

1. Introduction

1.1 Geography and sociodemography

Turkey is located in the northern hemisphere and bridges Europe and Asia. The bordering countries are Greece and Bulgaria to the north-west, Georgia and Armenia to the north-east, the Islamic Republic of Iran in the east and the Syrian Arab Republic and Iraq in the south-east (Fig. 1.1). The country is surrounded by the Aegean Sea to the west, the Black Sea to the north and the Mediterranean Sea to the south. The Marmara Sea, with its passages in Çanakkale Straits (Dardanelles) and Bosphorus, connects the Aegean Sea to the Black Sea.

Fig. 1.1

Map of Turkey



Source: CIA, 2007.

In general, the country is mountainous with plateaus in central Anatolia. Turkey has a Mediterranean climate, although there are regional variations. In the western and southern parts of the country, summers are hot and winters are mild, whereas in the rest of the country winters are cold and summers are hot. The northern part of the country is an exception with mild winters and summers.

Turkey carried out the last de facto census in 2000. In 2006, the Turkish Statistical Institute (TURKSTAT (*Türkiye İstatistik Kurumu*)) introduced the “Population Record System Based on Addresses”, which updates population data based on place of residence, and started to collect such data annually on a *de jure* basis.² As the system is based on citizenship numbers, population movements can be detected and revised systematically. In 2010, the Turkish population was declared to be just over 73 million, with the female population making up 49.9% of the total population. The age dependency ratio was 48.9 (Table 1.1).

Table 1.1
Population/demographic indicators 1970–2010 (selected years)

	1970	1980	1990	2000	2004	2005	2006	2007	2008	2009	2010
Population (mid-year, thousands)	35 321	44 439	55 120 ^a	64 252	67 723	68 566	69 395	70 215	71 095	72 050	73 003
Females (% total population)	49.4	49.3	49.3	49.3	49.6 ^a	49.6 ^a	49.6 ^a	49.9 ^a	49.8	49.9	49.9
Population < 15 years (%)	35.0	29.8	34.9	29.8	28.8 ^b	28.4 ^b	28.1 ^b	26.4	26.3	26.3	26.0
Population 65+ years (%)	4.3	5.7	4.3 ^b	5.7	5.7 ^b	5.9 ^b	6.0 ^b	7.1	6.8	6.9	6.9
Population growth (%)	25.0	24.9	17.0	13.8	12.4	12.2	11.9	11.7	13.4	13.3	13.0
Population density (per km ²)	43.4	54.6	67.7	78.9	83.2	84.2	85.2	86.2	87.3	88.5	89.7
Fertility rate (total births per woman)	4.90 ^c	3.40	2.93	2.38	2.23	2.20	2.17	2.15	2.14	2.12	2.11
Crude birth rate (per 1 000 population)	34.5 ^b	30.8 ^b	24.1 ^d	20.3 ^d	19.0 ^d	18.7 ^d	18.4 ^d	18.0	17.9	17.8	17.5
Crude death rate (per 1 000 population)	11.6 ^b	9.0 ^b	7.1 ^d	6.6 ^d	6.4 ^d	6.4 ^d	6.3 ^d	6.4	6.4	6.3	6.3
Age dependency ratio	85.9	78.1	64.7	55.1	52.8 ^a	52.3 ^a	52.6 ^a	50.4	49.5	49.2	48.9
% population urban	28.7 ^b	35.9 ^b	51.3	59.2	60.3 ^b	62.1 ^b	62.7 ^b	67.5	69.2	70.1	71.0
Literacy rate (%) in population aged 15+ years	56.2	67.5	80.5	87.3	87.4 ^d	88.1 ^d	88.1 ^d	88.7 ^c	89.1	n/a	n/a

Sources: TURKSTAT, 2010b; Specific data: ^aOECD, 2009; ^bTURKSTAT, 2010a; ^cWHO Regional Office for Europe, 2010; ^dTURKSTAT, 2010c.

Notes: The age dependency ratio is the ratio of the combined child population (aged 0–14) and the elderly population (aged 65+) to the working age population (aged 15–64); n/a: Data not available.

