WORLD HEALTH ORGANIZATION
EUROPE

Highlights on health in Italy

2004

Highlights on health

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

Each report also compares a country, when possible, to a reference group. This report uses the 27 countries with very low child mortality and very low adult mortality, designated Eur-A by WHO, as the reference group. Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Germany, Greece, Finland, France, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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

Keywords

HEALTH STATUS
LIFESTYLE
DELIVERY OF HEALTH CARE
COMPARATIVE STUDY
ITALY

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Summary: findings and policy options

Life expectancy

People in Italy are living longer. In 2002, they had the seventh highest life expectancy in Eur-A, equivalent to that in France. Women in Italy continue to have a higher life expectancy than men: 82.5 versus 76.8 years.

Italians have one of the highest estimates of healthy life expectancy in the Eur-A. Nevertheless, 56% of adults in Italy self-rated their health status as good or very good, the second lowest percentage among the Eur-A countries where surveys were conducted.

As the length of life increases, older people can respond with lifestyle changes that can increase healthy years of life. Correspondingly, health care systems need to shift towards more geriatric care, the prevention and management of chronic diseases and more formal long-term care. Since people are living longer, measures to improve health and prevent disease need to focus on people of working age.

What are the main risk factors for disability in old age and how can disability be prevented? (Health Evidence Network, 2003a)

Ageing and employment policies (OECD, 2004a)

Infant mortality

Between 1980 and 2001, Italy reduced both infant and neonatal mortality rates by about two thirds, more rapidly than the average for the Eur-A. In 2001, Italy's infant mortality rate was slightly lower than the Eur-A average, whereas neonatal mortality was slightly higher.

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

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

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

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

Main causes of death

Noncommunicable conditions account for 81% of all deaths in Italy; this includes cancer, which causes 31% of deaths; and external causes (intentional and unintentional injuries) cause about 6%.

Thirty-eight per cent of total deaths in Italy in 2001 were due to cardiovascular diseases, with ischaemic heart disease being the single biggest killer, causing 12% of all deaths. The mortality rate due to diseases of pulmonary circulation and other heart disease among people 15–29 years of age was the highest in Eur-A in 2001.

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

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

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

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

Excess weight

Almost half the men and one-third of women in Italy are overweight. About 10% of both men and women are obese.

About 17% of 15-year-old boys in Italy are pre-obese; about 3% are obese. About 7% of 15-year-old girls are pre-obese and 1% are obese.

A national survey in 1998 found that 34% of Italian men and 46% of women 35–74 years old were sedentary.

Better eating habits can prevent premature death from CVD, but people's chances for a healthy diet depend on what food is available and whether it is affordable. Food and nutrition policies need to cross sectors and be coordinated, so that non-health sectors give priority to public health. This also applies to the promotion of physical activity: policies to encourage active living over the life course need to be integrated across health and non-health sectors.

CINDI dietary guide (WHO Regional Office for Europe, 2000)

Diet, nutrition and the prevention of chronic diseases (WHO, 2003a)

Food and health in Europe: a new basis for action (Robertson et al., 2004)

The potential contribution of increased vegetable and fruit consumption to health gain in the European Union (Joffe & Robertson, 2001)

Tobacco

In 2000, people in Italy consumed almost 8% more cigarettes per person than the Eur-A average. Between 1995 and 2000, per capita consumption increased by almost 13% in the country, whereas the Eur-A trend was downward.

Between 1994 and 2001, surveys found that smoking prevalence among men and women had decreased. A survey of 15-year-olds in 2001–2002 found that the smoking prevalence among boys was about equivalent to the Eur-A average for boys, whereas smoking among girls was below the Eur-A average for girls.

Cancer of the trachea, bronchus and lung accounted for almost 7% of all deaths in Italy in 2001. Although the absolute rate of mortality due to lung cancer among women aged 25–64 years is low and remains below the Eur-A average, it increased by almost 11% between 1995 and 2001, following the upward trend for Eur-A women in the age group. During the same period, mortality due to lung cancer among Italian women aged 65 years and older also rose by just over 7%.

For men, the absolute rates of mortality from lung cancer are dramatically higher than among women, but the trend for men between 1995 and 2001 was downward in Italy and the Eur-A overall. Nevertheless, the rates for men in Italy are relatively high within the Eur-A: across adult age groups, the rate in Italy was the fifth highest in the Eur-A in 2001; the rate for Italian men 65+ was the third highest.

To reduce consumption across the whole population, policy-makers need permanently to raise prices for tobacco through taxes, and cessation policies need to target vulnerable groups. Increasing adults' cessation of tobacco use is cost-effective for public health in the short and medium terms.

European Strategy for Tobacco Control (WHO Regional Office for Europe, 2002b)

Which are the most effective and cost-effective interventions for tobacco control? (Health Evidence Network, 2003c)

WHO European strategy for smoking cessation policy (WHO Regional Office for Europe, 2003)

WHO Framework Convention on Tobacco Control (WHO, 2003d)

Tobacco control database [online database] (WHO Regional Office for Europe, 2004f)

Mental health

Neuropsychiatric conditions have the highest burden of disease in the Italian population due to the associated disability in daily living. The burden is greater among females than males.

Better recognition and monitoring of depressive disorders can lead to positive effects, including reduced suicide rates. Comprehensive treatment programmes directed at the addictive and depressive features in alcohol abuse have been shown to be effective.

Mental health in Europe: country reports from the WHO European network on mental health (WHO Regional Office for Europe, 2001a)

Mental health policy and practice across Europe: the future direction of mental health care: proposal for analytical study (Knapp et al., 2004)

Project Atlas: mapping mental health resources in the world (WHO, 2003c)

The world health report 2001: mental health: new understanding, new hope (WHO, 2001)

Alcohol

In 2001, Italian people consumed about 16% less alcohol per capita than the Eur-A average. Since the late 1980s, consumption in Italy has dropped by 27%.

Italy has a decreasing trend in deaths from chronic liver disease, following the pattern of the Eur-A, but in 2001, the mortality rate for the population was 7% above the Eur-A average. Rates were especially high in older age groups: those 60–74 years of age had the seventh highest mortality for this condition in the Eur-A; Italian men in the age group had the seventh highest rate, and women had the fourth highest. Those aged 75+ had the highest mortality rate for this condition in the Eur-A for the age group.

Alcohol consumption varies among countries and between different population groups within countries. The variation in drinking patterns affects rates of alcohol-related problems and has implications for the choice of alcohol control policies. Measures that are generally effective in reducing alcohol consumption and the associated harm include pricing and taxation and restricting the availability of alcohol, opening hours for sales outlets and the legal drinking age. Most drink-driving countermeasures have been effective as well. International trade agreements and common markets have weakened the ability of national-level decision-makers to establish national alcohol policies. Most notable are the converging trends in alcohol taxation in several countries in the European Union.

Alcohol control database [online database] (WHO Regional Office for Europe, 2004a)

What are the most effective and cost-effective interventions in alcohol control? (Health Evidence Network, 2004b)

Alcohol: no ordinary commodity. Research and public policy (Babor et al., 2003)

HIV/AIDS

In recent years new HIV infections have been predominantly transmitted sexually. The rise in the incidence of heterosexual cases is mainly caused by an increase of imported cases from countries with generalized epidemics.

Prevention, treatment and care programmes need to reach all people affected by HIV/AIDS, particularly those whose language, culture or immigrant status might limit their access to health services.

Access to care: privilege or right? Migration and HIV vulnerability in Europe (Broring et al., 2003)

AIDS: epidemic update December 2003 (UNAIDS & WHO, 2003)

The HIV/AIDS epidemic in Europe and central Asia (WHO Regional Office for Europe, 2004e)

Drug use and hepatitis C

Testing in drug treatment centres in 10 regions in Italy between 1998 and 2000 found that almost 79% of injecting drug users were infected with hepatitis C. Known to be particularly vulnerable are prison populations. In 2003, Italy had a 134.5% occupancy level in its prisons based on official capacity.

Overcrowding in prisons causes and contributes to many health problems, most notably mental health conditions and communicable diseases. A critical test for services in prisons is the ability to offer care or continued care of illness and drug addiction at intake and on release.

The key to effective prevention of hepatitis C is to reduce the number of people who start to inject drugs and to encourage harm reduction among young and new injectors. Coordination of efforts within and between countries is a vital component of effective drug policy in the WHO European Region.

Annual report 2003: the state of the drugs problem in the European Union and Norway (EMCDDA, 2003)

Declaration. Prison health as part of public health, Moscow, 24 October 2003 (HIPP, 2003)

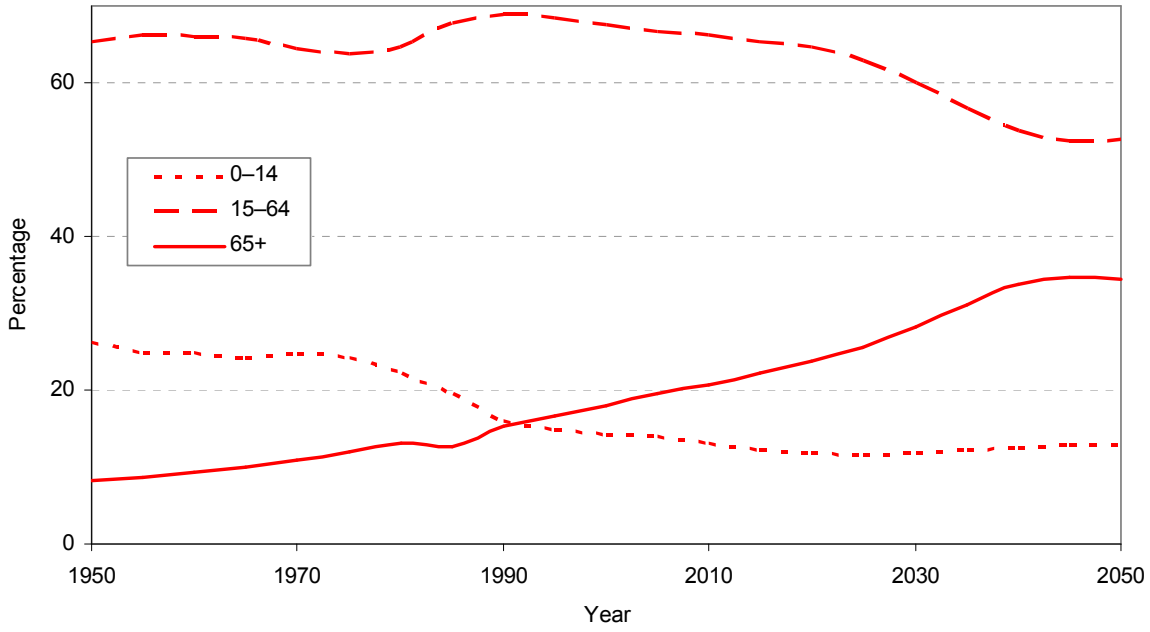
Selected demographic information

Population profile

Italy had a population of 57.9 million at the end of 2003. Among Eur-A countries, it has a relatively low percentage of urban population.

The most striking demographic feature for Italy, observed across Eur-A countries, is the increasing proportion of elderly people in the population. As the large birth cohorts of the late 1940s approach retirement age, the number of Italian people aged 65 years and older is expected to grow from about 18% of the population in 2003 (Council of Europe, 2003) to an estimated 28% in 2030 (Annex. Age pyramid)

Percentage of the population aged 0–14, 15–64 and 65+ years, Italy, 1950 to 2050 (projected)



Source: United Nations (2002).

Since 1980, the birth rate in Italy has dropped by about 18% compared with an average drop of about 20% for Eur-A for the same period. Currently Italy has one of the lowest birth rates in Eur-A. The rate of natural increase in the population has dropped dramatically since 1980, from 1.8 per 1000 to –0.45 per 1000 in 2001, and then further to -0.7 per 1000 in 2003. In contrast, the rate of net migration in the country has risen 30 times between 1980 and 2001.

Selected demographic indicators in Italy and Eur-A, 2001 or latest available year

Indicators	Italy	Eur-A		
	Value	Average	Minimum	Maximum
Population (in 1000s)[a]	57 888.2	–	–	–
0–14 years (%)	14.2	–	–	–
15–64 years (%)	67.1	–	–	–
65+ years (%)	18.7	–	–	–
Urban population (%)[b]	67.1	79.5	49.2	100.0
Live births (per 1000)[c]	9.2	11.3	8.7	21.2
Natural population growth (per 1000)	–0.4	1.1	–2.4	15.5
Net migration (per 1000)[c]	3.2	3.5	–9.6	17.3

[a] As of 31 December 2003.

[b] Including Andorra and Monaco.

[c] Including Andorra.

Sources: Council of Europe (2003), WHO Regional Office for Europe (2004c), ISTAT (2004); Central Bureau of Statistics of Israel (2003) for data on Israel.

Vulnerable populations

Income The evidence on determinants of health shows that people who are socioeconomically disadvantaged bear the greatest burden of disease. Among determinants, income is related to an accumulation of factors that affect mortality (Martikainen et al., 2001). For example, it influences and is influenced by education and employment.

Even in the richest Member States in the WHO European Region, wealth is not equitably distributed and pockets of relative poverty exist (WHO Regional Office for Europe, 2002a; WHO, 2002). The association between poverty and urban areas is especially important in Europe. As populations migrate and become more urban, there are increases in the number of urban poor whose housing, employment conditions and diet expose them to greater risk of illness and disease (WHO Regional Office for Europe, 2001b). The nature and impact of poverty can be unevenly distributed among poor people according to such factors as gender and age group (Ziglio et al., 2003).

In 2000, the GINI index for Italy was 36, indicating a relatively high degree of income inequality in the country, compared with 30.8 for Eur-A overall at approximately the same time (UNDP, 2004). From 1990 to 2000, almost 13% of Italy's population lived below the 50% median income level at some point versus about 9% for the Eur-A group (UNDP, 2004).

Overall unemployment in Italy was 8.7% in 2003 versus 6.5% for the Eur-A (UNSD, 2004). The rate among men was 6.7%; among women it was 11.6%. Unemployment among people 15–24 years old may differ from national averages: in 2001 in Italy it was 25% for males and 32% for females. Ninety-three percent of unemployed people had secondary education or less (80% had secondary level and 13% had primary level). Sixty-two percent of those unemployed had been so for 12 months or more (UNECE, 2003).

Social exclusion

Social exclusion has a broad impact on health. It refers to the relative position of an individual or a group in society as a whole. The processes that accompany and result in social exclusion – such as discrimination, stigmatization and hostility – prevent people from getting education or training and from gaining access to services and citizenship activities, making them more vulnerable to health risks and disease.

Examples of people outside the mainstream include members of ethnic or religious minorities; people who live in geographically disadvantaged areas, are unemployed or are elderly; and in some countries, indigenous peoples. People new to a country – such as refugees, immigrants or migrant workers – may also be socially excluded. Table 2 gives the total population figures for various vulnerable

groups of people resident in Italy. Immigrants include nationals and foreigners from within and outside the European Region. Countries have different data sources and administrative definitions of immigrant status.

Vulnerable populations in Italy

Population	1992	1995	1998	2001	2003 (estimate)
Immigrants	113 916	96 710	156 885	–	
Refugees	–	–	–	9000	
Prison inmates (per 100 000 national population)	81	87	85	95	99

Sources: EUROSTAT (2004), UNDP (2003) and International Centre for Prison Studies (2004).

