RATIONALIZATION OF HEALTH CARE SERVICES IN MACEDONIA

Case Studies: Skopje, Tetovo, Sveti Nikole, Negotino

Center for Research and Policy Making

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INTRODUCTION

The Macedonian health care system can serve as a case study of being a highly decentralized system during socialist times that during the transition to democracy moved to a centralized management though maintaining the decentralized structures. Nowadays, as an aftermath of the Ohrid Framework Agreement[1] (signed in August 2001) Macedonia is again decentralizing. Bringing the public services closer to the people is the maxim behind this nation- wide effort, in which the educational, social and health services are devolved to the local government units – the municipalities.

Health care in Macedonia is delivered through a system of health care institutions (HCI). It is organized in three levels: primary (PHC), secondary and tertiary care. The implementation of the functional divide between the three is still an outstanding issue. In fact, at the moment tertiary level health care institutions also deliver services defined as being secondary health care. Against this background the system has yet to implement the regulatory framework to ensure proper gate keeping and referral practices so that patients are treated at the appropriate care level.

There have been a number of reforms in the health care system in Macedonia in recent history. The health system in place

[1] The 2001 Ohrid Framework Agreement ended the war crisis between government security forces and ethnic Albanian rebels. It set out a strategic agenda concerning equal representation of different ethnic groups in public life and local self-government, and the devolution of powers from the central government to the local government units. The expected results were having more opportunities for citizens in general to participate at the civil society level and better public inputs that enhance the growth of the local communities. See for example chapters 2 and 3 of Dr. Zidas Daskalovski, *Walking on the Edge*, Globic: Chapel Hill, 2006.

in the Socialist Republic of Macedonia (thus, preceding the democratization in 1991) was highly autonomous and decentralized with health service provision and financing controlled and managed on the municipal level[2]. Overall, the health system was organized in stand-alone self managing communities: the health services delivery system was owned and managed by 30 municipalities and the City of Skopje with only large capital projects being centrally planned and implemented. The financing of the system was primarily managed at municipal level with a solidarity fund at central level providing finance for those municipalities whose revenues did not allow the sustainable provision of health care.

As each individual municipality developed its own structures for health care delivery, the decentralized system led to a fragmentation of service delivery and significant oversupply and duplication of both facilities and services. Moreover, a series of different units were established frequently containing elements of primary, secondary and tertiary care. Owing to the strong independence of municipalities with regard to both decision making and financing management, the influence of the central government on the overall development of the health care at the local (municipal) level was minor.

Following the democratic transition to an independent country, more centralized health planning became a necessity for Macedonia. For this purpose the Ministry of Health was established in 1991. The *Health Care Law* was passed in the same year setting out a process to centralize the financing and stewardship functions at the same time aiming to preserve some autonomy for the health care provider structures at local level. Against the background of

2 See WHO, Health in transition report 2000

limited resources effective, central planning infrastructure took precedence over the development of a management role on the regional level. The establishment of the Health Insurance Fund contributed to the further strengthening of the central strategic and operational planning.

However, amendments to the *Health Care Law* in 1995 acknowledged the importance of local involvement in decision-making and therefore proposed the establishment of management boards in the health care institutions. The latter were composed of representatives of employees and representatives appointed by the Parliament of Macedonia. The Boards for primary health care facilities were opened to municipal representation in 2004. In addition, since 2005 hospitals have started to receive funds for their annual budgets, thus providing for greater independence of directors and management boards of the respective institutions.

Furthermore, for contracted hospitals a set of performance indicators has been introduced to support monitoring functions. An increased autonomy of the Macedonian health care institutions will require adequate regulatory structures to be put in place. In addition, the health care institutions will need to be granted some autonomy in the planning of human resources, i.e. the right to hire new staff or end contracts of personnel with poor performance records.

Apart from being involved in the management of local health care facilities the *Law on Local Self-Government* passed in 2004, envisages more competences for the municipalities especially in the areas of health promotion, preventive activities, occupational and mental health as well as the provision of healthy living environments. To this end the Ministry of Health plans to

empower local representatives to play a more proactive role in problem assessment and analysis, priority setting and health promotion activities.3

In this context the Centre for Research and Policy Making (www.crpm.org.mk) has initiated the research project "Rationalization of Health Care Services in Macedonia" in which using the participatory approach all stakeholders/relevant actors in four municipalities were examined: doctors, patients, local self-government units in order to measure the capacities (human and technological) for delivery of health services. In particular the following were analysed: the relations between primary and secondary/tertiary level professionals, and the level of referrals and overburdens of health care institutions.

As a result of this research evidence has been gathered, thought through and analyzed. At the end of this study the recommendations that have been drawn from the research are presented. They are to be discussed with policy makers at local and national level. This study reveals attention-grabbing findings that could be translated in policy measures to facilitate efficiency and rationalization of health care services efforts in the process of decentralization of Macedonia.

The project has been implemented in the following municipalities: Skopje, Sveti Nikole, Negotino, and Tetovo. We have studied the primary health care sector in Sveti Nikole4, Negotino5, Skopje6 and Tetovo7; whereas the secondary health

3 See for example projects such as the healthy communities, the decentralized governance and management of the Medical Faculty and the Open Society Institute's joint health project, the "Environment and Safety Management in Enterprises" initiative, the HESME Program, Environmental Health Action Plans etc

4 Case study – Health Home Sveti Nikole

5 Case study – Health Home Negotino

6 Case study - Health Home Skopje: Polyclinic "Jane Sandanski"

care was studied in Tetovo8 and again Skopje9. The analysis of the health care services presented in this study is based on a review of policy documents and data gathered in the period between March and June 2006 among the doctors, patients and citizens of the mentioned municipalities. A total of 74 general practitioners were interviewed and surveyed using a questionnaire composed of 23 questions. A total of 68 specialists were surveyed while a representative sample of patients was also interviewed. The gender and ethnicity aspects of the survey were considered.

The survey takes into consideration the doctor's and patient's perceptions about the technology used at primary level, referral practices, communication between primary and secondary health care institutions and the reasons why there are referrals that burden the secondary and tertiary health care system. What are the reasons patients are not treated in the primary health care institutions? Is there a patient bias in favor of the doctors working in secondary health care providers? Are the doctors in the primary health care underpaid, overworked, without access to sufficient technology or materials to work properly? Alternatively is the health care system set up in such a way that it encourages the referrals from primary to secondary health care institutions?

Different perceptions of the primary and secondary health care doctors are being scrutinized in the study. How can we improve the Macedonian health care system so that services are being rationalized at an adequate level, be that primary, secondary or tertiary? The study analyzes the historical organization of the health system in Macedonia, the current deficiencies of the system,

7 Case study – General Hospital Tetovo

8 Ibid

9 Case study - Clinical centre Skopje: Neurology clinic

the overall health status of the population and of the citizens in the case study municipalities. In the end the study provides recommendations how to improve the delivery of health services in Macedonia and how to tackle the problem of referrals so that better rationalization of health care services is achieved.

1

OVERALL HEALTH STATUS OF MACEDONIA

According to the latest national census, held in 2002, the total population of Macedonia amounts to 2,022,547 inhabitants, about 59.5 % living in urban centers. The census showed also that since 1991, the year of independence, the population has grown by 5.4 %. Moreover, the population density has increased from 64 in 1971 to 79/ km^2 in 2002. In addition, the 2002 census showed an ethnic composition of 64.18% ethnic Macedonians, 25.17 % Albanians, 3.85% Turks, 2.66 % Roma, 1.78% Serbs and 0.4 % Vlachs; 64 % of the population are Christian (0.5 % are Catholic) and 36 % belong to the Islamic religion.

