

# HIGHLIGHTS ON HEALTH IN SLOVENIA



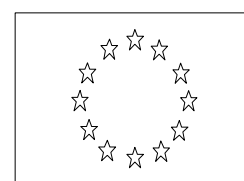
Country Highlights give an overview of the health and health-related situation in a given country and compare, where possible, its position in relation with other countries in the region. The Highlights have been developed in collaboration with Member States for operational purposes and do not constitute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

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Health Information Unit	Telephone: +45 39 17 12 00
WHO Regional Office for Europe	Telex: 12000 who dk
8 Scherfigsvej	Telefax: +45 39 17 18 95
DK-2100 Copenhagen Ø	E-mail: <a href="mailto:rpf@who.dk">rpf@who.dk</a>
Denmark	Web: <a href="http://www.euro.who.int/countryinformation">http://www.euro.who.int/countryinformation</a>

## AN OVERVIEW

The crude birth rate per 1000 population has decreased in Slovenia, and the crude natural growth rate has remained zero or below since 1992.

Life expectancy at birth is the highest among the ten reference countries<sup>1</sup> for both sexes, but almost two years shorter for women and three years shorter for men compared to the EU average.

The SDRs (standardized death rate) for cardiovascular diseases and cancer in the age group 0–64 are the lowest among the reference countries. The Slovene female SDRs for cardiovascular diseases and cancer are comparable to the EU rates, but the rates for males are still some 20% higher than the EU rate.

The SDR for external causes for all ages equals the average of the reference countries, but its decrease since the mid-1980s has been one of the largest among the reference countries. The suicide rate has been high, but has decreased since the mid-1980s. The SDR for motor vehicle traffic accidents has also decreased in the mid-1990s.

The SDRs for diseases of respiratory system and digestive system (all ages) are among the highest in the reference countries. The SDR for the diseases of digestive system has fallen since 1985 and this decrease has been the largest among the reference countries. In contrast, the SDR for diseases of the respiratory system has increased, and this increase has been the largest among the reference countries during the same period.

The SDR for infectious diseases (all ages) is also among the lowest in the reference countries. In 1997–1998, the Slovene incidences for viral hepatitis, for syphilis and for tuberculosis

were among the lowest, but the incidence of AIDS the third highest among the reference countries.

The infant mortality rate has decreased and is the lowest among the reference countries, but the maternal mortality rate remains at the same level in the late 1990s as in the mid-1980s.

The oral health among children aged 12 years has improved significantly since the mid-1990s.

Smoking has become less common in the late 1990s, and the prevalence of smoking is relatively low compared to other reference countries. The proportion of female smokers is, however, the second highest among the reference countries and the female SDR for trachea, bronchus and lung cancer rose above the EU rate in the mid-1990s.

The consumption of pure alcohol per person increased by more than one fifth since the mid-1980s and Slovenia had the highest alcohol consumption among the reference countries in 1997. Even though the latest sales figures suggest declining consumption, the SDR for liver diseases and cirrhosis for all ages is one of the highest among the reference countries, double the EU rate.

In Slovenia, a combination of compulsory and voluntary health insurance schemes replaced the former system of universal coverage following the health care reform legislation of 1992.

The number of hospital beds per 100 000 population is the lowest among the reference countries and the number of physicians per 100 000 population the second lowest in the reference countries. Both health care resource indicators are also well below the EU average.

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<sup>1</sup> The following ten candidate countries for accession to the European Union were used as reference countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

## 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, international comparisons are used as one means of assessing the 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. The country groups used for comparison are called reference countries and are chosen based on:

- similar health and socioeconomic trends or development; and/or
- geopolitical groups such as the European Union (EU), the newly independent states, the central Asian republics or the candidate countries for EU accession.

For Slovenia, the reference countries are ten central and eastern European candidate countries for accession to the EU (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia).

To make comparisons between countries as valid as possible, data for each indicator have, whenever possible, been taken from one common international source (such as WHO, EUROSTAT, the Organisation for Economic Co-operation and Development or the International Labour Office). This is done to ensure that they have been harmonised in a reasonably consistent way. It should also be noted, however, that other factors such as recording and classification practices and cultural differences can influence the comparability of the data. Unless otherwise mentioned, the source of all data is the health for all statistical database of the WHO Regional Office for Europe (*WHO Regional Office for Europe, 2001*). Information on national policies has been obtained from health for all evaluation reports from national authorities and by personal communication with them and from *Health in Europe 1997 (WHO Regional Office for Europe, 1998)*.

A special case of comparison is when each country is given a rank order. Although useful as a summary measure, ranking can be misleading and should be interpreted with caution, especially if used alone, as the rank is sensitive to small differences in the value of an indicator. Also, when used to assess trends (such as the table at the start of the section on health status), ranking can hide important absolute changes in the level of an individual country. Mostly bar charts (to indicate a country's position versus the reference countries according to the latest data) or line charts (usually to show time trends from 1970 onwards) have been used. Line charts present the trends for all the reference countries and for the EU, as appropriate. Only the country in focus and the appropriate group average are highlighted in bold 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 can be recognized more easily. To smooth out fluctuations in annual rates caused by small numbers, 3-year averages have been used, as appropriate. For example, this is the case for maternal mortality for all reference countries.

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

## THE COUNTRY AND ITS PEOPLE<sup>2</sup>

In October 1989, the Slovene Assembly voted a constitutional amendment giving it the right to secede from Yugoslavia. In July 1990, the Assembly adopted a declaration of sovereignty and a vast majority of the participants in the referendum voted for independence in December 1990. In June 1991 Slovenia declared independence, but agreed to suspend this for three months at peace talks. After the agreed moratorium Slovenia declared its independence in October 1991.

The parliament is bicameral consisting of a 90-member National Assembly and a 40-member State Council. The National Assembly is elected for four-year terms by proportional representation with a 3% threshold, and

the State Council is elected for five-year terms by interest groups. The latter has veto powers over the National Assembly. The President is elected in a referendum.

There are 193 administrative districts (municipalities), with elected mayors.

Slovenia is a member of the United Nations, the Council of Europe, the Central European Free Trade Area, the Central European Initiative and the NATO Partnership for Peace, and it is an associate member of the European Union and an associate partner of the Western European Union. Intensive negotiations regarding Slovenia's accession to full membership of the European Union began in April 1998.

Table 1. Slovenia and the reference countries (1999)

	<b>Slovenia</b>	Reference countries		
Capital	<b>Ljubljana</b>	Average/total	Minimum	Maximum
Population	<b>1 976 300</b>	104 705 300	1 442 400	38 741 000
Population 0–14 years (%)	<b>16.3</b>	18.8	16.1	21.2
Population 15–64 years (%)	<b>74.2</b>	68.4	66.3	74.2
Population ≥ 65 years (%)	<b>9.6</b>	12.8	9.6	16.0
Area in km <sup>2</sup>	<b>20 000</b>	1 078 066	20 000	313 000
Density per km <sup>2</sup>	<b>99</b>	97	32	130
Urban population (%)	<b>50</b>	64	50	75
Births per 1000 population	<b>8.8</b>	9.7	8.0	10.5
Deaths per 1000 population	<b>9.6</b>	11.2	9.6	14.2
Natural growth rate per 1000 population	<b>-0.8</b>	-1.5	-5.5	0.8
GDP per person in US \$ PPP	<b>15 977</b>	8 369	5 071	15 977

GDP: gross domestic product; PPP: purchasing power parity

<sup>2</sup> These introductory paragraphs are based on the material from *The statesman's yearbook* (Turner, 2000).

## Demography

The shape of an age pyramid shows the stage of the demographic transition of a population. The overall changes in population structure, caused by changes in fertility, mortality and migration, can be easily seen when the age pyramids for two different years are compared (Fig. 1). The countries of the EU have generally reached an advanced stage of demographic transition, with the younger age groups becoming smaller in relation to the middle and, at times, older age groups. The reference countries are, in general, developing a similar population structure.

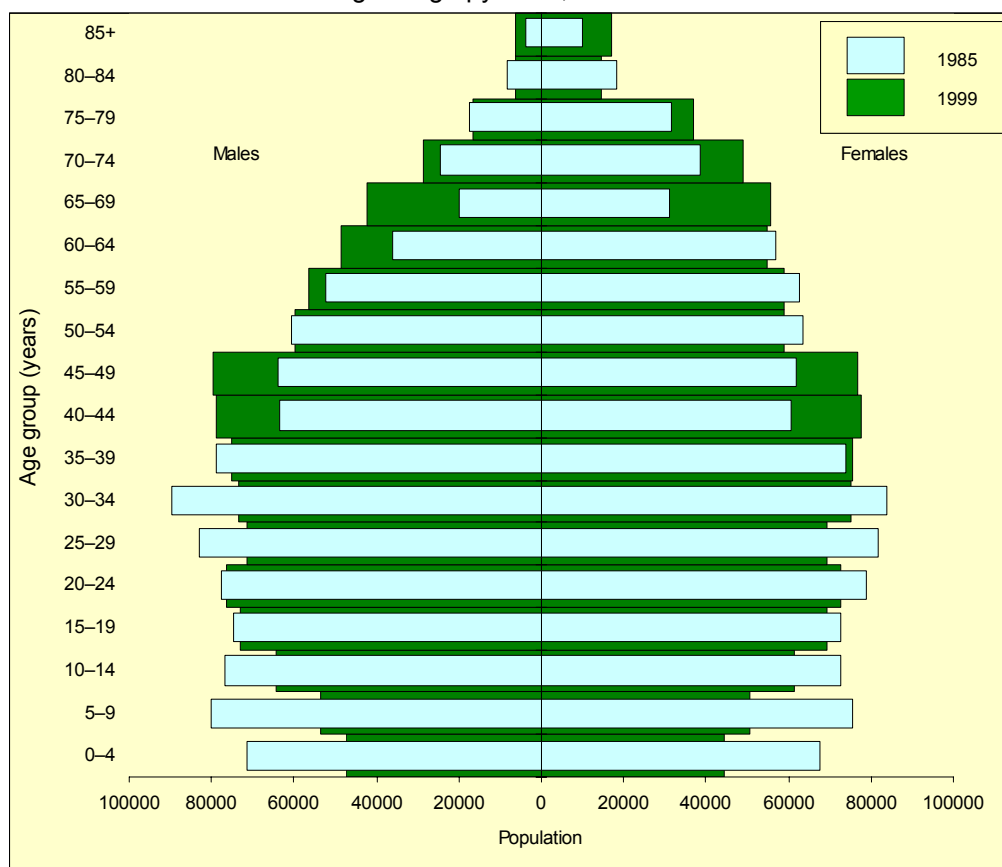
Younger age cohorts (0–24 years) were smaller in Slovenia than the average of the reference countries. For men, the age groups of 70–84 years were also smaller than in the reference countries. The age groups of 30–64

years and above 85 years were greater than in the reference countries for men, while the same was true for age groups of 30–39 years and above 60 years for women.

The Slovene natural growth rate was higher than the EU average until 1991. Between 1992 and 1996, the rate was zero, becoming negative in 1997. Though well below the EU average (0.9/1000 population in 1998), Slovenia has the third highest natural growth rate (-0.8/1000 in 1999) among the reference countries (Fig. 2).

The fertility rate has fallen below replacement level in Slovenia (1.2 in 1999), as in all other reference countries (average 1.3, variation from 1.1 to 1.4).

Fig. 1. Age pyramid, 1985 and 1999

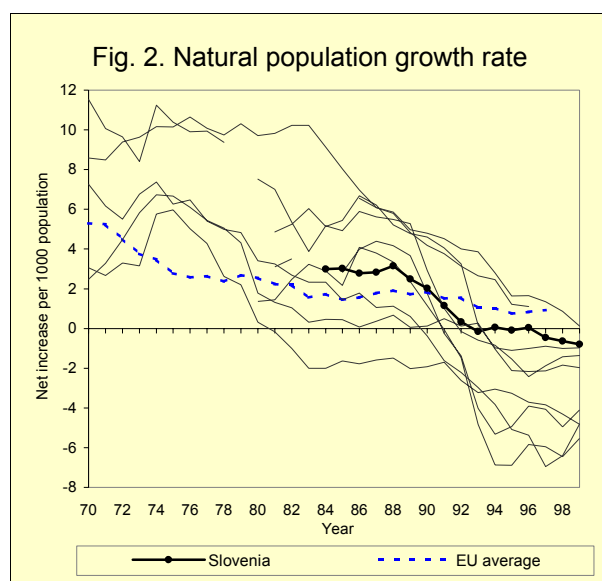


### Migrant population and ethnic profile

Immigrants and ethnic minorities can have specific patterns of disease and health needs because of cultural, socioeconomic and behavioural factors and exposure to a different environment in their country of origin. Obtaining access to health care that can meet such specific needs and that is culturally and linguistically acceptable can also be difficult. Moreover, many such people have a higher risk of living in relative poverty and being marginalized, which can result in reduced health status compared with other minority groups. Illegal immigrants, in particular, can find it difficult to obtain health care, and following up any care given can be problematic.

The population is predominantly Slovene (Turner, 2000). In 1997, there were 43 400 foreign citizens in Slovenia representing 2.2% of the total population. More than 90% are from the other republics of the former Yugoslavia.

In 1998, 4600 persons immigrated to Slovenia and 6700 emigrated from Slovenia, giving a negative net migration. The majority of the migration was to the countries formed after the breakup of the former Yugoslavia (Council of Europe, 1999).



