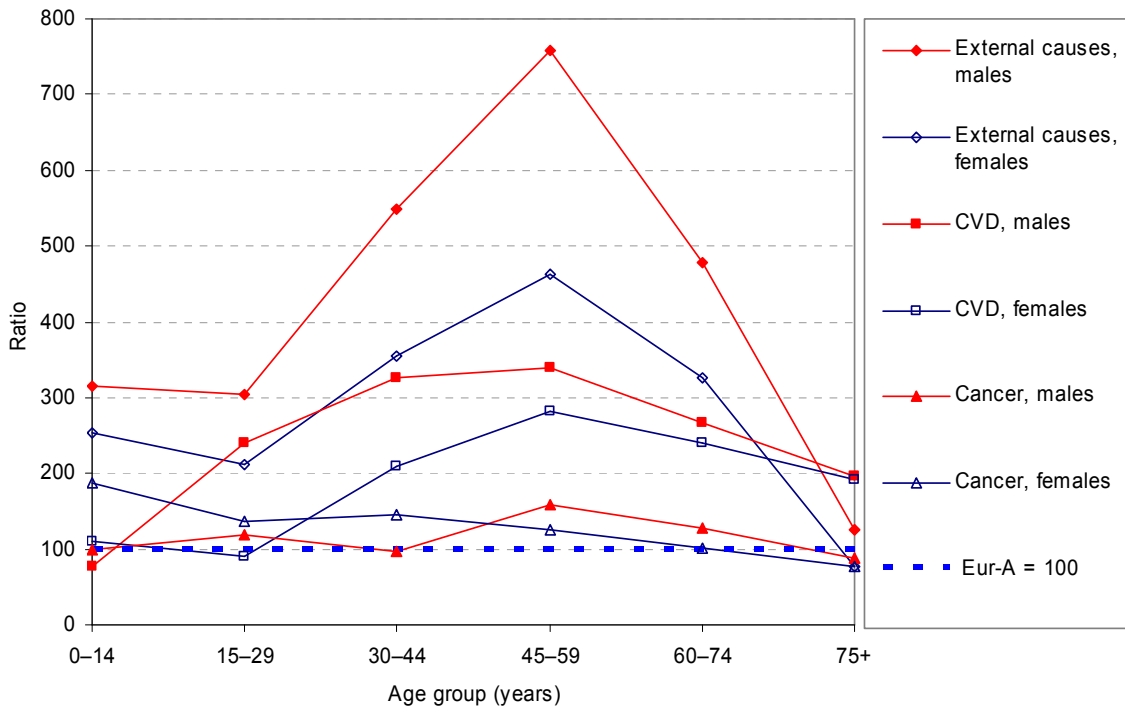
### Main causes of death

In 2003, selected main non-communicable diseases accounted for about 80% of all deaths in Lithuania, external causes for about 15% and communicable diseases for less than 1%. In total, 52% of all deaths were caused by diseases of the circulatory system and 19% by cancer (Annex. Selected mortality. Annex. Mortality data).

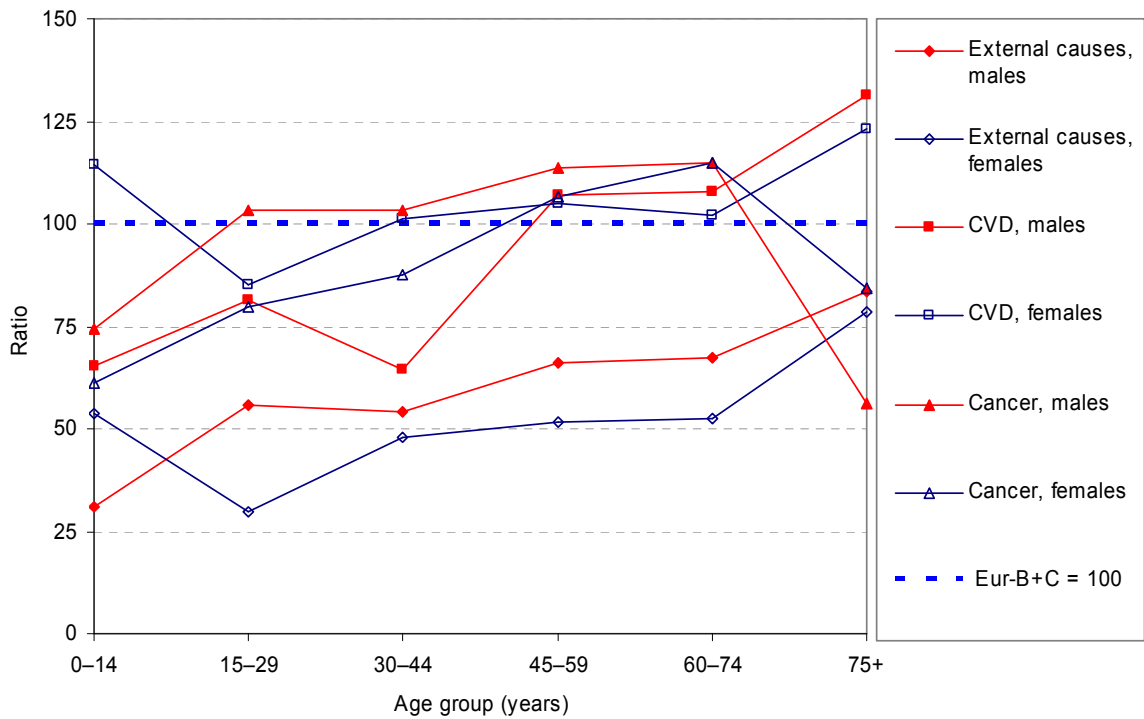
Lithuanians have a higher risk of dying from CVDs than the Eur-A average, excluding males under 15 years old and women under 30. In other age groups, the excess risk is at least double the Eur-A average, and it is at its highest – at least triple – among men 30–59 years old. The risk of death from cancer is also higher for males 45–59 years old and for females under 30 years, but proportionally the excess risks are much lower than those for CVDs. The risk of dying from external causes and poisoning is higher than the Eur-A average for both sexes in all age groups except the elderly: at least five times greater for males 30–59 years old and 4.5 times greater for females 45–59.

