

HIGHLIGHTS ON HEALTH IN LATVIA



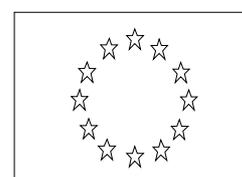
Country Highlights give an overview of the health and health-related situation in a given country and compare, where possible, its position in relation to other countries in the Region. The Highlights have been developed in collaboration with Member States for operational purposes and do not constitute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

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The views expressed in this document are those of WHO. Please forward comments or additional information to:

Health Information Unit
WHO Regional Office for Europe
8 Scherfigsvej
DK-2100 Copenhagen Ø
Denmark

Telephone: +45 39 17 12 00
Telex: 12000 who dk
Telefax: +45 39 17 18 95
E-mail: rpf@who.dk
Web: <http://www.who.dk>

AN OVERVIEW

The crude live birth rate per 1000 population has decreased substantially in Latvia, and combined with high mortality rates this has meant that the crude natural population growth rate has been negative since 1991.

The life expectancy at birth for men is the lowest among the reference countries.¹ Between 1987 and 1994, life expectancy decreased by more than seven years, mostly because mortality increased from cardiovascular diseases and external causes. Despite an increase of 5.5 years since 1994, the current life expectancy for men in Latvia is still lower than in the early 1970s. Life expectancy for women has stagnated since the 1970s, excluding the early 1990s, when it decreased temporarily by more than 2.5 years. In 1999, Latvia had one of the lowest life expectancies for women among the reference countries.

The standardized death rate (SDR) for cardiovascular diseases among men 0–64 years old has been the highest among the reference countries since the 1980s. The SDR for cardiovascular diseases among women has been among the highest in the reference countries. In the early 1990s, the SDRs increased substantially (by 74% among men and by 59% among women in five years) but then decreased rapidly to the previous level. Mortality is high for both ischaemic heart disease (the highest among the reference countries) and cerebrovascular diseases (the third highest), even though decreasing in the late 1990s.

The SDR for cancer among people 0–64 years has been high but is decreasing. One important exception to this is the increase in deaths from breast cancer among women since the 1980s.

The SDR for external causes for all ages doubled between the late 1980s and 1994 but decreased after that. Despite this positive trend,

mortality from these causes was still above the level of the 1980s. In 1999, the SDR was the second highest for men and the highest for women among the reference countries. The SDRs for motor vehicle traffic accidents are the highest among the reference countries, the SDR for homicide is the second highest, and the SDR for suicide the third highest.

Latvia, together with the other Baltic states, share with the Russian Federation a particular pattern of changes between 1984 and 1996 in deaths related to alcohol (cardiovascular, particularly sudden cardiac deaths, and external causes), with a clear fall in overall mortality in 1986 related to a period of restrictive alcohol policy. Mortality then rose steadily to around 1991 and reached a steep peak in 1994.

The SDRs for diseases of the respiratory system and the digestive system for all ages are among the lowest in the reference countries.

The SDR for infectious diseases for all ages has increased since 1985 and was the highest among the reference countries in 1999. In particular, the incidence rates of diphtheria, tuberculosis, syphilis and viral hepatitis are among the highest in the reference countries. Diphtheria immunisation rates among children are the lowest of the reference countries.

The maternal mortality rate is among the highest of the reference countries and has increased since the 1980s. The underlying trend in Latvian infant mortality has been generally downward since 1980. An apparent dramatic increase between 1989 and 1992 was caused by changes in classification and these statistics only became genuinely comparable from the mid-1990s. Infant mortality has fallen from 18.9 per 1000 live births in 1995 to 11.3 per 1000 live births in 1999. It is still much higher than recent EU averages, but now below the reference country average. However, the proportion of newborns weighing less than 2500 grams is among the lowest in the reference countries.

¹ The following 10 EU candidate countries were used as reference countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

Although Latvia reports a comparatively high prevalence of people smoking, the SDR for trachea, bronchus and lung cancer for all ages is decreasing and is one of the lowest among the reference countries.

A mandatory health insurance scheme that entitles citizens and permanent residents to state-funded health care services was launched in the 1990s. Other health care reforms of the 1990s aimed to decentralize the health care

system, to increase physicians' autonomy and to find new strategies for financing the health care system.

Although the number of hospital beds decreased throughout the 1990s, the number per 100 000 population is still much higher in Latvia than in most of the reference countries or in the EU in general. The number of physicians has also decreased, and the current rate per 100 000 population is below the EU average.

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 the WHO European Region as one means of assessing the comparative strengths and weaknesses, 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 Latvia, 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 been taken from one common international source (such as WHO, EUROSTAT, the Organisation for Economic Co-operation and Development or the International Labour Office), whenever possible. Nevertheless, 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. 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 PEOPLE²

In May 1990 the Latvian Supreme Soviet resolved to re-establish the authority of the Constitution of 1922. A transition period was set for the restoration of independence. The majority in a referendum supported the principle of independence in March 1991, and the USSR State Council conceded a fully independent status in September 1991.

The Declaration of the Renewal of the Independence of the Republic of Latvia in May 1990 and the 21 August 1991 declaration re-established *de facto* independence and proclaimed the authority of the Constitution. The highest legislative body is the single-chamber parliament with one hundred deputies elected in direct, proportional elections for four-year terms. Parties must receive at least 5% of the

national vote to gain seats in parliament. The Latvian head of state is the President, elected by parliament for a period of four years.

In Latvia, there are 33 authorities at the first level below the central government (26 districts and seven cities). These are divided in 481 municipalities (civil parishes).

Latvia is a member of the United Nations, the Council of Europe, the Organization for Security and Cooperation in Europe 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. Latvia has been a member of the World Trade Organization since 1998. In 1999, Latvia, along with five other countries, was invited to begin full negotiations for EU membership.

Table 1. Latvia and the reference countries (1999 or latest available)

	Latvia	Reference countries		
	Riga	Average/total	Minimum	Maximum
Population	2 431 700	104 705 300	1 442 400	38 741 000
Population 0–14 years (%)	18.3	19.5	16.1	22.2 ^c
Population 15–64 years (%)	67.2	68.0	66.5 ^c	74.2
Population ≥ 65 years (%)	14.6	12.5	9.6	16.0
Area in km ²	65 000	1 077 966	20 000	313 000
Density per km ²	37	97	32	130
Urban population (%)	69	64	50	75
Births per 1000 population	8.0	10.1	8.0	11.1 ^b
Deaths per 1000 population	13.5	11.3	9.6	14.2
Natural growth rate per 1000 population	-5.5	-1.1	-5.5	1.1 ^b
GDP per person in US \$ PPP	5 728^a	8 156	4 809 ^a	14 293 ^a
GDP: gross domestic product; PPP: purchasing power parity ^a 1998, ^b 1997, ^c 1996				

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

Demography

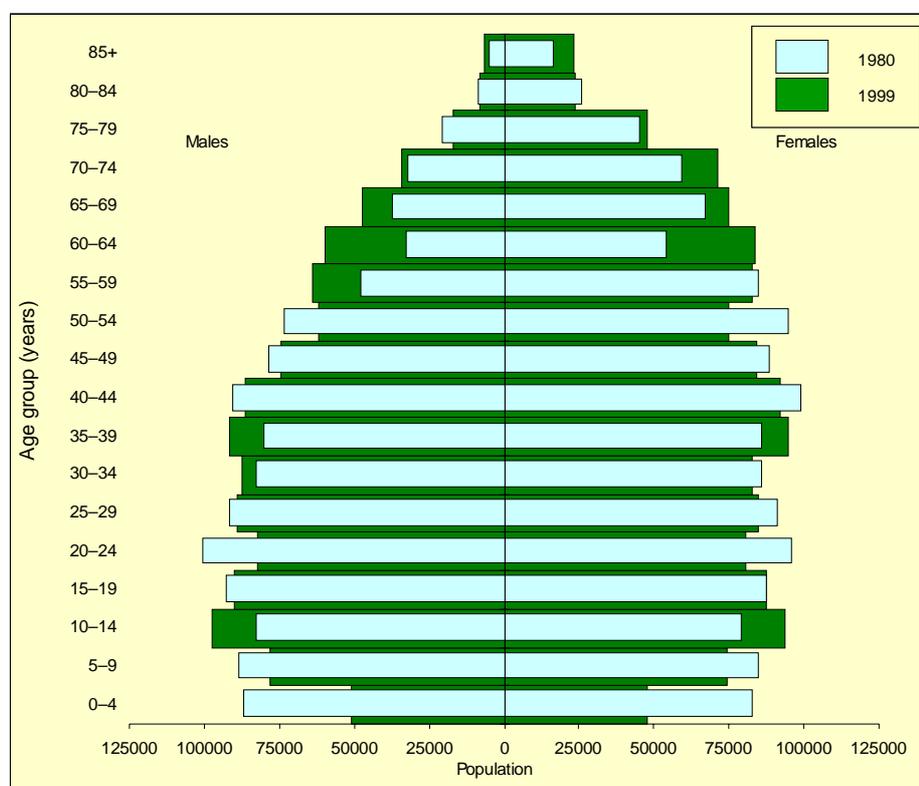
The shape of an age pyramid shows the stage of the demographic transition of a population. The overall changes in population structure, caused by changes in fertility, mortality and migration, can be easily seen when the age pyramids for two different years are compared (Fig. 1). The countries of the 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.

The age groups 0–4 years, 15–24 years and 40–44 years were smaller in Latvia than the average for the reference countries in 1997; whereas the age group 55–59 years was larger. The high premature mortality among men is reflected in the age pyramid, since the age groups of 70–84 years are smaller in Latvia than in the reference countries, whereas the

age groups of 60 years or more among women are larger than in the reference countries. Ageing of the population is particularly prominent in the eastern part of Latvia (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

Between 1987 and 1999, the crude live birth rate per 1000 population in Latvia declined from 16.0 to 8.0, and Latvia had the lowest birth rate among the reference countries in 1999. The crude death rate increased from 12–13 per 1000 population in the 1980s to 16.4 per 1000 in 1994 but decreased to 13.5 per 1000 in 1999. This was still one of the highest rates among the reference countries. Latvia's natural population growth rate became lower than that of the EU in 1989, and it has remained negative since 1991 (Fig. 2). In 1999, Latvia's growth rate (–5.5 per 1000 population) was the lowest among the reference countries, much below the average of the

Fig. 1. Age pyramid, 1980 and 1999



reference countries (-1.1 per 1000 population in 1999) and that of the EU (+0.9 per 1000 population in 1997). The fertility rate in Latvia (1.15 in 1999) has fallen under the replacement level, as in all other reference countries (average 1.3, range 1.1 to 1.4).

Migrant population and ethnic profile

Immigrants and ethnic minorities can have specific patterns of disease and health needs because of cultural, socioeconomic and behavioral factors and exposure to a different environment in their country of origin. Obtaining access to health care that can meet such specific needs and which 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 the indigenous population. Illegal immigrants, in particular, can find it difficult to obtain health care, and following up any care given can be problematic.

In 2000, 55.8% of the population were Latvians, 32.3% Russians, 3.9% Belarussians, 2.9% Ukrainians, 2.2% Poles and 1.3% Lithuanians. There are also minorities of Jews 0.3%, Gypsies 0.3%, Estonians 0.1% and Germans 0.1% (*Central Statistical Bureau of Latvia, 2000a*).

Net immigration was negative in the mid-1990s, but its level decreased from -47 000 in

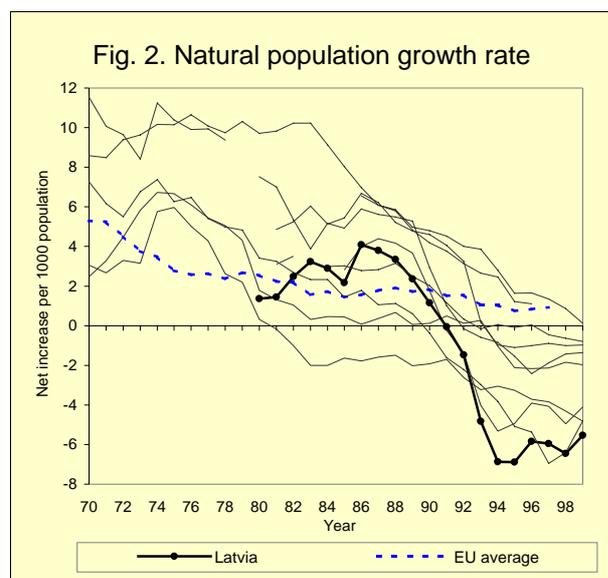
1993 to -3200 in 1998. About half of all emigration was to the Russian Federation (3200 in 1998). Net emigration to industrialized countries increased from near zero in 1990 to 1500 in 1998, and the main destination countries were Germany, the United States and Israel. Other important countries receiving immigrants from Latvia were Belarus (500), and Ukraine (360) (*Council of Europe, 1997 and 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 ratio³ for primary education is also an insensitive indicator for detecting differences in educational levels.

In Latvia, enrolment in secondary education has been constant in the 1990s. The net enrolment ratio for secondary education in 1996 equalled the average of reference countries, 79% (*UNESCO, 1999*).

The gross domestic product (GDP) adjusted for purchasing power parity (PPP) was US \$7540 in 1991. In 1993-1995, it had declined to somewhat over US \$3000, but increased to US \$5728 in 1999. This was one of the lowest figures among the reference countries and only 26% of the EU average. According to the preliminary figures for 1997, 62% of the GDP came from services, 31% from industry and 7% from agriculture (*United Nations Economic Commission for Europe, 1999*). About 57% of all employed people were work-



³ 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*).

ing in services, 25% in industry and 18% in agriculture (*United Nations Development Programme, 1997*).

Real wages in Latvia declined by 46% between 1989 and 1996. At the same time, the distribution of earnings has become more unequal (*United Nations Economic Commission for Europe, 1999*). In 1996, 21% of all Latvian households (19% of urban and 26% of rural residents) had a monthly income that was less than 50% of the national average income. Further, 44% of households (42% in urban areas and 51% in rural areas) had an income less than the minimum wage, and 68% (65% in urban areas and 74% in rural areas) had an income less than the crisis subsistence minimum set by the Ministry of Welfare. The prevalence of living in poverty was even higher for single parents with children and for families with at least three children (*United Nations Development Programme, 1997*).

The official unemployment rate in Latvia increased from 2.3% in 1992 to 9.1% in 1999. This is still below the EU average (10.3% in

1999) and among the lowest rates in the reference countries. Unemployment in most countries in central and eastern Europe may be higher than these official rates. Almost 55% of unemployed people had been without work more than six months and 30% more than 12 months in the mid-1990s. Both of these proportions have increased in recent years (*United Nations Development Programme, 1997*). Unemployment is most severe in the eastern part of Latvia, near the border to the Russian Federation, where the unemployment rate in some regions exceeds 20% of the economically active population (*Ministry of Economy, 2000*). According to national statistics, the proportion of unemployed people receiving unemployment benefit fell from 78% in 1993 to 33% in 1995, subsequently rising to 40% (*Ministry of Welfare, 2000*).

Inflation has caused severe problems for countries in central and eastern Europe. In Latvia, the inflation rate in 1992 was up to 950% but decreased to 2.4% in 1999, among the lowest rates in the reference countries.

HEALTH STATUS

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

- In general, Latvia's relative position on these key health indicators compared unfavourably with the other reference countries in 1985 and 1999.
- In 1999, Latvia had the lowest life expectancy and the highest mortality rates for maternal mortality, ischaemic heart diseases, external causes and motor vehicle accidents. It's relative position was poor for infant mortality, cerebrovascular diseases, suicide and gender difference in life expectancy.
- Latvia's relative position has improved in infant mortality and SDR from suicide and self-inflicted injury.

