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Successful Health System Reforms:

The Case of Turkey

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ABSTRACT

Turkey has undertaken major reforms to transform and improve the health system and its outcomes. The objective of this paper is to analyse the reforms and health system strengthening efforts that led to these improvements in order to share lessons learned with other countries seeking to transform their health sectors. This paper documents the key achievements in health system performance that occurred between 2002 and 2011 resulting from the Health Transformation Program (HTP) in Turkey. It then analyses how these results were achieved and highlights the lessons that derive from the Turkish experience. Finally, it discusses the new and continuing challenges facing the Turkish health sector.

Keywords
HEALTH CARE REFORM
HEALTH SYSTEMS PLANS – ORGANIZATION AND ADMINISTRATION
OUTCOME ASSSESSMENT (HEALTH CARE)
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PREFACE

This paper is intended to serve as a background paper for a technical briefing -*Equitable Access to Health: Snapshots from Health Reform Country Experiences* -at the 65th session of the World Health Assembly in May 2012. It is also prepared as a case study for the World Health Organization (WHO) Global Learning Program on National Health Policies, Strategies, and Plans. The views presented in the paper are those of the authors and do not represent official WHO policy. Any errors or inaccuracies are solely the responsibility of the authors.

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The authors would like to gratefully acknowledge the extensive support and guidance provided by a team of officials in the Turkish Ministry of Health, in particular HE, Dr. Recep Akdağ, Minister of Health.

The document draws on interviews with key actors in the health reforms in Turkey. The Ministry of Health and WHO/Europe thanks all those interviewed for their availability and insights.

LIST OF ABBREVIATIONS

COPD	Chronic obstructive pulmonary disease
FCT	Field coordination team
FM	Family medicine
GC	Green card
GP	General practitioner
GoT	Government of Turkey
HFA	Health for All
HFADB	Health For All Data Base
HMIS	Health management information system
HRH	Human resources for health
HTP	Health Transformation Program
IHD	Ischaemic heart disease
IMR	Infant mortality rate
IoM	Institute of Medicine
MMR	Maternal mortality ratio
MoH	Ministry of Health
NCDs	Non-communicable diseases
P4P	Performance-based payment
PHD	Provincial Health Director
PM	Prime Minister
PPP	Purchasing power parity
SSI	Social Security Institute
TDHS	Turkish Demographic Health Survey
THE	Total health expenditures
TurkStat	Turkish Statistical Institute
U5MR	Under-5 mortality rate
WHO	World Health Organization

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I. Introduction

At the turn of the millennium the performance of Turkey's health sector in terms of health outcomes, financial protection, and patient satisfaction put it at the bottom of the OECD countries (Barış et al. 2011) and in the European Region of WHO (Tatar et al., 2011). In fact, dissatisfaction with the health system was so widespread that government made health sector reform a key priority when it came into power in late 2002. By 2010, however, the situation had changed dramatically. Turkey had undertaken major reforms to transform and improve the health system and its outcomes. The objective of this paper is to analyse the reforms and health system strengthening efforts that led to these improvements in order to share lessons learned with other countries seeking to transform their health sectors.

The remainder of this paper is divided into six sections. Section II describes the materials and methods used to prepare the paper, while Section III shows the key achievements in health system performance that occurred between 2002 and 2011 resulting from the Health Transformation Program (HTP) in Turkey. Section IV analyses how these results were achieved and Section V analyses the lessons that derive from the Turkish experience. Section VI discusses the new and continuing challenges facing the Turkish health sector, while Section VII concludes the paper.

II. Material and Method

The paper was based on a desk review of published articles and reports as well as other relevant information. In particular, the evaluation report -*Turkey Health Transformation Program: Evaluation Report (2003-2010)* prepared by HE Professor Dr. Recep Akdağ, Minister of Health, Turkey (Akdağ, 2011) has served as an invaluable source of information. The information obtained from the desk review was supplemented by a series of key informant interviews with important stakeholders involved in the design and/or implementation of the reforms (please see Annex 1 for a list of interviewees).

The statistical data used in Tables 1, 2 and 4 derive as far as possible from the WHO European Health For All Database (HFADB). Where the most recent (2011) data have not yet been reported by Turkey HFADB, this information has been complemented by the Statistical Yearbook of the Ministry of Health of Turkey (forthcoming for 2011) or other national reports. The validity and quality of the data deriving from national sources have not been checked by WHO and should thus be interpreted with caution by taking into account other HFADB related indicators. Such data and their publication in this document do not constitute an endorsement by WHO.

III. Health System Performance Then and Now

Tables 1 and 2 provide an overview of the improvement in a number of important health system performance measures as well as statistics on the health system. It is particularly noteworthy that life expectancy (at birth) increased from 71 in 2000 to 75 in 2009, according to WHO estimates (World Health Report 2011), a significant improvement in a relatively short period of time. In part, this was brought about by a major reduction in infant and under five mortality rates. Increasing immunization rates and expansion of the immunization programs helped contribute to this decline. Maternal mortality also declined significantly in part due to an increase in the percentage of deliveries taking place in hospital (Akdağ, 2011; Turkey National Demographic and Health Survey (NDHS), 2003; MoH, 2011).

Table 1: Health System Performance Indicators Before implementation of the HTP and most recent available

Indicator	Before HTP	Most recent data available from HFADB or national source
Population	66,008,000 (2002*) [6]	73,722,992 (2010*) [6] 74,724,269 (2011) [10]
Health Improvements		
Estimated life expectancy (World Health Report)	71.0 (2000) [1], [6]	75 (2009) [1], [6]
Infant mortality (1000 live births)	36 (2000) [1], [6]	12 (2010)[11] 9.6 (2011) [3]
Under 5 mortality (1000 live births)	42 (2000) [1], [6]	13 (2010) [11] 12.5 (2011) [3]
Measles incidence (100,000 population)	11.8 (2002) [6]	0.01 (2010 **)[6]
Financial Access and Risk Protection		
Total expenditures on health (THE) (% GDP)	5.4 (2002) [4]	6.1 (2008) [4]
Public sector expenditure on health as a percentage of total government spending (WHO estimates)	9.1 (2002) [6]	12.8 (2010) [6]
Public sector expenditures on health (% of THE)	70.7 (2002) [6]	73 (2008) [6]
Private health expenditures (% of total health expenditures) (THE)	29.3(2002)[6],[8]	27(2008)[6]
Out-of-pocket expenditures on health as a percentage of total health expenditures	19.8 (2002)[5],[7]	17.4(2008)[5],[7]
Percentage of people paying for their own medicine and treatments	32 (2003)[19]	11.1 (2011)[9]
Health insurance coverage (%)	70(2000)[4]	98(2010)[4]
Satisfaction (public sector only)		
Overall patient satisfaction (%)	39.5(2003)[9]	75.9(2011)[9]
Patient satisfaction, primary care (%)	41(2003)[9]	78.4(2011)[9]
Patient satisfaction, public hospitals (%)	41(2003)[9]	76.4(2011)[9]