The Lithuanian death rates are comparable to the Eur-B+C averages when studied by sex and age group. The most significant exception is for cancer among those 75 and older, where Lithuanians have an approximately 30% higher risk.

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



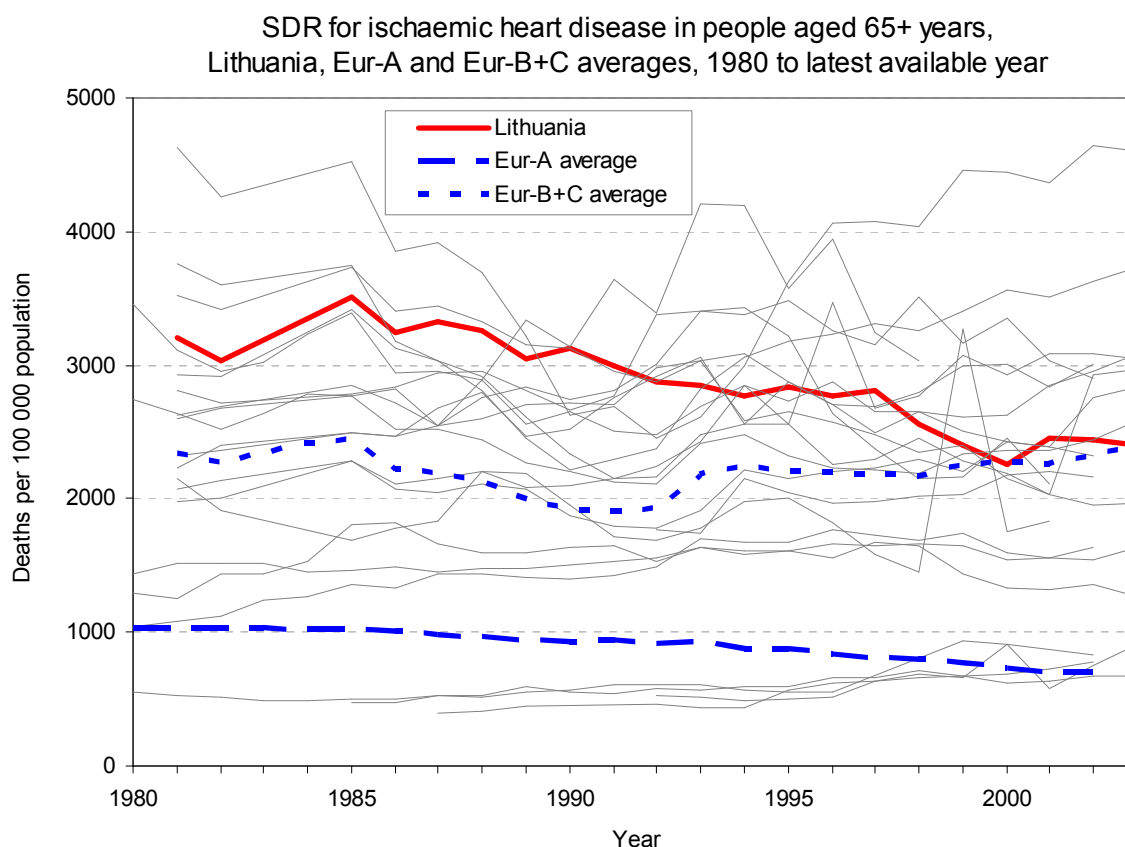
Main causes of mortality by sex and age group in Lithuania in comparison with Eur-B+C (Eur-B+C = 100), 2003



## CVD

More than half of all deaths in Lithuania are caused by cardiovascular diseases. Mortality rates for CVD were never as high in Lithuania as in the other Baltic countries, and therefore their decrease has been more moderate, less than one sixth. The improvement has been most substantial for women and for men over 30. The most current Lithuanian rates are below the Eur-B+C average for both sexes and all age groups.

