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The Effect of Human Resources on Health Reforms: a Turkey Case Study

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EXECUTIVE SUMMARY

Human resources for health is one of the major problems in all countries. In addition to the numerical shortage, many countries also deal with problems such as geographical distribution, migration, sex and aging. Besides, the expectations of societies for better quality of health care services are also increasing in the world of globalization, which creates the imbalance of demand-supply equilibrium in health to the disadvantage of supplier. The phenomenon has direct effects on the health reforms conducted by countries and international organizations in the world. Work force capacity turns out to be a huge barrier on the path towards realization of these goals even if countries wish to achieve them and have financial adequacy for such purpose. It is evident that countries need further quantity and quality of human resources than they already have and developed countries endeavor to find an advantageous solution to this problem by offering better wages, living conditions, educational facilities and security. Such imbalance does not only effect delivery of health care services but also raise doubts that global health care services may become ineffective for global health crisis in the future (such as the Avian Flu and SARS) and occurring results may effect the whole world.

In quantitative terms, the work force in Turkey is less than the other countries, which have similar socio-economic characteristics as Turkey. In addition, geographic distribution is a common problem in Turkey, too. Health reform, on the other hand, which was launched in 2003 (also known as Health Transformation Program) aimed to improve access to health care services, increase the quality of services and put further emphasis on patient's satisfaction with health care services, which caused heavier workload for limited number of health care personnel. Ministry of Health developed as series of new interventions in order to meet such demand increased.

In struggle with the problem and in order to achieve the planned health reform, the Ministry of Health developed some options such as employing foreign physicians, raising the quota for medical students at medical schools and implementing the performance-based payment system (PBP) in Turkey. For some reasons, the first two options were not put into effect and only the third one - development and full implementation of the PBP system- was achieved.

To compare the pre and post-PBP system, it could be clearly seen that the PBP system has raised the productivity of physicians, the consultation rate in the MoH hospitals has increased 300 % and other selected indicators (such as the average length of stay, hospitalized patient rate, surgical operation rate and crude mortality rate) have given positive results. Excessive demand, which occurred from the increased access to health care services that were given by limited number of physicians, was met in short time. It is estimated that the system led to about 10 % extra burden on public expenditures for health.

To sum up, the PBP system, which might serve as an example for middle-income countries with limited labor force, could be used as an instrument to increase the productivity of physicians. Yet, when making plans and investments, policy-makers should always keep in mind that the investments that are merely made in infrastructure, medical devices and health information systems alone would not be adequate for complete success but both quantity and quality of human resources should be carefully considered because any reform could be achieved only by human workforce.

INTRODUCTION

1. General Information on Country

Located in a region which Asia, Europe and Africa continents meet very closely, Turkey is surrounded by sea on three sides, by the Black Sea in the north, Aegean Sea in the west and Mediterranean Sea on the south. Turkey borders Greece and Bulgaria in the west, Iran ands Armenia in the east, and Iraq and Syria in the south. Total area of Turkey is 780.580 km2.

Source: http://www.turkishnews.com/DiscoverTurkey/images/maps/map1.jpg

1.1. Basic Statistics

The information given here is some statistical information which is considered to be directly or indirectly relevant to the subject matter. Further information could be obtained at the web sites of the WHO, OECD, WB and Turkish Ministry of Health (www.saglik.gov.tr). Basic information on Turkey is briefly presented in the following table.

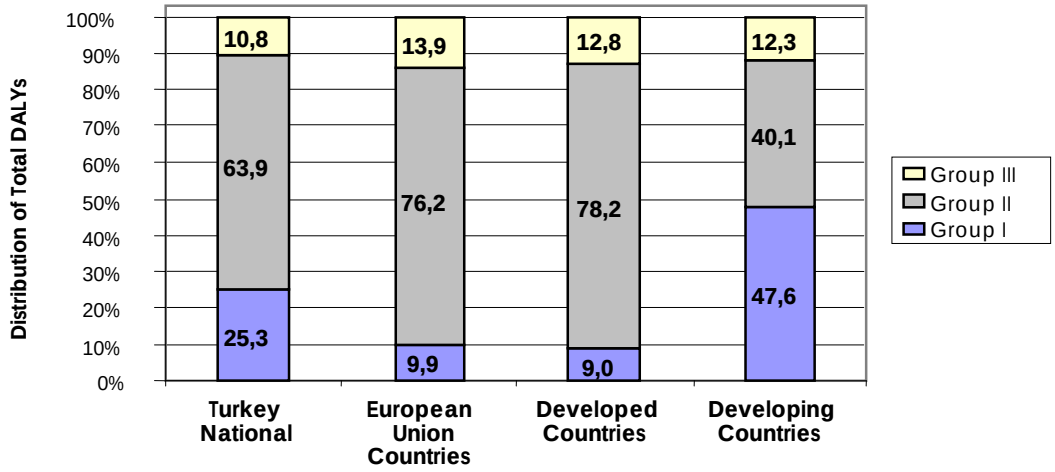
Table 1: Basic Health Statistics, Turkey

Total population	70.586.256
Life expectancy at birth m/f (years)	69/74
65 + population*	7 %
Population Growth Rate	1.24 %
Infant Mortality Rate	28 %o
Under five age mortality rate	25. 1 %o
Gross national income per capita (PPP international $)***	8. 420
Total expenditure on health per capita (Intl $)*^	583
Total expenditure on health as % of GDP*^	7.7

Source: Turkish Statistical Institute 2007, * Population and Health Survey 2003, ***WHO World Health Statistics 2007, *^ OECD Health Data, 2006

Burden by and distribution of DALY in the country is summarized in the below figure by the ICD-10 classification:

Figure 1: Burden of Disease in Turkey and Comparison with Other Countries



Group I: Communicable, Maternal Causes, Perinatal Causes and Nutritional Deficiencies.
Group II: Non-communicable diseases; Cardiovascular System Diseases, Respiratory System Diseases, Digestive System Diseases, Endocrine, Nutritional and Metabolic Diseases, Sense Organ Disorders, Genitourinary System Diseases, Malign Neoplasms, Musculoskeletal Diseases and Neurological Disorders, Neuro-psychiatric Disorders and Mouth and Dental Health Disorders.
Group III: Injuries; intentional and unintentional injuries.

Source: Burden of Disease Study 2004, School of Public Health, Ministry of Health, Turkey, 2006

As we can see (Burden of Disease Study, 2006) above, Turkey has double burden of communicable and non-communicable disease, better than developing countries but worse than EU and developed countries.

TURKISH HEALTH SYSTEM

2.1. Overview of the Health System

As required by its nature, health sector in Turkey has a very complex system (Mollahaliloglu et al., 2007) in which a great many actors operate. Though being so complex, it could be somewhat easier to set out a general view of the system by dividing it into three major groups that are: (a) health system policy makers, (b) health service providers and (c) health system funders. Further detailed information on structuring could be found in the following Table 2.1.

Table 2.1 Health Care Organizations in Turkey by Function

POLICY –MAKING	**DELIVERY OF HEALTH CARE SERVICES**
Turkish Grand National Assembly	
State Planning Organization	**Public**
Ministry of Health	Ministry of Health
Higher Education Council	University Hospitals
Constitutional Court (Supreme Court)	Ministry of Defense
ADMINISTRATIVE DECISION-MAKING	**Private**
	Private Hospitals
Ministry of Health	Foundation Hospitals
Provincial Health Directorates	Minority Hospitals
	Independent GPs / specialists
	Out-patient Treatment Clinics
HEALTH SERVICES FINANCING	Laboratories and Diagnostic Centers
	Pharmacies
Ministry of Finance	Medical Devices and Equipment Sellers
Social Security Institute	
Private Insurance Companies	**Non-Governmental Organizations**
Self-Financed Institutions	Red Crescent
International Agencies	Foundations and Associations

Source: Ministry of Health, 2007

Actors, who are involved in delivery of health care services, are divided into two groups which are the public sector and private sector. Public sector consists of the Ministry of Health (MoH) – as the major provider of health care services- , State Universities, Ministry of Defense, State Economic Enterprises (SEE), Municipalities, Provincial Special Administrations and Municipalitan Economic Enterprises. However, these public agencies – except for the Ministry of Health - do not play a significant role in running the system.

As for the administration (Decree Law, 1983) of the MoH's rural organization, provincial governors and provincial health directors are the authorities which are primarily responsible for health care services in all 81 provinces. In this respect, governors are the top officials who responsible for the execution, coordination and improvement of health care services. They, however, could devolve some of their responsibilities to their deputies or provincial health directors. Provincial health directors, on the other hand, are

the highest-ranking health managers in provinces and have liabilities to provincial governors. On district level, district governors and health group (Rural Organization, 2008) presidents are the primarily responsible officials for health care services. District governors have responsibility in the execution, coordination and improvement of health care services. Health group presidents are the top health managers in districts.

Also it should be stated that the country is going through a transition period in family medicine system (2005-2010) and thus primary care services might be a little different in some provinces depending if family medicine system is in effect or not.

In provinces where family medicine system has been introduced, family physicians and population health centers, district polyclinics at hospitals, polyclinics of other public agencies, industrial physicians (in private sector) and institution physicians (in public sector) act as the major officials who are responsible for primary care services.

In other provinces where family medicine system has not been introduced yet, health centers are the main pillars of service provision in primary care services. In addition to health centers, district polyclinics at hospitals, and polyclinics, institution and industry physicians are also involved in provision of primary care services. Apart from health centers, mother and child health and family planning centers, tuberculosis control dispensaries and malaria control centers, and tropical diseases hospitals and research centers which are limited to certain areas, provide primary care services in some fields vertically.

Private sector (Private Sector Regulation, 2008) is also involved in provision of health care services. Private sector services in health could be handled in two groups: out-patient and in-patient services. Out-patient services are given by private practices, polyclinics, dispensaries, medical centers, beauty and esthetic centers, diagnosis and treatment centers, private oral and dental health care facilities, and by industrial and institution physicians who are employed for occupational health and safety as required by law. Private practices and polyclinics are primary care facilities while centers are secondary care facilities.

In-patient services in private sector (Private Hospitals Regulation, 2005) are given by private hospitals, foundations-owned hospitals, minority-owned hospitals and hospitals which are owned by foreign nationals. Private hospitals are opened by the Ministry of Health's approval and license. According to the respective laws and regulations, citizens who ask to open a private hospital or their responsible managers should apply to provincial governor's office with a petition specifying the type of that hospital.

