

Health Workforce Policy in Turkey

Recent Reforms and Issues for the Future

Marko Vujcic, Susan Sparkes, Salih Mollahaliloglu

July 2009



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Health, Nutrition and Population (HNP) Discussion Paper

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Abstract:

The health status of the Turkish population has improved significantly over the past few decades, accompanying improvements in the scale and functioning of the health-care system. Impressive progress has been made in expanding financial protection to the population through expansions in the breadth and depth of health insurance coverage combined with service delivery reforms to improve equity in access to health services. This note summarizes the main developments in the area of health workforce policy and how these have affected key health workforce performance outcomes. Specifically, the main objectives are to (i) Summarize trends in key health workforce outcomes (ii) Compare health workforce outcomes in Turkey to OECD and other countries (iii) Discuss the impact of recent reforms in the health sector on health workforce outcomes and (iv) Highlight key health workforce policy issues for the future.

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An earlier draft of this paper was prepared as a background policy note for the joint World Bank/OECD review of the Turkish health system (Sarhani Chakraborty, TTL). The authors wish to thank Minister Dr. Recep Akdag, Undersecretary Dr. Nihat Tosun and Deputy Undersecretary Dr. Sabahattin Aydin from the Ministry of Health in Turkey for their support. The authors also thank Dr. Mustafa Kosdak and Sirin Ozkan for their assistance in collecting and analyzing data and information for several sections of the report. The paper benefited from comments from George Schieber, Sarhani Chakraborty, Andreas Seiter from the World Bank and Jeremy Hurst from the OECD. Emiliana Guanawan provided outstanding administrative support.

Keywords: human resources for health, health workforce, health systems

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PREFACE

The health status of the Turkish population has improved significantly over the past few decades, accompanying improvements in the scale and functioning of the health-care system. Impressive progress has been made in expanding financial protection to the population through expansions in the breadth and depth of health insurance coverage combined with service delivery reforms to improve equity in access to health services. Health expenditures have also increased in the past decades commensurate with income increases. Nonetheless, health policy in Turkey faces important challenges in further improving the health status of the population and enhancing the efficiency of the system.

This note summarizes the main developments in the area of health workforce policy and how these have affected key health workforce performance outcomes. Specifically, the main objectives are:

- Summarize trends in key health workforce outcomes
- Compare health workforce outcomes in Turkey to OECD and other countries
- Discuss the impact of recent reforms in the health sector on health workforce outcomes
- Highlight key health workforce policy issues for the future

PART I – BACKGROUND ON THE TURKISH HEALTH SYSTEM REFORM

The Turkish health system is in transition. As a part of the Government's Health Transformation Programme, (HTP) institutional and organizational reforms are underway that aim to eliminate fragmentation and duplication in the health financing and delivery systems and to assure universal access to health insurance and health services.

Prior to 2003, the Turkish health system was fragmented with large disparities in outcomes. It was characterized by the presence of several different public agencies funding and providing health care, some vertically integrated and others relying on contractual relationships. They served different parts of the population leaving significant gaps in coverage. Social security institutions covered salaried workers in the formal sector, as well as the self-employed and active and retired civil servants. A government-financed programme covered the low-income uninsured (the Green Card programme). Informal sector workers account for about 25% of the population and only some were covered as dependents. Although the majority of the population was covered through one of the health insurance schemes, including the Green Card, and although all citizens were eligible for free primary and emergency hospital care, there were serious problems on the delivery side, which meant that even insured persons did not have adequate access to timely health services. The Ministry of Health (MoH) operated a very large network of preventive and primary health care centers and hospitals, while one of the social security agencies managed its own network of facilities. There also existed private facilities, many of which were not effectively regulated.

There were regional and urban-rural disparities in utilization of health services, due in part to the difficult access and high cost of health services in rural areas. Allocative efficiency of health services was poor, with the majority of health expenditures dedicated to more costly inpatient and outpatient hospital-based services instead of preventive and primary health care services. Demand for preventive and primary health care services among the population was very low, partially driven by the perceived low quality of care in primary health care facilities and the public sector more generally. Therefore, the majority of outpatient visits occurred in hospital settings. Despite the establishment of a four-tiered integrated health services delivery system, the referral system did not work and patients routinely bypassed primary health care to seek services at higher levels of care.

The Government's HTP has been under implementation since 2003. Its objective is to make the health system more effective by improving governance, efficiency, user and provider satisfaction and long-term fiscal sustainability. Key elements of the HTP include: i) establishing the MoH as a planning and supervising authority; ii) uniting all citizens of Turkey under a single public health insurance institution through implementation of the Universal Health Insurance (UHI);, iii) expanding the delivery of health care and making it more easily accessible and user-friendly; iv) improving the motivation of health personnel and equipping them with enhanced knowledge and skills

v) setting up educational and scientific institutions to support the system; vi) securing quality and accreditation systems to encourage effective and quality health care services; vii) implementing rational drug use and management of medical materials and devices, and viii) providing access to reliable information for decision-making, through the establishment of an effective Health Information System.

The implementation of the HTP has resulted in significant changes in the health system. The majority of public hospitals in Turkey, including those previously managed by a social security institute, are now integrated under one umbrella (the MoH), thereby resulting, in principle, in the separation of the purchaser of health services from the provider. As a result of the reforms, the various social security institutions are now integrated under one institution, the Social Security Institute (SSI), and share common beneficiary databases, claims and utilization management systems. The benefits package across the various health insurance schemes is unified and provider payment mechanisms are shifting away from retrospective, fee-for-service systems towards prospective payment systems incorporating pay-for-performance. With the implementation of the “Social Security and Universal Health Insurance Law,” planned for October 2008, a single-payer system will be established for public patients in Turkey. An integrated primary health care system (based on the model of family medicine) is under implementation in 23 out of 81 provinces of Turkey, and public hospitals have been given more autonomy over resource allocation while simultaneously expected to operate under a more rigorous MoH accountability framework.

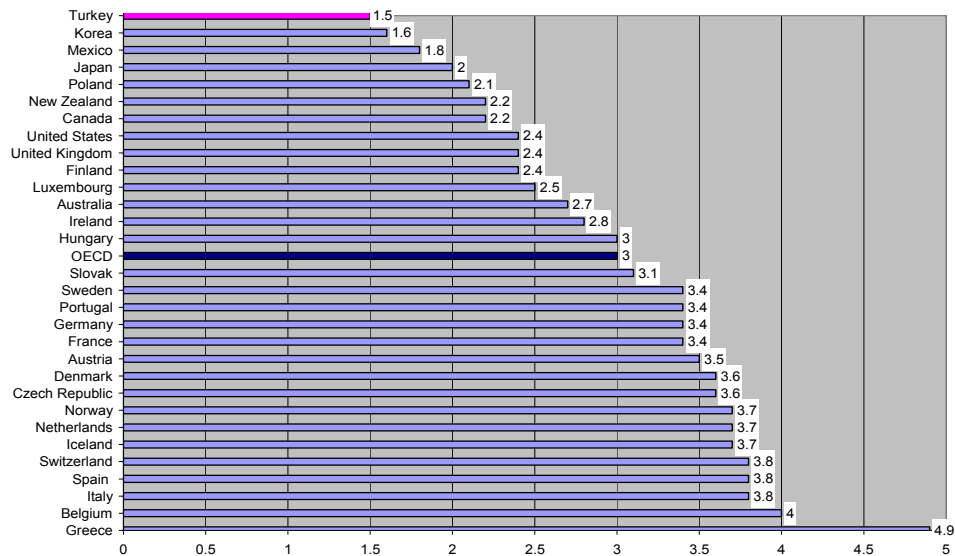
PART II – HEALTH WORKFORCE OUTCOMES IN TURKEY

OVERALL STAFFING LEVEL

In comparison to all other OECD member countries, Turkey has the lowest number of physicians and nurses per capita. In 2005, Turkey had 1.5 physicians per 1000 population, in contrast to the OECD average of 3.0 (Figure 1). Korea and Mexico had slight similar numbers of physicians per capita, at 1.6 and 1.8 respectively; however, all other countries were either at or above 2 physicians per capita in 2005.

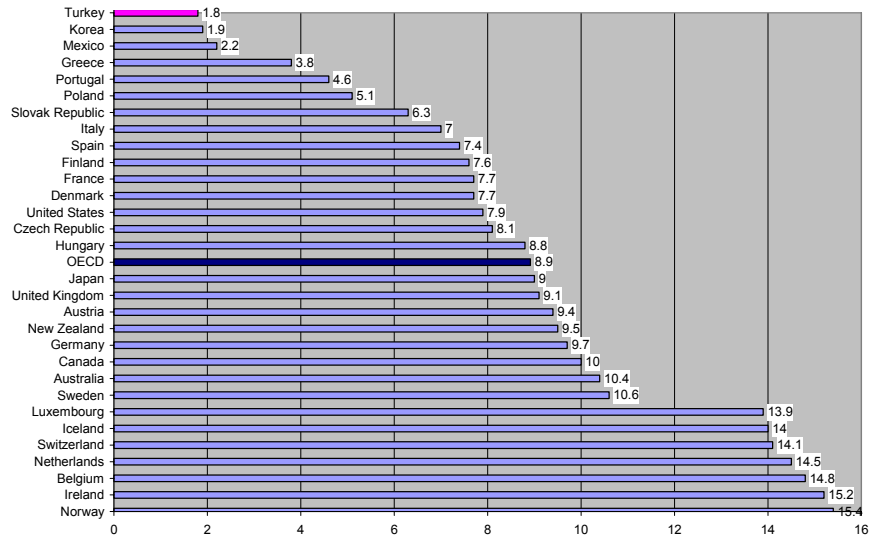
In terms of nurses, in 2005 Turkey had 1.8 per 1000 population, which is much lower than the OECD average of 8.9 per 1000 (Figure 2). Again Korea and Mexico are the closest comparators, at 1.9 and 2.2 respectively, but all other OECD countries had 3.8 or above nurses per capita.

Figure 1: Practicing physicians per 1,000 population, 2005 or latest available year



Source: OECD 2008.

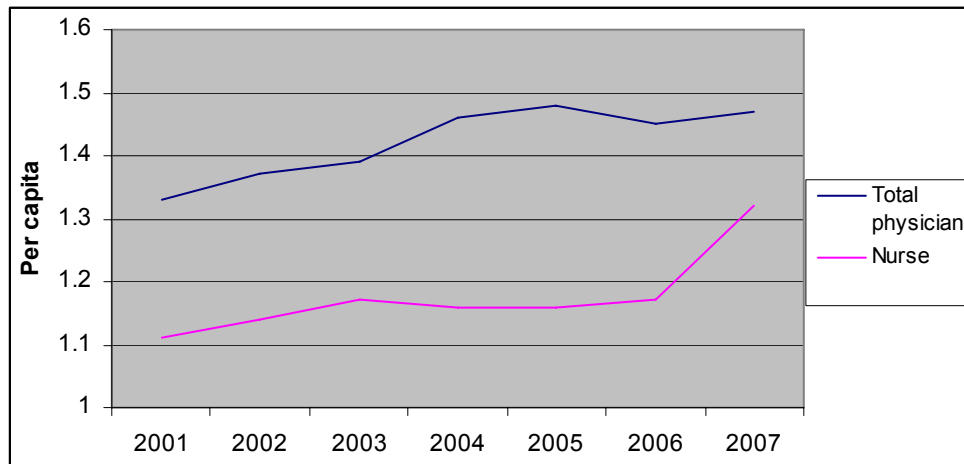
Figure 2: Practicing nurses per 1,000 population, 2005 or latest available year



Source: OECD 2008.

Turkey has been working to address the low level of health workers per capita in relation to other OECD countries. Total physicians per capita increased from 1.33 in 2001 to 1.47 in 2007. Additionally, the number of nurses increased between 2001 and 2007, from 1.11 to 1.32 (Figure 3). These increases show that Turkey is making significant progress in scaling up the health workforce to address the relatively low levels of health workers. However, it appears that it will take many more years of this increasing trend to reach OECD averages.

Figure 3: Physicians and Nurses per Capita, Turkey 2001 – 2007



The increase in the number of physicians is accounted for entirely by specialists. General practitioner staffing levels actually went down. In decomposing this trend in total physicians and nurses per capita we see that the number of general practitioners per capita has actually decreased during this time period, whereas both specialists and

residency assistants increased (Table 1). Given the focus on family medicine, the tendency towards specialization is a concern, as it can lead to a relative skill mix imbalance. As will be discussed later, this is being addressed through the training program for family medicine practitioners. Furthermore, all categories of health workers saw an increase in numbers per capita between 2001 and 2007, except for general practitioners.