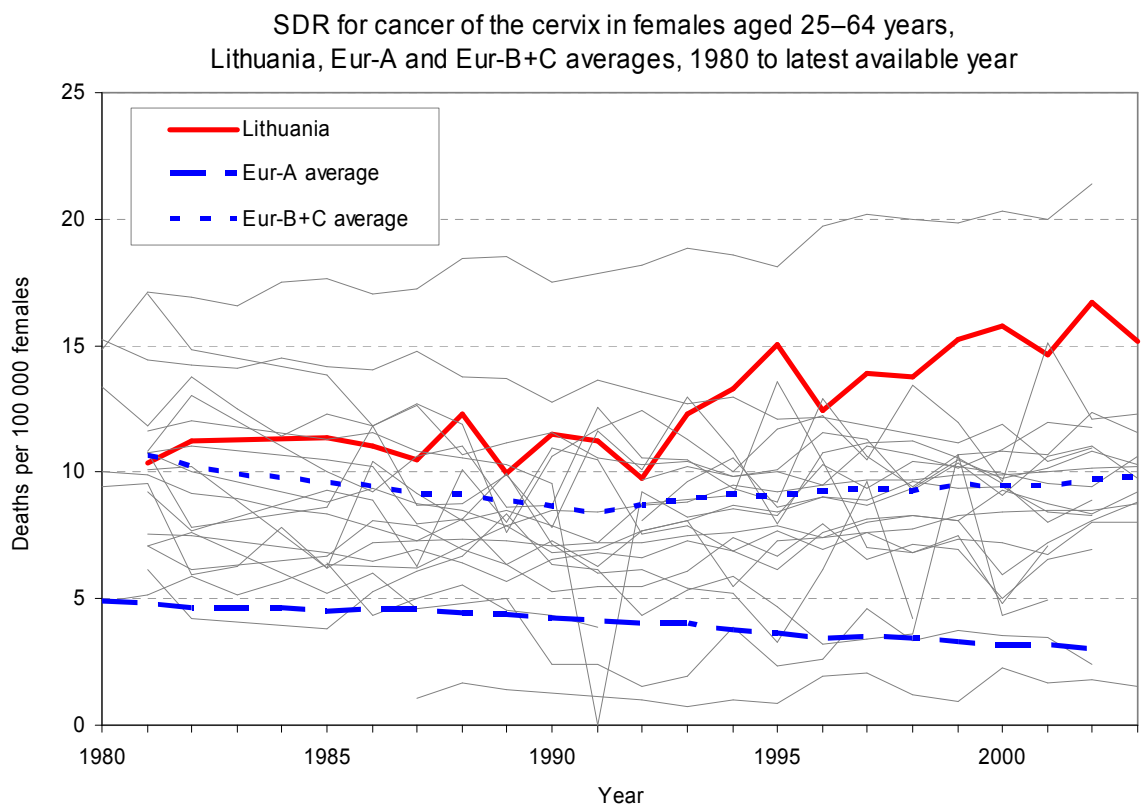
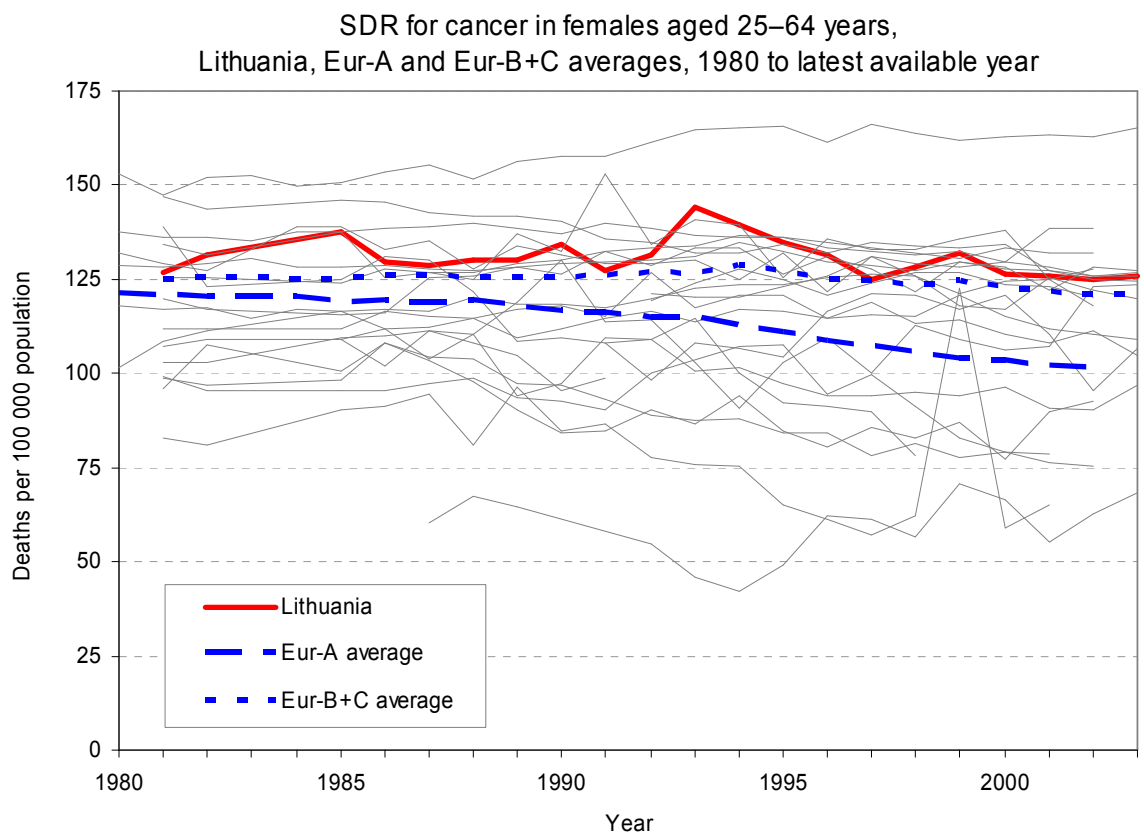
Ischaemic heart disease is the single biggest killer in Lithuania, causing almost 28% of all deaths in 2003. For men and women 15–74 years old, the Lithuanian mortality rate has declined substantially, and remains below the Eur-B+C average. For the elderly, the rate has stagnated and is above the Eur-B+C average. The declining trend is similar for cerebrovascular diseases for both sexes and for all age groups under 75. For the oldest age group, the death rate started to increase in the 1980s and continues to do so.