Sources: 1)World Health Statistics, 2011; 2) TDHS, 2003; 3) MoH Statistics Yearbook 2011 (forthcoming); 4) Akdağ, 2011; 5) MoH Statistics Yearbook 2010; 6) WHO Health For All Data Base (HFADB); 7) OECD Health Data; 8) TurkStat National Health Accounts Study, 2008; 9) TurkStat - Life Satisfaction Survey, 2011. 10) TurkStatAddress Based Population Register Database, 11) World Health Statistics, 2012 (in press).

* Mid-year estimate

** There were 7 cases of measles in 2010, 111 cases of measles in 2011 in Turkey, all of them foreign-sourced (MoH Statistics Yearbook 2011).

Table 1 also shows how financial risk protection, as measured by a number of indicators, improved impressively. Equally impressive is the increase in general satisfaction with the health sector, which grew from 39.5% in 2003 to 75.9% in 2011 (TurkStat - Life Satisfaction Survey, 2011).

These results were attained, in part, by major investments in the health sector to increase access to health care. As shown in Table 2, the number of acute care hospital beds per 100,000 population increased from 211 in 2002 to 243 in 2011. During the same time, the number of physicians (per 100,000 population) increased by more than 25%, from 117 in 2002 to 166 in 2011. The number of general practitioners also increased, albeit to a smaller extent, from 46 per 100,000 in 2002 to 50 per 100,000 in 2011. Not only did the total resources increase, but, remarkably, the geographic distribution of health care providers also improved, with the ratio of best-to-least endowed provinces in terms of human resources for health (HRH) declining significantly.

Table 2: Other Health System Indicators: Before implementation of the HTP and most recent available

Performance Indicator	Before (Year)	After (Year)
Health Care Resources		
Acute care hospital beds per 100,000 population	211 (2002)[4]	239 (2009)[4] 243 (2011)[1]
Physicians per 100,000 population	117 (2002)[4]	163 (2009)[4] 166(2011)[1]
General practitioners per 100,000 population	45.9 (2002)[4]	52.3 (2009)[4] 50 (2011)[1]
% of MoH doctors working full-time	11(2002)[2]	93(2010*)[2]
No. Specialist doctors working for MoH	22187 (2002)[1]	32623 (2011)[1]
Geographic distribution (ratio of best to least endowed provinces) • Specialists • General practitioners (GPs) • Nurses	Specialists....23.8:1[1] GPs.....6.2:1[1] Nurses.....7:1[1] (2002)	Specialists.....4.1:1[1] GPs.....2:1[1] Nurses.....3.7:1[1] (2011)
Medical Technology (No. Units)		
Computed tomography (CT scanners	323 (2002)[2]	1088 (2011)[1]
Magnetic Resonance Imaging (MRI scanners)	58 (2002)[2]	781 (2011)[1]
Intensive care beds	869 (2002)[2]	20977 (2011)[1]
Neonatal intensive care beds	1091 (2002)[2]	6654 (2011)[1]
Ambulances	617 (2002)[2]	2766 (2011)[1]
Medical Technology (No. Units)		
Full vaccination coverage (%)	78 (2002)[1]	97 (2011)[1]
Pregnant women delivering in hospital (%)	78 (2003)[3]	94 (2011)[1]
Average no. of visits to physicians per capita/year	2.8 (2002)[1]	7.6 (2010)[5]
Emergency medical service calls/year	350,000 (2002)[1]	2,680,000 (2011)[1]

Sources: 1) MoH Statistics Yearbook 2011; 2) Akdağ, 2011; 3) THDS, 2003; 4) WHO Health For All Data Base (HFADB); 5) MoH Statistics Yearbook 2010

*for 2011, MOH doctors working full-time: 100%

Access to sophisticated equipment, such as CT and MRI scanners also grew significantly, as did the supply of ambulances and the number of intensive care beds for both adults and infants. The expansion in the health care delivery system helped contribute to noteworthy improvements in utilization of health care services, increases in immunization rates, as well as to an increase in productivity of doctors.

These achievements did not come for free; according to HFADB public health expenditures grew from 9.74% of all public expenditures in 2003 to 12.8% in 2008, reflecting the greater priority placed on health relative to other sectors, THE only increased from 5.3% to 6.1% of GDP due to rapid economic expansion during this period (Akdağ, 2011; Barış et al., 2011; WHO HFADB). More recent data indicate that the pace has been decreasing or is even reversing. Indeed, public health expenditure ratio within non-interest overall public expenditures has been reported to change from 14.7 in 2003 to 15.2 in 2008 and 13.1 in 2011.

IV. How Were These Results Achieved?

Why has Turkey succeeded and what lessons can be learned from these reforms? The answer is not simple. It lies partly in the systematic and analytical way in which the MoH approached the reforms, partly in the strategic ways in which they sequenced the reforms; but other factors also played a critical role. This section examines the diagnostic exercise carried out to identify the root causes of the performance problems targeted for improvement; it then describes the reforms and health system strengthening initiatives that were put in place to address them, and finally it analyses a number of other factors that were crucial for the successes.

Diagnosis of Performance Problems

Roberts et al. (2004) argue that for health sector reforms to succeed, they must address the underlying causes of the performance problems targeted for improvement. Following this principle, the MoH, as one of its initial activities, carried out a diagnostic exercise to identify the root causes of Turkey's poor health system outcomes on basis of which the reforms would be developed. Columns two and three of Table 3 provide a simplified overview of the proximate and root causes of the three major types of performance problems. (Column four is discussed in the next section.)

Analysis of the root causes listed in Table 3 suggests a number of priority areas that had to be addressed if performance is to improve. For the sake of brevity only the most important are discussed here. First, it was clear that the fragmented health financing system, which resulted in gaps in coverage and inequitable benefit packages, inefficient risk pools and delivery systems, as well as low levels of health expenditures, needed to be significantly reformed.