Fig. 3. Latvia relative to reference countries in 1985 ● and latest available year (1996–1999) ☹

POSITION	BEST					WORST					Latvia	Reference countries		
	1	2	3	4	5	6	7	8	9	10		Average	Minimum ^a	Maximum ^b
Life expectancy at birth (years)								●		☹	70.2	72.0	70.2	75.8
Male versus female difference in life expectancy at birth (years)								●	☹		10.7	8.1	6.8	10.9
Infant mortality rate per 1000 live births		●							☹		11.3	12.1	4.6	18.6
Maternal mortality rate from all causes per 100 000 live births ^c								●		☹	44.1	17.3	4.8	44.1
SDR ^d from cardiovascular diseases, age 0–64 years										☹	165.2	134.6	61.1	167.3
SDR from ischaemic heart disease, age 0–64 years										☹	88.0	57.3	25.3	88.0
SDR from cerebrovascular disease, age 0–64 years									☹		41.2	31.3	14.3	51.1
SDR from cancer, age 0–64 years					●	☹					103.1	109.3	92.7	145.3
SDR from trachea/bronchus/lung cancer, age 0–64 years					☹	●					22.8	27.6	19.4	42.0
SDR from cancer of the cervix among females aged 0–64 years	●		☹								4.7	7.6	3.3	11.9
SDR from breast cancer among females aged 0–64 years					●	☹					16.8	16.2	14.8	20.6
SDR from external causes of injury and poisoning								●		☹	156.6	74.8	52.2	156.6
SDR from motor vehicle traffic accidents										☹	26.0	14.7	10.2	26.0
SDR from suicide and self-inflicted injury						●	☹				30.0	17.2	12.0	42.1

☹	Position improved	1	(indicators)	^a Lowest value observed among ten reference countries ^b Highest value observed among ten reference countries ^c Three-year averages ^d SDR: standardized death rate
☹	Position unchanged	4	(indicators)	
☹	Position deteriorated	9	(indicators)	

Life expectancy

Latvia has the lowest life expectancy for males among the reference countries and the third lowest for females. The life expectancy at birth was 64.8 years for males and 75.4 years for females in 1999. For both sexes, the difference between Latvia and the EU average has increased since the 1980s, and the most recent life expectancy for females is almost six years less than the EU average and ten years less for males (Fig. 4–6).

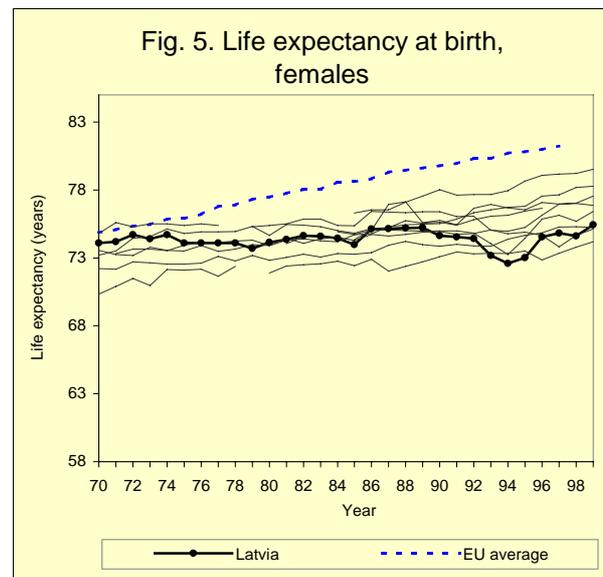
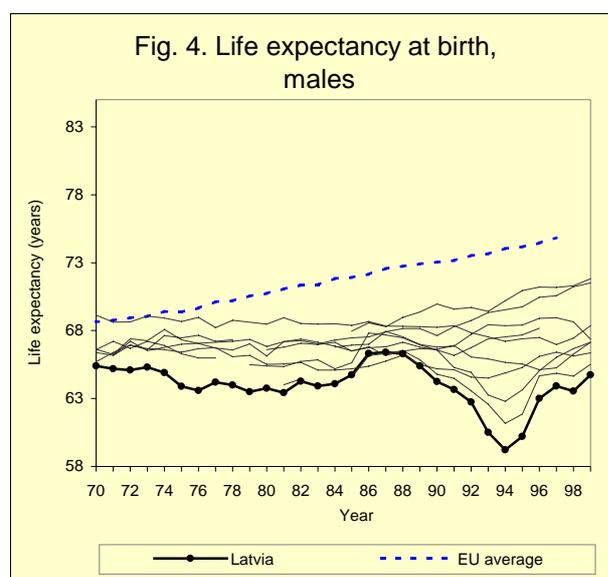
Life expectancy for males declined slowly in the 1970s but increased in most of the 1980s. In 1987, male life expectancy started to decrease, with a very steep decline in the early 1990s. This trend lasted for seven years, mainly because of increasing mortality from external causes and cardiovascular diseases, largely caused by increasing alcohol consumption and the social instability of the transition period. The total decline was more than seven years, and in 1994 life expectancy for males fell below 60 years (59.5 years). Since 1980, this has been recorded only in the Russian Federation and in Kazakhstan within the European Region (excluding countries with war conditions). Since 1994, however, the mortality rates for the main causes of death – cardiovascular diseases, cancer and external causes – have declined, and 75% of the decline of seven years has been regained. Despite this improvement, life expectancy for Latvian males

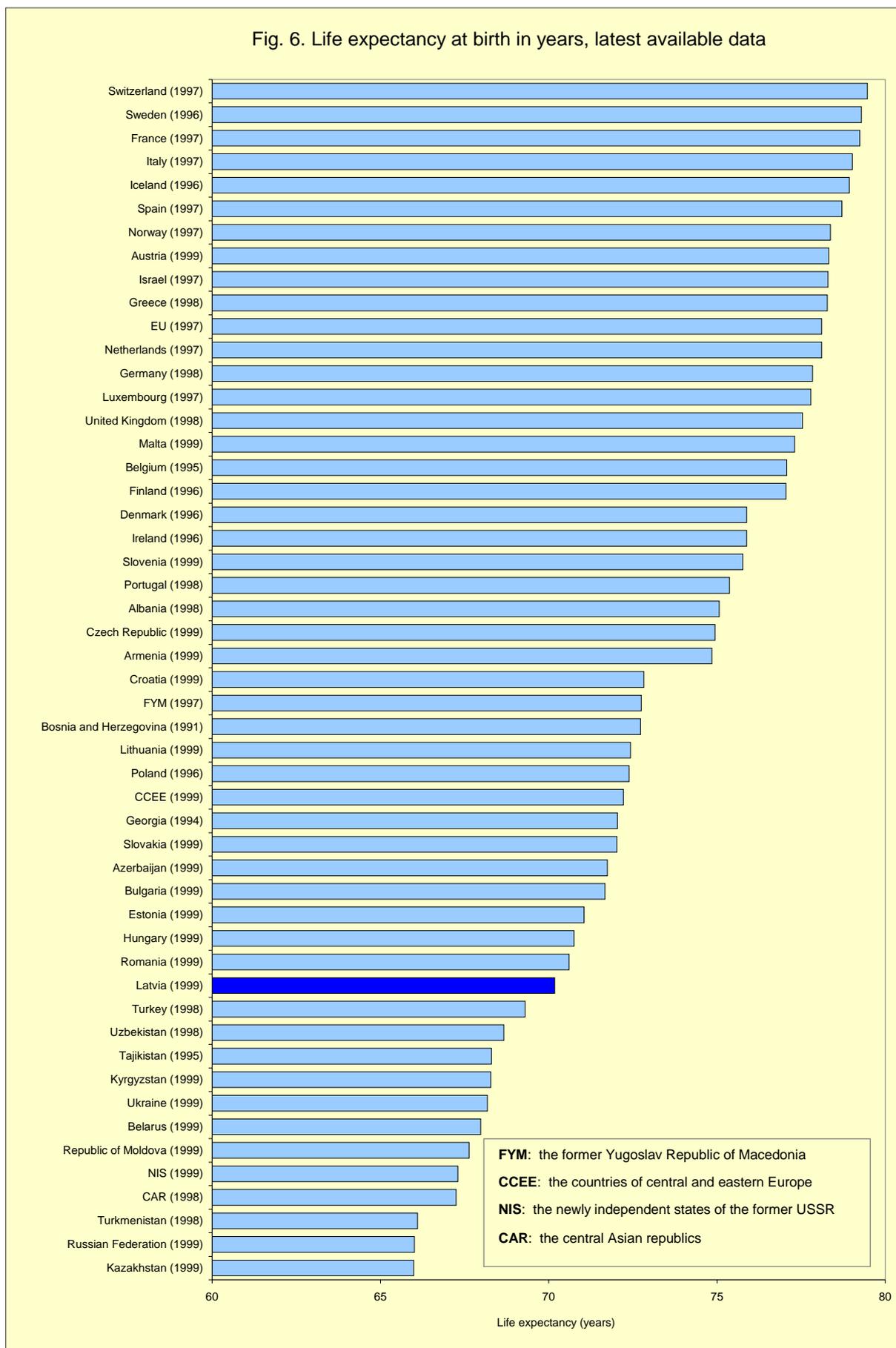
is now the lowest of the reference countries and more than one year lower than in the late 1950s (*Central Statistical Bureau of Latvia, 2000b*).

Life expectancy for females was among the highest of the reference countries in 1970, but it stagnated until 1990. It then declined from 75.2 years to 72.6 years in 1994, but has improved to 75.4 years in 1999. Increasing mortality rates from cardiovascular diseases and from external causes shortened life expectancy.

The gender difference in life expectancy has increased in almost all reference countries. The difference in Latvia varied between 9 and 10 years in the 1970s and 1980s but increased to 13.4 years in 1994. Even though this declined to 10.7 years in 1999, it is the second largest gender difference among the reference countries after Estonia. Of the other countries in the European Region, only the Russian Federation (12.5 years) and Belarus (11.7 years) had higher differences in 1999.

Life expectancy at the age of 50 years for men was the same in 1996 (21 years) as it had been a century before. During the same period, however, life expectancy for women at 50 years increased from 23 to 29 years (*Ministry of Welfare, 2000*).





Main causes of death and morbidity

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.

Although mortality rates from a number of causes are higher in some of the age groups than the reference country averages (particularly cardiovascular disease among men age group 35–64), the contribution of external causes to premature mortality is the most dramatic. Mortality due to external causes alone exceeds the average and ‘minimum’ reference country SDRs due to all causes for males and females aged under 35 years (Fig. 7–9).

In 1986, Latvia shared with the other countries of the former Soviet Union a fall in the SDR from all causes, reflecting a reduction in deaths from cardiovascular disease and external causes. This followed the introduction in June 1985 of a vigorous campaign to restrict and thereby reduce alcohol consumption (the so-called Gorbachov anti-alcohol campaign). Mortality rates rose slightly from a low point in 1988 until 1992. Following economic liberalisation in 1991, alcohol became more widely available and relatively cheaper than before 1985. This is believed to have contributed to the 21% increase between 1992 and 1994 in overall mortality (all causes, all ages SDR) in Latvia. The changes in SDRs are dominated by changes in male mortality (Fig. 10). These trends, and the evidence supporting the causal role of alcohol, are covered in more detail in *Health in Europe, 1997 (WHO Regional Office for Europe, 1998)*.

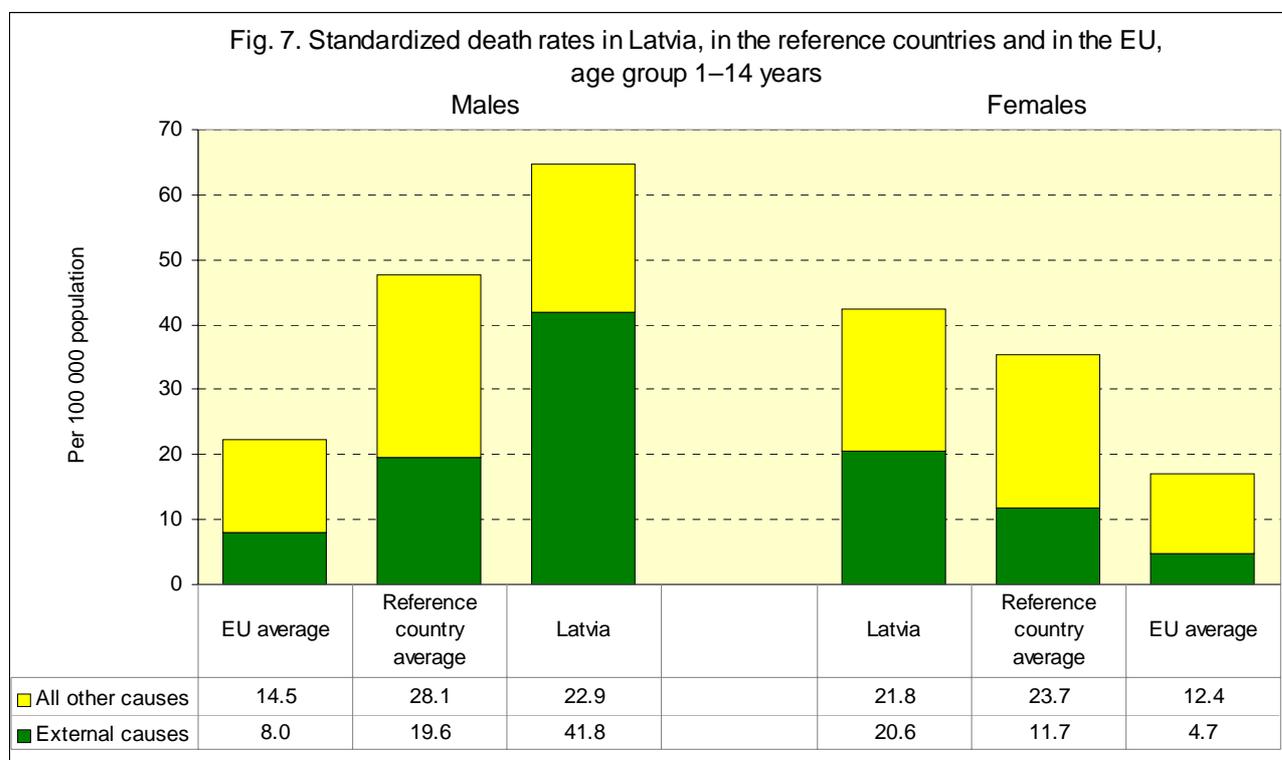


Fig. 8. Standardized death rates in Latvia, in the reference countries and in the EU, age group 15–34 years