## Cancer

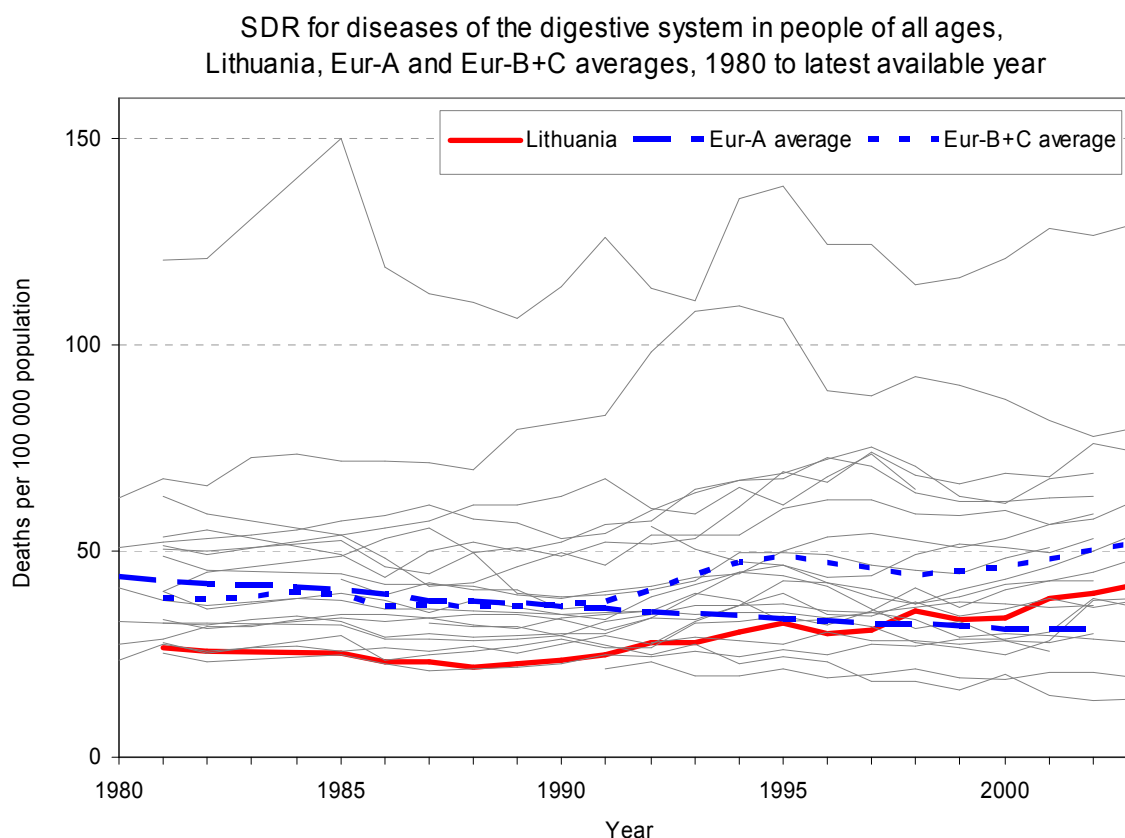
Cancer causes every fifth death in Lithuania. Cancer mortality is decreasing for all age groups under 75, but is higher than the Eur-B+C average for males 45 and older and females 30 and older. Among elderly Lithuanians of both sexes, cancer death rates have constantly increased since the 1980s.

The risks of dying from bladder or liver cancers are decreasing and are below the Eur-A and Eur-B+C averages. Mortality from cancers of the stomach, pancreas, ovaries, larynx, trachea, bronchus and lung (especially for men) is also decreasing, but the Lithuanian rates are near the Eur-B+C average or even above it (pancreatic and ovarian). The death rate for cancer of oesophagus has been low, but is increasing and approaching the country group averages. Death rates are also rising for cancers of the lip, oral cavity and pharynx, colon/rectum, skin, breast, cervix and prostate, and the most recent Lithuanian rates are above the Eur-A and Eur-B+C averages for all other causes but colorectal cancer. The death rate for cervical cancer is especially high, the second highest in the WHO European Region after Romania.



### **Other causes of death (diseases and medical conditions)**

The death rate from diseases of the digestive system is increasing in Lithuania, following a similar increase for chronic liver diseases and cirrhosis. The increase is similar for men 15 and over and women 30 and over. The risk for men is more than double that for women. In general, Lithuania follows the Eur-B+C average, while a constantly increasing trend can be seen in Eur-A countries.



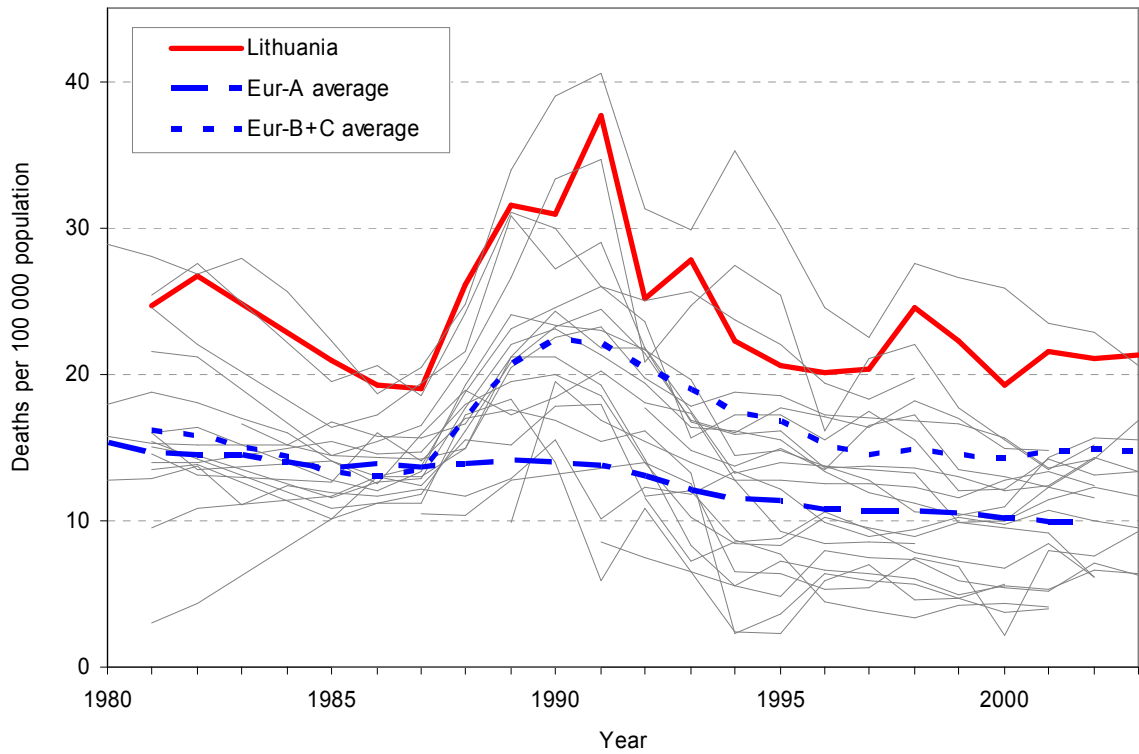
### **External causes**

Mortality for external causes almost doubled between the late 1980s and 1994, but has decreased by one fourth since and is about to reach the increasing Eur-B+C average. Despite falling death rates, Lithuanians still have a high risk to die from all external causes, excluding exposure to smoke, fire and flames. Mortality from poisoning is also lower than Eur-B+C average, but the rate for alcohol poisoning is double the Eur-B+C average and 50 times the Eur-A average.