² TURKSTAT first undertook a comprehensive address identification process throughout the country and compiled an address database. After this, all addresses were visited and the citizenship numbers of residents at those addresses were added to the database. A citizenship number is issued at birth and acts as an ID number. The number is issued only to Turkish nationals.

As can be seen from Table 1.1, the population growth rate has declined since the 1980s, although the rate is still high compared with European levels. While the ratio of younger people is high in Turkey, owing to the comparatively higher population growth rate, the number of elderly people is also increasing, a tendency reflected in the high age dependency ratio. Currently, the dynamic nature of the population is seen as a window of opportunity, particularly for social security policies. According to the latest OECD and International Bank for Reconstruction and Development (IBRD)/World Bank report (OECD & IBRD/World Bank, 2008), Turkey is facing more favourable demographic prospects than most other OECD countries over the next 25 years. The report states that, according to United Nations population projections, the proportion of the population of working age (15–65) will increase from 66% of the total in 2005 to 69% in 2030. This means that the number of contributors to the social security system will increase, and this can be regarded as an asset for the sustainability of the system. However, this advantage very much depends on economic development over the next two decades, as the increased number of people of working age can only be an asset if the phenomenon is accompanied by conditions that allow this group to join the workforce. Without high and sustainable economic growth rates, this demographic trend may manifest into high unemployment rates, low national income per capita and social unrest in the long run.

The OECD and IBRD/World Bank report (2008) also focuses on the ageing population and states that the population over 65 years will double from 5% to 11% in 2030. Although lower than the OECD average (14%), there still will be increased cost pressures on the health care system because of the ageing population. Table 1.1 also shows that the percentage of people living in urban areas has increased over time. According to 2010 figures, 71% of the population live in urban areas and 36.2% live in Turkey's five biggest cities; Istanbul alone is home to 18% of the population. The urbanization rates in Turkey should be treated cautiously because of the high migration rates from villages to cities and from the east to the west of the country. The literacy rate has steadily increased since 1970 but it is still below the average figures for European countries. The government and nongovernmental organizations (NGOs) have initiated programmes in the last 10 years to address this issue.

The official language of the Republic of Turkey is Turkish but people in different parts of the country speak other languages, such as Kurdish and Laz, in social life. The majority (more than 99%) of the population is Muslim. Constitutionally, Turkey is a secular country where no religious interference is allowed in the state's official structures, laws and regulations.

1.2 Economic context

Turkey's gross domestic product (GDP) per capita was US\$ 13 598 purchasing power parity (PPP) in 2008 (Table 2.1), the lowest among OECD countries (OECD & IBRD/World Bank, 2008; OECD, 2008b). Since the late 1990s, the country has experienced two major economic crises that severely slowed the pace of development. A high inflation rate, unemployment, internal and external debts and both long-term and short-term instability characterized the 1980s, 1990s and early 2000s. The beginning of the 1980s can be regarded as a turning point for the Turkish economy, when a radical ideological change occurred in line with global trends, emphasizing a liberalized economy; prior to this, a closed economy, distinguished by the substitution of imports by internally manufactured goods, was in place.

The period until the last economic crisis in 2001 was marked by high and increasing public deficits, high interest rates, high inflation and increasing public sector borrowing requirements. External factors, such as the Asian crises and the dissolution of the Russian Federation, coupled with rising prices for crude oil and natural gas, and unfavourable exchange rates in the international arena, fuelled the crisis in the already weak and vulnerable Turkish economy. In April 2001, following severe economic turmoil, a new recovery programme was adopted with the IMF. The basic principles of this programme were tight fiscal and monetary policies and flexible exchange rates. The government's strong commitment and the impetus provided by the commencement of accession talks with the European Union (EU) accelerated the recovery process. The last few years have witnessed a considerable recovery in economic indicators, with support from the relatively stable political environment. In 2003, after a long period of hung parliaments, a single-party government took office, with a strong commitment to introducing structural and economic reforms and to becoming a member of the EU. Following the 2001 crisis, during 2002–2004, average annual growth reached 8%. For the first time in 35 years, inflation declined to single digits (9.3% in 2004) (Ministry of Finance, 2011), leading to a reduction in interest rates as well. Since the late 1990s, despite the economic instability experienced in earlier years, the Turkish economy has grown substantially. As can be seen from Table 1.2, GDP increased four-fold between 2000 and 2008. However, the most recent global crisis of 2008 has also shown that there are still weaknesses in the economy, with Turkey's economic performance having been severely affected. The economic growth rate declined to 0.7% in 2008 and 4.8% in 2009 from 6.9% in 2006. However, the economic growth rate increased to 8.9% in 2010 during the recovery period from the global economic

