



Highlights on health in the Republic of Moldova 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

According to WHO estimates, a person born in the Republic of Moldova in 2003 can expect to live 67 years on average: 71 years if female and 63 years if male. For that year, the official national estimate for life expectancy, based on nationally reported figures, was 68 years, which is close to the Eur-B+C average of 69 years. Life expectancy in the country is about 11 years lower than the Eur-A average of 79 years. However, despite being the second poorest county in the European Region, the life expectancy estimate is 2–5 years higher than similar estimates for a number of considerably richer regional countries.

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

In 2003, the infant mortality rate in the Republic of Moldova was 14 deaths per 1000 live births, which is considerably better than the Eur-B+C average of 20 deaths per 1000 live births. Lithuania, at 7 deaths per 1000 live births, achieved the lowest infant mortality rate in Eur-B+C that year. Between 1995 and 2003, in the Republic of Moldova, infant mortality fell by 33% (if 1995 is taken as 100%). For the same period, neonatal mortality also fell, from about 12 deaths per 1000 live births in 1995 to about 7 deaths per 1000 live births in 2003. In 2003, the Eur-B+C average was about 7 neonatal deaths per 1000 live births, and the best estimate for the Eur-A average was about 3 neonatal 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

Between 1990 and 2002, maternal mortality rates in the Republic of Moldova fell by almost 23% – this despite a rate increase between 1990 and 1992. From 1992 to 2002, the rates fell by about 36%. For the Republic of Moldova to reach its Millennium Development Goal target, the maternal mortality rate would have to fall another 68% from the 2002 level.

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

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

Main causes of death

In general, mortality rates in the Republic of Moldova are about 10% higher than the Eur-B+C average rates and over twice as high as the Eur-A average rates. The single most prominent cause of excess mortality is chronic liver disease and cirrhosis, the occurrence of which is very closely related to the average level of alcohol consumption in the population. The mortality rate in the Republic of Moldova for chronic liver disease and cirrhosis is over three times higher than the Eur-B+C average rate and over eight times higher than the Eur-A average rate. Other causes of considerable excess mortality are diseases of

the digestive and respiratory systems, as well as ischaemic heart disease. Also, excess mortality due to external causes is slightly over 20% lower than the corresponding Eur-B+C average, although it is almost three times higher than the corresponding Eur-A average.

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

The Republic of Moldova has 4.3 million inhabitants, 752 000 of whom live in Chisinau, the capital city. It is the most densely populated country (127 people per km²) in the former Soviet Union.

At the beginning of January 2004, the resident population of the Republic of Moldova was 3.6 million people, which does not include the districts on the left bank of the Nistru River and Bender Municipality. The latter are also referred to as the Transdnestr region, which has been partly autonomous since 1997. The region had a population estimated at 0.6 million inhabitants in 2003. It does not provide mortality data to WHO and, consequently, mortality figures have a different population base since 1997, compared with the preceding period. The left bank is considerably more urban and industrial, and the percentage of ethnic Russians and Ukrainians is higher while that of Moldovans is lower. In general, the *de jure* population of the Republic of Moldova has decreased by about 3.3% since 1990, but the *de facto* population remains unknown in the absence of a recent population census.

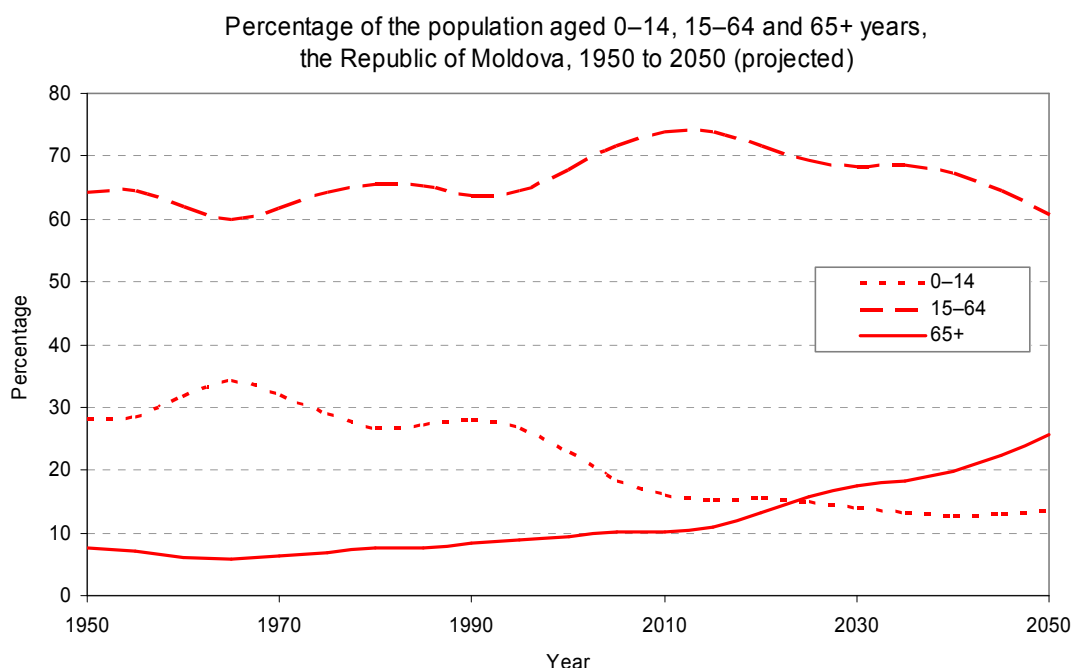
In the Republic of Moldova, the total fertility rate, which is roughly the average number of children that would be born alive to a woman during her lifetime, is estimated at 1.4 children on average for the period 2000–2005. To ensure a stable population size, it needs to be above 2.1 children. The net reproduction rate, which is roughly the average number of daughters that would be born to a woman, is an alternative indicator: it was 0.58 daughters in 2002. The total fertility rate was relatively high in the past decades and remained higher than the Eur-B+C-average until 1994, when it fell considerably.

The crude death rate – which is roughly the average number of deaths each year per 1000 people – for the Republic of Moldova was 11.9 deaths per 1000 population (2003); the rate is closer to the Eur-B+C average rate than that of any other country in the reference subgroup. It has increased 22% since 1990, but this increase is practically the same as the Eur-B+C average increase of 21%.

The mortality rate among older people, particularly among women, is higher than the corresponding Eur-B+C average rate. This age-specific mortality pattern and the relatively high fertility rate in previous decades explain why the population structure of the Republic of Moldova remains relatively young: the percentage of the population aged 0–14 years is higher than the Eur-B+C average for this age group, while that of people 65 years of age and older is lower than the average (9.8% for the Republic of Moldova versus 12.3% for the Eur-B+C average). Nevertheless, as with many other countries in Eur-B+C, an increasingly aging population is also projected for the Republic of Moldova (Annex. Age pyramid).

Overall, there is a natural population decrease due to the death rate exceeding the birth rate. Unlike most other countries of central and eastern Europe (CCEE) and the Commonwealth of Independent States (CIS), the birth rates remained higher than the death rates well into the 1990s, but the natural population growth turned negative in 1998.

The Republic of Moldova also has uninterrupted negative net migration since 1982. On average, the population has been shrinking, due solely to migration, at a rate of -0.32% per year. The rate has not changed much since the break-up of the Soviet Union.



Selected demographic indicators in the Republic of Moldova and Eur-B+C, 2003 or latest available year

Indicators	Republic of Moldova	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	4216.2	–	–	–
0–14 years (%)	20.3	–	–	–
15–64 years (%)	69.9	–	–	–
65+ years (%)	9.8	–	–	–
Urban population (%) ^a	45.9	63.7	25.0	73.3
Live births (per 1000)	10.1	12.8	8.6	27.1
Natural population growth (per 1000)	–1.8	0.8	–7.5	23.0
Net migration (per 1000) ^a	–0.9	1.8	–6.6	2.1

^a 2002.

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

Socioeconomic indicators

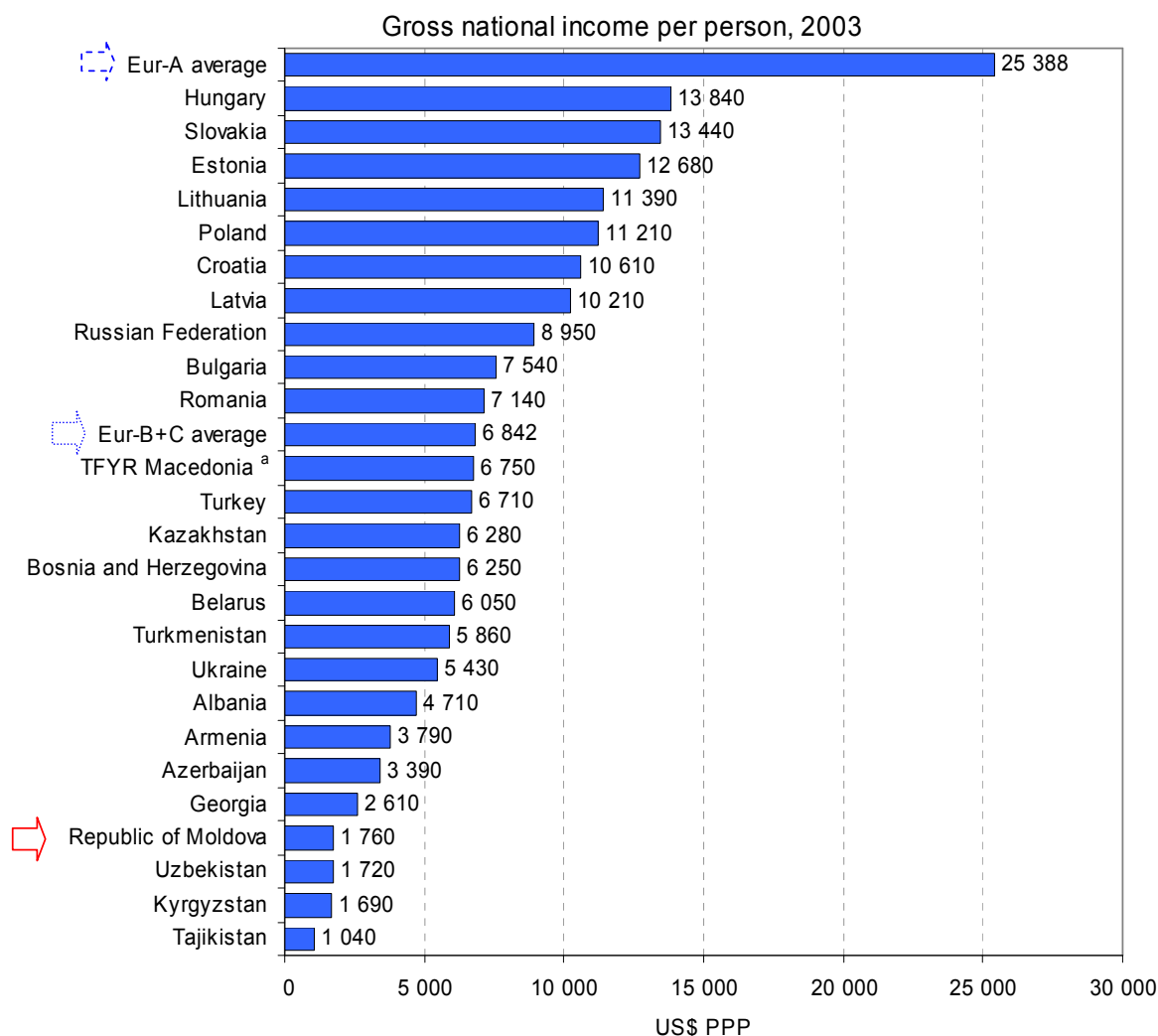
Health outcomes are influenced by various factors that operate at individual, household and community levels. Obvious factors are, for example, diet, health behaviour, access to clean water, sanitation and health services. However, underlying health determinants of a socioeconomic nature also play a 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 the Republic of Moldova, the per person gross national income, adjusted for purchasing power parity (PPP), was US\$ 1760 in 2003, which is below the Eur-B+C average (US\$ 6842).



