



Highlights on health in Armenia 2005

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

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

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

Keywords

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Summary: findings and policy considerations

Life expectancy

WHO estimates that a person born in Armenia in 2003 can expect to live 68 years on average: 72 years if female and 65 years if male. Life expectancy in Armenia is three years longer than in Azerbaijan and three years shorter than in Georgia. These values are five years lower than the nationally reported figures, which place the population average at 73 years): 76 years if female and 70 years if male.

WHO also estimates that for the year 2002, people in Armenia can expect to live 61 healthy years on average: 63 healthy years if female and 59 healthy years if male. This is about equal to the Eur-B+C average value and is about 10 years less than the Eur-A average value. For males and females, the conditions that account for the biggest burden of disease are cardiovascular diseases and neuropsychiatric illnesses. Tobacco and high cholesterol level are the dominant risk factors for men. The main risk factors for women are excess weight and high blood pressure.

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

Infant and neonatal deaths and under-5 mortality appear to be underreported in Armenia. Between 1990 and 2003, the infant mortality rate fell by a third. Since 1991, the neonatal mortality rate has stayed around 8 deaths per 1000 live births, compared with the Eur-B+C average of 7 deaths per 1000 live births. Between 2000 and 2003, WHO estimates that under-5 mortality dropped at an annual average rate of 3.3%, while the comparable annual average rate of decline for the European Region was 3.5%.

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

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

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

Maternal mortality

Accepting nationally reported figures, for the period 1990–2002, the maternal mortality rate in Armenia fell by about 36%. For Armenia to reach its Millennium Development Goal by 2015, the maternal mortality rate has to fall a further 61%.

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

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

Main causes of death

In 2002, noncommunicable diseases accounted for about 83% of all deaths in Armenia; external causes for about 3%; communicable diseases for less than 1%; and about 4% was attributed to ill-defined conditions. In general, mortality rates in Armenia are about 20% lower than the corresponding Eur-B+C average rates.

Adult mortality from all groups of diseases is considerably lower in Armenia than the corresponding Eur-B+C averages. For many if not most conditions, mortality rates in Armenia are similar to those of the Eur-A group. With due consideration to the completeness of data, this suggests that the level of adult health should be, generally, better than that in several other countries of the Commonwealth of Independent States. In the age group 0–14 years, however, the mortality rate in Armenia is about 25% lower than the corresponding Eur-B+C average rate and two times higher than the corresponding Eur-A average rate.

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

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

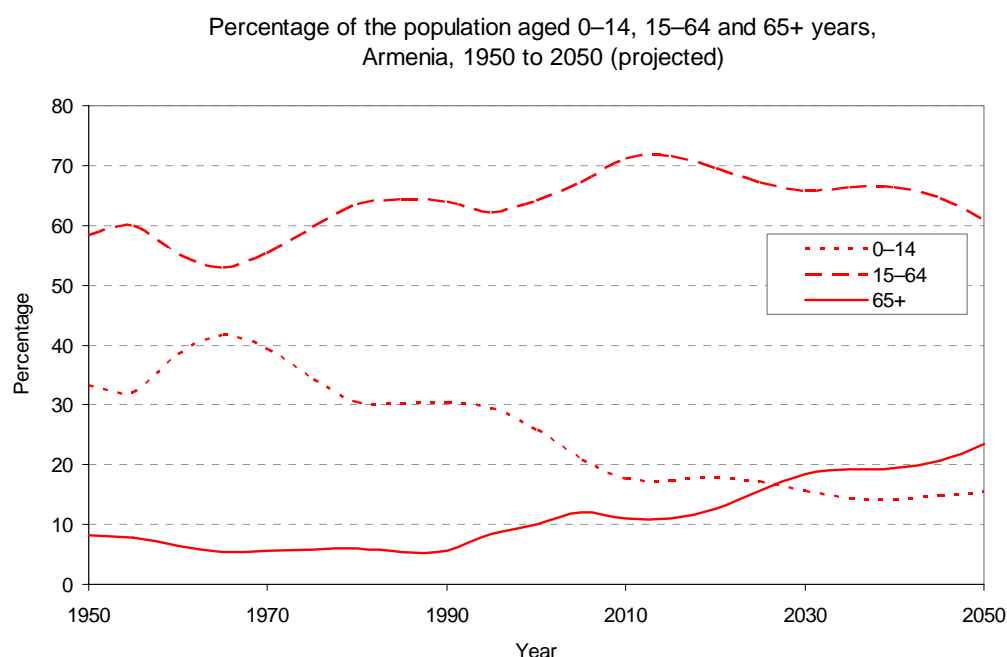
Towards a European strategy on noncommunicable diseases (WHO Regional Office for Europe, 2004b)

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

Selected demographic and socioeconomic information

Population profile

In mid-2003, Armenia had about 3.2 million people. About 65% of them lived in urban areas, which is the Eur-B+C average rate. The percentage of the population 0–14 years old was relatively steady during the 1980s but fell from about 30% in 1990 to 23% in 2003. The percentage, however, is still slightly above the Eur-B+C average. At the other end of the age spectrum, the percentage of Armenia's population 65 years old and over is slightly below the Eur-B+C average. By 2030, an estimated 19% of Armenia's population will be 65 years old or older (Annex. Age pyramid).



The birth rate in Armenia was slightly below the corresponding Eur-B+C average rate in 2003. Natural population growth in Armenia is positive and above the corresponding Eur-B+C average rate. Net migration is negative and below the corresponding Eur-B+C average rate.

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

Indicators	Armenia	Eur-B+C		
	Value	Average	Minimum	Maximum
Population (in 1000s)	3211.3	–	–	–
0–14 years (%)	23.0	–	–	–
15–64 years (%)	66.9	–	–	–
65+ years (%)	10.1	–	–	–
Urban population (%) ^a	64.6	63.7	25.0	73.3
Live births (per 1000)	11.2	12.8	8.6	27.1
Natural population growth (per 1000)	3.1	0.8	–7.5	23.0
Net migration (per 1000)	–2.4	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

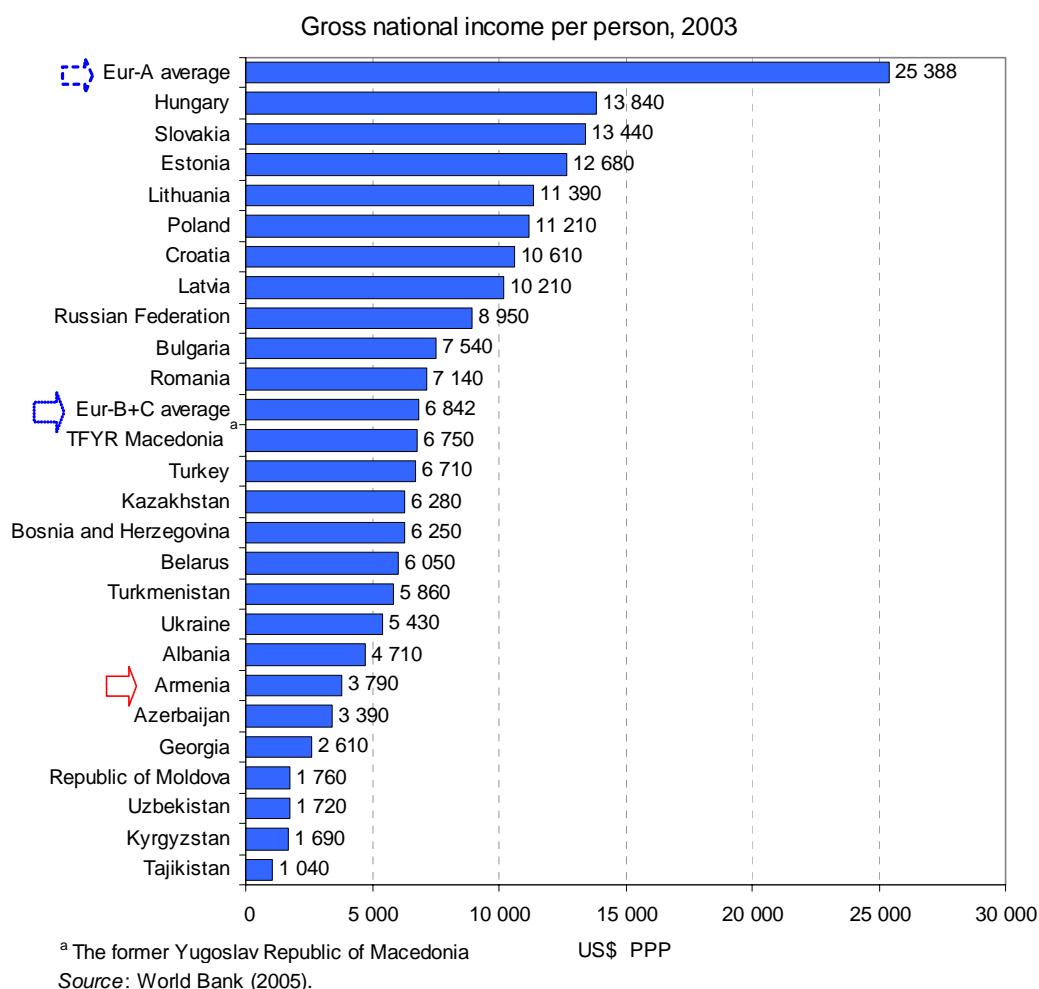
There is an income gradient affecting health: the poor generally suffer worse health and die younger than people with higher incomes. For instance, the latter are better able to afford the goods and services that contribute to health, for example, better food and living conditions.