Table 3. Diagnosis of Turkey's Health System Performance Problems in 2002 and Linked Reforms, Policies, and Programs

Outcomes	Major Causes of Poor Outcomes	Root Causes of Performance Problems	Reforms, Policies, and Programs
Low (and inequitable) health status	• Unhealthy lifestyles and environmental conditions • Inadequate and inequitable access to and utilization of health care services, especially primary care • Poor quality of care • Inadequate health insurance coverage (breadth and depth)	• Inadequate regulatory framework to fight unhealthy lifestyles, particularly tobacco use • Inadequate or non-existing health promotion programs to prevent chronic diseases • Benefit package varies across social health insurance scheme and Green Card Program • Health insurance coverage spotty, many without coverage • Quality of care varies by provider types/ insurance scheme • Care dominated by hospitals with inadequate primary care • Delivery system infrastructure (building, equipment, staff) inadequate, particularly in rural areas • Providers mal-distributed • Missing or poorly developed preventive health programs • Low motivation of hospital managers	• Major initiatives to fight tobacco and obesity • New unified benefit package • Expanded social health insurance coverage due to institutional and structural regulation • Expanded and improved primary and preventive health care services (Family Medicine, Community Health Centres, Improved MCH/EPI/communicable disease services) • New policies on mental health and NCDs • New and improved access to diagnostic curative health services through unification of hospitals, autonomization, investments in infrastructure, equipment, supplies and training of health care staff • Expanded and improved access to Emergency Medical Services
Inadequate and inequitable financial protection	• Multiple Social Security Schemes with different benefit packages • Inadequate Green Card Program for indigents • High out-of-pocket expenditures • Informal payments to doctors • Low levels of public health expenditures (in absolute and relative terms)	• Multiple social security schemes with different coverage, benefits, and delivery systems • Health insurance coverage not mandated • Many informal sector workers not covered • Green card program not extended to every indigent • Doctors' wages very low, leading to informal payments and dual employment in public and private sectors • Fragmented health financing system leads to multiple, small(er) risk pools and inefficiencies • Poorly performing health sector makes GoT reluctant to increase health expenditures	• Unification of SS funds and Green Card Program[1] • GoT to pay premiums for Green Card holders • Elimination of co-payment for primary care services regardless of insurance status • Doctors are asked to choose between full-time care in public or private hospitals • Pay-for-performance system implemented to improve productivity, outcomes, and salaries of public providers • New investments in the health infrastructure and increases in operating budgets.

High dissatisfaction with health system	• Inadequate access to health care services
	• Poor service and technical quality of care
	• Doctors all powerful and patients treated with little or no respect
		• Fragmented and spotty health insurance coverage
		• Different benefit packages across social health insurance schemes and Green Card Program
		• Delivery system infrastructure (building, equipment, staff) inadequate, particularly in rural areas
		• Providers mal-distributed
		• Dissatisfaction expressed by patients with regards to how they are treated
		• No way for patients to complain and have their complaint addressed
		• Inadequate Patients' Rights Charter and limited implementation of it
			• Resolution of "Emergency Issues":
			  · Pre hospital emergency transfer system
			  · Patient "pawn" situations in hospitals resolved
			• Annual patient/citizen satisfaction surveys to monitor progress and identify system problems
			• Telephone hotlines/email to report problems; new positions established to ensure 24 hours resolution of problems
			• Improvements to, and effective implementation of, the 1998 Patients' Rights Charter
			• Improved access to care and improved quality of care
			• Improved equity of access and equalized benefit packages
			• Improved financial risk protection.

1 The MoH initiated the Green Card Program in 1992 for low-income citizens, who did not have social security coverage and suffered from a lack of economic means to access health care services. Its coverage was limited to inpatient services in the beginning, but following the implementation of HTP, it was expanded to also cover outpatient and pharmaceutical services. By 2012, it had been transformed and merged into the Universal Health Insurance scheme provided by the Ministry of Labour and Social Security.

Second, the fragmented health delivery system with its lack of effective primary and preventive health services would need to be reformed, expanded, and strengthened to improve (equitable) access to effective care, health outcomes, and patient satisfaction. And third, the low wages of health professionals, leading to low motivation and low levels of productivity, also had to be addressed as they contributed importantly to the current performance problems.

It should be noted that even this quite superficial diagnostic exercise yields a number of important insights that seem applicable beyond Turkey's borders. First, the causes of the performance problems are likely to be numerous and complex, ruling out simple solutions, as they are unlikely to adequately address all the root causes of the performance problems. Second, many of the root causes contribute to more than one performance problem, confirming the need for a wider approach and comprehensive reforms. And third, many of the root causes of the performance problems will require systemic approaches to address them.

Linking Reforms to the Root Causes of the Performance Problems: The Health Transformation Program

Having identified the root causes of the performance problems, the MoH set out to design a set of reforms and health system strengthening efforts that would address *all* the root causes of the performance problems. To this end, literature studies were conducted on successful health sector reforms in other countries and study visits were undertaken toa number of countries including Finland, France, Mexico, and Cuba, to investigate their health systems and identify lessons relevant for Turkey. The result was the so-called Health Transformation Program (HTP), which was developed on basis of the following basic principles (Akdağ, 2011):

- Human-centeredness
- Sustainability
- Continuous quality development
- Participation
- Reconciliation
- Volunteerism
- Separation of powers (purchaser-provider split)
- Decentralization
- Competiveness in service.

The salient features of the HTP were as follows:

- The three existing social security funds and the Green Card Program would be merged into a single Social Security Institute (SSI) that would provide a uniform benefit packages to all beneficiaries;

- The GoT would expand eligibility for the Green Card Program for indigents and pay the premiums for Green Card holders to the SSI;
- Health insurance coverage would be significantly expanded with the aim to ultimately cover the entire population;
- Hospitals owned and operated by the existing social security funds would be transferred to the MoH to create a single, unified public hospital system under the jurisdiction of the MoH.[2]
- The health services delivery system would be dramatically expanded and improved through investments in infrastructure, equipment, and supplies as well as through training of staff;
- A Family Medicine Program, assigning each patient to a specific doctor, would be established throughout Turkey;
- Community Health Centres, providing free-of-charge logistical support to family physicians for priority services such as vaccination campaigns, maternal and child health, and family planning services, would be established;
- Doctors would be required to choose between full-time employment in either the public or the private sector;
- A system for family physicians and key hospital personnel would be implemented in order to reward productivity and, in the case of family physicians, the provision of certain high impact health services;
- Public hospitals would be autonomized to allow them to out-source some medical and non-medical services, such as laboratory and diagnostic imaging services, cleaning, laundry, and food services, and hospital managers would be hired on a contractual basis and paid on P4P basis; doctors and nurses would remain civil servants.
- The pre-hospital emergency system would be expanded significantly and include the establishment of an emergency 112 hotline as in EU countries.
- Patients would be empowered, in part by improvements to, and effective implementation of, the Patients' Rights Charter, established in 1998, and in part, through the establishment of hotlines (SABIM ALO 184) exclusively for assisting patients.
- Major initiatives would be launched to fight unhealthy lifestyles, in particular tobacco use and obesity.
- New policies would be developed to address important health issues, including but not limited to, mental health and non-communicable diseases.