^a The former Yugoslav Republic of Macedonia

Source: World Bank (2005).

Annual household surveys in the Republic of Moldova, conducted from 1988 to 2001, found that since 1988, when the absolute poverty rate was 3.4%, using the US\$ 4.30 per person per day benchmark, the rates have been very high. They peaked in 1999 at 94.7% of the population living on US\$ 4.30 or less per day. By 2001, the rate was 92.1%. That same year, 64.0% of the population lived on US\$ 2.15 or less per day (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.

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.

Despite pervasive poverty, the Republic of Moldova's Gini index is relatively high (36.1), indicating an inequitable distribution of the little income available in the country. The Gini indices for 15 Eur-B+C countries for 2000–2002 range from 26.1 for Bosnia and Herzegovina (2001) to 45.6 for 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.

In the Republic of Moldova, in 2000, net secondary school enrolment was 68.6%, the lowest among the Eur-B+C countries with comparable data that year (average 81.2%) (UNESCO, 2005).

Employment

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

The total unemployment rate in the Republic of Moldova was 7.3% in 2001, which was lower than the Eur-B+C average of 12.9% for that year, keeping in mind that national rates are based on estimates of people available and seeking employment and that countries have different definitions of labour force and unemployment (ILO, 2005).

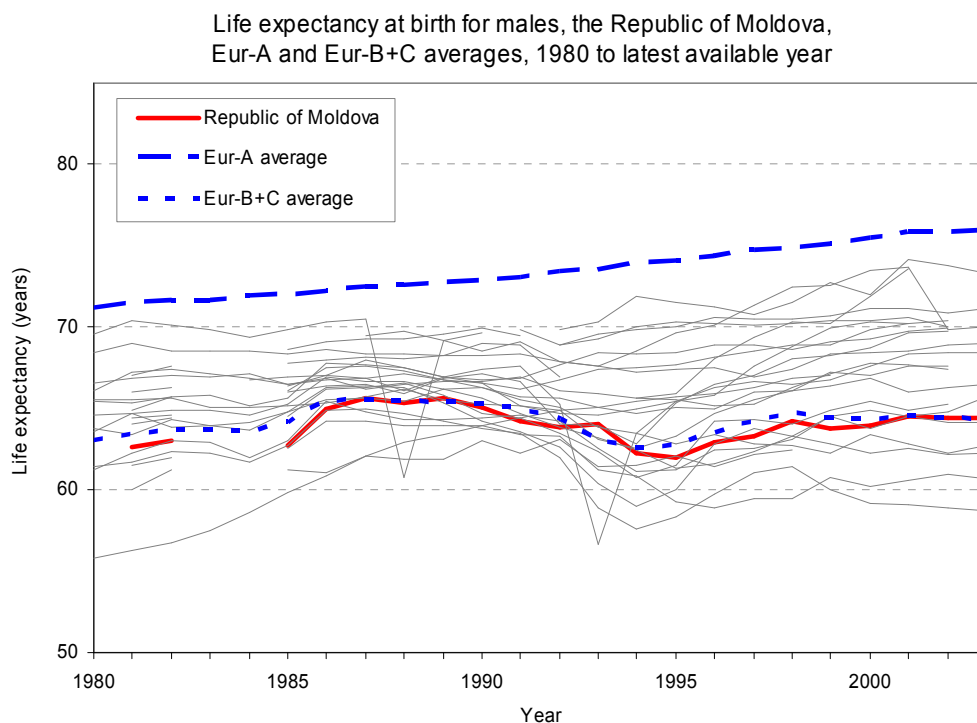
Life expectancy (LE) and healthy life expectancy (HALE)

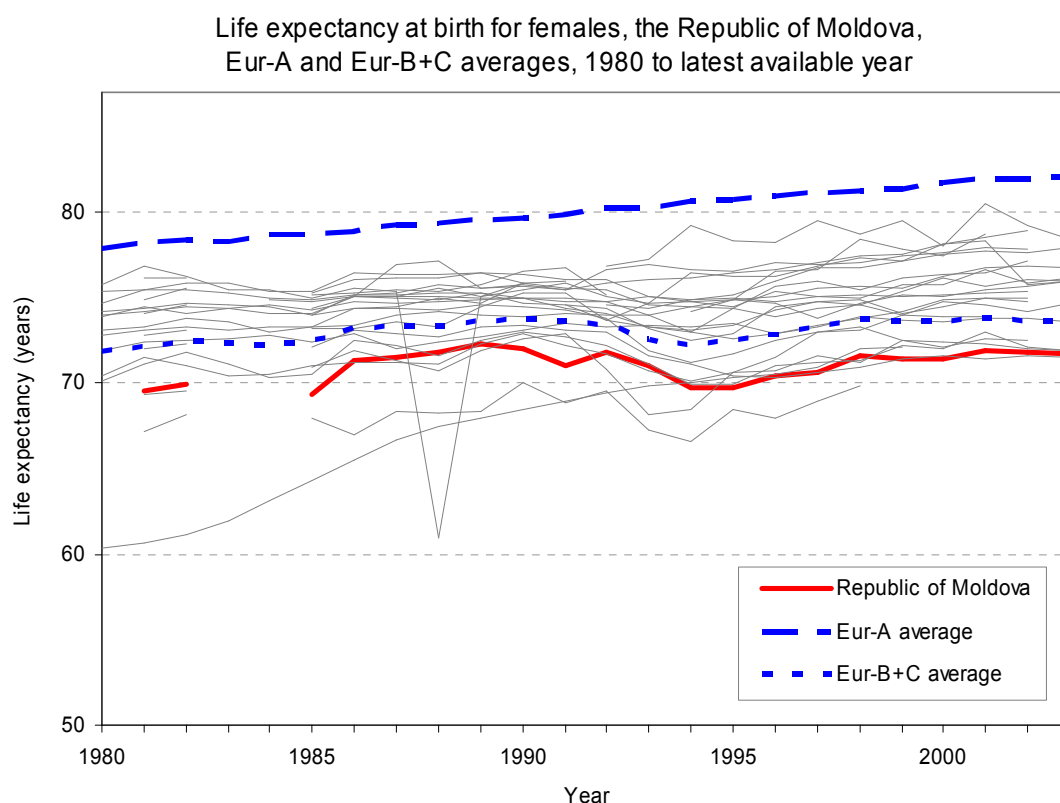
Historically, in the immediate postwar period in the countries of the former Soviet Union, there were large gains in LE. However, by 1965 these stagnated and subsequently declined, interrupted by a short improvement in the late 1980s, during the “Gorbachev anti-alcohol campaign”. There was further deterioration in the 1990s and, although LE started to improve around 1995, by 1999 the positive trend lost momentum and turned downwards. This suggests that the economic recovery of recent years has not tangibly improved LE and other key health indicators. It is believed that the stagnation in health trends is partly due to the relatively rapid increase in the income inequalities in the countries of the former Soviet Bloc in the 1990s.

According to figures compiled by WHO (WHO, 2005), a person born in the Republic of Moldova in 2003 can expect to live 67 years on average: 71 years if female and 63 years if male. The official nationally reported estimate, based on mortality registration, is about 68 years. Since the WHO estimate is reasonably close to the official national statistics of the Republic of Moldova and since the difference between the LE estimates is mostly due to the difference in under-5 mortality, the official nationally reported mortality data should be sufficiently accurate for the purpose of this document. Therefore, these data are used almost exclusively in the remainder of this report, except for the indicators of maternal and early childhood mortality, for which both the official nationally reported country statistics and the WHO estimates are given.

The nationally reported LE in the Republic of Moldova is 68.1 years (2003) – close to the Eur-B+C average of 68.7 years, which is based on official nationally reported mortality registration data too. The LE level in the country is, however, about 11 years below the Eur-A average of 79.0 years. Nevertheless, it should be noted that for a relatively poor country, in terms of the Region’s gross domestic product (GDP) per person, the Republic of Moldova presents an LE estimate (WHO) that is 2–5 years higher than the LE estimates (WHO) for a number of considerably (2–4 times) richer CIS countries.

The LE for males follows closely the Eur-B+C average LE, while the LE for females is about two years below the Eur-B+C average LE. In general, both indicators present contours that are similar to the respective Eur-B+C averages. Therefore, the female–male difference in LE in the Republic of Moldova is two years lower than the respective Eur-B+C average of nine years (the Eur-A average is six years).





Generally, LE trends in low-income and low-to-middle-income countries are strongly associated with GDP indicators. However, around 1998, LE in the Republic of Moldova decoupled from the trend in the GDP and improved notably, although the income level did not recover from the level around 1995, when it *bottomed up*. Such a divergence can be observed in at least three other CIS countries of relatively low income – namely, Georgia, Kyrgyzstan and Uzbekistan, which around 2002 still struggled with income levels below the CIS depression levels in 1994–1995, but nevertheless managed to visibly improve LE after the mid-1990s crisis.

Interestingly, LE in the Russian Federation also decoupled from the GDP trend around 1998, but oppositely – LE dropped while GDP grew strongly. Belarus seems to present the same pattern, although LE remained rather unchanged.