Table 1: Number of health personnel per 1000 population by year

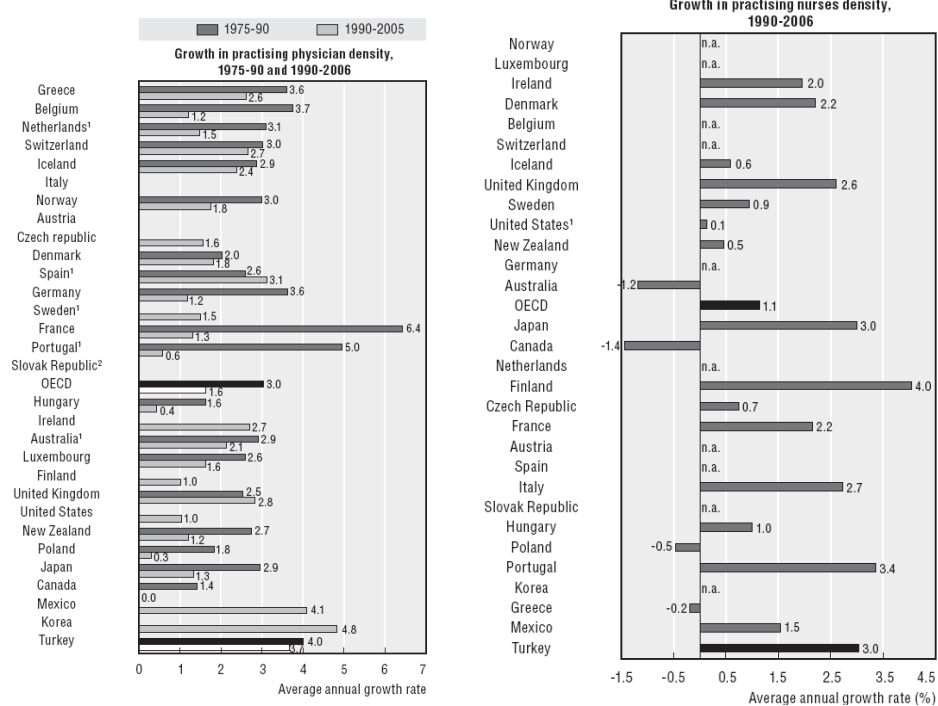
	2001	2002	2003	2004	2005	2006	2007
Specialist physician	0,61	0,63	0,66	0,75	0,74	0,74	0,75
General practitioner	0,53	0,55	0,53	0,49	0,51	0,46	0,46
Residency assistant	0,18	0,19	0,20	0,22	0,24	0,25	0,25
Total physician	1,33	1,37	1,39	1,46	1,48	1,45	1,47
Dentist	0,23	0,25	0,26	0,26	0,26	0,25	0,25
Pharmacist	0,34	0,32	0,34	0,35	0,30	0,33	0,35
Health officer	0,67	0,71	0,72	0,81	0,81	0,73	0,95
Nurse	1,11	1,14	1,17	1,16	1,16	1,17	1,32
Midwife	0,60	0,60	0,59	0,60	0,60	0,60	0,64

Source: Department of Strategy Development Health Statistics, 2001-2005, Directorate General of Personnel, 2006 and December 2007 studies, TURKSTAT demographic projections.

* Non-active personnel included.

Physician and nurse densities have grown twice as quickly in Turkey as in the OECD. While Turkey's health worker density is still well below OECD levels, from 1990 to 2005 it increased at a much faster rate than most OECD countries (Figure 4). As expected, nurse density has not been growing as quickly, furthermore the nurse to physician ratio has decreased in the past 15 years (Figure 6).

Figure 4: Growth in practicing physician and nurse density



Source: OECD and World Bank 2008.

Compared to countries with similar GDP and health spending level, Turkey has slightly more doctors per capita but less health workers per capita. Figure 5 and 6 summarize staffing levels for countries of similar GDP levels and health spending levels. Turkey's overall staffing levels per capita are lower than its income comparators. Similar trends are observed in looking at Turkey's health worker and doctor supply per capita in relation to countries with similar spending levels (Figure 6). Turkey fares slightly worse than the average in relation to the total number of health workers per capita, but slightly better than average on doctor supply.

Figure 5: Health workers and doctors per 1000 population versus GDP, 2000-2006

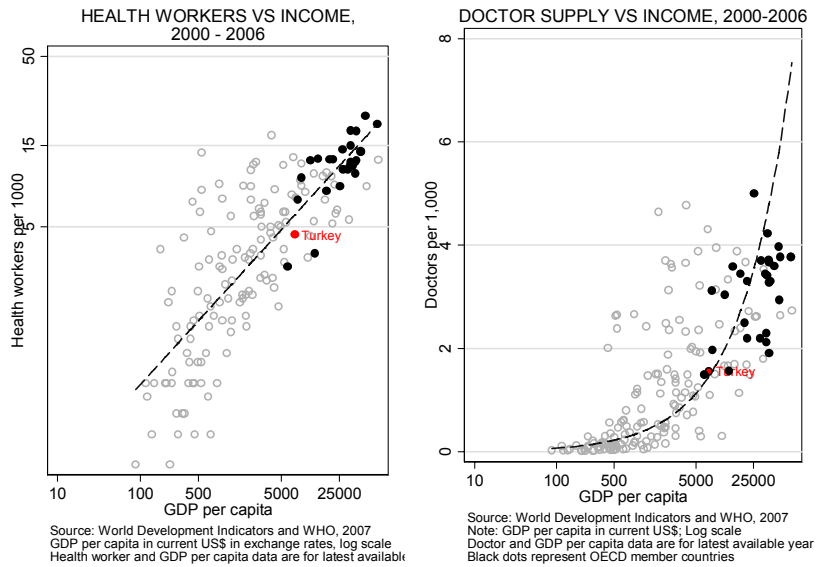
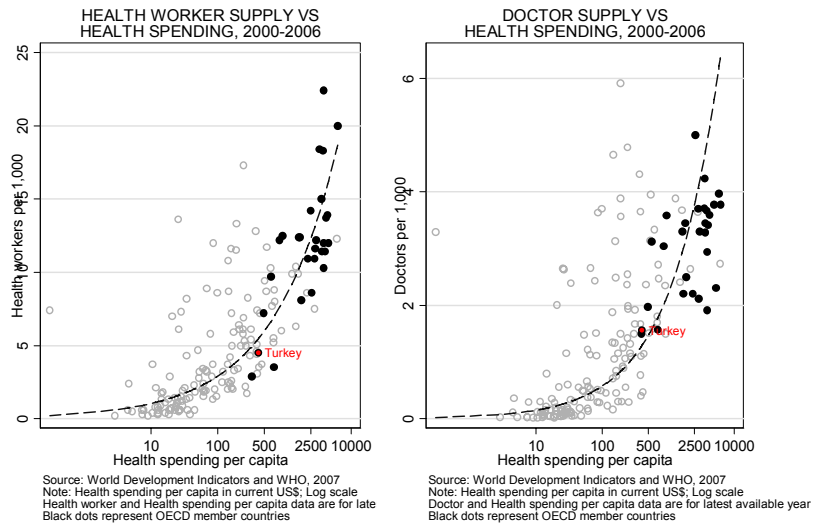


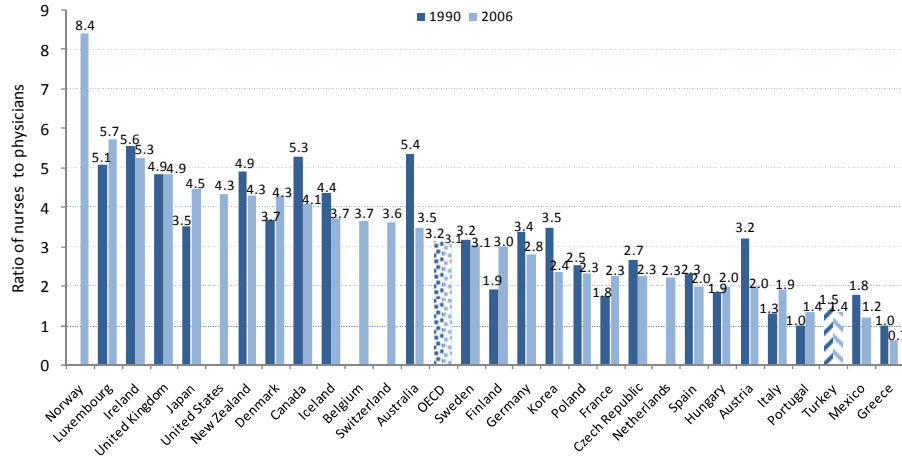
Figure 6: Health workers versus health spending, 2000-2006



SKILL MIX

Relative to OECD countries Turkey has a very low nurse to physician ratio (Figure 7). In 1990 the ratio was 1.5 and in 2006 it has actually decreased to 1.4 nurses per physician. This is in comparison to the OECD average of 3.2 in 1990 and 3.1 in 2006. This shows a relative imbalance in the total number of nurses in Turkey in relation to the total number of physicians.

Figure 7: Ratio of nurses to physicians, Turkey and other OECD countries, 1990 to 2006



Source: OECD and World Bank 2008.

There is recent evidence that the increase in the doctor to nurse ratio is reversing. Since 2005 the ratio has been decreasing. However, the large decrease may be due to a reclassification of physicians and specialists. Table 2 shows that after increases in the physician to nurse ratio, from 1.2 in 2001 to 1.28 in 2005 the number decreased in 2007 to 1.11. Table 2 also confirms the steady increase in the specialist physician to general practitioner ratio from 2001 to 2007. In 2007, there were more than 2 specialists for each general practitioner. Given the increased importance of the family physician system, this trend will have to be addressed through targeted expenditures and training. The trend of physicians to nurses and midwives ratio has remained relatively constant between 2001 and 2007.

Table 2: Proportion of health employees to each other by years

	2001	2002	2003	2004	2005	2006	2007
Specialist							
Physician/General Practitioner	1,48	1,50	1,64	1,98	1,92	2,14	2,14
Physician/Nurse	1,20	1,20	1,19	1,26	1,28	1,24	1,11
Physician/Nurse + Midwife	0,78	0,79	0,79	0,83	0,84	0,82	0,75

Source: Department of Strategy Development Health Statistics, 2001-2005, Directorate General of Personnel, 2006 and December 2007 studies,

* Assistants are included in specialist physicians.

The analysis shows that compared to other OECD countries, Turkey has two types of skill mix distribution imbalances – those between specialists and general practitioners and those between nurses and physicians. Only half of all practicing physicians are general practitioners, which include 17,000 assistant physicians who receive specialty training and 10,000 of which serve in hospitals and emergency services (Republic of Turkey 2007). This means that only one-fourth of all physicians in Turkey work actively in primary health care. Furthermore, despite the increased focus on family medicine, approximately only 3 percent of the total physician labor force was classified as family physicians in 2007 (Republic of Turkey 2007).

The relatively low nurse density rate suggests that some clinical tasks that could be handled by a nurse are conducted by physicians, leading to a relatively inefficient use of skills. Furthermore, Turkey's relatively high infant mortality rate points to a need to increase the emphasis on primary health care and nurses who provide these services (Republic of Turkey 2007).

GEOGRAPHIC DISTRIBUTION

The unequal geographic distribution of health workers in Turkey is a recognized problem by the MoH. There are two components to geographic distribution – across provinces and between urban and rural centers. Figures 8, 9 and 10 show the change in distribution of physicians, nurses and specialists among provinces between 2002 and 2007. While large differences in staffing levels exist between provinces, they have decreased in recent years. In 2007 the highest to lowest ratios were: 4.5 to 1 for specialists, 2.7 to 1 for GPs, and 4.3 to 1 for nurses/midwives.

Table 3 shows the difference in distribution of health personnel between the highest density province and the lowest density province. Inequality appears to be largest in the distribution of specialists; however the MoH has made a concerted effort to improve this trend, especially amongst internal medicine, obstetrics and gynecology, pediatrics and general surgery (Mollahaliloglu et al 2007). The variation in distribution of general practitioners appears to be the lowest.

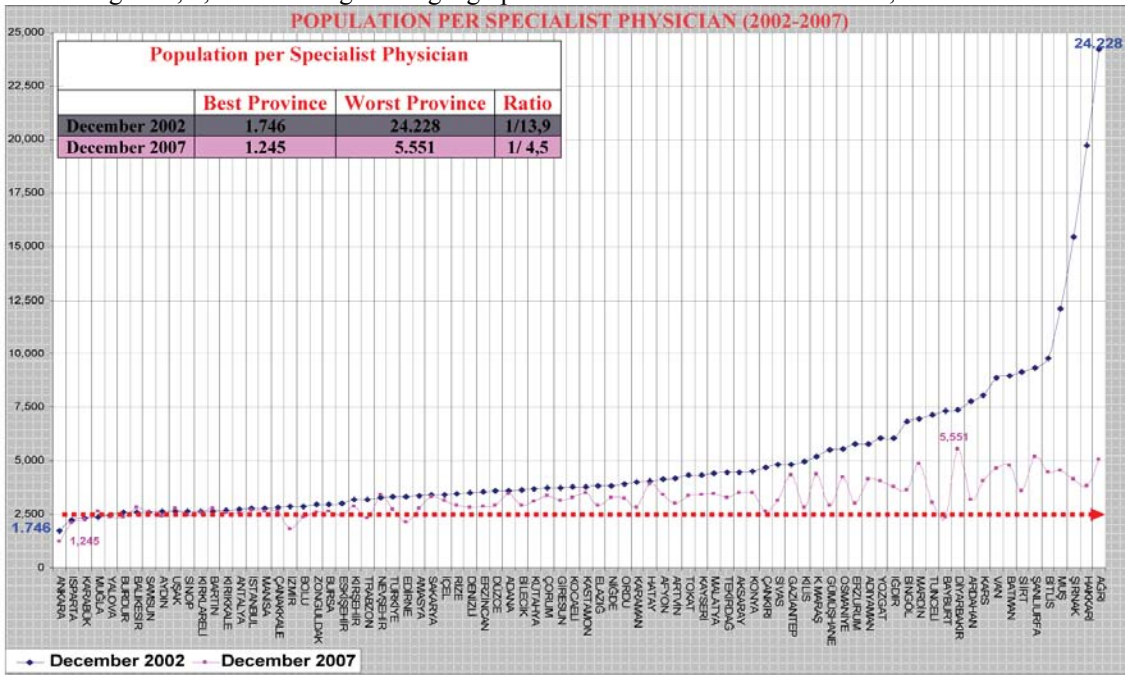
Table 3: Distribution of personnel by provinces in the best and worst provinces, per 1000 population, 2007

	Best province	Worst province	Turkey in total
Specialist physician	2.57 (Ankara)	0.19 (Sirnak)	0.99
General practitioner	0.62 (Izmir)	0.28 (Istanbul)	0.44
Total Physician	3.01 (Ankara)	0.51 (Sirnak)	1.43
Nurse	2.34 (Trabzon)	0.42 (Sirnak)	1.31
Midwife	1.93 (Tunceli)	0.25 (Sirnak)	0.65