In addition to these reforms, a number of high impact, cost-effective health care programs and initiatives (Jamison et al., 2006) were implemented. These included an expansion and improvement of maternal and child health services, including, but not limited to, prenatal care, hospital-based deliveries, distribution of free-of-charge iron supplements and vitamin-D to pregnant women and babies, inclusion of vaccines for

2 University hospitals are under the jurisdiction of the Council of Higher Education.

11 different antigens into the routine immunization program, and the introduction of cancer-screening programs. In addition, a system of medical audits of all infant and maternal deaths was put in place.

Table 3 shows how completely the HTP addressed all the underlying causes of the major performance problems identified in the diagnostic analysis. However, international experience suggests that while technically sound reform designs are necessary for success, they are far from sufficient. Other important factors include the sequencing of reforms, which will be dealt with in the next section. In this too, the Turkish reformers were both strategic and clever.

The Political Economy of Health Reform in Turkey

International experience indicates that high-level political support is critical if complex and contentious health reforms or initiatives are to succeed (cf. Reich, M.R., 1995; Berkman, A. et al., 2005; Buse, K. et al., 2008). From the discussion above, it is clear that the Turkish health reforms were not only strongly supported by, but to a large extent also driven by the Minister of Health (OECD 2010), who from the outset made a strong personal commitment to improve the health of Turkey's citizens to ensure that they had adequate health insurance coverage, and that patients took centre stage in the health system.

Equally important to the success of the Turkish health reforms was the support obtained at the highest governmental level – the office of the prime minister. The Government recognized the importance of reducing inter-regional inequalities in access to health and other social services in safeguarding social peace and stability in the country (Barış et al. 2011). Political commitment at the highest level was essential in several instances, including for increased public funding for the health sector and for merging the existing social insurance funds into a unified Social Security Institute– an essential aspect of the reforms.

Several factors contributed to the political commitment to implement the health reforms. Firstly, the poor performance of the health sector prior to 2002 had put the issue on the government's agenda. Secondly, the visible improvements achieved by the initial interventions of the health reforms not only helped increase citizens' satisfaction with the health system, but lent credibility to the Government's general efforts to keep health as a top priority in the political agenda and improve the welfare of the Turkish population. The health reforms were consolidated during the Government's second term. Political stability ensured continuation and deepening of the reforms which over time increased the health system's responsiveness to population expectations and needs. The Minister of Health is now in his 9th year of service, a rare occurrence anywhere in the world. With another three years remaining of his term, the Minister has time to address the emerging and remaining challenges and to institutionalize the reforms.

Finally, it should be noted that the high rate of economic growth in Turkey also facilitated important improvements in other sectors, such as better transportation, improved water, sewage and sanitation systems that also contributed to the positive health outcomes.

Sequencing of Reforms

Some of the planned reforms would clearly require time to yield measurable results, either because they required the passage of politically contentious laws (e.g., merging the existing social insurance programs) or because of the magnitude of the changes needed (e.g. training a large number of new specialists in family medicine). It would therefore be important to sequence the reforms in a way that would maximize the probability of continued political support to complete the reforms. To address this problem, the Minister and his Team decided to use the model of a team of medical doctors encountering a trauma patient with multiple and life-threatening injuries. Specifically, they would first address the injuries/conditions that were life threatening and thus essential for short-term survival. With the patient stabilized, they would next turn to the major organ/system 'failures' that would have to be fixed to ensure long-term survivability and health. Finally, they would focus on the more "cosmetic problems" that were not urgent, but still important to ensure long-term quality of life for the patient.

Following this model, the MoH focused its initial efforts on "emergencies" that could be fixed relatively quickly while yielding visible results of importance to both patients and the general population. Specifically, they moved to abolish the widespread practice of refusing to discharge patients from the hospital until they or their family had paid their bills. This use of patients as "pawns" was particularly repugnant in cases where the hospital refused to relinquish for burial the bodies of deceased infants, but relatively easy to address. The second "emergency" action taken was to improve the pre-hospital emergency care system, which was done by improving an emergency hotline number-112 (the same as in the EU countries)-for requesting an ambulance and rapidly expanding the number of ambulances available. At a later stage, ambulance planes and helicopters were introduced to transport accident victims and emergency patients to hospitals in rural areas, where access to care would otherwise be prohibitively time consuming.

Having addressed the "emergencies," the MoH Team went on to focus on the systemic reforms that would be needed to improve performance. It began by adopting a number of reforms in areas that had been on the agenda for a long time and/or about which there was little disagreement, such as family medicine, performance-based supplementary payment systems, and unification of hospitals under the jurisdiction of the MoH. It also made other relatively easy changes such as equalizing the benefits across different population groups by requiring that the most generous benefit package provided by the social insurance program for civil servants be extended to (virtually) the entire population, including to Green Card (GC) holders.

The family medicine (FM) program was re-introduced in 2005, after having been previously introduced as a pilot system but subsequently abandoned, in part due to a shortage of FM specialists. To overcome this challenge, the MoH allowed GPs (graduates from medical school without FM specialty training) and physicians from other specialities to become FM practitioners after completing a pre-service 10-day training program (allied health personnel e.g. midwives, nurses, and health officers underwent a 3-day pre-service orientation training program). A one-year training program to be completed at a later stage would follow this training. In total, 45,000 physicians and 25,000 allied health personnel were trained between 2005 and 2011 (Akdağ, 2011). Doctors were also attracted to work in FM by the establishment of a capitation plus bonus-based payment system, which had been initiated in 2003. This program allowed health care providers to increase their usual salary by between 150% and 800%, depending on occupation and working conditions (Akdağ, 2011).