The table also includes data about prison inmates, a particularly vulnerable population in that they are typically from minority groups and have lower socioeconomic status and less education than the general population. Incarceration can expose them to direct health hazards, particularly if prison populations outpace capacity. The resulting overcrowding causes and contributes to many health problems, most notably mental health conditions and communicable diseases. In fact, drugs and drug-related infectious diseases in prisons are causing major problems in all countries in the European Region, with the risks of transmission affecting not only inmates but also prison employees and contacts outside the institutions (EMCDDA, 2002).

In 2003, Italy had a 134.5% occupancy level in its prisons based on official capacity (International Centre for Prison Studies, 2004).

Burden of disease

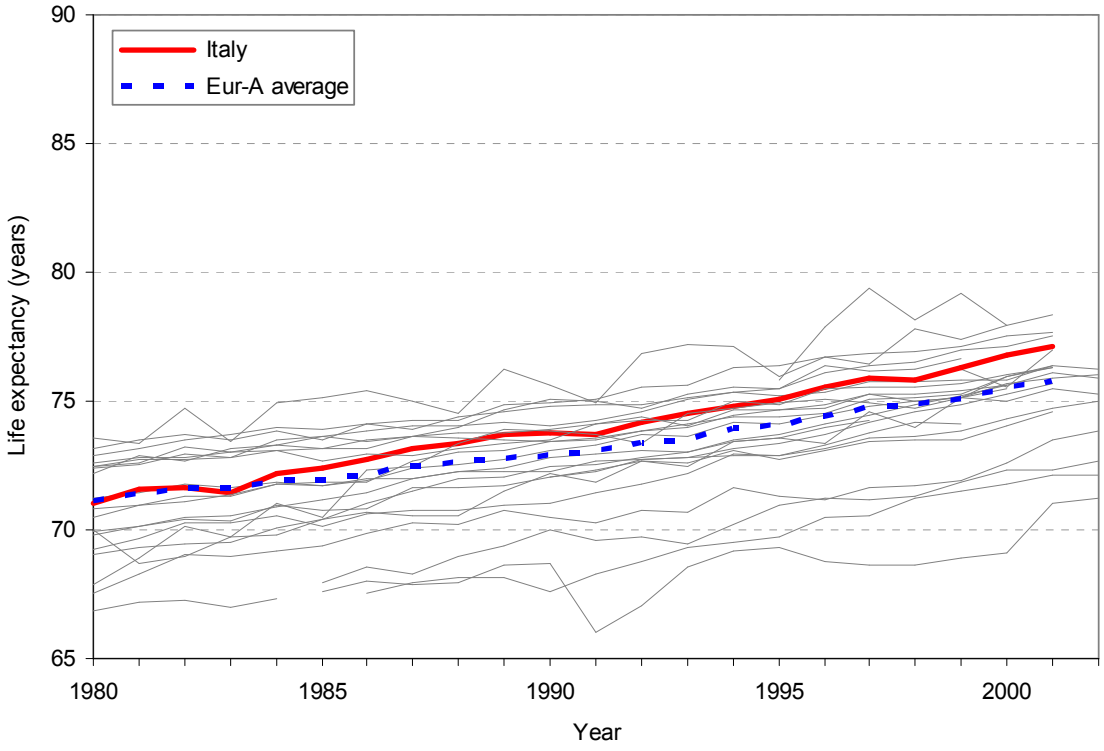
The burden of disease can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows elaborates on the burden of disease in the population.

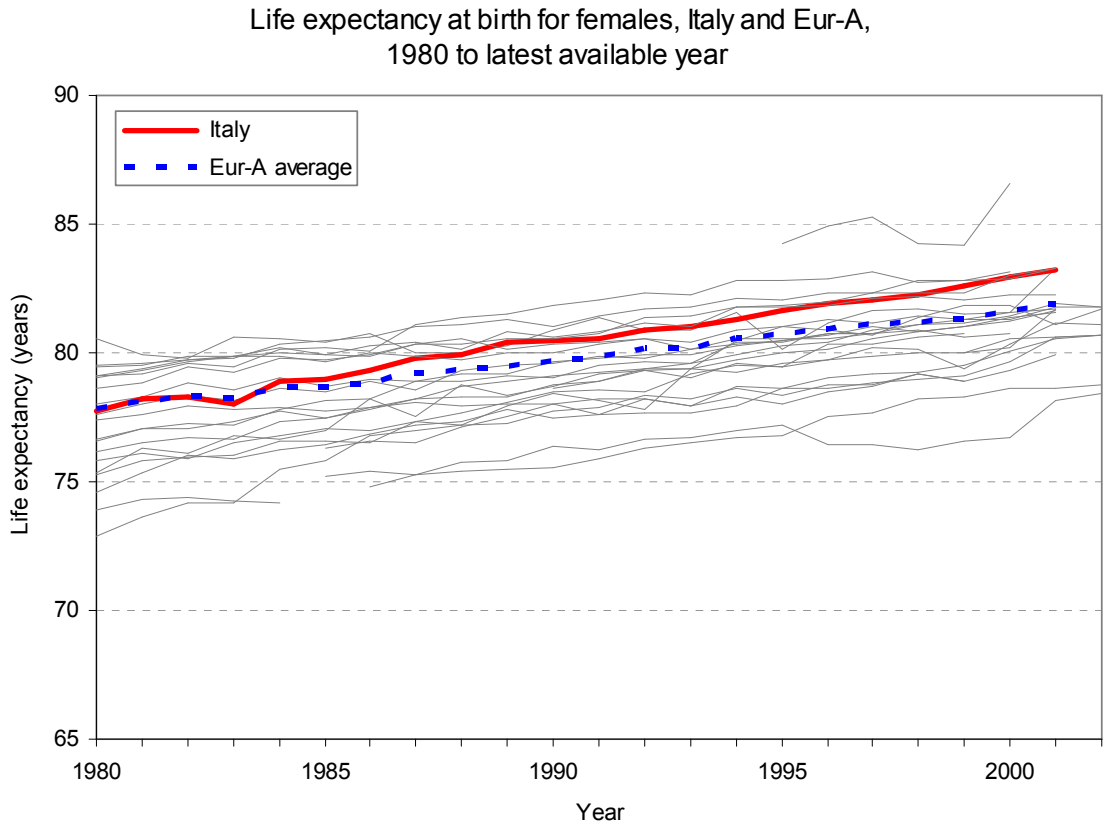
Life expectancy and healthy life expectancy

A person born in Italy in 2002 can expect to live 79.7 years on average: 82.5 years if female and 76.8 years if male, according to WHO (2003f) estimates. Life expectancy (LE) in Italy is the seventh highest in Eur-A, equal to that in France, almost one year more than the average for Eur-A.

Between 1980 and 2001, according to estimates reported by Italy, people in Italy gained almost 6 years in LE. Males gained just over 6 years, representing an increase of 8.5% over the period; females gained about 5.5 years, 7% more than in 1980. Both percentages were better than the Eur-A averages for males and females in the period.

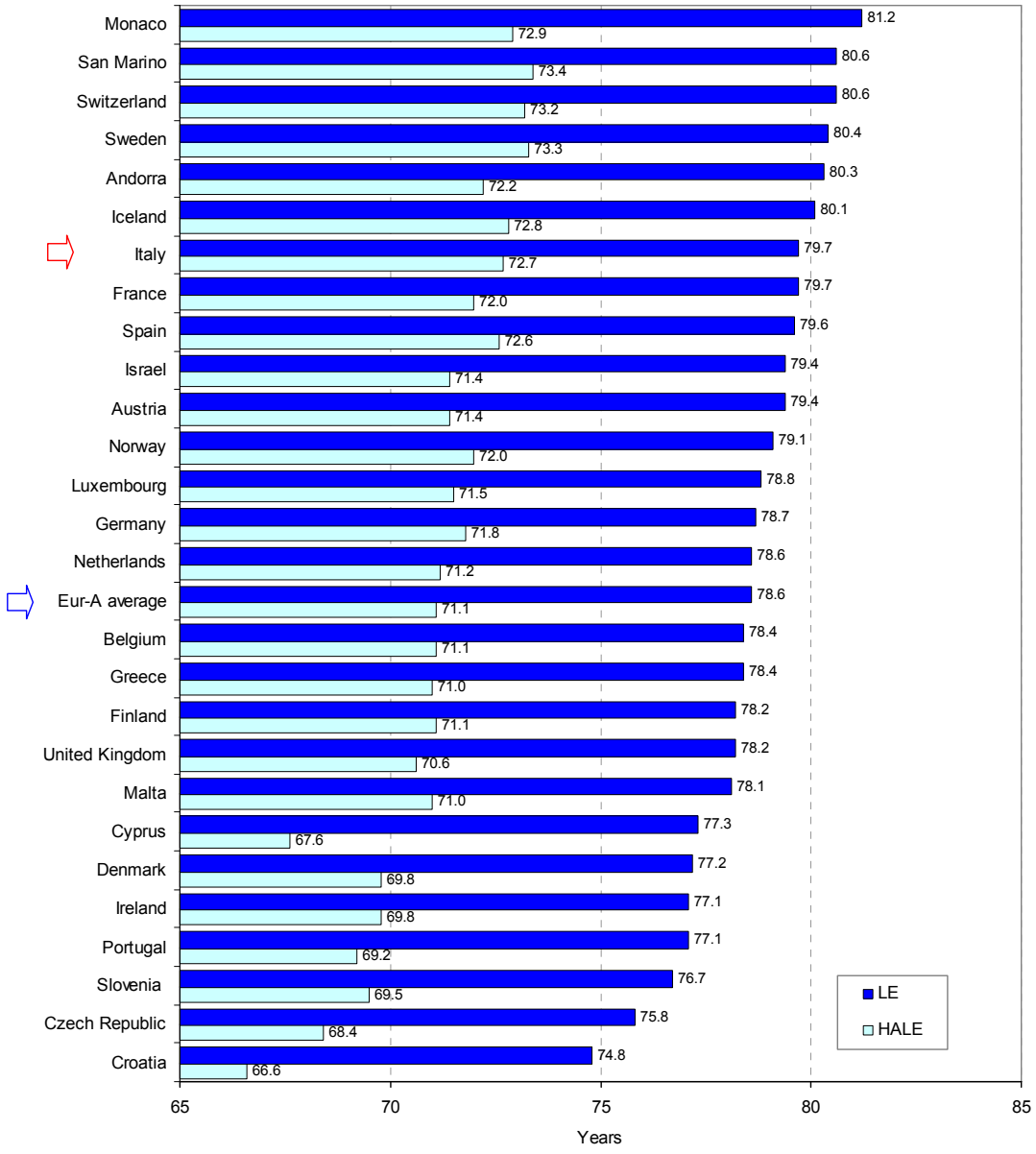
Life expectancy at birth for males, Italy and Eur-A,
1980 to latest available year





In addition, WHO (2003f) estimates that, on average, Italians can expect to be healthy for about 91% of their lives. They lose on average 7 years to illness – the difference between LE and healthy life expectancy (HALE). Since women live longer than men, and since the possibility of deteriorating health increases with age, women lose more healthy years of life (7.8 years) than men (6.1 years). Nevertheless, the longer LE for women in Italy compared with men gives women about three more years of healthy life than men.

LE and HALE, Italy and Eur-A[a], 2002

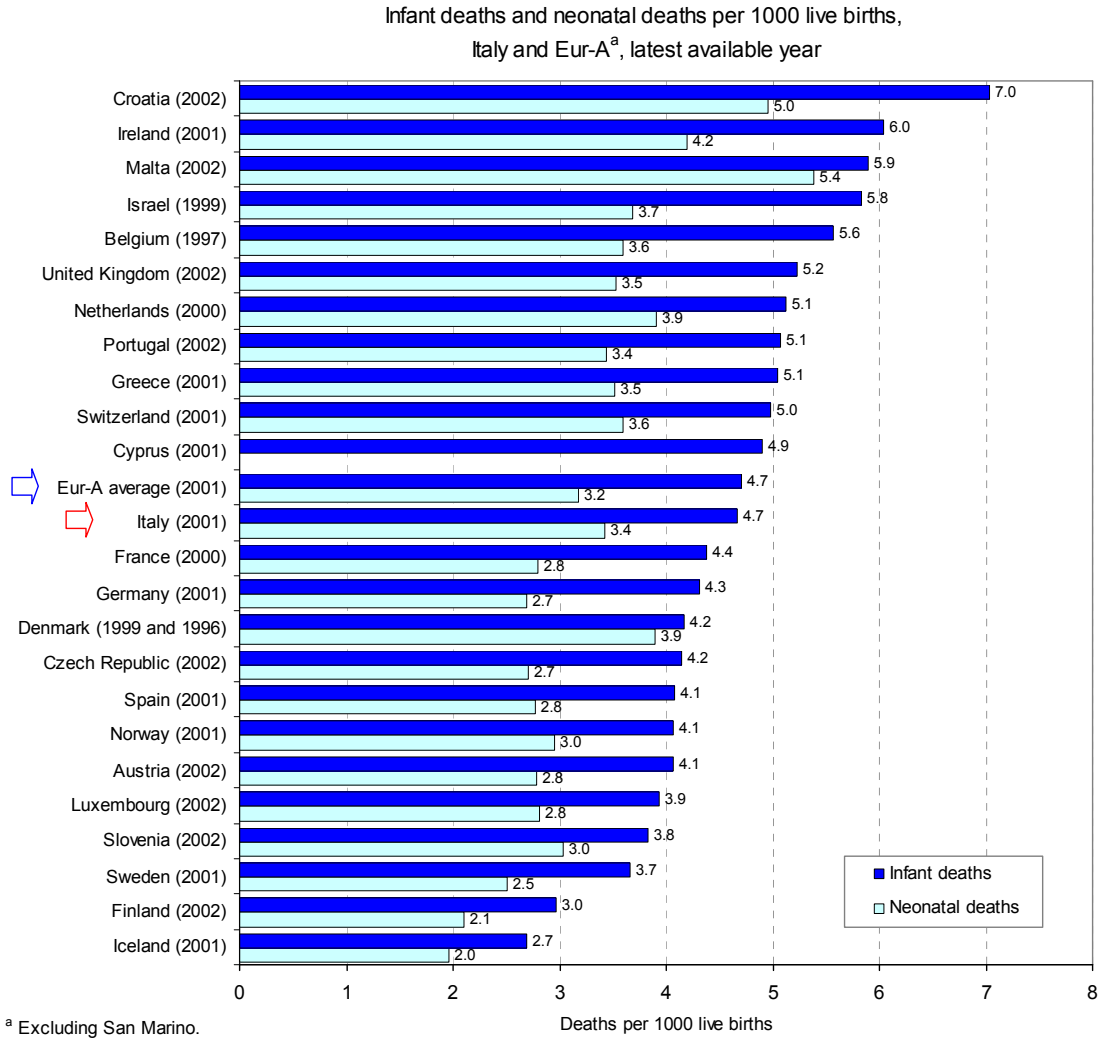


[a] Including Andorra and Monaco.
Source: WHO (2003f).