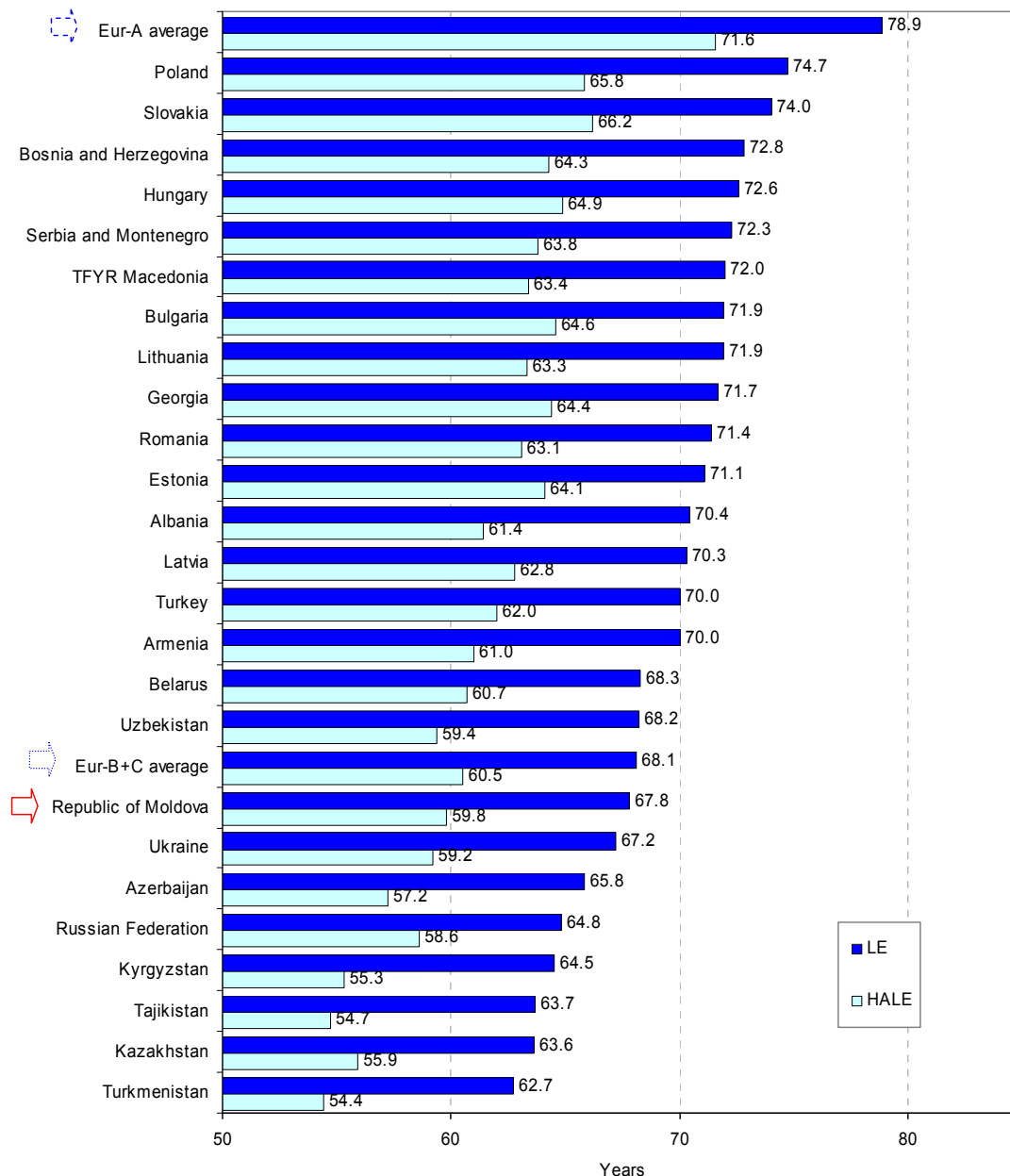
This divergence is unlikely to be explained by sudden changes in the major behavioural risk factors or in the health services. Neither can it be explained by a more complete registration of deaths, at least not in the cases of Belarus, the Republic of Moldova and the Russian Federation. Changes in the de facto population base, however, both in terms of composition and size, may play a role. In particular, in the case of the Republic of Moldova, one should keep in mind the above-mentioned change in the socioeconomic and ethnic composition of the reference population since 1997 as a possible factor that explains the changes in the mortality pattern.

Healthy life expectancy

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. According to WHO estimates for 2002, people in the Republic of Moldova can expect to live 59.8 healthy years on average: 62.4 years if female and 57.2 years if male. This is about 11.8 years less than the Eur-A average (71.6 years) and 0.7 year less than the Eur-B+C average (60.5 years). It should be noted, however, that some statistical uncertainties are inherent in these estimates, and they should not be regarded as exact measurements. The best achievement in the Region is 73.3 years for people living in Sweden: 74.8 years if female and 71.9 years if male. At age 60 years, the HALE in the Republic of Moldova is 13.2 years if female and 11.0 years if male, while in Sweden those estimates are 19.6 years if female and 17.1 years if male.

Alternatively, the expected length of life spent in less than good health in the Republic of Moldova is 9.2 years if female and 6.8 years if male, which is close to the estimates for Sweden: 7.9 years if female and 6.2 years if male.

LE and HALE, the Republic of Moldova, Eur-A and Eur-B+C averages, 2002



Source: 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 (disability groups), in descending order, that account for approximately 90% of the burden of disease among males and females in the Republic of Moldova. Cardiovascular diseases (CVD) and neuropsychiatric conditions account for the highest burden of disease, both among males and females. Because mortality from neuropsychiatric conditions is minor, disability in daily living comprises the bulk of their burden on the population's health.

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

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Neuropsychiatric conditions	20.1	Cardiovascular diseases	26.0
2	Cardiovascular diseases	19.7	Neuropsychiatric conditions	19.0
3	Unintentional injuries	12.8	Digestive diseases	10.1
4	Digestive diseases	9.5	Malignant neoplasms	8.3
5	Malignant neoplasms	7.7	Unintentional injuries	5.3
6	Intentional injuries	5.6	Musculoskeletal diseases	5.1
7	Infectious and parasitic diseases	4.7	Sense organ diseases	4.6
8	Respiratory diseases	3.5	Respiratory diseases	3.7
9	Sense organ diseases	3.0	Infectious and parasitic diseases	2.6
10	Respiratory infections	2.6	Congenital anomalies	2.3

Source: Background data from WHO (2003c).

Main risk factors

The 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 the Republic of Moldova. According to the DALYs, alcohol and tobacco place the greatest burden of disease on the Moldovan 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 the Republic of Moldova (2002)

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Alcohol	27.2	High blood pressure	15.3
2	Tobacco	14.9	High cholesterol	12.9
3	High blood pressure	11.3	Alcohol	12.8
4	High cholesterol	8.8	High BMI	10.0
5	High BMI	5.6	Low fruit and vegetable intake	6.6
6	Low fruit and vegetable intake	5.3	Physical inactivity	5.1
7	Physical inactivity	3.5	Tobacco	3.2
8	Indoor smoke from solid fuels	1.3	Unsafe sex	2.2
9	Illicit drugs	1.1	Indoor smoke from solid fuels	1.9
10	Lead	1.1	Contaminated injections in health care settings	1.0

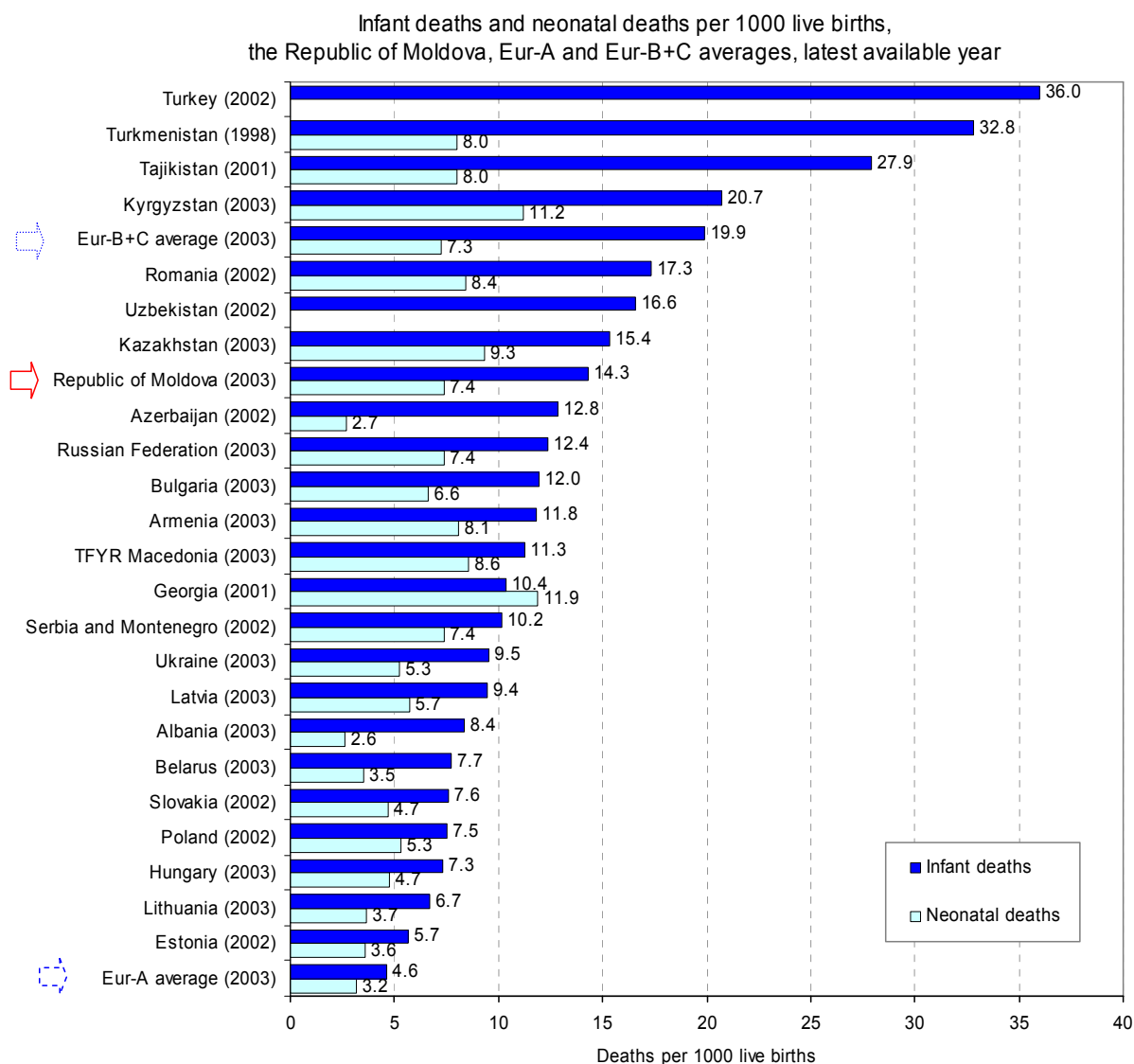
Source: Background data from WHO (2003c).

Mortality

Infant, neonatal and child mortality

In 2003, the infant mortality rate in the Republic of Moldova was 14.3 deaths per 1000 live births, which is considerably better than the Eur-B+C average of 19.9 deaths per 1000 live births. The best achievement in the Eur-B+C group was 6.7 deaths per 1000 live births, for Lithuania. Between 1995 and 2003, infant mortality fell by 33% (if 1995 is 100%).

Neonatal mortality also fell, from 11.6 deaths per 1000 live births (1995) to 7.4 deaths per 1000 live births (2003). In 2003, the Eur-B+C average was 7.3 deaths per 1000 live births, and the best estimate for the Eur-B+C group was between 3 and 4 neonatal deaths per 1000 live births.



National data and WHO estimates for 2002 show that of every 1000 live births in the Republic of Moldova, there is a probability that about 18 children will die before age five. The lowest WHO estimates for the Eur-B+C countries are for Estonia and Slovakia, each at 8 deaths per 1000 live births. The Millennium Development Goal (MDG) for the under-5 mortality rate for Europe and central Asia is 15 deaths per 1000 live births by 2015. Adjusting for the known biases in national data (underreporting of vital statistics), WHO estimates the Republic of Moldova's latest probability (2002) to be 27 under-5 deaths per 1000 live births. Whether the Republic of Moldova reaches the MDG goal by 2015, according to WHO estimates, is uncertain, as the 2002 estimated rate is greater than that for 2000.

The WHO estimates are the best available. Some of them are published together with their ranges of statistical uncertainty, the lower boundary of which means definite underreporting. Given that, under-5 mortality appears clearly underreported. Nevertheless, WHO estimates that under-5 mortality has dropped in the period 1990–2003 at an average annual rate of about 1%. The average annual rate of change for the period 2000–2003 for the European Region as whole is about -3.5%.

The other WHO estimates above are difficult to interpret, but the conclusion that under-5 mortality is underreported means that infant and neonatal mortality registration should be interpreted in a similar way.

As mentioned, in an attempt to estimate possible underreporting of mortality data in the official nationally reported statistics, WHO produces concurrent estimates by systematically analysing complementary information from various sources and statistical modelling. The following table compares the nationally reported statistics and the WHO estimates for four indicators prone to under-registration.

