HEALTHCARE FINANCING REFORM: THE CASE in TURKEY

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1. Introduction

Because of some of the market failures and positive externalities in healthcare, the government intervention in the health sector was an actor. It can be either on health care service or regulation. Through this thinking, Turkey started a reform study called Transformation of Health in (TOH) 2003. The TOH's objectives are about the service and financing of health care as well as justice in terms of the access of the service providers by regions. By its application, Turkey got successful results on the various health sector indicators. For example, infant mortality rate, maternal mortality rate and life expectancy at birth rates are improved. Turkey has reached the OECD countries' health rates by this success. Also public sector health expenditure ratio in total health expenditure increased to 73%at 2008 from 61.1% at 1999. In the end, Turkey is the last among OECD countries for total health expenditure, public health expenditure and health expenditure per capita. Although there are some successes on the health ratios, access to the services and its distribution of the finances by region has different ratios. Household health expenditure on the poorest quintile has increased extraordinarily since 2003. As a result, nearly half of the population can't benefit from the public health service according to the Turkish Statistical Institute (TURKSTAT) in 2008.

Health expenditures have risen not only in developed countries but also in undeveloped countries during the last decade. Using advanced technology in healthcare service is the main

reason for the high level of spending. On the other hand, this ratio is rising faster than the national income. Because of this, health expenditures are getting to be a financial burden on public budgets. Also this burden causes a healthcare service quality problem. After the 2008 global economic fiscal crisis, there is a political change in public health spending nearly all over the world. Governments have launched healthcare reform program. The purpose of such programs is to reduce health spending. Turkey launched a reform program at 2003 called Transformation of Healthcare Services.

The study analyzes healthcare reform experiences in developed countries. Turkey's healthcare reform is examined. The method is quantitative research for which the study uses Household Budget Survey Data of the years 2003 and 2010.

2. Background

Household health expenditures are the major sources of the financing health in the various countries. Most funding is public expenditure from taxation and social health insurance, except in Azerbaijan, Georgia and Kyrgyzstan, where prepaid sources of revenue are minimal and most services are funded through out-of pocket payments. Taxation plays some role in funding health services in nearly all European countries. In all European countries, with the exception of France and the Netherlands, out-of-pocket payments form a larger proportion of private health expenditure than private health insurance (Mossialos and Dixon, 2002: 18). But, modern health care systems cannot be financed from the out-of-pocket expenditure of patients (Evans, 2002: 48).

In high-income countries, out-of-pocket spending accounts for less than 20 percent of total health spending. Country weighting reduces the out-of-pocket shares somewhat (they account for more than 40 percent of total low-income country health spending), but the story remains the same. On the other hand the composition of private health spending also differs across income levels. As incomes increase, both private and out-of-pocket shares of total health spending decrease, and public spending pre-dominates (Gottret and Schieber, 2006: 37-38). Informal payments in the health sector in the countries of Central and Eastern Europe and of the Former Soviet Union are growing and are becoming an important source of health care financing. On the other hand OPPs can also be a major impediment to health care reform (Lewis, 2002: 201).

The impact of OPPs has been widely recognized in the literature. Most of these contributions analyze the role out of pocket health payments in causing poverty, that is, the extent to which illness induces impoverishment by answering the question of how many households have become poor due to illnesses. Others focus on those expenditures that represent catastrophic payments, in the sense that they represent an amount in excess of a substantial fraction of household income causing an impoverishing effect (Diaz and Rubi, 2009: 1). Also, user fees are an important barrier to accessing health services, especially for poor people. They also impact negatively on adherence to long-term expensive treatments (James et al., 2006: 150).
These negative effects consist of two main points. Firstly, out of pocket health expenditures block access to health care service. Secondly, out of pocket health expenditures create financial burdens on the household budget (Özgen et al., 2010: 13). In other words, this burden causes catastrophic health expenditures. According to the study which used data from 116 surveys covering 89 countries, financial catastrophe occurs in almost all countries, even the richest. Globally, 150 million people suffer financial catastrophe each year because they must pay for care (Xu et al., 2007: 980). Catastrophic spending rates were highest in some countries in transition, and in certain Latin American countries (Xu et al., 2003: 1). In addition, the authors identified three key preconditions for catastrophic payments as the availability of health services requiring payment, low capacity to pay, and the lack of prepayment or health insurance.