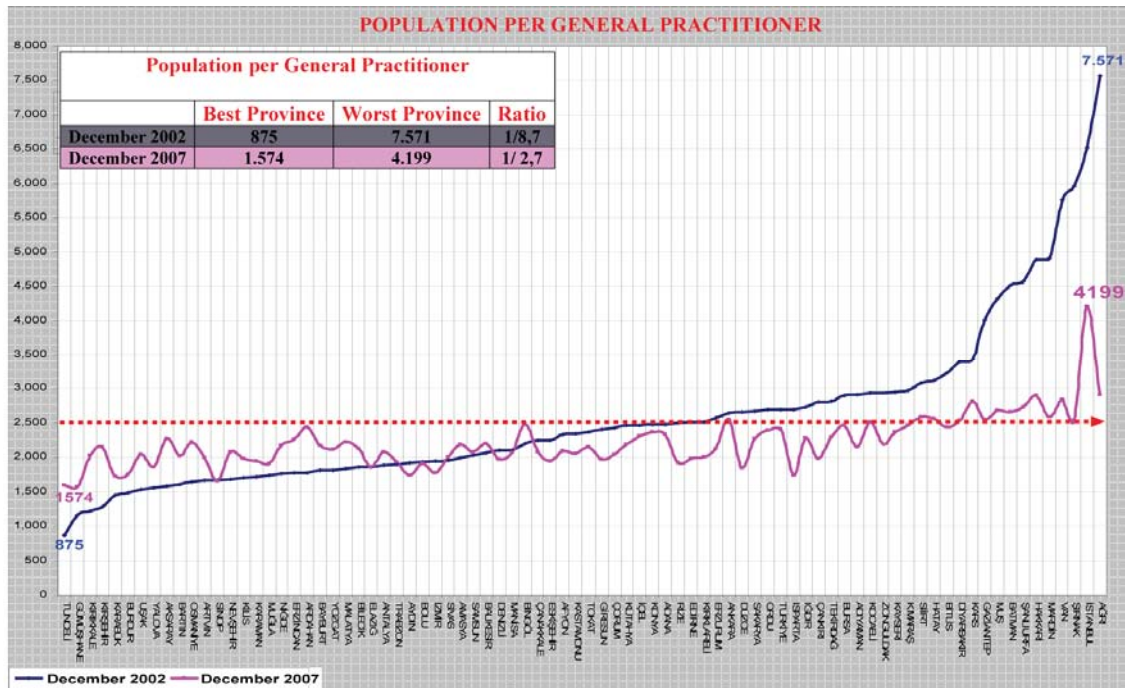
Source: Directorate General of Personnel, 15 December 2007

A large part of the variation can be explained by lower living standards and economic conditions provinces. It has been found that relative densities of health workers are highly correlated with provincial levels of economic development. A simple calculation showed that 50 percent of the variation in specialists and GP density is accounted for by provincial GPD per capita, and accounted for 30 percent of the variation in nurse/midwife variation (Ministry of Health Turkey 2007). While these calculations are not assigning causality, they do reveal that differences in economic development are correlated with the distribution of health workers in Turkey. There also seem to be intra-urban inequalities; however the evidence is not well-documented.

Figure 8, 9, and 10: Progress in geographical distribution of health workers, 2002 to 2007

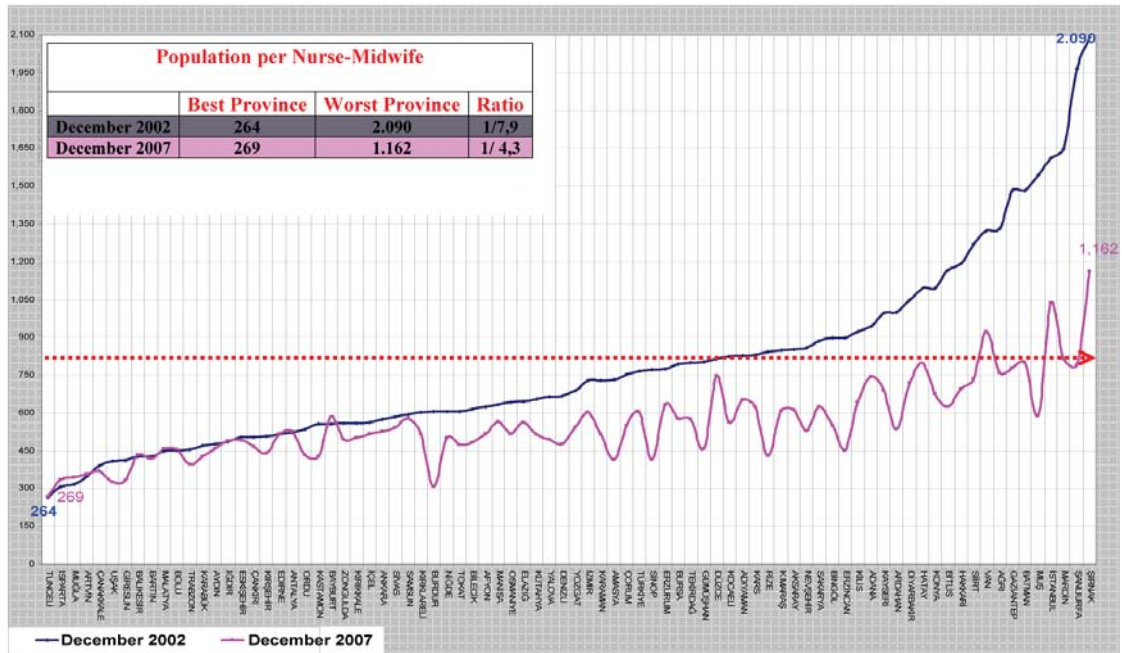


Source: MoH General Directorate of Personnel, 15.12.2007, Active Personnel CD



Source: MoH General Directorate of Personnel, 15.12.2007, Active Personnel CD

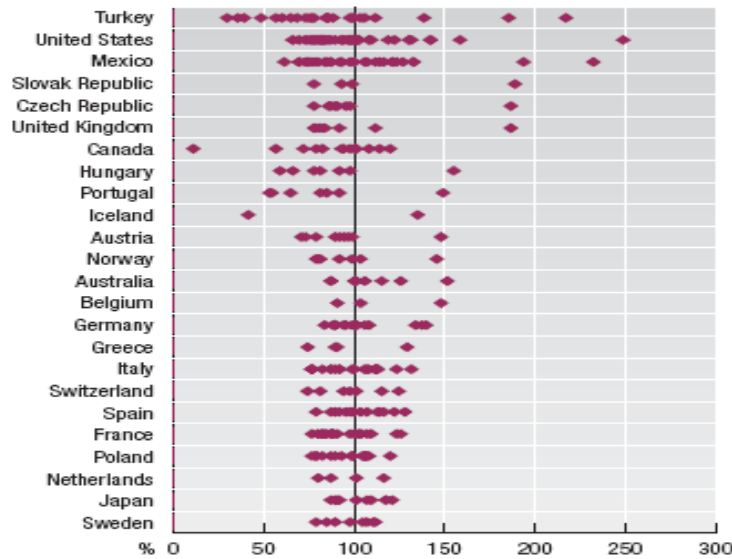
POPULATION PER NURSE-MIDWIFE IN 2002-2007



Source: MoH General Directorate of Personnel, 15.12.2007, Active Personnel CD

While progress has been made in decreasing geographic imbalances, compared to OECD countries Turkey still fares poorly. Figure 11 shows that in 2004, compared to OECD countries, the regional variation in physician density in Turkey ranks among the highest. As shown in Figures 8, 9 and 10 Turkey has been successfully working to address these geographic imbalances.

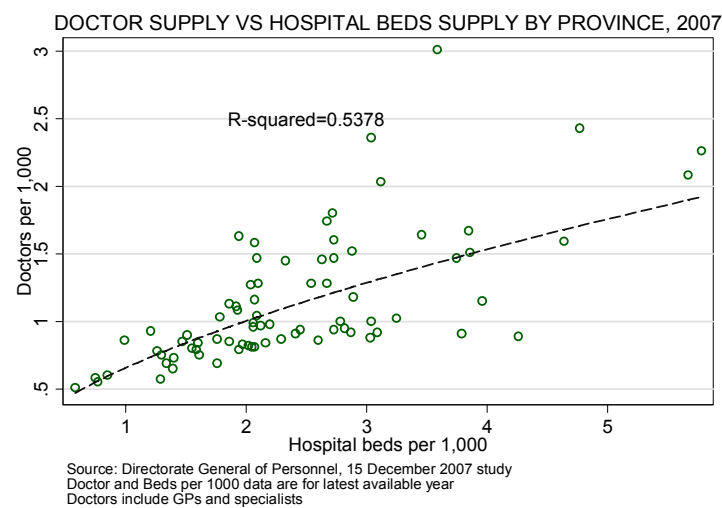
Figure 11: Regional variation in physician density (Percentages of national average, 2004)



Source: OECD and World Bank 2008.

The regional variation in the availability of health workers is not accounted for by differences in the availability of health facilities. Almost every district in Turkey has a district hospital, which include beds for patients. In the case of Turkey, there is a very weak relationship between health worker and hospital bed density (Figure 12). For example, provinces having between 0.5 and 1 doctor per 1,000 population have between approximately 0.6 and 4.3 beds per 1,000 population. This shows that, in general, health worker densities are not inherently constrained by low levels of health facilities to serve the population. Therefore, policy measures specifically targeted at increasing staffing levels should address the geographic imbalances. In making appointments, the Ministry of Health in Turkey may need to focus on filling every vacant position in low density provinces.

Figure 12: Doctor Supply in relation to Hospital Beds by Province



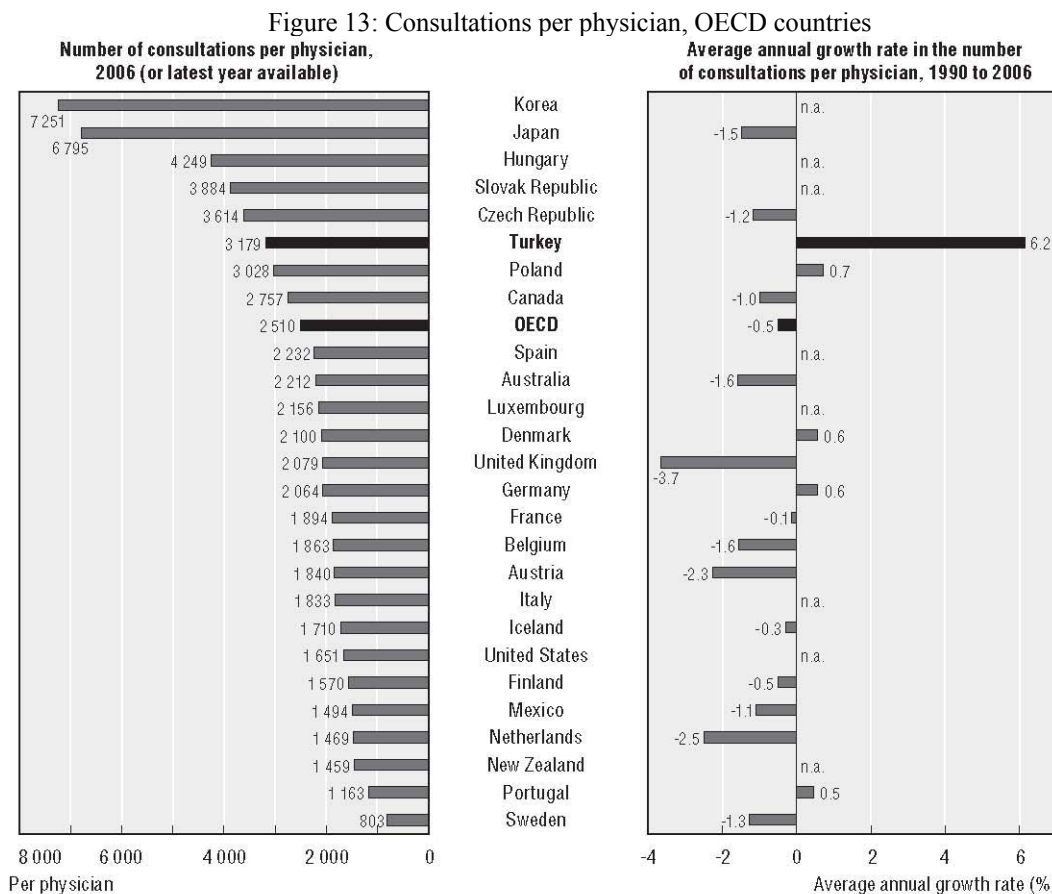
In areas where it is difficult to recruit and retain staff, contract based employment is used as a means to increase remuneration. Although primarily for lower skilled staff, contracts are an important means of hiring staff where it is difficult to recruit. Contracts are regulated by the government with a fixed salary scale and are used primarily for physicians, health officers and nursing cadres in regions where it is difficult to recruit staff. The salary levels for contracted personnel are slightly above those of staff hired as civil servants. Thus, the use of contracts allows facilities to pay a premium to staff in provinces where it is difficult to recruit and retain staff under the normal MOH terms of service. The salary premium can be up to 28 percent.

Table 4: Share of Staff Employed on Contracts and Salary Premium

Share of All Staff Employed on Contracts					Salary Premium (% percent govt salary)		
	Specialist Physicians	General Practitioners	Nurses	Midwives	Specialist Physicians	General Practitioners	Nurse
Region 1	0.0%	1.1%	30.7%	14.0%			
Region 2	0.2%	3.0%	17.1%	7.9%			
Region 3	0.5%	6.1%	16.8%	10.7%			
Region 4	3.0%	9.8%	21.6%	21.7%	109%	109%	108%
Region 5	9.4%	16.1%	33.0%	28.8%	128%	112%	111%
Region 6	28.3%	28.7%	40.2%	45.8%	67%	111%	117%
TOTAL	2.9%	6.7%	25.8%	16.2%			

PRODUCTIVITY

There are signs that workforce productivity has been improving in recent years. A crude measure of doctors' productivity – albeit one which does not allow for variations in quality of care (or costs) – is consultations per physician per year. There were 3,179 consultations per physician per year in Turkey in 2006, which was well above the OECD average at 2,510 in that year (Figure 13). Moreover, consultations per physician in Turkey rose to 3,630 in 2007. Consultations per physician rose at an annual rate of 6.2% per annum in Turkey between 1990 and 2006, whereas in the average OECD country they fell by 0.5 percent per annum. Inpatient days per physician have increased in MOH hospitals since 2001 as well



Note: For Turkey, consultations per physician for 2006 were provided by the School of Public Health. For Turkey, the average annual growth rate in consultations per physician uses OECD Health Data 2008, for 1990 and School of Public Health Data for 2006.