Comparison of key indicators of child and maternal mortality in the Republic of Moldova based on nationally reported data and WHO estimates to assure comparability

Indicator	Nationally reported ^a	WHO estimates
Infant mortality per 1000 live births, 2000 (MDG indicator)	18.4	24 ^b
Neonatal mortality per 1000 live births, 2000	10.7	16 ^c
Under-5 mortality per 1000 live births (MDG indicator)	17.7	32 (24–40) ^c
Maternal mortality per 100 000 live birth, 2000 (MDG indicator)	27.1	36 ^c

^a WHO Regional Office for Europe (2005); ^b WHO (2004); ^c WHO (2005).

Maternal mortality

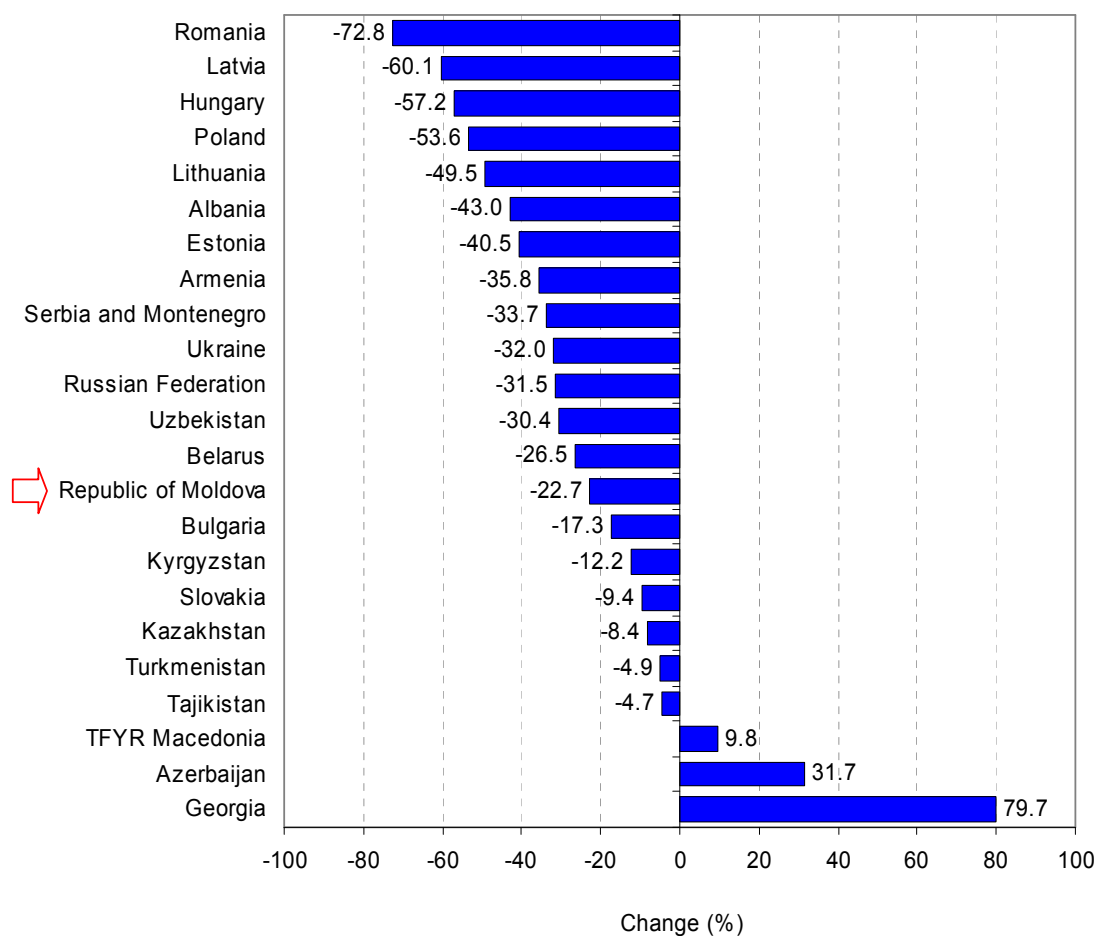
Maternal mortality rates (MMR) and the Millennium Development Goal (MDG)

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 data in the maternal mortality registration appears reasonably accurate in international comparisons. As shown in the following figure, between 1990 and 2002, the MMR in the Republic of Moldova fell by almost 23% – this despite a rate increase between 1990 and 1992 (with a peak of about 50 maternal deaths per 100 000 live births). From 1992 to 2002, the rates fell by about 36%. Of the eight maternal deaths reported in the Republic of Moldova in 2003, four were attributed to abortion. For the Republic of Moldova to reach its MDG target, the MMR would have to fall another 68% from the 2002 level.

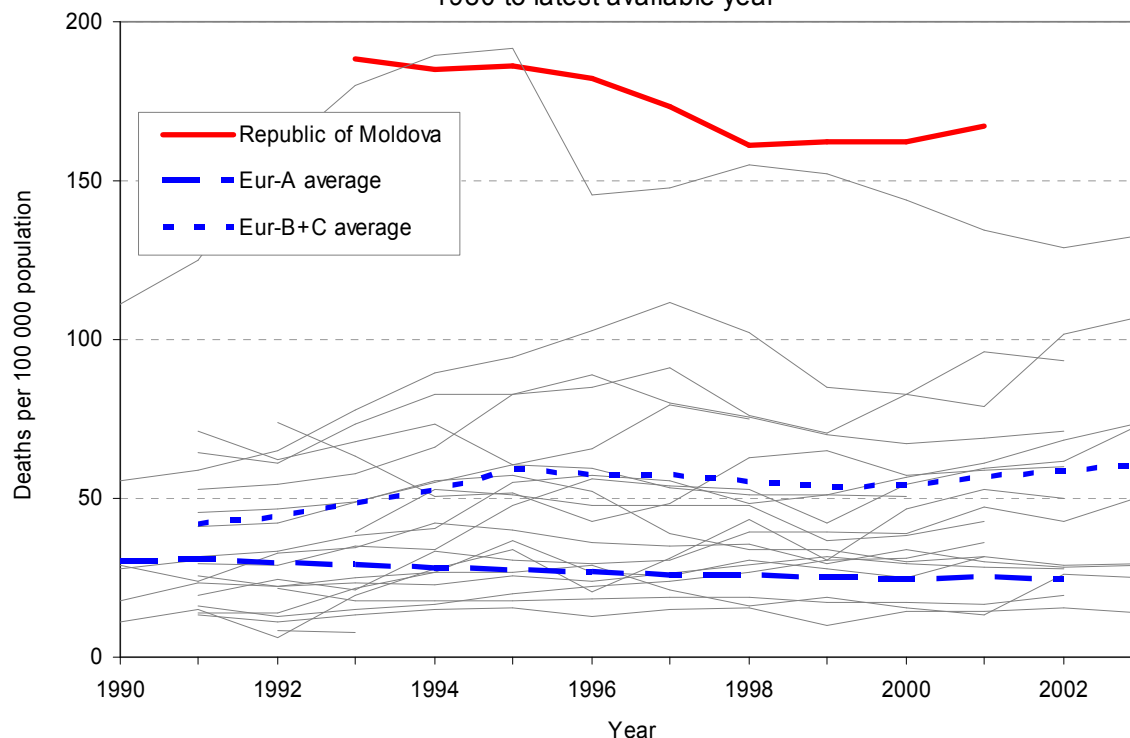
Per cent change for maternal mortality (3-year moving averages),
1990 to 2002 or latest available year



Excess mortality

In general, mortality rates in the Republic of Moldova are about 10% higher than the Eur-B+C average rates, but over twice as high as the Eur-A average rates (Annex. Selected mortality). Unlike some other CIS countries, the highest excess mortality is not due to external causes, which are actually 20% less frequent a cause of death in the country than in the Eur-B+C on average, although they are still 2.7 times higher than the Eur-A average. The single most prominent cause of excess mortality is chronic liver disease and cirrhosis (see figure that follows), the occurrence of which is very closely related to the average level of alcohol consumption in the population. It is 3.2 times higher than the Eur-B+C average and 8.2 times higher than the Eur-A average. On the one hand, this indicates that there is a high level of alcohol-related harm; on the other hand, it may indicate a culture of alcohol consumption – similar to the countries of southern Europe – and may not necessarily be the cause of as many accidents as in some neighbouring CIS countries.

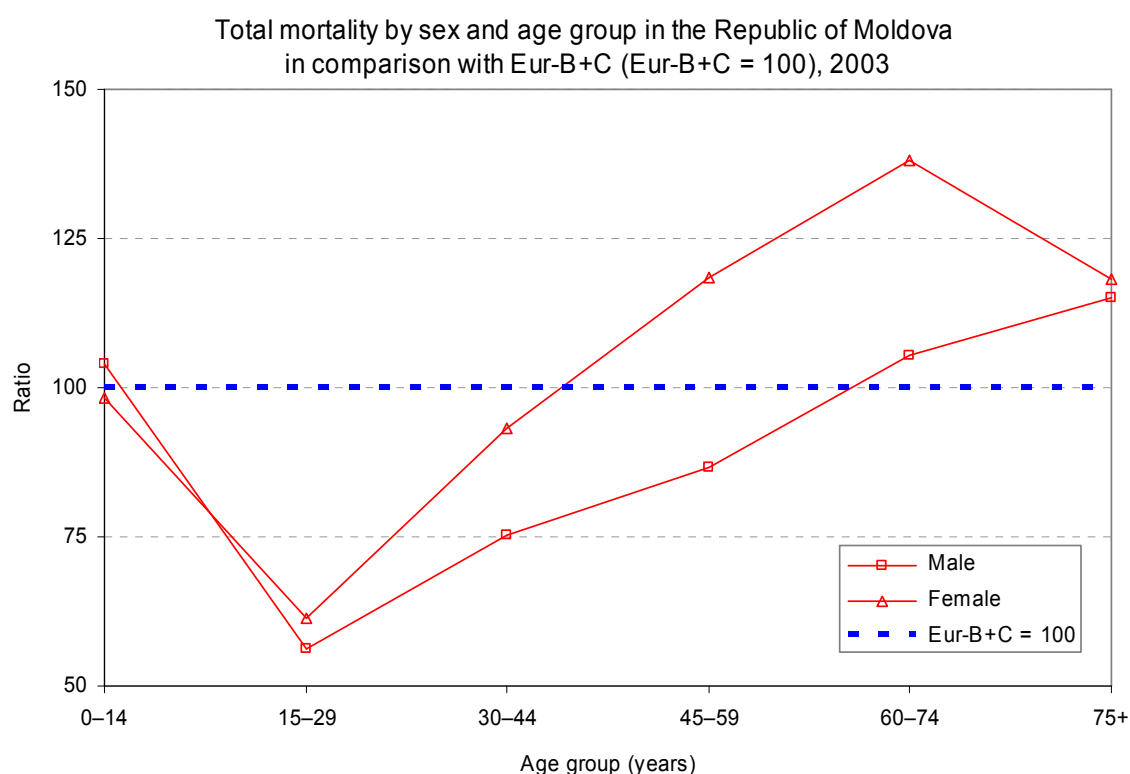
Standardized death rate (SDR) for chronic liver disease and cirrhosis in people aged 45–59 years, the Republic of Moldova, Eur-A and Eur-B+C averages, 1980 to latest available year



Note: Data for the Republic of Moldova are 5-year moving averages.

Other causes of considerable excess mortality are diseases of the digestive system and the respiratory system, as well as ischaemic heart disease.

