



*THE MINISTRY OF HEALTH OF TURKEY*



# **Turkey Health Report**

**February 2004  
ANKARA**

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# TURKEY HEALTH REPORT

February 2004

ANKARA

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## 1. COUNTRY PROFILE

### 1.1. Geography

Turkey occupies a surface area of 774,815 square kilometers. About three percent of the total area lies in Southeastern Europe (Thrace) and the remainder in Southwestern Asia (Anatolia or Asia Minor). Turkey has borders with Greece, Bulgaria, Syria, Iraq, Iran, Georgia, Armenia, and Azerbaijan. The shape of the country resembles a rectangle, stretching in the east-west direction for approximately 1,565 kilometers and in the north-south direction for 650 kilometers. Seas surround the three sides of Turkey: in the north, the Black Sea; in the northwest, the Sea of Marmara; in the west, the Aegean Sea; and in the south, the Mediterranean.

### 1.2. Administrative structure

Since the founding of the Republic, three Constitutions (1924, 1961, and 1982) have shaped the Turkish administrative structure. These three constitutions proclaimed Turkey to be a Republic with a parliamentary system and specified that the will of the people be vested in the Turkish Grand National Assembly (TGNA). All three constitutions adopted basic individual, social and political rights, and accepted the principle of separation of powers. Turkey's national administration is centralized, with all crucial decision-making powers given to capital city-based ministries. The country is now administratively divided into 81 provinces. Provinces are divided into hierarchical units named as districts and sub districts. The head of the province is the governor, as the highest-level administrative and political officer in the province, represents not only the Ministry of Internal Affairs but also the State as a whole, the Government, and each Minister individually. The governor, carries out the policies of the central government, supervises the overall administration of the province, coordinates the work of the various ministry representatives appointed by the central authority in the capital Ankara, and maintains law and order within his/her jurisdiction.

The diverse geographical, climatic, cultural, social, and economic characteristics of different parts of the country are the basis for the conventional regional breakdown within Turkey. Five regions (West, South, Central, North, and East) are distinguished, reflecting, to some extent, differences in socioeconomic development levels and demographic conditions among sections of the country. This regional breakdown is frequently used for sampling and analysis purposes in social surveys.

Turkey has a long experience in collecting stock (censuses and surveys) and flow data (vital statistics) on population. Births and deaths are also registered by other institutions, notably by the Ministry of Health (MoH) in the case of births and deaths, and by municipal authorities and the State Institute of Statistics (SIS) in the case of deaths, but such information either remain unpublished or are known to be unreliable.

Surveys in Turkey remain as the principal data sources for estimating and monitoring demographic trends in the absence of information from the vital registration system. The Hacettepe Institute of Population Studies has conducted the most notable series of surveys since 1968 at five-year intervals. The series has included the 1978 Turkish Fertility Survey, conducted as part of the World Fertility Survey project, and the 1993 and 1998 Turkish Demographic and Health Surveys (TDHS). Other institutions, such as the State Institute of Statistics also carry out surveys, albeit at no systematic intervals.

## 2. DEMOGRAPHIC SITUATION

### 2.1. Population structure

In 1927, Turkey's population was 13.6 million according to the census, which was conducted four years after the establishment of the Republic. Beginning with the 1935 census, subsequent population censuses were undertaken at 5-year intervals, with the last complete census occurring in 2000. According to this census, the population increases to 67.8 million. Turkey is among the 20 most populous countries of the world and is the most populous country of the Middle East (SIS, 1999; Population Reference Bureau, 1999).

**Table 1.** Region-Specific Population Distribution

Regions	1990 Population Census	1997 Population Census	2000 Population Census	Population Growth Rate (1990-2000)
<b>TOTAL</b>	56 473 035	62 865 574	67.803.927	15.08
<b>Marmara</b>	13 295 607	16 186 673	17 365 027	27.67
<b>Aegean</b>	7 594 977	8 452 087	8 938 781	15.04
<b>Mediterranean</b>	7 026 489	8 058 311	8 706 005	19.27
<b>Central</b>	9 913 306	10 580 657	11 608 868	9.16
<b>Anatolia</b>	8 136 984	7 843 966	8 439 213	-5.16
<b>Black Sea</b>	5 346 208	5 614 907	6 137 414	6.9
<b>Eastern</b>	5 159 464	6 128 973	6 608 619	24.31

Source: 1990, 1997, 2000 Population Census, SIS

Turkey has a young population structure as a result of the high fertility and growth rates of the recent past. Recent decades have witnessed dramatic declines especially in fertility rates. In the early 1970s, the total fertility rate was around 5 children per woman, whereas the estimates in the early 1990s put the total fertility rate at less than 3 children. The crude birth rate is 22.2 per thousand and crude death rate is 6.4 per thousand (SIS, 2000). The Turkish population is expected to reach replacement level in 2005 and to reach 88 million by the year 2025. As a consequence of past trends, major changes are expected to take place in the relative and absolute sizes of age groups. During the next 20 years, the size of the age group 20-54 will have doubled, and the proportion of the elderly will reach 10 percent. Crude Death Rate is 5.6 per thousand for 2000 (SIS, 2000).

There is a migration from underdevelopment region to developed region, from rural area to urban area, from Turkey to abroad also external migration especially from east neighbors as refugee, war victim etc. Table 2 is showing migration in different years between geographical regions inside Turkey (Population and Development, Hacettepe Population Institute)

### 2.2. Population growth

The annual population growth rate is 1.83 % (1.50 % in 2000) is quite above the average growth rate of developed countries (0.6%) and also above the average growth rate of the developing countries.

**Table 2.** Population Growth (per thousand)

<b>Regions</b>	<b>1980-1985</b>	<b>1985-1999</b>
<b>West</b>	35.8	63.3
<b>South</b>	16.0	26.2
<b>Central</b>	-6.7	-16.1
<b>North</b>	-29.5	-58.8
<b>East</b>	-40.4	-72.3

Source: Population and Development, Hacettepe Population Institute

The population growth has been around 20-25 per thousand since the 1970s. The latest estimate of the population growth rate was 18.3 per thousand for 2000. The population of Turkey has almost quadrupled since the establishment of the Republic. After a long period when population growth rates fluctuated around 2.5 percent per annum, 2000 census revealed that the growth rate had slowed down to 1.8 percent, resulting in a total population of 67.8 percent in 2000. According to the projections, the population of Turkey is expected to reach 76 million in the year 2010 and 88 million in 2025 (Population Reference Bureau, 1999).

### 3. HEALTH STATUS

#### 3.1. Life expectancy

Life expectancy during the 65 years period of 1935-2002 showed 21.3 years increase for female and 15.5 years for men while both crude birth and mortality rates steadily decreased, by 22.4 and 24.7 respectively.

The latest estimates put life expectancy in Turkey at 71 years for women and 67 years for men. This is well below the 1998 EU average life expectancy at birth of 80.5 years for women and 74.4 for men. It is also lower than the 1999 average for all of Europe of 77.6 years for women and 69.5 years for men. There are also regional variations within Turkey in life expectancy at birth (SIS, 2000).

Distribution of main death causes of children under 5 years old is given in table 3 and distribution of main causes for all deaths is given in table 4.

**Table 3.** Distribution of Main Death Causes of Children Under 5 Years Old in Turkey, 1998

CAUSES	Rate (%)
<b>Perinatal Causes</b>	<b>58.6</b>
Other Causes of Perinatal Mortality	27.7
Congenital Anomalies	16.3
Delivery Traumas, Difficult Deliveries	14.6
<b>Meningococcal Infections</b>	<b>13.7</b>
<b>Pneumonia</b>	<b>7.2</b>
<b>Heart Disease</b>	<b>4.8</b>
<b>Enteritis and Other Diarrhea Diseases</b>	<b>3.0</b>
<b>Symptoms and Undetermined Diseases</b>	<b>1.9</b>
<b>All Other Disease and Accidents</b>	<b>10.8</b>

Source: SIS

**Table 4.** Distribution of Main Causes for All Deaths in Turkey, SIS, 1998

CAUSES	Rate (%)
Heart Disease	36.3
Malignancies including Lymphoid and Haematopoetic Tumors	12.6
Symptoms and Undetermined Cases	9.0
Cerebro-vascular Diseases	7.7
Other Causes of Perinatal Mortality	3.3
Meningococcal Infections	2.2
All Other Accidents	2.1
Congenital Anomalies	1.9
Delivery Traumas, Difficult Deliveries, Anoxia and Hypoxia	1.7
Other	23.2

Source: SIS

#### 3.2. Reproductive health and fertility outcomes

Home to 67.85 million people, Turkey is among the 20 most populous countries in the world (SIS

1999). High fertility and growth rates of the past have resulted in a young population structure and, as Table 5 shows, 30 percent of the population is under the age of 15 and almost 11 percent under the age of 5 (2000). Over 17.8 million women are in the reproductive age group of 15-49 years.

Total fertility rate (TFR) has declined steadily in the last three decades, from 4,9 in 1970 to 2,53 in 1999. The TFR declined 2.46 in 2002. The TFR decline was more rapid in the 1980s than in the 1990s, a trend that is not unusual and the experience of many countries suggests that rapid initial declines with the start of family planning programs are followed by more gradual and difficult to achieve reductions in fertility rates.

**Table 5.** Population data (in thousands)

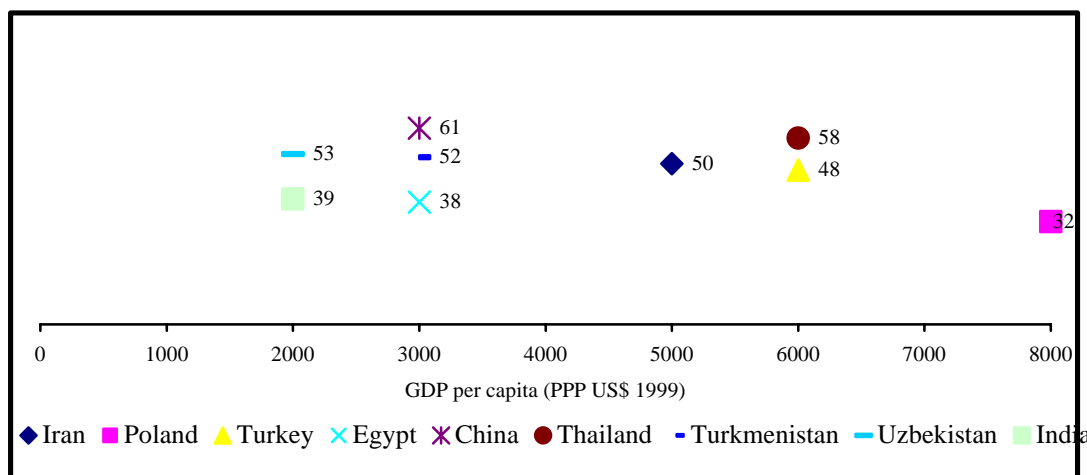
POPULATION	2005*	2000	1999	1998	1997	1996	1995	1990	1980
Female 15-49 years	19,798	17,828	17,536	17,200	16,830	16,441	16,045	14,014	10,564
Population less than 15 years	22,044	20,021	19,926	19,873	19,852	19,846	19,840	19,630	17,515
Population less than 5 years	7,794	7,108	7,192	7,271	7,316	7,295	7,186	5,920	6,044
Total population	74,029	66,668	65,674	64,652	63,609	62,554	61,493	56,098	44,645

Source: "World Population Prospects: The 2000 Revision", New York, United Nations, 2000.

\* Source: "World Population Prospects: The 2002 Revision", New York, United Nations, 2002

Overall, the reduction in TFR of 48 percent between 1970 and 1999 in Turkey compares well with the experience of other countries, though the current TFR level of over 2 is significantly higher when compared to most countries in the European region, which are currently experiencing negative population growth rates and TFR levels well below 2. As Figure 1 shows, China, the world's most populous country with a lower GDP per capita than Turkey, reduced TFR by 61 percent; Turkmenistan and Uzbekistan, also with lower per capita GDPs, reduced their TFR by 52 and 53 percent respectively and Iran reduced its TFR by 50 percent during the same period. Thailand, with a similar per capita GDP, reduced its TFR by 58 percent in the same period. Poland, with a similar per capita GDP, reduced its TFR by 32 percent in the same period. India, with a similar per capita GDP, reduced its TFR by 39 percent in the same period. Egypt reduced its TFR by 38 percent in the same period.

**Figure 1.** Percent Decline in Total Fertility Rates, 1972-1999



Source: Human development report 2001, UNDP.

Turkey's country-wide TFR, however, masks considerable variation in fertility across urban-rural Turkey and across regions. As the Turkey Demographic and Health Survey (TDHS) results show, TFR in rural areas was 3.08 in 1998, almost 29 percent higher than the TFR of 2.39 in urban areas. The Eastern region has the highest TFR (4.09), almost twice as high as that in the Western region (2.03), a rate that is comparable to that of many Western European countries. The Northern, Central and Southern regions are grouped around a TFR of 2.6. TFR falls as education levels rise, and is 2.4 times higher among women with no education or minimal education (3.89) compared to those who have at least secondary school education (1.61).

The urban-rural and regional differences in TFR are indicative of disparities in access to health and family planning services, differences in income and education levels and differences in cultural values across locations and regions.

### **3.2.1. Birth Intervals**

Repeated pregnancies with short birth intervals, particularly intervals of less than 24 months, are known to be deleterious to the health of babies. TDHS 1998 shows that in Turkey the median birth interval is slightly over 3 years (37 months), which is 12 months more than the minimum interval considered safe, and 3 months more than the median birth interval as reported in 1993 (33.6 months). Although a quarter of births occur with a birth interval less than two years, it is encouraging to note that more than a third (36 percent) of all births occur with birth intervals of more than 48 months. Birth intervals vary by region, with the highest proportion of short birth intervals occurring in the East. Shorter birth intervals following a female birth are more frequent than following that for male births. Women's educational levels also influence the birth interval: 17 percent of women with at least a secondary education have births intervals of less than 24 months compared to 28 percent of women with no education who post birth intervals of less than 24 months.

### **3.2.2. Age At First Birth**

The age at which a woman has her first child has important demographic consequences as well as implications for the health of the mother and child. Postponement of first births in many countries has contributed to the overall decline in fertility. Additionally, the proportion of women who have their first child before the age of 20 is a measure of adolescent fertility, a major health and social concern in many countries. In Turkey, the median age of childbearing has increased from 20.6 years in 1988-93 to 22.2 years in 1993-98. Women living in rural areas have their first childbirth a year earlier than their urban counterparts, and women in the Eastern Turkey become mothers 1.6 years earlier than women in the Western Turkey. Education has the greatest impact on the age at first birth, and women with at least a secondary education delay first births by 4-6 years compared to women with no education (TDHS 1998).

### **3.2.3. Incidence Of Low Birth Weight**

Low birth weight (LBW) is defined as a birth weight of less than 2,500 grams, indicating an infant at greater risk of illness, malnutrition and death. In Turkey, 8 percent of infants were LBW in between 1995-1999; in comparison, the incidence of low birth weight is 7 percent in Romania, 6 percent in Bulgaria, 6 percent in Greece, 5 percent in France, 4 percent in Spain and Ireland. Some East European and Central Asian countries have a higher share of LBW infants than Turkey, and include Hungary, 9 percent, Armenia, 9 percent and Kazakhstan, 9 percent.



### 3.2.4. Contraceptive Prevalence And Use

Contraceptive prevalence rate (CPR) is a commonly used indicator measuring the success of family planning programs, and higher contraceptive prevalence rates are generally associated with lower fertility rates. Overall, only 64 percent of married women in Turkey were using a method of contraception, traditional or modern, in 1998, significantly lower than contraceptive use in other countries with GDP per capita similar to that of Turkey, such as Bulgaria (86 percent), Thailand (72 percent) and Iran (73 percent). (Human Development Report 2001, UNDP)

As Table 6 shows, the use of contraceptive methods, traditional or modern, has remained unchanged at around 64 percent since 1988, though the use of modern methods went up from 31 percent in 1988 to almost 38 percent in 1998. Most of this increase came from the use of IUDs and condoms, while the use of pills declined during the period 1988-98. The proportion of women not using any contraception remained unchanged.

**Table 6.** Contraception Use (% of married women)

Contraceptive method	TPHS 1988	TDHS 1993	TDHS 1998
<b>Any method</b>	63.4	62.6	63.9
<b>Any modern method</b>	31.0	34.5	37.7
<i>Pill</i>	6.2	4.9	4.4
<i>IUD</i>	14.0	18.8	19.8
<i>Condom</i>	7.2	6.6	8.2
<i>Female sterilization</i>	1.7	2.9	4.2
<i>Other modern methods</i>	2.0	1.3	1.1
<b>Any traditional method</b>	32.3	28.1	25.5
<b>Periodic abstinence</b>	0.1	1.0	1.1
<b>Withdrawal</b>	25.7	26.2	24.4
<b>Other methods</b>	6.5	0.9	0.6
<b>Not currently using</b>	36.6	37.4	36.1

Source: TPHS 1988, TDHS 1993 & 1998

Contraceptive use varies with the number of living children, peaking at 78 percent among women with two children, and is more frequent among women with higher levels of education. Regional differences in the use of modern contraceptive methods are marked, with over 71 percent women in Western Region reporting use of modern contraceptives compared to 42 percent in Eastern Region. The majority of women in Turkey who practice contraception rely on a modern method, and the IUD is the most commonly used modern method followed by condoms, pills and female sterilization. Withdrawal, a traditional method, is the most popular method among currently married women in Turkey.

### 3.2.5. Abortions

Women resort to induced abortions when they lack access to contraceptive services, experience social barriers that prevent them from using family planning methods to avoid unplanned pregnancies or in the case of contraceptive failure. Extensive use of pregnancy termination can, therefore, be the result of poor accessibility to safe and affordable family planning services.

**Table 7.** Induced abortions (per 100 pregnancies)

Background characteristics	TDHS 1993	TDHS 1998
<b>Age</b>		
15-19	3.8	5.8
20-24	8.3	7.7
25-29	20.4	12.6
30-34	27.9	23.3
35-39	36.2	33.4
40-44	47.1	42.5
45-49	47.6	66.2
<b>Residence</b>		
Urban	21.3	16.1
Rural	12.4	11.6
<b>Region</b>		
West	24.9	18.0
South	16.3	13.7
Central	19.8	16.7
North	17.0	15.6
East	8.7	7.6
<b>TOTAL</b>	<b>18.0</b>	<b>14.5</b>

Source: TDHS 1993, 1998

Abortion was legalized in Turkey in 1983 with the enactment of the new population policy. According to TDHS, 1998, 23.2 percent of all pregnancies in Turkey ended in abortions, of which 63% were induced. As Table 5 shows, location and regional variations are significant, with fewer induced abortions in the Eastern region compared to the rest of the country.

Mother's age and number of living children are strongly associated with the likelihood that a woman will have had an induced abortion, with older women and women with more than two children being more likely to undergo an abortion.

### 3.2.6. Maternal Mortality

Data on maternal mortality is not entirely reliable, and wide variations exist between the years depending on who is collecting and reporting the data. Table 6 shows the different rates for maternal mortality provided by various sources.

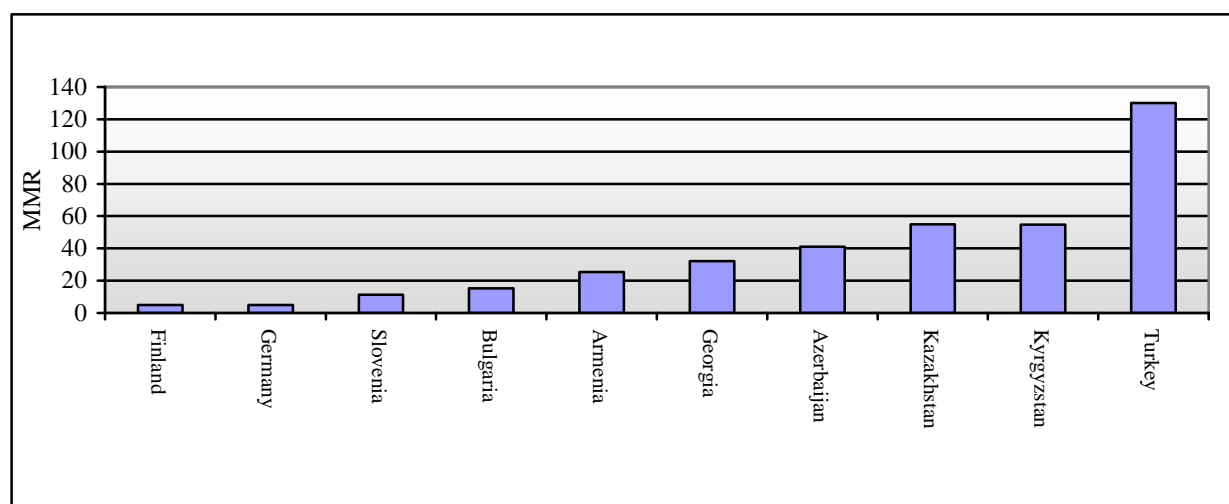
A study undertaken by the MoH and Hacettepe University, with support from UNFPA and WHO, suggests that maternal mortality declined from 138/100,000 live births in 1983 to 52/100,000 live births in 1999. This data on maternal deaths, however, is hospital based and excludes the deaths that occur from births taking place at home and some that occur after discharge from hospital.

**Table 8.** Maternal Mortality Rates (selected years and sources)

Source	Period	Maternal Mortality (deaths per 100,000 live births)
MoH	1974	207
MoH, SIS	1981	132
UNFPA/WHO/MoH study	1983	138
HFA-DB WHO European region	1990	180
MoH	1996	100
HFA-DB WHO European region	1998	130
UNDP/WHO/MoH study	1999	52
MoH (Health statistics 1998)	1980-97	130
UNDP	1980-99	130
UNDP	1985-2001	130

According to the TDHS, 1998, 73 percent of all deliveries took place at a health facility and antenatal care was received by 68 percent of pregnant women, which leaves a quarter of the births taking place at home and a third of pregnant women not receiving any antenatal care. The figure of 52 per 100,000 live births is, therefore, likely to be an under-estimation.

Although Turkey has achieved significant declines in the recent past, maternal mortality still remains much higher than that of other countries in the European region as well as the EU average. As Figure 2 shows, maternal mortality in 1998 in Turkey was the highest of all countries in the European region.

**Figure 2.** Maternal Mortality Ratios, Selected European Countries, 1998

Source: HFA-DB, WHO European Region, 2000

There are several causes of high maternal mortality in Turkey. Some studies list infection<sup>1</sup> as the most common cause of death while others list toxemia<sup>2</sup> as the most common cause. An analysis

<sup>1</sup> A retrospective analysis of 117 maternal deaths at Hacettepe University hospital between 1968 and 1992, showed infection to be the most common cause of death at 60 percent. Trends in maternal mortality at a university hospital in Turkey. A. Ayhan et al. International Journal of Gynecology and Obstetrics, 1994 March 44 (3): 223-228.

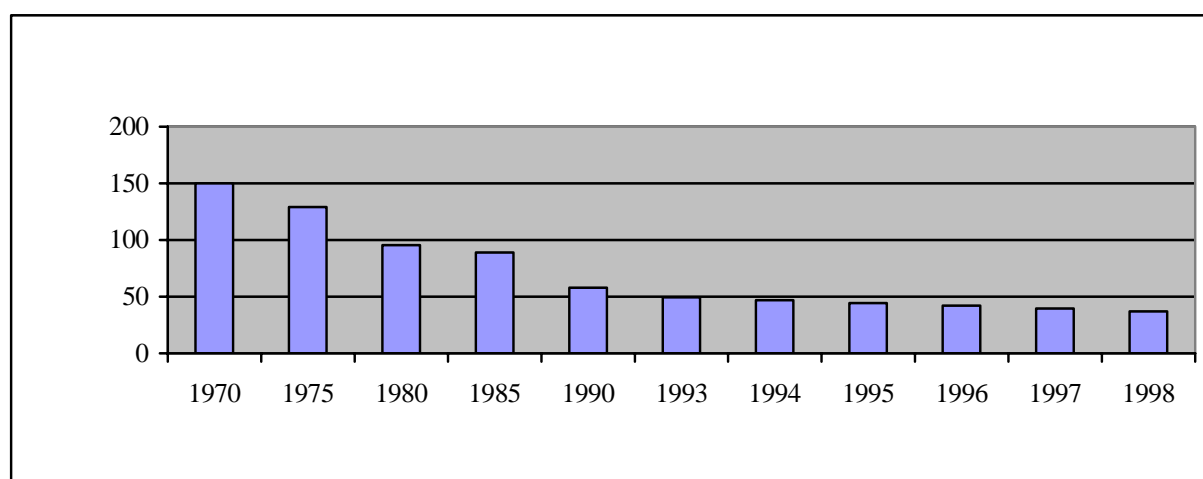
<sup>2</sup> In 1996 a hospital based study on maternal mortality and its causes was designed by MoH in collaboration with WHO, UNFPA and Hacettepe University Public Health Department. According to the intermediate evaluation of this study, the maternal mortality rate was estimated as 54.2 per 100,000 live births and the main causes of maternal deaths was found as toxemia (28.2 percent), hemorrhage (5.6 percent) and infections (5.6 percent).

of hospital-reported maternal mortality for the year 1997 reveals the problem of misclassification that complicates accurate estimation of maternal mortality. The most common cause at 31 percent of the deaths has been labeled as “other complications of pregnancy, birth and puerperium.” This definition could include anything from obstructed labor, uterine rupture, and infection to hemorrhage. Another 21 percent of the deaths are listed as “delivery without mention of complication.” Apart from these two causes, the most common cause of maternal mortality is related to abortions.

### 3.3. Morbidity and mortality among infant and children

While Turkey has achieved significant success in reducing infant mortality rate (IMR) in the last few decades, during which IMR has fallen from over 150 per 1,000 live births (in 1970) to under 40 per 1,000 live births (in 1998)<sup>3</sup>, 36 per 1,000 live births in 2001<sup>4</sup>. Data on infant mortality is probably the best available data on mortality for Turkey. As Figure 3 shows, following a sharp decline during the 1970s and 1980s, the reduction in IMR became more gradual in the 1990s. Nevertheless, infant mortality rates in Turkey remain significantly above the European Union average (8 per 1,000 live births).

**Figure 3.** Trends in Infant Mortality in Turkey (per 1,000 live births)



Source: WHO – HFA Database, 2000

Table 9 demonstrates that Under 5 Mortality is comprised of Infant Mortality (perinatal mortality defined as death during the first month of life plus post-neonatal mortality defined as death between the second and twelfth month of life) and Child Mortality (defined as death between the age of 13 and 59 months). The TDHS of 1988, 1993 and 1998 (Table 9) show that infant mortality declined by 19 percent between the 1993 and the 1998 survey, mainly due to a substantial decline in post-neonatal mortality (28 percent). The data also provide a breakdown of deaths under the age of 5 (U5MR) into infant mortality (as defined above) and child mortality (defines as mortality between the ages of 1 and 5 years), and shows that 81 percent of the under-five deaths during 1988-1993 occur in the first year of life and a majority of those (60 percent) happen in the first month of life, implying that perinatal causes of death are the leading cause of infant mortality.

<sup>3</sup> Source: The Situation of Children and Women in Turkey, UNICEF, May 1998.

<sup>4</sup> Source: Human Development Report 2003, UNDP

**Table 9.** Infant, Child and Under-Five Mortality Rates, 1983-1988 to 1993-1998

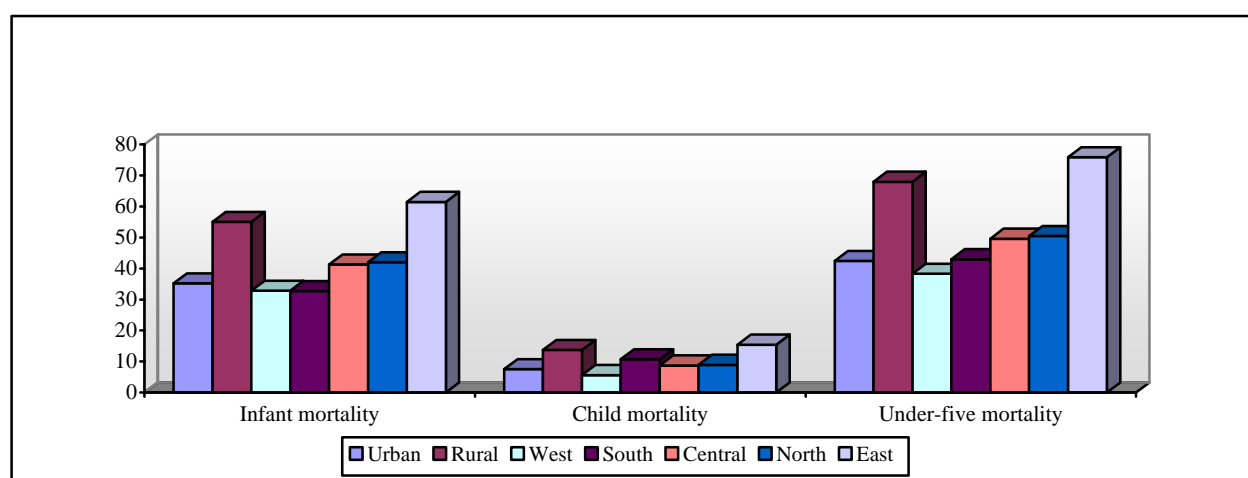
Period	Neonatal mortality (1)	Post-neonatal mortality (2)	Infant mortality (3=1+2)	Child mortality (4)	Under-five mortality (5=3+4)
TDHS 1983-88	34.7	47.4	82.2	16.7	98.9
TDHS – I 1988-93	29.2	23.4	52.6	8.8	61.4
TDHS –II 1993-98	25.8	16.9	42.7	9.8	52.5
Percent change, 1988-1993 to 1993-1998	-11.6	-27.8	-18.8	+11.3	-14.4

Source: TDHS-I 1993, TDHS-II 1998.

Post neonatal mortality slowed dramatically between 1988-1993 and 1993-1998 compared to the period 1983-1988 to 1988-1993 (50.6% vs. 27.8%), the rate of decline in neonatal mortality was almost similar during the period (15.9% and 11.6%), while a dramatic decline in child mortality (47.3%) occurring between the periods 1983/88 to 1988/93 reversed and increased by 11.3% between 1988-1993 and 1993-1998.

Note, however, that the underlying health system processes and public health issues that affect neonatal mortality and post-neonatal mortality are quite different. For example, neonatal mortality is largely affected by maternal health status, maternal characteristics (e.g., age), and the extent to which there was prenatal care, prenatal maternal nutrition, and perinatal infections (frequently related to maternal infections prior to delivery). On the other hand, post neonatal mortality is more related to complications resulting from premature birth, low birth weight, infections (e.g., diarrhea), and feeding practices (i.e., lack of breastfeeding). Child mortality (i.e., age 12-59 months) is heavily influenced by infections (e.g., respiratory tract infections, diarrhea, and vaccine-preventable diseases).

The country-wide infant mortality rate masks considerable variation across urban and rural Turkey and across regions. As Figure 4 shows, IMR and U5MR are lower than the national average in the urban areas and Western and Southern regions, and almost 40 percent higher than the national average in the rural areas and the Eastern region.

**Figure 4.** Urban-Rural and Regional Variations, 1993-1998

Similar to patterns in many other countries, neonatal mortality rates are lower and child and post-neonatal mortality rates are higher among female children compared to male children. Overall, as Table 10 shows, infant and under-five mortality rates are somewhat lower among female children compared to male children.

**Table 10.** Gender Differences in Infant, Child and Under-Five Mortality Rates

Mortality	TDHS-I 1988-93		TDHS-II 1993-98	
	Male	Female	Male	Female
Infant mortality	70.5	66.0	51.0	45.5
Child mortality	12.4	13.6	10.4	13.4
Under-five mortality	82.0	78.7	60.9	58.3

Source: TDHS 1993, 1998

The TDHS permit a comparison of infant and under-five mortality rates across quintiles of households ranked by wealth. As Table 11 shows, IMR and U5MR are 3.9 and 4.6 times higher respectively in the lowest income quintile relative to the richest income quintile. The difference between the fourth and the top quintile is also significant (about 50 percent), while the second and third quintiles group together. Factors such as inadequate access to health care services, lower utilization of health services, poor nutritional levels and lack of environmental hygiene (availability of safe drinking water and sanitation) contribute to these differences in infant and under-five mortality rates across wealth quintiles.

**Table 11.** Infant and Under-Five Mortality per 1,000 Live Births (by wealth quintiles), 1993

Wealth Quintiles	Infant mortality	Under-five mortality
First quintile	99.9	124.7
Second quintile	72.7	84.0
Third quintile	72.1	83.2
Fourth quintile	54.4	61.8
Top quintile	25.4	27.1
<i>Population average</i>	68.3	80.5

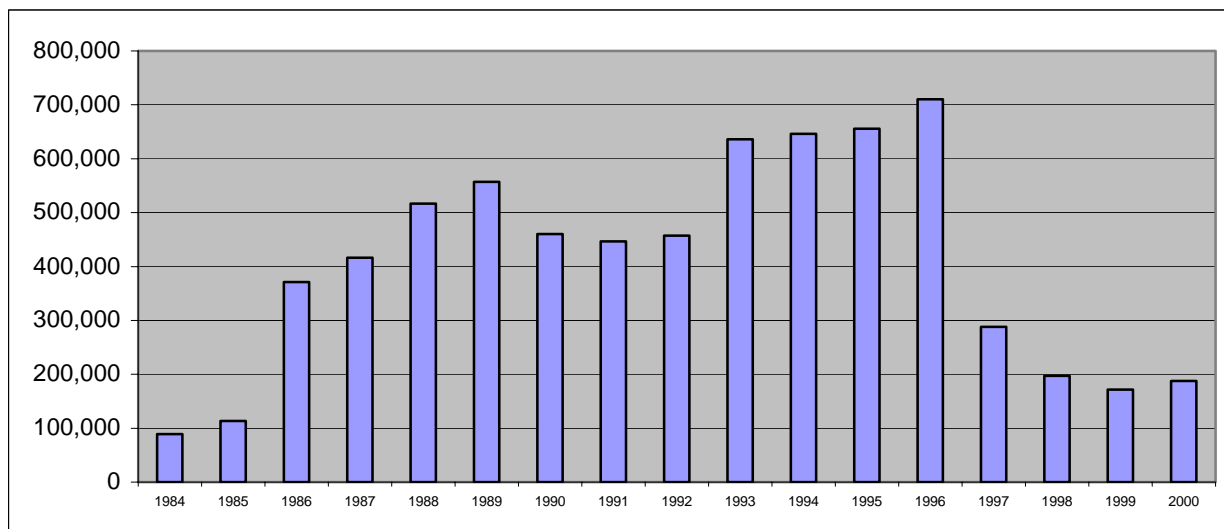
Source: Socio-Economic Differences in HNP, World Bank, May 2000 (using TDHS data)

### 3.3.1. Diarrhea

Diarrhea is an important cause of morbidity among children under 5 in Turkey, even though significant progress has been made in recent years. As Figure 5 shows, the number of children treated for diarrhea went up from a little over 89,192 in 1983 to 710,163 in 1996, before falling to 288,333 in 1997 and to under 188,000 in 2000, probably a reflection of improved awareness and availability of oral rehydration therapy.<sup>5</sup>

<sup>5</sup> According to TDHS 1998, 30 percent of children under-five-years of age had an episode of diarrhea in the two weeks preceding the survey, 5 percent higher than that reported in TDHS 1993. As is well-known, diarrheal diseases fluctuate according to the season when the survey is made and to this extent, data that gives the number of cases in two weeks prior to the survey is not the best indicator of annual incidence but better used for program evaluation.