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 person per day to measure poverty in low- and middle-income countries of the WHO European Region (using 1993 international prices adjusted for purchasing power parity). While there is no certainty that the poverty lines measure the same degree of need across countries, the World Bank uses them as a constant to permit comparison. Many countries in the Region calculate their national poverty lines on the basis of a minimum consumption basket selected and priced according to the specific circumstances of the country.

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

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 Armenia, per person gross national income, adjusted for purchasing power parity (PPP), was US\$ 3790 in 2003, below the Eur-B+C average of US\$ 6842.



Relative to the national poverty line, 53.7% of Armenia's population lived in poverty in 1999. Using the World Bank's recommended benchmarks to measure absolute poverty in Europe, household surveys in Armenia found that in 1996, 31.5% of the population lived on US\$ 2.15 per day or less. A mid-year survey for 1998 found an increase to almost 49%. If the poverty line of US\$ 4.30 is applied, the 1996 survey found almost 68% of the population living in absolute poverty, by definition. The 1998 survey established the rate at about 86% (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 Armenia, in 2000, secondary school net enrolment (75.6% of the school age population) was below that of the corresponding Eur-B+C average (81.2%). In 2001, Armenia's secondary school net enrolment jumped to 84.6%. In contrast, the average secondary school net enrolment in Eur-A in 2000 was 88.5% (UNESCO, 2005).

Employment

Being employed tends to be better for health than being unemployed, except 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 latest available total unemployment rate for Armenia (for 1998) was 9.4%. That year, Armenia's rate was among the lowest rates in Eur-B+C countries with data, 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)

Life expectancy

According to figures compiled by WHO (WHO, 2005) – to assure comparability for all Member States (which are not necessarily the nationally reported statistics of Member States) – a person born in Armenia in 2003 can expect to live an average of 68 years: 72 years if female and 65 years if male. Life expectancy (LE) in Armenia is three years longer than in Azerbaijan and three years shorter than in Georgia.

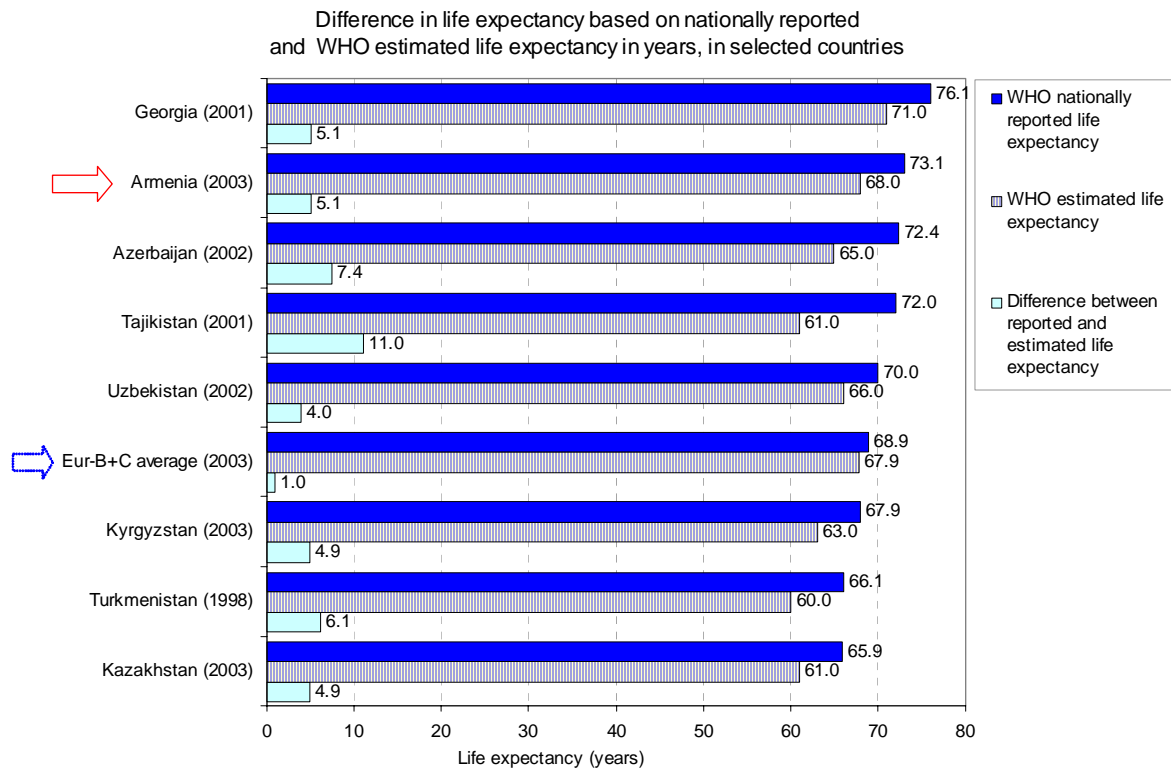
Two types of mortality data are available: (1) nationally reported mortality statistics produced by Armenia, on the basis of regular registration of deaths by the statistical system, and reported to WHO; and (2) international mortality estimates produced by WHO, which are aimed at compensating for gaps in availability, comparability and other quality gaps in the nationally reported statistics.

It should be emphasized that at present it is very difficult to analyse and interpret time trends in Armenia because the population base for the indicators has changed considerably. In 2002, for the first time since independence, a population census was carried out. It produced significantly lower population figures than the population estimates used before that. The population base shrank from 3.8 million people to 3.2 million people. This caused sharp changes in the mortality rates for 2002, as compared with 2001. For example, nationally reported LE dropped by three years, solely because of the change in the denominator for the mortality rates. The WHO Regional Office for Europe will recalculate indicators prior to 2002 when the retrospective adjusted population figures become available.

In this context, the WHO estimate for average LE is five years lower than the nationally reported LE figure, which is 73.1 years (2003) for both sexes combined: 75.9 years if female and 70.0 years if male. The difference is due mainly to under-registration of child mortality, (the mortality data in adults is believed to be considerably more reliable). Here, it is assumed that the latest data (2003) reflect broadly (but sufficiently accurately) the main pattern of mortality in Armenia, if not always reflecting the levels accurately. With these caveats, and because the official statistics show details by age- and sex-specific population groups, the official national statistics are used almost exclusively in this report. However, the nationally reported mortality statistics are complemented by the available WHO estimates to help assess the most likely health situation – in particular, as they relate to children's health.

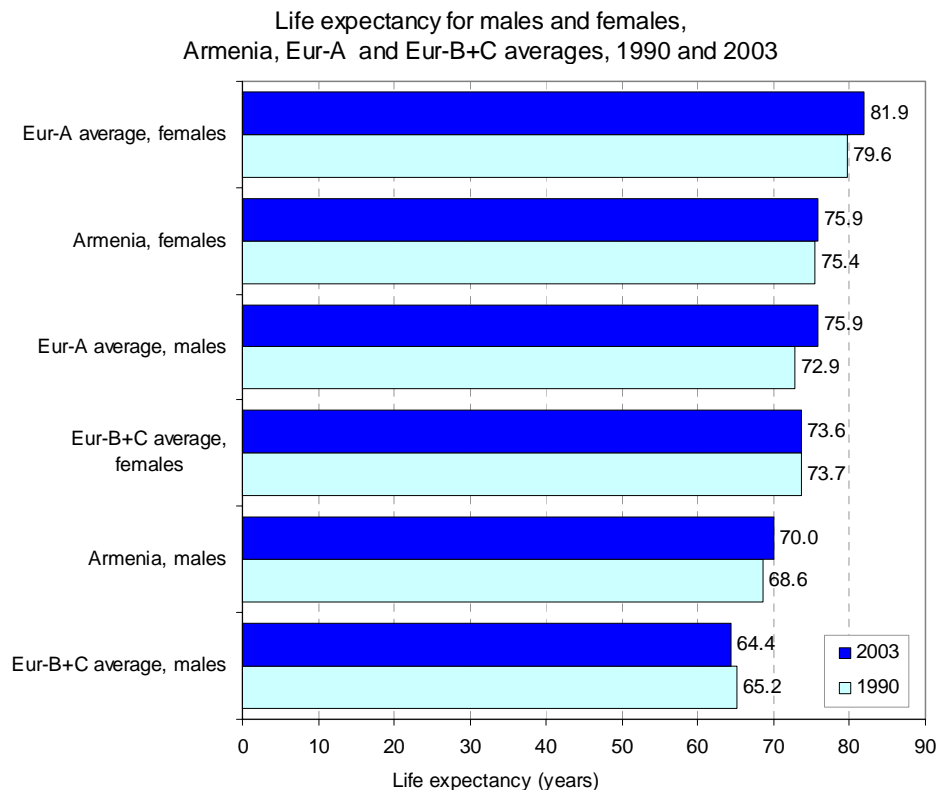
A less obvious data problem is the quality of the certified causes of death, because of indications of misclassification of causes of death, which are difficult to quantify. These discrepancies inevitably impact on the conclusions drawn from the regular statistics, particularly where international comparisons are concerned. The user of this report should keep the above points in mind.