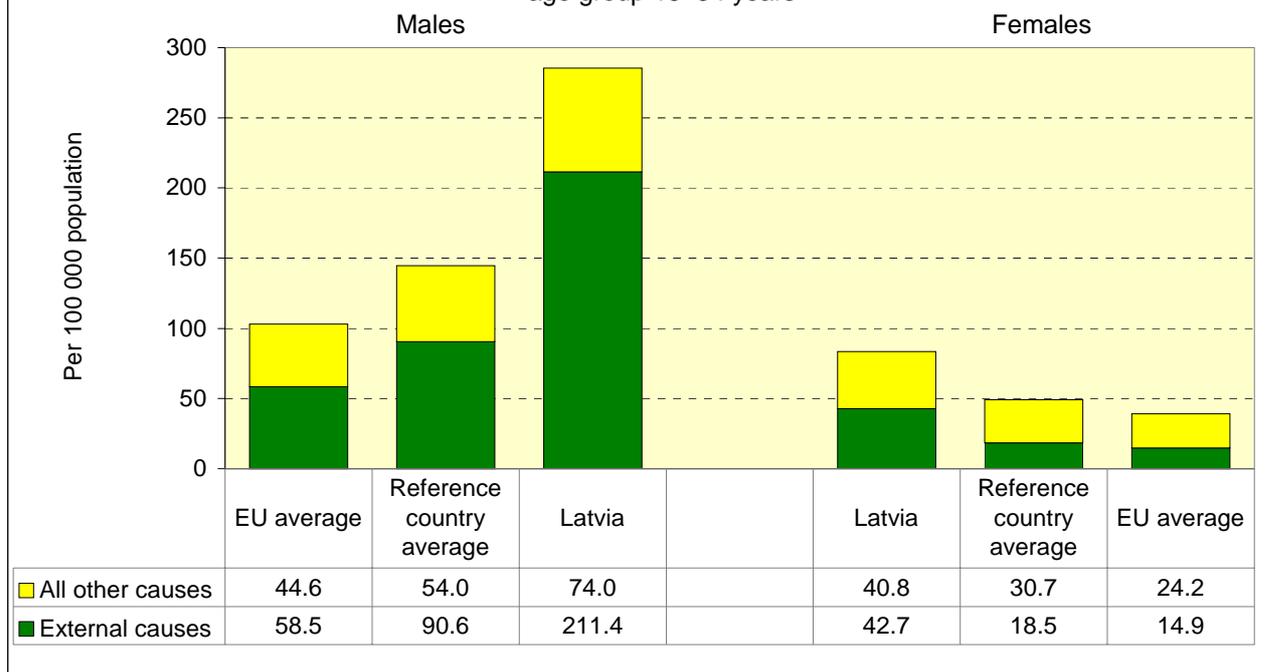
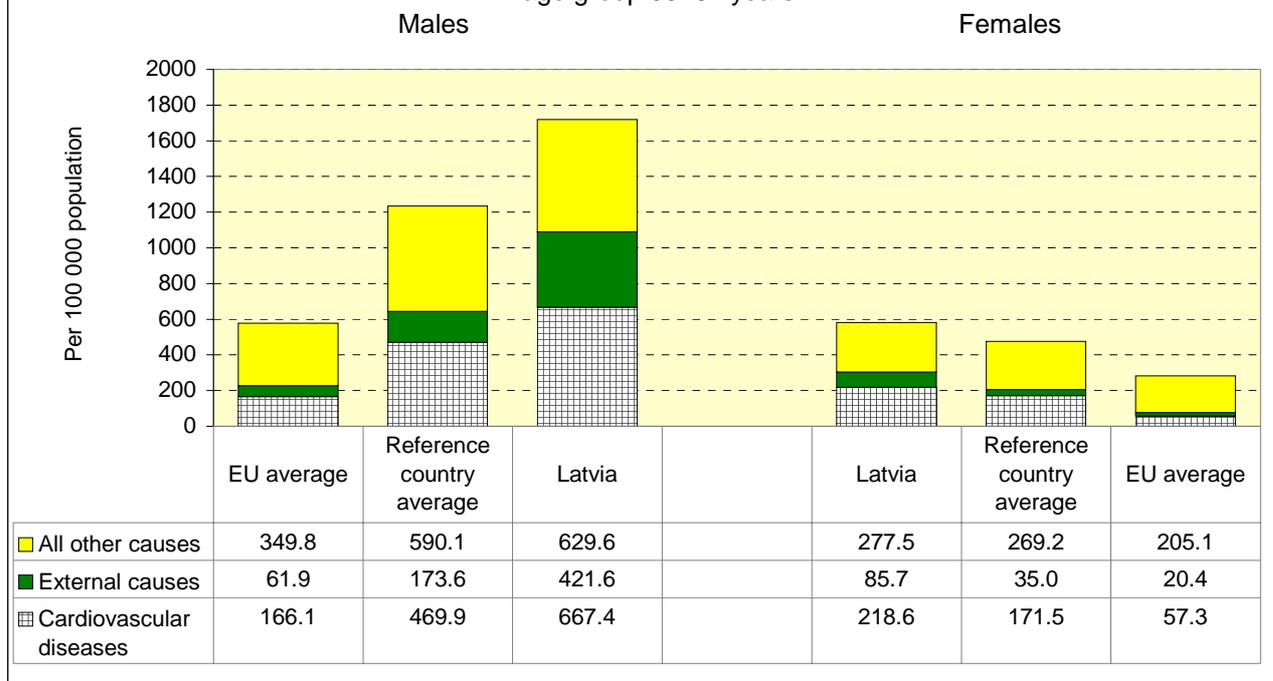
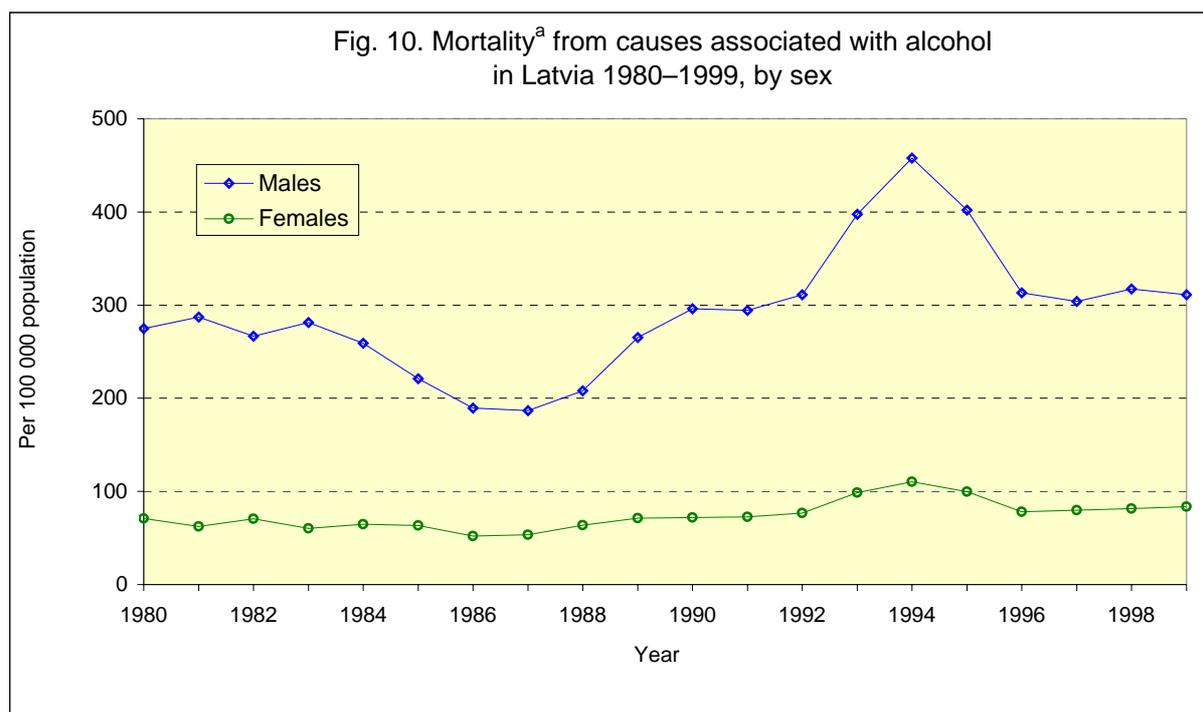


Fig. 9. Standardized death rates in Latvia, in the reference countries and in the EU, age group 35–64 years





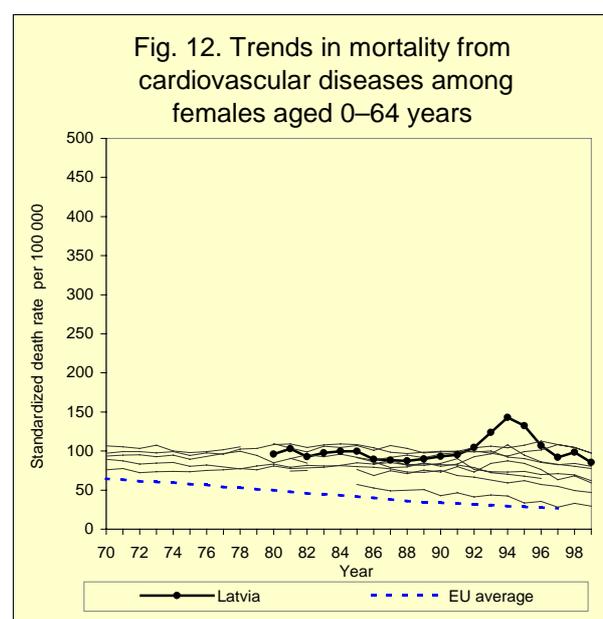
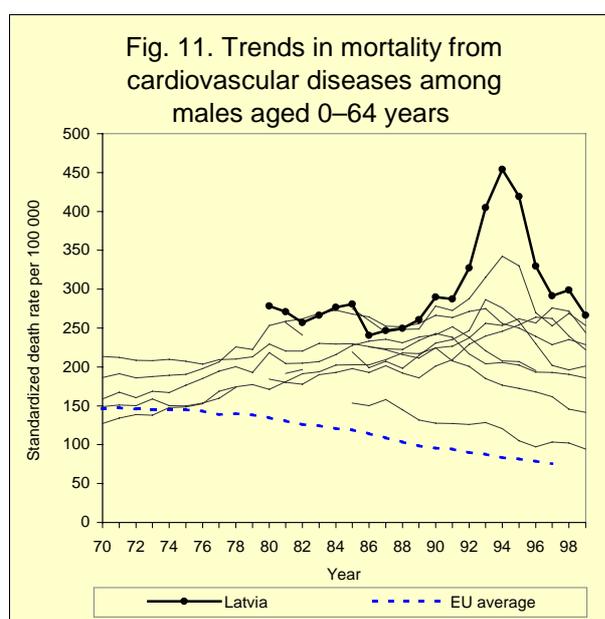
^a Includes mortality from cancer of oesophagus and larynx, alcohol dependence syndrome, chronic liver disease and cirrhosis and all external causes.

Cardiovascular diseases

The SDR for cardiovascular diseases among men aged 0–64 years in Latvia has been one of the highest among the reference countries. The rate almost doubled between 1986 and 1994, but since then the SDR has decreased to the level of the 1980s. Despite this improvement, it is still more than three times the EU average and the highest rate among the reference coun-

tries. One main reason for this increase is increasing alcohol consumption but also smoking, less than optimal diet and lack of exercise are risk factors (Fig. 11).

The pattern is similar for women in the same age group, although the SDR among women is much lower than among men. For women the



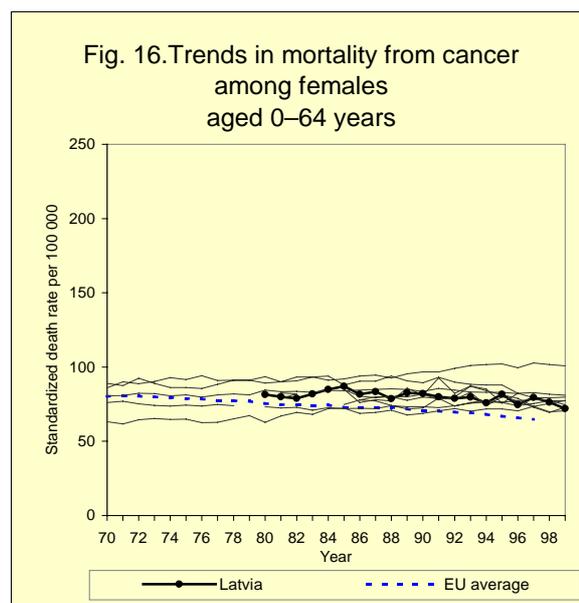
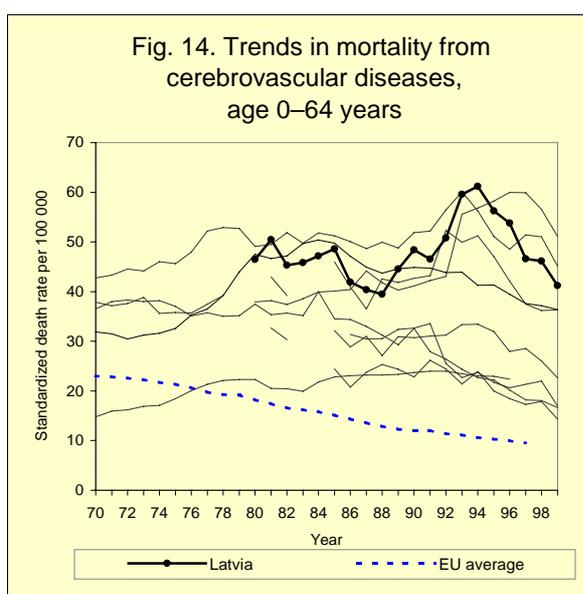
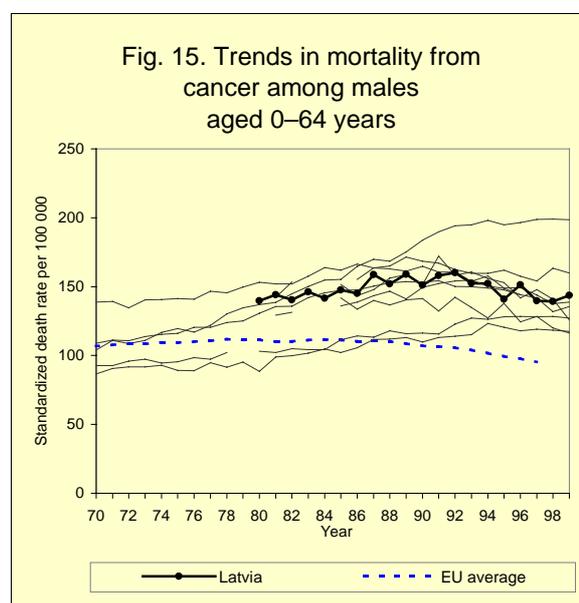
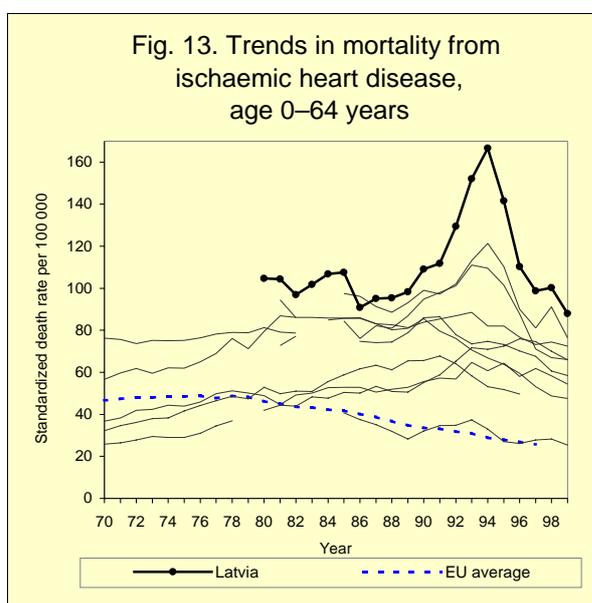
increase between 1986 and 1994 was 40%, and the difference from the EU average is also somewhat lower than for men (Fig. 12).

Similar to total mortality from cardiovascular diseases, Latvia has high SDRs for ischaemic heart disease (the highest among the reference countries) and for cerebrovascular diseases (the third highest) among people aged 0–64 years (Fig. 13, 14). The increase between 1987 and 1994 as well as the difference between Latvia and the EU were comparable to those observed for total mortality from all cardiovascular diseases.

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 and data on cancer of the trachea, bronchus and lung in the section on smoking.

The SDR for cancer among males aged 0–64 years has been above the average of the reference countries but decreased by about 10% during the 1990s. In 1999, the SDR was lower



than the average for the reference countries but still almost 50% higher than the EU average (Fig. 15).

