

HIGHLIGHTS ON HEALTH IN KYRGYZSTAN



Country Highlights give an overview of the health and health-related situation in a given country and compare, where possible, its position in relation with other countries in the region. The Highlights have been developed in collaboration with Member States for operational purposes and do not constitute a formal statistical publication. They are based on information provided by Member States and other sources as listed.

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TECHNICAL NOTES

Highlights on Health provide an overview of the health of a country's population and the main factors related to it. When possible, comparisons are made with other countries in WHO's European Region, as one means of assessing the country's comparative strength and weaknesses. As a rule, data have been taken for this purpose from one common international source; nevertheless, even under these circumstances the comparability of data may be limited owing to differences in national definitions, registration systems, etc. Unless otherwise mentioned, the main source of all data is the "Health for All" (HFA) database of the WHO Regional Office for Europe (June 1999 version).

Where necessary, specific data from national sources are cited in the Highlights.

Two main types of graphical presentation are used in the Highlights to illustrate comparisons between countries:

- line charts, showing the trend in a particular indicator in the country in question (thicker line) compared with reference countries (thin lines);
- bar charts, showing a particular country's ranking compared with reference countries. The latest available data are used (i.e. the last year for which data are available may differ from one country to another). This type of chart is sensitive to small differences in the value of an indicator and should accordingly be interpreted with a certain amount of caution. For instance, a given country's position relative to other countries may change sharply one way or another when more recent data are included.

There are 51 Member States in WHO's European Region. It is not always appropriate to include all these countries in comparisons. For that reason, the charts mentioned above show a limited number of (usually geographically neighbouring) countries, which have certain similarities caused by their historical developments. In this case, comparisons are made with the other 14 countries that were formerly republics of the Soviet Union, with the average for all 15 newly independent states (NIS) formed following the break-up of the USSR, with the average for the five central Asian republics (CAR), and with the average for the 15 countries that are members of the European Union (EU).

Mortality data are the most complete and comparable, and they therefore constitute the main component of international comparisons. However, even in this case there is often some doubt about the completeness of the recording of deaths, especially at very young and old ages, and regarding the accuracy of coding of causes of death.

Unless otherwise stated, the charts are based on mortality rates standardized for the European standard population structure (for further details, see any issue of the *World Health Statistics Annual*). In most cases, so-called "premature mortality" in the age group 0–64 years is used.

In order to ensure comparability, the majority of indicators have been calculated at the WHO Regional Office for Europe (WHO/EURO), using a uniform methodology and software. For that reason, the values of some indicators in the HFA database may differ somewhat from national assessments based on other methods. This is true in particular for indicators such as life expectancy and maternal mortality.

Only a relatively small amount of the data contained in the HFA database is used in the Highlights. If further data are needed, readers are recommended to make use of the database itself, which can be downloaded from WHO/EURO's web site (www.who.dk, Country Information).

A list of references and a glossary are given at the end of this document.

OVERVIEW

After rapid population changes in 1991–1994 following the break-up of the Soviet Union (intensive emigration, a fall in the birth rate and an increase in mortality), population trends have stabilized. Despite a recent decline, the birth rate remains high compared with other countries in the European Region.

As in most of the other countries that were formerly republics of the USSR, the trend in life expectancy in Kyrgyzstan in 1985–1986 shows a sharp improvement, a result of the anti-alcohol campaign, followed by a sharp deterioration in 1992–1994, most likely owing to a return to previous drinking habits as well as to the difficult socioeconomic conditions in the transition period. As from 1995, life expectancy has stabilized and increased to a certain extent, although it remains one of the lowest in the European Region.

Maternal and infant mortality rates in Kyrgyzstan are high compared with the majority of countries in Europe (more than twice the European average).

The main causes of death are cardiovascular diseases and external causes of injury and poisoning, where trends are largely similar to those for overall mortality, i.e. a sharp increase in 1992–1994 followed by some stabilization and downward movement since 1995.

The rate of premature mortality due to cerebrovascular diseases in Kyrgyzstan is the highest in the European Region.

Cancer mortality is quite low and has continued to fall in recent years. However, the rate of premature mortality due to breast cancer in Kyrgyzstan is one of the highest in the European Region.

Similar to neighbouring central Asian republics (CAR), mortality due to infectious and parasitic diseases and to diseases of the respiratory organs is very high in Kyrgyzstan compared with other countries in the European Region.

Since 1994 the tuberculosis incidence rate has risen sharply, and according to the latest available data, is the highest of all countries in the Region.

There is high morbidity due to viral hepatitis and syphilis.

The hospital bed rate fell by almost one third between 1992 and 1997 and is now approaching the European average. The physician/population ratio is close to the average for the CAR but somewhat lower than the average for Europe as a whole.

The indicators of health service utilization (numbers of inpatient admissions and outpatient consultations) had fallen steadily, although some stabilization and even upturn has been evident since 1996–1997.

Compared with the majority of European countries, health care expenditure in Kyrgyzstan (as a percentage of gross domestic product – GDP) is low.

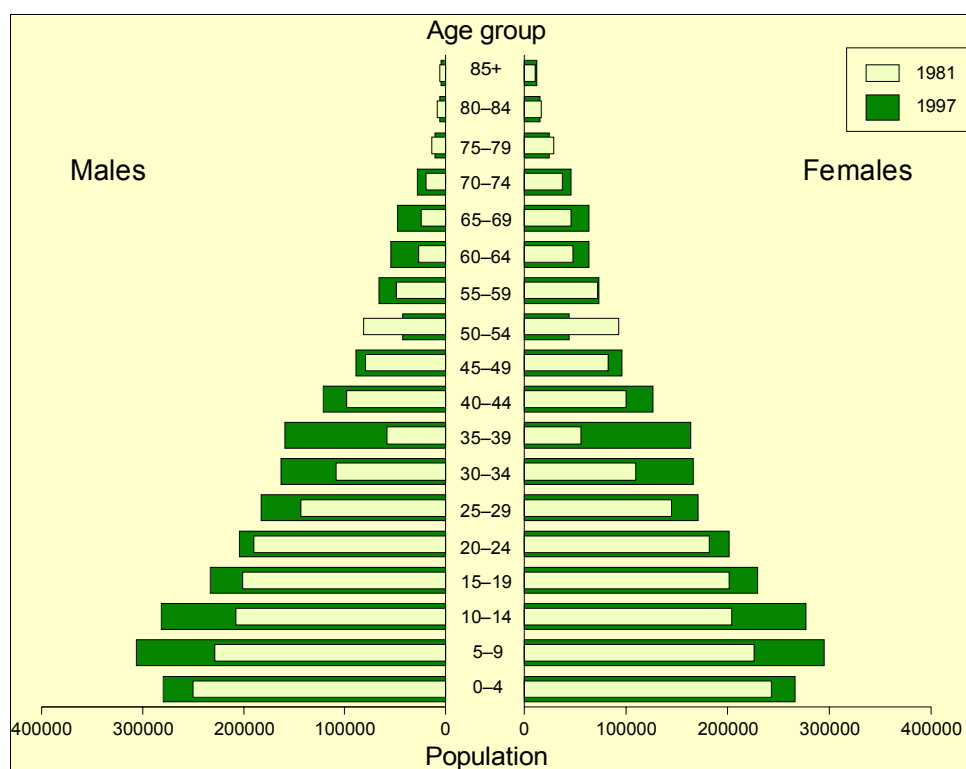
THE COUNTRY AND ITS PEOPLE

Following the break-up of the Soviet Union, Kyrgyzstan became independent in August 1991. Kyrgyzstan is a republic with a bicameral parliament, the Supreme Council or Zhogorku Kenesh. All the members of both chambers (105 members) are directly elected every five years by the population aged 18 years and above. The government is appointed by parliament. The head of state is the President, elected every five years. Local self-government is carried out by oblast, city and region administrations.

The capital of Kyrgyzstan is Bishkek.

Basic data on Kyrgyzstan and the WHO European Region		
	Kyrgyzstan (1997)	Europe (1996)
Population (millions)	4.6	
Population aged		
• 0–14 years, %	37.0	20.4
• 15–64 years, %	57.4	66.2
• ≥ 65 years, %	5.6	13.4
Area, km ²	199 900	
Population density per km ²	22.8	31
Urban population (%)	34.0	71.6 ^a
Births per 1000 population	22.2	11.34
Deaths per 1000 population	7.5	11.15
Natural growth rate per 1000 population	14.7	0.19
Gross domestic product (GDP) per person in US\$, PPP	2140	11 940 ^a
^a - 1995		
^b - PPP – purchasing power parity		

Age pyramid, 1981 and 1997

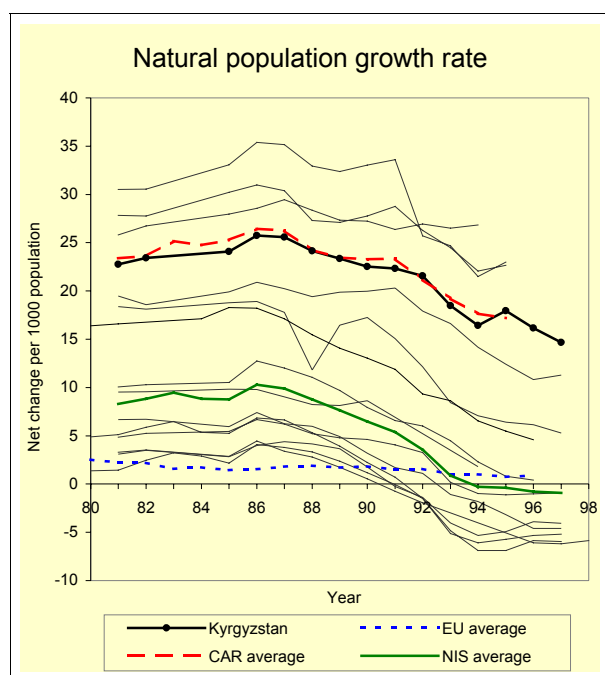


Demographic situation

At the start of 1998 Kyrgyzstan had a resident population of 4 653 000, an increase of approximately 6% since independence (1991). One third of the population live in towns, two thirds in rural areas. The increase in the population is mainly due to natural reproduction.

Just as in other countries that are members of the Commonwealth of Independent States (CIS), the birth rate fell steadily from the end of the 1980s, although this decrease has halted in recent years. The birth rate is still as high as in other CAR, ensuring a relatively high level of natural reproduction (15 per 1000 population in 1997).

The population is slowly aging (1990–5.0% aged 65 years and above, 1997–5.6%).



Family structure

The number of registered marriages has fallen sharply in recent years, from 43 500 in 1990 (an average of 9.9 per 1000 population) to 26 600 in 1997 (5.7 per 1000). This has also had an effect on the birth rate, since some 80% of children are born to spouses who are in officially registered marriages.

There has been an increase in the proportion of births out of wedlock (from 13% in 1990 to 24% in 1997). At the same time, Kyrgyzstan is a country with a low divorce rate (1.4 per 1000 population in 1997). This is substantially affected by the high proportion of people of indigenous nationality, among whom the divorce rate is 5 per 1000 married couples (for comparison, corresponding figures are 18 among Russians, 16 among Germans and 12 among Ukrainians).

Migrant population and ethnic profile

Migration increased sharply at the beginning of the 1990s, reaching a peak in 1993, when 144 000 people left the country. In recent years, numbers of both emigrants and immigrants have been falling. A positive migratory balance has been maintained with some CIS countries such as those in the trans-Caucasus, Turkmenistan, Kazakhstan and Tajikistan. Refugees come from Tajikistan (more than 15 000 by the start of 1998), while the main flows of emigrants are to the Russian Federation and Germany. In total, some 500 000 people or almost 10% of the population emigrated in the period 1991–1997.

More migration is also being seen within the country. Worsening living conditions and unemployment are the reasons why people are moving from mountainous regions with a harsh climate to the capital and valley areas, where there is a better chance of finding work in state or private enterprises.

As a result of these migratory processes and owing to differences in birth rates (which are significantly higher among indigenous central Asian peoples), the composition of Kyrgyzstan's population has changed: the proportion of Kyrgyz and Uzbeks has increased, while that of Russians has fallen (these three nationalities account for 90% of the population of the country). There is no uniform pattern for the remaining nationalities: while numbers of Jews and Germans have fallen sharply, the reductions in the numbers of Armenians, Belarussians, Moldovans, Koreans

and Tatars have been less marked. On the other hand, the numbers of Azerbaijanis, Dungans, Kazakhs, Tajiks and some other nationalities are increasing.

In 1997, the ethnic profile was as follows: Kyrgyz – 61.2%; Russian – 14.9%; Uzbeks– 14.4%; Ukrainians – 1.5%; others – 8.0%.

Education

Education is compulsory up to the age of 15 years. The literacy rate (among people aged 15 years and above) is 97%. More than 10% of the adult population have received university level education, and 56% have general and special secondary education.

There are two official languages in the country: Kyrgyz and Russian. Other languages (Uzbek, Kazakh, Uighur, etc.) are also widely spoken.

Islam and Christianity are the most widespread religions.