Table 1.2
Macroeconomic indicators, 1990–2010 (selected years)

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP (1 000 YTL) ^a	393	7 762	166 658	240 224	350 476	454 781	559 033	648 932	758 391	843 178	950 098	952 558	1 103 749
GDP (US\$, PPP) ^a	322 832	426 695	588 553	561 159	572 094	588 070	688 850	781 243	881 098	960 256	969 488	943 127	1 103 749
GDP (US\$ per capita) ^a	2 681	3 379	3 924	2 857	3 349	4 317	5 494	6 720	7 268	9 333	11 463	8 479	10 028
GDP (US\$ per capita, PPP) ^a	5 749	6 908	9 160	8 616	8 667	8 794	10 169	11 391	12 692	13 669	13 598	14 106	15 258
Annual GDP growth (%) ^a	9.2	6.7	6.8	-5.7	6.2	5.3	9.4	8.4	6.9	4.6	1.1	0.2	15.9
Short-term debt outstanding (current US\$) ^b	9 500	15 701	28 301	16 403	16 424	23 013	31 880	37 103	40 354	41 747	51 793	49 577	54 472
Value added in industry (% of GDP) ^a	25.0	25.8	24.6	23.8	23.2	23.5	23.0	23.0	22.9	22.3	21.9 (6 months)	n/a	n/a
Value added in agriculture (% of GDP) ^a	17.0	15.0	10.7	9.4	11.4	11.1	10.7	10.6	9.4	8.5	8.5 (6 months)	n/a	n/a
Value added in services (% of GDP) ^a	58.0	59.2	64.7	66.8	65.4	65.4	66.3	66.4	67.7	69.2	69.6 (6 months)	n/a	n/a
Consolidated budget deficit/GNP ^c	-2.3	-3.0	-8.2	-12.4	-11.9	-8.8	-5.4	-1.3	-0.6	-1.6	-1.8	n/a	n/a
Labour force (total, million) ^a	20.5	22.5	23.0	23.4	23.8	23.6	24.2	24.5	23.2	23.5	24.3	24.7	25.6
Unemployment (% total population) ^d	8.04	7.64	6.54	8.44	10.34	10.54	10.34	10.34	9.95	9.95	13.65	14.00	11.90
Official exchange rate (YTL to the US\$) ^e	26 076	45 673	623 704	1 224 411	1 505 839	1 493 067	1 422 341	1.34 [*]	1.43	1.30	1.29	1.55	1.50
Real interest rate ^c	62.726	106.316	198.956	59.06	44.06	26.06	18.0	13.508	17.506	15.757	15.70	11.60	8.12
Annual inflation rate (%) ^a	60.3	93.6	39.0	68.5	29.7	18.4	9.3	10.5	9.6	8.4	10.06	6.50	6.40

Sources: ^aTURKSTAT, 2009b, 2011b; ^bTurkish Treasury, 2011; Ministry of Finance, 2011; ^cSPO, 2009b; ^dTURKSTAT, 2009d; SPO, 2011.
^eNote: ^{*} From 2005, changes were made to the currency and 6 zeros were deleted from the Turkish lira (YTL).

crisis. The unemployment rate increased to 14.0% in 2009 from 11.0% in 2008 (Ministry of Finance, 2010a). It is envisaged that the impact of the global economic crisis will be considerable and will create problems in both the economic and the social spheres. The Turkish Central Bank (*Merkez Bankası*) also reported that the current account deficit has also widened, reaching US\$ 37 billion in 2007 (Turkish Central Bank, 2011).