**Figure 5.** Number of Children Treated for Diarrhea



### 3.3.2. Respiratory Disease

Acute respiratory infections are also a cause of morbidity and mortality in children under five-years of age. According to the TDHS 1993, 12 percent of children had an episode of acute respiratory infection in the two week period preceding the survey. A higher percentage of children suffer from respiratory disease in rural than in urban areas (15.7 percent versus 10.3 percent respectively) and in the eastern than in the western region (15.4 percent versus 7.5 percent respectively). The Control of Acute Respiratory Infections Program was initiated in 1986, and has since been expanded to cover half the population of Turkey by 1998.<sup>6</sup>

### 3.3.3. Vaccine-Preventable Diseases

Immunization activities against 6 vaccine preventable disease; measles, diphtheria, pertussis, polio, tuberculosis, tetanus are carried out under “Expanded Programme on Immunization” (EPI) since 1980. This programme includes Hepatitis-B vaccine since 1998.

Although the immunization program has led to a decrease in the number of cases due to vaccine preventable diseases, immunization coverage in Turkey remains below that of other countries with similar or even lower GDP per capita, and varies from year to year. As Table 12 shows, only about 46 percent of children (between 12-23 months) completed the vaccination schedule before the age of 1 year, while 4 percent of children did not receive any vaccinations at all. This indicates a high drop out rate for vaccinations such as DPT and Polio that require repeated administration.

<sup>6</sup> A total of 64,785 cases of pneumonia were recorded among children under five years of age in 1998.

**Table 12.** Reported Percent of Target Population Vaccinated (by antigen) and Reported Cases of Vaccine-Preventable Childhood Illnesses, 1995 to 2002

	1995	1996	1997	1998	1999	2000	2001	2002
<b>BCG vaccine coverage (%)</b>	68	69	73	77	78	77	82	77
<b>Polio 3 coverage in percent</b>	67	84	79	76		80	83	78
<b>Polio cases</b>	32	17	6	26	0	0	0	0
<b>DPT vaccine coverage (%)</b>	66	84	79	81	79	80	83	78
<b>Diphtheria cases</b>	4	22	2	6	4	2	5	2
<b>Pertussis cases</b>	347	672	694	429	222	528	182	193
<b>Tetanus total cases</b>	63	42	51	60	83	25	24	16
<b>Measles vaccine coverage (%)</b>	65	84	76	79	80	81	84	82
<b>Measles cases</b>	14,351	27,171	22,795	27,120	16,329	16,010	30,509	7,810
<b>TT2+ vaccine coverage (%)</b>	29	32	36	35	36	35	38	37

Source: Vaccines, Global summary, WHO 2000 for 1995-98; MOH for 1999 and 2002.

According to data obtained from routine surveillance system, national vaccination coverage rates are as follows; 78% for DPT3, 82% for measles, 72% for HB3 and 37% for TT2+. Vaccination coverage differs widely from region to region. Considering DPT1 and measles doses; Drop-out Rate for "0" age group had been 0.2% in the year 2002. Regional differences are also available for drop-out rates. Drop-out Rate of DPT1-DPT3 was 5.4% (Primary Health Care Directorate 2002 Statistics, MoH).

39 diseases are obligatory for notification. Within the context of "Polio Eradication Programme", Polio free certificate was received together with European Region. The number of measles cases dropped substantially and efforts are going on about "Measles Elimination Programme".

### 3.3.4. Genetic Diseases: Phenylketonuria

Phenylketonuria (PKU) is an inborn error of protein metabolism caused by an impaired ability to metabolize the essential aminoacid phenylalanine. Phenylketonuria results in developmental delays and mental retardation, although the latter can be prevented if the condition is detected early. Turkey has the highest incidence of phenylketonuria in the world, with approximately 1 case of PKU in 2,600 births. A national countrywide screening program is in place, and the number of samples tested has gone up almost twelve-fold, from 71,839 in 1988 – of which 16 cases were found to be PKU positive – to 816,227 cases in 2000, of which 96 cases were found to be PKU positive, of which 99 cases were found to be PKU positive – to 855,004 cases in 2002.

When we summarized the general health situation of children we can say that infectious and vaccine-preventable diseases are the group of diseases that we can manage better to change our results for a better situation. The National Burden of Diseases and Cost-Effectivity Study results are important to decide on the priorities of our country.



### 3.4. Morbidity and mortality among adults<sup>7</sup>

#### 3.4.1. Infectious Disease

The MoH in Turkey requires mandatory notification of certain communicable diseases, such as the vaccine preventable childhood illnesses (Diphtheria, Pertussis, Tetanus, Measles and Polio), Dysentery (amebic and bacillary), Hepatitis (A and B), Typhoid and Para-Typhoid fevers, Rabies, Brucellosis, Malaria and Tuberculosis as well as of some non-communicable diseases such as Cancer. As Table 13 shows, among the notified infectious diseases, Group A Beta Hemolytic Streptococci Infections<sup>8</sup> account for almost one-third of all infections, followed by Amoebiasis (14%), Typhoid (13%), and Malaria (5%).<sup>9</sup>

**Table 13.** Percent Distribution of Notified Infectious Diseases, 2000, 2002

Infectious Diseases	2000		2002	
	Number of Cases	% of Total	Number of Cases	% of Total
Group A Beta Hemolytic Streptococci Infection	65,236	31.13	56,134	29,98
Typhoid Fever	25,731	12.28	24,390	13,03
Amoebiasis	23,723	11.32	26,503	14,16
Malaria	20,963	10.00	10,224	5,46
Tuberculosis	20,222	9.65	16,370	8,74
Measles	16,244	7.75	7,810	4,17
Brucellosis	10,742	5.13	17,765	9,49
Hepatitis A	10,654	5.08	10,600	5,66
Scarlet Fever	4,856	2.32	3,706	1,98
Hepatitis B	4,111	1.96	5,813	3,10
Leprosy	2,514	1.20	2,475	1,32
C. Leishmaniasis	1,135	0.54	2,721	1,45
Dysentery	1,083	0.52	1,047	0,56
Paratyphoid	782	0.37	467	0,25
Meningitis	512	0.24	592	0,32
Pertussis	429	0.20	193	0,10
Anthrax	396	0.19	398	0,21
Trachoma	156	0.07	0	0,00
Tetanus	60	0.03	16	0,01
Diphtheria	6	0.00	2	0,00
Rabies	3	0.00	1	0,00
<b>Poliomyelitis</b>	0	-	0	-
<b>TOTAL</b>	209,558	100.00	187,227	100.00

Source: MoH, 2001, 2003

<sup>7</sup> This section is particularly problematic in terms of the reliability of the data. The surveillance systems for communicable and for cancer are notoriously incomplete and underdeveloped. In addition, lab capacity is very limited in Turkey making under-reporting of the other communicable diseases a real problem for the morbidity discussion. So conclusions about the leading morbidity may not be entirely accurate; but there are certainly patterns of diseases that potentially tell a lot about the health sector.

<sup>8</sup> The Group A Streptococ is “non-news” for the most part. This is the bug that causes tonsillitis, sore throats, scarlet fever, and impetigo – which have little public health significance and probably should not be a reportable disease unless it was causing sepsis.

<sup>9</sup> With the exception of the International Health Regulations, reporting requirements for infectious diseases are nationally or sub-nationally determined. There are differences from country to country, and even within countries in how the reporting of each disease is carried out which introduces an element of non-comparability into global disease surveillance systems, since information on the same disease is collected in a somewhat different way depending on the country.

Infections such as Amoebiasis, Para-Typhoid, and Typhoid are transmitted primarily by contaminated water (and food), indicating improved water and sanitation needs; Brucellosis is transmitted by contaminated meat, indicating the need for improved food safety and inspections programs; while measles, tetanus, pertussis, diphtheria are vaccine-preventable diseases, indicating the need to improve preventive services in primary health care.

Data on mortality, especially on adult and maternal mortality, is scarce in Turkey, and most of the available mortality data is based on hospital deaths and thus heavily weighted towards non-communicable diseases. To this extent, therefore, this data is not likely to present the most accurate picture of mortality for the country. Table 14 presents trends in hospital discharges for different diseases, and shows that non-communicable diseases account for over 77% of all hospital-based deaths, followed by deaths due to non-communicable diseases (13.5%) and accidents (9%).

**Table 14.** Hospital Deaths, 1999

	<b>Number of deaths</b>	<b>% of Total</b>
<b>Group I - Communicable diseases</b>	10,990	13.45
<b>Group II – Non-communicable diseases</b>	63,259	77.42
<b>Group III - Injuries and accidents</b>	7,466	9.13
<b>Total</b>	81,702	100

Source: Health Statistics 2000, MoH

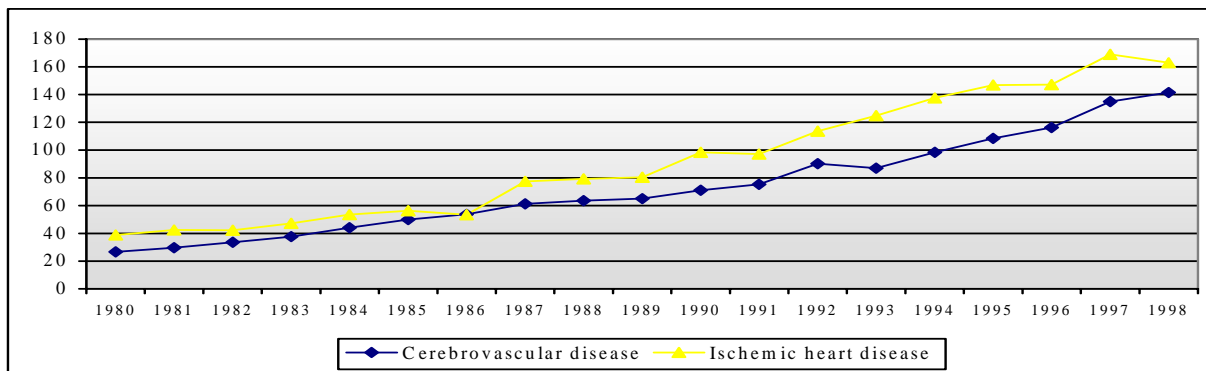
Among non-communicable diseases, coronary heart disease and cancers are the two leading causes of death in Turkey.

### 3.4.2. Cardiovascular Disease

As in many other countries, this group of diseases forms a major component of the non-communicable disease group in Turkey. As Figure 6 shows, morbidity and mortality associated with this group of diseases has increased considerably over the years, with a 327 percent increase recorded in hospital discharges for ischemic heart disease and a 429 percent increase in hospital discharges for cerebrovascular diseases over the last 18 years. Discharges due to diseases of the circulatory system have also increased 1.5 times over the same period. These chronic diseases often require long term medical care both in outpatient settings and in hospitals, while leading to significant disability. Cardiovascular diseases are more prevalent in urban areas in Turkey, and aggressive preventive health programs targeting life-style changes, risk factors such as smoking and diabetes, high fat diets, obesity, and sedentary lifestyle as well as programs for early detection and treatment are necessary to reduce them.<sup>10</sup>

<sup>10</sup> The notion that CVD and cancer are diseases of the affluent is falling by the wayside. In most middle income countries and countries in epidemiological transition, CVD and cancer strike lower socioeconomic groups as well with less ability to pay for the expensive services and medications needed on a long term basis.

**Figure 6.** Hospital Discharges, Ischemic Heart Disease and Cerebrovascular Disease, 1980-98, Turkey

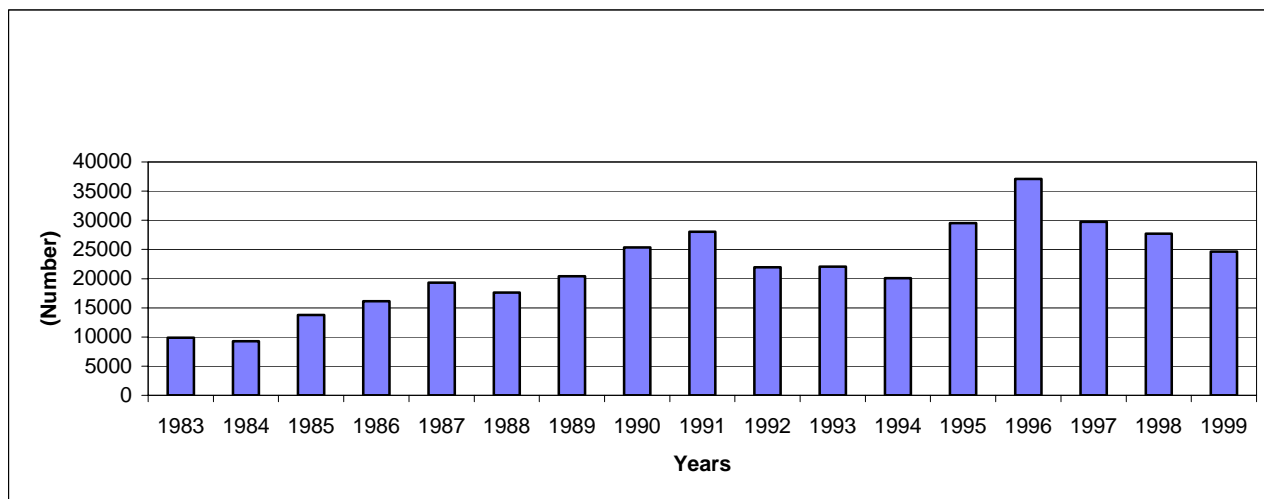


Source: HFA-DB, WHO regional office for the European Region

### 3.4.3. Cancer

Cancer has emerged as a significant health problem in Turkey and is the second-leading cause of death. As Figure 7 shows, there has been an almost three-fold increase in cancer incidence in Turkey in the period 1983-1999, with the number of reported cases increasing from 9,868 to 24,650 during the period.<sup>11</sup>

**Figure 7.** Numerical Distribution of Cancer Notifications Reaching Cancer Registration Center (1983-1999)



Source: HFA-DB, WHO Regional Office for Europe

Lung cancer is the most common form of cancer, accounting for almost 20% of all cancer cases. High rate of smoking (and, to a smaller extent, increased pollution) is thought to have influenced the growth in lung cancer prevalence. Breast cancer is the most commonly seen cancer in women, and its incidence has increased by almost 240 percent from 3.66 per 100,000 in 1984 to 12.83 per 100,000 in 1999. Breast cancer incidence data is also one of the cancers most sensitive to changes in utilization of screening services (mammography). Trends in breast cancer incidence data are very hard to interpret without data on mammography utilization. Stomach,

<sup>11</sup> It is not clear; however, to what extent this is related to population ageing.

skin, bladder, colon, larynx, and bone marrow are the other frequently-reported forms of cancer.

Among the regions, the largest number of cancer cases are reported in the Aegean region (7,385 cases in 1999), followed by Central Anatolia (6,277 cases), Marmara (4,369 cases), Black Sea region (3,188 cases), East Anatolia (3,012 cases) and South East Anatolia (828 cases).<sup>12</sup>

### 3.4.4. Respiratory Infections

Respiratory infections are also common among adults. Increased urbanization with its accompanying increase in pollution and high rates of smoking, particularly among men, appear to be contributory factors. Hospital discharges due to respiratory diseases increased 2.5 fold between 1980 and 1998 (from 330 per 100,000 to 801 per 100,000). The prevalence of chronic obstructive pulmonary disease (COPD) increased 2.75 times from 0.08 percent to 0.22 percent during the same time (HFA-DB, WHO- Europe). As discussed earlier, respiratory system cancer also rose significantly.

### 3.4.5. Tuberculosis

The incidence of tuberculosis (TB) in Turkey has fallen from 83 per 100,000 to 34 per 100,000 cases in the 19 year period between 1980 and 1999. Though the incidence is still higher than the European Union average, Turkey has had greater success in combating TB compared to many Central and Eastern European countries, where the incidence of TB has been on the rise, particularly since 1995. The National Tuberculosis Control Program in Turkey operates country-wide through a network of 272 dispensaries (MoH 2002).<sup>13</sup>

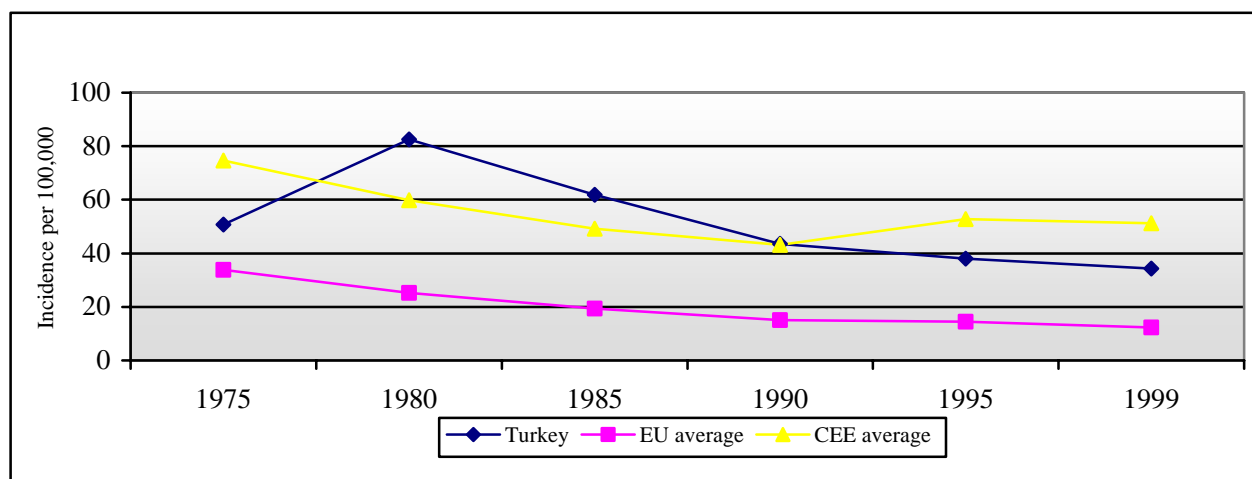


Figure 8. Incidence of Tuberculosis, 1970 to 1999

Source: HFA-DB, 2000, WHO Europe

### 3.4.6. Malaria

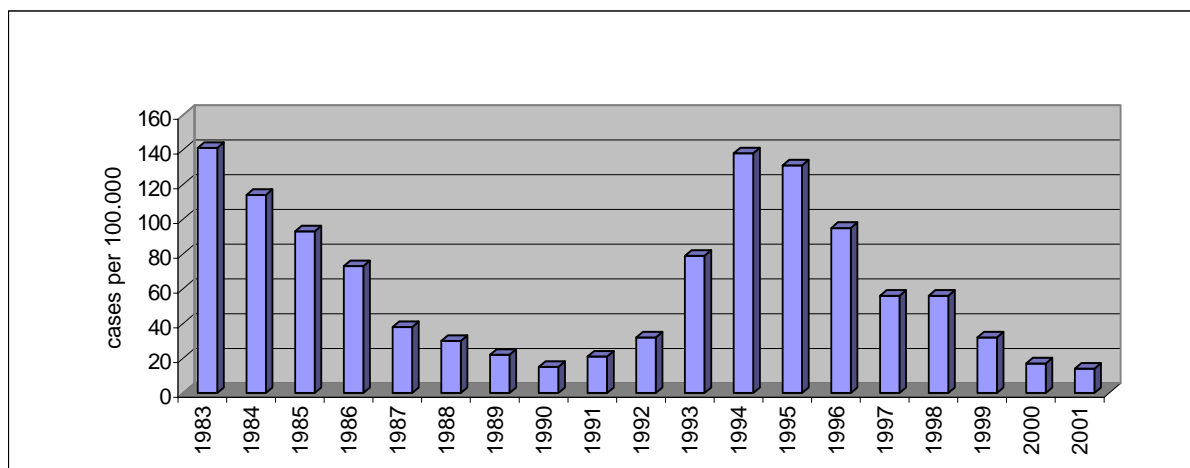
Malaria has been a long-standing health problem in Turkey. Since the early 70s only *plasmodium vivax* malaria was found to be the indigenous species in country. A recent surge in the incidence

<sup>12</sup> The cancer data is so incomplete and poor quality, the regional distribution can be very misleading. Note that the data refer to cancer reporting rather than cancer incidence.

<sup>13</sup> Starting from January 2002 DOTS pilot project has been put into action in 4 dispensaries.

of malaria was observed between 1993 and 1996, largely due to changing agricultural practices that created conditions favorable to growth of malaria vectors and due to the migration of workers from the eastern areas. Since 1994 a decrease in malaria cases has been observed. Total number of malaria cases reported in 2002 was 10,224. The majority of malaria cases are reported in the South-Eastern provinces. Deaths associated with malaria have declined over the years, and only 1 hospital death was reported out of 227 hospital discharges in 2000.

**Figure 9.** Incidence of Malaria 1983-2001



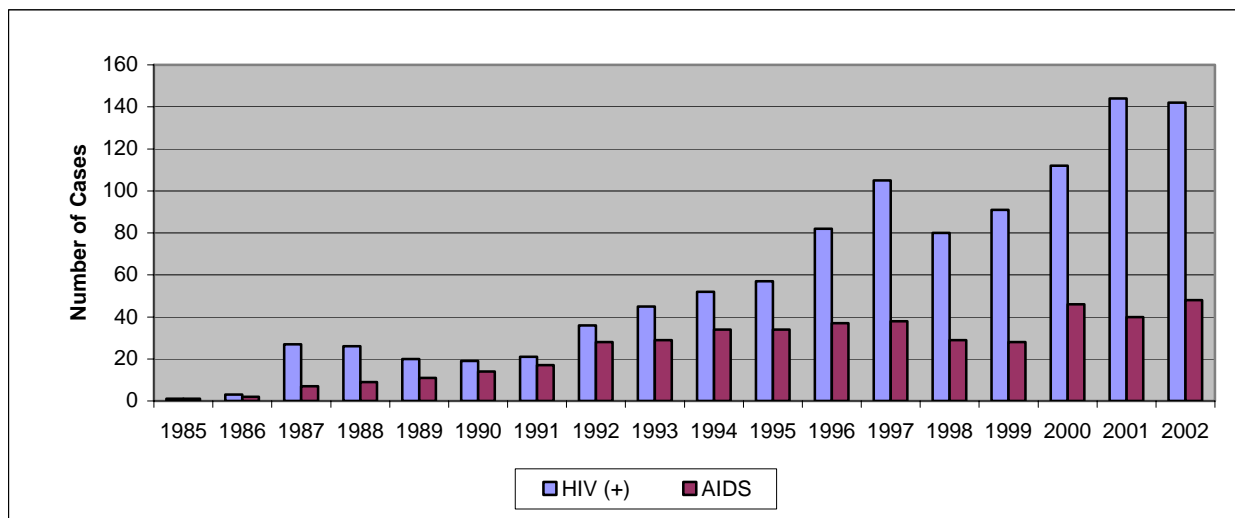
Source: Health Statistics, MoH, 2001

### 3.4.7. HIV/AIDS

The first case of HIV infection was reported in 1985, and as Figure 10 shows, a total of 1,051 cases were identified by the end of 2000. Of these, 300 were in the 25-34 age group, 200 in the 35-49 age group and a little less than 100 in the 15-24 age group (UNAIDS 2000 update). Total of 1,312 cases were identified by the end of 2001 (UNAIDS 2002 update).

Heterosexual transmission is (still) the main route of HIV transmission, accounting for half of all infections, while, mother-to-child transmission accounts for 1 percent of infections. The number of cases diagnosed among intravenous drug users (IDU) is small. While the number of cases is increasing progressively, effective prevention programs at this stage may keep infection rates low and the problem manageable in the future. HIV testing is mandatory in blood donors, commercial sex workers and military service conscripts abroad. The TDHS 1998 indicates that even though 84 percent of women and 93 percent of husbands overall had heard of HIV/AIDS, awareness regarding ways to prevent infections was poor. Regional variations were also reported with 58 percent of women in the eastern regions of the country reporting having heard of HIV/AIDS compared to 92 percent in the western region.

Figure 10. HIV-AIDS cases, 1985-2002



### 3.4.8. Micronutrient - Iodine deficiency

Turkey's geographic location and its mountainous terrain make it an iodine-poor area. Iodine deficiency is a major health concern, with 31 percent of the population being geographically at risk for iodine deficiency. 4 percent, or 2.4 million of those at risk, actually have goiter (UNICEF 1998). Iodination of salt has been legally mandated since 1968. The Salt Iodination program initiated in 1994 attempted to implement this legislation. However, in 1998 only 5 percent of the 48 salt producers in Turkey were actually producing iodized salt and distributing it through the supermarkets in larger cities, and only a third of the salt produced in Turkey was iodized (UNICEF 1998). The problem is particularly serious in rural areas, where only 9 percent of all salt consumed is iodized, compared to 23 percent of all salt consumed in urban areas. The consumption of iodized salt was to the tune of 23 percent in urban areas and 9 percent in rural areas. The problem is also acute in the Eastern region where there is a cultural preference for granular or blocks salt, which is not iodized. In a recent development, the salt producers of Turkey have agreed to iodize all salt being produced after 2000; its implementation will, however, need to be monitored.

### 3.4.9. Accidents, injuries and poisoning

Increasing urbanization in over the past two decades in Turkey has brought with it an increase in accidents, injuries and poisoning. The significant increase in this group of health problems has added to hospital admissions and consequently the shift towards an increased disease burden from communicable to non-communicable disease conditions. Hospital discharges from injury and poisoning have increased by 15 percent from 358 per 100,000 in 1980 to 421 per 100,000 in 1998. Persons injured in road traffic accidents have increased almost three-fold over the last 3 decades (61 per 100,000 in 1970 to 176 per 100,000 in 1999). This is a trend that is characteristic of many developing countries experiencing economic expansion, rapid urbanization and increased traffic.

**Table 15.** Admittance to Hospital Due to Accidents (1999, 2001)

Accidents	1999		2001	
	Number	Fatality Rate (%)	Number	Fatality Rate (%)
Motor Vehicle	65,002	4	54,844	4
Other vehicle	13,307	2	14,047	2
Falls	79,833	1	79,209	1
Fire	7,468	5	7,530	3
Water	1,050	2	637	5
Firearms	6,870	4	5,594	4
Work-related	11,822	3	10,721	1
Animal bites	4,702	<1	4,898	1
Other	26,400	...	21,827	1
<b>TOTAL</b>	<b>216,454</b>	<b>3</b>	<b>199,307</b>	<b>2</b>

Source: Health Statistics, Turkish Republic MoH Survey Planning and Coordination Directory, Publication, 1999 and 2001

### 3.4.10. Disasters

Disasters that affect human beings can be occurred as a result of natural incidents caused by natural disasters or as a result of artificial disasters caused by human beings' actions. We can give examples for natural disasters, such as earthquake, flood, landslide, tornado/typhoon, volcano explosions and for artificial disasters such as nuclear accident/war, chemical substance emissions, and traffic accidents.

So, Turkey is affected more or less from almost all disaster types. From the beginning of 1900 till now, more than 120,000 people have died as a result of natural disasters. More than 250,000 people have been severely wounded and disabled. 65 % of deaths have been caused by earthquakes, 15% by landslides, 12% by floods, 7% by rock slides, and 1% by avalanche falls as a result of natural disasters in Turkey. As it is understood from those rates, earthquakes are the most important disasters that cause deaths in Turkey. 91% of soils and 95% of population of Turkey are on the seismic belt. 3,000-4,000 earth tremors have been recorded every year and more than 50 severe earthquakes have been occurred from 1,900 till now. A severe earthquake has been occurred every 10-11 months and 50 million people have been affected directly and more than 100,000 people have died and approximately 250,000 people have been severely wounded and disabled. More than one million buildings have been collapsed and five million people have been homeless as a result of these earthquakes. Thousands of work places have been closed, hundreds of industries have been damaged, thousands of animals have been died and supplies valued billions of dollars have been wasted. From 1925 till now more than 2% of GDP have been spent in order to meet urgent damages caused by earthquakes (Health 21, Ministry of Health).

Except from earthquakes, landslides, floods, avalanche falls, terror and similar disasters have affected Turkey severely. For example, more than 50,000 deaths and two-fold of disabilities of this rate have been occurred because of terrorist actions made in the last years.

## 3.5. Mental health

A summary of the Turkish Mental Health data are presented in Table 16.

**Table 16.** Mental Health Disorders, Turkish Mental Health Profile, 1996

MENTAL HEALTH DISORDER	Female		Male		Total	
	Number	%	Number	%	Number	%
Panic disorders	22	0.5	7	0.2	29	0.4
Agoraphobia	38	0.9	10	0.3	48	0.6
Unipolar affective disorders Major- depression	33	0.8	17	0.5	50	0.7
Generalized Anxiety disorders	221	5.4	76	2.3	297	4.0
Dysthymia cases	90	2.2	26	0.8	116	1.6
Unipolar affective disorders-mild	91	2.2	28	0.8	119	1.6
Hypochondriasis	31	0.8	11	0.3	42	0.6
Neurasthenia	150	3.7	33	1.0	183	2.4
Alcohol dependence and harmful use	4	0.1	57	1.7	61	0.8
Obsessive-compulsive disorders	26	0.6	8	0.2	34	0.5
Eating disorders- Anorexia Nervosa	0	-	0	-	0	-
Bulimia Nervosa	15	0.4	2	0.1	17	0.2
Social phobia	96	2.3	38	1.1	134	1.8
Separation anxiety disorders	157	3.8	46	1.4	203	2.7
Pain disorders	464	11.3	161	4.8	625	8.4
Somatization disorders	15	0.4	1	0	16	0.2
Having any single mental health disorder	919	22.4	369	10.9	1.288	17.2

For adults not only the infectious but also chronic diseases are important to manage. The National Burden of Diseases and Cost-Effectivity Study results are important to decide on the priorities of adults' health situation.



## 4. LIFE-STYLE

### 4.1. Nutritional outcomes and child nutritional status

Inadequate and imbalanced nutrition problems are still continuing in Turkey. Generally, anemia, malnutrition, rickets are appeared in infants and children. Obesity, diabetes, cardiovascular diseases are appeared in adults.

The major aims of the studies directed to the public nutrition are to improve the adequate and balanced nutrition habits of both the population as a whole and the risk groups, to eliminate the wrong and negative nutritional applications and to follow research studies and educations based on the usage of nutritional resources more effectively and economically.

Examples of nutrition programs are implemented by MoH; Community Nutrition Education Program, Let's Eat Healthy, Let's Keep Our Hearts, Mother and Child Nutrition Program, Promoting Breastfeeding and Baby Friendly Hospital Initiative, Program for Prevention of Iodine Deficiencies.

National Food & Nutrition Action Plan has prepared by The State Planning Organization. MoH, MARA (Ministry of Agriculture and Rural Affairs) and other related sectors have worked together in this study. This report was published. 21. Century for all health in Turkey was determined.

To protect and promote people's health through their lives what we are doing; development and implementation of nutritional programs, providing of implementation of nutrition surveys when is needed, making suggestion to prevent diseases of nutrient deficiencies and unhealthy nutrition, planning and organizing nutrition training program for health personnel and public, providing coordination between formal and informal organizations and cooperation with international organizations about implementing nutritional programs, Preparing education materials (book, brochure, poster, video cassette, television program) (MoH, Primary Health Care Directorate).

Three nutritional indices are typically used for predicting the nutritional status of children: height for age (HFA), weight for height (WFH) and weigh for age (WFA). Height-for-age is an indicator of linear growth retardation for children. Children who are 2 standard deviations below the median of the reference population in terms of HFA are considered 'stunted', or chronically under-nourished, while those who are 3 standard deviations are considered 'severely stunted'. Stunting reflects the outcome of a failure to receive adequate nutrition over a long period of time, and is also affected by recurrent and chronic illnesses. WFA measures body mass in relation to height. Children who are 2 standard deviations below the median of the reference population terms of WFH are considered too thin or 'wasted', reflecting acute under-nourishment in the period immediately prior to the survey. WFA takes into account both acute and chronic under-nutrition.

Table 17 presents the nutritional status of children in Turkey for the year 1998. Malnutrition does not appear to be a serious problem among children under 6 months of age but becomes serious thereafter. The incidence of malnutrition increases rapidly after the age of 6 months and continues to grow through the second and third years of life, flattening out in the fourth and fifth year of life. Twenty percent of children between 2 and 4 years of age are chronically under-nourished, or stunted, and around a quarter of the children are stunted at the age of 5 years. The determinants of stunting include short birth intervals and birth order, and 25 percent of children born with a birth interval of less than 24 months and nearly a third of the children with a birth order of more than 6 are found to be below two standard deviations for the HFA index.

Compared to stunting, wasting is a less significant problem in Turkey, and less than 2 percent of children under 5 years of age have a WFH index below two standard deviations of the reference population. Wasting is, however, present in almost 4 percent of children between 6 to 11 months of age and in 3 percent of children between the first and second years of life before returning close to the reference population, reflecting probable incorrect weaning practices.

**Table 17.** Nutritional status of children, 1998 (% children under-five years of age)

Background characteristic	Height-for-age Percentage below 3SD 2SD		Weight-for-height Percentage below 3SD 2SD		Weight-for-age Percentage below 3SD 2SD	
	<b>Child's age</b>					
Under 6 months	0.4	2.0	0.2	2.1	0.5	1.7
6-11 months	1.0	4.6	0.9	3.7	0.9	7.0
12-23 months	4.9	16.7	0.6	2.9	2.6	10.5
24-35 months	7.1	17.4	0.3	1.4	1.7	8.2
36-47 months	10.8	20.1	0.3	1.4	1.8	9.7
48-59 months	7.8	23.7	0.0	0.7	0.5	9.0
<b>Gender</b>						
Male	5.8	16.0	0.6	2.1	1.7	8.4
Female	6.4	16.0	0.1	1.7	1.0	8.1
<b>Birth Interval</b>						
First Birth	4.0	13.4	0.4	1.9	1.0	7.6
Under 24 months	12.2	24.9	0.5	2.6	2.3	12.3
24-47 months	7.4	18.3	0.4	1.6	2.0	8.8
48+ months	3.7	11.3	0.1	1.6	0.7	5.9
<b>Birth Order</b>						
1	4.1	13.5	0.4	1.8	1.0	7.5
2-3	5.7	14.2	0.3	2.0	1.2	7.0
4-5	7.1	17.5	0.8	2.4	2.5	10.2
6+	14.1	32.2	0.0	1.2	2.5	14.8
<b>Total</b>	6.1	16.0	0.4	1.9	1.4	8.3

Source: TDHS 1998

WFA takes into account both acute and chronic under-nutrition. According to the TDHS 1998, a little over 8 percent of children are underweight, 17 percent of who are severely underweight. As with stunting, determinants of acute and chronic under-nutrition include birth order and birth intervals. Twelve percent of the children with birth intervals of less than 24 months and 15 percent of the children with a birth order of 6+ are seen to be under-nourished on the WFA index. In the reference population, only 2.3 percent of children fall below 2 standard deviations for each of the three indices.<sup>14</sup>

Under-nutrition among children under-five years of age has decreased slightly between 1993 and 1998 (TDHS 1993, 1998). The reduction in the prevalence of wasting is more significant – dropping by 36 percent between 1993 and 1998 – as compared to reductions in the prevalence of

<sup>14</sup> UNICEF data indicate that 8 percent of Turkish children under the age of 5 years are malnourished in terms of weight-for-age (below two standard deviations of the reference population) and 16 percent are undernourished in terms of height-for-age (below two standard deviations of the reference population) for the period 1995-00 (HDR 2001, UNDP).

stunting (12.6 percent during this period).