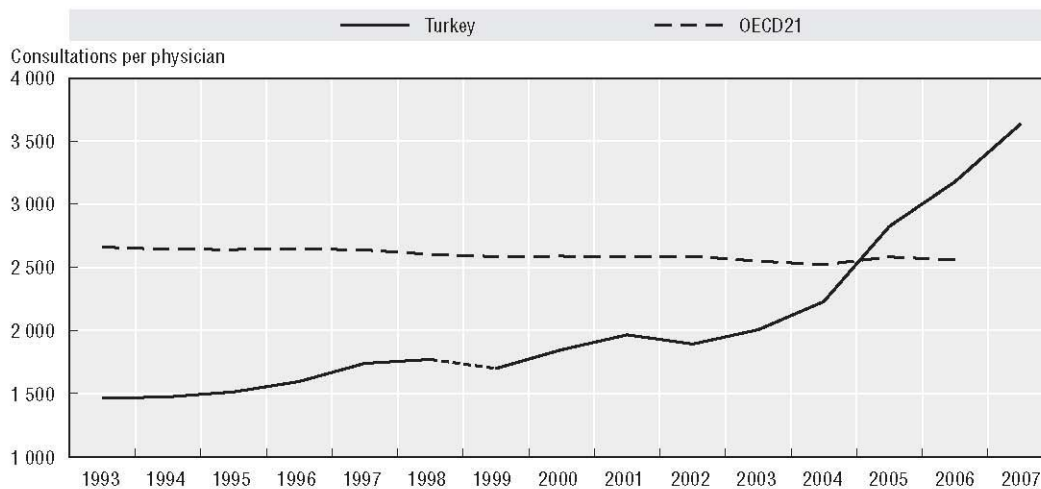
Source: OECD Health Data 2008 and School of Public Health, MoH, Turkey.

Consultations per physician grew especially steeply in Turkey from 2004, and by 2005 had overtaken approximately 21 OECD countries (Figure 14). This corresponds to the period when the performance payment system was introduced (this is discussed further in another section). On the face of it, the suggestion is that the

performance payment system stimulated a rise in physician productivity in Turkey, assuming that the quality of care did not change adversely.¹

There are several complementary reforms that contributed to the increase in productivity as well. In the case of primary care, the introduction of the performance management system was supported by a tripling of expenditure on preventive and primary care between 2002 and 2007. It was also supported by measures to attract physicians to deprived areas (with a mix of regulatory and financial incentives), activation of dormant health centres and a sharp increase in the availability of examination rooms in health centres. Whereas only 45 percent of health centre doctors had their own examination room in 2002, 95 percent of doctors had such rooms in 2006. A beneficial result of these changes was that the rate of referral of patients from health centres to hospitals declined from 20 percent to 6 percent over the same period (Akdağ, 2007).² Moreover, in the regions where family medicine services were introduced, the ratio of consultations in primary care to consultations in hospital outpatient clinics increased from 40/60 to 51/49 (Akdağ, 2008).

Figure 14: Consultations per physician (headcount), Turkey and OECD, 1993 to 2007



Note: The consistent OECD average is calculated for 21 countries.
 From 2000, data on Turkey come from the School of Public Health, Turkey.
 Source: OECD Health Data 2008 and School of Public Health, Turkey.

¹ However, three notes of caution should be registered. First, physician headcounts have been used in estimating the ratio of consultations to physicians. No adjustments have been made for changes in part-time working among physicians. In fact, as is mentioned in the main text, there was a strong switch to full-time working by physicians in public hospitals from 2004, which suggests that the change in consultations per hour of physician time will have been smaller than the change in consultations per physician. Secondly, physicians who switched to full-time working in public hospitals may have brought some of their private patients – previously unrecorded – into their public clinics, increasing recorded consultations. Thirdly, it is possible that the performance management system, by incentivizing reporting of consultations, will have encouraged more complete reporting of public consultations which had previously gone unrecorded.

² Turkey does not have a compulsory referral system, so patients are not obliged to see a GP before going to the hospital.

QUALITY OF CARE

Patient satisfaction with primary health care services was low in Turkey in relation to other OECD countries in the early part of this decade. In using the EUROPEP questionnaire conducted before the beginning of the HTP, it was found that on 23 indicators, patients ranked Turkey below the average of 10 other OECD countries. This questionnaire asks patients to rate 23 aspects of primary care based upon a five point scale, with poor as the lowest score and excellent as the highest score. Table 5 shows the percentage of patients giving either “good” or “excellent” responses to each of the 23 questions on aspects of care (column 2) in Turkey and (on average) in a group of ten European countries (column 3).

Table 5: Satisfaction with primary care using the EUROPEP scale, scores for Turkey and average scores for ten European countries

Percentages of patients who gave “good” or “excellent” responses to 23 questions on aspects of care	Turkey %	Average score ten European countries % ³
Keeping your records and data confidential	68	94
Listening to you	72	89
Making you feel you had time during consultations	65	87
Providing quick services for urgent health problems	76	87
Telling you what you wanted to know about your symptoms	70	85
Thoroughness	73	85
Physical examination	75	85
Explaining the purpose of tests and treatments	68	85
The helpfulness of the staff (other than the doctor)	67	84
Making it easy for your to tell him or her about your problems	67	84
Interest in your personal situation	67	84
Helping you to feel well so that you can perform your normal daily activities	63	84
Helping you to understand the importance of following his or her advice	77	83
Involving you in decisions about medical care	61	83
Getting an appointment to suit you	70	82
Quick relief of your symptoms	63	81
Knowing what s/he had done or told you to do during previous contacts	71	81
Preparing you for what to expect from specialists or hospital care	66	79
Help in dealing with emotional problems related to your health status	60	79
Offering you services for preventing diseases (e.g. screening, health checks, immunisations)	64	77
Getting through to the practice on the phone	76	77
Being able to speak to the GP on the telephone	75	75
Waiting time in the waiting room	63	63

On average, across all aspects of care, over two-thirds of Turkish patients thought that the primary care they had received was either excellent or good. However, this was approximately 14 percent below the corresponding average in ten European countries. It is difficult to interpret this difference since no data were collected on expectations in these studies. If Turkish expectations were, say, below those in the

³ The ten countries were Belgium (Flanders), Denmark, Germany, Iceland, Netherlands, Norway, Slovenia, Sweden, Switzerland, and the United Kingdom.

European countries, Turkish satisfaction *adjusted for expectations* would be lower still on average in relation to Europe.

The assessments reported in Table 4 suggest that, on average, primary care in government health centres in Turkey in the early part of the current decade may have been rather hurried and impersonal and that confidentiality of patient records was not always observed, or believed to be observed. The authors of the Turkish study point to the lack of incentives that existed for medical staff to satisfy patients in public health centres, because of the fixed and fairly low salaries and the frequent turnover of staff. They also remark on the hierarchical nature of Turkish society in general and of medical education in particular, and on the lack of rules in primary care about medical record keeping.

A more recent EUROPEP survey conducted in September 2008 shows a sharp increase in patient satisfaction (Table 6). Particularly large improvements in satisfaction were recorded for aspects such as: “making it easy for you to tell him or her about your problems”; “involving you in decisions about medical care”; and – significantly – “offering services for preventing diseases”. In a number of respects, the gap between patient satisfaction in Turkey and patient satisfaction in other European countries has closed, or nearly closed. Although satisfaction had improved with most aspects of services in provinces which have *not* yet adopted family practitioner services, the improvements in satisfaction in the 23 provinces which have adopted family practitioner services are much larger and have often matched or overtaken average levels in Europe. On the basis of this evidence, Turkish patients seem to be delighted with their new family practitioner services under the HTP.

Table 6: Satisfaction with primary care using the EUROPEP scale, 2008 Survey, 81 provinces, Turkey

	Turkey % family physician provinces (23 provinces)	Turkey % other provinces (58 provinces)	Total (%) (81 provinces)
Making you feel you had time during consultations	89.6	76.8	80.5
Interest in your personal situation	89.9	77.8	81.3
Making it easy for your to tell him or her about your problems	90.8	80.3	83.3
Involving you in decisions about medical care	86.5	75.3	78.6
Listening to you	93.3	83.4	86.3
Keeping your records and data confidential	90.7	82.0	84.5
Quick relief of your symptoms	86.8	77.5	80.1
Helping you to feel well so that you can perform your normal daily activities	86.8	77.5	80.1
Thoroughness	91.2	83.6	85.7
Physical examination	90.4	82.9	85.0
Offering you services for preventing diseases (e.g. screening, health checks, immunisations)	84.5	78.8	80.5
Explaining the purpose of tests and treatments	88.7	77.9	81.0
Telling you what you wanted to know about your symptoms	90.1	78.8	82.0
Help in dealing with emotional problems related to your health status	83.4	72.5	75.6
Helping you to understand the importance of following his or her	88.5	77.4	80.6

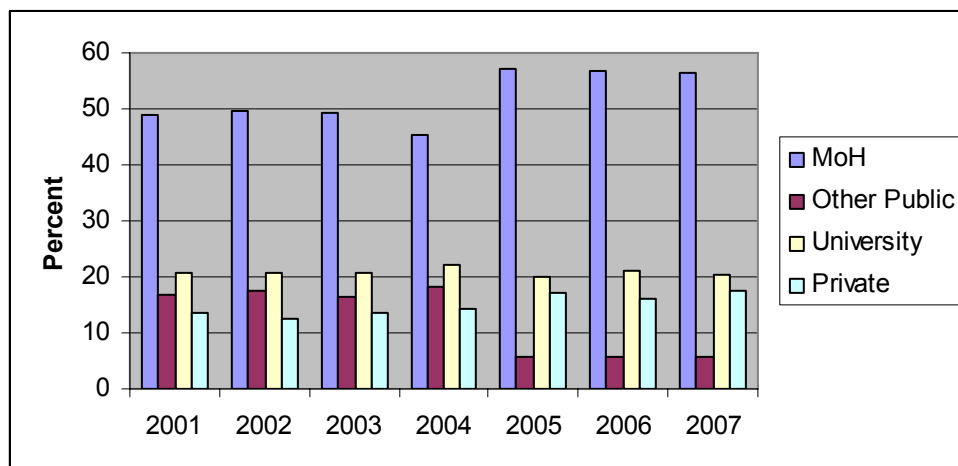
advice			
Knowing what s/he had done or told you to do during previous contacts	85.1	73.3	77.1
Preparing you for what to expect from specialists or hospital care	82.7	74.3	76.7
The helpfulness of the staff (other than the doctor)	86.9	77.9	80.4
Getting an appointment to suit you	78.8	66.4	70.0
Getting through to the practice on the phone	75.3	59.4	63.9
Being able to speak to the GP on the telephone	72.2	58.1	62.1
Waiting time in the waiting room	76.7	63.7	67.4
Providing quick services for urgent health problems	83.1	75.7	77.8

The satisfaction level with both public and private hospitals increased dramatically in recent years. The Turkstat Life Satisfaction Survey in 2003 suggested that 41 percent of respondents were satisfied with public hospitals, 47 percent were satisfied with university hospitals and 49 percent were satisfied with private hospitals. The corresponding survey in 2007, suggests that 67 percent were satisfied with public hospitals, 69 percent were satisfied with university hospitals and 61 percent were satisfied with private hospitals. Satisfaction rose by 26 percentage points in public hospitals, by 22 percentage points in university hospitals and by 12 percentage points in private hospitals.

PUBLIC PRIVATE MIX

The majority of physicians work in the public sector. As of December 15, 2007, approximately 57.6 percent of all physicians work in the MoH, an increase from 49.1 percent in 2001. The MoH is the major employer in almost all personnel groups except for dentists and pharmacists who are mainly employed in the private sector. As of 15 December 2007, 76 percent of health officers, 71.2 percent of nurses and 92.6 percent of midwives are employed in the MoH. The private sector accounts for less than 20 percent of all staff.

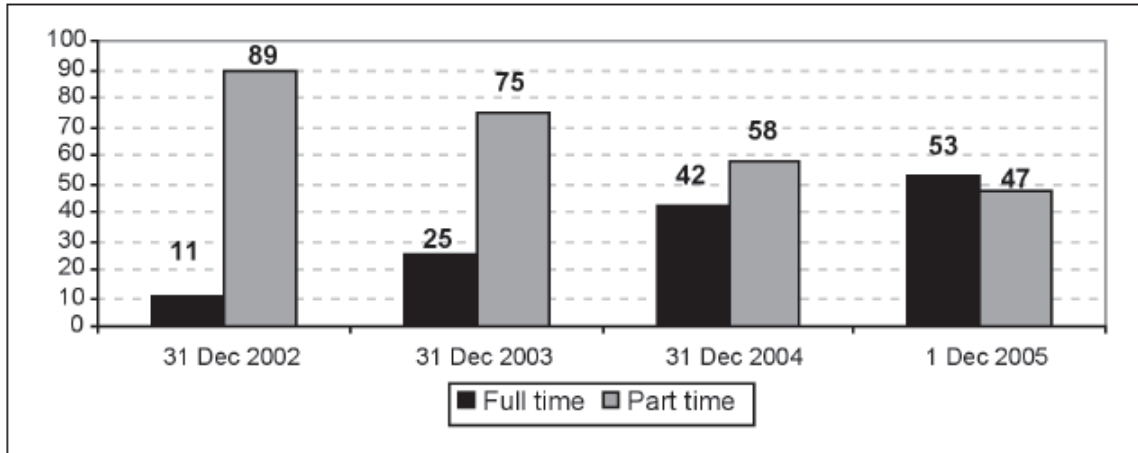
Figure 15: Distribution of health workers



Source: Department of Strategy Development Health Statistics, 2001-2005.
Directorate General of Personnel, 2006 and December 2007 studies
SSPC statistical yearbooks

Dual employment has been prominent in Turkey but has decreased significantly in recent years. Public sector salaried workers are permitted to work part time in the public sector and part time in the private sector. A study conducted in 2001 has demonstrated that public sector physicians working part time in private sector earn 5 times more compared to those working full time in public sector. Between 2002 and 2005 and the implementation of the performance based payment system there was a significant reduction in dual practice. Fifty-four percent of specialist physicians worked only part time in the public sector in 2005 compared to over 89 percent working only part time in 2002 (Figure 16).

