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The impact of Health Cost on the Right to Health Care in Lebanon

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Introduction

Health indicators are among the major measurements used to assess the socio-economic standing of the population, as well as to determine the position of a country with respect to the development and sustainability processes. Among the major criteria adopted in this context, are the health demographic indicators (mortality, morbidity, diseases,..). However, another factor that is also playing an integral role in evaluating health status is the existence of the suitable policies, calling for equitable supply of health services at a reasonable and bearable cost. The role of the government is essential in this regard not only as a provider and producer, but also as a regulator, promoter and supervisor of these services. Most societies are currently going into the process of minimizing the role of governments as a direct actor in different fields, however, social services are still being handled by governments, either directly through the provision of the primary health care, or indirectly through setting up the suitable environment, to avoid monopolies and insure fair coverage.

In Lebanon, the situation is relatively complicated, mainly as to the wide variety of players (financing, providers and even regulators) and the lack of communication among these different players. The long period of civil war has contributed to intensifying and widening the problems facing the health sector in Lebanon, the fact that was mainly reflected in the relatively huge size of the "health care bill", measured as a percentage of gross domestic product, coupled with an apparent inequitable access to health care services for the different regions and social segments. It is needless to say that the role of the private sector grew dramatically during the war period, with the persistence of out-dated policies governing the performance of the sector. This fact was illustrated through the regional imbalances in the distribution of hospitals, medical and para-medical staffs, in addition to the ascending trend in the health care prices, mainly relative to the consumer prices.

These obvious imbalances call for an elaboration on the structure of the existing health system, and tracing the different schemas relating the different components of this system, to come out with a set of policies to enhance the overall performance of the sector.

This policy paper was carried out with the aim of highlighting how the current structure of the health system is affecting the health care bill, and consequently the right of citizens, from the different regions and income levels, to equitably access health services. This issue is raised in light of the sensitive situation the country is currently going through, recording notably slow rate of economic growth and apparent recession, uncontrollable and continuous levels of budget deficits, and growing public

debt exceeding the gross domestic product. One of the major consequences of the fiscal and monetary policies adopted in the recent years was widening the gap among the different social classes, creating further imbalances in income distribution, consequently adding more burdens to the low and middle income groups that were, severely affected during the civil strife, and limiting thus their access to the basic social services (health, education,..).

The first section of the study presents a quick review of the main demographic and health indicators recorded in the country. In **the second section**, the major macro-economic indicators that governed during the last few years will be treated. **The third section** illustrates the different sources of health financing and their contributions to the overall health care bill. **The fourth section** analyses the flow of funds between financing agents and health service providers. **The fifth section** elaborates on the different health care service providers, and **the sixth section** concludes with some policy recommendations.

I. Demographic and Health Indicators

The efficiency of the health system is usually reflected- in addition to the affordable cost of health care services- through the prevalence of acceptable health indicators with minor regional disparities, insuring thus a balanced coverage of both preventive and curative health care in the country wide.

The demographic and health characteristics of any population are interdependent. Health needs depend to a large extent on the underlying population structure, and demographic indicators reflect the different health and epidemiological factors prevailing in the country. Lebanon, like other developing nations, is undergoing changes in its demographic structure, as well as in the morbidity and mortality characteristics of the population. Improvements in quality of life and in life expectancy at birth, in addition to declines in mortality and fertility rates, contributed to an increase in both the number and proportion of elderly people, and thereby to an aging of the population. Furthermore, rising incomes and the acquisition of new lifestyles related to urbanization led to the gradual replacement of infectious diseases with chronic degenerative illnesses as important causes of death and disability (World Bank, 1987; Ammar, 1997; UNFPA, 1998).

1. Demographic characteristics

The Ministry of Social Affairs in Lebanon with the collaboration of the UNFPA conducted a survey in 1995-1996 on a representative sample of households, resulting in an estimate of the total Lebanese population of **3.1 million** residents. On the other hand, the Central Administration of Statistics (CAS) in 1997 estimated the resident population to be around **4 million** residents (of which around 7% are non-Lebanese), with an annual growth rate of 2.4 percent (compared to 1970 where the Lebanese population was estimated at 2.1 million). It is important to mention that, despite the large discrepancy between the two figures (where the interpretation of this discrepancy is beyond the scope of this report), both studies will be used throughout the analysis, whereby the major health and population characteristics provided by the Ministry of Social Affairs will be adopted, and the indicators pertaining to the expenditure structure of households, as well as the number of residents and their distribution by Mohafazat, will be based on the estimates released by the Central Administration of Statistics (Living Conditions of the Lebanese Households in 1997, 1998).

The major findings pertaining to the demographic, socioeconomic and socio-professional characteristics of the Lebanese population, are summarized below[1]:

- A sizable proportion of the total Lebanese population (63.8%) is in the active age category, i.e. within the age range of 15 to 64 years. By contrast, only 1.8% of the total population are below one year of age and 10.2% of that population are 60 years and above (refer to Annex, Table 1). In fact, the predominance of children, adolescents and young adults in the Lebanese population came as a consequence to previously high fertility rates. The burden of dependent youth on the economically active population (46.0%) is still much higher than that of elderly population (10.7%). However, many developing countries, including Lebanon, are currently undergoing a demographic transition, a phenomenon resulting in a decline in mortality rates and an increase in life expectancy at birth followed by a decline in fertility rates, which leads eventually to an increase in the number and proportion of elderly, and a higher prevalence of chronic degenerative illnesses, thus putting greater pressure on the healthcare system (MOSA, 1996; United Nations Population Fund, 1998; Ammar, 1997).

- The average number of family members of a household is estimated at 4.7, with around 18.36% of total Lebanese households having 5 members and 18.04% having 7 and more members. Also, around 14.2% of the Lebanese households are headed by a female

- Most of the Lebanese household members reside in the areas of Mount Lebanon (36.8%) and the North Lebanon (21.6%), whereas only 13.1% are found in the Mohafazat of Beirut (refer to Annex, Table 1), in which a large proportion of the healthcare physical and human resources are located (MOSA, 1996; Lebanese Hospital Association, 1997).

- The proportion of illiterate individuals in the overall population is around 12.5% with a higher proportion among females (16.4%) when compared to males (8.5%).

- Around 31.5% of the total Lebanese population are economically active individuals, with women representing around 20.5% of the active population. (Annex, Tables 2)

[1] Population & Housing Database, Ministry of Social Affairs (MOSA) and UNFPA, 1995-1996

2. Health Indicators

The health status of the population is usually diagnosed through a variety of indicators, including morbidity, mortality and reproductive health indicators (UNFPA, 1998; World Bank Group, 1997).

2.1 Mortality & life expectancy

The crude death rate of the overall Lebanese population is estimated at around 7.4 per 1000 people, with mortality rate being higher for males (7.9) than for females (6.9). Moreover, infant mortality rate is estimated at 28 per 1000 live births, with considerable regional disparities; this rate is merely recording 15.9 in Beirut, while it rises to 51.5 in North Lebanon and 35.9 in Bekaa. The regional disparity considering this indicator reflects to large extent the disadvantageous health conditions prevailing in some Lebanese areas with dominance of rural features (mainly North, Bekaa and South), against the availability of better prevention of infectious diseases in the urban areas.

It is important to note that the Infant Mortality Rate in Lebanon is much lower than the average rate of the MENA region, which is estimated to be around 54 per 1,000 live births. (World Bank, 1997; MOSA, 1996).

Based on estimates of Cause-specific mortality rates, injury appears to be number one cause of death among infants below one year of age (56 per 100,000) and individuals aged 15 to 49 (47 per 100,000). As for individuals aged 60 years and older, the most important health problems are senile and ill-defined causes of death (1,282 per 100,000) followed by circulatory problems (935 per 100,000) and neoplasm (292 per 100,000).

Life expectancy at birth is estimated at 71.3, with notable gender variation (72 for female and 69 for male). Regional disparities are significant in this regard with higher figures recorded in Beirut (74.5) and lower in the North (68.5).

2.2.Disability

The overall rate of disability is found to be 1% for both males and females, with the higher proportion of disabled male residents being caused by war-related injuries. Among the disabled individuals, mental disorders (24.2%), paralysis (20.5%) and other limb impairments (12.9%) are the most prominent types of disability.

2.3.Reproductive health

The crude birth rate in Lebanon is around 24.6 live births per 1000 people. As to total fertility rate, it is estimated at 3 live births per 1,000 women, which is relatively lower than the MENA regional average of 4.2, and almost equivalent to Low and Middle Income countries average of 3.1. However, both the total fertility rate and the maternal mortality ratio (104 per 100,000) appear to be higher than the average rates witnessed in high-income nations (1.7 and 14 respectively). (PAPCHILD, 1996; World Bank Group, 1997)

2.4. Healthcare services Utilization Characteristics

Preventive services

In general, healthcare services can be categorized into several complementary subtypes, including primary (prevention), secondary (treatment) and tertiary (rehabilitation) services. For instance, the prevention of communicable diseases can be achieved through mass immunization campaigns. By the same token, early screening for reproductive health problems through family planning services is more effective at improving the health of a large population of married women at a lower cost, as compared to individual curative services. In sum, these preventive healthcare services have large positive externalities and are less expensive than secondary or tertiary healthcare services (World Bank, 1987; World Bank Group, 199 7).

The coverage of immunization (DPT) is estimated at 91.8%, with the highest coverage recorded in Mount Lebanon (94.4%) and the lowest in the North (88.4%). Ideally speaking, infants should be inoculated three times with the DPT and Polio vaccines and at specific points in time during their infancy period. However, a small percentage of children 12-13 months of age (2.9%) had missed the third inoculation of "DPT + Polio" vaccines. In addition, the measles vaccine covered around 86% of the total population. This value is slightly higher than that of high-income nations (83%) and is equal to the average value of the Middle East and North Africa Region (League of Arab States & Republic of Lebanon, 1996; World Bank Group, 1997).