The nutritional status of children varies significantly across households grouped by wealth quintiles. As Table 18 shows, children in the poorest quintile were almost 9 times more likely to be stunted and almost 7 times more likely to be under-weight than those in the richest quintile. These differences persist in both urban and rural areas.

**Table 18.** Children (under 5) classified as moderately under-weight and moderately stunted

	Percent children stunted (below -2SD z-score)	Percent children underweight (below -2SD z-score)
<b>Poorest quintile</b>	36.3	22.1
<b>Second quintile</b>	26.3	10.9
<b>Middle quintile</b>	18.8	7.7
<b>Fourth quintile</b>	9.4	4.7
<b>Richest quintile</b>	4.3	3.0

Source: Socio-economic differences in HNP, World Bank, 2000 based on data from TDHS 1993.

Gender differences in the prevalence of stunting and children being under-weight do not appear too significant. Male children are slightly more wasted than female children, but the numbers fall well within the normal limits of the reference population.

## 4.2. Obesity

Obesity is a problem among the adult population in Turkey as in many other western countries. The prevalence of overweight and obesity from some local studies and from TEKHARF survey is shown in table 19.

**Table 19.** Prevalence of Obesity in Adults, Turkey (%)

Source	Year	Gender	Overweight	Obese
National	1974	Male	26,4	7,6
		Female	38,5	25,6
Kanra et al.	1982	Male	18,6	7,8
		Female	39,5	13,3
National	1984	Male	25,8	12,8
		Female	33,3	31,9
Yavuz	1986	Male	23,2	23,2
		Female	24,9	53,5

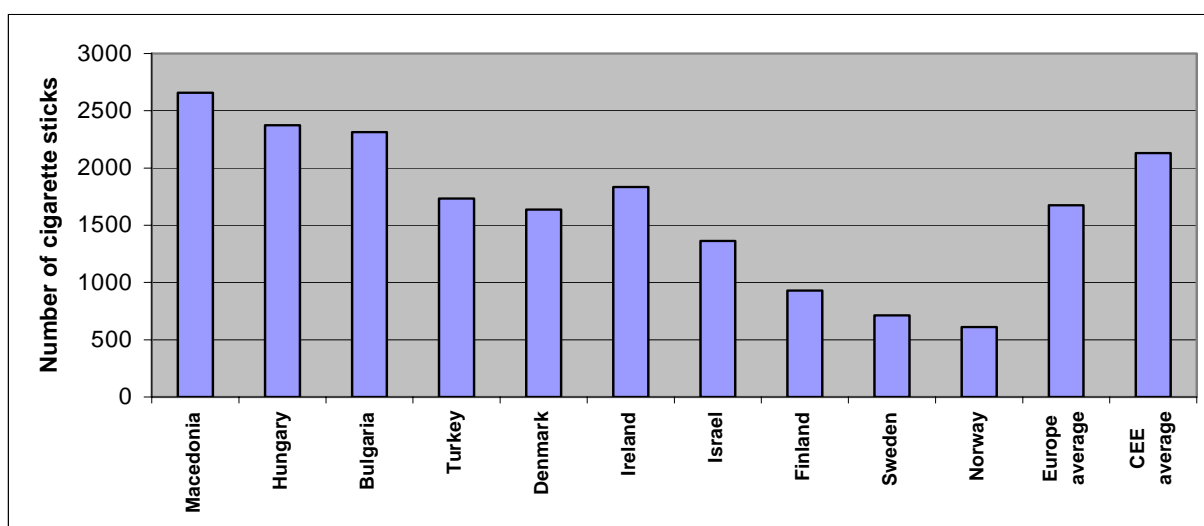
Per 1998 TDHS, 19 percent of mother's were obese and 52 percent were in the overweight group. 1993 DHS figures were 19 and 32 percent respectively.

## 4.3. Smoking

Cigarette smoking is a common habit in Turkey, and both the number of smokers and the number of cigarettes consumed have increased significantly over time. The total number of cigarettes consumed in Turkey increased from 37,506 million pieces in 1970 to 115,500 million pieces in 2000, an increase of 207 percent overall and 34 percent in per capita cigarette consumption.

Following the free import of foreign brand cigarettes into the country in 1986, there was an increase in absolute and relative numbers of smokers, along with a shift in favor of the imported foreign cigarettes. During the 10 year period 1990-99, Turkey experienced the second highest growth rate in cigarette consumption in the world. The increase for this period was 52 percent, second only to Pakistan (71 percent). As Figure 11 shows, Turkey's per capita consumption in 1999 (1,734 cigarettes per person per year) was above that of many other countries in the European region and above the European average of 1,675 cigarettes per person per year. In 1999, Turkey consumed 15 percent of total cigarettes smoked in the European and Central Asia (ECA) region. The total consumption in ECA was 757,151 million pieces, which was 15 percent of the global consumption in that year. Overall, Turkey accounted for 2.25 percent of total world cigarette consumption in 1999 (World Bank). Turkey is also a major producer of tobacco, and accounts for around 4 percent of the world production. In 2002 it reduced 119.000 tons in Turkey. This is an important achievement in Turkey despite the hard works of tobacco companies.

**Figure 11.** Per Capita Cigarette Consumption, 1999



#### 4.4. Alcohol

Alcohol consumption in Turkey is increasing steadily. In one study, the prevalence of alcohol use in young population was found to be 42.6% and regular alcohol use was found in 20.5%. (Health For All, MoH, 2001)

#### 4.5. Illicit drugs

Substance abuse, which was not considered to be a problem for a long time, is showing some increase. In a study, lifetime prevalence of using any substance among high school students was 2.9%. In another study conducted in 1995, it was found that 3.5 % of high school students used at least once a narcotic drug. In a study conducted among street children, it was determined that 4.2% sniffed thinner and 11.5% sniffed adhesive substances. (Health For All, MoH, 2001)

## 5. HEALTH CARE SYSTEM

### 5.1. Historical developments of MoH

#### **1920-1938 Period**

MoH, which was established in 1920, has made legal arrangements in many fields in period of 1920-38. When taking the conditions of that period into consideration, the aims of these arrangements, which are of priority, were;

- Solving the post-war problems,
- Supporting health personnel in quality and quantity,
- Establishing the structure starting from centre to villages,
- Spreading preventive health services

Vertical organization regarding the communicable diseases mainly malaria, syphilis, trachoma still continues to exist within the current organization.

Institutions like Central Hygiene Institute and School, Dispensary, Health Center and Health House have found application area up to date without any change.

The following laws, which were issued in the same period, still present in the current regulation although they have been exposed to various changes;

- ✓ Law on Legal Medicine dated 1920 and numbered 38
- ✓ Law on Bacteriology and Chemistry Laboratories dated 1927 and numbered 992
- ✓ Law on Pharmaceuticals and Medical Preparations dated 1928 and numbered 1962
- ✓ Law on Practice of Medicine and its Branches dated 1928 and numbered 1219
- ✓ Law on General Hygiene dated 1930 and numbered 1593
- ✓ Law on Officers and Establishment of the MoH and Social Help
- ✓ Law on Treatment with Radiology, Radium and Electricity and Other Physiotherapy Institutions dated 1937 and numbered 3153.

#### **1938- 1960 Period**

Legal arrangements and practices were carried out to strengthen the central structure and develop policies with social content.

“Extraordinary Malaria Control Law” which aimed to struggle against malaria, smallpox, syphilis and leprosy epidemics emerged after the Second World War has been issued and disease focused vertical organizational structures specific to diseases were further expanded. Labor Insurance Institution, which forms the beginning of Social Security Institution, has been established in 1945, thus the monopoly of the MoH in the field of service and employment has been removed.

Studies regarding the establishment of the Pension Fund have also been carried out in this period and the coverage of social security has started to be expanded. Hospital services executed by Provincial Private Administrations and local authorities are transferred to the MoH. Regional institutional organization was performed in this period. Regional Numune Hospitals, maternal, children, tuberculosis, and mental diseases hospitals were also the works of that period. Spreading of health houses have also accelerated in these years.

Many laws made in these years are still in force and constitute the basis of our health organization.

- ✓ Law on Opticianry and Opticians dated 1940 and numbered 3958
- ✓ Law on Turkish Medical Association dated 1953 and numbered 6023
- ✓ Law on Pharmacists and Pharmacies dated 1953 and numbered 6197
- ✓ Law on Nursery dated 1956 and numbered 6283
- ✓ Law on Turkish Pharmacists Association dated 1956 and numbered 6643 are the main examples of these laws.

### **1961-1980 Period**

Different health policies have started to be discussed in this period but socialization of health services has been adopted. The Law on the Socialization of Health Services numbered 224 has come into force in 1961 and this law has application areas since 1963. Health policies applied until 1980 were formed within the context of this law.

Vertical organizations were partially decreased and structures giving different health services were integrated within the health houses. Socialization was started with pilot practices and free-working of the doctors working in this context has been prevented by this law. Although spreading of socialization to the whole country in 15 years was suggested, this could not be achieved. This has been changed into an unsuccessful application also according to Dr. Nusret Fişek, who prepared the socialization law.

After 1960, planned period was started and five years development plans became one of the most important elements in determination of health policies. Programs based on socialization policies were also constructed in the First Five Years Development Plan.

Discussions on General Health Insurance concept, which would be talked about for years, were started in these years. General Health Insurance Draft was firstly prepared in 1967 but could not be sent to the ministerial board. Establishment of General Health Insurance was expected in 1969 in the Second Five Years Development Plan; General Health Insurance draft was submitted to the Grand National Assembly of Turkey but not accepted. The draft was re-submitted to the Grand National Assembly of Turkey in 1974 but it could not be discussed.

All laws, regulations and circulars prepared in this period aimed arrangements based on the main basis of socialization.

### **1980-Today**

1982 Constitution includes arrangements parallel to 1961 Constitution in health services and administration. Article 60 includes, everybody "has social security right and the state undertakes this responsibility" expression. General Health Insurance is included in Article 58 of the 1982 Constitution with the expression "General Health Insurance can be established".

80s witnessed to the efforts for expansion of socialization policies started in 1961. With the increase in health finance management, general health insurance again came into the agenda in 1987 but legal arrangement regarding this issue could not be implemented. Main Law of Health Services was issued at the same year. However, arrangement necessary for the implementation of this law could not be prepared until today.

SPO made a master plan regarding health sector prepared and First National Health Congress was held in 1992 in line with this plan and re-structuring process was started. In the Second National Health Congress held in 1993, national health policies were determined and Green Card project for poor people out of social security coverage was started.

In parallel to the resolutions of the Second National Health Congress held in 1993 some arrangements have been made up to now, unfortunately expected consequences could not be obtained. No results have been obtained from the studies regarding privatization and autonomization of hospitals.

## 5.2. Organization of the health sector

The Turkish health care system has a highly complex structure. The actors in health care in Turkey are several public, quasi-public, private and philanthropic organizations. In Table 20, the agencies involved in the health sector, either directly or indirectly, are grouped according to whether they are concerned with policy formulation, provision of health care, finance of health care, or whether they have administrative jurisdiction over delivery of health care.

**Table 20.** Organizations involved in Turkish health care classified by their function

<p><b>POLICY FORMULATION</b> The Parliament The State Planning Organization The MoH The Higher Education Council The Court of Constitution</p> <p><b>ADMINISTRATIVE JURISDICTION</b> The MoH Provincial Health Directorates</p> <p><b>FINANCE OF HEALTH CARE</b> The Ministry of Finance SSK Bağ-Kur GERF Private Insurance Companies Self Funded Schemes International Agencies</p>	<p><b>PROVISION OF HEALTH CARE</b></p> <p><b>Public</b> The MoH Social Insurance Organization University Hospitals The Ministry of Defense</p> <p><b>Private</b> Private Hospitals Foundations <b>Minority Hospitals</b> Private Practitioners/Specialists Outpatient Clinics Laboratories and Diagnostic Centers Pharmacies</p> <p><b>Philanthropic</b> Red Crescent Foundations</p>
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There are three key players in the Health System of Turkey.

### 5.2.1. Ministry of Health

The MoH is the main government body responsible for health sector policy making, implementation of national health strategies through programs and direct provision of health services. MoH is the major provider of primary and secondary health care, maternal health services, children's and family planning services. It is essentially the only provider of preventive health services through an extensive network of health facilities (health centers and health posts) providing primary, secondary, and specialized in-patient and out-patient services. At the end of 2001, MoH had 754 hospitals, approximately 26,000 health posts and 5,700 health centers – about twice as many as a decade ago. However, several hundred health posts are not operating because of lack of personnel and equipment.

The Minister of Health is the highest authority in the Ministry, and is assisted by an Under-Secretary who reports directly to him. In turn, five Deputy Under-Secretaries report to the Under-Secretary. The MoH currently comprises seven general directorates: (i) Primary Health Care; (ii) Curative Services; (iii) Mother and Child and Family Planning; (iv) Pharmacy; (v) Health Education; (vi) Personnel and (vii) Borders and Maritime Health. The organization is essentially

structured along vertical lines of responsibility reflected in the topic-based, functional divisions within each directorate also at the provincial level and, to a certain extent, in health centers and posts.

At the provincial level, provincial health directorates (for 81 provinces) are responsible for administering health services provided by the MOH. The provincial health directorates are accountable to provincial governors for administrative matters and to the MoH for technical matters. Directors of MoH hospitals report to the Director General of Curative Services, while Directors of Health Centers report to the Director General of Primary Health Care.

### ***Managerial Autonomy***

The central office of the MoH has responsibility for the provincial health directors. More specifically, the Director-General of Personnel has the ability to retain or delegate powers to the provincial directors.

The recruitment process for all Ministry staff is managed through the Personnel Directorate. Recruitment of new graduate doctors and nurses (including midwives) is through an appointment system based on MoH identifying and advertising areas where positions are available. Graduates identify three top priority areas and the selection is based on attempting to match vacancies with graduate priority preferences. Appointments are for two years. This is a relatively new system introduced about three years ago to ensure a fairer more transparent system of appointment than had previously been in place.

### ***Provincial Health Services***

A doctor heads MoH's provincial health centers. Health centers are under the supervision of the provincial health directorate. The provincial health director is responsible for day-to-day planning and administration of all primary care activities in the province and must receive approval of health services activities from Ankara as well as from the provincial governor. Doctors for primary care facilities are recruited and assigned to their posts centrally by the Personnel General Director while other health center staff are assigned by MoH to a particular province and distributed to specific primary care facilities by the Provincial Health Directorate. Health center operating expenses are paid through the provincial government and supplies are provided to the centers through the provincial health directorate, based on their availability and past usage rather than actual case loads. In some areas, district level Group Doctors have been created to act as administrative head of a group of health centers, but their position is ill-defined.

## **5.2.2. Ministry of Labor and Social Security**

In 1983, the two separate Ministries of Labor and Social Security combined to form one major government agency – the Ministry of Labor and Social Security (MLSS). The Ministry deals with employment related issues, occupational health and safety, labor inspection, foreign affairs issues as they relate to labor, responsibility for Turkish workers working overseas, and coordination with the European Union. The Ministry also carries out personnel, communications/public relations and research activities in relation to its main responsibilities. Two social security institutions, Sosyal Sigortalar Kurumu (SSK) and Bağkur, operate as semi-autonomous bodies within MLSS.

While the Ministry operates in a centralized manner, it also oversees a provincial structure with 22 regional labor directorates, and Inspector Boards in 10 provinces. A number of affiliated organizations have relationships with MLSS, allowing for a wider coverage by the Ministry in the 81 provinces. Within the core functions of MLSS (not including SSK and Bağkur), there are 1,700 staff, of which 1,200 are based at the head office in Ankara. In addition, the Inspection Board has 600 staff.



### **Sosyal Sigortalar Kurumu (SSK)**

SSK is a social security organization for private sector employees and blue-collar public sector employees and operates within MLSS. SSK provides health insurance and a range of other social protection insurance covering industrial accidents, occupational diseases, sickness, maternity, invalidity, old-age and survivors insurance. The organization was established in 1946 as the "Workers' Insurance Organization" and was restructured in 1965 following the passing of Social Security legislation, which is now the governing legislation for SSK.

In terms of health, SSK operates as both an insurer and provider of curative health services through a network of 118 hospitals, 219 health stations (similar in scope to MoH health posts) and 189 health dispensaries (equivalent to MoH health centers). SSK's members use SSK facilities as well as MoH, University and private health facilities. SSK does not provide or pay for preventive services. SSK health services are funded by premiums paid by employees and employers. SSK's facilities are located primarily in industrial areas where there is a high concentration of SSK beneficiaries. SSK beneficiaries are expected to use MoH primary care facilities if they live or work in an area that does not have a nearby SSK primary care center.

While a single system is used to collect both retirement and health insurance premiums, health premiums and health expenditure are separately identified in SSK accounts.<sup>15</sup> SSK has two other sources of funding in addition to premiums: income from fees paid on behalf of non-members using SSK facilities (for example Bağkur members), and income obtained through co-payments. About 18 months ago the social security and health insurance functions of SSK were separated and distinct branches for each established.

### **Bağkur**

Bağkur is the insurance scheme for the self-employed.<sup>16</sup> It was established in 1971 under law 1479 essentially for self employed people, but the scope of coverage has since increased to also include unemployed people, housewives, local community elders, people of Turkish origin (and carrying a foreign passport) who live in Turkey, and the unemployed wives of Turkish nationals working abroad. In 1983, access to insurance through Bağkur was extended to self employed agricultural workers (under Law 2926). In 1985-86, the scope of insurance was also extended to include health insurance. Since February 1999, health insurance has been extended to agricultural workers.

Bağkur has offices in all 81 provinces. Of the 6,000 authorized positions, only 4,300 of these positions are filled. From an organizational perspective, Bağkur became a semi-autonomous part of the Ministry of Labor in 1983 when the two separate Ministries of Social Security and Labor were merged. This was part of a general approach by government to rationalize government agencies. Bağkur is financially and administratively autonomous, while still being part of the Ministry of Labor.

The scope of Bağkur's service coverage includes medical examination of an insured person (and the person's beneficiaries), laboratory tests for diagnostic purposes, and associated in-patient and out-patient treatment. Insurance assistance operates until the patient has recovered or for a period of 90 days. All contributors to Bağkur have the same entitlement to benefits covering all outpatient and in-patient diagnosis and treatment.

Bağkur does not own health facilities, but contracts with other service providers. At present, contracts exist with 133 health facilities, including the MoH, local government, university

<sup>15</sup> The insurance services operated through SSK include: accident and occupational diseases; medical; maternity medical and income replacement; disability, old age and death insurance.

<sup>16</sup> The scheme covers the self-employed who were excluded from the Social Insurance Law. This includes: craftspeople, artisans, and small business owners, technical and professional people registered through a professional chamber or association and shareholders of companies other than co-operatives.

hospitals, private hospitals, state-owned economic enterprises and NGOs such as the Red Crescent Society. The contracts are either for specific services such as dialysis, cardiovascular, or dental services, or for general medical services. Within the 133 contracts, Bağkur also has contractual arrangements for prescriptions with a range of relevant societies such as the physician sections of Chambers of Commerce, and trades and crafts organizations.

The Bağkur scheme works on a reimbursement basis in which the fees are determined independently by the institution. In-patient care is fully covered by the scheme. For out-patient care, drug purchases require a 20 percent co-payment from active members and a 10 percent co-payment from retired members. Co-payments are also required for many some other goods and services, such as corrective eye glasses. Bağkur contracts annually with the Turkish Pharmacists Association, covering prices for core drugs and with opticians for standard glasses and frames.

According to the 1999-2000 Bağkur Statistical Yearbook, there are approximately 3.3 million people insured through the scheme under laws 1479 and 2926. Coverage extends to approximately 9 million when dependents are taken into account. The scheme has been seriously underpaid by subscribers and Bağkur has just started to take specific steps to increase premium payments.

### **5.2.3. Emekli Sandığı (Pension Fund)**

Emekli Sandığı (ES), the Government Employees Retirement Fund, was established in 1950 under Act No 5434 to provide retirement and invalid pensions for white collar employees and military personnel. Initial coverage has been extended to include: local government council members, parliamentarians, military school students and selected categories of people from state organizations. ES does not collect specific health insurance premiums from either active civil servants or pensioners. The scheme is basically financed by state budget allocations. ES finances all health care needs of retired government employees, with only a 10 percent drug co-payment paid by users. Medical and health insurance is a significant part of ES.

Key functions of ES include payments for superannuation, payments for disability and invalidity in the workplace or through war, refunding deductions and making lump sum and cumulative payments, payment of retirement and marriage bonuses, provision of medical coverage, that include 100% of hospital treatment costs and 90% of drug costs, corrective eyeglasses, hearing aids etc., payments at the time of death of the contributor to the surviving spouse and children and lump sum payment, payments for dependent and poor people over 65 (undertaken by ES on behalf of the Turkish Treasury), and limited payments under Act No. 3480 for war victims.

#### ***Managerial Autonomy***

The Minister of Labor and Social Security appoints senior managers of ES, Bağkur and SSK. The Director-General of the Health Directorate of SSK appoints health personnel to SSK hospitals in much the same way as MoH does for MoH and public university hospitals. Positions in each of these organizations are considered to be civil servant positions. There is limited ability to monitor performance, and virtually no ability to fire staff.

SSK hospitals are also managed by a head physician, who has the responsibility for overall hospital operations and management. In general, the chief physician is appointed on the basis of length of service and medical reputation rather than management skills. A chief physician, head nurse and hospital administrator with responsibility for financial, technical and some everyday personnel matters assist the head physician. Appointments are made by the General Directorate of Health Services in the MLSS.

## 5.3. Hospital organizational structure

### 5.3.1. Public Hospitals

A head doctor assisted by a chief physician, a head nurse and a hospital director heads public hospitals. The director is in charge of financial, technical and some personnel matters on a daily basis. All management staffs at MoH hospitals are appointed by MoH. Management staffs at SSK hospitals are appointed by SSK's General Directorate for Health Services, while management at university hospitals is appointed by the Higher Education Council. The main criteria for selection of the chief doctor are generally length of service and reputation as a doctor, rather than managerial capacity. Many head physicians lack management skills. All health personnel are recruited and assigned to specific hospitals centrally. Hospitals generally have shared corporate services and a human resources section dealing with personnel and administrative issues that reports directly to the Director.

### 5.3.2. Private Hospitals

There is no set format governing the organizational and management structure of private hospitals. This section is based on the experience of Güven Hospital, a private hospital that opened in 1974, and one of the 8 private hospitals in Ankara. It started as a family-based and owned company established by a husband and wife team, with the woman of the partnership as the chief physician. The family nature of the business has continued as the hospital's services have expanded. One daughter, who is a business management graduate, has recently been appointed Deputy General Director in a restructured and expanded operation.

The hospital started with few full-time staff and with all of the doctors providing services on a part-time basis. During the 1990s, however, the hospital expanded, extending the scope and nature of services available from the hospital. The organizational structure has also been altered and updated to reflect the wider and more sophisticated nature of the business.

The hospital provides a range of surgical, laboratory and radiological services, and runs its own ambulances. The services provided include: anesthetic services, family medicine and check-up, nutrition and diet advice, neurosurgery, pediatric services, medicine, internal medicine, dermatology, gastroenterology, general surgery, thoracic diseases, an IVF clinic, gynecology and obstetrics, cardiovascular surgery, cardiology, ENT, neurology, radiology, nuclear medicine, and laboratory services. The hospital has added an Accident and Emergency unit recently. Thirty percent of the hospital's patients are private patients paying out-of-pocket, while over sixty percent of patients are financed through private companies paying for their employees. Members of parliament have access to services from private hospitals with funding from the state budget.

#### **Financial Autonomy**

Hospitals are funded through two main sources: from the MoH for personnel and part of maintenance costs and from the revolving funds for additional capital costs and supplementary personnel costs. MoH pays personnel and maintenance costs directly from the Ministry's budget. Revolving funds receive their resources from fees paid by social insurance agencies (such as ES and Bağkur) and by private patients. SSK hospitals have no revolving funds because the large majority of their patients are SSK beneficiaries.

While revolving funds are collected and kept in the facilities, MoH hospital managers are bound by guidelines from the MoH Directorate of Curative Services. Thus, as per the guidelines, a maximum of 50% of the funds can be used for topping up salaries, if the hospital has no other outstanding bills. The payment of salary supplements is expected to be based on performance

evaluations. Within the broad guidelines, facilities collecting the revolving funds can use the receipts in different ways.

## 5.4. Supply of the health services

Health services in Turkey are supplied by a multitude of public and private providers. The three key public providers are the MoH, SSK and the Universities through University hospitals. Other public Ministries, (Defense, Transport, Education), some state enterprises and municipalities also provide health services, but their capacity is quite limited. At the central level the MoH is the major government body responsible for sectoral policy making, implementation of national health strategies and programs and provision of health services. At the provincial level, provincial health directorates, accountable to the provincial governors for administrative matters and to MoH for technical matters, administer health services provided by MoH.

MoH is the major provider of primary and secondary health care and essentially the only provider of preventive health services. MoH operates an extensive network of health facilities providing primary, secondary and specialized inpatient and outpatient care. SSK operates a significant network of secondary in- and out-patient facilities and a more limited number of primary facilities servicing members of SSK and their dependents. University hospitals provide in-and outpatient care. Public sector health facilities are complemented by a much smaller network of private facilities providing both inpatient and outpatient care.

### 5.4.1. Public sector health services: Outpatient care

#### *Primary and Preventive Health Care*

##### ***Type of the system***

The MoH is the most important public provider of primary health care and essentially the sole provider of preventive health services. It is also the major provider of maternal health care services. These services are provided through a network of health posts and health centers which were established throughout the country on the basis of the 1963 law on socialization of health services. According to this law, primary care implies that national policies influence the location of physician practice so that they are distributed throughout the population rather than concentrated in certain geographic areas. Although primary care centers are aimed to be distributed throughout the population rather than concentrated in certain geographic areas, it does not come to reality. Primary health centers do not represent the equitable distribution of physicians' resources.

With respect to the circular dated 28.08.03 published by MoH, rural health posts to serve an average of 1,500 people and for three types of health centers. Current regulations provide for rural health posts to be staffed by a midwife who is to provide primary health care and family planning services, attend deliveries and make monthly visits to ascribed households. Rural health posts are attached to and supervised by a health center. Rural health centers are to serve a population of 2,500 and have a staff of eight, including a general practitioner, a nurse, a health officer, two midwives and support staff. District health centers, expected to serve a population of 5,000 are to be staffed by a team of about 16 health professionals (including four general practitioner, a dentist, a pharmacist, an environmental health technician, several health officers, a laboratory technician, two nurses, and two midwives). Province health centers, expected to serve a population of 10,000 and in metropolitan cities expected to serve a population of 20,000 moreover in case of need, the units which are affiliated with health centers can be opened with the approval of Governorships and proposal of Provincial Health Director without being dependent on population criteria.

The main functions of health centers are the prevention and treatment of communicable diseases, immunization, maternal and child health services, family planning, public health education, environmental health, patient care and the collection of statistical data concerning health. In addition to providing

preventive and primary health care services, health centers are intended to be the first contact point for anyone needing health care and to refer those needing more specialized care to higher institutions.

With respect to the circular dated 22.10.02 published by MoH, stickers informing people about health centers and their services were adhered to the doors of houses and apartments in provinces and districts having more than one health center.

A study had been conducted by MoH in order to determine the current situation in health centers in 2002 (Health Center Survey 2002, March 2003 Ankara, MoH, Health Project Coordination Unit). The provinces take place in I., II. Health Projects and Primary Health Care Project had been included. The objective of the study is to assess patient satisfaction, health center administration at the level of province and performances of health centers from the point of provision of primary health cares.

Health centers are being visited primarily for examination when it is evaluated from the point of health center beneficiaries. Secondly, they visit for prescription/report inquiries. Most of the beneficiaries are women and are graduated from primary school. 92.2 % of beneficiaries are satisfied although the rate of satisfied patients is decreased. The rate of people considering the period and explanation sufficient is 90%. The rate of health center beneficiaries is 77% in the last three months. These outcomes should not be valid for general population but only for those participated in the study.

#### ***Financing and cost sharing for primary care services***

The services are being given free of charge at primary level health centers. Diagnosis and drug expenses of insured people (civil servants, retirement fund, SSK and Bağkur) are met by their own insurance institution. The examinations of poor people having no insurance are being made free of charge and treatment expenses are met by Social Solidarity Fund - if any money available. This issue is defined in detail in Revolving Funds part.

#### ***Type of primary health care practitioner***

General practitioners are the prototypical primary care physicians in our health centers together with dentists. There are no specialists available in those health centers according to present law, except in Mother-Child Health & Family Planning Centers (MCH-FPC). There are only pediatricians, gynecologists, family medicine practitioners and public health specialists as well as general practitioners in the MCH-FPC.

#### ***Percent active physicians who are specialists***

There are 85,117 active physicians consist of 38,064 specialists and 47,053 general practitioners. Percent active physicians who are specialists below 50 % (44.7 %) are considered indicative of an orientation toward primary care.

#### ***Professional earnings of primary care physicians relative to specialists***

A General Practitioner earns 566 \$ and a specialist earns 633 \$. If specialists are working at the hospital they get hospital revolving funds approximately 400 \$. Professional earning of primary care physicians relative to specialists is (0.6:1). A low ratio (0.8:1 or less) is considered an incentive toward a specialty-oriented system.

#### ***Patient lists***

There are system requirements for patient case record. Personal lists are called as "personal health forms"; necessary information regarding patients' health status is recorded according to this system however, a particular practitioner does not follow these forms. Moreover, these forms are not being used in practice.

#### ***Requirements for 24 hour coverage***

Personal or delegated 24 hour coverage exists by legal obligation in some areas in the case of necessity (tourism area or emergency health units so far above 20 km.) and these areas are determined with ratification of MoH. Moreover with respect to circular dated 28.08.2003, determining of health centers and related units working 24 hour are being organized by Provincial Health Directorates by taking into account population of region, socio-economic structure, access to health institution and service productivity with approval of Governorships. According to the same circular, the expenses regarding staff, transportation, security, heating and food of health centers and related units of which work hours expanded to 24 hour are being met by Provincial Health Directorates. Health centers and related units working 24 hour are obliged

to provide all services of health centers and "Emergency Service". Health centers having no inpatient institution and are in districts, which serve "Emergency Service" in addition to their routine services, are organized by Provincial Health Directorates and performed with approval of Governorships by meeting staff support, transportation, security, heating and eating etc. needs of these health centers. Routine services of these centers are being continued in working hours. It is not expected them to give routine services outside of their working hours except "Emergency Service". Working hours of the staff at Primary Level Health Care are regulated by Governorships. This regulation organizes working hours of the staff not more than weekly working hours. Health centers still serving 24 hour continue their tasks.

On the other hand, emergency and forensic medicine services are given in 24 hour in all types of health facility and all over the country. In districts with state hospitals, people choose hospitals in of emergent cases. The name and telephone number of the physician who is charged to give forensic medicine services is written on the door of health center and cannot leave his/her mission area in 24 hours.

#### **Strength of academic departments of family medicine**

Family medicine is accorded low priority or prestige in medical education and training. There are 1,100 family practitioners in our country. Family medicine departments which give specialty degree are established at 15 university hospital, 14 state hospitals. Currently approximate number of assistants is 200.

Primary care practice are provided by primary health centers, private sector (solo practice or in the polyclinics) and state and university hospital polyclinics. Additionally, there are general practitioners providing primary care in state hospitals and private sector. Specialists are restricted to hospitals and private sector except MCH-FPC.

The type of reimbursement of generalists is as monthly salary paid from general budget. There is no fee regarding per service. However, revolving fund system has been established recently at primary health care level. The same situation is feasible for specialists and General Practitioners working at MCH-FPC. Specialists and General Practitioners working at state hospitals are getting fees from revolving fund as well as their salaries.

Primary care organized by defined geographic area: Rural, semi urban and urban health centers.

#### **RATING PRACTICE CHARACTERISTICS**

**First contact:** There is referral system but needs to be strengthened. There are incentives to reduce direct access to specialists. Before the date of July 2003, people dependent on ES and Bağkur can receive treatment from specialists without visiting Primary Care Centers however people having green-card and civil servants had to visit Primary Care Centers firstly. After afore-mentioned date decisions about the need for specialty services are made after consulting the primary care physician.

**Longitudinality:** There is no an implicit or explicit relationship over time. There is no relationship which is based on enrollment or registration (patient list) with a particular practitioner and also every one does not visit the same health center and is not examined by particular physician.

**Comprehensiveness:** Arrangements for universal provision of extensive and uniform benefits and for care of children, elderly and women as well as other adults routine obstetric care provided by primary care practitioners, consideration of mental health needs in primary care practice, performance of minor surgery, and various aspects of preventive care are performed within the primary care practice.

**Coordination:** There are formal guidelines for the transfer of information between primary care physicians and specialists (Form 019). But this form has not been in use for a long time.

**Family-centeredness:** Health care services are family centered at primary health centers. Family information is taken into account in providing health service to a patient by using family records kept in primary health centers.

**Community orientation:** Practitioners use community data in planning for services or identification of problems. Household Registration Forms are being used at primary health care centers and updated by midwives every June and include information regarding households. On the other hand clinical data derived from analysis of data from the practice are used to identify priorities for care and reports derived

from this data are sent to MoH monthly (Form 024- includes number of polyclinics, number of injections, laboratories, minor surgery, immunizations, pregnancy-child follow up) and annually.

### **Existing Primary Care Facilities**

Following the above described model, the MoH has established almost 11,700 health posts and 5,840 health centers (Table 21). For maternal and child care and for key preventive services, MoH also runs a number of vertical programs. To help implement these programs, particularly in urban areas, MoH therefore also operates a series of specialized centers and dispensaries, including 280 MCH-FPC, 272 tuberculosis control dispensaries and a small number of other specialized dispensaries. These dispensaries, with their specialized personnel, offer preventive and curative health services and training for health personnel from other primary care units. However, as they depend administratively and financially on different MoH departments than MoH's regular primary care facilities, coordination and integration of services at the field level often leaves to be desired. Within the framework of preventive care, health centers also deal with TB, malaria, family planning and maternal and child care.

MoH's facilities are complemented by SSK's more limited primary care network consisting of 202 health stations and 213 health dispensaries. SSK's facilities are primarily located in industrial areas with a high concentration of SSK beneficiaries.

**Table 21.** Public Primary and Preventive Health Care Facilities, 2000, 2002

	<b>2000</b>	<b>2002</b>
<b>MoH Facilities</b>		
Number of MoH Posts	11,675	11,735
Number of MoH Centers	5,700	5,840
Provincial centers	1049	1092
District Centers	1113	1168
Town	1682	1703
Village	1856	1877
MC-FPC	291	280
Tuberculosis Dispensaries	270	272
<b>SSK Facilities</b>		
SSK Health Stations	219	202*
SSK Health Dispensaries	198	213*

Source: MoH and SSK

\*SSK 2004

### **Revolving Funds**

In principle, treatment at MoH primary care facilities is currently free of charge and open to everybody, regardless of whether they are affiliated with one of the insurance schemes or not. Patients do, however, have to pay for medicines to the extent that these are provided by the facility.<sup>17</sup> In practice, some facilities have resorted to charging a small fee per consultation to help increase their operating funds. The fees charged go to a foundation which has been created either by the facility or a group of facilities to help support their operations. In addition to the modest contribution which patients are asked to make to the foundation, funds are typically also solicited from the local business community. The foundation is generally headed by a board made up of representatives from the local community and health care personnel and the board

<sup>17</sup> Primary care centers are not allowed to sell drugs unless the nearest pharmacy is more than 10 km away. In this case the head doctor of the facility can apply to MoH for a license to sell drugs, if the license is granted the doctor can sell the drugs at the same margin as pharmacies.

decides on the allocation of funds. Treatment at SSK's primary care facilities is limited to those insured under SSK and their dependents and provided free of charge.