Table 1. Demographic indicators

Area, households and population according to the different censuses

year	Surface area, km^2	Households	Population		
			Total	Males	females
1921	25713	146161	808724	401468	407256
1931	25713	164052	949958	478519	471439
1948	25713	218819	1152986	584002	568984
1953	25713	246313	1304514	659861	644653
1961	25713	280214	1406003	710074	695929
1971	25713	352034	1647308	834692	812616
1981	25713	435372	1909136	968143	940993
1991	25713	505852 [1)]	2033964 [1)]	1027352 [1)]	1006612 [1)]
1994	25713	501963 [2)]	1945932 [3)]	974255 [3)]	971677 [3)]
2002	25713	564296	2,022,547	1015377	1007170

1) Enumerated and estimated population and household
2) Enumerated households
3) Enumerated and estimated population according to the 1994 Census definitive results. Total population according to the definition used in the 1994 Census, given in the methodological explanations
4) Average number of person of enumerated households

Current data show that almost all demographic and socioeconomic indicators have seen an upwards trend over the last years. However, most figures still feature lower trends than for

example those of the EU countries; therefore efforts will have to be made to improve the health status of the population further. Life expectancy at birth for both sexes in Macedonia has increased slightly from 72.13 years in 1991 to 73.54 years in 2003, whilst the gap between the sexes remains almost the same (4.6 years in 1991 compared to 4.9 in 2003 with women expected to live longer than men.)

Life expectancy in Macedonia is however much lower than in some other countries and in 2004 was five years below the EU average of 78.49 years and 5.5 years lower than the EU-15 average. Differences in life expectancy between countries can among many other factors be attributed to differences in adult mortality, the latter being dependent on socio-economic status, standard of living as well as life style.

In Macedonia the rate of live births per 1000 population decreased from 18.18 in 1991 to 13.33 in 2003. However, the inverse trends to this end are far more pronounced in the EU countries with an average of 10.33 live births/1000 population in EU25 in 2003. One of the positive developments in Macedonia in the last decade was that infant mortality rate (IMR) continued to fall as in almost all countries in the region and has halved from 28.25 (1991) infant deaths/1000 live births to 11.29 in 2004. However, this figure is still three times higher than the EU 25 average of 4.75. A decrease in IMR up to 2002 can partly be attributed to the many policy interventions undertaken. Significant outcomes have been achieved with the Perinatal Project (1999-2001) as part of Health Sector Transition Project (for details see below/ reforms section). The project improved access to intensive care facilities with modern equipment and evidence-based methods of treatment.

The crude mortality rate of Macedonia has shown a steadily increasing trend from 7.72 in 1991 to 8.88 in 2003. This rate is higher compared to Albania with 5.79 but much lower than in EU countries and many of the neighboring countries such as Slovenia, Croatia and Bulgaria.

Table 2. Mortality Rate

Mortality and morbidity rate in Macedonia

Year	Number of people	Mortality rate	Number of registered illnesses	Morbidity rate
2002	17962	8.881	2.405.827	1189.5‰
2003	18006	8.884	2.721.628	1342.8‰

Source: State Health Institute (Republichki Institut za Zdravstvo)

Circulatory diseases are the leading cause of death in Macedonia, accounting for nearly 57% of all deaths in 2003. The standardized death rate (SDR) per 100,000 inhabitants for circulatory diseases has increased in 2003. Overall mortality from malignant neoplasm as the second most important cause of death has also increased over the past ten years. External causes (injuries and poisoning) are the third leading cause of death. Respiratory diseases occupy the fourth place, with bronchitis, emphysema and asthma accounting for more than 60% of these deaths. Diseases of the endocrine system and digestive system - with a substantial proportion

(approximately 40%) of the latter attributed to chronic liver diseases and cirrhosis - represent the fifth and sixth most important cause of death, respectively.

Table 3. Reasons for Death

Reasons for death		
Year	**Diseases**	**%**
2002	Circulatory system diseases	58
	Cancer	17
2003	Circulatory system diseases	56.6
	Cancer	18
Source: State (Public/Republican) Health Institute		

As circulatory diseases are the leading cause of death, with a prevalence of ca. 600 cases per 100 000 during the last decade, they have also been the dominant factor contributing to the overall burden of disease in Macedonia. It is rather concerning that this rate is double that of the EU average of 262.38 in 2004.

2

A SHORT OVERVIEW OF THE HEALTH STATUS IN THE CASE STUDY MUNICIPALITIES

The health care institutions that were case studies in our research were carefully selected to depict the differences between Macedonia's eastern and western regions; as well as the differences in trends and perceptions among the capital Skopje and the rest of the country. The research team did field work in two towns with similar size Negotino (in the central region of the country) and Sveti Nikole (in the eastern regions of the country). Skopje (the capital) and Tetovo (in the western regions of the country) on the other hand are much bigger towns the municipalities accounting for a third of the total population of Macedonia. Out of these case studies only Tetovo is a majority rural municipality. It has the biggest birth rate in Macedonia of 17.7%.[10]

10 Data from the State Statistics Office.

Table 4: Population in the case study municipalities[11]

Towns	Total	Men	Women	Urban	Rural		
	#	#	%	#	%	#	#
Negotino	23757	12019	50.6	11738	49.4	12853	10904
Sveti Nikole	21355	11129	52.1	10226	47.9	13240	8115
Skopje	578144	284345	49.2	293799	50.8	471187	106957
Tetovo	189066	92958	49.2	96108	50.8	55207	133859

In this research the Center for Research and Policy Making has also taken into consideration the diversity of the country in ethnic terms as being a significant factor in local and national politics. Thus, we have carefully selected the case studies so that a balance is being made considering the ethnic make-up of the municipalities under study. Tetovo is a municipality with a strong majority of ethnic Albanians. Although in the town also many Macedonians live, ethnic Albanians populate the surrounding villages making them a dominant factor in the municipality. Negotino and Sveti Nikole are small municipalities with Macedonians as a majority ethnic group with a number of Roms living there too. Skopje is the capital city with quite a mixture of ethnic groups populating it, the Macedonians being the far most numerous.

11 Ibid.

Despite the regional differences, and the variety of ethnic make-ups of the municipalities in our study and in Macedonia in general, similarities exist among them regarding health indicators. Thus, for example, as in the rest of the country the circulatory diseases are most often cause of death in the case study municipalities. The prevalence of these diseases against other causes of death in the four case study municipalities is similar to that at the state level.

Table 5: Cause of Death

Towns	Total	Circulatory diseases	Cancer
Negotino	213	62%	16.9%
Sveti Nikole	196	59.7%	15.8%
Skopje	4678	53.9%	22.1%
Tetovo	1455	47.8%	14.8%

Source: State Health Institute (data for 2002)

3

ORGANIZATIONAL STRUCTURE AND MANAGEMENT OF THE MACEDONIAN HEALTH CARE SYSTEM

Following independence in 1991, Macedonia set up an insurance-based health care system with the Government and the Ministry of Health providing the legal framework for operation and stewardship, whereas the Health Insurance Fund (HIF) is being responsible for the collection of contributions, allocations of funds and the supervision and contracting of providers. At present the system is facing a number of challenges, including the need to overcome the legacies from the former socialist type of health care delivery system, such as to rationalize the provider structures, to reduce the oversupply of personnel in the health sector as well as to secure sustainable health financing including adequate funding for preventive programs and capital investments. To this end "the Ministry of Health will need to strengthen its policy formulation, implementation and monitoring capacities further, whilst the HIF will need to enhance its budget planning, monitoring and reporting instruments"[12].