Moreover, the utilization of contraceptive methods (one type of family planning services) by ever-married women aged 15 to 49 years amounted to around 61%, whereas 39% of currently married women reported not using any contraceptive method, whether modern or traditional (PAPCHILID, 1996).

Curative services

The utilization of curative or secondary healthcare services by the Lebanese population can be approximated by the number of hospitalization days or doctor visits during the year preceding the survey conducted by the Central Administration of Statistics in 1997. According to this survey, around 11% of the total population reported being hospitalized at least once within twelve months. In addition, a larger proportion of females (12.1%) than of males (9.9%) was hospitalized within that same time period. On the other hand, a much larger percentage of Lebanese household residents (45.4%) had visited a doctor in the previous year, with a greater proportion of females (49.3%) than of males (41.7%) having had at least one contact. The average number of hospitalization days was 0.9 whereas the average number of doctor visits was 2.1, 2.7 and 2.4 for males, females and the total population, respectively (CAS, 1997).

Dispensaries

Dispensaries and Primary Care Centers are mainly located in the rural areas, are managed by non-governmental organizations and are a cheap alternative to other sources of primary healthcare such as hospitals, physicians or pharmacists (Van Lerbergue et al., 1997; Ammar, 1997). Dispensaries are used by around 28.5% of Lebanese household members, of which a large proportion consult a physician (30%), while others use the dispensaries as a source of drugs (24.8%) or for vaccination (14.3%) (CAS, 1997).

The major health indicators of the Lebanese population are summarized in *table 1* below. (refer to details in Annex)

Table 1. Selected Demographic and Health Indicators

			Gender		Regions						
	Year	National	Female	Male	Beirut	Mount Lebanon	North	South	Nabatieh	Bekaa	SOURCE
Life expectancy at Birth	1996	71.3	72	69	74.5	73.5	68.5	73.1	70.6	69.5	MOSA
Annual Population Growth	1996	1.73	1.7	1.76							MOSA
Crude Birth rate	1996	24.6									MOSA
Crude Death rate	1996	7.4	6.9	7.9							MOSA
Population in Urban areas	1996	80.8			100	92.5	64.9	72.4	70.45	65.6	MOSA
Average Household Size	1996	4.7			4.2	4.4	5.2	5	4.8	5.1	MOSA
Population Density	1996	297			22633.5	587.7	388.7	297	194	90.3	MOSA
Reproductive Health											
Contraceptive Prevalence rate %	1996	61									Papchild
Maternal Mortality Ratio per 100,000 live birth	1996	104									Papchild
% women receiving health care during pregnancy	1996	87			98.8	95.8	71	93.6	82	86.1	Papchild
% births attended by trained personnel	1996	89			93.9	95.7	75	97.6	86.5	90.8	Papchild
Total fertility rate	1996	3									Papchild
Child Health											
Infant mortality rate	1996	28	27.6	28.6	15.9	22.4	51.5	35.2		35.9	Papchild
Under Five mortality rate	1996	32	31	33							Papchild
Immunization (% coverage) DPT	1996	91.8	92.3	91.4	90.4	94.4	88.4	92.7	93.5	88.6	Papchild
Immunization (% coverage) Measles	1996	85.7									Papchild
Low birth weight	1996	7.4			8.7	10.2	6	2.3	7.6		Papchild
Neonatal Mortality rate (0/00)	1996	20	19.9	20.7							Papchild
Undre-five deaths from diarrhea	1996	1.3									Papchild

II. Macro-economic framework

In the period that followed the war, Lebanon witnessed structural changes at the macro-economic level, which largely affected the socio-economic conditions of the population. The fiscal and monetary policies adopted by the government in the recent years, and their consequent outcomes, reflect, directly or indirectly, the socio-economic guidelines followed by the government. Notwithstanding the achievements that have been recorded since the end of the war, a general slowdown was dominating the economy, which further deepened the social and economic imbalances prevailing in the country, prior and during the war period.

- The gross domestic product which rose considerably at the beginning of the nineties, started to slowdown in the last three years. Several factors contributed to this slowdown, the most important of which is the high-interest bearing treasury bills issued by the government to finance its budget deficit, which caused capitals to flow into the country, and local deposits to rush into this high profit investment, competing thus with the private sector on the available financial resources (crowding-out effect). Also, the structure of GDP apparently witnessed substantial changes, as internal debt service expenditures- actually being part of the total interest component- has grown as percentage of GDP from around 4% in 1992 to around 14% in 1997. This growth occurred theoretically at the expense of the other components of GDP, namely wages and profits. In addition, the last period witnessed a declining trend in public investment expenditures as percentage of GDP, which dropped from 9.3% in 1994 to 8.5% in 1996, noting that these figures are far below the figures forecasted in the reconstruction and rehabilitation plans, which estimated these rates to range between 15.5% and 14.6% in 1995 and 1996 respectively.

- The stabilization policy followed by the government since the last quarter of 1992, resulted in an improvement in the exchange rate of the $US vs. the Lebanese pound, which dropped from an average of 1838 LL in 1992 to around 1508 in1998. Nevertheless, despite this improvement in the exchange rate, the consumer price index persists increasing, though at relatively slower rates, noting that the average annual inflation rate dropped from 100% in 1992, to record an average of around 36% in the period 1995-1998 (base year 1994=100).

- The rehabilitation and reconstruction plans were launched starting the beginning of 1993, with remarkable concentration on the rehabilitation of infrastructure (electricity, roads, telecommunication,..), and relatively low allocation of resources to other sectors with socio-economic dimensions (productive sectors,

employment,..). The total cost of the reconstruction plan (Horizon 2000), as updated in 1995, was US$ 17.8 billion, in current prices for 1995. In addition to the public investment in the rehabilitation of the infrastructure, the contribution of the private sector is estimated by around twice the cost of the reconstruction plan.

- Regarding public finance, budget deficit kept recording high and uncontrollable levels. Since 1992, the percentage of deficit of total public spending did not fall below 39%, recorded in 1993, and reaching a high rate of 59% in 1997. These huge rates of deficit came as a result of the unmanageable spending and under-collection of revenues, in addition of the growing debt service that represented around 41% of total spending in 1998.

- Gross public debt witnessed rapid growing rates during the last period, rising from LL 4650 billion at the end of 1992 to reach LL 27534 billion at the end of 1998, i.e., growing around 6 times, and representing in 1998 around 111% of GDP. It should be noted that this level for public debt is considered as alarming, and needs urgent and effective solutions. The government started in 1997 substituting the short term internal debt, by increasing the weight of long term external debt that constituted around 23% of total debt at the end of 1998, after being in the order of 13-15% during the period 1992-1997.

Table 2 illustrates the main macro-economic indicators during the period 1992-98.

Table 2. Macro-economic Indicators (1992-1998)

	1992	1993	1994	1995	1996	1997	1998
Nominal Gross Domestic Product (Billion LL)	**9499**	**13122**	**15305**	**18028**	**20417**	**22872**	**25140**
Real Growth in Gross domestic Product	4.49%	7.05%	5.55%	7.54%	3.79%	4.00%	4.00%
Exchange rate of US$ vs. LL	1838	1711	1647	1596	1552	1528	1508
Annual Inflation Rates	120.01%	29.04%	8.23%	10.28%	8.88%	7.76%	4.45%
Foreign Trade							
Exports (Million $)	559.7	452	572.7	822.6	1017.9	642.4	716
Imports (Million $)	4202.3	4821.4	5990.4	7266.8	7558.7	7456.6	7058
Balance of trade (Million $)	-3642.6	-4369.4	-5417.7	-6444.2	-6540.8	-6814.2	-6342
Balance of Payment							
BDL Assets (Million $)	231.18	456.4	1860.7	438	1428.4	61.7	478.8
Commercial Banks Assets (Million $)	-177.5	713.1	-730.2	-180.9	-641.71	358.1	-966.4
Balance of Payment (Million $)	53.68	1169.5	1130.5	257.1	786.69	419.8	-487.6
Fiscal Balance							
Public Revenues (billion LL)	1138	1855	2241	3033	3533	3752	4430
Public Expenditure (Billion LL)	2181.1	3017	5204	5856	7225	9161	7816
Of which debt service (Billion LL)	458.7	784	1525	1862	2693	3440.42	3214
Deficit (Billion LL)	1043.1	1162	2963	2823	3692	5408.66	3386
Deficit as % of expenditures	48%	39%	57%	48%	51%	59%	43%
Deficit as % of GDP	11%	9%	19%	16%	18%	24%	13%
Public Debt							
Internal Public Debt (billion LL)	4178	5804	9348	11997	17229	19787.1	21235.5
External Public Debt (billion LL)	473	560	1271	2082	2960.5	3718.3	6299.2
Gross Public Debt (billion LL)	4651	6364	10619	14079	20189.5	23505.4	27534.7

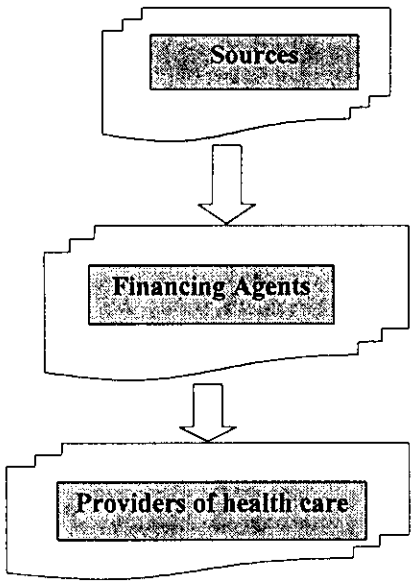
The health sector, being a basic social service, has apparently been affected by the overall performance of the economy. The growing size of the health care bill could not be considered "healthy" indicator in an economy showing alarming signs of fiscal disorder and slow rates of growth. It is obvious that the structure of the health system is a major contributor to the boost in the health care cost, with the war- inherited imbalances not being corrected in the period that followed settlement of peace, mainly through regulatory measures to redefine the role of each party involved in the sector, and control the relationships among the different actors in this regard.