Given the severe constraints on primary care facility's operating budgets; MoH is planning to introduce revolving funds for primary care facilities. Legislation to this effect was passed in early 2001 and 45 provinces received permission from the Ministry of Finance (MoF) to establish revolving funds for selected primary care, effective 1.11.2001. The primary care revolving funds will be fuelled by charges for diagnostic, treatment and rehabilitation services provided to those who are covered by one of the insurance schemes, such as SSK, ES, Bağkur or Civil Servants. Preventive care will continue to be free of charge for all. Charges will be submitted to the relevant insurance scheme for payment, while those without coverage will continue to receive free treatment. To avoid discrimination against those without insurance, revolving funds will be kept and managed by the provincial health directorate rather than by individual facilities. Similar to revolving funds for hospitals, the resources from primary care revolving funds are expected to be used to top up salaries of health care staff (up to 50% of funds collected), to purchase supplies and equipment and for staff training. Although 45 funds have been established, they have not yet become fully operational, since MoH has not yet signed any protocols regulating payment into these funds with the concerned social insurance organizations.

### **Management of Primary Health Care Facilities**

MoH health centers are headed by a doctor who has, however, next to no managerial autonomy. MoH primary care facilities do not have their own budget and head doctors can not decide on the staff working in their centers. Health centers are under the supervision of the provincial health directorate. The provincial health director is responsible for day to day planning and administration of all primary care activities in the province and must receive approval of health services' activities from MoH as well as the provincial governor. Doctors for primary care facilities are recruited and assigned to their post centrally by MoH, while other health center staff are assigned by MoH to a particular province and distributed to specific primary care facilities by the Provincial Health Directorate. Health center operating expenses are paid through the provincial health directorate with funds from the MoH budget. The provincial health directorate also provides the centers with supplies based on availability and past usage rather than actual case loads.

District level Health Groups are increasingly created for administrative purposes. The group head doctor is then responsible for overall coordination of all health center activities and administration in his district, including the ordering of supplies from the provincial health directorate and subsequent distribution of these to the centers.

### **Utilization rates**

Although they have increased somewhat over the past five years, contact rates of Turkey's population with MoH's primary care facilities remain low, indicating that many people make use of alternative facilities. The average annual visit per capita to a health center is 0.8, compared to 1.6 average annual visits per capita to outpatient facilities of hospitals. Visits to MoH primary care facilities only account for 31% of total outpatient visits to public sector health facilities. There is no recent nation wide data which shows what percentage of the population makes use of MoH primary care facilities, but a number of case studies carried out mostly in urban areas, show that a minority (maximum one quarter) of people surveyed in these areas make use of MoH health centers.<sup>18</sup> Most either go directly to higher order facilities or seek private care.

<sup>18</sup> See, for example, Aslan, S. et.al, Kaya Sağlık Ocagi Bölgesinde Sağlık Ocagini Kullanım Boyutu ve Sağlık Ocagi Hizmetlerinden Memnuniyet Düzeyi Araştırması, Hacettepe University Public Health Department, Ankara, 2000., Yardim, M. Ankara ili Cankaya İlçesinde 25 Yaş ve Üzeri Nüfusun Sağlık Düzeyinde ve Sağlık Hizmet Kullanımında Sosyoekonomik Farklılıklar, Hacettepe University Public Health Department, Ankara, 2001, Gül A. et.al. Kostence Sağlık Ocagi Hizmet Bölgesinde Toplumun Sağlık Ocagi Hakkındaki Bilgi ve Kullanım Düzeyinin Araştırılması,



### SSK Primary Health Care Facilities

SSK's primary health care facilities only provide services to SSK members and their families. In 1999, SSK recorded 10.7 million visits to its dispensaries and 3.6 million visits to its health stations, averaging 62,094 visits per dispensary per year and 17,831 visits per health station. This shows significantly more visits per facility than MoH health centers. SSK beneficiaries make 0.4 visits/beneficiary to SSK primary care facilities and 1.4 visits/beneficiary to SSK hospital outpatient facilities per year. Both numbers are below the national average annual contact rates with MoH facilities.

**Table 22.** Utilization of Health Centers, 2000

	Number of Visits/clinic/year	Number of visits/Doctor	Number of visits/capita	% of referrals to higher facilities
<b>Marmara</b>	12,191	4,787	0.61	12.7
<b>Aegean</b>	10,340	3,599	1.15	13.3
<b>Mediterranean</b>	10,482	3,391	0.97	12.3
<b>Central Anatolia</b>	8,123	2,838	0.80	12.9
<b>Black sea</b>	6,740	3,579	0.88	17.0
<b>Eastern Anatolia</b>	6,203	2,821	0.61	17.2
<b>Southeastern Anatolia</b>	8,027	3,547	0.51	18.6
<b>Turkey</b>	9,024	3,771	0.78	14.0

Notes: Regional averages mask wide inter-provincial differences in contact rates which range from 0.26 visits/capita/year to 1.6 visits/capita/year.

Source: MoH, General Directorate of Primary Health Care, Web-Page.

### Quality of service and client satisfaction

Recent national data which reflects the satisfaction with services received at the primary care level is not available. Recent case studies carried out in specific health districts have found that around 10% of those who used a particular MoH center were not satisfied with the service received. The greatest level of dissatisfaction was generally expressed with technical facilities available at health centers. Furthermore, those within closer reach of a center generally were more satisfied with the service obtained at the center than those who had to travel further<sup>19</sup>. Low per capita contact rates with health centers, combined with the high number of outpatient visits to secondary facilities, indicate that a large share of the population considers the quality of care provided by health centers unsatisfactory.

Social Assessment Study gives more detailed information for both sides of health sector, as providers and users.

#### 5.4.2. Public sector health services: Secondary level outpatient care

Visits to hospital based outpatient facilities have increased by almost 40% over the last five years. The number of hospital based outpatient visits is over 60% higher than that to MoH and SSK primary care facilities combined. Access to outpatient facilities is open to all who are insured or who are willing to pay the fees. SSK beneficiaries must use SSK facilities unless they are referred by an SSK doctor to another facility. Bağkur and ES beneficiaries can use any facility with which their insurance has a provider contract. No referral from a primary care physician is needed and there is no price penalty if a patient makes direct use of outpatient facilities. As a

Hacettepe U. Department of Public Health, Ankara, 1999.

<sup>19</sup> See for example Tanriover, Altug et al. (2000); Atasoy, Deniz et al. (2000); Yardim, Mahmut S. (2001); Gül Ahmet et. Al. (1999)

result, the number of patients referred to higher order facilities by MoH health centers equals only about 7% of the outpatient visits at MoH outpatient facilities, while that of MoH and SSK referrals combined only account for about 9% of all outpatient visits. This indicates that the large majority of people who use hospital outpatient facilities go there directly without the benefit of a primary care physician's advice on where to go.

Hospital outpatient facilities have become over-loaded with patients who do not require specialist care and could be dealt with at the primary care level. Majority of cases do not require complex investigation and treatment and could thus well be treated at the primary care level. Since treatment at primary level is normally significantly cheaper than treatment at outpatient facilities, the excessive use of outpatient facilities potentially result in unnecessarily high treatment costs and inefficient use of resources.

The overcrowding of hospital outpatient facilities has led to an extremely heavy workload of doctors in such facilities, particularly at provincial hospitals and at hospitals in large urban areas. It is not uncommon for a physician at a polyclinic of a provincial MoH hospital to see 50 or more patients per day, while doctors in SSK polyclinics see even more. The average consultation for a patient in most hospital polyclinics (particularly at provincial centers) lasts only about minutes.

Over 90% of outpatient visits are to general hospitals (Table 23). MoH hospitals account for over half of all outpatient visits and SSK hospitals account for another third. The number of outpatient visits to private and foundation hospitals has increased three fold over the last five years and their relative importance has grown from under 2% to 4% of all outpatient visits.

**Table 23.** Visits to Hospital Based Outpatient Facilities, 2000, 2002

	Number of visits 1995	% of total in 1995	Number of visits 2000	% of total in 2000	% Increase 1995 - 2000	Visit/ physician / year 2000	Number of visits 2002	% of total in 2002
<b>MOH Hospitals</b>	41,578,790	55	55,389,441	56	43	2,752	66,231,841	55
<b>University Hospitals</b>	5,276,810	7	8,135,393	8	54	534	8,823,361	7
<b>SSK Hospitals</b>	26,112,437	34	32,864,494	31	26	4,444	43,561,287	36
<b>Private &amp; Foundation Hospitals</b>	1,461,470	2	4,117,708	4	182	1,042	4,407,122	4
<b>Municipal Hospitals</b>	384,272	1	473,528	0	23	2,133	1,293,748	1
<b>Other</b>	1,056,981	1	813,555	1	-23	1,634		
<b>Total</b>	<b>75,870,760</b>	<b>100</b>	<b>105,797,119</b>	<b>100</b>	<b>39</b>	<b>2,175</b>	<b>124,317,359</b>	<b>100</b>

Source: MOH Yataklı Tedavi Kurumları İstatistik Yıllığı, 2000 and 2002

### 5.4.3. Public sector health services: In-patient services

#### *Evolution of Hospital Capacity*

The public sector accounts for ninety two percent of hospital capacity in Turkey. MoH, SSK and the Universities are the major public providers of in-patient hospital care. MoH hospitals account for about forty six percent of all hospital beds, SSK accounts for eighteen percent, while

university hospitals account for about sixteen percent (Table 24). Hospital bed capacity has increased by about twelve percent between 1995 and 2000, with the largest absolute increase occurring in MoH hospitals, followed by a very noteworthy increase in the capacity of private hospitals (Table 25).

**Table 24.** Distribution of Hospital Beds and Physicians by Provider, 2000

	Number of Hospitals	Number of Approved Beds	Number of Actual Beds	% of Actual Beds	Number of GPs	Number of Specialist	Total Number of Doctors	% of Doctors
<b>MOH Hospitals</b>	744	86,117	69,089	45,8	12,790	8,788	21,578	44
<b>SSK Hospitals</b>	118	27,900	27,245	18,1	4,865	2,531	7,396	15
<b>University Hospitals</b>	42	24,647	23,838	15,8	7,204	7,791	14,995	31
<b>Ministry of Defence H.</b>	42	15,900	15,900	10,5	NA	NA	NA	NA
<b>Other Public Hospitals</b>	10	2,287	1,491	1,0	80	275	80	0.2
<b>Municipal Hospitals</b>	9	1,341	1,130	0,7	182	40	222	0.5
<b>Foundation Hospitals</b>	18	1,318	1,112	0,7	434	40	474	1
<b>Private Hospitals</b>	234	11,667	10,074	6,7	3,217	259	3,476	7
<b>Minority and Foreign H.</b>	9	1,272	976	0,6	118	25	143	0.3
<b>Total</b>	1226	172,449	150,855	100	29,085	19,554	48,639	100

Notes: Number of GPs includes assistant doctors, information on number of doctors in Ministry of Defense Hospitals not available, totals thus exclude these

Number of beds is number of actual beds is not available for Ministry of Defense Hospitals, approved MOD beds are assumed as actual beds

Source: MOH, Yatakli Tedavi Kurumlari Istatistik Yilligi, 2000

**Table 25.** Evolution of Hospital Capacity 1995-2000

	Change in number of beds 1995-2000	% increase 1995-2000	Share in total increase
<b>MOH Hospitals</b>	6,061	10	37
<b>SSK Hospitals</b>	1,885	7	11
<b>University Hospitals</b>	4,268	22	26
<b>Ministry of Defence</b>	-	0	0
<b>Other Public Hospitals</b>	(815)	-35	-5
<b>Municipal Hospitals</b>	158	16	1
<b>Foundation Hospitals</b>	177	19	1
<b>Private Hospitals</b>	4,883	94	30
<b>Minority and Foreign H.</b>	(213)	-18	-1
<b>Total</b>	16,404	12	100

Notes: Number of actual beds, including Ministry of Defense

Source: MOH, Yatakli Tedavi Kurumlari Istatistik Yilligi, 2000

**Table 26.** Hospital Beds and Admission in Turkey and Selected Other Countries

	Hospital beds/ 1,000 population	In-patient admission/ 100 population
<b>Selected Upper Middle Income Countries</b>		
Brasil	3.1	NA
Mexico	1.1	5.5
Malaysia	2.0	NA
Romania	7.6	18
Thailand	2.0	NA
<b>Turkey</b>	<b>2.6</b>	<b>7.6</b>
Tunisia	1.7	8
Venezuela	1.5	NA
<b>Total Upper Middle Income Countries</b>	<b>3.3</b>	<b>6</b>
<b>Selected OECD Countries</b>		
Canada	4.1	10.0
Germany	9.3	22.6
Italy	5.5	18.0
Portugal	4.0	12.0
UK	4.2	15.1
USA	3.7	12.5
<b>OECD Average</b>	<b>7.4</b>	<b>16.2</b>

Notes: In-patient admission rate in Turkey is net of admission to Ministry of Defense hospitals

The overall admission rate is somewhat higher than indicated above.

Source: OECD Health Data 2001, World Bank World Development Indicators 2001

### Hospital Size

The size of hospitals in Turkey varies significantly and ranges from health center hospitals (sağlık merkezi) with less than ten beds to hospitals with over 1,800 beds. There are a very large number of small hospitals. Overall, over half of all hospitals in Turkey have 50 or less beds. 124 hospitals have 10 or less beds and almost three hundred hospitals have between ten and thirty beds. At the other end of the distribution, there are thirty hospitals with between six hundred and one thousand beds and nine hospitals with more than one thousand beds (Table 27). One quarter of all beds are thus in hospitals with more than six hundred beds.

**Table 27.** Distribution of Hospitals by Number of Beds, 2000

	Number of Hospitals	% of Hospitals	Number of beds	% of beds
<10 beds	124	10	760	0.6
11-30 beds	297	25	5,530	4.1
31-50 beds	226	19	9,400	7.0
50-100 beds	214	18	15,180	11.3
101-200 beds	163	14	23,520	17.4
200-400 beds	75	6	24,970	18.5
400-600 beds	43	4	20,370	15.1
600-1000 beds	30	3	23,130	17.1
>1000 beds	9	1	11,810	8.8
NA	3	0	253	0.2
<b>Total</b>	<b>118</b>		<b>134,950</b>	<b>100.0</b>

Notes: Based on actual bed numbers. Ministry of Defense Hospitals excluded.

Source: MOH, General Directorate of Curative Services, Web-Page

The majority of small hospitals in Turkey are MoH run health center hospitals (sağlık merkezi) and district hospitals. There are 141 health center hospitals, 99 of them with 10 or less beds and 42 with less than 30 beds. In addition there are 407 district hospitals at an average size of 65

beds. A majority of SSK hospitals fall into more efficient size categories. About two thirds of SSK hospitals have between one hundred and six hundred beds, although almost 30% also have below 50 beds. Forty three percent of University hospitals have more than six hundred beds.

The distribution of admissions across providers is in relatively close concordance with their respective shares of hospital beds (Table 28), with MoH hospitals accounting for over half of all hospital admissions, close to two thirds of all births and somewhat less than have of all surgeries. SSK hospitals account for about one fifth of all beds, but for one quarter of all admissions, surgeries and births, while university hospitals account for only thirteen percent of admissions, but one fifth of all large surgeries. Foundation and private hospitals account for a disproportionate share of surgeries, particularly large ones, compared to their share of beds in the system.

**Table 28.** Distribution of Hospital Admissions, Surgeries and Births by Hospital Provider, 2000

	% of beds	% of admissions	% of surgeries	% of large surgeries	% of births
<b>MOH Hospitals</b>	51	53	43	39	63
<b>SSK Hospitals</b>	20	24	25	24	24
<b>University Hospitals</b>	18	13	18	21	4
<b>Other Public Hospitals</b>	1	0.4	1	0.4	0.1
<b>Municipal Hospitals</b>	1	0.3	0.4	1	0.1
<b>Foundation Hospitals</b>	1	1	2	3	0.3
<b>Private Hospitals</b>	7	8	10	12	9
<b>Minority and Foreign H.</b>	1	0.3	0.4	0.4	0.3

Note: Data exclude beds and activities of Ministry of Defense Hospitals

Source: MOH, Yataklı Tedavi Kurumları İstatistik Yıllığı, 2000

### **Hospital Occupancy**

The country's average hospital occupancy rate has increased from 53% in the mid-1980s, to 57% in the mid-1990s and 60% in 2000, while the average length of stay has dropped somewhat from 6.7 days in 1985, to 6.4 days in 1995 and 5.9 days in 2000.

### **Hospital Financing**

MoH and University hospitals are financed from two sources, contribution from the budget and revolving funds. In addition, some hospitals, also receive some funding from local health foundations funded through donations from the local community. Revolving funds receive their resources from service fees paid by the social insurance organizations (primarily ES, Bağkur, Green Card System and civil servant system) and private patient payments. SSK hospitals have no revolving funds, as only a very small share of the patients they treat are not SSK beneficiaries (non-SSK beneficiaries account for less than 1% of admissions to SSK hospitals and about 1% of outpatient visits).

The resources of revolving funds are collected and kept at the facility level. However, hospital managers do not have entirely free reign over revolving fund resources. Revolving fund budgets of MoH hospitals and their execution need to be approved by MoH's General Directorate of Curative Services. Revolving fund budgets of University hospitals require the approval by the President of the University, upon a proposal and recommendation made by the hospital management council. Up to fifty percent of quarterly revenues from MoH revolving funds can be used to pay salary improvements to health personnel, provided the hospital has no other

outstanding bills. In reality a significantly smaller share generally goes to staff expenditures<sup>20</sup>. Revolving fund resources have grown of increasing importance for the financing of both MoH and University Hospitals. They now account for almost sixty percent of MoH hospital financing and almost seventy percent of University Hospital financing.

### **Hospital Management**

All public hospitals are headed by a chief head physician who is in charge of overall hospital operations and management. The chief physician is assisted by a head nurse and a hospital administrator who takes care of financial, technical and some personnel matters on a daily basis. All managerial staffs at MoH hospitals are appointed by the MoH. Those at SSK hospitals are appointed by SSK's General Directorate for Health Services. The chief physician of a University hospital is appointed by the University President, in consultation with the dean of the University's medical school. Other University hospital management staff are appointed by the hospital's chief physician and confirmed by the University President. The key criteria for selection of the chief physician are generally his length of service and reputation as a doctor, rather than his managerial capacity. Chief physicians do not need to go through any specialized management training. As a result, many of them lack the management capacity required to effectively manage a modern hospital. Furthermore, they often continue to operate as physicians at the hospital or in private practice, thus decreasing the time and effort devoted to hospital management.

All fees for services provided in public hospitals are set centrally by MoF for MoH and University hospitals and by SSK's General Directorate of Health Services for SSK facilities. University boards (but not university hospital managers) can, however, decide on a slight surcharge for services provided on a semi-private basis, meaning services provided in university facilities after 4.00 pm or services provided by a specific doctor upon request during regular university hospital working hours. In principle, MoF set fees apply equally to all patients treated in MoH and University hospital during official hospital working hours. However, in the face of budget constraints, some of the public insurance companies (SSK, ES) have resorted to negotiating discounts with specific suppliers (e.g. a private University hospital), arguing that they should get a bulk discount in view of the large number of patients they provide. SSK fees only apply to non-SSK insured patients treated in SSK facilities (less than 1% of all hospital admissions and about 1% of SSK outpatients). SSK hospitals are not reimbursed on a fee for service basis for SSK beneficiaries treated in their facility. Rather, SSK funds are to cover a particular SSK facility's overall operation, regardless of the case load and case mix in a given hospital.

The fees established by MoF and SSK are not high enough to cover the actual cost of services to which they apply. This is evidenced by the fact that MoH and University hospital staff salaries are paid from the general Government budget and that for most hospitals, revolving fund revenues are supplemented by additional budgetary sources from the MoH and University budget. Similarly, SSK hospital managers deem that the fees set for services provided by their hospitals to non-SSK beneficiaries are well below actual costs.

Public hospital managers have only limited financial autonomy. For MoH hospitals, budgets must be approved by MoH's general directorate of curative services and by MoF's representative in MoH's budget department. Revolving fund budgets must be approved by MoH's directorate of curative services. Hospital managers have no authority to shift resources between expenditure categories; this applies to budgetary funds as well as revolving funds. Any reallocation requires an amendment of the budget and the necessary approvals from the central government. Personnel expenditures are paid directly from the central budget. Other expenditures financed from the budget follow the same approval procedure as those of any Ministry. They need to be

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<sup>20</sup> For example, the Numune Hospital in Erzurum (provincial MOH hospital) spent only 25% of its revolving fund resources on salary improvements in 2001, while the University hospital in the same city spent 26% on salary improvements during the same year.

approved by MoH's general directorate of curative services, the MoH, the MoF and the court of accounts, only then are the resources sent by MoF to the provincial MoF representative who will release them to the hospital management. MoH hospital managers do have somewhat more autonomy over expenditures financed from revolving funds. Within overall guidelines established by MoF and MoH for the operation of revolving funds, hospital managers can make their own revolving fund budget, which then needs to be approved by MoH's general directorate of curative services.

Budgets for University hospitals follow similar procedures as those of MoH hospitals, except that the necessary approvals need to come from the University president for revolving fund expenditures. Additional allocations from the University budget are made by the University president in consultation with the University's board and the dean of the medical faculty and are finally approved by Yuksek Ogrenim Kurumu-YOK (Higher Education Council- HEC) within the framework of the approval of the University's overall budget.

SSK hospital managers have very limited financial autonomy. All expenditures need to be approved by SSK's General Directorate of Health Services. Funds are generally only transferred to the SSK hospital for specific payments, although in some cases SSK's General Directorate of Health Services grants the hospital director the authority to execute individual purchases and make specific payments within a given allocation without further central approval (e.g. for the purchase of some supplies and drugs). Allocation of SSK funds for investment purposes, such as the purchase of new equipment or renovation of facilities, often depends on the personal relation of the hospital director with SSK's General Directorate of Health Services. Several SSK hospital managers interviewed during this review indicated that they would be significantly more successful in managing their hospital effectively and providing better services if their hospital had its own revolving fund, like MoH or University hospitals and if their facility received SSK funding on a fee for service basis rather than the current system where SSK facilities are essentially funded on an as needed basis.

The budgeting process for general budget funds for public hospitals is such that hospital managers have no incentive to provide services in the most efficient manner. Hospitals are allocated a fixed amount per approved bed per day to cover supplies and basic equipment maintenance expenditures,<sup>21</sup> while the budget for utilities is determined by estimated needs based on past consumption. Personnel expenditures are fixed based on the number of staff positions. The amount of services provided or the case load and mix hardly enter the equation during the budgeting process. Those hospitals which rely largely on revolving funds to finance their operation (except salaries) and basic investments, have more of an incentive to maximize service provision and allocate resources effectively, as efficient resource allocation and use, combined with maximized service provision, increase the amount of revolving fund resources which they can allocate to improve staff compensation.<sup>22</sup>

Medical supplies and drugs are purchased individually by each MoH and University hospital's purchasing committee, usually based on three price quotations.<sup>23</sup> While this practice helps to assure relatively speedy supply of drugs and supplies, it must also result in unnecessarily high expenses, particularly when purchases are made by small district hospitals. Purchases of drugs and supplies for SSK facilities are generally made through SSK's General Directorate of Health

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<sup>21</sup> For the 2002 budget the allocation is 750,000 TL per bed/day of which 87% is to go towards materials and supplies, 5% towards equipment and 8% towards services.

<sup>22</sup> Up to 50% of quarterly revolving fund revenues can be used to make supplementary payments to staff, provided other expenditures have been fully covered.

<sup>23</sup> Public procurement rules require that purchases above a certain limit be made through competitive bidding. In practice, however, hospitals keep the purchase almost always below this threshold, so that they can proceed with the purchase based on three quotations only.

Services, although the latter can and sometimes does delegate this authority to individual hospital directors. SSK hospitals also receive some of their drug supplies from SSK's pharmaceutical company in Istanbul. Since SSK hospitals do not have any revolving funds and their budgetary allocations are irrespective of the amount of services provided, SSK hospital managers have even less incentives than MoH or University hospital managers to maximize service provision or rationalize expenditures.

#### 5.4.4. Private sector health services: Outpatient care

Private outpatient services are provided in five different settings: (i) private physicians who work on a full time basis in private practice; (ii) public sector physicians who work part-time in private practice; (iii) private polyclinics and medical centers; (iv) private services provided in public facilities, and (v) health services provided by so called occupational physicians engaged by private companies with 50 or more employees.

Information on the number of private doctors and medical establishments is scant and of questionable reliability. MoH estimates that there are about 11,200 doctors (15%) who work on a private basis only, while somewhat below sixty percent of public sector doctors work part-time in private practice (Table 29). Dentists who work full time in private practice are significantly more common and essentially all dentists who work in public facilities also practice in private. The relatively higher share of dentists working full time in private practice is at least partly driven by the limited number of dentist positions in the public sector.

**Table 29.** Private and Part-Time Private Physicians

	fully	fully all	part-private	part-all
<b>GPs</b>	2,952	7	24,122	56
<b>Specialist</b>	8,268	24	20,218	59
<b>TOTAL</b>	11,220	15	44,340	57
<b>Dentist</b>	<b>8,813</b>	<b>66</b>	<b>4,608</b>	<b>100</b>

Note: Above figures are estimates only and can only be considered as indicative.

Source: staff estimates, based on TTB Statistical Yearbook 2000 and Tokat M. Türkiye Sağlık Harcamaları ve Finansmanı 1998", MOH Health Project (2001)

Doctors working on a merely private basis are heavily concentrated in the big cities, over half of all private doctors are in the Istanbul area, about one quarter are in and around Ankara and another twelve percent in the Aegean region, primarily İzmir (Table 30). Private dentists are similarly concentrated in the three main cities.

**Table 30.** Regional Distribution of Full Time Private

	Private GPs	Private Specialist	% of doctors	Private Dentist	% of dentist
<b>Marmara</b>	1,570	4,345	53	4,327	49
<b>Aegean</b>	261	1,040	12	1,341	15
<b>Mediterranean</b>	303	605	8	835	9
<b>Central</b>	673	1,974	24	1,367	16
<b>Black</b>	98	218	3	573	7
<b>Eastern</b>	10	36	0	163	2
<b>Southeastern</b>	37	50	1	205	2
<b>Turkey</b>	<b>2,952</b>	<b>8,268</b>	<b>100</b>	<b>8,813</b>	<b>100</b>

Source: TTB Statistical Yearbook, 2002



The vast majority of private sector doctors are at the same time employees of public health establishments. Since salaries of doctors in the public sector are low (ranging from about \$400-\$500 equivalent/month), engagement in private practice allows public sector doctors to substantially increase their earnings. Therefore, the possibility of private practice by public doctors helps the public sector keep the necessary number of doctors engaged despite low public sector wages.<sup>24</sup>

### **Private Practices**

Doctors operating in private practice can either operate as a private physician or as a limited company. The latter provides fiscal advantages. Doctors operating on a private basis outside a company must pay a “minimum standard of living tax” independent of their earnings as private physicians, while doctors operating under the umbrella of a limited company are taxed like any private sector company depending on their actual earnings. Therefore, many doctors operating in private practice have proceeded to establish a limited liability company; others have had to close down their private practice because they could not afford to pay the minimum standard of living tax. Anyone who is a Turkish citizen and has a Turkish medical degree can open a private practice by registering with the provincial chamber of the Turkish Medical Association (TTB) and obtaining a tax ID number from the Ministry of Finance.

### **Private Policlinics and Medical Centers**

At least two doctors working together can open a private policlinic. Four doctors working together can open a medical center, provided that at least two of them have the same specialization and at least one of each specialist is a full time employee of the center. Doctors working in a private policlinic or medical center are not allowed to work in more than one private health establishment (with the exception of part time assignment as occupational health physician), but they may work on a part time basis in public facilities within the same health jurisdiction (either provincial health directorate or sub-provincial health group) and the majority do so. Doctors working in these establishments must be Turkish citizens or of Turkic origin. Assistant doctors working in public institutions are not allowed to work in private policlinics or medical centers. Policlinics and medical centers must be headed by a physician who is in charge of overall administration and management.

There currently are about 1,500 private policlinics and a number of private medical centers in Turkey. These private establishments are largely concentrated in the three big cities, about half of them are in Istanbul, and another quarter is in Ankara<sup>25</sup>. The vast majority are privately owned and operated like a private company, although foundations (NGOs) also have the right to open policlinics.

In the spring of 2000, MoH for the first time issued regulations governing private policlinics and medical centers. Until then these establishments were essentially unregulated. The new regulations put private policlinics and medical centers under the supervision of the provincial health directorates and give them the power to issue and revoke licenses. They also set out who can establish a policlinic or medical center, the minimum number of employees, minimum physical standards of the establishments, minimum equipment and detailed reporting

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<sup>24</sup> A study carried out in 1998 showed that doctors working full time in the private sector earned about \$ 34,000 per year before taxes, those working part time \$24,000 before taxes, while doctors working full time in the public sector earn maximum \$5500/year after taxes. See TOKAT, M., *Turkiye Saglik Harcamalari ve Finansmani 1998*, MOH, Health Project Coordination Unit, 2001.

<sup>25</sup> The MoH's unit on private health establishments is in the process of establishing a database with all private policlinics, medical centers and laboratories with the aim of gaining a better overview of their importance and eventually also of their performance and compliance with applicable regulations. Until this data base is complete, information on private outpatient establishments is only available at the level of individual provincial health directorates.

requirements. They stipulate that inspectors of the provincial medical directorate must inspect polyclinics and medical centers at least four times a year and that the latter can issue fines or revoke an establishment's license on a temporary or permanent basis if it does not comply with the regulations. Polyclinics are supposed to follow relatively strict reporting requirements and the director should submit a timetable of doctors on duty to the provincial health authority on a monthly basis. He should also seek permission from the authorities when going on leave. In practice these requirements are rarely complied with. Because no standards of practice are set out and there is no official accreditation system for private doctors in Turkey, the regulations and proposed supervision focus mainly on physical standards of the establishments (e.g. m<sup>2</sup> of examination rooms/hallways) and the format of record keeping, but they contribute little to assuring adequate service quality.

### **Private Services in Public Facilities**

Doctors working in MoH and university hospitals are allowed to see private out-patients in these facilities after 4.00 pm. Social insurance beneficiaries making appointments with specific doctors in public facilities after 4.00 pm pay an out-of-pocket surcharge, while basic treatment fees are covered by their insurance. Revenues from treatment of private patients in public hospitals are shared between the hospitals' revolving fund and the treating physician. SSK physicians can not see private patients at SSK facilities except from a recently initiated pilot in a limited number of SSK facilities. While such arrangements help public hospitals and physicians increase their revenues, they again pose a significant moral hazard problem, as doctors have little incentives to adequately treat patients before 4.00 pm.

### **Occupational Doctors**

Turkish law requires that all private enterprises with more than fifty workers employ a so called occupational doctor. If the enterprise has less than 700 employees, occupational doctors can be engaged on a part-time basis; otherwise they have to be full-time. Occupational doctors must be hired through the local chamber of Turk Tabipler Birliği – TTB (Turkish Medical Association-TMA). Their primary responsibility is to ensure that occupational health risks at the work place are minimized, but in practice they usually are the first contact point for employees who need medical care. TTB currently has about 8,000 occupational doctors registered and runs training programs for them.

### **Private Diagnostic and Laboratory Services**

There are a growing number of private laboratory and diagnostics facilities, one third of which provide radiology and similar diagnostic services (Table 31). Import and operation of diagnostics equipment is ill regulated and little supervised. Reports of diagnostic equipment being operated by people without the necessary technical qualifications and training abound.

**Table 31.** Private Laboratory and Diagnostic Services, 1998

SERVICES	Ankara	İstanbul	Izmir	Other Location	Total
Radiology	147	362	110	434	1053
Nuclear Medicine	5	26	23	21	75
Physiotherapy	35	124	28	147	334
Biochemistry	68	319	52	276	715
Bacteriology	110	234	93	372	809
Pathology	26	62	9	99	196
<b>TOTAL</b>	<b>391</b>	<b>1,127</b>	<b>315</b>	<b>1,349</b>	<b>3,182</b>
<b>% of</b>	<b>12%</b>	<b>35%</b>	<b>10%</b>	<b>42%</b>	

Source: MoH, Statistical Yearbook 1999

Most facilities rely heavily on contracts with social insurance organizations and there is a significant tendency to over-prescribe high technology diagnostic examinations. Although illegal, some private diagnostics centers are known to give referring public sector physicians a commission. The import of diagnostic equipment, particularly second-hand, has boomed. Diagnostic equipment is in significant oversupply compared to needs.<sup>26</sup>

### **Utilization of Private Health Services**

No reliable data on the share of outpatient visits provided by private facilities is available, as private physicians are not required to report their activities other than for tax purposes. The health care utilization survey carried out in the early 1990s showed that about 14 percent of the population uses a private physician as their first contact point. It furthermore showed that there is significant regional variation in the choice of private providers, with only 6 percent in Eastern Anatolia seeking private care, while twenty percent in the Marmara region and sixteen percent in Central Anatolia preferred private care. Provider preferences in urban and rural areas didn't differ much in terms of preference for private providers. Preference of private providers depended on people's insurance coverage. Almost one third of those without insurance visited private providers, 40 percent of Bağkur beneficiaries, but only 17 and 10 percent of SSK and ES respectively sought private care. More recent data on provider preference is not available on a national basis, but given that about three quarters of all doctors operate at least part time in the private sector, a significant share of health services, particularly outpatient services, must be provided by the private sector.

### **Fees for Private Medical Services**

TTB sets floor prices for all outpatient medical services provided by the private sector, including laboratory and diagnostic services. Fees are set on a provincial basis and adjusted twice a year. TTB only sets a minimum price which is binding for all private service providers, above that private provider are free to charge as much as they want. The purpose of setting a floor rather than a ceiling price is to prevent unfair competition by private physicians, according to TTB and MoH.

### **Non-Governmental Organizations**

Apart from foundation hospitals, only a handful of NGOs are active in the health sector and their focus is primarily on family planning and/or maternal and child health issues. In addition, there are some associations, which focus on a particular health condition such as diabetes or cancer. While these may provide limited health services, their main focus is on raising money to support further research and on providing support to their specific clientele.