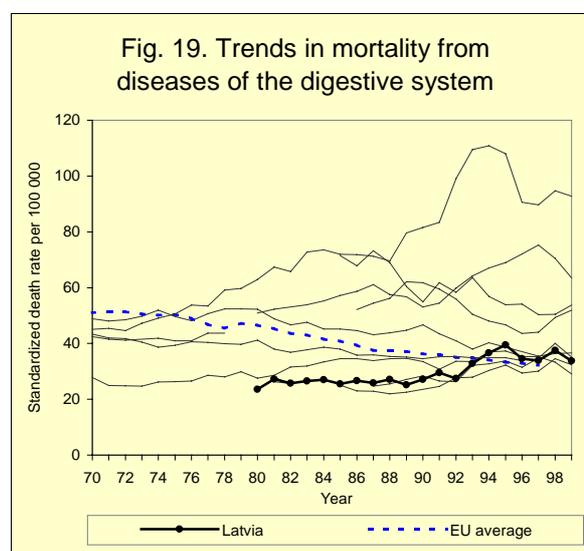
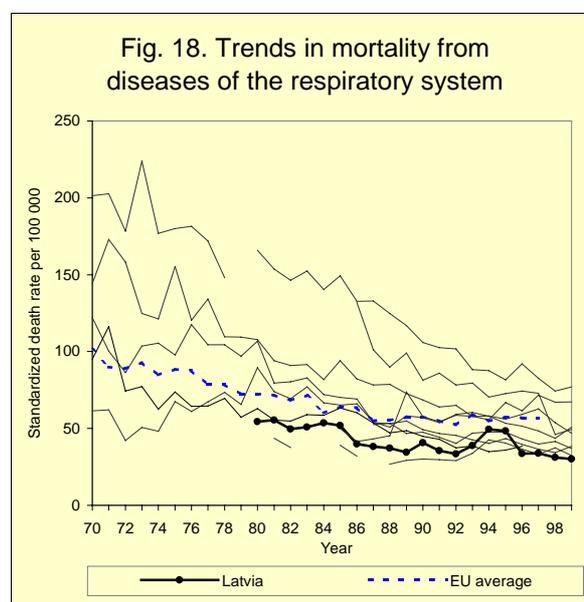
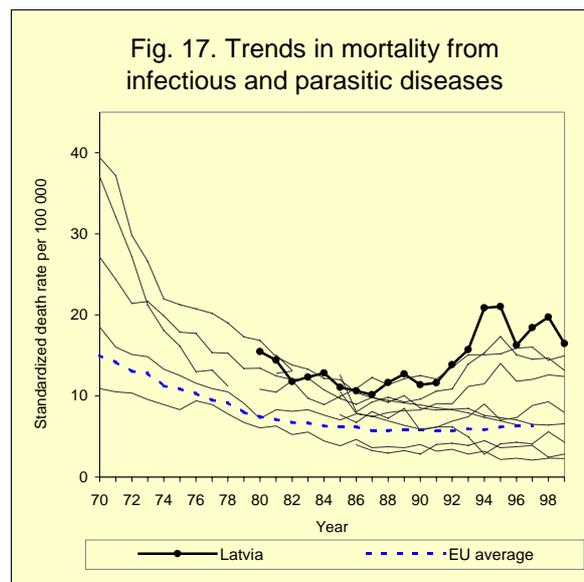
The SDR for cancer among females aged 0–64 years has slowly declined since the early 1990s and was below the reference country average in 1999. The difference from the EU average has remained small but stable. In 1997, the SDR was 23% higher than the EU average (Fig. 16).

In the mid-1990s, the incidence rates of prostate cancer, malignant tumours of lymphatic and blood-forming tissue and pulmonary cancer increased among men, and the incidence rates of stomach cancer, leukaemias and lymphomas, breast cancer and ovary cancer increased among women (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

The percentage of cancer patients still alive five years after detection increased from 53% in 1991 to 57% in 1999, but this may be partly due to an increase in the proportion of cancers with high survival rates (e.g. breast and prostate) and a reduction in lung cancer (which is relatively common and has poor survival). Mortality during the first year after detection increased, possibly due to an increased proportion of cases diagnosed late. In 1999, the percentage of new cancer cases first diagnosed in stage IV (the stage where there is evidence at diagnosis that the cancer has spread from its original site to other organs of the body and, consequently, cure is virtually impossible) increased from 19% to 24%. In the same year, 57% of new cases were diagnosed late (stages III and IV), because of late presentation of symptoms to the doctor. In addition, the diagnosis of cancer in preventive examinations has decreased. In 1994, 9.5% of all new cases were found in preventive examinations, whereas the percentage was less than 2% in 1998 (*Ministry of Welfare, 1998 and 2000*).

Other natural causes of death

The SDR for infectious and parasitic diseases dropped very sharply both in the reference countries and in the EU during the 1970s and the early 1980s, but the decrease stabilized or



the SDR even started to increase in several reference and EU countries after that. Between 1987 and 1995, the SDR in Latvia more than doubled. Despite the declining trend since then, the current rate is the highest among the reference countries, and almost three times the EU rate. This increase has been larger among men than among women (Fig. 17).

Since the 1980s Latvia has had one of the lowest SDRs for diseases of respiratory system among the reference countries. Except for the early 1990s, the SDR has remained below the EU average, and the latest rate is almost half of the EU average (Fig. 18).

The SDR for diseases of the digestive system was one of the lowest among the reference countries in the 1980s, much below the EU rate. However, this positive trend ended in the 1990s, and the SDR has increased by one third since then. The SDR has now reached the declining EU rate (Fig. 19).

External causes of death and injuries

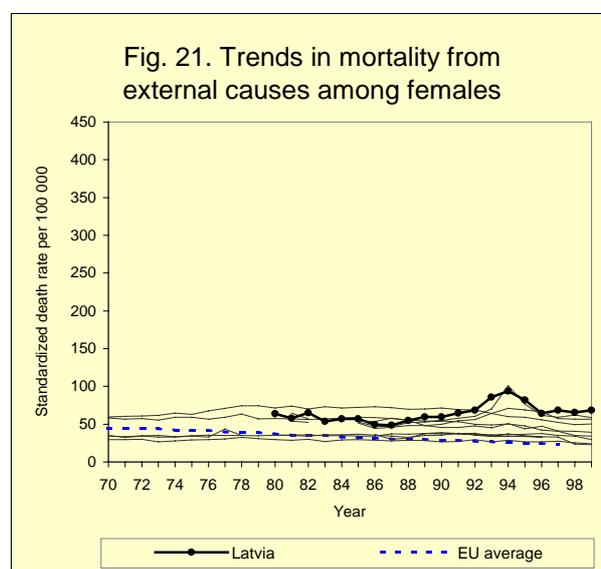
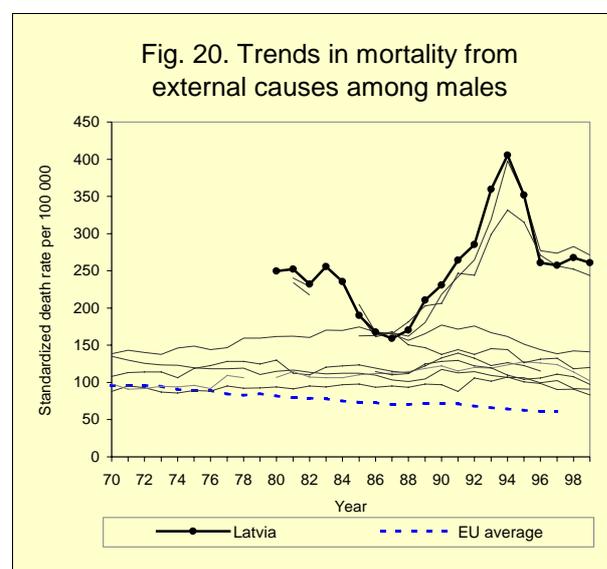
External causes of death and injuries covers all deaths caused by accidents, injuries, poisoning and other environmental circumstances or events such as violent acts (homicide) and suicide.

The SDR for external causes, injuries and poisoning among men was high in Estonia, Latvia and Lithuania in the early 1980s, but the SDR declined significantly – 38% in Latvia – in the mid-1980s because of the restrictive alcohol

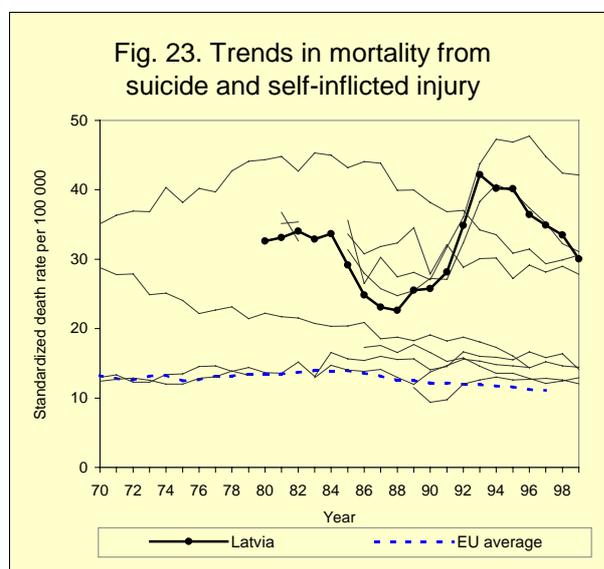
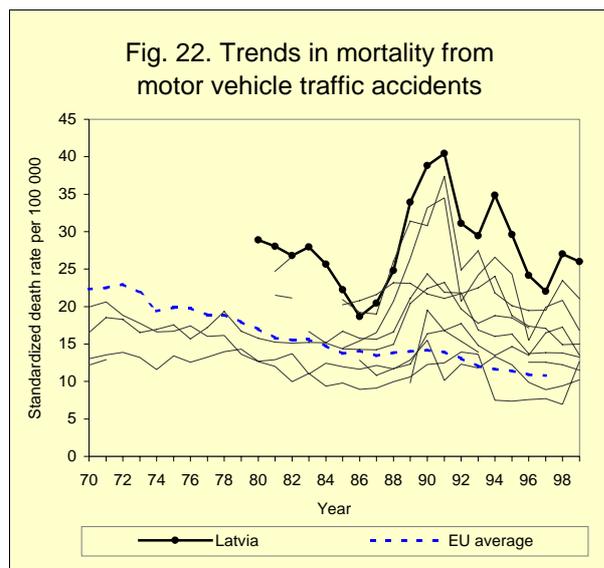
policy initiated in the USSR as a whole. After this decline, however, the SDR started to increase, and it more than doubled between 1987 and 1994. One reason is the increasing alcohol consumption in this period. Even though the SDR has decreased by more than one third since 1994, it was the second highest among the reference countries and more than four times the EU average in 1999 (Fig. 20).

Women have notably lower SDRs for external causes in general. In 1999, the rate for men was almost four times the rate for women. Before the mid-1980s, the SDR for external causes among females in Latvia was close to the average of the reference countries, but it started to increase along with the male rate. The proportional changes – first a notable increase and then a significant decrease – were almost as large for women as for men. According to the latest figures, Latvia has the highest SDR for external causes among females, almost three times the EU rate in 1998 (Fig. 21).

The SDR for homicide and purposeful injury in Latvia was high but declined in the 1980s. This positive trend stopped in the late 1980s, and the SDR increased rapidly from 4 to 25 per 100 000 population. Although the most recent rate has declined to 12.5 per 100 000 population, it is the highest among the reference countries and 12 times the EU average. The homicide rate was 19 per 100 000 men versus 7 per 100 000 women in 1999.



The SDR for motor vehicle traffic accidents in Latvia declined in the 1980s, but it doubled rapidly from 20 to 40 per 100 000 population between 1987 and 1991 (see comments on alcohol related mortality on page 11). Even though the rate has since declined to 26 per 100 000, it remains the highest among the reference countries and more than twice the EU average of 11 per 100 000 population (Fig 22).



Mental health

Although mental and psychosocial well-being is an important aspect of health-related quality of life, too little information is usually available to allow these very important dimensions of the population's health to be described re-

liably. Suicide can be used as a surrogate indicator of the overall level of mental health.

The SDR for suicide and self-inflicted injury has been high but declined by one third in the 1980s to 22 per 100 000 population in 1988. After that, however, the suicide rate increased rapidly to 42 per 100 000 in 1993. In the late 1990s, the rate again declined by 30% to 33 per 100 000, but this is still among the highest suicide rates of the reference countries (Fig. 23).

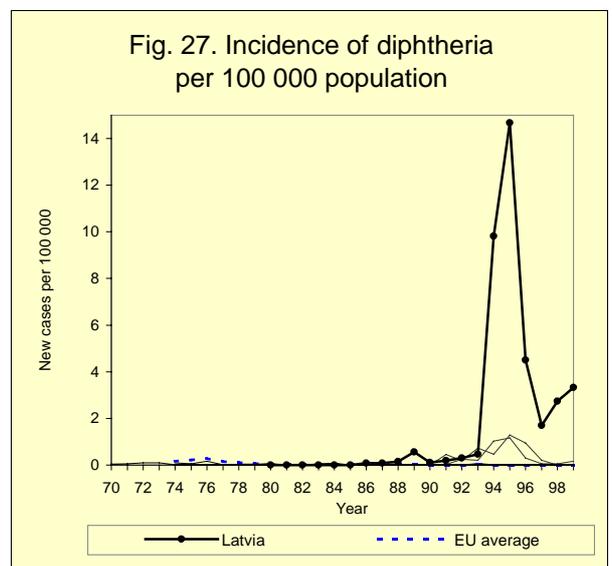
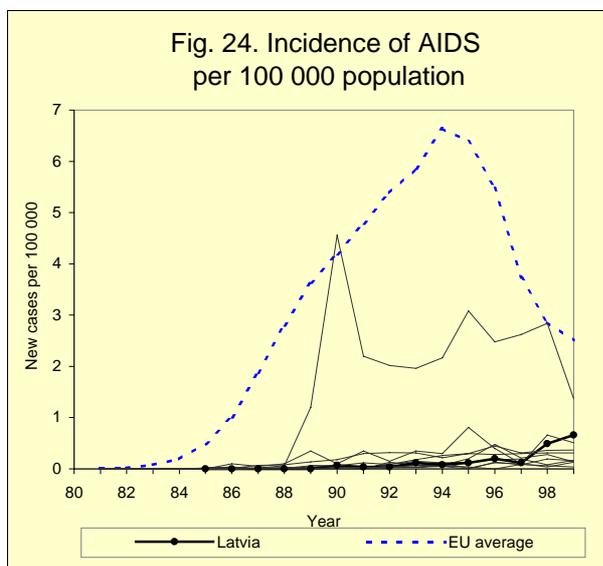
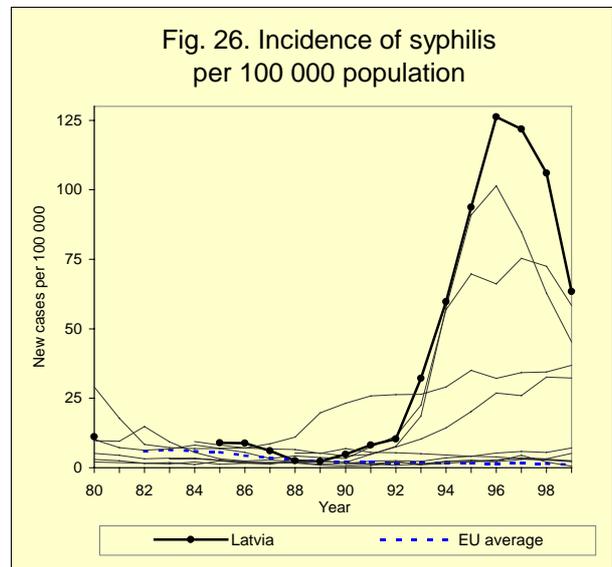
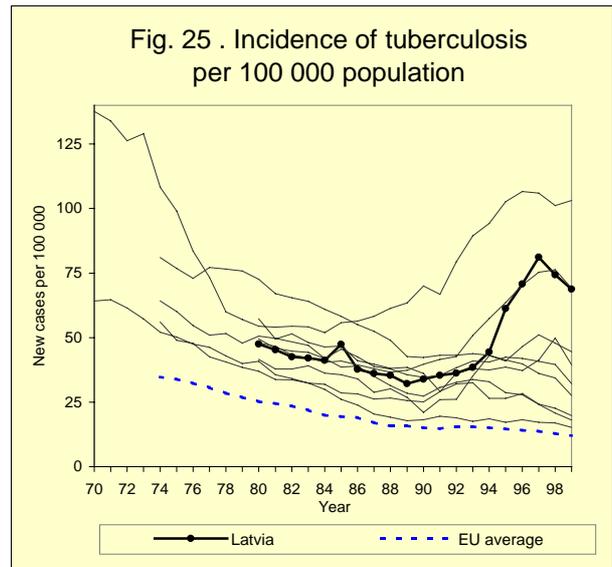
The trends for suicide rates among men and for women have differed. The female suicide rate is much lower than the male rate and variation in the female rate has been small. This has meant that the overall rate is clearly dominated by changes in the male rate, which has varied and generally widened the gender difference, making the male rate more than five times the female rate in the late 1990s. This was one of the greatest gender differences for suicide among the reference countries.