Figure 16. Share of Specialists Working Part time in the Public Sector

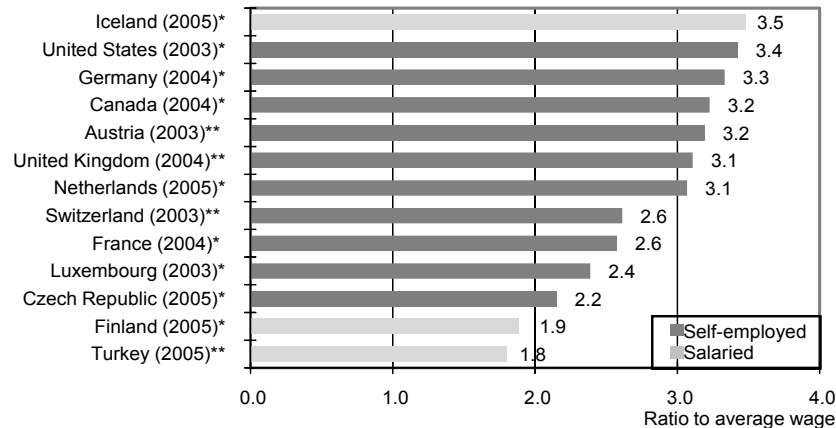


Source: Ministry of Health Turkey 2007.

PART III – REMUNERATION OF HEALTH WORKERS

GPs in Turkey are not very well paid relative to other professions. Remuneration of salaried GPs in government health centres in Turkey in 2005 (prior to the introduction of a family practitioner service) was about 1.8 in relation to the average wage. This was similar to salaried GPs in Finland but low compared with self-employed GPs in other OECD countries. The introduction of a family practitioner service in Turkey is raising remuneration for GPs, and it is likely that Turkey will move up the distribution of relative remuneration across countries in future years.

Figure 17. Remuneration of GPs relative to average wage, Turkey and selected OECD countries



Note: * refers to the remuneration of full-time GPs and ** indicates that the data include part-time GPs.

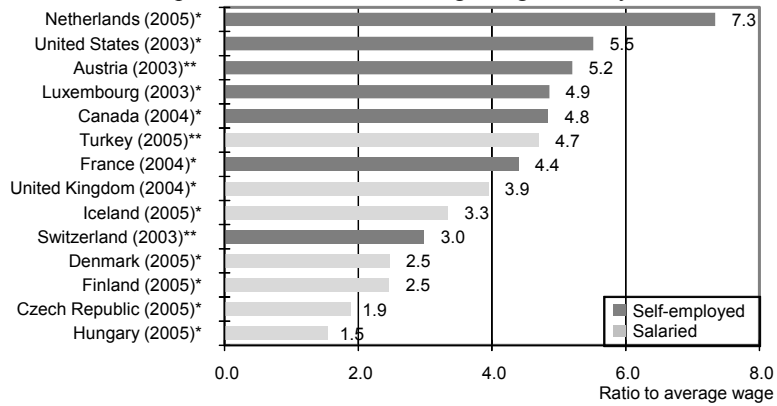
Source: OECD Health Data, for Turkey, remuneration data provided by School of Public Health; and for the US, Community Tracking Study Physician Survey, 2004-05

Average wage data are OECD estimates based on OECD National Accounts database and OECD Economic Outlook, No. 80, December.

For Iceland and Turkey, the average wage data come from the OECD publication Taxing Wages and only include the average wage of full-time employees working in selected industry sectors.

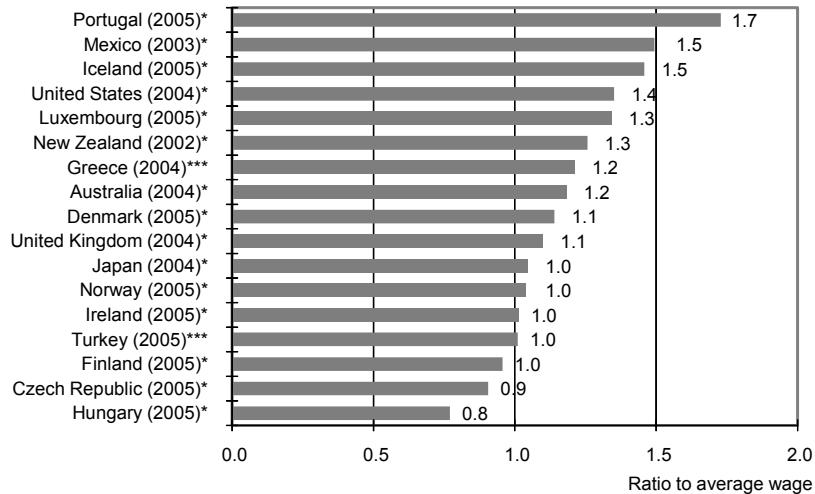
But specialists are very well paid compared to other professions. The remuneration of salaried specialists in hospitals in Turkey in 2005 was 4.7 times the average wage (Figure 18). Turkey occupies the highest position in the international distribution for *salaried* specialists although it occupies a middling position in relation to *all* specialists (both salaried and self-employed). It is likely that these figures reflect the receipt of the significant bonuses which specialists could earn following the introduction of the performance management system in government hospitals from 2004. For nurses Figure 19 suggests that the remuneration gap between nurses and other occupations in Turkey in 2005 was lower than in most OECD countries.

Figure 18. Remuneration of specialists relative to average wage, Turkey and selected OECD countries



Note: * refers to the remuneration of full-time specialists and ** indicates that the data include part-time specialists.
 Source: OECD Health Data, for Turkey, remuneration data provided by School of Public Health; and for the US, Community Tracking Study Physician Survey, 2004-05
 Average wage data are OECD estimates based on OECD National Accounts database and OECD Economic Outlook, No. 80, December.
 For Iceland and Turkey, the average wage data come from the OECD publication Taxing Wages and only include the average wage of full-time employees working in selected industry sectors.

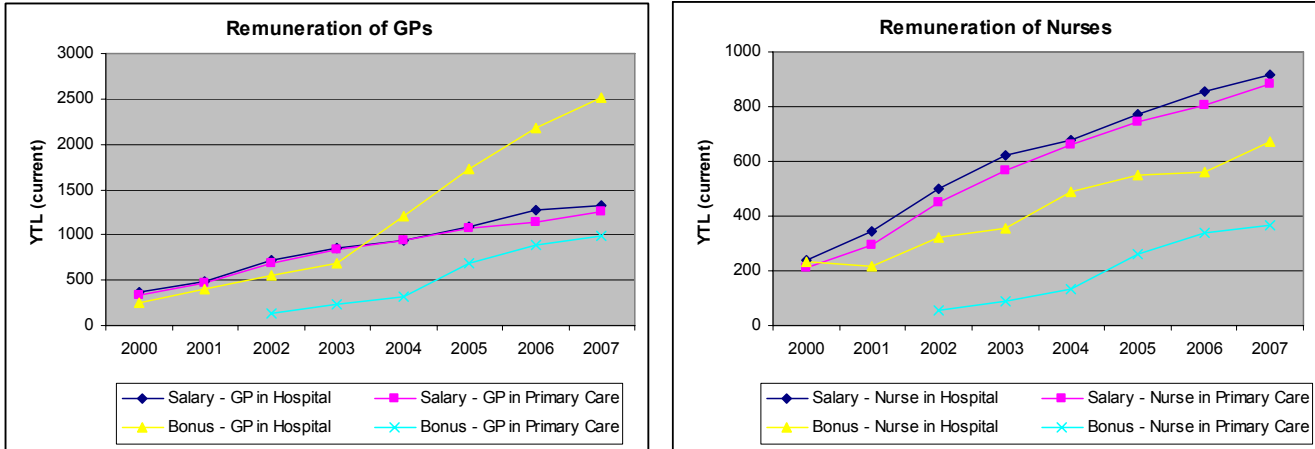
Figure 19. Remuneration of nurses relative to average wage, Turkey and selected OECD countries, circa 2005



Note: * refers to the remuneration of full-time nurses, ** indicates that the data include part-time nurses and *** means that it is not known if the data include part-time nurses or not.
 Source: OECD Health Data, for Turkey, remuneration data provided by School of Public Health; and for the US, Community Tracking Study Physician Survey, 2004-05
 Average wage data are OECD estimates based on OECD National Accounts database and OECD Economic Outlook, No. 80, December.
 For Iceland, Mexico, New Zealand and Turkey, the average wage data come from the OECD publication Taxing Wages and only include the average wage of full-time employees working in selected industry sectors.

Performance based bonuses have increased remuneration for doctors working in hospitals significantly. Remuneration levels for doctors have grown much faster in hospitals than in primary care settings. This is due solely to the fact that bonus payments for GPs have increased much more rapidly in hospitals compared to in primary care settings (Figure 20).

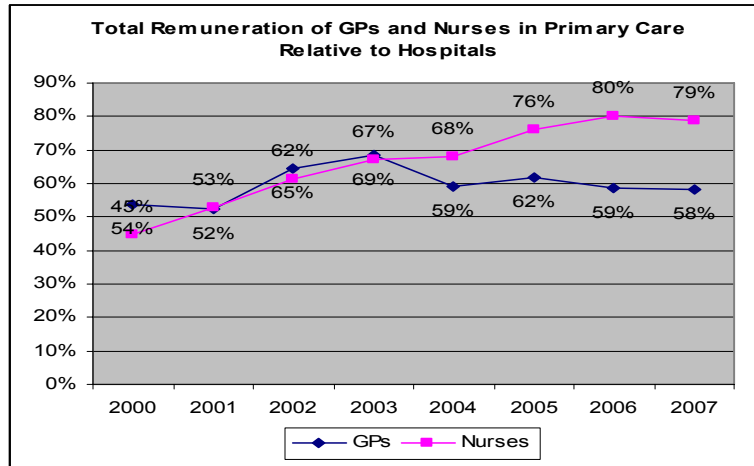
Figure 20. Remuneration Patterns over Time for GPs and Nurses



Source: Analysis of MOH data

The pay premium associated with hospital based employment has decreased for nurses. On average, GPs working in primary care earn 58 percent of what GPs working in hospitals earn and this has decreased substantially since the introduction of the performance based payment system. For nurses, however, the opposite is true. Nurse remuneration in primary care settings has been steadily catching up to remuneration levels in hospitals (Figure 21). This is because the gap in bonus payments between primary care and hospital settings has been shrinking. Salary levels have actually always been very similar (Figure 20).

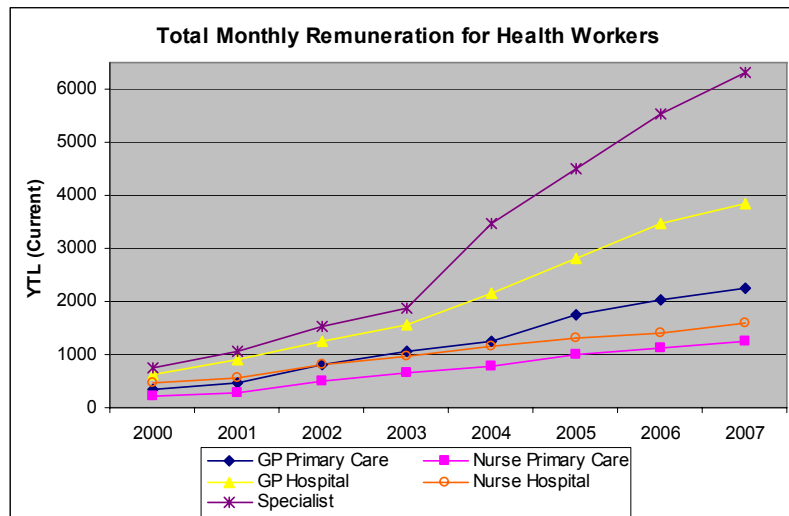
Figure 21. Remuneration Patterns over Time for GPs and Nurses



Source: Analysis of MOH data

Remuneration of specialists has increased much faster than for GPs, providing strong incentives for specialty training. There are still strong incentives to specialize rather than to go into family practice. Specialists have received the largest increase in remuneration in recent years. This is a direct result of large increases in performance based bonuses. Specialists have received a 310 percent increase in total remuneration since 2002 compared to 200 percent for GPs and 120 percent for nurses. Bonus payments account for over 75 percent of total remuneration for specialists compared to two-thirds for GPs and less than half for nurses. Again, these bonus payments can be attributed to the performance based payment system implemented in 2004 in hospitals.