## **5.4.5. Private sector health services: Inpatient care**

Non-public hospitals are grouped into four categories in Turkey: private hospitals (i.e. hospitals owned by Turkish citizens and established as a corporation), foundation hospitals, hospitals owned by ethnic minorities and hospitals owned by foreigners. Together they only account for about 8 percent of Turkey's hospital capacity. Private hospitals are the dominant group among non-public hospitals and account for 82% of non-public capacity. They have grown significantly during the 1990s, and their capacity almost doubled between 1995 and 2000. Foundation hospitals are significantly less dominant in terms of number and capacity (9% of non-public hospital capacity), although they have grown at a moderate rate over the 1990s. Foreigners and ethnic minorities are the only provider type, which has continuously reduced its capacity over the

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<sup>26</sup> One recent study found that if British standards were used, the number of existing computer tomography equipment in Turkey would be almost five times what is needed. See Soyer A. and Belek, I. "Yeni Dünya Düzeni ve Ozelleştirmeler icinde Türkiye'de Özel Sağlık Sektörü ve Sağlıkta Özelleştirme", TTB, Ankara, 1998.

past decade, as they have come under pressure from the rapidly growing private hospitals<sup>27</sup>. Private hospitals are heavily concentrated in the three largest cities - only one third of private hospital capacity is outside Ankara, Istanbul and İzmir. Istanbul alone accounts for half of all private hospitals. On the other hand, there are only three private hospitals in Eastern Anatolia and seven in Southeastern Anatolia. In recent years, a significant number of private specialty hospitals (e.g. ophthalmology, orthopedics, physical therapy or micro-surgery) have been opened, particularly in Istanbul. Until the mid-1990s the expansion of private hospitals was facilitated by subsidized directed Government credits.

### Utilization

Private hospitals account for about 7 percent of hospital capacity, 8 percent of all hospital admissions, 3 percent of out-patient visits and 10 percent of all operations (12% of large operations) carried out in Turkey. Foundation hospitals account for an additional 1 percent of admissions and outpatient visits and 2 percent of operations. Minority and foreign owned hospitals have continuously declined in their importance and now account for less than 1 percent of admissions, outpatient visits and operations. The client pool of non-public hospitals is limited by the fact that beneficiaries of public health insurance (about 86% of the population) can not seek treatment at private facilities unless their insurance has a provider contract with a facility for specialized procedures which can not be readily carried out at public facilities (open heart surgery, MRIs, tomography, etc). Outside these contracts, patients seeking treatment in any hospital outside the public sector must cover the bills on their own, unless they have private health insurance<sup>28</sup> or work for a private company which has a provider contract with a particular private institution (e.g., some of the larger commercial banks). Although a majority of their patients are private patients, revenues from Government contracts contribute an important share to income of a significant number of private hospitals.<sup>29</sup>

**Table 32.** Utilization of Non-Public Hospitals, 2000

UTILIZATION	Private Hospitals	Foundation Hospitals	Minority Foreign H.	Total Non-public hospitals
% of beds (1)	7.5	0.8	0.7	9
% of doctors	9.3	1.4	0.5	11
% of in-patient admissions	8.0	1.1	0.3	9
% of surgeries	10.3	2.1	0.4	13
% of large surgeries	11.8	2.1	0.4	14
% of birds	8.9	2.5	0.4	12
% of out-patient visits	3.0	0.9	0.1	4
ALO days	2.4	3.6	10.7	
be occupancy rate (%)	26	50	46	
throughput bed	40	51	16	

Note: (1) Data excludes beds and activities of Ministry of Defense Hospitals. Including beds of the latter, lowers of non-public sector beds to about eight percent

Source: MoH, Yataklı Tedavi Kurumları İstatistik Yıllığı,

<sup>27</sup> In some cases foreign or minority owned hospitals have been taken over by private Turkish investors and thus continue to operate, but for reporting purposes they have been shifted to the category of "private hospital"

<sup>28</sup> Private health insurance is not wide spread in Turkey. Currently less than 1% of the population (about 600,000 people) is covered by private health insurance.

<sup>29</sup> Some of the larger private hospitals in Ankara, for example, earn about 40% of their revenues from Government contracts, 30% from patients with private insurance and 30% from private paying patients.

Private hospitals have a significantly lower average length of stay than public hospitals, although the share of operations and births in total admissions are comparable to those of MoH and SSK hospitals. Similarly, foundation hospitals have a much lower length of stay than public hospitals, although they have a higher share of operations (and particularly large operations) in total admissions than all public hospitals, including University hospitals. Private and foundation hospitals also have a significantly lower rate of deaths per admission than public hospitals, though by some accounts this is partly due to their generally admitting less serious cases than university hospitals. Their throughput rate per bed is higher than in most public facilities, suggesting a relatively stronger workload. On the other hand, official statistics show that private hospitals have an extremely low average occupancy rate of 26%.

### **Hospital Fees**

Private hospitals are not free to set their own prices. Room fees, covering room and board, nursing care, simple laboratory work and routine monitoring by doctor if the doctor is a hospital employee, are set by a commission with representatives from the provincial health directorate, TTB, the local chamber of commerce, the municipality, and the chief doctor of a state hospital or a doctor from a nearby health center. Fees can only be adjusted once a year, unless inflation as measured by the wholesale price index has exceeded twenty percent and they have been in force for at least six months. For treatment fees, the floor prices set by TTB are applicable, but hospitals are free to charge higher prices. In practice, however, few hospitals charge above the TTB floor price for fear of losing patients. In addition, private health insurance companies generally go by TTB prices and so do private enterprises (e.g. banks) which negotiate provider contracts with private hospitals. Contracts between private hospitals and social insurance organizations, on the other hand, are based on fees significantly below those set by TTB and are determined by MoH and MoF. Prices of medicines and supplies used during treatment in private hospitals are set by the Turkish Pharmacist Association (TEB) and hospitals are not allowed to add any surcharges.

Private hospitals are obliged to reserve five percent of their beds for poor non-paying patients. The provincial health directorate, chief doctor of the general hospital or of health centers can decide which patients are to be admitted by private hospitals in beds reserved for non-paying patients.

### **Legal Framework and Supervision**

All non-public hospitals are subject to the law on private hospitals which dates from 1933 and a MoH regulation last updated in 1983<sup>30</sup>. Like in the regulation on private policlinics, the focus of the law and regulations applicable to private hospitals is on minimum physical standards, staffing and equipment. The law puts private hospitals under the jurisdiction of the MoH and assigns the responsibility of issuing licenses and supervision to local representatives of MoH (nowadays provincial health directorate). It spells out the procedures to be followed and information to be provided to seek a license specifies the minimum qualifications and responsibilities of a hospital director and states under what circumstances the latter can be prosecuted.<sup>31</sup> The more recent MoH regulation focuses on physical standards with which private hospitals must comply, spells out minimum staffing, equipment and pharmaceutical requirements, specifies who sets applicable fees, how payments can be collected, what documentation needs to be issued and kept and what the reporting requirements are. It also obliges private hospitals to have an emergency unit.

Licenses for private hospitals are issued in the name of the owner rather than in the name of the institution. Therefore, the license needs to be renewed if hospital ownership changes. Private

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<sup>30</sup> Law no. 2219, *Hususi Hastaneler Kanunu*, May 24, 1933. *Ozel Hastaneler Tuzugu*, no. 17924, October 1, 1983.

<sup>31</sup> Minimum qualifications of a private hospital director as set out in the law are: medical degree, five years of practical experience as a doctor, including two in a state hospital

hospitals are not issued a single license covering all hospital activities, in addition to a general license; they also need to obtain separate licenses for specific departments which are a cumbersome and time consuming procedure.

Inspection of hospital facilities prior to issuing a license is quite strict and carried out by the provincial health directorate. The focus is on compliance with physical and equipment standards set out in the regulations. Once a hospital is operational, however, there is limited follow-up. Inspections, to the extent that they take place, continue to focus on compliance with physical, equipment and staffing standards, with little or no attention paid to the quality of treatment provided. Given the absence of treatment standards this is not surprising. In view of the recent increase of private hospitals and provincial health directorate's limited capacity, MoH is currently considering the establishment of an independent commission to supervise non-public hospitals.

#### **5.4.6. Patient rights and liability policy**

Patient rights are set out in a MoH regulation issued in 1998.<sup>32</sup> The regulation focuses on a patient's right to freely chose the medical facility and personnel to treat him (within the applicable regulations of various social insurance schemes), the right to be fully informed about his condition, treatment options, proposed treatment and consequences of absence of treatment. It also spells out a patient's right to privacy and the doctor's associated obligations, the need to obtain the patient's full consent prior to any treatment unless his life is endangered and what recourse a patient has if he feels that his rights have been trespassed. The regulation is essentially mute on the extent of a medical professional's liability.

The recourse open to a patient who feels that his patient rights have not been observed or that he has been subject to malpractice depends on whether the patient was treated in a public or a private facility. If the patient was treated in a public facility and feels that his patient rights have been infringed he can sue the health establishment in question. If a patient has suffered material, physical or psychological damage due to improper treatment by a doctor in a public facility, the patient needs to address his complaint and request for damage compensation to the public health establishment's management. If the latter does not agree with the patient or fails to respond to the patient's complaint, the patient can take the case to court within one year of the occurrence. However, he cannot take legal action against the doctor who treated him, only against the health establishment in question. If the court decides in the patient's favor, any compensation that may be awarded to the patient will have to be paid by the concerned public health facility. The establishment can then in turn decide to take action against the doctor in question. In reality this rarely happens.

If the patient who has a complaint was treated in a private facility, he can take legal action directly against the doctor in question, rather than against the facility where he was treated. The regulation is mute on whether a patient can also take action against a private health facility (as opposed to a doctor) when he has been subject to malpractice or infringement on his patient rights. When taking action against a doctor of a private facility, the patient can chose to file a complaint with the Turkish Doctor's Association (TTB) which has the right to bar private doctors from practicing for up to six months. Alternatively, the patient can launch a complaint with the High Medical Council at the MoH and if the Council supports his complaint, he can take the case to court. A third option is to take the case to court directly. In the latter case the courts usually call upon the TTB or MoH's Higher Medical Council to take a position and the ruling then generally follows the advice of the body consulted. TTB estimates that there yearly are about 400 cases in which doctors are taken to court, but only about half of them end in the prosecution of a doctor.

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<sup>32</sup> Hasta Haklari Yonetmeligi, Official Gazette no. 23420, 1.8.1998.

The main reason for this low rate of prosecution is that the lack of enforceable standards of practice makes it very difficult to prove malpractice.

#### 5.4.7. Pharmaceutical sector

In sharp contrast with health services provision, which is dominated by the public sector, the pharmaceutical sector is almost exclusively in private hands. The production of pharmaceutical raw materials and medicines, the import, wholesale, storage and retail of drugs and medical supplies is all carried out by the private sector. The only exception is a pharmaceutical factory owned by SSK, which supplies SSK facilities with drugs. There currently are 125 pharmaceutical companies in Turkey, 76 of them produce medicines, 11 produce raw materials and 36 import pharmaceuticals. Of the 36 foreign owned companies, only eight are engaged in production, the rest focus on importing medicines and supplies. A large share of drugs is produced under license to foreign companies. Although there are 125 pharmaceutical companies, the production and supply of pharmaceuticals is relatively concentrated: the 20 largest companies have a market share of over 75%.

At the retail level, there currently are almost 21,500 private pharmacies in Turkey. Retail pharmacies are, however, very unevenly distributed across the country. Half of the country's pharmacies are in and around the seven largest cities, which account for about 35% of the population. Pharmacies are relatively scarce in Eastern and to a somewhat lesser extent Southeastern Anatolia. In some provinces of Eastern Anatolia one pharmacy on average serves well over 10,000 people while there are only about 2,000 people per pharmacy in the three largest cities. Private doctors and policlinics are not allowed to dispense drugs unless closest pharmacy is more than 10 kilometers away, in which case they can apply to the MoH to obtain a license to sell drugs to their patients.

#### **Pharmaceuticals Consumption**

Drug consumption in Turkey has increased substantially during the 1990s.<sup>33</sup> Table 32 shows the relative share of various treatment group drugs in overall drug consumption in Turkey. Antibiotics are by far the most frequently consumed drugs in Turkey and account for almost one fifth of total drug consumption. While this is not untypical for developing countries with a high prevalence of infectious diseases, antihypertensive, cardiac and vascular drugs, psycho-pharmaceuticals and cancer drugs rather than antibiotics are generally among the most frequently used drugs in OECD countries. The high use of antibiotics in Turkey is also a reflection of the fact that Turkish doctors tend to over-prescribe this and other drugs. Ninety-five out of every hundred consultations results in prescription of some drugs. This compares to 56 prescriptions per one hundred drugs in Holland, 73 in Italy and 85 in France.<sup>34</sup> One review of prescriptions found that every third prescription written in Turkey is for antibiotics.<sup>35</sup> Prescriptions are written influenced by the demands of patients so trainings on rational drug use are not only for physicians but also for patients must be planned.

Antibiotics are often prescribed without proper laboratory tests preceding the prescription, leading to prescription of antibiotics which may not be the most effective in treating a particular bacterial infection or even to the use of antibiotics in the absence of bacterial infections. Furthermore, antibiotics can be purchased without prescription at any pharmacy if the consumer is willing to pay for it out-of-pocket.

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<sup>33</sup> Domestic production (measured by the number of bottles produced), increased by 36% between 1995-2000, while imports of finished drugs grew more than threefold in dollar terms during the same time.

<sup>34</sup> See Atay, O. "Sağlıkta İlacın Yeri Ve Sorunları", in Yeni Türkiye, No. 40, July-August 2001, pp. 1047-1056

<sup>35</sup> See Atay, O. *op.cit.* (2001)

The generous prescription of drugs in general and antibiotics in particular is partly a reflection of the ineffective primary care system and a tendency of overloaded doctors at secondary level outpatient facilities to substitute prescription for effective consultation. The generous prescription of drugs is further facilitated by the fact that for those covered by public health insurance; any drug prescribed by a public doctor is covered by insurance with only a minimal co-payment by the patient. It is estimated that about 85% of pharmaceuticals purchased in Turkey are paid for by the public sector through the social insurance schemes<sup>36</sup>.

**Table 33.** Consumption of Drugs by Treatment Group (2000)

	% of total consumption
Antibiotics	19.0%
Analgetics	12.0%
Antirheumatics	11.0%
Cold and cough medicines	8.6%
Vitamines, minerals and antianaemics	7.3%
Dermatological drugs	5.3%
Digestive drugs	5.3%
Cardiac and vascular drugs	4.8%
Hormones	4.3%
Ear, nose, eye and throat drugs	4.2%
Neuralgic drugs	3.2%
Antispasmodics	1.7%
Antiasthmatics	1.4%
Antihistamines	1.3%
Laxatives	1.0%
Hypotensives and diuretics	1.0%
Antidiabetics	1.0%
Antiparasitics	0.8%
Other drugs	6.7%

Source: IES

### **Licensing and Drug Pricing**

The drug industry is supervised by MoH's General Directorate of Pharmacy and Pharmaceuticals Products, which approves drugs for use in Turkey and issues licenses for production facilities and individual drugs. It also fixes drug prices at all levels (factory gate, wholesale, retail). Factory gate prices are made up of three factors: (i) production costs, (ii) overheads and (iii) producer's profit. Production costs and overheads are based on actual costs incurred by the producer and the latter must document these costs to MOH based on set criteria. Producer profits are set as a percentage of the sum of production and overhead costs. Similarly, wholesale, storage and retail margins are set as a fixed percentage of factory gate or CIF prices. This system encourages use of expensive raw materials and provides pharmacists with an incentive to sell the most expensive drugs whenever the prescription allows for it. Enforcement of MoH set prices at the retail level is the responsibility of the Turkish Pharmacists' Association. Given that about 85% of drugs sold are paid for by the public sector, control should also be exercised by insurance claims processors. MoH carries out drug quality controls through the analysis of samples taken from production facilities and retail outlets.

Anyone with a pharmacology degree can open a retail pharmacy, upon application for a license to the provincial health directorate. The latter is obliged by law to issue a license within thirty days of the application, provided all necessary documents have been submitted and

<sup>36</sup> Eccizibasi, B. "Yeni Kirzlerden Korunmak Icin Politik Mudahale Son Bulmalı", in Yeni Turkiye, No. 40, July-August 2001, pp. 1001-1020.



requirements have been fulfilled. Membership in the Turkish Pharmacists' Association is mandatory for anyone operating a pharmacy. Although by law only pharmacists are allowed to open and operate a pharmacy, MoH estimates that about one quarter of all pharmacies are in fact owned by none pharmacists who have opened them in the name of somebody else with a pharmacology degree.

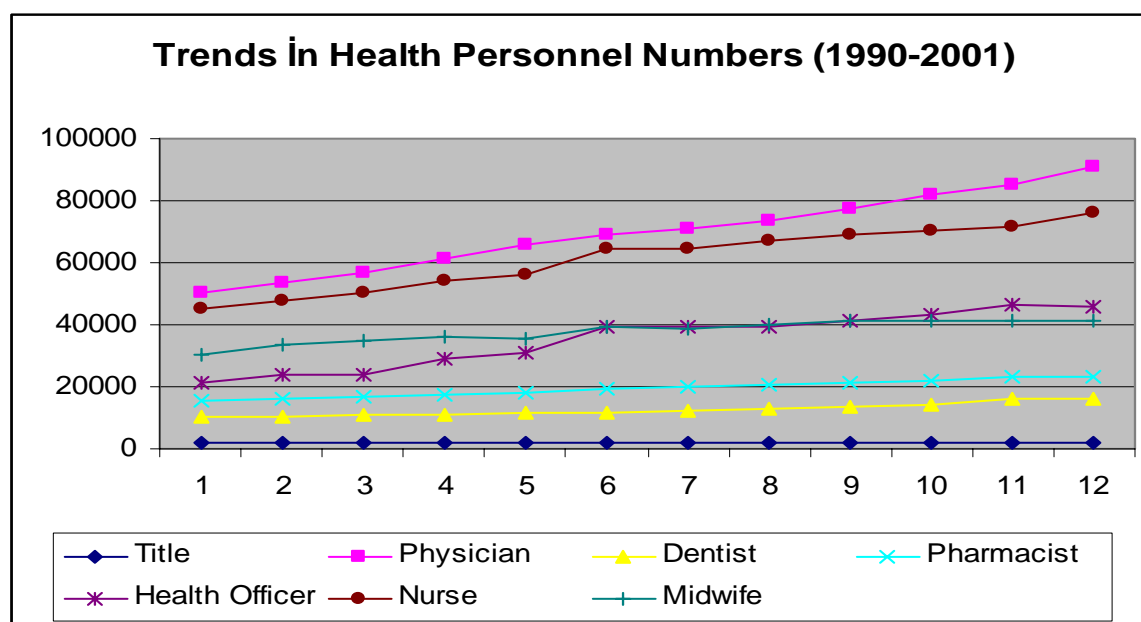
## 6. HUMAN RESOURCE IN HEALTH

### 6.1. Health personnel in Turkey: Present status and trends

According to the MoH Health Statistics for the year 2000, there were a total of 81,988 physicians in Turkey in 1999 – equivalent to one physician for every 785 persons – consisting of 36,854 specialists and 45,134 general practitioners. This is a 62% increase in the number of physicians between 1990 and 1999, which translates to 48% increase in the number of specialists and 75% increase in the number of practitioners. With regard to the number of other health personnel in 1999, there are 14,226 dentists (one for every 4,522 persons), 22,065 pharmacists (one for every 2,916 persons), 43,032 health officers (one for every 1,495 persons), 70,270 nurses (one for every 916 persons) and 41,271 midwives (one for every 1,559 persons). These numbers do not compare unfavorably with upper middle income countries like Mexico (625 persons per physician), and are better than Brazil (769 persons per physician), Thailand (2,500) and Tunisia (1428). The average for OECD countries as a whole is 370 persons per physician.

There has been a huge increase in the number of health personnel between 1990 and 1999. The number of physicians went up by 62% during this period, with dentists, pharmacists, nurses, midwives, health officers and other health personnel also showing significant increases (Figure 12).

Figure 12. Trends in Health Personnel Numbers (1990-2001)



Source: MOH, Health Statistics, Research, Planning and Coordination Council, 2002

### 6.2. Distribution of health personnel by agencies

Turkey's health sector is fragmented, with multiple public organizations providing health services at various levels in parallel to private providers. The three key public providers are the MoH (MoH), the Social Insurance Organization (SSK) and the Universities through University hospitals. Other public Ministries (Defense, Transport and Education) some state enterprises and

municipalities also provide health services, but their capacity is quite limited. In addition, there are private and foundation hospitals. Table 34 shows the distribution of health personnel by different agencies in Turkey in 1999.

**Table 34.** Distribution of Health Personnel by Agencies in Turkey, 2002

Personnel Title	Total	Population Per Person	Minister of Health		SSK	University	Other Org.	Private
			Number	%				
Physician	90,757	755	45,540	49	10,106	18,752	5,028	12,331
Specialist	41,907	1635	14,748	35	6,188	9,422	2,116	9,433
Practitioner	48,850	1403	29,792	61	3,918	9,330	2,912	2,898
Dentist	15,866	4319	2,414	15	615	884	695	11,258
Pharmacist	22,922	2990	760	3	856	717	222	20,367
Health Officer	45,560	1550	33,349	73	2,086	3,135	2,904	4,086
Nurse	75,879	903	43,346	57	11,700	11,156	4,778	4,899
Midwife	41,158	1665	37,709	92	1,813	112	165	1,359

Source: MoH Health Statistics, Research, Planning and Coordination Council, 2002

A large number of public sector physicians also work part-time in private practice; in fact, under Law 1219, doctors working in MoH and university hospitals are allowed to see private out-patients in these facilities after 4pm (health personnel working at university facilities are allowed to work privately part time at university hospitals after midday. Social insurance beneficiaries making appointments with specific doctors in public facilities after 4pm pay an out-of-pocket surcharge, while basic treatment fees are covered by their insurance. Revenues from treatment of private patients in public hospitals are shared between the hospitals' revolving fund and the treating physician. SSK physicians cannot see private patients at SSK facilities except from a recently initiated pilot in a limited number of SSK facilities. While such arrangements help public hospitals and physicians increase their revenues, they again pose a significant moral hazard problem, as doctors have little incentives to adequately treat patients before 4pm. Reliable statistics of dual job-holding are not available, though some recent studies (Tokat, 1998) estimate that about 60% of all public physicians (i.e., over 44,000 doctors) also have private practices. Further, essentially all dentists (i.e., 15,866 dentists) who work in public facilities also practice in private.

### 6.3. Education in health

Undergraduate medical education is provided at three levels in Turkey. These include: (i) Faculties; (ii) Higher Education Schools with 4-year Program; and (iii) Higher Education Schools with 2-year Program. Post-graduate medical education (Master and Doctorate programs) is provided in Graduate Schools. In addition, there are Research Centers and Training Hospitals where Medical Interns carry out research and receive training, and Institutes where specific scientific research is conducted.

There are 40 Faculties of Medicine, 14 Faculties of Dentistry, 8 Faculties of Pharmacy, one Faculty of Health Sciences and two Faculties of Health Education in Turkey. The Faculties of Medicine offer 6-year undergraduate medical education, which includes internship in the 6<sup>th</sup> year of education. The Faculties of Dentistry offer 5-year undergraduate education, whereas the remaining faculties offer 4-year undergraduate education.

The Higher Education Schools offers 4-year training to undergraduates in the fields of physiotherapy, nursing, and health administration and health technology. The Higher Education

Schools offer 2-year training to students in health services and health sciences. An amendment to the Council for Education Law (Number 2547) gave the right to the graduates of Vocational High Schools (Lycee); including Health Vocational High Schools graduates, to enroll to Higher Education Schools with 2-year Program without prior University Entrance Examination.

### 6.3.1. Doctors

Medical education in Turkey takes six years. However, some of the medical schools require a one-year English preparation course and in some of the Turkish medical schools, the teaching language is English. In general, the theoretical training is concentrated during the first three years, and practical training in the following three years. The curriculum of medical education is decided by the Supreme Council of Higher Education, which determines the compulsory topics and the minimum duration for medical training. The individual schools of medicine are flexible in adding to these topics and in deciding the structure of coursework.

Some medical schools follow the traditional method of teaching, which structures training in terms of distinct academic disciplines, e.g. anatomy, physiology, biochemistry, and pathology, with each discipline remaining relatively separate from the others. For example, consecutive lectures may be the anatomy of brain, the physiology of lungs and prevention of intestinal infections. In contrast, some medical schools have teaching systems that depend on a more integrated approach, in which the theoretical program is divided into subjects such as cardiovascular system, gastrointestinal system, infectious diseases, etc. In this system, consecutive courses are related to each other. For example, in the cardiovascular subject group training, consecutive lecture topics may be the heart anatomy, heart physiology, heart diseases, etc.

### 6.3.2. Nurses-Midwives

Turkey has three major categories of basic nursing education. The first category is that of the four-year high school based diploma programs that are accredited by the Turkish MoH (MoH) and run by the MoH. These schools combine high school and nursing education programs, and about 90% of the nurses in Turkey are graduates of these schools. The curriculum includes cultural, basic science, and nursing courses. On completion, graduates from these programs are employed as staff nurses. The second type of nursing education is based on the Bachelor of Science degree programs. Although the main purpose of these programs is to prepare candidates to become leaders in nursing practice, administration, education, and research, a significant number of these nurses select different positions such as academicians, teachers at vocational schools, etc. The third type of nursing education is a university-based associate degree program. Although frequently the same faculty teaches in both the baccalaureate and associate degree programs, the latter are administered by the Division of Allied Health in universities and are usually headed by a non-nurse. Their aim is to prepare nurses at the staff level and ease the nursing shortage.

Nurse-midwives are nurses with additional training from a nurse-midwifery program in areas such as maternal and fetal procedures, maternity and child nursing, and patient assessment. They manage gynecological and obstetric care and often serve as substitutes for obstetricians/gynecologists in rural areas and in some women's hospitals.

The nursing curricula are organized in a manner similar to nursing curricula in the United States and are standardized by the Council of Higher Education for both baccalaureate and associate degree programs. In a study of 21 university based schools of nursing,

### 6.3.3. Dentists

Dentists are the major providers of dental care in Turkey. All dentists must be a graduate of an accredited school. Some of the specialty areas of dentistry are orthodontics, oral and maxillofacial surgery, pediatric dentistry, periodontics, prosthodontics, and endodontics. Technological advances, including implant dentistry, laser-guided surgery, orthognathic surgery for the restoration of facial form and function, new metal combinations for use in prosthetic devices, and the development of new materials and instruments, influence the growth of dental specialties. Most dentists practice in private offices as solo or group practitioners but the majority still does not practice as a group. Due to the expanded capacity of dental schools during the last 15 years, there has been an increase in the number of new dentists entering the field. Dentistry is also among the most competitive professions in the Turkish health care industry. The demand for dentists will increase with an increase in populations likely to be associated with dental needs.

### 6.3.4. Pharmacists

The traditional role of pharmacists has been to dispense medicines prescribed by physicians and dentists, and to provide consultation on the proper selection and use of medicines. The practice requirements include graduation from an accredited pharmacy program and practical experience or completion of a supervised internship. Most pharmacists are generalists, dispensing drugs and advising providers, and the majority of them independently own pharmacies in Turkey.

### 6.3.5. Allied health professionals

Allied health professionals constitute a major proportion of the Turkish health care work force. Allied health professionals are divided into two broad categories: technicians and technologists. Formal requirements for allied health professionals depend on the postsecondary educational programs. Technicians receive high school based training or two years of postsecondary education, and are trained primarily to perform procedures. They are supervised by physicians to ensure that care plan evaluation occurs as part of the treatment process.

Technologists receive more advanced training. They learn how to evaluate patients, diagnose problems, and develop treatment plans. They must also have the training to evaluate the appropriateness and the potential side effects of therapies. Education at the technologist or therapist level includes skill development in teaching procedures to technicians. Social workers help patients and families cope with the problems resulting from long-term illness, injury, and rehabilitation. Examples of technical jobs include dietetic assistants, electroencephalogram technologists or technicians, and sanitarians.

## 7. FINANCING OF HEALTH SECTOR

### 7.1. Health expenditures

#### 7.1.1. Total expenditures on health

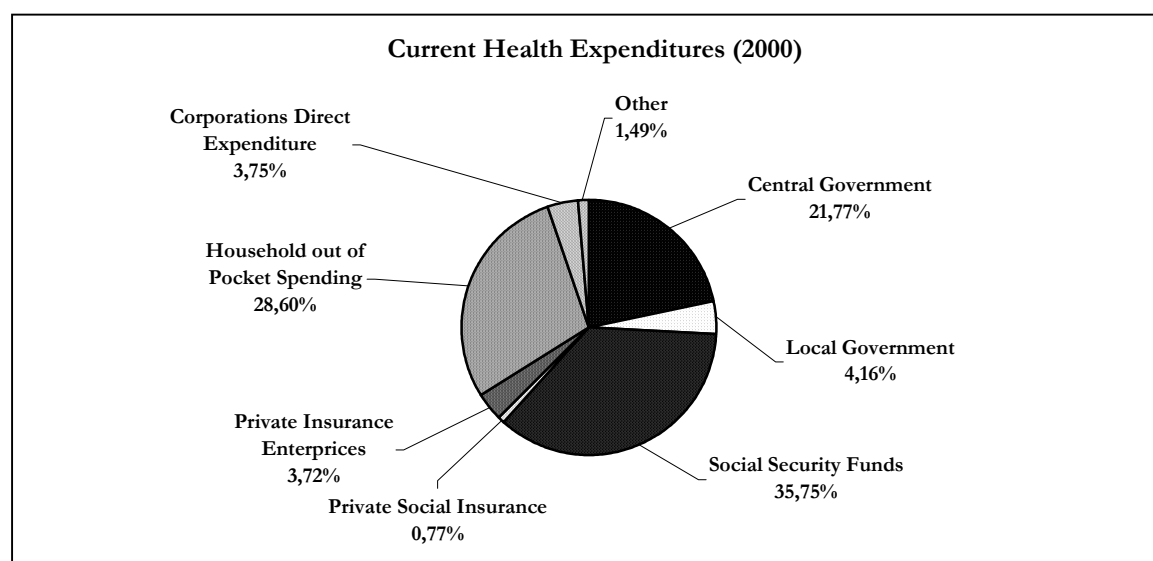
There are different estimations for Turkey’s Health Expenditure. In WB document it is stated that Turkey spent about 9,207,615 billion TL on health care in 2001. Of the total, 7,604,855 billion TL came from public sources, and the remaining 1,602,760 billion TL from private sources. Overall, public expenditures constitute 82.6 percent of total health expenditures in Turkey, while private expenditures on health constitute the remaining 17.4 percent. Annually, Turkey spends about 135 million TL (US\$112) per person on health (2001).

School of Public Health, MoH has completed National Health Account Study (for year of 2000) recently and a figure of some number has been changed. According to the study General Health Expenditures of Turkey estimate is approximately 8.619 trillion TL and health expenditure made per capita is approximately 127,1 million TL or 202 US dollar per capita on the dollar rate of mid year. This rate is equivalent to 463 \$ from the point of Purchasing Power Parity. According to OECD classification Total Health Expenditure for 2000 is 8.248 and Current Health Expenditure is 7.888 trillion TL. Total health expenditure made per capita is equal 121.6 million TL or 194 US\$ on the dollar rate of mid year and 443 US\$ from the point of Purchasing Power Parity. Current health expenditure made per capita is equal 116,3 million TL or 185 US\$ on the dollar rate of mid year and 424 US\$ from the point of Purchasing Power Parity.

Health Expenditures 2000 are 6,3% of GDP in current expenditure shares from the point of Gross Domestic Product (GDP) share and this rate is more than 25 % which has been reported by Turkey beforehand in order to make OECD comparisons.

According to National Health Account study breakdown of total health expenditures has been showed as below;

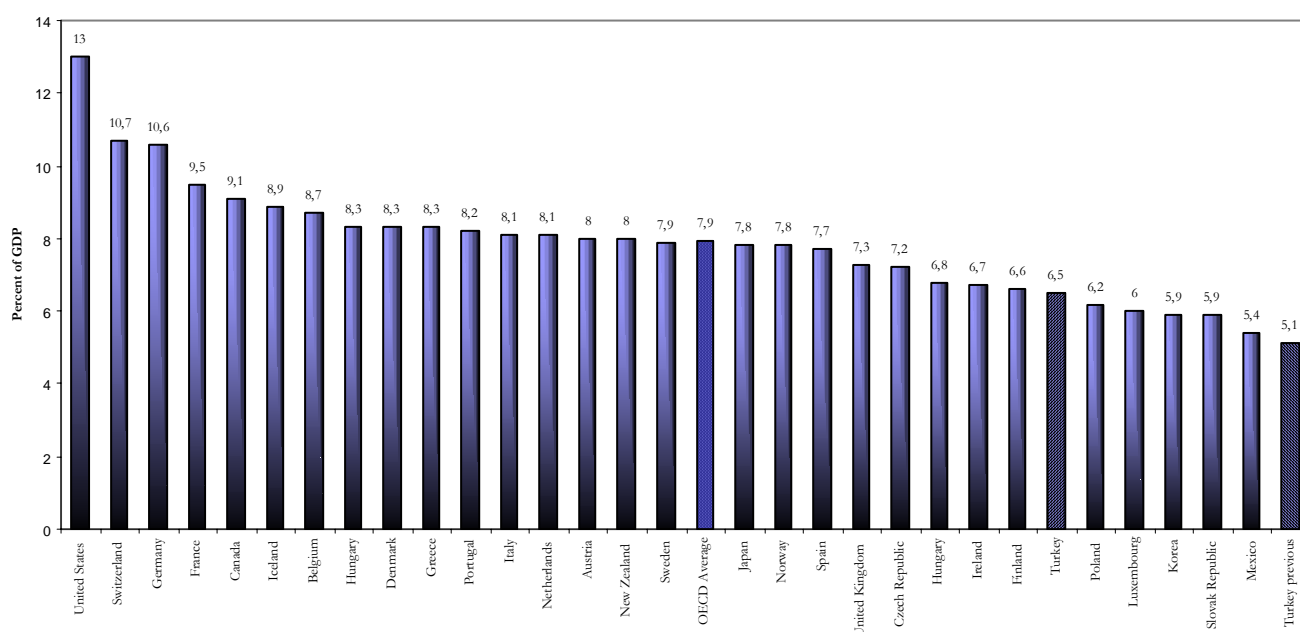
**Figure 13.** Current Health Expenditures (2000)



Source: National Health Account Study, 2000

After results of National Health Account study, position of Turkey also has been changed among OECD countries.

**Figure 14.** Total Expenditure on Health as a Percent of GDP (NHA-2000)



**Table 35.** Expenditures on Health Care, 1998 (selected countries)

	Total expenditure on health (% of GDP)	Public expenditure on health (% of total health expenditure)	Per capita total expenditure on health in international dollars	Per capita public expenditure on health (international dollars)
Chile	7.5	39.6	664	263
Greece	8.4	56.3	1220	687
Mexico	5.3	48.0	443	212
Malaysia	2.5	57.7	168	97
South Africa	8.7	43.6	530	231
Poland	6.4	65.4	535	350
Turkey	4.9	71.9	326	234
Turkey*	6,6	62,9	443	279
Lebanon	11.6	18	594	107
Thailand	3.9	61.4	197	121
Tunisia	5.3	41.3	310	128
Russia	5.6	70.7	317	225
Romania	3.8	56.9	238	135

Source: WHR 001

\* NHA study results for 2000

As Table 35 shows, Turkey spends less on health (in PPP terms) compared to countries at similar levels of per capita GNP. Public expenditures on health in Turkey do not compare unfavorably with public expenditures on health in other countries; overall, however, per capita expenditures on health in Turkey are on the lower side compared to other countries.

### 7.1.2. Public expenditures on health

Public expenditures on health consist of expenditures incurred by the MoH, General Directorate of Coastal Health Services, Universities, Social Solidarity Fund, other Ministries and agencies, local governments, state enterprises, civil servants, and social security institutions: SSK, ES and Bağkur. Private expenditures on health consist of out-of-pocket treatment and pharmaceutical expenditures incurred by individuals and households, and by companies and individuals contributing to private insurance schemes.