Infectious diseases

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.

The incidence of AIDS in Latvia was 0.7 per 100 000 population in 1999, one of the highest rates in the reference countries, though well below the average incidence in the EU of 2.5 per 100 000 (Fig. 24). The main methods of transmission in Latvia were homosexual contact (63%), contaminated drug injection (27%) and heterosexual contact (10%). No cases of transmission from mother to child or from blood products have been reported (*European Centre for the Epidemiological Monitoring of AIDS, 2000*).

The incidence of tuberculosis in Latvia was declining and around the average of the reference countries in the 1980s. The positive trend ended in the beginning of 1990s, and the incidence of tuberculosis increased from 35 to 81 per 100 000 population between 1991 and 1997. Even though the incidence decreased to 69 per 100 000 population in 1999, it was still among the highest rates in the reference countries and more than five times the EU rate (Fig. 25). In 1997, 14% of all registered cases lived in penitentiary institutions and 7% were children. Deteriorating socioeconomic conditions, lifestyle factors and personal attitudes have been listed as the main causes for the increase in tuberculosis. Late diagnosis, mistakes in treatment and the resistance of mycobacteria to medication have caused additional difficulties in combating tuberculosis (*Ministry of Welfare, 2000*). The incidence of syphilis was the highest among the reference countries in the mid-1980s but dropped to the EU average later during the decade. This declining trend ended in the 1990s, and the incidence of syphilis increased dramatically from 2 to 126 per 100 000 population between 1989 and 1996, mainly because of increased prostitution, unemployment, vagrancy among children and adolescents and substance addiction. The total incidence decreased to 106 per 100 000 population in 1998, and further to 63 per 100 000 in 1999, and infections among children and adolescents have declined during recent years



(*Ministry of Welfare, 2000*). Despite this improvement, Latvia has one of the highest incidence rates in the European Region, exceeded only by some newly independent states. The average incidence in the EU is only 1.7% of the Latvian one (Fig. 26).

The incidence of viral hepatitis in Latvia declined until the late 1980s. After stagnating from 1988 to 1990, the incidence started to decline again, but it is still one of the highest among the reference countries and three times the EU average.

Latvia is the only reference country that has had epidemics of diphtheria. The incidence increased from 0.5 to 14.7 per 100 000 population between 1993 and 1995 subsequently decreasing to 3.3 per 100 000 in 1999. This is still the highest rate within the European Region and is probably linked to the low vaccination rates (Fig. 27).

In 1999, the incidences of both tick-borne viral encephalitis and Lyme disease fell (by 34% and 49% respectively from 1998 levels). Recent trends, however, have been for a decrease in tick-borne viral encephalitis, but an increase in Lyme disease. This may be because there is no vaccine against Lyme disease and diagnostic accuracy has improved. The incidence of yersiniosis has fallen since the early 1990s and leptospirosis has fallen since 1994 (*Ministry of Welfare, 2000*).

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).

According to data from 1999, the most common causes of disability were cancer (23%), diseases of the circulatory system (15%), external causes (13%) and mental and behavioural disorders (11%). The proportions of cancer and mental and behavioural disorders

as causes have increased during the 1990s (*Ministry of Welfare, 2000*).

Self-assessed health

Comparable data are lacking for the proportion of the population assessing their own health positively. Among the reference countries, seven of the countries have such data, with Bulgaria having the largest proportion of adult respondents assessing their health as being good (62%) and Latvia the least (26% in 1994). The large observed variation may be caused by the differences in study settings or in data collection or by cultural differences.

In all countries, men assessed their health as being good more often than women did. In Latvia, this difference was the largest, with 34% of men but only 19% of women assessing their health as good in 1994. According to a more recent survey from 1999, 27% of the population aged 18 years or more reported their health as being good. The sex difference had decreased, since 29% of men and 21% of women reported their health as being good (*Central Statistical Bureau of Latvia and Fafo Institute, 1999*).

Health of children and adolescents

Perinatal and neonatal mortality rates decreased in the 1990s. Two main reasons suggested for this were the establishment of two specialized institutions and the improved quality of care (*Ministry of Welfare, 1998*).

Before 1990, Latvian infant mortality was falling and reached 11.3 per 1000 live births in 1989. The implementation of WHO standards in classification of infant deaths led to an apparent increase, reaching 16.5 per 1000 in 1992. This level is very close to the reference country average, but much higher than the EU average of 6.9 per 1000. The rate resumed a broadly downward trend reaching 15 per 1000 in 1998. The 1999 rate has fallen to 11.3 per 1000, below the reference country average (Fig. 28). Infant mortality has been higher in rural areas (17.4 per 1000 live births in 1996) than in urban areas (14.7 per 1000 live births). This difference was not observed in 1999, but this observation is not sufficiently stable statis-

tically to conclude that the difference has disappeared (*Ministry of Welfare, 2000*).

The main causes of infant mortality in western Europe are 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 each. In Latvia the main causes of death are also related to perinatal conditions and malformations (80%), but deaths from external causes (6%) are more

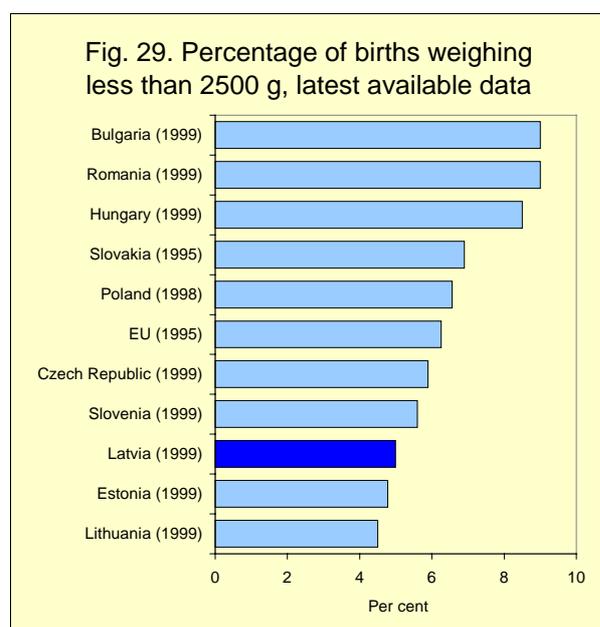
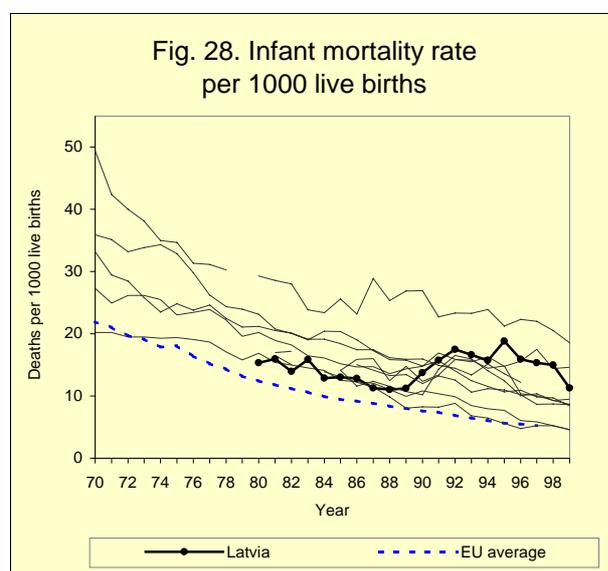
common than in the EU. The proportion of deaths due to infectious and parasitic diseases (3%) and respiratory diseases (2%) correspond to the EU level. Sudden infant death syndrome (5%) is diagnosed less frequently than in the EU, but some cases may be classified under diseases of the respiratory system. In 1997, nearly one fifth of infant deaths were estimated to be avoidable, i.e. caused by an infectious disease, respiratory disease or external cause, but in 1999 only one out of nine perinatal deaths belonged to this group (*Ministry of Welfare, 1997b and 2000*).

The proportion of children that weigh less than 2500 grams has often been used as an indicator for the health of newborns. In the EU, 6.0% of all children had low birth weight in 1994. This proportion was on average higher in the reference countries (7.2%) but lower in Latvia (5%) in 1999 (Fig. 29). This may be partly due to low rate of births to teenage mothers (see below), at least compared with the other reference countries. Such mothers tend to have smaller babies that are at higher risk).

Breastfeeding is more common in Estonia and Lithuania than in Latvia. During the 1990s, one third of newborns in Latvia were breastfed until the age of three months and one fourth until six months. These figures are towards the lower end of the range of European countries with available statistics. There has been no change in the proportion breastfeeding at three months, but it has become more common at six months.

Children in most reference countries have good immunization coverage. In the mid-1990s Latvia had the lowest coverage among the reference countries, some 70–80%. The situation has improved, however, since then. In 1999, coverage above 94% was recorded for tuberculosis, measles, rubella, mumps, hepatitis B, poliomyelitis and pertussis. Despite the previous epidemic, diphtheria coverage was only 76%. The routine vaccination of younger children has generally been successful, but among school children coverage is lower, particularly for diphtheria, polio and mumps.

As in the EU, children's oral health improved in the reference countries in the 1990s, but progress was slower in Latvia. The DMFT in-



dex (the number of decayed, missing or filled teeth) in Latvia was 6.6 in 1985 and 4.2 in 1998, and the most recent scores were the poorest among the reference countries.

Children with disabilities and others who experience difficulty in learning are often marginalized within 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 (*Ain-scow & Haile-Giorgis, 1998*).

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 Latvia there were 19 live births per 1000 women aged 15–19 years in 1998 (decreasing by 53% since 1980). This was significantly higher than in the EU (8 per 1000) but below the average of the reference countries (26 per 1000) (*Council of Europe, 1999*).

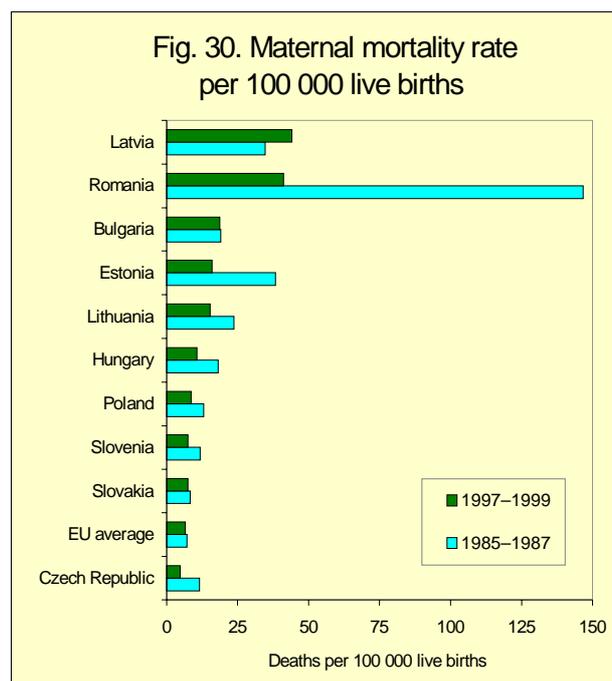
Women's health

Women as a group live longer than men and have lower mortality rates for all the main causes of death. For example, in Latvia, the SDRs among women 0–64 years old in 1999 were 50% lower for cancer and 68% lower for diseases of the circulatory system compared with men. 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.

Considerable care must be exercised in interpreting maternal mortality data for smaller populations, as maternal deaths are, fortunately, rare. Maternal mortality has declined noticeably since the 1980s in almost all reference countries. Latvia is the only reference country where it has increased, from 35 to 44 per 100 000 live births between the mid-1980s and the late 1990s. Of the reference countries

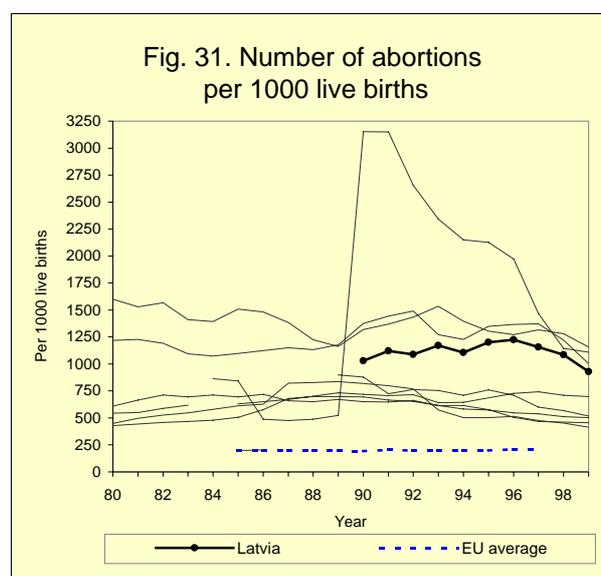
only Romania experienced similarly high rates, more than six times the EU average of 6.6 per 100 000 live births (Fig. 30).

In the countries of central and eastern Europe and in the newly independent states, induced abortion was a common contraceptive method because modern contraceptives were lacking. The annual number of abortions in Latvia declined from 39 000 in 1990 to below 20 000 in 1998. However, the proportional decline in the



Data for Poland is 1985–1987 and 1994–1996.

Data for EU average is 1985–1987 and 1995–1997.



number of live births was similar (54%), and the number of induced abortions per 1000 live births has therefore remained at a high level. The latest figure was still very high and much above the average for the reference countries and more than four times the EU average (Fig. 31). Maternal death following abortion is rare and has been declining in Latvia. Such deaths have not, therefore, contributed to the increase in maternal mortality.

The proportion of women aged 15–44 years using oral contraceptives increased from 3.2% to 11.7% between 1992 and 1999. At the same time, however, the use of intrauterine contraceptive devices in the same age group decreased from 16.6% to 8.0% (Ministry of Welfare, 2000).