2.2. Health Services Financing

Financing of health care services has a rather complicated system. Brief information could be found below.

Public administrations, local administrations and social security agencies in the scope of central administration are involved in public side of health services financing. Public agencies, government employees, uninsured citizens (Green Card holders), universities,

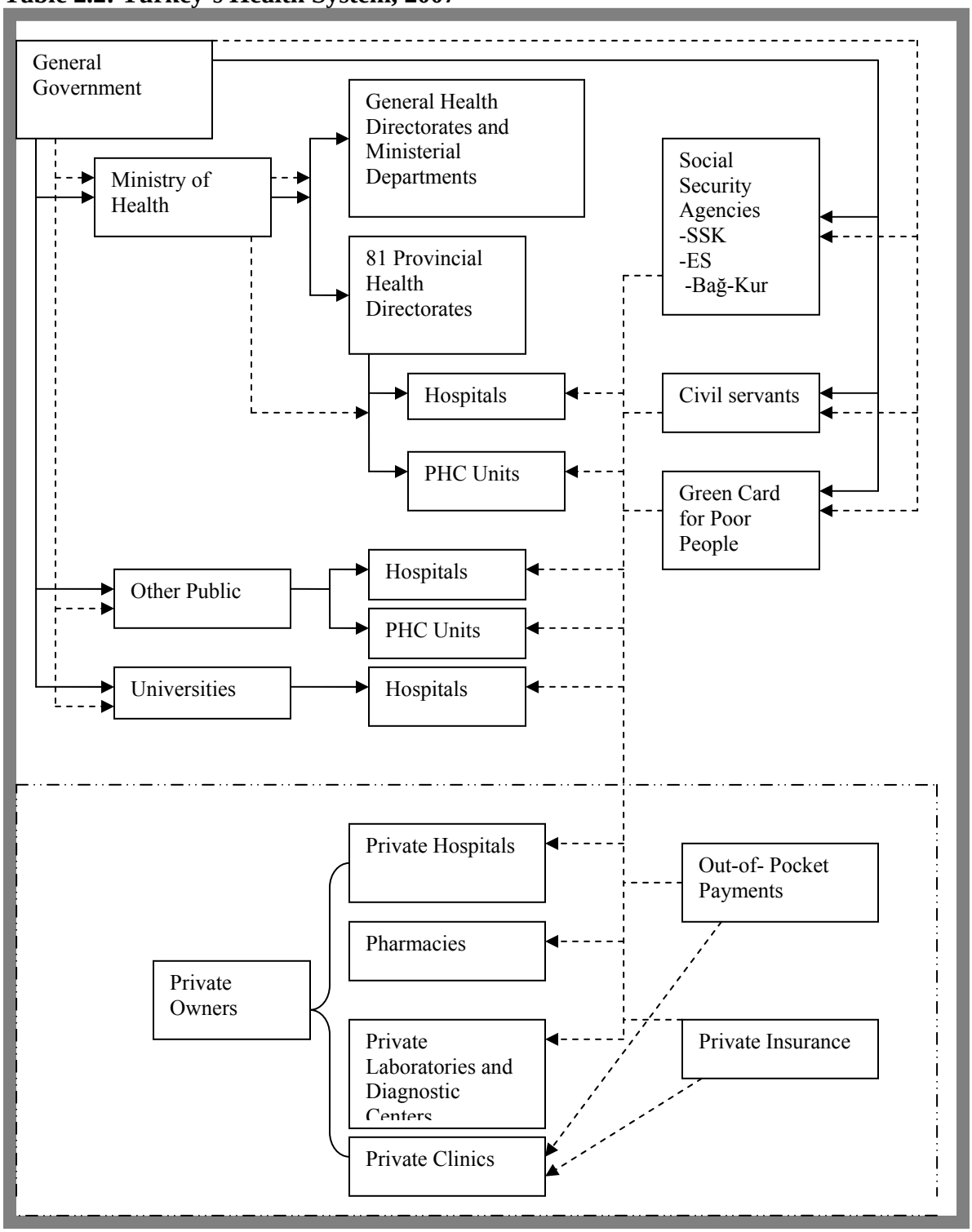
regulation and supervision agencies and social security agencies are covered in this framework.

Social security funds in Turkey could be examined under three topics: Social Security Institution (SSI) which serve to workers, Government Employees' Retirement Fund (ES) which serve to retirees, and Self-Employed People's Fund (Bağ-Kur) which serve to self-employed people, artisans, craftsmen, tradesmen and agricultural workers. These three agencies were structured under separate Ministries until now. However, they are all going through a new period (the universal health insurance and re-structural laws area passed in May 2008) which will result in unification under the Social Security Institution's umbrella which will be founded under the Ministry of Labor and Social Security.

Bodies and organs which are excluded from public agencies constitute private sector. Private social insurance, household our-of-pocket expenditures, non-profit organizations serving to households, enterprises, state economic enterprises, foundations-owned universities and institutions which will be privatized are all covered in this scope.

Table 2.2 sets out the health system and financial and hierarchical relations between institutions.

Table 2.2: Turkey's Health System, 2007

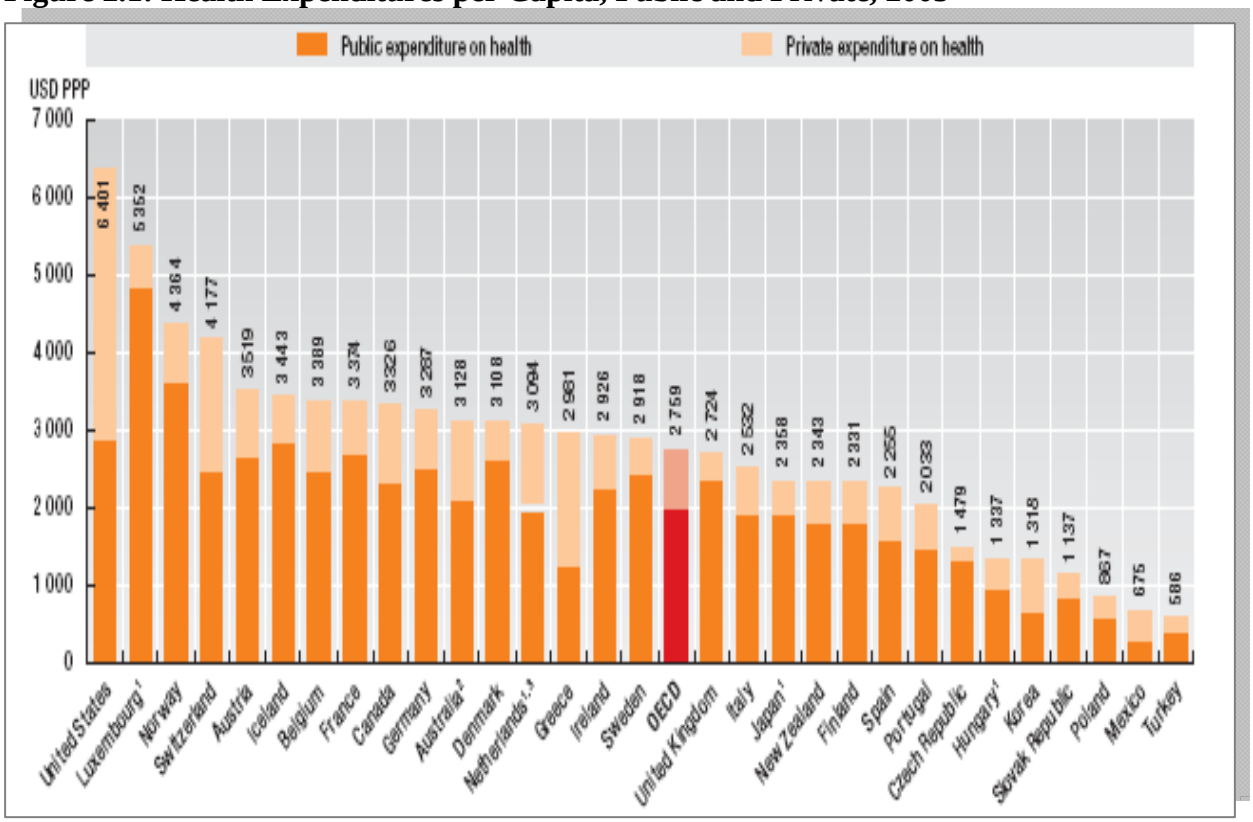


Source: School of Public Health, Ministry of Health, 2007

2.3. Health Expenditures

This report aims to examine the effects of human resources for health and incentives on health personnel (especially, on physicians) and therefore it will just take a glance at health expenditures in general terms. Some comparisons with the OECD Member States are available in the following. As seen in the figure 2.1, per capita health expenditure in Turkey was found to be 586 USD (PPP) in 2005.