Mortality

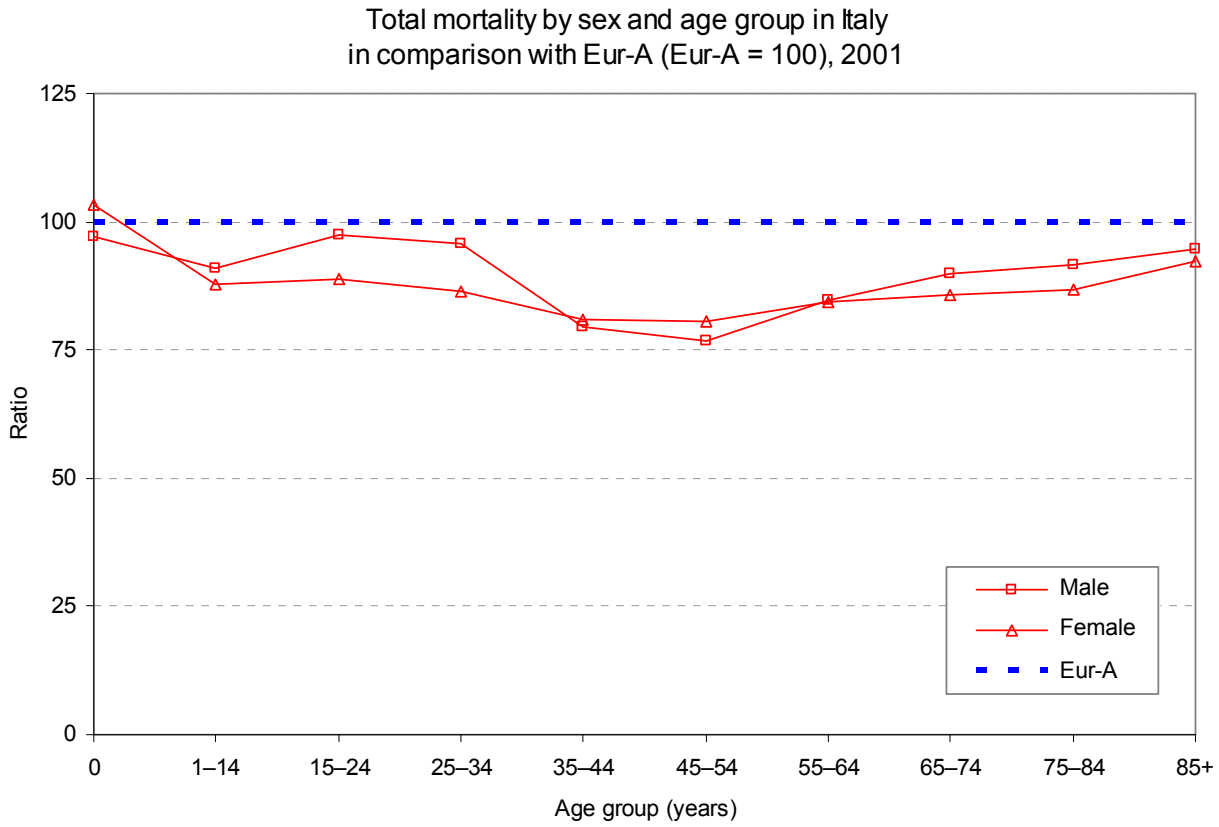
Infant mortality and neonatal death

In 2001, Italy's infant mortality rate was slightly less than the Eur-A average and the neonatal mortality rate was about 7.5% higher than the Eur-A average. Between 1980 and 2001, Italy reduced both infant and neonatal mortality rates by about two thirds, a more rapid rate of decline than the average for the Eur-A.



Excess mortality

Overall mortality across age groups in Italy, for both males and females, is lower than Eur-A averages by about 11%. The mortality rates are close to Eur-A averages only among men 15–34 years old and among men and women 85 years and older.

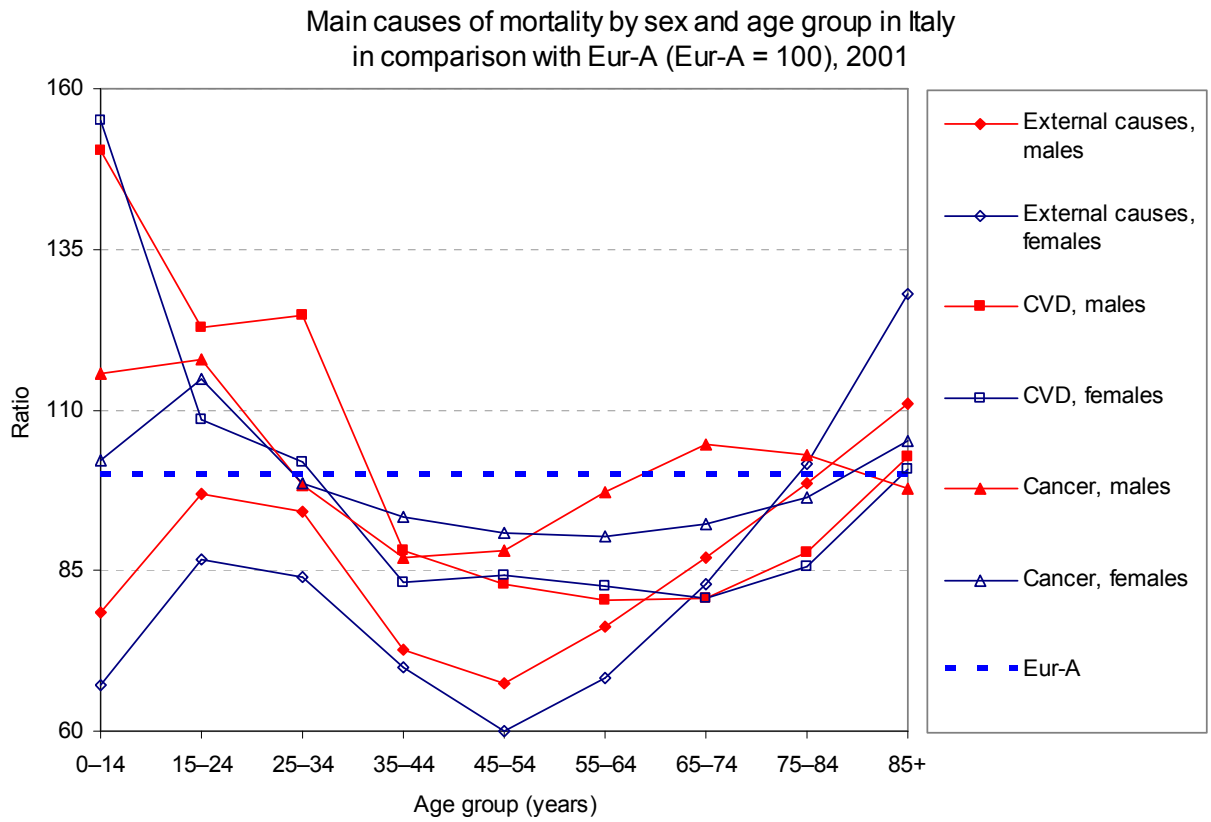


Main causes of death

In 2001, noncommunicable diseases accounted for about 81% of all deaths in Italy; external causes for about 6%; and communicable diseases for less than 1% (Annex. Selected mortality).

People in Italy generally have lower rates of mortality than the Eur-A for all main causes of death. Cardiovascular diseases (CVD) accounted for 38% of all deaths in Italy in 2001. The single biggest killer was ischaemic heart disease, responsible for about 12% of all deaths in the country, even though rates among men and women dropped by about 27% from 1995 to 2001.

Up to age 34 years, cardiovascular conditions accounted for a 33% excess mortality relative to Eur-A in 2001: children 0–14 years have the highest mortality due to CVD in Eur-A, higher among females than males; people 15–29 years old have the third highest rate, higher among males than females. The mortality rate due to diseases of pulmonary circulation and other heart disease among people 15–29 years of age was the highest in the Eur-A in 2001.



Italy has relatively lower mortality due to external causes than the Eur-A. But within the category, deaths in Italy due to unintentional injuries occur at a 33% higher rate than in the Eur-A, whereas the rate from intentional causes is lower. The rates for two types of unintentional injury are notable – those due to motor vehicle traffic injuries and to falls. In 2001, the rate for motor vehicle traffic injuries was 18% higher in Italy than in the Eur-A; for falls, it was 58% higher in Italy (Annex. Selected mortality).

For men 25–64 years old, the mortality rate from motor vehicle traffic injuries between 1995 and 2001 increased by 5%, whereas the Eur-A trend was downward for the period. The rate for men 65 years and older during the same period decreased by 25% but remained 34% higher than for the Eur-A (Annex. Mortality data).

The mortality rates for deaths due to accidental falls are higher among people 65 years and older. Women 65 years and older had the sixth highest mortality rate in the Eur-A due to falls in 2001; men had the eighth highest rate.

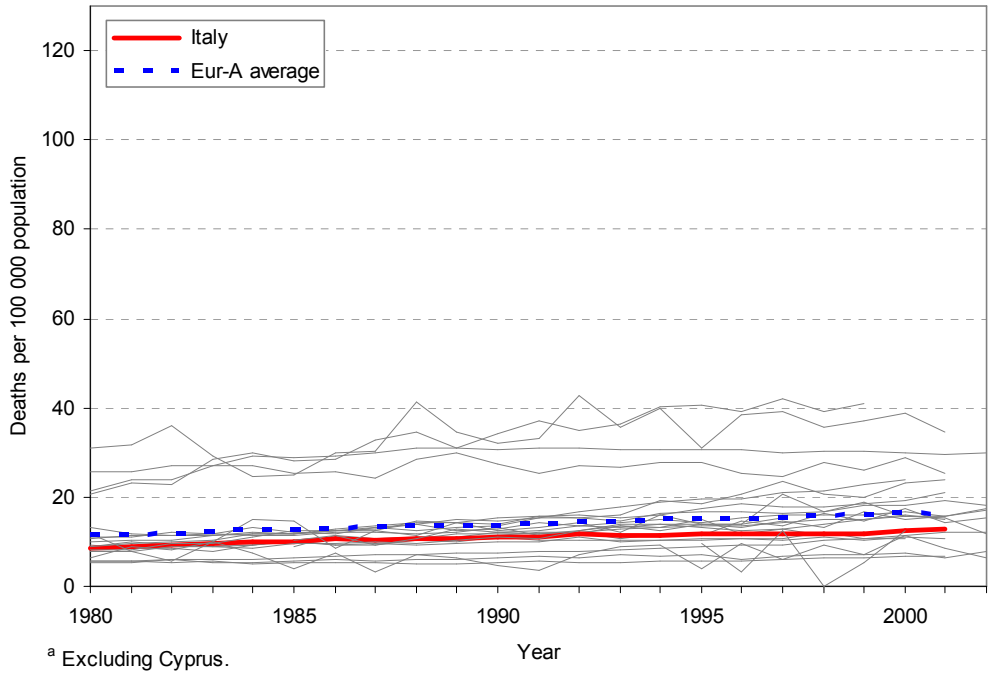
Malignant cancer accounted for 31% of all deaths in Italy in 2001. Males 24 years and younger had 17% excess mortality due to cancer compared with the Eur-A average. Females 15–24 years old had 15% excess mortality due to cancer. In 2001, mortality due to cancer of lymphoid and haematopoietic tissue for children 0–14 years old in Italy was the sixth highest in the Eur-A. For those 15–29 years old, the death rate due to these types of cancer was the second highest in Eur-A, tied with Luxembourg.

Among women aged 25–64 years, although absolute rates are low and rates remain below the Eur-A averages, mortality due to lung cancer increased by almost 11% between 1995 and 2001, following the upward trend for Eur-A women in the age group. During the same period, mortality due to lung cancer also rose by just over 7% among Italian women aged 65 years and older. For this group as well, the mortality rate and the rate of change were below the Eur-A averages (Annex. Mortality data).

For men, the absolute rates of mortality from lung cancer are considerably higher than among women, but for men the trend between 1995 and 2001 was downward in Italy and the Eur-A overall. Nevertheless, the rates for men in Italy are relatively high within the Eur-A: across all age groups, the rate

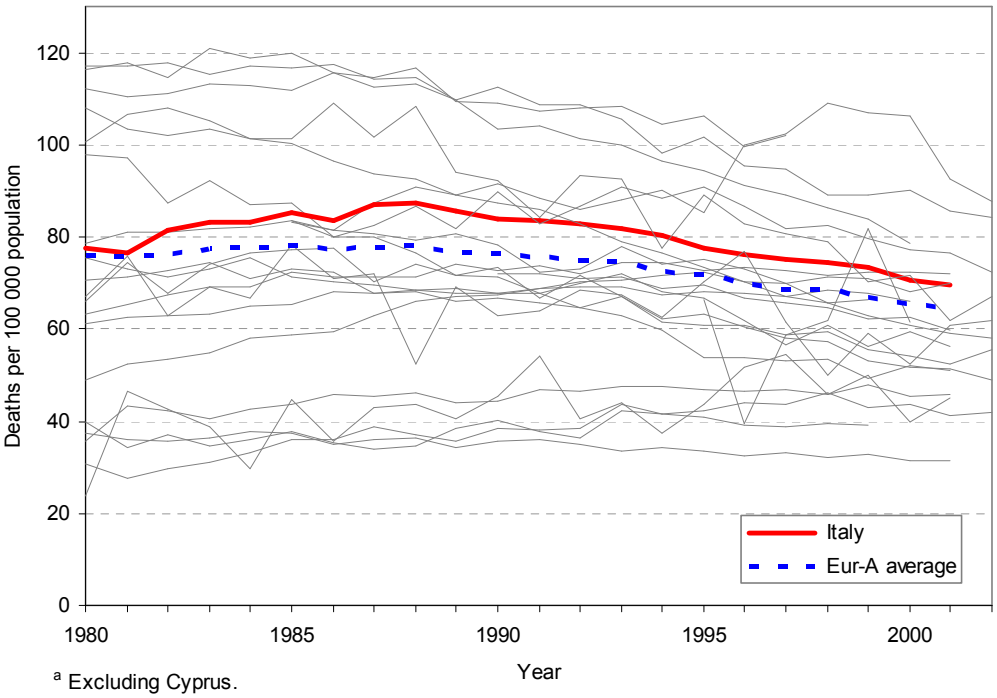
in Italy was the fifth highest in the Eur-A in 2001. The rate for Italian men 65 years and older was the third highest in the Eur-A.

Standardized death rates (SDR) for trachea, bronchus and lung cancer in females, all ages, Italy and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

SDR for trachea, bronchus and lung cancer in males, all ages, Italy and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Disability-adjusted life-years

The disability-adjusted life-year (DALY) is a summary measure that combines the impact of illness, disability and mortality on population health. The table lists the top 10 conditions affecting males and females in Italy in terms of DALYs.

Neuropsychiatric conditions have the highest burden of disease in Italy and in most of the other Eur-A countries. Because mortality from these conditions is minor compared with that from other diseases, disability in daily living comprises the bulk of their burden on the health of the population.