The nationally reported LE in Armenia (2003) is about four years above the corresponding nationally reported Eur-B+C average of 68.8 years. However, the WHO estimate for Armenia puts the average LE exactly at the Eur-B+C average, which is calculated on the basis of the WHO estimates for all countries and which is about 68 years. Moreover, LE is probably about 11 years below the corresponding Eur-A average of 79.0 years. This large difference indicates huge potentials for middle- to long-term improvement in Armenia, provided that the best available knowledge and practice are implemented appropriately.



For 1990, the nationally reported LE in Armenia is two years above the corresponding Eur-B+C average of about 70 years. At present, however, it is very difficult to analyse and interpret time trends, because of the discrepancies mentioned above.

For 2003, the female–male difference in LE in Armenia is 5.9 years, which is closer to the corresponding Eur-A average of 6.0 years than it is to the corresponding Eur-B+C average of 9.2 years.

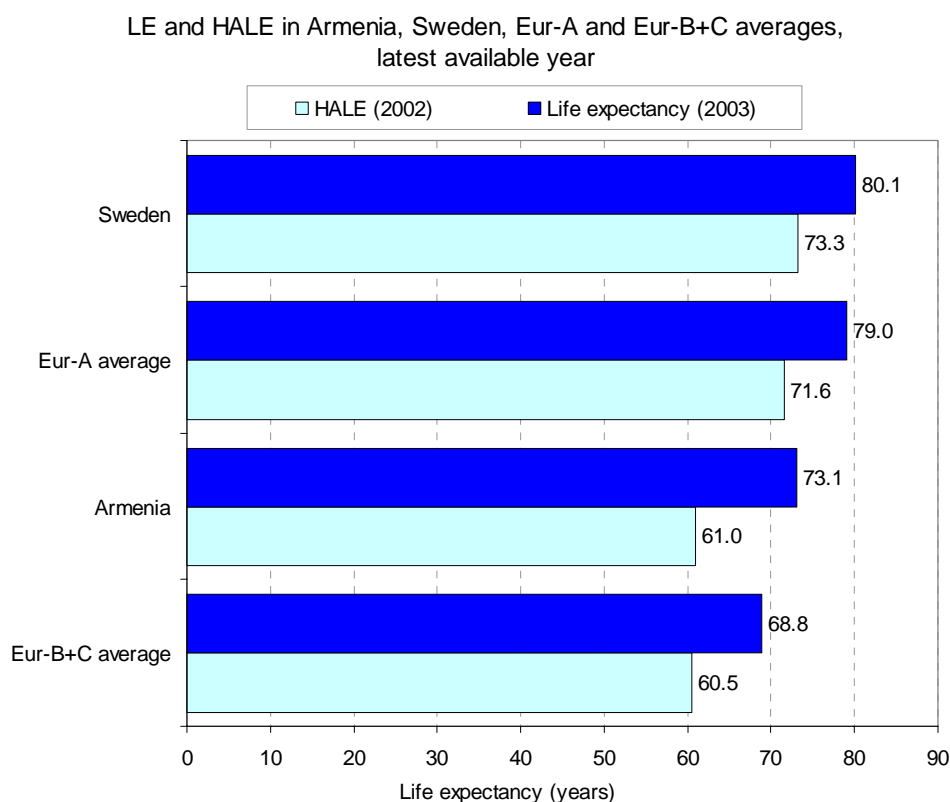


Healthy life expectancy

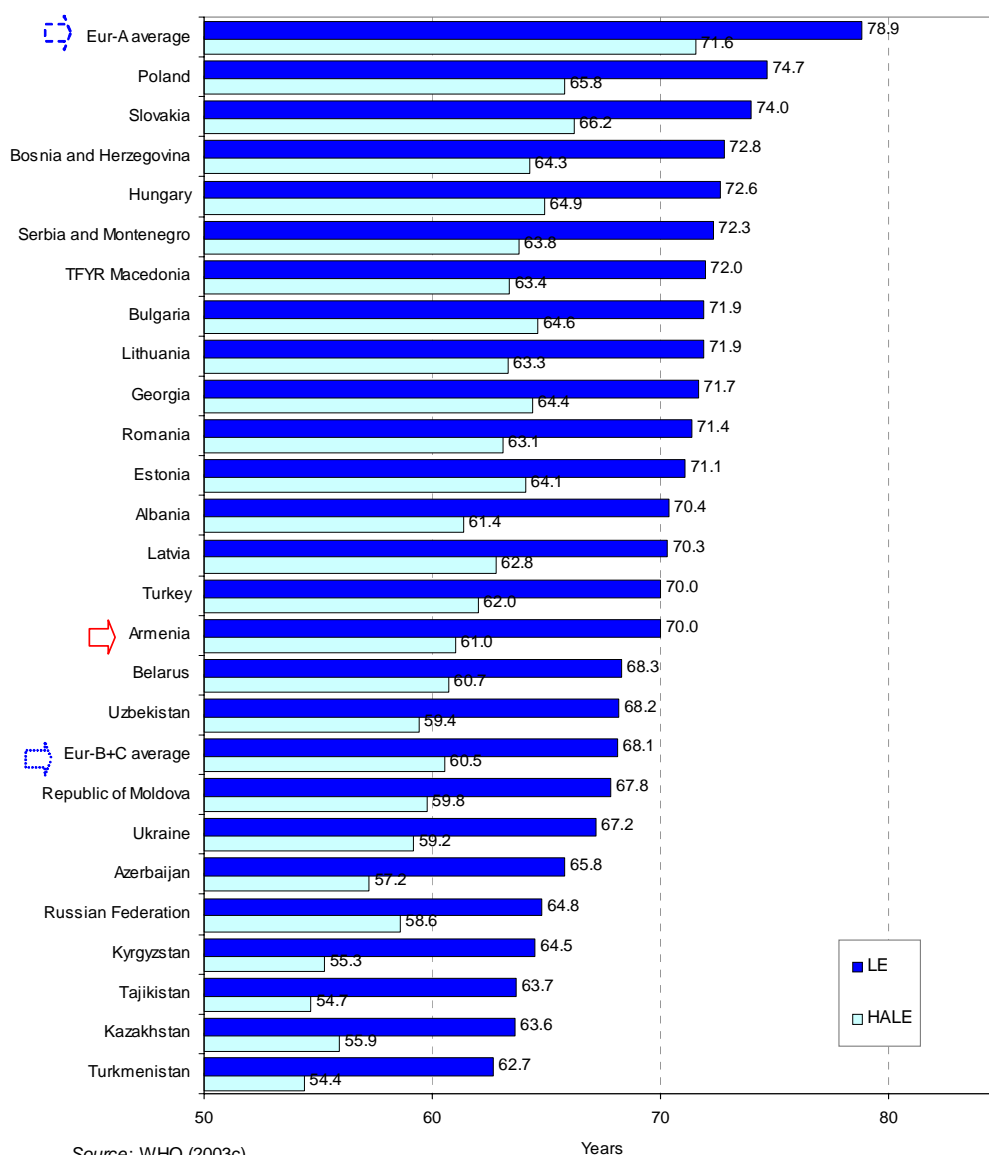
In addition to longevity in general, it is increasingly important to know the expected length of life spent in good health. WHO uses a relatively new indicator for this purpose – healthy life expectancy (HALE), subtracting estimated years of life spent with illness and disability from estimated LE. WHO has produced HALE estimates, which should be used in conjunction with the above-mentioned WHO estimates of total LE, but not in conjunction with nationally reported LE statistics from Armenia.

WHO estimated for the year 2002 (WHO, 2004) that people in Armenia have 61.0 healthy years on average: 62.6 years if female and 59.4 years if male. This is about 10.6 years less than the corresponding Eur-A average of 71.6 years, but slightly above the corresponding Eur-B+C average of 60.5 years. 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 60 years of age, HALE in Armenia is 13.3 years if female and 10.9 years if male, while in Sweden those estimates are 19.6 and 17.1 years, respectively.

An alternative way to present the same concept is the expectation of life years spent in less than good health. In Armenia, this is 10.4 years if female and 7.6 years if male. The estimates for Sweden are 7.9 years if female and 6.2 years if male.



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



Burden of disease

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

Main conditions

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

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

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Cardiovascular diseases	24.2	Neuropsychiatric conditions	20.7
2	Neuropsychiatric conditions	14.7	Cardiovascular diseases	19.9
3	Unintentional injuries	10.5	Malignant neoplasms	11.5
4	Malignant neoplasms	10.5	Sense organ diseases	7.4
5	Sense organ diseases	5.1	Diabetes mellitus	4.7
6	Infectious and parasitic diseases	5.0	Musculoskeletal diseases	4.1
7	Digestive diseases	5.0	Digestive diseases	4.0
8	Perinatal conditions	4.4	Unintentional injuries	3.6
9	Respiratory diseases	3.8	Infectious and parasitic diseases	3.5
10	Musculoskeletal diseases	2.9	Perinatal conditions	3.4

Source: Background data from WHO (2003c).

Main risk factors

The following table has the top 10 risk factors with their relative contributions, in descending order, to the burden of disease in the male and female populations of Armenia. According to the DALYs, tobacco and high levels of cholesterol place the greatest burden of disease on the Armenian male population, and high body mass index (BMI) and high blood pressure place the greatest burden of disease on females.