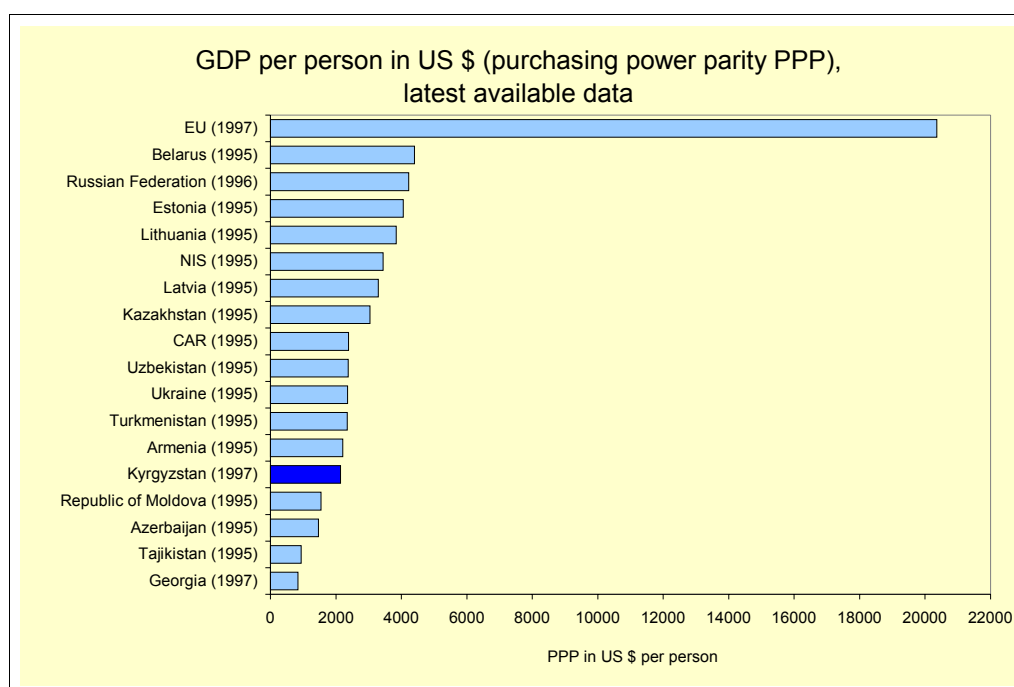
Economy

As in most other central and eastern European countries, the social and political reforms in Kyrgyzstan have been accompanied by a sharp deterioration in the economic situation. In real terms, gross domestic product fell by almost

half between 1990 and 1994. There has been some stabilization and a small increase in GDP since 1995. In 1997, Kyrgyzstan was one of the countries in the European Region with the lowest figure for GDP per person. The economic recession has been accompanied by rising unemployment and hyper-inflation. Inflation peaked (at more than 2000% per year) in 1992, but it has since stabilized in the range 100–200%, reaching 113% in 1997. In western Europe, the average inflation rate is some 3%, i.e. almost 40 times less. According to available data, the unemployment rate reached 4.3% in 1996 and fell back to 3.1% in 1997. By European standards this is extremely low, but it should be borne in mind that real unemployment is significantly higher than the official figure. According to data from a comprehensive survey of poverty made by the World Bank, 51% of the population of Kyrgyzstan may be classified as living below the poverty line (*The World Bank, 1999*).

Main sectors of the economy:

- agriculture (40% of GDP);
- services (40% of GDP);
- industry (17% of GDP).



HEALTH STATUS

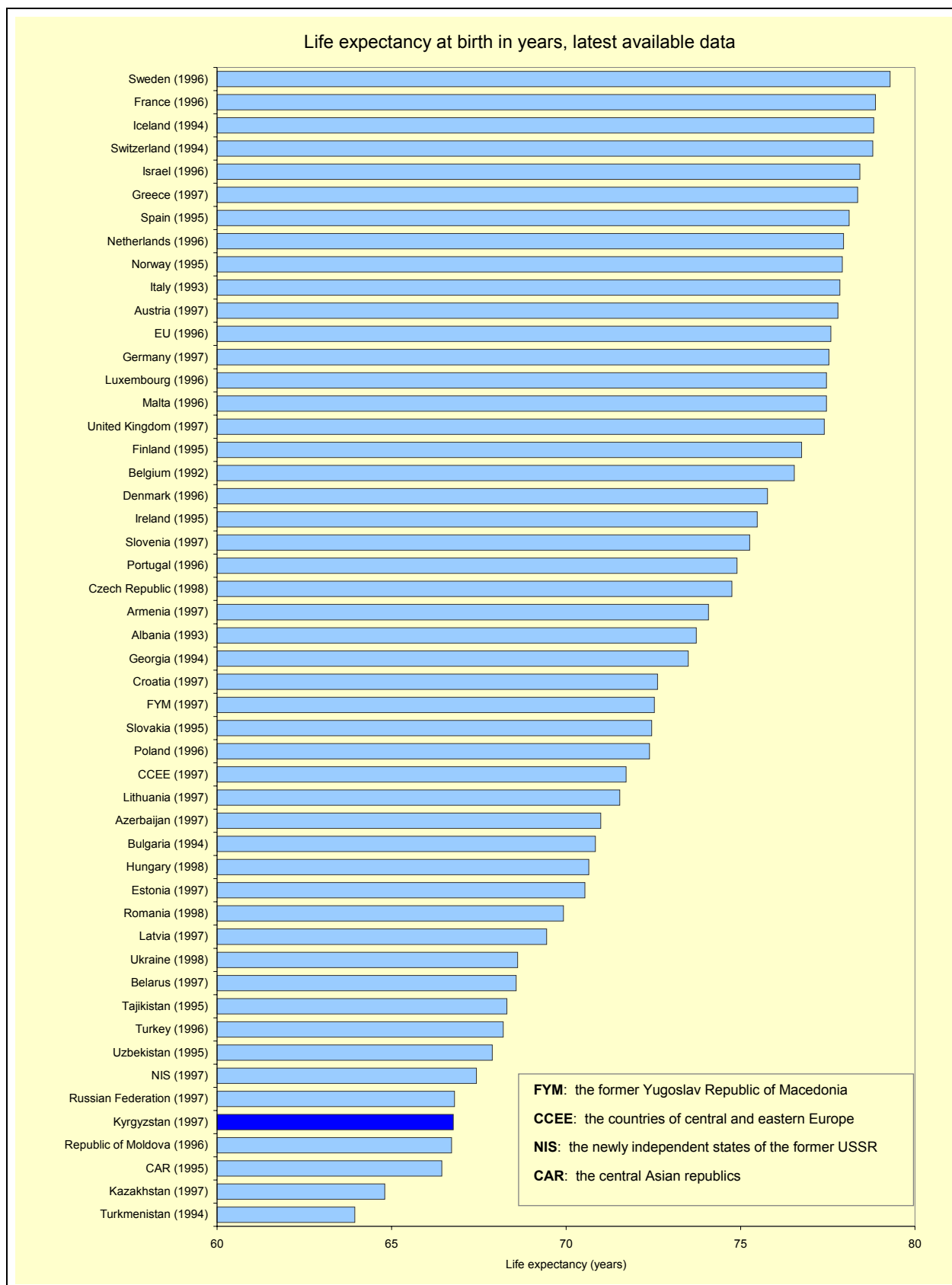
As in most other former republics of the Soviet Union, the following features characterize trends in mortality and hence also in life expectancy in Kyrgyzstan: a sharp improvement in the period 1985–1986 as a result of President Gorbachev's anti-alcohol campaign, followed by a sharp deterioration in 1992–1994, owing partly to a return to former patterns of alcohol consumption and partly to the difficult socioeconomic conditions during the transitional period, and finally a certain degree of stabilization and improvement as from 1995. Mortality among men is approximately 1.7 times higher than in women. During the period 1992–1995, a marked deterioration was also seen in a number of other indicators of health status. Rates of infant and maternal mortality and mortality due to a number of other causes remain high, while incidence rates for tuberculosis and sexually transmitted infections are increasing.

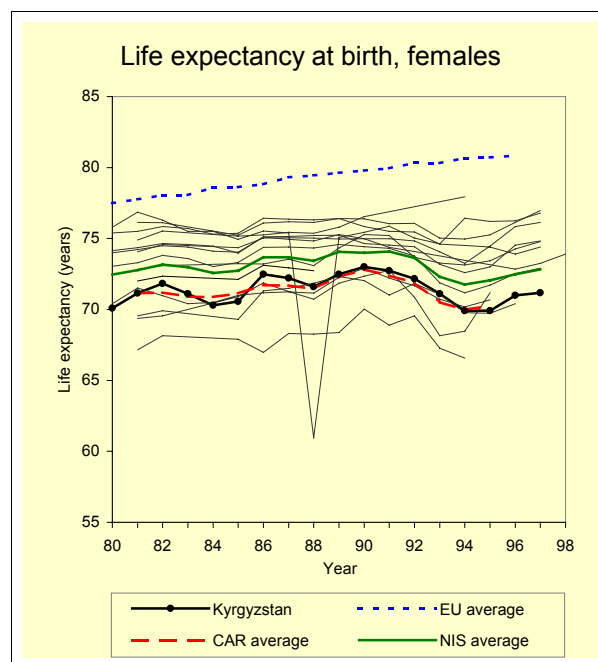
Life expectancy

Life expectancy at birth in 1997 was 66.8 years, somewhat higher than the average for the CAR. It rose to 67.1 years in 1998, according to preliminary data. However, like all other NIS, life expectancy in Kyrgyzstan is significantly (more than 10 years) lower than the average for western European countries. Compared with all European countries, Kyrgyzstan has one of the lowest values for this indicator (data from 1994–1997).

Compared with the NIS averages, male life expectancy in Kyrgyzstan is somewhat higher and the figure for women is substantially lower. This pattern is seen in most of the other CAR.

Selected health indicators in Kyrgyzstan and European Region		
	Kyrgyzstan (1997)	Europe (1996)
Life expectancy	66.8	72.8
• Men	62.5	68.6
• Women	71.2	77.1
Infant mortality per 1000 live birth	28.6	12.6
Maternal mortality per 100 000 live birth	62.7	19.8
Standardized death rate (SDR) for all causes of death per 100 000 population	1336.7	1013.7
SDR for cardiovascular diseases per 100 000 population	622.2	497.9
SDR for malignant neoplasms per 100 000 population	117.1	188.3
SDR for injuries and poisoning per 100 000 population	104.2	93.1
SDR for diseases of the respiratory organs per 100 000 population	172.4	65.8
SDR for diseases of the digestive system per 100 000 population	73.4	40.3
SDR for infectious and parasitic diseases per 100 000 population	43.0	13.7
New cases of tuberculosis per 100 000 population	114.1	37.8
New cases of syphilis per 100 000 population	150.9	83.9
New cases of AIDS per 100 000 population	0.07	2.1





Main causes of death and disease

As in most other countries, cardiovascular diseases are the most frequent causes of death, both in the age group up to 65 years and at older ages. Furthermore, in both youth and middle age there are high rates of mortality from accidents, respiratory diseases, cancer, diseases of the digestive system and infectious diseases.

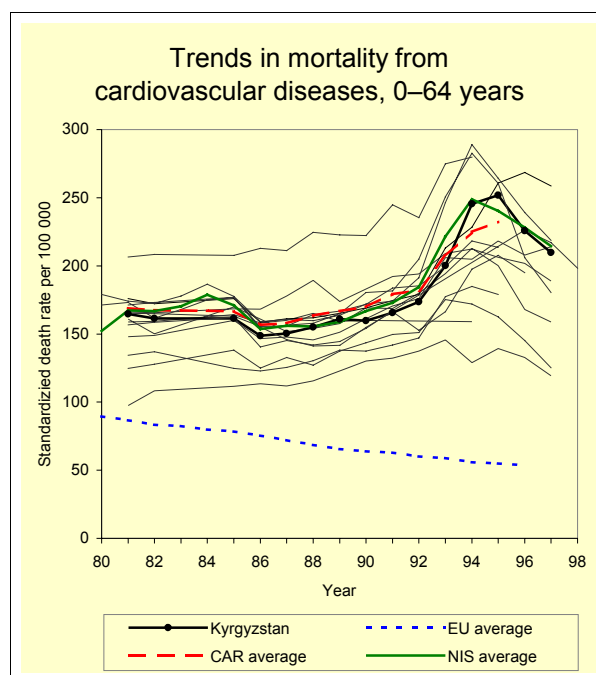
In terms of mortality at all ages, the situation does not change significantly: the only change is in the ranking of the standardized mortality indicators, and in the addition of “ill-defined”

(where deaths due to senility are included- the diagnosis frequently given by medical personnel to old people who die while not under medical supervision). So cardiovascular diseases, as the main cause of death, are followed by diseases of the respiratory system, ill-defined conditions, cancers, accidents, diseases of the digestive system and infectious diseases.

Diseases of the respiratory system and infectious and parasitic diseases are the leading main causes of hospitalization.