### Social conditions and economy

The relevance of educational attainment to health is well documented. The literacy rate among the adult population (aged 15 or older) has often been used as an indicator, but the uniformly high adult literacy rates in Europe (all reference countries report a literacy rate of 96% or more) limit its value for comparison. As all the reference countries have universal primary education with almost all children participating, the enrolment ratio<sup>3</sup> for primary education is also an insensitive indicator for detecting differences in educational levels.

Comparable data on enrolment ratios in secondary education (such as middle school, high school and vocational and technical schools) are more useful. In Slovenia, enrolment in secondary education has risen in the 1990s, and was above the average of the reference countries in the mid-1990s (UNESCO, 1999).

The Slovene gross domestic product (GDP) adjusted by purchasing power parity (PPP) increased from US \$9156 in 1991 to US \$15 977 in 1999, and Slovenia had the highest gross national product (GNP) among the reference countries, at 71% of the EU average. Despite this relatively strong economy, national statistics show that real wages in Slovenia declined between 1989 and 1996. The distribution of earnings became more unequal during the same period (United Nations Economic Commission for Europe, 1999). In 1997, 53% of the GDP came from services, 33% from industry and 5% from agriculture (Turner, 2000). The service sector appears to be increasing as a proportion of economic activity.

The official unemployment rate in Slovenia rose from 1.5% in 1987 to 11.5% in 1992, but it had fallen to 7.6% in 1999. These rates are below the EU average (10.3% in 1999), and are among the lowest rates in the reference

<sup>3</sup> The net enrolment ratio is the number of enrolled students in the official age group, divided by the population of the same age group which corresponds to a specific level of education. National regulations are used to define the level of education and, therefore, the official age group (UNESCO, 1999).

countries. Unemployment in most countries in central and eastern Europe may be higher than these official rates, though statistics in Slovenia are thought to be among the most reliable.

Inflation has caused severe problems for some countries in the central and eastern Europe.

In Slovenia, inflation peaked at 201% in 1992, but was less (8%) than in the reference countries in general by 1999.



## HEALTH STATUS

A summary of recent changes in Slovenia's health position compared to the reference countries (Fig. 3) shows:

- In general, major health statistics for Slovenia compare favourably with the reference countries, having the best indicators for six of the fourteen key indicators.
- In many instances (gender difference in life expectancy, infant mortality, cerebrovascular mortality, cervical and all cancers, motor vehicle accident mortality and suicide) the relative position of Slovenia has improved.
- For only two indicators is there either a poor (breast cancer, second highest mortality) or deteriorating (maternal mortality) comparative position.

Fig. 3. Slovenia relative to reference countries in 1985 ● and in 1999 <sup>e</sup> ☺															
POSITION	BEST					WORST					Slovenia	Reference country average	Minimum <sup>a</sup>	Maximum <sup>b</sup>	
	1	2	3	4	5	6	7	8	9	10					
Life expectancy at birth (years)	☺										75.8	72.3	70.2	75.8	
Male versus female difference in life expectancy at birth (years)				☺			●				7.7	8.2	6.8	10.9	
Infant mortality rate per 1000 live births	☺		●								4.6	10.9	4.6	18.6	
Maternal mortality rate from all causes per 100 000 live births <sup>c</sup>			●		☹						11.3	17.6	6.3	44.1	
SDR <sup>d</sup> from cardiovascular diseases, age 0–64 years	☺										61.1	129.9	61.1	167.3	
SDR from ischaemic heart disease, age 0–64 years	☺										25.3	57.5	25.3	88.0	
SDR from cerebrovascular disease, age 0–64 years	☺	●									14.3	32.6	14.3	51.1	
SDR from cancer, age 0–64 years		☺	●								93.8	107.3	92.7	145.3	
SDR from trachea/bronchus/lung cancer, age 0–64 years				☺							22.0	26.8	19.4	42.0	
SDR from cancer of the cervix among females aged 0–64 years	☺		●								3.3	7.4	3.3	11.9	
SDR from breast cancer among females aged 0–64 years									☺		20.2	15.7	13.7	20.6	
SDR from external causes of injury and poisoning						☺					77.1	74.0	52.2	156.6	
SDR from motor vehicle traffic accidents						☺		●			15.0	14.5	10.2	26.0	
SDR from suicide and self-inflicted injury						☺		●			27.8	17.3	12.0	42.1	
☺	Position improved		7		(indicators)									<sup>a</sup> Lowest value observed among ten reference countries	
☺	Position unchanged		6		(indicators)									<sup>b</sup> Highest value observed among ten reference countries	
☹	Position deteriorated		1		(indicators)									<sup>c</sup> Three-year averages	
														<sup>d</sup> SDR: standardized death rate	
														<sup>e</sup> Maternal mortality 1997–1999 (Poland 1994–1996)	

## Life expectancy

The Slovene life expectancy at birth is the highest among the reference countries, 71.8 years for males and 79.5 for females in 1999. The difference between the EU and Slovenia has decreased by more than one year for males and almost one year for females since the mid-1980s. According to the latest figures, Slovenia has still some three years shorter life expectancy for men and almost two years shorter for women than the EU average (Fig 4, 5, 6).

The gender difference in life expectancy has increased in all reference countries except in the Czech Republic and Slovenia. In 1999, this difference in Slovenia was 7.7 years, which was one of the smallest differences among the reference countries, but larger than the EU average difference of 6.4 years (in 1997).

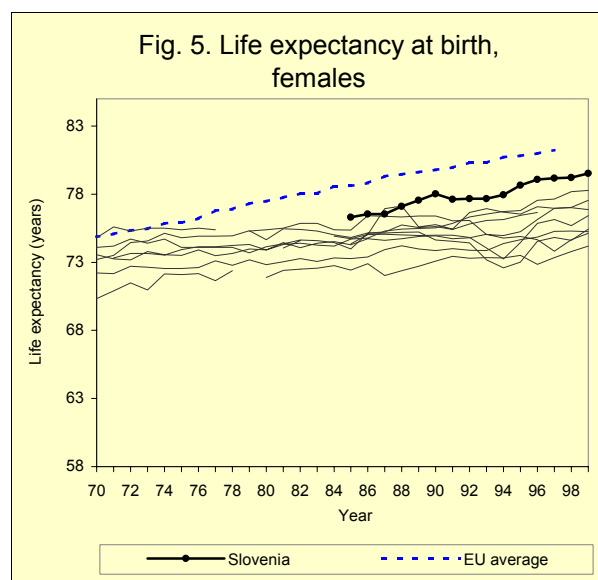
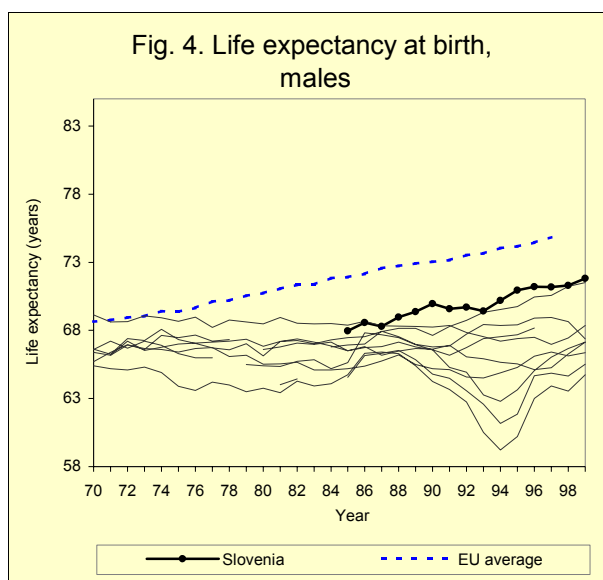
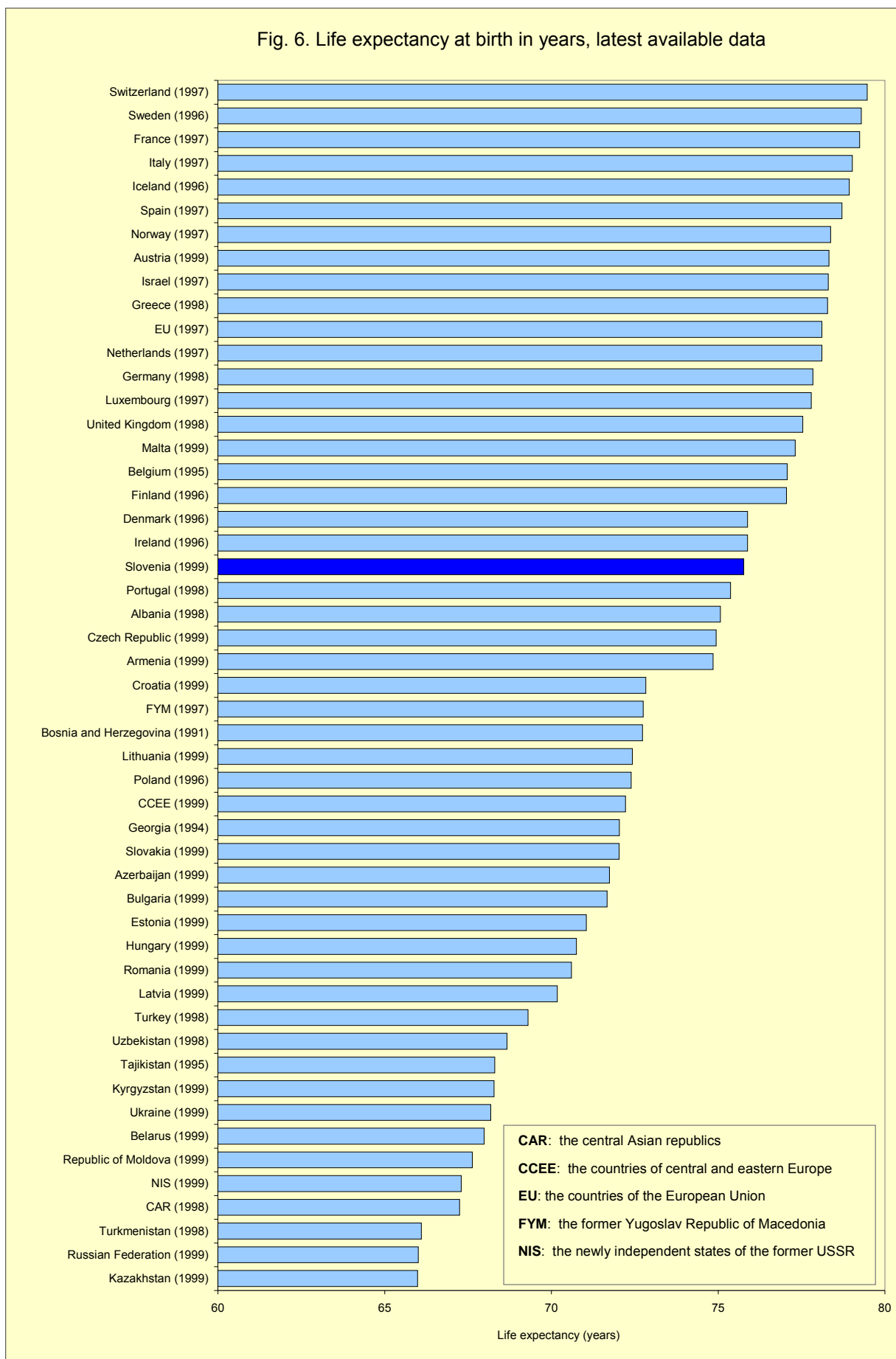