Hospital performance was improved through a number of mechanisms. First, a performance-based payment (P4P) was implemented in hospitals (in 2004) to foster simultaneous improvements in productivity, technical quality, working conditions and patient centeredness. This complex system rests on individual and organizational incentives along with quality and efficiency audits. It includes bonus payments linked to the performance of health personnel and their institution, through higher volumes of selected services, examinations or procedures, increased patient satisfaction, better quality of infrastructure, equipment and service delivery. Second, hospital doctors were also required (in 2010) to choose between full-time work in the public or the private sector (as opposed to being able to work in both, as had been the case in the past).

To further improve hospital performance, they were autonomized and given the right to hire additional staff on a contractual basis, which would allow them to rapidly expand the quality and quantity of services provided. Approximately 181,000 health care personnel (Akdağ, 2011) were hired on this basis,[3] including professional managers who were also paid on a P4P basis to align their incentives with those of the hospitals. This phase also included transferring hospital ownership from other public and private providers to the MoH, and integrating existing health financing agencies (social security funds and the GC program) into a single Social Security Institute (SSI), thereby increasing the size of the risk pool and reducing the overlap and inefficiencies in the existing delivery system.

After the main systemic reforms had been completed, the MoH turned its attention to long-term issues such as a reorganization of the Ministry to create a structure that better matched its new roles and responsibilities. In this-the current-phase, the MoH continues the implementation of the recent reforms, makes efforts to improve its effectiveness, and addresses other outstanding issues.

3 Hospitals were also allowed to out-source medical and non-medical services (e.g., cleaning, laundry, food services) and through this mechanism hired an additional 107,000 staff (Akdağ, 2011).

Implementation of Reforms

One of the keys to the success of the Turkish reforms was the speed with which they were implemented once a political decision had been made. This is in part attributable to the personal contact taken at the highest level within the Ministry to those affected by the reforms to explain and support implementation. Customarily the communication and implementation process would have been prolonged by the preparation of detailed written instructions and standard operating procedures. Several vehicles served to provide this contact: site visits by the Minister and his team, site visits by a Field Coordination Team (FCT) established to facilitate implementation of the reforms, and a number of formal and informal reporting and monitoring systems designed to provide timely information about developments on the ground.

Site Visits

Early in his tenure, the Minister placed great emphasis on making frequent field visits to convey the goals of the reforms and communicate his personal commitment to achieving them. He had repeated personal contacts with the country's 81 governors who organizationally are in charge of the provincial health services as well as with the provincial health directors (PHD) who would be key to the successful implementation of the reforms. In this way, the Minister was able to observe first-hand the problems facing both the political leaders as well as the health care staff throughout the country.

In addition to these site visits, implementation was greatly facilitated by the work of a large, multi-disciplinary FCT, led by a member of the MoH reform team, which criss-crossed the country visiting its 81 provinces multiple times. While the FCT was tasked with inspecting implementation progress, it also served as a communication channel to the Minister, who followed its work closely and when necessary took decisions to resolve implementation problems encountered on the ground. This open channel of communication allowing for quick resolution of identified problems was clearly an important reason for the successful implementation of the reforms.

The FCT also played an important role in forging support for the reforms among the provincial health directors and in building their capacity to implement the reform. The FCT frequently included a provincial health director (PHD) from another part of the country. This proved to serve not only as a capacity building mechanism for the PHDs, but also as a great motivator for PHDs to quickly fix their own problems upon returning to their own province, where they frequently faced the same issues as those they had just evaluated during the site visit. In other words, being part of a team that assessed someone else's problems helped motivate PHDs to address their own problems, which facilitated both the acceptance and implementation of the reforms. With more than 345 site visits during the reforms, the FCT clearly played a crucial role in the implementation process.

Formal and Informal Information Channels with Feedback Loops

In addition to the information obtained personally and through the FCT site visits, a variety of other information channels were set up to identify and solve problems in the field. These information channels include regular monitoring reports that served to identify problems or challenges that needed to be addressed. The Strategy Development Department, for example, prepare weekly reports on key hospital performance indicators (e.g. P4P payments and budget execution rates). Hospitals whose indicators are outliers are singled out and an action plan is prepared. This action plan is given great attention at the highest level of the MoH.

The establishment of a telephone hotline which enables patients to provide direct feedback to the Minister and his team, complemented the formal monitoring systems. Those with access to the Internet can also send emails directly to the Minister. A special unit (SABIM ALO 184) of 160 persons was established in the MoH to man the hotline and to take action on incoming comments. To ensure that issues would be (re) solved, Deputy Provincial Health Directors and Deputy Hospital Directors were given responsibility for following up on the patient complaints. The hotline served both as a mechanism to solve individual complaints but also as means for the MoH to identify and resolve systemic issues. As an example, the hotline helped identify a need to empower patients as a means to change the behaviour of doctors, who in Turkey as in many other countries had not traditionally considered patient preferences and feelings to any great extent. This was achieved by implementing and expanding the Patients' Rights Charter, established in 1998.

In some cases, the Minister himself would personally follow up on an issue raised through the hotline. He might, for example, call the doctor or hospital manager in question to ensure that a complaint, which he felt was particularly significant, was resolved. His personal involvement served to communicate the importance attached to patients being treated respectfully and appropriately. This is bound to have a major impact on the attitude of staff working in field.

Other Important Factors

A number of other factors also facilitated the success of the Turkish reforms. First, many of the reforms had been discussed in the decade prior to the new government coming on board, which helped foster a large degree of consensus about the general nature of the needed reforms. Preparation for some of the reforms was also quite far advanced, which facilitated the speed with which they could be implemented.

Second, as noted above, health expenditures in Turkey, both in absolute and relative terms, were very low when the new government took office in 2002 and thus cost containment was not a major concern at the time. Furthermore, with Turkey's high economic growth rates from 2002 through 2007[4], the reforms were being implemented

4 The economy was flat in 2007 and contracted in 2008, but resumed its high growth rate in 2010 (World Bank, 2012).

during a period of growing government budget, which clearly made it much easier to sustain the large increases in capital and operating budgets required by the new reforms. Had cost containment been a major concern or had the economy been contracting throughout the reform period, the reforms would have been much harder to implement.

Third, Turkey's long history of a strong centralized bureaucracy and top-down decision-making, may have facilitated the direct role of the Minister of Health and his Team in making extensive changes. Dating back to the Ottoman Empire, Turkey has had a tradition of obtaining information about what was happening on the ground through fact-finding field teams. Similar techniques have been utilized in the contemporary health sector setting with the Field Coordination teams (FCT).