Despite improvements over time, income in Turkey is still very unequally distributed. The Gini coefficient³ was calculated by the State Planning Organization (SPO (*Devlet Planlama Teşkilatı*)) as 0.51 for 1978, 0.50 for 1986, 0.49 for 1994, 0.42 for 2003, 0.38 for 2005 and 0.39 for 2008 (SPO, 2010; World Bank, 2010).

1.3 Political context

The Republic of Turkey is a parliamentary democracy with a clear separation of executive, legislative and judicial powers. The 1982 Constitution describes Turkey as a democratic, secular and social state governed by the rule of law. The Grand National Assembly (*Büyük Millet Meclisi*) is the legislative body (parliament) acting on behalf of the nation and its power cannot be delegated (Article 7 of the Constitution). The President and the Council of Ministers (Cabinet) exercise executive power (Article 8 of the Constitution). Independent courts handle judicial power (Article 9 of the Constitution).

The major functions of the parliament are to enact, change and repeal laws; supervise the Council of Ministers; delegate authority to the Council of Ministers, issue governmental decrees with the force of law on certain matters; and debate and approve the budget and legislation on the final accounts (Turkish Grand National Assembly, 2006). All legislation, including that related to health care, is enacted by the parliament. There are specialized parliamentary committees where political parties are represented according to their share of seats. Laws can be proposed by members of parliament and the Council of Ministers. The Health, Family, Labour and Social Issues Committee discusses the drafts of health-related laws, and makes amendments if needed, before sending its approved drafts to the parliament for discussion and ratification. Once a law is ratified, the parliament sends the document to the President for approval and the law becomes enforceable after publication in the *Official Gazette*. The President can

³ The Gini coefficient is a number between 0 and 1, where 0 corresponds with perfect equality (where everyone has the same income) and 1 corresponds with perfect inequality (where one person has all the income, and everyone else has zero income).

veto all or some parts of legislation and in such cases, the parliament discusses it again. If the parliament approves legislation vetoed by the President without making any changes, the President is obliged to approve it. In contrast, if the parliament makes a change in legislation returned by the President, then the procedure begins again, and the President can accept or reject it. Budget laws lie outside of this process. All legal arrangements can be taken to the Constitutional Court on the grounds that all or some parts of the legislation do not conform to constitutional principles. If the Court decides that a law is not compatible with the Constitution, then it can annul all or relevant sections.

In the last parliamentary elections in 2007, seven political parties won seats in the parliament: the ruling Justice and Development Party (340 seats), the Republican Populist Party (98 seats), the Nationalist Movement Party (70 seats), the Democratic Society Party (20 seats), the Democratic Left Party (13 seats) and other small parties and independents (7 seats). These results allowed a single-party government to be formed and strengthened its position, enabling it to implement reforms that previously were not possible under weaker coalition governments.

The Prime Minister and the Council of Ministers form the executive organs of the state. The President represents the Republic of Turkey and assures that constitutional principles are not violated. She/he can convoke parliament if and when needed, call for referenda on constitutional amendments and also call new elections. The President also appoints some members of the supreme courts and other organizations such as the Higher Education Council (*Yükseköğretim Kurumu*). The Council of Ministers Cabinet consists of the Prime Minister and ministers. The Prime Minister is assigned by the President from among the members of the Grand National Assembly. In most instances, the task of forming the government is assigned to the leader of the political party with the highest number of seats. The Prime Minister forms the Cabinet, which must be approved with a vote of confidence from the parliament.

Administratively, Turkey is divided into 81 provinces headed by provincial governors appointed by the central government. The state is highly centralized, although there have been recent (unsuccessful) attempts to change this structure and move to a more decentralized public management system. Provincial governors are the representatives of all ministers at the provincial level. All ministries, including the Ministry of Health (*Sağlık Bakanlığı*), have their own local organizations in the province and the heads of these organizations are responsible to the provincial governor.

The governor's office is the coordinating body for all ministerial functions. Provinces are divided into districts (*ilçe*) and villages (*köy*) according to their population and geographical location. The district administrators are also appointed by the central government, and administrative organization at the district level mirrors the provincial level. The district administrators are responsible to the provincial governor of the area they are geographically part of.