So far the newly established structures have been characterized by large scale inefficiencies in performance as they are forced to operate in an environment that has been deprived of

12 Interview with Rajna Krtova Cemerska, the World Bank office in Skopje (June 21, 2006)

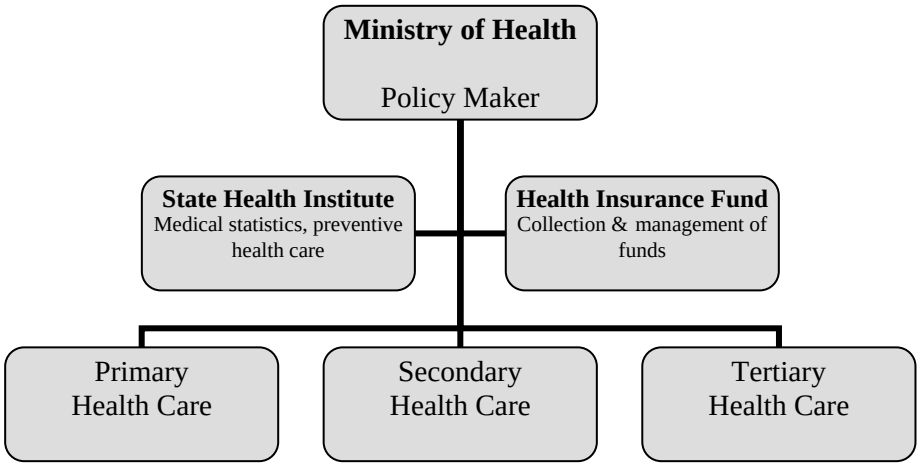
adequate resources for a long period of time. Furthermore, as a legacy of the system of locally controlled delivery structures and in the absence of uniform performance standards inequalities in health care delivery persist. Moreover, and contrary to the legal provisions, at present there is weak and insufficient financial support from the Central Budget for the preventive health care programs.

As described above, the *Health Care Law* established the organizational structure of the system such that the Ministry and the Government is in charge of health policy formulation and implementation; the Health Insurance Fund is responsible for the collection and management of the funds; and the health care institutions are responsible for service delivery. The health facilities span from health care stations and health care centers at the primary health care level, specialist-consultative and inpatient departments at the secondary level, to university clinics and institutes at the tertiary level, the latter also performing research and educational activities under the responsibility of the Ministry of Education.

The past few years have seen a considerable growth of the private sector, especially at the primary care level. The Ministry of Finance shares the rotating chairmanship of the HIF Management Board with the Ministry of Health. The Ministry of Local Government has taken some responsibilities in the primary and especially the preventive health care sector. Additionally, the professional chambers monitor the professional standards and have developed a new licensing system recently. On the other hand, the medical associations are to develop new clinical guidelines. The Ministry of Defense supervises the health care provision for army

personnel in the military hospitals. The Ministry of Labor and Social Affairs, apart from supervising the health care rights of workers, also covers the insurance contributions of the needy, the unemployed and the pensioners.

Figure 1. Health Care System in Macedonia – Organizational Chart



THE MAIN STAKEHOLDERS IN THIS SCHEME (The main actors of the health sector are shown on Figure 1 and described in further detail bellow)

The Ministry of Health

The *Health Care Law* regulates the functions of the Ministry of Health. This body is responsible for the management of the

health care system and the policy making in health policy areas. The Ministry is accountable for its work to the Government. It formulates and oversees the implementation of health policies and legislation. Moreover, the Ministry is supposed to analyze the organizational set up of the health system institutions and to identify any need for restructuring processes and/ or to set up new institutions or departments.

To monitor the management efficiency of the HIF the Ministry has established a special unit. In addition, the Ministry is part of the management board of the HIF. Moreover, the Ministry monitors and assesses any impacts of cross-sectoral activities on the health sector. However, a recent functional analysis made by Department for International Development (DFID) on the behalf of the Ministry of Health shows that there is an urgent need to re-align the roles and functions of the Ministry towards the core functions of policy formulation and implementation, priority-setting as well as the monitoring of the health system's performance.[13] In addition, there is a need to develop the ministerial capacity for budget formulation and human resources policy management. In context of continuing the privatization of health services provision, there is also a need to strengthen the regulatory framework for consumer protection.

13 Note that the functional analysis of DFID is an internal document of the government. The Center for Research and Policy Making was able to obtain only a paper copy of this document.

Additional laws and bylaws regulate the protection against communicable diseases, the establishment of health information systems, the protection against ionising radiation, pharmaceutical products, chemicals, drug and psychotropic substances abuse, food safety, pregnancy termination and organ transplantations, etc.

For the supervision of these topic areas the Ministry of Health has established a number of specialized units. The Ministry incorporates for example the State Sanitary and Health Inspectorate or the Drugs Bureau. The latter supervises registration and licensing procedures for drugs, remedial medicines and medical devices. Furthermore it participates in the preparation of the essential and positive drug lists.

The Food Directorate is a new organizational structure in the Ministry of Health and responsible for food safety surveillance. Its establishment represents a step forward in the process of harmonizing system structures with EU legislation.

Health Insurance Fund (HIF) of Macedonia

The Fund supervises the insurance system collects the contributions of the insurers and contracts the providers. In 2002 the Fund has also started contracting private primary health care facilities, agreeing to a capitation-based payment system. In addition, the Fund collects data on the insurance coverage of the population and ensures service provision according to the defined benefit package. Initially, it operated within the Ministry of Health and the Director was appointed by the Government. The adoption

of the *Law on Health Insurance* in 2000 made the Fund an independent institution.

At present its Management Board consists of a representative of the Fund, the Ministry of Health and the Ministry of Finance respectively as well as 6 representatives of service users. Recent amendments of the law foresee a rotating chairmanship of the Board by the Ministry of Health and the Ministry of Finance as well as granting both the power to veto any decision taken. The Director of the Health Insurance Fund is appointed by the Management Board provided that the Government consents the appointment decision.

Despite being structured as an independent institution the Health Insurance Funds has quite a few deficiencies. For example, the Fund needs to improve its budget planning capacities, including the setting of global budgets for providers. Moreover, budget projections should include capital investment as a cost item. However, it is acknowledged that "budget planning is jeopardized if agreed transfers of funds from central budget are delayed"[14]. The Health Insurance Fund needs to strengthen its budget monitoring and reporting instruments as well as to develop a set of corrective measures in case budget monitoring reveals discrepancies from projected goals.

14 WHO, Health in transition report 2006

The Ministry of Finance

The Ministry of Finance in cooperation with other ministries defines the Budget of the State. Following proposals of the Ministry of Health these are annually adopted and include preventive health care programs, such as compulsory immunization campaigns, programs against AIDS, TB, brucellosis, communicable diseases, comprehensive health checks of children and young people, active protection of mothers and children, etc. As the Health Insurance Fund budget represents an integral part of the state budget the Ministry of Finance also plays a role in its planning and approval. As stated above, the Ministry of Finance is part of the Fund's management board and takes turns with the Ministry of Health to chair it.

The Ministry of Education

The Ministry of Education is responsible for all educational institutions and programs studying medicine. The departments of medicine, dentistry and pharmacy operate under the auspices of the Ministry and are responsible for the teaching as well as the practical training and specialization programs for physicians, dentists, pharmacists and nurses. Furthermore, the ministry supervises the secondary schools of medicine, dentistry and pharmacy as well as the advanced schools for nurses and radiology

technicians and is responsible for the practical training of nurses and other health professionals.