Comparative analyses of variations in mortality by sex and age, and possibly socioeconomic variables, can help to understand better the causes underlying the average rates in the country. As shown in the following figure, the mortality trends, by age group, in the Republic of Moldova have had opposing affects on the total mortality, as the decrease in child mortality over time has somewhat mitigated certain mortality increases in older people. The result is that, despite considerable swings, mortality at the end of the period 1990–2003 was only slightly higher than at the start. While under-5 mortality and mortality among older children and adolescents have decreased steadily, mortality in adults practically returned to the levels at the start of the period, and mortality in people aged 65 years and older actually increased (LE at age 65 years decreased by 1.3 years). This pattern differs from that observed in other CIS countries – in particular, the Russian Federation – in that mortality in middle-aged adults has suffered comparatively little. It should be noted again that the levels and trends of mortality in the Republic of Moldova have been remarkably close to the Eur-B+C averages.



Due to the higher mortality in the CIS countries about 1994–1995 (in the aftermath of the geopolitical collapse of the former Soviet Union), the trends for the period 1995–2003, which are reviewed next, are generally more favourable than those for the entire period 1990–2003 (Annex. Mortality data).

In the age group 0–14 years, the mortality rate in the Republic of Moldova of 154 deaths per 100 000 population (2003) is almost the same as the Eur-B+C average of 152 deaths per 100 000 population, although it is three times higher than the Eur-A average (for 2002) of 49 deaths per 100 000 population. It has improved by 3.7% over the 1995 level. Also, it is similar to the improvement in the Eur-A average rate (3.8%) and considerably better than the improvement in the Eur-B+C average rate (2.4%). With minor exceptions, the improvement encompasses all causes of death and both sexes.

In the age group 15–29 years, the total mortality rate in the Republic of Moldova is closer to the Eur-A average rate than to the Eur-B+C average rate. This is due mostly to the considerably lower mortality from external causes than is present in the Eur-B+C average, which highlights the relatively safe environment of the Republic of Moldova. Mortality from cardiovascular diseases in this age group is also markedly lower than the Eur-B+C average for this cause. Since 1995, the rates for all causes of mortality improved (except for infectious and parasitic diseases, for which the Eur-A and Eur-B+C averages for these causes did not improve either) and did so on a larger scale than the corresponding Eur-A and Eur-B+C averages.

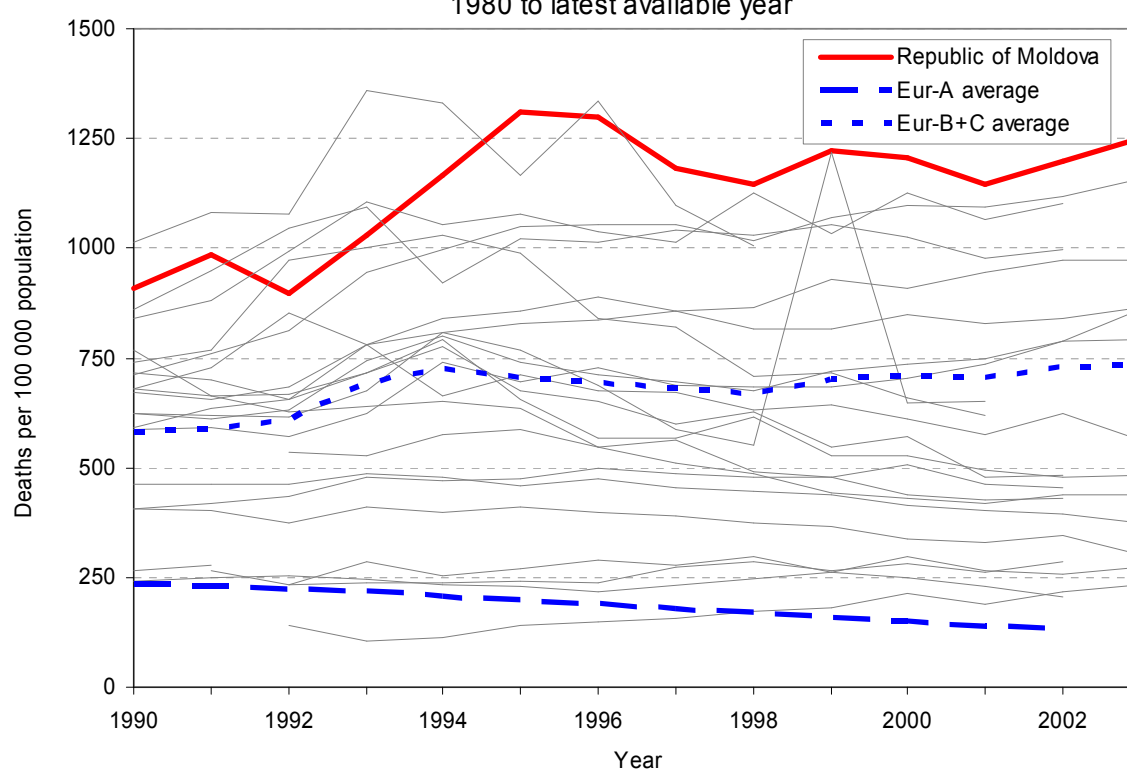
In the age group 30–44 years, the mortality rates depart from those of the Eur-B+C average rates and approach those of the Eur-A average rates, with the rate of improvement since 1995 similar to that of the Eur-A averages and better than that of the Eur-B+C averages. A cause of concern is the increase in mortality from lung cancer in women, which is clearly due to tobacco smoking. A similar trend is observed in several other countries in the European Region.

In the age group 45–59 years, the mortality rates and patterns are similar to those of the Eur-B+C average rates. The rates are slightly lower than those of the Eur-B+C average rates in men, but they are slightly higher in women. Also, mortality from external causes remains below that of the Eur-B+C average, but it is notably higher than in the younger age groups in the country. It should be pointed out, however, that mortality from respiratory and, particularly, digestive diseases is very high, which is also

noticeable in the next younger age group. These high mortality rates warrant careful consideration, as they indicate both problems in the quality of care and room for improvement. A positive sign is the rate of improvement since 1995, which is larger than the averages for both country reference groups, Eur-A and Eur-B+C.

In the age group 60–74 years, the mortality rates in men are similar to those of the Eur-B+C average rates, but those in women clearly exceed the corresponding Eur-B+C average rates. This gradual increase with age in mortality in women supports a general conclusion that women in the Republic of Moldova likely benefit comparatively less from the activities of the health system than do women in Eur-B+C on average. This is not the case for men. In particular, the mortality rate for ischaemic heart disease for women is about ten times higher than the corresponding Eur-A average rate and 70% higher than the corresponding Eur-B+C average rate.

SDR for ischaemic heart disease in females aged 60–74 years, the Republic of Moldova, Eur-A and Eur-B+C averages, 1980 to latest available year



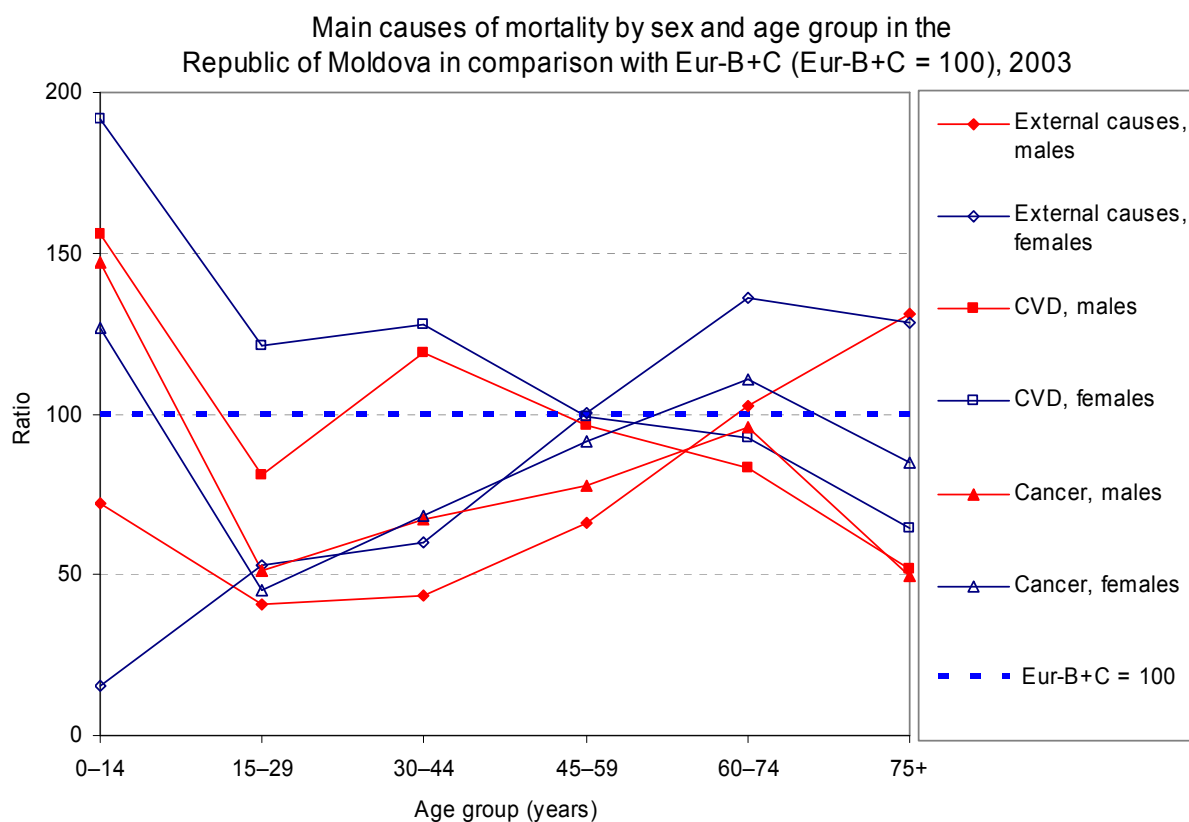
Again, in the age group 60–74 years, Moldovan mortality from digestive diseases is also very high in both sexes – but more so in women – when compared with both Eur-A and Eur-B+C average rates. Moreover, since 1995, when mortality rates peaked, this age group has shown negligible improvement in mortality rates.

In the age group over 74 years, the trends outlined above for 60–74 year olds escalate. Mortality rates for both sexes exceed the Eur-B+C average by nearly 20%, mainly due to higher mortality in women. The main causes for the higher mortality are cardiovascular, digestive and respiratory diseases, and by 2003 the situation had deteriorated further, as compared with 1995.

In summary, the mortality rates and trends in the Republic of Moldova are close to those of the Eur-B+C averages, but in international comparisons the ranking of younger age groups and males is more favourable than that of the older age groups and of females. While mortality rates for external causes are lower, those for respiratory and digestive diseases are too high. If 1995 is the baseline used for comparison, then improvements have been above average and the overall level of achievement is remarkably better than predicted on the basis of GDP levels alone.