Structure of mortality (in %) by main cause of death and age group in Kyrgyzstan (1997), compared with the average for the European Region (1996)				
Cause of death	0–64 years		65 years and above	
	Kyrgyzstan	Europe	Kyrgyzstan	Europe
Cardiovascular diseases	33.5	30.6	55.9	60.0
Malignant neoplasms	11.2	22.6	7.0	16.3
Accidents, injury and poisoning	15.9	20.5	2.0	2.7
Diseases of the respiratory system	13.5	5.7	12.5	7.0
Infectious and parasitic diseases	6.6	2.7	0.8	0.5
Diseases of the digestive system	8.7	5.7	3.3	3.0
Ill-defined conditions	1.6	2.6	16.2	4.1
Other diseases	9.0	9.6	2.3	6.4

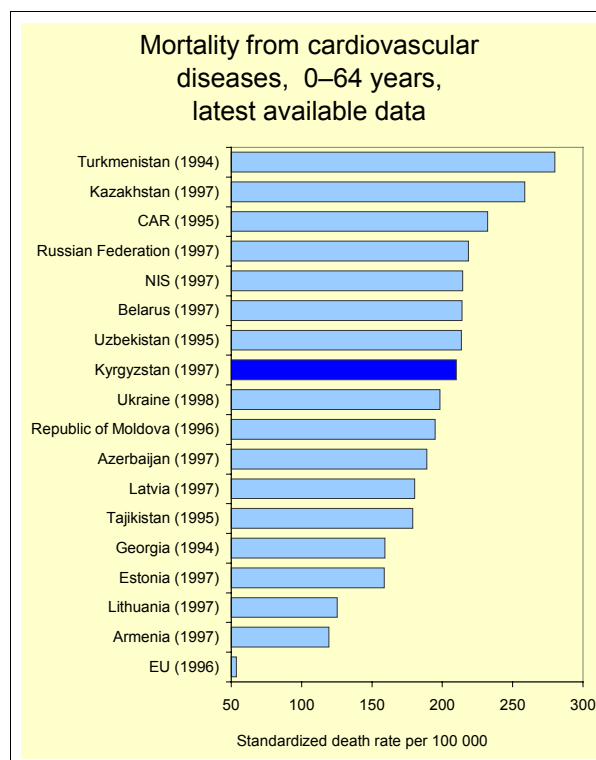
Inpatients by disease category, 1997 (% of all patients hospitalized)		
Disease category	Kyrgyzstan	Europe
Infectious and parasitic diseases	11.5	3.5
Malignant neoplasms	1.4	6.5
Cardiovascular diseases	5.3	11.7
Diseases of the respiratory system	17.8	10.0
Diseases of the digestive system	8.8	9.7
Injury and poisoning	5.7	8.3
Other diseases	47.9	50.3

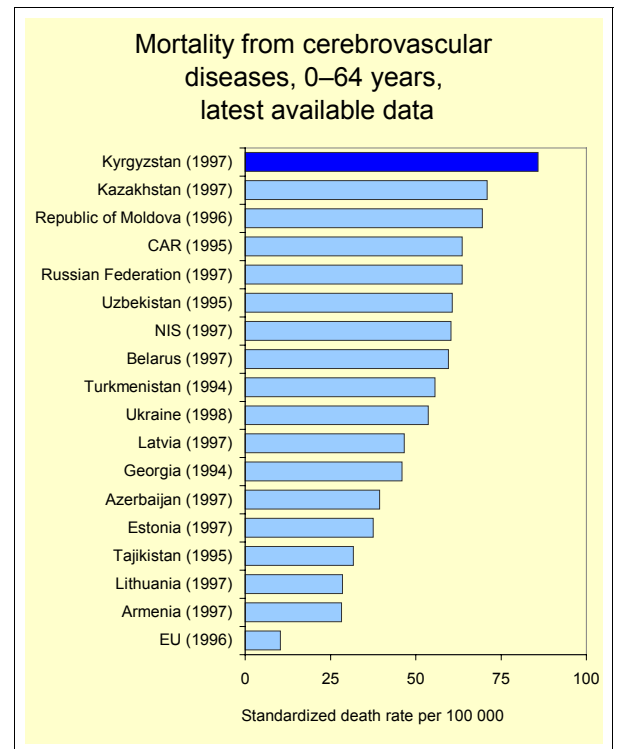
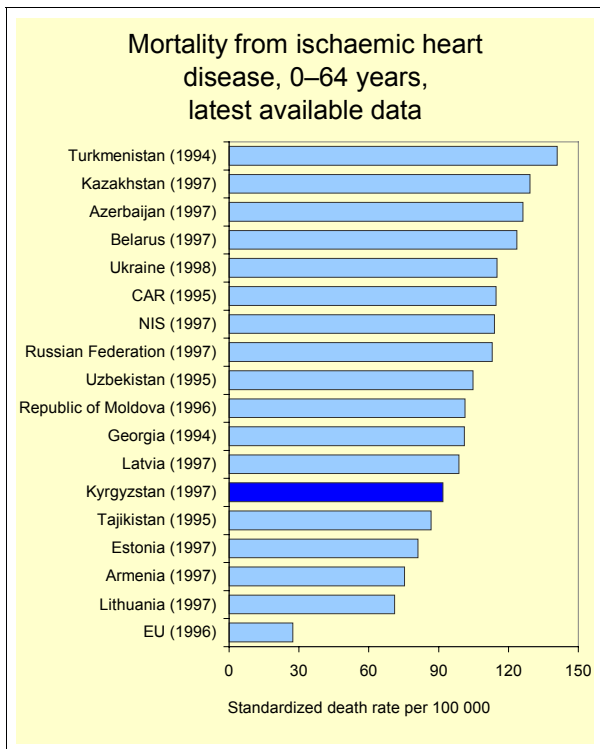
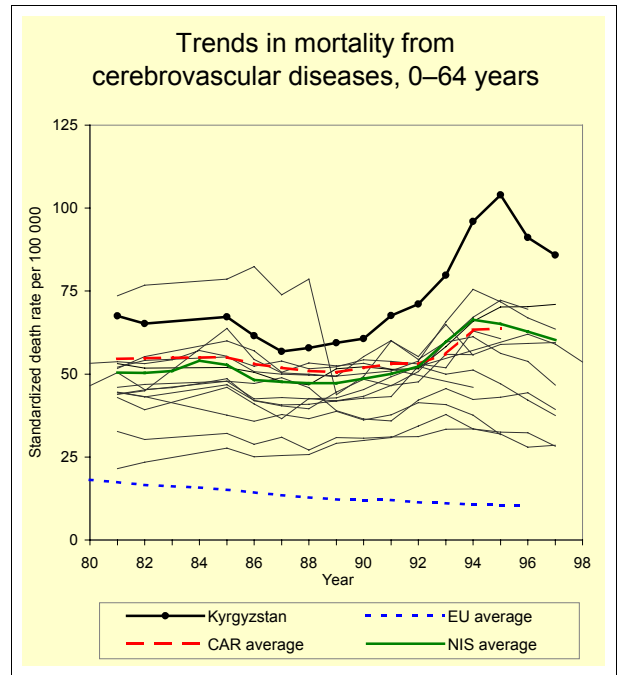
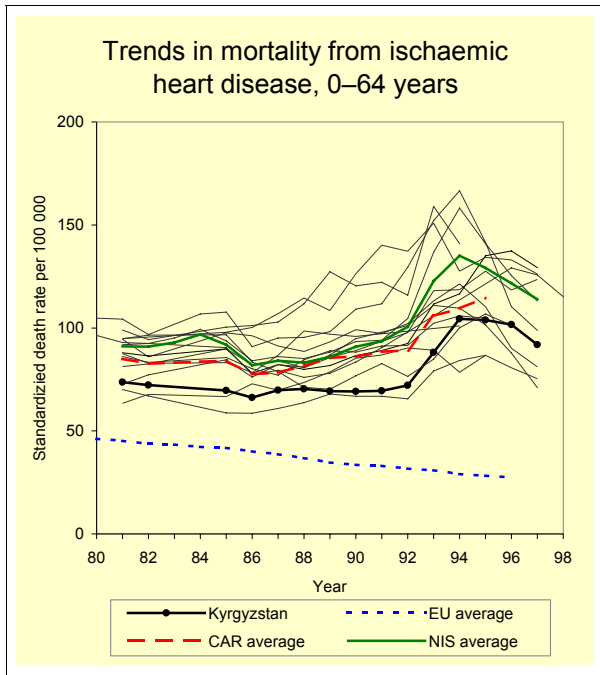


Cardiovascular diseases

After a sharp increase in 1992–1994, mortality due to cardiovascular diseases began to fall although it is still at a high level. In the age group 0–64 years, the standardized mortality rate in Kyrgyzstan, in 1997, was somewhat lower than the average for the CAR and NIS, but approximately four times higher than the average for western European countries (210 and 55 per 100 000 population, respectively). For all ages, there was an almost two-fold difference (622 and 289 per 100 000, respectively).

The situation with regard to mortality from ischaemic heart disease is somewhat better. On the other hand, Kyrgyzstan has an extremely high rate of mortality from cerebrovascular disease. In the age group 0–64 years, this rate is the highest not only among the CAR and NIS but also for the whole European Region of WHO.



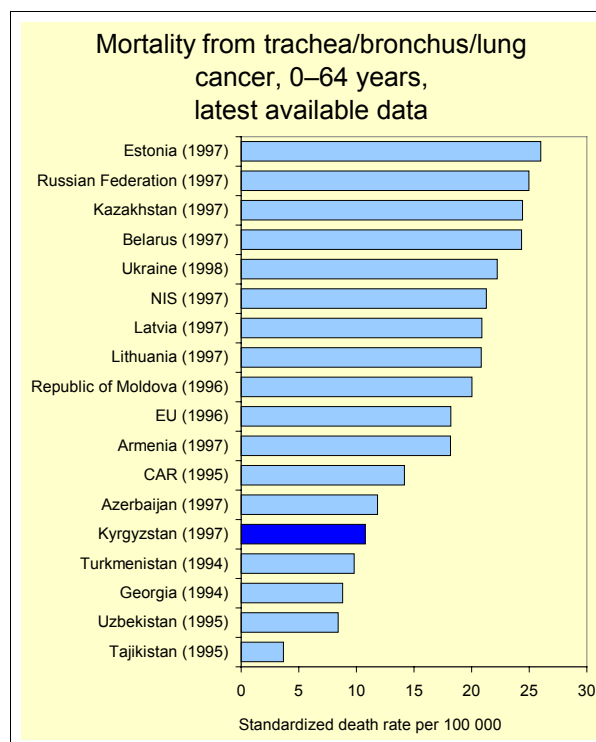
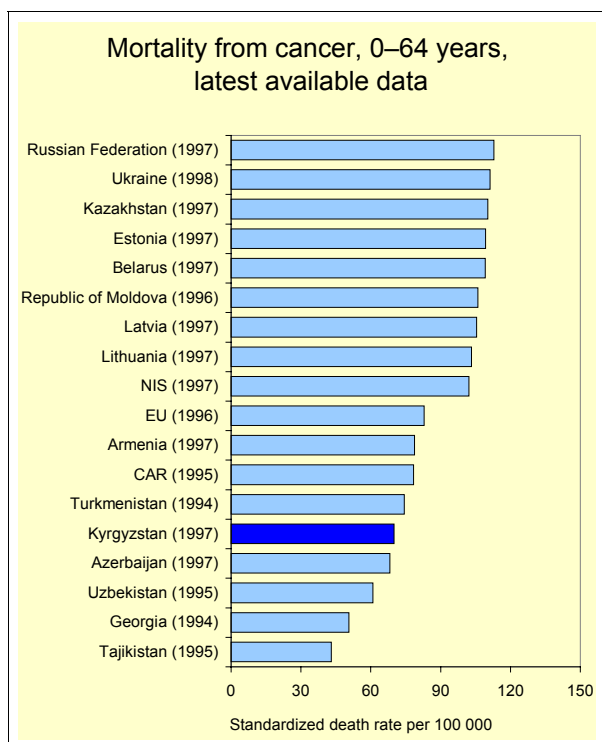
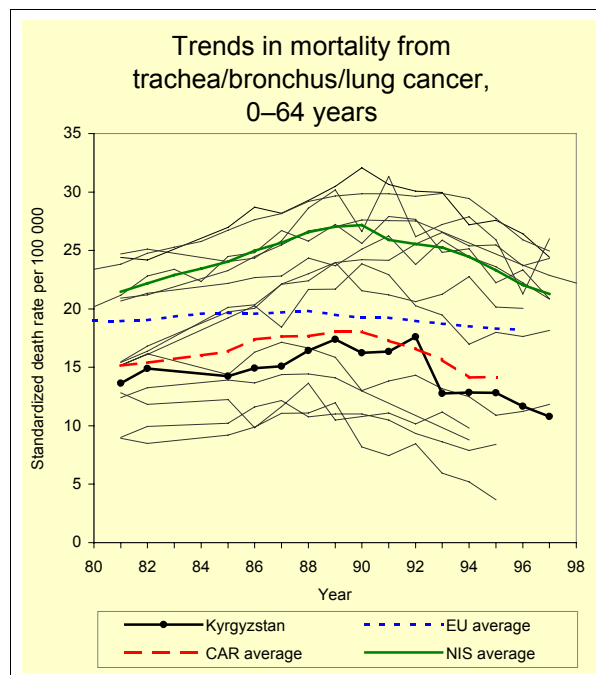
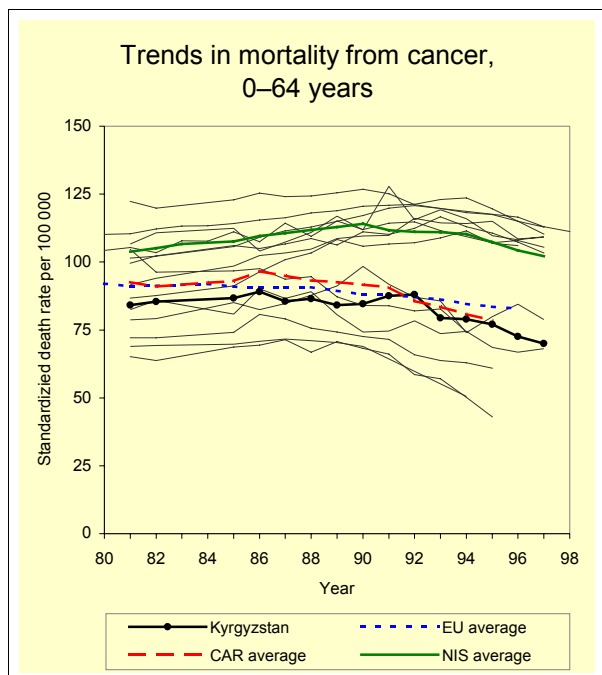


Cancer

Morbidity and mortality due to cancer are relatively low in Kyrgyzstan, compared with most other countries in the European Region. The cancer mortality rate has been falling further in recent years.