Fig. 6. Life expectancy at birth in years, latest available data



### Main causes of death

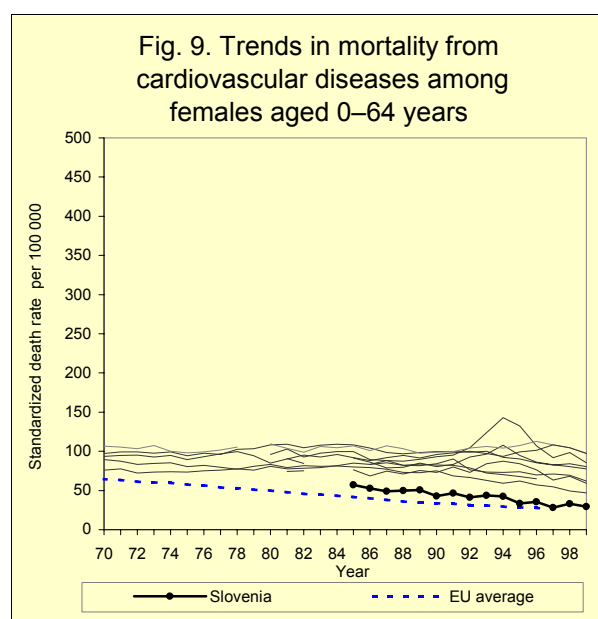
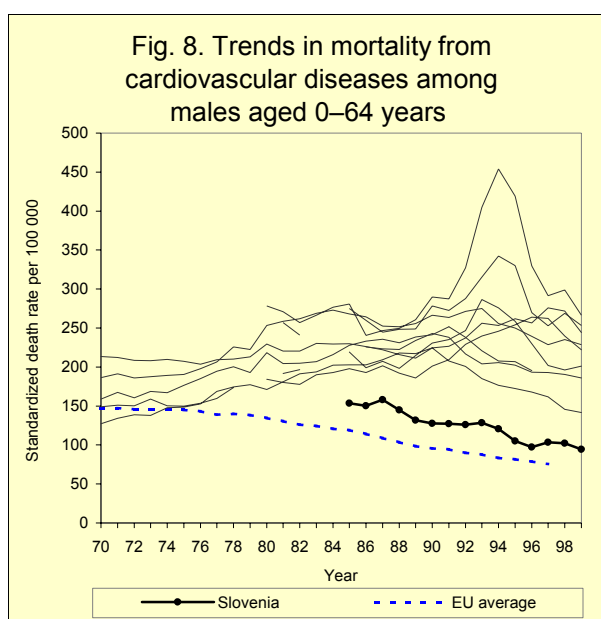
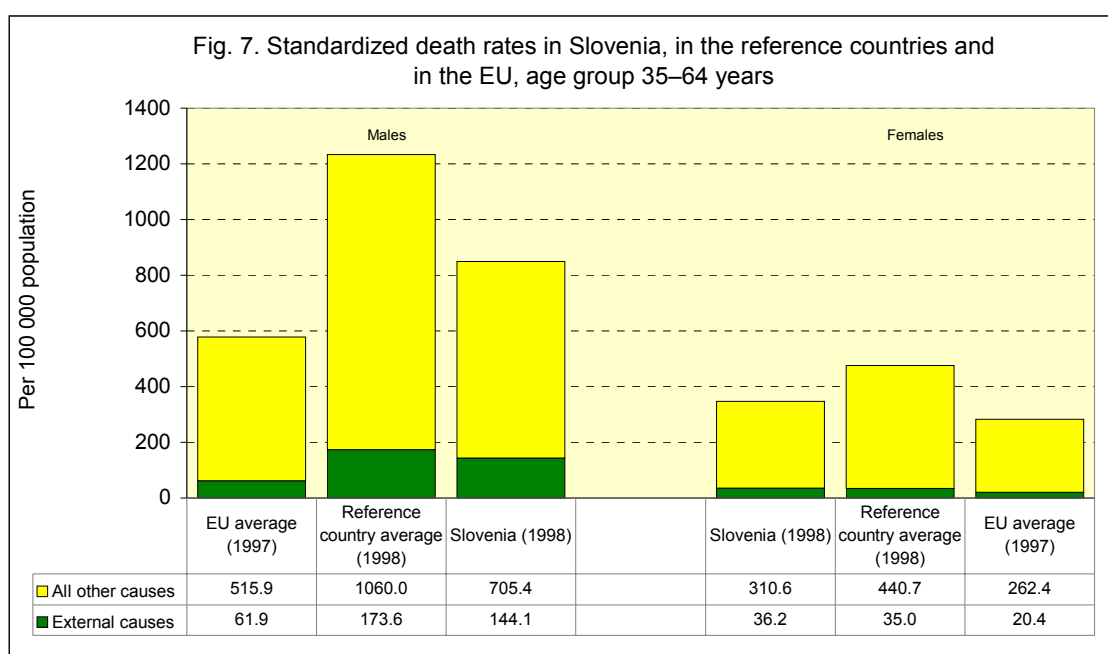
Comparing the death rates from main causes between countries can indicate how far the observed mortality might be reduced. As almost all the causes underlying the deaths attributed to cardiovascular diseases, cancer and accidents are influenced by collective and individual habits and behaviour, a wide variety of health promotion and prevention measures can bring about changes to reduce health risks and thus disease and premature deaths.

For the age group 35–64, both male and female mortality in Slovenia is significantly

lower than the reference country average, but remains above the EU average, particularly for men. Although several causes of death are more common in Slovenia than in the EU as a whole, mortality due to external causes is disproportionately high (Fig. 7).

### Cardiovascular diseases

The SDR for cardiovascular diseases for males aged 0–64 years in Slovenia was the lowest among the reference countries by the mid-1980s. Since then, the Slovene rate has



decreased by almost 40%, the largest decrease among the reference countries. The latest Slovene rate is still approximately a quarter higher than the EU rate, while the SDRs in all other reference countries are at least double the EU rate (Fig. 8).

The pattern is similar for females aged 0–64 years. The Slovene rate was already the lowest among the reference countries by the mid-1980s, and has since declined significantly, reaching the EU average (Fig. 9).

The EU average SDR for ischaemic heart disease among those aged 0–64 has declined

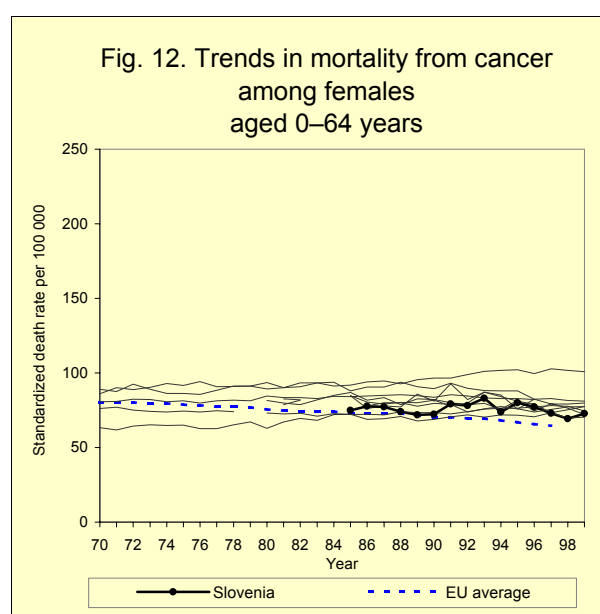
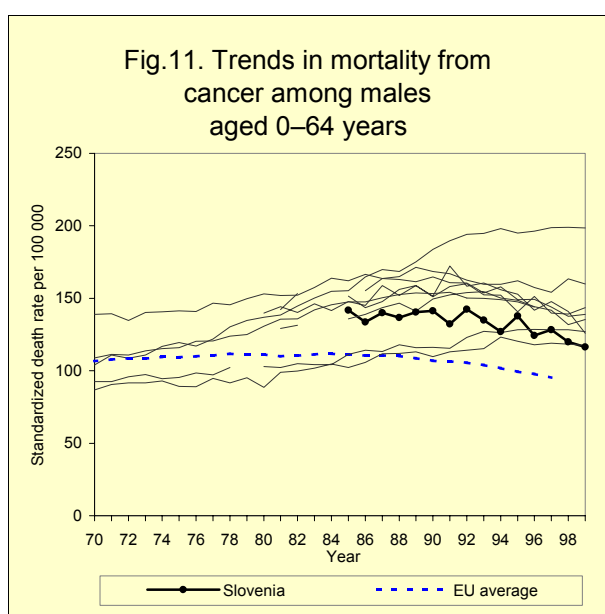
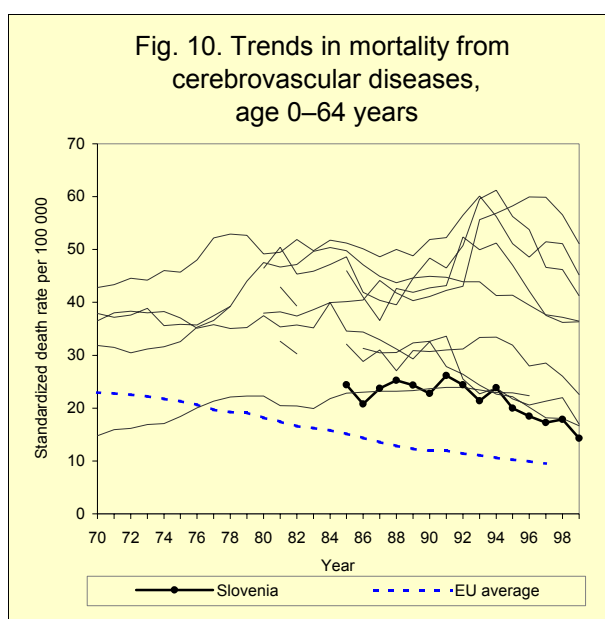
since the 1970s, but the decline started much later or the trend has been increasing in the reference countries. The Slovene trend has followed the EU trend since the mid-1980s. The pattern is similar for both sexes.

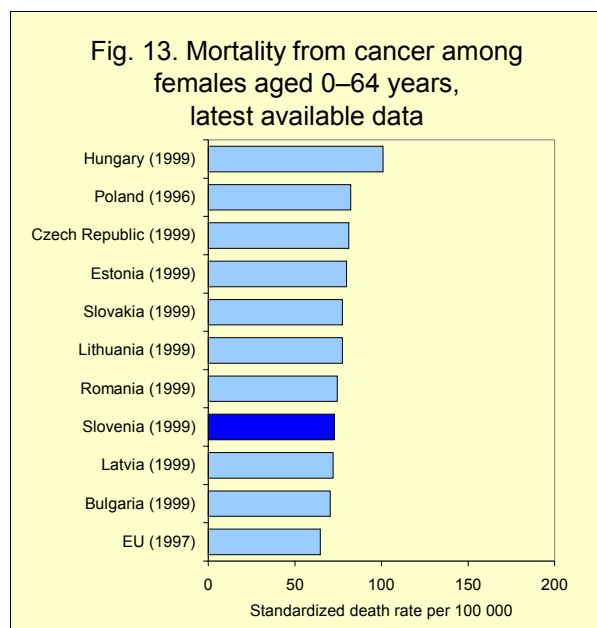
The SDR for cerebrovascular diseases in the age group 0–64 in the reference countries has consistently exceeded the average of the EU. This is also true for Slovenia, with a static rate until 1994, when a fall began. Though this decrease is one of the largest among the reference countries, the Slovene rate remains above the EU rate, especially for males (Fig. 10).

### Cancer

This section provides comparative data on total cancer mortality. More detailed data on breast cancer and cervical cancer among women are presented in the section on women's health, whereas that on cancer of the trachea, bronchus and lung is presented in the section on smoking.

The SDR for cancer among the Slovene male population aged 0–64 years has fallen slowly, but steadily since the mid-1980s. Even though Slovenia has one of the lowest rates among the reference countries, the latest rate is still 20% higher than the EU rate (Fig. 11).





The SDR for women in the same age group equalled the EU rate by the mid-1980s. Since then the EU rate has been decreasing, but the decrease for the Slovene rate has been much slower. Despite this lack of dramatic progress, the Slovene rate is among the lowest for the reference countries (Fig. 12, 13).

### Other natural causes of death

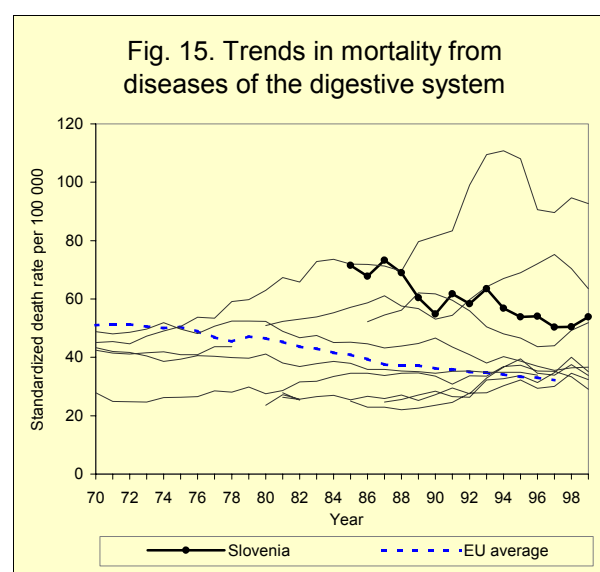
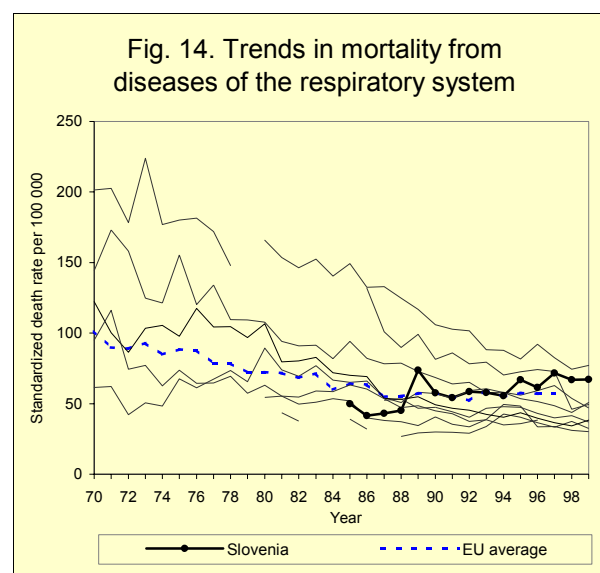
The SDR for infectious and parasitic diseases dropped very sharply in the reference countries and in the EU during the 1970s and the early 1980s. In several countries the SDR then started to rise. The SDR in Slovenia has remained low and is now the lowest among the reference countries. It is even below the EU rate, despite a slight increase in the late 1990s.

The Slovene SDR for diseases of the respiratory system was one of the lowest among the reference countries and lower than the EU average in the 1980s. The Slovene rate has, however, increased in the late 1980s and has since remained above the EU rate. The Slovene rate is among the highest in the reference countries, more than 60% higher than in 1986 and almost 20% higher than the EU rate (Fig. 14). This has been dominated by increases in mortality for those aged over 65. Male mortality in younger age groups is now falling, suggesting that the adverse trend in overall respiratory mortality may change in the future.

The Slovene SDR for diseases of the digestive system was one of the highest among the reference countries in the mid-1980s. Slovenia's position has remained poor, even though its SDR decreased between 1985 and 1999 by 25%, which was the largest decrease among the reference countries. Even though the Slovene rate has decreased more rapidly than the EU rate, for both sexes in all age groups, it is still almost 70% higher (Fig. 15).