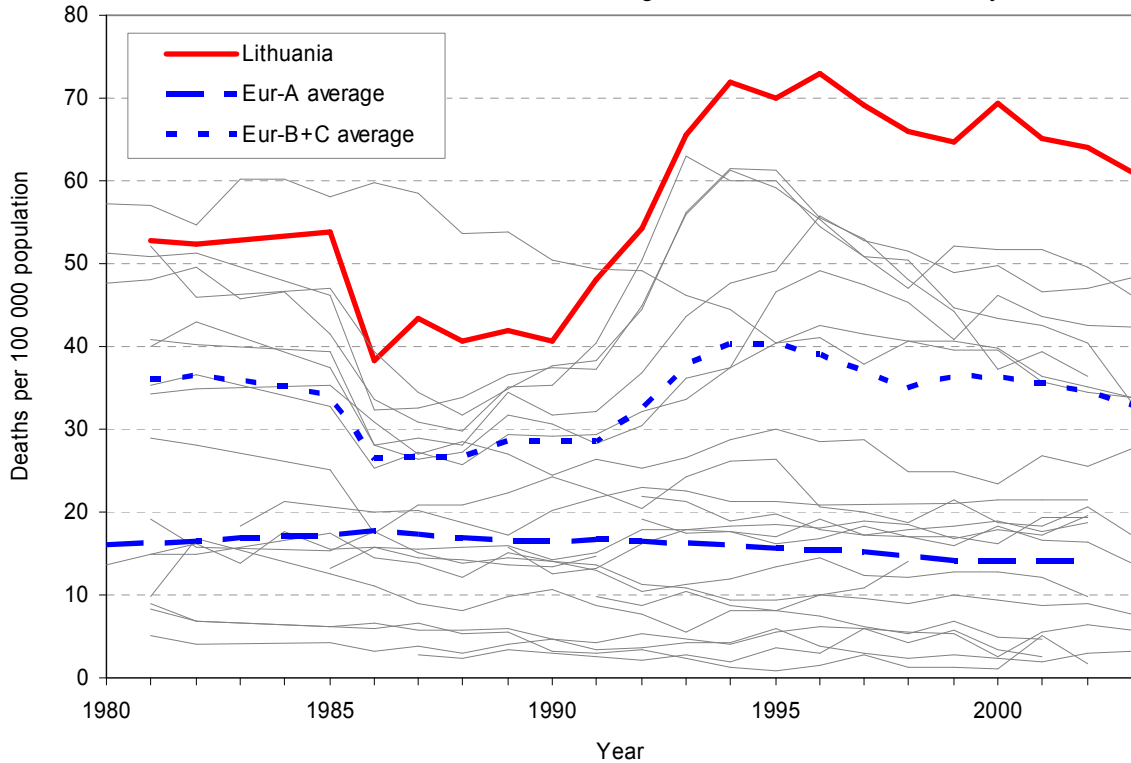
Lithuania has the highest mortality rate from motor vehicle traffic accidents in the WHO European Region, the second highest from all traffic accidents (after the Russian Federation) and the third highest from accidental drowning (after Belarus and the Russian Federation). Men have much higher mortality rates from these causes than women: four times the risk of death in transport and motor vehicle transport accidents (highest in the 15–74 age groups), and six times the risk of accidental drowning (highest in age groups over 45).

Despite a fall since the mid-1990s, Lithuania has the highest suicide rate in the WHO European Region. The most recent rate is almost double the Eur-B+C average and four times the Eur-A average. Both sexes have high suicide rates, but especially males 30–74 and females 30–59. The homicide rate is decreasing and while below the Eur-B+C average, it is much higher than the Eur-A average.

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



SDR for suicide and self-inflicted injury in people aged 25–64 years, Lithuania, Eur-A and Eur-B+C averages, 1980 to latest available year