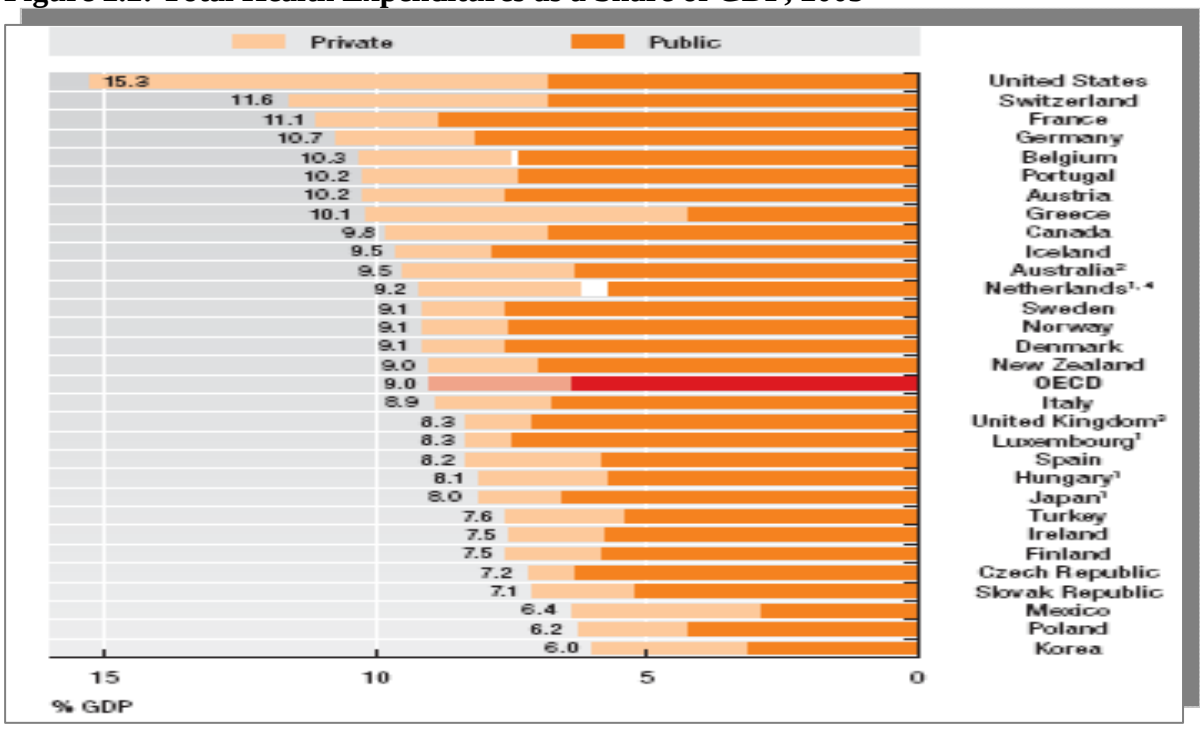
Figure 2.1: Health Expenditures per Capita, Public and Private, 2005



Source: OECD Health Data, 2007

Turkey spends 7.7 % of its GDP (2007) for health, which is less than that of the European average. A detailed comparison could be found in the figure 2.2.

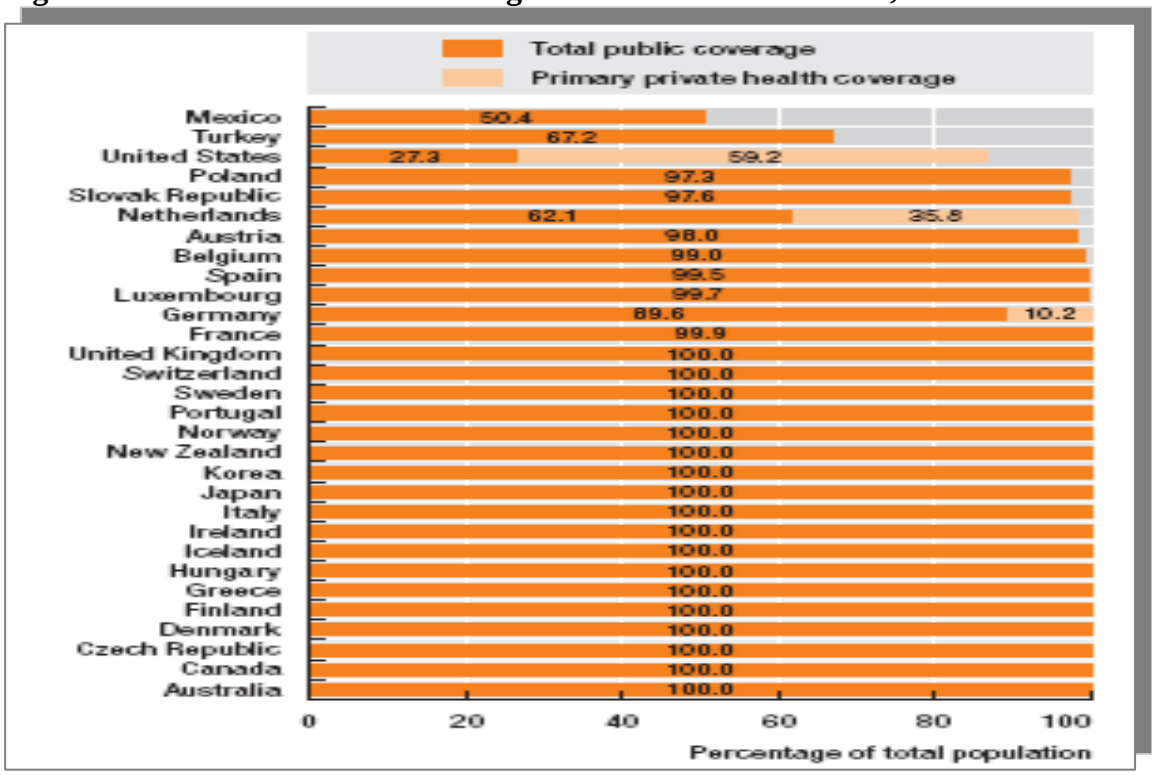
Figure 2.2: Total Health Expenditures as a Share of GDP, 2005



Source: OECD Health Data, 2007

As could be seen in the following figure 2.3, health expenditures are mostly made by public sector, which is approximately 67.2 %.

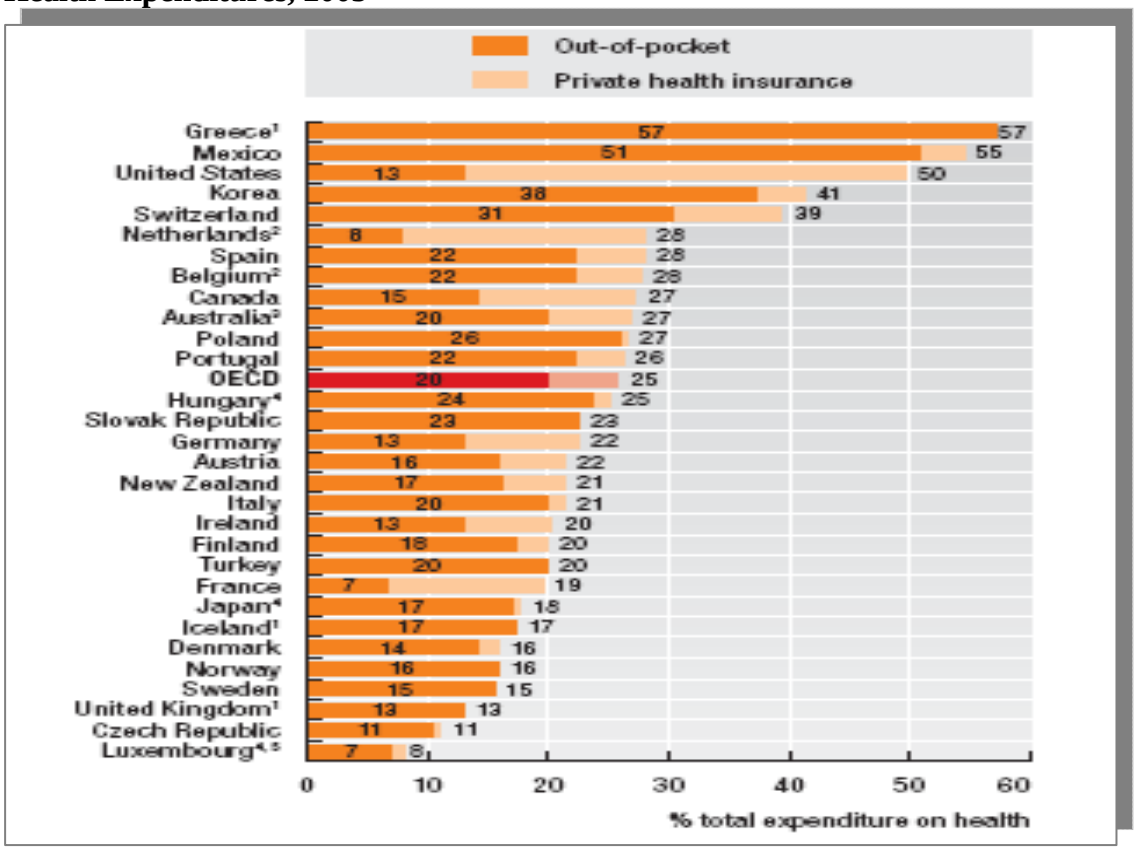
Figure 2.3: Health Insurance Coverage for a Core Set of Services, 2005



Source: OECD Health Data, 2007

Out-of-pocket health expenditures are equivalent to 20 % approximately. This can be seen comparison with other OECD countries as below in Figure 2.4.

Figure 2.4: Out-of- pocket and Private Health Insurance Spending as Share of Total Health Expenditures, 2005



Source: OECD Health Data, 2007

When compared to previous years, increase is noted in health expenditures (5.6 % of GDP in 2000) while decrease is noted in out-of-pocket health expenditures (approximately 32 % in 2000). While only 67 % of population held health insurance (in 2000), 100 % of population was covered by the Universal Health Insurance which was enacted in 2007 and first implemented after May 2008.

HEALTH REFORMS

3.1. Health Reforms and Health Transformation Program

It is seen that the efforts to improve health care services in Turkey have had a long history and evolved by years. However, it was only the early 1990s when studies for such purpose adopted a systemic approach, which was characterized with the Health Projects which were implemented under the agreements particularly signed with the World Bank (WB). Under such projects, a variety of studies have been conducted varying from primary care services to curative services, from health insurance to the establishment of health information system, and from human resources development to building infrastructure and medical devices equipment. The said process is continuing under the title of the "Health Transformation Program" in recent years. A Loan Agreement was signed with the WB in order to support the Program's implementation.

In the early 2003, the Health Transformation Program (HTP) was developed by the Ministry of Health and announced to public for the first time by a booklet which was issued in November 2003. Never closing eyes on previous experiences and older knowledge, HTP was developed also by taking lessons (Akdag, 2007) from the recently implemented reform actions and achievements in the world.

It which aims to organize health care services (Health Transformation Program, 2003) in an effective, productive and equal way, is based on eight main pillars which are listed below:

1- Ministry of Health as the planner and supervisor,
2- Universal Health Insurance covering all citizens under a single umbrella,
3- Widespread, easy-to-access and friendly health care system,
    1- Empowered primary care services,
    2- Effective and gradual chain of referral,
    3- Administratively and financially autonomous health care facilities,
4- Highly-motivated health labor force equipped with knowledge and skills,
5- Educational and scientific institutions supporting the system,
6- Quality and accreditation for qualified and effective health care services,
7- Institutional structuring in rational medicines and substance management,
    1- National Medicines Agency,
    2- Medical Devices Agency,
8- Access to knowledge in decision-making: Health Information System.