The civil war had a significant impact on the evolution and development of the health sector in Lebanon. The war considerably weakened the institutional and financial capacity of the Government and its role in the provision of health care services steadily declined.

The funds mobilized in the Lebanese Health Sector do not pass directly from the primary sources to their final uses. Instead, much of the money first passes through financial intermediaries, known as Financing Agents, which in turn transfer resources to the ultimate Providers of care. This intermediate category of payer allows for the separation of financing and provision of health care services. In some cases, Sources and Financing Agents may be identical like households and firms that pass much of their expenditures directly to the ultimate providers of care.

For all sources of funding, money is transferred to more than one financial intermediary and providers. These interrelationships are easily visualized through the flow of funds diagram..

Flow of Funds Diagram



The framework elaborated in this report is designed to capture the totality of expenditure flow in the health sector. Lebanon has a highly pluralistic health care system, with several different governments, non-profit and private providers and financing agents. Analysis of health financing should begin with robust estimates of national health expenditures—total spending, contributions to spending from different sources, and the end use to which these funds are put to. However, in general there are:

1. Three types of Sources of Financing: Taxes, Contributions and Out of Pocket.
2. Four major types of financing agents: The public sector, Social Insurance Schemes, Private Firms, and Households.
3. Different types of providers: The health care market is dominated by the private sector with the government owning fewer facilities.

The framework elaborated requires not only an analysis of the total expenditures, but also an understanding of the flow of funds through the health care system. It stresses the need to know in an integrated way **who** pays, **how much**, and **for what**, rather than simply separating the who from the what. In addition, this analysis is intended to support policy and decision makers in their proposals towards a more affordable and equitable health care system.

III. Sources of Financing: global expenditures on health

The "sources and uses" method, implemented through out this study, imposes an important discipline on National Health Expenditure analysis, which typically consists of separately compiled estimates of expenditures by sources and by type of providers e.g. hospitals and doctors.

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However, As it was mentioned earlier the main constraint facing the health sector lies in the relatively huge size of the health care bill exceeding 10% according to several official and non-official sources, while a considerable share of this bill is being covered directly by the household spending (out-of -pocket).

1. Non-household spending

The non-household spending on health comprises the amounts allocated by the different financing agencies, funds and institutions for health care and related administrative services. Four major types of Financing Agents are distinguished: the government sector, social insurance schemes, private firms, and households:

- Social Insurance include: The National Social Security (NSSF)
  The Civil Service Cooperative (CSC)
  Scheme for the Army
  Scheme for Internal Security Forces (ISF)
  Scheme for General Security (GS)
  Scheme for State Security (SS)
- The Government: The Ministry of Health
- The Private Firms.
- Households: Out of pocket

This spending is being financed through:

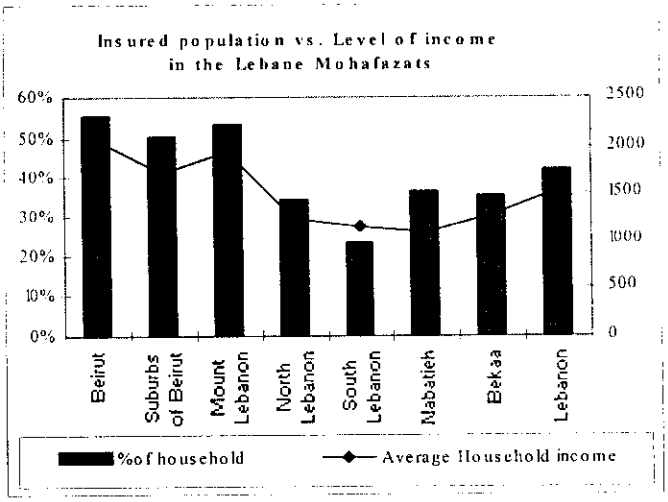
- Taxes: collected by the government and which pass to the different public financing agents and part of the NSSF.

- Contributions: paid by beneficiaries and which pass to the Mutual funds, the Private insurance companies and parts of the NSSF

Table 3. Non-household health financing Billion LL

Financing Agents	Taxes	Contributions	Expenditures on Health 1997
MOH	250.7	0	250.7
CSC	41.5	0	41.5
Army	82.3	0	82.3
ISF-GS-SS	69	0	69
Mutual Funds	15.2	12.5	27.7
NSSF	55	145	200
Private Insurance		359.6	359.6
Total	**513.7**	**517.1**	**1030.8**

Source: Journal Medical Libanais, 1998



The above insurance schemes are estimated to cover around 42%[2] to 48%[3] of the Lebanese households (based on a total population of 4 million). However, huge disparities are recorded regarding the geographic distribution of insured households (or household members). For instance More than 55% of Beirut residents are insured, against merely 23.5% in South Lebanon. It is noted that the percentage of insured households was positively correlated with the average level of income, i.e., areas with high income levels have higher proportions of insured population. This fact illustrates that households with lower incomes are more likely to spend out-of-pocket money on health than households with higher incomes.

It should be noted that the areas with low percentage of insured population (South Lebanon, Nabatieh, North Lebanon, Bekaa) are generally characterized by the dominance of agricultural practices, small enterprises, informal activities, seasonal employment, lack of health and social awareness, in addition to the lack of the basic

[2] Living conditions of the Lebanese Households in 1997, Central Administration of Statistics, 1998.

[3] The gazette, 24/12/1998

health care facilities relative to the other Lebanese areas. Also, these areas witness the highest proportions of populations affected by chronic diseases (e.g. 11.6% of population in South Lebanon are affected against 7.8% in Mount Lebanon).

Also, As to the age structure of insured it is noted that only 37.4% of the Lebanese population aged above 60 years are covered through insurance schemes, noting that this age category is the most prone to chronic diseases and are in need for special, and sometimes expensive, health care (around 35.3% of the above-60-years age group are affected by chronic diseases, against an overall rate of 8.85 for the Lebanese population).

The Ministry of Health contribution in this regard is still very limited, as shown by the percentage of households- which received medical aid through the MOH- which did not exceed 12.6% of total households in 1997 (CAS). However, the contribution of the MOH assisted, to some extent, in easing the imbalances in the distribution of insured population mainly regarding geographic coverage. For instance, MOH's aids went to around 18.5% of the households of South Lebanon and 16.2% of Nabatieh, against 7.8% of Beirut's households.

As a result, despite the relatively huge funds allocated by the different public and para-public institutions for health financing, inequity problem arises mainly when the geographic, socio-occupational and age elements are concerned.

2. Household Spending (Out-of-pocket)

The household out-of-pocket spending is somehow hard to predict due to several constraints, the most important of which is the unavailability of a recent data on a detailed family budget reflecting the actual share of health expenditures of total family spending. However, according to the recent released statistics regarding the structure of family spending , around 8.6% of the family budget is being allocated for the health expenditures[4] in 1997. Meanwhile, this percentage might include a double counting of some health expenditures which are covered by households and later reimbursed by financing agents (e.g., deferred payment of drugs and medical consulting by the NSSF). The following schedule shows the out-of-pocket spending on health care in 1997, as per each health care service:

[4] Living Conditions of the Lebanese Population in 1997, op. cit.

Table 4. Breakdown of household spending on the health care services, 1997

	Average bill/year 1000 LL	% households concerned	Total spending 1000 LL	Total spending 1000 $
Private Insurance	1719	14.80%	214,132,729	142,755
Hospitalization	1167	28.80%	282,884,273	188,590
Drugs	556	83.00%	388,417,102	258,945
Medical consulting	358	73.50%	221,470,469	147,647
Labs and radiology	249	45.90%	96,196,106	64,131
Treatment	520	7.70%	33,700,747	22,467
Dentist	705	29.70%	176,234,539	117,490
Total			**1,413,035,965**	**942,024**
Total excld. Insurance			**1,198,903,236**	**799,269**

Source: Living Conditions of the Lebanese Households in 1997

The aforementioned table reveals that total household out-of-pocket spending is around LL 1,198 billion (based on a total resident households of 841,677 in 1997). However this figure might be relatively exaggerated. To illustrate, consider the drug item for which total bill paid by household is estimated at US$ 296.7 million, of which around US$ 259 are spent on out-patient drugs utilization and US$ 37.7 million are spent as a component of the hospitalization bill (noting that this last figure is considered as 20% of total hospitalization bill [5]). Hence, households are paying around 82% as out-of-pocket of the total drug bill (estimated as a price-for-public in 1997 at US$ 362 million[6]). Meanwhile, considering the spending on drugs taken over by the different public and para-public institutions, it is expected to be as follows:

Table 5. Breakdown of public and para-public spending on the major health care services and on the drug component, 1997

	MOH	NSSF	CSC	Army	ISF	GS	SS	Total
Out patient In Millions of LL	3,004	78,638	18,563	9,600	10,843	2,920	879	124,447
Of which 50% for drugs	1,502	39,319	9,282	4,800	5,422	1,460	440	62,224
Hospitalization In Millions of LL	190,905	101,900	21,500	47,528	47,000	2,680	1,410	412,923
Of which 20% for drugs	38,181	20,380	4,300	9,506	9,400	536	282	82,585
Total Spending on health	193,909	180,538	40,063	57,128	57,843	5,600	2,289	537,370
Of Which on drugs Million LL	39,683	59,699	13,582	14,306	14,822	1,996	722	144,808
Spending on drugs in Million $	26	39	9	9	10	1	0	97