3. The View of the Turkish Health System and Health Reforms

There was a complex status in the healthcare sector early 2000s. The public sector was a major actor and its proportion in the total health expenditure is approximately 60% to 70%. The public expenditures rate for healthcare was 4% of GDP in 2003. In this system, there were three separate health insurance funds: These are the Sosyal Sigortalar Kurumu (SSK) for blue and white-collar workers in the public and private sectors, Bag-Kur or the Social Security Organization for Artisans and the Self-Employed and Emekli Sandigi or the Government Employees Retirement Fund (GERF). In addition, the government put into practice a “Green Card” for poor and vulnerable in 1992. The benefit package applications differ from each other. The health coverage was not known certainly but nearly 64% of the population had some type of health coverage according to the Turkish Statistical Institute in its Household Budget Survey 2003. Turkey had a mixed health care services delivery system in 2003. There were three major providers. These were: The Ministry of Health, SSK and

University Hospitals. On the other hand, the private sector was very limited. In 2001, there were approximately 250 private hospitals in the country. The health status of Turkey was not a good level when compared to the other countries with the same income level. Maternal mortality rate and infant mortality rate are both very high. There were great differences in health indicators between rural and urban areas and between the various regions. Life expectancy at birth was about 66 for males and about 71 for females and this period was 10 years shorter than the average of OECD countries. With this negative situation, Turkey was behind most of the middle-income countries in terms of its health level. On average, a doctor was present in only 2 of the 5 births (%40). 11.6% of the women in the poorest group gave birth under the control of a doctor compared to 72.3% of the women in the richest group. This ratio was over 90% in the middle-income countries. Resources for health were less than OECD Countries and these sources were used inadequately as a result of lack of coordination. Out of Pocket Payments (OPPs) were not known exactly but it was estimated that the rate of this amount is higher than OECD Countries, even reaching about 50%. In summary, the Turkish health system was inefficiently using resources. Turkey launched the Health Transformation Program (HTP) in 2003 to solve problems that were explained before. The HTP's objectives are to organize, provide financing and deliver the health services in an effective, productive and equal way. A new program, the Universal Health Insurance system, which would combine SSK, Bag-Kur, GERF and Green Card Program under one umbrella, was established. The family medicine system was created and MOH was restructured as a regulator in the health system. On the other hand, the private sector was very limited. In 2001, there were approximately 250 private hospitals in the country (OECD, 2008: 28-35).

The health status of Turkey was not a good level when compared to the other countries with the same income level. Maternal mortality rate and infant mortality rate are both very high. There were great differences in health indicators between rural and urban areas and between the regions. Life expectancy at birth was about 66 for males and about 71 for females and this period was 10 years shorter than the average of OECD countries. With this negative situation, Turkey was behind most of the middle-income countries in terms of health level. On average, a doctor was present in only 2 of the 5 births (40%). 11.6% of the women in the poorest group gives birth under the control of a doctor compared to 72.3% of the women in the richest group. This ratio was over 90% in the middle-income countries. Resources for health were less than OECD Countries and these resources were used inadequately as a result of lack of

coordination. OPPs were not known exactly but it was estimated that the rate of this amount is higher than OECD Countries, even reaching about 50% (MOH, 2003: 11-17).

Summary, Turkish health system was inefficiently using sources. There were regional differences in access to health service. Out of pocket payment, especially informal payments, in the health sector were rising and this was a serious problem for the poor and vulnerable access to health care services. For example, individuals in the lowest two income quintiles paid on average 27 Turkish Lira (TRL) for a visit to a health centre as compared with approximately 13 TRL for individuals in the two highest quintiles. (OECD, 2008: 37-38).

Turkey launched the Health Transformation Programme (HTP) in 2003 to solve problems that were explained before. The HTP's objectives are to organize, provide financing and deliver the health services in an effective, productive and equal way (MOH, 2003: 24). A new programme, the Universal Health Insurance system, which would combine SSK, Bag-Kur, GERF and Green Card Programme under one umbrella, was established. The family medicine system was created and MOH was restructured as a regulator in the health system.

With HTP application, there were some positive outcomes in the health system. Firstly, public health expenditure in total expenditure has risen. Table 2 gives the ratio of public health expenditure as a percentage of GDP and per capita. The public health expenditure rose from 3.84% in 2003, to 4.44% in 2008. Also public health expenditure per capita and US$ purchasing power parity both increased. Although increasing in expenditure, Turkey is still last in OECD countries with this level (OECD, 2011). On the other hand, the proportion of public sector in the total health expenditure is about 68% in 2007. So, the private health expenditure is still wide.