Fourth, the reforms were managed by a very robust and dedicated team closely affiliated with the Minister of Health. While this team mostly consisted of experienced medical doctors, many of them had multiple degrees in other fields such as economics and public administration, which allowed them unique perspectives and competences. Many of the original members of the team are still active in the Ministry of Health in one capacity or another, but many have gone on to high-level jobs in other (both public and private) sectors, including the Parliament, reflecting the tremendous competence, skills and talent of the Minister's reform team.

V. Lessons Learned

The Turkish reforms provide a number of lessons for reformers in other countries, most importantly, perhaps, that it is possible to achieve major improvements in health system performance in a relatively short period of time under the *right* conditions. In particular, the design of the reforms needs to be technically sound and address all the major root causes of the performance problems that one seeks to improve. They should also address the weaknesses in all the relevant health system functions, and the reforms must have strong political support from top MoH officials (e.g., the Minister of Health) and, preferably, also other important government officials, such as the Prime Minister and/or the President.

The reforms must be triaged and sequenced carefully to achieve quick results and ensure continued political support for the reforms. Major reforms take time; they require changes that affect many different stakeholders, some of whom will gain from the reforms while others will lose. Since change is frequently perceived as threatening, even for potential beneficiaries of the reforms, it is important to achieve visible results (benefits) as quickly as possible, so that the reforms can gain credibility and beneficiaries can be counted on to provide the political support needed to continue reform process.

The reforms should be clearly articulated and focus on ultimate outcomes such as health status, financial risk protection, and population and user satisfaction. The particular outcomes chosen for the reforms will be determined by a combination of technical, ethical, and political consideration and therefore cannot be determined *a priori*.

The literature on health system reform suggests that the goals should be concrete and measurable to facilitate measuring progress along the way, but the experience in Turkey suggests that data on the progress made can also serve as a powerful tool to overcome resistance to the continuation of the reforms and to build political support for them. Furthermore, the reform experience in Turkey indicates that it may be equally important to create informal lines of communication, such as telephone hotlines to follow what is happening on the ground.

Turkey's reform experience also documents the utility of having more formal monitoring systems with key performance measures, so that senior can identify problem areas that must be addressed urgently. For these systems to be useful, it is important that they be accompanied by action plans and follow up to ascertain that the action plans have been effective and that the problems have been solved. In the Turkish case, the specific assignment of responsibilities to the Deputy Provincial Health Directors and the Deputy Hospital Directors served as an effective tool to follow up on patient complaints, but the

precise mechanism is not important. Rather, the crucial thing is that problems can come to the attention of senior officials and there is follow up to ensure they are resolved.

International experience is replete with examples of technically sound reforms failing because of the way they were implemented. The Turkish reforms show the value of a technically strong and committed Change Management Team to guide the implementation process. As mentioned above, it is important to be able to measure progress toward reform goals. To this end, a well functioning health and health management information system is essential. Most countries have some sort of information system, but few of them provide the type of data that are needed to monitor progress on the reforms and manage the health system effectively. Without adequate attention to this issue, reforms efforts are likely to fail. Equally important is the establishment of a monitoring and review system to analyse performance and address identified problems or challenges.

Some might argue that the situation in Turkey was unique either because of the favourable political situation or because the economic environment made it possible to sustain large increases in health expenditure over a fairly long period of time. While this may be the case, the lessons above from Turkey would seem useful for other countries even in the absence of those two key factors for success: Sequencing of reforms, focus on outcomes, clear statement of objectives, and monitoring of the progress toward the objectives with both formal and informal monitoring and review mechanisms to identify new and emerging problems, and to ensure that they are (re)solved.

VI. New and Continuing Challenges

Despite the tremendous progress achieved to date, the Turkish health sector continues to face a number of challenges. Some of the planned reforms (e.g., the structural and functional reorganization of the MoH, Figure 1) have taken longer to implement than expected and are thus still under way. Others are only the first step in a planned series of steps (e.g., autonomization of hospitals); and some-family medicine, for example-simply require a number of years for the requisite number of staff to be trained and deployed. And, as is always the case, even successful reforms create new challenges that must be addressed to ensure long-term sustainability. The most important of these challenges are described below.

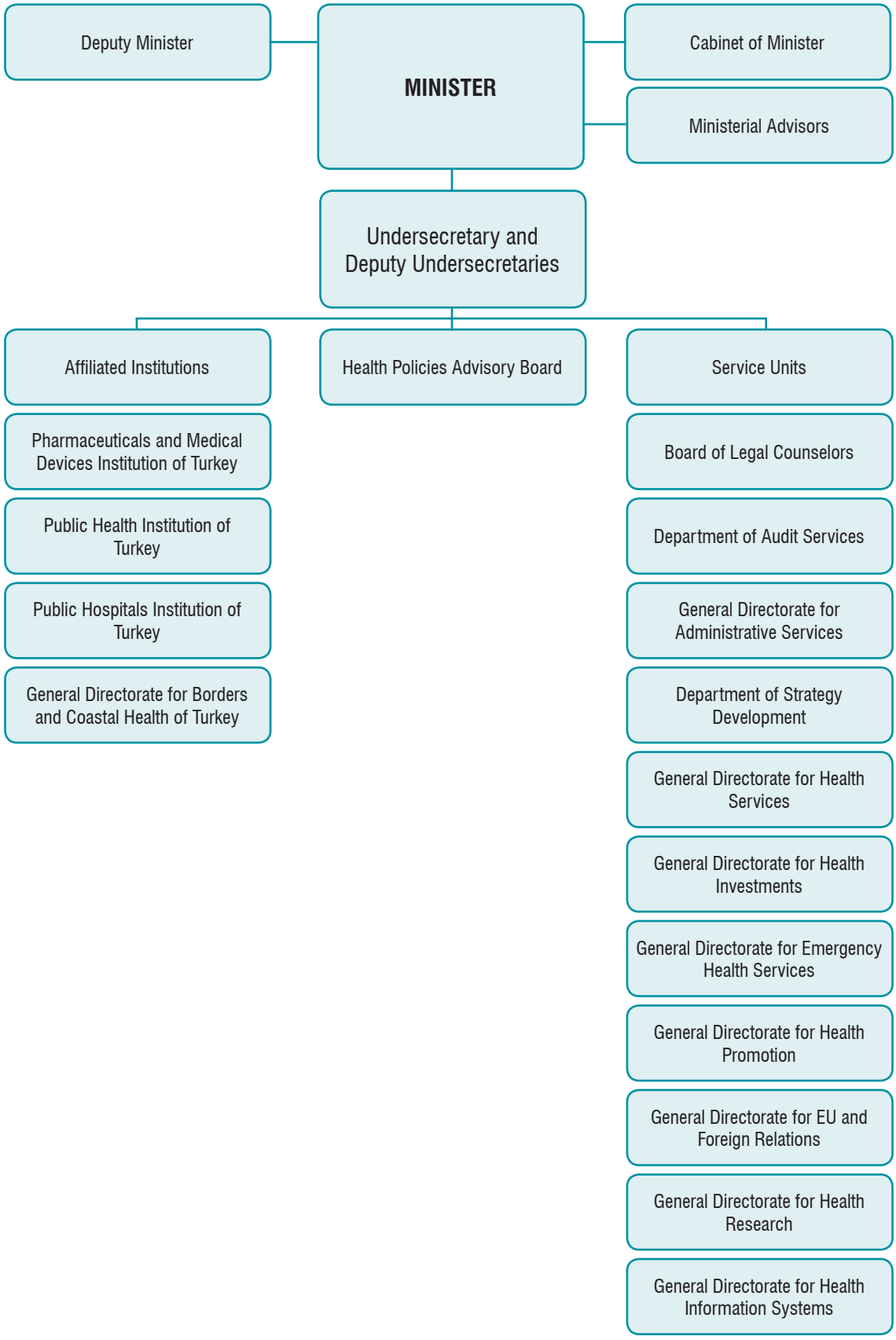
Institutionalization of the Existing Reforms