Positive developments have been noted in many targets after HTP was put into implementation and they are increasing both in quantity and quality in this dynamic process. This report, however, will focus on the Program's direct or indirect effects on human resources.

First of these effects is that the Ministry of Health-affiliated hospitals started to give services to the Social Insurance Institution's beneficiaries in 2004 so that limited human resources and financial sources were used effectively. Previously, beneficiaries of the Social Insurance Institution (SSI) (whom are approximately equivalent to 33 % of the

population) could receive health care services only from the SSI-affiliated hospitals. Second major step is revolution of all hospitals in Turkey – including the SSI or some other institutions-affiliated hospitals- moved to under management of the Ministry of Health in 2005.

In the scope of e-Health, large-scaled information system was set up in order to assess health care services as well as monitoring and evaluation of the system. Very intensive efforts are still being made to this end.

Family medicine system, which was first implemented by a pilot study in 2005 in Düzce, was later generalized to other 24 provinces (of total 81 provinces) by late 2007. The system aims to prevent unnecessary patient load at hospitals and to adopt a more systemic approach for service delivery by assigning family physicians as "gatekeepers".

3.2. Health Reforms Focused on Human Resources for Health

Ministry of Health founded the School of Public Health (SPH) in 2003 under the Ministry to promote the capacity of human resources and the SPH, started to give in-service trainings, field researches, evaluation of implementations, continuing and internet-based trainings for lower and mid-level managers, then.

Apart from these, a bill was passed in the Parliament allowing foreign national physicians to work in Turkey as a means to increase the number of physicians in Turkey but the bill rejected by the President. However, it is considered that the same bill would be brought to the agenda and could be approved by the new President who came into force in 2007.

Turkey, which occupies the lowest rank in the "health personnel per 100.000 population list" of WHO-EURO Region among its 53 Member States, endeavored to take some steps for quantitative improvement in health personnel but such demands were rejected by the Higher Education Council (HEC) which is an autonomous body. HEC stated that quality of personnel was more important than quantity and Turkey had no need for further labor force in health. Yet, it is apparent that the government is still resisting on this issue and maintaining its initiatives.

Individual and institutional performance was developed for effective use of the existing labor force and is applied to the whole country. Further details on this process could be found under the heading of "Performance Based Payment in Health" to be included in the forthcoming pages.

HUMAN RESOURCES FOR HEALTH

4.1 Current Situation in Human Resources for Health

Considering health policies in Turkey, it is apparent that the Health Transformation Program, which was commenced to improve health care services, is human being-oriented and thus places the needs, demands and expectations of people whom will benefit from improved health care services in the center of its efforts in planning and provision of services. In this respect, efforts are being made for health human resources.

At this point, it would be helpful to present the quantity and distribution of existing man labor force. Respective data are indicated in the following table:

Table 4.1: Health Labor Force in Turkey and Number per 1000 Population, 2007

		Total Physicians	Spcialist Physic.	General Pract. (GP)	Assistant Physic.	Dentists	Pharm acists	Health Officers	Nurses	Mid-wives
Number of personnel	**2002**	95.190	43.660	38.076	13.454	17.108	22.322	49.324	79.059	41.513
	2007*	108.894	55.581	34.607	18.609	18.304	25.541	74.459	97.678	47.247
Personnel per 1000 population	**2002**	1,37	0,63	0,55	0,19	0,24	0,32	0,71	1,14	0,59
	2007*	1,47	0,75	0,46	0,25	0,25	0,35	0,95	1,32	0,64

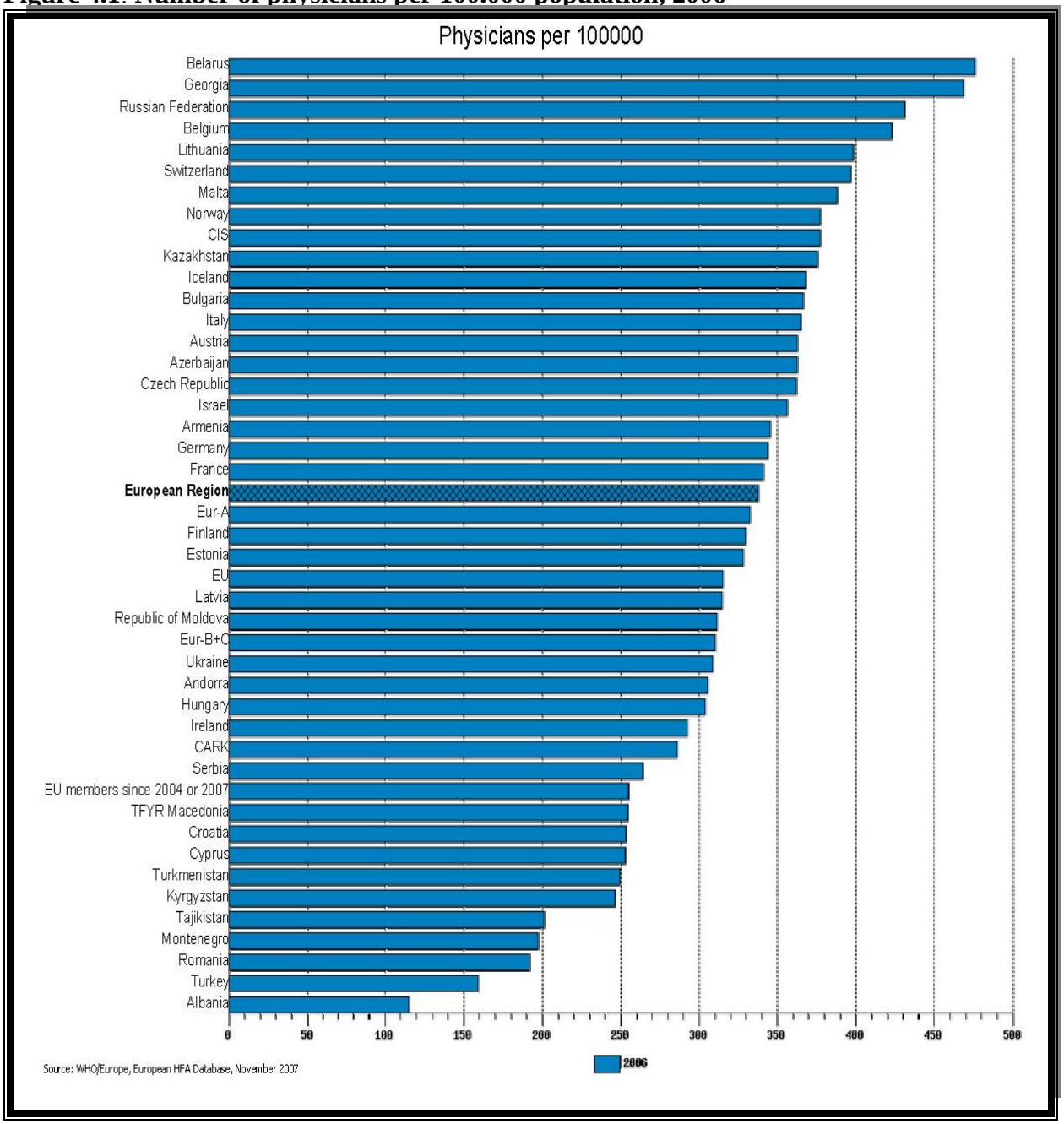
Source: Department of Strategy Development, Health Statistics, 2001-2005.
Directorate General of Personnel 2006 and 2007 December Studies
Student Selection and Placement Center (SSPC) Statistics
*** Also non-active personnel included in the MoH personnel. Data were obtained from 2006 since personnel number by institutions is not available in 2007.**

There are 108.894 physicians in Turkey as of late 2007. Given physicians' distribution across country, 55.581 of them are specialists (51 %), 34.607 of them are GPs (32 %) and 18.609 are assistants (17 %). Assistant physicians had better be considered in terms of secondary care services since they are assigned at hospitals. 74.190 of physicians in Turkey (68 %) are involved in secondary level curative services.

Health care services are provided by service providers in public and private sector in Turkey. Being the major service provider, the Ministry of Health became much more effective after the SSI-affiliated hospitals were devolved to the Ministry in 2005. Besides, health care services which were previously given by some other Ministries (Ministry of Defense, Ministry of Education and etc.), public agencies and municipalities were also devolved to the MoH. Following the MoH, universities occupy the second rank at the list of service providers.

It is apparent that health labor force in Turkey is not satisfactory (Mollahaliloglu et al., 2007) if to compare with the status in other countries and consider major differences closely. Health labor force in WHO-EUROPE region is presented in the below figure in terms of physicians.