Table 1: Public Health Expenditure by Years

Years	Share of Public Health Expenditure in GDP	Per Capita Public Health Expenditure, in US $	Per Capita Public and Private Health Expenditure, PPP, in US $
2008	4.44	456	618
2007	4.10	375	552
2006	3.97	301	505
2005	3.70	259	422
2004	3.83	221	390
2003	3.84	174	339

Source: *TURKSTAT,* MOH Statistical Yearbook, 2008-2009-2010.

Maternal mortality rate and infant mortality rate fell in Turkey. In 2000, infant mortality rate was 43 ‰, it decreased to 13.1 ‰ in 2009. While maternal mortality rate was 70 per 100.000 live births in 2000, it was 18.4 in 2009. Life expectancy also increased from 71 in 2000, to 73.8 in 2009. To sum up, Turkey has closed to OECD Countries ratios on health status after HTP.

4. Health Expenditures and Welfare in Turkey

Total health expenditure has risen in Turkey since 2000. While the public health expenditure has been rising, the private health expenditure has been increasing too. To give an example, out of pocket payments in total health expenditure was 18.5% in 2003, it is 21.8% in 2007 (last available year). This situation is in contrast with HTP's objectives that are explained above. Accordingly, increasing OPPs is harmful for the poor and vulnerable population's access to health care service. To investigate household health expenditure, the study uses micro data sets. These are Household Budget Surveys of 2003, 2009 and 2010.

Sülkü and Bernard (2008) used Turkey's 2002-03 National Household Health Expenditure Survey to examine to what extent the health insurance system in Turkey provided adequate protection against high out-of-pocket expenditures in the population aged under 65 years prior to the HTP. They found that 19% of the non-elderly population (12.6 million individuals) was living in families spending more than 10% of family income on health care. In the case of the poor, 23% were living in families spending more than 10% of family income on health care and 19.4% were living in families spending more than 20% on health care (OECD, 2008: 70).

Aran and Hentschel (transferred from: OECD, 2008: 71) found a rather different picture for 2006, using Turkey's Household Budget Survey. Only 5.3% of households were spending more than 10% of their household expenditure on health care in that year. This suggests that impoverishment levels due to catastrophic medical expenses are rather low. However, and unfortunately, it is not possible to deduce that catastrophic health spending has declined over the past years given that the National Household Health Expenditure Survey and the Household Budget surveys are not comparable.

Özgen, Şahin and Yalçın (2010: 183) used Turkey's 2004-2008 Household Budget Survey Data and found that many households had catastrophic health expenditure during 2004-2008.

On the other hand, generally, household health expenditure ratio is under 10% of both consumption expenditure and payment capacity ratio increased from 2004 to 2008.

Table 2: Household Health Expenditure Ratio by Income Quintile, 2003, 2009, 2010.

	2003	**2009**	**2010**
1. 20%	9.1	10.5	10
2. 20%	12.4	14.9	14
3. 20%	17.3	15.3	17.2
4. 20%	17.8	22.4	22.8
5. 20%	43.5	37.0	36
Total	100	100	100

Source: *Household Budget Survey, 2003-2010.*

Table 2 gives household health expenditure sorted by income quintile in 2003 and 2009. The year 2003 is inception of the HTP. In 2003, health expenditure ratio was 9.1% of the poorest quintile by income. In 2009, it rose to 10.5%. On the other hand, it decreased from 43.5% in 2003, to 37% in 2009 for the richest quintile by income. This situation is contrast with HTP. Protecting the poor and vulnerable is one of the HTP's objectives but poor people spend more of their income. So, poor people cannot access the health care service or postpone their healthcare demands. Table 4 gives the percentage of main reasons for not consulting specialist even though needing to consult a specialist during the past 12 months by sex in 2008.

Table 3: Household Health Expenditure Ratio by Consumption Quintile, 2003-2009.

	2003	**2009**
1. 20%	3.9	6.8
2. 20%	6.7	10.0
3. 20%	11.3	16.2
4. 20%	20.5	20.5
5. 20%	57.6	46.5
Total	100	100

Source: *Household Budget Survey, 2003-2009.*

Table 3 gives household health expenditure that is sorted by consumption quintile in 2003 and 2009. The poorest quintile spent more in 2009. While the ratio was 3.9% in 2003, it was 6.8% as a percentage of their total expenditures in 2009. The richest quintile on the contrary spent less than 2003. The rate decreased from 57.6% in 2003 to 46.5% in 2009. This shows that HTP is unsuccessful in protecting the poor. It also suggests that OPP is rather progressive richer households allocate more of their household spending to health expenditure than poorer households both in relative and absolute terms (OECD, 2008: 71).