Professional Associations/Chambers/Unions

The doctors', dentists' and pharmacist chambers are responsible for licensing and supervising the professional conduct of their respective professional group. In order to improve the performance of health care personnel and thereby to enhance the quality of health services the chambers have been granted the authority to extend, renew and deprive individuals of the working license.

There are also other related organizations such as the Macedonian Medical Association and the Macedonian Nursing Association. These organizations have been established after the Second World War and are internally subdivided by specialty. They are responsible for continued professional development, including the preparation of clinical guidelines. Healthcare workers are represented by a single trade union which negotiates terms and working conditions with the employers - the health care institutions.

The Non-governmental Sector

At present, the role of civil society in the health sector is limited. However, there are several non-governmental organizations focusing their activities on the health sector. In this context the Public Health Program of the Foundation Open Society

Institute Macedonia played an especially important role supporting, both technically and financially, the establishment of the School for Public Health and providing a Public Health Management in decentralized environment training program for local health managers. In addition, NGOs such as HERA, HOPE, ESE and Studiorum specialized in the fields of mental health, violence and injuries prevention, HIV/AIDS prevention, continue to implement successful projects mainly in the area of citizen's education on the above mentioned health issues.

4

THE HEALTH CARE DELIVERY SYSTEM IN MACEDONIA

Health care in Macedonia is delivered through a system of health care institutions. It is organized at the three levels: primary (PHC), secondary and tertiary care. The implementation of the functional divide between the three is outstanding however. The last years have seen a substantial growth of the private sector, especially in the field of PHC. Most dentistry practices have been privatized, a process later expanded to the pharmacies too. The rationalization of health care facilities, reform of the human resource related policies in this sector as well as further regulation of the pharmaceutical sector are priority for the health governing institutions.

The health care institutions' management oversight function is performed by Management Boards composed of seven members as follows: three professionals working in the health institution in question and four appointed by the Government. In primary health care institutions, two members of the Management Board are representatives of the local municipality. The health care institutions' executive directors are proposed by an advisory board and appointed by the Minister of Health. Most of these posts have seen frequent replacements as many appointees lack any prior management skills and knowledge. Each state health care

institution has its individual Statute adopted by its Management Board. The Statute defines and regulates the structure and the functions, and it is subject to the Government's consent.

The health care institutions are subject to initial licensing, i.e. an assessment of their compliance with the defined standards concerning premises, equipment and staff is undertaken. Although in theory licenses can be revoked when stated requirements are not met, in practice this has yet to be implemented. Standards are not always kept by the state health care institutions. There are institutions, especially in rural areas, that possess very poorly maintained equipment only or lack elementary supplies altogether. Furthermore most of the health care organizations face problems due to a deterioration of their capital assets. This is an especially serious problem in the primary health care sector. However, some positive results in the area of equipment procurement in primary health care have been achieved with the Project for Continuous Medical Education, financed through a World Bank credit (1996-2002).

The health care system in Macedonia is also delivered by private health care organizations, established mainly as primary health care clinics (general practice, dental offices). Doctors employed in the public sector are allowed to hold additional private practice in public or private facilities.[15] At present there is scope

15The Health Care Law came into force on 24th January 2007, forbids the doctors employed in the public sector working in private health care providers. See Dnevnik 25th January 2007, „Drzhavnite lekari gi soblekoa privatnite mantili [State doctors took off their private gowns]„ For more details see the study of the Center for Research and Policy Making: Occasional Paper 12 Ukinuvanje na mozhnosta lekarite vraboteni vo javnoto zdravstvo da vrshat dopolnitelna dejnost vo zdravstveni ustanovi [Укинување на можноста лекарите вработени во јавното здравство да вршат дополнителна дејност во здравствени установи]

for conflict of interest as the regulatory framework clearly defining the applying conditions is still under preparation.

The Primary Health Care

In Macedonia the first contact between a patient and the health care delivery system takes place at the primary health care level organized in form of health stations (mostly to be found in rural settlements with the permanent presence of a nurse and a physician visiting periodically, often only once a week), health care clinics and centers (to be found on the municipal level with a permanent presence of a number of nurses and physicians). Primary health care (supplemented by primary dental care) consists of five specialties:

- General medicine
- Occupational medicine
- Children's health care/ pediatrics (0-6 age)
- School medicine (school children and youth 7-19 age)
- Women's health care (obstetrics and gynecology).

In general, smaller rural settlements have few medicaments and rarely offer anything beyond the general medicine services. The primary health care centers at the municipal level also include emergency and home treatment, pharmacies, laboratories, x-ray

and echo cabinets, preventive tuberculosis services including "polyvalent patronage"-nurse services, as well as dental care.

General practice is provided through physicians with and without specialization in general practice, pediatricians (for the children 0-6 years), gynecologists and dentists. According to the law, primary health care physicians are responsible for the delivery of the following services:

- general medical examinations;
- drug prescription;
- issuance of referrals for specialized out-patient services;
- issuance of referrals for in-patient treatment;
- issuance of sick leave for temporary inability to work for a period of up to 15 days;
- issuance of sick leave for a period longer than 16 days.

At present the system performs well in some areas (e.g. immunization and antenatal care) and less well in others (non-rational prescription, high referral rates, lack of coordination between different levels of care, scant attention to mental health).

In 2004 the Macedonian public primary health care sector employed 1115 physicians who delivered their services in 732 clinics. The ratio doctors – health personnel with advanced or secondary school education (mostly nurses) was 1:1,6 in rural, and 1:1,4 in urban settings. The average number of service users per physician in a rural primary health care practice was around 3 000, whereas the national average was 1,800. In theory the insured

persons are obliged to select own general practitioner who in turn is to guide them as a gate-keeper through the system. The delay in implementing this fully may in parts be due to the flaws of primary health care in rural areas (for details see above) as well as the practice - in absence of one family doctor providing comprehensive care – of different family members attending different PHC physicians.

In 2001 Macedonians showed with an average number of 3.0 out-patient visits per capita/per year one of the lowest utilization rates of outpatient services in Europe (compared with an EU-15 average of 6.8 and an EU-10 average of 8.6). However, the picture may be skewed by the many people visiting the private primary heath care offices, where statistical data is poor, or by by-passing primary health care services and transiting directly to secondary or tertiary level of health care without referrals.

Preventive - Public Health Institutions and Services

During socialist times the prevention of diseases at all levels of care was given a special attention in Macedonia. Today, there is very wide immunization coverage of the population. Thus, for example, the level of immunization coverage for measles in Macedonia is among the highest in Europe. Specialized preventive health care is organized and provided through the State Institute for Health Protection (State Health Institute) in Skopje and the subordinated 10 regional institutes for health protection as well as 21 HES (Hygienic-Epidemiologic-Sanitary) units. Patronage (visiting-nurse) services as a form of specialized nursing care also include a

series of public health functions. Similar to visits at home this service is based on family needs including visits to mothers postpartum and their infants.

The State Institute for Health Protection (SIHP) is the top-level scientific institution providing highly specialized preventive health care services. It develops public health guidelines, specifically for the areas of social medicine, hygiene and occupational medicines, which are the basis of the Medical Faculty's training curricula also. The SIHP cooperates closely with the Ministry of Health and the Health Insurance Fund, helping to shape the health policy in the field as well as performing public health control functions. With the help of the subordinate institutes the State Institute for Health Protection is also responsible for the collection and analysis of any health status and care related data including the performance of environmental health risks assessments. In this context the surveillance of communicable and non-communicable diseases such as HIV/AIDS, cancer, drug and alcohol addiction, injuries plays an important role. Public registries have been established in the State Institute for Health Protection. Special efforts are also devoted to health promotion and health education.