### External causes of death and injuries

External causes of death and injuries covers all deaths caused by accidents, injuries, poisoning and other environmental circumstances or events such as violent acts (homicide) and suicide.



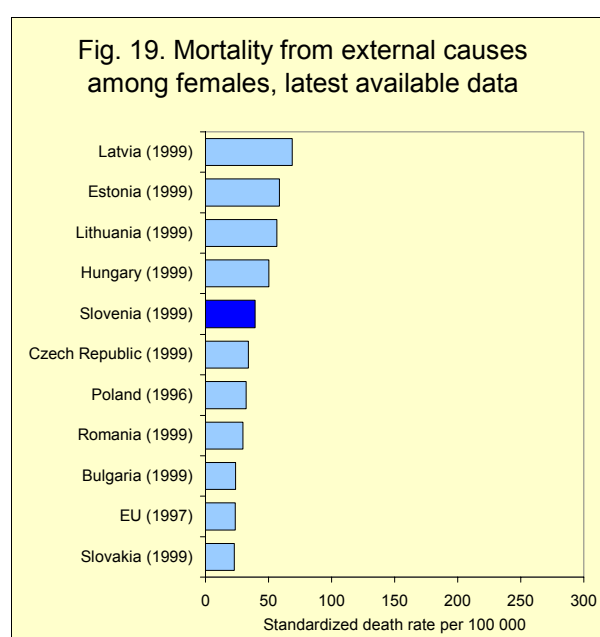
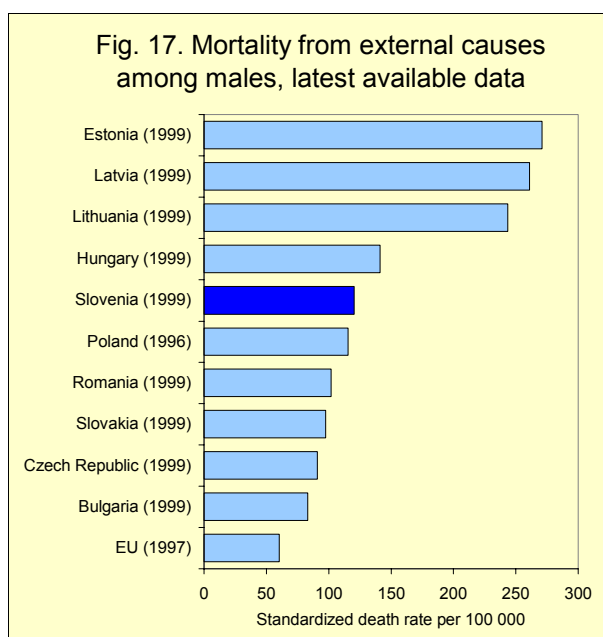
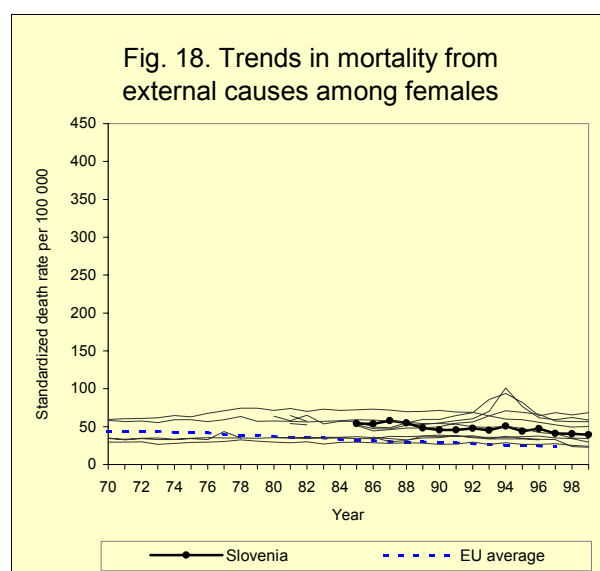
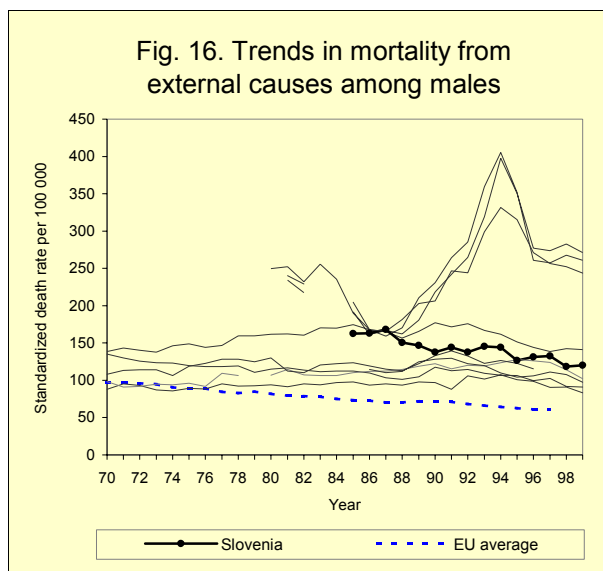
In the mid-1980s, the SDR for external causes, injuries and poisoning for men in Slovenia was one of the highest among the reference countries. Since then, however, the rate has fallen by more than a quarter. Despite this improvement (the largest in the reference countries), the Slovene rate is still double the EU average (Fig. 16, 17).

Women have notably lower SDRs for external causes in general. In 1999, Slovene males had a SDR for external causes, which was almost three times the female rate. Also for women, the SDR for external causes in Slovenia was higher than the average of the reference countries in the late 1980s. The rate has declined by

a quarter since 1985, which was as large as the decline in the EU, but is still 67% higher than the EU average (Fig. 18, 19).

The SDRs for homicide and purposeful injuries has increased in almost all the reference countries since the mid-1980s. However, Slovenia is an exception, since the rates were equal in the mid-1980s and the mid-1990s. The homicide rate in Slovenia is one of the lowest among the reference countries. Until 1997 it was almost double the EU rate, but fell below it in the following years.

The SDR for motor vehicle traffic accidents in Slovenia was high and, indeed, increased between the mid-1980s and 1994. Mortality



has since decreased by 38%, but is only just below the average level of the reference countries, 40% higher than the corresponding EU level.

### Mental health

Although mental and psychosocial wellbeing are important aspects of health-related quality of life, too little information is usually available to allow these important dimensions of the population's health to be described reliably. Suicide rates can be used as a surrogate indicator of the overall level of mental health.

The Slovene SDR for suicide and self-inflicted injury for men has been above the average of the reference countries. Despite a decline, the Slovene rate is still more than 2.5 times the EU rate (Fig. 20).

Women have in general lower suicide rates than men. This is also true for Slovenia, where the male rate is almost four times the female. Even though the Slovene suicide rate for women has decreased by more than 10% since the mid-1980s, it remains above both the average rate of the reference countries and the EU.

### Infectious diseases

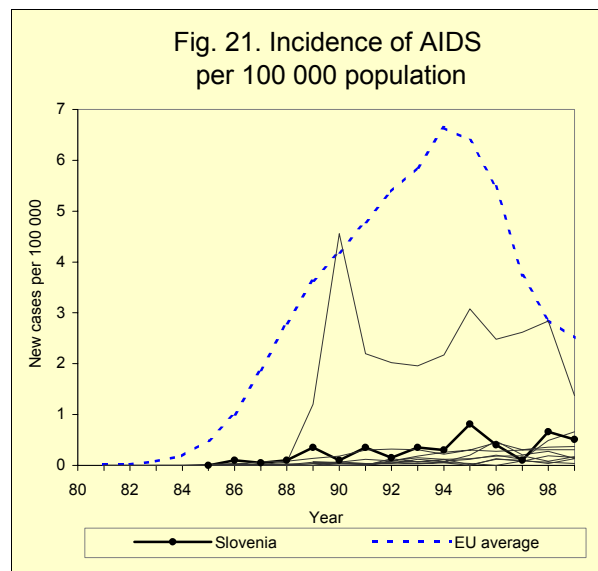
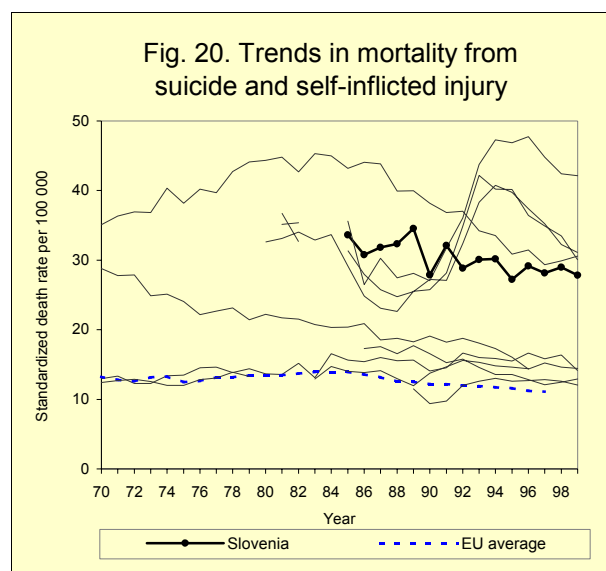
The acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV), which can be transmitted in three ways: sexual transmission; transfusing infected blood or blood products or using non-

sterile injection equipment; or from mother to child. The incubation period between initial HIV infection and developing AIDS is about 10 years or more. The number of notified cases of AIDS is rising in central and eastern Europe, although more people have been diagnosed with AIDS in western and northern Europe.

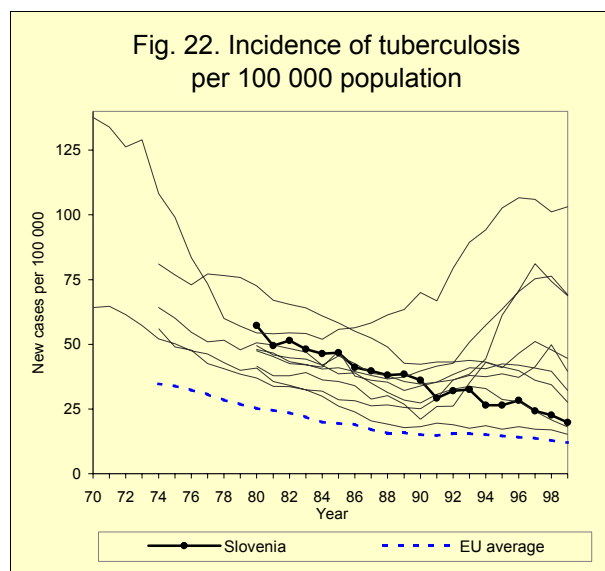
In Slovenia the incidence of AIDS (0.5/100 000 population in 1998) is the third highest among the reference countries, though much lower than in the EU (2.5/100 000) (Fig. 21). The largest transmission groups are homo/bisexual contacts (52%), heterosexual contacts (25%), injected drugs (6%) and blood products (5%). Few cases of mother-child transmissions have been reported (*European Centre for the Epidemiological Monitoring of AIDS, 2000*).

The Slovene incidence of tuberculosis was above the average of the reference countries in the mid-1980s, but has since halved. It is now one of the lowest among the reference countries, but still almost 70% higher than the EU rate (Fig. 22).

The incidence of viral hepatitis A per 100 000 population in Slovenia has been among the lowest in the reference countries, below the EU level in the 1990s. The incidence of syphilis has also been one of the lowest, and it has remained at the EU level or even below it.







There have been no epidemics of diphtheria in Slovenia, but the incidences of viral meningitis and tick-born encephalitis have increased significantly during the 1990s (*Statistical Office of the Republic of Slovenia, 1995*).

National immunisation programmes have eradicated poliomyelitis and neonatal tetanus, and significantly reduced the incidence of measles, German measles, mumps, whooping cough, hepatitis B and tetanus among adults (*Institute of Public Health, 1998*).

### Long-term illness and disability

The prevalence of long-term illness and disability is an important indicator of a population's health status and health-related quality of life. Those countries which do provide data are difficult to compare because of differences in definitions, data collection methods and in national legislation on disease-related social benefits (where disability statistics are based upon those receiving such benefits).

Though the proportion of disabled people in active employment has increased slightly during the 1990s in Slovenia, only one out of every hundred disabled people of working age have a regular occupation (*Institute of Public Health, 1997*).

### Self-assessed health

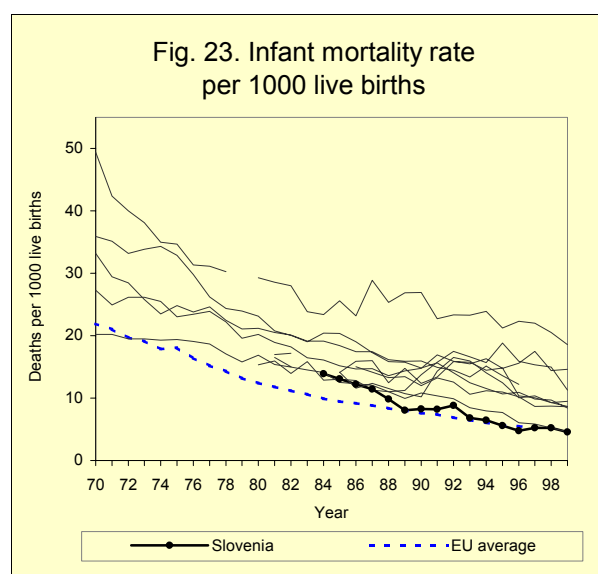
Data are also not routinely available on the proportion of the population assessing their

own health positively. Among the reference countries, seven of the countries had some national level data with Bulgaria having the largest proportion of adult respondents assessing their health as being good (62%) and Latvia the least (26%). The large observed variation may be caused by the differences in study settings, in data collection or by cultural differences. In all countries, men assessed their health as being good more often than women did. No data are available for Slovenia. However, a local study reported that just over half the population assessed their health as being good (56%) (*Institute for Social Science, 1999*).