Each geographical area has a municipality, and city mayors and municipality council members, together with provincial council members and village heads, are elected in local elections. Municipalities are responsible for a variety of tasks ranging from the environment to health care, and economic development to transport. They can raise their own revenues from economic activities and can collect certain taxes. However, a considerable number of municipalities are dependent on funds from the central government, which impacts on their level of independence.

Decentralization has long been on the political agenda and special emphasis has been placed since 2003 on empowering municipalities and delegating certain roles from the central government, albeit with little success. A Public Administration Law, which delegated a number of responsibilities currently under central authorities to local governments, was ratified by parliament in 2004. However, the President vetoed it and sent the legislation back to the parliament. After the veto, no concrete attempts have been made to pursue this reform.

Organized interest groups have a very restricted role in the process of health policy-making. The most relevant of such groups are professional organizations, the most influential of which are the Turkish Medical Association (*Türk Tabipleri Birliği*), the Turkish Dentists' Association and the Turkish Pharmacists' Association. These organizations share their views on health policy with the government when a participatory approach is adopted. However, this is mainly a consultative process with no executive powers. In the past, there have been attempts to involve these groups through participatory meetings, but anecdotal evidence suggests that in many instances the stakeholders have complained that their views were not well represented in the final policy.

Turkey is a member of leading international and regional organizations such as the United Nations, the Council of Europe, the North Atlantic Treaty Organization, OECD, World Trade Organization and the Organization of the Black Sea Economic Cooperation. The country is also a candidate member for accession to the EU, with negotiation meetings starting in June 2006. The country has signed major international treaties such as the General Agreement

on Trade in Services (GATS), the Convention on the Rights of the Child, the European Human Rights Convention and the International Convention on Human Rights.

In terms of dealing with corruption and human rights, Turkey has made considerable progress in the last decade. Although instances of breaches of human rights and examples of corruption are still reported by international agencies such as Human Rights Watch, Amnesty International and Transparency International, improvements so far have also been acknowledged. The accession negotiation process with the EU has also contributed to improvements as new legislation is enacted to harmonize Turkish legal codes with EU rules and regulations. Examples include the Access to Information Law (2002) and the Law on Establishing a Public Servants Ethics Commission (2004).

1.4 Health status

Turkey has accomplished remarkable improvements in terms of health status since the early 1980s. Major health indicators such as the infant mortality rate (IMR), life expectancy and maternal mortality have improved considerably. As Table 1.3 shows, these improvements have occurred mainly after the 1980s. The implementation of the Health Transformation Program (HTP (Sağlıkta Dönüşüm Programı)) has also had an important impact, particularly in achieving major declines in infant and maternal mortality. Health data and other official statistics are collected by the Ministry of Health and TURKSTAT.⁴ However, there are deficiencies in the data collection process. In particular, mortality statistics cannot be collected accurately at the district and village level, mainly because of current problems with the health information system. However, now that the family practitioner scheme has been extended to the whole country (since the end of 2010; see Chapter 7), it will be possible to collect accurate data at the village level. In addition, mortality statistics and maternal and infant mortality data are now more accurate as they are collected regularly through an active surveillance method, and primary care facilities regularly collect data on immunization rates, follow-up of pregnant women and on children.

⁴ Although data collection is not independent from the government, there is no political manipulation of the data collected.

Table 1.3

Mortality and health indicators, 1970–2010 (selected years)

	1970	1980	1990	1993	1998	2000	2003	2005	2006	2007	2008	2009	2010
Life expectancy at birth (years)													
Female	56.3	60.3 ^a	69.5 ^b	70.6 ^b	72.4 ^b	73.1 ^b	74.4 ^b	75.2 ^b	75.6 ^b	76.0 ^b	76.3 ^b	76.5	76.8
Male	52.0	55.8 ^a	65.4 ^b	66.4 ^b	68.3 ^b	69.0 ^b	70.2 ^b	71.0 ^b	71.2 ^b	71.4 ^b	71.5 ^b	71.7	71.8
Total	54.2	58.1 ^a	67.4 ^b	68.5 ^b	70.3 ^b	71.0 ^b	72.1 ^b	73.0 ^b	73.3 ^b	73.6 ^b	73.8 ^b	74.0	74.3
Mortality rate, (per 1000 live births)													
Infant	145.0	117.5	51.5	52.6 ^c	42.7 ^c	31.6 ^c	28.5 ^c	18.4 ^c	16.9 ^d	15.9 ^d	17.0 ^c	13.1 ^d	10.1 ^d
Under 5 years	201.0 ^e	133.0 ^e	82.0	61.0 ^c	52.0 ^c	44.0	37.0 ^c	29.0 ^b	28.7 ^d	26.6 ^d	24.0 ^c	17.0	13.0