Ten leading disability groups as percentages of total DALYs for both sexes in Italy

Rank	Males		Females	
	Disability groups	**Total DALYs (%)**	**Disability groups**	**Total DALYs (%)**
1	Neuropsychiatric conditions	22.7	Neuropsychiatric conditions	28.0
2	Malignant neoplasms	19.0	Cardiovascular diseases	16.9
3	Cardiovascular diseases	19.0	Malignant neoplasms	16.2
4	Unintentional injuries	7.6	Musculoskeletal diseases	6.0
5	Respiratory diseases	5.7	Sense organ diseases	5.9
6	Sense organ diseases	4.8	Respiratory diseases	4.5
7	Digestive diseases	3.9	Diabetes mellitus	4.1
8	Musculoskeletal diseases	3.5	Unintentional injuries	4.0
9	Diabetes mellitus	3.4	Digestive diseases	3.8
10	Intentional injuries	1.8	Endocrine disorders	1.8

Source: Background data from WHO (2003f).

Main risk factors

The table presents the top 10 risks to health in developed countries in terms of DALYs. As with the table on disability groups, risk factors are estimated to contribute differently to the burden of illness and death in a population. The degree to which the Italian population is exposed to five of these risks is described below.

Ten leading selected risk factors as causes of disease burden measured in DALYs in developed countries

Risk factors	Total DALYs (%)
Tobacco	12.2
Blood pressure	10.9
Alcohol	9.2
Cholesterol	7.6
Overweight	7.4
Low fruit and vegetable intake	3.9
Physical inactivity	3.3
Illicit drugs	1.8
Unsafe sex	0.8
Iron deficiency	0.7

Source: WHO (2002).

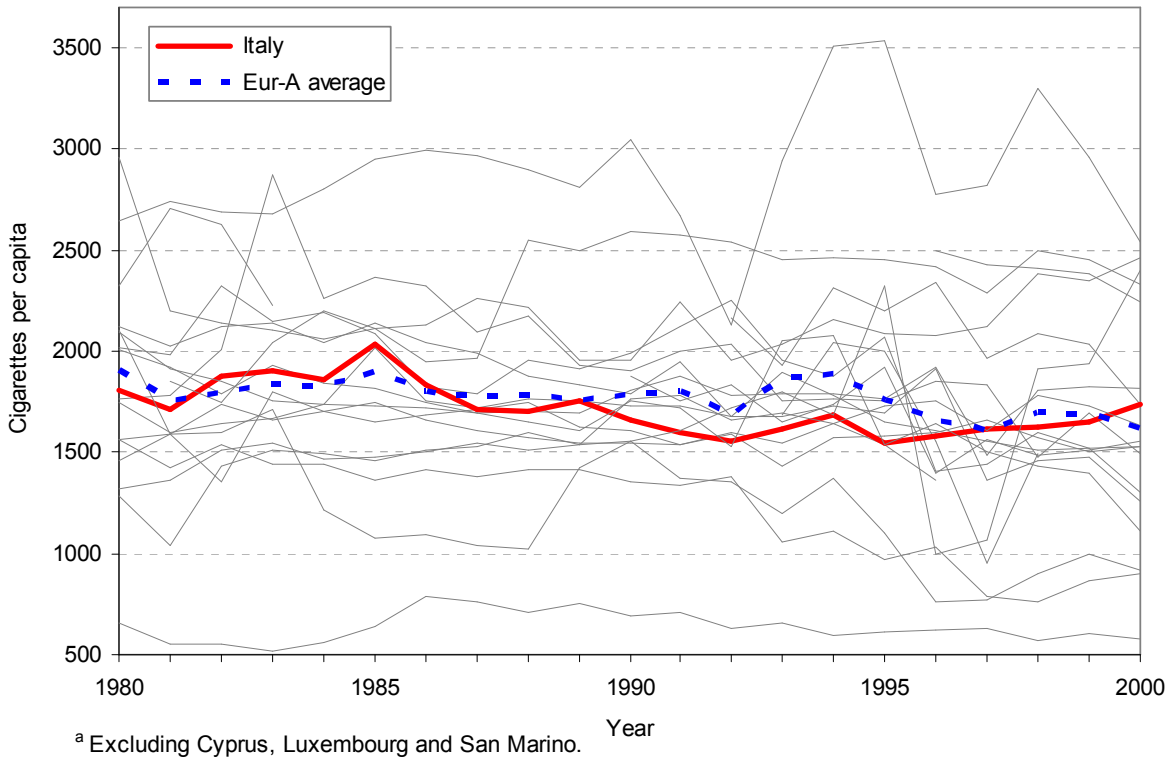
Tobacco

The European Region has only 15% of the world's population but nearly 33% of the worldwide burden of tobacco-related diseases (WHO Regional Office for Europe, 2004g). The annual number of deaths in the Region attributable to the consumption of tobacco products was recently estimated to be 1.2 million, and about 40% occur in Eur-A countries (WHO Regional Office for Europe, 2002a). About half the deaths

affect people in middle age. Typically, the more affluent are the first both to begin smoking and to stop. As they quit, smokers increasingly comprise people with less education and lower income (Bostock, 2003).

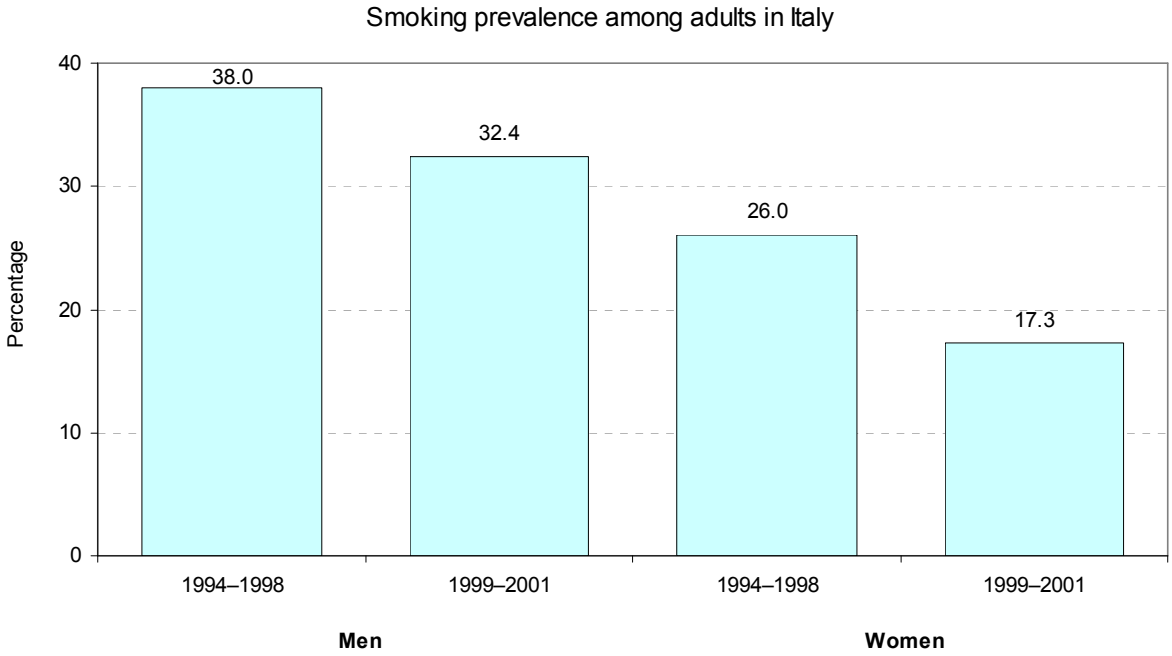
In 2000, people in Italy consumed almost 8% more cigarettes per person than the Eur-A average based on official statistics for production, import and export. (Not included is consumption of additional cigarettes available unofficially, for example, through smuggling across borders and bootlegging.) Between 1995 and 2000, per capita consumption increased by almost 13%, whereas the Eur-A trend was downward.

Cigarettes consumed per person,
Italy and Eur-A[a], 1980 to latest available year

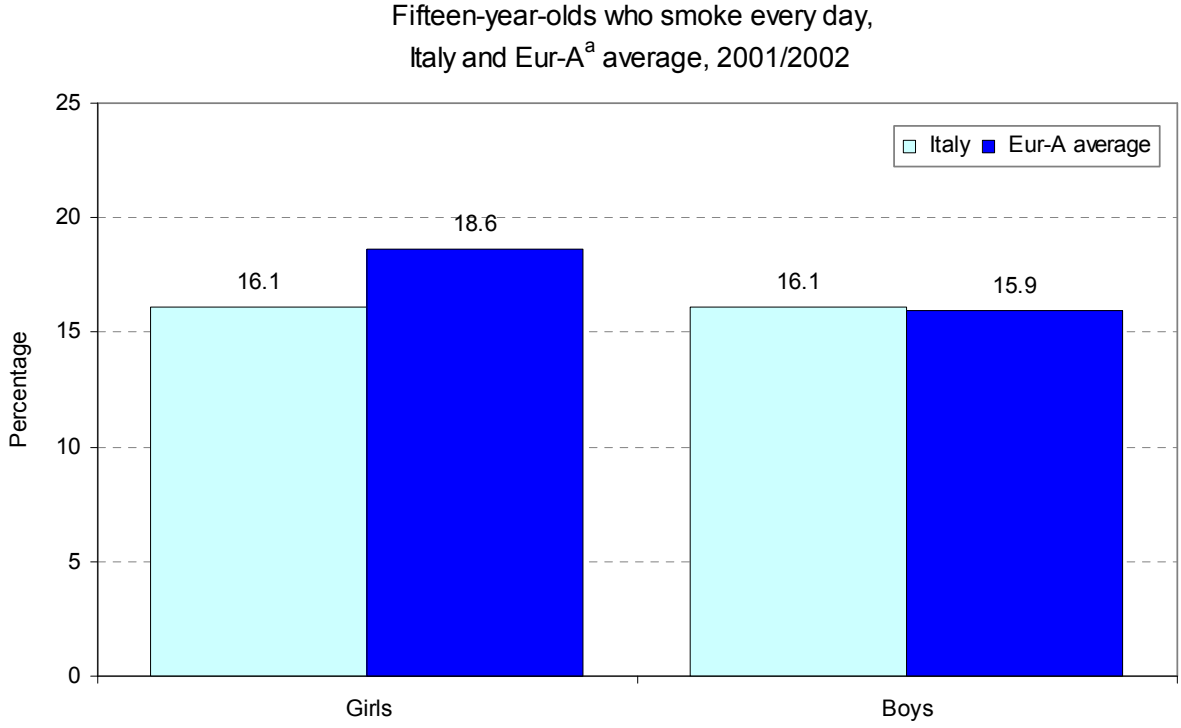


[a] Excluding Cyprus, Luxembourg and San Marino.

Between 1994 and 2001, however, surveys found that the prevalence of smoking among men and women had decreased. A survey of 15-year-olds in Italy in 2001–2002 found that the smoking prevalence among boys was about equivalent to the Eur-A average, whereas the prevalence among girls in Italy was below the Eur-A average.



Source: WHO Regional Office for Europe (2004f).



[a] Excluding Cyprus, Iceland, Luxembourg and San Marino.
Source: Currie et al. (2004).

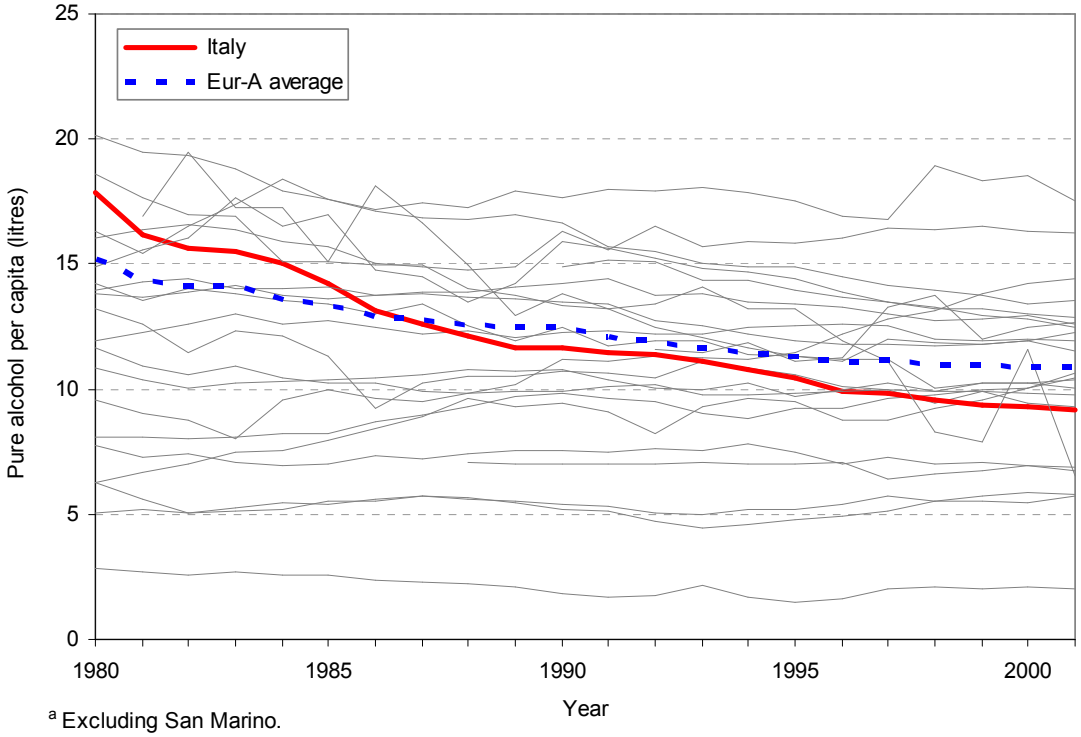
Alcohol

Two major public health issues are related to alcohol consumption: regular drinking of more than small amounts and harmful patterns such as binge drinking (when a person consumes a bottle of wine or equivalent on one occasion; or having five or more "standard" drinks in a row). Both practices cause or

aggravate health problems and increase the risks of injury to the drinker and others (European Commission, 2003).

In 2001, Italians consumed about 16% less alcohol per capita than the Eur-A average based on official statistics on local production, sales, imports and exports. (Not included is unrecorded consumption.) Since the late 1980s, consumption in Italy has dropped by 27%.

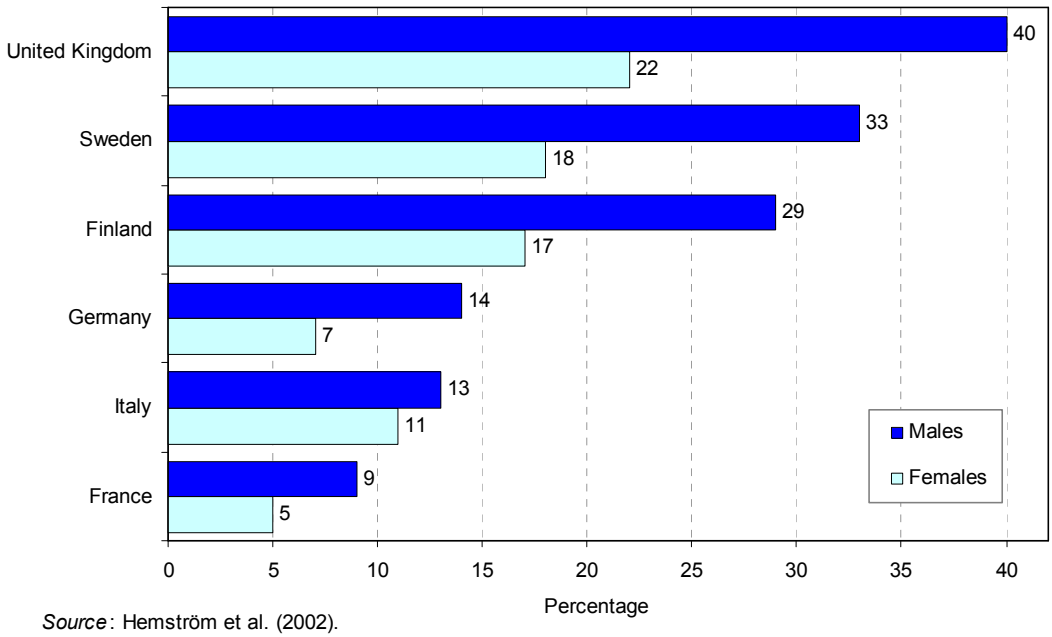
Alcohol consumption in the group aged 15+ years,
Italy and Eur-A[a], 1980 to latest available year



[a] Excluding San Marino.