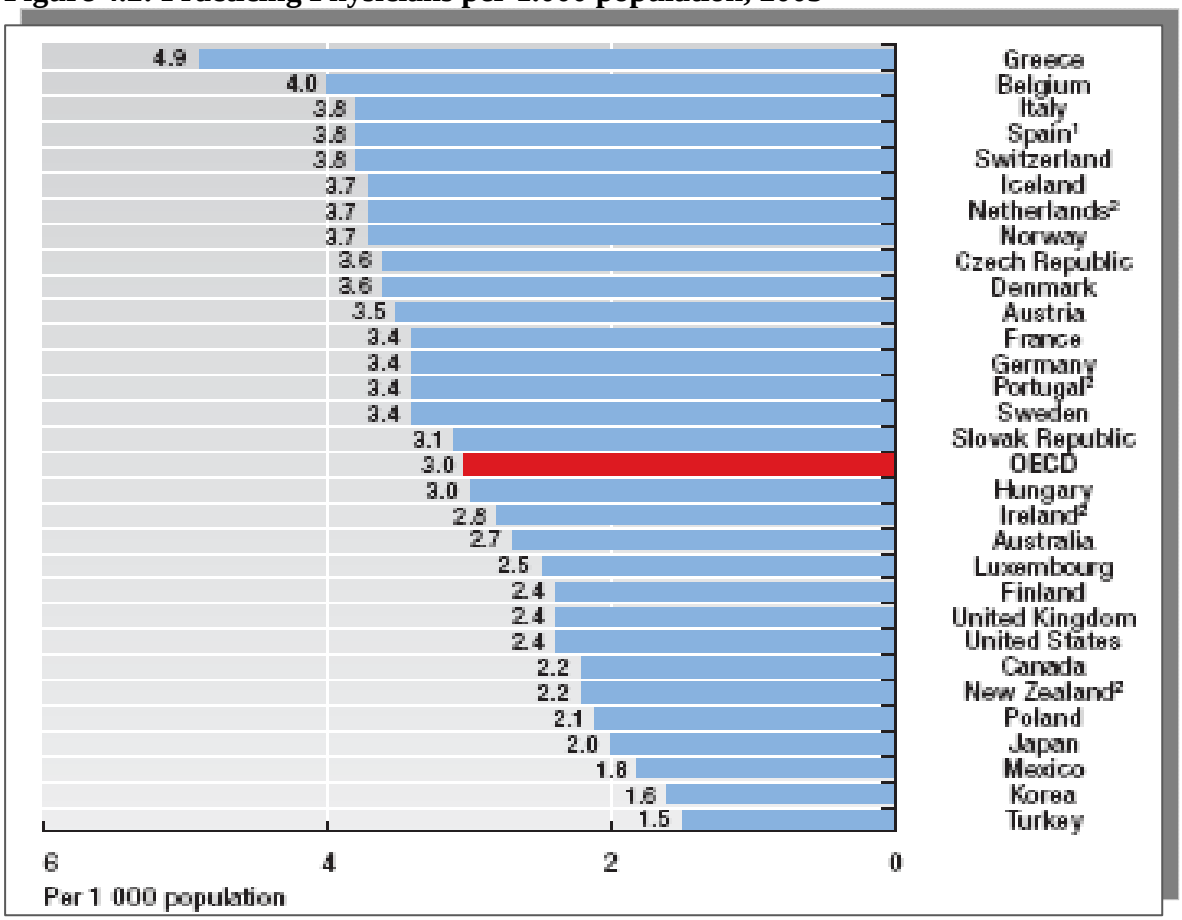
Figure 4.1: **Number of physicians per 100.000 population, 2006**



Source : WHO/EUROPE, European HFA Database, November 2007

Turkey is also a member of the OEDC and an international comparison is presented below with respect to the number of physicians.

Figure 4.2: Practicing Physicians per 1.000 population, 2005



Source: Health at a Glance, OECD 2007

As could be seen in this figure, Turkey ranks the last among the OECD Member States in terms of physician labor workforce. Although both WHO-EUROPE and OECD comparisons present a figure of physicians, the status of Turkey with regards to other health care personnel does not differentiate from the previous one (also ranking the last with 1.8 nurses).

Afore-mentioned data are rather relevant to density which refers to health care personnel per population. Apart from density, Turkey has also some other problems in health labor workforce such as provincial and regional distribution of health labor workforce, full-time and part-time practice and productivity. It is also though that new health labor workforce problems would appear in the near future such as migration, work-life balance and etc.

Number of new graduates from medical, nursing and midwifery schools is presented in the below Table 4.2 by years. Besides higher education at universities, nursing and midwifery education is also given in vocational high schools for health in Turkey. In

2006-2007 term, 1.192 nurses graduated from nursing departments and 1.144 midwives graduated from midwifery departments in vocational high school for health.

Table 4.2: **Number of Medical, Nursing and Midwifery School Graduates by Years**

Education Year	Faculty of Medicine	Nursing	Midwifery
2000-2001	4925	2142	575
2001-2002	4755	2590	537
2002-2003	4380	3000	838
2003-2004	4487	3285	979
2004-2005	4494	3648	1101
2005-2006	4532	3781	1169

Source: SSPC, Higher Education Statistics, 2007

Considering distribution of health personnel by provinces in Turkey, some problems exist in terms of geographical distribution. Imbalanced distribution, which seems to be much more in health than in any other sectors (which is about 13 times for specialist physicians and 6 times for all physicians), is noted less if only MoH personnel are considered (which is about 4.4. times for specialist physicians and 6 times for all physicians). Table 4.3 presents the best and worst provinces in terms of personnel number per 1000 population.

Table 4.3: Distribution of personnel in all sectors by provinces, personnel number per 1000 population according to the best and worst provinces*, 2007

	Best Province	Worst Province	Average in Turkey(mean)
Specialist Physician**	2,57 (Ankara)	0,19 (Şırnak)	0,99
General Practitioner	0,62 (İzmir)	0,28 (İstanbul)	0,44
Total Physicians	3,01 (Ankara)	0,51 (Şırnak)	1,43
Nurses	2,34 (Trabzon)	0,42 (Şırnak)	1,31
Midwives	1,93 (Tunceli)	0,25 (Şırnak)	0,65

Source: Directorate General of Personnel, 15 December 2007 Study.

* Personnel in all sectors included. Non-active personnel not included.

** Assistant numbers included.

57.6 % of all physicians are the permanent staff of the MoH. This percentage has increased about 9 % since 2001 due to a process also including devolution of the SSI personnel in 2005. The case is almost the same in all personnel groups, and the MoH is the major employment field for almost all personnel groups except for dentists and pharmacists, most of whom are employed in private sector. 82.6 % of GPs, 71.2 % of nurses and 92.6 % of midwives are currently employed by the MoH.

Staffing need of the MoH is identified in accordance with the Personnel Distribution Scale (PDS). Occupancy rate is 88 % for specialist physicians, 87 % for GPs, 82.3 % for nurses and midwives and 72.8 % for other health personnel groups. However, PDS is a scale which was formerly planned according to the demographic criteria only. Therefore, it would be necessary to re-adjust this need in line with new reforms, economic

improvement, any probable changes in job description and increased demand for health care services.

Health care personnel are employed in public sector by the Law on Civil Servants, and a great majority of health care personnel consists of civil servants (Civil Servants Law, 1965). However, contracted health care personnel have been also employed in public sector in recent years though being limited in number. As for the first appointment of the MoH's personnel, specialist physicians, GPs, dentists and pharmacists are chosen by public notary's lottery among all applicants while other personnel are appointed from those who have passed the Public Personnel Selection Exam (PPSE). Upon need, the Ministry announces vacant positions, and appointment rules and essentials. In the past, two-year compulsory public service was applied for physicians. Later in 2003-2005 period, the implementation was annulled and replaced by volunteerism and higher salary-based appointment method (on contract basis). However, the new method did not prove to be very successful. Therefore, compulsory public service was re-implemented in 2005 which envisages compulsory public service for new graduates of medical education and new graduates of medical specialty education for a certain period varying from 300 days to 600 days depending on the residential areas to which they are appointed.

PERFORMANCE BASED PAYMENT

Revolving funds constitute the basis for performance-based payment for health in Turkey. The period in which revolving fund was implemented (1961-2003) and the period in which performance-based payment is implemented (2004 and later) are briefed in the following so as to better present the picture of the existing process.

5.1 Period of Revolving Funds

Revolving Fund Implementations were started by the Law Dated 1961 and Numbered 209 on "Revolving Funds to be granted to the Ministry of Health-Affiliated Health Care and Rehabilitation Facilities". Revolving fund payment is disbursement for all health care personnel, which is made in addition to basic salary, regardless of services produced and also the same (equal) for all professionals within a certain group of profession. Revolving funds of facilities are created by the accrual in return for bills, which patients get from their social security agencies, and co-payments and out-of-pocket expenditures for health of individuals who are not insured and who have to pay for services out of their pockets.

The Law Numbered 209 was issued to meet the needs of hospitals, to provide hospitals with self-adequacy by the income that they received by delivery of health care services, and so to lessen the burden on general budget and to improve health care services this way. The first law issued aimed to improve the infrastructure and avoid any delays in services.

The amendment which was made in 1989 introduced additional payment for health care personnel who were assigned at facilities with revolving funds and made considerable improvements in financial status of health employees so. Thanks to this amendment, all personnel also including allied health personnel were provided with additional payment from revolving funds in compliance with the Ministry of Health's rules and principles, which amounted maximum 50 % for allied health personnel and 100 % for other personnel of their annual salaries (also including additional indicators), benefits and all kinds of indemnification.

In 2003, directive regarding the said law was amended and additional payment was introduced for primary care personnel, too. Besides, another amendment made in the same year paved the way for additional payment for personnel assigned in the MoH's Central Organization.

By the new directive, coverage of revolving funds was extended and the amount of additional payment was increased which was maximum 100 % for physicians and dentists and 80 % for other personnel. So, additional payment was introduced for the Ministry personnel depending on their titles and positions (maximum 200 %).

5.2 Period of Performance-Based Payment

In 2004, the method of additional payment for both hospital and primary care personnel was changed (Aydin and Demir, 2007) and salary-based additional payment was replaced by performance-based additional payment. With this method, employees took the opportunity of additional payment in addition to their performance, however, the payment was limited by a payment ceiling amount.

In the following years, the implementation was regularly monitored and improved in terms of problems, shortfalls and imbalances. In this scope, the latest directive was enacted in late 2007, which envisages the following coefficients for the ceiling additional payment amounts.

Table 5.1: Ceiling Additional Payment Coefficients

	Coefficient
Full-time public sector practicing hospital chief physician, clinic chefs and deputies	8
Specialist physicians- in compliance with the regulation on medical specialty- and full time practicing specialist dentists	7
Non-private practicing general practitioners and dentists	5
Clinic chefs, deputy clinic chefs, specialist physicians -, in compliance with the regulation on medical specialty- and full time practicing specialist dentists	3.5
Private practicing (part time at public sector) general practitioners and dentists and pharmacists	2.5
Personnel and head nurses assigned in specialty wards such as intensive care, labor, newborn, infants, burns, dialysis units; operating theaters, bone marrow transplantation units, emergency units- polyclinics and psychiatric services at hospitals	2
Other personnel excluded	1.5

Source: Ministry of Health, 2007

As could be seen in the above table, there is a maximum limit allowed for individual employees. Following table, on the other hand, demonstrates the difference between fixed salary-based additional payment and performance-based additional payment implementation. Yet, it should be kept in mind that these payments are additional to salaries.

Table 5.2: Monthly Payment (YTL) Before and After Performance System for Hospital Level Specialist Physicians

Years	Basic salary (net)	Maksimum Bonus Payment (net)	Average Bonus Payment (net)
2000	413	297	297
2001	624	470	470
2002	870	616	616
2003	984	647	647
2004	**1067**	**7469**	**2650**
2005	1112	7784	4500
2006	1294	9058	4750
2007	1297	9097	5039

Source: Ministry of Health, 2007

Besides, the Ministry of Health issued Directive on Development of Institutional Quality and Assessment of Performance for Inpatient Treatment Facilities in 2005. So, institutional performance criteria were identified in the light of internationally accepted hospital criteria and country's own needs.