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

Rank	Males		Females	
	Risk factors	Total DALYs (%)	Risk factors	Total DALYs (%)
1	Tobacco	20.3	High BMI	11.1
2	High cholesterol	9.4	High blood pressure	8.8
3	High BMI	8.9	High cholesterol	6.1
4	High blood pressure	8.2	Physical inactivity	3.9
5	Alcohol	7.9	Tobacco	3.5
6	Low fruit and vegetable intake	4.8	Low fruit and vegetable intake	3.1
7	Physical inactivity	4.4	Unsafe sex	2.9
8	Lead	1.4	Iron deficiency	2.8
9	Unsafe sex	1.2	Indoor smoke from solid fuels	1.3
10	Indoor smoke from solid fuels	1.2	Alcohol	1.0

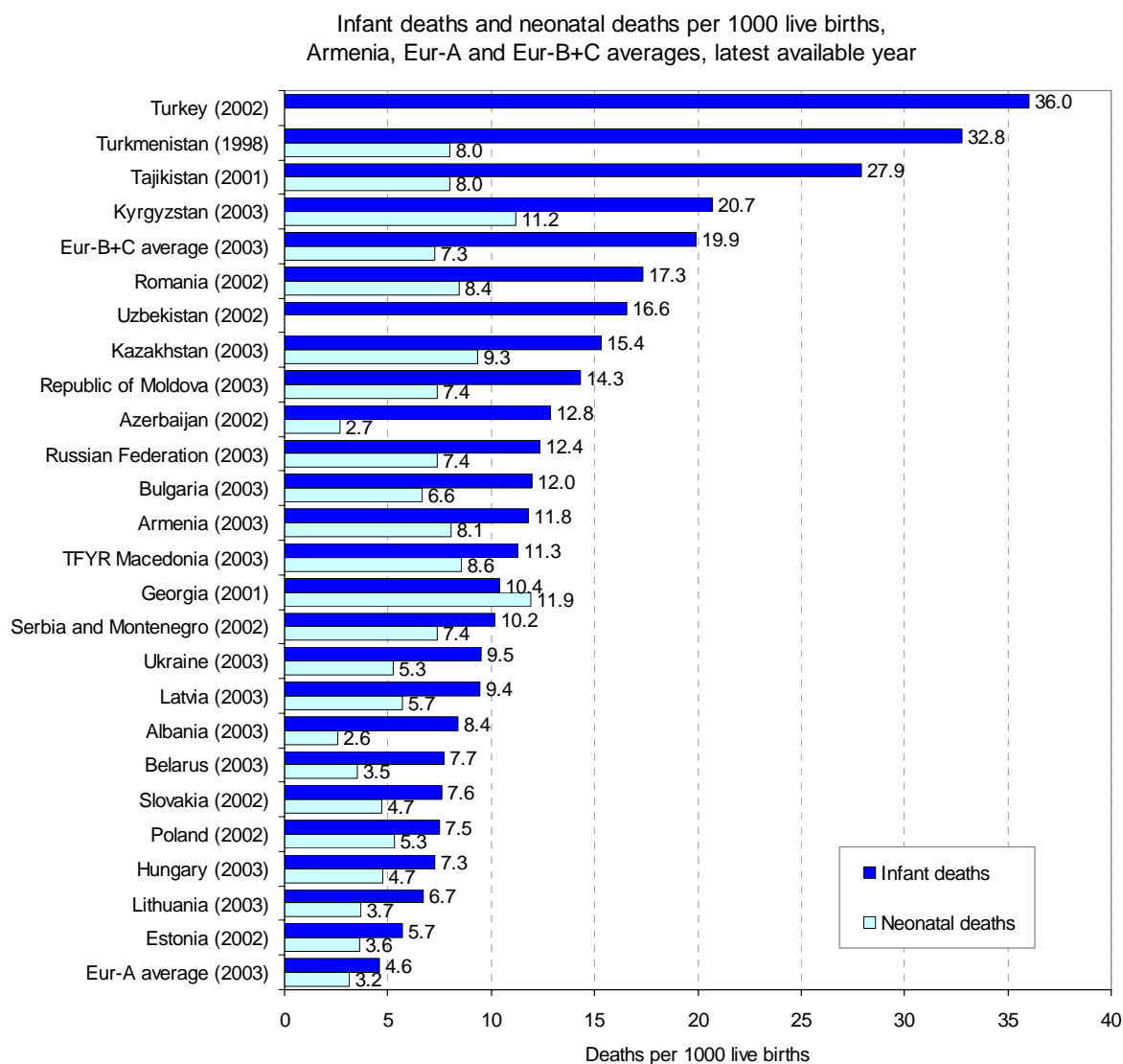
Source: Background data from WHO (2003c).

Mortality

Infant, neonatal and child mortality

Based on nationally reported deaths and births in 2002, there is a probability that, of every 1000 live births in Armenia, about 16 children will die before the of age 5 years (the 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 (such as underreporting of vital statistics), WHO estimates Armenia's latest probability to be 37 under-5 deaths per 1000 live births. Since extrapolation of WHO estimates is not valid, it is uncertain whether Armenia will reach the MDG by 2015.

By 2003, the nationally reported infant mortality rate in Armenia was 11.8 deaths per 1000 live births. For comparison, in 2003 the corresponding Eur-B+C average was 19.9 deaths per 1000 live births, and the best achievement in Eur-B+C was for Lithuania, at 6.7 deaths per 1000 live births. In comparison to 1990, the Armenian infant mortality rate decreased by a third.



The registration-based neonatal mortality rate for 2003 is about 8 deaths per 1000 live births, which is a very good achievement, if valid in international comparison. The level has been fairly constant since 1991. In comparison, in 2003 the Eur-B+C average was 7.3 deaths per 1000 live births, and the best estimate for Eur-A was about 3–4 deaths per 1000 live births.

As mentioned previously, in an attempt to estimate possible underreporting of mortality data in the nationally reported statistics, WHO produces concurrent estimates by systematically analysing complementary information from various sources and from statistical modelling. The following table compares nationally reported estimates with WHO estimates for four indicators particularly prone to under-registration. (WHO's estimates make use of the best information available. Being of course only estimates, they take into account statistical uncertainties and have calculated ranges of statistical uncertainty. In particular, the lower boundary of such an interval of uncertainty can be interpreted to mean that official data below the level are likely underreported.)

Comparison of key indicators of child and maternal mortality in Armenia 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)	16	31 ^b
Neonatal mortality per 1000 live births, 2000	10	17 ^c
Under-5 mortality per 1000 live births (MDG indicator)	13	33 (29–38) ^c
Maternal mortality per 100 000 live birth, 2000 (MDG indicator)	22	55 ^c

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

The data show that nationally reported under-5 mortality per 1000 live births in Armenia is likely to be less than half the estimated actual rate. As under-registration of child deaths occurs mostly for the age under 1 year, this discrepancy indicates that neonatal and infant mortality must be underreported too, which the respective data in the table above confirm. The magnitude of the underreporting, however, appears to be comparatively small.

In addition, WHO estimates that under-5 mortality has dropped in the period 2000–2003 at an average annual rate of about 3.3%. The respective rate for the European Region as a whole is about 3.5% (WHO, 2005). While the improvement in Armenia is around the average for the Region, this is a very good result in comparison with the more moderate rates of improvement in most CIS countries with a high rate of child mortality.

Maternal mortality

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

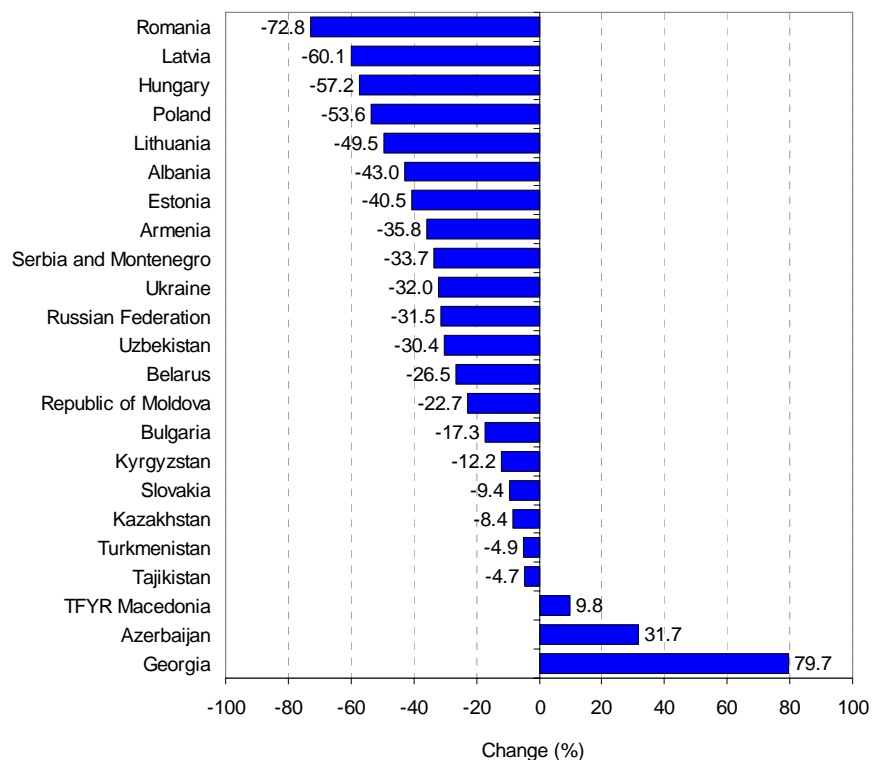
Despite the difficulties in accurately measuring MMR, nationally reported figures are accepted at face value relative to the MDG to improve maternal health – to reduce the MMR by 75% between 1990 and 2015. In some countries, the 2015 target may be equal to or lower than the average current MMR for high income countries in the European Region (the Eur-A 2001 average of 5 maternal deaths per 100 000 live births). Countries with 2015 targets lower than the current Eur-A average can be judged as having achieved or being likely to achieve the MDG (World Bank, 2004).