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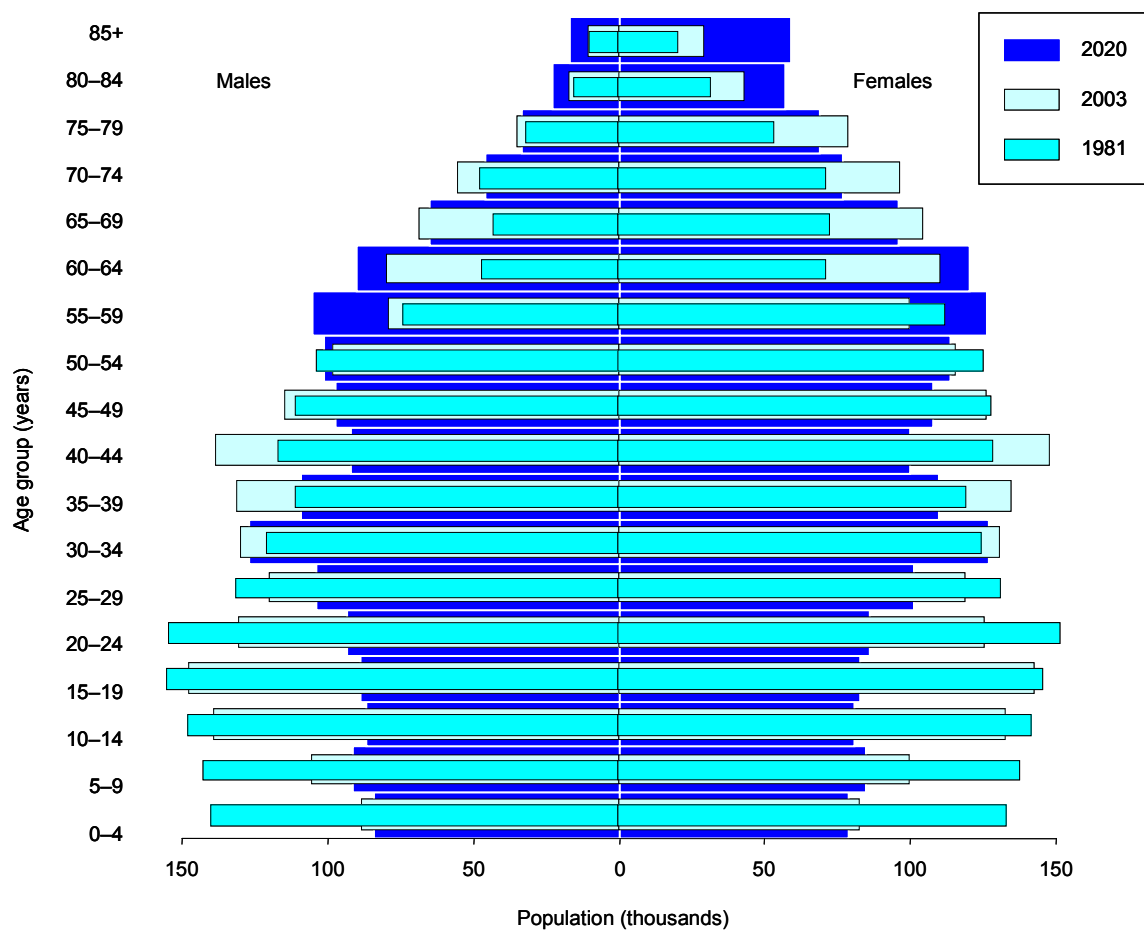
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## Annexes

### Annex. Age pyramid

#### Age pyramid for Lithuania



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

## Annex. Selected mortality

## Selected mortality in Lithuania compared with B+C averages

Condition	SDR per 100 000		Excess mortality in Lithuania (%)	Total deaths in Lithuania (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Lithuania to Eur-A (%)	Total deaths in Eur-A (%)
	Lithuania (2003)	Eur-B+C average (2003)						
<b>Selected non-communicable conditions</b>	806.3	1044.9	-22.8	80.0	79.6	533.8	51.0	82.4
<i>Cardiovascular diseases</i>	519.8	741.8	-29.9	51.6	56.5	243.4	113.6	37.6
Ischaemic heart disease	327.8	362.7	-9.6	32.5	27.6	95.9	241.8	14.8
Cerebrovascular diseases	117.4	221.7	-47.0	11.6	16.9	61.1	92.1	9.4
Diseases of pulmonary circulation and other heart disease	30.6	68.9	-55.6	3.0	5.3	56.6	-45.9	8.7
<i>Malignant neoplasms</i>	193.6	172.0	12.6	19.2	13.1	181.5	6.7	28.0
Trachea/bronchus/lung cancer	36.2	33.9	6.8	3.6	2.6	37.1	-2.4	5.7
Female breast cancer	27.1	22.1	22.6	2.7	1.7	27.0	0.4	4.2
Colon/rectal/anal cancer	20.6	19.0	8.4	2.0	1.4	20.7	-0.5	3.2
Prostate	29.0	14.3	102.8	2.9	1.1	25.1	15.5	3.9
<i>Respiratory diseases</i>	39.1	63.1	-38.0	3.9	4.8	47.8	-18.2	7.4
Chronic lower respiratory diseases	24.1	31.2	-22.8	2.4	2.4	20.2	19.3	3.1
Pneumonia	11.9	23.6	-49.6	1.2	1.8	16.2	-26.5	2.5
<i>Digestive diseases</i>	42.0	52.3	-19.7	4.2	4.0	30.8	36.4	4.8
Chronic liver disease and cirrhosis	21.0	32.0	-34.4	2.1	2.4	12.6	66.7	1.9
<i>Neuropsychiatric disorders</i>	11.8	15.7	-24.8	1.2	1.2	30.3	-61.1	4.7
<b>Communicable conditions</b>	13.2	20.8	-36.5	1.3	1.6	8.4	57.1	1.3
AIDS/HIV	0.2	0.8	-75.0	0.0	0.1	1.1	-81.8	0.2
<b>External causes</b>	147.8	139.6	5.9	14.7	10.6	40.3	266.7	6.2
<i>Unintentional</i>	97.3	102.2	-4.8	9.6	7.8	28.7	239.0	4.4
Road traffic injuries	21.3	14.7	44.9	2.1	1.1	9.9	115.2	1.5
Falls	11.8	7.5	57.3	1.2	0.6	6.1	93.4	0.9
<i>Intentional</i>	50.4	37.4	34.8	5.0	2.9	11.6	334.5	1.8
Self-inflicted (suicide)	41.1	23.2	77.2	4.1	1.8	10.6	287.7	1.6
Violence (homicide)	9.4	14.2	-33.8	0.9	1.1	1.0	840.0	0.2
<b>Ill-defined conditions</b>	11.4	64.0	-82.2	1.1	4.9	20.9	-45.5	3.2
<b>All causes</b>	1008.3	1312.2	-23.2	100.0	100.0	647.8	55.6	100.0