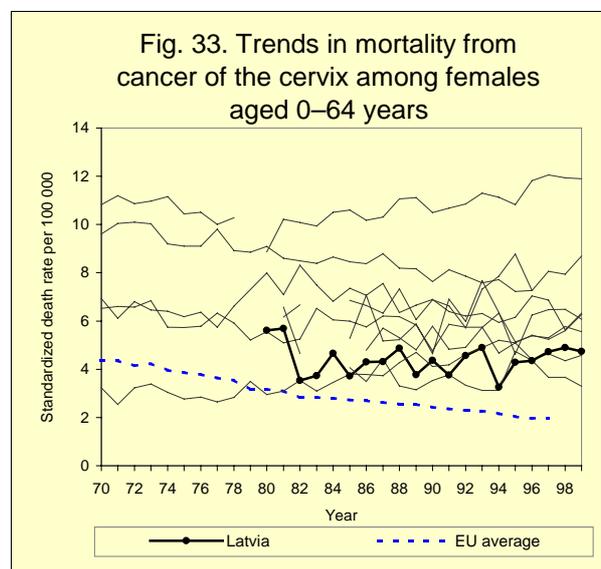
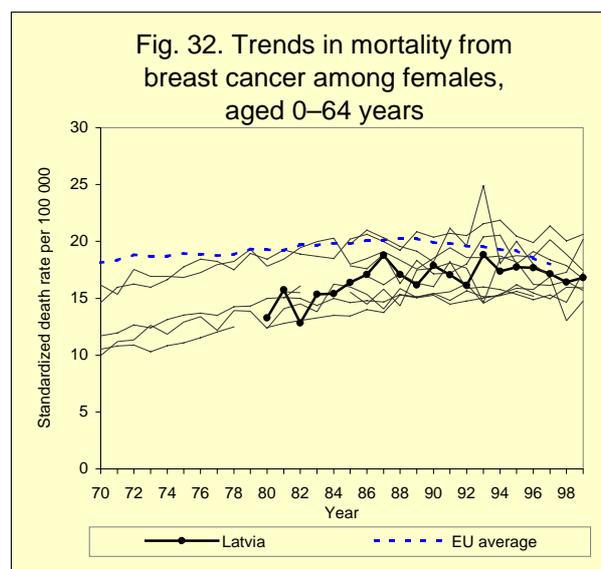
The SDR for breast cancer among females in Latvia has been below the average of reference countries and the EU average since 1980 but increased in the mid-1980s (Fig. 32).

The SDR for cancer of the cervix has remained at the same level since the early 1980s, somewhat below the average for the reference countries but above the EU average. Since the SDR in the EU has declined, the difference between the EU average and almost every reference country has widened (Fig. 33).

In 1999, 44% of all new cases of cancer of the cervix and 30% of those with breast cancer were detected late (stages III and IV). For both types of cancer, the situation could be improved by realizing the national programme for detection of these cancers and by implementing a national prevention programme (Ministry of Welfare, 2000).

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

tor. The SDR for homicide among females in Latvia was higher in the 1990s than in the 1980s, and the rate in 1999 (7.2 per 100 000 women) was the third highest among the reference countries, eleven times the EU rate (0.6 per 100 000 women in 1997) and nine times the lowest rate among the reference countries.



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 1999b*).

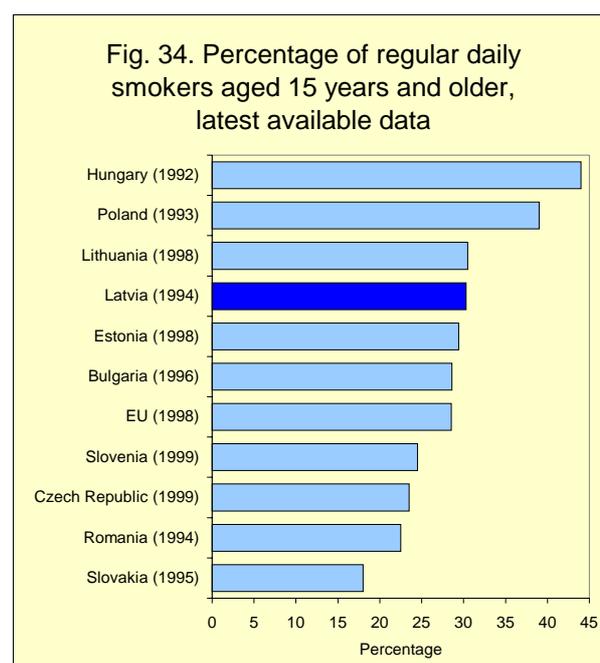
Tobacco consumption

The prevalence of smoking among people aged 15 years or older is relatively high in Latvia, especially among men (Fig. 34). In 1994, almost half of men but only one ninth of women smoked regularly. Smoking has become less common, since these proportions were higher in 1991 (*WHO Regional Office for Europe, 1997*). In a survey performed in 1997, 14% of men but fewer than 1% of women smoked more than 20 cigarettes per day (*WHO Regional Office for Europe, 1999a*).

In the Baltic Nutrition and Health Survey, only 32% of men and 79% of women in Latvia reported themselves as non-smokers. In total 56% of men, but only 11% of women reported regular daily smoking. The Latvian percentage of regular smokers among men was at the

same level as in Estonia, but more Latvian women smoked than Lithuanians (8%). Older age groups were less likely to smoke daily. In Latvia 43% of men aged 50–64 years and 7% of women in the same age group were regular smokers, while the proportions were 65% and 14% in the age group of 35–49 years (*WHO Regional Office for Europe, 1999a*). A questionnaire survey performed in all the Baltic states in 1998 confirmed the high smoking prevalence among men (52%), but reported even higher prevalence for women (19%), especially in age group 20–34 years (19%) (*Pudule et al., 2000*).

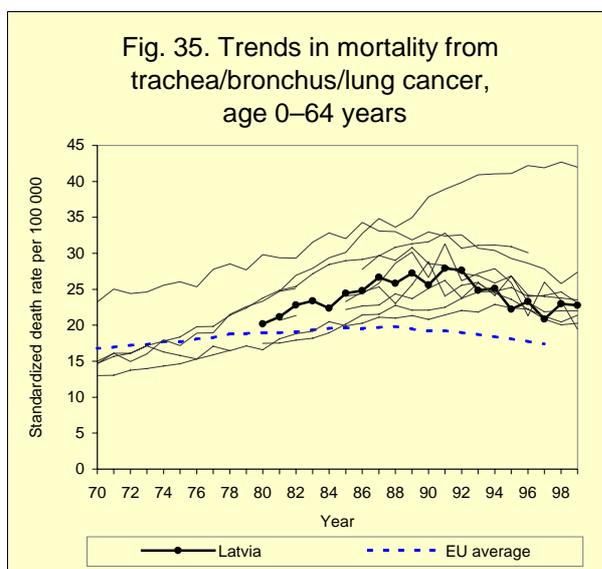
According to a questionnaire survey performed in 1993–1994 as part of the WHO Health Behaviour in School-Aged Children Study, 33% of boys and 14% of girls aged 15 years smoked at least once a week. These percentages had increased to 37% for boys and 19% for girls four year later. Boys in Latvia had the highest prevalence rate of smoking among the seven reference countries participating in the survey, but the prevalence among girls was just above the average of reference countries (*WHO Regional Office for Europe, 1997 and 2000*).



The annual registered consumption of cigarettes in Latvia was low compared with the reference countries and the EU in the late 1980s, about 1200 cigarettes per person. By the late 1990s, this figure increased to 1650 cigarettes, equalizing the EU average, which declined during the 1980s and 1990s. Increased black-market sale or increased import of tobacco products may, however, explain some of this apparent observed decline in consumption in the reference countries.

The overall smoking pattern is of high smoking among men (with boys taking up smoking at a high rate) with lower, but probably increasing, consumption among women and girls.

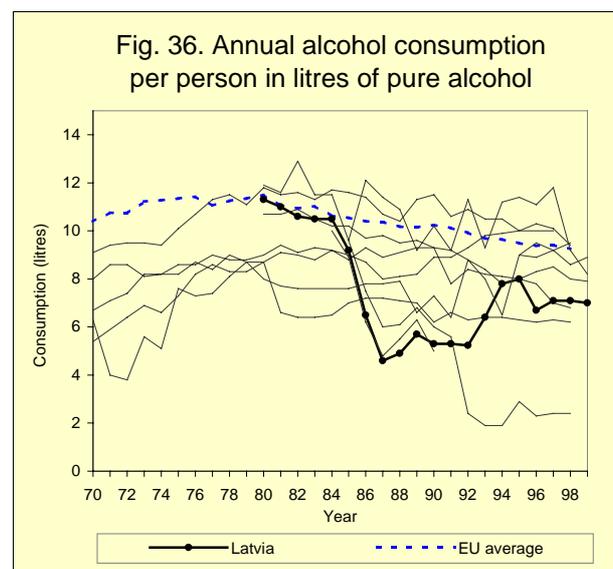
The mortality from cancer of the trachea, bronchus and lung can be used to indicate the trends and positions of countries in relation to the deaths caused by smoking. The SDR increased in Latvia in the 1980s but started to decrease in the early 1990s. The most recent rate is at the same level as in the early 1980s (Fig. 35). Similar to smoking prevalence, the gender difference is large: the SDR for men is more than ten times the SDR for women. Compared with the EU average, Latvia's SDR was almost 70% higher for men and almost 40% lower for women in 1998.



Alcohol consumption

Data on alcohol consumption in the 1990s have to be interpreted carefully, since studies in Estonia, Latvia and Lithuania have reported very high levels of unrecorded consumption as well as illegal import and production (*WHO Regional Office for Europe, 1997*) Registered alcohol consumption in Latvia decreased from 11 litres of pure alcohol per person in the early 1980s to less than 5 litres when the restrictive alcohol policy was implemented after 1985. Consumption then increased in the late 1980s, and the registered alcohol consumption varied between 6 and 8 litres from 1993 to 1999 (Fig. 36). According to sales data, the registered consumption of spirits decreased by 7%, consumption of beer by 29% and consumption of wine by 72% between 1985 and 1997 (*Produktschap voor Gedistilleerde Dranken, 2000*).

A health survey in 1993 observed that 85% of men and 54% of women drank alcohol, and about 60% of both sexes preferred to drink vodka and other spirits rather than beer or wine (*WHO Regional Office for Europe, 1997*). Based on consumption figures for one week collected in a 1997 health survey, the annual consumption of alcohol among those who drank alcohol was 12.8 litres of pure alcohol for men and 6.5 litres for women aged 19–64 years (*WHO Regional Office for Europe, 1999a*).



In the Baltic Nutrition and Health Survey 1997 the intake of alcohol was estimated to be 5 grams per day for men aged 19–64 and 1 gram for women in the same age group. This was the lowest figures in the Baltic states. In total 11% of Latvian men and 28% women reported that they never drink spirits⁴. The percentages were higher for consumption of wine (50% of men and 31% of women) and beer (22% and 59%). Daily use of beer was reported by 3.6% of men, while daily use of wine (0.0%) or spirits (0.5%) was more uncommon. For women the daily use of beer, wine and spirits was rare (0.3% or less).

Heavy drinking – defined by intake of 80 grams of alcohol per day or more – was reported by 2.8% of men and 0.2% of women. If taking into account only those who reported alcohol drinking during the week of the survey, these percentages increased to 4.3% and 0.5%, respectively. The proportion of heavy drinkers equalled that in Lithuania, but a much higher proportion was observed in Estonia (*WHO Regional Office for Europe, 1999a*).

A questionnaire survey performed in 1993–1994 as part of the WHO Health Behaviour in School-Aged Children Study found that 8% of girls and 20% of boys aged 15 years reported drinking alcohol at least once a week. Four years later, the percentages had increased to 12% for girls and 28% for boys, and Latvia's position among the seven reference countries has deteriorated and now reach the average of the reference countries (*WHO Regional Office for Europe, 1997*).

The number of deaths from chronic liver disease and cirrhosis can be used to estimate the harmful effect of long-term alcohol consumption. The SDR for chronic liver disease and cirrhosis was the lowest among the reference

⁴ Another survey in the following year reported lower percentages, 9% for men and 15% for women (*Pudule et al., 2000*). The Baltic Nutrition and Health Survey data were collected by personal interviews, but the second data by questionnaires, which may explain these differences between the results of the two surveys.

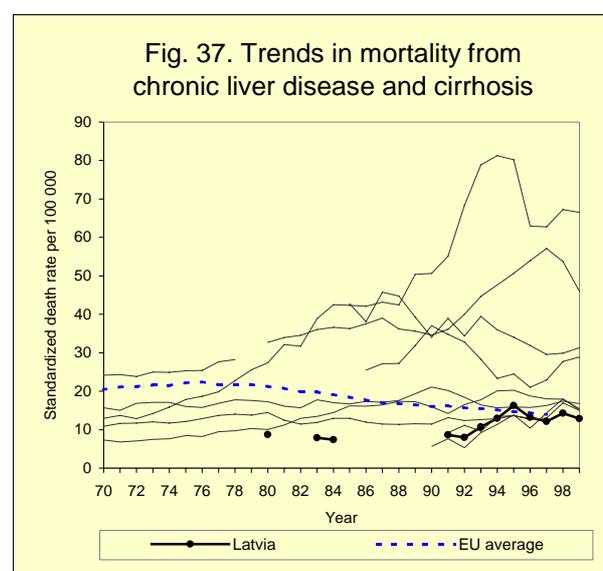
countries in the 1980s and much lower than the EU average. In the 1990s, however, Latvia's rate doubled above the EU average, but it has decreased by 20% since then and is now only slightly below the EU rate. Despite this unfavourable trend, Latvia still has one of the lowest rates for chronic liver disease and cirrhosis among the reference countries (Fig. 37). The trend has been similar for both sexes in all reference countries, but men have a higher mortality risk than women. In Latvia, the SDR among men is almost double the rate among women.

The numbers of new cases of alcohol-induced psychosis are a better indicator of the short-term health effects of the misuse of alcohol. This has more than quadrupled in Latvia, from 8 per 100 000 population in 1991 to 35 per 100 000 population in 1997 (*Ministry of Welfare, 1998*).

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.

Cannabis is the most widely used illicit drug, and the number of minors using it has increased. Heroin, most often homemade, is the most popular drug among heavy users. The number of registered drug users in police and



medical files increased from 600 in 1992 to 5200 in 1994, but experts have estimated that the actual number may exceed 10 000 (0.5% of the population aged 15 years or older). The reported use of glue among young people has increased (*WHO Regional Office for Europe, 1997*).

According to the 1999 ESPAD-survey (European School Survey Report on alcohol and other drug use among 15 to 16-year-old) the use of illicit drugs was somewhat more common in Latvia than in other reference countries in general. Some 17% of respondents reported that they had used cannabis at least once, and 11% reported use of a drug other than cannabis. (*Hibell et al., 2000*).

Nutrition

Nutritional habits are rooted in cultural traditions and food production. Nevertheless, in recent decades changes have occurred with increasing globalization, as 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.⁵ 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.

⁵ 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.

The FAO data suggest that Latvia follows the pattern for southern Europe in part, with low availability of sugar and animal fat and high availability of cereals, and the northern European pattern in part, with low availability of fruit and vegetables. The availability of fruits and vegetables may, however, be an underestimation, since homegrown fruit and vegetables may not be recorded, and the actual intake can best be verified by dietary intake surveys.

Baltic Nutrition and Health Surveys were conducted in all three Baltic states during the summer 1997. Representative samples of 3000 respondents were taken among the population aged 19–64 years, and the response rate in Latvia was 77.7%. The survey indicated relatively high intake of fat, high prevalence of overweight and obesity, and a large proportion of people with low physical activity (*WHO Regional Office for Europe, 1999a*).

In Latvia, 57% of men and 63% of women reported that they eat raw, fresh, boiled or stewed vegetables at least six times a week. This was more than in Estonia, but substantially less than in Lithuania. Almost 1% of men and 1.5% of women reported that they never ate vegetables. This proportion increased by age.

The crude intake of energy was 2583 calories for Latvian men and 1791 calories for women, which were lower than in Lithuania, but higher than in Estonia. The intake of fat was relatively high in Latvia: 127 grams per day for men (equaling 43% of total energy) and 84 grams per day for women (41%). The intake of fat in Latvia was 10% lower than in Lithuania, but almost 30% higher than in Estonia (*WHO Regional Office for Europe, 1999a*).