Sources: OECD, 2008a.; specific data: ^aWHO Regional Office for Europe, 2008; ^bTURKSTAT, 2010c; ^cHacettepe University Institute of Population Studies, 1994, 1999, 2004, 2009; ^dMinistry of Health General Directorate of Mother and Child Health and Family Planning, 2010, (unpublished data); ^eWorld Bank, 2009.

As seen in Table 1.3, life expectancy at birth has improved consistently over the last 45 years. Life expectancy at birth was 71% of the OECD average in 1960 whereas it stood as 93% of the OECD average in 2009. The OECD and IBRS/World Bank report (2008) stated that life expectancy in Turkey was about average for a country with its health care spending levels but slightly below the average for its income level compared with other upper middle income countries. Although there have been improvements in the past few years in the IMR, it is still the highest rate among OECD countries (10.1 per 1000 live births in 2010). The main reasons for this are the low level of socioeconomic conditions in some parts of the country, low female education levels and the prevalence of infectious diseases. Regional variations are also of special importance. Some studies (Hacettepe University Institute of Population Studies, 2004; Ministry of Health & Başkent University, 2004) have shown that there are wide discrepancies in terms of the IMR between the eastern and western parts of the country. According to the 2004 Turkish Demographic and Health Survey (*Türkiye Nüfus ve Sağlık Araştırması*) (Hacettepe University Institute of Population Studies, 2004), the IMR per 1000 live births was 41 for the east and 22 for the west in 2003, and 39 for the east and 16 for the west in 2008. More recently, regional variations have been getting smaller: according to the Ministry of Health General Directorate of Mother and Child Health and Family Planning (unpublished data, 2010), the IMR was 14.1 per 1000 live births for the east (south-eastern Anatolia Region by NUTS-1) and 7.5 for the west (Istanbul Region by NUTS-1) in 2010.⁵

⁵ Nomenclature of territorial units for statistics (NUTS) is a geocode standard with three levels developed and regulated by the EU for referencing the subdivisions of countries for statistical purposes; a similar system is used for candidate countries.

A similar geographical discrepancy was found in the past for life expectancy at birth. According to the burden of disease (*hastalık yükü*) study, life expectancy at birth in 2001 was 69 years for females living in the eastern part of the country and 73.4 for the west. The figures were 65.5 and 69.3 years, respectively, for males (Ministry of Health & Başkent University, 2004).

The maternal mortality ratio per 100 000 live births is also high in Turkey but falling rapidly. A national study in 2006 (Hacettepe University Institute of Population Studies, 2006) found the national ratio to be 28.5 per 100 000 live births. This study highlighted distinct regional variations, with a ratio of 7.4 for the west and 68.3 for the north-east of the country. Major progress in improving maternal mortality has been noted in the last few years, with a decline from a national average of 19.4 per 100 000 live births in 2008 to one of 16.4 in 2010. A World Health Organization report (2010a) highlights that Turkey is one of 14 countries that have achieved more than 5.5% annual declines in maternal mortality over recent years. Regional variations have also been alleviated; the maternal mortality rate was 10.6 in western Anatolia Region by NUTS-1 in 2010, and 25.6 in the middle eastern Anatolia Region by NUTS-1 (Ministry of Health, 2011b).