Figure 22. Total Monthly Remuneration for Health Workers

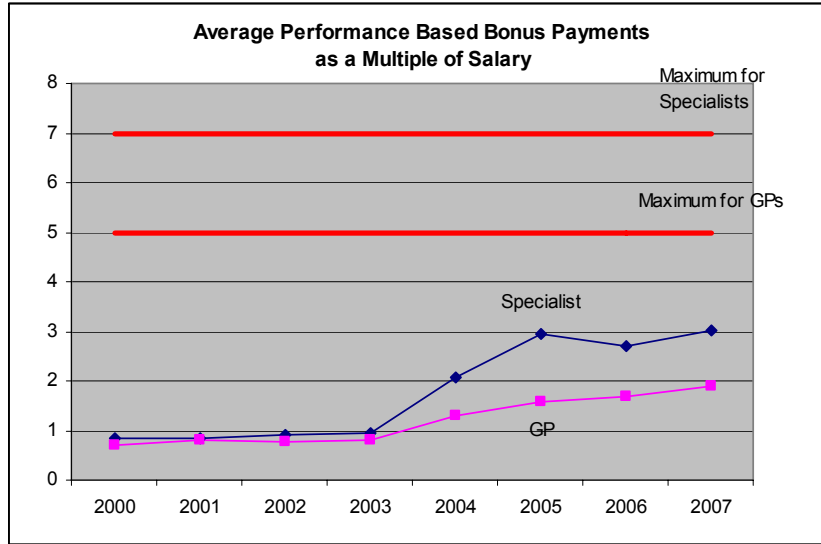


Source: Analysis of MOH data

Bonus payments to health workers are, on average, well below the maximum threshold allowed through the performance based payment system. Individual level data are not available so it is unclear what share of staff are already receiving or are close to the maximum individual bonus level amount. But for the average health worker bonus payments are well below the individual level threshold set out in the regulations.

The aggregate level of bonus payments paid out of revolving funds is also well below the threshold (this is explained in more detail in a latter section). Currently 31 percent of revolving funds are paid out as staff bonus payments. This is below the threshold of 40 percent that is set in the regulations.

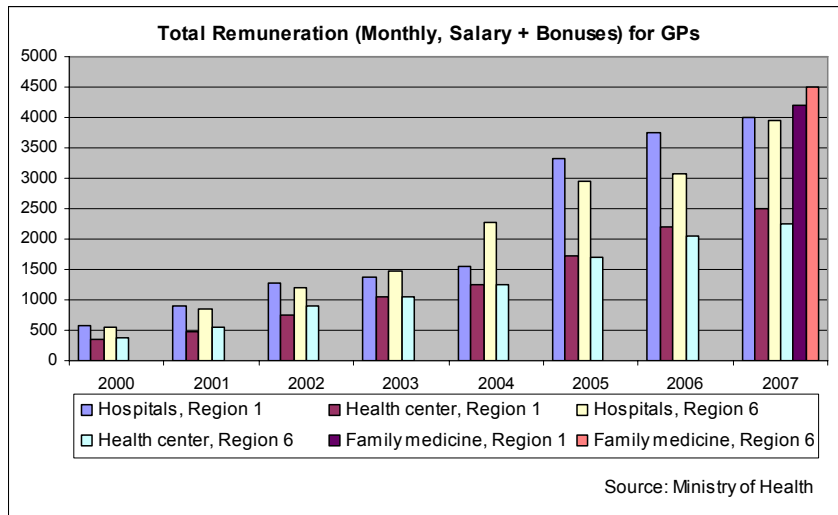
Figure 23.



Source: Analysis of MOH data

Remuneration for family practitioners appears sufficiently high to attract GPs into the family medicine program. Remuneration for family practitioners has been established at a level just above that of GPs in hospitals and health centres (Figure 24). This provides an appropriate incentive to attract GPs to switch to family practice. However, from the point of view of new medical students, there will still be incentives to specialize rather than to go into family practice – monthly remuneration of specialists remained about 40 percent above that of family practitioners in 2007.

Figure 24.



Source: Ministry of Health

Source: Analysis of MOH data

There is little difference in trends in remuneration across regions. The pattern over time of wage increases for nurses, GPs and specialists does not vary by geographic region. It appears that the performance based payment system has had a similar impact on total remuneration across all geographic areas (analysis not shown).

PART IV - RECENT REFORMS AND HEALTH WORKFORCE OUTCOMES

PERFORMANCE BASED PAYMENT SYSTEM

A performance-based supplementary payment system (PBSP system) was introduced in MoH hospitals in 2004. The main objective of the PBSP system is to encourage job motivation and productivity among public sector health personnel. When the HTP was launched, the majority of public specialist doctors worked part time, and specialist doctors preferred to work in the private sector. As a result, there was overcrowding in public hospitals, long waiting times to see a doctor and patient and provider satisfaction with the health system was low. The PBSP system was considered a key intervention to address these problems.

Under the PBSP system health personnel receive a payment each month in addition to their regular salaries. The base salary is paid from the MoH line item budget (under health personnel salaries). The performance-based payments are paid from the revolving funds that are financed from the reimbursements hospital receive from the general insurance system and out of pocket expenditures paid by patients.

The bonus payment for a health worker is determined through a combination of individual and institutional performance criteria. The following factors determine how much health personnel will receive as performance-based payments:

First, the total amount that health facilities can allocate to performance-based payments to health personnel is capped at 40% of revenues. Some hospitals may choose to allocate less than the 40 percent depending on other needs in the hospital (for example, if laboratory equipment needs to be upgraded or the hospital needs to hire more auxiliary health personnel). Hospital management is responsible for deciding how much will be allocated for performance based payments within the limits defined by the Ministry of Health. Moreover, individual bonuses for staff are capped at a certain multiple of basic salary. This means, for example, that a specialist earning YTL 1,000 per month in basic salary can receive a maximum bonus of YTL 7,000.

Second, this total (capped) amount is subsequently adjusted based on institutional performance of the health center or hospital. Every health center and hospital is given a score from 0 to 1 based on institutional performance indicators and the performance based bonuses are multiplied by this factor. For example, if a hospital wishes to devote 40 percent (the capped limit) to staff bonuses, and its institutional performance score is 0.8, then in reality only 32 percent can be devoted to staff bonuses. This places a high premium on good institutional performance and balances the individual incentives for high service volume with group incentives for overall institutional quality. The MoH has established five categories of indicators to measure institutional performance of hospitals, each of which carry equal weight. These indicators largely target structural quality of care

and patient and provider satisfaction. The five categories include: i) access to examination rooms; ii) hospital infrastructure and process; iii) patient and caregiver satisfaction; iv) institutional productivity (bed occupancy, average length of stay); and v) institutional service targets (caesarian-section rate, share of doctors working full time, surgery points per surgeon and per operating room, and reporting scores for the performance monitoring system to the MoH).

Third, an individual level performance score is calculated for each staff member. This score is used to determine how the aggregate amounts of bonus payments for a hospital are distributed across individual health workers.

The individual level performance score for physicians depends on the number of procedures performed by that staff member and their job title. Each clinical procedure carries a particular point level that is determined by the Ministry of Health. The total points score for a physician is then adjusted by a job title coefficient that is meant to measure workload aside from providing clinical care for different types of doctors (i.e. administrative duties, teaching, etc.) This adjustment varies only by job title not by individual. The score is also adjusted by the number of days the person has worked in the year. The score is adjusted depending on whether the person is employed full time or part time in the hospital. The current coefficient for full time status is 1 but for part time status it is 0.4. This adjustment was put in to encourage full- time practice in public hospitals and discourage “moonlighting” in the private sector. An example of point values is given below.

CODE	NAME OF MEDICAL PROCEDURE	SCORE
550.130	Anesthesia A1 group (special surgeries and interventions)	1.200
550.131	Anesthesia A1 group (special surgeries and interventions), together with expert and anesthesia technician	400
604.910	Coronary artery by-pass, charoid endarterectomy + patch plasty	2.500
607.980	Splenechotomy, total	500
610.130	Appendectomy	420
520.010	Consultation fees (for each practitioner)	10
520.030	Normal polyclinic examination fees	21
520.031	Referred examination	5
619.910	Birth with intervention	143
619.920	Normal birth	143
619.921	Birth in accompany of midwife	36
619.930	Caesarian	143
530.100	Electrocardiograph	0
530.140	IM injection	0
530.150	IV injection	0

Source: Performance and Quality Development Department, MoH, 2007

Hospital managers have only marginal discretion in adjusting bonus payments. Hospital managers have the discretion to provide additional points to selected staff. This discretionary performance reward can only be given to 5 percent of staff and the

maximum number of additional points is 20 percent of the average point level. This is simply a reallocation of points across staff. The relative point values are re-scaled.

The performance based system allows flexibility in balancing incentives for health workers with investments in other inputs. It is important that facilities have discretion over how revolving funds can be used as the bottlenecks to improving patient satisfaction and quality of care are different for each hospital.

The performance based incentive scheme provides very strong motivation to improve institutional quality. The fact that individual level bonuses are scaled back based on deficiencies in institutional quality makes health workers have a stake in the performance of institutions as whole. For example, an individual surgeon is rewarded for performing a C-section because it increases his gross point total. However, if the C-section rate in his hospital becomes too high then institutional quality will fall which then reduces the net point total of that same surgeon.

Aside from providing individual and institutional incentives, the performance based payment system has built in checks and balances that can act as cost control levers. First, at the individual level there is a cap on total payments health workers can receive. The point system provides incentives for high productivity, high volume of services but above a certain level, the financial payoff to increased volume of services disappears and can, in fact, be negative. Thus, there are incentives to keep service levels and costs below a certain threshold. Second, at the institution level utilization rates for services can be incorporated into facility performance criteria if utilization is deemed to be getting too high. For example, this is the case for the C-section rate, which is currently an indicator in the institutional performance score. But this is likely to be a weak cost containment incentive, as it is impossible to include utilization rates for more than just a few services in the institutional performance criteria. Third, the individual level thresholds for the levels of bonuses (e.g. 7x salary, 5x salary) can be adjusted downward uniformly to control costs. In fact, this is likely to be the most effective way of reducing staffing costs as it does not change the relative value of services (which could be a distortionary effect) and does not change the distribution of bonuses across different cadres of staff. It does however penalize the best performers – those that are near the maximum bonus level – more than those that are well below the threshold.

The points system is flexible and is a powerful policy tool. It can be altered to readjust the relative rewards for different health services. This is a policy lever that can be used to respond to situations where utilization of certain services increases to a level that is deemed inappropriate given the needs of the population. However, it is difficult to estimate by how much point levels need to be increased or reduced in order to bring about a change in service delivery patterns: calibrating the system is likely to be challenging. As a result, it is important to constantly monitor and evaluate the impact of changes in point levels on different service delivery outcomes.

The system is quite complex. There are over 5,000 different point values that can be adjusted, there are upper limits to individual bonus levels that can be adjusted, and there

is an upper limit on the share of the revolving fund going to bonuses that can be altered as well. These different policy levers give the MOH incredible scope to alter the incentives for staff working in the MOH. Moreover, most of these policy levers are within the direct control of the Ministry of Health and are easy to change from a regulatory standpoint. Only the 0-40 percent limit on how much revolving funds can be transferred to staff as bonuses requires parliamentary approval. However, to adjust all of the parameters in an optimal way is difficult and requires continuous monitoring and evaluation of utilization, staff productivity, quality etc. The Ministry of Health should ensure that there is sufficient support and financial resources made available for this.

Initial findings suggest the bonus payment system has had a positive impact on workforce productivity, quality of care and retention of staff in public sector hospitals. As noted earlier, the share of staff in MOH hospitals working full time has increased dramatically, as have services per physician and patient satisfaction. The average cost of services in hospitals has fallen; indicating that the performance based payment system is also improving efficiency.

The bonus payment system also provided strong incentives for continued specialization of the health workforce and hospital-based employment. As noted earlier, the remuneration of doctors (specialists in particular) working in hospitals increased considerably relative to those working in primary care settings after the implementation of the bonus system. With an already highly specialized medical workforce, these skewed incentives have made specialist training even more attractive. The recently implemented family medicine program and its relatively rich remuneration scheme have made family medicine specialization and working outside of hospitals attractive once again.

The bonus payment system appears to have led to the reduction in dual employment among health workers. Public sector salaried workers are permitted to work part time in the public sector and part time in the private sector. As noted earlier, since the implementation of the performance based payment system there has been a significant reduction in dual practice, with less than half of specialist physicians working only part time in the public sector in 2005 compared to over 89 percent working only part time in 2002.

COMPULSORY SERVICE REQUIREMENT

All physicians trained in the public sector in Turkey are currently required to complete compulsory service in the public sector. Doctors and nurses are primarily trained in the public sector in Turkey. Only in recent years have private medical schools emerged (Erus and Bilir 2007). After four to six years of medical school and before receiving an official license, a doctor must complete obligatory service in a public facility. The length of this service can range from one to two years according to the socioeconomic ranking of the region. For instance, a doctor assigned to a province with a lower level of socio-economic development will have a shorter period of obligatory service than a doctor posted to a more developed province. For those physicians who continue in specialty education, which is an additional four to six years of training, this obligatory service increases to a minimum of two years and maximum of four years. If a physician chooses not to go to his/her obligatory service location, the physician will not receive his/her license to practice medicine in Turkey (Erus and Bilir 2007).

New graduates are assigned to different provinces based on staffing needs and a lottery system. The Ministry of Health uses a personnel distribution scale to identify need and place relevant health workers in positions. The purpose of this scale is to ensure fair and balanced distribution of existing personnel across the country and to maximize efficiency of employment (Mollahaliloglu et al 2007). Once the vacant positions are established recent medical school graduates submit their top five posting preferences. The MOH then sorts people according to their preferences and relevant vacant positions. Since there are always excess applicants for some positions and a scarcity of applicants for others the MOH holds a lottery – up to six times each year. The lottery results and posting assignment announcements are considered as formal notification for physicians to report to their assigned duty station to begin their compulsory service requirement (Mollahaliloglu et al 2007).

Since there are job opportunities in the private sector in large urban areas, it is sometimes difficult for the MOH to retain physicians posted in less desirable locations. Doctors simply leave their post and opt out after a short period of service and move to urban centers and work in the private sector. In order to try to solve this problem, the Ministry of Health has created a rotation system to try to create additional incentives for physicians who have worked in less preferred locations (i.e. preferential access to specialty training).