Physical activity

In many countries physical activity in daily life and at work has declined, and therefore, exercise in leisure time has become more important in order to maintain an activity level beneficial to health.

According to 1997 Latvian data from the Baltic Nutrition and Health Surveys, 35% of men and 17% of women reported moderate physical activity at work and 12% of men and 2% of

women heavy physical activity at work. Hard training or competitive sports was reported by 3% of men and 1% of women, jogging or recreational sports by 16% of men and 15% of women, and walking, bicycling or other light activities by 28% of men and 33% of women. Physical inactivity increased rapidly with age.

In total, low physical activity in leisure time was reported by 53% of men and 51% of women aged 19–64 years, while 19% of men and 16% women reported high or very high physical activity. Even though the Latvian percentage of respondents reporting low physical activity was not the highest in the Baltic states, high or very high physical activity among men was less common in Latvia than in Estonia and in Lithuania (21%). Latvian women reported as low a percentage as Estonian women (15%), lower than the Lithuanian women (21%). Despite these responses, 80% of Latvian men and 85% of Latvian women also reported that they never participated in regular physical activity to work up a sweat (*WHO Regional Office for Europe, 1999a*).

Overweight

Overweight and obesity are commonly assessed with the body mass index (BMI), calculated as weight in kilograms/(height in metres)².

According to the Baltic Nutrition and Health Survey, the mean BMI in Latvia was 25.5 for men and 25.8 for women. In total, 41% of Latvian men aged 19–64 years were overweight (BMI more than 25, but less than 30) and 10%

obese (BMI more than 30). There were fewer overweight (33%), but more obese (17%) Latvian women. The percentage of overweight and obese increased with age: among population aged 50 years or more, 62% of men and 76% of women were overweight or obese, and 14% of men and 30% of women were obese. For women, a higher average BMI was observed among rural women compared with urban women and among women with only primary education compared with women with a university education. Men did not differ in average BMI by rural or urban residence or by education. The average BMIs and the prevalence for overweight and obesity placed Latvia between the Lithuanian (highest) and Estonian figures (lowest) for both sexes and for most age groups (19–34 years, 35–49 years and 50–64 years) (*WHO Regional Office for Europe, 1999a*).

Other risk factors

According to a survey in 1996–1997, 50% of men and 40% of women had arterial hypertension with a blood pressure of 140/90 mmHg or higher. Hypertriglyceridaemia (blood triglycerides exceeding 1.7 mmol/l) was reported among 25% of men and 21% of women and hyperglycaemia (blood glucose exceeding 5.8 mmol/l) among 16% of men and 14% of women. When all these risk factors and excess use of alcohol, smoking and overweight are combined, 91% of the population were estimated to have at least one risk factor for cardiovascular disease (*Ministry of Welfare, 1998*).

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. 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 intoxicating 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. In Latvia, the Ministry of Welfare and Ministry of Environmental Protection and Regional Development coordinated the development of the plan in 1995–1997, and the State Ministers of Health and Environmental Protection accepted the final plan in June 1997 (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 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 13 people affected by microbial foodborne outbreaks per 100 000 population in Romania to 464 per 100 000 in the Czech Republic). No comparable data are available from Latvia, but national statistics suggest that they have become more common, with increases in the proportion of analysed foodstuffs failing to meet microbial safety standards. Of the 43 500 food samples taken in 2000, 6% did not meet the national microbiological standards. Cakes with cream, milk products and fish along with food from public catering were the most likely to fail to meet microbiological standards. In addition, almost 1.4% of 7205 food samples inspected by the Environmental Health Service did not meet the national physical and chemical standards (*Ministry of Welfare, 2000*). Other data from 1995 indicate that the following foods were the most likely to be contaminated either bacteriologically or chemically; cooked meals in health care institutions (28%), children's food (9%), cakes with cream (8%) and public catering (7%). These cases were most often related to the failure of food hygiene practice, the presence of antibiotics in milk and milk products, and to the presence of toxins in milk, milk products, meat and meat products (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

Obsolete equipment, the increased number of small producers, the increased number of non-professionals in the food industry, trade and public catering, poorer training in hygiene, violations of food legislation and a reduction in the number of food hygiene inspectors are the most likely reasons behind deteriorating food safety in Latvia (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

Air quality

Emissions of sulphur dioxide, nitrogen dioxide, ammonia, carbon monoxide, carbon dioxide and methane are all lower in Latvia than in the reference countries and in the EU. (*United Nations Economic Commission for Europe, 1999*). This may be a factor contributing to the relatively low mortality rates from respiratory diseases in Latvia.

In several major cities, the presence of many pollutants – such as carbon monoxide, ammonia, zinc, lead and copper – has intensified during the 1990s, and air quality has deteriorated. The main source of pollution is motor transport, which has caused lead concentrations in almost all Latvian cities to exceed the maximum permissible level. Also the increased number of boiler houses, burning fossil fuels without purification of emissions of particulates and gases, has adversely affected air quality. In 1995, one third of the boiler houses examined did not meet health standards, and 5% of the air samples did not meet the air quality standards. Poor air quality may be one factor behind the increased occurrence of allergic dermatitis, congenital diseases, allergic skin diseases, infectious diseases and infant asthma (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

	Latvia	Reference countries	EU countries
Sulphur dioxide	15.1	68.3	31.5
Nitrogen dioxide	11.5	25.3	32.4
Ammonia	6.7	10.7	9.4
Carbon monoxide	70.6	99.1	119.3
Carbon dioxide	3838	7555	8499
Methane	38.9	56.5	61.4

Water quality

The major sources of water in Latvia are artesian wells, other (running) underground water sources and surface water sources. In Latvia, underground and surface sources are used in roughly equal quantities. Neither industrial nor agricultural contaminants are found in artesian waters, but locally low fluoride levels and elevated levels of ammonium, phenol, iron and manganese have been reported. In the largest cities, some 3% of water samples did not meet the bacterial standards in 1990–1995. About half the rural population get their drinking-water from wells. More than one third of such wells did not meet the chemical and bacterial standards in 1995 (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

In 1999, legislation established higher standards for drinking water. These require new data that are not directly comparable with previous years.

Waste management and soil pollution

One third of municipal waste is food or other organic matter and another third paper and cardboard. In rural areas the annual amount of domestic waste is estimated to be between 100 and 150 kg per inhabitant, but up to 300 kg in urban areas. Some attempts have been made to collect paper, glass and plastic separately, but their use as a raw material has not been very successful because recycling is proving uneconomic. Municipal waste is usually transported to one of the 400 dumps. The majority are operating without any rules or surveillance.

Industrial waste fell from 250 000 tonnes in the late 1980s to 50 000 tonnes in 1995, rising to 106 000 tonnes in 1998 reflecting the economical changes. Special treatment is available for fluorescent lamps, photofilm processing liquids and oil products, but other sorts of hazardous waste are stored at the production site, diluted and drained into the sewage system or mixed with municipal waste (*Ministry of Welfare*).

The effect of soil quality on health has not been adequately investigated in Latvia. In general, the background concentrations of heavy

metals in soil are much lower than the maximum permissible level. The most intensive sources of soil and groundwater contamination are municipal and industrial dumps. The use of pesticides has decreased substantially during the 1990s: the average load of pesticides was 15.6 kg per hectare in 1990 but only 2.8 kg in 1995. At the same time, the percentage of soil samples with pesticide residues exceeding the maximum permissible concentration level decreased from 29% to none (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

Between 1997 and 1999 a range of new legislation was introduced which controls the collection, utilization and disposal of hazardous waste.

Housing

The average estimated size of dwellings in Latvia is 55 m², close to the average for the reference countries (54 m²) but clearly smaller than the EU average (89 m²). In 1995, 42% of dwellings in Latvia were owner-occupied. This was among the lowest figures in the reference countries and even in the WHO European Region (*United Nations Economic Commission for Europe, 1999*). Sociological studies have indicated that heating is perceived to be more important for people's quality of life than other amenities or facilities, such as indoor toilets. Thirty-five per cent of urban inhabitants and 47% of rural inhabitants complained of damp living accommodation and 43% and 52%, respectively, of cold housing or lacking heating (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

One aspect of the quality of housing is the proportion of the population with connection to piped water and with access to hygienic sewage disposal. According to the latest data, which included only urban residents, 93% of Latvians had a piped water connection and 92% were connected to a sewage system in 1998.

Noise has become a problem in some cities. The noise level was measured next to main urban roads with intensive traffic in 1993–1995,

and noise levels exceeded the standards in 60% of the more than 600 measurements (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

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. This decline was 81% in Latvia.

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 either improvements in occupational safety, or reflecting the decline in economic activity. 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%) and from 2.1 to 1.6 per 100 000 in the EU (a decline of 28%). In 1999, there were more work-related accidental deaths in Latvia (2.7 per 100 000, a decrease of 42% since 1988) than the reference country average.

Because of inadequate occupational health services and insufficient pathologists in this field, occupational diseases are not all diagnosed. According to national data, up to 56% of industrial enterprises do not provide a healthy working environment, and the working conditions in these enterprises are also generally poor. Major factors causing occupational diseases are industrial dust, chemicals, physical-factors such as vibration, noise and radiation, biological factors such as excessive work and

ergonomic problems, including repetitive motion and enforced body position. The most typical occupational diseases are musculoskeletal disorders caused by excessive strain and enforced body positions. Disability related to occupational diseases has been recognized as a great and comparatively urgent problem (*Ministry of Welfare and Ministry of Environmental Protection and Regional Development, 1998*).

HEALTH CARE SYSTEM⁶

Health care reform

The Latvian health care system was based on compulsory health insurance until the Second World War. The first sickness funds were founded in 1920, and laws requiring compulsory health insurance for employees and regulating the insurance of the rest of the population were enacted by 1930.

Between 1945 and 1991, health care in Latvia was planned and organised according to the Semashko model. The state centrally planned the organization, management and delivery of health care services, and private initiatives were restricted. All services were free of charge and accessible to the whole population, though out of pocket payments by patients to health care workers to obtain better care were common. The health care strategy was directed towards construction of large facilities and supporting high-level specialization and scientific work. Primary health care deteriorated in remote areas, and many small hospitals were closed. The social standing of health professionals deteriorated.

The Latvian Physicians Association was re-established in 1988 and had a significant role in the introduction of health care reforms.

Their main reform effort was directed towards improving the status and incomes of physicians. More recently, the Ministry of Welfare and the Health Managers Association have driven health sector reforms.

The present health care policy is oriented towards promoting primary and preventive health care. The process of decentralization and deinstitutionalization is still developing. The aim is that individual family physician practices will become the basic unit of health care instead of health care centres or polyclinics.

Problems have been identified with attitudes in society to mental illness and mental health services (*Ministry of Welfare, 1997a and 2000*). In 2000 the Ministry of Welfare accepted new regulations entitled “On strategy of Psychological help in 2000–2003 years”. This strategy aims to provide services closer to the patients’ home, moving services from hospital into the community, develop multidisciplinary teams to better integrate health and social care, and strengthen specialised mental health services.

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

	Latvia	Reference countries	Minimum	Maximum
Hospital beds per 100 000 population	888	716	555	938
Physicians per 100 000 population	313	265	191	394
Hospital admissions per 100 population	22.1	18.1	13.8 ^a	25.4
Average length of hospital stay in days	11.8	10.3	9.0	11.9
Total health care expenditure as a percentage of GDP	4.4	5.6	2.6 ^a	7.7
^a 1998				

⁶ If not indicated otherwise, this section is based on the 2001 issue of *Health Care Systems in Transition. Latvia*.

Priority will be placed on services for vulnerable groups – patients with severe or multiple mental health problems, the mentally ill within the criminal justice system, and children, adolescents and the elderly with serious mental illness.

Organizational structure

The administrative structure of health care management has been changed several times since independence in 1991. In 1993, the Ministries of Health, Labour and Social Welfare were merged into one Ministry of Welfare.

The reformed Latvian Health care system comprise three basic tiers:

- National, including the Ministry of Welfare, other relevant ministries, the State Compulsory Health Insurance Agency, Health Statistics and Medical Technology Agency, National Environmental Health Centre and range of other specialist national bodies, professional organizations and unions.
- Sub-national, including county and municipal governments managing health care facilities, regional Sickness Funds and the local health care units.
- Private health care providers.

The national level is responsible for the legislation, policy and planning, while the sub-national level is responsible for the health care facilities managing and providing health care services along with the private sector.

Health care finance and expenditure

The public health care sector is funded from general taxation. In 1993, the Central Account Fund (now known as the State Compulsory Health Insurance Agency) was established to manage the state health care budget. Thirty-two territorial account funds and three branches (now sickness funds) were established to contract with and pay health care providers in primary and secondary care. This particular mechanism, with total funding divided

between national and local bodies, was seen to result in inequalities in service access and utilization, with wide variations in per capita health care spending.

To overcome these inequalities, in 1997 there was a major restructuring of these financial mechanisms. The number of sickness funds was consolidated to eight. Payments were made directly to them from the State Compulsory Health Insurance Agency, according to a capitation formula. In 1999, this mechanism accounted for approximately 75% (up from 70% in 1996) of funding, with the remainder being paid 'out-of-pocket' by patients. In practice, health care providers often have difficulty in obtaining payments from patients, who find the system difficult to understand and may be unable or unwilling to pay

Citizens of the Republic of Latvia and others with either permanent residence or who have paid income tax for more than six months are entitled to those health care services covered by the health care minimum and health care national programs.

The 'Basic Care Programme' describes the range of services to be provided, and is revised annually. Within this system, only emergency, maternity care and treatment for those aged under 18 years is entirely free, with a payment of 25% of care costs required for most, non-urgent care. Some specific aspects (e.g. dental treatments for adults, most medications) are paid for entirely by the individual patient. A range of services, such as joint replacement, cosmetic surgery and infertility treatment, are not covered at all by the Programme and patients would need to purchase these treatments directly from health care institutions (state, municipal or private)

There has also been a trend to privatize health care facilities. Most primary health care centres and district hospitals are not-for-profit organizations, which are owned by employees through stock companies. Almost all dental practices and pharmacies are private.

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 the most recent data, health care expenditure as a percentage of GDP is below the EU average of 8.6% in all reference countries. Latvia (4.4%) reported the lowest percentage after Romania (2.6%) (Fig. 38).

Data on health care expenditure adjusted in purchase power parity (PPP) from 1998 showed that the average of reference countries (US\$ 480) is one third of the EU average (US\$ 1 848). Latvia reported the third lowest expenditure (US\$ 223), which equalled only 15% of the EU level.

Primary health care

Until the early 1990s, primary health care in cities and larger towns was provided in polyclinics, where specialist physicians, dentists, nurses and therapists provided health care services. In rural areas, primary health care was provided by local internists (a medical degree and three years of postgraduate training required) or by feldshers. Special primary health care services were organized for certain industrial groups, such as military personnel and

railway workers. The present primary health care has been developed from this foundation. In the capital and larger towns, most polyclinics and occupational health service facilities have been converted to health centres, with ownership shared between municipalities and physicians. Most of the individual and group practices are located in the countryside, where they are called doctorates. This usually refers to a co-practice of a local internist, a paediatrician, a dentist, a midwife and nurses. Specialists may be available on a part-time basis. The current policy is to encourage a move to individual or co-practices in primary health care.