Main causes of death

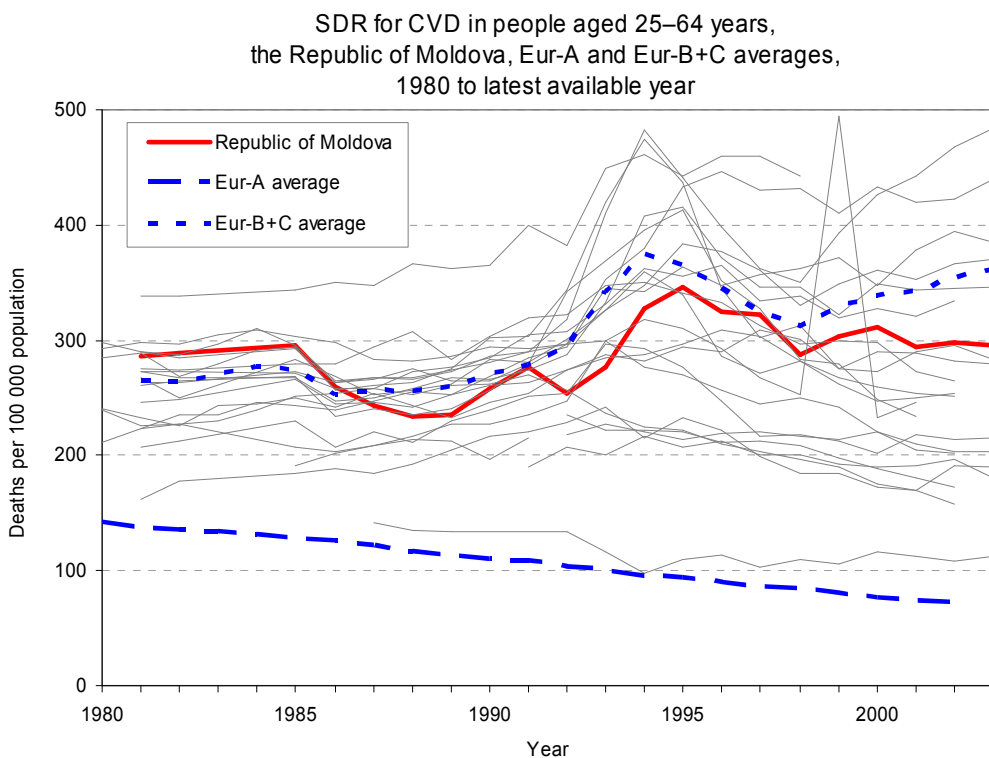
In 2003, noncommunicable diseases accounted for about 87% of all deaths in the Republic of Moldova; external causes for about 8%; and communicable diseases for less than 2% (Annex. Selected mortality).



CVD

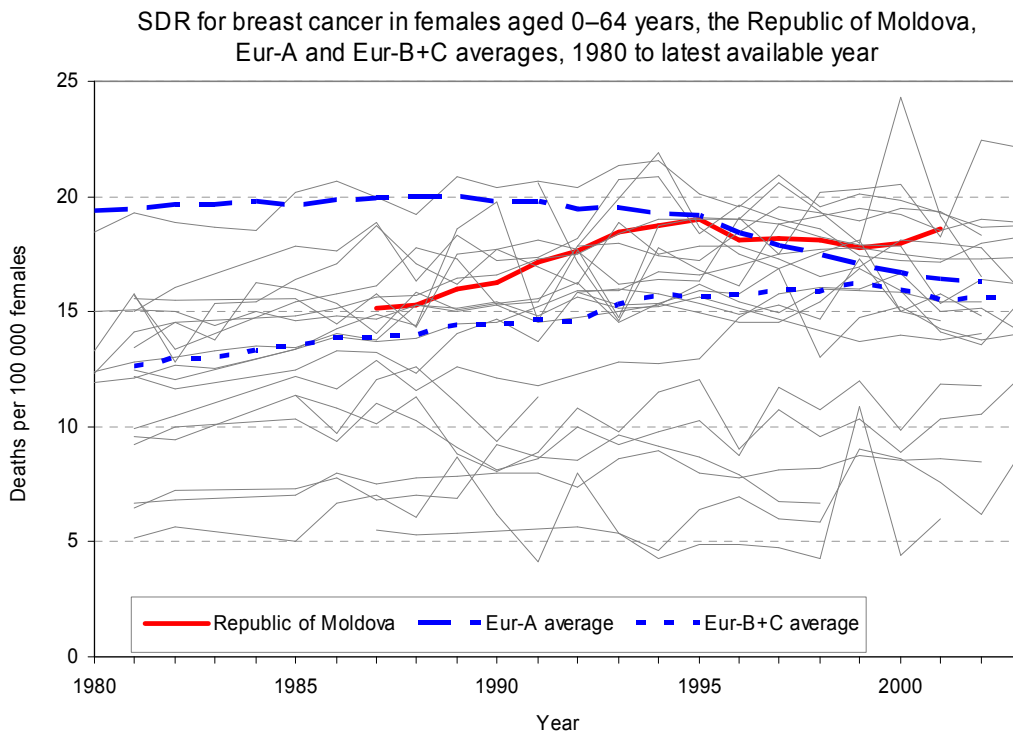
Cardiovascular diseases were the main cause of death in the Republic of Moldova in 2003: they were responsible for 59% of the overall mortality. Two thirds of mortality from CVD was due to ischaemic heart disease (41% of the total mortality), and the other one third was almost exclusively attributed to cerebrovascular diseases (16.3% of total mortality), which is unusual and likely indicates under-diagnosis of other CVD. Overall, mortality rates for CVD were about 2.3 times higher in the Republic of Moldova than in the Eur-A group on average, but only slightly above the Eur-B+C average. Mortality rates for CVD in the Republic of Moldova were lower than those in the Eur-B+C on average in the younger age groups, but higher in the older age groups. This pattern confirms the above-mentioned impression: that the health of the younger people is better than the average for their peers in Eur-B+C and, therefore, closer to the average for their peers in Eur-A; in the older age groups, however, the population's health comes closer to the less favourable Eur-B+C average and becomes worse than average in the seventh decade of life.

Over the last 20 years, mortality rates for CVD have fluctuated considerably, in unison with the typical CIS trend over time. In the final analysis, however, the levels seem to be back to where they were in 1980, which is a relatively good outcome.



Cancer

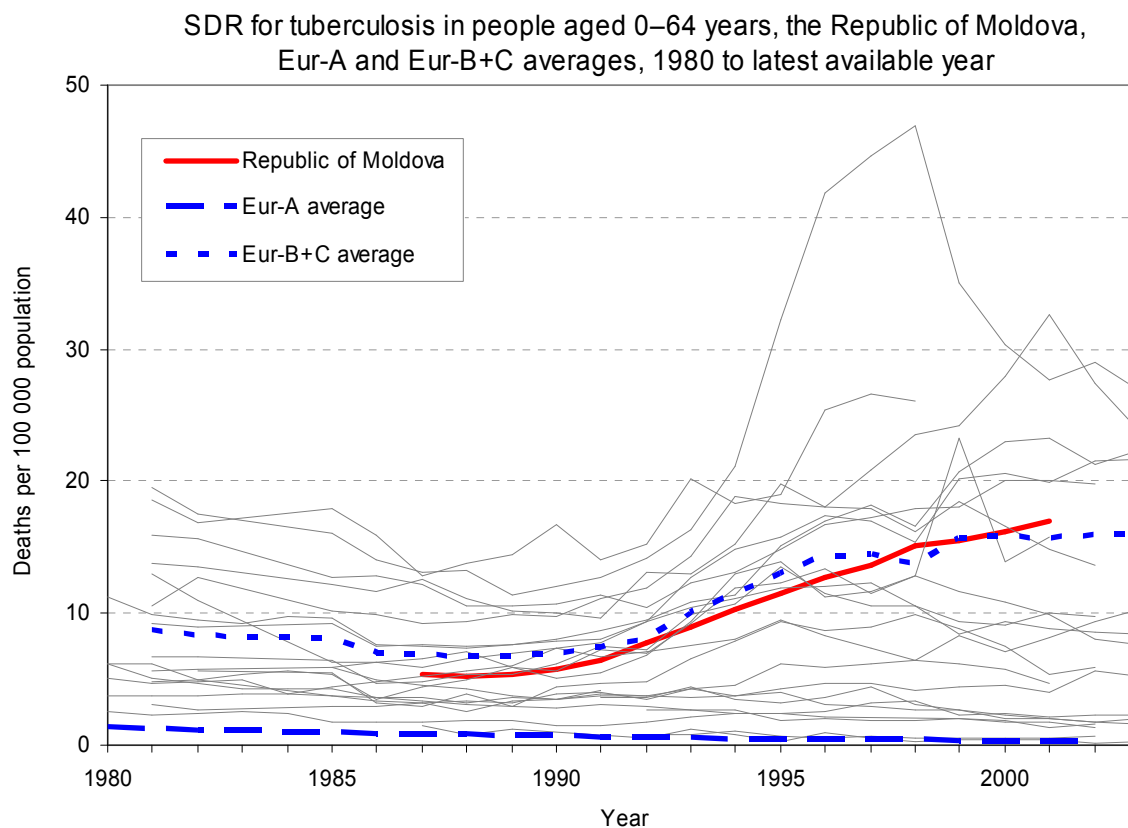
The mortality rates for cancer are more equally distributed across the Region. The rates in the Republic of Moldova are below both the average rates for Eur-B+C and Eur-A. However, as in other CIS countries, due to higher mortality from other causes, cancer accounts for about 10.7% of total mortality in the Republic of Moldova, while the corresponding average rate in Eur-A is 28%.



Note: Data for the Republic of Moldova are 5-year moving averages.

Respiratory diseases

In 2003, respiratory diseases accounted for about 6.7% of total mortality in the Republic of Moldova, which was above the Eur-B+C average (4.8%). However, the rate per 100 000 population was almost 50% higher than the Eur-B+C average rate and two times higher than the Eur-A average. The rates may be artificially inflated by coding other causes of death as respiratory complications.

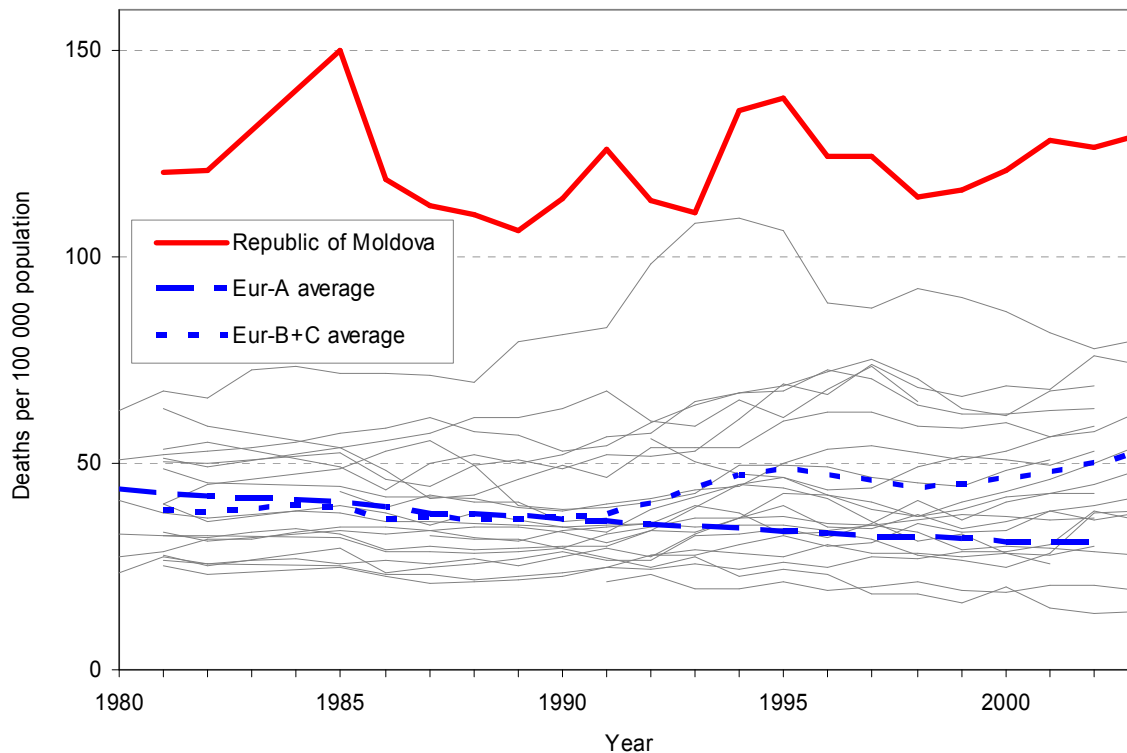


Note: Data for the Republic of Moldova are 5-year moving averages.