First-time appointments as well as transfers of GPs are closely linked to staffing needs. For specialists, this is less the case. There is a clear relationship between the number of vacant positions in a province and appointments and transfers of GPs to that province. Clearly, the MOHs method of assigning GPs – through both the compulsory service scheme and transfers – is functioning well. Five provinces account for 30 of all GP vacancies in Turkey. These five provinces received 50 percent of all first time GP appointments in Turkey in 2007, suggesting that they are clearly being prioritized for

staffing through the compulsory service scheme. They also received 30 percent of all transferred staff (Table 7).

For specialists, however, the appointment and transfer system does not appear to be as needs based. The five provinces that account for 57 percent of all vacancies in Turkey only received 18 percent of first-time specialist appointments – and only 9 percent of all specialist transfers. Taking all provinces in Turkey, the correlation statistics confirm these results. These data suggest that the institutional arrangements for appointing and transferring specialists could be improved upon to better reflect provincial staffing needs.

Table 7: Vacancies, Occupancy Rates, Appointments and Transfers of Staff in Turkey, 2007

		General Practitioners			
		Vacancies	Occupancy Rate	Appointments	Transfers
Lowest Vacancy	Izmir	-329	117%	6	0
	Antalya	-51	105%	5	0
	Aydin	-49	109%	0	0
	Tunceli	0	100%	1	1
	Gumushane	0	100%	0	1
Highest Vacancy	Diyarbakir	104	85%	12	26
	Van	123	74%	15	3
	Bursa	143	88%	23	58
	Konya	154	85%	27	28
	Istanbul	190	65%	324	137
		Specialists			
		Vacancies	Occupancy Rate	Appointments	Transfers
Lowest Vacancy	Izmir	-943	117%	4	2
	Edirne	-5	101%	5	3
	Yalova	1	99%	5	6
	Bayburt	5	87%	0	0
	Aydin	7	99%	15	4
Highest Vacancy	Van	500	57%	5	3
	Adana	505	79%	17	10
	Gaziantep	591	64%	7	18
	Istanbul	853	95%	24	3
	Diyarbakir	908	55%	9	3

Compulsory service addresses both the inequitable distribution of physicians across Turkey and covers some of the costs associated with publicly financed medical education. The compulsory service scheme is one of the primary reasons behind the improvement in geographic distribution of physicians in Turkey. A recent study examines the effect of the compulsory service requirement on the distribution of specialists across Turkey (Erus and Bilir 2007). Compulsory service was first implemented between in 1981 and then lifted in 1995 and has since been reinstated. The study takes advantage of the change in regulation to derive the impact of the regulation. The authors find that the

presence of the compulsory service laws had a significant impact on the distribution of specialists across Turkey, while controlling for other factors. The positive findings of this study may be part of the reason the Government of Turkey decided to reinstate the compulsory service scheme for doctors.

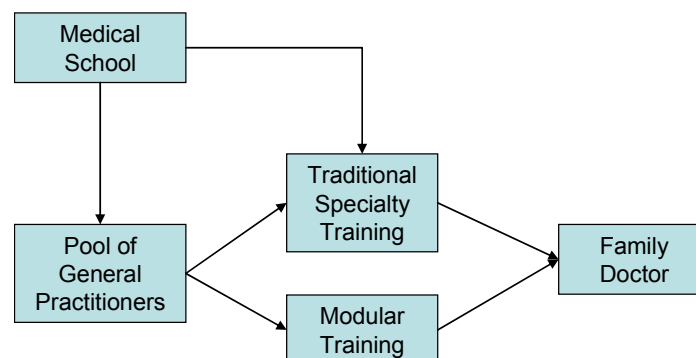
FAMILY MEDICINE PROGRAM

The family medicine program was adopted in 2004 and continues to be rolled out. Under the model of family medicine currently under implementation in Turkey, salaried general practitioners working at the primary-care level (e.g. in MoH primary health care centres) or at the secondary-care level (e.g. in emergency departments of MoH hospitals) are given an option to take a leave of absence from their public sector jobs and take up a position as an contracted, independent, capitated, family doctor. These doctors have a right to return to their original public sector jobs at any time. The implementation of family medicine began with a pilot in Duzce and is currently operational in 23 out of 81 provinces in Turkey. Approximately 20 percent of Turkish citizens are enrolled with family doctors.

The method of training family medicine doctors has changed considerably to facilitate faster roll out. The targeted family doctor to patient ratio is currently 1:3,400. This translates into a national requirement of 20,000 family doctors for full implementation. In Turkey, traditionally family medicine training was carried out through specialty training programs just like other medical specialties. However, this method provides limited capacity to scale up. For example, with about 6 percent of specialty training slots devoted to family medicine, this translates into less than 70 graduates per year.

In response, the Ministry of Health has created a new modular approach. Doctors must complete a ten-day first-phase orientation training on family medicine. This ten-day course covers the principles of family medicine practice, communication, clinical methods and epidemiology. The second stage of training will be primarily via distance learning. Training will consist of 40 modules, 3 of which will be given in practice. This second phase will take at least 6 months. The third stage training is still in the planning phase but will be primarily clinically based training. As of March 2007, approximately 11,430 practitioners received the first-phase of trainings.

Figure 25. Traditional and New Modular Approach to Family Medicine Training



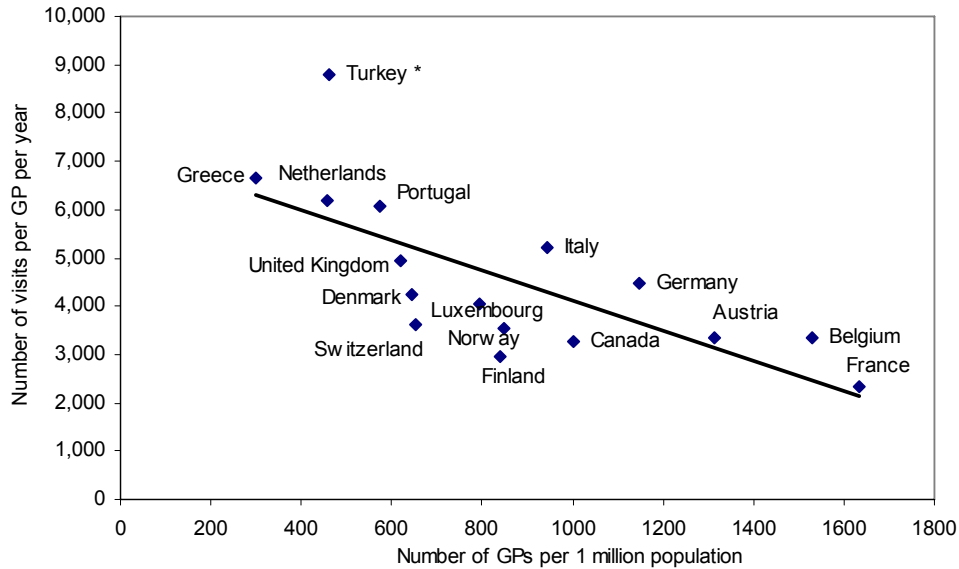
Remuneration under the family medicine program is quite generous and should provide financial incentives for doctors to take up training. The current capitation rate per physician is 1.18 YTL per month per registered patient. With the target ratio of 3,400 patients enrolled per doctor, and translates into 4012 YTL per month. However, where the program has been implemented, the current average is approximately 3,500 patients, which means the total income is even higher. Additionally, family doctors receive 2000 YTL each to cover expenses such as rent and electricity. However, since doctors have been organizing in group practices, the experience has been that about 2/3 of this payment is sufficient to cover expenses, and 1/3 is then retained by the physician as additional income. The payment system, thus, provides a strong incentive for group practice. An additional 750YTL is paid to physicians – mostly in underserved, remote areas – that have to travel to do outreach services. As noted in an earlier section, income in the family medicine program is higher than in any other settings for GPs.

There are strong incentives for good performance built into the family medicine program. A portion of the capitation payments are paid on the basis of achieving performance indicators which include indicators related to achieving specified vaccination rates, ante-natal visits and referrals. Continued training in family medicine is also a requirement and all family doctors have to complete the second-level training, which is more intensive, focusing on the promotion of professional knowledge and skills. Until July 2006, a mandatory referral requirement was in place: family medicine clients were required to obtain a referral before they could receive secondary care from a hospital. However, this requirement was suspended due to the high work burden on family doctors.

The targeted doctor to patient ratio is very high compared to OECD countries. Workloads may be too high in the future. The targeted ratio in Turkey is 1:3,400 compared to an OECD average of 1:1,200. This could result in high workloads and potentially poor quality care in the future. In fact, according to March 2008 data, the average number of daily medical examinations per physician is 44, which translates into approximately 7-8 minutes per clinical examination – and is quite low compared to other countries (Mechanic et al 2007; The Commonwealth Fund Performance Snapshots 2009; Chan et al 2001). The number of visits per GP per year in the family medicine program is also very high compared to other OECD countries that have similar staffing levels. Turkey is clearly an outlier (see chart).

There does not seem to be a problem in finding enough patients to enroll into family medicine practices. In urban areas, it is an open enrolment system and individual members of the population can choose their family doctor, but in peri-urban areas where there is not enough choice of family doctors, the population is assigned to specific doctors based on catchment areas.

Figure 26. Number of visits per GP per year



Source: OECD 2008, Turkey MOH Data

Initial findings suggest that the family medicine has improved patient satisfaction and reduced the use of hospitals. As noted in the earlier section on patient satisfaction, increases in patient satisfaction were much larger in provinces that implemented the family medicine program. A full impact evaluation of the program is currently underway. In provinces where the family program was not implemented the number of visits to hospitals increased 16 percent (during the period of study). In provinces where it was implemented visits decreased by 1 percent. This suggests a significant impact on hospital utilization (the total volume of visits in both cases increased).

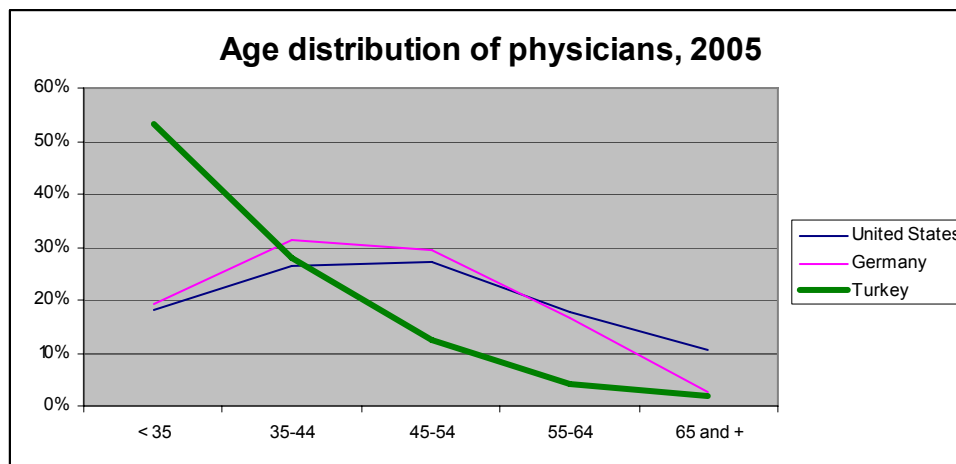
POSSIBLE SUPPLY SIDE AND DEMAND SIDE CONSTRAINTS TO SCALING UP

To better understand the feasibility of scaling up the health workforce, it is useful to carry out some very basic analysis of inflows to and outflows from the labor market, as well as the resource envelope available for hiring additional health workers in the future.

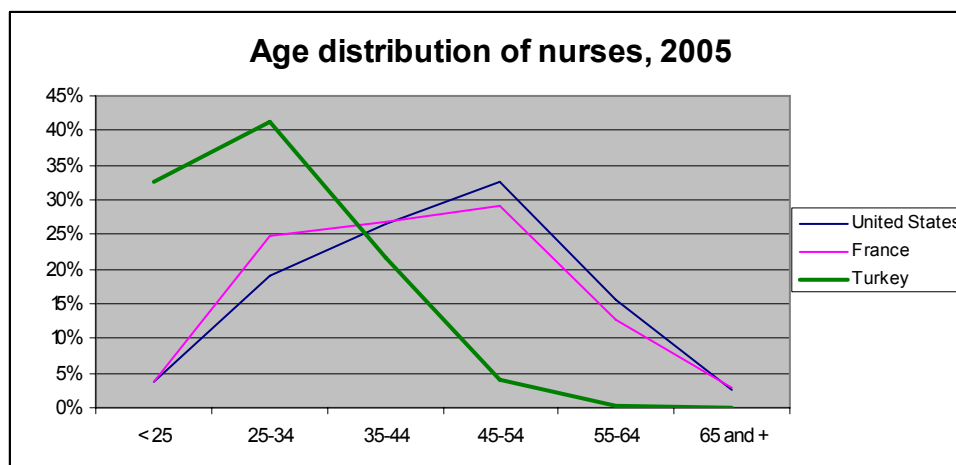
Retirement

The health workforce has historically been very young in Turkey compared to other OECD countries; however, it is beginning to age. There is no pending wave of retirements. While OECD countries are faced with the challenges of an aging workforce, the age distribution of both physicians and nurses in 2000 in Turkey was skewed heavily towards those less than 35 years old. Over 80 percent of all physicians in Turkey were under the age of 35 in 2000. In the United States and Germany only 44 and 51 percent of physicians are under 35, respectively. A similar trend is seen when comparing the age distribution of nurses in 2000. In Turkey, 74 percent of all nurses were under the age of 35, whereas in the United States and France, it is only 23 and 29 percent, respectively. However, there are signs that the workforce is aging in Turkey. By 2007, only 53.7 percent of physicians were under 35 years old. If this trend continues, like many OECD countries, Turkey may eventually have an issue with a large number of health workers retiring in the same time period. The mandatory retirement age for public sector employees is between 55 and 60 for current public sector health workers, but has been increased to 65 recently for all newly appointments, which will keep health workers in the workforce longer.