Aran and Hentschel indicate that the incidence of additional impoverishment due to high medical expenses in Turkey is low and has been declining in 2006. It has also been low relative to other countries where data are available (OECD, 2008: 71). This study considers just 2003 and 2006 Household Budget Surveys. On the other hand, in Turkey there was a political change in health financing. Social Security Institution launched co-payments for consulting and drugs in 2009. Co-payments were 2 TRL for primary health care and family medicine, 8 TRL for secondary and tertiary health care and 15 TRL for private health care. Because of this, household expenditures tend to rise. Table 4 shows household spending as a share of household expenditures.

Table 4: Average Consumption Expenditure per Household by Quintiles Ordered by Income

	2002	**2003**	**2008**	**2009**	**2010**
1. 20%	2,5	2.3	1.8	2.2	2
2. 20%	2.4	2.1	1.7	2.1	2
3. 20%	2.5	2.3	1.8	1.6	1.8
4. 20%	2.1	1.8	1.8	1.9	2
5. 20%	2.3	2.4	2.1	1.9	2.4

Source: *Household Budget Survey, 2002-2003-2008-2009-2010.*

Table 4 shows that poorest quintile spent 2.5% as a share of household expenditures in 2002. The rate was 2.3% in 2003 and 1.5% in 2008 but in 2009, the rate increased to 1.9%. In addition to, it can be said that this rate will increase more because of the co-payments. Further, the richest quintile spent less. This data belong to 2009 and it has not been declared for 2010 and 2011. Because of these, it cannot be calculated truly in terms of the burden on the household budget and poverty.

There are also informal health care payments in Turkey. A study conducted in one geographic region of Turkey in 2002 covering approximately 900 households found that 25% of total out-of-pocket expenditures were informal. The majority of informal payments were in cash (71%) and for outpatient services. Having health insurance did not protect patients from paying informal payments and in fact to obtain services covered under health insurance, patients had to first visit a doctors' office and make a payment. In public facilities, the poor paid more than the non-poor per capita, and the elderly paid more than the young, raising serious equity concerns. The authors of the study relate the existence of these informal payments as being most likely due to two factors: *i)* the fact that public sector health personnel were allowed to

practice in the private sector and may have indulged in unethical practices including referring the patient to their private clinic after office hours, *ii)* under-financing of the benefits package or underinsurance which meant that health facilities faced resource constraints, and patients had to buy their own supplies. The study found that the majority of informal payments by the insured were for physicians' services. Green Card holders largely paid informal fees for physician services and for surgery. As the study points out, this indicates that even the poor were not exempt from referral to physicians' private practices after office hours (Tatar et al., 2007, OECD, 2008: 31).

Table 5: Average Consumption Expenditure per Household (TRL)

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Average Consumption	738.3	889.3	1.091	1.224	1.363	1.621	1.688	1.843
Average Health Expenditure	16.4	19.8	24.2	26.1	32.1	30.7	32.9	39
Health Expenditure per Household by Equivalent Household Size	7	8.8	11	11.7	14.4	13.7	15	18
Health Expenditure as a Percentage of Household Consumption	2.3	2.2	2.2	2.2	2.4	1.9	1.9	2.1

Source: *Household Budget Survey, 2003-2010.*

Table 6: Average Consumption Expenditure per Household by Quintiles Ordered by Income,

2003

Health	**Total**	**1. 20%**	**2. 20%**	**3. 20%**	**4. 20%**	**5. 20%**
TRL	16.4	7.5	10	14	15	36

2009

Health	**Total**	**1. 20%**	**2. 20%**	**3. 20%**	**4. 20%**	**5. 20%**
TRL	32.9	17	24	25	36	60

2010

Health	**Total**	**1. 20%**	**2. 20%**	**3. 20%**	**4. 20%**	**5. 20%**
TRL	39	20	27	34	44	70

Source: *Household Budget Survey, 2003-2009-2010.*

According to the table 6, average consumption expenditure on health in 2009 was 32.9 TRL. It was just 16.4 in 2003 and increased nearly 50% from 2003 to 2009. In 2009, while the poorest quintile spent 17 TRL, the richest spent 60 TRL. On the other hand, poorest quintile spent more than richest as a share of income. It was 1.8% in 2008. The richest rate was 2.1 in 2008.