However, premature mortality due to cancer is higher than in the other CAR (except Kazakhstan). Comparatively high rates of

cancer mortality are seen in those areas of the country where a large proportion of people are of “European” nationality. According to data from the Kyrgyzstan Institute of Oncology and Radiology, morbidity (and consequently mortality) is higher in this group than in indigenous populations of central Asian peoples.

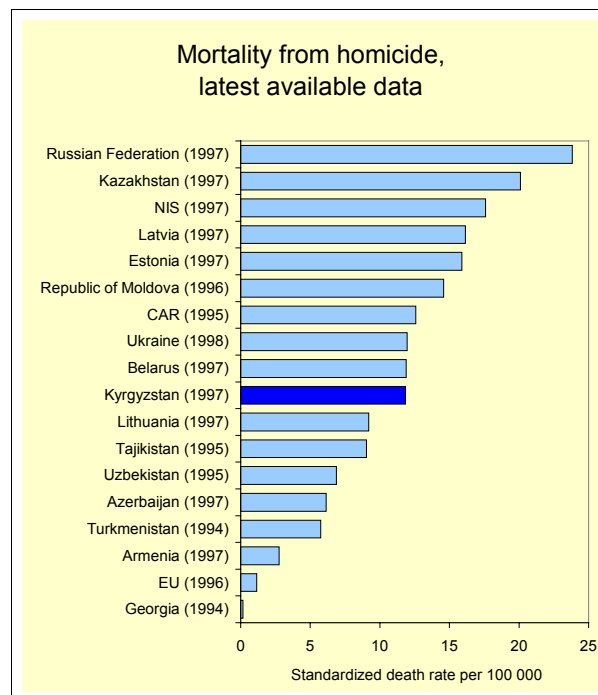
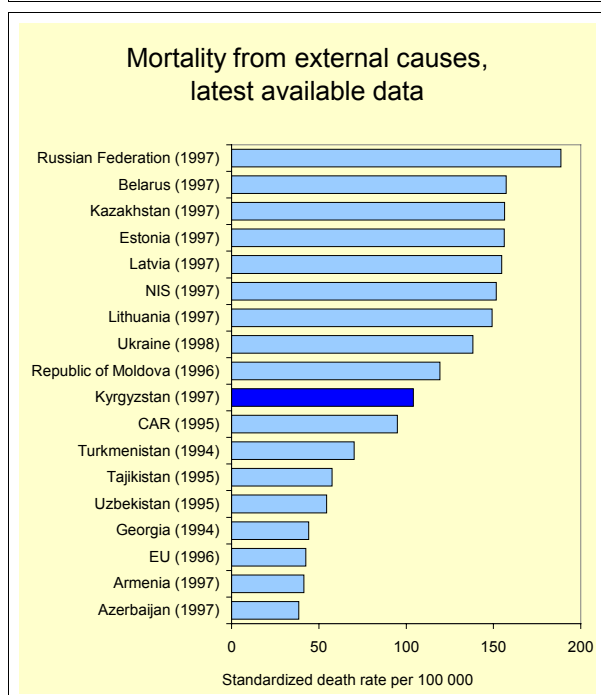
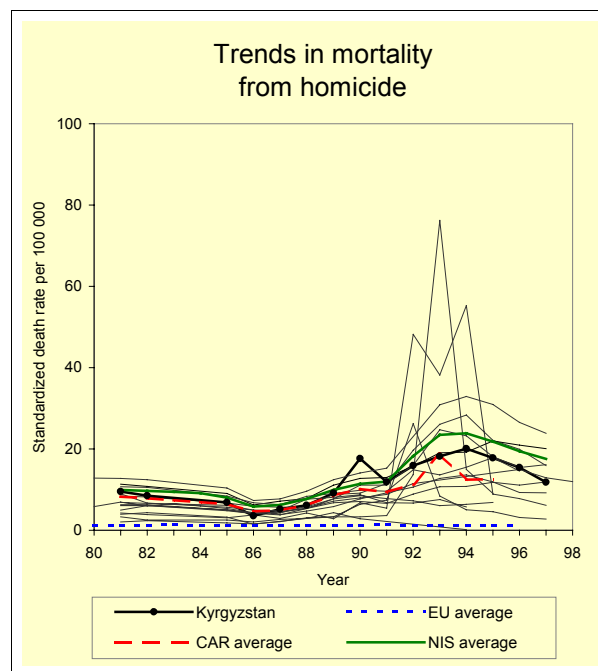
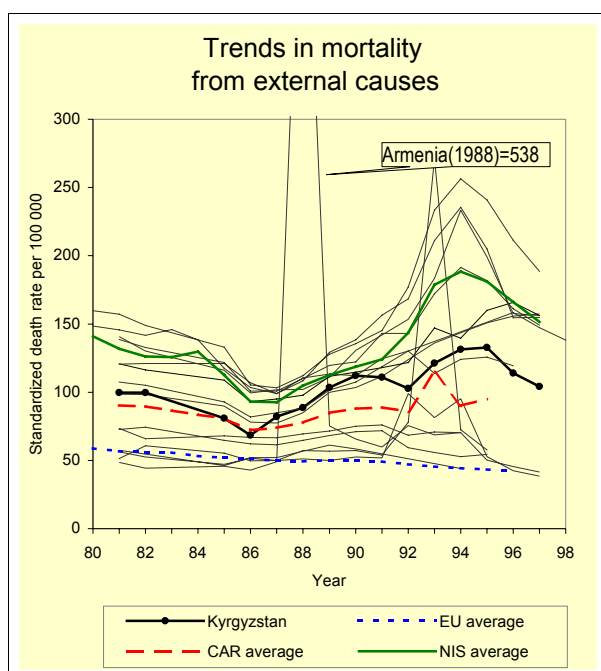


Injury and poisoning

External causes of injury and poisoning (accidents, suicides and homicides) are one of the leading causes of death in youth and middle age.

The trend in mortality due to external causes in Kyrgyzstan is similar to that in most of the former republics of the USSR: a reduction in 1986, linked to the anti-alcohol campaign, with a subsequent renewed increase up to 1995. A slight reduction in this figure is seen in 1996–1997 data.

Mortality due to external causes in Kyrgyzstan is relatively high compared with the other CAR, except for Kazakhstan, but lower than in a number of other CIS and Baltic countries. The mortality rate in men for external causes is 3–4 times higher than in women. The rates of mortality from road traffic accidents and suicide are close to the averages for the European Region, but on the other hand, Kyrgyzstan has a relatively high rate of mortality from other accidents and homicide.



Mental health

As noted above, the level of suicide in Kyrgyzstan is close to the average for the European Region. There has been little change in the past ten years: the SDR has varied within the range 15–20 per 100 000 population.

Despite the difficulty of comparing incidence rates in different countries, the available data point to the fact that the incidence and prevalence of mental disorders are close to the averages for the CAR (better than in Kazakhstan but worse than in the other CAR). The number of new cases of mental disorders has fallen slightly (from 182 per 100 000 in 1991 to 135 per 100 000 in 1997). The incidence of alcohol psychosis has risen in recent years but is still significantly lower than in Kazakhstan, the Russian Federation or the Baltic countries.

In the past three years there has been an increase in the number of mentally disabled people. Mental disorders are the sixth or seventh leading cause of primary disability. Mental retardation and schizophrenia are the main mental disorders that most often lead to disability.

Infectious diseases

Along with other CAR, the mortality from infectious and parasitic diseases in Kyrgyzstan is significantly higher than in other countries of NIS and western Europe. However, compared with the other CAR (except Uzbekistan), it is quite low, although it has been rising steadily since 1990.

The incidence of tuberculosis began to increase particularly strongly in Kyrgyzstan as from 1994, and in 1997 it was the highest among all countries of the European Region.

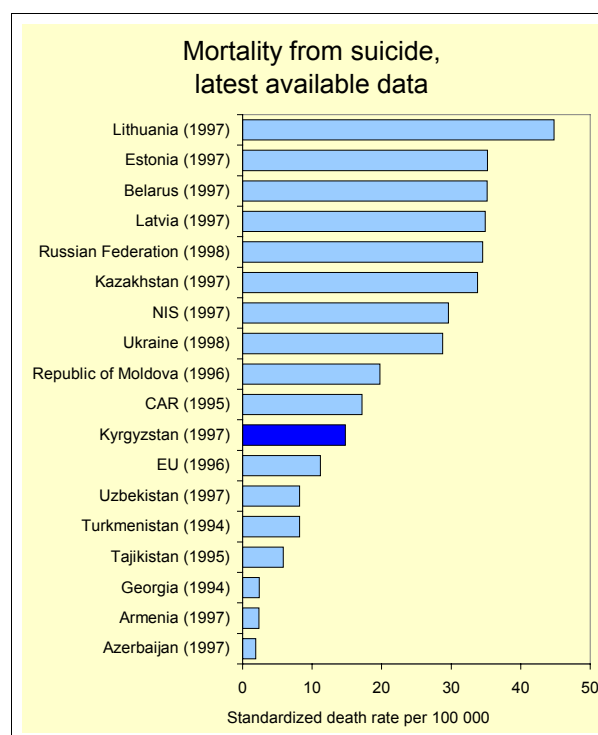
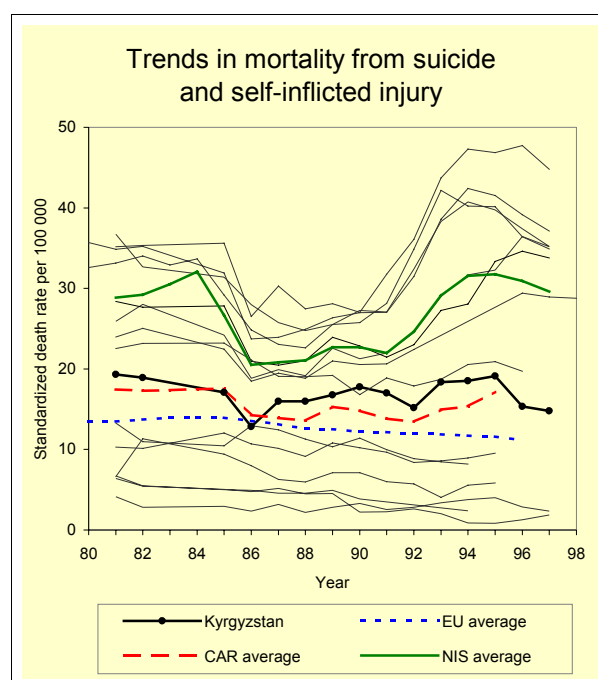
Viral hepatitis incidence in Kyrgyzstan, like in the other CAR, is also one of the highest rates in the European Region.

The incidence of diphtheria peaked in 1995 and is now falling, although it remains among the highest in the European Region of WHO.