Source: The gazette, 24/12/1998 and CRI estimation

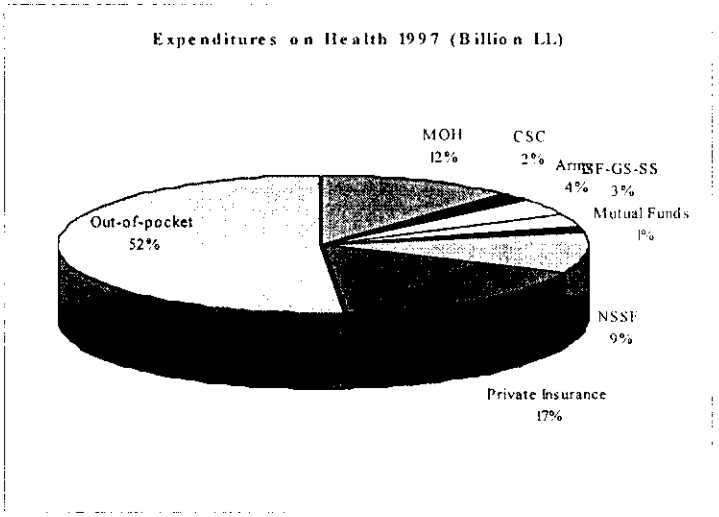
[5] Consumer Health Index, Consultation & Research Institute

[6] Consulting Bureau of Drugs, Study on the drug market for the year 1997, As-safir 4/4/1998

Thus total spending on drugs by the financing institutions is around US$ 96.5 million, i.e., around 27% of the total drug bill, which contradicts with the outcome of the household spending (82% of the drug bill). It results that the household out-of-pocket payment for drugs is over-estimated by around 9%. Assuming this fact is true for the whole bill paid by households, the actual out-of-pocket household payments would be around LL 1,091 billion, instead of LL 1,198 billion.

3. Total health care bill

The global national expenditures on health in Lebanon amount to LL 2121 Billions, i.e., representing 9.2% of GDP (estimated in 1997 at LL 23034 Billions), with out-of-pocket remaining a major source of financing for health care (52%). It should be recalled that the recent estimation of this percentage was around 10% of GDP, and this difference results mainly from the over-estimation of the out-of-pocket household spending.



However this rate (9.2% of GDP) remains very high for a country like Lebanon who is currently burdened by fiscal deficits and growing debt figures, and which is still showing slowing rates of growth accompanied by imbalances in the distribution of incomes. Furthermore, this rate seems higher than almost all the rates recorded in selected Middle-East countries as shown below:

Table 6. Health care bill as % of GDP in selected Middle East countries

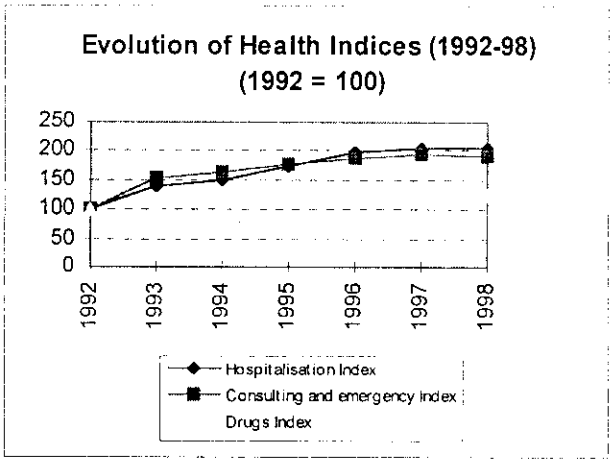
Country	health Care bill as % of GDP
Yemen	2.6
Egypt	3.7
Morocco	3.4
Iran	4.8
Jordan	7.9
Algeria	4.6
Tunisia	5.9
Palestine	8.4
Bahrain	5.7
Qatar	2.8
United Arab Emirates	2.2
Cyprus	4.6
Turkey	4.2

Source: World Bank, 1996

4. Health Price Index and Consumer Price Index

The national expenditure on health has dramatically grown during the last few years. As estimated by the World Bank, health expenditure in Lebanon amounted to 5.3 percent of GDP in 1995, as compared to an estimated MENA regional average of 4.8 percent.

.One of the major factors behind this growth was the continuous rise that was recorded in the levels of consumer prices of health services, as implied by the Health Price Index that recorded a rising trend during the period 1992-1998. In fact, this period witnessed significant annual rates of increase in almost all health care services and products, particularly in the hospitalization and consulting fees, as shown in the accompanying graph.



Source : Consultation and Research Institute

On average, the overall Health Price Index recorded during the period 1992-1998 higher average annual levels than the Consumer Price Index, as shown in *table 7.*

Table 7. Evolution of the Health Price Index and the Consumer Price Index - Annual average (1992-1998)

(1988 = 100)

	1992	1993	1994	1995	1996	1997	1998
Health Price Index	967	1283	1358	1530	1668	1723	1724
Consumer Price Index	871	1086	1172	1296	1411	1521	1590

Source: Consultation and Research Institute

In addition, the analysis of the trends recorded in the two indexes reveals that the annual rate of increase in the Health Price Index outpaced in some years the rate of increase in the Consumer Price Index, or the annual rate of Consumer Price inflation. In particular, the average annual rate of increase in the Health Price Index amounted to 33% in the year 1993, as compared to an estimated annual rate of inflation of 25% during the same year. The same phenomenon was also witnessed in 1995, when the rate of increase in the Health Price Index surpassed the rate of inflation. However, in the last two years, the Health Price Index tended to stabilize, while the Consumer Price Index continued its upward trend.

The above comparison between the Health Price Index and the overall Consumer Price Index reveals some important implications regarding the status of the Health Care System in Lebanon. In fact, the increase witnessed in the average prices of Health care services in Lebanon cannot be justified through its interrelation only with the Consumer Price Inflation. In addition, the rising trend of health care costs was a direct result of some internal characteristics that are inherent to Lebanese Health sector. Of these characteristics one can mention the dominance of private providers and the lack of effective government regulation and control, the tendency to pursue- like in any other economic sector- profit maximization objectives, the heavy investment of private hospitals in high-cost technologies, as well as the oligopolistic structure of the drug market and the tendency of some providers to use high cost drugs.

IV. Financing Agents to Providers

1. Health Coverage Plan

1.1 Social Insurance

The social coverage agencies currently operating in Lebanon have different target groups, as classified below:

- National Social Security Fund (NSSF): covers employees in the formal private sector, contractual and wage earners in the public sector, as well as students in the Lebanese university.
- Civil Servants Cooperative (CSC): covers the government employees (including permanent public administration employees, teachers in public schools,..).
- The military medical coverage: with independent institutional entities covering army, internal security forces, general security and state security.

Table 8. Number of beneficiaries in each public social agency

Agency	Number of Adherents	Total Number of Beneficiaries
NSSF	341 330	1 194 000
CSC	65 000	325 000
Army	85 000	325 000
ISF	23 100	78 100
GS	3 800	13 000
SS	1 463	3 877
Total	**519 693**	**1 938 977**

Source: The Gazette, 24/12/1998

Total number of adherents as shown above does not exceed 42% of total working population in Lebanon (estimated at 1.24 million in 1997) and 65% of total permanent wage-earners[7] , representing 64% of total working population. It is needless to say that the NSSF have the highest coverage rate among the public social agencies (66% of total beneficiaries of these schemes), with a total budget representing 51% of the public social schemes (excl. MOH). However, the declared figure of the NSSF beneficiaries seems higher than expected, noting that the ratio beneficiaries/adherent (3.5) is relatively higher than it used to be (between 2.8 and 3) which would result in a maximum number of beneficiaries of no more than one million. Another fact that would illustrate the over-estimation of the size of NSSF beneficiaries is the results of

[7] The Lebanese Active population in 1997, Central Administration of Statistics, 1888

the national survey on the living conditions of the Lebanese households (CAS, 1997) that estimated total number of NSSF beneficiaries of around 15.2% of the Lebanese population, i.e., around 600,000 beneficiaries.

1.2. Private Insurance

The activity of private insurance companies in Lebanon witnessed a growth of 23% in 1997, *(as per Zakhour page 68-69)* and is providing either a total or a complementary coverage. The total number of population covered by private insurance companies does not exceed 500 000 *(as per Zakhour page49).*

On the other hand, the national statistics show that around 14.8% of the Lebanese households are paying for private insurance, i.e., around 124.5 thousand households[8]. According to the same statistics, total household members benefiting from private insurance constitute around 11.6% of the Lebanese population (of which 8.7% are solely covered by private insurance and 2.9 by mixed insurance), i.e., around 464,000 in 1997. This figure matches, to some extent, with the estimation of Med net claiming that it insures 37% of population covered by private insurance schemes in 1997 (amounting to around 110,000 insured), which results in the following distribution of beneficiaries by private insurance according to the coverage plan.

Table 9. Number of beneficiaries in the private insurance

Coverage types / Insurance	Number of Beneficiaries with Total Coverage	Number of Beneficiaries with complementary Coverage	Total Number of Beneficiaries
Med Net estimation	300 000	173 000	473 000
CAS estimation	348 000	116 000	464 000

1.3 The Ministry of Health

The potential target group of the MOH services is the segment of the Lebanese population being not covered by any public or private insurance schemes. Thus, it results the following distribution of population as per the different financing agents:

[8] Living conditions of the Lebanese Households, op. cit.