Digestive diseases

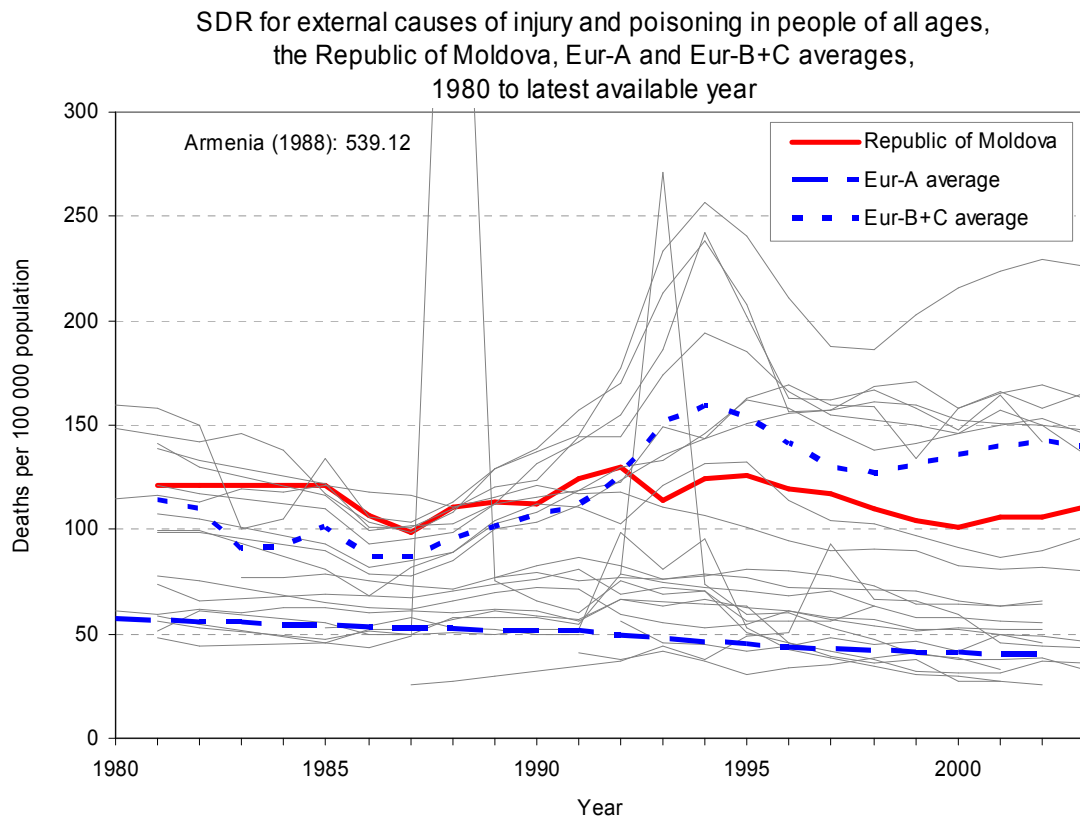
By 2003, the mortality rate for digestive diseases was 2.5 times higher than the Eur-B+C average rate and 4.2 times higher than the Eur-A average rate. As mentioned previously, the excess mortality from diseases of the digestive tract is due mostly to chronic liver disease and cirrhosis, which in turn (in the context of the Republic of Moldova) is likely due primarily to a high level of alcohol consumption in the population.

SDR for diseases of the digestive system in people of all ages,
the Republic of Moldova, Eur-A and Eur-B+C averages,
1980 to latest available year



External causes

External causes of death include unintentional injuries (such as traffic injuries, poisoning, and injuries due to falls, fires and drowning) and intentional injuries (such as self-inflicted injuries, and injuries due to violence and war). Overall, external causes were responsible for 111 deaths per 100 000 population in the Republic of Moldova in 2003, while the Eur-B+C average for that year was 140 deaths per 100 000 population, and the Eur-A average for the same year was just 40 deaths per 100 000 population.



The rates have more or less been at the levels of the mid-1980s, which is a qualified success, in as much as violent deaths have roughly doubled since then in some neighbouring CIS countries.

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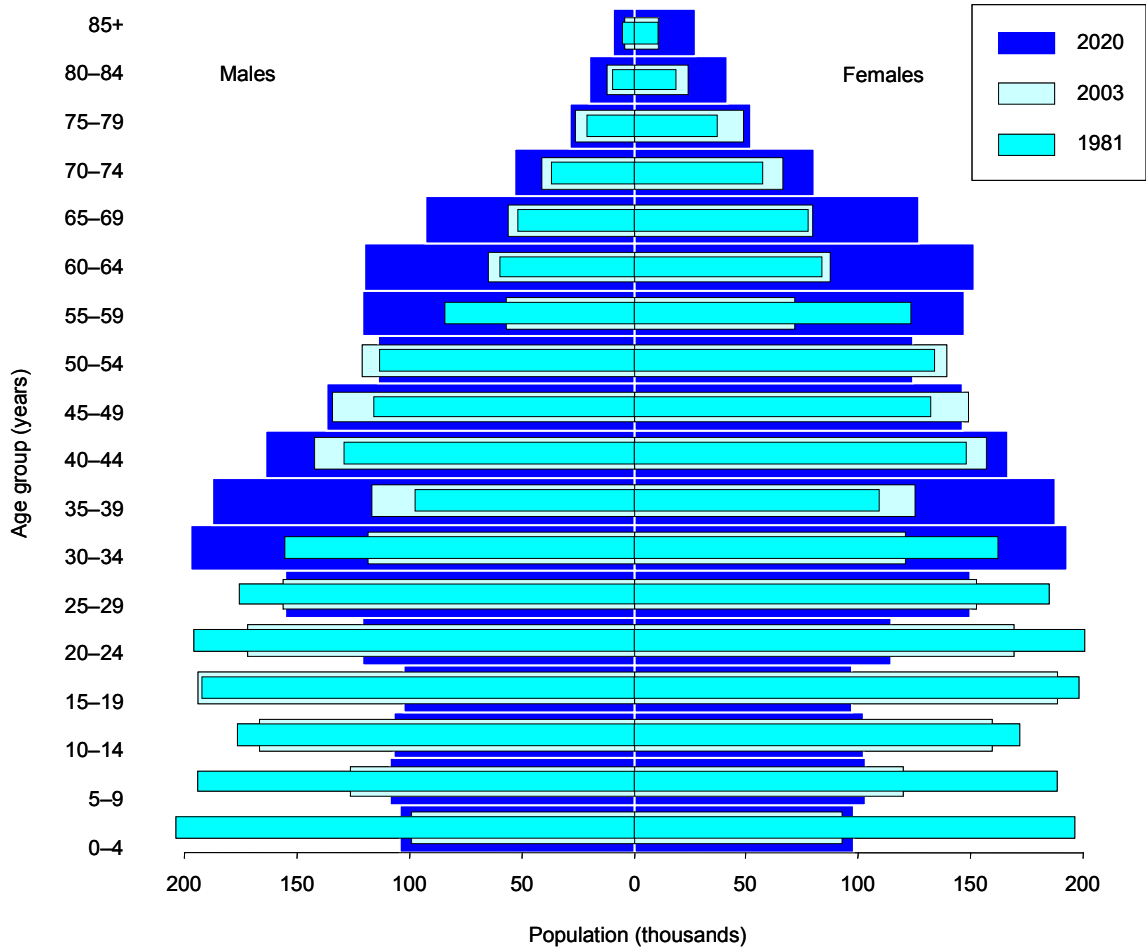
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Annexes

Annex. Age Pyramid

Age pyramid for the Republic of Moldova



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

*Annex. Selected mortality***Selected mortality in the Republic of Moldova compared with EUR-B+C averages**

Condition	SDR per 100 000		Excess mortality in Republic of Moldova (%)	Total deaths in Republic of Moldova (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Republic of Moldova to Eur-A (%)	Total deaths in Eur-A (%)
	Republic of Moldova (2003)	Eur-B+C average (2003)						
Selected non-communicable conditions	1252.5	1044.9	19.9	86.6	79.6	533.8	134.6	82.4
<i>Cardiovascular diseases</i>	857.6	741.8	15.6	59.3	56.5	243.4	252.3	37.6
Ischaemic heart disease	588.6	362.7	62.3	40.7	27.6	95.9	513.8	14.8
Cerebrovascular diseases	235.6	221.7	6.3	16.3	16.9	61.1	285.6	9.4
Diseases of pulmonary circulation and other heart disease	6.7	68.9	-90.3	0.5	5.3	56.6	-88.2	8.7
<i>Malignant neoplasms</i>	155.5	172.0	-9.6	10.7	13.1	181.5	-14.3	28.0
Trachea/bronchus/lung cancer	26.7	33.9	-21.2	1.8	2.6	37.1	-28.0	5.7
Female breast cancer	24.1	22.1	9.0	1.7	1.7	27.0	-10.7	4.2
Colon/rectal/anal cancer	18.6	19.0	-2.1	1.3	1.4	20.7	-10.1	3.2
Prostate	8.4	14.3	-41.3	0.6	1.1	25.1	-66.5	3.9
<i>Respiratory diseases</i>	96.7	63.1	53.2	6.7	4.8	47.8	102.3	7.4
Chronic lower respiratory diseases	65.2	31.2	109.0	4.5	2.4	20.2	222.8	3.1
Pneumonia	27.6	23.6	16.9	1.9	1.8	16.2	70.4	2.5
<i>Digestive diseases</i>	129.5	52.3	147.6	9.0	4.0	30.8	320.5	4.8
Chronic liver disease and cirrhosis	103.8	32.0	224.4	7.2	2.4	12.6	723.8	1.9
<i>Neuropsychiatric disorders</i>	13.3	15.7	-15.3	0.9	1.2	30.3	-56.1	4.7
Communicable conditions	20.4	20.8	-1.9	1.4	1.6	8.4	142.9	1.3
AIDS/HIV	0.6	0.8	-25.0	0.0	0.1	1.1	-45.5	0.2
External causes	110.7	139.6	-20.7	7.7	10.6	40.3	174.7	6.2
<i>Unintentional</i>	83.1	102.2	-18.7	5.7	7.8	28.7	189.5	4.4
Road traffic injuries	13.3	14.7	-9.5	0.9	1.1	9.9	34.3	1.5
Falls	5.7	7.5	-24.0	0.4	0.6	6.1	-6.6	0.9
<i>Intentional</i>	27.6	37.4	-26.2	1.9	2.9	11.6	137.9	1.8
Self-inflicted (suicide)	18.0	23.2	-22.4	1.2	1.8	10.6	69.8	1.6
Violence (homicide)	9.5	14.2	-33.1	0.7	1.1	1.0	850.0	0.2
Ill-defined conditions	19.0	64.0	-70.3	1.3	4.9	20.9	-9.1	3.2
All causes	1446.7	1312.2	10.2	100.0	100.0	647.8	123.3	100.0