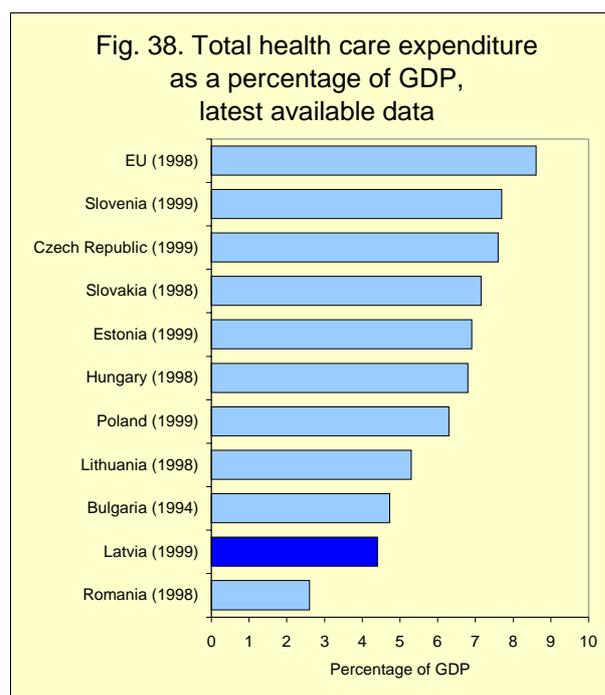
The specialty of family medicine was established in 1991 to shift the concept of primary care from medical intervention towards promoting health. The number of family physicians increased from 27 in 1991 to 801 in 1999 (*Ministry of Welfare, 2000*).

In 1992, a policy was introduced to implement a model for primary care based upon general practice/primary care physicians working as independent practitioners according to contracts with sickness funds. Implementation has been slow, as doctors have been reluctant to establish independent practices and patients have apprehensive of the 'gatekeeper' role, whereby a referral from primary care is required before a patient may see a specialist.

There are exceptions to this requirement, including dentistry for children, psychiatry, tuberculosis, sexually transmitted diseases, gynaecology, endocrinology and emergency treatment, all of which can be accessed directly without a referral. Referral is required for attendance at other specialized centres or state hospitals.

Patients choose a primary health care physician, and are free to change their choice once or twice a year. However, only inhabitants of cities have a real choice of practitioner, since there are few to choose from in rural areas. Approximately 80% of the population are thought to be registered with a primary care physician.

The major problems in primary health care have been financial restrictions and weak collaboration between the social and health care



sectors. In addition, health promotion and disease prevention activities have not been in focus in primary health care practice because of shortcomings in financing, education and training (*Ministry of Welfare, 1997a*).

Secondary and tertiary care

District hospitals have departments to provide internal medicine, paediatrics, treatment of infectious diseases, surgery and obstetrics. There are specialized hospitals for mental health care, tuberculosis, cancer treatment, infectious diseases, orthopaedics, dentistry, maternity homes, paediatric care and rehabilitation. The Latvian Medical Academy manages two large university clinics for training students, with many highly specialized centres.

The hospitals are usually constituted as a not-for-profit organization or a stock company (often owned by the employees on a cooperative basis). Nine of the ten private hospitals in Latvia are in Riga. Most provide out-patient as well as in-patient services. They obtain their income from direct payments by patients and from contracts for specific services from regional sickness funds, though these contracts are largely confined to out patient services, as private sector in patient costs are high.

In the public sector, patients sign an agreement to pay the co-payment with the hospital administration, and the costs are calculated prospectively. The remaining expenses are covered by the sickness fund.

The number of hospital beds per 100 000 population has decreased in almost all reference countries since 1985. Latvia had the highest number of all the reference countries and the 38% decrease in Latvia was one of the largest. Latvia's 888 beds per 100 000 population in 1999 is still high. It is the second highest of the reference countries, 32% higher than the EU average (674 per 100 000 in 1998) and 24% higher than the average for the reference countries (716 per 100 000) (Fig. 39). The number of beds varies largely between different regions according to the financial resources of each territory (*Ministry of Welfare, 1998*).

Fig. 39. Number of hospital beds per 100 000 population

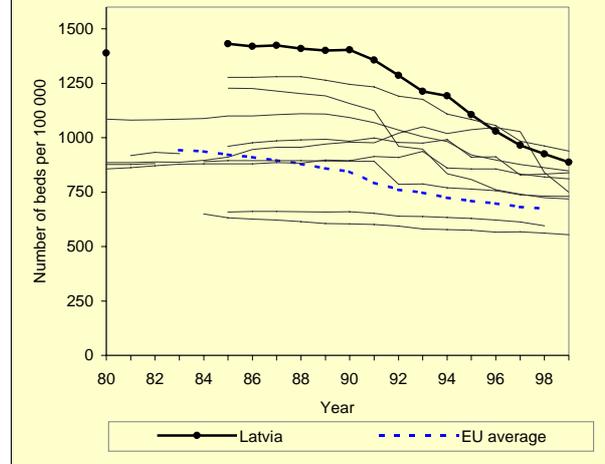


Fig. 40. Hospital admissions per 100 population per year

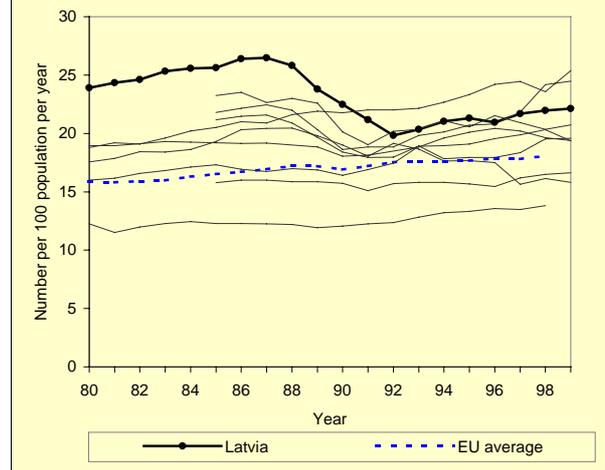
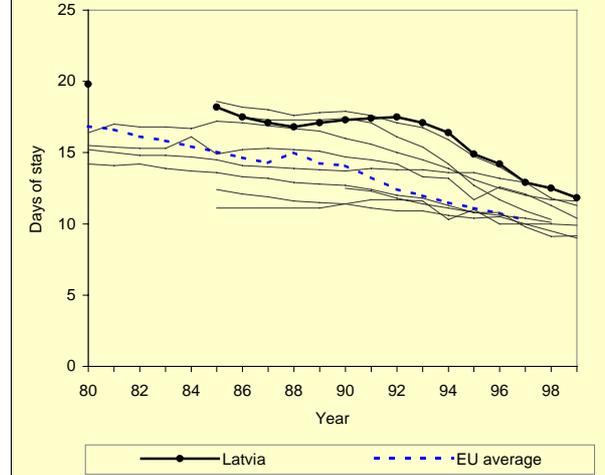


Fig. 41. Average length of stay in hospital in days



Many patients who only require social care remain in hospitals, though their number has been decreasing. There has been no financial incentive to avoid hospitalisation, and hospitals are not motivated to deal with the fact that patients often delay visits to primary care and are admitted later as urgent cases in the hospital. In addition, the continuity of care between primary and secondary care is said to be unsatisfactory (*WHO Regional Office for Europe, 1996, Ministry of Welfare, 2000*).

The average number of inpatient admissions varies substantially among the reference countries: from 13.8 to 25.4 admissions per 100 population in 1999. The rate in Latvia decreased from 26.5 in 1988 to 22.1 in 1999 but is still above the average for the reference countries (18.1 per 100 in 1999) and the EU average (18.1 per 100 in 1998) (Fig.40).

The average length of hospital stay has decreased in all reference countries since the 1980s. In 1985, the average length of stay in Latvia (18.2 days) was much higher than in the reference countries (13.4 days) and in the EU (15.1 days). Although since then the average length of hospital stay in Latvia has declined dramatically to 11.8 days in 1999, it remains the highest among the reference countries, well above the average for the reference countries (10.3 days in 1999) and that for the EU (10.2 days in 1997) (Fig. 41).

Since the 1980s, the number of outpatient contacts per inhabitant per year has declined from 10 to 4.9 contacts. Latvia has the lowest outpatient contact rate among the reference countries (average 8.0 contacts per inhabitant in 1999).

Pharmaceuticals and pharmacies

Latvia has a significant pharmaceutical industry, and supplies are sufficient to meet the needs of both individuals and hospitals.

In 1998, the National Medicines Pricing and Reimbursement Agency was created to reform drug reimbursement in accordance with the EC directive 89-105-EEC.

There is a national list of 52 severe and chronic conditions for which medication costs are partly or wholly reimbursed. Patients are also

exempt from at least some of the costs of drugs if the prescribing physician has a contract with the relevant Sickness Fund.

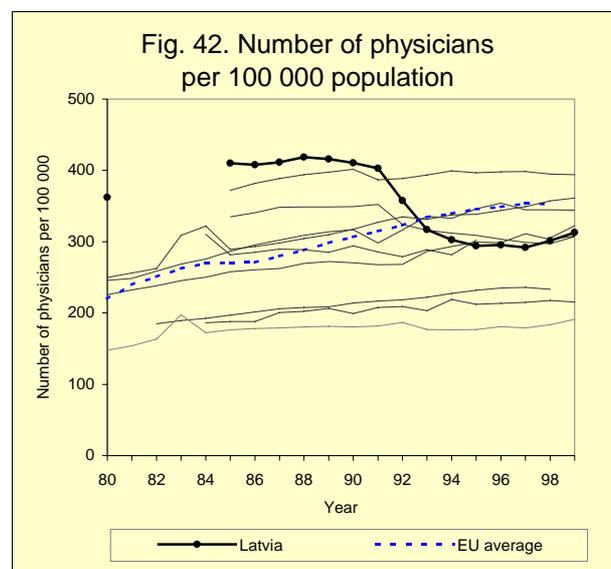
Despite the relatively high costs, the consumption of pharmaceuticals is rather high, since a prescription is not always needed to obtain medication and many people treat themselves (*WHO Regional Office for Europe, 1996, Ministry of Welfare, 2000*).

Human resources

The number of practising physicians in Latvia was the highest of all the reference countries up to 1992, from when it decreased by almost a quarter until 1994, mostly because of emigration. The most recent rate of 313 per 100 000 population in 1999 was higher than the average for the reference countries (265 per 100 000 in 1999), but lower than the EU average (353 per 100 000 in 1997) (Fig. 42).

The number of dentists has decreased by almost the same proportion as for physicians, mostly because of emigration. In 1999 Latvia had 47.9 dentists per 100 000 population, close to the average for the reference countries (45.3 per 100 000 in 1999) but substantially lower than the EU average (68.6 per 100 000 in 1998).

The number of nurses in Latvia (518 per 100 000 population in 1999) declined by 40% during the 1990s to below the average for the



reference countries (572 per 100 000), mostly because of emigration. The number of midwives also declined, and this decrease has been even faster than that of the nurses. There are

fewer midwives in Latvia (25.5 per 100 000 in 1999) than in the reference countries (average 48.1 per 100 000 in 1999) but more than in the EU (average 19.5 per 100 000 in 1998).

REFERENCES

- AINSCOW, M. & HAILE-GIORGIS, M. (1998). *The education of children with special needs: barriers and opportunities in central and eastern Europe*. Florence, UNICEF International Child Development Center (Innocent Occasional Papers, Economic and Social Policy Series, No. 67).
- CENTRAL STATISTICAL BUREAU OF LATVIA AND FAFO INSTITUTE (1999). *Living conditions in Latvia. Norbalt II survey. 1999*. Riga.
- CENTRAL STATISTICAL BUREAU OF LATVIA (2000a). *Statistical Yearbook of Latvia 2000*. Riga.
- CENTRAL STATISTICAL BUREAU OF LATVIA (2000b). *Demographic Yearbook of Latvia 2000*. Riga.
- COUNCIL OF EUROPE (1997). *Recent demographic developments in Europe – 1997*. Strasbourg, Council of Europe Publishing.
- COUNCIL OF EUROPE (1999). *Recent demographic developments in Europe – 1999*. Strasbourg, Council of Europe Publishing.
- EUROPEAN CENTRE FOR THE EPIDEMIOLOGICAL MONITORING OF AIDS (2000). *HIV/AIDS surveillance in Europe: surveillance report, 62*. Saint-Maurice, France, European Centre for the Epidemiological Monitoring of AIDS.
- HIBELL, B. ET AL. (2000). *The 1999 ESPAD Report. The European School Survey Project on Alcohol and other Drugs. Alcohol and Other Drug Use Among Students in 30 European Countries*. Modin Tryck AB. Stockholm, Sweden.
- MINISTRY OF ECONOMY (2000). *Economic Development of Latvia*. Riga.
- MINISTRY OF WELFARE (1993). *Health in Latvia. Yearbook of Latvian health statistics*. 3rd ed. Riga, Ministry of Welfare, Labour and Health and Medical Statistical Bureau.
- MINISTRY OF WELFARE (1997). *Latvia's report to the WHO Regional Office for Europe on the third evaluation of progress towards health for all in the European Region of WHO (1996–1997) (unpublished, 1997)*.
- MINISTRY OF WELFARE (1998). *Public health report, Latvia*. Riga, Ministry of Welfare, Latvian Center of Health Statistics, Informatics and Medical Technology and Medical Statistical Bureau.
- MINISTRY OF WELFARE (2000). *Yearbook of Health Care Statistics in Latvia 1999. Maternal and Infant Health Care 1999. Statistical Overview on Health and Health Care 1999. Medical Aspects of Death, Latvia 1999, Social Report 2000*, Riga.
- MINISTRY OF WELFARE AND MINISTRY OF ENVIRONMENTAL PROTECTION AND REGIONAL DEVELOPMENT (1998). *Environmental health action plan for Latvia*. Riga, GANDRS.
- PRODUKTSCHAP VOOR GEDISTILLEERDE DRANKEN (1998). *World drink trends 1998*. Schiedam, NTC Publications.
- PUDULE, I. ET AL. (2000). *Health behaviour among Latvian adult population, 1998*. National Public Health Institute. Series B:1/2000. Helsinki.
- TURNER, B., ed. (2000). *The statesman's year-book 2000*. London, Macmillan.
- UNESCO (1999). *Statistical yearbook 1999*. Paris, UNESCO Publishing & Bernan Press.
- UNITED NATIONS DEVELOPMENT PROGRAMME (1997). *Latvia. Human development report 1997* [<http://www.undp.riga.lv/english/pubs/eng1997.htm>]. Riga, United Nations Development Programme (accessed 12 June 2000).
- UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (1999). *Trends in Europe and North America 1998/1999*. Geneva, United Nations Economic Commission for Europe.
- WHO REGIONAL OFFICE FOR EUROPE (1993). *Health for all targets. The health policy for Europe*. Copenhagen, WHO Regional Office for Europe (European Health for All Series, No. 4).

WHO REGIONAL OFFICE FOR EUROPE (1997). *Smoking, drinking and drug taking in the European Region*. Copenhagen.

WHO REGIONAL OFFICE FOR EUROPE (1998). *Health in Europe 1997. Report on the third evaluation of progress towards health for all in the European Region of WHO (1996–1997)*. Copenhagen, WHO Regional Office for Europe (WHO Regional Publications, European Series, No. 83).

WHO REGIONAL OFFICE FOR EUROPE (1999a). *Nutrition and lifestyle in the Baltic republics*. Copenhagen, WHO Regional Office for Europe (document EUR/ICP/LVNG 02 03 04).

WHO REGIONAL OFFICE FOR EUROPE (1999b). *HEALTH21 – the health for all policy framework for the WHO European Region*. (<http://www.who.dk/cpa/h21/h21long.htm>). Copenhagen, WHO Regional Office for Europe (European Health for All Series, No. 6) (accessed 12 June 2000).

WHO REGIONAL OFFICE FOR EUROPE (2000). *Health and health behaviour among young people. WHO Policy Series. Health policy for children and adolescents 1*. Copenhagen.

WHO REGIONAL OFFICE FOR EUROPE (2001). *Health Care Systems in Transition. Latvia*. Copenhagen, WHO Regional Office for Europe 2001, (European Observatory on Health Care Systems).

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.

DISCLAIMER

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