However, in some countries, MMR were higher in 2002 than they had been in 1990. Applying the 75% reduction to the 1990 baseline in these countries creates, in some cases, a 2015MDG 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.

Maternal mortality, however, is very difficult to ascertain, even in countries with very strong registration systems. WHO estimates, derived by regression and similar methods, are usually higher than the country reports. The data show considerable discrepancy between the nationally reported and the estimated figures, but this is difficult to interpret. As maternal mortality is one of the MDG indicators, it should be pointed out that the officially reported figure for 2003 is 22 maternal deaths per 100 000 live births, while the respective 1990 figure (baseline for the MDG) is 40 maternal deaths per 100 000 live births. Of the eight maternal deaths reported in 2003, one was attributed to abortion. The MDG target is to reduce maternal mortality by three-quarters between 1990 and 2015.

Between 1990 and 2002, Armenia's MMR fell by about 36%. By 2015, the rate would have to fall to 8.14 maternal deaths per 100 000 live births for Armenia to achieve the MDG target. This requires a 61% drop in MMR over 13 years.

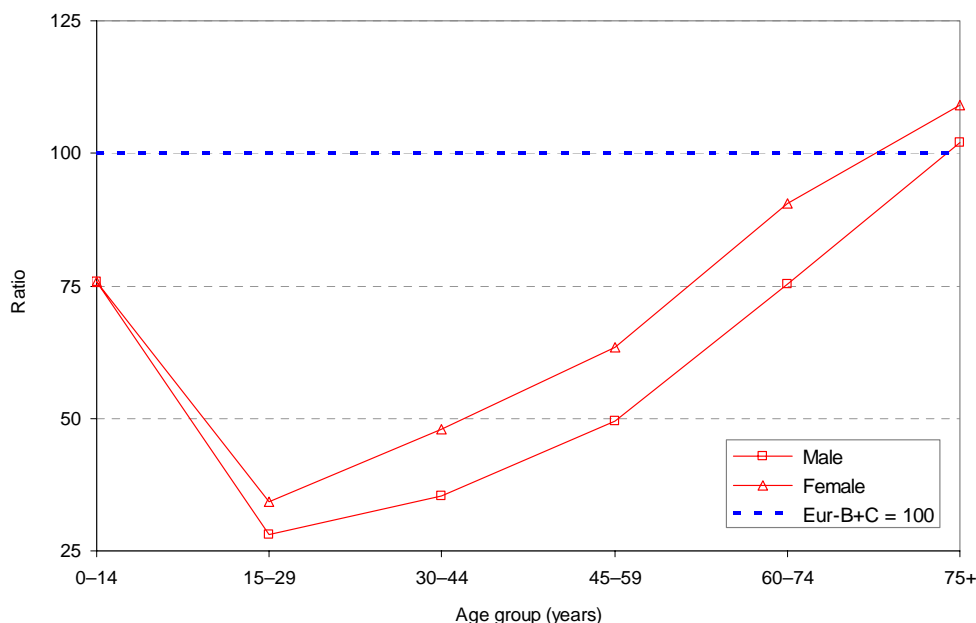
Per cent change for maternal mortality (3-year moving averages),
1990 to 2002 or latest available year



Excess mortality

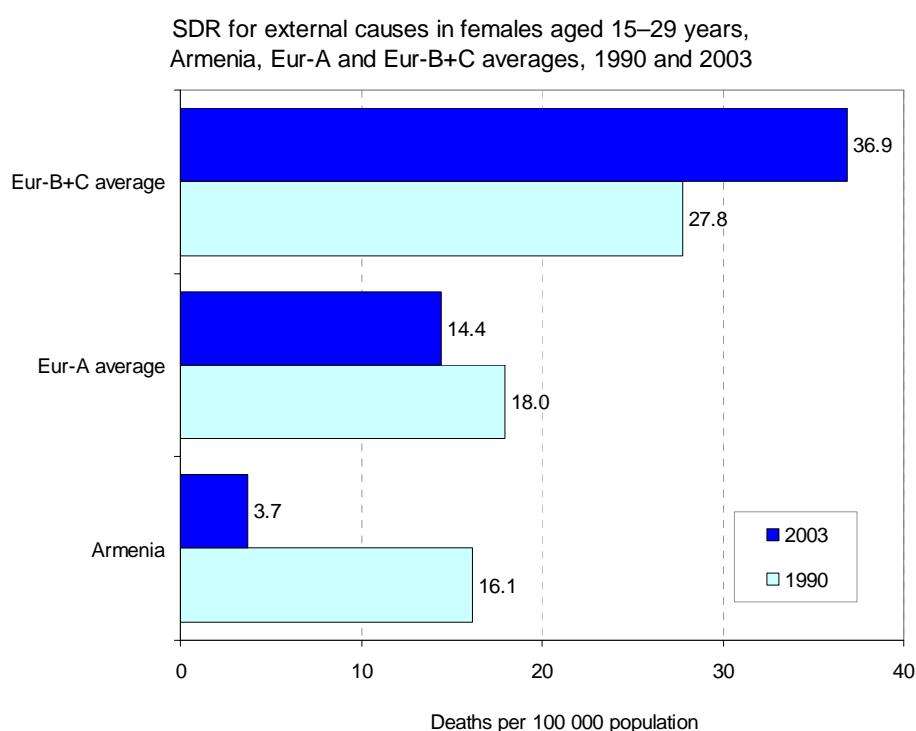
In general, mortality rates in Armenia are about 20% lower than the Eur-B+C average rates, but 70% higher than the Eur-A average rates (Annex. Selected mortality). In all ages under 75 years, mortality rates are below the corresponding Eur-B+C average rates. In young and middle-aged adults (15–59 years of age), mortality rates are about half of the corresponding Eur-B+C average rates. With due consideration to completeness of data, this suggests that the level of adult health should be, generally, much better than in several other CIS countries that suffer extremely high middle-age adult mortality.

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

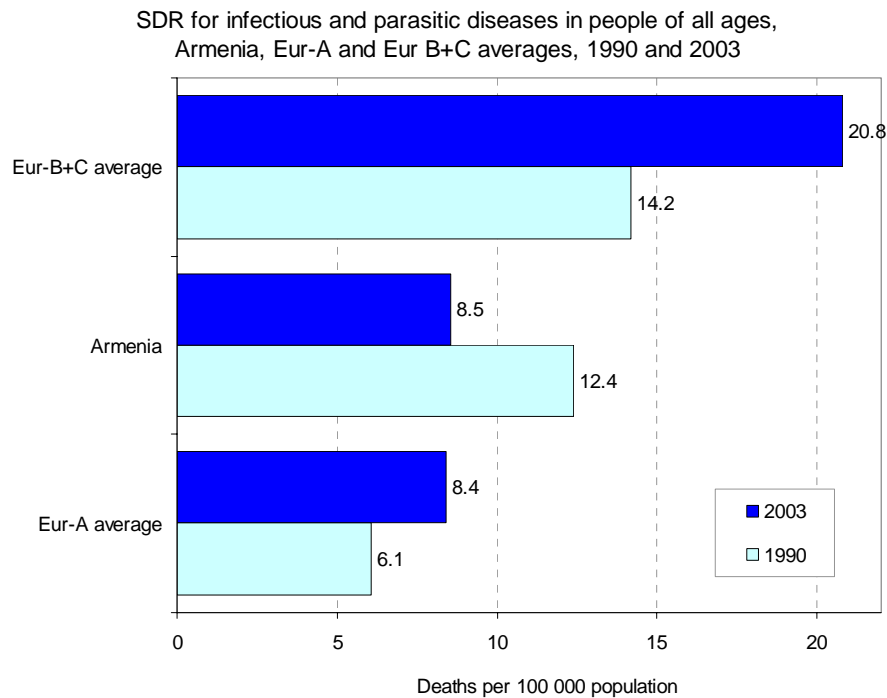


An important observation to make is that, as with other southern CIS countries (the Caucasus and central Asia), there is no excess mortality in Armenia from external causes in comparisons with the corresponding Eur-B+C average, which is a considerable comparative advantage, especially as it relates to intentional injuries. This advantage puts Armenia on a par with Eur-A countries, as mortality from external causes in Armenia is around or below the Eur-A average. This observation appears to be a promising entry point for analyses and planning of accident-prevention policies and programmes in the other Eur-B+C countries.