Because of the overlap between financing agents and providers of services – the MoH, for instance, finances health care and is also a provider of services – certain items appearing as health expenditures in one agent's accounts appear as revenue items in another agent's account. MoH and university health facilities are allowed to impose user charges for their services on the basis of a schedule of prices agreed between the MoH and the MoF (Table 36). The price list is prominently displayed in the health facilities and is published in the official gazettes. All monies thus received from user charges and charges for procedures go into the institution's revolving funds, which are based in facilities, and independent of the MoH or the universities that own the facilities.

**Table 36.** Average Fees in Public and Private Hospitals (million TL)

	MOH Hospital	SSK Hospital	University Hospital		Private Hospital (Bayindir Hospital)
			Normal rate	Revolving Fund rate	
<b>Small Surgery</b>	36	49.2	36	63	300
<b>Big Surgery</b>	360	432	360	630	6000
<b>X-Ray (Liver)</b>	8	8	8	14	36.5
<b>Birth Operation (Normal)</b>	20	20	20	35	1440
<b>Colonoscopy</b>	30	30	30	52.5	275
<b>General Examination</b>	2.75	3.3	2.75	4.8125	70
<b>Bed Price (Second Class)</b>	5	4.8	5	8.75	90

Source: Turkey Reforming the Health Sector for Improved Access and Efficiency Volume II, Document of the World Bank March 2003

Bağkur and ES are two public institutions that purchase health services on behalf of its beneficiaries from the MoH and university hospitals, and these expenditures are recorded as revenues for the MoH and university health facilities.

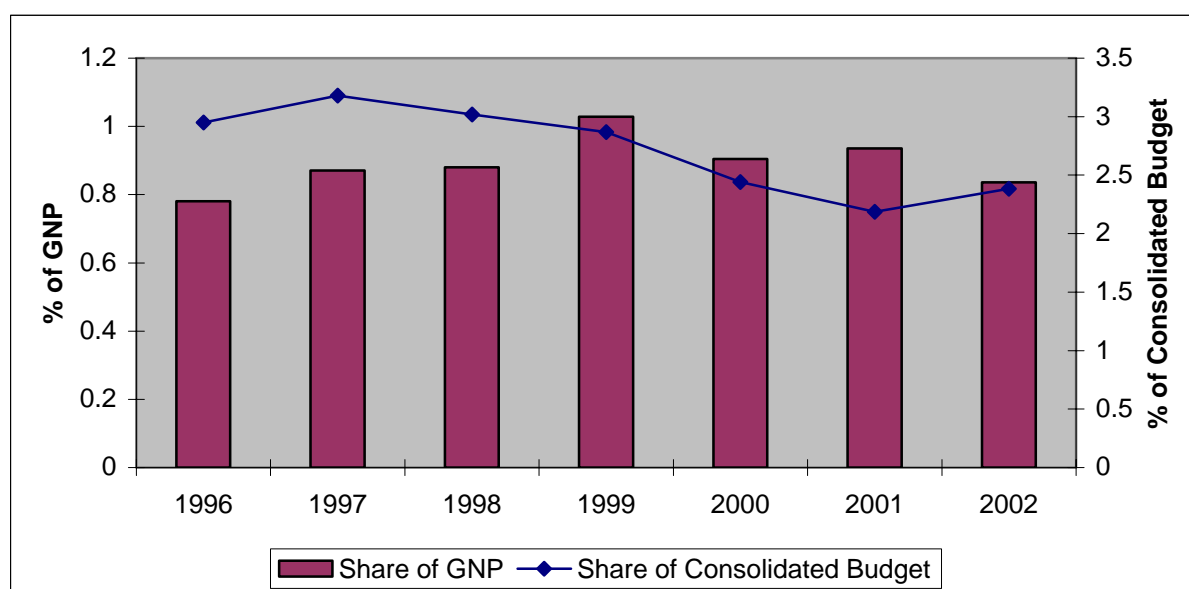
#### 7.1.2.1. Ministry of Health

Health expenditures by MoH as a percentage of GNP have, by and large, remained unchanged during 1996-2001 (Figure 15). Excluding the revolving funds of MoH facilities, health expenditures by MoH increased from 0.78 percent of GNP in 1996 to 1.03 percent in 1999, and then fell to 0.94 percent of GNP in 2001. In terms of the share of the total consolidated budget, MoH expenditures on health fell from 2.95 percent in 1996 to 2.87 percent in 1999, declining slightly thereafter to 2.19 percent in 2001. The share of MoH expenditures on health as a percentage of



total public expenditures on health has fallen significantly over the years, from 33 percent in 1996 to 20.8 percent in 2001. Including the contributions of the revolving funds of MoH facilities, the share of health expenditures as a percentage of total public expenditures on health by MoH fell from 39.6 percent in 1996 to 28.6 percent in 2001.

**Figure 15.** MoH Health Expenditures, 1996-2002



Source: Turkey Reforming the Health Sector for Improved Access and Efficiency Volume II, Document of the World Bank March 2003

The presence of revolving funds and other special funds in the resource pool of MoH and universities merits special discussion, not only because of their salience but also because of the way in which they interact with the regular budgetary sources of financing. Off-budget options of receiving and spending public funds are attractive for a variety of reasons. All budgetary agencies and provincial and municipal administrations are subject to the provisions of the General Accounting Law, the Public Tender Law, the Travel Allowance Law and the Civil Servants Law. The General Accounting Law, more popularly known as Code 1050, lays down individual and office responsibilities (articles 11, 13-15, 22), rules related to “visa” requirements of Ministry of Finance (article 64), and procedures for advance payments and credits related to purchases (article 83). All these codes and laws are rather restrictive in that they provide very limited flexibility in procurement procedures, payment mechanisms, compensation levels, etc. Moreover, the consolidated budget allocates funds according to line items, leaving very little scope for any subsequent changes.

Of the 727 hospitals owned and operated by the MoH, 536 hospitals, i.e., 73.7 percent of all hospitals, accounting for 96 percent of all hospital beds, have revolving funds (Table 37). Some hospitals have more than one revolving fund, so that there are 562 revolving funds in MoH facilities. Of these, 440 revolving funds are in state general hospitals, 23 in children hospitals, 46 in Women and Children hospitals and 53 in other facilities. In addition, there are 43 revolving funds that operate in university hospitals.

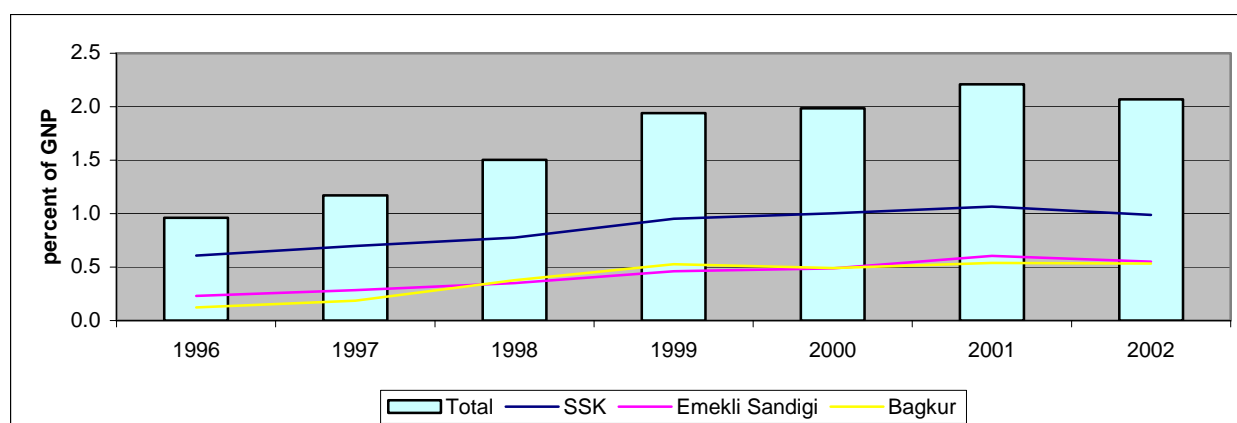
**Table 37.** Distribution and Collections of Revolving Funds, 2001

Region	MoH Facilities					University Facilities		
	State	Chest	Children & Women's	Other	Total RF	Collections (billion TL)	Total RF	Collections (billion TL)
Marmara	74	7	8	18	107	159,021	10	144,187
Aegean	71	3	6	5	85	169,485	6	115,163
Mediterranean	52	1	5	5	63	93,120	4	91,796
South East Anatolia	33	1	5	2	41	45,066	4	40,954
East Anatolia	49	1	3	3	56	56,092	4	54,328
Black Sea	84	6	8	12	110	104,667	3	33,244
Central Anatolia	77	4	11	8	100	218,059	12	250,428
<b>Total</b>	<b>440</b>	<b>23</b>	<b>46</b>	<b>53</b>	<b>562</b>	<b>845,509</b>	<b>43</b>	<b>730,100</b>

Source: Turkey Reforming the Health Sector for Improved Access and Efficiency Volume II, Document of the World Bank March 2003

### 7.1.2.2. Social security institutions

SSK, Bağkur and ES comprise Turkey's social security system, and cover more than 65 percent of the country's population. The share of health expenditures of the social security institutions in GNP has more than doubled between 1996 and 2001, increasing from 0.96 percent in 1996 to 2.2 percent in 2001 (Figure 14). The dependency ratio (i.e., the number of dependents per premium paying active member) in 2000 was 4.41 for SSK, 3.54 for Bağkur and 3.51 for ES.

**Figure 16.** Health Expenditures by Social Security Institutions (% of GNP)

Source: Turkey Reforming the Health Sector for Improved Access and Efficiency Volume II, Document of the World Bank March 2003

#### **SSK (Sosyal Sigortalar Kurumu)**

SSK is a social security institution for private sector employees and blue-collar public workers, and functions both as an insurer and a health care provider. SSK services are funded by premiums paid by employees and employers and budget transfers to compensate its fiscal deficit. While a single system is used to collect both retirement (pension) and health insurance premiums, health premiums and expenditures are separately identified in the SSK accounts.

Members primarily use SSK services for health care, but are referred when needed to MoH, University and private health institutions. In general, SSK does not provide or pay for preventive services.

There are two main branches of insurance within SSK: short-term and long-term branches. The short-term branches include cover employment injuries and occupational diseases, maternity, and sickness; long-term branches cover invalidity, old age, and death benefits (survivors). Each of these is discussed below.

#### **a) Short-term branches**

Employment injuries and occupational diseases: Employment injury refers to an accident occurring in any circumstance or situation which causes – immediately or subsequently – a physical or mental disability to an insured person. Occupational disease refers to a case of temporarily or permanently sickness, or disability or mental trouble suffered by an insured person due to continuing factors characteristic of the conditions required to perform their work. There is no qualifying period with regard to the assistance concerning employment injuries and occupational diseases. Premium (contribution) rate varies from 1.5 percent to 7 percent of earnings according to classification and degree of danger of the work place. Only the employer pays this premium.

Maternity: Maternity insurance covers cases of maternities of the insured women and the uninsured wife of the insured men. Maternity insurance benefits are also provided in cases of legal abortion and unviable births. In order to be entitled to maternity benefits, premiums – fixed at the rate of 1 percent of earnings, payable entirely by the employer – must have been paid up for at least 90 days for the insured women, and 120 days for the insured men, in the course of the year preceding the birth.

Sickness: Sickness insurance covers all cases of sickness, with the exception of those within the coverage of the employment injuries and occupational health. In addition to the insured person, spouses, dependent children, persons drawing income against permanent incapacity for work, pensioners and their dependent spouses, children and parents are also covered, but under different conditions from sickness insurance. Sickness insurance contributions must have been paid up for at least 60 days have to be in the course of the last six month preceding the date on which the sickness manifested itself. Spouses and dependents are entitled to medical benefits provided the sickness insurance contributions are paid up for at least 120 days in the course of the year preceding the date on which the sickness manifested itself.

Generally speaking, the sickness insurance premium rate is 11 percent of earnings, of which the employer pays 55 percent and 45 percent by the insured person. The premium rate for apprentices (as defined under Article 3-II-B of Code 506) is 4 percent of earning, shared equally by the employer and the insured person.

#### **b) Long-term branches**

Invalidity, old-age benefits and death benefits payable to survivors: Premium rates for invalidity, old age and death benefits payable to survivors are 20 percent of earnings, of which 55 percent is paid for by the employer and 45 percent by the insured person. Premium rate is 22 percent for miners.

The average total burden of SSK premiums, including employee and employer premiums as well as contributions to unemployment fund, is almost 41 percent. Employees contribute about 40 percent of the premium, while the employer contributes about 55 percent. The remaining 5 percent comes from the government budget.

Three groups of people are covered by SSK. The first group, subject to Code 506, is eligible for three schemes: compulsory insurance, voluntary insurance and collective insurance. Persons employed by one or more employer under a service contract are considered to be “compulsorily

insured.” Persons registered under Code 506 can be “voluntarily insured” till such time as their employment contracts are finalized. And lastly, SSK may conclude agreement with employers or with societies, associations, trade unions and other organizations in order that person who are not insured under Code 506 may be covered by group insurance for one or more of the branches of insurance covering employment injuries, occupational diseases, sickness, maternity, invalidity, old-age and death benefits, under general conditions to be approved by the Ministry of Labor and Social Security.

The second group, subject to Codes 3308 and 506 (Article 3-II-B), covers apprentices. According to the principle of apprentice agreement, an apprentice is a person whose work skills and experience are developed in a job field. Defined thus, all apprentices are eligible for employment injuries, occupational diseases and sickness insurance as described under Code 506, and insurance premium as described in Code 1475 is payable at the rate of 4 percent of 50 percent of minimum wage, as applicable for the insured’s age.

The third group, subject to Code 2925, covers persons who do not come under the coverage of any social security law and do not take invalidity benefit, old-age pension, or permanent full incapacity income. Such persons voluntarily participate in the insurance schemes of SSK.

With the exception of those voluntarily active and collectively insured, all others, including dependants, insured with SSK are covered by the health insurance scheme of SSK.

#### ***Bağkur (Social Security Organization of Craftsmen, Tradesman & Other Self Employed)***

There are two groups of persons who are required to be compulsorily covered by Bağkur. The first group is that of artisans, craftsmen, merchants, industrialist, other self-employed persons and village elders of quarters or villages who are responsible to govern are obliged to register with Bağkur under the provisions of Code 1479 as compulsory insurer. Insurees under Code 1479 are also eligible to benefits of long term insurance, including old age, invalidity, and survivors insurances, and of health insurance. The second group is that of agricultural sector employees not covered any social security organization and not working for an employer under a service contract, who are obliged to join Bağkur under Code 2926. Insurees under Code 2926 are also eligible to benefits of long term insurance, including old age, invalidity, and survivors insurances, and of health insurance. Both these groups are considered to be “compulsorily insured.”

Unemployed housewives and unemployed spouses of Turkish employees abroad, and foreign citizens residing in Turkey are also eligible to join Bağkur. They are considered to be “voluntarily insured.”

Bağkur also has two branches of insurance: short-term and long-term branches. The short-term branches cover health insurance, while the long-term branches provide invalidity, old age, and death benefits (payable to survivors). The premium rate for all branches is 40 percent of monthly earnings, half of which covers long-term insurance and half covers health insurance. Insurers under Code 1479 pay premiums monthly, while those under Code 2926 pay quarterly.

All insurers and their dependents are covered by health insurance scheme of Bağkur. In order to be entitled to health insurance benefits, the insurees are required to pay health insurance premiums for at least 8 months, and have no record of default of health insurance and long-term insurance premiums. Dependents of those who qualify for insurance coverage under Bağkur but who make use of health insurance facilities provided under other social security laws and special laws are not covered by health insurance scheme of Bağkur.

All contributors have the same entitlement to health benefits, which cover all outpatient and inpatient diagnoses and treatment. Bağkur operates no health services of its own, but contracts with other public sector providers. The scheme works on reimbursement system where fees are determined independently by the institutions.

### **Emekli Sandığı (Pension Fund)**

ES covers retired civil servants. Health expenditures of active insurers and their dependents are financed by the budgets of their public institutions, while health expenditures of pensioners and their dependents are financed by ES.

There is no specific health insurance premium collected from either active civil servants or pensioners. As in the case of SSK and Bağkur, there is a transfer payment to ES from the state budget to finance its deficits.

All insurers (active civil servants and pensioners) and their dependents are covered by health insurance scheme of ES. In general, dependents that make use of health benefits provided under special laws are not covered by health insurance scheme of ES.

### **7.1.2.3. The Green Card Program**

The "Green Card" program was introduced as a mechanism to ensure targeted delivery of health services to the poor who have little or no capacity to pay for the services. Enacted under Law 3816 of 1992, it provides free health care services to its beneficiaries. The Green Card program is seen as a transitional solution until a general health insurance system is introduced.

To qualify for a Green Card, an individual should be a Turkish citizen, not be covered by any social security system, and have a monthly income of less than one-third of the minimum wage (excluding taxes and social security premiums) as determined by Code 1475. The Green card program does not cover medical treatment expenditures of passive insured people like soldiers and students of higher education. On the other hand, those who are entitled to receive free health services under any other law can continue to make use of this facility even if they do not apply for the green card. According to Code 3816, the rights of these people are legally guaranteed. Those who cannot pay for health services and are not able to get a Green Card can have state-financed health care under Code 3294 (Law on Incentive to Social Aid and Solidarity Fund).

Applications for Green Cards are finalized in the districts by the Councils of Provincial Administration. The Councils determine eligibility based on verification of applicant's incomes, and make recommendations to the provincial Governor who then issues the Green Card. At present, approximately 11.3 million citizens benefit from this scheme (Table 38). Istanbul has the lowest percentage of population covered by Green Card (5.5 percent), followed by Tekirdag (6.5 percent), Ankara (6.6 percent), İzmir (7.8 percent) and Canakkale (8.3 percent). Bingol has the highest percentage of population covered by Green Cards (48 percent), followed by Adiyaman (41 percent), Sinop (39.4 percent), (Siirt 937 percent) and Kirsehir (35.1 percent).

The Green Card program is managed by the MoH. Medical treatment expenditures are determined by a regulation issued by the MOH, under which the provider institutions send an invoice detailing all charges to the MOH. These payments are cleared by the MOH within 15 days.

**Table 38.** Population Covered by Green Cards, 1992-2001

Years	Green Card Applications	Green Cards Awarded	Total Population	Population Covered (percent)
1992	910,873	365,509	58,179,932	0.6
<b>1993</b>	2,971,722	2,211,341	59,052,631	3.7
<b>1994</b>	4,469,935	3,671,452	59,938,421	6.1
<b>1995</b>	5,977,439	4,996,728	60,837,497	8.2
<b>1996</b>	6,948,328	5,713,066	61,564,398	9.3
<b>1997</b>	8,246,854	6,666,978	62,865,574	10.6
<b>1998</b>	9,592,807	7,760,443	64,166,750	12.1
<b>1999</b>	10,944,955	8,721,629	65,505,088	13.3
<b>2000</b>	12,555,783	10,125,706	67,844,903	14.9
<b>2001</b>	14,213,305	11,346,250	69,272,291	16.4

Source: Turkey Reforming the Health Sector for Improved Access and Efficiency Volume II, Document of the World Bank March 2003

The Green Card program is financed via general taxes, and health expenditures of green card holders are covered from the appropriation in the transfer item of the MOH budget. Appropriations granted by the Parliament cannot be exceeded in a fiscal year without prior authorization of Parliament, though a draft supplementary appropriation bill proposing additional financial commitments can be submitted to the Parliament indicating the requirement of additional resources and further borrowing. However, this appropriation has been exceeded without prior authorization of Parliament ever since the program was introduced, even though the Court of Accounts in Turkey (Sayistay) has declared this spending illegal.

Since 1992 when the scheme was first initiated, a total of approximately 1.5 billion USD has been spent under the scheme. End-of-year expenditures have continuously exceeded revenues under the Green Card program, and large deviations have been observed between initial appropriations and year-end expenditures over the past few years. This deviation seems to be mainly due to underestimations in initial appropriations. The level of appropriation is determined by the High Health Coordination Council under Article 9 of Law 3816, supposedly on the basis of number of holders of green card and estimated annual average health expenditure. However, this has not happened in practice, and even though the number of Green Card holders has gone up and treatment costs have increased, the appropriation for the year 2002 is less than that of 2001.

The Plan and Budget Committee, during its deliberations on the Final Account Bill for 1995, adopted a principle not to approve complementary appropriations for excess expenditures that have no legal basis in the following years. Unfortunately, this positive intervention – unprecedented in the Parliament’s history – proved ineffective. The Committee ignored its own decision during discussions on final account bills for the succeeding years, and legalized and legitimized the final account bill by providing complementary appropriations for these excess expenditures.

### 7.1.3. Delivery of Services

The co-existence of budgetary and non-budgetary sources of funding in the health sector has resulted in the emergence of a multi-tier system of health care in Turkey, defined by who provides health care, who pays for it and how much, and quality of care of that service. In effect, the funding pools of MoH and universities have a “hard” component and a “soft” component. The

hard component comprises allocations made under the general budget and the annex budget, collectively referred to as the consolidated budget. The soft component results from the possibility of mobilizing additional funds using revolving funds, special funds, foundations, etc. Since the two components have very different implications for delivery of health services and for this reason, the fragmented nature of the public expenditures on health takes on special significance.

Several different types and levels of health services delivery can be distinguished:

*Outpatient Care*

- MoH health centers and posts, providing free care for the Green Card holders, ostensibly at low levels of clinical quality;
- SSK clinics and hospitals providing care free to its members, ostensibly at low levels of clinical quality and patient satisfaction
- Private providers providing care at high costs to users, at high levels of patient satisfaction though not necessarily high levels of clinical quality.

*Inpatient Care:*

- MoH hospitals providing free care to Green Card holders, ostensibly at low levels of clinical quality
- MoH hospitals providing care at established fee-schedules, ostensibly at low to medium levels of clinical quality
- University hospitals providing care at established fee-schedules, at medium to high low levels of clinical quality
- MoH and University hospitals providing care at rates higher than the established fee-schedules, at medium to high low levels of clinical quality and high levels of patient satisfaction.
- SSK hospitals providing care free to its members, ostensibly at low levels of clinical quality and patient satisfaction
- Private hospitals providing care at high costs to users, at high levels of patient satisfaction though not necessarily high levels of clinical quality

*Preventive Care:*

- MoH health centers and posts, providing free preventive care

This multi-tier system allows quantity and quality of services to follow the ability to pay; however, the more appropriate notion of equity in health is that of utilization according to need, and this is not adequately addressed under the present system.

## 8. OTHER CRITICAL ISSUES - HEALTH SECTOR REFORMS

### (HEALTH TRANSFORMATION PROGRAM)

As being the winner of November 2002 elections in Turkey, Justice and Development Party (AKP) declared “Urgent Action Program” regarding the solutions of increasing problems. Within this framework the MoH prepared “Health Transformation Program” in order to promote and broaden the scope of health services.

Health transformation program is not much different from the health reform studies prepared and implemented beforehand. However with this program it is planned both to support the studies conducted in the past regarding these subjects and to reduce the possible disappointment felt by the people related with the word “reform” which was spelled in the past so many times and turned out to lose its force. While realizing this program the MoH has built its program on a structure giving priority to the patient satisfaction and providing contentment for service providers and service beneficiaries.

The objectives of the Health Transformation Program are declared as to present, provide, finance and organize health services in line with effectiveness, productivity and equity. Main principles of Health Transformation program are human centricism, sustainability, continuous quality improvement, participation, division of power, decentralization and competition in service. All these objectives and principles are harmonious with both ‘Health for All in 21<sup>st</sup> Century’ Policy of the World Health Organization and ‘Accession Partnership’ document prepared by the European Union.

### 8.1. Current situation (Strong-weakness parts of system)

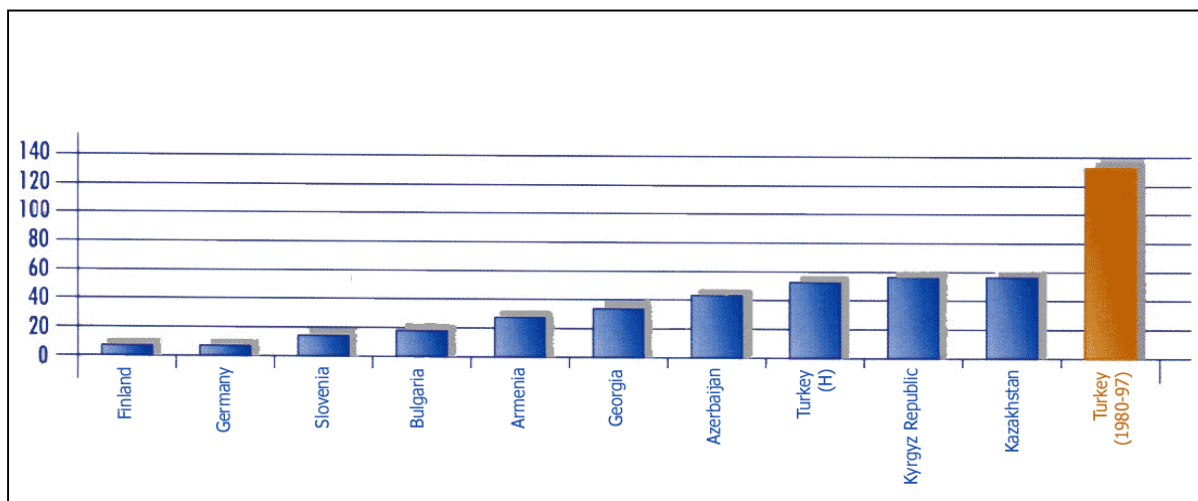
#### 8.1.1. Demographic and Epidemiological Features

Our country with 67.85 million populations is one of the twenty most crowded countries in the world. There exists a young population as a result of high fertility and growing rates in the past. 30 % of the population is below the age of 15 and 11% of the population is below the age of 5. More than 17.8 million (38%) women are in the fertile period, i.e. between the ages of 15-49. However, a decreasing trend has been observed in these rates. Total fertility number was 5 children per woman at the beginning of 1970s and it is less than 3 in 1990s.

It is a fact that the health status of Turkey is not at a good level both absolutely and when compared to the other countries with the same income level. The sector has problems in each parts but it is necessary to deal with some problems immediately. Maternal mortality rate (Figure 17), which is still very high, comes at the beginning of these problems.

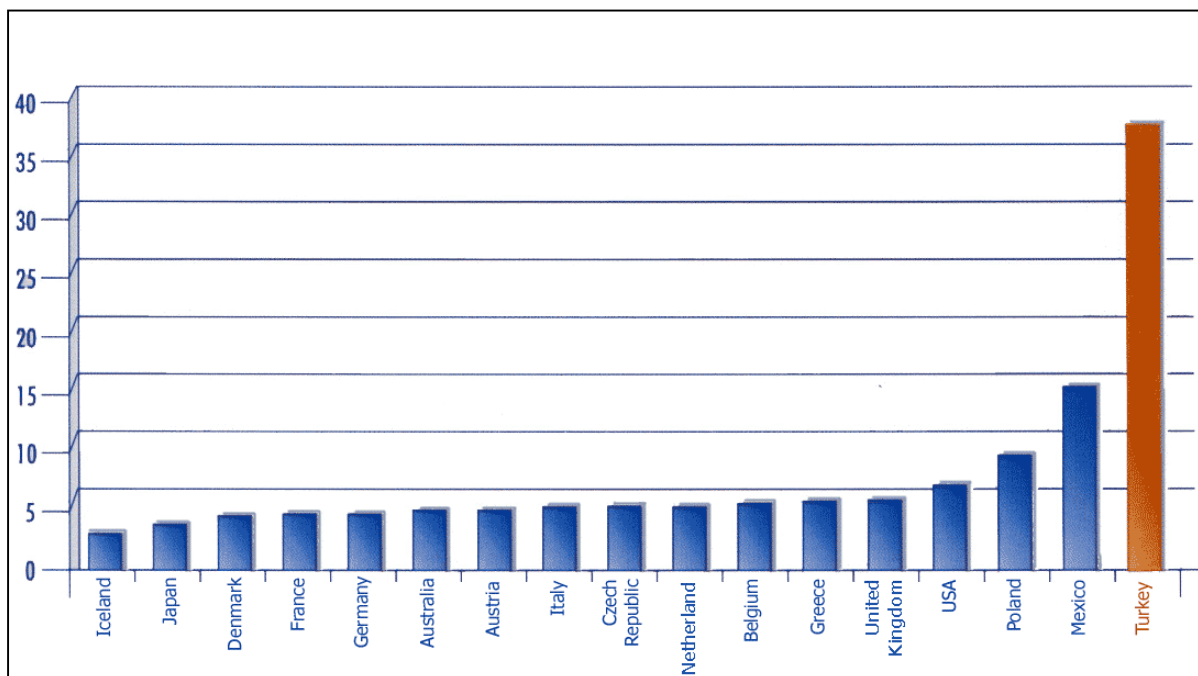


Figure 17. Maternal Mortality Ratio in some countries 1998

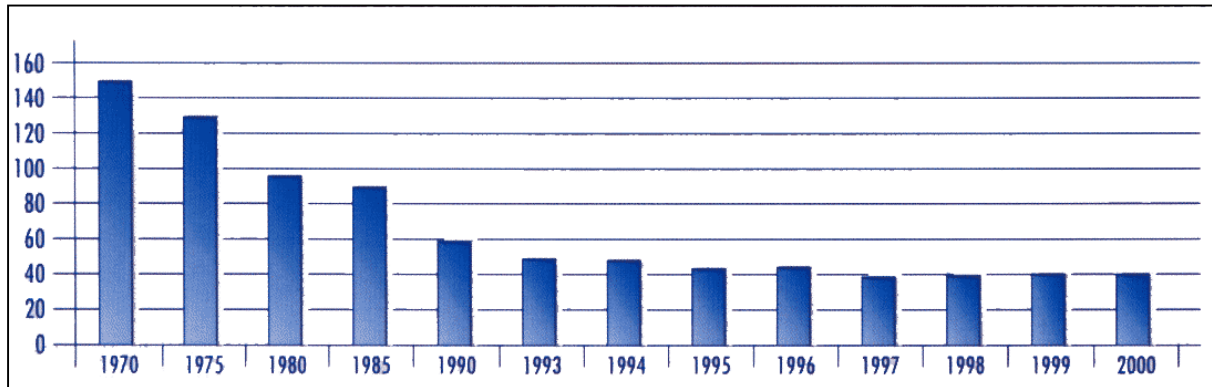


The second important problem is the high infant mortality rate. Although this rate was reduced to 40 for 1000 live birth in 1998 compared to more than 150 in 1000 alive birth in 1970 and decreased more in last years, Turkey is worse than many other countries in Europe (Figure 18). Change in infant mortality rates as to years are given Figure 19.

Figure 18. Average Infant Mortality Rate (in 1000) in OECD Countries – 1998



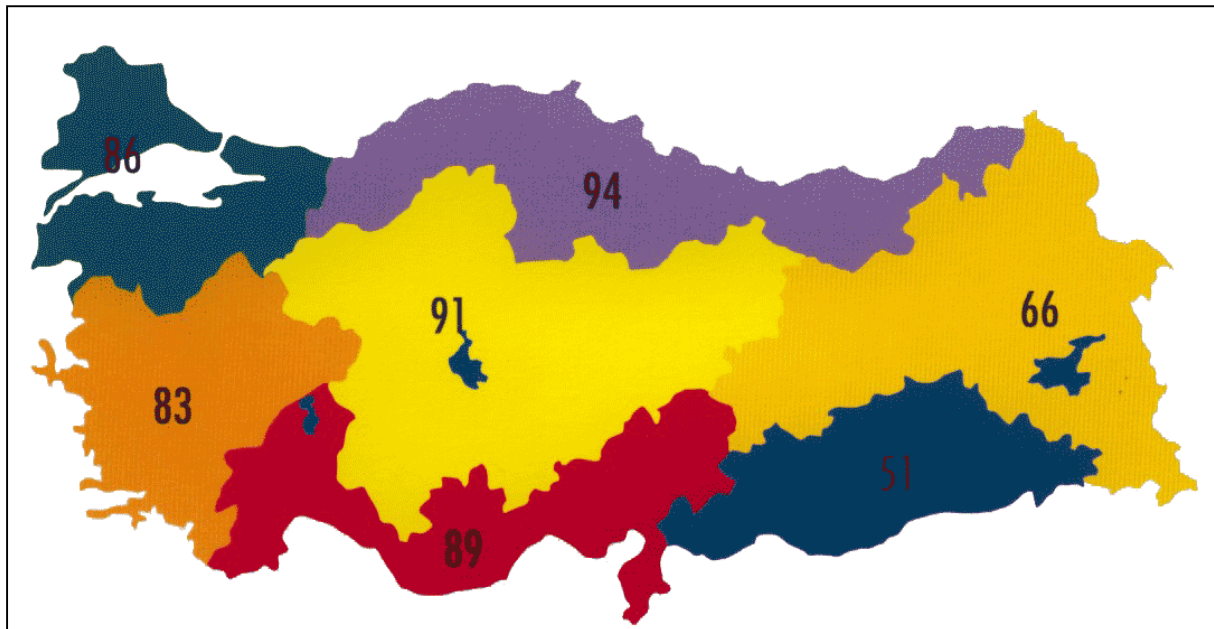
**Figure 19.** Mortality Rate in every 1000 alive birth



Factors such as insufficient follow up of pregnant women, medical intervention during and after birth and insufficiency of care are some of the reasons of high infant mortality.

Another issue with high priority is the existence of great differences in health indicators both between rural and urban areas and between the regions. It is necessary to take this issue into consideration while planning and developing health policies. Our immunization rates, which constitute an important place within the preventive health services, should be evaluated in this respect (Figure 20).

**Figure 20.** Regional distribution of the immunization situation in children before 12 months, Turkey, 2000 (%)



Population projections made according to 2000 census show that our country will reach to 78 millions population in 2010 and 92 millions in 2015. The population increase rate of our country is 18 per 1000. This is a higher rate in comparison to many countries. Change observed in population structure brings the aging of the population. When taking the tendency in the past into consideration, important changes will be expected in population pyramid. It is expected that the 20-54 age group will be doubled and the rate of the aged population will reach to 10% in the next 20 years.