Based on a small sample of countries, binge drinking in Italy occurs during less than 15% of drinking occasions among men and during just over 10% of drinking occasions among women.

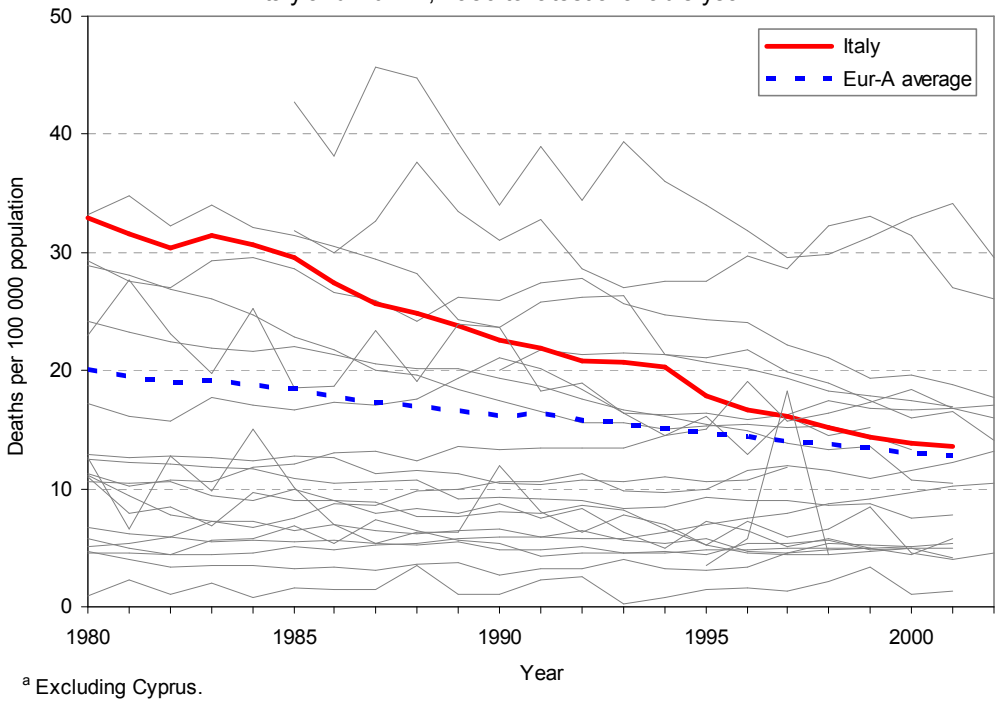
Binge drinking as a percentage of all drinking occasions in the past 12 months, selected countries in Eur-A, 2000



Source: Hemström et al. (2002).

Mortality from liver cirrhosis is the classic indicator of harm from chronic excessive drinking. Similar to pure alcohol consumption, Italy has a decreasing trend in deaths from chronic liver disease, following the pattern of the Eur-A, but remained above the Eur-A average by 7% in 2001. The rates are especially high in the older age groups. In 2001, people 60–74 years old in Italy had the seventh highest mortality for the condition in the Eur-A. Italian men in the age group had the seventh highest rate in the Eur-A and women the fourth highest. For those 75 years and older, Italians in general and Italian women had the highest overall mortality rates in the Eur-A for the age group.

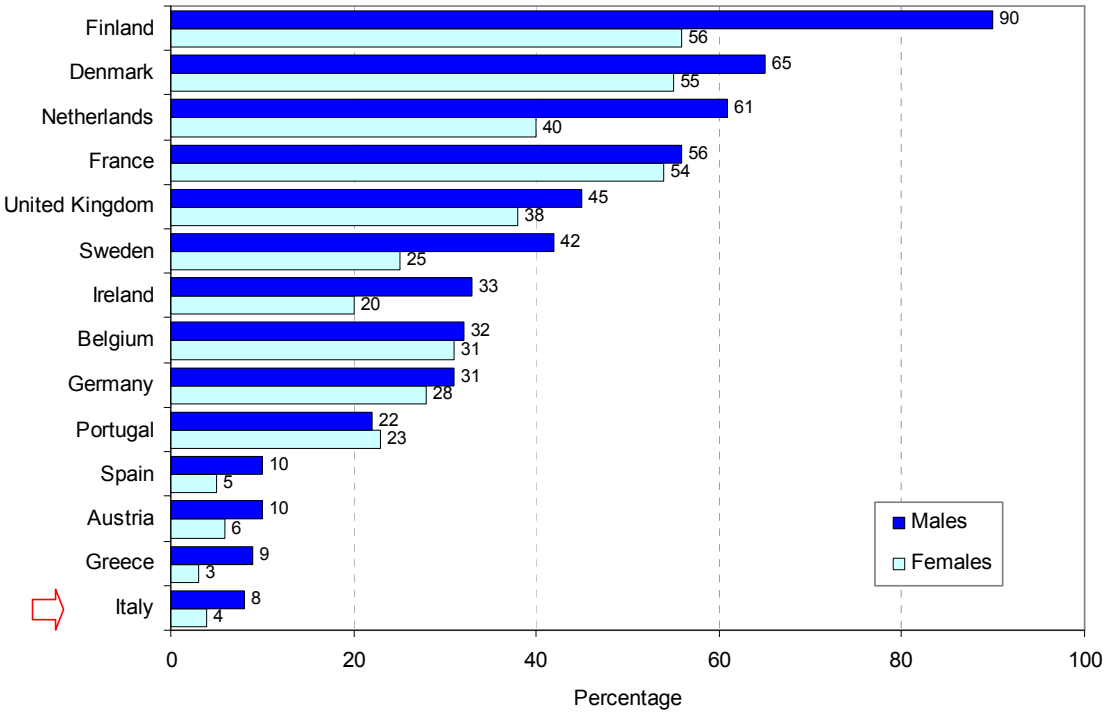
SDR for chronic liver disease and cirrhosis, all ages, both sexes
Italy and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Mortality due to cirrhosis explicitly caused by alcohol is another indicator of harm from alcohol, but variations in the coding of deaths classified as alcoholic cirrhosis make cross-country comparisons unreliable. The figure is therefore descriptive, showing where alcohol was the major risk factor in deaths due to cirrhosis in a particular country. In Italy, mortality noted as being due to alcoholic cirrhosis has been low.

Mortality from alcoholic liver cirrhosis as a percentage of total mortality from liver cirrhosis, selected countries in Eur-A, averages for 1987–1995

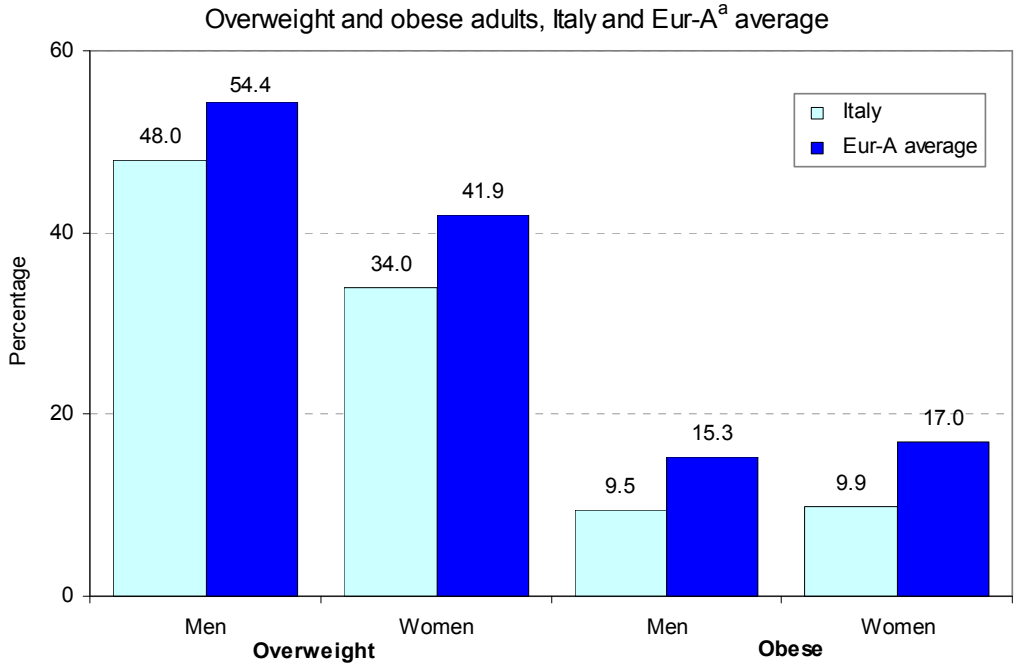


Note: Data for Germany refer to the territory of the Federal Republic of Germany as up to 3 October 1990.
Source: Hemström et al. (2002).

Excess weight

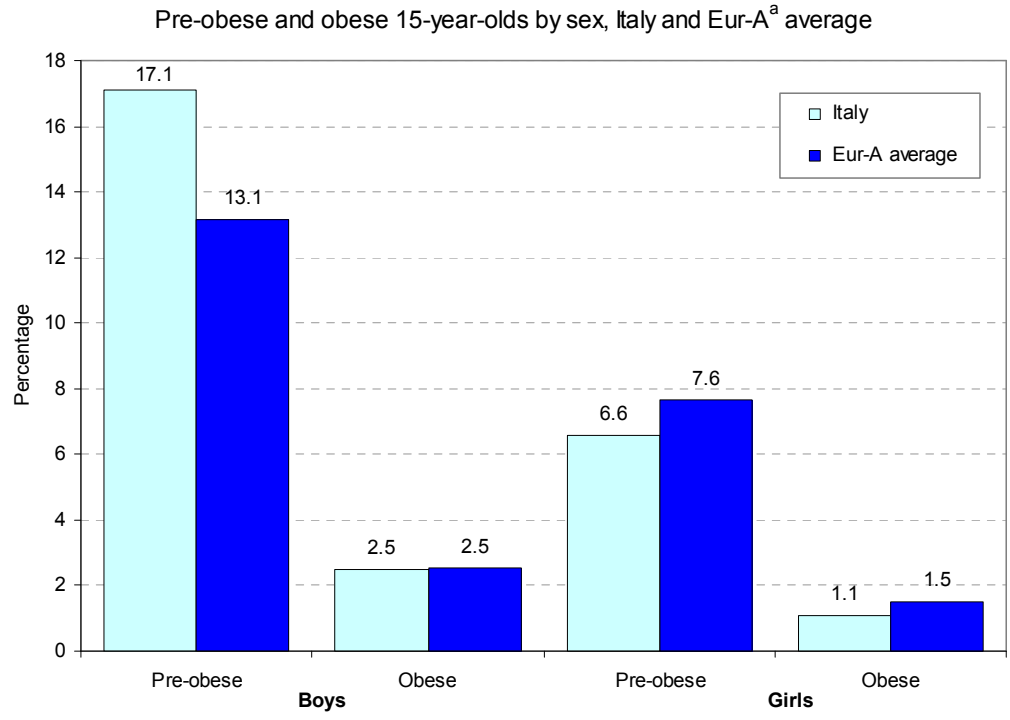
Studies have shown that excess weight contributes to CVD and cancer. In the 15 countries that comprised the European Union before May 2004, research suggests that the condition is responsible for 5% of all cancer cases (3% among men and 6% among women) and overall, almost 300 000 deaths annually (Banegas, 2002; Bergstrom et al., 2001). For children and adolescents, the main problem associated with excess weight, in particular, obesity, is its persistence into adult life and its association with the risk of diabetes and CVD (Stark et al., 1981).

According to the recommended body mass index (BMI), 48% of men and 34% of women in Italy are overweight (BMI of 25.0–29.9). About 10% of men as well as women are obese (BMI of 30+).



[a] Excluding Austria, Croatia, Cyprus, Iceland, Ireland, Luxembourg, San Marino and Slovenia.
Source: Robertson et al. (2004), the Danish Nutrition Council (2003) for data on Denmark and Israeli Center for Disease Control (2003) for data on Israel.

According to self-reported data on height and weight collected in schools, adjusted to correspond to adult BMI, about 17% of boys and 7% of girls aged 15 years in Italy are considered to be pre-obese, and 3% of boys and 1% of girls, obese.



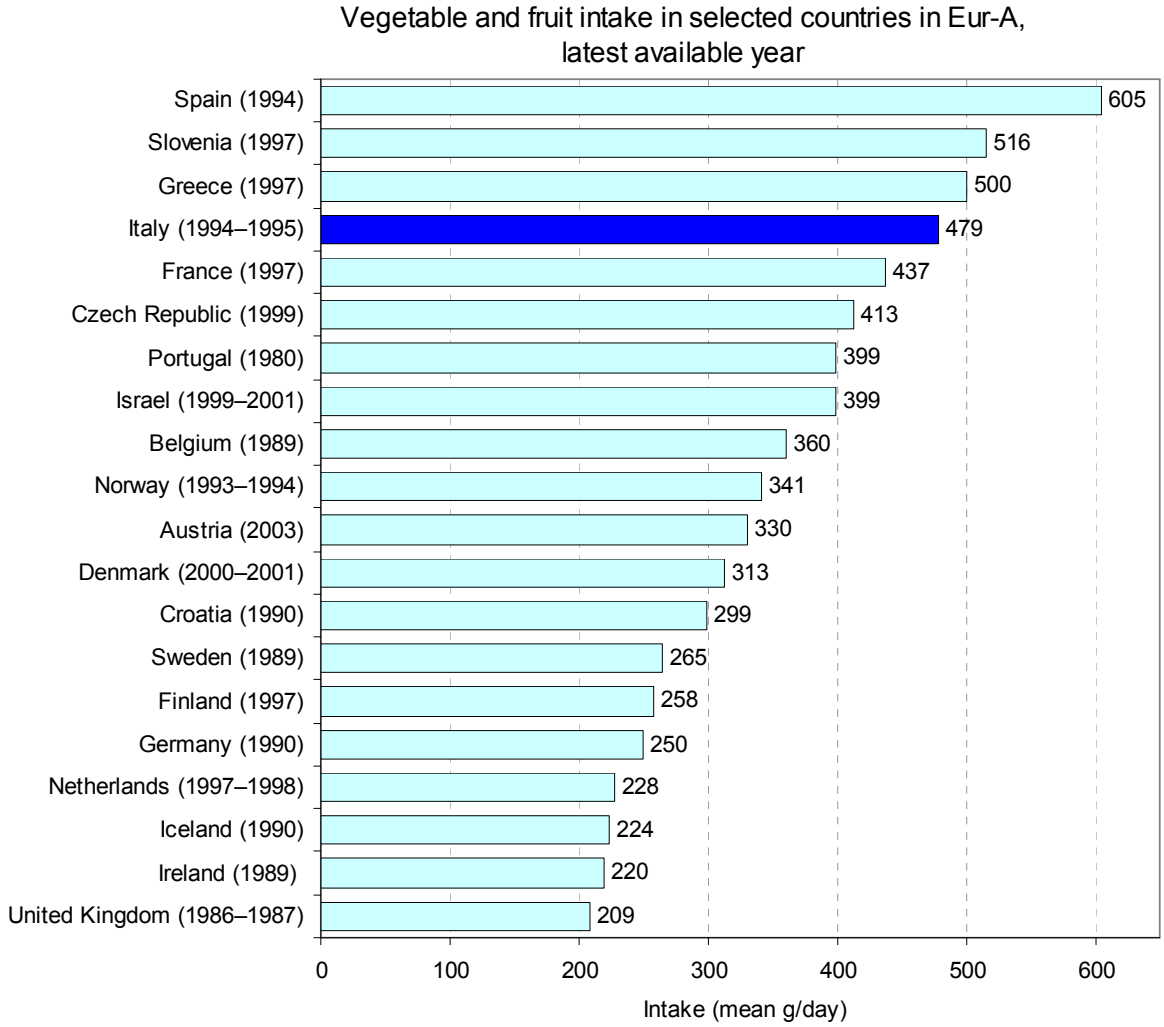
[a] Excluding Cyprus, Iceland, Luxembourg and San Marino.