Table 10. Number of actual and potential beneficiaries in the different insurance schemes (1997)

Financing Agents	Nb. of Beneficiaries
Public and para-public social schemes (1)	1,938,977
Private Insurance (2)	348,000
Potentially entitled to MOH	1,433,668
Total (3)	3,720,645

(1) This number is inflated due to the expected over-declaration of the NSSF regarding the number of beneficiaries

(2) Excluding the 2.9% of the population covered by mixed insurance which are effectively counted by public and para-public schemes (1)

(3) As per *CAS* the total number of Lebanese citizens being 3,720,645 (4,005,000 of whom 7.1% are non Lebanese)

2. Health Care Coverage schemes

Lebanon, and as discussed before, has a pluralistic health care system. The pluralistic nature of covering agencies or financing agents weakens and complicates the system and increases the administrative cost. In addition, each Financing agent reports to a different supervising body (usually Ministry). This fact gives rise to a need for a *National Health Office* that controls and supervises the whole coverage plan in Lebanon.

Table 11. Supervising bodies of existing financing agents

Coverage Plan	Supervisory Ministry
MOH	MOH
NSSF	Ministry of Labor
CSC	Prime Minister
ISF, GS, SS	Ministry of Interior
Army	Ministry of Defense
Private Insurance	Ministry of Economy and Commerce
Mutual Funds for Private Firms	Ministry of Housing and Cooperatives

The MOH provides the safety net in the sense that all those not covered under an insurance arrangement are covered by the MOH. However, with no supporting documents, the MOH might be paying even for individuals who are part of another insurance scheme. The overlap in coverage and the lack of reliable estimates makes analysis extremely difficult.

Table 12 summarizes the Public Health Care coverage scheme, noting that the percentage of coverage and the scheme are different among financing agents.

Table 12. Public Health Care Coverage Scheme among different agents

% and Rates	MOH	NSSF	CSC	Army	Private Insurance & Mutual Funds
In-hospital	85%	90%	90%	100%	As per Scheme
One day surgery	85%	-	-	-	
Outpatient					As per Scheme
Physician		20000LL	75% 12000LL	20000LL	
Specialist		30000LL	75% 20000LL	30000LL	
Ambulatory		-	90%	100%	
Drugs	MoH Index	MoH Index	MoH Index	MoH Index	MoH Index
Dental Coverage	NO	NO	75% of Tariff	Only in Army Provider	As per Scheme
Ophthalmology Coverage	NO	NO	75% of 35000LL	3rd 60000LL 2nd 80000LL 1st 100000LL	As per Scheme
Treatment Outside Lebanon	NO	NO	Pre-admission 90%	Committee $10000	As per Scheme
Immunization	Programs	NO	NO	NO	As per Scheme
High-tech Procedures					As per Scheme
Open Heart	100%	90%	Flat Rate	100%	
Kidney Transplant	100%	90%		100%	

3. Health Care Cost per Public Financing Agent

All public financing agencies contract out services with the private providers. Roughly more than 85% of the bill is charged to the agencies and paid directly to the providers. Payment of bills is delayed by as much as a year. Payment to providers is made according to a basic tariff but to different class of hospitalization among public financiers. All public Financiers are working closely in an effort to arrive at a unified payment schedule for services.

Table 13. Overall expenditures by public Financing agents, 1997

	MOH	NSSF	CSC	Army	ISF	GS	SS	Total
Out patient In Millions of LL	3,004	77,605	18,563	9,600	10,843	2,920	879	123,414
Hospitalization In Millions of LL	190,905	99,805	21,500	47,528	47,000	2,680	1,410	410,827
Total spending	193,909	177,410	40,063	57,128	57,843	5,600	2,288	534,241
Number of cases	125,892	105,000	16,651	44,100	34,000	1,650	1,187	328,480
Number of Hospital days	571,632	420,000	55,949	120,600	125,000	4,970	3,560	1,301,711
Cost per patient In 000s LL	1,516	951	1,291	1,078	1,382	1,624	1,188	1,251
Cost per day In 000s LL	334	238	384	394	376	539	396	316
Average length of stay (days)	4.54	4.00	3.36	2.73	3.68	3.01	3.00	3.96

Source: The Gazette, 24/12/1998 and CRI estimates

The average hospitalization fee is 1,251,000 L.L per patient, varying notably among the different financing agents; it is highest for the General Security and Ministry of Health, while it is lowest for the NSSF. As to the cost per day amounting ion the average to LL 316,000, it is notably high for the General security. Also, the length of stay varies among the different agent, with an average of 3.96 days, with the ministry of health accounting for the highest average of stay reaching 4.5 days.

According to *Jurjus, 1995* , Private hospitals depend heavily on public financing that covers 64% of their revenues , of which the MOH alone covers 30%.

The Hospitalization rates mentioned in the table above do not include the high cost interventions such as Open Heart Surgery, Organ Transplant, Cancer Treatment, Hemodialysis and other high tech treatments.

3.1 The Ministry of Health

The Current financing system creates strong incentives for excess use of hospital based services which does not cover physician fees for outpatients in addition of the cut down of the Ambulatory care in 1998. At the same time, the decision to reimburse providers for all curative services has lead to the private sector investing in high cost technologies. The MOH is one of the major public financing with a share of around 36% of the total spending on in-patient and out-patient services (table 12).

Total budget of the MOH is made up of an initial allocation set at the beginning of the year as a part of the ratifying the overall governmental budget, to which is added the balance from the previous year, in addition to exceptional allocations during the course of the fiscal year. *Table 14* shows initial allocations to the MOH in L.L.

Table 14. Evolution of total budget vs. MOH budget , 1992-1998 (1000LL)

	Total budget	MOH budget	MOH budget as % of total budget
1992	1,654,047,787	75,903,209	4.59%
1993	3,399,999,929	109,396,605	3.22%
1994	4,106,199,999	123,676,720	3.01%
1995	5,630,035,997	159,350,915	2.83%
1996	6,458,000,000	149,710,668	2.32%
1997	6,433,000,000	159,646,029	2.48%
1998	7,375,000,000	270,154,664	3.66%
Cumulative	35,056,283,712	1,047,838,810	2.99%

Source: Ministry of Finance, Budget laws (1992-1998)

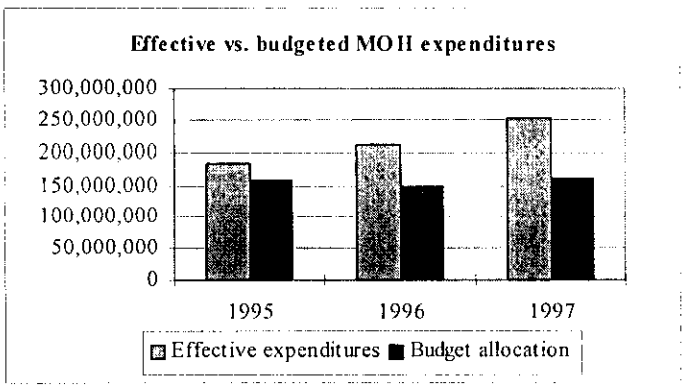
Roughly seventy five to eighty percent of the ministry recurrent budget to reimburse services provided by private sector to uninsured patients (World Bank, 1994)
As per the Ministry of Health, total Expenditures are allocated as follows:

Table 15. Allocation of effective expenditures for the Ministry of Health (1000 LL)

Description	1993	1994	1995	1996	1997
Hospital Expenses	85,300,000	106,150,000	131,700,000	162,400,000	196,550,000
Salaries	7,700,000	12,000,000	13,000,000	15,500,000	14,000,000
Drugs	4,300,000	7,500,000	12,500,000	14,700,000	20,400,000
Others	4,400,000	14,800,000	25,000,000	18,500,000	20,800,000
TOTAL	**101,700,000**	**140,450,000**	**182,200,000**	**211,100,000**	**251,750,000**

Source: The Ministry of Health - Accounting Department

It is noted that during the period 1995-1997 the effective expenditures of the Ministry of Health exceeded considerably the budgeted expenditures. This fact is currently further worsening public financial conditions, mainly as to cover the cumulated obligations towards private health providers.



Since 1990, and as mentioned before, the MOH has agreed to pay for high cost interventions such as Open-Heart, Organ Transplant and Cancer treatment. *Table 16* shows the percentage of contracted services that goes for these high cost new

interventions (All Other Hospitalization Expenses will be detailed in the next section). It is clear that about half of the MOH budget is used to reimburse high cost interventions.

Table 16. Percentage of effective MOH Expenditures for some contracted Services, 1997

Nature of Coverage	Percentage
Open Heart Surgery	9.72%
Cancer Treatment	21%
Hemodialysis	6.98%
Burns	0.22%
Organ Transplant	0.5%

The continued emphasis on curative care will make it difficult for the MOH to divert or increase allocations to the preventive and primary health care services. Providers tend to be concentrated in a few urban areas and individuals living in rural areas have difficulty accessing services. While the Government is committed to increase both horizontal and vertical equity in access to health care services, the current situation might make it very difficult to achieve this goal.

3.2 The Social Insurance scheme

Three medical insurance schemes exist in Lebanon. The National Social Security Fund (NSSF), the Civil Servant's Cooperative (CSC) and the Armed Forces. The NSSF is the largest scheme and is meant to cover all employees in the private sector, contractual employees in public sector, taxi drivers and students not covered through any other schemes. The CSC covers regular government employees.

All these schemes are employment-based with the employee and employer paying a certain proportion of the salary as premiums, except for the CSC and the armed forces, where there is nor employer contribution neither employee contribution.

- Under the NSSF scheme employers contribute 12% of the salary of the employee subject to a maximum and the employee contribute 3%. The NSSF have a staff dedicated to collect premiums from subscribers. The NSSF practices cost containment by adopting two strategies: First they have their own representatives at providers and facilities who act as gatekeepers. Second, payment of bills is delayed as much as a year.