### Health of children and adolescents

The infant mortality rate decreased in almost all the reference countries between 1985 and 1999. The Slovene infant mortality rate has more than halved from 13.1 to 4.6 per 1000 live births since 1985. This was the largest decrease among the reference countries, and the Slovene rate is now below the EU average (Fig. 23).

The main causes of infant mortality in Slovenia generally follow the pattern in western Europe, with the most frequent cause being malformations and perinatal conditions, which cause 82% of all infant deaths in the EU. The third most common cause is sudden infant death syndrome (11%), whereas external causes, infectious and parasitic diseases and

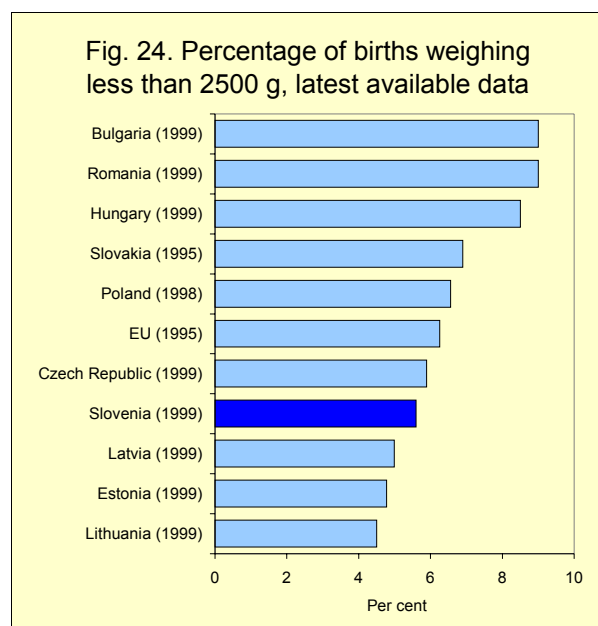


diseases of the respiratory system are responsible for 2–3% of deaths. In Slovenia, the main causes of death are also related to perinatal conditions and malformations (86%), but the proportion of deaths due to sudden infant death syndrome is slightly lower (9%) than in the EU, and some cases may be classified under other causes of death.

The proportion of the newborn weighing less than 2500 grams has often been used as an indicator for newborn health and perinatal care. The proportion of low-birth weight children was 5.6% in Slovenia in 1999, lower than in the EU (6.3% in 1995) or in the reference countries in general (7.3% in 1999) (Fig. 24).

In most of the reference countries, children have good immunisation coverage. Even though the coverage rates in Slovenia are lower than in the reference countries in general, they are relatively high, varying between 92% and 98% for all immunisation programmes in 1999.

The mortality of young children aged 1–6 years has fallen for all causes of death except cancer during recent years. There are, however, also adverse trends: the proportion of children aged 2–4 years receiving general health check-ups has fallen, mortality due to accidents among school children and adolescent has risen, and regional differences in the number of visits outside dispensaries are large and increasing (*Institute of Public Health, 1997*).



More than 90% of deaths of preschool children and 80% of deaths of school children are caused by accidental injuries. The leading causes are traffic accidents in both age groups and also drowning in the younger group (*Institute of Public Health, 1998*).

In general, children's oral health has improved in the reference countries in the 1990s as in the EU. In Slovenia, the DMFT-index (the number of decayed, missing or filled teeth) was one of the highest in the mid-1980s, but declined noticeably from 6.9 to 1.8 by 1998.

Children with disabilities and others who experience difficulty in learning are often marginalized or even excluded from school systems. In the countries of central and eastern Europe, the dominance of a traditional medicalized approach resulted in such children being educated in separate special institutions. In the 1990s, most of the ten reference countries had moved towards integrating these children in the normal school system, even though progress was slowed by economic problems (*Ainscow & Haile-Giorgis, 1998*). Disabled children in Slovenia are largely integrated into mainstream education.

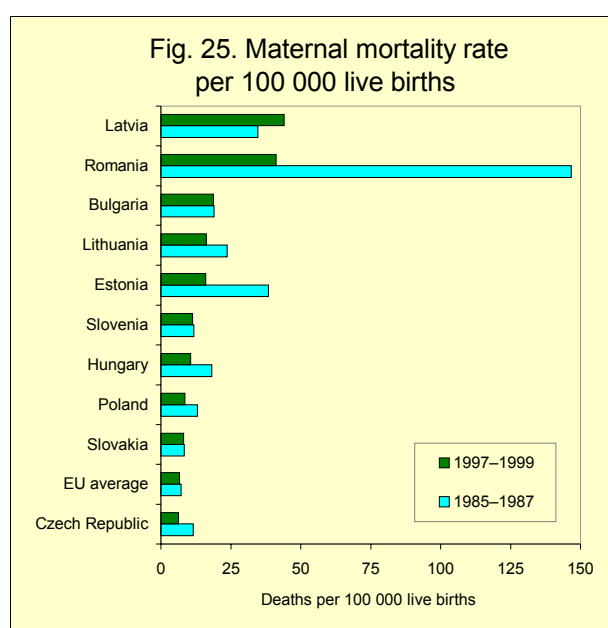
One of the few routinely available indicators for adolescents' sexual health and behaviour is the rate of teenage childbirth, which can reflect social factors as well as access to and use of contraception. In 1999, the birth rate per 1000 women aged 15–19 years was 8, which was the lowest among the reference countries, equalling the EU average (*Council of Europe, 2000*). The birth rate in this age group has been declining in all the reference countries since 1980. In Slovenia this decrease was 87%, which was by far the largest among the reference countries.

### Women's health

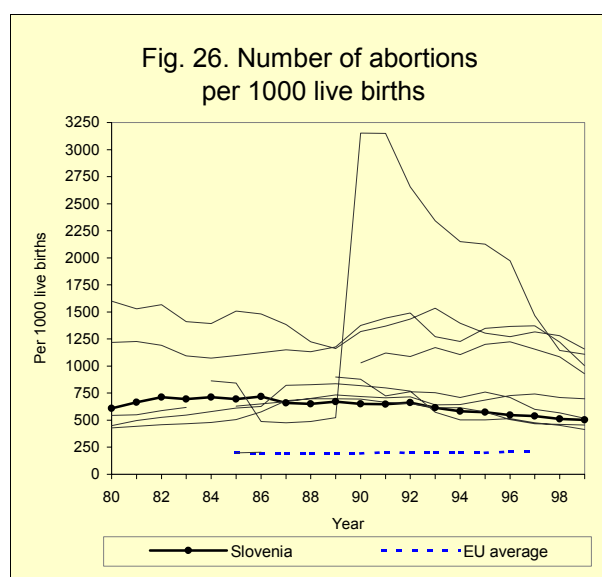
Women as a group live longer than men and have lower mortality rates for all the main causes of death. For example in Slovenia, the female SDR for cancer in the age group 0–64 was 37% lower than for men in 1999. The gender difference was even larger for diseases of the circulatory system, since the female rate was 69% lower than the male rate. However,

women have higher reported rates of morbidity and utilization of health care services (especially around childbirth), and they can be more affected by social welfare policies than men.

The maternal mortality rate has declined noticeably in almost all the reference countries between the mid-1980s and the late 1990s. In Slovenia, however, it remained basically static (11.8 and 11.3 per 100 000 live births respectively in the mid-1980s and the late-1990s), and the Slovene rate is almost double the EU rate of 6.3 per 100 000 live births (Fig. 25).



Data for Poland is 1985-1987 and 1994-1996.  
Data for EU average is 1985-1987 and 1995-1997.



Great progress has, however, been made in reducing the number of deaths due to illegally induced abortions, with no such deaths since 1983 (*Institute of Public Health, 1998*). In the countries of central and eastern Europe and in the newly independent states, induced abortion was commonly used as a contraceptive method due to lack of modern contraceptives. Therefore, the number of induced abortions was usually much higher than in the western European countries. The annual number of abortions in Slovenia declined by 41% from 14 700 in 1990 to 8700 in 1999. The proportional decline in the number of live births was smaller (23%), so the number of induced abortions per 1000 live births has declined significantly. Although Slovenia now has one of the lowest induced abortion rates per 1000 live births among the reference countries, it is more than double the EU rate (Fig. 26).

The use of effective contraception has only slightly improved the Slovene situation, despite the relatively good organization of health care services dedicated to women and the variety of contraceptive methods available in the market (*Institute of Public Health, 1997*). Though progress has been slow, Slovenia has high availability and use of contraceptive methods and the highest overall contraceptive prevalence rate among the reference countries (*WHO Regional Office for Europe, 2000*).

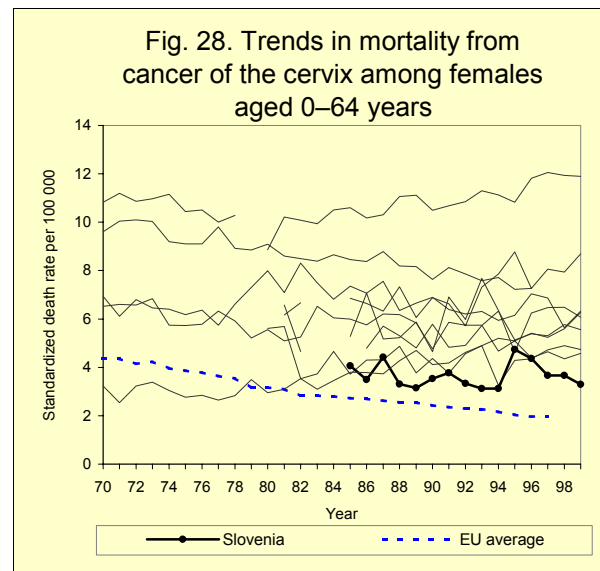
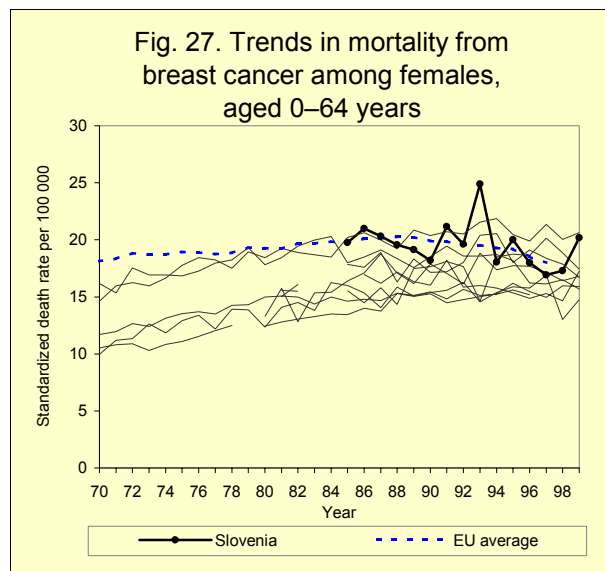
The SDR for cancer of the female breast in Slovenia and in the EU was approximately at the same level in the 1980s and in the early 1990s. After a peak in 1993 the Slovene rate decreased until 1998, but increased in 1999 to the EU and reference country averages (Fig. 27). National statistics show that women aged 50 years or more are reported to have the largest increase in the incidence of breast cancer, though total mortality has been decreasing (*Institute of Public Health, 1997*).

The Slovene SDR for cancer of the cervix has had a slightly increasing trend since the mid-1980s, while the EU rate has declined. Despite this trend, the Slovene rate has been one of the lowest among reference countries (Fig. 28). National statistics show that the incidence of cancer of the cervix has increased most among

women under 50 years (*Institute of Public Health, 1997*).

Violence against women has received limited attention as a public health issue. Data on the incidence and type of such violence are lacking. The SDR for homicide and purposeful injury for women can be used as a surrogate

indicator. Since the mid-1980s, the Slovene female SDR for homicide and purposeful injuries has been lower than in most reference countries. The SDR of 1999 (0.8 per 100 000 women) was only slightly higher than the EU rate (0.6 per 100 000 women in 1997).



## LIFESTYLES

Among the factors (including genetics and the physical and social environments) influencing health, behaviour substantially affects the health and wellbeing of each individual and the population. Lifestyle patterns such as nutritional habits, physical activity and smoking or heavy alcohol consumption together with the prevalence of such risk factors as elevated blood pressure, high serum cholesterol or overweight influence premature mortality, especially from cardiovascular diseases and cancers. These diseases are the main causes of death in Europe. Unhealthy behaviour also contributes to a wide range of other chronic illnesses and thus affects the quality of life in general.

Lifestyle, however, is also influenced by behavioural patterns common to a person's social group and by more general socioeconomic conditions. Evidence is growing that, at least in most western European countries, improvements in lifestyles have largely been confined to the more socially and economically privileged population groups, who are better placed to adopt health-promoting changes in behaviour (*WHO Regional Office for Europe, 1993 and 1999*).