## Annex. Mortality data

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	76.4	-5.5	49.4	-2.4	151.7	-3.8
	M	86.1	-5.3	55.3	-2.5	170.5	-3.9
	F	66.1	-5.7	43.3	-2.4	131.9	-3.8
<i>Infectious and parasitic diseases</i>	M	2.3	-5.7	1.4	-1.1	10.9	-7.0
	F	2.4	-4.4	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	0.0	-12.5	0.2	-0.7	5.1	-8.2
	F	0.0	-12.5	0.1	-7.3	4.7	-7.9
<i>Malignant neoplasms</i>	M	3.3	-5.8	3.3	-1.8	5.1	-1.9
	F	4.8	-2.9	2.6	-1.8	4.2	-1.9
<i>Cardiovascular diseases</i>	M	1.0	-7.3	1.4	-3.1	3.3	1.1
	F	1.4	-5.0	1.3	-2.5	2.6	0.1
<i>Respiratory diseases</i>	M	3.5	-7.2	1.4	-4.3	35.9	-5.0
	F	6.4	-1.5	1.0	-4.2	30.7	-5.0
Pneumonia	M	2.1	-5.7	0.5	-6.0	20.9	-4.9
	F	2.6	-4.0	0.4	-5.1	17.9	-4.7
<i>Certain conditions originating in perinatal period</i>	M	295.9	-6.3	255.3	-2.1	607.6	-2.7
	F	226.6	-6.4	202.3	-1.6	427.5	-2.7
Congenital malformations & chromosomal abnormalities	M	19.3	-7.0	11.6	-2.9	24.2	-2.8
	F	17.6	-5.3	10.0	-3.3	21.0	-2.6
<i>Ill-defined causes</i>	M	6.9	10.1	5.0	-3.9	5.6	-0.6
	F	2.0	-3.3	3.4	-4.2	4.6	-1.0
<i>External causes of injury &amp; poisoning</i>	M	21.5	-3.8	7.0	-4.0	29.0	-3.4
	F	11.1	-7.0	4.6	-3.2	18.1	-3.1
Road traffic injuries	M	6.4	2.0	2.5	-4.5	4.7	-2.6
	F	2.3	-5.1	1.7	-4.8	3.0	-1.6

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	132.8	-1.9	56.0	-2.3	161.0	-0.9
	M	212.2	-1.7	82.0	-2.3	241.7	-1.0
	F	51.7	-2.4	29.3	-2.2	79.0	-0.6
<i>Infectious and parasitic diseases</i>	M	3.9	0.1	1.2	1.5	12.3	3.0
	F	0.6	-10.2	0.8	1.9	5.1	2.5
Malignant neoplasms	M	7.2	-3.7	6.2	-1.0	8.8	-1.9
	F	6.5	-3.7	4.7	-1.4	7.7	-1.9
<i>Cardiovascular diseases</i>	M	9.8	-1.6	4.1	-2.4	17.6	0.0
	F	2.2	-4.3	2.3	-2.0	7.3	-0.9
<i>Respiratory diseases</i>	M	2.2	-1.4	1.4	-3.6	6.9	0.2
	F	2.8	9.9	0.9	-2.7	3.8	-1.1
<i>Digestive diseases</i>	M	4.3	-0.4	0.9	-3.5	8.0	3.0
	F	0.5	-4.5	0.5	-3.8	3.7	3.1
Ill-defined causes	M	10.1	51.2	4.0	-3.1	11.6	7.1
	F	2.5	27.6	1.4	-1.3	3.3	5.8
<i>External causes</i>	M	167.5	-1.9	58.3	-1.4	162.4	-1.6
	F	29.5	-1.4	14.4	-1.6	36.9	-0.2
Road traffic injuries	M	45.8	0.9	28.5	-1.3	27.8	-1.5
	F	10.0	3.0	7.3	-1.4	8.0	0.3
Accidental drowning	M	11.1	-6.6	1.3	-2.2	10.8	-3.9
	F	0.5	-9.6	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	13.2	-3.0	2.8	0.0	19.1	3.3
	F	3.0	1.1	0.7	0.8	4.4	2.5
Self-inflicted (suicide)	M	57.5	0.1	12.7	-1.8	36.8	0.0
	F	6.0	-4.4	3.1	-2.2	5.8	-1.3

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	342.0	-3.7	120.3	-2.5	453.8	-0.7
	M	539.4	-3.8	161.6	-2.6	700.0	-0.8
	F	152.9	-3.5	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	26.0	-5.7	27.6	-2.3	40.2	-2.8
	F	44.4	-2.1	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	3.1	-9.0	5.0	-3.4	7.3	-4.2
	F	0.7	-5.8	2.8	-0.6	2.2	-1.0
Female breast cancer	F	9.4	-3.0	10.0	-2.6	10.0	-2.3
<i>Cardiovascular diseases</i>	M	85.7	-3.6	26.1	-2.5	158.6	-0.4
	F	21.8	-3.1	10.4	-2.1	45.3	0.0
Ischaemic heart disease	M	35.2	-6.5	11.8	-3.1	73.7	-2.2
	F	5.7	-6.5	2.4	-2.7	14.4	-1.3
Cerebrovascular diseases	M	14.5	-3.0	4.4	-3.2	24.6	-0.4
	F	6.3	-3.5	3.6	-2.5	10.6	-1.3
<i>Respiratory diseases</i>	M	14.8	-1.5	3.9	-3.5	34.3	0.9
	F	3.7	-3.3	2.2	-2.0	9.8	0.8
<i>Digestive diseases</i>	M	40.6	1.5	12.6	-2.4	50.2	1.4
	F	12.0	0.3	5.4	-1.7	19.4	4.1
<i>External causes</i>	M	309.3	-3.5	58.8	-1.2	299.5	-1.9
	F	51.6	-3.5	15.1	-1.8	58.9	-1.0
Road traffic injuries	M	45.2	1.4	16.0	-0.5	31.4	-1.7
	F	7.0	6.9	3.9	-2.0	7.1	-0.5
Self-inflicted (suicide)	M	94.2	-2.4	21.2	-1.5	54.9	-2.4
	F	17.6	-0.7	5.8	-2.2	7.9	-2.5