Table 7: Consumption Expenditure per Household by Quintiles Ordered by Income 2009, Urban-Rural, (Vertical)

Urban	**Total**	**1. 20 %**	**2. 20 %**	**3. 20 %**	**4. 20 %**	**5. 20 %**
%	1.8	2	1.8	1.7	1.6	1.9
Rural	**Total**	**1. 20 %**	**2. 20 %**	**3. 20 %**	**4. 20 %**	**5. 20 %**

%	2.4	3.7	1.8	2	2	2.7

Source: *Household Budget Survey, 2009.*

Table 7 gives household health expenditure by urban and rural area by 2009. In urban areas, while household health expenditure ratio was 1.8%, it was 2.4% in rural areas. On the other hand, all income quintile in rural areas spent more than urban areas. Households being poor with out-of-pocket expenditure are more in rural areas than urban area (Özgen et al., 2010: 181).

Table 12: Consumption Expenditure Shares in Subgroups of Expenditure by Quintiles Ordered by Income, 2010 (%)

Health	**Total**	**1. 20 %**	**2. 20 %**	**3. 20 %**	**4. 20 %**	**5. 20 %**
Medical Products, Appliances and Equipment	100	14.3	15.3	19	22.4	28.9
Out-Patient Services	100	7.9	13.4	14.3	23.3	41.1
Hospital Services	100	8.1	18.8	7	18.8	47.3

Source: *Household Budget Survey, 2010.*

Household health expenditures cover drug, medical product, treatment tools and equipments, services provided in and out of the hospital, dental services and the expenditure related to the hospitals. Table 8 gives health expenditure shares in subgroups of expenditure by quintiles ordered by income by 2009. According to the table 9, the poorest quintile spent 14.3% for medical products, appliances and equipment, 7.9% for out-patient services and 8.1% for hospital services. On the other hand, in the rural areas the poorest quintile spent more than urban area. Table 9 and 10 gives expenditure rate by income quintile for area.

Table 9: Consumption Expenditure Shares in Subgroups of Expenditure by Quintiles Ordered by Income, 2010 (%), Urban

Health	**Total**	**1. % 20**	**2. % 20**	**3. % 20**	**4. % 20**	**5. % 20**
Medical Products, Appliances and Equipment	100	14.9	14.6	21.5	19.2	29.8
Out-Patient Services	100	7.4	13.1	14.6	22.6	42.2
Hospital Services	100	12.4	19	13.7	17.2	37.6

Source: *Household Budget Survey, 2009.*

Table 10: Consumption Expenditure Shares in Subgroups of Expenditure by Quintiles Ordered by Income, 2010 (%), Rural

Health	**Total**	**1. % 20**	**2. % 20**	**3. % 20**	**4. % 20**	**5. % 20**
Medical Products, Appliances and Equipment	100	12.7	16	18.8	23.9	28.6
Out-Patient Services	100	15.9	9.2	14.9	20.6	39.4
Hospital Services	100	18.9	0.3	4.5	5.3	70.9

Source: *Household Budget Survey, 2009.*

Table 7: Catastrophic Health Expenditures (2005-2010)

Catastrophic Health Expenditure	2005* (n=8544)	2006* (n=8558)	2007* (n=8548)	2008* (n=8549)	2009 (n=10046)	2010 (n=10082)
Shares of Consumption Expenditure (<10 %)	46,13	49,08	48,44	51,47	62,7	68,6
Shares of Consumption Expenditure (>10 %)	5,59	5,22	5,31	3,93	6,6	8,9
Shares of Consumption Expenditure (10-20 %)	3,89	3,53	3,67	2,7	4,2	6,4
Shares of Consumption Expenditure (20-40%)	1,31	1,45	1,24	1,03	1,9	2,1
Shares of Consumption Expenditure (≥40%)	0,39	0,24	0,40	0,20	0,50	0,43

Source: *Household Budget Survey, 2005-2010.*

Table 10: Household Health Expenditure by Region

Urban	**31.22 %**
Rural	**68.78 %**

Source: *Household Budget Survey, 2010*

Table 11: Household Health Insurance Status (%)

	n=6423
Yes- Social Security Institution	**69,04**
Yes-Other (Bank, etc.)	**0.42**
Yes-Private	**0.88**
Yes-Green Card	**17.18**
No	**12.48**