At the first stage, it was aimed (Ministry of Health Directive, 2007) to enable the measurement and supervision of institutional performance, raise health care facilities' awareness of quality and build capacity in this sense. Therefore, sanction was kept limited. In this process, responses and implementing capacity of actors were observed, and steps were taken to enhance the information and capacity of supervisors.

Provincial performance and quality coordination units were established in provincial health directorates and, quality units at hospitals. These coordination units were made responsible for measurement and improvement of quality.

In the said directive, institutional performance measurement methods were gathered under six topics:

a- Coefficient of Access to Examination
b- Infrastructure and Process Assessment Coefficient
c- Coefficient of Patients and Family Members' Satisfaction
d- Institution Effectiveness Coefficient
e- Facility Effectiveness Coefficient
f- Institutional Target Coefficient

As a result, these efforts were combined with quality studies and Directive on Quality Development and Performance Assessment in the Ministry of Health-affiliated Institutions was put into effect in 2007. Upon the enforcement of this directive, previous directives on institutional quality improvement were annulled.

It is apparent that the studies on institutional performance are underway. However, data in hand are not adequate to make assessment of results. Still, the Ministry of Health is

making big efforts to stabilize both individual and institutional performance, and especially to improve the institutional performance implementations. Ministry of Health established a separate Department in 2007 to this end.

5.3. How Does Performance-Based Payment System Run?

Performance-based additional payment system (Aydin and Demir, 2007) covers 827 hospitals, 6.400 health centers and 310.00 personnel (including 58.162 physicians) that are affiliated with the Ministry of Health.

The goal of the Regulation on Additional Payment is explained in the Article 1 as in the following: "This regulation, regarding the Ministry of Health-affiliated health care facilities and institutions in the light of the conditions and criteria of service delivery which are identified by the Ministry, shall identify the proportion, rules and principles of revolving funds-financed additional payment which will be used as an instrument to improve health care services and to encourage delivery of qualified and effective services by considering personnel's tasks, working conditions and term, contribution to services, performance, status of private practice, medical examinations, operations, anesthesia, invasive procedures and status of employment in highly specialized departments and/or branches."

As it is obvious, the final goal is to reflect the quantitatively measured individual performance of employees on additional payment and to contribute to institutions' and facilities' achieving their goals (service improvement and delivery of qualified and effective services).

Three models were developed for performance-based payment by the levels of health care services. In the first model, implementation rules and principles apply to primary care facilities. Respective regulation, in the light of characteristics and structuring of primary care services, was issued considering curative services, preventive services and service delivery in rural areas. In addition to the criteria for curative services in primary care, preventive care service points and regional administrative points are defined which increase towards rural areas.

In the second and third models, on the other hand, implementation rules and principles were defined for state hospitals and training and research hospitals. The system is implemented at training and research hospitals on the basis of clinics and also considers training and scientific publications. In the system, conditional values are identified and rated for a total of 5120 medical procedures at such facilities. These procedures are assessed in separate groups: those which are made by physicians from A to Z; and those in which physicians make contributory intellectual, physical and professional efforts (For example, medical examinations, operations, invasive procedures and etc.). Some other procedures such as injections and laboratory procedures which are mainly made by medical devices or allied health care personnel are not rated even though physicians have responsibility for those (Pls. see Table-5.3)

Table 5.3: Samples of Medical Procedures at Healthcare Facilities and Performance Points

CODE	PROCEDURE	PERFORMANCE POINTS
510.121	Visit per patient for minimum twice a day in branches of internal medicine (for each patient on daily basis)	21
520.010	Consultation fee (for each physician)	10
520.020	Emergency polyclinic examination fee	21
520.030	Routine polyclinic examination fee	21
520.031	Referred examination	5
520.032	Examination in night shift	30
520.033	Psychiatric examination (30 points for the first 10 patients and 21 points for others)	30
530.020	Abscess or hematome drainage, deep	150
530.100	Electrocardiography	0
530.140	IM injection	0
530.150	IV injection	0
530.581	IUD installment	40

Source: Performance Management in Health Book, Ministry of Health Publications, 2007

Points of all procedures made by each physician in a month (as described above) are added and so the **individual performance** of an employee is found. Mathematical average of performance points of all physicians at a hospital in a month is found and it refers monthly **performance point average** of that hospital.

Individual performance points of non-physician personnel, other health care personnel, laboratory branch physicians and hospitals managers are found by respective coefficients in compliance with their tasks, titles, working conditions and terms, and status of employment in high-risk departments and/or units (For example, coefficient is 4.50 for a chief physician, 2.50 for a biochemistry specialist, 1.00 for a hospital manager and 0.40 for a nurse).

Net performance points for all personnel are found by multiplying individual performance points with some parameters such as private practice (part-time public) coefficient, active work days coefficient and position-title coefficient, and then adding up other additional points which they might have when they perform other tasks such as getting involved in procurement and tender commissions and etc. (Net Performance

Point=Individual Performance Point/directly or indirectly calculated x position-title coefficient x active work days coefficient x full time or part time practice coefficient) .

So, performance of clinicians is measured directly and performance of laboratory physicians and other personnel is measured indirectly. Apart from this, net performance points are increased or decreased for all personnel by various reward and punishment mechanisms which are used in the system (Considering a variety of factors such as personnel's respective knowledge and skills, regular and qualified working, ability to work independently, take initiative and organize work, effort for self-improvement, attitudes towards supervisors and colleagues and to customers, contribution to department, difficulty of work and risks, head physicians at facilities and provincial health directors in institutions could make a proposal to give additional points to some personnel on condition that the number of such personnel do not exceed 5 % of all personnel in that institution or facility. Upon such proposal, revolving fund commission convenes and with majority of votes that is 2/3 of the commission members, the commission might resolve to give the said personnel additional points that are maximum 20 % of average service points at facilities and average provincial performance points in institutions).

Personnel's points are multiplied with a monetary coefficient which id identified on monthly basis (that is, additional payment coefficient in a term) and performance-based additional payment is found this way. This coefficient is found at facilities by dividing total amount of revolving funds into the addition of hospital's net performance points and in institutions by dividing total amount of revolving funds into the addition of provincial net performance points.

As required by law, maximum 40 % of revenues could be distributed to personnel as additional payment (20 % is allocated for the Treasury, SSCPA (Social Services and Children Protection Agency) and the Ministry of Health's Central Organization); 40-80 % is allocated for administrative operational costs. Institutional performance coefficient should be 1 so as to distribute 40 % of a particular term's revenue. As a result of performance coefficient's decrease from 1 to 0, the amount of additional payment also decreases from 40 % to 0 %. So, a hospital's institutional performance also affects the amount of additional payment which employees will receive individually.

Performance-based additional payment has never reached 40 % which is the maximum amount. Following table presents the amount of additional payment and its share in hospital total accrual by years.

Table 5.4: Performance-Based Payment by Years, 2007

YEAR	TOTAL ACCRUAL(YTL) OF HOSPITALS	ADDITIONAL PAYMENT (YTL)	RATIO (%)
2000	608.000.000	114.000.000	19
2001	1.024.000.000	226.000.000	22
2002	1.961.000.000	431.000.000	22
2003	2.919.000.000	523.000.000	18
2004	**4.827.000.000**	**1.275.000.000**	**26**
2005	7.542.000.000	2.157.000.000	29
2006	9.480.762.776	2.923.134.053	31

Source: Department of Strategy Development, 2007

As the table is showing us, performance based payment never exceeded 32 % of the total accrual of hospitals even the law is allowing to distribute the bonus up to 40 %.

DISCUSSION AND CONCLUSION

6.1. Result of Study

I believe that in discussion part, emphasis should be put on two aspects. The first aspect focuses on what is targeted by the HTP, which was put into implementation in 2003, and the capacity of human resources, which is required to achieve these targets, while the second aspect focuses on the contribution of such reform efforts to development of human resources.

As previously discussed, the HTP was designed to improve the existing health care system. HTP is rather a comprehensive, client (patient)-focused and ambitious project. The project targets to improve primary health care services on one hand and promote the quality of curative services on the other hand. Restructuring of the Ministry of Health, investments in health information system and establishment of universal health insurance, which aims to protect service users from an additional financial burden, are other points of consideration within the scope of this program.

HTP, like other health reforms, have three primary goals; the first one is to improve health status, the second one is to enhance financial protection and the third one is to ensure patient's satisfaction. In the very beginning, physical infrastructure of the country - even if the budget is adequate, should be clearly analyzed and it should be seriously discussed how the increasing demand, access and quality of care could be met at the end of the reform and if the current manpower is adequate to meet them in various aspects. When Turkey is compared to other countries such as Mexico, Poland, Romania, the South Korea etc., which have the similar socio-economic and geographical characteristics as Turkey, it is evident that the number of health care personnel per a certain population is lower in Turkey (OECD Health Data, 2006 and WHO World Health Statistics 2007).

Table 6.1: Total Hospital Visits per Capita by Years

Years	2002	2003	2004	2005	2006	2007
Total Visits	2.6	2.8	3.2	4.1	4.6	5.4

Source: Directorate General of Curative Services, 2003-2008 Statistics

As presented in the Table 6.1, hospital visits per capita was noted 2.6 in 2002 and was raised to about 5.4 in years. It is considered that a variety of efforts for easier physical access and access to health care services, patient's satisfaction, easier and more frequent use of health care services thanks to the universal coverage, better qualified delivery of health care services, devolution of power in management and decentralization have all influenced the number of total per capita visits to hospitals.

When examining domestic human resources, considering merely the number of physicians or nurses per a certain population could lead to poor policy decisions. Even if health care personnel are quantitatively adequate in total, the projects could be severely collapsed if other factors such as geographical distribution, work-life balance, age, gender and migration are not respected. To handle Turkey from this perspective, it could be

observed that the country has problems in total number of health care personnel and geographical imbalance, and individuals attach further importance to work-life balance as they have better economic satisfaction. Concerning the factor of age, employees, who obtain the right of retirement, will get retired in the next 10-12 years and immediate replacement of retirees with new personnel is thought to be somewhat challenge. Concerning sex and migration, no severe problems exist in Turkey at the moment. Yet, it is considered that these factors could turn out to be problematic in the future, and especially when the right of free movement for professions is obtained within the framework of Turkey's full membership to the European Union, if no measures are taken from now onward.