Table 17. The NSSF health expenditures for the year 1997

Category	Contribution (Million LL)	Nb. of cases	Cost/ Patient LL	Cost/visit US Dollars
Hospitalization	99,800	105,000	950,000	635
Outpatient	77,000	1,000,000	77,000	51
Contracted Firms	5,000			
Funeral Expenses	200			
Total	182,000			

Source: The NSSF

The Hospitalization in the is paid against a special nomenclature and as per contract with private firms. Special benefits are obtained by large enterprises- the contracted firms- that desire to make their own arrangements for health care. The NSSF reimburses them as a flat rate per enrollee for anticipated costs.

- Under the CSC, a full range of medical and dental services is provided. Provision of services needs prior authorization for hospitalization. The CSC currently reimburses providers at a rate that is slightly higher than that of NSSF or the MOH. Our data shows that 40 billions of LL was spent on health in 1997 by the CSC.

- Under the Armed Forces, the biggest two schemes are the Army and the National Internal Security Forces. These two schemes have no co-payments for in-patients or outpatients.

3.3 The Private Insurance

There is a small but growing market for private insurance policies. There are 464,000 beneficiaries currently covered by private insurance. Beneficiaries usually subscribe in Private insurance either to supplement other social insurance programs or as a full cover for health care. There is a Third Party Administrator (TPA), Mednet Lebanon that provides utilization review and case management services to 17 private insurers. Mednet Lebanon's book of business is reinsured with Munich Re. Premiums are risk rated in terms of pre-existing conditions and age of the insured. It is difficult to foresee the private health insurance markets efficiency under the current existing data that Mednet issue. However, the apparent increasing trend of medical share in the insurance portfolio underlies high risks for the insurance companies, meanwhile the government is attempting to reorganize the insurance sector (through setting laws, increasing capital and encouraging merging) to minimize financial risks.

3.4 Mutual Funds

Mutual Funds are new in Lebanon. Professionals or community related groups of fifty or more persons could form a mutual fund. They usually register at the Ministry of Housing & Cooperatives, with its only role is to give these funds the authorization to operate with no other regulatory or supervision authority. Mutual funds are self-financing schemes. Some of them have contracts with Mednet to manage their book of business. Others have direct arrangements with providers, while others have arrangements with insurance companies.

Some mutual funds and Professional association, such as the mutual fund of Parliament members, Judges, and the Lebanese University Professors benefit from the State budget and some earmarked taxes.

Table 18. CSC and the Mutual Funds Budget (Millions LL)

	CSC*	Mutual Fund of Parliament Members	Mutual Fund of Civil Servant in Parliament	Mutual Fund of Judges	Lebanese University Professors Mutual Fund	Total
Budget 1997	81,000	8,500	1,622	11,193	9,000	111,315
Budget 1998	81,000	9,100	1,820	6,500 (Excld. Tax)	13,000	111,420

Source: Ministry of Finance Global Budget.

** Around 50% of the CSC budget is allocated for Health and the other 50% for education.*

V. Providers to Functions

The health care market in Lebanon is dominated by the private sector with few public facilities. However, despite the poor management of the public hospitals, the Government decided to build 12 additional hospitals.

In 1997, around 150 private hospitals are estimated to be operating in Lebanon, with a total of 12,000 available beds. The *Hospital and Heavy Medical Technology Utilization Study (Dr Abdo Jurjus),* conducted in 1994, has a slightly lower estimate for the number of beds.

Table 19 shows that there are around 3.32 beds per 1000 population in Lebanon. The highest per capita availability of beds is in Beirut and the lowest is in North Lebanon.

Table 19. Beds per 1000 population

Region	Population	Beds	Beds/1000
Beirut	407,403	2 778	6.82
Mount Lebanon	1 145458	4 304	3.76
North Lebanon	670 610	995	1.48
South Lebanon	488 469	1 334	2.73
Bekaa	399 891	927	2.32
Country	3 111 831	10 338	3.32

Source: Heavy Medical Technology Utilization Study, 1994 Jurjus, A

Ministry of social affairs, 1996

The majority of the Private Hospitals has less than 70-bed capacity as per The Syndicate of Private Hospitals (*table 20* below). The Syndicate of Hospitals in Lebanon classifies these hospitals into long stay and short stay hospitals as follows:

Table 20. Classification of private hospitals by capacity

Number of Beds per Hospital	Number of Short Stay Hospitals	Number of Long Stay Hospitals
Less Than 70 Beds	107	8
70 - 200 Beds	26	6
Greater than 200 Beds	5	5

Sources: Syndicate of Hospitals, May1998.

The Private Hospitals in Lebanon are general Hospitals that lack specialization, which creates a problem of inefficiency. The only available specialization is by the duration of stay as mentioned by the Syndicate of Hospitals (*Table 20).*

1. Health Service Facilities

The Health Care Facilities are mainly curative with an oversupply of hospitals and sophisticated equipment. The private sector is providing today more than 90% of the total number of beds. In the absence of the appropriate regulatory framework, the private sector has grown in uncontrollable manner, compared to a continuous decline in the public health care facilities, at least till mid-nineties.

Table 21. Heavy Equipment and High Tech Centers

Number of centers Service centers	Beirut & Mount Lebanon	Number of units by 1,000,000 inhabitants	Total Lebanon	Number of units by 1,000,000 inhabitants
Open heart Surgery	6	2.7	12	3
Catheterization	12	5.5	19	4.75
Lithotripsy	14	6.4	27	6.75
Kidney Transplant	3	1.4	3	0.75
Dialysis Centers	19	8.6	39	9.75
Burns Centers	2	0.9	2	0.5
CT Scan	28	12.7	54	13.5
MRI	7	3.2	12	3
Radiotherapy	6	2.7	6	1.5

Source: MOH , Carte Sanitaire 1997

The health market is currently characterized by an oversupply in high tech centers, which mainly affects the cost of services. This system needs to be rationalized by setting regulation and standards to be enforced by the MOH. The MOH needs to play the role of regulating public and private sectors more than a financing agent.

Like the Health Care Service, there is an oversupply in physicians, accompanied with a shortage in para-medical staffs and mainly nurses. The number of physicians is growing by 8.3% annually, compared to an annual population growth of 1.7%-2% (as per *Daher page 46).*

In fact, 8500 physicians are registered in two Syndicates of Physicians, i.e., with more than two physicians per 1000 inhabitants. Meanwhile the number of nurses did not exceed 4000-5000, i.e., one nurse for one thousand inhabitants (as per *Akatcharian, 1994).*

2. Classification of Providers

The MOH has graded hospitals for their medical performance and hospitality level. Hospitals are rated from "A" to "F" to reflect their medical performance, and by assigning them a number of stars for the hospitality level. Health care facilities are priced according to these classifications. A committee, including representatives from all Public Financiers, Syndicate of Hospitals, NSSF, and a professional consultant from each Medical University in Lebanon, meet regularly to upgrade classifications.

Table 22. Classification of Private Hospitals by area

	Beirut	Bekaa	Chouf & Aley	Kesrwan & Jbeil	Metn	North Lebanon	South Lebanon
Class A	10	3	1	3	4	1	2
Class B	5	4	1	1	9	7	6
Class C	6	4	4	2	4	9	5
Class D & below	7	12	7	3	8	4	9
TOTAL	28	23	13	9	25	21	22

Source: MOH, 1997

3. Utilization

In-patient utilization rate refers to the percentage of population that reports a case of hospitalization. In Lebanon, different estimates of this rate are provided by different sources, ranging between 5.17% as a lowest rate and 15% as a highest rate, as shown in *table 23*.

Table 23. Percentage of population reporting hospitalization

Source of data	**Utilization Rate**
Beirut 1984	6.40%
Household Survey 1994	10.78%
Hospital & Heavy Medical Technology Utilization 1994	13.00%
NSSF	15.00%
Makassed Survey	5.17%

The available data shows utilization rates in the urban areas. Beirut 1984 survey provides information on utilization rates in Beirut Municipality area. The Household Survey 1994 was conducted on a sample of 1202 households (total of 5575 individuals) living in the urban area of Jounieh, Jbeil, Tripoli, Saida and Zahle. So both surveys use urban-based samples.

Table 24 provides different estimates for the visit per capita as per the different surveys:

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Table 24. Visits per capita

Source of data	Visits Per Capita
Beirut 1984	2.02
Household Survey 1994	8.5 (per household)
NSSF data for 1995	1.5

As discussed before, the health system in Lebanon operates in an open market where regular measures are ineffective, and the private sector continues to grow in an irregular manner leading to an oversupply. An attempt to estimate the oversupply in the number of beds is made below, by calculating the number of beds needed in each Mohafazat, based on some assumptions regarding the population per Mohafazat, the utilization rate, the average length of stay and the occupancy rate of hospital beds.
The current utilization rate in Lebanon is most probably around 10%: on one hand, the average of the estimated rates shown above is around 10%; on another hand, the number of hospitalization cases during 1998- as recorded in the annual report of the syndicate of hospitals- is 412,000 cases, which represents around 10% of the total resident population as estimated by CAS (1997 and updated for 1998). As to the average length of stay, based on the rates provided in table 13 and the number of cases corresponding to each agent, the weighted average length of stay is estimated to be 4 days per patient. The current occupancy rate of beds in Lebanon is around 44%, which is relatively low.

The exercise assumes an increase in the occupancy rate to 55%. Accordingly, each bed is assumed to be occupied 200 days and to serve 50 patients per year. As to the resident population, both estimates of CAS and MOSA will be adopted.

The following tables (tables 25 & 26) show the number of beds needed in each region, as well as the oversupply of beds, based on the assumptions discussed above and considering CAS population.