Since 1994, the increase in syphilis incidence has assumed threatening proportions, as in a number of other CIS countries, especially

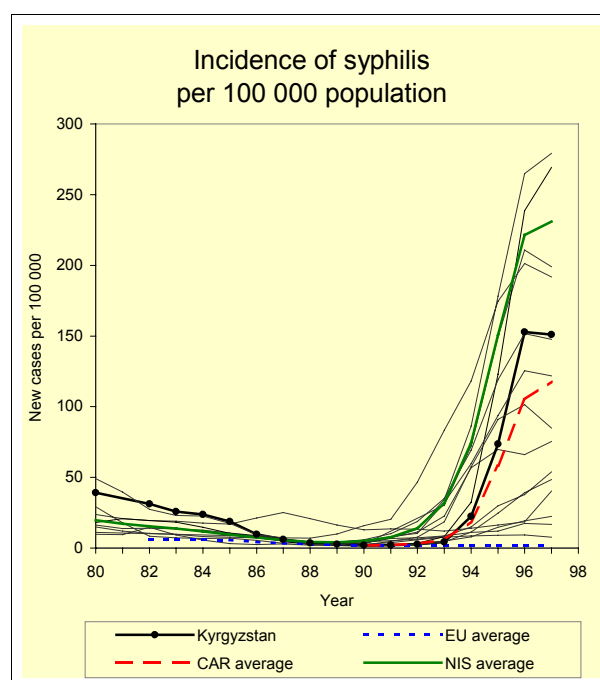
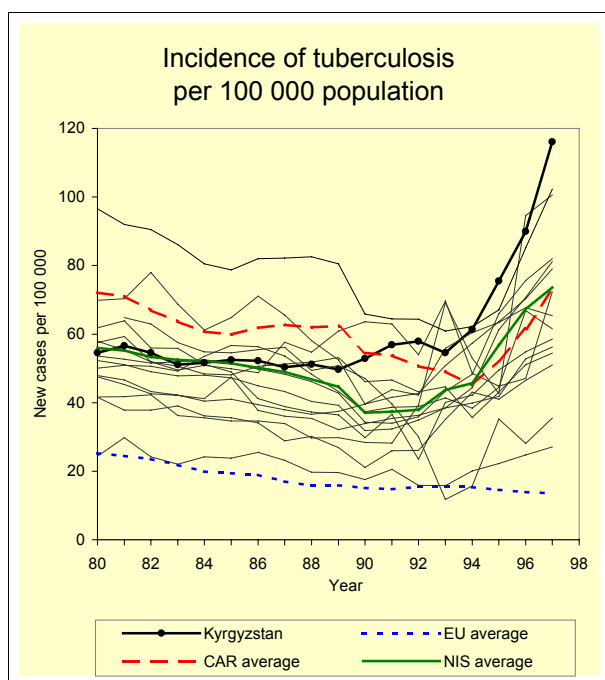
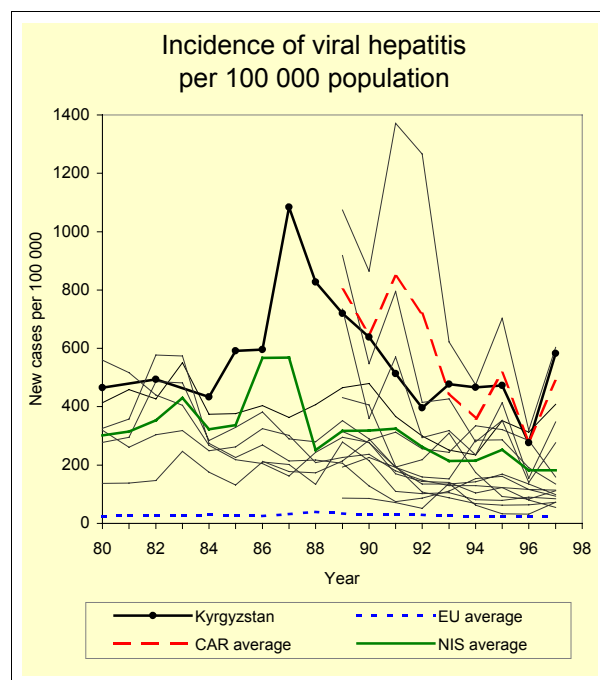
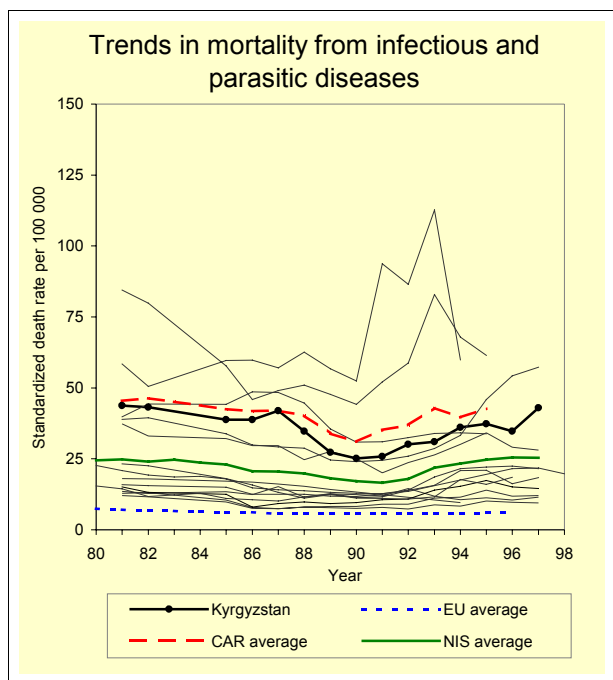
Kazakhstan and the Russian Federation. Data from 1997 show that the incidence of syphilis has stabilized in Kyrgyzstan, although the country still has the fifth highest rate in the European Region.

The difficulties of the transition period have also increased the risk of the spread of HIV infection. This is confirmed by the epidemiological situation that has arisen in CIS countries: Ukraine, the Russian Federation, Belarus, etc.



Before 1996, 18 cases of HIV infection had been detected in foreign citizens; the first case among nationals was registered in 1996. As of 1 September 1998, six HIV-infected citizens and one child born to an HIV-infected mother were under outpatient observation.

By contrast with the previous downward trend in the incidence of acute intestinal infections, this indicator rose in 1997 to the level attained in 1992–1993 (second highest among the CAR). This high level of incidence is related to unsatisfactory supplies of good-quality drinking water to certain areas of the country.



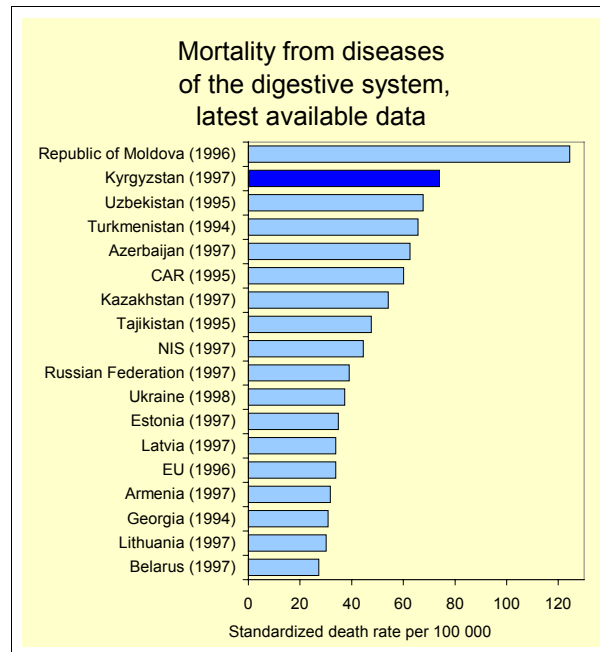
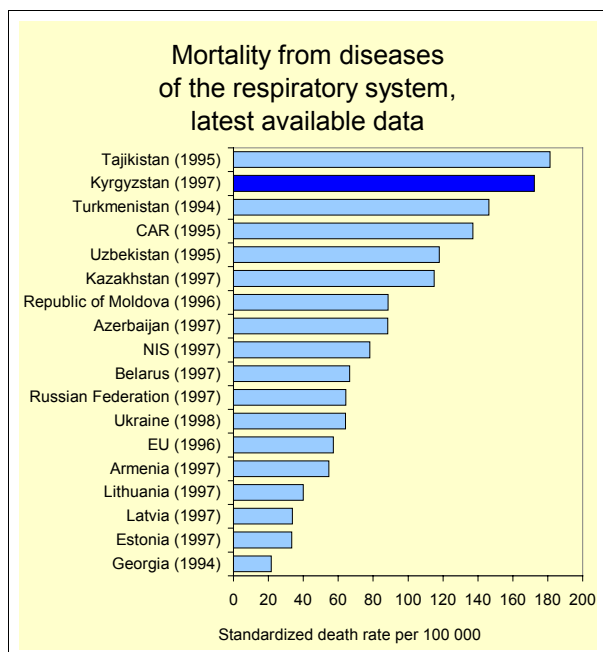
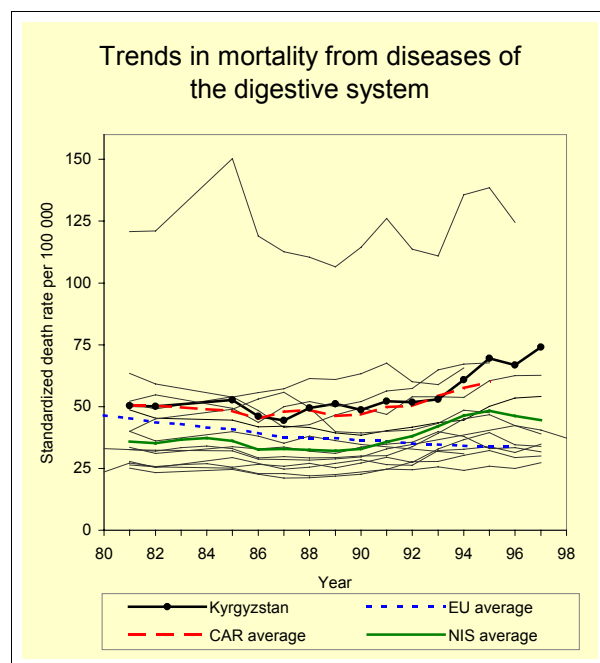
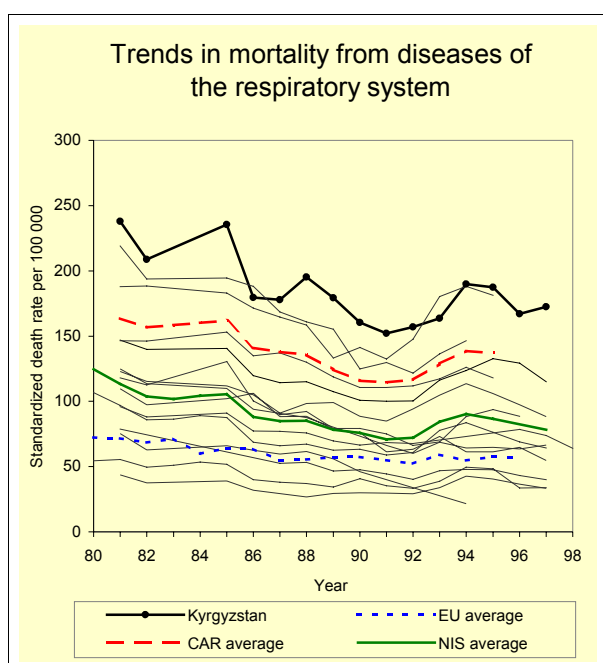
Other diseases

Like in all the other CAR, the mortality rate from diseases of the respiratory system is particularly high. It is among the highest in the European Region.

Research done by the Kyrgyzstan National Cardiology Centre has revealed the negative effects of certain factors in the mountain climate on the human organism: mortality due to diseases of the respiratory system among people living at 1500–2000 meters above sea level is far higher than in those living at 1000 meters.

Furthermore, in mountainous rural districts, (65% of the population of Kyrgyzstan live in rural areas), it is more complicated to organize the medical service owing to low population densities, the fact that populated localities are remote and inaccessible, the lack of regular transport links, etc.

Like in the other CAR, there is also relatively high mortality due to diseases of the digestive system, mainly owing to the increase in mortality from cirrhosis and chronic liver diseases. In recent years, this indicator has been somewhat higher than in the other CAR, and one of the highest rates among countries in the European Region.



Disability

From 1991 to 1994 the incidence of new registered cases of disability fell slightly. However, from 1995 up to 1997, this indicator rose to 237 per 100 000 population, mainly owing to the fact that new legislation was adopted in the country on supplementary benefits for disabled people. Among countries where data are available, this is one of the highest rates (after the Russian Federation and Lithuania).

The number of new cases of childhood disability also rose correspondingly from 1995. In 1994 it was 1341, whereas by 1997 it had risen to 1736.