### Tobacco consumption

The prevalence of smoking among population aged 15 years or more in Slovenia is lower than in the other reference countries (Fig. 29); men have lower prevalence than the reference countries in general, but women have one of the highest prevalence among the reference countries. Even though the proportion of smokers fell since the late 1980s, almost a third of men and almost a fifth of women were still regular smokers in 1998. In 1990, 18% of the 15-years-old and 28% of 17-years-old were smokers. By the age of ten years, 15% of boys and 7% of girls had tried their first cigarette (*WHO Regional Office for Europe, 1997*).

The annual consumption of cigarettes per person in Slovenia equalled the EU level in the

end of the 1980s. Consumption then increased rapidly above the average level of the reference countries by 1990, before returning to the EU level. In some countries of central and eastern Europe, increased black market sale or increased import of tobacco products may, however, explain some of the observed decline in the consumption figures in the 1990s.

Mortality from trachea, bronchus and lung cancer can be used as an indicator to measure the trends and country positions related to deaths

Fig. 29. Percentage of regular daily smokers aged 15 years and older, latest available data

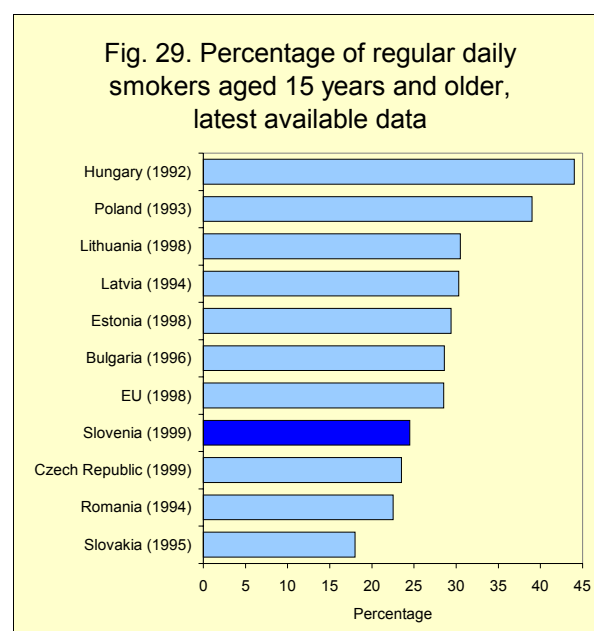
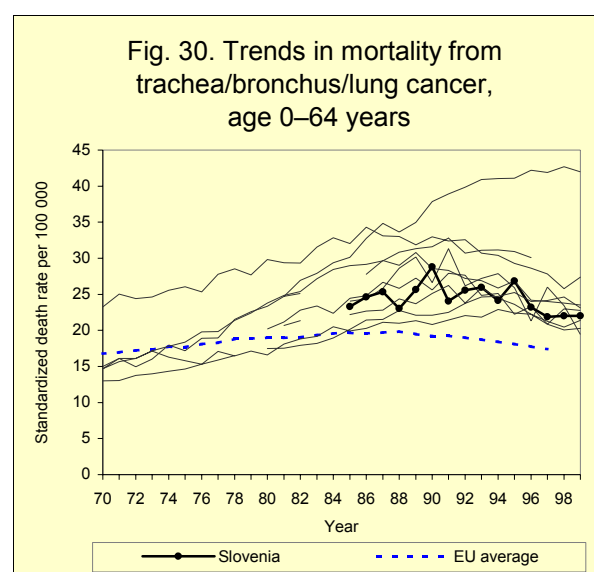


Fig. 30. Trends in mortality from trachea/bronchus/lung cancer, age 0–64 years



caused by smoking. In the mid-1980s, the Slovene SDR for men was near the average of the reference countries. Though decreasing, especially in the 1990s, the Slovene rate is now the lowest among the reference countries, but still a quarter higher than the EU average (Fig. 30).

For women a different trend can be observed. In the mid-1980s, Slovenia had one of the lowest SDRs among the reference countries, but the rate then increased above the average of the reference countries, now equalling the EU rate. Since men smoke more than women, there are large gender differences in SDR for trachea, bronchus and lung cancer. Despite the decreasing gender difference, the Slovene SDR for men is still more than four times the female rate.

Exposure to tobacco smoke is estimated to cause 20%–33% of asthmatic disorders and diseases of the lower respiratory tract among Slovene children (*Institute of Public Health, 1998*).

### Alcohol consumption

Registered alcohol consumption in Slovenia has been one of the highest among the reference countries, and has exceeded consumption in the EU consistently since 1980. In 1997, the difference was more than 2 litres (11.8 and 9.4, respectively) (Fig. 31). Slovene consumption then decreased by 30% to 8.2 litres per person. This may suggest problems in gathering accurate information on alcohol consumption. This is also true for other reference countries: for example some Baltic states recorded a remarkable decrease up to 65% in the 1990s, but local studies reported a very high level of unrecorded consumption as well as illegal importation and production (*WHO Regional Office for Europe, 1997*).

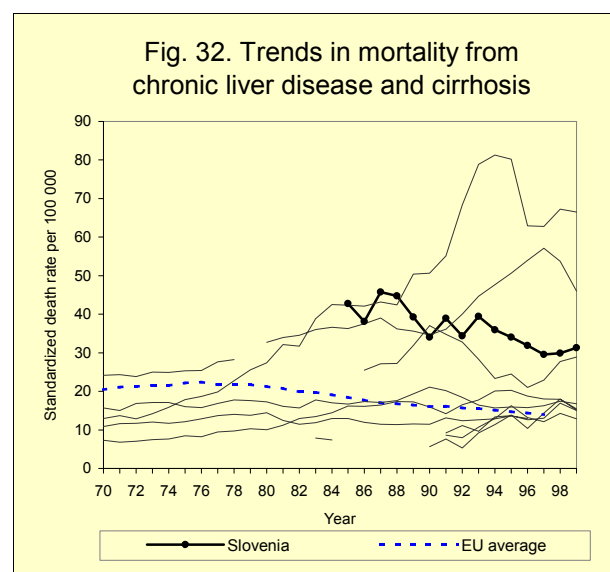
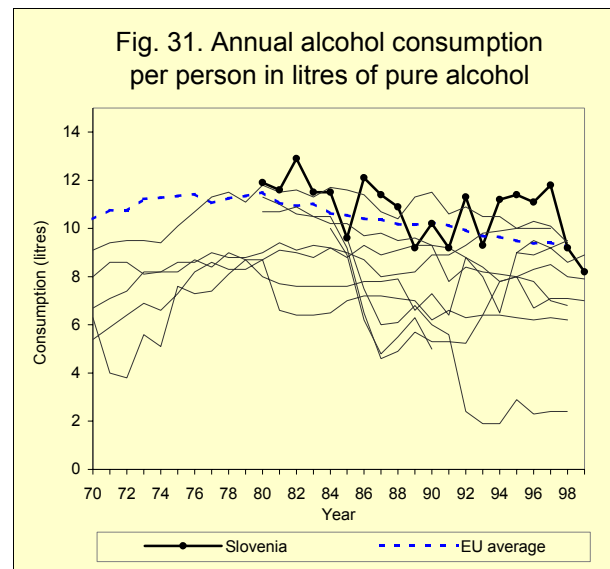
The number of deaths due to chronic liver disease and cirrhosis can be used to give an indication of the harmful long-term effect of alcohol consumption. The Slovene SDR for chronic liver disease and cirrhosis was one of the highest in the 1980s, but the rate has since declined by a third. Despite this remarkable decrease, the Slovene rate remains above the average of the reference countries, and it is

still almost double the EU rate (Fig. 32). The trend was similar for both sexes, but men have a consistently higher mortality than women. In Slovenia, the male SDR was more than double the female rate in 1999.

### Illicit drug use

Comparable data on drug use are rare. In general, the reference countries have reported increased drug use in the 1990s, even though the level is still lower than in the EU.

According to a survey performed in 1995, 13% of the Slovenes had experimented with illicit drugs at least once (*Vogler and Habl, 1999*).



Cannabis is the most widely used drug. In 1991, one pupil in every ten aged 12–14 and more than a fifth of pupils in high school had used it at some time. The survey performed one year later indicated increased use, with one-third of pupils reporting experimentation with cannabis (*WHO Regional Office for Europe, 1997*). According to the 1995 ESPAD-survey (European School Survey Report on alcohol and other drug use among 15 to 16-years-old) only 4% of boys, but 12% of girls had used cannabis at least once. The proportion for girls was the second highest among the reference countries, after the Czech Republic (*Hibell et al., 1997*). In the corresponding survey in 1999, the percentage of respondents reporting cannabis use had increased to 25%, which was among the highest among the reference countries. In addition, 7% of respondents reported use of drugs other than cannabis, a little lower than the average of the reference countries (9%) (*Hibell et al., 2000*).

Heroin use was reported to be increasing in the 1990s. Surveys estimated that there were some 1500–3000 users (75–150 per 100 000 population) in the mid-1990s, increasing to 5000 (250/100 000) now. Overall, 2% of school children reported having used heroin in a high school survey performed in 1992 (*WHO Regional Office for Europe, 1997*).

The use of amphetamines, LSD and cocaine has also increased. Multiple drug use (including alcohol) is common. A high school survey in Ljubljana reported that 4.8% had used LSD, 4.5% tranquillisers and other pills, 1.6% glue and 0.8% cocaine (*WHO Regional Office for Europe, 1997*).

## Nutrition

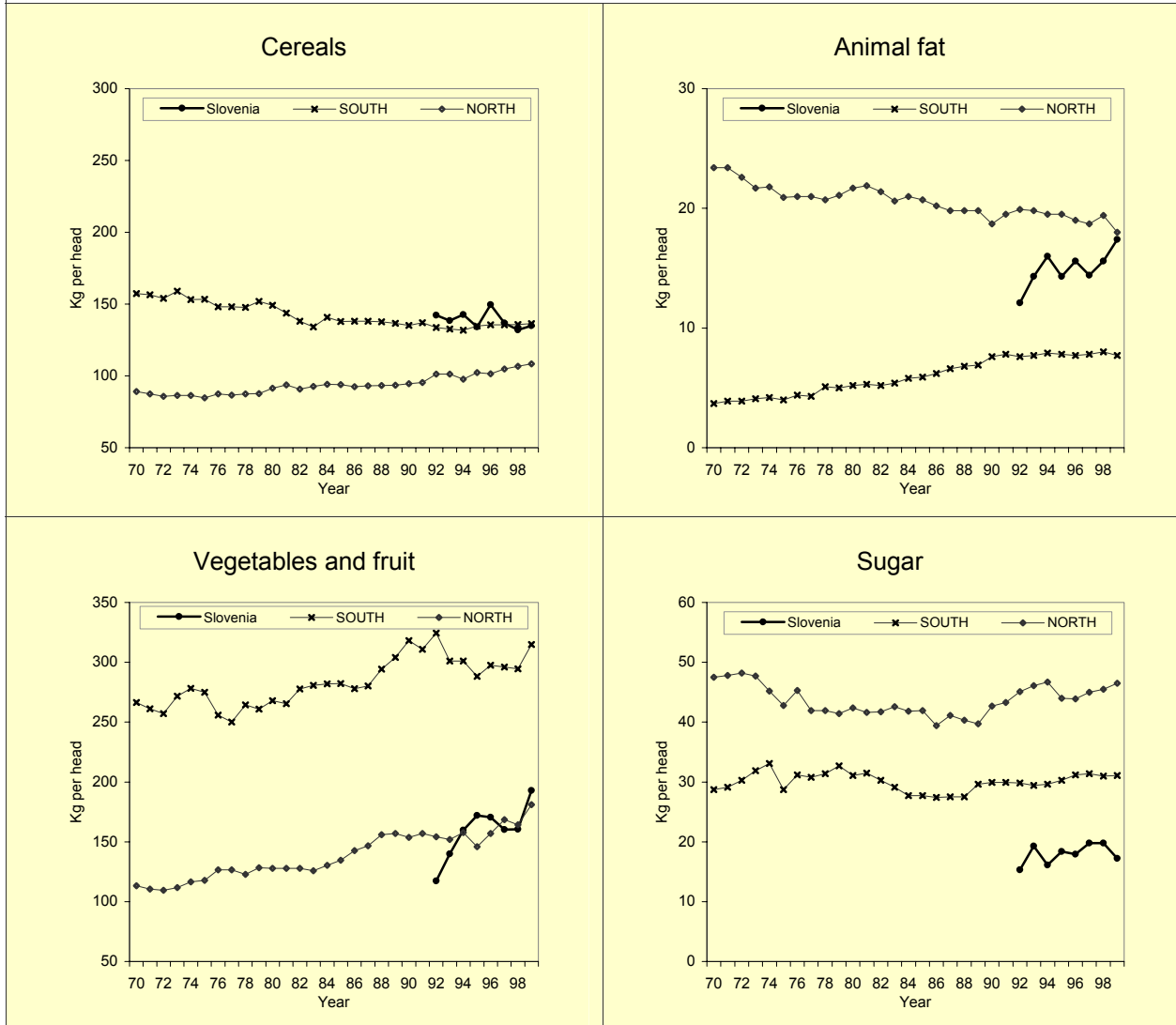
Nutritional habits are rooted in cultural traditions and food production. Nevertheless, in recent decades changes have occurred with increasing globalization, as global food markets have opened up, transport has become more rapid and more efficient techniques for conserving food have been developed. These factors together with increased mobility and increases in purchasing power are some of the reasons why the historically different nutrition patterns in Europe appear to converge.