Secondary Health Care

Secondary health care is provided by the general hospitals. They are subdivided into "specialty consultative" health care, responsible for out-patient assessment and treatment, and hospital

(inpatient) health care. This system foresees that access to hospital care is channeled through referrals issued by physicians working in the primary care level. Emergency cases are admitted without referral, the latter then being issued retrospectively as emergency medical assistance is provided in the framework of primary health care.

Specialist Consultative Health Care

Specialty consultative health care is provided in the hospital segments of the former medical centers as well as in the specialized hospitals, institutes, clinics and the Clinical Centre of Skopje. Services provided include diagnostics, treatment and rehabilitation.

Hospital Health Care

In 2005 hospital health care was delivered by 67 public hospitals, specialized hospitals, institutes, specialized departments (clinics) in the Clinical Centre of Skopje as well as 4 private hospitals. Within the general hospitals there are at least five specialized medical departments: internal medicine, surgery, pediatrics, obstetrics, gynecology and anesthesiology. Some of these hospitals include additional departments, such as ophthalmology, ENT, psychiatry and others. The hospitals provide emergency services as well as diagnosis, treatment, rehabilitation,

accommodation, nursing and catering services and 24 hours specialist supervision for inpatients. Furthermore the hospitals provide the practical training of future health professionals.

According to the law the costs for acute hospital treatment of insured patients are covered by the compulsory health insurance as well as by the patients' co-payment. For treatment in specialized facilities, such as for example geriatric institutions, patients have to cover themselves certain costs e.g. related to accommodation and catering. In regard to the utilization of the hospital capacity and taking into consideration the young population of Macedonia it is surprising that in 2001 the average length of stay in hospitals was 8 days in the emergency hospitals and 11.8 in all hospitals.

These figures are higher than the EU averages for that year. On the other hand the occupancy rate was 53.7 % for the emergency and 64 % for all the hospitals, figures much lower than the EU averages**.** While the European Union countries have been recording a constant decrease in the number of hospital beds in the last years in Macedonia their number has been relatively static (494 per 100 000 inhabitants), though at a level lower than the EU average. More than half of the hospital beds in Macedonia are to be found in specialized or tertiary health care institutions. The capital Skopje in particular shows a pronounced oversupply of beds in this sector.

Table 6: Hospital beds and occupancy rates

Number of beds, occupancy rate					
Year	Hospital Beds	Number of ill people	Hospital days	Length of stay	Occupancy rate
1990	11119	197240	3037559	15.4	74.8
1994	10800	191783	2699077	14.1	68.5
1995	10645	191790	2750332	14.3	70.8
1996	10311	192061	2898410	15.1	77.1
1997	10298	192058	2572961	13.4	68.5
1998	10333	197013	2507414	12.7	66.5
1999	10293	194931	2452403	12.6	65.3
2000	10248	196897	2392779	12.2	64
2001	10045	182250	2154053	11.8	58.8
2002	9770	187480	2150226	11.5	60.3
2003	9743	191965	2193229	11.4	61.7
Source: State Health Institute					

Specialized hospital care is delivered in six specialized hospitals and seven rehabilitation centers with 3.263 hospital beds, accounting for 33.6 % of the total number of hospital beds in the secondary health care sector. The average length of patients' stay is longer than that in general hospitals (where the average is 11 days) and ranges from 31.2 days in the specialized Hospital for Orthopedics and Trauma, “Sveti Erazmo” in Ohrid to 461.3 days in the psychiatric hospitals in Skopje, Demir Hisar and Gevgelija.

Tertiary Health Care

Tertiary health care is delivered in specialized hospitals and institutes, most of them located in Skopje. Besides delivery of secondary health care all tertiary health care institutions also undertake educational functions and pursue scientific research activities. Access to tertiary health care institutions is facilitated through referrals issued by doctors in the primary health care.

The Clinical Center in Skopje is the most sophisticated health care facility, providing tertiary health care in a number of specialties. It comprises of 22 clinics and institutes with almost 2400 beds. More than half of the patients using the services of this Center come from outside of the capital. The average length of stay in the Clinical Centre is 8.8 days, and the bed occupancy rate is 61,5%. The total number of beds in all other tertiary units is 1 353.

5

THE CASE STUDY HEALTH CARE INSTITUTIONS

Public services, such as education, health and social services, may add value when they help to make life better for everyone. They do this not just by providing collectively goods and services, but also because people value the way in which these are provided. Citizens value not just the public services but the 'procedural' aspects of how they are delivered – especially participation, fairness, equity and probity. Markets also only function efficiently in states where the rule of law and other supports provided by the state, such as regulation, work efficiently and are generally accepted.

Among other issues in Macedonia the process of decentralization seeks to change the organizational culture, and to reform government service delivery procedures. This initiative increases empowerment of community groups; creates opportunities for citizens to express their needs; actively incorporates the input of citizens into public decision making; delivers services that promote the social inclusion of vulnerable populations, has resulted in a more client-centered service delivery. Decentralization does and will affect the Macedonian health care sector.

It is only matter of time when the Macedonian citizens will require more efficient and functional health services. In the last fifteen years Macedonia has been conducting health care reforms aiming at improving the capacity and efficiency of the primary health sector, and reducing the costs of treatments in the hospitals. Similarly as in other countries of the region, the health care reforms in Macedonia were initiated and advocated by the World Bank through two projects such as the Health Sector Transition Project (now closed) and the Health Sector Management Project (still operational).

All recent analyses of the World Bank on the Macedonian health sector have indicated that the functional divide between the primary, secondary and tertiary level is not working well. On the other hand, all reform efforts, as mentioned before, focus only on primary health sector. None of the reforms have addressed the rationalization of health care services and their equal distribution on regional level.

The access to hospital care in Macedonia is provided to all citizens insured (83%) in the Health Insurance Fund through referral gate-keeping system. Once a patient is admitted to primary health care facility, he/she pays co-payment for the services. Only after a patient is referred to a higher level of health care he/she can see a specialist. As these services are more expensive than those of primary health care institutions the Law has limited the referrals one general practitioner could make.

Yet because all employees in the public health receive salaries from the Health Insurance Fund and since the system does not offer any incentive for the doctors or the staff to provide more and better services to patients, many practitioners in the primary and secondary health care refer patients to the tertiary health

institutions. As a result, the main state hospital complex, the Skopje Clinical Centre is overburdened with patients. On the other hand, the regional hospitals delivering mainly primary and secondary health services are underutilized.

Assuming this working hypothesis the Centre for Research and Policy Making undertook a research to find out the reasons why the referral rate is so high and some central hospitals are overburden and therefore inefficient in spending public money, whereas local hospitals deliver services to less people than they are supposed to. We have studied three primary health care institutions: the Policlinic "Jane Sandanski"-Skopje; the "Health Center [Zdravstven Dom]" Negotino; the "Health Center" Sveti Nikole. In the analysis we have included one secondary health care institution – the Medical Centre Tetovo and one tertiary health care institution – the Clinical Centre Skopje.