Table 25. Estimation of oversupply (undersupply) in beds by mohafazat

Region	Population*	Hospitalization cases (10% of population)	# of beds needed	Existing beds	Oversupply of beds
Beirut	403,337	40,334	807	2,778	1,971
Mount Lebanon & Suburbs	1,507,559	150,756	3,015	4,304	1,289
North Lebanon	807,204	80,720	1,614	995	-619
South Lebanon & Nabattieh	747,477	74,748	1,495	1,334	-161
Bekaa	539,448	53,945	1,079	927	-152
Lebanon	4,005,025	400,503	8,010	10,338	**2,328**

* Source: CAS

Table 26. Estimation of oversupply (undersupply) in beds by mohafazat

Region	Population	Hospitalization cases (10% of population)	# of beds needed	Existing beds	Oversupply of beds
Beirut	407,403	40,740	815	2,778	1,963
Mount Lebanon & Suburbs	1,145,458	114,546	2,291	4,304	2,013
North Lebanon	670,610	67,061	1,341	995	-346
South Lebanon & Nabattieh	488,469	48,847	977	1,334	357
Bekaa	399,891	39,989	800	927	127
Lebanon	3,111,831	311,183	6,224	10,338	**4,114**

* Source: MOSA

VI. Conclusions and policy recommendations

The mentioned analysis shows that the health care system in Lebanon is suffering from structural problems that are directly affecting the cost and hence the equal accessibility by all citizens to this service. Among the major predicaments and constraints contributing to the high cost and inequity features are:

- The inequity in accessing both preventive and curative health care among the different Lebanese regions which was clearly illustrated through the huge disparities in child and reproductive health indicators.

- The relatively huge amount paid as out-of-pocket reflects, to large extent, many constraints facing the health system in Lebanon. Out-of-pocket spending on drugs is clearly uncontrollable resulting from two major facts: first, the lack of control at the drug market level where the number of pharmaceutical products recorded 5968 in 1997, of which 3881 are not basic products, in addition to some others that are either not registered or internationally forbidden. The second fact lying behind the huge drug bill is directly related to the lack of control on physicians and pharmacists.

- The pluralistic nature of the health care system and the consequent incoherent and inconsistent flow of both financial resources and regulations through the chain of players involved in the health system.

- The multiplicity of the system results in a redundancy in the administrative staffs responsible for the health care system. Specifically, the problem arises in the health care financing agencies, having a notable proportion of expenditures allocated for the administration and staffing.

- The health care market ceased, to large extent, to be a social basic service with every citizen owning the right to have access to. However, it is currently driven by the forces of supply and demand, mainly in terms of pricing the health services against the quality of services provided. The problem is further accentuated by the relative weakness of the preventive health care which is attributing to raising demand for health services, and hence affecting the trend of pricing of these services.

- The role of the government in this messy environment is not clearly identified. On the one hand, the Ministry of Health- being the main government representative in this regard- is tending to invest in health market by providing additional hospital beds and health centers, meanwhile the statistics reveal that the market is almost

over-saturated, except for some specific geographic areas (tables 25 and 26). On the other hand, the regulatory role of the government is still lacking efficiency mainly as to controlling the private sector in terms of pricing of health services and insuring equitable access to these services.

Given these constraints, there is an immediate need to introduce fundamental reforms in order to establish a sound basis for an equitable, efficient and financially sustainable health care system. These reforms must address the points of weaknesses encountered in the health system in Lebanon from different perspectives.

1. Developing National Health Accounts

The introduction of a new national health strategy cannot take place in the absence of relevant data for appropriate analysis and decision making. The high complexity of the health care system in Lebanon, coupled with the lack of reliable data on the structure and functioning of this system, have weakened the performance of policy-makers as well as the financing agents. The introduction of national health accounts , which quantify patterns of data on health spending by sources of revenues and types of services purchased, would significantly contribute to improving the ability of decision-makers to identify problems and opportunities for change, and to develop and monitor reform strategies.

2. Regulating the private sector

The uncontrollable growth of the private sector burdens the ministry of health and hinders the effective operation of the health care market in Lebanon. In this regard, it is strongly recommended that the ministry of health regain its role as a regulator of the health care market, rather than as a financing agent. There is a need to license and monitor the health care market, regulate and control the delivery of health care services, improve the quality of care, contain health care cost and improve the management of the heath care sector.

In addition, the ministry of health needs to get a better understanding of the size, composition, and characteristics of the private sector, in order to be able to contain costs, unify prices, ensure quality of care and build a public-private partnership (Public hospital autonomy).

3. Unifying Coverage schemes and prices among different Financing agents and providers

As shown previously, there is a discrepancy in the coverage schemes adopted by the different financing agents, as well as in the prices charged by the different providers. The major reason behind these discrepancies is the diversity of the supervisory ministries in the health care market. It is recommended to have one health financing agent (as the National Social Security Fund), under the supervision of one regulatory ministry (as the Ministry of Health), and to establish a high level committee at the Ministry of Health that will coordinate and supervise this effort.

4. Regulating the pharmaceutical sector

The drug bill has dramatically increased in the last few years, representing around 25.6% of total health expenditure in 1998, which is a very high rate according to international standards; noting that Lebanon imports around 6,150 drug types annually, the highest number among Arab countries. The proliferation of drug types, coupled with the over-use and the inappropriate use of these drugs, is significantly contributing to the magnification of the annual health bill in Lebanon. In this context, it is recommended to undertake some reforms including:

- limiting the number of drugs that can be imported by adopting essential drugs list, such as the list developed by the National Health Organization in 1993, noting that NHO has specified 290 essential generics that are needed for Lebanon. The NSSF, after being restructured, or the National Office of Drugs can be activated in this regard, mainly as a regulator of the market, as well as an importing party competing with other drug importers.
- Controlling and monitoring the quality, specifications and prices of all imported drugs.
- Encouraging domestic drug production within an effective regulatory framework.

5. Ministry of Health efforts on Flat Rate payments and Clinical protocols

The Ministry of Health is burdened by high health expenditures. The first priority of the MOH is to cover the bill of private hospitals. The MOH is troubled with this bill and its complexity and the way of reimbursing private hospitals, setting tariffs and trying to bear cost. One decision was to change the way MOH reimburses hospitals by using the flat rate payment by diagnosis or surgical procedures (DRG Diagnosis Related Group) instead of the Fee for Service (FFS) following the American or the Canadian system. The flat rate system is attempted to solve the MOH problem with

the bill control, the money spent on administration and using the physician control at the private hospital to control the billing. But this strategy will create another problem for other financing agents that have no problem in control. The DRG doesn't fit in Lebanon especially that cheating will affect the quality of service delivered and so clinical protocol is necessary. What the MOH will face is the application of the system with the other financing agents. Another problem is highlighted in this context which is that every decision taken by the MOH should be applicable country-wide and compatible with the other financing agents. Applying any "imported" system is not always feasible. It is worth to recall that when MOH and the Private Hospital Association attempted at applying the Same- Day- Surgery approach, and after the study done by the NSSF, the approach was rejected by the NSSF for the fact that when the patient leaves the hospital in the same day of the operation and in case of any complication at home after surgery, the NSSF will have to pay for outpatient visits, while the MOH will not, since the latter is not supposed to cover outpatient visits.

6. Hospital Classification and pricing

As mentioned before, The Private Providers are paid against their classification. Classification decision results from the committee and is declared and signed by the Minister. The upgrade of any Hospital classification will automatically affect the price system of the hospital. The MOH will follow this classification, while other financing agents will stick to the old classification (e. g., NSSF), resulting in discrepancies among the different financing agents .

One other point to be raised is the specialization of the public and private hospitals creating redundancy in high-cost technological equipment. The trend in the advanced countries is toward establishing specialized centers for specific diseases (heart, cancer, fertility, ..). Taking into consideration the size of the country and the improving conditions of the communication means , the establishment of such center seems viable and will increase the efficiency of the service, and at the same time reduce the cost.

The role of the government should be the formulation of strategies to expand coverage in under-served areas, develop protocols for specializing the existing hospital and establishing new facilities and investments by the private sector in new technologies.

Finally, it is strongly recommended to conduct:

1. A national survey of health care providers
2. Socio-demographic survey on health care

3. A national household survey for more than 10,000 households (that could be used as a multipurpose survey with special emphasis on health status and spending on health)

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Annexes

Table 1. Distribution of the Lebanese population by age, sex and area of residence – Population and Housing Survey, Ministry of Social Affairs, 1996

	Males		Females		Total	
	N	%	N	%	N	%
Age (years)						
< 1	29205	1.9	26073	1.7	55278	1.8
1-4	108474	7.0	102192	6.5	210666	6.8
5-9	162214	10.5	154163	9.8	316377	10.2
10-14	170569	11.1	15981	1.0	330420	10.6
15-19	161758	10.5	152726	9.7	314525	10.1
20-24	153670	10.0	148796	9.5	302466	9.7
25-29	129152	8.4	140222	8.9	269374	8.7
30-34	118785	7.7	135569	8.6	254354	8.2
35-39	93701	6.1	108124	6.9	201825	6.5
40-44	77525	5.0	87404	5.6	164929	5.3
45-49	64720	4.2	69510	4.4	134230	4.3
50-54	60888	3.9	62297	4.0	123185	4.0
55-59	55011	3.6	58480	3.7	113491	3.6
60-64	52102	3.4	53756	3.4	105858	3.4
65-69	42771	2.8	42651	2.7	85422	2.7
70-74	31293	2.0	31078	2.0	62371	2.0
75-79	14094	0.9	15126	1.0	29220	0.9
80-84	8381	0.5	10140	0.6	18521	0.6
85+	8455	0.5	10864	0.7	19319	0.6
Total	**1542768**	**100.0**	**1569063**	**100.0**	**3111831**	**100.0**
Mohafazat						
Beirut	198026	12.8	209377	13.3	407403	13.1
Mount Lebanon	570418	37.0	575040	36.6	1145458	36.8
North	333490	21.6	337120	21.5	670610	21.6
South	139564	9.0	143493	9.1	283057	9.1
Bekaa	201628	13.1	198263	12.6	399891	12.9
Nabatyie	99643	6.5	105769	6.7	205412	6.6
Total	**1542769**	**100.0**	**1569062**	**100.0**	**3111831**	**100.0**