In the age group 0–14 years (Annex. Mortality data), however, the mortality rate in Armenia of 115 deaths per 100 000 population (2003) is only about 25% lower than the Eur-B+C average of 152 deaths per 100 000 population and is roughly two times higher than the Eur-A average of 49 deaths per 100 000 population. In this age group, the health situation in Armenia is similar to that of Eur-B+C. In the next oldest age group, young adults, the mortality rates in Armenia are more like those in Eur-A, and some causes of death present exceptionally low rates – for example, external causes in females.



In middle-aged adults, the mortality rates and patterns are even more similar to those of Eur-A, although the similarity is less apparent. It should be noted that even mortality rates for CVD, typically high in the CIS, are moderate. Moreover, the mortality rate for communicable diseases is less than half of the corresponding Eur-B+C average rate and almost identical to the corresponding Eur-A average rate, provided the coding of deaths is sufficiently accurate.

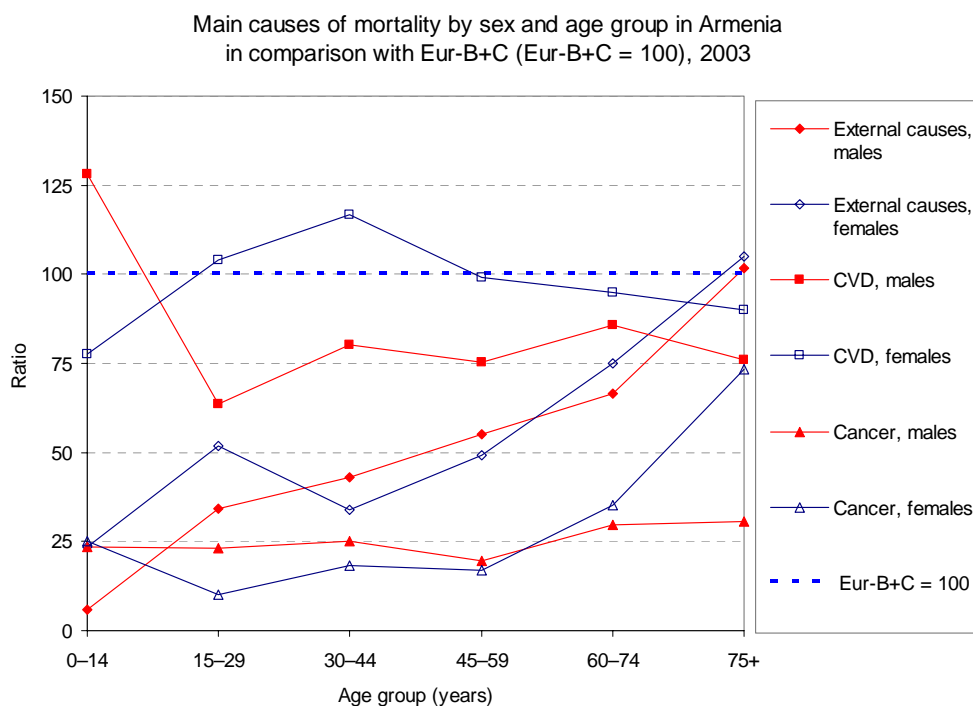


The mortality levels and structure in the older age groups are close to those of the Eur-B+C averages.

In summary, in comparison with Eur-B+C average rates, adult mortality rates for all groups of diseases are considerably lower in Armenia. The only major conditions presenting excess mortality are chronic lower respiratory diseases and breast cancer in women. Most similar to the Eur-B+C average rate is mortality from CVD. For many (if not most) conditions, mortality levels in Armenia are similar to those of Eur-A.

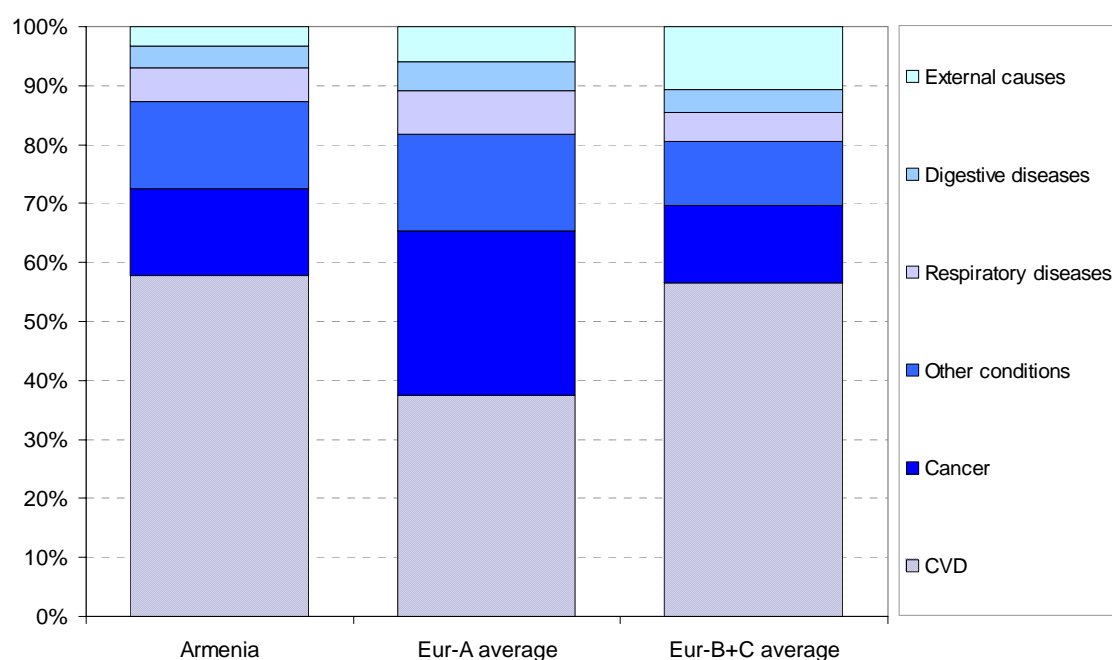
Main causes of death

With the exception of CVD in young women, all other main causes of death in all age groups present lower rates than those of the respective Eur-B+C average rates. In several cases, the rates are lower by 50% and more than the Eur-B+C average rates – for example, for cancer and external causes of death.



In 2002, noncommunicable diseases accounted for about 83% of all deaths in Armenia; external causes for about 3%; communicable diseases for less than 1%; and about 4% was due to ill-defined conditions (Annex. Selected mortality). In the Eur-B+C group, the average rate of deaths from external causes is considerably larger (10.6%). Overall, however, the mortality structure by causes of death in Armenia is closer to that of the Eur-B+C average than to that of the Eur-A average.

Proportion of mortality from CVD, cancer, respiratory diseases, digestive diseases, external causes and other conditions, Armenia, Eur-A and Eur-B+C averages, latest available year



Proportional mortality is a rough but robust measure which can help to consolidate the analysis of the recent situation in Armenia because of the often-uncertain reliability of the age- and cause-specific death rates in the country. The following figure shows both the differences and the similarities of the overall pattern of mortality in Armenia as compared to the Eur-A- and B+C averages.

The main difference is the lower proportion of deaths from external causes (3.3 %) as compared to both the A-average (6.0 %) and the BC-average (10.6%). The observation is likely real and therefore very important.

There is a considerably higher proportion of deaths from CVD in Armenia (70.0 %) than both the Eur-A average (37.4 %) and the Eur-B+C average (56.5 %). This may in part be due to imperfect coding practices which label avoidable mortality due to other causes than CVD, but nevertheless the CVD mortality rates in Armenia are lower than the Eur-B+C average.

On the other hand, it should be recognized that the general mortality structure in Armenia is quite similar to the average mortality structures in the Eur-A and the Eur-B+C-groups. This fact should not be overlooked in reading this country *Highlight on health* – which focuses primarily on deviations from the means – as it helps to balance the final analysis. The message is that there are no specific disease pattern for the rich countries and another for those most in need for international assistance. It is not the selection of the diseases as such but the frequency of occurrence of these diseases which varies within and between countries (International Institute for Society and Health (Marmot et al., 2005).

Moreover, since the main causes of these variations are social the challenge is to document the specific pathways between the causes and the alternative outcomes in a particular population so that policy can address the chains of circumstances and events more efficiently.

In conclusion, the overall health situation in Armenia seems to be relatively better than in many other CIS despite the extreme difficulties since independence. Many signs point to this, although the assessment is very difficult due to the numerous limitations of the available information. Overall, it seems likely that Armenia did exhibit less of the CIS typical large changes in mortality in the early post-Soviet period, although the country has undergone almost total economic collapse and has been beset by civil war. There are several signs of recent improvements but these conclusions are still to be confirmed by further studies and analyses.