According to the most recent burden of disease study (Ministry of Health & Başkent University, 2004), which was conducted in 2004 and bases its calculations on population data from 2000, ischaemic heart diseases seem to be the major cause of death, followed by cerebrovascular disease. Thus, Table 1.4 reflects that Turkey has a similar disease burden as the majority of developed countries. However, as can also be seen from Table 1.4, prenatal causes and infections of the lower respiratory tract are among the five major diseases that cause death. This finding can explain the high IMR and under-five mortality rates recorded in the country (see Table 1.3), although, as mentioned above, these have been declining steadily in the last few years. More recent TURKSTAT data on the main causes of death in 2009 indicate that these were diseases of the circulatory system (39.9%); malignant neoplasms (20.7%); diseases of the respiratory system (8.9%); endocrine, nutritional and metabolic diseases (6.4%); and external causes of injury plus poisoning (4%) (TURKSTAT, 2011a). The burden of disease study also looked at health-adjusted life expectancy and loss of healthy life expectancy (Table 1.5). Other factors that adversely affect health status and mortality rates are the high rates of road accident injuries and deaths (Table 1.6).

Table 1.4
Main causes of death, 2004

Rank	Causes of death	% of total deaths
1	Ischaemic heart disease	21.7
2	Cerebrovascular disease	15.0
3	Chronic obstructive pulmonary disease	5.8
4	Perinatal causes	5.8
5	Lower respiratory infections	4.2
6	Hypertensive heart disease	3.0
7	Trachea, bronchus and lung cancers	2.7
8	Diabetes mellitus	2.2
9	Road traffic accidents	2.0
10	Inflammatory heart disease	1.9
11	Congenital anomalies	1.6
12	Diarrhoeal diseases	1.5
13	Stomach cancer	1.3
14	Nephritis and nephrosis	1.1
15	Leukaemia	1.0

Source: Ministry of Health & Başkent University, 2004.

Table 1.5
Health-adjusted life expectancy and loss of healthy life expectancy for all age groups at the national level for males and females, 2004

Age (years)	National		Males		Females	
	HALE	LHE	HALE	LHE	HALE	LHE
0	62.49	7.28	60.8	7.83	64.0	7.94
1	63.89	7.48	62.2	7.76	65.4	8.16
5	60.71	7.25	59.0	7.46	62.2	7.94
10	56.10	7.09	54.4	7.29	57.6	7.75
15	51.42	6.92	49.8	7.06	52.9	7.58
20	47.05	6.56	45.4	6.80	48.5	7.14
25	42.70	6.21	41.2	6.39	44.2	6.63
30	38.35	5.85	36.9	6.02	39.8	6.25
35	34.02	5.48	32.6	5.66	35.5	5.80
40	29.74	5.12	28.4	5.24	31.3	5.30
45	25.54	4.78	24.2	4.92	27.1	4.88
50	21.64	4.30	20.4	4.39	23.2	4.29
55	17.91	3.86	16.8	3.91	19.5	3.66
60	14.39	3.48	13.4	3.54	15.9	3.15
65	11.37	2.89	10.6	2.92	12.7	2.49
70	8.65	2.41	8.1	2.39	9.8	1.91
75	6.32	1.99	5.9	2.02	7.4	1.34
80	4.29	1.80	4.0	1.83	5.6	0.74
85+	2.25	2.11	1.9	2.30	2.6	1.92

Source: Ministry of Health and Başkent University, 2004.

Notes: HALE: Health-adjusted life expectancy; LHE: Loss of healthy life expectancy.

Table 1.6

Factors affecting health status, 1970–2007 (selected years)

Indicators	1970	1980	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007 ^a
Prevalence COPD (%)	n/a	0.08	0.14	0.19	0.23	0.23	0.26	0.29	n/a	n/a	n/a	n/a
Pure alcohol consumption (litres per capita)	1.10	1.78	1.39	1.65	1.47	1.42	1.37	1.45	1.37	1.31	1.20	1.32
RTAs with injury (per 100 000)	49.6	53.6	156.0	185.4	202.8	169.6	167.2	168.3	190.0	213.8	231.7	267.8
Persons killed or injured in RTAs (per 100 000)	61.29	62.78	167.36	194.81	211.00	176.40	173.90	173.90	n/a	n/a	n/a	n/a
Average calories available per person per day (kcal)	3 017	3 281	3 539	3 444	3 372	3 347	3 357	n/a	n/a	n/a	n/a	n/a

Sources: WHO, 2006a. ^aTURKSTAT, 2009c.