Health of children and adolescents

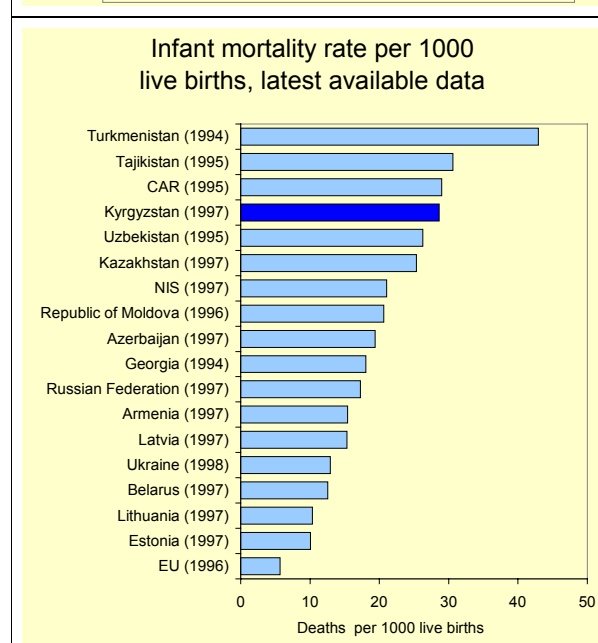
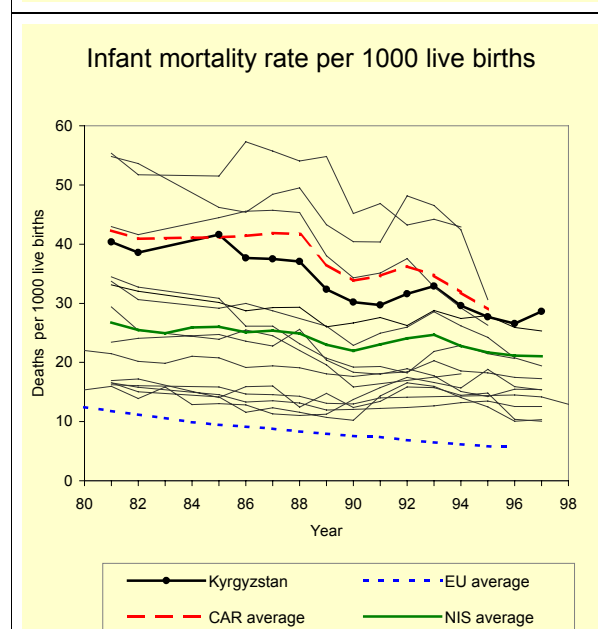
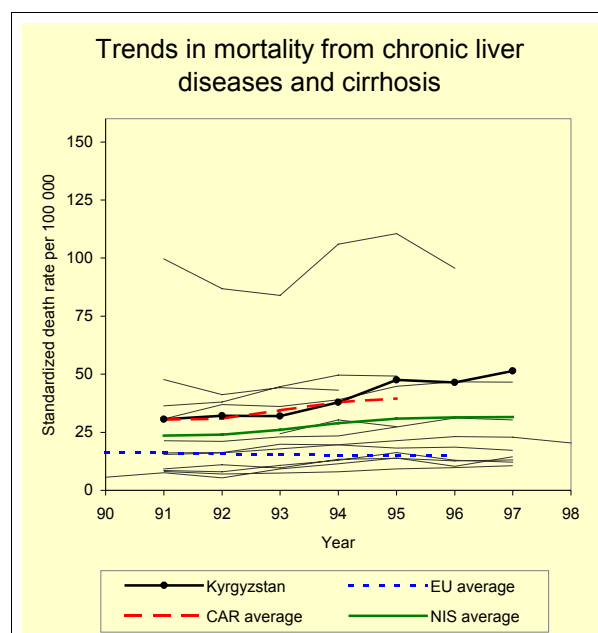
In the past ten years there have been some variations in the infant mortality rate, although with a definite downward trend.

Small increases in infant mortality were seen in 1992–1993 and 1997. As in the other CAR, infant mortality in Kyrgyzstan is high compared with other countries in the European Region (except for Turkey and Albania).

In this connection it should be borne in mind that national criteria for live births and hence for infant mortality differ from the international criteria. This means that the infant mortality rate may be even higher. Rates of perinatal mortality and mortality under the age of five years are also high.

The main causes of death in infants during the first year of life are diseases of the respiratory system (44%), conditions arising in the perinatal period (23%), and infectious and parasitic diseases (17%).

The same causes also play the main role in the structure of child mortality as a whole (up to the age of 14 years). The leading causes of morbidity are diseases of the respiratory system (44.9%), infectious and parasitic diseases (12.3%), and endocrine diseases and nutritional disorders (7.3%).



An increase is being seen in the number of congenital disorders (e.g. 583 per 100 000 live births in 1985, compared with 1330 in 1997). In recent years there has been a downward trend in overall morbidity among children due to most categories of disease, with the exception of diseases of the blood and blood-forming organs and a few other diseases. However, it should be noted that a fall in an indicator does not reflect the real pattern of a disease and may be related to less utilization of medical services.

The proportion of children born to women younger than 20 years has shown an upward trend in Kyrgyzstan since 1990 (1990–7.6%; 1997–13.2%).

A national preventive immunization programme has been adopted and is being carried out with support from UNICEF. It has resulted in broader coverage of children with the following vaccines: poliomyelitis – 99.1%; diphtheria – 98.1%; pertussis – 96.9%; measles – 98.0%; and tuberculosis – 97.1% (in 1997). The country has carried out three rounds of poliomyelitis vaccination for children and mass immunization against diphtheria for both adults and children.

Women's health

Although women in Kyrgyzstan, like in other countries, live on average longer than men, the difference is relatively slight. On the one hand, this is due to a relatively high rate of total mortality among women (compared with the NIS average), and on the other, to a lower rate of mortality among men (again compared with the NIS average).

Trends in female mortality in recent years show the same features as male mortality: an increase of approximately 30% in the period from 1990 to 1994, followed by a slow decline.

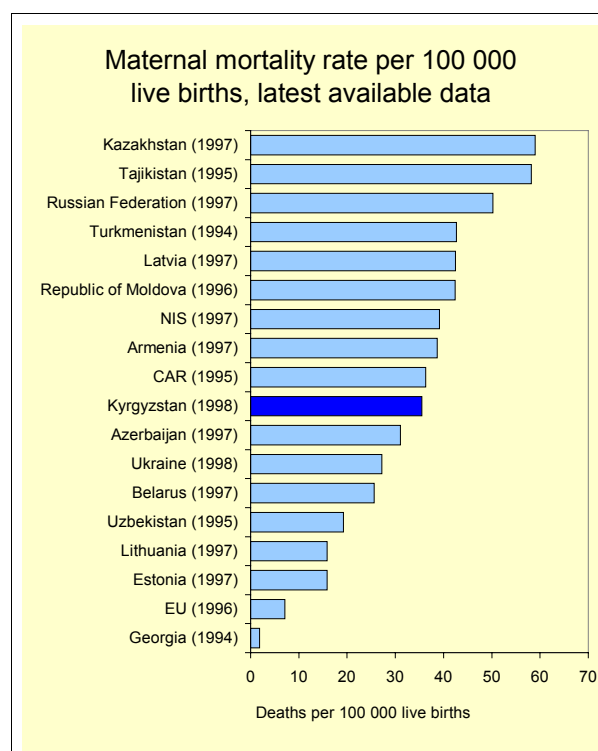
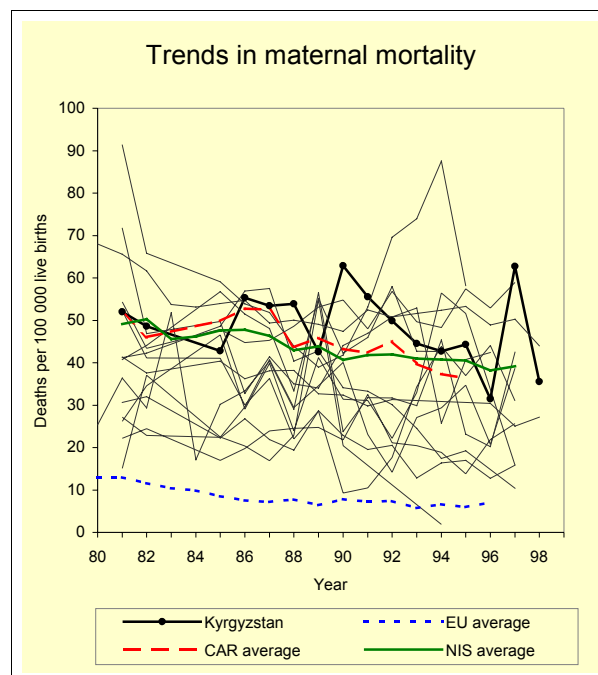
In 1997, mortality rates fell to approximately their 1993 levels. The main causes of death in women are diseases of the circulatory system (50%) and the respiratory system (12%), cancer (9%), diseases of the digestive system and accidents and injuries (5%), and infectious and parasitic diseases (2%). Mortality among

women living in towns is 13% higher than that among women living in rural areas.

The number of abortions per 1000 live births in the country is falling steadily and is now close to the average for EU countries.

The use of Caesarean section is increasing.

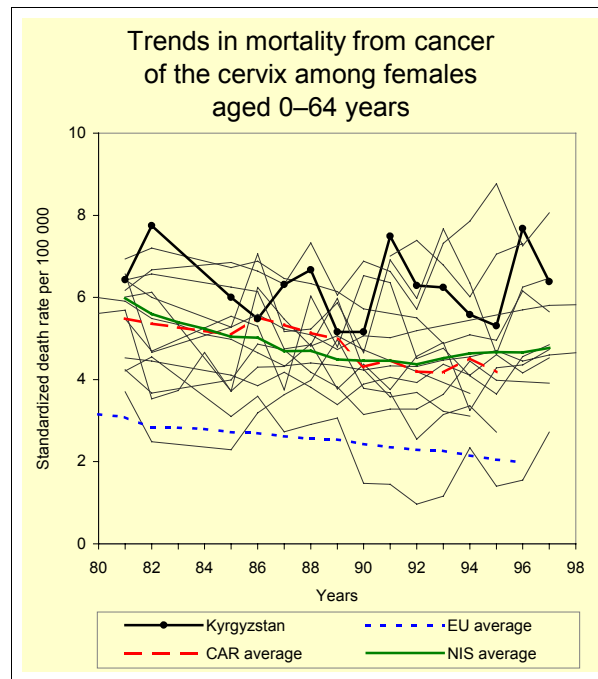
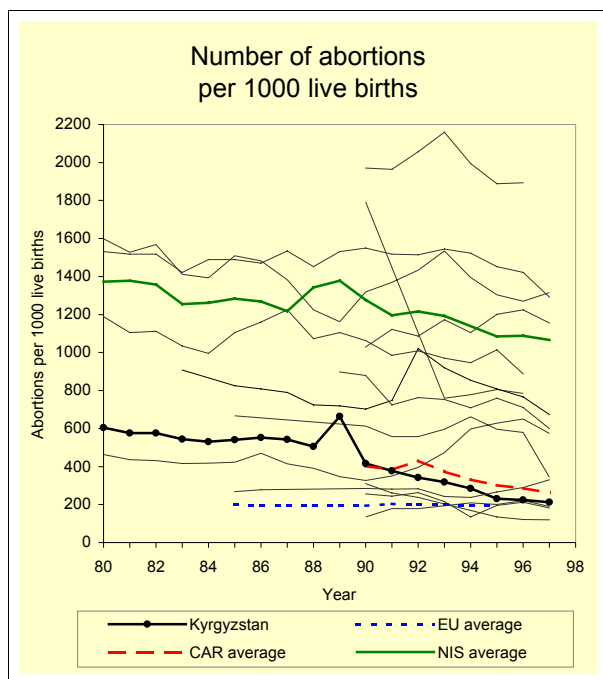
The incidence of premature mortality due to breast cancer is relatively high in Kyrgyzstan and higher than the average for the CAR.



According to the latest data, the maternal mortality rate in 1997, has declined to approximately the average for the CAR. According to estimates made by the Ministry of Health based on clinical data, the average

maternal mortality rate has varied between 60 and 70 per 100 000 live births in recent years.

The main causes of maternal mortality are toxicosis (27%), hypertension (23%) and other complications of pregnancy (23%).

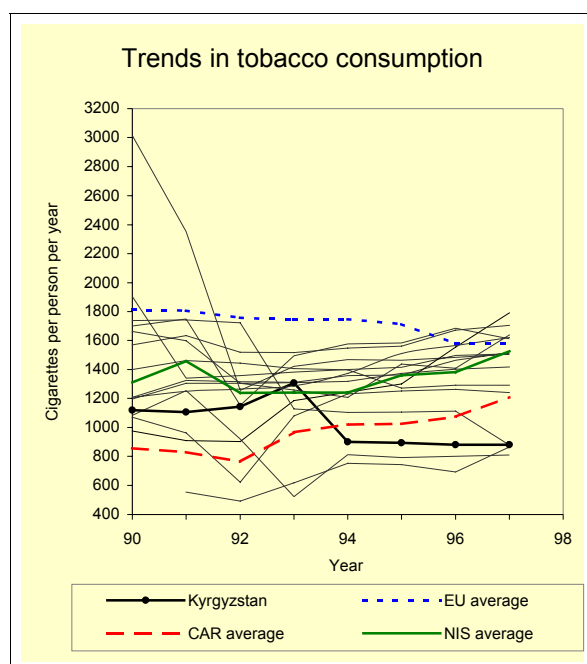


LIFESTYLES

Tobacco consumption

According to data from surveys made in 1996 and 1997 by the Department of Preventive Medicine at the Kyrgyz State Medical Academy and by the public organization "Smoke-free Kyrgyzstan", 32% of the population aged 20–59 years smoke (including 60% of men and 12% of the women surveyed). Average number of cigarettes smoked per person in Kyrgyzstan has stabilized in recent years at one of the lowest levels among the comparator countries, and substantially lower than in EU countries and NIS. According to some estimates, approximately 26% of male deaths and 6% of female deaths in Kyrgyzstan are attributable to smoking (*WHO Regional Office for Europe, 1997*). These are comparatively low figures. In 1995, Kyrgyzstan had relatively low figures for smoking prevalence in the European Region. The rate was higher than in Uzbekistan, Turkmenistan and Tajikistan, but lower than in Kazakhstan.