Besides, the epidemiological atmosphere is changing, the population is aging slightly but the period of aging will be completed in a shorter period in comparison with other developed countries, and chronicle diseases, in addition to communicable diseases, are becoming serious problems in the country. Apart from these, Turkey is a country, which is geographically located in the first-degree seismic zone. Therefore, the additional workload due to the frequent seismic events and the major earthquake that is probably to damage Istanbul deserve further consideration with regards to the probable loss of health and non-health labor force and their compensation, as well. On the other hand, technology and procedures are evolving rapidly. Individuals' demand for health and its nature is also continuously rising, which challenges governments to reduce or at least to control the public expenditures for health and to enhance the quality of health care services. In addition, the fact that every other thing is becoming more explicit and transparent all over the world, together with the facilitated comparison and communication between countries, raise the expectations of the society, too.

No matter which is adopted of two approaches (Bossert, 2007) - "need approach" and "market approach" - the reforms will finally give rise to demand on new professional groups, quantitative and qualitative increase and new branches and fields of health education finally. Yet, it is clear that governments usually overlook this point when designating reforms in health care. Yet, they are all the activities, which could be conducted only by human being's capability and labor force, and the target of health reforms, at the end point, not only has to be "patient-oriented" but also "qualified manpower-oriented". Otherwise, many of the projects and reform activities would result in disappointment and failure. Moreover, it is required to raise national awareness in this subject and to meet the rising demand for work force in a well-planned manner, which points out to the need for a well-designed strategic planning, adequate infrastructure and source allocation. Severity of the case could be better understood considering the fact that training of a physician takes 6 to 10 years on average and the increase in the number of medical students will create its effects only after 10 years.

Turkey performed a series of interventions with the aim of both achieving health targets as planned under the HTP and overcoming the problem of labor force restraint. One of the outstanding interventions is giving foreign physicians the right to practice medicine in Turkey. Since health care services are provided by civil servants as ruled by the law, physicians have to be the citizens of Turkish Republic. However, a legal amendment, which permitted foreign professionals to practice medicine in Turkey, was passed in Turkish Grand National Assembly in order for the quantitative shortfall in labor force be

eliminated in short time. This amendment aims to make use of the labor force, which is likely to be developed by approximately 4000 practitioners, who have has medical education in Turkey from neighborhood countries and do not consider going back to their home countries. Moreover, the amended law is expected to facilitate internationally respected and famous physicians, who practice in other countries, to visit Turkey for a certain period and to offer health care services not only to Turkish citizens but also to foreign nationals and tourists, who might prefer to have cost-effective surgical operations in Turkey instead of traveling to other developed countries. Like other countries, it was planned that the Higher Education Council (HEC) in Turkey selected eligible foreign physicians through a language and scientific exam in order for them to practice medicine in Turkey. However, the President at that time rejected this amendment, which had to be approved by the President for enforcement. The President at that time rejected the amendment because health care services are classified as public service in Turkey and they should be provided by civil servants. It is estimated that the amendment will be brought to the agenda again in the new President's term of office.

As another option for solution, it was discussed to increase the quota of students at Faculties of Medicine but the Ministry of Health and the HEC had disagreement in the last 6 years. HEC stated that the problem did not occur from politics but from geographical distribution. HEC is an independent agency and in constitutional terms, preserves the right to establish and close down new departments and branches at universities, as well as reducing or increasing the quota for students. Other Ministerial units could only give recommendations to the HEC. Apart from that rationale, the HEC discussed that the infrastructure of universities was not adequate to meet such demand and training well-qualified personnel was also more important than training personnel big in number.

Table 6.2: Number of Academicians and Freshmen at Medical Schools by Years, 2007

	1986	**1996**	**2006**
Population of Turkey (million)	51	63	73
No of Lecturers (Prof+Assoc.Prof+Assis.Prof)	1.875	3.975	9.020
No of Assistants	3.274	5.304	10.185
No of Freshmen	5.231	4.763	4.697

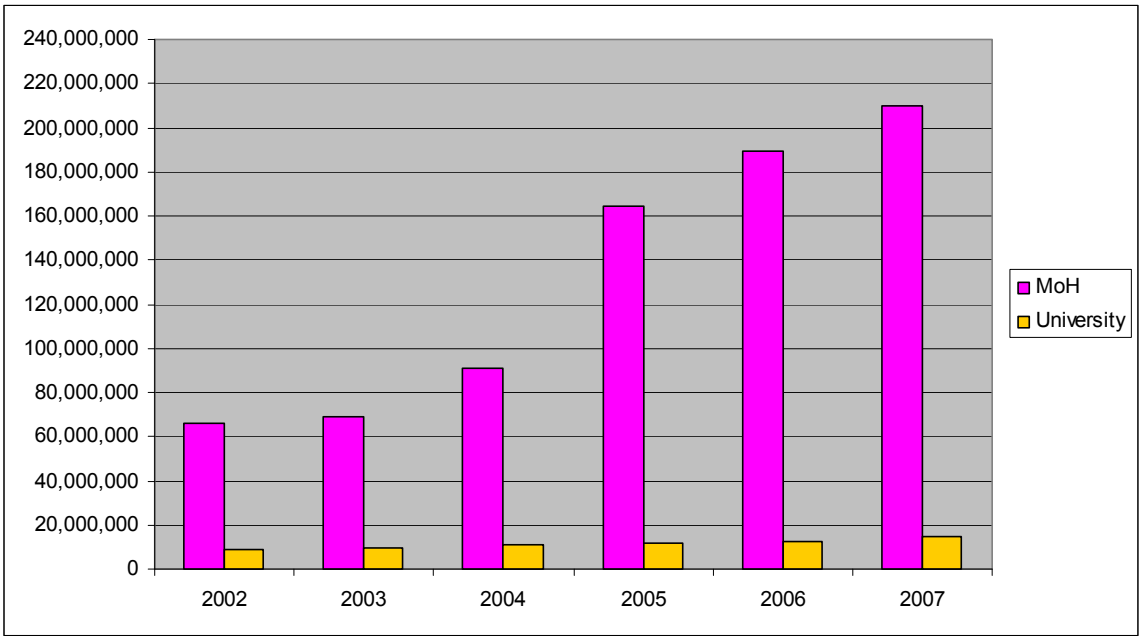
Source: Higher Education Council, 2007

Nevertheless, the above table 6.2 indicates that the number of students was decreased 10 % while the number of academicians was increased about 450 % in the last 20 years. After the HEC Chairman's seat was replaced in 2007, the HEC and the government came into agreement and declared that the annual number of freshmen would be raised to 6.500-7.000 at medical schools. As discussed previously, this change in student's quota will create its effects only after 10 years from now on. From another point of view, the shortage of nursing personnel, which is the other side of the coin and more severe than the shortage of physicians, is not discussed adequately. At the moment, only 1 nurse is available per 1 physician in Turkey but the case is different in developed countries, where 3 to 4 nurses are available per 1 physician. If plans are made to provide health care with the understanding of "team play", to alleviate work load of physicians and to offer better

qualified health care services, then the number of nurses should be raised and it should be minimum two nurses per a physician in middle run.

In the framework of the MoH's efforts to achieve the HTP goals with limited human resources, the third intervention is development and implementation of the performance-based payment (PBP) system. Promoting the productivity of physicians, the PBP aims to meet the high demand that occurs from easier access to health care services. As could be seen in the below Figure 6.1, the annual number of consultations at the MoH hospitals has increased 300 % since the PBP system was first put into effect in 2004. At public and university hospitals where the PBP system is not implemented, however, the increase noted has remained limited (70 %) in last 5 years.

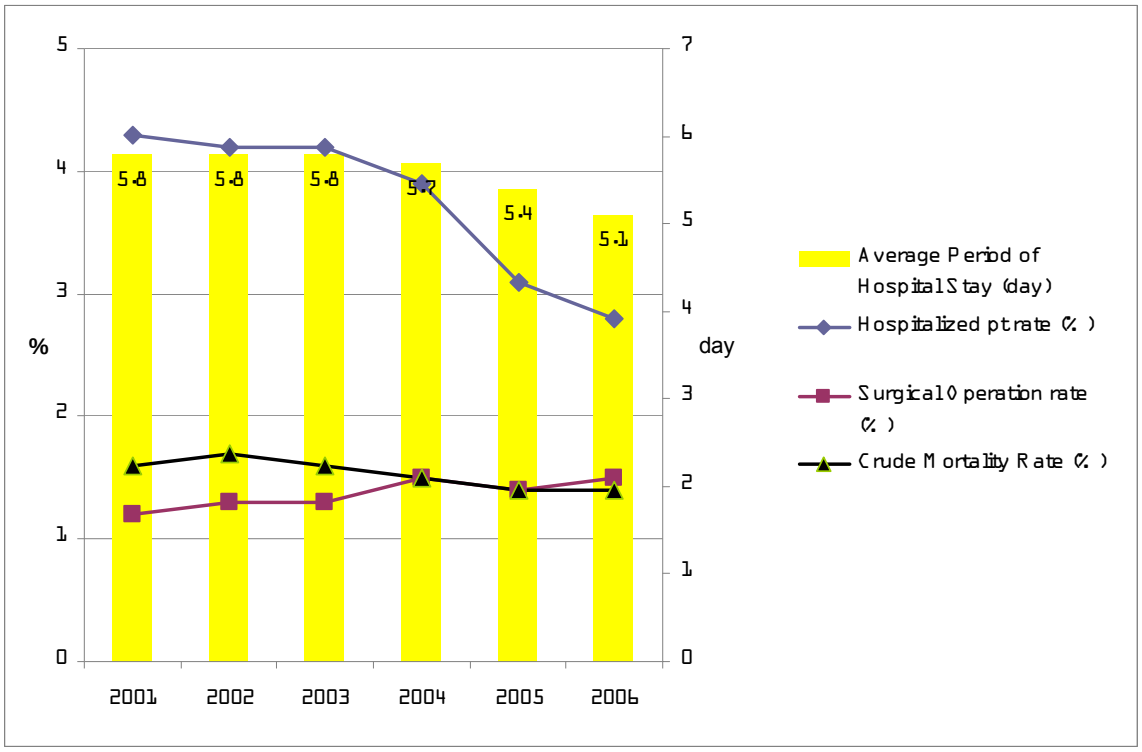
Figure 6.1: Number of Consultations at the MoH and University Hospitals by Years



Sources: Directorate General of Curative Services, 2003-2008 Statistics

Although some people allege that university hospitals (tertiary level healthcare) and public hospitals (secondary level healthcare) are positioned at different levels of healthcare, individuals could get health care services from any health care facility at any level they wish because the referral system is not effective in Turkey. University hospitals, in addition to producing health care services, also train physicians (undergraduate and residency) but the MOH-affiliated Training and Research Hospitals train also physicians (residency) similarly. Therefore, no matter what causes are considered, a sound explanation seems difficult for the case. Yet, university hospitals are affiliated with the HEC and the HEC's implementations may overlap with the government's national plans and policies at times.