Figure 27. Age distribution of physicians and nurses



Source: OECD (2008), "The Looming Crisis in the Health Workforce."



Source: OECD (2008), "The Looming Crisis in the Health Workforce."

Net Migration

Where data are available they suggest emigration rates for health workers are very low and do not represent a major source of outflows from the health workforce in Turkey. Only 2.4 percent of Turkish-trained physicians and 2.9 percent of Turkish-trained nurses are working outside of Turkey. This is a very low rate of emigration compared to both developed and developing countries (Dumont and Zurn 2007). In total, about 3500 physicians and 2300 nurses trained in Turkey are currently working abroad. Within the OECD the primary destination for Turkish physicians who have expatriated is Germany. According to the most recent data, 884 Turkish doctors were practicing medicine in Germany as of 2005 (Bundesärztekammer 2005). Other destination countries include the United Kingdom, Denmark, France, Finland and the Netherlands; however the numbers are relatively small.

Turkish law only permits Turkish citizens to practice medicine in Turkey. As a result, very few Turkish health workers are trained abroad. In 2006, 83 doctors and 51 nurses entered the labor market who were trained abroad. A breakdown of foreign-trained Turkish doctors and nurses by origin country for 2005 is provided below (Table 8).

Table 8: Number of foreign-trained doctors by country of training, Turkey, 2005

Country of Training	Doctors	Nurses
Azerbaijan	2	1
Bulgaria	9	48
China	-	1
Georgia	1	-
Germany	1	1
Iran	3	-
Russia	1	-
Tajikistan	1	-
Uzbekistan	2	-
Yugoslavia	1	-
Total	21	51

Source: Ministry of Health, General Directorate of Health Education, Branch Office of Residency

Increasing emigration rates could pose a threat to scaling up the health workforce in the future. Due to increasing shortages of doctors and nurses in many OECD countries, there is a potential for more doctors and nurses to seek employment outside of Turkey in coming years. As noted above, physicians in Turkey are not paid particularly well in relation to both other professions, and more importantly to other OECD countries. This can create an incentive for publicly trained and funded physicians in Turkey to seek more attractive jobs abroad. The potential membership of Turkey into the European Union (EU) poses a risk of greater expatriation of Turkish doctors and nurses to other EU countries.

Unemployment among Health Workers

There are few unemployed health workers. The most recent data suggest approximately 3 to 4 percent of health workers are not working or are working in occupations that are not health related. This is low compared to other OECD countries where such data have been collected. Unemployed health workers do not represent a major source that can be tapped into to increase the supply of health workers.

Education Capacity

There appears to be no shortage of qualified candidates applying to training programs in medical fields. There have been no statistics published on the number of applications to training programs per position but two indicators shed light on the supply of qualified candidates. First, the average Student Selection Examination score for students in health training programs is 15 percent higher than for other faculties. Second, the dropout rate for health training programs is very low (less than 2 percent). This shows that attrition during education does not represent a significant problem.

There appears to be no shortage of training capacity to scale up medical school enrolment. For other occupations such as nursing, however, it is less clear whether there are enough faculty and schools to increase enrolment. Turkey has one of the lowest student-to-faculty ratios for medical training in the world (Table 9). For nursing and other programs, however, in some provinces the student to faculty ratios exceed 30 with a national average of 26, which is high compared to international standards (around 8-10). Turkey has scaled up the number of medical faculty available significantly since the beginning of the 1990s.

Table 9: Ratio of Medical Students to Faculty

Germany	22.7
Spain	14.4
Italy	11.8
France	10.8
Turkey	3.6

Source: Zaman 2008.

Paying the Remuneration Costs of a Scaled up Health Workforce

Salaries for health workers in the public sector are paid out of the MOH budget. Currently, 51 percent of the MOH budget is used for salary payments. Health workers also receive additional remuneration through bonus payments that are paid out of revolving funds financed through the SSI system.

The demand for health workers, therefore, can be estimated by modeling the resources available within these two streams of health worker remuneration. The supply of health workers can be estimated under different scenarios of enrolment rates in training programs, net migration and retirements. Comparing demand and supply under various scenarios provides important information on how much expansion of the health workforce is affordable in the future (i.e. there are enough resources within the MOH budget and projected SSI resource envelope to pay salaries and bonuses).⁴

Table 10 summarizes the demand and supply scenarios that were modeled. These simulations focus only on physicians. However, since they are expressed as indexes the results will be exactly the same for other types of health workers⁵.

Table 10: Scenarios modeled for supply and demand of physicians in Turkey, 2008-2025

Scenario	Description
DEMAND	
Best case MOH budget	Best and worst case MOH and SSI budgets are based on analysis by J.Mays.
Worst case MOH budget	Simulation are based on scenarios for GDP growth, share of population covered by SSI, and elasticity of health spending with respect to GDP levels
Best case SSI budget	The share of revolving funds going to bonuses is held constant at 31percent
Worst case SSI budget	The share of the MOH budget allocated to salaries is held constant at 51 percent
SUPPLY	
Baseline	4532 medical graduates per year, zero net migration, retirement at age 65
Increase enrolment 1	Number of graduates doubles by 2015 ⁶
Increase enrolment 2	Number of graduates triples by 2015
Increase outmigration	Net out-migration increases to 1000 per year by 2015
All supply scenarios	Individual salary and bonus payments increase at the rate of inflation (4 percent)

⁴ The SSI resource envelope is funded through reimbursement of services, Hospitals do not pay all of this money, and rather managers can pay up to a maximum of 40 percent of this reimbursement as an additional bonus under the performance payment system.

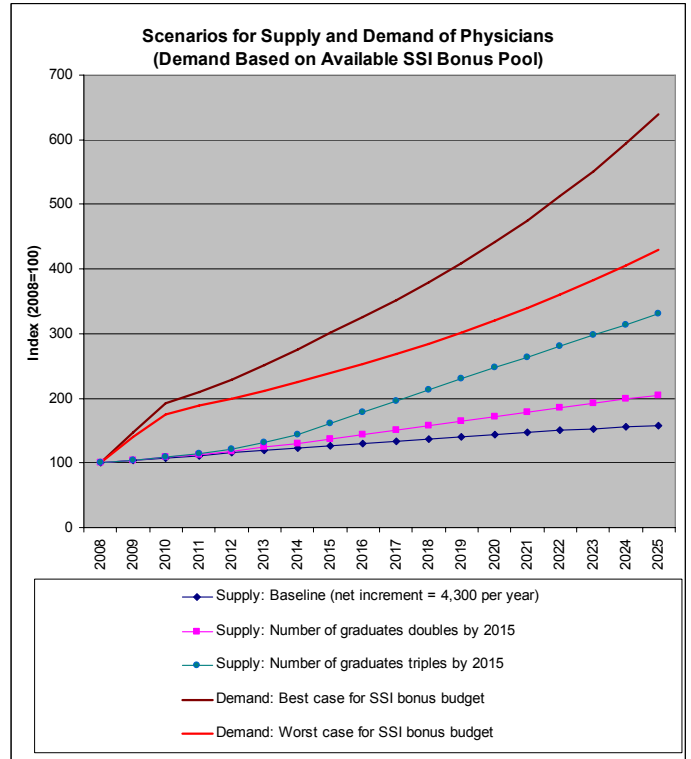
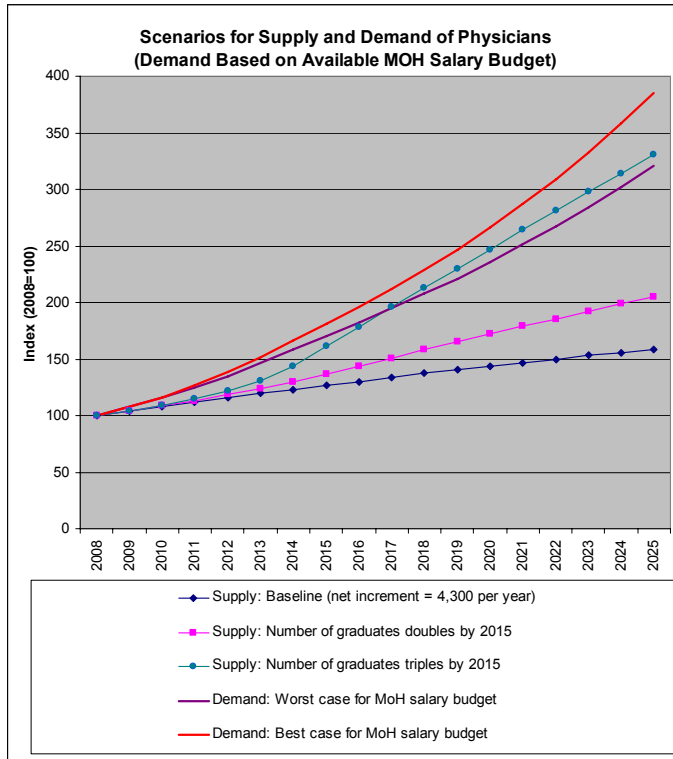
⁵ Assuming the ratio physicians to other occupations does not change.

⁶ The Ministry of Health's target is to double enrolment by 2023.

The analysis suggests that there will be sufficient resources to finance the wage bill and bonus payments under even the most aggressive scaling up scenarios. Furthermore, the simulations suggest that there will be sufficient resources in the revolving funds to pay staff bonuses. This is true for all supply scenarios and in fact, medical school enrolment can even more than triple without hitting a fiscal constraint. In terms of the MOH salary wage bill, the story is slightly different. Under the supply scenario where enrolment triples and the worst case demand scenario for the MOH budget, there will be start to be insufficient resources to pay the salary costs of health workers by around 2017 (Figure 28).

Even in cases where the simulations predict insufficient resources to pay salary costs, there are fairly straightforward policy options to resolve the problem. The government could choose to devote a higher share of health spending to salaries. Currently 51 percent of the MOH budget is used to finance the wage bill well within the range found internationally. Alternatively, the composition of remuneration could shift even more toward bonuses and away from salaries. According to the simulations, there will be more than sufficient resources within the revolving funds to pay bonuses. Reducing salaries and increasing bonus payments is a feasible option that keeps total remuneration constant and gets around the MOH wage bill budget fiscal constraint. Moreover, the share of revolving funds paid out as bonuses could be increased above 31 percent (the current limit is 40 percent) to provide additional remuneration to compensate for salary reductions. In fact, this is likely to happen under full hospital autonomy, increasing the share of an individual's total remuneration performance-based. The drawback from the health worker perspective is that this would significantly reduce pension benefits, as these are based on salary income. As a result, there may be considerable challenges to this option.

Figure 28. Summary of simulations of demand and supply



PART V - SUMMARY OF KEY HEALTH WORKFORCE ISSUES FOR THE FUTURE

Given high workloads and the MOHs plans to scale up the family medicine program, Turkey will need to scale up the health workforce significantly.

With the current population to physician norms in the family medicine program Turkey requires 20,000 family doctors. Currently there are just over 100,000 GPs and specialists in Turkey and even though some of these will transfer into family medicine, this still represents a significant scale up of staff. Moreover, the population-to-physician norms are significantly higher than in OECD countries and may need to be adjusted downward. This will require even more family medicine doctors to be trained, which will also entail increasing the annual physician graduation rate.

The performance based pay system has skewed incentives toward hospital-based employment and physician specialization.

Remuneration levels for doctors have grown much faster in hospitals than in primary care settings. This is due solely to the fact that bonus payments for GPs have increased much more rapidly in hospitals compared to in primary care settings. For nurses, this is less of an issue.

The recently implemented family medicine scheme is re-aligning incentives back toward primary care.

The current capitation rate plus additional payments result in remuneration levels within the family medicine program that are higher than in any other settings for general practitioners. This provides strong financial incentives for doctors to work in family medicine.

Compared to other OECD countries, Turkey has two types of skill mix distribution imbalances: between specialists and general practitioners and between nurses and physicians.

About only one fourth of all physicians in Turkey work actively in primary health care. Furthermore, despite the increased focus on family medicine, approximately only 3 percent of the total physician labor force was classified as family physicians in 2007. The relatively low nurse density rate suggests that some clinical tasks that could be handled by a nurse are conducted by physicians, leading possibly to an inefficient use of skills.

Geographic distribution has improved significantly in Turkey.

Compulsory service, the incentives created through the family medicine program and contract-based employment in areas where it is difficult to recruit staff are some of the

main reasons for this success. However, there is considerable dissatisfaction with the scheme among recent graduates. The government could explore alternative mechanisms of further addressing the problem, including reforms to the curriculum and medical school entry process.

The current workload level within the family medicine scheme is very high.

The targeted patient-to-doctor ratio in Turkey is roughly twice the OECD average. This could result in high workloads, poor quality of care in the future potentially and burnout among health workers. The average number of medical examinations per day per physician is 44, which translates into approximately 7 to 8 minutes per clinical examination. Turkey is clearly an outlier (see chart).

There appears to be sufficient training capacity as well as qualified applicants to expand significantly medical school enrolment. For nursing, it is less clear.

Above average entry exam scores and very low attrition rates among students indicate an excess supply of qualified medical students. Turkey also has one of the lowest student-to-faculty ratios for medical training in the world, indicating no training capacity constraint. For nursing and other programs, however, in some provinces the student-to-faculty ratios exceed 30 with a national average of 26, which is high compared to international standards. If nursing programs are to be scaled up, it will likely require investments in additional capacity.

Preliminary simulations indicate that there will be sufficient resources to finance the remuneration of health workers even under very aggressive scaling up scenarios.

Under almost all scenarios modeled there will be no wage bill constraint to expanding the health workforce. Moreover, in the scenario where the fiscal constraint becomes relevant, there is a wide range of policy options available to the government.

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