Intake of fruits and vegetables

Both CVD and cancer have substantial dietary bases. Conservative estimates suggest that better eating habits could prevent about a third of CVD cases and a third of all cancer deaths worldwide (Robertson et al., 2004). Contributing risk factors are high blood pressure and serum cholesterol, overweight and obesity, and low intake of fruits and vegetables. For the large proportion of the population that does not smoke, diet is one of the most important modifiable determinants of cancer risk.

Low fruit and vegetable intake is estimated to cause around 18% of gastrointestinal cancer, about 28% of ischaemic heart disease and 18% of stroke in the European Region. WHO recommends an intake of more than 400 g fruits and vegetables per person per day. The average intake in Italy was 479 grams in 1994–1995.

Mean consumption, however, is a poor measure of the intake distribution within a population. Data for the countries comprising the European Union before May 2004 show that people with higher incomes typically eat more fruits and vegetables than those with lower incomes (Joffe & Robertson, 2001). In Mediterranean countries such as Italy, fruits and vegetables are generally more accessible.



Sources: WHO Regional Office for Europe (2004b), Robertson et al. (2004) for data on Germany, Greece, Ireland and Spain, IFEW (2003) for data on Austria, Danish Institute of Food and Veterinary Research (2004) for data on Denmark and Israeli Center for Disease Control (2003) for data on Israel.

Physical inactivity

WHO and other international and national agencies encourage at least 30 minutes of physical activity each day, defined as any body movement that results in energy expenditure. Promoting physical activity

is probably one of public health's most beneficial interventions, reducing the risk of several diseases and conditions, including CVD, non-insulin-dependent diabetes and obesity, and contributing to physical coordination, strength and mental well-being. It comprises more than sports – it is a cornerstone of a healthy lifestyle, integrated into the routines of everyday life. In Europe, more than 30% of adults do not meet the WHO recommendation for physical activity of 30 minutes daily (Racioppi et al., 2002).

A national survey in Italy in 1998 found that 34% of men and 46% of women 35–74 years old were sedentary, having no leisure time with physical activity (WHO, 2004a).

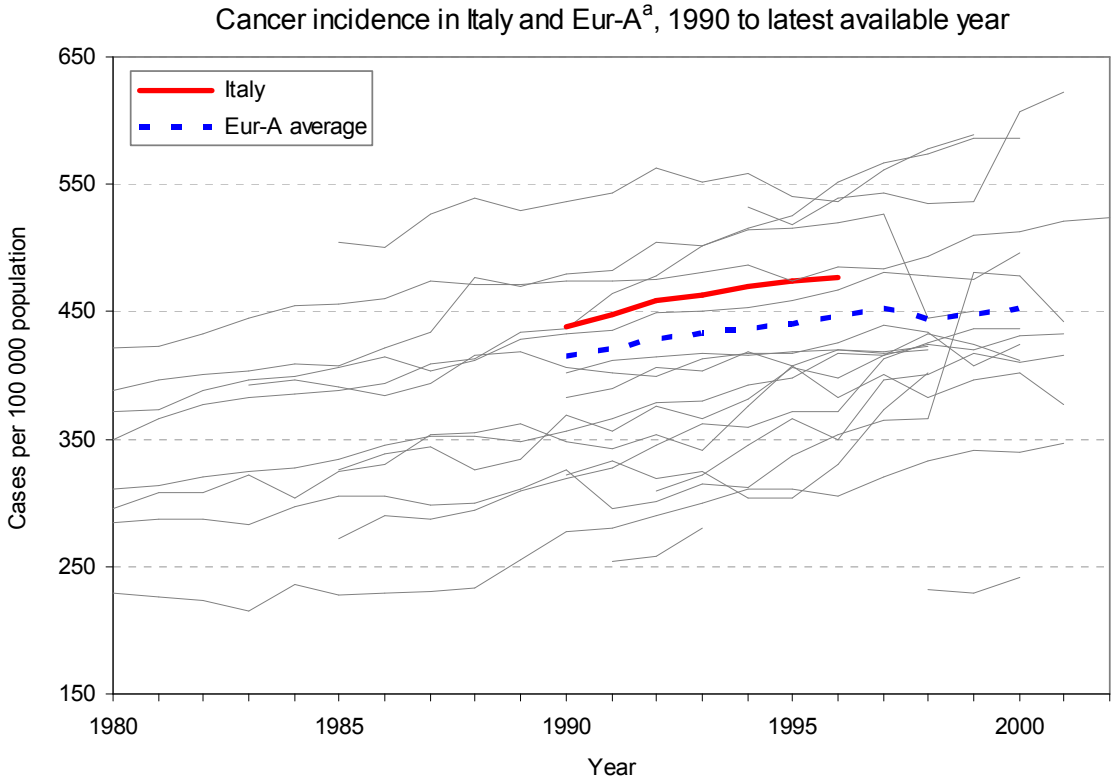
Selected causes of illness

Cancer

Cancer accounted for 31% of deaths in Italy in 2000. The combination of death and illness due to cancer, represented as DALYs (see table on disability groups), accounts for almost 19% of the disease burden among Italian men and 16% among women, among the highest proportions of burden assigned to cancer in the countries that comprised the European Union before May 2004. The mortality rate and the DALY indicator together show that the burden of cancer to the population at this point is mainly attributable to death rather than long-term illness.

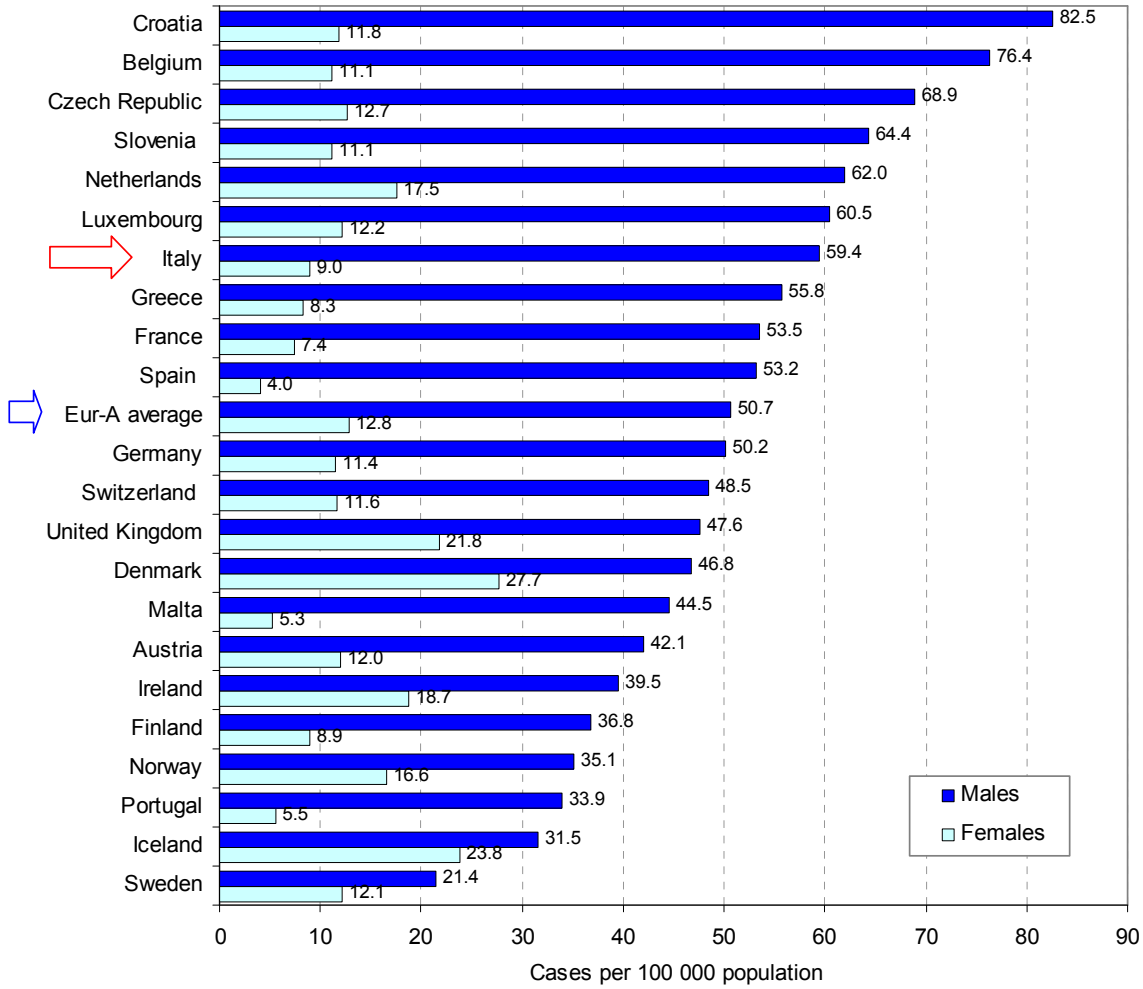
Lung cancer is the most common cancer in the Region and the world. The most important risk factor is tobacco (Tyczynski et al., 2002).

In 2000, the estimated lung cancer incidence among Italian men was the seventh highest in the Eur-A countries for which estimates were possible, 19% higher than the Eur-A average for men. The estimate for women in Italy was about 30% lower than the average estimate for women in the Eur-A.



[a] Excluding Greece, San Marino, Spain and Switzerland.

Estimated lung cancer incidence in Italy and Eur-A[a], 1997–2000



[a] Excluding Cyprus, Israel and San Marino.
Source: Tyczynski et al. (2002).

HIV

Increased trade and population movement within the European Region have facilitated the spread of infectious diseases. Surveillance of communicable diseases in western Europe remains incomplete, particularly testing for and reporting HIV. Data on newly diagnosed HIV infections and especially comparisons of rates in countries should be interpreted with caution (EuroHIV, 2003a, b).

In Italy, HIV reporting exists only in 6 of 20 regions and provinces, so analysing the HIV epidemic is difficult.

In 2000, the only year for which data are available for Italy, new HIV infections reported per 100 000 population were about 30% of the average rate for the Eur-A that year. For 2003, the estimated annual incidence of HIV is between 3500 and 4000 infections, with 35% of the cases being female and 20% among foreigners.

The most recent estimate for the cumulative number of people living with HIV/AIDS in Italy as of the end of 2003 is 120 000 (ranging between 110 000 and 130 000).

Early in the epidemic, the main route of transmission was through injecting drug use, but in recent years new infections have been predominantly transmitted sexually. About 40% of new HIV infections are attributed to heterosexual sex, 35% to injecting drug use and 20% to homosexual and bisexual sex. The rise in the incidence of heterosexual cases is mainly caused by an increase of imported cases from

countries with generalized epidemics. In 1994, just under 2% of AIDS cases in Italy were among non-Italian nationals versus about 20% in 2003 (UNAIDS & WHO, 2004).

Hepatitis C

Since the introduction of screening of blood and blood products for hepatitis C in the countries of the European Union before May 2004, transmission of the virus has fallen dramatically. Injecting drug users are now the group at greatest risk, accounting for up to 60–90% of new infections. Young and new injectors are at high risk of contracting the virus shortly after they begin injecting.

Wherever injecting drug use is likely to increase, new epidemics of hepatitis C are likely to emerge. Social exclusion is a factor in and a characteristic of the spread of infection (EMCDDA, 2004). Hepatitis C is predicted to have considerable long-term effects in terms of both health care spending and personal suffering.

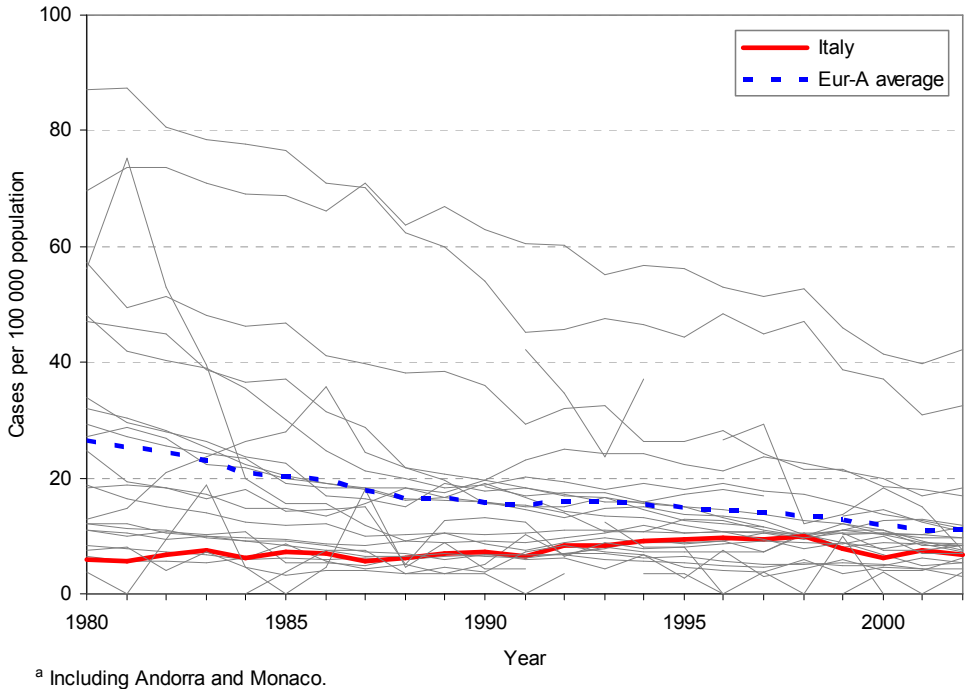
In Italy, testing in drug treatment centres in 10 regions between 1998 and 2000 found that almost 79% of injecting drug users were infected with hepatitis C (EMCDDA, 2003).