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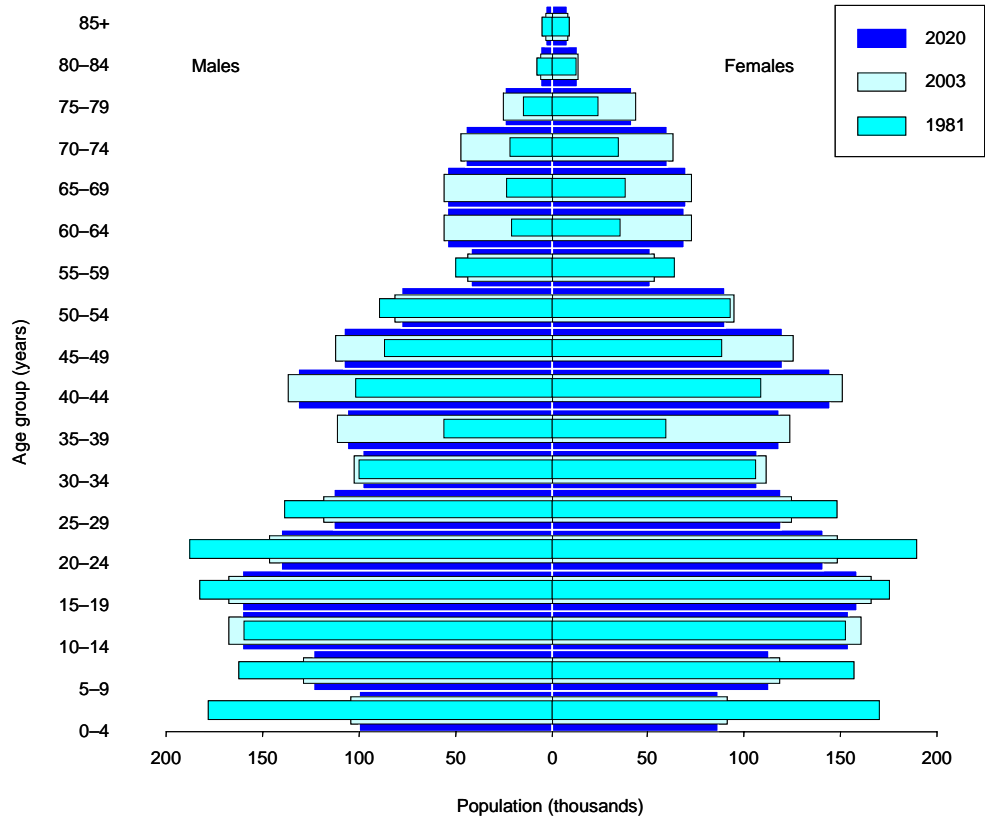
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Annexes

Annex. Age Pyramid

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



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

Annex. Selected mortality

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

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

Condition	SDR per 100 000		Excess mortality in Armenia (%)	Total deaths in Armenia (%)	Total deaths in Eur-B+C (%)	Eur-A average	Excess Armenia to Eur-A (%)	Total deaths in Eur-A (%)
	Armenia (2003)	Eur- B+C average (2003)						
Selected non-communicable conditions	895.5	1044.9	-14.3	82.7	79.6	533.8	67.8	82.4
<i>Cardiovascular diseases</i>	626.7	741.8	-15.5	57.9	56.5	243.4	157.5	37.6
Ischaemic heart disease	387.3	362.7	6.8	35.8	27.6	95.9	303.9	14.8
Cerebrovascular diseases	176.8	221.7	-20.3	16.3	16.9	61.1	189.4	9.4
Diseases of pulmonary circulation and other heart disease	28.5	68.9	-58.6	2.6	5.3	56.6	-49.6	8.7
<i>Malignant neoplasms</i>	159.2	172.0	-7.4	14.7	13.1	181.5	-12.3	28.0
Trachea/bronchus/lung cancer	32.2	33.9	-5.0	3.0	2.6	37.1	-13.2	5.7
Female breast cancer	29.7	22.1	34.4	2.7	1.7	27.0	10.0	4.2
Colon/rectal/anal cancer	13.3	19.0	-30.0	1.2	1.4	20.7	-35.7	3.2
Prostate	11.1	14.3	-22.4	1.0	1.1	25.1	-55.8	3.9
<i>Respiratory diseases</i>	63.4	63.1	0.5	5.9	4.8	47.8	32.6	7.4
Chronic lower respiratory diseases	48.9	31.2	56.7	4.5	2.4	20.2	142.1	3.1
Pneumonia	8.2	23.6	-65.3	0.8	1.8	16.2	-49.4	2.5
<i>Digestive diseases</i>	38.6	52.3	-26.2	3.6	4.0	30.8	25.3	4.8
Chronic liver disease and cirrhosis	20.9	32.0	-34.7	1.9	2.4	12.6	65.9	1.9
<i>Neuropsychiatric disorders</i>	7.6	15.7	-51.6	0.7	1.2	30.3	-74.9	4.7
Communicable conditions	8.5	20.8	-59.1	0.8	1.6	8.4	1.2	1.3
AIDS/HIV	0.0	0.8	-100.0	0.0	0.1	1.1	-100.0	0.2
External causes	36.1	139.6	-74.1	3.3	10.6	40.3	-10.4	6.2
<i>Unintentional</i>	32.1	102.2	-68.6	3.0	7.8	28.7	11.8	4.4
Road traffic injuries	6.4	14.7	-56.5	0.6	1.1	9.9	-35.4	1.5
Falls	0.9	7.5	-88.0	0.1	0.6	6.1	-85.2	0.9
<i>Intentional</i>	3.9	37.4	-89.6	0.4	2.9	11.6	-66.4	1.8
Self-inflicted (suicide)	2.1	23.2	-90.9	0.2	1.8	10.6	-80.2	1.6
Violence (homicide)	1.8	14.2	-87.3	0.2	1.1	1.0	80.0	0.2
Ill-defined conditions	41.7	64.0	-34.8	3.8	4.9	20.9	99.5	3.2
All causes	1083.3	1312.2	-17.4	100.0	100.0	647.8	67.2	100.0

Annex. Mortality data

Mortality data

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

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	115.5	-2.8	49.4	-2.4	151.7	-3.8
	M	129.1	-2.6	55.3	-2.5	170.5	-3.9
	F	99.9	-3.1	43.3	-2.4	131.9	-3.8
<i>Infectious and parasitic diseases</i>	M	7.6	-7.3	1.4	-1.1	10.9	-7.0
	F	7.7	-7.8	1.1	-3.0	9.5	-6.6
Intestinal infectious diseases	M	2.4	-10.4	0.2	-0.7	5.1	-8.2
	F	4.2	-9.2	0.1	-7.3	4.7	-7.9
<i>Malignant neoplasms</i>	M	6.5	3.5	3.3	-1.8	5.1	-1.9
	F	3.3	3.6	2.6	-1.8	4.2	-1.9
<i>Cardiovascular diseases</i>	M	0.2	-9.8	1.4	-3.1	3.3	1.1
	F	0.6	22.4	1.3	-2.5	2.6	0.1
<i>Respiratory diseases</i>	M	14.1	-7.7	1.4	-4.3	35.9	-5.0
	F	14.9	-6.3	1.0	-4.2	30.7	-5.0
Pneumonia	M	6.4	-7.7	0.5	-6.0	20.9	-4.9
	F	6.8	-6.0	0.4	-5.1	17.9	-4.7
<i>Certain conditions originating in perinatal period</i>	M	708.8	1.6	255.3	-2.1	607.6	-2.7
	F	417.0	0.3	202.3	-1.6	427.5	-2.7
Congenital malformations and chromosomal abnormalities	M	24.6	2.6	11.6	-2.9	24.2	-2.8
	F	25.8	5.1	10.0	-3.3	21.0	-2.6
<i>Ill-defined causes</i>	M	11.7	11.6	5.0	-3.9	5.6	-0.6
	F	8.3	1.6	3.4	-4.2	4.6	-1.0
<i>External causes of injury and poisoning</i>	M	6.8	-8.3	7.0	-4.0	29.0	-3.4
	F	4.5	-9.4	4.6	-3.2	18.1	-3.1
Motor vehicle traffic injuries	M	1.3	-7.1	2.5	-4.5	4.7	-2.6
	F	0.3	-9.7	1.7	-4.8	3.0	-1.6

Mortality data contd

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

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	47.2	-5.3	56.0	-2.3	161.0	-0.9
	M	67.7	-6.0	82.0	-2.3	241.7	-1.0
	F	27.1	-2.4	29.3	-2.2	79.0	-0.6
<i>Infectious and parasitic diseases</i>	M	3.4	-1.4	1.2	1.5	12.3	3.0
	F	0.8	-5.0	0.8	1.9	5.1	2.5
<i>Malignant neoplasms</i>	M	5.6	-5.8	6.2	-1.0	8.8	-1.9
	F	8.0	1.9	4.7	-1.4	7.7	-1.9
<i>Cardiovascular diseases</i>	M	6.0	-2.3	4.1	-2.4	17.6	0.0
	F	3.8	6.2	2.3	-2.0	7.3	-0.9
<i>Respiratory diseases</i>	M	1.3	-7.2	1.4	-3.6	6.9	0.2
	F	2.0	0.4	0.9	-2.7	3.8	-1.1
<i>Digestive diseases</i>	M	0.9	-8.8	0.9	-3.5	8.0	3.0
	F	0.3	-7.3	0.5	-3.8	3.7	3.1
<i>Ill-defined causes</i>	M	1.3	-4.3	4.0	-3.1	11.6	7.1
	F	1.1	17.4	1.4	-1.3	3.3	5.8
<i>External causes</i>	M	37.5	-6.9	58.3	-1.4	162.4	-1.6
	F	3.7	-7.6	14.4	-1.6	36.9	-0.2
Motor vehicle traffic injuries	M	8.7	3.6	28.5	-1.3	27.8	-1.5
	F	0.5	-7.7	7.3	-1.4	8.0	0.3
Accidental drowning	M	1.7	-6.5	1.3	-2.2	10.8	-3.9
	F	0.0	-12.5	0.2	-2.1	1.9	-2.2
Accidental poisoning	M	1.0	-1.0	2.8	0.0	19.1	3.3
	F	0.2	-9.3	0.7	0.8	4.4	2.5
Suicide	M	1.1	-9.3	12.7	-1.8	36.8	0.0
	F	0.0	-12.5	3.1	-2.2	5.8	-1.3