The mortality rate due to cancer of the lung, trachea and bronchus has been falling slightly since 1992 and is one of the lowest among the comparator countries.



Alcohol consumption

According to available statistics, alcohol consumption was 2.2 litres (in pure alcohol) per person per year. This is one of the lowest figures in WHO's European Region. However, special surveys show that actual consumption may be much greater, owing to unregistered consumption (like in some other NIS) (*WHO Regional Office for Europe, 1997*). In addition, alcohol consumption has been rising steadily since 1992.

One indicator of health impairments related to alcohol consumption is the rate of mortality due to cirrhosis and chronic liver disease. Mortality due to these causes has shown a clear upward trend in Kyrgyzstan in the past six years. In 1998, the country had the second highest figure (after the Republic of Moldova) among the comparator countries, and the fourth highest of all countries in the European Region. It should be noted, however, that a significant proportions of deaths due to these causes are a consequence of contracting infectious hepatitis.

Although morbidity due to alcoholic psychosis has also risen three-fold in Kyrgyzstan since 1994, it remains at quite a low level. Kyrgyzstan is one of a group of countries with traditionally low rates in terms of this indicator (Armenia, Georgia, Azerbaijan, Turkmenistan, Tajikistan and Uzbekistan).

Illicit drug use

In 1997, a total of 3 500 people were registered as drug abusers (75.7 per 100 000 population), some 10% of whom were women. Compared with 1990, there has been an increase in morbidity due to drug abuse (1990 – 3.7 per 100 000; 1997 – 18.8 per 100 000).

The number of first-time referrals to drug treatment centres in 1997 corresponded to a rate of 8.47 per 100 000 population.

The majority of drug abusers 64% are people aged 20–34 years. (*Minister of Health of the Republic of Kyrgyzstan, 1998*).

A government drug control board has been set up with the aim of controlling the consumption of alcohol and drugs. An intergovernmental commission of the central Asian republics on drug control has also been established.

The Government of Kyrgyzstan is a party to the United Nations conventions of 1961, 1971 and 1988 on the control of narcotics and psychotropic substances and their illicit transfer, and has concluded a number of international agreements on the control of narcotics and psychotropic substances.

Nutrition

Kyrgyzstan (like other CAR) has one of the lowest figures in the European Region for average daily calorie consumption per head (2490 kcal. in 1996).

The consumption of fats, milk products, fish and eggs has declined. Carbohydrates make up an increasingly large part of people's diets. People obtain 70% of their energy from carbohydrates.

In 1996, the prevalence of acute malnutrition among children aged 1–6 years was 9.3%, and 4.8% among children aged 7–11 years (*National Statistical Committee, 1998*).

Kyrgyzstan's specific problem in recent years continues to be the high morbidity due to iron-deficiency anaemias and iodine deficiency disorders. Some 50% of samples of table salt

in the country do not meet the standard for iodine content (*Ministry of Health of the Republic of Kyrgyzstan, 1998*).

Overweight

The predominance of a carbohydrate-based diet is a problem that promotes obesity. Of those surveyed, 5.3% of men and 11.3% of women suffered from significant overweight. The largest percentages of people with excess body weight were in the age group from 50 years to retirement (9% of men and 23% of women). In the age group 30–39 years, 5.5% of men and 7.8% of women suffered from obesity, while among retired people the corresponding figures were 8.6% and 19.3%

Blood pressure and blood cholesterol levels

High blood pressure and a high serum cholesterol level are among the most serious risk factors for development of cardiovascular disease. According to research done by the National Centre for Cardiology and Therapy, 21.5% of men and 26.3% of women in the age group 20–64 years have hypertension (above 94/159 mm Hg). At the same time, only one third of the population have their blood pressure checked regularly.

Raised total serum cholesterol levels (more than 200 mg/dl) have been found in 21.3% of men and 17.8% of women aged 20–59 years. (*National Centre for Cardiology and Treatment, 1997*).

ENVIRONMENT AND HEALTH

The Ministry of Health and the Ministry of the Environment are jointly responsible for controlling the state of the environment in Kyrgyzstan.

In 1995 the government adopted the “National environmental protection plan”, which sets priorities for environmental policy.

In 1997 the Ministry of Health and the Ministry of the Environment, with the participation of other interested bodies, prepared a draft of the “National environmental health action plan for the Kyrgyz Republic”.

Air Quality

The main sources of air pollution are enterprises in the energy sector, mining and refining industries, companies manufacturing building materials, and transport and the private sector.

Owing to the downturn in production, total emissions of pollutants into atmospheric air from stationary sources have declined substantially compared with 1990. In recent years, levels of air pollution with particulates and CO² from stationary sources have fallen, while those related to pollutants such as NO² and particulates from mobile sources have increased.

Seventy-eight per cent of total emissions of pollutants in the country come from mobile sources (1996 data). The proliferation of motor vehicles and the use of low-grade fuels have led to a sharp increase in concentrations of various pollutants in urban air, the most hazardous of which are benzo(a)pyrene, heavy metals and formaldehyde. In the air above Bishkek, levels of benzo(a)pyrene, one of the most dangerous carcinogens, are 20 times higher than the health and safety standards in force. In some areas of the city, levels are 50–70 times higher.

The following categories account for the largest proportion of emissions into ambient air: particulate matter (up to%), sulfur dioxide

(from 16% to 34%), and carbon monoxide (from 14% to 31%). Emissions of nitrogen oxides are less significant (some 3.9–7.6% of total emissions).

As a result of deep cuts in funding, testing of atmospheric air has been reduced by 50%. Capital expenditure on measures to protect atmospheric air in 1996 was 25% that of the 1994 level. (*National Environment and Health Action Plan, 1997*).

Water and sanitation

For Kyrgyzstan, the problem of water and drinking-water supplies is one of the key issues in environmental health.

Drinking-water supplies are obtained from surface and underground water, of which ninety per cent of the drinking supply is met from underground sources.

In the country as a whole, more than 700 000 inhabitants do not have a piped water supply. Despite the fact that more than 60% of the population live in rural areas, some 35% of villages do not have piped water. The majority of existing systems were built 20–30 years ago and need major repairs or reconstruction. As a result, some 45% of the rural population have to use water from open sources for drinking.

Of the 280 waterworks in cities, 49% do not have a sanitary protection zone, 13% do not have the full range of purification equipment, and 48% do not have a disinfection plant. In many cities, the water supply network needs to be repaired, rebuilt or extended. In 1997, 2.4% of samples of piped water from public systems and 2.8% from institutional (departmental) systems did not meet hygiene standards in terms of chemical indicators; corresponding figures for microbiological indicators were 11.7% and 13.7%.

The unsatisfactory state of the water supply system is the leading cause of the high morbidity rate due to intestinal infections, especially in the south of the country, and carries with it the threat of mass outbreaks of typhoid, dysentery and viral hepatitis.

The typhoid epidemics that occurred in some areas in 1997 and increases in the incidence of viral hepatitis A and dysentery were linked to water-borne transmission of infection. Particular attention needs to be paid to the unsatisfactory condition of sewage systems and treatment plant. Only some 40% of the major populated localities have a sewage system. This will lead to contamination of underground and surface water. Each year, on average, some 900 000 m³ of untreated sewage is discharged into open water sources.

Waste disposal and treatment

The economic recession has also led to a weakening of measures related to waste disposal, treatment and utilization. In 1995 alone, 329 000 tonnes of waste were generated. Of the 155 solid waste dumps, only one fully meets health and hygiene requirements. There are no solid waste processing plants. Such facilities are particularly needed in Bishkek and Osh.

Waste materials and tailings left after the closure of mining and metalworking enterprises remain an acute problem. Such waste amounts to a total of some 75 million m³. Many tailings are not recycled. A total of 1200 hectares of land are subject to restoration.

Food quality

The sharp reduction in the output of major enterprises in the food industry, the mass appearance of small producers and universal unregulated street trading have all led to a significant increase in the amount of poor-quality food products on the consumer market. A contributing factor is the huge increase in imports of foodstuffs, often of poor quality and frequently smuggled into the country.

Under these conditions, there have been increases in food poisoning, intestinal infections and “zoonotic infections” – brucellosis and echinococcosis. In the past

seven years, the incidence of echinococcosis in the country as a whole has increased 2.5 fold (from 2.8 to 7.0 per 100 000). In addition, this disease no longer has the characteristic of being related to occupation: it has begun to affect urban and rural populations equally.

The causes of this situation include a weakening of veterinary surveillance (resulting in meat from sick animals coming onto the market) and infringement of the regulations governing the cooking and handling of meat products by small producers and retailers.

Occupational health and safety

Working conditions are monitored to ensure that they are in line with the Act on the Health and Epidemiological Wellbeing of the Population of the Kyrgyz Republic, and the Labour Act.

According to data from the National Statistical Committee, 14% of workers in the country are working in unfavourable conditions, and a large proportion of them are employed in workplaces that do not meet health and hygiene standards. (*National Statistical Committee, 1996*).

Workplace air pollution is seen in enterprises in mineral production, light industry and coal mining, as well as in transport, communications and agriculture.

Between 1991 and 1997, 922 cases of occupational disease or poisoning were registered in Kyrgyzstan. The main disease categories were acute and chronic brucellosis (60.3%), dust-related bronchitis (20.5%), vibration disease and hearing disorders (10.4%), and poisoning by chemical substances (5.6%).

In 1997, the leading positions in the aetiology of occupational diseases were taken by dust-related (34.7%), chemical (30.4%) and biological (26%) factors.

HEALTH CARE SYSTEM

Health system reform

After gaining independence, the country launched reforms in all sectors of the economy, including the health sector.

The country is currently implementing the “Manas” national health care reform programme 1996–2006, developed by the Ministry of Health with the assistance of the WHO Regional Office for Europe and subsequently endorsed by the Government.

The main aims of this programme are to improve people’s health, to ensure the principle of equity, to make efficient use of health care resources, and to provide high-quality medical care.

In many respects, the main orientations of the reform are the same as in other NIS, i.e. to strengthen primary health care and to transform the system for funding health care establishments.

In reforming primary medical care, the main emphasis is being placed on introducing the principles of family medicine and setting up family practitioner groups (FPGs), as a new structure for delivering family-based medical services. An analysis of the work of FPGs, including levels and sources of funding and salaries of personnel, was due to be made in 1999 using data from the computerized clinical information system.

The main aims of changes to the funding system in Kyrgyzstan are: to set up a system of material incentives for improving the work of the medical services; to shift the emphasis in the delivery of medical care from inpatient facilities to the outpatient/polyclinic level; and to reduce the costs of medical care.

New methods of funding provide for per capita allocations to FPGs, a fee-for-service system for outpatient facilities and polyclinics, and financing of inpatient care based on the number of cases treated.

It is also planned to introduce changes in the budget system. Budgets will be built up on the basis of programmes, with the aim of making more efficient use of limited resources and

ensuring that priority services are fully funded. Government funding will be focused on programmes designed to tackle national health care issues, on modern technology and on programmes that facilitate an equal provision of medical services to people in the various regions of the country. A mechanism will be introduced for centralizing Government budgetary resources for financing health care at provincial and national levels, through establishment of the corresponding funds. (*WHO Regional Office for Europe, 1999*).