TB

Between 1995 and 2001, Tuberculosis (TB) notification rates decreased overall in western Europe. Drug resistance remains relatively low in reporting countries, indicating that TB control is in general effective (EuroTB, 2003). Higher rates are typically found in pockets of risk populations (such as immigrants and refugees from areas with high TB incidence) and among the indigenous poor, homeless people and prison inmates. Higher rates are also associated with HIV.

Italy has historically had lower rates of TB notification than the Eur-A average. But from 1990 until 1998, the rate for newly diagnosed cases increased due to outbreaks, whereas the trend in Eur-A was downward. The rate dropped in Italy between 1998 and 2000, increased in 2001 and then dropped again in 2002, remaining below the Eur-A average (6.8 versus 10.9 per 100 000 population respectively).

TB incidence in Italy and Eur-A[a], 1980 to latest available year



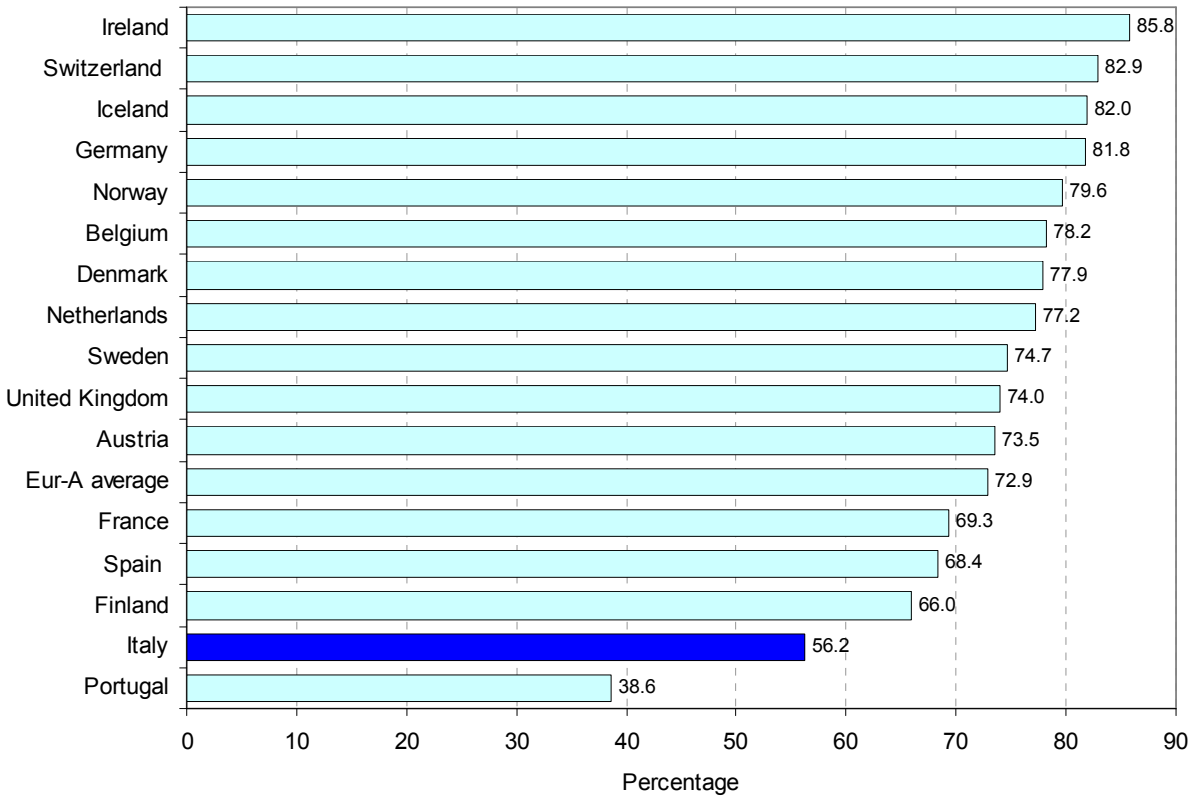
[a] Including Andorra and Monaco.

Self-reported health

People are usually well informed about their health status, the positive and negative effects of their behaviour on their health and their use of health care services. Yet their perceptions of their health can differ from what administrative and examination-based data show about levels of illness within populations. Thus, survey results based on self-reporting at the household level complement other data on health status and the use of services.

Self-reported health status in Italy showed that 56% of adults rated their health as being good or very good, the second lowest percentage to do so among the Eur-A countries where surveys were conducted.

People who perceive their health as good or very good, selected countries in Eur-A, 1997–2000



Sources: European Commission (2003) and Kasmel et al. (2004) for data on Finland.

Health system[1]

Organizational structure of the health system

In 1978, the National Health Service (NHS) was established. The NHS aims at granting universal access to a uniform level of care throughout the country, financed by general taxation. Universal coverage has been achieved, although regions widely differ in terms of health care and health expenditure, with a clear-cut north-south divide.

Pursuant to the 2001 reform of the Italian constitution, the state and the regions share responsibility for health care. The state has exclusive power to define the basic benefit package (livelli essenziali di assistenza – LEA), which must be uniformly provided throughout the country, and the 20 regions have responsibility for organizing and administering the health care system. Local health units (public health enterprises legally independent from the region) have responsibility for delivering health care services at the local level, serving geographical areas with average populations of about 300 000.

Health care financing and expenditure

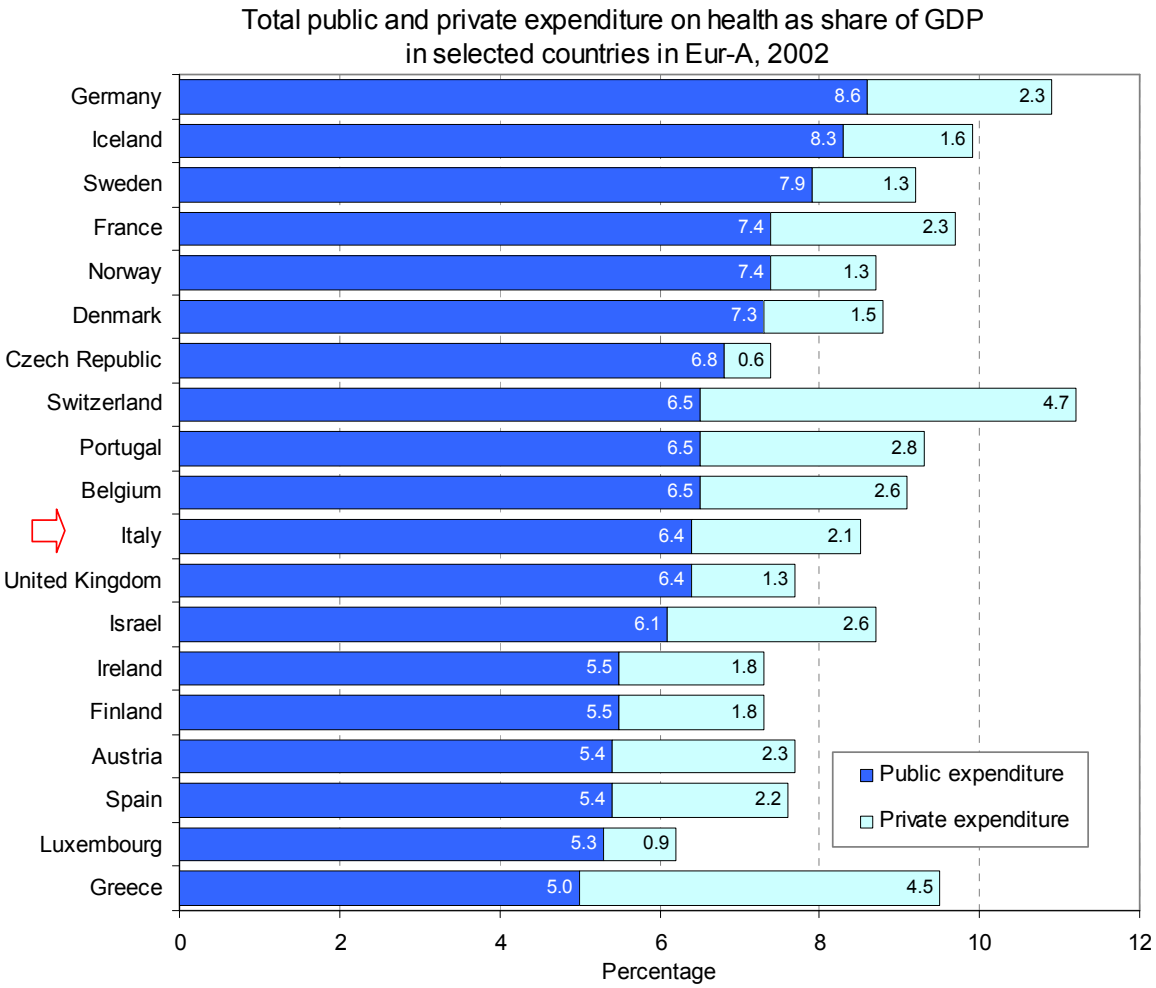
Although one of the principal tenets of the 1978 was a quick move toward progressive financing of the NHS, throughout the 1990s social health insurance contributions still represented more than 50% of total public financing. In 1998, a regional business tax replaced social contributions. This tax is supplemented by a national grant financed with revenues from the value-added tax to ensure adequate resources for each region.

Out-of-pocket payments refer to cost-sharing for public services, such as co-payments for diagnostic procedures, pharmaceuticals and specialist consultations. Since 1993, users had to pay for the cost of outpatient care up to a ceiling that has been set at €36 since 2000. Co-payments for drugs and ambulatory specialist services have a limited impact, however: they reached a peak of 4.8% of total NHS revenues in 1996, falling to 2.9% in 2002, after drug co-payments were abolished at the national level.

Further, users need to directly purchase private health care services and over-the-counter drugs. About 15% of the population has complementary private health insurance either individually subscribed or offered by employers.

In 2002 Italy's total expenditure on health amounted to 8.5% of GDP, representing per capita expenditure of US$ 2166 in purchasing power parity (Annex. Total expenditure on health). Public sources cover 75% of health expenditure. Private expenditure has risen since co-payment schemes were introduced, amounting to 25% in 2002.

[1] This section is based on publications of the European Observatory on Health Care Systems (2002a-c) and (Donatini et al., 2001).



Sources: OECD (2004b); data for Israel are 2001 estimates from WHO (2004b).

In 1997, a weighted capitation rate for the regional resource allocation was introduced that took into account the age structure and health status of the population. Based on a capitation formula, regions also transfer funds to the local health units.

Tertiary hospitals are provided the status of trusts, so that they enjoy expanded financial freedom. Public secondary hospitals are granted some financial autonomy but remain under the control of local health units. A prospective payment system for inpatient care based on diagnosis-related groups (excluding rehabilitation and long-term care) is in place, with the regions defining the tariffs. Hospital physicians are salaried employees.

General practitioners and paediatricians are independent contractors of the NHS mainly paid on a capitation basis. Reforms aimed at providing additional incentives for efficiency: income can be complemented by fees for specific treatments and financial rewards for effective cost containment.

Health care provision

Primary health care is provided by general practitioners and paediatricians, who are independent contractors of the NHS. They act as gatekeepers to secondary care.

Local health units are in charge of protecting and promoting public health mainly through disease prevention (especially immunization), health promotion and food control.

Specialized services are provided either directly by local health units or through contracted-out public (61%) and private (mainly not-for-profit) facilities accredited by local health units. The number of beds per 1000 population has decreased from 7.2 in 1990 to 4.0 in 2001.

Italy had 6.1 physicians per 1000 population in 2001, among the highest in western Europe. The number of nurses per 1000 population was 3.0 in 1989, among the lowest in the Eur-A (Annex. Selected health care resources).

Developments and issues

The inception of the Italian NHS in 1978 represented an ambitious, laudable effort to rationalize and expand public health care services. Due to mounting financial pressure and incomplete implementation, the initial reform aims were only partially achieved. The market-oriented reforms in 1992 and 1993 aimed at addressing some of the most pressing issues. The period 1997–2000 witnessed a series of radical and innovative changes, including the devolution of administrative and fiscal responsibilities to the regions. Challenges to be addressed deal with guaranteeing a basic benefit package free of user charges as well as uniform levels and quality of health care across the regions.

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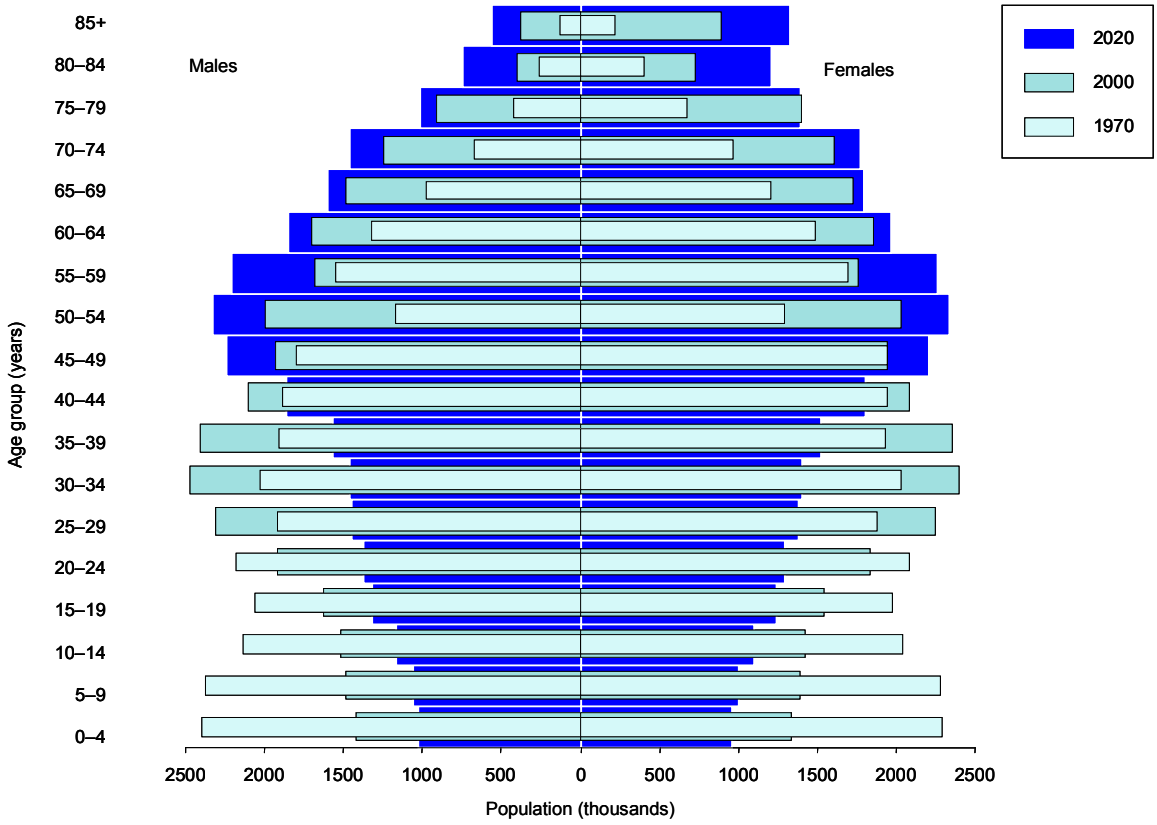
Annexes

Annex. Age pyramid



Sources: WHO Regional Office for Europe (2004c) and United Nations (2002).