The substantial and personal efforts made by senior management and officials within the MoH have helped to bring about this noteworthy success. However the continued sustainability of the reforms remains vulnerable to changes in leadership as they have not yet been fully institutionalized, in particular with regards to monitoring and evaluation.

The MoH is keenly aware of this situation and are working to address it. To this end a law was passed in November 2011which created the legal foundation for a major reorganization of the MoH and created a structure more consistent with the new roles and functions required by the reforms. In particular, the law envisions and allows the Ministry to play a stronger role as a steward of the health sector rather than as a service provider.

As shown in Figure 1, the new organogram envisions the establishment of four autonomous institutions to which all operational functions will be transferred. A number of ministerial general directorates will be responsible for the Ministry's myriad stewardship functions, while a Health Policy Board, supported by a large secretariat of national and international experts, will be charged with the analysis of current operations and the development of new policy proposal. Decision-making will continue to rest with the Minister of Health. With implementation of the new organogram still on-going (and not expected to be complete until the end of 2012), it is too early to tell whether the proposed changes are sufficient to adequately institutionalize the reforms, but at least on paper the new structure is consistent with the new roles of the Ministry of Health.

Figure 1. New MoH Organogram



Relationship with Key Stakeholders

As described above, the reform process in Turkey has to a large extent been driven by a very strong top-down approach. While the results of the reforms have been very positive for citizens and patients, some health care staff are unhappy with certain aspects of the reforms. For instance, while doctors typically have welcomed the opportunity to substantially increase their incomes, not everyone has liked the compulsory choice between public and private sector employment or the increased supervision and accountability that has accompanied the P4P. In addition, certain initiatives, such as the establishment of the Patients' Rights Charter and the telephone hotlines, have significantly empowered patients and resulted in a considerable change in the power relationship between doctors and patients. It is believed that collectively those changes might have led to some discontent among health professionals and addressing those issues is one of the key issues facing the MOH at the present time. The MOH has already started working on that issue, one instance being the online "Health Meeting Point" for health workers to be in direct communication with the Ministry for their contributions for ongoing implementations

The ongoing reorganization of the MoH is also the cause of considerable uncertainty and anxiety on part of the civil servants affected by the impending reorganization of the MoH. This sort of fear of change is neither unique to Turkey, nor to the public sector. Indeed, the literature on organizational change (e.g., Shani, Woodman, & Pasmore (Eds), 2011; Kanter, Stein & Jick, 1992) clearly documents the need to manage major organizational changes like those being implemented in Turkey very carefully, particularly as regards the affected personnel. The MoH has recently recognized this challenge and has developed a communication strategy intended to facilitate the ongoing transformation of the MoH, but the challenge remains acute until the reorganization has been completed.

Quality of Care

Much has been done to improve quality of care. As shown in Table 2, structural quality (Donabedian, 1980) has been greatly improved through the extensive development of infrastructure, particularly in the rural areas and in primary care (Akdağ, 2011). Process quality has also improved in a variety of ways in part thanks to improved training, better access to medicines and diagnostic equipment, and a capitation-plus-bonus-based payment system, which in the primary sector rewards the delivery of high-impact health services that have helped improve outcomes, e.g., immunization rates, eliminate measles[5]. Infant and maternal mortality has also declined dramatically thanks in part to medical audits, sometimes chaired by the Minister himself.

Service quality has also improved significantly due to outsourcing of medical and non-medical services, such as cleaning, laundry, and food services, and patient empowerment, which has led to more respectful treatment of patients. The above-

5 There have been no domestic cases of measles in Turkey since 2008 (Akdağ, 2011). In 2011, there were 111 foreign-sourced measles cases (MoH, 2011).

mentioned telephone hot lines have also played an important role in improving the interpersonal aspects of patient care.

One area, however, that has been insufficiently addressed is the technical quality of (diagnostic and curative) care, particularly in hospitals. This is not really surprising because the reforms have focussed on increasing access to care and improving the productivity of providers. The development and use of evidence-based clinical guidelines and protocols are still in its infancy. Furthermore, the existing system of supervision emphasizes structural and process aspects of care, which means that there are few, if any, data on the outcome of treatment particularly in the hospital sector. Information is also non-existent on the number and types of medical errors, which research in other countries (cf. IoM, 1999) has shown to be a widespread problem and a significant cause of death in high-income countries. In short, improving quality is a challenge that should receive priority attention in the coming years.

Non-Communicable Diseases

Like other middle-income countries Turkey is far into the epidemiological transition and has seen a major shifts the main burden of disease away from communicable diseases toward non-communicable diseases (NCDs). Reducing the burden of disease from NCDs requires not only effective treatment of patients with such diseases, but also reducing the incidence and prevalence of these disease. While the former is the task of the health system, the latter requires interventions beyond the health system in order to change the population's unhealthy life styles.