The analysis of the secondary data provided by the Public Health Institute reveals a situation in which the capital has more doctors per capita than any other town. Tetovo, being the third largest municipality in Macedonia has four times less doctors than Skopje does.[16] In contrast Tetovo (2.2) has more hospital beds per capita than Skopje and far more than Sveti Nikole (0.3)

Another interesting finding is that the primary health facilities such as the ones in Negotino and Sveti Nikole have more specialists than general practitioners[17]. Such a situation is an anomaly of the Macedonian health care system as it is organized at the moment. The purpose of the primary health care facilities is to provide general health services to all citizens and diagnose the

16 See in Tables 7 and 8

17 See in Table 7

need for treatment at higher level of health care. This is supposed to be done by the general practitioner who is supposed to undertake a role of a "family doctor" according to the most recent reform efforts in this area. However, the statistical data provide another reality- the system has so far produced specialists that are well embedded in primary health care institutions.

Yet analyzing the policy of referrals then we assumed that this situation should be more favorable for the patients in the small municipalities as the specialists working at primary health care level are supposed to be skilful to treat the patients and thus do not need to refer them to their colleagues at secondary health care level. However, the referral rates do not second this expectation. What is more the statistics from the number of visits to specialists in Skopje show that eight times more patients visit specialists in Skopje than in the other cities studied[18]. This again confirms the findings of other studies that the Skopje Clinical Centre is overburdened.

What are the reasons for this situation? How can we overcome this? How can the functional divide between the three levels of health care work better? Can we reduce the referral rate in Macedonia? Can the Macedonian health care system be more efficient? These were the questions that our team aimed to answer and on basis of the analysis of the survey results from Negotino, Sveti Nikole, Skopje and Tetovo and provide evidence-based recommendations for policy change in the health policy area.

18 As in Table 9

Table 7: Number of doctors

Towns	Number of					Number of medical staff per capita		
	Doctors			dentists	pharmacists	Doctors	dentists	Pharmacists
	total	general	specialists					
Negotino	32	6	21	10	5	742.4	2375.7	4751.4
Sveti Nikole	33	13	19	11	2	647.1	1941.4	10677.5
Skopje	1974	435	1279	453	121	292.9	1276.3	4778.0
Tetovo	216	30	149	54	5	875.3	3501.2	37.813.2

Source: Public Health Institute (data for 2002)

Table 8: Number of hospital beds

Towns	Number of hospital beds	Beds per 1000 people
Negotino	16	0.7
Sveti Nikole	6	0.3
Skopje	3959	2.0
Tetovo	412	2.2

Source: Public Health Institute (data for 2002)

Table 9: Number of visit to general practitioners

	General practitioners				Specialists			
Towns	Total	First visits	#of visits after the first	Average visits per capita	Total	First visits	#of visits after the first	Average visits per capita
Negotino	52568	24851	1.1	3.1	17530	12849	0.4	0.3
Sveti Nikole	59183	4524	12	3.8	15982	12555	0.3	0.4
Skopje	1191661	388639	2.1	2.9	526365	370407	0.4	8.0
Tetovo	207480	139373	0.5	1.8	152955	96620	0.6	1.6
Source: Public Health Institute (data for 2002)								

An Analysis of the Case Studies[19]

As mentioned before the analysis was conducted in four cities located in the North East, Central and North West part of Macedonia, namely Skopje (the capital of Macedonia), Tetovo, Sveti Nikole and Negotino.

The Health Care institutions that were included in the research were the following:

19For a better clarity, all the results of the paper will be presented in the appendix as a graph table together with the questionnaires used in the survey of doctors and patients.

- The Policlinic ”Jane Sandanski” and the Clinical Centre (the biggest health institution in Macedonia) in Skopje
- The Health Center in Negotino
- The Health Center in Sveti Nikole
- The Medical Center in Tetovo

In the Medical institutions mentioned above, 74 of the interviewed medical personnel were primary care doctors and 68 were doctors-specialists. More precisely our team has spoken with the following number of doctors in every of the case study municipalities:

Table 10: Survey sample

Cities	Primary Care Doctors (PCDs)	Specialists
Skopje	27	30
Negotino	5	6
Sv. Nikole	17	4
Tetovo	25	28
TOTAL	74	68

In the analysis 33% of the primary care doctors were male and 67% female. In the sample of specialists males were represented with 56% and females with 44%. In the group of primary care doctors (PCDs), 65% were general practitioners, 17% were pediatricians, 3% were gynecologists, 1% dermatologists-

veneroulogists, 1% physiotherapists, 1% practice internal medicine and other 12%. In the group of specialists, 23% of the doctors practiced internal medicine, 13% were ophthalmologists, 11% were gynecologists 11%, 6%, were specialists in general practice, 4% were pediatricians, 3% were physiotherapists, 3% were dermatologist 3% and 37% were specialists in other medical areas (such as neurologists and psychiatrists.)

PCDs Opinion on the Low Efficiency of the Primary Health Sector

The Macedonian health system functions in such a way that patients that visit primary health care doctors are examined and diagnosed there. If they have a more complex disease or a diagnosis of their sickness cannot be made at primary health care units then they are supposed to be referred to secondary health care providers. After a diagnosis is made and medical treatment is defined the patient is practically referred back to the primary health care units. There the treatment is made and monitored. In practice however, patients seek medical treatment, even the most basic one such as treating wounds and cuts, in secondary health care providers. At the moment, 57% of the PCDs think that in most of the cases they diagnose and treat the patients on their own, 3% of them consulting a specialist in the process. The rest, refer their patients for diagnosis to a secondary health care doctors.

Having regular medical checkups and screenings conducted in primary health facilities, Macedonians of all ages can have healthier lives and the Macedonian health care system will be more efficient as these cost less than a treatment at secondary health care level. Therefore all citizens need to make sure to have a

primary health care provider, such as a family practitioner, who will monitor an illness, injury, or developmental delay that requires professional attention. Most of the surveyed PCDs (37%) work *with younger patients*, 27% of which are *unemployed and receive welfare*.

Approximately 27% of the patients they receive in a regular working day are "acute cases", i.e. people with acute medical problems. Around 81% of the PCDs ask their patients to come to a regular check up, while 19% of them do not practice this. The most interesting fact is that only around 30% of the patients undertake regular controls. This implies the conclusion that the average Macedonian patient that uses primary public health care services does so in emergency situation, when there is an acute need for medical help. **A typical profile of this patient is a child of unemployed parents, with acute illness that is not monitored regularly**.

On the other hand, if the patients are not regularly monitored they could develop chronicle illness and seek for specialist health care. In fact many of the citizens that come to the primary health care units do so only when they have developed a chronic illness. The data from the survey made by the Center for Research and Policy Making show that about 45% of the total number of patients are chronically ill. Majority of these people can be treated at a primary health care level. Thus, the primary health care doctors can treat 55% of the chronically ill patients without consulting a specialist.[20] These patients then should remain and be treated within the primary health care units. Yet, they are not, for the PCDs refer the patients to other secondary or tertiary

20 60% of the patients can be treated without consulting secondary or tertiary institution

institutions. What are the reasons for these referrals? Approximately 57% of the PCDs give the deficit of diagnostic tools as the most important reason.

The second reason for sending patients to the secondary or tertiary health care units instead of treating them at the primary health care providers is also related to the **material conditions in the Macedonian health system**. Thus, early 38% of the PCDs gave a moderate priority to the lack of adequate conditions for effective treatment in the local primary health care institution, while 27% of the PCDs give the highest priority to this reason. The third reason why patients are not treated in the primary health care units is related to their perceptions of where they can get good treatments and wishes to be treated somewhere else. The PCDs, are aware of the problem as 22% of them, gave the highest priority to the problem of patients requesting referral to specialists on their own, 23% gave the moderate priority and 18% of the PCDs gave to this reason the lowest priority.