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	1026.7	-2.6	435.6	-1.3	1294.9	-0.6
	M	1619.6	-2.7	580.1	-1.4	1981.7	-0.6
	F	531.0	-2.6	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	345.5	-1.3	218.2	-1.2	323.2	-1.9
	F	195.1	-0.4	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	105.6	-2.4	65.9	-1.5	101.4	-2.9
	F	13.2	4.3	21.8	3.4	15.4	1.0
Female breast cancer	F	52.1	0.4	44.0	-2.2	45.3	0.1
<i>Cardiovascular diseases</i>	M	524.7	-2.7	156.4	-2.6	793.1	-0.1
	F	140.7	-3.7	50.9	-2.5	271.7	-0.6
Ischaemic heart disease	M	328.0	-3.6	86.2	-3.3	435.3	-0.7
	F	53.4	-5.9	17.8	-3.4	111.1	-0.6
Cerebrovascular diseases	M	73.1	-3.6	23.7	-2.6	168.6	-0.9
	F	39.1	-3.8	14.5	-2.1	88.4	-1.4
<i>Respiratory diseases</i>	M	58.1	-3.2	20.3	-1.7	108.7	-1.4
	F	13.2	-1.7	10.2	-1.3	24.5	-0.7
<i>Digestive diseases</i>	M	111.1	5.3	49.6	-0.8	129.7	0.7
	F	46.1	4.5	20.3	-0.7	57.3	1.9
<i>External causes</i>	M	465.6	-2.8	62.8	-1.0	409.2	-0.9
	F	95.0	-2.6	20.9	-0.9	89.1	-1.1
Road traffic injuries	M	46.0	0.2	13.0	-1.3	28.5	-1.8
	F	11.1	-1.3	4.1	-2.1	7.5	-1.4
Self-inflicted (suicide)	M	138.3	-1.9	23.1	-1.1	68.1	-2.4
	F	22.2	-1.4	8.5	-1.2	10.2	-3.4

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	2507.2	-1.6	1570.9	-1.9	3411.7	-0.1
	M	3982.2	-1.2	2156.9	-2.1	4996.4	0.1
	F	1552.8	-2.5	1069.2	-1.9	2339.0	-0.6
<i>Malignant neoplasms</i>	M	1082.8	-1.1	851.3	-1.4	1002.5	-0.8
	F	447.7	-0.6	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	343.2	-1.9	261.8	-1.9	321.7	-1.5
	F	31.1	-0.7	59.0	0.2	37.1	-1.4
Female breast cancer	F	81.1	1.5	79.7	-1.6	68.7	1.3
<i>Cardiovascular diseases</i>	M	1953.0	-1.1	744.9	-3.6	2903.0	0.6
	F	788.6	-3.4	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	1285.1	-1.7	381.3	-4.2	1582.2	1.2
	F	437.3	-3.9	133.5	-4.6	731.4	0.5
Cerebrovascular diseases	M	395.6	-0.8	143.3	-3.7	833.7	0.2
	F	215.8	-3.8	86.7	-4.1	528.9	-0.8
<i>Respiratory diseases</i>	M	231.7	-2.0	144.0	-3.5	303.0	-2.4
	F	35.9	-6.4	62.5	-2.4	68.6	-3.6
<i>Digestive diseases</i>	M	159.3	4.2	111.6	-1.6	193.0	0.1
	F	64.1	1.0	54.1	-1.7	94.2	0.2
<i>External causes</i>	M	367.0	-0.9	79.3	-1.4	320.0	1.0
	F	101.9	-0.5	32.1	-2.1	88.7	-0.5
Road traffic injuries	M	32.6	-2.4	14.8	-3.0	24.3	-1.5
	F	15.9	1.8	5.9	-3.4	9.5	-1.0
Self-inflicted (suicide)	M	95.5	-0.4	24.5	-1.6	60.5	-0.8
	F	16.9	-3.9	8.7	-2.6	12.7	-3.1

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

Causes of death	Sex	Lithuania (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
<b>All causes</b>	Both	9638.6	-1.0	8059.6	-1.0	12338.8	0.0
	M	12239.7	-0.1	9832.0	-1.1	14838.0	0.1
	F	8605.7	-1.4	7112.5	-0.9	11421.7	0.0
<i>Malignant neoplasms</i>	M	1957.7	1.7	2231.1	-0.4	1489.3	1.2
	F	887.6	1.5	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	396.3	2.2	457.1	-0.7	323.5	1.0
	F	61.5	3.0	102.7	1.5	55.6	0.5
Female breast cancer	F	122.5	6.5	159.6	-0.4	92.0	3.1
<i>Cardiovascular diseases</i>	M	8514.2	-0.3	4356.2	-2.1	10221.2	0.4
	F	6913.9	-1.7	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	5874.6	-0.7	1708.0	-2.2	4925.6	1.4
	F	4492.1	-2.3	1150.0	-2.2	4028.6	1.2
Cerebrovascular diseases	M	1770.6	1.5	1119.8	-2.5	3004.4	0.7
	F	1729.8	0.0	1026.9	-2.4	2967.6	0.5
<i>Respiratory diseases</i>	M	802.5	0.9	1156.5	-2.4	824.1	-2.1
	F	222.8	-2.5	591.9	-2.1	302.3	-3.2
<i>Digestive diseases</i>	M	261.4	3.4	340.3	-1.1	270.4	0.3
	F	193.0	5.6	279.8	-0.4	175.0	1.1
<i>External causes</i>	M	338.7	-2.0	275.0	-0.6	604.2	0.1
	F	145.2	0.8	187.8	-1.2	172.4	-1.2
Road traffic injuries	M	39.8	-2.2	28.1	-2.2	34.6	-3.1
	F	14.9	-2.6	10.0	-3.1	14.7	-1.7
Self-inflicted (suicide)	M	93.5	-4.4	49.5	-1.6	86.6	-1.1
	F	24.9	-3.3	11.8	-3.2	22.4	-1.9

## Technical notes

### Calculation of averages

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

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

### Data sources

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

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

### Disease coding

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

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

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

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

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

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

### Limitations of national-level data

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

### Reference groups for comparison

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

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

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what could be improved in the future. Differences between countries and average values allow the formulation of hypotheses of causation or imply links or remedies that encourage further investigation.

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

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

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

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

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

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

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

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## Glossary

### Causes of death

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

### Technical terminology

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

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