Table 2. Distribution of the Lebanese population by socioeconomic characteristics – Population and Housing Survey, Ministry of Social Affairs, 1996

	Males		Females		Total	
	N	%	N	%	N	%
Marital status						
Single	651836	52.4	582259	45.3	1234095	48.8
Engaged	5459	0.4	4178	0.3	9637	0.4
Married	560552	45.1	579006	45.0	1139558	45.1
Polygamous	4447	0.4	0	0.0	4447	0.2
Separated	821	0.1	1760	0.1	2581	0.1
Divorced	3999	0.3	10317	0.8	14316	0.6
Widowed	15761	1.3	109114	8.5	124875	4.9
Total	**1242875**	**100.0**	**1286634**	**100.0**	**2529509**	**100.0**
Educational level						
Illiterate	115114	8.5	229279	16.4	344393	12.5
Not enrolled (under 10)	5695	0.4	5490	0.4	11185	0.4
Read & Write	139686	10.3	107639	7.7	247325	9.0
Elementary	462836	34.1	407299	29.2	870135	31.6
Middle school or BP	296894	21.9	316581	22.7	613475	22.3
High school or BT	186455	13.7	205440	14.7	391895	14.2
Undergraduate or LT/TS	132254	9.7	114922	8.2	247176	9.0
Graduate studies	19220	1.4	9477	0.7	28697	1.0
Total	**1358154**	**100.0**	**1396127**	**100.0**	**2754281**	**100.0**
Relationship to labor force						
Works outside residence	754111	60.7	175871	13.7	929982	36.8
Home-based worker	4046	0.3	21730	1.7	25776	1.0
Unemployed, worked before	24200	1.9	4789	0.4	28989	1.1
Unemployed, never worked	38976	3.1	7262	0.6	46238	1.8
Self-sufficient	27681	2.2	4497	0.3	32178	1.3
Retired	36081	2.9	1526	0.1	37607	1.5
Student	294130	23.7	288687	22.4	582817	23.0
Housewife or single woman at home	0	0.0	773436	60.1	773436	30.6
Other	63649	5.1	8836	0.7	72485	2.9
Total	**1242874**	**100.0**	**1286634**	**100.0**	**2529508**	**100.0**

Table 3. Distribution of the Lebanese population by occupational characteristics – Population and Housing Survey, Ministry of Social Affairs, 1996

	Males		Females		Total	
	N	%	N	%	N	%
Work status						
Employer	51241	6.5	2445	1.2	53686	5.5
Self-employed	239721	30.6	21523	10.6	261244	26.5
Employee or family worker, paid	479844	61.3	173172	85.6	653016	66.3
Employee, unpaid	3971	0.5	1268	0.6	5239	0.5
Family worker, unpaid	7580	1.0	3982	2.0	11562	1.2
Total	**782357**	**100.0**	**202390**	**100.0**	**984747**	**100.0**
Work type						
Permanent	637731	81.5	184925	91.4	822656	83.5
Temporary/Seasonal	44847	5.7	7913	3.9	52760	5.4
Intermittent	99780	12.8	9552	4.7	109332	11.1
Total	**782358**	**100.0**	**202390**	**100.0**	**984748**	**100.0**
Sector						
Public & municipalities	126375	16.2	27765	13.7	154140	15.7
Private sector	649139	83.0	171596	84.8	820735	83.3
NGOs	1901	0.2	1881	0.9	3782	0.4
Both public & private	707	0.1	242	0.1	949	0.1
Other	4236	0.5	907	0.4	5143	0.5
Total	**782358**	**100.0**	**202391**	**100.0**	**984749**	**100.0**
Occupation						
Top management	41805	5.3	3751	1.8	45556	4.6
Professional/Academic	65407	8.4	63245	31.3	128652	13.1
Semi-professional /Technical	43634	5.6	26531	13.1	70165	7.1
Administration	36973	4.7	23445	11.6	60418	6.1
Services workers	139773	17.9	32653	16.2	172426	17.5
Agricultural/ skilled workers	35546	4.5	2918	1.4	38464	3.9
Handicraft workers	200618	25.7	12846	6.4	213464	21.7
Industrial workers	82622	10.6	10108	5.0	92730	9.4
Unskilled workers	82298	10.5	25536	12.6	107834	11.0
Army	52996	6.8	1141	0.6	54137	5.5
Total	**781672**	**100.0**	**202174**	**100.0**	**983846**	**100.0**

Table 4. Dependency ratios of the Lebanese population – Population and Housing Survey, Ministry of Social Affairs, 1996

Definition	Value (%)
Total dependency ratio	56.7
Young age dependency ratio	46.0
Old age dependency ratio	10.7

Table 5. Distribution of the Lebanese population by disability characteristics and sex – Population and Housing Survey, Ministry of Social Affairs, 1996

	Males		Females		Total	
	N	%	N	%	N	%
Disability status						
Disabled	18937	1.2	12059	0.8	30996	1.0
Not disabled	1523830	98.8	1557002	99.2	3080832	99.0
Total	**1542767**	**100.0**	**1569061**	**100.0**	**3111828**	**100.0**
Type of disability						
Blindness	1395	7.4	900	7.5	2295	7.4
Deafness	1611	8.5	1399	11.6	3010	9.7
Paralysis	3690	19.5	2680	22.2	6370	20.5
Amputation, upper limb	616	3.2	115	0.9	731	2.4
Amputation, lower limb	1210	6.4	385	3.2	1595	5.1
Limb impairment	2658	14.0	1338	11.1	3996	12.9
Mental disorder	4378	23.1	3130	25.9	7508	24.2
Multiple handicaps	1089	5.7	785	6.5	1874	6.0
Other	2290	12.1	1329	11.0	3619	11.7
Total	**18937**	**100.0**	**12061**	**100.0**	**30998**	**100.0**
Age at onset (years)						
Less than 1	6962	36.8	5457	45.3	12419	40.1
1-4	1616	8.5	1345	11.2	2961	9.6
5-14	1944	10.3	1124	9.3	3068	9.9
15-49	5171	27.3	1570	13.0	6741	21.7
50-59	936	4.9	590	4.9	1526	4.9
60+	2309	12.2	1973	16.4	4282	13.8
Total	**18938**	**100.0**	**12059**	**100.0**	**30997**	**100.0**

Table 6. Fertility indicators among the Lebanese population – Population and Housing Survey, Ministry of Social Affairs, 1996

Definition	Value
Crude birth rate (per 1000)	18.4
Age-specific fertility rate (per 1000)	
15-19	15.7
20-24	84.3
25-29	126.8
30-34	111.9
35-39	67.4
40-44	20.4
45-49	4.9
General fertility rate (per 1000)	6.8
Total fertility rate (per 1000)	2.15
Maternal mortality ratio (per 100,000)	328

Table 7. Preventive healthcare use among Lebanese population – Lebanese Maternal and Child Survey, Ministry of Health, 1996

Preventive health care indicator	Percent
Immunization rates	
DPT1 and Polio1	100%
DPT2 and Polio2	100%
DPT3 and Polio3	97.1%
Measles	85.7%
Family planning	
Ever use of contraceptive methods by ever-married women (15-49 years)	80.8%
Current use of contraceptive methods by currently married women (15-49)	
▪ Modern methods	37.2%
▪ Traditional methods	23.8%
▪ None	39.0%

Table 8. Curative healthcare use among Lebanese population by sex – Enquête sur les conditions de vie des ménages, Administration Centrale des Statistiques, 1997

	Males	Females	Total
Number of hospitalization days per year			
None	90.1	87.9	89.0
One	0.8	1.2	1.0
Two	1.3	2.0	1.6
Three	1.6	2.1	1.9
Four to five	1.8	2.4	2.1
Six to nine	1.9	2.1	2.0
Ten or more	2.4	2.3	2.4
Average #	**0.9**	**0.8**	**0.9**
Number of doctor visits per year			
None	58.3	50.7	54.6
One	8.0	8.5	8.2
Two	9.3	10.0	9.7
Three	6.6	7.8	7.2
Four	3.8	4.8	4.3
Five	3.4	3.9	3.6
Six to seven	2.8	3.8	3.3
Eight to ten	3.2	4.6	3.9
Eleven to fifteen	2.3	3.2	2.7
Sixteen or more	1.9	2.4	2.1
Average #	**2.1**	**2.7**	**2.4**

Table 97. Use of dispensaries among Lebanese population– Enquête sur les conditions de vie des ménages, Administration Centrale des Statistiques, 1997

	Individuals (%)	Households (%)
Services provided by dispensaries		
Hospitalization	3.3	2.9
Drugs	24.8	22.8
Physician consultation	30.0	27.0
Laboratory/radiology	9.5	8.7
Therapy	3.2	2.7
Dentistry	4.5	3.6
Vaccination	14.3	11.4

Table 10. Health insurance coverage among Lebanese population by age and sex – Enquete sur les conditions de vie des ménages, Administration Centrale des Statistiques, 1997

	Males	Females	Total
Age (years)			
0-15	42.1	40.4	41.3
15-44	39.4	44.0	41.7
45-59	52.0	44.5	48.2
60+	39.5	35.2	37.4
Total	**41.7**	**42.2**	**42.0**

Table 11. Average levels of major health indicators – Health, Nutrition & Population, The World Bank Group, 1997

	World	Low and Middle Income	High Income	MENA region
Infant mortality rate (per 1,000)	55	60	7	54
Under 5 mortality rate (per 1,000)	81	88	9	72
Total fertility rate	2.3	3.1	1.7	4.2
Maternal mortality ratio (per 100,000)	295	350	14	280
Immunization coverage, measles (%)	77	76	83	86