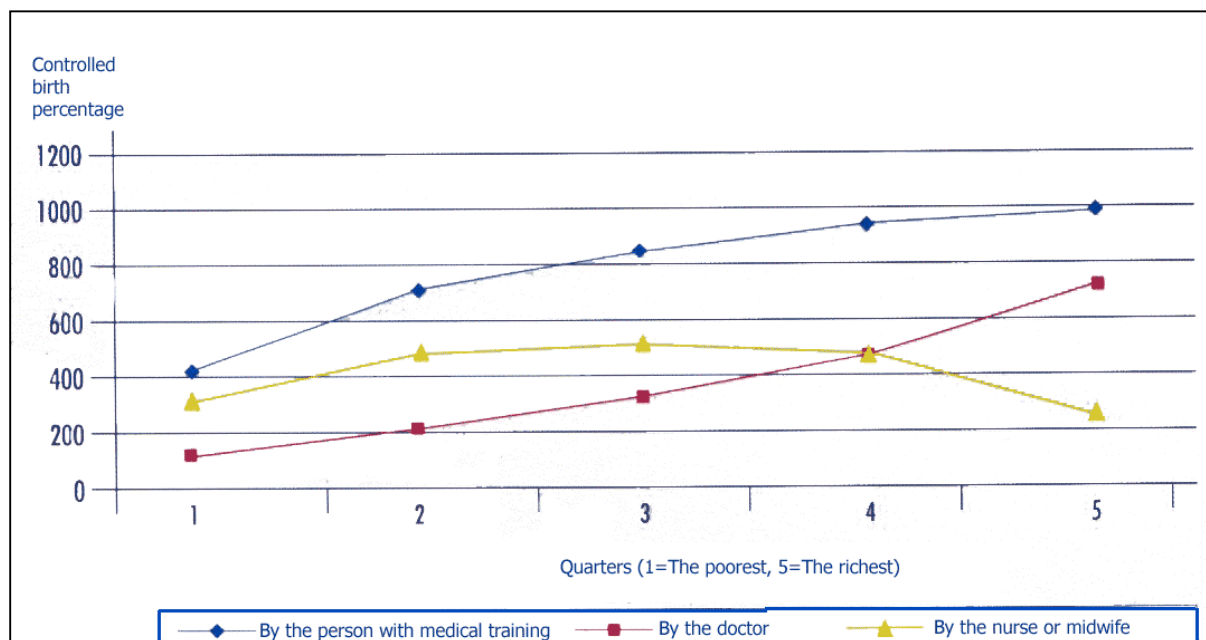
Life expectancy at birth is about 66 for males and about 71 for females and this period are 10 years shorter than the average of OECD countries.

Today, 65% of our population lives in cities and the projections performed shows that the urban ratio will reach to 80% in near future. Rapid urbanization period that our country has experienced caused various problems, infrastructure and town planning services could not be submitted properly and ghettos appeared. In parallel to these problems in the delivery of the health services increasingly multiplied.

### 8.1.2. Health Level

In spite of the rapid improvements in the near past, Turkey is still behind of the most of the middle-income countries in terms of health level. Less than two third of all mothers receive prenatal care and full dosage tetanus toxin injection could be given less than one third of them. In the average a doctor is present in only 2 of the 5 births (40%). 11.6% of the women in the poorest group give birth under the control of a doctor on the other hand 72.3% of the women in the richest group. This ratio is over 90% in the countries with middle-income (Figure 21).

**Figure 21.** Births under the control of the qualified people



Among the reasons of death under the age of 5, perinatal reasons constitute the highest rate. However, among the reasons of death above the age of 5, diseases like hearth diseases, brain-vascular diseases, diabetes and cancer dominate. This data shows that while frequency and

importance of the infectious diseases, which is dominant in the past, decreases; an epidemiological transition to chronic diseases is observed. In this transition period, health planners should give the same priority to both communicable diseases and chronic diseases. As it is mentioned above there exist great differences between our rural areas and cities and between our western and eastern regions in terms of health indicators. These differences dramatically appear even between the central district of big cities and ghettos.

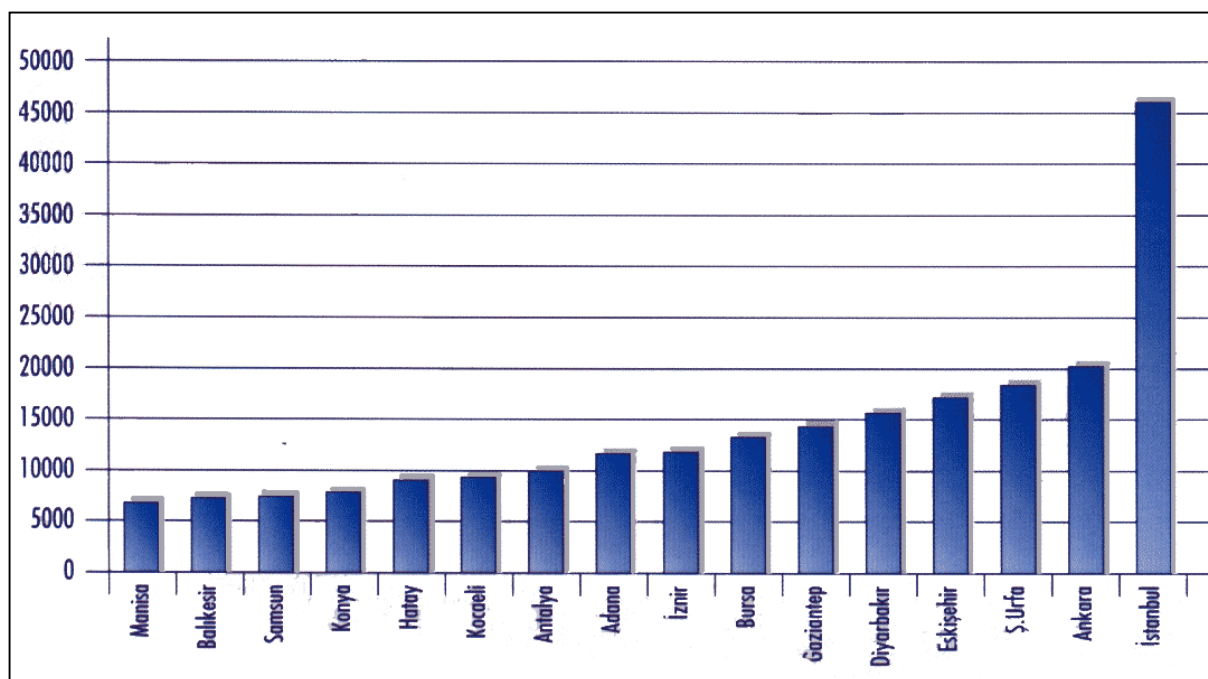
While, our country is at the 17<sup>th</sup> rank in the global scale as an economical power, it is at the 86<sup>th</sup> rank in the human development index prepared in line with the social indicators in which health and education are involved.

### 8.1.3. Organization and Delivery of Health Services

Health services seem to be as complex and multi-pronged structures. “Strategic Management” is a serious deficiency in the sector. Since the MoH concentrates on giving service in its own institutions, it remains insufficient in providing direction to the sector and policy development.

Since there is no effective coordination among the MoH, Social Insurance Institution, university hospitals, institutional hospitals and private hospitals; planning of services and investments cannot be carried out in parallel with the social needs. Demographic and epidemiological characteristics have been overlooked in health investments and planning (Figure 22). Since the “primary level” is not sufficiently strong for constructing the services, the desired level has not been achieved in the delivery of primary health care services. Health centers have completed its organization on a large scale in the rural areas. However, physicians’ being not educated and not directed to give service in this field and non-institutionalization of the management of the health centers cause a barrier for the effective service delivery. The infrastructure of the health centers is insufficient in rural areas, especially in urban areas.

Figure 22. Population per health center in some provinces



Most of the primary health care institutions established for certain purposes such as Tuberculosis Control Dispensary and Mother and Child Health Centers have either completed their work or have remained as non-functional because of deficiency in maintaining the necessary importance. General practitioners working in the primary health care services cannot concentrate on their services sufficiently due to the socio-economic condition and specialization expectation. On the other hand, our citizens seem to be reluctant to get health services at this level. As a result, our people have tendency to go to the hospitals directly.

Unproductiveness remains as an important issue in delivery of the hospital services. Insufficiencies in the primary health care and referral system cause accumulations in hospitals and increase the costs while decreasing the quality of service. Bed occupancy rates remain low due to unbalanced investments in the hospitals that are operated without management approach because of political concerns. Since people who are under the coverage of different social security institutions such as Pension Fund, Social Insurance Institution (SSK), BAĞ-KUR (Social Security Organization for Self-Employed) get services from certain hospital groups, this situation increases the unproductiveness. Centralized structure of the MoH and SSK hospitals; irrational and inflexible management of equipment and personnel are important factors in this increased unproductiveness. The study we have initiated as of 1 July in 6 provinces has been successfully carried out and our citizens under the coverage of SSK can get services from the organizations and institutions of our Ministry.

In the near future, this implementation, which we will expand throughout our country, both increased the attitudes of enjoying primary health care services and prevented the accumulation in SSK hospitals.

In spite of being frequently mentioned in the health services, the concept of “quality” seems to have an open-ended meaning. It is necessary to expand this concept by making it to be understood correctly, to train qualified specialists and to employ them in the sector. Approaches based on measuring the outcomes regarding how much do health services, especially medical service quality, increase the health status of patients are too few. Although important advances have been achieved regarding the standards that health services suppliers have to adapt during the establishment stage, concrete steps could not be taken in measuring the outcomes of services and service process. In connection to this situation, concept conflict still continues related to licensing and accreditation.

#### **8.1.4. Financing of the Health Services**

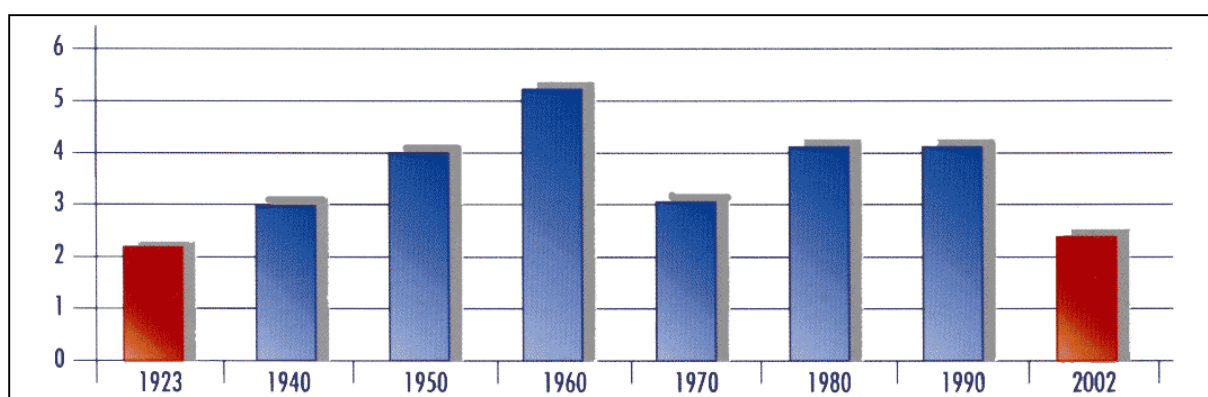
There are two main models in the financing of health services. One of them is completely financing from the public resources and the other is financing from those who demand the service. Turkey has a mixed structure between these two points. Health expenditures have three main sources in Turkey: state budget, social security institutions and personal expenses of the individuals. Since, there is no “national health account system” which provides recording and monitoring of the health accounts periodically in our country, it can not be possible to reach the accurate information in this subject. Main findings regarding the form and situation of the health financing are as below:

- Sources allocated for health in Turkey are less than OECD Countries in terms of proportion.
- These sources are used unfruitful as a result of lack of coordination.
- There is not a general health insurance covering all individuals of our country and the current insurance institutions have very different systems.
- The number of currently insured people has not been known exactly. As a result of the mistakes in calculating the number of insured people, wrong information has been obtained and this situation makes it difficult to calculate the health expenditure per person.

- Personal payments of the individuals have not been known exactly. However, it is estimated that the rate of this amount is higher than all OECD Countries, even reaching about 50 %.
- Inability to calculate the health service expenditures and to identify the payment from pocket exactly prevents making projection for the future and planning process.

Since the formation of public financing which constitutes the most important part in health financing of our country as different from the developed countries, is complex and uncontrolled; this situation increases the burden on the budget indirectly. On the other hand, it cannot be provided for health expenditures to take portion from the Gross National Product. In other words, health financing and services in Turkey have been loaded to the state in a large scale (Figure 23).

**Figure 23.** The proportion of the budget of the MoH to the budget of the state (%)



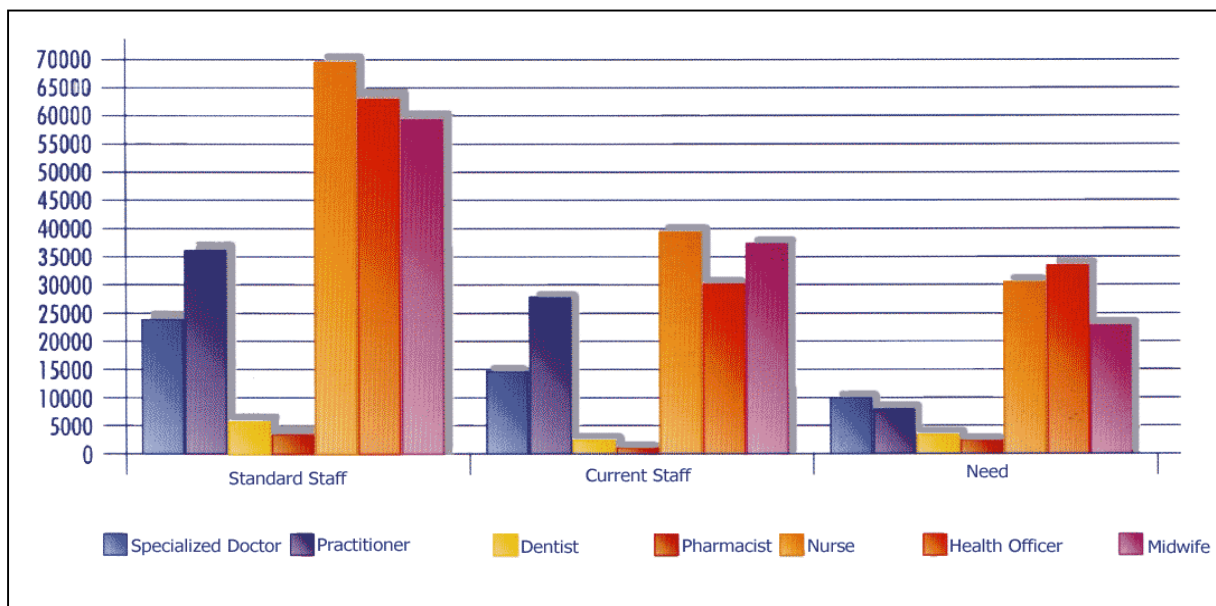
State, while financing the health in a large scale in one hand, in other hand tries to deliver the services. State, indirectly, conveys much more than the expected source to this sector. Use of these sources cannot be controlled due to the complex structure and management of the sector and the need for source has increased. It has been tried for the increased needs to be covered from the budget that remains constantly deficit.

### 8.1.5. Human Resources

Quantitative deficiencies of human resource in the health sector, imbalances in the expansion of personnel throughout the country and quality problems are among the main problems. It has been tried to provide the balanced expansion of practitioners through obligatory service practices; however, it failed as the other practices having the expression of “obligatory” in it. Among the health workers between practitioner/nurse and specialist practitioner/general practitioner, there are imbalances in the rates against nurses and general practitioners (Figure 24). Planning, training and utilization of human resources have been carried out by different institutions. Planning has been performed by State Planning Organization (SPO), training has been performed by universities and employment has been performed by the MoH and Social Security Organization. Since there is no effective coordination between these institutions, problems arise.



**Figure 24.** Numerical distribution of the health personnel



Rapid increase in the number of medicine faculties during the last ten years, insufficient infrastructure and limited practical training facilities lead serious concern regarding the quality of medicine training. Problems arise from the situation that graduates of occupational health high schools and nurses graduated from a two-year university program and nurses with B.Sc. Degree are in the same system and discussions carry on regarding the need for the “training of nurses to be at the university level”. Since, occupational definition of many profession groups who graduated from our schools training non-practitioner health profession staff does not take part in the laws, these qualified personnel can not be utilized in the public sector adequately.

The fact that health and operational management are not separated difficulties in finding the qualified directors and deficiencies in training of directors weaken the system. Developing the health policy, health management based on population, directors equipped with adequate information and skill related to hospital management and the training programs to train them are limited in terms of quantity and quality.

There are inconveniences since the health personnel are at the state officer status. The first inconvenience is the practice of fixed wage between personnel regardless of province, region differences. Moreover, interventions from the headquarters decrease the working safety. Problems increase when this situation is combined with the intensity of political influences.

### 8.1.6. Information Systems

MoH produces statistics together with its own institutions instead of providing information to whole sector. Different units collect different data in line with its own needs, and this data is conveyed to the MoH through Provincial Health Directorate. Data has been collected by the related unit; compiled and published as an Annual Statistics by the Council of Research, Planning and Coordination Board. However, this data has not been converted to the information and could not be used for the purpose of management. Statistical outcomes have been examined in terms of reliability since adequate control could not be provided in collection and flow of the data. This examination and raised distrust prevent the data to be used in the decision mechanisms.

Health registrations of individuals remain at the level of polyclinic card in most places and unsystematically registered files in the hospitals have sometimes been lost in the archives. In fact, it cannot be possible to understand the content of the found files. There is not an integrated system in which health registrations of individuals will be recorded and a disease registration and notification structure that will analyze the epidemiological data could not be established completely.

The fragmented structure of Turkish health system, disorder in the health registration system and the efforts of each institution to establish its own system has led a complex structure. In short, there is not a medical registration system in which the health registrations of individuals are recorded regularly and continuously starting from the primary health care.

Electronic hospital information systems, established in line with the technological developments emerged, have a structure in which accountancy registration is made mostly. In most of these programs, an automation approach does not exist which provides the stock follow-up, material management and financial analyses. Hospital information systems, in which patients are registered, almost do not exist. Behavioral change of hospital staff regarding data keeping in the programs having this property has not also been provided. In addition to these, owing to the centralist attitude of our Ministry, in some of our hospitals, electronic register systems have not been established.

Although a definite standard structure in hospital information systems on finance, accountancy and invoicing exist, main standards for medical patient registration have not been developed and different implementations do not allow an integrated data analysis. To date, the use of information systems have completely stayed at the stage of registration, collecting and storing and for this reason, benefits such as transformation of data into information, making analysis of it, use of information and support of it to the management which are essential functions of information systems have not been provided. This situation turns information systems into a work burden.

The most important problems in health information systems are the difficulty in analysis of needs and change of needs in time. Thus, information system can turn into an old-technology in a short time even before the completion of the project.

Establish the information systems are not enough by its own but it is also necessary to maintain them in a working manner. For this reason, trained health staff and technical staff are required. However, rapid change in staff, inability to train the new staff creates serious problems.

### **8.1.7. Drug Policy**

Challenges of nonexistence of a national medicine policy with determined borders reveal itself in this field. Although implementations to protect the administrative structure and economy of each country have been projected in the acquisitions of European Union, it is necessary to activate certain standards.

Scientists, commissioned in the commissions of medicine inspection and license, have worked in a voluntarily based manner. This situation reduces the dynamism of commissions, and implementations, which should be carried, out very actively and rapidly remain delayed.

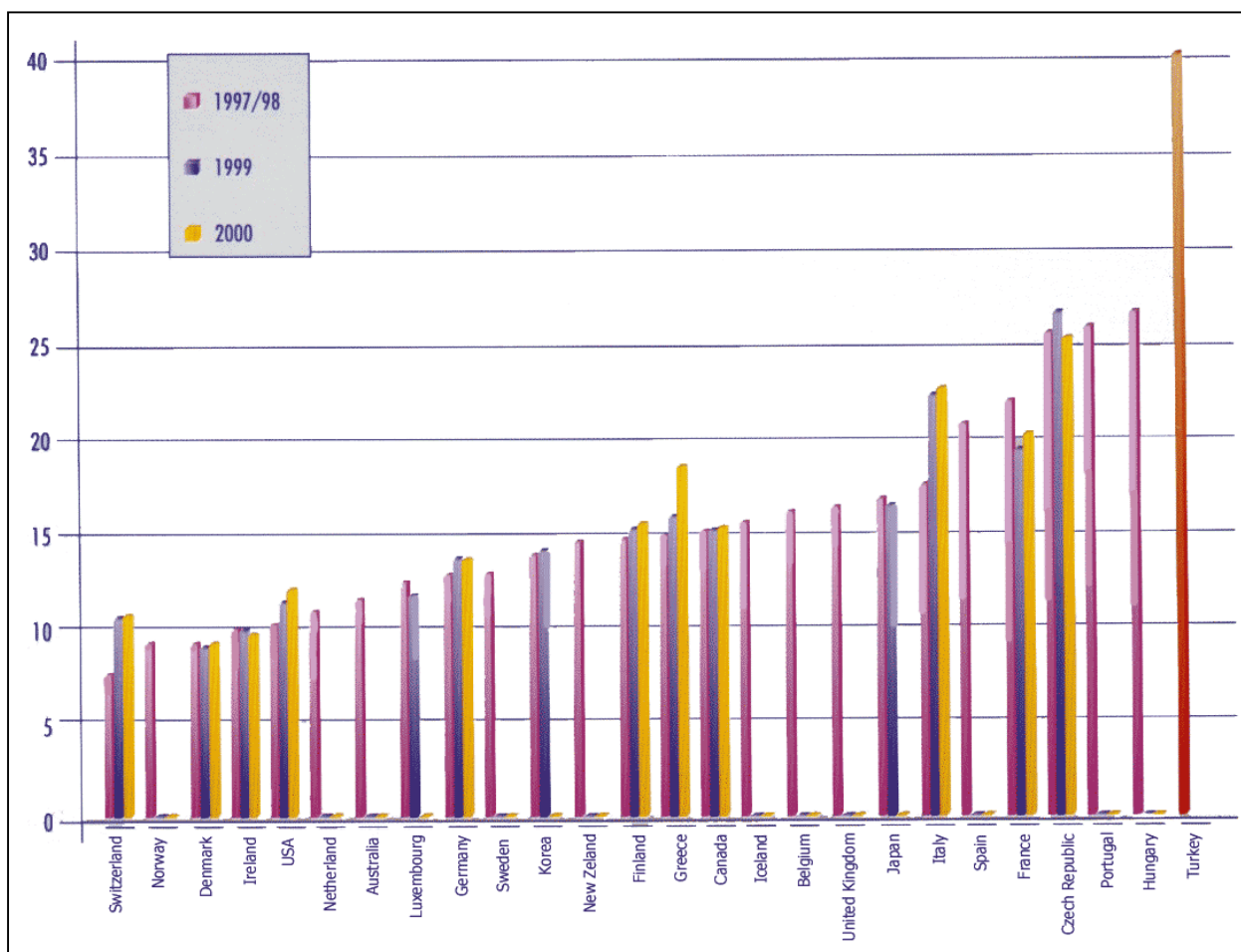
Problems, related to drugs, which is an important component of health sector, is not limited with this. Besides the licensing of drugs, production, pricing, selling, exportation, introduction, control, rational use, activities of research-development, intellectual property rights of them, the burden that the increase in drug expenses bring to the government budget and social security institutions are among the current problems. Recently, although social security institutions such as Pension



Fund, Social Insurance Institution and Social Security Institution for Self-Employed, have carried out effective regulations on this matter, more rational solutions are required.

When compared with developed countries, although drug consumption does not seem very high at the first glimpse, its share in health expenditures is twice more. There are differences among social security institutions and drug expenses in general health expenditures reaches to 40% (Figure 25). As can be understood from these, health sector with all its areas has serious problems. These problems have become more serious by overlapping and have complicated and serious bottlenecks have occurred.

**Figure 25.** The proportion of drug expenditures within the health expenditures in the OECD countries



### 8.1.8. Current Structure of the MoH

Responsibilities of the MoH in Turkish Health System are as follows:

- To protect individual and public health in order to provide the continuation of physically, psychologically and socially well-being of everybody's lives, for this purpose, to make plans and programs covering the country, implement them and make them to be implemented, to take all the measures related to health, to make the necessary organizations.

- To give preventive services by fighting against communicable, epidemic and social diseases, to give curative services by treating the ill person and to give rehabilitative services by bringing services to elderly and disabled people.
- To realize services regarding the protection of mother and child health and family planning.
- To control and inspect the production and consumption of medicine, drugs and psychotropic substances at every stage, to make regulations regarding the opening and working of production and distribution places of pharmaceuticals, medical substances and ready-made medicine and to inspect them.
- To produce vaccine, serum, blood products and to make them produced and import them in case of need.
- To carry out the control services of food and food production places in terms of health.
- To take necessary measures related to environmental health in coordination with the local administrations and other related institutions.
- To take preventive health measures at the land border gates, seaports and airports against communicable, epidemic human diseases.
- To carry out the control services of cancer, tuberculosis and malaria, to provide the coordination and inspection studies of organizations and institutions giving service in this field.

The MoH has established organizations and institutions in order to carry out its responsibilities mentioned above and have realized a widespread organization throughout the country. Operating, investment and human resources of these organizations have been aimed to be carried out by central planning and inspection. It already has certain vertical structural system for primary and secondary health services. Malaria Control Department to fight against malaria, Tuberculosis Control Department to fight against tuberculosis, General Directorate of Mother Child Health and Family Planning to reduce mortality rates of mother and child has been established.

This structure in the control and fight against diseases cannot be ignored; however, nowadays-contemporary approach is integrated health services. Working with separate staff, separate building, separate vehicle on separate issues and inability to give integrated health services have led wasting of human and financial resources and this situation prevents to give better services with the available facilities.

While the Headquarters has been designed to carry out these services, it turned into a stable structure, which is formed by low efficient human resources and overlapped task and responsibility areas. Staff appointments and transfers throughout the country are the main issues hindering the operating of the Headquarters. While intensive efforts have been made in the provision of finance, investment and human resources of the health institutions and organizations, the continuation of these institutions has been provided, namely, the health services have been provided by the Ministry. On the other hand, even indirectly, it turns into a position that it finances the services by the Green Card practices. When tasks of identifying and inspecting the standards of the service are taken into account, conflicting responsibility areas are observed. For this reason, a balanced investment, a good quality service and a continuous, dynamic inspection do not exist.

Health institutions of Social Insurance Institution, which is in the second main health services provider, experience this chaos more than the others and have more disadvantages.

The MoH, whose main duty is to protect health of individuals and public and for this purpose to make plans, programs covering the country, could not respond the expectations of the public. The service capacity of the Ministry has not been sufficient in terms of making policy, identifying

the priorities of health sector, determining the service standards, focusing on the issues of accreditation and inspection of institutions.

## 8.2. Health Transformation Program in Turkey

### 8.2.1. Why is Health Transformation Program?

There have been a number of efforts and projects of MoH produced with national and international partnership until now and these projects have been called as “reform”. We know that the Ministry has worked upon many projects, which aim the same goal. The reason of why we don’t talk about a reform today is because we are aware of the fact that we don’t produce a new point of view in the field of health. As the MoH, we should expand the current inherited experience of the civilized world. The public, however, has lost its confidence towards these reforms because similar reform efforts have been unfruitful until now. On the other hand, it is not very realistic to move into a completely new system, abandoning the current system all at once.

In order to achieve the desirable change, it is necessary to alter the existing structure into a planned target without harming the existing one. We are determined to realize the aforementioned changes. Therefore, we have launched a set of actions in which all the involving parties will be able to get responsibility in order to blaze up the ambition of the public, which has already turned into dismay. We call this as a “Transformation Program”.

### 8.2.2. Objectives and Targets

The objectives of the Health Transformation Program are

- to organize
- to provide financing and
- to deliver

The health services in an *effective, productive and equal way*.

**Efficiency** means the aim of improving the health level of our public through effective policies. The main target in the delivery of health service must be the prevention of people from the diseases instead of the treatment of the patient. Attaining this objective will be possible with the advances in the epidemiological indicators. A decrease in the maternal and child mortality and morbidity ratios and an increase in the life expectancy at birth will be the most concrete proofs of the above-mentioned objectives.

**Productivity** is the proper use of the resources is by reducing the cost and producing more services with the same resources. Distribution of the human resources, management of materials, rational drug use, health administration and preventive medicine practices should be evaluated under the framework of this goal. Involvement of all sectoral resources of the country in the system and achievement of integration will enhance productivity.

**Equity** is the achievement of the access of all citizens in Turkey to health services and their contribution to the finance of the services on the extent of their financial power. The scope of equity includes decreasing the gaps concerning access to health services, and health indicators among different social groups, between rural and urban areas and between east and west.

### 8.2.3. Main Principles

The principles of the Health Transformation Program are as follows:

- **Human centrism:** This principle means that the individual citizen should get maximum benefit from the system and the individual's need, demand and hope should be central in the planning of the system and in the delivery of service. The individual should be addressed in the framework of 'family health' concept according to the fact that the health is produced in the atmosphere of family.
- **Sustainability:** It signifies the harmonization of the new system with the conditions and resources of our country and the continuity of the system by renewing itself.
- **Continuous quality improvement:** It signifies the formation of a feed back system in which the flaws or insufficiencies in the delivery of the services are detected and amended in the best way possible so that the system always reviews itself.
- **Participation:** Obtaining the opinions and recommendations of all stakeholders and the formation of platforms, which will enable a constructive discussion environment during the development, and implementation of the system means participation. Furthermore, this principle aims at involving all the components of the health sector into the scope of the system and the achievement of resource unity in practice.
- **Reconciliation:** Reconciliation is the lookout in reaching the common points by taking into consideration the interests of different units of the sector as a requirement of democratic governance. Instead of an implementation based on the conflict of the interest, the achievement of unity in methods, standards and control mechanisms and the commitment of the stakeholders to them are aimed.
- **Volunteerism:** It is the method that enables acting of all units in the system towards the planned objectives without making any distinction between service suppliers and service demanders and between individuals and institution. It is essential that service supplier and service demander participate in the system voluntarily and not compulsorily in line with the encouraging measures.
- **Division of Power:** It means the division of powers providing the finance of health services, making plans, undertaking control and producing service. In this way, there won't be any conflicts of interest and more productive and more qualified services will be delivered.
- **Decentralization:** The institutions should be recovered from the clumsy structure. Parallel to the changing conditions and contemporary vision, self-management is planned. Therefore, autonomous companies in terms of administration and financing will have rapid decision mechanisms and will use the resources productively.
- **Competition in service:** It signifies the transfer of the delivery of health service from the monopoly to the competitive different service deliveries appropriate for certain standards. Thus, an environment, which encourages towards continuous quality development and decreasing the cost, will be established.

During the achievement of the following objectives, Health Transformation Program will take into consideration the 'Health for All in 20<sup>th</sup> Century' policy of the World Health Organization, "Accession Partnership" document prepared by the European Union, the need for harmonization

of Turkish health legislation with European Union health legislation in line with the "National Program" for Turkey and other international experience

### **8.3. General framework of Health Transformation Program**

Health Transformation Program consists of 8 components, which have been formed to cover the sector with all its dimensions. Each component is matched with other component and covers the solutions appropriate for the program.

It may not be possible for the elements in health system to achieve 'perfection' which they have themselves defined in terms of the completeness of the system. In this situation, we have to produce the most suitable solutions that will respond to the important and priority needs in line with the resources and facilities of our country. Nevertheless, it is important to give service units in the system a chance to unrestricted movement to achieve perfection. That is to say, service components must act in a free way that will contribute to the system.

Health Transformation Program is prepared with the understanding of these prospects. When each piece that composes the program is addressed one by one, it may be possible for every piece to define and form more developed piece than itself. Then the difficulty of implementation of the program as a whole can be seen. We even know that the anxiety of achievement of perfection in a single piece has increased our failure in the past.

Various groups in the health sector may have different opinions on the components of Health Transformation Program. At this point, we hope to evaluate the impact of different opinions on each piece upon the whole and to make comments and provide advice only after then. Within this framework, we welcome the comments within the holistic view of the program that won't harm the completeness but maintain the objectives and principles of the program.

### **8.4. Components of Health Transformation Program**

#### **8.4.1. The MoH as the planner and controller**

The MoH in the vision of Health Transformation Program is in the position to develop policies, define standards, and make control and steering efforts in order to enable appropriate use of resources allocated for health, in an effective, productive and equal way. As a result of this understanding, re-construction of the associated institutions of the MoH in the light of self-management principles will be achieved and the Ministry will be positioned as a strategic institution, which makes planning. Therefore, the MoH, as stated in the Turkish Constitution will carry out the task of 'central planning' of the health sector.

In order to attain this target in an organizational model removing the vertical structure of the MoH and giving priority to the integrated health service, it is necessary:

- To review its structure in order to define its new mission, objectives and tasks in the fields of strategic planning, human resource policies, personnel management, distribution of resources, and material management,
- To re-organize its structure in order to support the transfer of financial and administrative control into rural areas while undertaking more active leadership in the health sector,
- To redefine its mission, sector policies, organizational structure, functions at central and rural level, to modernize and promote the health system and services,

- To develop a management model that will encourage central and rural authorities to take responsibility in the management and administration of health sector with its management bodies, its roles, policies and methods,
- To develop, implement and control education programs at graduate and postgraduate levels in order to train personnel that will be able to take active role in the planning of health education in various levels of health administration system.

During the achievement of its re-organization, planning and delivery of health services, the MoH will give priority to preventive services and strengthen primary health services. The main task and responsibility of the MoH is to prepare the policy and control the system. Quality control and training of the consumers are some of the fields on which the MoH should concentrate. From now on the MoH should focus on the decision of priorities for health sector, monitoring and control of quality, accreditation of institutions and giving license to experts, arrangement and control of insurance, management of public health functions and surveillance of communicable diseases.

#### **8.4.2. General health insurance gathering everybody under a single umbrella**

An insurance model in which the citizens will contribute according to their financial capacity and will use the services on the extent of their needs, which is compatible with the justice objective of the Health Transformation Program, is essential. This approach is one of the requirements of the social state and is clearly stated in Article 56 of our Constitution. Today, SSK (Social Insurance Institution), BAĞ-KUR (Social Security Organization for Self-Employed) and ES (Social Security Organization for Civil Servants) are our institutions working for this goal. Although these institutions are quite far from the professional insurance perspective because of irrational arrangements in which health and retirement insurance are not separate, and the gaps are compensated from the budget; an important part of the society is covered by these insurance institutes. These institutions have not reached standard conformity because they produce or purchase services at different levels and ways. Moreover, there are a considerable number of people who doesn't have any insurance at all. Some of these people are covered by the Green Card and some of them are covered by private health insurance companies. Yet, the problems are known by everybody.

There is a need for mandatory health insurance system that covers the whole society. This will not only improve the quality of services, but also deliver primary health care service to every patient at an equal level and eliminate the financial relations between the patient and the doctor. Such an insurance system will aim at decreasing the cost of health expenses and will encourage and stipulate preventive medicine practices. Control and sanctions of General Health Insurance Institution will decrease squandering of medicines and medical materials, which increasingly constitute high ratios in the health expenditures. Price control and financing of health services should be covered from one center and the patient-doctor relation should not be based on money.

Within the scope of Health Transformation Program, the efforts are carried out on the following points in order to set up General Health Insurance that will take all our community under guarantee.

- A level of poverty will be defined in order to determine the ones who cannot finance health expenses. An evaluation system to determine the financing capacity of the citizens will be established.
- A source will be provided with public resources partially or fully in order to refund the premium of people who don't have financial capacity.

- For the short term, a system for collecting the premium of people who don't have social insurance will be set up.
- Health premium pool will be separated from the other branches of social security and its own balances will be set up.
- Main guarantee package in the health services will be defined.
- A structure to will be formed to define the need of health service at provincial and if necessary, at district level. Based on demographic and epidemiological characteristics.
- In accordance with the defined needs, mechanisms will be established to make contracts in order to purchase service from primary health institutions and hospitals.
- A structure to define whether services are appropriate for the determined qualities will be formed through making 'appropriateness and convenience' controls.

In addition to these, 'National Health Budget' will be set up to compensate for the lack of knowledge on health financing in Turkey. Therefore, it will be possible to pursue how much resource has been spent annually or where the resource has been used in the field of health.