Annex. Mortality data

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	154.1	-3.7	49.4	-2.4	151.7	-3.8
	M	177.2	-3.6	55.3	-2.5	170.5	-3.9
	F	129.6	-4.0	43.3	-2.4	131.9	-3.8
<i>Infectious and parasitic diseases</i>	M	7.1	-5.5	1.4	-1.1	10.9	-7.0
	F	8.7	-1.5	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	3.6	-6.3	0.2	-0.7	5.1	-8.2
	F	3.8	3.4	0.1	-7.3	4.7	-7.9
<i>Malignant neoplasms</i>	M	8.0	-0.9	3.3	-1.8	5.1	-1.9
	F	8.1	2.6	2.6	-1.8	4.2	-1.9
<i>Cardiovascular diseases</i>	M	2.4	-4.7	1.4	-3.1	3.3	1.1
	F	0.4	-10.1	1.3	-2.5	2.6	0.1
<i>Respiratory diseases</i>	M	28.9	-5.4	1.4	-4.3	35.9	-5.0
	F	23.9	-5.2	1.0	-4.2	30.7	-5.0
Pneumonia	M	26.6	-5.4	0.5	-6.0	20.9	-4.9
	F	21.3	-5.3	0.4	-5.1	17.9	-4.7
<i>Certain conditions originating in perinatal period</i>	M	570.4	-4.1	255.3	-2.1	607.6	-2.7
	F	338.1	-6.2	202.3	-1.6	427.5	-2.7
Congenital malformations & chromosomal abnormalities	M	38.8	-0.1	11.6	-2.9	24.2	-2.8
	F	29.2	-2.8	10.0	-3.3	21.0	-2.6
<i>Ill-defined causes</i>	M	1.0	-2.4	5.0	-3.9	5.6	-0.6
	F	3.4	8.1	3.4	-4.2	4.6	-1.0
<i>External causes of injury & poisoning</i>	M	42.6	-2.1	7.0	-4.0	29.0	-3.4
	F	22.9	-2.3	4.6	-3.2	18.1	-3.1
Road traffic injuries	M	4.5	-5.5	2.5	-4.5	4.7	-2.6
	F	4.0	-1.3	1.7	-4.8	3.0	-1.6

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	92.7	-4.5	56.0	-2.3	161.0	-0.9
	M	135.9	-4.8	82.0	-2.3	241.7	-1.0
	F	48.5	-3.7	29.3	-2.2	79.0	-0.6
<i>Infectious and parasitic diseases</i>	M	11.8	1.7	1.2	1.5	12.3	3.0
	F	4.1	0.4	0.8	1.9	5.1	2.5
Malignant neoplasms	M	7.1	-6.2	6.2	-1.0	8.8	-1.9
	F	9.3	-0.2	4.7	-1.4	7.7	-1.9
<i>Cardiovascular diseases</i>	M	7.2	-5.9	4.1	-2.4	17.6	0.0
	F	3.8	-3.6	2.3	-2.0	7.3	-0.9
<i>Respiratory diseases</i>	M	4.7	-6.2	1.4	-3.6	6.9	0.2
	F	1.3	-6.5	0.9	-2.7	3.8	-1.1
<i>Digestive diseases</i>	M	7.9	-2.9	0.9	-3.5	8.0	3.0
	F	3.4	-3.8	0.5	-3.8	3.7	3.1
<i>Ill-defined causes</i>	M	1.1	4.7	4.0	-3.1	11.6	7.1
	F	0.4		1.4	-1.3	3.3	5.8
<i>External causes</i>	M	83.5	-5.2	58.3	-1.4	162.4	-1.6
	F	16.6	-5.1	14.4	-1.6	36.9	-0.2
Road traffic injuries	M	24.2	-4.0	28.5	-1.3	27.8	-1.5
	F	5.8	-2.0	7.3	-1.4	8.0	0.3
Accidental drowning	M	4.7	-7.1	1.3	-2.2	10.8	-3.9
	F	1.2	-2.9	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	4.8	-5.4	2.8	0.0	19.1	3.3
	F	1.4	-4.2	0.7	0.8	4.4	2.5
Self-inflicted (suicide)	M	15.0	-2.1	12.7	-1.8	36.8	0.0
	F	1.1	-9.9	3.1	-2.2	5.8	-1.3

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	358.0	-2.3	120.3	-2.5	453.8	-0.7
	M	527.9	-2.4	161.6	-2.6	700.0	-0.8
	F	200.7	-2.3	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	47.8	-2.2	27.6	-2.3	40.2	-2.8
	F	56.0	1.2	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	9.0	-3.4	5.0	-3.4	7.3	-4.2
Female breast cancer	F	4.1	25.4	2.8	-0.6	2.2	-1.0
<i>Cardiovascular diseases</i>	F	13.5	-2.3	10.0	-2.6	10.0	-2.3
	M	69.1	-3.5	26.1	-2.5	158.6	-0.4
	F	27.3	-4.9	10.4	-2.1	45.3	0.0
Ischaemic heart disease	M	35.8	-2.6	11.8	-3.1	73.7	-2.2
Cerebrovascular diseases	F	9.4	-4.1	2.4	-2.7	14.4	-1.3
	M	19.2	-2.4	4.4	-3.2	24.6	-0.4
	F	10.4	-3.9	3.6	-2.5	10.6	-1.3
<i>Respiratory diseases</i>	M	39.0	-3.8	3.9	-3.5	34.3	0.9
	F	10.3	-3.3	2.2	-2.0	9.8	0.8
<i>Digestive diseases</i>	M	78.2	-3.2	12.6	-2.4	50.2	1.4
	F	33.1	-4.0	5.4	-1.7	19.4	4.1
<i>External causes</i>	M	202.0	-2.2	58.8	-1.2	299.5	-1.9
	F	40.4	-2.7	15.1	-1.8	58.9	-1.0
Road traffic injuries	M	29.3	-3.0	16.0	-0.5	31.4	-1.7
	F	6.1	-0.2	3.9	-2.0	7.1	-0.5
Self-inflicted (suicide)	M	43.4	-0.8	21.2	-1.5	54.9	-2.4
	F	6.2	-4.3	5.8	-2.2	7.9	-2.5

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	1236.3	-1.9	435.6	-1.3	1294.9	-0.6
	M	1717.2	-1.8	580.1	-1.4	1981.7	-0.6
	F	828.2	-2.2	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	311.3	-1.7	218.2	-1.2	323.2	-1.9
	F	184.9	-0.3	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	81.5	-2.7	65.9	-1.5	101.4	-2.9
Female breast cancer	F	13.0	1.7	21.8	3.4	15.4	1.0
<i>Cardiovascular diseases</i>	F	47.9	-1.3	44.0	-2.2	45.3	0.1
	M	525.9	-1.9	156.4	-2.6	793.1	-0.1
	F	272.4	-2.6	50.9	-2.5	271.7	-0.6
Ischaemic heart disease	M	284.7	-1.4	86.2	-3.3	435.3	-0.7
Cerebrovascular diseases	F	119.1	-2.6	17.8	-3.4	111.1	-0.6
	M	178.3	-1.6	23.7	-2.6	168.6	-0.9
	F	118.5	-2.2	14.5	-2.1	88.4	-1.4
<i>Respiratory diseases</i>	M	142.2	-2.9	20.3	-1.7	108.7	-1.4
	F	34.2	-3.6	10.2	-1.3	24.5	-0.7
<i>Digestive diseases</i>	M	252.7	-2.4	49.6	-0.8	129.7	0.7
	F	189.2	-3.2	20.3	-0.7	57.3	1.9
<i>External causes</i>	M	317.5	-0.9	62.8	-1.0	409.2	-0.9
	F	81.6	-1.6	20.9	-0.9	89.1	-1.1
Road traffic injuries	M	25.5	-4.3	13.0	-1.3	28.5	-1.8
	F	8.1	-0.3	4.1	-2.1	7.5	-1.4
Self-inflicted (suicide)	M	69.8	0.8	23.1	-1.1	68.1	-2.4
	F	7.6	-5.3	8.5	-1.2	10.2	-3.4

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	4057.8	-0.4	1570.9	-1.9	3411.7	-0.1
	M	5267.3	-0.1	2156.9	-2.1	4996.4	0.1
	F	3226.9	-0.8	1069.2	-1.9	2339.0	-0.6
<i>Malignant neoplasms</i>	M	836.4	-0.1	851.3	-1.4	1002.5	-0.8
	F	405.7	-0.5	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	217.3	-1.4	261.8	-1.9	321.7	-1.5
Female breast cancer	F	37.2	1.0	59.0	0.2	37.1	-1.4
<i>Cardiovascular diseases</i>	F	75.2	2.5	79.7	-1.6	68.7	1.3
	M	2975.5	0.1	744.9	-3.6	2903.0	0.6
	F	2053.2	-0.4	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	1920.9	-0.2	381.3	-4.2	1582.2	1.2
	F	1249.6	-0.6	133.5	-4.6	731.4	0.5
Cerebrovascular diseases	M	918.4	1.4	143.3	-3.7	833.7	0.2
	F	710.4	0.3	86.7	-4.1	528.9	-0.8
<i>Respiratory diseases</i>	M	426.4	-0.9	144.0	-3.5	303.0	-2.4
	F	135.6	-1.2	62.5	-2.4	68.6	-3.6
<i>Digestive diseases</i>	M	513.7	0.6	111.6	-1.6	193.0	0.1
	F	408.0	0.2	54.1	-1.7	94.2	0.2
<i>External causes</i>	M	306.9	2.9	79.3	-1.4	320.0	1.0
	F	98.0	-0.1	32.1	-2.1	88.7	-0.5
Road traffic injuries	M	22.3	-0.5	14.8	-3.0	24.3	-1.5
	F	8.7	0.6	5.9	-3.4	9.5	-1.0
Self-inflicted (suicide)	M	45.8	-0.9	24.5	-1.6	60.5	-0.8
	F	11.3	-4.3	8.7	-2.6	12.7	-3.1

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

Causes of death	Sex	Republic of Moldova (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	14599.9	-1.2	8059.6	-1.0	12338.8	0.0
	M	17076.1	-1.3	9832.0	-1.1	14838.0	0.1
	F	13485.4	-1.2	7112.5	-0.9	11421.7	0.0
<i>Malignant neoplasms</i>	M	770.2	0.0	2231.1	-0.4	1489.3	1.2
	F	466.0	1.5	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	148.3	3.7	457.1	-0.7	323.5	1.0
Female breast cancer	F	37.0	2.8	102.7	1.5	55.6	0.5
<i>Cardiovascular diseases</i>	F	65.7	-0.9	159.6	-0.4	92.0	3.1
	M	13394.3	3.9	4356.2	-2.1	10221.2	0.4
	F	11283.9	4.9	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	10218.1	4.6	1708.0	-2.2	4925.6	1.4
	F	8533.3	5.8	1150.0	-2.2	4028.6	1.2
Cerebrovascular diseases	M	2969.9	4.7	1119.8	-2.5	3004.4	0.7
	F	2561.7	4.4	1026.9	-2.4	2967.6	0.5
<i>Respiratory diseases</i>	M	1494.6	10.6	1156.5	-2.4	824.1	-2.1
	F	708.7	11.9	591.9	-2.1	302.3	-3.2
<i>Digestive diseases</i>	M	543.9	5.8	340.3	-1.1	270.4	0.3
	F	435.4	8.0	279.8	-0.4	175.0	1.1
<i>External causes</i>	M	300.6	0.9	275.0	-0.6	604.2	0.1
	F	145.9	-1.7	187.8	-1.2	172.4	-1.2
Road traffic injuries	M	20.5	10.0	28.1	-2.2	34.6	-3.1
	F	14.3	-1.3	10.0	-3.1	14.7	-1.7
Self-inflicted (suicide)	M	50.7	-3.5	49.5	-1.6	86.6	-1.1
	F	7.5	-9.1	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).