The historical differences in western Europe between the northern and southern dietary patterns are confirmed by data relating to the amount of food available (national food balance sheets) in each country collected since the 1960s by the Food and Agriculture Organization (FAO) of the United Nations.<sup>4</sup> Typical of northern Europe is a high availability of saturated fat and a low availability of fruit and vegetables. This pattern is reversed in southern Europe.

The FAO data suggest that Slovenia follows the Southern pattern with the exception that the availability of fruits and vegetables appears to be low (Fig. 33). However, home-grown fruits and vegetables may not be recorded by these data, and the actual intake can best be verified by dietary intake surveys. The moderate use of animal fat is confirmed by the fact that the average proportion of energy derived from fat is estimated to be 32% in 1997, which equals the average of reference countries (30%), though lower than the EU (39%).

<sup>4</sup> The rapid increase in international trade accelerated in 1994, when food was incorporated into international free trade agreements (the GATT Uruguay Round). This has affected the reliability of national food statistics, making international comparisons more difficult.

Fig. 33. Food consumption patterns, 1970–1999



South: population-weighted average for Greece, Italy, Portugal and Spain.  
 North: population-weighted average for Denmark, Finland, Iceland, Norway and Sweden.



## ENVIRONMENT AND HEALTH

Environmental conditions affect humans through short-term and long-term exposure to noxious factors. In the long term the main objective is to promote sustainable development compatible with good health, and especially to protect the food chain (water, agricultural products) from the effects of harmful substances. Short-term environmental protection means avoiding or at least reducing potentially harmful situations, bearing in mind that people are not exposed equally to adverse environmental conditions and not all people and social groups are equally vulnerable to them. Thus, children, pregnant women, elderly people and ill people are more likely to be affected by polluted air or contaminated food. Also, specific population groups tend to experience more adverse environmental conditions. Low income, for instance, is often associated with exposure to environmental hazards at work (noxious substances and risk of accidents) and poor housing conditions (such as crowding, air pollution and noise). These situations may affect health and wellbeing either directly by causing discomfort and stress, or indirectly by giving rise to unhealthy coping behaviour such as the use of drugs or heavy drinking.

The increased recognition of the importance of the effects of the environment on health and the need for intersectoral action at all levels has been demonstrated by the development and implementation by nearly all European countries of national environment and health action plans (NEHAP). In Slovenia, the preparation of the NEHAP is prescribed with the Environmental Protection Act. There was a plan that the Healthcare Plan Up To 2000 and the NEHAP would be merged in Slovenia, but it was eventually decided that two separate plans would be formulated (*Institute of Public Health, 1998*).

### **Microbial foodborne diseases**

The number of microbial foodborne outbreaks and the number of people who have suffered from these diseases can be used to indicate the quality of food and its production, even though some of the observed variation can be caused by differences in definitions and data-collection methods.

According to the most recent data from the mid-1990s, the variation between the reference countries is large (from less than one person affected by microbial foodborne outbreaks per 100 000 population in Estonia to 585 per 100 000 in the Czech Republic in 1999). The number of microbial foodborne diseases in Slovenia has been lower in the late 1990s than during the previous ten years, and the latest figures from 1999 show that Slovenia has one of the lowest recorded incidences among the reference countries (30 per 100 000 population).

Unsatisfactory intersectoral collaboration on management and professional levels are listed as the main obstacles in creating a coordinated national food policy to reduce, for example, environmental pollution due to agro-technical procedures in primary production (*Institute of Public Health, 1997*).

### **Air quality, water quality and waste**

Between 1990 and 1995 the emission of sulphur dioxide decreased and the emission of carbon dioxide remained stable in Slovenia, while the emission of nitrogen dioxide and carbon monoxide increased (*United Nations Economic Commission for Europe, 1997*). In 1995, the per person emissions of sulphur dioxide, nitrogen dioxide, ammonia and methane were higher in Slovenia than in the reference countries on average or in the EU. In contrast, emissions of carbon monoxide and carbon dioxide were lower than in the reference countries or in the EU (*United Nations Economic Commission for Europe, 1999*).

Table 2. Emission of selected air pollutants in kg per person in Slovenia, in the reference countries and in the EU in 1995

	Slovenia	Reference countries	EU countries
Sulphur dioxide	88.9	68.3	31.5
Nitrogen dioxide	33.7	25.3	32.4
Ammonia	13.7	10.7	9.4
Carbon monoxide	45.7	99.1	119.3
Carbon dioxide	6765	7555	8499
Methane	62.0	56.5	61.4

Chemical analysis showed improved water quality in the large and medium-size supply systems, but microbial analysis suggested a deterioration in water quality in the small water supply systems due to inadequate control and disregarding of restrictions in water protection zones in the 1990s. Increased concentrations of nitrates were reported as the most frequent cause for unsafe water (*Institute of Public Health, 1997*).

In 1996, 11% of the microbial and 7% of physical and chemical drinking water samples failed, most often in small water supply systems. The quality of bathing water has been found to be poor, with 17% of the microbial and 26% of physical and chemical samples taken in indoor pools failing (*Institute of Public Health, 1998*).

Since 1980, the quantity of wastewater has fallen by more than 50% for mining, the metal industry, paper industry and other industries. The total amount of wastewater and the proportion of wastewater without any treatment have also decreased significantly between 1990 and 1994 (*United Nations Economic Commission for Europe, 1997*).

The total amount of waste was estimated to be 8.8 million tons in 1995, of which 40% came from agriculture and from the food and forestry industries, 26% from construction, 14% from energy, 10% from mining and manufacturing and 10% from municipalities (*United Nations Economic Commission for Europe,*

1997). Rising living standards have increased the amount of municipal waste throughout the 1990s (*Institute of Public Health, 1998*), and Slovenia has one of the highest outputs of municipal waste per person among the reference countries (*United Nations Economic Commission for Europe, 1999*). Some 25 000 tons of hazardous waste (such as oils, solvents and acids) and 420 000 tons of special waste (such as slag and ash, mud and slime from waste and wastewater treatment) are generated in Slovenia annually (*Institute of Public Health, 1998*).

### Housing

The average estimated size of dwellings in Slovenia (70 m<sup>2</sup>) is one of the largest among the reference countries (average 54 m<sup>2</sup>), but still below the EU average (89 m<sup>2</sup>). Overall, 61% of Slovene dwellings were owner-occupied in 1995, equal to the averages of the reference countries and the EU (*United Nations Economic Commission for Europe, 1999*).

One aspect of the quality of housing is the proportion of the population with a connection to water and with access to hygienic sewage disposal. Slovenia had one of the highest proportions among the reference countries: all Slovenes living in urban areas and 97% of those living in rural areas had a water connection in 1991 (*United Nations Economic Commission for Europe, 1999*). In 1994, 98% of Slovenes had access to hygienic sewage disposal people, and the difference between urban (100%) and rural (95%) areas was small.

Whereas housing conditions, such as quality, location and infrastructure, affect people's health and wellbeing, lack of housing is even more crucial. Homeless people are more vulnerable to health problems, such as malnutrition, infectious diseases and psychosocial stress caused by solitude and insecurity, than the rest of the population. Whereas data on the quality of housing (albeit not always comparable) are increasingly becoming available, reliable data on homelessness are lacking.

**Occupational health and safety**

Exposure to health hazards at the workplace is still an important cause of ill health and death. However, information about exposure in terms of the type, frequency and intensity of hazards and the number of workplaces or people affected is not always available and comparable data are scarce.

The rates of injuries from work-related accidents per 100 000 population varied substantially among the reference countries, which suggests that the figures may describe different phenomena in the countries. Nevertheless, the number of such injuries has declined in all reference countries by an average of 51%, from 592 to 292 per 100 000 population between 1985 and 1999. In Slovenia, the decline was slightly lower, at 42%.

The data on deaths from work-related accidents may be more comparable than the data on injuries. The number of deaths has decreased in all reference countries indicating improvements in occupational safety. Between 1985 and 1999, the number of deaths in work-related accidents decreased from 3.8 to 1.8 per 100 000 population in the reference countries (a decrease of 53%). In 1999, Slovenia had slightly fewer work-related accidental deaths (1.6 per 100 000, a decrease of 62% since 1985) than the reference countries on average, and the Slovene rate equalled the EU rate (1.6 per 100 000, a decrease of 25% since 1985).

## HEALTH CARE SYSTEM<sup>5</sup>

The first sickness fund was established in Ljubljana in 1889, when Slovenia was a constituent part of the Austro-Hungarian Empire. This makes Slovenia one of the first European countries to establish compulsory health insurance.

In 1945, Slovenia became a part of the Socialist Federal Republic of Yugoslavia. In accordance with federal laws, health care was based on universal coverage, state financing and decentralised primary care. Private practice was prohibited and all physicians were salaried employees of the state. Until 1954, health insurance was an integrated part of social security and the federal state had full control of the health care budget. After the reforms of 1954 and 1955, health insurance was separated from social security and excluded from the state budgetary system. In 1969, health insurance was extended to also cover farmers, agricultural workers and their families. Despite bureaucratisation, poor salaries in the health sector, a general lack of experience in health care finance and administration and increasing financing difficulties, the Slovene health care system has been described as effective and of high quality.

### Health care reform

Slovenia became an independent state in 1991, and the process of economic transformation towards a market economy started. In 1992, the compulsory insurance system was reformed, a voluntary health insurance system was introduced and the privatisation of health care facilities started. According to the current law, the individual is responsible for his/her own health and employers are responsible for the maintenance of healthy working environments and the primary health care of their employees. The government is responsible for assuring the conditions for a healthy environment and healthy living as well as for the implementation and functioning of preventive public health programmes and health promotion. The local government has the responsibility for defining and maintaining the primary care network, including health centres and pharmacies.

Health insurance is provided by the Health Insurance Institute of Slovenia established by legislation in 1992. The largest single problem with the current health care system is its financing. Several employers do not pay their contributions punctually – if they pay them at

Table 3. Health care resources in Slovenia and in the reference countries (1999 or latest available)

	<b>Slovenia</b>	Reference countries	Minimum	Maximum
Hospital beds per 100 000 population	<b>555</b>	716	555	938
Physicians per 100 000 population	<b>215</b>	265	191	394
Hospital admissions per 100 population	<b>16.6</b>	18.1	13.8 <sup>a</sup>	25.4
Average length of hospital stay in days	<b>9.0</b>	10.3	9.0	11.9
Total health care expenditure as a percentage of GDP	<b>7.7</b>	5.6	2.6 <sup>a</sup>	7.7
<sup>a</sup> 1998				

<sup>5</sup> This section is largely based on *Health care systems in transition. Slovenia* (WHO Regional Office for Europe, "In press").

all – which has further aggravated the work of the Health Insurance Institute of Slovenia. The burdens on the compulsory health insurance scheme have increased greatly over the last three years. The introduction of value added tax, increasing salaries for health professionals and higher drug prices have been the most important factors (*Markota & Albreht, 2001*).

A further problem, which came with the establishment of the Health Insurance Institute of Slovenia, was the dispute between the government and the health insurance system concerning the debts of public health services, particularly hospitals. Accumulated high debts were compounded by inflation, bad financial management by hospitals and poor control of the Ministry of Health. In 1993/1994, the Parliament intervened to cover the outstanding debts.

By the end of 1995, the Health Insurance Institute of Slovenia had a large deficit, which led to an increase in the patients' payments and to restrictions in compensation. The situation of the voluntary health insurance companies became even more difficult, since the increase in patients' payments was smaller than the increased insurance costs, and the deficit of the voluntary health insurance companies rose. One of the main tasks in the health care reform process in the future is to solve the dilemma with obligatory and voluntary insurance (*Vogler and Habl, 1999*).

A national plan is in place to reform health care. It is wide-ranging, based upon health for all principles. In respect of health care, it sets a strategic direction of decentralisation and gradual privatisation, with service targets and incentives to achieve its aims.

### **Organizational structure**

Central government is responsible for planning, policy and regulation of the entire health care system. It also provides capital funds for the hospital sector, with local government providing capital expenditure for primary care. Revenue funding for the health care system is provided by the insurance system.

### **Health care finance and expenditure**

All citizens are entitled to the benefits of compulsory health insurance coverage. The unemployed, who receive public support, are covered by payments from the National Employment Institute and its branches. Refugees are provided with health services by a special arrangement financed by the state budget. Citizens of other nationalities can also be covered by insurance either by paying a premium, or by bilateral conventions and arrangements.

The extent of health insurance coverage – i.e. which benefits are included in the basic health care package – are decided annually by the Health Insurance Institute of Slovenia. Some special groups, such as the socially disadvantaged, enjoy full coverage under the compulsory health care scheme, but all other insured persons must pay a certain proportion of the costs, unless voluntary insurance coverage has been taken to cover such costs. In 1997, some 85% of the costs of the population health services were paid through the compulsory health insurance system (*Institute of Public Health, 1997*). Health insurance also includes compensation for sickness leave of more than 30 days, costs related to death and funerals, and transportation costs (*Vogler and Habl, 1999*).

Contributions by the economically active population are proportional to their income, and are set by the Parliament. Since 1996, employers paid 6.89% and employees 6.36% of gross income. Others pay a fixed amount, which represents a minimum financial liability to cover health risks. These fixed contributions are determined independently by the Health Insurance Institute of Slovenia. Pensioners pay a contribution of 5.72% of their gross pension (*Vogler and Habl, 1999*).