As can be seen in Table 4 Turkey has a very high prevalence of the main risk factors for chronic diseases, in particular tobacco use and obesity, resulting from sedentary life styles and unhealthy diets. With the signing of the WHO Framework Convention on Tobacco Framework Agreement" in 2004, and the resulting decline in smoking rates among adults (over 15 years of age) from 33.4 % in 2006 (TurkStat 2006 Family Structure Study) to 31.2% in 2008 (GATS, 2008) and 29,5% in 2010 (TurkStat 2010 Health Survey), Turkey became a role model for other countries seeking to combat tobacco use. Efforts to promote healthy diets and active life styles have yet to reduce obesity rates, which remain a *growing* problem and a key challenge for Turkey.

Table 4
Risk Factors for Chronic Diseases in Turkey

Risk Factor	Turkey
Smoking (% of population 15+ years)	29.5
Alcohol consumption (litres per capita per year)	1,5
% Overweight (25<BMI<30)*	33
% Obese (BMI>30)*	16,9

Sources: OECD Health Data 2010; TSI 2010 Health Survey,
*Body Mass Index (BMI) is measured in kg/m^2

Similarly, despite recent efforts to develop national prevention and control programs in areas such as cardiovascular diseases, diabetes, and chronic respiratory diseases (asthma-COPD (chronic, obstructive pulmonary disease)), much remains to be done. Indeed, reducing the incidence of NCDs and appropriately managing patients with these diseases will be one of the main challenges for the years to come.

Efficiency

The Turkish reforms have gone a long way towards improving both the allocative and technical efficiency of the health system, but there is still room for improvement. While primary care has been expanded significantly, hospital care is still too dominant, in part because primary care providers do not act as gatekeepers to other providers. Patients are therefore free to seek care in both family practices and hospitals. Efforts are now under way to institute co-payments for primary care services obtained in a hospital setting. While this may address part of the problem, the problem is likely to continue because of the lack of incentives for the two sectors to work together and the P4P system in the hospitals, which essentially creates competition between the two levels of care. Other mechanisms will be needed to address this issue.

Cost Containment and Long-Term Fiscal Sustainability

As described above, Turkey's health reforms have taken place during a time of economic growth, which has made it easier to increase health expenditures both in absolute and relative terms. While Turkey's health expenditures, as a percentage of GDP, remain lower than those in other OECD and middle-income countries, expenditure growth will need to constrained at some point either due to diminishing marginal benefits of additional expenditures, or because the economic situation in its very nature changes and makes continued growth fiscally unsustainable. With the strong incentives to expand productivity created by the P4P systems in both the primary and secondary care sectors, this may prove difficult. A flat budget envelope is also likely to make improving appropriateness and quality of care more difficult.

Other Challenges

Two other challenges face the Turkish health sector. The first concerns the health management information system (HMIS), which despite major improvements still needs further development, if it is to provide timely data to all the relevant stakeholders. It will be necessary to find a way to share data, or at least statistics, between the MoH and the SSI, which is not currently possible, in order to carry out the type of analyses that is needed to improve the efficiency and effectiveness of the health system.

The second challenge concerns the SSI, which has yet to become the effective purchasing agent envisioned by the reforms. This will, among other things, entail moving from using the Medulla information system for more than administrative and financial reporting purposes, as is currently the case. For this to happen, the current culture within the SSI will need to change and to develop the capacity to carry out health economic analysis to, for example, improve the cost-effectiveness of care. This is a major challenge that must be addressed, if the reforms are to achieve their full potential. Unfortunately, it is a challenge that is beyond that influence of the Minister of Health.

VII. Conclusions

Turkey has done what few other countries have managed to do: to dramatically improve health and health system outcomes in a very limited amount of time. The Minister of Health and his team have worked incredible hours with dogged determination to make sure that Turkey's population would have equitable access to appropriate health care regardless of their financial situation. They have empowered patients and made them the centre of the health system, although this power shift seems to created a perception that it might have been done at the expense of health care providers, who ultimately have to own the reforms, if they are to be sustainable. Turkey is now considered as a successful example of a country implementing the values and principles of the WHO Tallinn Charter: Health Systems for Health and Wealth (2008)- ensuring that health systems are equitable, responsive and fair, in order to achieve not only health and wellbeing but economic and social development.

It is clear that there are still important reforms to be implemented, chief among them the institutionalization of the reforms and the reorganization of the Ministry of Health. This will require the continued dedication from the Minister of Health and his team and the strong support of the PM, however, there is little reason to believe that this will not be achieved. Perhaps one of the key challenges will be how to generate the kind of commitment to and support of the reforms on part of the new SSI and to improve the collaboration between the MoH and the SSI that is necessary for the reforms to achieve their full potential.

Other countries have much to learn from Turkey's experience, not only from the particular reforms, such as P4P, autonomization, and family medicine, but also from the way in which virtuous cycles have contributed to sustaining the momentum of the reforms.

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Annex 1

LIST OF KEY INFORMANTS INTERVIEWED

Name/Title	Position/Institution
Prof. Dr. Recep Akdağ	Minister of Health
Prof. Dr. Nihat Tosun	MoH Undersecretary
Mr. Ömer Faruk Koçak	MoH Deputy Undersecretary
Dr. Yasin Erkoç	MoH Deputy Undersecretary
Dr. Turan Buzgan	MoH Deputy Undersecretary
Mr. Birol Aydemir	Former President of Social Security Institute (Currently: Director of Turkish Institute of Statistics - TurkStat)
Dr. Hasan Çağıl	Former General Director of Health Insurance in Social Security Institute (Currently: President of Public Hospitals Institution of Turkey, MoH affiliated institute)
Prof. Dr. Sabahattin Aydın	Former MoH Deputy Undersecretary (Currently: Rector of İstanbul Medipol University)
Mr. Hüseyin Çelik	Advisor to Former Deputy Undersecretary of Ministry of Labour and Social Security, and President of Social Security Institute (Currently: Advisor at Acıbadem Health Group)
Mr. Hakan Aksu	MoH Deputy Head of Strategy Development Department
Mr. Fatih Türkmen	Head of Health and Social Security Department Ministry of Development (Formerly: Strategic Planning Organization)
Prof. Mehtap Tatar	Hacettepe University-Department of Health Sciences
Dr. Salih Mollahaliloğlu	Former Head of Public Health School of MOH, Turkey

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