In addition to setting up General Health Insurance system, establishment of private health insurance will be supported and the existent private health insurance within the system will be provided with a complementary role. Further to the guarantee package included by Mandatory General Health Insurance, the people that demand service can be covered under private insurance and can demand their services through these companies. Thus, private insurance will be encouraged.

Retirement insurance and health insurance in the existing social security institutions will be separated and health insurance tasks will be gathered under a single umbrella.

Significant points on General Health Insurance are as follows:

- Each Turkish citizen will be covered and a single number will be given to every citizen. MERNIS number system will be an economic approach.
- Health insurance will be separated from other insurance systems.
- Health institutions will not check whether the premium is paid or not, rather insurance institutions will be responsible for the payment of premiums.
- Payback will be carried out to the service suppliers on time and regularly.

These efforts are launched with the coordination of the Ministry of Labor and Social Security.

### **8.4.3. Widespread, easy accessible and friendly health service system**

It is not possible to transfer any program in any country into our country and it is also not true to establish a homogenous system all across the country because of geographical characteristics. In Turkey every region has different problems waiting for solutions. There are tiny settlements in the middle of a field or at the top of a mountain with only a few houses, some villages, which can be reached only in some seasons because of climate conditions and towns, more crowded than some of the large city centers. We have to take into account these characteristics when planning the delivery of health services that our citizens deserve, commensurate with modern norms.

Health home and health house system model established with the law for The Socialization of Health Services numbered 224 and dated 1961 is one of the modern and developed systems in our time. However, it is difficult to say that the objective aimed with this law has been achieved or implemented adequately.

Suburban areas that develop and integrate with the cities as a result of increase in population and immigration from village to city and enormous gaps in income distribution show us that it is mandatory to adapt the past into present instead of accepting the past without any change. Today our task is to adapt the logical structure of this system that is appropriate for socio-economic, demographical and epidemiological structure of 1960's to the changing conditions of Turkey in 21st century.

In accordance with this target, we consider that it is necessary to create a competitive service environment covering all dynamics willing to deliver health service. Private initiatives, especially foundations and associations, are supposed to be in the service network. This understanding will entail the use of country resources effectively and pave the way for an easily accessible service.

Any programme that doesn't aim at reducing health inequalities will be meaningless for this country. The inequality between east and west has increased when compared to the inequality between rural and urban areas. This situation is not too easy to describe with economic reasons. In order to solve these inequalities, we won't reduce the public health facilities equally in each area and pass them into the private sector. On the contrary, developing public facilities where necessary, increasing the quality of these facilities and competition with private sector are aimed.

### **Strengthened Primary Health Care Services**

In the field of primary health care, there is not a well-organized health system approach devoted to performance. The primary health care should reach to a point where it will compete with and control the other service levels. The starting point of these transformations in this regard is to improve the relative conditions of individuals in general and patients and health professionals in particular.

As well as supporting the preventive health services in rural areas undertaken by the health homes, these services will be rendered in the public health centers in towns and cities in a common, organizational and strict way. Other service units in health sector will be integrated to this institutional structure.

Sharing of the responsibility in the primary health services and the approach to individual with 'one window' system are the factors that promote success. Therefore, preventive services towards individual and primary diagnosis and treatment services are aimed to be carried out by the physician chosen by the individual. Physician and family members will make up closer and individual relations and physician will play an important role in health education, prevention of diseases and promoting of health. Preventive dental practices will be involved in primary health services. Keeping the health records of individuals by primary care physicians will contribute significantly to the control, follow-up and risk analysis.

We believe that a discussion on the terms of 'family physician' and 'general practitioner' is unnecessary. The number of family physicians in our country is very few. To start the practice after a short-term training to existing general practitioners and supporting them with continuous trainings within the practice period will be the most practical solution. Such a start will enable general practitioners who have already lost their esteem, to gain credit. It is easier to integrate the physicians who have taken specialization training into the system.

The infrastructure of health associations in rural areas will form a basis for such practice. Private physician practice and private health centers will assume responsibility in the cities where the infrastructure is insufficient.

### **Effective and Staged Referral Chain**

The prerequisite for establishing an effective referral system is to obtain primary service from the doctor that the patient chooses and trusts. This depends on strengthening of the primary health care services as mentioned above and the quality of the service delivered by the family



physician. In short, the basis of the system is the family practitioner practice aiming at satisfaction of the patient.

In order to reach to this target, planning and encouragement is essential. We know that most of the problems of the patients can be solved at primary health services whereas hospital outpatient clinics are full of such patients. Rendering the system more effective will decrease both unnecessary crowds in the hospitals and the waste of health expenses and also increase the quality of primary health care services. Referral system is not just a single direction way. Many patients transferred to secondary or third level institutions for diagnosis or treatment are sent back to the institutions at lower levels for the follow-up, monitoring and further care. Feedback of the consultation service at the higher levels to the primary care physician who is responsible for keeping the registry of the patient will strengthen the medical registration system. In this way, it will be possible for physicians to pursue the individuals and to deliver health service more quickly and at a lower cost without making a concession from the quality.

Nobody can force the patients to get into the referral chain if they do not want to be included in. If the patient prefers not to enter the referral chain and applies to the hospital directly, then the additional cost the patient is going to pay won't be a practice against social state approach and patient rights.

### **Health Enterprises Having Financial and Administrative Autonomy**

All hospitals in our country can deliver services to all citizens if they make contracts with insurance institutions and fulfill the referral system principles strictly. During the delivery of these services, the hospitals will be checked whether the quality of the services and prices are in accordance with the principles of the contract. Instead of institutions, individuals will be supported in the financing of health. The institutions delivering this service will take share according to the level of their service.

Public hospitals should be released of their current central depended structure in order to adapt to the changing structure, and be converted into more effective administrations in order to compete with the other actors of the sector. Autonomy will be provided to all hospitals of the MoH and Social Insurance Institution (SSK) in terms of both financing and administration and also for the procurement of necessary input for producing and managing health services. This system will enhance the productivity of the hospitals. All public health institutions will be autonomous institutions under the control of the MoH. At the first step, unification of service delivery will be provided in these hospitals and at the second step, separate autonomy will be provided to each establishment. It is not obligatory for health institutions to depend on state directly. Municipalities, private companies, foundations, provincial authorities, universities will be able to set up health institutions. It will be requested from public health institutions to finance themselves and they will not be allowed to be expensive institutions or make concessions from the quality of service for the sake of profit.

As a natural result of this structure, every hospital will be responsible for its own management decisions, service quality and productivity. Considering the demographic distribution that is not homogenous and the existence of deprivation areas, health institutions, which are not productive economically, will be supported for the continuity and quality of service. At the first hand, health institutions will be organized as non-profit establishments and will give priority to necessity and productivity in every investment and planning. Consumer oriented organization structure in which local dynamics will take a role in decision mechanisms will be initiated.

We have to move into performance management from nominated stationary management. Performance indicators will be determined and payment systems based on performance will be developed.

It is necessary to create opportunities for organizations, which provide outpatient treatment of people who actually don't need in-patient treatment. This will save cost. Developed policlinics

and laboratories, outpatient intervention and daily surgery centers are included in secondary health services.

Treatment for the handicapped and necessary rehabilitation services after treatment should be rendered in specialized health centers that are independent from but in cooperation with curative services. Rehabilitation centers that will be set up for this purpose will be encouraged.

### **Health Manpower Equipped with Knowledge and Competence and Working with High Motivation**

Completing transformation with success depends on the availability of qualified and necessary human resources. In the framework of program, tasks and responsibilities of health professionals will be determined in line with the harmonization process with European Union. Within this framework, tasks and responsibilities of health profession staffs working with the patients directly will be described.

A new education program will be prepared for the specialization of family physicians who will work in the primary care area. This program will be run in cooperation with the universities in order to educate the physicians before graduation according to the needs of our country.

Our main tasks are to make our society aware of the dental health, to enable training and to provide a structure aimed at treatment with preventive medicine efforts. Within the primary health services, all dentists will be available for the service and specialized dentists will give the second and third level dental care.

Arrangements for improving nursing training to international level and for improving nursing service as a scientific discipline towards patient care will be made. 'Family health nursing' will be developed to make 'family health' concept that form the core of Health Transformation Program operational and this service will be within the primary health care.

Attaining the objectives of Health Transformation Program is possible with having effective management staff. Employment of physicians in management administration results in both inexperienced administration and also useless investment to physician. Attention and priority will be given to planning, research and training facilities to strengthen the development of health system management as an independent discipline from physician.

Health Transformation Program will enable the balanced distribution of health professionals across the country by means of encouraging voluntary policies. As a result of this approach, compulsory service will be abolished. Measures will be taken in order to encourage more keen and more effective efforts in public institutions.

Local governments, non-governmental organizations and labor associations should be involved in the system effectively. Decentralized human resource planning and management skill will be formed and participation of health administrations into human resource planning effectively will be provided.

### **Education and Science Institutions Supporting the System**

It is clear that people having knowledge and skill of public health, especially who have sound knowledge on health policy, health management, health economy and health planning are needed in order to realize the transformation and to maintain success permanently. There is a lack of institutions, which make sectoral analysis, plan researches, consult the governments and offer postgraduate training to people that the health sector needs.

Non-existence of such an institution for the training of health professionals that will use the developed techniques in the field of public health and implement multidisciplinary approach and planning of arrangements is a serious deficiency. Public health departments in our universities

are units intended for public health practices formed within medical faculties. However, public health is a science that covers different disciplines including public health physician. To establish such an institution in our country is among the priority targets of Health Transformation Program.

Improving Refik Saydam Hygiene School, which was established after the foundation of our Republic but survives only on paper, into a modern institution according to the needs of our century is our loyal debt.

Medicine education will not be considered as a preparatory education for specialization but rather will aim to equip the physicians with the knowledge and skill, which they will need to fulfill the tasks envisioned by the Health Transformation Program. Specialization education in the medicine education program should be developed and controlled with the participation of the union organizations. An institutional structure that will reorganize education hospitals, plan the current specialized education in medicine, make standardization and control will be established. These practices will be reunited to an academic structure under Health Academy or Health Specialization Institution.

### **Quality and Accreditation for Qualified and Effective Health Services**

Acceptability and standard of service in health sector is as important as the medical consumption equipment used and the quality of the diagnosis and treatment devices. Suitability of health units to certain standards is not enough. Setting up a mechanism in which the service delivery process and obtained outputs are evaluated is necessary. Although the subject of quality has been ignored before, both service providers and financial resource providers have begun to pay attention to this subject.

Health Transformation Program gives priority to a need, which has not taken place in the agenda of our country so far. 'National Quality and Accreditation Institution' which is going to be established will organize the authorization, certification and accreditation of services, as it must be. Establishing this institution in an autonomous structure and with the management of the involving stakeholders is aimed. The institution will develop systems for the measurement of health outcomes and these measures will be used to formulate performance indicators for health service supplier. Thus, database including the performance of service supplier will be formed and the determination of applicable health indicators will be provided through the definition of good practices.

Furthermore, the protection of ethical values is the fundamental principle in the delivery of health services. This can be achieved through the establishment of an ethic board, which has a strong power of sanction. This board should be formed with the contribution of various representatives and comprehensive authority should be given.

### **Institutional Structure in the Management of Rational Medicine and Equipment**

There is a need for an institutional establishment that will be able to catch up with the international norms on issues of standardization, authorization and rational use of medicines, equipment and medical devices. The organization of these institutions autonomously and independently from political anxiety and sanctions will be implemented. These specialized institutions may work separately or together with each other.

#### ***National Institution of Medicine***

Expenses related to medicines and pharmaceuticals products in Turkey are very high. Because of the current policies of the social security institutions, great part of the population is sensible to the prices of drugs. We know that the increase in medicine prices doesn't depend on a scientific basis. Within the framework of Health Transformation Programme, a platform will be formed where dialog and reconciled approaches of the involving stakeholders will be possible on a scientific basis in order to solve the problems relating to medicines.

'National Institution of Medicine' will be responsible for the arrangement and support for the decision policies relating to medicines and the issues on authorization, production, and marketing of medicines and management of research and development activities. This institution will work independently, clear from every kind of effects and will execute the tasks in accordance with national policies.

The process on the authorization of medicines will be more effective, transparent and rapid. There is a need for developing a method concerning the pricing of medicines that all stakeholders will reach agreement. International marketing of medicines produced in Turkey and the investment of Turkish drug industry abroad are among the important and priority topics that will be addressed within the scope of Health Transformation Programme. Addressing protection of intellectual property rights on medicines within the framework of our national interests, our international law and our commitments and reaching an agreement with the stakeholders on the basis of a dialog are our main objectives.

Directing the medicine purchase of public with the methods developed in the light of pharmacoepidemiology and pharmacoecconomy is our main principle. It is also necessary to direct medicine consumption on scientific criteria.

#### ***Institution of Medical Devices***

For the time being, medical devices and other medical supplies are imported to a great deal. External references on the issues of control, quality certificate and calibration are taken into consideration. Besides international references, determination of national standards and the arrangement of quality certificates will make domestic production easier. These efforts will increase the periodical calibration of medical devices, hence the safety and productivity of diagnosis and treatment.

Standardization and control of medical supplies and medical devices are very important. The establishment of Institution of Medical Devices will be designed as an institution focusing on the clinical engineering services in the hospitals and having authority on control, education and arrangement at national level. This institution will establish a knowledge data base, provide information on planning and purchase of medical devices, comparative evaluation of medical devices safety program, clinical engineering, and will advise on laws and arrangements in related fields. Rendering on-line and continuous training program or financing third persons with applicable researches are among the tasks of this institution.

Standardization of devices and medical supplies according to the international norms will increase the productivity of service. It prevents waste of time and material and leads to an increase in quality. It contributes to the economy by paving the way to international health service. The most important thing is that, it raises the level of the delivery of appropriate health service to the level of international standards.

Today, plastic and electronic industry infrastructure is very sophisticated in our country. These sectors should be encouraged and directed to the investments that will make production for medical technology. The manufacturing of products according to standards will render legislative aspects of manufacturing easier and will enable our country to become an exporting country and prevent waste of resources.

#### **Access to Effective Information at Decision Making Process: Health Information System**

We believe that health system policies and management decisions should be based on knowledge. The decisions not based on correct information result in undesirable outcomes. True information can be obtained by means of well-chosen, correct and well-analyzed data. There is a need for integrated health information system to enable harmonization among all components of Health Transformation Program. There is a need for vertical integration on the flow of information

and horizontal integration at the point of evaluation of service delivery and finance data in the institutions delivering health service.

We want to establish Health Information System to form health inventory, to keep medical records of individual, to enable flow of information among transfer steps and to collect data on primary health care. Keeping health records in a reliable and permanent way, improving of the productivity of services, pursuing where and how the resources are used is possible with the establishment and management of an effective system. Our approach is to construct a structure growing with modular structures as necessary, and decreases the user-service supplier relation significantly with the developing technologies.

Health information system will collect and process sufficient data which can be used for scientific research and studies on the determination of policies relating to health, deciding on the problems and priorities in the health sector, taking measures, planning of sector resources, tasks and investments, and evaluation of delivered health services.

This system will be run over the common data system, which is able to operate by using today's communication facilities. Transfer system will change into a more effective, more rapid and more reliable system. Furthermore, the adaptation of a special reference number such as MERNIS in all health databases will facilitate matching of data on insurance system with data concerning the use of health services. Using this number given to each Turkish citizen will give the chance to mutual match of data kept under different databases and check rapidly whether the patient is covered by any insurance or not and determine the people getting benefit from more than one insurance system.

The main points of the health insurance system must:

- Make standard data transfer from independent hardware of family physician, hospital and other component based on web technology.
- Access to sufficient and necessary information necessary for decision mechanisms from the center.
- Make epidemiological and demographic analysis on disease burden and health expenses.
- Support data collecting, evaluation of data under an institutional structure and establishment of feedback mechanisms in order to solve problems by using the technology. This will make service planning possible in accordance with the obtained data on health and delivery of health service at country level.
- Establish early warning systems on health related events with applications, which will support the National Surveillance system and provide integration with international systems.
- Create a chance to drug (medicine) control with drug provision system.
- Give opportunity to control the level of distribution in the delivery of health service.
- Should be based on the individual reference registration with MERNIS number.
- Match family physicians with their own patients and give authority to them.
- Be patient oriented and give opportunity to minimum service delivery by providing patient satisfaction such as 'electronic appointment'.

## **8.5. Implementation process of health transformation program**

We need to emphasize the integrated approach in each step taken for transformation. It is necessary to develop policies and programs valid for all actors of health system and to see the whole picture of the health sector together. The application of Health Transformation Program will be carried out in four phases with possible small changes relating to its each component.

**Conceptualism**

The first phase is 'conceptualism' phase. The document that has been prepared, which takes into account the targets of our governments and accumulation of past experiences is a draft document and the first product at this phase. Objectives, principles, development implementation processes concerning each component in this document will be produced in a conceptual manner and will be made clear and developed after discussion with national and international experts on the subject.

**Legitimization**

In parallel to conceptualism, the second phase is 'legitimization' process. Once conceptually clarified, necessary arrangements will be made in terms of legislation (such as law, regulation and cabinet minister decision).

**Controlled Local Practices**

It is known that implementation of the program as a package is far from the reality. At this phase, limited and controlled practices of some innovations and promotion within the framework of the program will be made before spreading it across Turkey. It is possible to address specific promotion practices in line with main principles not taking into account the conceptualism and legitimization phases. However, components of the program compose the subject of the phases. Thus, it will be possible to detect the caveats in the system and to take necessary measures.

**Spreading of Health Services across Turkey**

Fourth phase is transition to the implementation across Turkey. Naturally, it may not be necessary for each component to go through this phase. It is not necessary for all phases of each component to be carried out at the same time period. Some components may progress without waiting for the others, but some components need to wait for the completion of some others.

During the preparation and implementation process of Health Transformation Program, management will be transparent. All efforts will be available to the public at a special web site and there will be every kind of opinion in this site. Our goal is to find the common truth.

Within this process we strive to take the opinions of scientists, professional associations, trade unions, industrial institutions, business world, private sector health enterprisers, volunteer organizations, political parties, members of parliament and public and to find optimum solutions by considering these opinions.

We have to build up mechanisms to get maximum benefit from the knowledge and experience of the World Health Organization and other international institutions, experts and academicians in order to keep up with the developments in the world. Within this scope, we will perform an effective cooperation to use the resources from European Commission effectively and to achieve these projects.

Naturally, the efforts concerning the Health Transformation Program will not prevent or slow down the routine health practices of our government. On the other hand, attention will be paid to enable every application compatible with Health Transformation Program. Amendments in the current system will be made through various short and long term measures.

Every effort will be made to explain the studies of Health Transformation Program, and to give information to our public on this program and to take their support. We believe that such a great Transformation Program can be achieved with the support of the public.

Health Transformation Program is a comprehensive program taking into consideration all efforts that have been made so far and aiming at producing the most suitable solutions with democratic decision processes. The success of the program depends on fulfillment of everyone's commitment in the field of health. Our government will try to carry out its commitment with great

sensitivity and determination. National synergy that we will create in this field and the support and reliance of our public will carry us to success.

In conclusion, Health Transformation Program will deliver the health services in a qualified, effective, sustainable and equal way and will be a system that will assume an increase in income level based on the performance of health professionals. We want our public to receive the service it deserves.

We need to advance in our efforts carefully and attentively, thanks to our past experiences and knowledge. We will start a change and transformation process at once. All our need is people who are determined and hard working. These people exist and we will reach our goal.

### **Improvements implemented in health (2003)**

- 1- Promotion of the Health Investments:** Obstacles, in the front of the representatives of private sector, who wish to make investment in health, have been removed. Bureaucratic processes have been reduced to the minimum and have been made as an attraction center. Benefits of public and social aspects that the health sector should include have been protected carefully.
- 2- Saving in Health Expenditures:** Pricing application, depending on diagnosis, has been launched. From now on, invoices, including exaggerated analysis and treatment, depending on service, will not be accepted. Control units, examining all the invoices, sent by health institutions, have been established.
- 3- Public Staff's Benefiting from Private Health Institutions:** With the change made in regulations, civil servants have been enabled to be examined and treated in private health institutions. Thus, burden on state hospitals has been reduced without affording an extra cost and foundations of their taking service have been laid without causing public staff to lose time and workforce.

This will lead to a competitive environment together with the autonomization of state hospitals and will affect the quality of the service positively.

Patients are referred to the related specialization branch instead of hospital and freedom of hospital and doctor selection of patients has been made functional.

- 4- Increasing the Productivity of the Services:** With the regulations made, instead of purchasing medical equipment for public institutions which needs considerable investment, services with reasonable cost can be purchased from private sector which has this equipment. With the implementation of purchasing services which is the cheapest and the most practical way of offering service without forcing the limited public resources and experiencing the difficulties in the provision of trained personnel, queues on specific issues and lasting for months will be dissolved immediately.
- 5- Income Depending on Performance and Freedom of Doctor Selection:** The system for our successful health staff to receive additional payment from revolving fund according to their performance has been activated. This system has been prepared by placing the patient-centered satisfaction in the forefront together with the patients' freedom of selecting the doctor. The hard-working staffs who satisfy his patients will earn more. Initiated pilot implementation will continue by spreading throughout the year.
- 6- Organization of a Contemporary MoH:** Organization law of our Ministry and establishment laws of institutions such as Accreditation Institution, Institution of Medical Equipment and

Medicine, Health Academia, School of Public Health of our Ministry which are mentioned in the law, have been prepared and made ready to be referred to the parliament.

**7- Re-organization in Emergency Health Services:** 149 fully-equipped new ambulances have been distributed and all of the 112 Emergency Health ambulances have been adapted to the regulations. In cooperation with İstanbul Grand City Municipality, municipality's 20 ambulances together with their staff have been transferred to control and coordination our Ministry. Staff and station cooperation with the 1<sup>st</sup> Army Commandership and Municipalities of Bağcılar, Küçükçekmece, Bakırköy, Silivri, Sarıgazi has been provided. In addition, financial support from Traffic Foundation for the maintenance and repair of the ambulances has been provided.

#### **8- Giving Priority to Primary Health Care:**

- Within the framework of child health programs;  
Control program of Hemoglobinopathy, national neonatal surveillance program, maintenance, encouraging and supporting of breast-feeding, program of prevention of anemia of iron deficiency, elimination of measles and neonatal resuscitation program have been initiated.  
The goals of the neonatal resuscitation program are; the provision of standard and neonatal reanimation training to all health staff having roles in the birth process throughout the country and renewing these skills in certain periods. Thus, neonatal mortality that is high in our country can be reduced to low levels.
- Within the framework of maternal health programs;  
With United Nations and reproductive health program supported by European Union, training of undergraduates, in-service assistants and managers, improvement of indicators of population and development and establishment of a data bank has been aimed.
- Spreading primary health care services;  
Utilization of primary health care services has been tried to be increased through allowing the public staff to apply to the private polyclinics.

**9- Decentralized Management in Health:** Authorization transfer to lower ranks and the provinces has been carried out in order to get rid of the clumsy structure which has been brought together with the central management of institutions and to adapt the changing conditions without delay. Henceforth, pharmacy license and inspection operations are completely given to provinces. Also, licensing operations of private hospitals, private branch centers, medical centers and dialysis centers are about to be transferred to the provinces.

**10- Voluntary Service Instead of Obligatory Service:** Injustice in the distribution of health staff among regions will be abolished by the law proposal being discussed nowadays in the parliament and the abuse of public resources will be prevented. Fixed contractual health staff implementation will be initiated in our 26 provinces by this law. In addition, norm staff study ended in order to provide the implementation of staff employment in all health institutions and organizations under the control of our Ministry in accordance with the service requirements.

**11- Encouraging of Medicine Production and Export:** Bureaucratic operations have been reduced and style medicine production and export have been facilitated in order to encourage private sector to invest in the field of health. Intensive studies are going on in order to reduce the licensing period to a level acceptable by everybody.



- 12- Inspection of Dialysis Centers:** Regulations regarding the opening, operation, staff and service standards of these centers are at the publishing stage. Thus, progress will be provided on inspection, standards and education.
- 13- Green Card Organization:** Green card has been transformed into ration card with photocopy. Thus, unfair and inappropriate use will be prevented and extravagance in the use of medicine will end. People having Green Card will be re-evaluated and real holders of right will be identified.
- 14- Common Delivery of Health Services:** The protocol, prepared in order to enable the members of Social Security Organization for Self-Employed, Pension Fund, active civil servants, Green Card holders to use facilities, health manpower, medical and technological opportunities of all the health institutions and organizations belonging to the MoH and Social Insurance Institution, has come into force as of 1 July 2003 and has been implemented successfully in the provinces of Ankara, İstanbul, İzmir, Sivas, Rize and Yalova. Our aim is to spread this implementation throughout our country.
- 15- Health Inventory Study:** Studies of lying out of a health profile of our country with in situ identifications in 81 provinces have been completed in order to designate health investments with idle capacities, workforce, and medical equipment and to plan country resources correctly and appropriately.

We are sure that our country will attain a new and nice appearance in the health area with the addition of our studies, which we are planning to realize, to these ones and similar completed studies. We invite everybody to contribute and support the studies we are carrying out for our people's future.

## 9. CONCLUSION

As it is known there are many problems in health. Both present health status and problems are mentioned in the report. It is necessary to establish priorities regarding solution of these problems and improve effective interventions. Our approach on this issue should be public health approach i.e diseases/incidents frequently observed, fatal and caused disability are primarily public health problems. Possible interventions regarding health are as given below. As some intervention fields (especially on mother and child health care) are being handled in different projects and these are not mentioned in here due to not making repetition. When it is appropriate, these interventions will be included in a project comprehensively in January 2003 in the light of the subjects mentioned shortly in this report.

- **Health Management**

As it is known, management is a science and the managers should have the knowledge or talent for this management science. But as mentioned in detail within the report human resources are important in health sector. According to the survey results our managers start working as a manager without any knowledge or talent for management and learn all the related knowledge by living. This means professional management is not taking place in our system.

Besides this; the personnel starting to work in primary health care services, needs both acknowledgement about management and the place he will be on duty.

With the solution of these two problems it is believed that; the effectiveness and productivity in providing primary health care centers and health care provided in institutions depended upon Ministry of Health would increase and the health managing capacity of Health Managers would be strengthened.

For these objectives 'Management Education Program' and 'Adaptation Education Program' are important issues to work on.

- **Disaster Management**

Turkey is affected more or less from almost all disaster types. A severe earthquake has been occurred every 10-11 months. From 1925 till now more than 2 % of GDP have been spent in order to meet urgent damages caused by earthquakes.

Primarily children, elderly people and women are the most and badly affected part of the population in the course of disasters. The poor are influenced economically. Anyhow they are living in risky places (water course, slums, etc.) because of their economical status. They have serious problems regarding food, health and sheltering because they loose limited economical power after disasters. Such a project will decrease the negative conditions in welfare to the least from the point of vulnerable groups, besides affecting health directly.

Disaster management is a multidisciplinary subject and health staffs have serious tasks on this issue. Training of these people before disaster and providing intervention at the time of a disaster in fast and organized manner will reduce the physical and psychological losses. Forging disaster intervention core team and center in Ministry of Health will ensure fast and effective health care provision.

- **Development of Treatment and Diagnosis Guidelines for Patients**

As a developing Country, Turkey has no luxury or financial excess to have let irrationalities faced in prescribing habits, where the total expenditure on drugs is US\$ 4.321 billion which constitutes 33.6% of the total Health Budget and about 25% of this number is paid directly from the pocket and rest is paid by the public resources (National Health Accounts Study for year 2000).

To break this incorrect flow, from the starting days of year 2001 Rational Drug Use Program (RDUP) was one of the major activities of the *School of Public Health*. As an important part of RDUP “Standard Diagnosis & Treatment Guidelines for the Primary Health Care” was printed two times with different and modified editions in recent two years and delivered to each of the practitioners.

But the coin has the other side; it is obvious that none of the interventions progress to a definite success without population involvement. As the consumer in health sector, patients have also a great role in the irrational consumption of the drugs. They demand health and as they pay out of their pocket they also has the power to induce the irrationality. To interfere this side of the flow there should be a patient education process and the best way to achieve this is to develop guidelines addressing the patient population.

- **Case Management**

National Burden of Disease (NBD) & Cost Effectiveness Study, undertaken by School of Public Health will give us comprehensive and comparable information on the causes of burden for our society. It has also taken first steps towards quantifying the burden associated with a range of risk factors and health determinants. With the help of this data it is obvious that “case management” intervention will be most efficient way of training for patients. So that well informed people demand health services and interventions on time from the right places.

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## LIST OF ORGANIZATIONS, ABBREVIATIONS AND USEFUL WEBSITES

English	Turkish	Abbreviation	Website
Audit Office	<i>Sayıstay</i>		
Chief doctor	<i>başhekim</i>		
City	<i>şehir</i>		
Constitutional Court	<i>Anayasa Mahkemesi</i>		<a href="http://www.anayasa.gov.tr">www.anayasa.gov.tr</a>
Council of Higher Education	<i>Yüksek Öğrenim Kurumu</i>	YOK	<a href="http://www.yok.gov.tr">http://www.yok.gov.tr</a>
Council of Ministers	<i>Bakanlar Kurulu</i>		
Court of Appeal	<i>Yargıtay</i>		<a href="http://www.yargitay.gov.tr">www.yargitay.gov.tr</a>
General Directorate of Women's Status and Problems	<i>Kadının Statüsü ve Sorunları Genel Müdürlüğü</i>	KSSGM	
General Directorate of Handicapped Persons	<i>Özürlüler İdaresi Başkanlığı</i>	GDHP	
General Directorate of Penitentiaries and Detention Centers	<i>Ceza ve Tutukevleri Genel Müdürlüğü</i>		
District	<i>ilçe</i>		
District administrator	<i>kaymakam</i>		
European Union	<i>Avrupa Birliği</i>	EU	
Employment Agency of Turkey	<i>İş ve İşçi Bulma Kurumu</i>		<a href="http://www.iskur.gov.tr">www.iskur.gov.tr</a>
Entrance examination for medical specialization study	<i>Tıpta Uzmanlık Sınavı</i>	TUS	
Family Research Institution	<i>Aile Araştırma Kurumu</i>		
General Provincial Assembly	<i>il genel meclisi</i>		
General Directorate of Handicapped Persons	<i>Özürlüler İdaresi Başkanlığı</i>		
Pension Fund/Government Employees' Retirement Fund	<i>Emekli Sandığı</i>	GERF	<a href="http://www.emekli.gov.tr">http://www.emekli.gov.tr</a>
Grand National Assembly	<i>Türkiye Büyük Millet Meclisi</i>	TBMM	<a href="http://www.tbmm.gov.tr">www.tbmm.gov.tr</a>
Gross Domestic Product	<i>Gayri Sahfi Milli Hasıla</i>	GDP	
Hacettepe University	<i>Hacettepe Üniversitesi</i>		<a href="http://www.hacettepe.edu.tr">http://www.hacettepe.edu.tr</a>
Health Project General Coordination Unit	<i>Sağlık Projesi Genel Koordinatörlüğü</i>		<a href="http://www.spgk.saglik.gov.tr">http://www.spgk.saglik.gov.tr</a>
Higher Health Council	<i>Yüksek Sağlık Şurası</i>		
Household Labor Force Survey	<i>Hane Halkı İşgücü Araştırması</i>	HHLF	
International Labor Organisation	<i>Uluslararası Çalışma Örgütü</i>	ILO	<a href="http://www.ilo.org">www.ilo.org</a>
Istanbul Medical Chamber	<i>Istanbul Tabip Odası</i>		<a href="http://www.istabip.org.tr">http://www.istabip.org.tr</a>
Ministry of Defence	<i>Milli Savunma Bakanlığı</i>		<a href="http://www.msb.gov.tr">www.msb.gov.tr</a>
Ministry of Environment	<i>Cevre Bakanlığı</i>		<a href="http://www.cevre.gov.tr">http://www.cevre.gov.tr</a>
Ministry of Finance	<i>Maliye Bakanlığı</i>		<a href="http://www.maliye.gov.tr">www.maliye.gov.tr</a>
Ministry of Foreign Affairs	<i>Disisleri Bakanlığı</i>		<a href="http://www.mfa.gov.tr">http://www.mfa.gov.tr</a>
Ministry of Health	<i>Sağlık Bakanlığı</i>		<a href="http://www.saglik.gov.tr">http://www.saglik.gov.tr</a>
Ministry of Justice	<i>Adalet Bakanlığı</i>		<a href="http://www.adalet.gov.tr">www.adalet.gov.tr</a>
Ministry of Labour and Social Security	<i>TC Çalışma ve Sosyal Güvenlik Bakanlığı</i>	MLSS	<a href="http://www.calisma.gov.tr">www.calisma.gov.tr</a>
Ministry of National Education	<i>Milli Eğitim Bakanlığı</i>	MoNE	<a href="http://www.meb.gov.tr">http://www.meb.gov.tr</a>
Municipal Assembly	<i>Belediye Meclisi</i>		
Municipal governor	<i>Belediye başkanı</i>		
Pharmaceutical Manufacturers' Association	<i>İlaç Endüstrisi İşverenler Sendikası</i>		<a href="http://www.ieis.org">www.ieis.org</a>
Province	<i>il</i>		
Provincial governor	<i>vali</i>		

English	Turkish	Abbreviation	Website
Red Crescent	<i>Kızılay</i>		<a href="http://www.kizilay.org.tr">http://www.kizilay.org.tr</a>
Revolving funds	<i>döner sermaye</i>		
School of Public Health	<i>Hıfzıssıhha Mektebi Müdürlüğü</i>		<a href="http://www.hm.saglik.gov.tr">www.hm.saglik.gov.tr</a>
Social Security Organisation of Craftsmen, Tradesmen and Other Self- Employed	<i>Esnaf, Sanatkarlar ve Diğer Bağımsız Çalışanlar Sosyal Sigortalar Kurumu</i>	Bag-Kur	<a href="http://www.bagkur.gov.tr">www.bagkur.gov.tr</a>
Social Services and Child Protection Agency	<i>Sosyal Hizmetler ve Çocuk Esirgeme Kurumu</i>	SHCEK	
Social Insurance Institution	<i>Sosyal Sigortalar Kurumu</i>	SSK	<a href="http://www.ssk.gov.tr">http://www.ssk.gov.tr</a>
State Planning Organisation	<i>Devlet Planlama Teskilatı</i>	SPO/DPT	<a href="http://www.dpt.gov.tr">http://www.dpt.gov.tr</a>
State Institute of Statistics	<i>Devlet İstatistik Enstitüsü</i>	SIS/DIE	<a href="http://www.die.gov.tr">http://www.die.gov.tr</a>
Southeastern Anatolia Project	<i>Güneydoğu Anadolu Projesi</i>	GAP	<a href="http://www.gap.gov.tr">www.gap.gov.tr</a>
Town	<i>ilçe</i>		
Turkish Industrialists' and Businessmen's Association	<i>Türk Sanayicileri ve İşadamları Derneği</i>	TUSIAD	<a href="http://www.tusiad.org/english.nsf">http://www.tusiad.org/english.nsf</a>
Turkish Medical Association	<i>Türk Tabipler Birliği</i>	TMA/TTB	<a href="http://www.ttb.org.tr">http://www.ttb.org.tr</a>
Undersecretariat of Treasury	<i>Hazine Müsteşarlığı</i>		<a href="http://www.hazine.gov.tr">www.hazine.gov.tr</a>
United States dollars	<i>Amerikan Doları</i>	US \$	
Village	<i>köy</i>		
Village Council of Elders	<i>ihtiyar heyeti</i>		
Village Head	<i>muhtar</i>		