The following data provide for additional evidence of the above stated conclusions. The PCMs have these basic diagnostic tools (routine laboratory tests, ECG, ultrasound and x-rays) on their disposal in the health care institutions included in this research:

Table 11: PCM's equipment in case study hospitals

Routine laboratory tests (blood, urine, capillary glucoses)	ECG (electrocardiography)	Ultrasound	X-rays
80%	78%	76%	89%

Approximately 71% of the PCDs that have facilities for routine laboratory tests use the primary health care unit laboratories, 9% cooperate with private laboratories and 20% do not make laboratory tests in their institutions. A question remains why a significant number of PCDs (20%) that have laboratory tests do not use them when almost all of the surveyed primary health doctors (96%) think that having routine laboratory tests would decrease the number of patients they send to the specialists?

Having appropriate equipment at primary health care units to be used for diagnosis and treatment of patients is one of the crucial factors for the rationalization of hospital services provided at secondary and tertiary level health care institutions. If the primary health care units have adequate equipment and if there is continuous monitoring to make sure that the equipment is actually used the level of referrals would decrease. The lack of diagnostic tools decreases the ability of the PCDs to treat patients and diagnose illness correctly; therefore as much as 35% of the surveyed PCDs are not stimulated to work without appropriate equipment. It is also very worrying that almost 45% of the PCDs think they are not stimulated enough to do their job the inhibiting factor being the great responsibility they carry performing their job.

As pointed out before, **the referral rate in Macedonia also depends on the will of the patients**. The evidence shows the expectations of the patients on the type of health care service to receive is an important factor influencing the referral rates. The patients see the primary health care units as a gate through which they can access secondary and tertiary health care institutions. Thus, only 29% of patients actually expect medical advice and

therapy to be received in the primary health care units; whereas as much as 41% of the patients based on their own opinion ask their doctors to write a prescription/referral to a specialist.

If they are not referred to a specialist, 17% of the patients are not satisfied with the health care provided at primary level. As a result, 13% of the PCDs are even threatened by patients to be replaced if they do not write the prescription/referrals as the patients want or expect them to do. The patients and the doctors need to be better informed of the role of the primary health care units so that they treat patients at this level of the health system and do not refer patients to the secondary or tertiary health care providers.

Referring patients to secondary health care institutions is a prerogative of the PCD' although the system is structured as such to limit referrals. The Ministry of Health has issued a recommendation to all primary health care institutions to limit the number of referrals to secondary and tertiary level. Those doctors that still refer a great number of their patients are reprimanded.[21] Yet 51% of the PDCs think they do not have any limitations on giving prescriptions, referrals to the specialist or similar, while 49% are informed of these limitations. Doctors at primary health care units do not comprehend the reasons why patients should be treated at this level of the health system and why they should not be referred elsewhere. Thus the opinion of 17% of the PCDs is that the limitations in the number of referrals provide rationalization of the prescribed medicines. Although the main reason for these limitations is to rationalize hospital services, many of the primary

21 Interview with Dr. Svetlana Grlichkova, from the Zdravstven Dom [Primary Health Care Unit] "Mlin-Balkan", 25th August, 2006, Deputy Minister of Health Vlado Lazarevik, 21st August, 2006.

health care doctors (43%) think that these limitations decrease the quality of the treatment of the patient, while (35%) say it does not affect the quality. Doctors at primary health care units **are not informed about the limitations of referrals, do not know the reason behind these limitations** and feel that if their patients are not referred to secondary health care providers **they would not receive good quality health care**.

For the specialists the referrals are a source of income too. The financing of this level of health care is based on the number of out-patient services they have provided. Moreover, the secondary health care institutions exploit this financing system, charging the Health Insurance Fund for more services than the Fund could finance this way creating debts in the public health. In the current health financing system referrals are incentives for the secondary health institutions to work inefficiently. There were reforms undertaken by Ministry in 2005 amending the Law on Health Insurance introducing budgets and budget ceilings of the health care institutions.[22] However, the budgets have been and are still planned on the basis of historical expenditures incurred during the previous three years. Since the health care institutions before 2005 have been working inefficiently the budgets and the budget ceilings do not reflect the real costs of the services and the scope of the services provided.

The rationalization of the health care service in Macedonia is also strongly linked to the question whether the PCDs can see all their patients and treat them accordingly during their working hours or because of being too busy they are made to either work after working hours or refer their patients to other doctors.

22 See Article 70, Official Gazette of the Republic of Macedonia, 119/2005.

Surprisingly as much as 51% of surveyed doctors see their patients after working hours. Yet about half of them (49%) stated that they require extra "stimulation" (benefits) for this kind of work. Some of the PCDs are so dedicated to their profession that they are personally fulfilled even if working after their shift (19%), or think that its part of their medical profession to be available 24h (12%), but 8% of the surveyed doctors think they are not adequately stimulated because of being available 24h.

The new Labor Law that regulates employment after working hours than addresses accordingly this opinions and practice of the medical professionals in Macedonia. When the PCDs were questioned if they were stimulated enough to give the best health care to the patients only 12% declared they were stimulated enough. Taking into consideration the above it is understandable why the PCDs (76%) think that the primary care is overburden whereas only 24% of them think that the specialist are overburden. But what is more, very high number of PCMs (53%) thinks that there is a rivalry between the PCMs and the specialists from the clinical centre of Skopje.

From the above one can conclude that most of the general practitioners refer patients to secondary health care facility due to: (i) scarce resources (medical equipment), (ii) lack of functional conditions to provide the needed medical services and (iii) because patients asked them to do so. These are the areas where the Ministry of Health needs to focus on improving the health care system.

The Specialist's Perceptions on the Efficiency of Health Care

Taking into consideration the rivalry between PCDs and specialists we have been presumptive that they would have different perceptions on the level of efficiency of health care system. In particular the assumption was that these two groups of doctors would have different opinions regarding the referral practices and rates and how to overcome the present circumstances where secondary and tertiary health care institutions are overburdened while the primary health care institutions are inefficiently used. In an effort to find out why the secondary and tertiary health care is overburdened (73% of the doctors specialist working in secondary health care units think that the secondary and tertiary health care is overburdened) we asked about the role of the primary health doctors in the treatment of patients who need to be referred at institutions of a higher level of health care.

About a third of the doctors that work in the secondary health care units have a misperception of the set up of the Macedonian health care system. Thus, 34% of the specialists believe the role of the PCDs is only as a prescription and referral point of the health care chain. Luckily, 60% think that PCDs should take an active part in the treatment of the patients, which as an approach if applied often, would rationalize health care services as well as it will cut cost.

Patients that are referred to secondary health care units are supposed to be diagnosed only there and treated at primary health care units. Yet few patients return to their primary health care units and seek treatment or monitoring of their health status in the secondary health care providers. In fact, the opinion of 39% of the

specialists is that after their therapy is prescribed less than 10% of the patients are controlled and periodically examined by the PCDs. Instead **these patients return to the doctors specialists in the secondary health care units**.

Few of the doctors- specialists believe that their patients are regularly treated and examined by the PCD's. Only 5% think that more than 90% of the patients are regularly treated and examined by the PCDs. The specialists were also asked to give their opinion why the PCDs resend the already diagnosed patients to another specialist's examination. About 39% think that the main reason is the worsening of the patient status and 37% think it is because of the lack of proper diagnostic to observe the patient during treatment.