Source: *Household Budget Survey, 2010*

Table 13: Percentage of main reasons not consulting a specialist even needed to consult a specialist but did not during the past 12 months by sex and residence, 2009-2010

	2009	**2010**
Not consult a specialist	4.9	19.9
Could not afford to (too expensive or not covered by the insurance fund)	44.1	44.9
Waiting list, other reasons due to the hospital	6.3	6.8
Could not take time because of work, care for children or for others	17.4	18.3
Too far to travel / no means of transportation	3.5	4.3
Fear of doctor/hospitals/ examination/treatment	10.3	4.1
Could not find any one to take to hospital	2.4	2.7
No permission from family or relatives	1.9	0.6
Very late appointment	1.7	2.6
Other reasons	12.4	15.7

Source: *Health Survey, 2009-2010*

5. Conclusion

Turkey's OPP spending as a share of total health expenditure was relatively low (19.3%) by 2006 – three years after the start of the HTP. This may indicate that more people in Turkey benefited from risk pooling/health insurance by 2006 and were, therefore, on average, better protected from catastrophic medical expenses, than in many other countries with comparable income levels at that time (Xu et al., 2007).

Based on the overall information available from the latest national health accounts and Household Budget Surveys, it appears that the Turkish health system performs quite well in terms of equity and financial protection, both in absolute terms and relative to other countries. The OPP share is relatively low and the incidence of OPP is progressive, falling disproportionately on the rich. The level of impoverishment due to catastrophic medical expenses is also low (OECD, 2008: 73).

According to the Özgen and others (2010), households had catastrophic health expenditure during 2004-2008. On the other hand, the financial burden of health expenditure on household decreased from 2004 to 2008.

Household Budget Surveys do not include advanced questions about health. Because of these, health rates in budget surveys are less than health surveys (Zoidze et al., 2009). So, using budget surveys causes lesser household health expenditure ratio. Therefore, it can be argued that household budget surveys do not picture the correct situation. In addition, studies that are given above about 2008 but co-payments were launched in 2009 for household. This application naturally has strong effect on household health expenditure. After healthcare reform, the poorest quintile spent more than before in Turkey in 2010. For example, while out of pocket health expenditure of the poorest quintile increased 27%, the richest quintile increased just 3.4% at 2009. Also, the expenditure of this quintile has increased nearly 95% since 2003. While health expenditure of poorest was 8.6% of the total consumption in 2008, this rate is 10.5% in 2009. The richest quintile is 43.5% in 2003 and 37% in 2009.

References

Evans, R. (2002). Financing Health Care: Taxation and the Alternatives. D. A. Mossialos E. in, *Funding Health Care: Options for Europe* (p. 31-58). Philadelphia: Open University Press.

Gottret, P., & Schieber, G. (2006). *Health Financing Revisited: A Practioner's Guide.* Washington: The World Bank.

James, C., et al. (2006). "To Retain or Remove User Fees? Reflections on the Current Debate in Low and Middle Income". Applied Health Economics and Health Policy, 5(3), p.137-153.

Ke Xu, et al. (2003). “Household Catastrophic Health Expenditure: A Multi-Country Analysis”, The Lancet. Vol(362):111-117.

Ke Xu, et al. (2007). Protecting Households from Catastrophic Health Spending. *Health Affairs* , 972-983.

MOH (2003). *Health Transformation Program in Turkey.* Ankara: Minister of Health.

MOH (2010) Statistical Yearbook, Ankara

Mossialos, E., & Anna, D. (2002). *Funding Health Care: An Introduction.* Philadelphia: Open University Press.

OECD. (2008). *OECD Reviews of Health Systems: Turkey.* Washington: World Bank.

OECD. (2011). Health Data

Ozgen, H., et al. (2010). *An Analysis of Out of Pocket Payments and Effects on Household Catastrophic Health Expenditure and Poverty*, Hacettepe University, Ankara

Sülkü, S.N. and D.M. Bernard (2008), “Financial Burden of Health Expenses: Turkey, 2002-2003 Period”, *Strategy Development Headship*, Working Paper, Ministry of Health of Turkey, Ankara.

Tatar M., S.H. Ozgen, P. Belli and P. Berman (2007), “Informal Payments in the Health Sector: A Case Study from Turkey”, *Health Affairs*, Vol. 26, No. 4.

TURKSTAT. (2010). Household Budget Survey.