Notes: COPD: Chronic obstructive pulmonary diseases; RTA: Road traffic accident; n/a: Data not available.

Smoking is a major public health problem in Turkey, and smoking rates are high compared with European countries. In 2003, the average daily smokers in the population aged 15 and over was 31.2% (17.8% for females and 51.1% for males) (OECD, 2008a). According to the Global Tobacco Survey for Adults, which was conducted by TURKSTAT in 2008, 11.6% of females, 43.8% of males and 27.4% of the total population aged 15 or over are daily smokers, indicating a slight decline in the smoking rate over the five years from 2003 (TURKSTAT, 2009c). A survey conducted by the Ministry of Health's General Directorate of Primary Care Services in 2010 shows similar rates for daily smokers (11.6% of females, 38% of males and 24.7% of the total population) (Ministry of Health, 2011b). Although some measures were instituted in the past, such as restricting cigarette advertisements, prohibiting smoking in public places and increasing taxes on tobacco and alcohol, implementation of these policies was not very successful until the introduction of a new Law on Tobacco and Tobacco Products in 2008. The Law prohibited smoking in all closed public and private areas, including restaurants; all transport vehicles, including taxis; and other places open to the public. It took full effect in July 2009 after a transition period that started in May 2008, making Turkey one of the smoke-free countries in the WHO European Region, ranked fourth in the Tobacco Control Scale in Europe, 2010 (Joossens & Raw, 2011). It is envisaged that this measure will have a positive impact on the incidence and prevalence rates of smoking-related diseases in the medium to long term.

According to the *World Health Statistics* (WHO, 2010b), 99% of the population has access to improved drinking water sources. This figure is 100% for the urban population and 96% for the rural population. Moreover, 90%

of the population has access to improved sanitation facilities (sewage system, septic tank or other hygienic means of sewage disposal). These figures are very similar to those in European countries (WHO, 2010b).

In terms of child health, the mean number of decayed, missing or filled teeth for a child aged 12 years was reported as 2.5 in 2004 (WHO, 2006b). This figure is low according to the WHO classification of mean values for decayed, missing or filled teeth at 12 years of age (Nithila et al., 1998).

In 2008, 98% of infants were breastfed at 3 months of age, falling to 95.9% at 6 months of age. In 2003, the ratios were 95.7% and 92.1%, respectively. Moreover, immunization rates have improved considerably. In 2010, 98% of infants were vaccinated against diphtheria, tetanus and pertussis, 97% against measles and 96% against hepatitis B (Ministry of Health, 2011b; see also Chapter 6). With its falling incidence rates for measles, from 30 000 cases in 2001 to 34 in 2006, Turkey is exceeding most OECD countries in preventing this illness (OECD & IBRD/World Bank, 2008). All of the seven cases reported in 2010 were extrinsic, with no local cases (Ministry of Health, 2011b). Regional discrepancies in immunization rates have also diminished. For example, in 2003, 63% of children in western regions were fully immunized, whereas this figure was only 34.8% for the eastern part of the country (Hacettepe University Institute of Population Studies, 2004). Five years later, in 2008, 84.6% of children were fully immunized in the west, and 64.3% in the east (Hacettepe University Institute of Population Studies, 2009). In terms of specific vaccines, regional differences have almost disappeared. For example, for the combination vaccine for diphtheria, acellular pertussis, tetanus, inactive polio and *Haemophilus influenzae* type b (DaPT-IPA-Hib), the southeastern Anatolia region had the lowest immunization rate of 93% (in 2010) and for the BCG vaccination (for tuberculosis), the lowest rate of 95% was recorded in the middle eastern Anatolia region (Ministry of Health, 2011b).

Turkey was among the countries affected by the avian influenza outbreak in the late 2000s. In 2006, 12 human cases of the disease were detected with four deaths recorded (WHO, 2006a). Since 2002, there has been an increase in the number of cases and deaths for Crimean haemorrhagic fever. In 2006, 438 cases were detected, of which 27 patients died. In 2007, these figures increased to 717 cases and 33 deaths (Ministry of Health, 2008).