Figure 6.2: Evaluation of the MoH Hospitals by the Selected Indicators

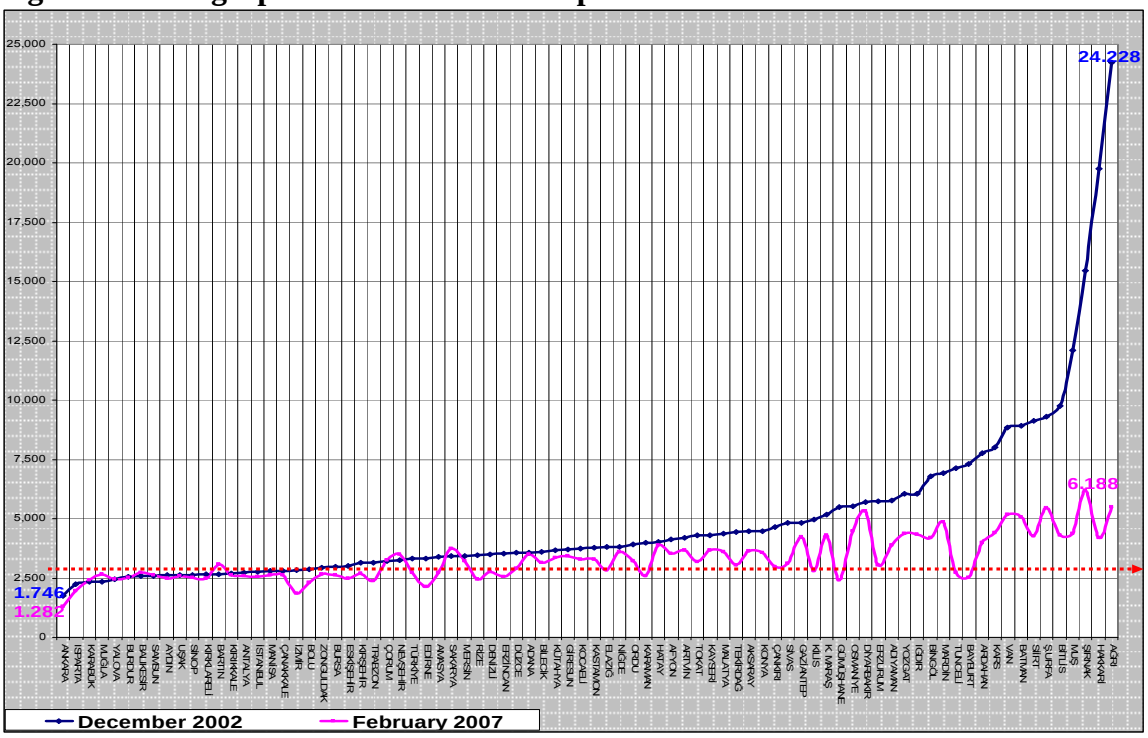


Sources: Directorate General of Curative Services, 2003-2008 Statistics

Looking at some selected hospital indicators as presented in the Figure 6.2, the average period of hospital stay (on day basis) has shortened, surgical operation rate has slightly risen but crude mortality rate has had a regular decrease and the hospitalized patient rate has decreased, as well. They all indicate that the PBP system both fosters productivity and improves the cost and quality of hospital care services. Increased demand for surgeries could be interpreted as "unmet demand" because access to services has been facilitated recently if to compare with the past. Probable factors need to be further analyzed. PBP has also to target the quality of care (Conrad et al, 2006; 32:443-51) in the care services and payment should be not only individual or institutional performance but also some of the selected quality (Epstein, 2004;350:406-10) indicators. Unfortunately, the system did not introduce an implementation for measurement and improvement of clinical quality. Still, decrease in crude mortality rate could be considered an indirect quality indicator positively even there is 300 % increase in services.

Apart from all these, the PBP also proved to be a useful instrument to solve the problem of geographical misdistribution: personnel have started to prefer working in less preferred areas to get higher "bonus payment", respective details of which could be found in the following Figure 6.3:

Figure 6.3: Geographical Distribution of Specialists in 2002-2007 Period

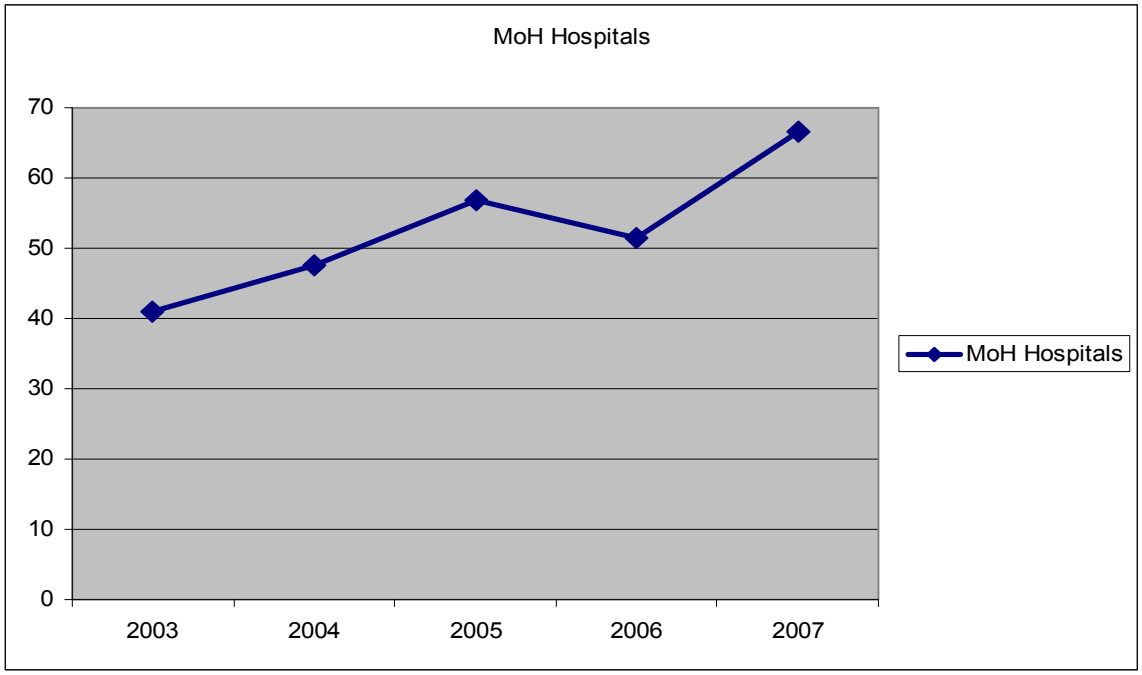


Source: Akdag, R., Budget Presentation for the Fiscal Year 2007

As clear in the above figure, the last ranking province had one specialist per about 24.000 population in 2002 while one specialist was noted per 6.000 population in 2007, the post-PBP period.

Regarding the effect of said developments on patient's satisfaction, no national survey on patient's satisfaction with hospital care is available now. Institutional performance evaluation, which has been integrated with the PBP system, will certainly create positive effects on patient's satisfaction. Nonetheless, since 2003, Turkish Statistical Institute (TURSKTAT) has conducted "Life Satisfaction Survey"s in the European Union's "Eurobarameter" standards, which is similar to the "Happiness Survey"s in the E.U. Results of the survey is demonstrated in the below Figure 6.4.

Figure 6.4: Level of Satisfaction in the MoH Hospitals



Source: Life Satisfaction Survey 2003-2007, TURKSTAT

As apparent in the above Figure 6.4, services users of the MoH hospitals have become more satisfied with health care services that they receive. Satisfaction with the MoH hospital services has risen from 40 % to 65 % but such increase can not be associated only with the PBP. One should keep in mind that some other factors might also have had a role in the increase noted. Still, patient's right to choose physician, establishment of patient's rights departments at hospitals, intra-mural and extra-mural competition etc. could be regarded major factors. Otherwise, it would be challenging to maximize satisfaction permanently. In this respect, results of these surveys - even limited- could give some tips on the case.

Pertaining to the effects of health projects such as the HTP on human resources, in-service trainings could be given example for successful steps, which are taken to raise awareness on the subject, design a specific program and build capacity. Under the HTP, the MoH, for the first time in its history launched to prepare a Strategic Plan for Human Resources and in this context, in-service training programs were put into implementation in order to develop projections for the year 2023 and train well-qualified and competent health care personnel, who are strongly needed for delivery of health care services as desired. In that period, the School of Public Health was founded, which is a semi-autonomous agency to coordinate all of these tasks and responsibilities, as well as projects and programs.

6.2. Conclusion

This point implies that reforms have influences on human resources as human resources have influences on reforms, too. To sum up, it could pose a risk to launch a new program or project without considering the aspect of human resources. In addition to physical infrastructure, budget, sustainability and legislations, quantitative and qualitative aspects of human resources should be respected, as well. Each country should respect both quantity and quality of human resources, which is peculiar to itself. Each country, on the other hand, should discover her specific problem in the context of her specific problems. A solution or an approach, which works in a country, may not be that successful and helpful in the other. Unfortunately, limited evidence is available on this subject and further researches are needed. Like other countries, also Turkey, in the context of her sources and opportunities, has developed some options for her problems, taken successful steps and experienced failures at times, and had to postpone some of the approaches and solutions for some time. Yet, the PBP has improved physcians' productivity in recent years and has proved to be a solution in short-run, which could serve as an example especially for upper-middle income countries. It would be useful to analyze the system in-depth and examine its effects on different levels of care and groups.

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