Health care resources and their utilization in Kyrgyzstan, compared with European averages		
	Kyrgyzstan (1997)	Europe (1996)
Hospital beds per 100 000 population	832.5	828.0
Physicians per 100 000 population	305.8	352.0
Hospital admissions per 100 population	17.5	18.5
Average hospital stay, days	14.5	12.9
Health care expenditure as a percentage of GDP (1997)	2.9	6.0

Health care expenditure and health system funding

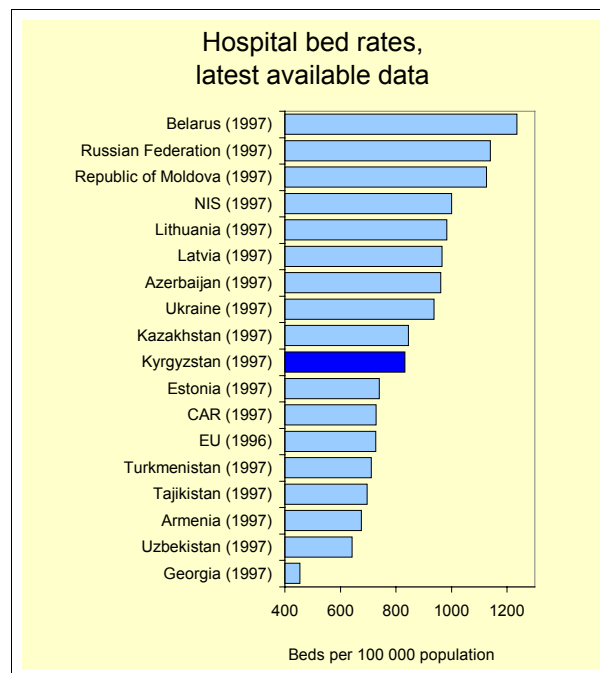
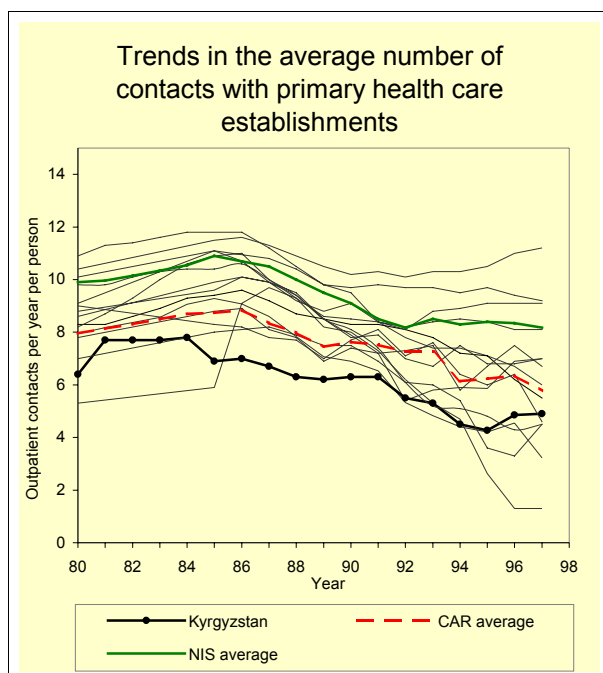
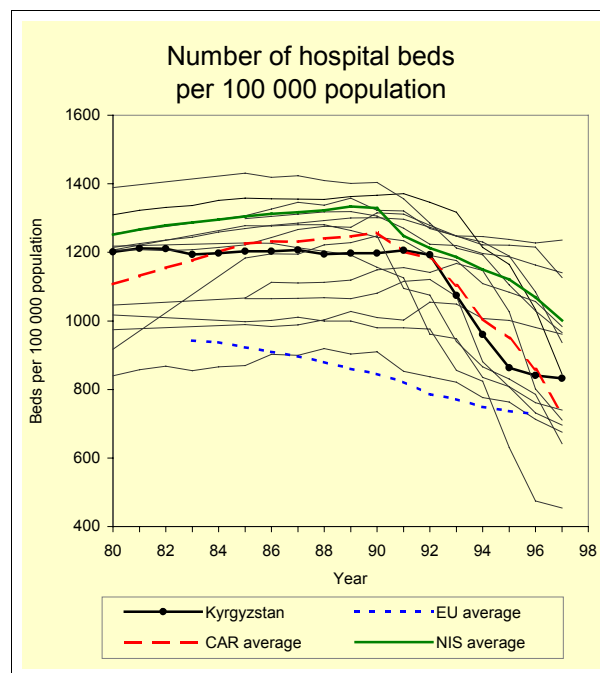
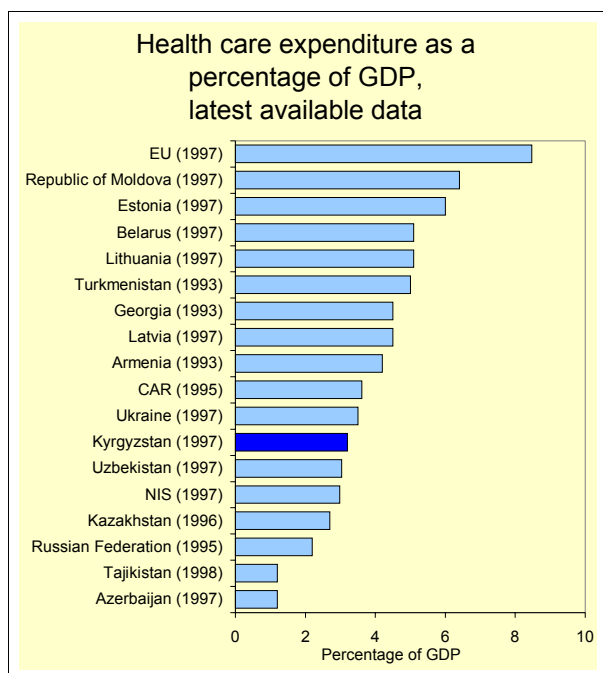
In the period following independence, the country was in a difficult economic situation, which led to a sharp reduction in government funding for health care. In 1990, health care expenditure accounted for 3.8% of GDP, whereas corresponding figures for 1992 and 1993 were only 2.7% and 2.6%.

In 1997, health care expenditure amounted to 2.9% of GDP (3.2% on health care, physical education and sport), but this is significantly lower than the 1990 level and than the average for EU countries (more than 8%). This figure in Kyrgyzstan, like in most neighbouring countries, is one of the lowest in the European Region. The estimated level of health care funding in 1998, according to preliminary data, was 2.6–2.7% of GDP.

The use of resources from the Compulsory Medical Insurance (CMI) fund has its own particular features. During a two-year transitional period, the financing of health care establishments through the CMI fund will merely supplement budgetary funding, and the resources received will be spent mainly on purchasing drugs.

Outpatient services

Primary medical care is delivered in 565 independent and combined outpatient facilities/polyclinics (polyclinics attached to hospitals, independent polyclinics, rural medical outpatient facilities, family practitioner groups), with a capacity of some 62 000 visits per shift, as well as in 856 feldsher/midwife posts serving approximately 34% of the rural population.



On average, each person visits his or her doctor five times a year. Primary medical care is provided free of charge, although on initial attendance at a polyclinic, working adults pay to see a doctor and also pay for the doctor to make a home visit. The level of payment per visit is set by each local administration.

In the framework of the Government Programme on Health System Reform, work is continuing on making the transition to family practice-based primary health care. As at 1 September 1998, 450 family practitioner groups were working in therapeutic/preventive care establishments in Kyrgyzstan.

Similar to a number of other NIS, day inpatient care has been developed in outpatient facilities and polyclinics. In 1991 there were only 21 such units, with a capacity of 332 beds, but by 1997 this figure had risen to 70 units(1349 beds)(*Ministry of Health of the Republic of Kyrgyzstan, 1998*).

Inpatient services

In 1997, inpatient care was provided by 342 establishments. The reforms being carried out to ensure rational use of resources led to a sharp reduction in the hospital bed stock between 1992 and 1995. Thereafter, the hospital bed rate then continued to fall more slowly and in 1997 was at a level of 832 beds per 100 000

population. This figure is almost the same as the European average (828 beds per 100 000).

It should be noted that the bed stock is unevenly distributed. The hospital bed rate in Bishkek is almost twice as high as in the rest of the country.

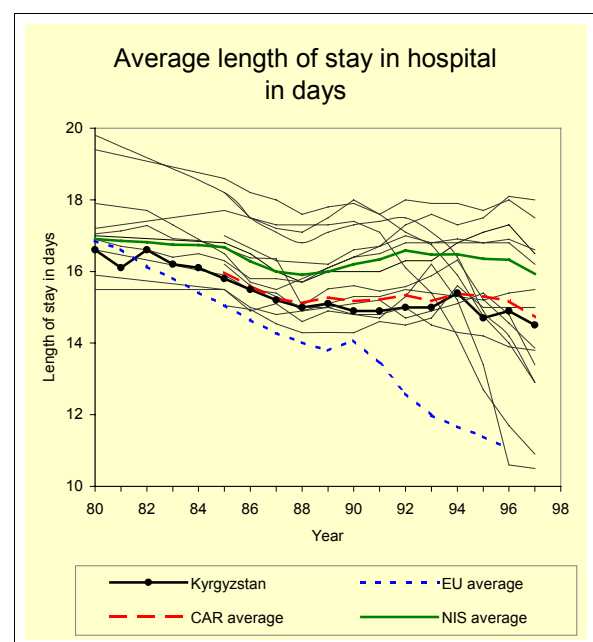
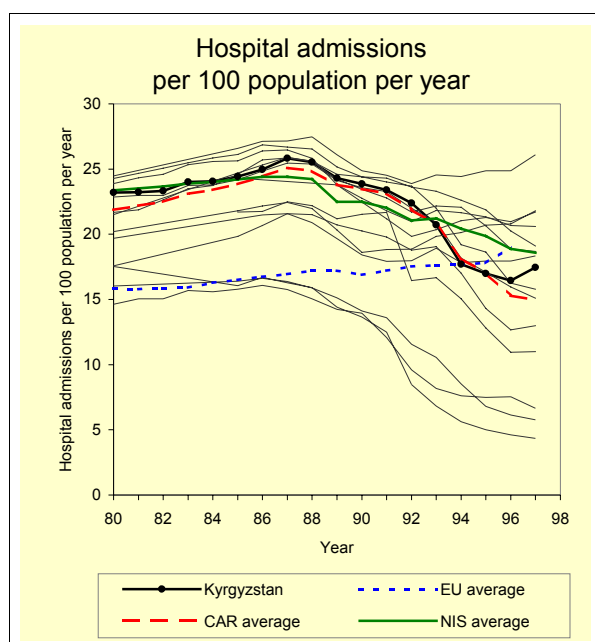
In 1997, the average bed occupancy rate in short-stay inpatient facilities was 305 days (83.6%); this is higher than the European average (79.2%).

The average length of stay in an inpatient facility in Kyrgyzstan began to fall steadily from 1982 and, after some variations between 1993 and 1996, fell to 14.5 days in 1997, lower than the average for the NIS but higher than that for EU countries.

Between 1980 and 1987 the hospitalization rate rose slightly, but it then showed a pronounced fall until 1996. In 1997 there was a slight increase, to 17.46 per 100 people. This is close to the averages for the EU, the NIS and the European Region as a whole.

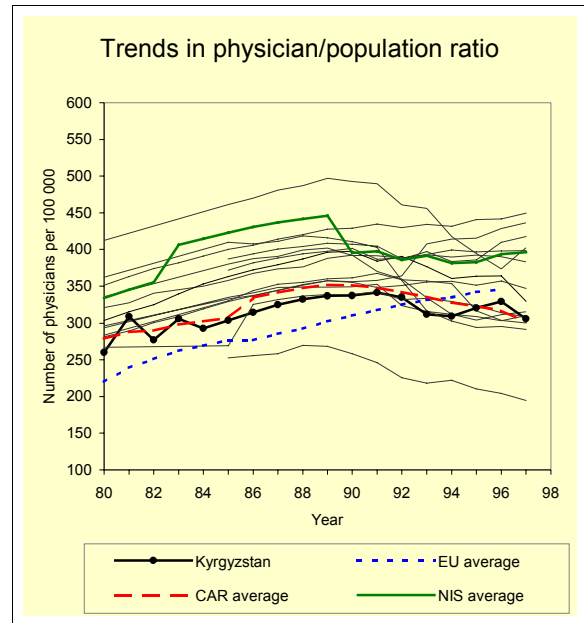
Medical personnel

The physician/population ratio increased slowly up to 1991. In 1992 and 1997 there were slight reductions in the numbers of working doctors.



In 1997, the physician/population ratio was 306 per 100 000 population. This is close to the average for the CAR, but lower than that for the European Region as a whole. On the whole, physician/population ratios in all the CAR, except for Tajikistan, are roughly the same.

It should be noted, however, that this figure is not uniform throughout the country. The highest ratios are found in cities: the capital and provincial capitals (from 416 to 773 per 100 000 population). In rural areas, the ratio ranges between 96 and 195 per 100 000 population. (*Ministry of Health of the Republic of Kyrgyzstan, 1998*).



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GLOSSARY

Incidence rate: the number of new cases of a disease occurring in a population per 100 000 people during a specified period (usually 1 year).

Infant mortality rate: the yearly number of deaths of children aged less than 1 year per 1000 live births.

Life expectancy at birth: an estimate of the average number of years a newborn child can expect to live provided that the prevailing age-specific patterns of mortality at the time of birth were to stay the same throughout the child's life.

Prevalence rate: the total number of people in a population who have a disease or any other attribute at a given time or during a specified period per 100 000 of that population.

Purchasing power parity (PPP): a standardized measure of the purchasing power of a country's currency, based on a comparison of the number of units of that currency required to purchase the same representative basket of goods and services in a reference country and its currency (usually US dollars) The EU uses the purchasing power standard to measure this.

Standardized death rate (SDR): a death rate (usually per 100 000 population) adjusted to the age structure of a standard European population.

Total fertility rate: the average number of children that would be born alive per woman during her lifetime if she were to bear children at each age in accordance with prevailing age-specific birth rates.

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