Annex. Selected mortality

Selected mortality in Italy compared with Eur-A averages

Condition	SDR per 100 000		Excess mortality in Italy (%)	Total deaths in Italy (%)	Total deaths in Eur-A (%)
	Italy (2001)	Eur-A average (2001)			
Selected noncommunicable conditions	467.0	519.5	– 10.1	81.0	79.9
Cardiovascular diseases	221.5	246.3	– 10.0	38.4	37.9
Ischaemic heart disease	70.9	97.3	– 27.1	12.3	15.0
Cerebrovascular disease	59.4	62.0	– 4.2	10.3	9.5
Diseases of pulmonary circulation and other heart disease	58.7	57.0	3.0	10.2	8.8
Malignant neoplasms	178.1	181.8	– 2.1	30.9	28.0
Trachea/bronchus/lung	37.4	37.0	1.2	6.5	5.7
Female breast	25.5	27.1	– 5.9	4.4	4.2
Colon/rectal/anal	18.4	20.7	– 11.1	3.2	3.2
Prostate	17.9	25.0	– 28.6	3.1	3.8
Respiratory diseases	31.3	47.7	– 34.5	5.4	7.3
Chronic lower respiratory diseases	15.9	20.0	– 20.7	2.8	3.1
Pneumonia	7.6	16.5	– 53.9	1.3	2.5
Digestive diseases	27.0	30.7	– 12.1	4.7	4.7
Chronic liver disease and cirrhosis	13.6	12.8	6.8	2.4	2.0
Neuropsychiatric disorders	9.2	13.0	– 29.4	1.6	2.0
					0.0
Selected communicable conditions	4.2	8.1	– 48.2	0.7	1.2
HIV/AIDS	0.0	0.9	– 100.0	– 0.0	0.1
External causes	34.3	39.5	– 13.1	6.0	6.1
Selected unintentional causes	21.4	16.1	33.2	3.7	2.5
Motor vehicle traffic injuries	11.8	10.0	18.2	2.0	1.5
Falls	9.6	6.1	57.8	1.7	0.9
Selected intentional causes	6.8	11.4	– 40.1	1.2	1.8
Self-inflicted (suicide)	5.9	10.5	– 43.3	1.0	1.6
Violence (homicide)	0.9	1.0	– 5.2	0.2	0.1
Ill-defined conditions	7.2	21.3	– 66.4	1.2	3.3
All causes	576.3	650.1	– 11.3	100.0	100.0

Annex. Mortality data

Table 1. Selected mortality data for the group aged 1–14 years by sex in Italy and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Italy (2001)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	Both	15.2	– 30.1	17.0	– 20.4	12.9	28.2
	M	17.4	– 29.0	19.2	– 20.3	12.6	32.2
	F	12.9	– 31.7	14.8	– 20.4	4.9	24.1
Cardiovascular diseases	M	1.6	– 31.9	0.9	– 26.0		1.8
	F	1.6	– 49.7	1.0	– 21.8		1.6
Ischaemic heart disease	M				– 75.0		0.6
	F				– 66.7		0.2
Cerebrovascular disease	M	0.1	– 77.4	0.2	– 44.4		0.4
	F	0.3	– 66.3	0.2	– 39.4		0.7
Malignant neoplasms	M	3.9	– 24.9	3.3	– 15.4		5.1
	F	2.8	– 19.2	2.7	– 10.4		4.9
Lung cancer	M				– 80.0		0.2
	F						0.3
Breast cancer	F				– 100.0		0.1
Respiratory diseases	M	0.9	– 28.9	0.8	– 13.7		3.0
	F	0.6	– 41.1	0.7	– 11.9		2.4
Digestive diseases	M	0.2	– 61.4	0.3	– 21.6		0.7
	F	0.2	– 51.1	0.2	– 25.0		2.6
External causes	M	5.0	– 33.6	6.4	– 30.7	3.5	20.3
	F	2.7	– 22.9	4.0	– 24.3		7.0
Motor vehicle traffic injuries	M	2.7	– 36.8	2.7	– 30.3		8.0
	F	1.5	– 14.5	1.8	– 29.3		4.1
Suicide	M	0.3	– 21.2	0.4	– 11.9		0.7
	F	0.1		0.1	0.0		0.6

NA = not applicable. Blank = rate < 0.1

Table 2. Selected mortality data for the group aged 15–24 years by sex in Italy and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Italy (2001)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	50.7	– 14.0	53.1	– 13.2	37.4	69.7
	M	75.8	– 15.4	77.8	– 13.0	59.4	110.2
	F	24.6	– 9.5	27.7	– 13.2	13.9	34.8
Cardiovascular diseases	M	4.0	– 20.6	3.3	– 12.1		5.7
	F	1.9	– 1.5	1.8	– 13.1		2.9
Ischaemic heart disease	M	0.3	3.2	0.3	– 15.0		1.6
	F	0.1	– 52.6	0.1	– 7.7		0.7
Cerebrovascular disease	M	0.6	– 35.5	0.7	– 13.6		1.4
	F	0.4	– 30.5	0.4	– 24.1		1.4
Malignant neoplasms	M	6.3	– 13.4	5.4	– 7.9		15.5
	F	4.3	– 4.3	3.7	– 7.9		7.0
Lung cancer	M	0.1	– 14.3	0.1	– 50.0		0.3
	F			0.0	– 33.3		0.3
Breast cancer	F			0.1	– 16.7		0.3
Respiratory diseases	M	0.8	– 44.9	1.1	– 25.7		4.5
	F	0.5	– 22.9	0.8	– 18.8		2.0
Digestive diseases	M	0.4	– 57.6	0.5	– 28.8		1.2
	F	0.3	– 41.7	0.3	– 30.4		1.1
External causes	M	53.2	– 9.4	54.9	– 12.0	33.0	96.5
	F	12.4	– 8.7	14.3	– 14.8	6.9	23.5
Motor vehicle traffic injuries	M	35.7	– 7.6	30.2	– 9.3	14.9	71.1
	F	8.7	– 2.9	8.1	– 10.7	2.6	14.3
Suicide	M	6.4	– 8.5	11.2	– 11.5		36.7
	F	1.3	– 17.0	2.5	– 24.3		7.5

NA = not applicable. Blank = rate < 0.1

Table 3. Selected mortality data for the group aged 25–64 years by sex in Italy and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Italy (2001)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	260.0	– 17.0	315.4	– 13.1	218.8	449.7
	M	351.3	– 18.6	425.4	– 14.3	276.0	661.7
	F	172.8	– 14.1	208.4	– 11.0	128.0	322.5
Cardiovascular diseases	M	91.3	– 18.7	110.6	– 20.8	72.2	225.0
	F	31.9	– 20.9	38.2	– 21.3	23.4	74.7
Ischaemic heart disease	M	41.5	– 26.4	59.8	– 24.6	35.2	108.6
	F	8.6	– 27.6	13.6	– 28.0	5.4	28.6
Cerebrovascular disease	M	14.6	– 24.9	17.4	– 22.0	7.5	56.6
	F	8.7	– 25.0	10.5	– 20.2	5.2	27.0
Malignant neoplasms	M	139.9	– 14.1	148.8	– 9.8	91.0	217.2
	F	93.1	– 8.1	102.4	– 7.7	76.1	155.2
Lung cancer	M	42.3	– 20.6	43.9	– 12.8	18.5	71.0
	F	9.6	10.5	13.3	11.7	6.9	32.8
Breast cancer	F	25.9	– 13.6	27.5	– 14.3	14.7	37.2
Respiratory diseases	M	8.7	– 21.2	15.8	– 19.2	8.5	29.7
	F	3.7	– 11.1	7.9	– 12.3	3.7	22.6
Digestive diseases	M	23.1	– 23.6	31.8	– 9.6	3.1	67.0
	F	8.9	– 24.3	13.4	– 7.5	4.2	26.2
External causes	M	46.4	– 6.7	59.9	– 10.5	28.2	120.7
	F	12.3	– 9.0	17.8	– 10.6		33.1
Motor vehicle traffic injuries	M	19.5	5.3	15.8	– 7.8	6.5	34.0
	F	4.9	– 8.9	4.3	– 14.4		7.4
Suicide	M	11.4	– 11.0	21.2	– 9.0	6.6	56.4
	F	3.6	– 13.0	6.8	– 11.1		15.8

NA = not applicable. Blank = rate < 0.1

Table 4. Selected mortality data for the group aged 65+ years by sex in Italy and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Italy (2001)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	3825.6	– 11.9	4199.5	– 11.5	3714.4	6010.0
	M	4931.9	– 11.4	5328.5	– 13.2	4658.1	7580.8
	F	3089.1	– 12.2	3460.2	– 11.5	2937.7	5088.6
Cardiovascular diseases	M	2051.2	– 17.0	2232.9	– 23.4	1614.4	4272.2
	F	1481.7	– 18.2	1613.4	– 21.7	1027.5	3314.3
Ischaemic heart disease	M	710.2	– 16.5	948.2	– 20.3	517.5	1702.7
	F	402.1	– 16.5	539.5	– 17.4	244.7	1084.7
Cerebrovascular disease	M	543.1	– 18.9	536.2	– 35.9	324.8	1302.3
	F	442.4	– 20.9	457.0	– 32.6	170.4	1018.5
Malignant neoplasms	M	1525.0	– 2.7	1482.9	– 12.1	1175.1	1900.6
	F	725.4	– 1.3	749.8	– 9.4	589.1	1088.5
Lung cancer	M	427.6	– 4.9	371.8	– 22.0	196.0	615.4
	F	68.8	7.3	81.7	15.6	13.8	213.2
Breast cancer	F	107.0	– 4.0	113.9	– 10.1	83.3	164.1
Respiratory diseases	M	414.7	– 16.5	545.9	– 13.6	371.8	1115.6
	F	157.9	– 11.7	266.5	– 13.9	157.9	716.3
Digestive diseases	M	211.2	– 17.1	205.0	– 10.5	117.8	342.9
	F	137.6	– 15.8	143.3	– 20.3	77.8	196.0
External causes	M	151.7	– 12.1	152.6	2.0	80.6	282.8
	F	98.8	– 17.5	91.0	0.7	41.3	157.3
Motor vehicle traffic injuries	M	27.4	– 25.0	20.4	– 15.3	8.7	46.0
	F	8.1	– 25.0	7.9	5.4	0.0	15.5
Suicide	M	23.3	– 21.8	34.3	– 13.5	8.8	86.1
	F	5.8	– 24.5	9.9	– 17.6	1.1	23.6

Annex. Total expenditure on health per capita

Total public and private expenditure on health per capita, in selected countries in Eur-A, 2002

Country	Expenditure (US$ purchasing power parity)
Austria	2220
Belgium	2515
Czech Republic	1118
Denmark	2580
Finland	1943
France	2736
Germany	2817
Greece	1814
Iceland	2807
Ireland	2367
Israel	1622
Italy	2166
Luxembourg	3065
Netherlands	2643
Norway	3083
Portugal	1702
Spain	1646
Sweden	2517
Switzerland	3445
United Kingdom	2160
Eur-A average	2348

Sources: OECD (2004b) and WHO Regional Office for Europe (2004c) for 2001 data on Israel.

Annex. Selected health care resources

Selected health care resources per 100 000 population in Eur-A, latest available year

Eur-A	Nurses		Physicians		Acute hospital beds	
	Number	Year	Number	Year	Number	Year
Andorra	316.1	2002	304.2	2002	283.2	2002
Austria	587.4	2001	332.8	2002	609.5	2002
Belgium	1075.1	1996	447.8	2002	582.9	2001
Croatia	501.6	2002	238.3	2002	367.3	2002
Cyprus	422.5	2001	262.3	2001	406.6	2001
Czech Republic	971.1	2002	350.5	2002	631.3	2002
Denmark	967.1	2002	364.6	2002	340.2	2001
Finland	2166.3	2002	316.2	2002	229.9	2002
France	688.6	2002	333.0	2002	396.7	2001
Germany	973.1	2001	335.6	2002	627.0	2001
Greece	256.5	1992	453.3	2001	397.1	2000
Iceland	898.2	2002	363.6	2002	368.2	1996
Ireland	1676.2	2000	238.3	2001	299.5	2002
Israel	598.4	2002	371.3	2002	218.0	2002
Italy	296.2	1989	612.1	2001	397.9	2001
Luxembourg	779.3	2002	259.3	2002	558.7	2002
Malta	551.1	2002	267.2	2002	348.8	2002
Monaco	1621.4	1995	664.3	1995	1553.6	1995
Netherlands	1328.2	2001	314.9	2002	307.4	2001
Norway	2055.7	2001	364.5	2002	308.9	2001
Portugal	384.0	2001	322.9	2001	330.8	1998
San Marino	507.7	1990	251.7	1990	–	–
Slovenia	717.9	2002	224.2	2002	414.3	2002
Spain	367.2	2000	324.3	2000	296.4	1997
Sweden	975.1	2000	304.1	2000	228.3	2002
Switzerland	830.0	2000	361.6	2002	398.3	2002
United Kingdom	497.2	1989	210.0	2002	390.0	2002
Eur-A average	819.8	2001	354.1	2002	409.6	2001

Sources: WHO Regional Office for Europe (2004c) and OECD (2004b) for data on physicians and acute hospital beds for the United Kingdom.

Technical notes

Calculation of averages

In general, the average annual or ten-year percentage changes have been estimated using linear regression. This gives a clearer indication of the underlying changes than estimates based on the more straightforward percentage change between two fixed points over a period.

To smooth out fluctuations in annual rates caused by small numbers, three-year averages have been used, as appropriate. For example, maternal mortality, usually a small number, has three-year moving averages calculated for all countries.

Data sources

To make the comparisons as valid as possible, data for each indicator have, as a rule, been taken from one common international source or from the Statistical Office of the European Communities (EUROSTAT) to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data for figures and tables is the January 2004 version of the WHO Regional Office for Europe's European health for all database.

Disease coding

Case ascertainment, recording and classification practices (using the ninth and tenth revisions of the International Statistical Classification of Diseases and Related Health Problems: ICD9 and ICD10, respectively), along with culture and language, can influence data and therefore comparability across countries.

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

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

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

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

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

Household surveys

Household surveys are currently the only source of evidence of health status at the individual level. The information generated is subjective and self reported. It complements the official aggregated statistics on death rates, life expectancy and morbidity. Tools are available for both designing the surveys and analytically estimating health, adjusted for differences in cultural norms and expectations of health, so that survey results become comparable across populations and groups.

Limitations of national-level data

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

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[1] *The world health report 2003 – Shaping the future.* Geneva, World Health Organization, 2003 (http://www.who.int/whr/2003/en/, accessed 25 May 2004).

Ranking

A special case of comparison gives each country 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 (as in the table at the start of the section on health status), ranking can hide important absolute changes in the level of an individual country. Graphs have usually been used to show time trends from 1970 onwards. These graphs present the trends for all the reference countries and for the EU-15, as appropriate. Only the country in focus and the appropriate group average are highlighted, and identified in the legend. This enables the country's trends to be followed in relation to those of all the reference countries, and performance in relation to observable clusters and/or the main trend or average to be recognized more easily.

Reference groups for comparison

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

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

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

The fifteen-member EU (EU-15) is the reference group comprising Austria, Belgium, Denmark, Germany, Greece, Finland, France, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

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

Glossary

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

Technical terminology

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

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