Compulsory plans cover a full range of basic benefits either with or without a co-payment. Treatment for infectious diseases are free of any co-payments. All preventive dental programmes, care of children and students, reproductive health services for women, treatment and rehabilitation of occupational diseases, as well as a number of specified diseases and conditions (such as mental diseases, epilepsy, cerebral palsy, diabetes and psoriasis) are fully

covered. In addition, at least 50%, and possibly as much as 95%, of the costs of services such as surgery, intensive care, treatment of oral and dental conditions, medication from the positive list, and vision and hearing aids are covered by the compulsory insurance. Alternative therapies, complementary medicine and cosmetic surgery not related to medical treatment are excluded from the benefit package. There are plans to increase co-payments for some areas – e.g. dental and optical services – or include them only in voluntary insurance schemes.

Practically all Slovenes – 98% in 1998 – have additional, voluntary health insurance. A maximum monthly limit, partly related to the insurance taker's age, but unrelated to health status, has been set for such schemes (*Vogler and Habl, 1999*).

International comparisons of health care expenditure are extremely difficult because the definitions underlying health statistics as well as accounting practices vary from one country to another. The following data on health care expenditure should therefore be used with caution, as the boundaries of what constitutes health care can vary substantially between countries.

According to data from 1998, Slovenia reported the highest proportion among the reference countries (7.7%), but also this remained

below the EU average of (8.6%) (Fig. 34). Data on health care expenditure adjusted for purchase power parity (PPP) from 1998 showed that the average of the reference countries (US \$480) is one third of the EU average (US \$1848). This expenditure in Slovenia (US \$1101) was the highest among the reference countries, but only 60% of the EU level.

National statistics show that the share of private expenditure increased from 1.7% to 12% between 1992 and 2000 in Slovenia (*Health Insurance Institute of Slovenia, 2001*).

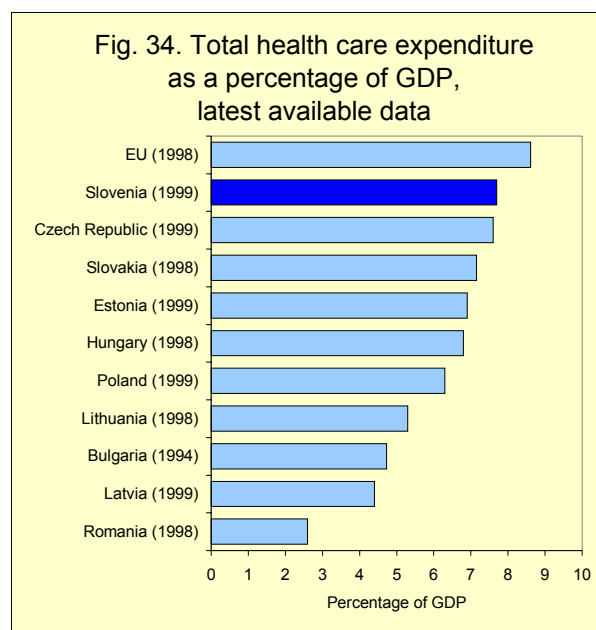
### Primary health care

Primary health care is provided in publicly owned health care centres (64 in 1999) and health care stations (69). Health care centres are located in local communities, and provide basic preventive health care, emergency medical aid, general medicine, special services for women, children and young people, home nursing, diagnostic services, dental care, medical aids and appliances, pharmacy services and physiotherapy. There may also be specialist outpatient services, if hospital treatment is not required.

A health care station provides basic emergency medical assistance, general medicine and health care for children and young people, family medicine and basic diagnostic services. The health station is linked with the nearest health centre, which provides other activities defined by law.

A primary health physician and a nurse comprise a health team, which provides preventive and curative care for a defined population. A general practitioner provides care primarily for adults, while paediatricians and school medicine specialists provide the health care of children. Gynaecologists provide maternity care and occupational specialists provide preventive and primary health care services for workers. Community nurses support the recipients of nursing care through health promotion, prevention, treatment and palliative activities.

Since 1992, private, independent practice has been permitted. This grants private practitioners with a contract with the Health Insurance Institute of Slovenia equal rights with those



practising in the public sector. Most private practitioners are located in health centres, renting office space. A private practitioner without a concession may practice but the patient has to pay out-of-pocket for the services. The 1992 Health Care Reform limited the capacity of the entire health care system to its present level. Minor developments in capacity were planned by 2004 by the National Health Insurance Plan adopted in 2000.

The personal physician represents the entrance point to the system as gatekeeper. If secondary or tertiary care is needed, the patient can be referred to a particular specialist or hospital for consultation or for treatment. Patients have the right to choose from the range of existing publicly owned institutions or private providers. Again, if the private provider does not have a contract with the Health Insurance Institute of Slovenia, the patient must meet all costs associated with the referral.

### Secondary and tertiary care

Referral by a primary health care doctor (including a range of specialists, such as paediatricians and gynaecologists working in primary settings) is needed for secondary or tertiary care.

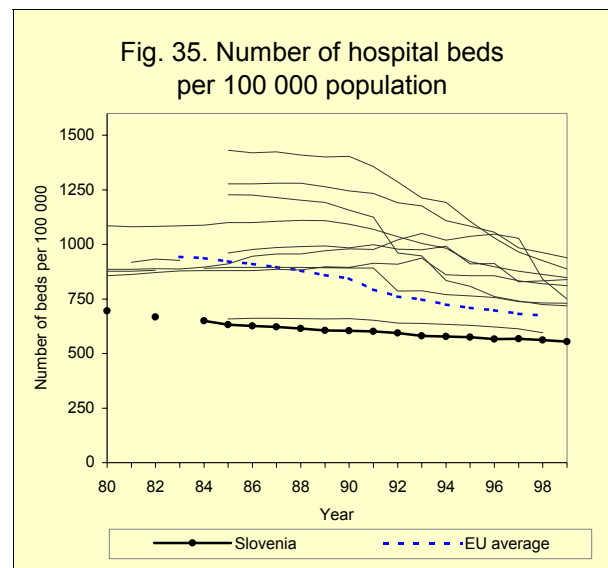
Specialised ambulatory medical services are provided in polyclinics affiliated with hospitals or in community health care centres contracted with the clinical specialist. Private practitioners can also provide specialised health care services, either with or without a contract with the Health Insurance Institute of Slovenia.

Specialist outpatient activities in the secondary level are performed in hospitals, in spas or in private health facilities. Most secondary care is provided in hospitals. There are 26 hospitals in Slovenia, of which eleven are regional general hospitals, 12 specialized hospitals (e.g. for orthopaedic, pulmonary, gynaecologic and psychiatric care). Finally, the Clinical Centre in

Ljubljana, the Institute of Oncology and the Institute of rehabilitation provide care of the highest complexity. All hospitals are owned by the state.

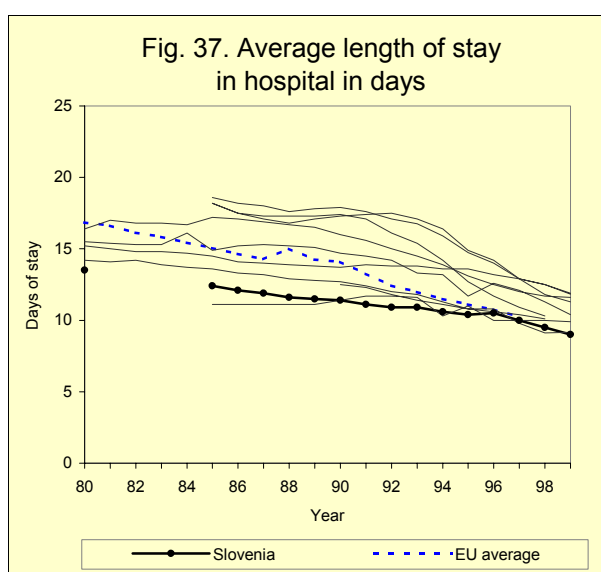
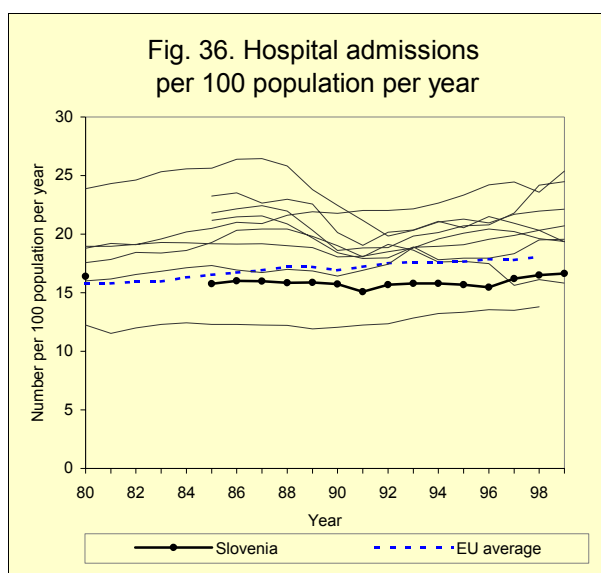
The number of hospital beds is considered to be too low. Therefore, hospital care suffers from long waiting lists. Other problems are the lack of quality control, high co-payments for patients without additional voluntary insurance, and the tendency for interventions to be carried out in the hospitals instead of primary health care or ambulatory care. In addition, problems with cost control have made the planning of hospital care delivery system difficult (Vogler and Habl, 1999).

The number of hospital beds per 100 000 population has decreased in almost all of the reference countries since 1985. The decrease in Slovenia (-12%) has been slower than in general, but since the initial level was lower in Slovenia than in other countries, the Slovene figure (555/100 000 in 1999) remains the lowest among the reference countries. It is 18% lower than the EU average (674/100 000 in 1998) and 29% lower than the average of the reference countries (715/100 000 in 1999) (Fig. 35).



The number of inpatient admissions also varies significantly among the reference countries, from 13.8 to 25.4 admissions per 100 population in 1999. Slovenia has reported a relatively constant admission rate (16.6/100 in 1998), slightly lower than the average of the reference countries (18.1/100 in 1999) and the EU (18.1/100 in 1998) (Fig. 36).

The average length of hospital stay has decreased in all reference countries since the 1980s. In 1985, the Slovene average was 12.4 days, falling to 9.0 in 1999. These were among the shortest averages in the reference countries, more than one day shorter than the average of the reference countries (10.3 days in 1999) and of the EU (10.2 days in 1997) (Fig. 37).



There are large differences in the reported number of outpatient contacts among the reference countries with a variation from 4.9 to 16.4 annual contacts per person in 1999. During the last two decades, the number of outpatient contacts has been stable in Slovenia (7.4 contacts in 1999), slightly lower than the average of the reference countries (8.0 contacts in 1999).

### Pharmaceuticals and pharmacies

There is no national essential drug list in Slovenia, but all medications are divided in to three lists. A positive list includes drugs that are paid entirely by insurance, an intermediate list with drugs that are paid in varying percentages by the patient and by the insurance, and a negative list with drugs that are fully funded by the patient.

The consumption of pharmaceuticals is high and has increased significantly during the 1990s. This along with rapid and uncontrolled increases in the prices of medicines raised costs for the Health Insurance Institute of Slovenia. In 1995, special legislation was accepted to control prices, after which the increase in the prices slowed down substantially (*Vogler and Habl, 1999*).

### Human resources

Although the Slovene number of physicians per 100 000 population has increased by almost a fifth since the mid-1980s, most of this increase occurred before 1992, and the current number of physicians in Slovenia (215/100 000 in 1999) is the second lowest among the reference countries, some 40% lower than the EU average (353/100 000 in 1998) (Fig. 38).

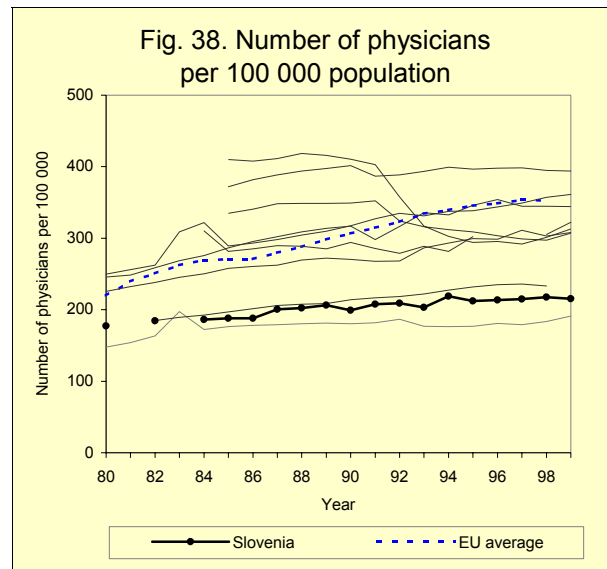
Slovenia had 60.4 dentists per 100 000 population in 1999, which was higher than the average of the reference countries (45.3/100 000 in 1999), but lower than the EU average (68.6/100 000 in 1998).

There were 35.0 pharmacists per 100 000 population in Slovenia in 1999. This equalled the average of the reference countries (35.9/100 000 in 1998), but was much lower than the EU average (81.7/100 000 in 1999), which was more than double the Slovene rate.



The number of nurses in Slovenia – 693 per 100 000 population in 1999 – was more than 20% higher than the average of the reference countries (572/100 000 in 1999). There is still, however, a lack of nurses, especially in the hospitals (*Institute of Public Health, 1997*).

The number of midwives was higher in almost all the reference countries (average 48.1/100 000 in 1999) than in the EU (average 19.5/100 000 in 1997), but Slovenia reported one of the lowest numbers (40.8/100 000 in 1999) among the reference countries.



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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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