Mortality data contdTable 3. Selected mortality for the group 30–44 years by sex in Armenia and B+C country average:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	172.2	-1.6	120.3	-2.5	453.8	-0.7
	M	248.1	-2.2	161.6	-2.6	700.0	-0.8
	F	103.4	-0.5	78.5	-2.1	215.6	-0.2
<i>Malignant neoplasms</i>	M	32.3	-2.0	27.6	-2.3	40.2	-2.8
	F	51.2	2.0	31.3	-2.0	43.8	-1.4
Trachea/bronchus/lung cancer	M	5.6	-5.3	5.0	-3.4	7.3	-4.2
	F	2.0	0.0	2.8	-0.6	2.2	-1
Female breast cancer	F	15.9	0.3	10.0	-2.6	10.0	-2.3
<i>Cardiovascular diseases</i>	M	68.4	-3.2	26.1	-2.5	158.6	-0.4
	F	15.3	-3.6	10.4	-2.1	45.3	0.0
Ischaemic heart disease	M	48.2	-3.5	11.8	-3.1	73.7	-2.2
	F	4.3	-5.3	2.4	-2.7	14.4	-1.3
Cerebrovascular diseases	M	10.9	2.8	4.4	-3.2	24.6	-0.4
	F	5.7	-0.1	3.6	-2.5	10.6	-1.3
<i>Respiratory diseases</i>	M	8.9	-0.2	3.9	-3.5	34.3	0.9
	F	3.0	3.9	2.2	-2.0	9.8	0.8
<i>Digestive diseases</i>	M	17.7	-0.6	12.6	-2.4	50.2	1.4
	F	2.8	-4.6	5.4	-1.7	19.4	4.1
<i>External causes</i>	M	75.4	-2.6	58.8	-1.2	299.5	-1.9
	F	10.8	-3.4	15.1	-1.8	58.9	-1
Motor vehicle traffic injuries	M	17.9	3.7	16.0	-0.5	31.4	-1.7
	F	3.6	2.2	3.9	-2.0	7.1	-0.5
Suicide	M	6.5	-1.0	21.2	-1.5	54.9	-2.4
	F	0.2	-11.6	5.8	-2.2	7.9	-2.5

Mortality data contdTable 4. Selected mortality for the group 45–59 years by sex in Armenia and B+C country average:
SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	690.6	-0.9	435.6	-1.3	1294.9	-0.6
	M	982.4	-1.2	580.1	-1.4	1981.7	-0.6
	F	443.1	-0.1	293.3	-1.0	698.9	-0.5
<i>Malignant neoplasms</i>	M	243.6	0.1	218.2	-1.2	323.2	-1.9
	F	184.6	3.0	155.0	-1.0	186.1	-0.5
Trachea/bronchus/lung cancer	M	84.5	-0.5	65.9	-1.5	101.4	-2.9
	F	14.4	16.1	21.8	3.4	15.4	1.0
Female breast cancer	F	61.7	5.7	44.0	-2.2	45.3	0.1
<i>Cardiovascular diseases</i>	M	437.8	-1.2	156.4	-2.6	793.1	-0.1
	F	133.3	-2.9	50.9	-2.5	271.7	-0.6
Ischaemic heart disease	M	310.0	-1.2	86.2	-3.3	435.3	-0.7
	F	52.6	-4.1	17.8	-3.4	111.1	-0.6
Cerebrovascular diseases	M	79.8	-0.2	23.7	-2.6	168.6	-0.9
	F	55.2	-0.4	14.5	-2.1	88.4	-1.4
<i>Respiratory diseases</i>	M	42.8	-3.4	20.3	-1.7	108.7	-1.4
	F	12.5	-1.6	10.2	-1.3	24.5	-0.7
<i>Digestive diseases</i>	M	63.3	-2.4	49.6	-0.8	129.7	0.7
	F	18.6	2.3	20.3	-0.7	57.3	1.9
<i>External causes</i>	M	79.4	-3.4	62.8	-1.0	409.2	-0.9
	F	15.1	-2.5	20.9	-0.9	89.1	-1.1
Motor vehicle traffic injuries	M	12.2	-4.3	13.0	-1.3	28.5	-1.8
	F	1.6	-5.2	4.1	-2.1	7.5	-1.4
Suicide	M	5.3	-6.8	23.1	-1.1	68.1	-2.4
	F	1.4	-6.3	8.5	-1.2	10.2	-3.4

Mortality data contd

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

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	2835.1	0.2	1570.9	-1.9	3411.7	-0.1
	M	3769.0	0.4	2156.9	-2.1	4996.4	0.1
	F	2120.6	0.0	1069.2	-1.9	2339.0	-0.6
Malignant neoplasms	M	859.1	3.9	851.3	-1.4	1002.5	-0.8
	F	416.9	2.9	439.8	-1.1	438.9	-0.7
Trachea/bronchus/lung cancer	M	295.6	4.2	261.8	-1.9	321.7	-1.5
	F	28.9	1.5	59.0	0.2	37.1	-1.4
Female breast cancer							
	F	76.7	3.5	79.7	-1.6	68.7	1.3
Cardiovascular diseases	M	1935.1	-0.7	744.9	-3.6	2903.0	0.6
	F	1129.1	-1.4	335.7	-3.9	1507.8	-0.3
Ischaemic heart disease	M	1225.3	-1.0	381.3	-4.2	1582.2	1.2
	F	561.6	-2.7	133.5	-4.6	731.4	0.5
Cerebrovascular diseases	M	512.3	-0.5	143.3	-3.7	833.7	0.2
	F	426.6	-0.6	86.7	-4.1	528.9	-0.8
Respiratory diseases	M	316.9	0.6	144.0	-3.5	303.0	-2.4
	F	76.8	-2.4	62.5	-2.4	68.6	-3.6
Digestive diseases	M	195.6	1.6	111.6	-1.6	193.0	0.1
	F	80.2	0.3	54.1	-1.7	94.2	0.2
External causes	M	94.4	-2.8	79.3	-1.4	320.0	1.0
	F	31.4	-2.0	32.1	-2.1	88.7	-0.5
Motor vehicle traffic injuries	M	15.7	-4.1	14.8	-3.0	24.3	-1.5
	F	5.7	-4.5	5.9	-3.4	9.5	-1.0
Suicide	M	7.0	-4.5	24.5	-1.6	60.5	-0.8
	F	0.8	-8.7	8.7	-2.6	12.7	-3.1

Mortality data contd

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

Causes of death	Sex	Armenia (2003)		Eur-A (2002)		Eur-B+C (2003)	
		Rate	Change (%)	Average	Change (%)	Average	Change (%)
All causes	Both	13335.9	4.1	8059.6	-1.0	12338.8	0.0
	M	15136.9	6.1	9832.0	-1.1	14838.0	0.1
	F	12464.3	3.2	7112.5	-0.9	11421.7	0.0
Malignant neoplasms	M	1132.3	17.5	2231.1	-0.4	1489.3	1.2
	F	650.2	14.5	1136.2	-0.4	721.7	0.8
Trachea/bronchus/lung cancer	M	274.3	31.9	457.1	-0.7	323.5	1.0
	F	39.0	16.4	102.7	1.5	55.6	0.5
Female breast cancer							
	F	116.6	27.2	159.6	-0.4	92.0	3.1
Cardiovascular diseases	M	10391.6	5.6	4356.2	-2.1	10221.2	0.4
	F	9243.5	3.0	3577.9	-1.9	8805.6	0.4
Ischaemic heart disease	M	6774.6	4.3	1708.0	-2.2	4925.6	1.4
	F	5821.4	1.8	1150.0	-2.2	4028.6	1.2
Cerebrovascular diseases	M	2701.2	7.8	1119.8	-2.5	3004.4	0.7
	F	2617.6	4.8	1026.9	-2.4	2967.6	0.5
Respiratory diseases	M	1306.0	9.2	1156.5	-2.4	824.1	-2.1
	F	557.2	2.1	591.9	-2.1	302.3	-3.2
Digestive diseases	M	389.4	10.0	340.3	-1.1	270.4	0.3
	F	282.3	12.0	279.8	-0.4	175.0	1.1
External causes	M	185.0	3.7	275.0	-0.6	604.2	0.1
	F	126.4	8.7	187.8	-1.2	172.4	-1.2
Motor vehicle traffic injuries	M	18.7	-0.7	28.1	-2.2	34.6	-3.1
	F	11.6	19.1	10.0	-3.1	14.7	-1.7
Suicide	M	6.2	-3.3	49.5	-1.6	86.6	-1.1
	F	6.1	4.2	11.8	-3.2	22.4	-1.9

Technical notes

Calculation of averages

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

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

Data sources

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

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

Disease coding

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

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

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

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

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

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

Limitations of national-level data

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

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

Reference groups for comparison

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

The country groups¹ used for comparison are called reference groups and comprise:

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

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

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

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

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

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

Glossary

Causes of death

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

Technical terminology

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

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