The equipment at disposal of the PCDs is as an important factor for the referral practices in the country as around 66% of the specialists assume that if the PCDs have the necessary medical equipment and laboratory tests they will be less overburdened. Yet it remains that about one third (34%) of the doctors-specialists think that having the equipment would have no effect on the number of patients referred to the secondary health care units. In fact, **the patient's demands to be referred to a higher level of health care provider have been identified by the doctors in the secondary health care units as an essential reason for the high number of referrals**.[23]

23 Most of the specialists (97%) point out this as an important factor.

The Relations between Doctors- Specialists and PCDs

It is important to consider the relationship between doctors in the primary and the secondary health care units. We measured the level of communication between the doctors after the patient is referred from primary to secondary health care provider. The flow of information, from secondary health care to primary health care units, after a referral of patients is made is rather good as most of the PCDs (85%) receive the needed information after they send the patients to the specialists, while 15% do not. Yet the communication between doctors in primary and secondary health care units seems to be rather limited.

Responding to the question "what is the level of communication between the PCDs and the specialists?" 60% of the specialists contact with the PCDs only about the referrals and the reports they are sending. About a third, 32%, contact each other for better informing of the patients health condition. However, 58% of the doctor specialists think there is a rivalry between them and PCDs. Even though the percentage of the rivalry between PCDs and specialists is very high, 84% of the specialists think that if the cooperation between each other is improved it will lower their overload with patients. It is relevant to be mentioned that 44% of the specialists are afraid that their monthly income will decrease if the number of referrals from the PCDs gets lower.

The doctors- specialists gave their priority to several reasons why the PCDs issue a greater number of referrals:

Table 13: Reasons for referrals[24]

	Because of the demands of the patients	PCDs are not equipped with proper diagnostic tools	PCDs are not paid/stimulated enough to keep the treatment at the primary level	PCDs do not want to take the responsibility of treating the more complicated cases	Because PCDs are overburdened
Low priority	12%	7%	10%	9%	19%
Moderate priority	36%	33%	19%	15%	40%
High priority	19%	28%	41%	50%	17%

As it can be deducted from the table above the doctors working in the secondary health care units strongly believe that their colleagues at the primary health care providers do not want to take the responsibility of treating the more complicated cases and are not paid/stimulated enough to keep the treatment at the level of primary health care. They give as moderate reasons for the number of referrals the demands of the patients and the statement that the PCDs are overburdened with work. Although as we have observed the information flow between the secondary and primary health care doctors is good the doctors- specialists feel that their colleagues PCDs do not want to take the responsibility of treating patients with more complicated cases. It is a worrying signal that neither the doctors- specialists nor the patients have much faith in the doctors and the services in the primary health care units in general.

24 The percentages do not add up to 100% as some doctors did not answer all the questions.

CONCLUSIONS AND RECOMMENDATIONS

Macedonia shares the disease prevalence pattern of that of other European countries: cardiovascular diseases, cancer, mental health problems, injuries and violence as well as respiratory diseases are the most prominent causes of mortality. The main priorities of the Government and the Ministry of Health are similar to those of the reform priorities in the European Union (achieving an improved health status of the population, the provision of a more sustainable, affordable and efficient system for health care delivery, overall improved quality of the health care services and a more patient focused service provision). The reforms in the health sector have started since Macedonia gained independence from federal Yugoslavia in 1991. They have been spurred by the World Bank and other international agencies and institutions. Much of the reforms have been developed on the basis of theoretical models and costs predictions. However, without analyzing the ever-changing realities on the ground Macedonia would be building a health care system that is not responsive to current needs of the citizens.

Our study of the four municipal hospitals and the Clinical Centre Skopje shows that there is a decrease of citizen's use of the public primary health services. An increasing number of Macedonian citizens acquire primary health services in the private sector. At the moment they can still afford that. The private health care institutions are easily accessible and have the diagnostics equipment that is often lacking in many of the public health care providers. Our study reveals that often only children of those

receiving social welfare still use the primary health institutions as care providers. For a number of reasons the majority of the citizens consider this level of health care only as a passing point to the secondary and tertiary health care institutions. Thus, the secondary and the tertiary level of health care is overburden being at the moment much cheaper from the few private secondary health care providers. The public secondary and tertiary health care institutions cost the Ministry of Health more than the primary health care units. Unreasonable use of secondary health care units must be downsized. All treatment that can be provided in the primary health care institutions should be given and received there and not in the secondary health care units.

The limitations of the number of referrals that doctors in the primary health care units can proscribe are not respected as many of the primary doctors never heard of them. There is not a clear law or public policy regarding the matter. A subsequent effort for educating the secondary/tertiary doctors of their responsibility to refer back the patient, as well as the doctors in the primary health care units of their limitation to refer patients at higher level of health care. Moreover, in order to rationalize hospital services and enhance efficiency at primary level, an obligation should be enforced for the secondary health care doctors to refer back the patients that have received care at secondary or tertiary level to continue receiving treatment with their primary health care doctors.

An education campaign among patients should be also undertaken for a greater acceptance of the primary doctor as the family doctor, the doctor where they go for treatment and not to get referrals to secondary or tertiary health care institutions only.

In addition, a campaign in which the importance for regular check ups is emphasized should be made by the Ministry of Health as this would provide for early identification of chronically diseases and timely treatment of the same. Too many citizens come to the doctor's office only when they develop a chronic illness. They should and could be treated in the much earlier phase in the primary health care units.

A new systematization of the primary health hospitals should be undertaken to provide for a responsive human resource establishment in the municipal health homes to the needs of the citizens. To do this a survey of the history of diseases in every of the municipalities should be conducted to see if for example the municipality of Negotino needs a neurologist rather than dermatologist in their health home. Also the number of general practitioners in the municipal health care institutions to provide for the needs of diagnostic and treatment of patients in every area should be increased.

Moreover, the introduction of a performance measurement of the Macedonian civil service that has started recently and is conducted on annual basis should be replicated in the health sector, so that efficiency of the human resources and utilization of the equipment and the available technology is ensured. The available laboratories and equipment in the primary health care units should be utilized to the maximum extent. Performance measurement is crucial to oversee that the equipment in the health centers in the smaller municipalities is actually utilized by the medical personnel there rather than having patients being sent to

larger centers or the capital city for the same service they could get at home.

Finally redirecting and investing money from the budget and the donor supported programs into the primary health care for buying essential diagnostic and laboratory equipment would have direct affect on the rationalization of hospital services at a secondary and tertiary level of health care. Better equipment in the primary health care units would bean less patients referred to the secondary and tertiary sectors of the health system in Macedonia. This would not only save costs, but also lives and the health of many citizens.

The following are the direct recommendations of the Center for Research and Policy Making to the health care authorities considering the rationalization of health care services in Macedonia:

- All treatment that can be provided in the primary health care institutions should be given and received there and not in the secondary health care units;
- A policy should be adopted regulating limitations of the number of referrals that doctors in the primary health care units can proscribe;
- Primary health doctors should be educated on this regulation limiting the number of referrals;
- Secondary/tertiary doctors should be educated on their responsibility to refer back the patient to primary heath practitioners;

- An education campaign among patients should be also undertaken for a greater acceptance of the primary doctor as the family doctor;
- The Ministry of Health should undertake a campaign in which the importance for regular check ups is emphasized to provide for early identification of chronically diseases and timely treatment of the same;
- Human resource management responsive to the needs of the citizens in all municipal health care institutions should be introduced;
- Number of general practitioners in primary health care institutions in every municipality should be increased;
- Performance measurement of the work of the doctors should be introduced to ensure efficiency of the human resources and utilization of the equipment and the available technology;
- Redirecting and investing money from the budget and the donor supported programs into the primary health care for buying essential diagnostic and laboratory equipment.

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